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OFFICIAL GAZETTE UNITED STATES PATENT OFFICE

VOL. 132

JAN. - FEB.

1908

MICRO PHOTO INC.
CLEVELAND, OHIO

OFFICIAL GAZETTE

OF THE

UNITED STATES PATENT OFFICE.

VOLUME CXXXII.

JANUARY 7 TO FEBRUARY 25, INCLUSIVE,

1908.

WASHINGTON:

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1908.

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ERRATA.

875,818, page 50, in claim, line 5, for the word "uniting" read *united*.

875,843, page 57, in claim, line 1, for the word "alternately" read *alternating*.

876,851, page 416, in heading, assignment, name of assignee, after the word "Company" strike out the comma.

877,205, page 578, third claim, line 5, for the word "axle" read *axis*.

877,259, page 596, first claim, line 4, strike out the reference-numeral "30."

877,380, page 634, first claim, line 3, for the words "to turn" read *to be turned*.

879,025, page 1251, in heading, title of invention, for "Drop-Down Small-Arms" read *Drop-Down Small-Arm*.

879,538, page 1460, in heading, assignment, name of second-mentioned assignee, for "John W. Prophet" read *John M. Prophet*.

879,821, page 1552, in heading, after residence of patentees, insert *assignors, by mesne assignments, to the Paramount Knitting Company, a Corporation of Illinois*.

880,410, page 1779, in heading, assignment, after the word "assignor" insert the words *of one-half*.

67,274, (Trade-Mark,) page 836, in heading, title of invention for "Certain Foods" read *Certain Dried Fruits*.

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None.

OFFICIAL GAZETTE

OF THE

UNITED STATES PATENT OFFICE.

JANUARY—FEBRUARY, 1908.

Patents Nos. 875,679 to 876,312.

THE OFFICIAL GAZETTE

OF THE

United States Patent Office.

[BY AUTHORITY OF CONGRESS.]

VOL. 132—No. 1. TUESDAY, JANUARY 7, 1908. PRICE—$5 per year.

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TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	3	1	New Hampshire	1	
Alaska, District of			New Jersey	46	7
Arizona Territory			New Mexico Ter'y		
Arkansas		1	New York	74	36
California	32	6	North Carolina	1	
Colorado	15	1	North Dakota	2	1
Connecticut	14	7	Ohio	37	6
Delaware			Oklahoma	1	
District of Columbia	3		Oregon	7	
Florida	3		Panama		
Georgia	6	9	Pennsylvania	65	6
Hawaii Territory			Philippine Islands	1	
Idaho	1		Rhode Island	5	3
Illinois	63	9	South Carolina		
Indiana	22		South Dakota	2	1
Iowa	12		Tennessee	4	2
Kansas	10	1	Texas	4	1
Kentucky	7	1	Utah		
Louisiana	6	2	Vermont	8	
Maine	4	1	Virginia	7	2
Maryland	2	3	Washington	7	
Massachusetts	29	8	West Virginia	2	
Michigan	22	2	Wisconsin	15	2
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Montana	2				
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Nevada	2				

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina			Natal		
Austria-Hungary	2		Netherlands		
Belgium	2	1	Newfoundland		
Brazil			New South Wales		
British West Indies			New Zealand		
Canada	13		Norway	1	
Cape Colony			Persia		
Chile			Queensland		
China			Roumania		
Costa Rica			Russia		
Cuba			Scotland		1
Denmark			South Australia		
Ecuador			Spain		
England	14	2	Sweden	1	
France	6		Switzerland	4	
Germany	18	3	Transvaal, South Africa		
Haiti			Victoria		
Ireland		1	Western Australia		
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Japan			Total to citizens of foreign countries	63	8
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Mexico					

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 28, 1907.

Meade-Van Bokkelen Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Barton Vineyard Company, Limited, of Fresno, Cal., for registration of a trade-mark and a trade-mark registered to the Meade-Van Bokkelen Company, of Chicago, Ill., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Meade-Van Bokkelen Company having been returned undelivered, notice is hereby given to the said Meade-Van Bokkelen Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 28, 1907.

Noble and Streeter, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Joseph C. Allen, of Plainfield, N. J., for registration of a trade-mark and a trade-mark registered to Noble and Streeter, of New York, N. Y., and it appearing upon a showing made by the junior party that said Noble and Streeter have not been located, notice is hereby given to the said Noble and Streeter, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business December 31, 1907.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
204	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Dec. 17	Nov. 1	388
202	XVII. Linotyping; Printing; Metals-Making; Nut and Bolt Lodge; Obsolete.	Dec. 16	Dec. 2	162
244	XXXV. Buttons, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Toilet; Signals; Garment Supporters.	Dec. 16	Oct 1	654
172	XXXI. Alcohol; Charcoal and Coke; Ammonia, Water, and Wood Distillation; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Oils, Fats, and Glue; Water Purification; Mineral Oils.	Dec. 9	Nov. 12	189
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Dec. 2	Dec. 2	494
202	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Cans of Live Stock; Fishing and Trapping; Stationery; Stone-Working; Educational Appliances.	Nov. 20	Oct. 26	289
126	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Stone Furniture.	Nov. 20	Sept. 23	373
170	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Nov. 20	Nov. 6	288
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Nov. 20	Oct. 26	285
222	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Towers; Iron Structures.	Nov. 27	Dec. 2	229
213	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Nov. 27	Nov. 4	286
215	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Soap.	Nov. 26	Nov. 1	274
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electricity, Medical and Surgical; Electric Signaling; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas, and Canes.	Nov. 22	Oct. 26	289
167	V. Bookbinding; Harvesters; Jewelry; Music.	Nov. 20	Sept. 23	295
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232	X. Carriages and Wagons	Nov. 13	Oct. 9	469
203	XII. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Nov. 13	Oct. 7	645
147	XXIX. Coopering; Reels; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking-Tools; Woodworking; Fine-Escapes; Ladders.	Nov. 13	Sept. 23	386
208	XV. Bread, Pastry, and Confections Making; Cooking; Leaf-metal Sheets and Fabrics; Furniture; Hydraulic Lifts and Cement; Paper-Making; Paving; Plastics; Plastic Block- and Earthenware Apparatus; Photo Compositions; Photography.	Nov. 11	Nov. 1	454
156	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Buttons, Pearl, and Rivet Setting; Leather Manufactures; Malting and Stapling; Whips and Whip Appendages; Harness.	Nov. 11	Oct. 26	382
169	XXV. Lamps and Gas-Fittings; Fluid-Pressure Regulators; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Nov. 8	Oct. 15	389
229	XXVIII. Internal-Combustion Engines, Miscellaneous Motive-Power Plants.	Nov. 7	Oct. 7	397

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Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
204	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Measuring Instruments; Wind-Wheels; Engraving.	Nov. 7	Aug. 26	445
227	XVIII. Steam-Engines; Steam-Boilers; Steam-Engine Valves; Steam and Vacuum Pumps; Injectors and Ejectors.	Nov. 6	Oct. 4	285
279	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanisms.	Nov. 6	Sept. 11	295
275	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Nov. 4	Nov. 11	363
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Presses; Tobacco; Stores-Service; Pneumatics.	Nov. 4	Oct. 21	276
227	XIV. Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal-Ware Making; Tools; Wire-Working; Compound Tools.	Nov. 2	Aug. 8	296
215	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Nov. 1	Oct. 19	430
273	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Stopping and Stoning Vessels; Packaging Liquids; Refrigeration.	Nov. 1	Sept. 3	469
239	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Oct. 31	Oct. 16	381
226	XIX. Furnaces; Stoves and Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel.	Oct. 29	Oct. 1	514
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Oct. 29	Aug. 24	543
312	VII. Games and Toys; Mechanical Motors; Paper Manufactures; Velocipedes; Optics.	Oct. 28	Oct. 14	376
260	XL. Deposit and Collection Receptacles; Special Receptacles and Packages; Check-Controlled Apparatus; Fine Arts; Paper Receptacles; Package and Article Carriers; Wooden Receptacles; Baggage; Lighting-Fixtures; Cloth, Leather, and Rubber Receptacles.	Oct. 23	Aug. 24	736
107	XXXVII. Electricity, Conductors; Electric Lighting; Electricity, General Applications.	Oct. 10	Aug. 19	753
105	XXVI. Electricity, Generation; Electric Heating and Rheostats; Electric Railways; Motive Power.	Oct. 9	Aug. 2	472
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Oct. 4	Aug. 23	607
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109	XVI. Telegraphy; Telephony	Sept. 18	July 5	722
269	XLI. Railway Draft Appliances; Railway-Ties and Fasteners; Railway-Rails and Joints; Resilient Ties and Wheels.	Aug. 15	Aug. 2	1249

Total number of applications awaiting action 18,540

181	TRADE-MARKS, DESIGNS, LABELS AND PRINTS.			
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	Designs	Dec. 10	Dec. 2	61
	Labels and Prints	Dec. 30	Dec. 27	13

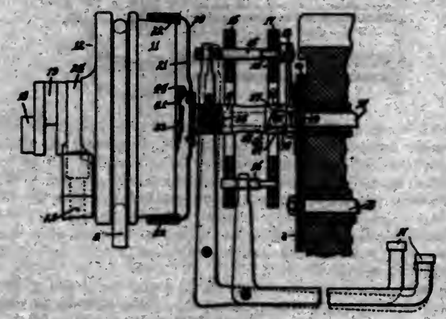
Delivery of Patent.

The patent will be delivered or mailed on the day of its date to the attorney of record, if there be one; if not, to the patentee; or, if the attorney so request, to the patentee or assignee of an interest therein.

PATENTS

GRANTED JANUARY 7, 1908.

875,679. CLUTCH FOR RELIEFOGRAPHS. FREDERICK H. ALLING, New Haven, Conn., assignor to Pollard-Alling Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Oct. 6, 1906. Serial No. 337,667.



1. The combination of a rotatable driving member, a second rotatable member, an arm carried by the latter member, a connecting member carried by said arm for causing the driving member to engage said arm and operate the second member, a trip device mounted on said arm and organized when advanced to cause the said member to engage the driving member, and means organized to disengage the connecting member at the completion of a single revolution of the driven member and arm, upon the release of the trip device before completion of said revolution.

2. The combination of a rotatable driving member, a second rotatable member, an arm carried by the second member, a connecting member carried by said arm for causing the driving member to engage said arm and operate the second member, a trip device mounted on said arm and organized when advanced to cause the said member to engage the driving member, means being organized to disengage the connecting member at the completion of a single revolution of the driven member and arm, upon the return of the trip device to normal position before completion of said revolution, and means for causing said disengagement of the connecting member at the end of a revolution, upon the trip device being retained in advanced position after said revolution.

3. The combination of a rotatable driving member, a second rotatable member, an arm carried by the latter member, a connecting member carried by said arm, means for causing the connecting member to engage the driving member and cause rotation of the second member and arm, a releasing member movable on a fixed support and arranged to engage the connecting member at one position of its rotation by said arm and disengage it from the driving member, and a trip device carried by said arm and arranged to shift the releasing member to permit the connecting member to engage the driving member.

4. The combination of a rotatable driving member, a second rotatable member, an arm carried by said latter member, a connecting member carried by said arm arranged to cause the driving member to rotate the second member and arm, a releasing member movable on a fixed support and arranged to engage the connecting member at one position of its rotation and disengage it from the driving member, a trip device carried by said arm and arranged to shift the releasing member to permit the connecting member to engage the driving member, the driving member having a clutch face, a rotatable clutch member coöperating with said clutch face, a rotatable shaft on which the clutch member is mounted, means for arresting the latter shaft and clutch member, and means for causing the said arrest of the shaft and clutch member to operate the trip device and cause the driving member to operate said driven member for a single revolution.

5. The combination of a rotatable driving member, a second rotatable member, an arm carried by the second member, a connecting member pivoted on said arm, means for normally shifting the connecting member to engage the driving member and cause the rotation of the driven member, a releasing member pivoted on a stationary support and arranged to engage the connecting member in one position of its rotation to move it out of engaging position, a trip member pivoted on said arm and arranged to engage the releasing member when the arm and connecting member are in the said position of engagement with the releasing member, to thereby swing the releasing member out of engagement with the connecting member permitting the connecting member to engage the driving member, said releasing member having means tending to retain it in position for engagement with the connecting member, whereby the releasing member after being shifted to disengage the connecting member will return to normal position before the completion of a revolution and will shift the connecting member upon the completion of a revolution to disconnect the driving and driven member.

[Claims 6 to 16 not printed in the Gazette.]

875,680. DISPLAYING AND MEASURING DEVICE FOR OIL-CLOTH. JOSEPH ARMSTRONG, Denver, Colo., assignor of one-half to William G. Newlands, Denver, Colo. Filed May 8, 1905. Serial No. 259,274.



2. In a structure of the class described, the combination of two upright end parts provided with roll-holding shelves separating the space between the ends into compartments, the compartments being open to allow the

material to be drawn from the rolls on the shelves, each shelf consisting of two members, each of which is adapted to support a roll thus adapting each shelf for two rolls, the ends of the structure adjacent the shelves being provided with vertically-disposed parting strips adapted to engage the extremities of the two rolls on each shelf and separate the same, and one of the end parts being provided with designations indicating units of measurements, the said designations beginning at zero at the uppermost shelf and increasing downwardly.

2. In a structure of the class described, the combination of two upright end parts provided with roll-holding shelves separating the space between the ends into compartments, the compartments being open to allow the material to be drawn from the rolls on the shelves, each shelf consisting of two members separated by a narrow slot, the ends of the frame adjacent the shelves being provided with vertically disposed parting strips which separate the shelf members and also form stops to separate the extremities of the rolls where two rolls are placed upon each shelf, and one of the end parts being provided with designations indicating units of measurement, the said designations beginning at zero at the uppermost shelf and increasing downwardly.

875,681. MANICURING IMPLEMENT. DORSEY F. ASBURY, Washington, D. C. Filed Jan. 30, 1907. Serial No. 354,024.



1. A manicuring implement having a carrier and a flesh pushing wheel, the carrier being rotatively connected with the wheel on only one side thereof, the other side of the wheel being concaved.

2. A manicuring implement having a carrier and a flesh pushing wheel, the carrier being rotatively connected with the wheel on only one side thereof, the other side of the wheel being concaved to fit the nail of a finger, and the periphery of the wheel being roughened.

3. A manicuring implement having a carrier and a wheel, the carrier being rotatively connected with the wheel on only one side thereof, the other side of the wheel being concaved to fit the finger nail, and the periphery of the wheel being tapered.

4. A manicuring implement having a carrier and a wheel, the carrier being rotatively connected with the wheel on only one side thereof, the other side of the wheel being concaved to fit the nail of a finger, and the periphery of the wheel tapering toward the concaved surface and being also roughened.

5. A flesh pushing wheel having a concaved side to fit a finger nail, the periphery of the wheel being tapered inward toward said concaved side.

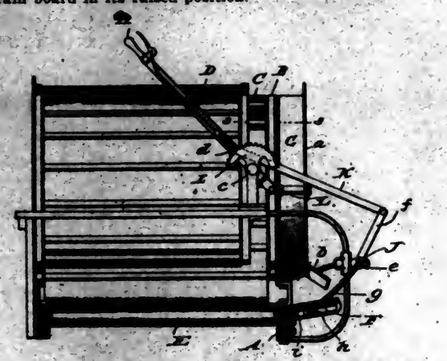
[Claims 6 to 9 not printed in the Gazette.]

875,682. GRAIN-HARVESTER. WILLIAM J. AUMEN, Allentown, Pa. Filed Nov. 8, 1907. Serial No. 401,266.

1. The combination with the elevator of a grain harvester of a grain board, of angular form in cross-section, hinged to the rear edge of the elevator frame, and means for detachably securing the said grain board in its raised position.

2. In a grain harvester, the combination with an elevator comprising a frame, a lower apron, and an upper apron of a less width than the lower apron to afford an open space at the rear of the elevator, of a grain board, of angular form in cross-section, hinged to the rear edge of the elevator frame, and means for detachably securing the said grain board in its raised position.

3 The combination with the elevator of a grain harvester, of a grain board, of right angle form in cross-section, having a bottom wall hinged at its forward edge to the rear edge of the elevator frame and also having an outer wall, and means for detachably securing the said grain board in its raised position.



4. In a grain harvester, the combination with an elevator comprising a frame, a lower apron, and an upper apron of a less width than the lower apron to afford an open space at the rear of the elevator, of a grain board having a bottom wall hinged at its forward edge to the rear edge of the elevator frame and also having an outer wall disposed at a right angle to the bottom wall, and means for detachably securing the said grain board in its raised position.

5. The combination with the elevator of a grain harvester, of a grain board, of angular form in cross-section, hinged to the rear edge of the elevator frame and having a flared extension at the lower end of its outer wall, and means for detachably securing the said grain board in its raised position.

[Claims 6 to 14 not printed in the Gazette.]

875,683. COMBINED BOTTLE AND ROLLING-PIN. ENDO L. BELL, Norfolk, Va. Filed Nov. 13, 1906. Serial No. 343,227.



1. A device of the class described comprising a hollow receptacle having its opposite ends reduced to form terminal necks, the interior walls of each neck at the mouth thereof being inclined towards the body of the receptacle, there being continuous seating grooves formed in the interior walls of the necks and spaced from the inclined portions of said walls, closures seated in the necks and each having one end thereof inclined to correspond to the inclination of the ends of the necks and bearing against the same, and packing rings interposed between the walls of the closures and necks and adapted to enter the grooves in the latter.

2. A device of the class described including a hollow receptacle having its opposite ends reduced to form terminal necks, the interior walls of each neck at the mouth thereof being inclined towards the body of the receptacle and provided with a continuous seating groove, closures seated in the necks and each provided with an inclined shoulder adapted to bear against the inclined end of the adjacent neck, angular packing rings carried by the closures and engaging the seating grooves formed in the walls of the necks, flanges formed on the closures and projecting laterally beyond the exterior walls of the necks, said flanges bearing against the terminals of the necks at the inclined shoulders of said closures.

3. A device of the class described comprising a hollow receptacle having its opposite ends reduced to form terminal necks the exterior walls of which are provided with circumferential enlargements, the interior walls of the necks at the enlargements being inclined towards the body of the receptacle and provided with annular seating grooves, a closure seated in each neck and having its side walls inclined for engagement with the correspondingly inclined interior walls of the adjacent neck, packing rings interposed between the closures and the interior walls of the necks and seated in said annular grooves, and flanges formed on the closures and extended laterally beyond the exterior walls of the enlargements.

875,684. FISH-HOOK. LOUIS BIERBACH, Freeport, Ill. Filed Sept. 5, 1907. Serial No. 391,442.



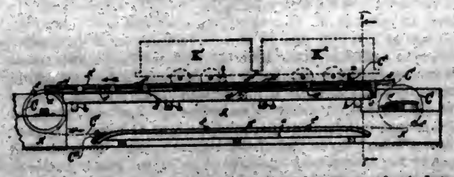
1. The combination with a fish hook, of a guard and guide consisting of the rudder-like plate of metal which has a concavity adapted to receive the point of the hook and a convex surface which is adapted to coöperate with the current of a body of water in supporting the hook in an upright position.

2. The combination with a fish hook of a combination weed and snag guard and rudder one side of which has a depression for the point of the hook while the opposite side is convexed as set forth, so that it coöperates with a current in controlling the position of the hook.

3. The combination with a fish hook having a spring arm 5 of a combination guard and guide, said guard and guide constructed and arranged with a concavity on one side which guards the point of the hook and a convexed surface on the opposite side which coöperates with the current and the force of gravity on the hook to hold the latter in a proper or upright position.

4. The combination with a fish hook having an arm 5, of a guard and guide on the free end of said arm, said guard and guide consisting of a flat piece of metal having a concavo-convex portion 8 and the flat part 7 arranged at an angle to the part 8, as and for the purpose set forth.

875,685. FEEDER FOR CAR-HAULS, &c. HENRY H. BIGHOUSE, Cleveland, Ohio, assignor to The C. O. Bartlett & Snow Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 20, 1906. Serial No. 348,716.



1. The combination with a track, of means adapted to move a car along the same, and other means positively co-operative with said first named means to render the same alternatively operative and inoperative.

2. The combination with a track, of means adapted to move a car along the same, and other means positively co-operative with said first named means to render the same alternatively operative and inoperative for successive sections of said track.

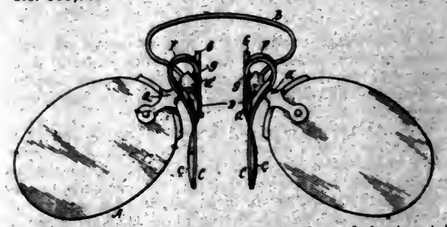
3. The combination with a track, of a cable passing along the same and adapted to engage and move a car thereon, and means positively coöperative with said cable to effect such engagement for certain sections of said track only.

4. The combination with a track, of a cable passing along the same and adapted to engage and move a car thereon, and means positively coöperative with said cable to effect such engagement for two separated sections of said track and to break such engagement for the intermediate section.

5. The combination with a track, of a cable passing along the same, a dog borne by said cable, said dog being adapted in one position to engage and move a car on said track, and means adapted to thus operatively position said dog for certain sections of said track only.

[Claims 6 to 14 not printed in the Gazette.]

875,686. NOSE-GUARD FOR EYEGLASSES. CHARLES BILLINGTON, Attleboro, Mass. Filed Feb. 2, 1907. Serial No. 355,372.



1. A nose guard comprising a single piece of sheet metal having one end formed into an elliptical main bearing having a depressed surface and the other end formed into a circular pad having a plurality of depressions, the said main bearing and pad being connected by a neck bent into a gooseneck form whereby the bearing surfaces of the main bearing and pad may be arranged to lie in the same plane, as set forth.

2. A nose guard comprising a single piece of sheet metal having one end formed into an elliptical main bearing and the other end formed into a circular pad, the bearing surface of the said pad and main bearing being depressed and one of the said surfaces having a number of depressions, the said main bearing and pad being connected by a neck bent into a gooseneck form whereby the bearing surfaces of the main bearing and pad may be arranged to lie in the same plane, as set forth.

875,687. FILTER-LEAF. HIRAM W. BLAISDELL and HARRY A. BROOKS, Los Angeles, Cal. Filed May 20, 1907. Serial No. 374,775.



1. In a filter leaf sheets of filtering fabric, strips of foraminous material interposed between said sheets, fastenings uniting said filtering fabrics and said strips of foraminous material, means between said strips to hold said filtering fabrics from each other between said fastenings and passageways adjacent to said means.

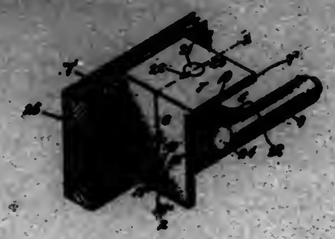
2. In a filter leaf sheets of filtering fabric, strips of foraminous material therebetween, fastening uniting said fabrics and said strips and distenders having passageways therein between said sheets of filtering fabric.

3. In a filter leaf sheets of filtering fabric, strips of foraminous material therebetween, fastenings uniting said fabrics and said strips, distenders having passageways therein between said sheets of filtering fabric and means for separating the end of one distender from the major part of the adjacent distender.

875,688. HINGE-BUTT GAGE. CHRISTIAN BODMER, New Britain, Conn. Filed July 11, 1906. Serial No. 325,636.

1. A butt-gage comprising a pair of plates located at right-angles to each other, and one of which projects at

its edges over the other; devices adjustable through the plates, and having marking-points; and means for clamping said devices.



2. A butt-gage comprising a pair of plates at right-angles to each other, and one of which projects at its edges over the other, rods adjustable through openings in the plates, and each having a marking-point, and means for securing the rods.

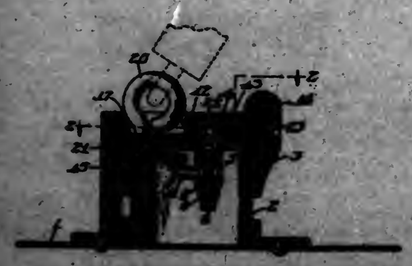
3. A butt-gage comprising a pair of plates located at right-angles to each other, and one of which is of greater width than the other, each plate having a countersunk opening; rods adjustable through the openings of the plates, each rod having an incising-head of a shape to fit the countersunk opening in the plate through which it works; and means for securing the rods in any position of adjustment.

4. A butt-gage comprising a pair of plates at right-angles to each other, one plate being of less width than the other, and each plate having a countersunk opening, of rods movable through the openings in the plates; incising-teeth carried by the rods; and means for clamping the rods in any desired position of adjustment.

5. A butt-gage comprising a pair of perforated plates located at right-angles to each other, one plate being of less width than the other plate, and one plate being of greater length than the other plate; rods passing through the openings of the plates and having incising-heads; and means for clamping said rods in adjusted positions.

[Claims 6 and 7 not printed in the Gazette.]

875,689. CAP FOR FILL-PIPES, &c. ALLEN A. Bowsm, Fort Wayne, Ind., assignor to S. F. Bowser & Company, Fort Wayne, Ind., a Corporation of Indiana. Filed June 22, 1906. Serial No. 323,044.



1. In a device for the purpose described, the combination of a fill-pipe, a cap body, said fill-pipe and cap body being provided with coöperative means for attachment of the body to the pipe by a relative rotary movement, means for holding the parts against said relative rotary movement, embodying two disengageable members, one carried by the cap body and the other having a fixed relation to the fill-pipe, and means for holding said members from being disengaged.

2. In a device for the purpose described, the combination of a fill-pipe, a cap body, said cap body and fill-pipe being provided with means for attaching them together requiring a relative rotary movement, a hasp carried by the body, means fixed with relation to the fill-pipe for the engagement of the hasp, for holding the body against rotary movement, and means for locking the hasp and body against relative movement.

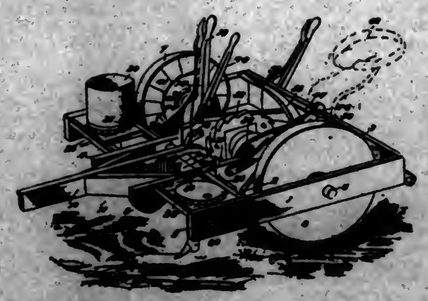
3. In a device for the purpose described, the combination of a fill-pipe, a cap body for closing the same, said cap body and fill-pipe having means for attaching them together, requiring a relative rotary movement, a hasp hinged to the body and having a projection, means fixed with relation to the fill-pipe for the engagement of said projection, and means for locking the hasp against pivotal movement on its hinge.

4. In a device for the purpose described, the combination of a fill-pipe, a cap body, said body and pipe having means of attachment requiring a relative rotary movement, a hasp carried by the body, means fixed with relation to the fill-pipe for the engagement of the hasp for holding the body against said relative rotary movement, and a staple for a lock screwed into the body and held from unscrewing by the hasp.

5. In a device for the purpose described, the combination of a fill-pipe, a cap body, means for attaching the body and pipe together, requiring a relative rotary movement, a slotted hasp carried by the body, means fixed with relation to the pipe, and engaging with a part of the hasp, for holding the body against said relative rotary movement, and a staple screwed into the body and projecting through the slot of the hasp, for receiving a lock.

[Claims 6 to 8 not printed in the Gazette.]

875,690. CHECK-ROW PLANTER. CHRISTOPHER C. BUTCHER, Urbana, Mo., assignor of one-third to Edward L. Russell, Urbana, Mo. Filed July 3, 1907. Serial No. 382,085.



1. In a planter the combination of seed dropping mechanism including a ratchet wheel, a marker for indicating the hills and rotatable with the said ratchet wheel, a lever 50 having pin 51 adapted to coöperate with the teeth of the aforementioned ratchet wheel, a pin 47 carried by said lever 50 and projecting from opposite sides thereof, and means for supporting opposite ends of the pin 47 to prevent the end of the lever 50 carrying the pin 51 from dropping when the said lever 50 is moved to throw the pin 51 clear of the teeth of the ratchet wheel.

2. In a planter, the combination of a seed dropping mechanism, a ground wheel, a tube having an independent rotary and longitudinal movement, a ratchet mechanism between said ground wheel and tube, connecting means between the tube and seed dropping mechanism, an operating lever, and coöperating wedge shaped teeth between the said lever and tube to throw the latter out of action.

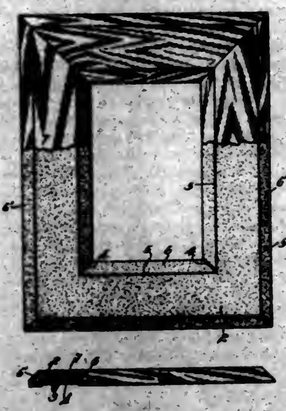
3. In a planter, the combination of a seed dropping mechanism, a ground wheel, a tube having an independent rotary and longitudinal movement, a ratchet mechanism between said ground wheel and tube, connecting means between the tube and seed dropping mechanism, an operating lever, and coöperating wedge shaped teeth between the said lever and tube to throw the latter out of action, said wedge shaped teeth provided with interlocking stop shoulders to prevent overthrowing of the teeth when the tube is thrown out of gear.

4. In a planter, the combination of seed dropping mechanism, a ground wheel, a rotary driver, a ratchet connection between said rotary driver and ground wheel, connecting means between the rotary driver and the seed dropping mechanism, a lever 44, coöperating wedge elements between the lever 44 and rotary driver to throw the latter out of gear, an operating lever 55, and a connection 57 between the levers 55 and 44.

5. In a planter, the combination of a seed dropping mechanism, a ground wheel, a rotary driver, a ratchet connection between the rotary driver and ground wheel, a collar 36 forming a part of said rotary driver, a lever 52, a lever 55 pivoted to the lever 52 and having a limited play to admit of independent movement of the levers 55 and 52 within certain limits, a lever 44, connecting means between the levers 55 and 44, and means carried by the levers 44 to throw the said rotary driver out of gear.

[Claim 6 not printed in the Gazette.]

875,691. MOUNT. ESTON S. CHENEY, Haywards, Cal. Filed Jan. 18, 1907. Serial No. 352,972.

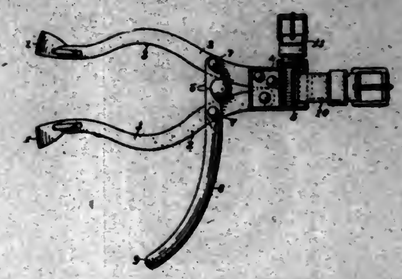


1. A mount comprising top and bottom unbeveled perforated sheets of relatively stiff material, a layer of filling material between said sheets having an opening of lesser diameter than the diameter of the perforation in the bottom sheet, said top sheet having bendable flaps extending over the inner edges of the filler and contacting with the inner edges of the back sheet to provide incline supporting surfaces around the opening for a surface sheet, and a surface sheet stretched over said top sheet and the inclined flaps thereof and secured to the underside of said bottom sheet.

2. A mount comprising a perforated bottom sheet, a perforated filler superimposed on said bottom sheet, a top sheet having flap-portions to overlap the filler and to contact at an incline with the bottom sheet, and a surface sheet stretched over said top sheet and said incline flaps and secured to the back of the bottom sheet, said inclined flaps producing a bevel effect when said surface sheet is so stretched and secured.

3. A mount comprising a bottom sheet, a filler superimposed on the bottom sheet, a top sheet having flap portions to overlap the filler and to contact at an incline with the bottom sheet, and a surface sheet stretched over said top sheet and said inclined flaps and secured to the back of the bottom sheet, said inclined flaps producing a bevel edge effect when said surface sheet is so stretched and secured.

875,692. VETERINARY DENTAL SPECULUM. LEONARD L. CONNEY, Grand Rapids, Mich. Filed Dec. 26, 1906. Serial No. 349,430.



1. A device of the class described, comprising an upper plate, a pair of upper arms supporting said plate at one end, a lower plate, a pair of lower arms supporting said lower plate at one end and pivoted to the respective upper arms at the other end, toggle levers pivotally connected to the adjacent upper and lower arms at each side and provided with a rule joint between said arms, and a U-shaped downward extension connecting said levers.

2. A device of the class described comprising an upper plate, a pair of upwardly curved arms supporting the same at one end, hinge member attached to the other ends of said arms, straps attached to said hinge members, a lower plate, a pair of downwardly curved lower arms supporting said lower plate at one end and pivoted to said hinge members at the other end, toggle levers having rule joints and pivotally connected to the opposing upper and lower arms, and a U-shaped downward extension to said levers and connecting the same.

3. In a device of the class described, an upper plate, a pair of upwardly curved upper arms supporting said plate at one end, hinge members rigidly attached to the other ends of said arms, straps attached to said hinge members, a lower plate, a pair of downwardly curved lower arms supporting said lower plate, at one end and pivoted to the hinge member at the other end, toggle levers pivotally connected to the adjacent upper and lower arms and having rule joints midway between their pivots, and a downwardly and forwardly curved extension to said levers and connecting the same.

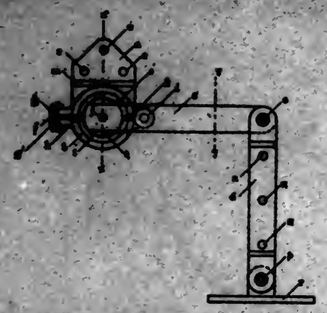
4. In a device of the class described, an upper plate, an upper pair of arms supporting said plate at one end, hinge members rigidly attached to the other ends of said arms, rearwardly projecting straps attached to said hinge members, upwardly projecting straps also attached to said hinge members, a lower plate, a pair of arms supporting said lower plate at one end and pivoted to the hinge members at the other end, toggle levers having rule joints and connecting the opposite upper and lower arms to adjust and hold the same, and a U-shaped downwardly projecting extension connecting said levers.

875,693. VEHICLE-SPRING CHECK. HERBERT CORTELL, Newark, N. J. Filed Jan. 9, 1907. Serial No. 351,410.

1. A vehicle spring check, comprising a longitudinally divided clamping case, adapted to be attached to vehicle body, and to be adjusted in clamping frictional contact with an internal cylindrical crank hub provided with circumferential wedge rings upon its surface, and a lever arm and connecting rod, to attach to lower spring or axle; to resist rapid spring compression or extension; substantially as described.

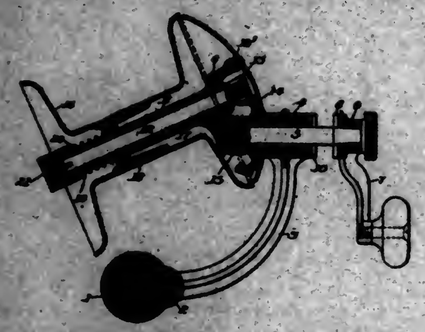
2. An adjustable spring check, comprising a divided hinged cylindrical clamping case lined with "Babbitt metal", adapted to be attached at its upper division to vehicle body, and to clamp an internal oblong crank hub having circumferential wedge rings upon its surface

and a lever arm extension with connecting rod attached thereto to connect to lower spring or axle, to resist rapid



spring compression or extension, substantially as described.

875,694. FISHING-REEL. HENRY F. CRANDALL, Milwaukee, Wis. Filed Apr. 8, 1907. Serial No. 366,931.



1. A fishing reel comprising, in combination, a spool, means whereby it may be rotated both axially and orbitally, and means whereby the orbital rotation thereof may be suspended.

2. A fishing reel comprising, in combination, a spool, means whereby it may be rotated both axially and in a conical orbit, and means whereby the conical-orbital rotation thereof may be suspended.

3. A fishing reel comprising, in combination, a spool, means whereby it may be given both axial and gyratory rotation, and means whereby gyratory rotation thereof may be suspended.

4. A fishing reel comprising, in combination, a spool, means whereby said spool may be rotated axially and simultaneously given a gyratory movement at opposite ends thereof, and means whereby gyratory movement thereof may be suspended.

5. A fishing reel comprising, in combination, a spool, means whereby said spool may be rotated axially and simultaneously given a gyratory movement at opposite ends thereof, the center of gyration being substantially midway between opposite ends of the axis of said spool, and means whereby gyratory movement thereof may be suspended.

[Claims 6 to 17 not printed in the Gazette.]

875,695. FIRELESS COOKER. HARRY H. CERA, Decatur, Ill. Filed May 2, 1907. Serial No. 371,715.

1. A fireless cooker comprising a shell, a nest therein, and a cover having a skirt and a plurality of separated plates rigidly held therein and forming a plurality of non-conducting chambers superimposed above the nest.

2. A fireless cooker comprising a shell, a nest therein, a plurality of non-conducting chambers surrounding the nest between it and the shell, a cover having a skirt, and a plurality of separated plates rigidly held therein and forming a plurality of superimposed non-conducting chambers in the cover above the nest.



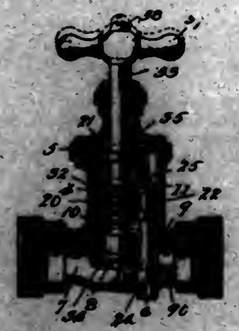
3. A fireless cooker comprising a shell, a nest centrally disposed therein and with its bottom raised above that of the shell to form a non-conducting chamber between them, a plurality of such chambers surrounding the nest between it and the shell, a cover having a skirt, and a plurality of separated plates rigidly held therein and forming a plurality of non-conducting chambers in the cover superimposed above the shell.

4. A fireless cooker comprising a shell having an open top and a closed bottom, and peripheral guides on the latter directed toward its center; a nest consisting of a cylindrical body fitting between said guides, a raised bottom forming a non-conducting chamber below it, and a non-conducting chamber surrounding its central opening; and a cover consisting of a skirt adapted to stand midway between said shell and the outer wall of the nest, and a series of plates within the skirt and forming non-conducting chambers superimposed above the nest.

5. A fireless cooker comprising a shell having an open top and a closed bottom, and peripheral guides on the latter directed towards its center; a nest consisting of a cylindrical body fitting within the guides, a raised bottom secured across the body and forming a non-conducting chamber beneath, an inner wall secured upon said bottom and forming a non-conducting chamber surrounding the central pot-compartment, and an annular cover rigidly connecting said inner wall and the body; and a cover for the whole including a series of non-conducting chambers adapted to rest upon said annular cover and to extend over and close the pot-compartment.

[Claims 6 to 8 not printed in the Gazette.]

875,696. COMPRESSION STOP AND WASTE COCK. WELDON P. DEVERELL, Decatur, Ill. Filed Apr. 10, 1907. Serial No. 367,460.



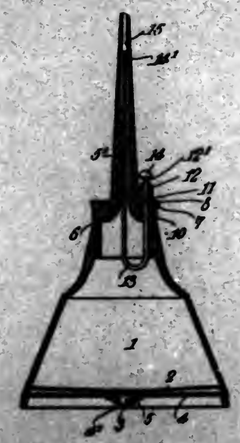
1. In a cock, a casing having inlet and outlet ends and a lateral orifice in one of them, a barrel between said ends and having openings into them and to said orifice, and a valve seat in the barrel; combined with a nut movable within the barrel, a main stem threaded through the nut and having a head adapted to contact with said seat, and a secondary stem carried by the nut and having a head adapted to close said orifice.

2. In a cock, a casing comprising a barrel having inlet and outlet and an orifice in one of them, a valve seat in said barrel, and a cap; combined with a nut movable within the barrel, a main stem threaded through the nut and having a head adapted to contact with said seat, a secondary stem carried by the nut and adapted to close said orifice, and a shoulder on the stem, the shoulder abutting against the cap when one valve is closed and the other open and the upper end of the nut abutting against the cap when the position of the valves is reversed.

3. In a cock, a casing comprising a barrel having inlet and outlet and an orifice in one of them, a valve seat in said barrel, and a cap; combined with a nut movable within the barrel and having a cupped upper end, a spring between the cup and cap, a main stem threaded through the nut and having a head adapted to contact with said seat, a secondary stem carried by the nut and adapted to close said orifice, and a guide in the barrel toward which the nut is normally borne by said spring.

4. In a cock, a casing having inlet and outlet ends and an intermediate barrel with openings into said ends and a valve seat between them, one wall of the barrel having a passage parallel with its axis and intersecting the outlet opening, and a waste orifice communicating with said passage; combined with a nut movable in the barrel and having an ear movable in its passage, a main stem threaded through the nut and having a head adapted to contact with said seat, a secondary stem carried by said ear and having a head adapted to close said orifice, and means for turning the main stem in either direction.

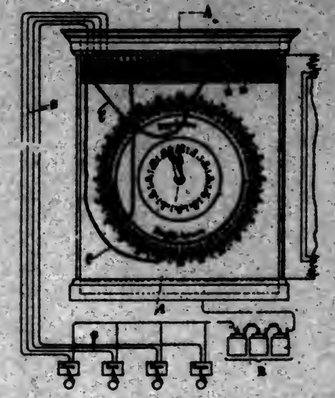
875,697. OIL-CAN. WALTER E. DILLARD, Petersburg, Va. Filed Dec. 20, 1906. Serial No. 348,798.



An oil can comprising a receptacle having a double bottom made up of an outer plane perforated member and an inner imperforated flexible concaved member having a conical lug which passes through the perforation in the outer member, and a peripheral flange which rests upon the outer member and means for resiliently retaining the conical lug in contact with the edges of the perforations of the outer member.

875,698. ELECTRIC TIME-ALARM. EDUARD DUBS, Oerlikon, Zurich, Switzerland. Filed Aug. 30, 1906. Serial No. 332,696.

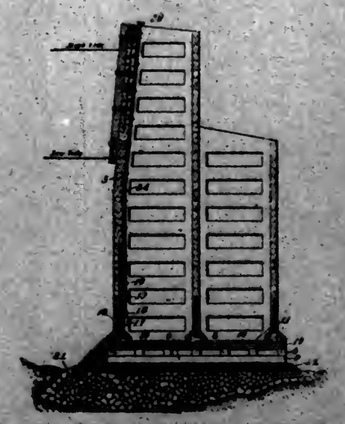
1. In an electrical indicating clock, a clock plate having two concentric sets of holes arranged alternately, loose contact pins fitting the said holes and arranged to project internally, the clock spindle, a contact lever mounted on the said spindle, gearing turning the lever once every twenty four hours, brackets at the end of the lever, a pin parallel with the lever turning in the said brackets, a spring and stop controlling the movement of the pin and a contact wing on the said pin, projecting from the front of the lever to meet the contact pins, substantially as herein described.



2. In an electrical indicating clock, a clock plate having two concentric sets of holes, loose contact pins adapted to fit in the said holes and project internally, the pins having a conical end and an annular groove, wire loops secured behind each of the plate holes, adapted to receive the ends of the pins and engaged in their grooves, the clock spindle, and a contact lever on the said spindle adapted to make contact with the projecting pins, substantially as herein described.

3. In an electrical indicating clock the combination of a contact making lever on the clock hand, a spring contact piece on the lever, contact pins in a fixed clock plate, a parallel fixed plate carrying the clock gearing and adjusting screws regulating the distance of the gearing and contact arm from the contact pins to determine the length of contact.

875,699. REINFORCED COMPOSITE STRUCTURE. PAUL T. C. DUMAIS, Hull, Quebec, Canada. Filed June 20, 1907. Serial No. 379,841.



1. In composite crib work, the combination of a base, a monolithic superstructure comprising outer walls and inner connecting walls progressively built up from said base, and reinforcing rods embedded in said superstructure and extending in said base to constitute anchors for said walls, substantially as described.

2. In composite crib work, the combination of a base, a monolithic superstructure comprising outer walls and inner connecting walls progressively built up from said base,

and an overlapping series of reinforcing rods embedded in the walls of said superstructure, the rods of the lower series extending within the base to anchor the walls thereto, substantially as described.

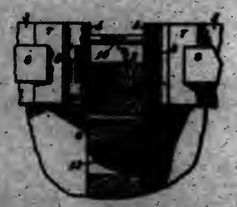
3. In composite crib work, the combination of a base, a monolithic superstructure progressively built up from said base and comprising outer walls and inner connecting walls subdividing the interior of said superstructure into a series of compartments, metal reinforcing bands embedded in said superstructure and extending around the walls of said several compartments, and reinforcing rods embedded in the outer walls of said superstructure and extending in the base to anchor said walls thereto, substantially as described.

4. In composite crib work, the combination of a water tight base, a monolithic superstructure integral with said base and comprising water tight outer walls progressively built up from said base and provided with inlet openings in their lower portions, valves controlling said inlets, manually-operated means supported by said outer walls for actuating said valves, and means for extending said manually-operated means along said walls as the latter are progressively built up, substantially as described.

5. In composite crib work, the combination of a buoyant water-tight flooring, a monolithic superstructure secured to said flooring, said monolithic superstructure comprising water-tight outer walls progressively built up from said flooring, valved inlets extending through the lower portions of said outer walls, manually-operated means supported by said outer walls for controlling said valved inlets, and means for extending said manually operated means along said walls as the latter are progressively built up, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

875,700. MOLD. PAUL T. C. DUMAIS, Hull, Quebec, Canada. Filed June 20, 1907. Serial No. 379,842.



1. A snap mold for concrete, comprising independent mold plates adapted to be assembled to constitute mold sections for providing continuous molding faces of any required dimensions, braces carried on the backs of said mold plates and provided with end recesses, locking plates fitting such recesses for locking together the abutting mold plates of said sections, and adjustable clamping means for clamping together said mold sections with any desired space between their molding faces, substantially as described.

2. A snap mold for concrete, comprising independent mold plates adapted to be assembled to constitute mold sections for providing continuous molding faces of any required dimensions, braces carried on the backs of said mold plates and provided with end recesses, locking plates fitting such recesses for locking together the abutting mold plates of said sections, said locking plates constituting rigid bearings extending across the joints between said abutting mold plates, and adjustable clamping means for clamping together said sections with any desired space between their molding faces, substantially as described.

3. A snap mold for concrete, comprising independent mold plates adapted to be assembled to constitute mold sections for providing continuous molding faces of any required dimensions, braces carried on the backs of said mold plates and provided with inclined recesses, locking plates formed with oppositely tapered portions for engaging such inclined recesses to lock together the abutting mold plates of said sections and strongly forcing together the abutting edges of said plates, and adjustable clamping means for clamping together said sections with any desired space between their molding faces, substantially as described.

875,701. GRINDING AND POLISHING ROLL. CLAUS A. EDLUND, Providence, R. I., assignor of one-half to Emil Bernstrom, Providence, R. I. Filed May 31, 1906. Serial No. 319,448.



1. A device of the character described comprising a cylinder around which is wrapped a sheet of surfacing material, said cylinder being provided with a chamber into which the ends of said material may extend, a slotted tubular retaining member constructed of resilient material adapted to fit closely in said chamber, said member being adapted to bind the ends of said material against the walls of said chamber by spring pressure to hold the same by friction, and means in said member for engaging the ends of the material to eject the same as said member is turned backward to release said material.

2. A device of the character described comprising a cylinder around which is wrapped a sheet of surfacing material, said cylinder being provided with a chamber into which the ends of said material may extend, a slotted tubular retaining member constructed of resilient material adapted to fit closely in said chamber, said member being adapted to bind the ends of said material against the walls of said chamber to hold the same by friction, said member being provided with a key receiving recess whereby the same may be rotated, and means in said member for engaging the ends of the material to eject the same as said member is turned backward to release said material.

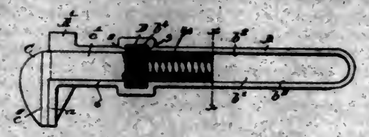
3. A device of the character described comprising a cylinder around which is wrapped a sheet of surfacing material, said cylinder being provided with a chamber into which the ends of said material may extend, a slotted tubular retaining member constructed of resilient material adapted to fit closely in said chamber, said member being adapted to bind the ends of said material against the walls of said chamber by spring pressure to hold the same by friction, and a scraping lip formed on one edge of said slot for engaging and removing the said material when said member is turned backward.

4. A device of the character described comprising a cylinder around which is wrapped a sheet of surfacing material, said cylinder being provided with a chamber into which the ends of said material may extend, a slotted tubular retaining member constructed of resilient material adapted to fit closely in said chamber, said member being adapted to bind the ends of said material against the walls of said chamber to hold the same by friction, said member being provided with a key receiving recess whereby the same may be rotated, and a scraping lip formed on one edge of said slot for engaging and removing the sandpaper when said member is turned backward.

5. A device of the character described comprising a cylinder around which is wrapped a sheet of material, said cylinder being provided with a chamber into which the ends of said material extend, a tubular retaining member in said chamber constructed of resilient material the ends of the material of the retaining member being turned inward forming pockets therein for the reception of the manipulating key, means whereby the wall of said resilient member is caused to engage and bind the ends of said material against the walls of said aperture and hold the same by friction, and means in said member for engaging the ends of the material to eject the same when said member is turned backward.

[Claims 6 and 7 not printed in the Gazette.]

875,702. WRENCH. ALFRED G. ELY, New York, N. Y. Filed Nov. 14, 1904. Serial No. 232,607.

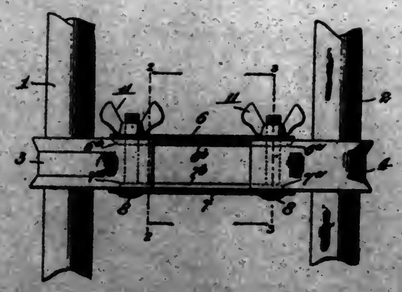


1. A wrench comprising a hand piece having at one end a fixed jaw and having channels open at the opposite sides of the hand piece in the median line thereof, said channels being separated by a thin web extended in a direction parallel with the length of said jaw, said web having a transverse opening, a nut sustained in said opening, and a jaw having a slotted and threaded shank, the legs of the shank entering said open channels and being exposed along the sides of the hand piece, the threaded ends of the legs entering the nut, as and for the purpose described.

2. A wrench comprising a hand piece having a jaw at one end and provided at each side thereof with channels that start from the face of the jaw and extend along the median line of the hand piece toward the opposite end, said two channels having side walls, one channel being separated from the other by a thin web constituting a common bottom for both the channels, said web being provided with a notch, a nut located in the notch of the web and sustained by shoulders of the hand piece, and a jaw having two parallel legs extended therefrom, said legs being threaded and entering the open longitudinal channel of the hand piece and the nut, the side edges of the legs coacting with and being guided by the side walls of the hand piece, said legs constituting the exposed sides of the hand piece.

3. A wrench comprising a hand piece having a jaw at one end and provided at its opposite sides with channels that start from the face of the jaw and extend along the median line of the hand piece toward the opposite end thereof, said two channels having side walls, one channel being separated from the other by a thin web constituting a common bottom for both channels, said web being provided with a notch extended into said side walls, a nut located in said notch and sustained by the shoulders of the side walls of the hand piece, and a jaw having two parallel legs extended therefrom, said legs being threaded and entering the open longitudinal median channels of the hand piece and being extended through said nut, the side edges of said legs co-acting with and being guided by the side walls of the hand piece, the threaded sides of said legs being exposed at opposite sides of the hand piece.

875,703. SHORT RAIL FOR BEDS. ORRIN G. FRANKS, Chicago, Ill., assignor to The Seng Company, Chicago, Ill., a Corporation. Filed Mar. 18, 1907. Serial No. 363,031.



1. In a short rail for metal beds, the combination with the rail-sockets having vertical slots therein, of plates bearing against the upper and lower ends of the sockets, bosses projecting inwardly from the plates and closely fitting in the ends of the slots, and bolts for connecting the plates and clamping them against the ends of the sockets with the bosses engaging the slots, substantially as shown and for the purpose set forth.

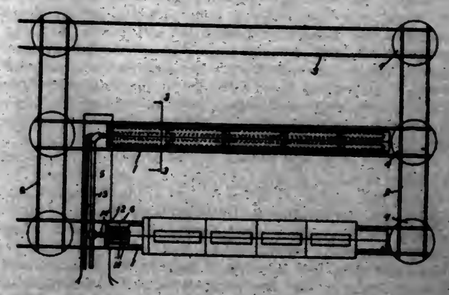
2. In a short-rail for metal beds, the combination with the rail-sockets having vertical slots therein, of plates bearing against the upper and lower ends of the sockets, bosses projecting inwardly from the plates and engaging in the ends of the slots, the engaging edges of said bosses being beveled, and bolts for connecting the plates and clamping them against the ends of the sockets, substantially as shown and described.

3. In a short-rail for metal beds, the combination with the rail-sockets having vertical slots therein, of upper and lower plates having bosses on their inner faces adapted to fit into the ends of the slots in the rail-sockets, said plates having bolt-holes extending through the bosses, bolts engaging the bolt-holes, and nuts threaded on the bolts and adapted to clamp the plates against the rail-sockets.

4. In a short-rail for metal beds, the combination with the rail-sockets having vertical slots therein, of upper and lower plates having bosses on their inner faces with bolt-holes therethrough, the bolt-holes in one of the plates being rectangular, bolts engaging the bolt-holes and having shoulders which engage the aforesaid rectangular openings, and winged nuts threaded on the bolts to clamp the plates against the rail-sockets and so that the bosses engage into the ends of the slots therein.

5. In a short-rail for metal beds, the combination with the rail-sockets having vertical slots therein, of upper and lower clamping plates formed of stamped metal to provide bosses near their ends connected by a depressed rib extending longitudinally of the plate, said bosses being shaped to engage the opposite ends of the slots in the rail-sockets and pierced to provide bolt-holes, connecting-bolts engaging said bolt-holes, and winged nuts threaded on the bolts and adapted to clamp the plates against the rail-sockets, substantially as shown and described.

875,704. DRIER. HERMAN J. GERSCH, Wausau, Wis. Filed May 31, 1907. Serial No. 376,574.



1. The combination with a track, of a plurality of cars adapted to receive the articles to be dried, said cars having roofs adapted to form a substantially continuous roof when the cars are arranged end to end, the said car roofs being provided with ventilators; side walls for said cars adapted to form the cars into a continuous chamber; end walls for the outer ends of the end cars of the series; a tunnel beneath said track; steam pipes arranged in said tunnel; a header for said steam pipes; a deflector arranged longitudinally above the steam pipes; a steam supply pipe for having a valved connection to said header; valved cross pipes for the said steam pipes, and valves in said steam pipes arranged at the rear of and adjacent to the said cross pipe, dividing said steam pipes

into sections corresponding in length to the length of the cars, for the purpose specified.

2. The combination with a track, of a plurality of cars adapted to receive the articles to be dried, said cars having roofs adapted to form a substantially continuous roof when the cars are arranged end to end, the said car roofs being provided with ventilators; side walls for said cars adapted to form the cars into a continuous chamber; end walls for the outer ends of the end cars of the series; a tunnel beneath said track; steam pipes arranged in said tunnel; a header for said steam pipes; a steam supply pipe having a valved connection to said header; valved cross pipes for the said steam pipes, and valves in said steam pipes arranged at the rear of and adjacent to the said cross pipes, dividing said steam pipes into sections corresponding in length to the length of the cars, for the purpose specified.

3. The combination with a track, of a plurality of cars adapted to receive the articles to be dried, said cars having roofs adapted to form a substantially continuous roof when the cars are arranged end to end, the said car roofs being provided with ventilators; side walls for said cars adapted to form the cars into a continuous chamber; end walls for the outer ends of the end cars of the series, and a heating tunnel beneath said track, for the purpose specified.

4. The combination with a track, of a plurality of cars adapted to receive the articles to be dried, said cars having roofs adapted to form a substantially continuous roof when the cars are arranged end to end; side walls for said cars adapted to form the cars into a continuous chamber; end walls for the outer ends of the end cars of the series; a tunnel beneath said track; steam pipes arranged in said tunnel; a header for said steam pipes; a deflector arranged longitudinally above the steam pipes; a steam supply pipe having a valved connection to said header; valved cross pipes for the said steam pipes, and valves in said steam pipes arranged at the rear of and adjacent to the said cross pipe, dividing said steam pipes into sections corresponding in length to the length of the cars, for the purpose specified.

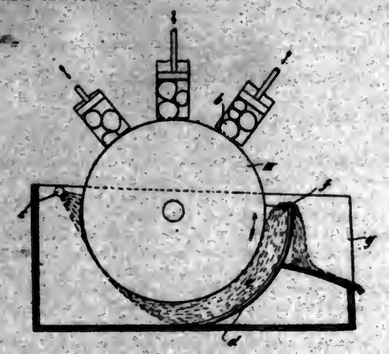
5. The combination with a track, of a plurality of cars adapted to receive the articles to be dried, said cars having roofs adapted to form a substantially continuous roof when the cars are arranged end to end; side walls for said cars adapted to form the cars into a continuous chamber; end walls for the outer ends of the end cars of the series; a tunnel beneath said track; steam pipes arranged in said tunnel; a header for said steam pipes; a steam supply pipe having a valved connection to said header; valved cross pipes for the said steam pipes, and valves in said steam pipes arranged at the rear of and adjacent to the said cross pipes, dividing said steam pipes into sections corresponding in length to the length of the cars, for the purpose specified.

[Claims 6 to 22 not printed in the Gazette.]

875,705. APPARATUS FOR GRINDING WOOD-PULP. KARL GRÖSSEL, Osterode-im-the-Harz, Germany. Filed Sept. 19, 1906. Serial No. 335,313.

1. Apparatus for grinding wood in the manufacture of wood pulp or cellulose comprising, in combination, a grind stone, means for pressing the wood against the surface of the grind stone and a water pipe adapted to deliver a water spray on only the ground material carried by the stone as the latter revolves said pipe being disposed to the discharge at substantially the horizontal axis of the stone and provision for cleaning the lower surface of the stone by delivering the water at a point at substantially the plane of the horizontal axis.

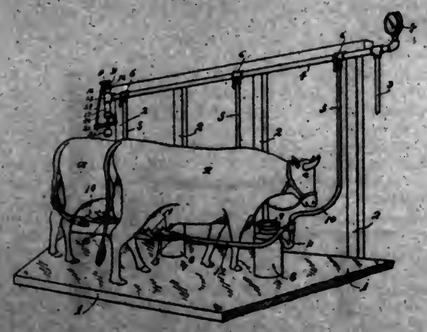
2. Apparatus for grinding wood in the manufacture of wood pulp or cellulose, comprising, in combination, a receiver, a grind stone mounted in the receiver, means for pressing the wood against the upper surface of the stone, a water pipe having a rose thereon for spraying water in a downward direction upon the ground material only at substantially the plane of its horizontal axis to keep the lower surface of the stone clean, and a guide in the receiver for directing the water and pulp around the lower part of the stone and up to a position in line with the axis thereof.



3. Apparatus for grinding wood in the manufacture of wood pulp or cellulose comprising, in combination, a receiver, a revoluble grind stone with deep indentations on its surface mounted in said receiver, means for pressing the wood against the upper surface of the grind stone, a water pipe with rose arranged at one side of said grind stone and adapted to deliver a spray of water in a downwardly inclined direction on the ground material only at and after it passes the horizontal center of the stone and a trough with curved bottom in the receiver said trough being carried up to a position in line with the axle of the grind stone.

4. Apparatus for grinding wood in the manufacture of wood pulp or cellulose comprising, in combination, a receiver, a revoluble grind stone therein having deep indentations covered with metallic lead on its surface, means for pressing the wood against the upper surface of the grind stone, a water pipe with a rose arranged at one side of the grind stone, and adapted to deliver a spray of water in a downwardly inclined direction on the ground material only at and after it passes the horizontal center of the stone, and a trough with a curved bottom in the receiver said trough being imperforate and concentric with the stone and carried up to a position in line with the grind stone, whereby the ground material is automatically cleaned from the lower surface of the grindstone and a substantially clean and dry upper side is presented to the material to be ground.

875,706. PULSATING DEVICE FOR MILKING APPARATUS. EZRA E. GOOD, Waterloo, Iowa. Filed Feb. 11, 1907. Serial No. 356,674.

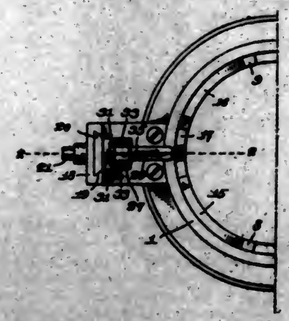


1. In a milking apparatus, means for producing pulsations, comprising an automatically actuated vibratory controller subject to varying vacuum or pressure from within said apparatus, a vent opening into the air conduit of said apparatus, a valve for opening and closing said vent, and a valve actuating connection subject to said controller and arranged to remain set in either of its two extreme positions during a material part of the movement of said controller, but which controller is arranged to operate on said actuating connection to open said valve under extreme movement in one direction and to close said valve under extreme movement in the other direction, substantially as described.

2. In a milking apparatus, means for producing pulsations, comprising an automatically actuated vibratory controller subject to varying vacuum or pressure from within said apparatus, a vent opening into the air conduit of said apparatus, a valve for opening and closing said vent, a valve actuating connection subject to said controller and arranged to remain set in either of its two extreme positions during a material part of the movement of said controller, but which controller is arranged to operate on said actuating connection to open said valve under extreme movement in one direction and to close said valve under extreme movement in the other direction, and means for adjusting or varying the action of said controller in respect to the amount of movement required to render the same operative on said valve actuating connection, substantially as described.

3. In a milking apparatus, means for producing pulsations therein, comprising a vent valve controlling and opening into an air conduit of said apparatus, a pivoted tripping dog operative on said vent valve, a spring tending to hold said tripping dog in either of the two positions in which it may be set, a tripping lever, a rod connecting said tripping lever to said tripping dog, and a weighted piston working in a tube of said apparatus and operating on said tripping lever under extreme movements, substantially as described.

875,707. KNITTING-MACHINE. ANDREW V. GROUPE, Philadelphia, Pa., assignor to E. Jenckes Manufacturing Company, Pawtucket, R. I., a Corporation of Rhode Island. Filed June 28, 1905. Serial No. 267,339.



1. In a knitting machine the combination with the cam cylinder, of a support thereon, and a needle picker having two separate pivotal connections with said support, the axes of said connections being arranged on inclines with relation to the axes of the cam cylinder.

2. In a knitting machine, the combination with the cam cylinder, of a support thereon, and a needle picker having two separate pivotal connections with said support, the axes of said connections being arranged on inclines with relation to the axis of the cam cylinder and one of said connections being adapted to turn about the axis of the other of said connections.

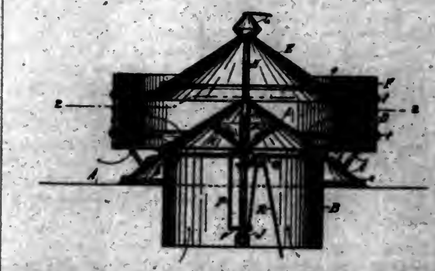
3. In a knitting machine, the combination with the cam cylinder, of a support thereon, a needle picker provided with oppositely disposed needle engaging portions and having two separate pivotal connections with said support, and means to prevent the turning of the picker about the axis of one of its pivotal connections during the turning of the picker about the axis of its other pivotal connection.

4. In a knitting machine, the combination with the cam cylinder, of a support thereon, a needle picker having two separate pivotal connections with said support, the axes of said connections being arranged on inclines with relation to the axis of the cam cylinder, and means to prevent the turning of the picker about the axis of one of its pivotal connections during the turning of the picker about the axis of its other pivotal connection.

5. In a knitting machine, the combination with the cam cylinder, of a support thereon, a needle picker carried by the support and movable in either of two diverging paths, a pivot pin for the picker arranged at right angles to the plane of one of its paths, and a pivot pin for the picker arranged at right angles to the plane of the other of its paths.

[Claims 6 and 7 not printed in the Gazette.]

875,708. VENTILATOR. MALCOLM HARD and EDWARD CONEY, Cleveland, Ohio, assignors to The Ohio Blower Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 6, 1907. Serial No. 366,835.



1. In a ventilator, the combination of a wall around the ventilation opening, a movable member adapted to close the upper end thereof and having a bead adapted to extend over the extreme upper edge of the wall, a roof member suitably supported some distance above the wall, said roof member having a bead, which bead the bead of the movable member is adapted to occupy when the movable member is elevated.

2. In a ventilator, the combination of a ventilator roof, a vertical rod depending therefrom, a gate for closing the ventilator opening slidable up and down on said rod, a pulley carried by the rod below the gate, a bar depending from the gate below the pulley, means passing over the pulley and connected to said bar for raising the gate, and a cross bar for supporting the lower end of said rod.

3. In a ventilator, in combination, a drum adapted to extend through the roof, upwardly extending legs outside of the drum, a cone carried by the upper portions of said legs, a shield carried by the outer portions of the legs, a rod depending from the cone, an inner cone slidable on said rod, a member depending from the inner cone and yoking around the rod, a pulley carried by said rod at a point beneath the inner cone, and a chain passing over said pulley and connected at its end with the member yoking around the rod, whereby the chain may elevate the inner cone to open the ventilator.

875,709. CUSPIDOR-CARRIER. CLAUDE N. HARRINGTON, Avon, Minn. Filed May 11, 1907. Serial No. 373,047.

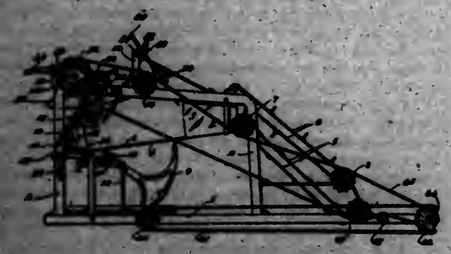
1. An article of the class described, comprising a handle including spaced members, a yoke carried by the handle, a vessel-engaging member pivoted in the yoke, a block having passages in which the spaced members of the handle are engaged for sliding movement of the block thereupon, a rod carried by the block and a member carried by the rod for movement into and out of engagement with a vessel in the vessel-receiving member.

2. An article of the class described comprising a handle, a yoke carried by the handle, a vessel receiving member pivoted in the yoke, a rod slidably connected with the handle, and a member carried by the rod for movement therewith into and out of engagement with a vessel in the first named member.



3. An article of the class described comprising a handle including spaced parallel rods and a connecting grip located at one end of the rods, said rods being separated at their other ends to form a yoke, a vessel-engaging member pivoted in the yoke, a rod slidably connected with the handle, and a vessel-retaining member carried by the rod and arranged to engage a vessel in the vessel-engaging member.

875,710. GRAIN-BINDER. AMANDUS M. HEMMENO, Minneapolis, Minn. Filed July 13, 1907. Serial No. 383,649.



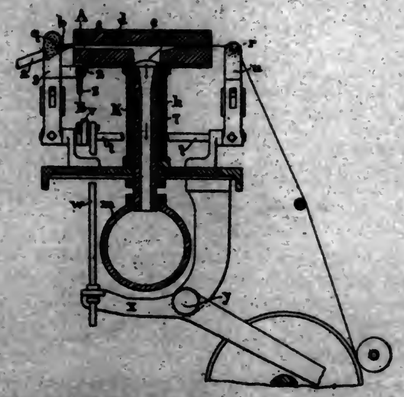
1. In a grain binder, the combination with a needle, packers and means for discharging the bound bundles, of binder driving means, a one revolution clutch for causing said driving means to intermittently operate said needle and bundle discharging means with properly timed actions, a pivoted tripping head having a projecting lock arm, a spring pressed lock bolt normally engaging said lock arm and holding said tripping head in normal position, means whereby a movement of said lock bolt throws said clutch into action, and means for releasing the said lock bolt from said lock arm after said clutch has been thrown into action by initial movement of said tripping head, substantially as described.

2. In a grain binder, the combination with a needle, packers, a binder shaft, and a discharge arm and knotter actuating means carried by said shaft, of cooperating half clutches on said shaft, one of which is loose and is continuously driven, and the other of which is rotatable with said shaft, a pivoted tripping head, a sliding clutch stop for controlling the clutch members at the completion of each rotation of said binder shaft, a spring pressed bolt arranged to be moved by said tripping head, and when moved to cause said clutch stop to render said clutch operative, substantially as described.

3. In a grain binder, the combination with a needle, packers and binder shaft, said shaft having a bundle discharge arm, a continuously driven wheel loosely mounted on said shaft and provided with a half clutch, a cooperating spring pressed half clutch slidably mounted on said shaft, said sliding half clutch having a laterally projecting cam lug 42 and stop 41, a sliding stop 44 engageable with said stop 41 and having a lug 45 engageable with said cam lug 42, to throw said sliding half clutch out of engagement with said continuously driven half clutch, to intercept the movement of the same and said binder shaft, a tripping head and connections whereby initial movement of said tripping head moves said sliding stop into an inoperative position, substantially as described.

4. In a grain binder, the combination with a needle, packers, a pivoted tripping head and a binder shaft, which binder shaft is provided with a bundle discharging arm and means for actuating a knotter, of a continuously driven wheel, a one revolution clutch for intermittently connecting said wheel to said binder shaft, a lock arm movable with said tripping head, a spring pressed lock bolt normally holding said lock arm and having a cam acting end serving, when moved, to render said clutch operative, a tripping abutment operating to release said lock bolt from said lock arm under initial movement of said tripping head, an intercepting stop operative on said lock arm to intercept the movement of the same and said tripping head, and a connection operated from said binder shaft for withdrawing said intercepting stop from said lock arm, to thereby permit further movement of said tripping head during the bundle discharging action, substantially as described.

875,711. GLASSING-MACHINE FOR YARN AND THREAD. JOSEPH HIGGINSON, Jr., Stockport, England. Filed May 25, 1906. Serial No. 318,781.



1. In gassing machines for yarn or thread, the combination of a singeing burner for the said yarn or thread, a tube forming a conduit longitudinally through which the said yarn or thread travels while being acted on by the flame from the said burner, and a suction or exhaustion connection opening directly into the said tube, substantially as described.

2. In gassing machines for yarn or thread, the combination of a singeing burner for the said yarn or thread, a tube open at each end forming a conduit longitudinally through which the said yarn or thread travels while being acted on by the flame from said burner, and a suction or exhaustion connection opening directly into the said tube at a point between its ends, substantially as described.

3. In gassing machines for yarn or thread, the combination of a singeing burner for the said yarn or thread, a tube open at each end forming a conduit longitudinally through which the said yarn or thread travels while being acted on by the flame fro mthe said burner, a suction or exhaustion connection opening directly into the said tube at a point between its ends, and supporting guides for the yarn or thread as it travels through the tube, substantially as described.

4. In gassing machines for yarn or thread, the combination of a singeing burner for the said yarn or thread, a tube open at each end forming a conduit longitudinally through which the said yarn or thread travels while being acted on by the flame from the said burner, a suction or exhaustion conection opening directly into the said tube at a point between its ends, means for passing the yarn or thread into the interior of the tube and supporting guides for the yarn or thread as it travels through the tube, substantially as described.

5. In gassing machines for yarn or thread, the combination of a singeing burner for the said yarn or thread, a tube open at each end forming a conduit longitudinally through which the said yarn or thread travels while being acted on by the flame from the said burner, a suction or exhaustion connection opening directly into the said tube at a point between its ends, a jacket for the said connection, means for passing the yarn or thread into the interior of the tube and supporting guides for the yarn or thread as it travels through the tube, substantially as described.

[Claim 6 not printed in the Gazette.]

875,712. COIN SORTING AND COUNTING MACHINE. HERMAN G. JAKOBSSON, Bethlehem, Pa. Filed Nov. 13, 1906. Serial No. 343,223.



1. In a coin sorting device, the combination with a delivery hopper, of a fixed conical distributer arranged below the hopper, and a series of obstructions arranged to intercept the free passage of coins sliding radially on the face of the distributer, the whole constructed to cause the coins to assume a flat-wise position upon the distributer.

2. In a coin sorting device, the combination of a delivery hopper, a plurality of fixed conical distributers arranged one above the other and below the hopper, the adjacent distributers inverted in respect to each other, and a series of obstructions arranged to intercept the free passage of coins radially over each distributer, the whole constructed to cause the coins to assume a flat-wise position upon the distributer.

3. The combination with the hopper of a coin sorter, of a sorter consisting of a conical disk having peripheral radial arms and recesses, and a series of obstructions.

4. In a coin distributer, an inclined chute provided with a bottom transversely inclined, and with openings in said bottom of successively larger dimensions, and a blade below each opening with an exit space between the edge of the opening and the face of the blade.

5. In a coin distributer, a chute having an inclined bottom provided with a succession of openings each formed by slitting the bottom and bending the latter downward on the outer side of and from said slit, thus forming an inclined lip.

[Claim 6 not printed in the Gazette.]

875,713. TRIMMING ATTACHMENT FOR LOOPING-MACHINES. OTTO LANGE, Camden, N. J. Filed Sept. 12, 1906. Serial No. 334,280.



1. A trimming attachment for the purpose stated, composed of stationary blades with their cutting edges on the inner sides opposed to each other without overlapping, a to and from their support and to and from each other.

2. A trimming attachment for the purpose stated, composed of stationary blades with their cutting edges on the inner sides oppositely disposed and relatively adjustable to and from their support and to and from each other, and a plate with which said blades are connected, said plate having a throat adjacent to said cutting edges.

3. A trimming attachment for the purpose stated, consisting of a pair of blades having cutting edges on their inner sides opposed to each other without overlapping, a carrier for said blades and screws on said carrier adapted to engage said blades to adjust the same at right angles to their length relatively to the face of said carrier.

4. A trimming attachment for the purpose stated consisting of a pair of stationary blades having their cutting edges on their inner sides opposed to each other, a carrier for said blades and a device on said carrier in front of said edges for preventing rising of the fabric to be trimmed and guiding the latter true to said edges.

5. In a trimming attachment for the purpose stated, a supporting plate and relatively adjustable stationary blades affixed thereto for adjustment relatively to said plate and to each other with their cutting edges on their inner sides opposed to each other without overlapping, a the fronts of said cutting edges being flared.

[Claim 6 not printed in the Gazette.]

875,714. SPRING-HOOK. GEORGES LEIGHTON, Paris, France. Filed Oct. 31, 1904. Serial No. 230,845.

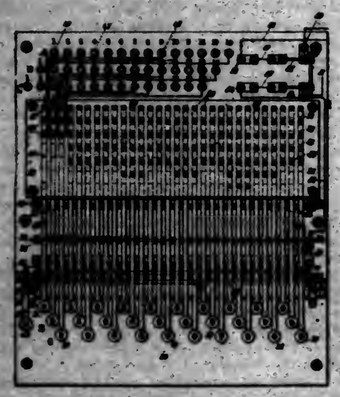


A spring hook formed from one piece of material and comprising a central base portion, an upwardly and inwardly-turned hook portion extending substantially parallel with the base portion, an upwardly and inwardly-turned spring portion also extending substantially parallel with the base, a downwardly-inclined tongue on said spring portion, and a curved end to said tongue, said end being above the base, and inwardly struck-up lugs on the base to act as guides for the tongue end, substantially as set forth.

875,715. INTERCHANGEABLE ELECTRIC DISPLAY APPARATUS. DESONDA LEVY, New York, N. Y., assignor to Mason Monogram Company, New York, N. Y., a Corporation of New York. Filed Apr. 5, 1906. Serial No. 311,997.

1. In electric-display carriage-call apparatus; employing a monogrammic field of electric lamps to be lighted in the outline of the numerals to be displayed thereon, the switch mechanism comprising the base, the set of parallel pivotally mounted numbered switch-levers thereon carrying

spring-contacts in varying numbers at the upper side of their inner ends, the board over said switch-lever contacts and having the parallel rows of binding posts in varying numbers to be engaged by said contacts, the circuit wires connected to said posts, springs normally holding said contacts free of said posts, spring latches for independently locking the front end of said levers in their depressed position when said ends are depressed to move said contacts into connection with said posts, a second series of binding posts (47) to which said circuit wires lead, and wires leading therefrom to the lamps, said levers being of conducting material and in the electric circuit for the lamps, and said circuits and wires leading to the lamps being arranged to display a complete numeral on the monogrammic field on the depression of any one of said levers, the numeral thus displayed corresponding with that delineated on the lever; substantially as set forth.



2. In electric-display carriage-call apparatus employing a monogrammic field of electric lamps to be lighted in the outline of the numerals to be displayed thereon, the switch mechanism comprising the base, the set of parallel pivotally mounted numbered switch-levers thereon carrying spring contacts in varying numbers at the upper side of their inner ends, the board over said switch-lever contacts and having the parallel rows of binding posts in varying numbers to be engaged by said contacts, the circuit wires connected to said posts, means normally holding said contacts free of said posts, spring latches for independently locking the front ends of said levers in their depressed position when said ends are depressed to move said contacts into connection with said posts, releasing means for simultaneously acting on all said latches for releasing all of said depressed levers, a second series of binding posts (47) to which said circuit wires lead, and wires leading therefrom to the lamps, said levers being of conducting material and in the electric circuit for the lamps, and said circuits and wires leading to the lamps being arranged to display a complete numeral on the monogrammic field on the depression of any one of said levers, the numeral thus displayed corresponding with that delineated on the lever; substantially as set forth.

3. In electric-display carriage call apparatus employing a monogrammic field of electric lamps to be lighted in the outline of the numerals to be displayed thereon, the switch mechanism comprising the base, the set of parallel pivotally mounted numbered switch-levers thereon carrying spring contacts in varying numbers at the upper side of their inner ends, the board over said switch-lever contacts and having the parallel rows of binding posts in varying numbers to be engaged by said contacts, the circuit wires connected with said posts, springs normally holding said contacts free of said posts, a row of pivoted independent spring latches between and for engaging and locking the front ends of said levers when they are depressed to move said contacts into connection with said posts, the pivotally supported transverse rod extended along all of said latches, and a releasing lever at one side of said base for moving said rod to release said latches from all of the depressed switch-levers, said switch-levers being of conducting material and in the electric circuit, and said circuits and wires leading to the lamps being arranged to display a complete numeral on the monogrammic field on the depression of any one of said levers, the numeral thus displayed corresponding with that delineated on the lever; substantially as set forth.

4. In electric-display carriage call apparatus employing three monogrammic fields of electric lamps to be lighted in the outlines of the units, tens and hundreds numerals to be displayed thereon, the switch mechanism comprising the base, the three sets of parallel pivotally mounted and correspondingly numbered switch-levers representing units, tens and hundreds, respectively, and carrying contacts in varying numbers at the upper sides of their inner ends, the board over said switch-lever contacts and having the series of parallel rows of binding posts in varying numbers to be engaged by said contacts, the circuit wires connected with said posts, means normally holding said contacts free of said posts, spring latches for locking the front ends of said levers in their depressed position when said ends are depressed to move said contacts into connection with said posts, and releasing means for simultaneously releasing all of said depressed levers, said levers being of conducting material and in the electric circuit for the lamps, and said circuits and wires leading to the lamps being arranged to display a complete numeral on the monogrammic field on the depression of any one of said levers, the numeral thus displayed corresponding with that delineated on the lever; substantially as set forth.

5. In electric-display carriage call apparatus employing three monogrammic fields of electric lamps to be lighted in the outlines of the units, tens and hundreds numerals to be displayed thereon, the switch mechanism comprising the base, the three sets of parallel pivotally mounted and correspondingly numbered switch-levers representing units, tens and hundreds, respectively, and carrying, at the upper sides of their inner ends, spring-contacts in varying numbers, the board over said switch-lever contacts and having the series of parallel rows of binding posts in varying numbers to be engaged by said contacts, the circuit wires connected with said posts, means normally holding said contacts free of said posts, a row of spring latches for locking the front ends of said levers in their depressed position when said ends are depressed to move said contacts into connection with said posts, means for simultaneously releasing all of the depressed levers, the three sets of binding posts 47 corresponding with the said three sets of switch-levers and connected with the wires leading from the posts on said board, and wires leading from the posts 47 to the lamps, said levers being of conducting material and in the electric circuit for the lamps, and said circuits and wires leading to the lamps being arranged to display a complete numeral on the monogrammic field on the depression of any one of said levers, the numeral thus displayed corresponding with that delineated on the lever; substantially as set forth.

875,716. CARBURETER FOR EXPLOSIVE-ENGINES. ADELE A. LONGUEMARE, Paris, France. Filed Nov. 11, 1905. Serial No. 286,878.

1. In a carbureter the combination of an atomiser for the fuel, a choke tube surrounding the atomiser said choke tube comprising the frusta of two hollow cones connected by their smaller ends, a valve seat formed by the base of the lower frustum, a supplemental air valve adapted to fit the valve seat on the choke tube, an inclosing casing surrounding the air valve, a helical spring arranged between the top of the valve and the casing and adapted to press the valve upon its seat, said spring being capable of being overcome by a reduction of pressure within the casing, and means for controlling the movement of the valve substantially as set forth.

2. In a carbureter the combination of an atomiser for the fuel, a choke tube surrounding the atomiser said choke tube comprising the frusta of two hollow cones connected by their smaller ends, a valve seat formed by the base of the lower frustum, a supplemental air valve comprising a hollow piston having an annular internal projection said projection being adapted to fit the valve seat on the choke tube, an inclosing casing surrounding the air valve, a helical spring arranged between the top of the valve and the casing and adapted to press the valve upon its seat, said spring being capable of being overcome by a reduction of pressure within the casing, and means for controlling the movement of the valve substantially as set forth.

3. In a carbureter the combination of an atomizer for the fuel, a choke tube surrounding the atomizer said choke tube comprising the frusta of two hollow cones connected by their smaller ends, a valve seat formed by the base of the lower frustum, a supplemental air valve comprising a hollow piston having a reduced cylindrical portion forming an external annular groove and an internal projection, said projection being adapted to fit the valve seat on the choke tube, an inclosing casing surrounding the air valve, a helical spring arranged between the top of the valve and the casing and adapted to press the valve upon its seat, said spring being capable of being overcome by a reduction of pressure within the casing, a stop-arm adapted to engage the external annular groove of the hollow piston forming the air valve, a pin carrying the said stop-arm, a bearing for the pin, and an operating arm on the outer end of the pin, substantially as set forth.

875,717. CUTTING IMPLEMENT. ABBOT A. LOW, Horseshoe, N. Y. Filed June 10, 1907. Serial No. 378,076.



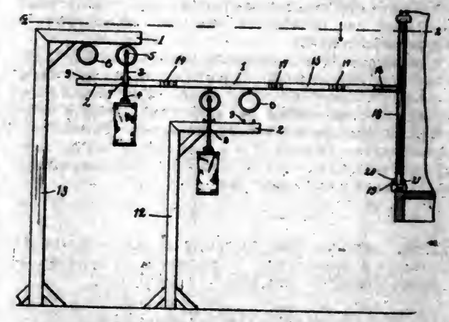
1. In an implement of the character designated, the combination of the stationary cutting blade formed with a shank handle plate, a corresponding handle plate secured to said shank plate, a movable cutting blade pivotally secured between said handle plates and formed with a rear extension, and a spring between said handle plates secured thereto at one end and having its free end bearing against the said rear extension of the movable cutting blade, for the purpose described.

2. In an implement of the character designated, the combination of a stationary blade formed with a shank handle plate a corresponding handle plate secured to said shank handle plate a movable cutting blade pivotally secured between said handle plates and formed with a rear extension, a spring between said handle plates secured thereto at one end and having its free end bearing against the said rear extension of the movable cutting blade, and elastic grippers adjustably secured to both cutting blades, for the purpose described.

3. In an implement of the character designated, the combination of a stationary blade formed with a shank handle plate, a corresponding handle plate secured to said shank handle plate, a movable cutting blade pivotally secured between said handle plates and formed with a rear extension, a spring between said handle plates secured thereto at one end and having its free end bearing against the said rear extension of the movable cutting blade, and a removable end piece attached to the end of the stationary cutting blade, for the purpose described.

4. In an implement of the character designated, the combination of a stationary blade formed with a shank handle plate, a corresponding handle plate secured to said shank handle plate, a movable cutting blade pivotally secured between said handle plates and formed with a rear extension, a spring between said handle plates secured thereto at one end and having its free end bearing against the said rear extension of the movable cutting blade, and a bolt upon the stationary blade arranged to lock the movable blade in its closed position, for the purpose described.

875,718. MAIL-BAG-DELIVERY APPARATUS FOR RAILWAYS. TUPP MACKIM, Amherst, Nova Scotia, Canada. Filed Oct. 18, 1907. Serial No. 398,118.



1. In an apparatus of the character described, the combination with a receiving member having a keeper, of a delivering member, and a mail box hanger removably engaged with the delivering member and having a hook to engage the keeper on the receiving member.

2. In an apparatus of the character described, the combination with a receiving member having a keeper, of a delivering member having an inclined upper face, a mail bag hanger having an inclined projection to engage said inclined face of the delivering member and also having means at its top to engage the keeper on the receiving member.

3. In an apparatus of the character described, the combination with a receiving member having a keeper, of a delivering member having an inclined upper face, stops upon the delivering member, a mail bag hanger having an inclined projection removably supported upon the inclined face of the delivering member between said stops, and means at the top of the hanger to engage the keeper on the receiving member.

4. In an apparatus of the character described, the combination with a receiving member having a keeper, of a delivering member having an inclined upper face, and a mail bag hanger having hooks at its upper and lower ends and an intermediate inclined projection to engage the upper inclined face of the delivering member, the lower hook being adapted to receive a mail bag and the upper hook to engage said keeper.

5. In an apparatus of the character described, the combination with a receiving member and a keeper ring or loop thereon, of a delivering member or bar having an inclined upper face, spaced stops upon the delivering member, a mail bag hanger having at its upper and lower ends hooks and at its intermediate portion an inclined

projection to engage the inclined upper face of the delivering member, the lower hook being adapted to receive a mail bag and the upper one to engage the keeper ring or loop, and spring guards upon the hanger for said hooks.
[Claims 6 to 12 not printed in the Gazette.]

875,719. BOUQUET-HOLDER. FRANK MAWHINNEY, Topeka, Kans. Filed Aug. 5, 1907. Serial No. 387,185.



1. A bouquet holder comprising a shank, a disk member secured at one end of the shank, a "button-head" secured to the other end of the shank, said "button-head" having a tubular portion, and said shank having a curved socket to receive said tubular portion, substantially as shown and described.

2. A bouquet holder comprising a shank, a disk member secured at one end of the shank, a "button-head" secured to the other end of the shank, said "button-head" having a tubular portion, and said shank having a curved socket to receive said tubular portion, said "button-head" comprising two sections of like form, substantially as shown and described.

3. A bouquet holder comprising a shank, a disk member socket to receive said tubular portion, said "button-head" cured to the other end of the shank, said "button-head" having a tubular portion, and said shank having a curved socket to receive said tubular portion, said "button-head" comprising two sections of like form, and means for securing said sections together to form rigid structure, substantially as shown and described.

875,720. MEANS FOR FASTENING MAIL-BAGS, &c. VINCENZO MASSATENTA, Turin, Italy. Filed Dec. 14, 1905. Serial No. 291,794.



1. A fastening for mail bags, including means for closing the bag, and a lock having means for separably connecting it to both ends of said bag closing means.

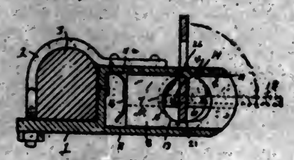
2. A fastening for mail bags, including means for closing the bag, and a lock having a catch adapted to engage one end of said bag closing means, and means for separably engaging the other end of said bag closing means.

3. A fastening for mail bags, including means for closing the bag, and a lock having a catch adapted to engage one end of said bag closing means, means for disengaging said catch when said lock and end are turned relatively, and said lock having means for engaging the other end of said bag closing means, means for holding said parts in engagement, and means for preventing the disengagement of said catch while said holding means are operative.

4. A fastening for mail bags, etc., including a strap, a part adapted to be fastened to one end thereof, a spring catch for fastening the part to the other end of said strap, and means for preventing the release of such catch.

5. The combination of a strap having at one end an opening or eye, and at the other end a projection, with a plate having an opening coinciding with that of the strap, whereby a seal may be passed therethrough to hold the parts united, and means carried by said plate for engaging such projection.
[Claims 6 to 8 not printed in the Gazette.]

875,721. THILL-COUPLING. NICHOLAS H. MEETS, Hartford, Wis. Filed Mar. 29, 1907. Serial No. 365,349.



1. In a coupling of the described class the combination of a supporting bracket, a slide mounted therein and provided with a substantially circular aperture, a coupling member provided with forked arms embracing the bracket and having inwardly projecting trunnions resting in suitable bearings in the bracket,—said trunnions being provided with cross heads adapted to swing in said slide aperture,—and a spring arranged to press the slide against the ends of the cross heads, said bracket and slide being adapted to permit the trunnions and cross heads to be manipulated into and out of position when the forked arms are in a raised position.

2. In a thill coupling, the combination of a bracket provided with a cross slot terminating in a trunnion bearing at the base of the slot, a thill iron provided with a trunnion having a rearwardly projecting member adapted to enter the cross slot at one side of the bearing, a slide mounted in the bracket across the plane of said slot and provided with an opening adapted to receive said member,—said opening being adapted to permit the member to swing to a position substantially at right angles to the slot, and said member being adapted to substantially fit the opening in such position, together with means for pressing the slide resiliently against said member.

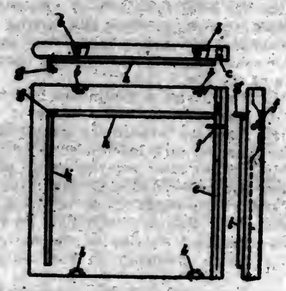
3. In a coupling of the described class, the combination of a supporting bracket provided with an open cross slot extending downwardly from its upper surface, a centrally disposed slide mounted in suitable guide ways in said bracket and provided with an aperture opening through the top of the slide coincidently with said slot and of greater width than the slot, a spring adapted to move the slide forwardly, a thill iron having trunnions adapted to enter said slot, and projections on the thill iron arranged, in one position of adjustment, to enter the aperture in the slide, and in another position to push the slide backwardly against the tension of said spring.

4. In a coupling of the described class, the combination of a supporting bracket provided with an open cross slot extending downwardly from its upper surface, a centrally disposed slide mounted in suitable guide ways in said bracket and provided with an aperture opening through the top of the slide coincidently with said slot and of greater width than the slot, a spring adapted to move the slide forwardly, a thill iron having trunnions adapted to enter said slot, and projections on the thill iron, arranged, in one position of adjustment, to enter the aperture in the slide, and in another position to push the slide backwardly against the tension of said spring,—said bracket having a plate fitting a recess in said slide and extending between the projections, whereby they are prevented from shifting laterally.

5. In a coupling of the described class, the combination of a supporting bracket provided with an open cross slot extending downwardly from its upper surface, a centrally disposed slide mounted in suitable guide ways in said bracket and provided with an aperture of a generally circular form open at the upper side through the top of the slide, a spring adapted to move the slide forwardly to a position with the slide opening coincident with said slot, a thill iron provided with a member, adapted, when in one position of adjustment, to enter said slot and slide aperture,—said member being in length substantially equal to the diameter of the slide aperture and adapted to extend across the plane of the slot when the thill iron is in

normal position of use, and said thill iron having trunnions adapted to rest at the base of the slot when the thill iron is in such position.
[Claims 6 and 7 not printed in the Gazette.]

875,722. KNOCKDOWN SECTIONAL BOOKCASE. FRANK B. MOORE, Detroit, Mich. Filed Oct. 18, 1905. Serial No. 283,217.



1. The combination in a knockdown sectional structure, of abutting end sections having laterally-opening conical recesses partially in each section the smaller end being at the opening thereof, and shelves having truncated cones at the ends thereof adapted to be detachably inserted in said recesses and partially within the respective abutting end-sections.

2. In a knockdown sectional bookcase, the combination of a shelf having at its ends outwardly projecting truncated cones, so attached thereto as to permit being adjusted longitudinally along their axes, and abutting end-sections having laterally-opening conical recesses partially in each section adapted to detachably engage the said cones, substantially as described.

3. In a knockdown sectional bookcase, the combination of a shelf having at its ends outwardly projecting truncated cones, so attached thereto as to permit being adjusted longitudinally along their axes, abutting end-sections having laterally-opening conical recesses partially in each section adapted to detachably engage the said cones, a back adapted to engage the shelf and end-sections by means of rabbets, and hooks at the lateral edges of the backs, adapted to engage pins in the rabbets of the end-sections, substantially as described.

4. In a knockdown sectional bookcase, the combination of a shelf having at its ends outwardly projecting truncated cones, so attached thereto as to permit being adjusted longitudinally along their axes, abutting end-sections having laterally-opening conical recesses partially in each section adapted to detachably engage the said cones, a back adapted to engage the shelf and end-sections by means of rabbets, hooks at the lateral edges of the backs, adapted to engage pins in the rabbets of the end-sections, and means on the end-sections to support and operate a front member or door, substantially as described.

5. In a knock-down structure, a shelf having supporting projections at its ends, said projections being widest at their centers and relatively narrow towards the top and bottom of the shelf, in combination with abutting end pieces formed with adjoining complementary recessed portions, said recessed portions together constituting pockets for the reception of the supporting projections on the ends of the shelf, the pockets being formed complementary to said projections, whereby they are widest at said abutting edges of the end pieces and relatively narrow at their tops and bottoms respectively, whereby to facilitate the entrance and centering of the projections in the recesses and to exert a constant tendency to maintain the end pieces in vertical alinement.
[Claims 6 and 7 not printed in the Gazette.]

875,723. SLED. THOMAS MOURADICK, Mojavé, Cal. Filed Jan. 22, 1907. Serial No. 353,500.



1. The combination with a sled, of a tongue slidably mounted on said sled, and a foot rest secured to one end of said tongue for the purpose described.

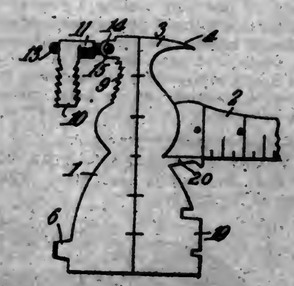
2. The combination with a sled provided with guide-plates, of a tongue mounted in said plates and a swinging foot rest carried by said tongue, for the purpose described.

3. The combination with a sled provided with guide-plates, of a tongue mounted in said guide plates, a swinging foot rest carried by said tongue and a skirt supporter mounted on said tongue, for the purpose described.

4. The combination with a sled, of a tongue slidably mounted in said sled, a skirt supporter slidably mounted on said tongue and a swinging foot rest carried by one end of said tongue, for the purpose described.

5. The combination with a sled having guide-plates, secured under its seat, of a tongue mounted in said plates a bolt secured in one end of said tongue provided with a ring and a pin secured in the other end of said tongue, a foot rest carried by said ring, and a skirt supporter slidably mounted on said tongue, for the purpose, described.

875,724. COMBINATION-TOOL. ELMER E. MULLINIX, Burlington, Kans. Filed Aug. 16, 1907. Serial No. 388,901.



1. The combination with a tool head provided with a toothed jaw, of an arm pivotally connected with the head for swinging movement parallel with the longitudinal axis thereof, and a double toothed jaw engaging the arm and provided on one side with a boss whereby to increase the space between two jaws for the purpose of engaging pipes or the like.

2. The combination with a tool head provided with a toothed jaw, of a threaded arm pivotally connected with the head, and a double toothed jaw engaging the arm and provided on one side with a boss whereby to increase the space between two jaws for the purpose of engaging pipes or the like.

3. The combination with a tool head having a toothed jaw, of a threaded arm pivotally connected therewith, and a reversible toothed jaw engaging the arm.

4. The combination with a tool head provided with a toothed jaw, of a bolt carried by the head, an arm mounted upon the bolt and provided with an inclined face, a similarly faced boss with which the faces of the arm coacts, a coiled spring upon the bolt to hold the two faces in contact, and a toothed jaw carried by the arm.

875,725. NEEDLE-THREADER. COLONEL A. MURPHY, Chicago, Ill. Filed Feb. 27, 1907. Serial No. 359,564.



1. In a sewing machine needle threader, the combination of an elongated body portion having one end transversely slotted to receive the thread, an immovable threading member extending longitudinally of said body portion, and a stop at the bottom of the body portion to limit the movement of the threader to a position to register the threading member with the eye of the needle, substantially as shown and described.

2. In a sewing machine needle threader, the combination of an elongated body portion having one end transversely slotted, an immovable threading member extending longitudinally of said body portion, a stop at the bottom of the body portion to limit the movement of the threader to a position to register the threading member with the eye of the needle, and a guide-arm, substantially as shown and described.

3. In a sewing machine needle threader, the combination of an elongated body portion having one end transversely slotted, an immovable threading member extending longitudinally of said body portion, a stop at the bottom of the body portion to limit the movement of the threader to a position to register the threading member with the eye of the needle, and approximately parallel guide-arms to keep the needle substantially parallel with the free end of the threading member and its hook, substantially as shown and described.

4. In a sewing machine needle threader, the combination of a flat elongated body portion having one end transversely slotted, an immovable threading member extending longitudinally of said body portion, a stop at the bottom of the body portion to limit the movement of the threader to a position to register the threading member with the eye of the needle, and approximately parallel guide-arms to keep the needle substantially parallel with the free end of the threading member and its hook, substantially as shown and described.

875,726. VEHICLE-WHEEL AND TIRE THEREFOR. VALENTINE H. MCDOWELL, Lynn, Mass. Filed Sept. 14, 1906. Serial No. 334,641.



1. An elastic tire adapted to contain air, and provided with a plurality of clencher-engaging flanges separated by a space at each edge of its base portion, the body of the tire and said flanges being reinforced by continuous textile fabric embedded therein.

2. In combination, an elastic tire adapted to contain air, and provided with a plurality of clencher-engaging flanges separated by a space at each edge of its base portion, the body of the tire and said flanges being reinforced by continuous textile fabric embedded therein, and a wheel rim having means for engaging both sides and the spaces of said flanges.

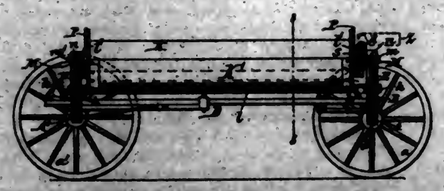
3. An elastic tire adapted to contain air, and provided at each edge of its base portion with a plurality of clencher-engaging flanges separated by a space, said flanges and the body of the tire being reinforced by continuous textile fabric embedded therein, a wheel rim having inwardly-projecting ears adapted to enter the spaces of said flanges, and means for connecting the said ears and flanges to prevent creeping of the tire.

4. A resilient tire having a continuous longitudinal air chamber at its inner portion, and a series of transverse independent air chambers between the continuous chamber and the thread portion, each independent chamber having two oppositely inclined outer branches which meet at the central portion of the tire in close proximity to the tread, and diverge toward the edges of the tire, and two oppositely inclined inner branches extending inwardly from the outer branches, and meeting at the central portion of the tire in close proximity to the continuous air chamber.

5. A resilient tire having a series of independent transverse air chambers between its tread and inner portions, each chamber having two oppositely-inclined outer branches which meet at the central portion of the tire in relatively close proximity to the tread, and two oppositely-inclined inner branches extending inwardly from the outer branches, and meeting at the central portion of the said outer and inner branches surrounding a core which is integral with the body of the tire, the several cores and the intermediate portions of the body being circumferentially continuous.

[Claims 6 to 9 not printed in the Gazette.]

875,727. DUMPING WAGON OR CAR. EDWARD C. NORTH and WILLIAM L. KNAPP, Palmyra, and CHRISTOPHER H. BIERBAUM, Buffalo, N. Y. Filed Apr. 6, 1907. Serial No. 366,664.



1. A dumping wagon or car having two vertically turning trays arranged side by side and adapted to meet normally at their inner edges, the axes of said trays being arranged inwardly from the longitudinal center of the trays, substantially as set forth.

2. A dumping wagon or car having two trays pivoted parallel to each other and each having a curved body and end walls, the inner edges of said bodies meeting each other and being in line with the axes of the trays in the normal position thereof, substantially as set forth.

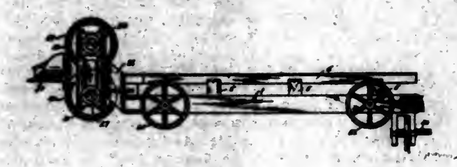
3. A dumping wagon or car having two trays pivoted parallel to each other and each having a curved body and end walls, the inner edges of said bodies meeting each other and being in line with the axes of the trays in the normal position thereof and the outer edges of said trays being normally above said axes, substantially as set forth.

4. A dumping wagon or car having two trays pivoted parallel to each other and each having a curved body and upright end walls, the inner edges of said bodies meeting each other and being in line with the axes of the trays in the normal position thereof and the opposing inner edges of each pair of corresponding end walls diverging upwardly, substantially as set forth.

5. A dumping wagon or car having two trays pivoted parallel to each other and each having a curved body and upright end walls, the inner edges of said bodies meeting each other and being in line with the axes of the trays in the normal position thereof and the opposing inner edges of each pair of corresponding end walls diverging upwardly and shutter or bridge plates arranged to close the spaces between the inner portions of said end walls, substantially as set forth.

[Claims 6 to 23 not printed in the Gazette.]

875,728. MACHINE FOR DRAWING LAPWELD-PIPE. LA VERNE W. NOYES, Chicago, Ill. Filed May 3, 1902. Serial No. 105,762.



1. The combination with a draw bench, of a buggy thereon, a pair of welding rolls and driving means common to both rolls and buggy for driving said rolls and buggy simultaneously and in the same direction, substantially as described.

2. The combination with a draw bench, of a buggy thereon, a pair of welding rolls and driving means common to both rolls and buggy for driving said rolls in the same direction and with the same circumferential speed as the speed of the buggy at all times, substantially as described.

3. The combination with a draw bench, of a buggy mounted thereon, a forming bell mounted at the forward end of the bench, a pair of welding rolls mounted in the rear of the forming bell, cables for operating said buggy and said rolls in unison, in the same direction, whereby the skelp is drawn first through the bell and thence passed through the rolls, substantially as described.

4. The combination with a pair of welding rolls, of a welding ball, and means operated by said rolls for automatically moving said welding ball away from and between said rolls.

5. The combination with a pair of pipe welding rolls, of an arm extending across the same and supported at the sides thereof, a welding ball rigidly mounted upon said arm, and means operated by said rolls for automatically moving said ball away from and between the same.

[Claims 6 to 11 not printed in the Gazette.]

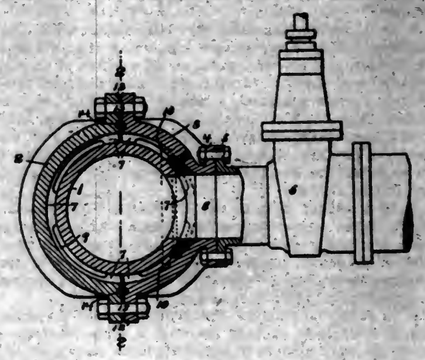
875,729. CONNECTING BRANCH SLEEVE. DENNIS F. O'BRIEN, Newark, N. J. Filed May 12, 1904. Serial No. 207,611.

1. A split sleeve for making connections to water mains under pressure provided with an interiorly projecting portion or portions of small dimensions so as to be capable of being readily reduced in depth to adapt the sleeve to mains of different diameters, substantially as described.

2. A split sleeve for making connections to water mains under pressure provided on opposite sides of the hub opening, considered lengthwise of the sleeve, with interiorly projecting portions of small dimensions so as to be capable of being readily reduced in depth to adapt the sleeve to mains of different diameters, substantially as described.

3. A split sleeve for making connections to water mains under pressure provided on opposite sides of the hub opening, considered lengthwise of the sleeve, with rings each having an inwardly projecting portion or portions of small dimensions so as to be capable of being readily reduced in depth to adapt the sleeve to mains of different diameters, substantially as described.

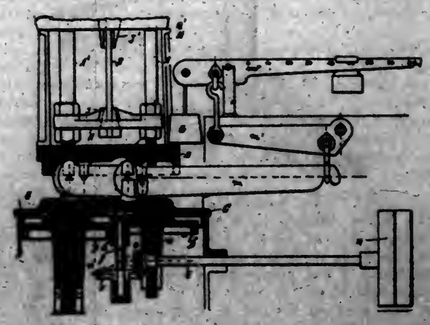
4. A split sleeve for making connections to water mains under pressure provided on each side of the hub opening, considered lengthwise of the sleeve, with a plurality of projecting portions of small dimensions so as to be capable of being readily reduced in depth to adapt the sleeve to mains of different diameters, substantially as described.



5. A split sleeve for making connections to water mains under pressure provided on each side of the hub opening, considered lengthwise of the sleeve, with a ring having a plurality of projecting portions of small dimensions so as to be capable of being readily reduced in depth to adapt the sleeve to mains of different diameters, substantially as described.

[Claim 6 not printed in the Gazette.]

875,730. TESTING-MACHINE. TINIUS OLSEN, Philadelphia, Pa. Filed Feb. 8, 1904. Serial No. 192,581.



1. In a testing machine having two specimen holders, means for fixing one of the said holders mounted on a scale platform rigidly against vertical movement relative to the scale beams, a movable support for the other, a movable platform on which the latter is supported, means for moving the said platform and therethrough the movable holder comprising three screws of varying pitches for their threads and varying diameters for their cross sections, and means for actuating the said screws at a rate inversely proportionate to their thread pitches and diameters.

2. In a testing machine the combination of two specimen holders mounted on a scale platform, one of which is stationary as to vertical motion and one independently

movable relative to the scale beam, means for actuating the said independently movable holder whereby stress is communicated to the specimen, said means consisting of three screws, said screws being of varying sizes and thread pitches and located at the vertices of an acute triangle and means for giving to the said movable holder through the said screws longitudinal motion in proportion to the thread pitches of the said screws, as and for the purpose set out.

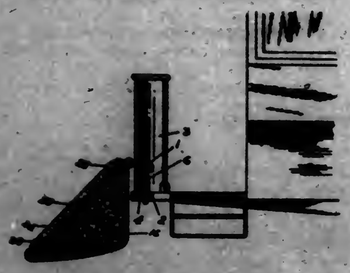
3. In a testing machine the combination of a lower specimen holder, three screws supporting the said specimen holder, said screws located at the vertices of an acute triangle and having varying but compensating thread pitches, a scale platform, a second and upper specimen holder, standards K supporting said upper specimen holder on said scale platform, said latter supported on said scale platform through standards K therefor and means for actuating said screws inversely in proportion to their sizes and thread pitches.

4. In a testing machine the combination of a specimen holder, three screws supporting said holder, said screws being of varying sizes but compensating sizes and thread pitches, a second specimen holder supported on a scale platform and means for actuating the said screws inversely in proportion to their sizes and thread pitches.

5. In a testing machine the combination of a specimen holder, a portable support therefor, a scale platform on which the said support is mounted, three screws of varying sizes and pitches, said screws located at the vertices of a triangle whose sides are not equal, a movable specimen holder, said movable specimen holder supported on the said three screws and means for rotating the said screws inversely in proportion to their sizes and thread pitches.

[Claim 6 not printed in the Gazette.]

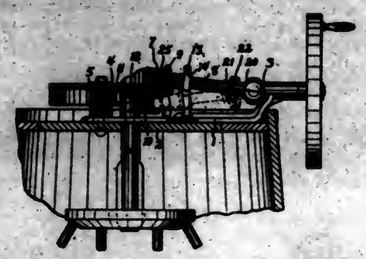
875,731. CAR-FENDER. TIMOTHY O'REARDON, Detroit, Mich. Filed Sept. 28, 1907. Serial No. 395,012.



1. A car fender comprising a substantially rectangular open frame, adapted to be secured in oblique position to the front of a car, a net having a substantially rectangular body laced at its upper end to an upper cross-member of the frame, a pad consisting of superposed sheets of soft fabric secured on the lower end of the net which is laced to and wrapped around a lower cross member of the frame, wings integral with the net laced along their oblique margins to the sides of the frame and along their lower margins to the adjacent edges of the net body, and pads covering the side members of the frame.

2. A car fender comprising a substantially rectangular open frame, adapted to be secured in oblique position to the front of a car, a net having a substantially rectangular body laced at its upper end to an upper cross-member of the frame, a pad consisting of superposed sheets of soft fabrics secured on the lower end of the net which is laced to and wrapped around a lower cross member of the frame, wings integral with the net laced along their oblique margins to the sides of the frame and along their lower margins to the adjacent edges of the net body, pads folded around the side members of the frame, and straps buckled around the pads and side members.

875,732. DRIVING MECHANISM FOR WASHING-MACHINES. JOHN C. PETERS, Fort Wayne, Ind. Filed Apr. 19, 1905. Serial No. 256,358.



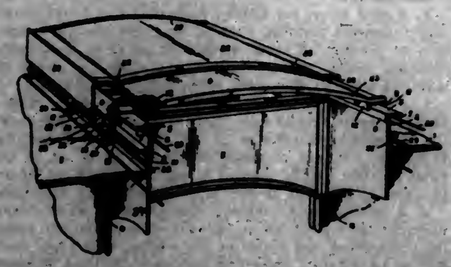
1. In mechanism of the class described, a guide having curved faces; a rotatable swinging tumbling shaft extending through the guide; a bearing block for the tumbling shaft having oppositely disposed lugs which act against the curved faces of the guide; and means fixed on the tumbling shaft adjacent the bearing block to hold the latter in proper relation with the guide.

2. In mechanism of the class described, a guide having curved faces; a bearing block having bearing relation with said faces; and a swinging tumbling shaft extending through the block and having means at its extending end to preserve the relation between the block and guide.

875,733. APPLIANCE FOR OPENING AND CLOSING SWITCHES ON CAR-LINES. WILLIAM A. POINDEXTER, Allegheny, Pa. Filed July 30, 1906. Serial No. 328,491.

In a railway switch operating device, in combination with the rail, a switch point and a car, of a primary centrally pivoted lever having a projecting lug at each end thereof, a centrally pivoted secondary lever having one extremity directly attached to the primary lever and the other extremity directly attached to the switch point, and a movable arm depending from said car to selectively engage either of said lugs, substantially as described and for the purposes set forth.

875,734. SHIP. JOHN REID, New York, N. Y. Filed June 14, 1907. Serial No. 379,043.



1. In a ship's hatch construction, the combination with suitable supports projecting upwardly from the sides of the hatch way, of a cover traveling along said supports.

a cover adjoining the aforesaid cover and arranged in a higher level, means for raising and supporting the upper cover, and means for causing the lower cover to travel along said supports under the higher cover, substantially as described.

2. In a ship's hatch construction, the combination with the side coamings of the hatch way and track ways rigidly secured thereto at the upper end, of a cover extending across said hatch way and traveling on said track ways, a cover normally supported on the said cover, means for raising and supporting the upper cover from the lower cover, and means for causing the lower cover to travel along said track ways, substantially as described.

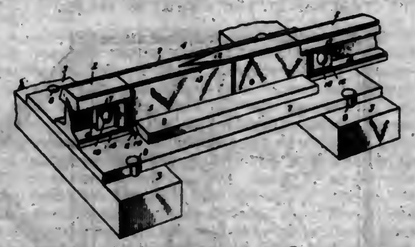
3. In a ship's hatch construction, the combination with the side coamings and a track way rigidly secured to the top ends of said side coamings, of a cover having bracket extensions therefrom at each side thereof, bearings arranged in said brackets, rollers journaled on said bearings and traveling on said track way, a cover normally resting on the said cover and having extensions at each side thereof surrounding the aforesaid bracket extensions of the lower cover, means engaging said extensions of the upper cover for the raising of said upper cover from the lower cover, and means for causing said lower cover to travel on said track ways, substantially as described.

4. In a ship's hatch construction, the combination with track ways supported at the sides of the hatch way, of a cover extending across said hatch way and supported and traveling on said track way, a cover extending across said hatch way and adapted to be raised and supported above the aforesaid cover, a cable passing along said hatch way adjacent with the side thereof and adapted to be connected to said traveling cover, and means for setting said cable in motion, substantially as described.

5. In a ship's hatch construction, the combination with track ways supported at the sides of the hatch way, of a cover traveling on said track ways, an adjoining cover adapted to be raised above the aforesaid cover, endless cables extending along the sides of said hatch way having one rope thereof in proximity to said track and said traveling cover, and means extending from said traveling cover for gripping said cable to said cover and freeing said cover from said cable, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

875,735. RAIL-JOINT. AMOS R. RICH, East Eddington, Me. Filed July 5, 1907. Serial No. 382,213.

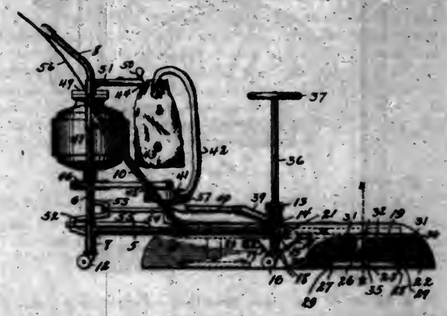


1. In a rail joint, the combination with track rails, of a base plate, two slidably engaged joint members connected to the adjacent ends of the rails and means upon the base plate for retaining said joint members thereon, substantially as described.

2. In a rail joint, the combination with track rails, of a base plate, two slidably engaged joint members connected to the adjacent ends of the rails and guide devices upon said base plate to slidably receive said joint members between them and to retain said members on the base plate, substantially as described.

3. In a rail joint, the combination with two track rails, of a base plate provided with parallel cleats having undercut inner walls, two joint members slidably arranged between said cleats and having their inner ends overlapping and slidably engaged and their outer ends formed with tongues to receive the track rails between them and fastenings passed through said tongues and said track rails, substantially as described.

875,736. FLOOR POLISHING AND FINISHING MACHINE. SAMUEL M. RICH, Altadena, Cal. Filed Dec. 12, 1906. Serial No. 347,504.



1. In a device of the character described, the combination with a supporting frame, of a motor mounted upon said frame, a vertically movable frame arranged within said supporting frame, reciprocating abrading mechanisms mounted in said last named frame, means arranged through said first named frame for adjusting said last named frame and said abrading mechanisms, and means for imparting reciprocatory movement to said abrading mechanisms, substantially as described.

2. In a device of the character described, the combination with a supporting frame, of a vertically movable frame arranged therein, reciprocatory abrading mechanisms arranged within said last named frame, an adjusting element arranged through a portion of said first named frame and against said last named frame to adjust the same and said abrading mechanism, and means for imparting reciprocatory movement to said abrading mechanisms, substantially as described.

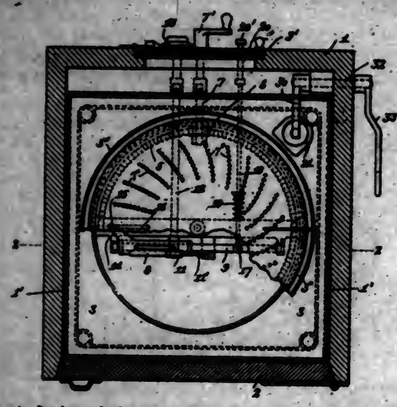
3. In a device of the character described, the combination with the supporting side frames, of a vertically movable frame mounted therein, reciprocating abrading mechanisms arranged within said last named frame, a member bridging said side frames, an adjusting element arranged through said member and against said last named frame to adjust the same and said abrading mechanisms, and means for imparting reciprocatory movement to said abrading mechanisms, substantially as described.

4. In a device of the character described, the combination with the supporting side frames, of a vertically movable frame mounted therein, an apron carried by said second frame and forming a casing, reciprocatory abrading mechanisms mounted in said last named frame to move within said casing, a member bridging said side frames, and adjusting element arranged through said member and against said last named frame to adjust the same and said abrading mechanisms, and means for imparting reciprocatory movement to said abrading mechanisms, substantially as described.

5. In a device of the character described, the combination with the supporting side frames, of a vertically movable frame mounted therein, an apron carried by said second frame and forming a casing, reciprocatory abrading mechanisms, mounted in said last named frame to move within said casing, a member bridging said side frames, an adjusting element arranged through said member and against said last named frame to adjust the same and said abrading mechanisms, and a motor mounted on said first named frame for imparting reciprocatory movement to said abrading mechanisms, substantially as described.

[Claim 6 not printed in the Gazette.]

875,737. MACHINE FOR CUTTING BUTTER OR THE LIKE MATERIAL. CHARLES E. ROBERTS and OWEN W. ROBERTS, Chicago, Ill. Filed Feb. 26, 1907. Serial No. 359,432.



1. A device of the class described comprising a base, a turnable rotatable thereon, an upright secured to said base adjacent said table, a dividing plate slidable upon said upright, a cutter arm adjustable on said dividing plate, means for adjusting said cutter arm, predetermined amounts, vertically relative to said turntable.

2. A device of the class described comprising a base, a revoluble turntable pivoted thereon, an upright secured to said base adjacent said turntable, a dividing plate slidable along said upright, a cutter arm vertically adjustable on said dividing plate, and means to secure said cutter arm in predetermined adjusted position.

3. A device of the class described comprising a base, a turntable revoluble thereon, an upright secured to said base adjacent the turntable, a dividing plate slidable along said upright, a cutter arm vertically adjustable on said dividing plate, and means to secure said cutter arm in predetermined adjusted position, said means consisting of a separately adjustable member carrying a locking bolt, means to secure said member in adjusted position and spaced grooves on the dividing plate, coöperating with said locking bolt.

4. A device of the class described comprising a base, a turntable revoluble thereon, an upright secured to said base adjacent the turntable, a dividing plate slidable along said upright, inter-engaging flanges on said dividing plate and upright respectively, a rigid cutter arm vertically adjustable upon said dividing plate, a slidable bar mounted transversely in said cutter arm, a locking bolt adapted to extend outward from said bar, spaced grooves arranged in said dividing plate for coöperation with said bolt and means for normally projecting said bolt into one of said grooves.

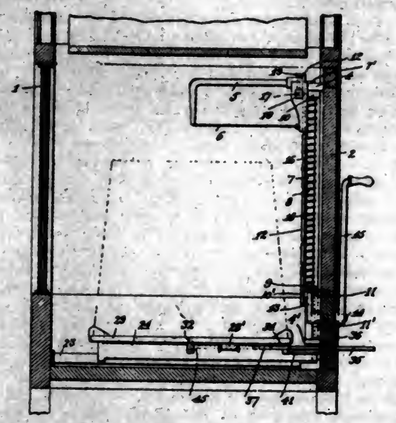
5. A device of the class described comprising a base, a turntable revoluble thereon, an upright secured to said base adjacent said table, a dividing plate held for sliding movement on said upright, a rigid cutter arm adjustably secured to said plate, means for normally holding said plate and arm at the upper limit of their movement and means for manually depressing said parts at will.

[Claims 6 to 21 not printed in the Gazette.]

875,738. MACHINE FOR CUTTING BUTTER, &c. CHARLES E. ROBERTS and OWEN W. ROBERTS, Chicago, Ill. Filed Mar. 27, 1907. Serial No. 364,862.

1. A butter cutting apparatus comprising a casing, slide ways secured in the base thereon, a turn table mounted to slide on said ways and to turn about an axis, and a movable cutter member adapted to operate adjacent said turn table and sever blocks of butter thereon.

2. A butter cutting apparatus comprising a casing, a door therein, slide ways formed in the base of the casing and extending towards said door, a turn table mounted to slide on said ways and to turn about a center, and a vertically movable cutter member adapted to operate above said turn table.



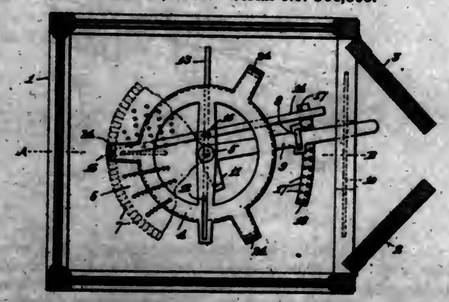
3. A butter cutting apparatus comprising a casing, tubular guides formed in the base thereof, a support having parts to slide in and upon said guides, a turn table mounted to rotate upon said support, and a movable cutting member mounted to operate adjacent said turn table.

4. An apparatus of the class described comprising a casing, tubes to serve as guide ways secured in the base thereof, a support slidable upon said tubes and supported thereon at the rear, rods slidable within said tubes and arranged to receive said support at the front thereof, a turn table pivoted upon said support, and a cutter member arranged for operation adjacent said turn table.

5. An apparatus of the class described comprising a casing, a turn table pivoted therein, a door for said casing and a cutting member mounted upon said door and arranged to operate adjacent said turn table.

[Claims 6 to 16 not printed in the Gazette.]

875,739. MACHINE FOR CUTTING BUTTER, &c. CHARLES E. ROBERTS and OWEN W. ROBERTS, Chicago, Ill. Filed Mar. 27, 1907. Serial No. 364,863.



1. A butter cutting apparatus comprising an inclosing casing, means for fixing a supporting base in position therein, a supporting base, a rotatable index plate thereon, and a removable butter pan adapted to be positioned on said index plate.

2. A butter cutting apparatus comprising a casing, a base member therein, interengaging parts on said casing and base for holding said elements in fixed relation, an index plate pivoted and supported on said base, means for rotating said index plate, and a removable pan arranged to be positioned on said index plate.

3. A butter cutting apparatus comprising a casing, a base arranged therein, similarly spaced engaging members on said casing and base to determine the location of said base, an index plate pivoted on said base, an index lever also pivoted to said base, and constructed to operate said plate, a portion of said lever extending without the casing, a butter pan removably secured to said index plate, and means for determining the position of said butter pan on said index plate.

4. A butter cutting apparatus comprising a casing a base positioned therein, means for fixing the location of said base in said casing, an index plate pivoted to said base, means for rotating said index plate, a butter pan, an annulus secured thereto, and coöperating means on said annulus and index plate for determining the position of said ring and pan on said index plate.

5. A butter cutting apparatus comprising a casing, a base therein, interengaging lugs and flanges on said casing and base respectively to determine the position of the base, an index plate on said base having peripheral projections thereon, a removable butter pan, a ring secured thereto at its circumference, said ring having notches spaced to receive the projections on said index plate to position the same thereon.

[Claims 6 to 10 not printed in the Gazette.]

875,740. PASSENGER-CAR. WILLIAM G. ROSS and DUNCAN MCDONALD, Montreal, Quebec, Canada. Filed July 26, 1907. Serial No. 385,619.



1. A passenger car having a platform extending inwardly from one side of the car, provided with inclosing means whereby the interior of the car is divided into compartments, said car being provided with an interior passage-way between the platform inclosure and one side of the car whereby the said several compartments are connected.

2. In a passenger car, a platform extending inwardly from one side of the car, and dividing the interior of said car into compartments, the car being provided with a passageway connecting the compartments, an entrance and exit door and means forming separate passageways for the entrance and exit of passengers to and from said entrance and exit doors.

3. A passenger car having a platform extending inwardly from one side of the car, dividing the car into compartments, the car being provided with a passageway connecting the compartments so formed, an entrance door from the platform into the said passageway, and exit doors for each of the said compartments and means forming separate passageways for said entrance and exits.

4. A passenger car having a platform extending inwardly from one side of the car, dividing the car into compartments, the car being provided with a passage connecting the compartments so formed, an entrance door from the platform into the said passage and exit doors from each of the said compartments to the said platform.

5. A passenger car having a platform extending inwardly from one side of the car, steps leading thereto, hand-rails dividing the platform into three ways, and entrance and exit doors from the said platform opening into the three ways.

[Claims 6 to 12 not printed in the Gazette.]

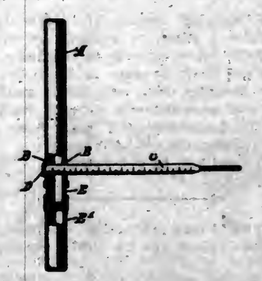
875,741. BOX. HENRY SAMETZ, Philadelphia, Pa., assignor to Lewis Oppenheimer's Sons, Philadelphia, Pa., a Firm. Filed Mar. 19, 1906. Serial No. 306,736.

1. In a device of the character described, a box, compartments therein having sides and end pieces, the latter being situated to form spaces between them and the edges of the box, and a removably independent auxiliary retainer having ends adapted to be seated within said spaces and portions resting loosely on the tops of the compartments and of the box and overlying the partitions between the compartments.



2. A box having compartments, an auxiliary retainer independent of and removable from the box and removably supported on the tops of the same and its compartments, and having depending portions received in the spaces between the walls of the box and compartments, and a lid engaged over the top of the box and over said retainer, said retainer having portions overlapping the walls of the box and of the compartments.

875,742. CLINICAL-THERMOMETER ATTACHMENT. RALPH F. SCHNEIDER, New York, N. Y., assignor to Charles J. Tagliabue, Brooklyn, N. Y. Filed July 27, 1907. Serial No. 385,878.



1. The combination of a case provided with openings, a thermometer adapted to be projected through said openings at substantially right angles to the axis of the case, and an enlargement on said thermometer to prevent the thermometer from being forced all the way through said openings.

2. The combination of a case provided with openings, a thermometer adapted to be projected through said openings at substantially right angles to the axis of the case, and an enlargement at one end of said thermometer to prevent the thermometer from being forced all the way through said openings.

875,743. CIGAR-LIGHTING APPARATUS. ALBANUS SÖDERLUND, Arlington, and BARTHOLEMEW HALLENBROOK, Boston, Mass., assignors of one-third to Axel Smith, Arlington, Mass. Filed Apr. 15, 1907. Serial No. 368,154.

1. Tobacco igniting apparatus, comprising a hood adapted to cover a flame and having a small outward draft passage in its upper part, permanently open; there being an additional outward draft passage in the upper part of the hood; in combination with means normally closing said additional passage, adapted to be operated by inward pressure of tobacco thereon.

2. Tobacco igniting apparatus, comprising, in combination, a hood adapted to cover a flame and having an outward draft passage normally closed; means automatically closing said passage, yielding to inward pressure; and a screen in the hood between said passage and the flame preventing access to the flame.

3. Tobacco igniting apparatus, comprising, in combination, a hood adapted to cover a flame, having a draft passage from its upper part, and an automatically closing door in the passage, yielding to open the passage by inward pressure.

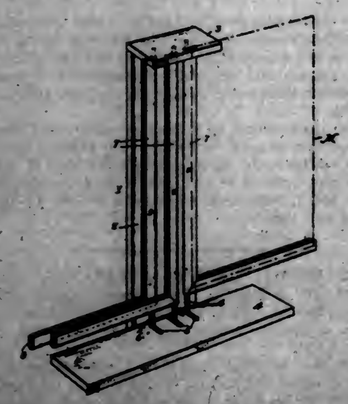
4. Tobacco igniting apparatus, comprising, in combination, a hood adapted to cover a flame, having an opening arranged with a tube passing downward, an automatically closing door therein, and a knob projecting downward from the door in the entrance-way.



5. Tobacco igniting apparatus, comprising a hood adapted to cover a flame, in combination with a burner and an automatic valve normally turned down, there being a small outward draft passage in the upper portion of the hood, permanently open, adapted to maintain only a small flame; and an additional outward draft opening in the hood, adapted to maintain a larger flame; and means automatically closing the second passage.

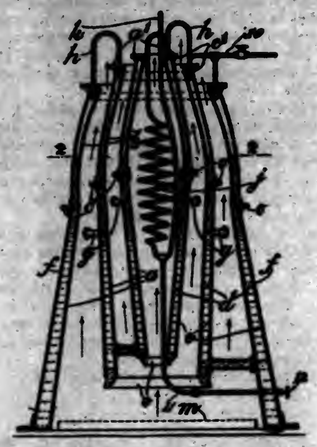
[Claim 6 not printed in the Gazette.]

875,744. MUSIC-LEAF TURNER. LAURA B. STANTON, Colbran, Colo. Filed Apr. 24, 1907. Serial No. 370,048.



The herein described music leaf turner comprising the upright back 2, the forwardly and right angularly projecting top 3, the forwardly and right angularly projecting bottom 4, the latter having its ends projecting beyond the sides of the back 2 to provide a supporting base for the device, said top and bottom being formed in their opposing faces with the vertically-aliming, forwardly and rearwardly-extending, parallel grooves 5, the right angular music sheet holders 7 constructed of sheet metal bent upon itself to provide grooves for the reception of the edges of the music sheets, and the pivot rods 6 passed through and secured in the vertical portions of said holders and having their ends mounted to turn and slide in said grooves in the top and bottom or base of the device, substantially as described.

875,745. APPARATUS FOR THE RAPID GENERATION OF STEAM. GEORGE R. STEWARD, London, England. Filed Apr. 29, 1907. Serial No. 370,800.



1. A steam generator comprising a series of annular sections tapered in a general contour and connected together by steam and water ways and arranged concentrically, each section comprising two smaller shells closed at the top and bottom, said sections being curved inward toward their upward ends and tapered in their general contour toward their lower ends and provided with a central passageway for the products of combustion.

2. A steam generator comprising a series of annular sections tapered in a general contour and connected together by steam and water ways and arranged concentrically, said sections being curved inward toward their upward ends and tapered in their general contour toward their lower ends and provided with a central passageway for the products of combustion.

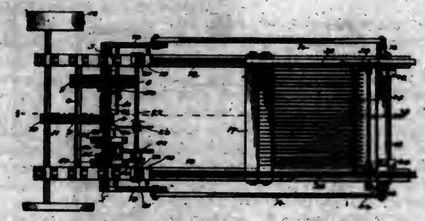
3. A steam generator comprising a series of annular sections tapered in a general contour and connected together by steam and water ways and arranged concentrically, said sections being curved inward toward their upward ends and tapered in their general contour toward their lower ends and provided with a central passageway for the products of combustion, and a superheater arranged in the central passageway in communication with certain of the sections.

4. A steam generator comprising a series of annular sections tapered in a general contour and connected together by steam and water ways and arranged concentrically, said sections being curved inward toward their upward ends and tapered in their general contour toward their lower ends and provided with a central passageway for the products of combustion, and a superheater arranged in the central passageway in communication with the inner and outer sections.

875,746. MACHINE FOR MAKING RADIATORS. FRANK H. STOLP, Chicago, Ill. Filed Apr. 24, 1906. Serial No. 313,488.

1. In a mechanism for applying fin plates to tubes, the combination of a set of supporting rods, an abutment member holding said rods at one end, a reciprocatory member operating to travel over said rods, and means for varying the relative approach of the said abutment and reciprocating members.

2. In a mechanism for applying fin plates to tubes, the combination of a set of supporting rods, an abutment member supporting said rods at one end and holding them in parallelism, a reciprocatory member apertured to fit over said rods and operating to traverse the latter, and automatic means for moving one of said members relatively to the other step by step whereby their relative approach is varied upon each reciprocation.



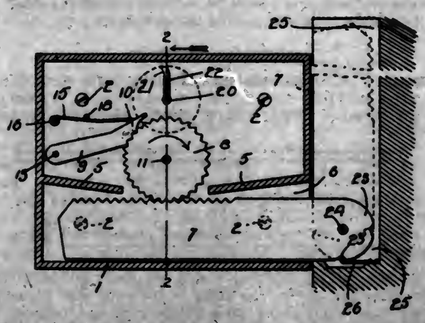
3. In a mechanism for applying fin plates to tubes, the combination of a set of tube supports, means supporting said tube supports at one end, a reciprocatory member and means actuating said member to traverse the rods, mechanism operating to move one of said members relatively to the other a predetermined distance upon each reciprocation of the reciprocatory member, and means associated with said reciprocatory member and operating to support said tube support in alternation with said reciprocatory member.

4. In a machine for applying fin plates to tubes, the combination of a set of supporting rods, an abutment member in which the end of each rod is supported and whereby the rods are held in parallelism, a reciprocatory cross-head apertured to fit over said rods, means for reciprocating said reciprocatory member, means for regularly varying the relative approach of the reciprocatory member and abutment member, a supporting comb movable into and out of engagement with the ends of the rods remote from the supporting abutment, and mechanism operating to shift said supporting comb in synchronism with the movements of the reciprocatory member.

5. In a machine for applying fin plates to tubes, the combination with a suitable bed frame, of an abutment member and a reciprocating member supported to traverse said main frame, a set of supporting rods mounted in said abutment member in parallelism with each other and with the line of reciprocation of said reciprocatory member, a rotating member, crank and pitman connections between said rotating member and said reciprocatory member, a traversing mechanism, operative connections between said rotating member and said traversing mechanism and between the latter and the abutment member, and an automatic ungearing mechanism for arresting the movement of the reciprocatory member.

[Claims 6 to 9 not printed in the Gazette.]

875,747. SLIDING-DOOR LOCK. JOHN F. STRENG, Stewardson, Ill. Filed Apr. 11, 1907. Serial No. 367,628.

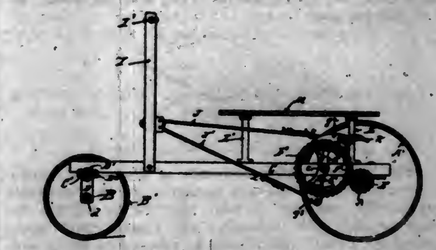


1. The combination with a door and a projecting rack rail carried thereby, of a casing, a rotatable element mounted therein and designed to engage said rack rail, means engaging said element to hold the same against displacement from said rack rail, and means for releasing said engaging means.

2. The combination with a door and a projecting rack rail carried thereby, of a casing, said rack rail being adapted to move into and out of said casing, a rack wheel mounted for rotation in said casing and formed to engage said rack rail and hold the same against movement in a determinate direction and a spring pressed key controlled dog formed to engage said rack wheel and prevent backward rotation thereof.

3. The combination with a door and a projecting rack rail carried thereby, of a casing, said rack rail being adapted to move into and out of said casing, a rotatable element mounted in said casing and formed to engage said rack rail to hold the same against displacement, means engaging said element to hold the same against rotation, and means for releasing said engaging means, said rack rail being pivotally carried by said door, said door being recessed to receive said rack rail in one position thereof.

875,748. VEHICLE PROPELLING MECHANISM. CLARK F. THAYER, Erie, Pa. Filed Apr. 21, 1906. Serial No. 313,031.



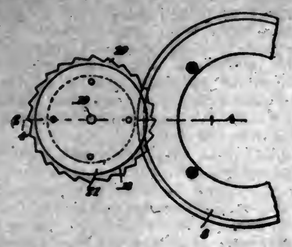
1. The combination in a vehicle of a frame, an axle journaled thereon, a driving-wheel, corrugations on the inner surface of the rim thereof, levers mounted at the axis of said driving-wheel, shoulders on said levers having inclined notches therein, rollers or balls in the inclined notches in said levers adapted to engage the corrugations in the driving wheel rim, when the levers are moved in one direction, and disengage therefrom when moved in the opposite direction, a brake-shoe on one of said levers, an oscillating hand-lever, and means connecting each of said levers with said hand-lever whereby each lever is reciprocated by an oscillation of said hand-lever and the brake brought into operation by an extreme oscillation of the hand-lever in one direction, substantially as set forth.

2. The combination of a vehicle frame, a rear axle mounted in bearings therein, a gear pinion secured thereto, a geared driving wheel mounted in said frame and intermeshing with the geared pinion on said rear axle, corrugations on the inner surface of the rim of said driving wheel, levers mounted in said frame on a common axis with said driving wheel, mechanism on each of said levers engaging the corrugations in said driving wheel when such lever is moved in one direction, a brake-shoe on one of said levers adapted to be brought into engagement with the pinion on the rear axle, and a single operating lever connected with both of said levers on the driving wheel axis, and simultaneously moving both of said levers and operating to bring said brake-shoe into contact with said gear pinion when desired, substantially as set forth.

875,749. CUTTING APPARATUS FOR CORN-HARVESTERS. WILLIAM H. TILSON, Plainview, Tex. Filed Apr. 3, 1906. Serial No. 309,644.

1. A cutting device including a shaft, a main annular cutter carried thereby and having a circular cutting edge, a peripherally serrated auxiliary cutter supported in engagement with the main cutter, and a disk of less diameter

than and disposed over the auxiliary cutter and overlapping the edge of the main cutter.



2. A cutting device including a driving shaft, a wheel upon said shaft, an annular cutter, bolts connecting the cutter with the wheel, and spacing sleeves upon said bolts.

875,750. CARBON BRUSH FOR COMMUTATORS AND THE METHOD OF PREPARING SAME. EDWIN C. VAN NORT, Jr., St. Louis, Mo. Filed Mar. 19, 1906. Serial No. 306,868.



1. The herein described process of producing commutator brushes, which consists in taking blocks of ordinary commercially prepared carbon, such as is utilized for carbon brushes, and immersing and treating said blocks in a boiling liquid, which holds in suspension finely powdered plumbago or graphite.

2. The herein described process of producing commutator brushes, which consists in taking blocks of ordinary commercially prepared carbon, such as is utilized for carbon brushes, and immersing and retaining said blocks in boiling wax of high penetrative power, having in suspension finely powdered plumbago or graphite.

3. The herein described process of producing commutator brushes, which consists in taking blocks of ordinary commercially prepared carbon, such as is utilized for carbon brushes, and immersing said block in an oleaginous boiling liquid, having in suspension finely powdered plumbago or graphite.

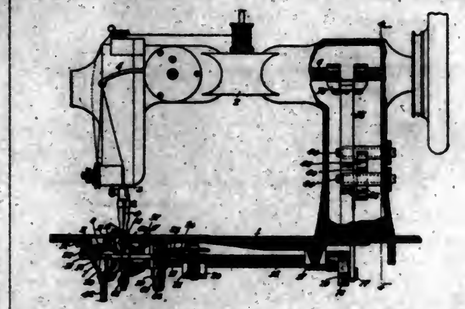
4. The herein described method of preparing for use brushes for commutators, which consists in first taking a block of commercially prepared commutator brush material, cutting said block into proper size for commutator brushes, and third, immersing the brushes in a boiling solution of paraffin, yellow wax and plumbago.

5. As a new article of manufacture, a commutator brush, constructed of a block of carbon, which is permeated throughout with wax, carrying finely powdered plumbago or graphite.

[Claim 6 not printed in the Gazette.]

875,751. UNDER-THREAD MECHANISM FOR SEWING-MACHINES. JASPER VANNETTE, Tiffin, Ohio, assignor of one-fourth to Charles J. Yingling and one-fourth to George S. Yingling, Tiffin, Ohio. Filed Feb. 23, 1906. Serial No. 302,613.

1. In a sewing machine, the combination with the needle and its operating mechanism, of a case for containing the under-thread supply, a frame having a movable connection with said case exteriorly of the contained thread supply to support the same and also having an opening or cut-out for the passage therethrough of the needle-thread loop in being passed around the case, means for operating said case and frame to move each in a direction opposite to the other, and means for passing a needle-thread loop around the case.



2. In a sewing machine, the combination with the needle and its operating mechanism, of a case for containing the under-thread supply, a frame having a sliding connection with said case exteriorly of the contained thread supply to support the same and also having an opening or cut-out for the passage therethrough of the needle-thread loop in being passed around the case, means for operating said case and frame to move each in a direction opposite to the other, and means for passing a needle-thread loop around the case.

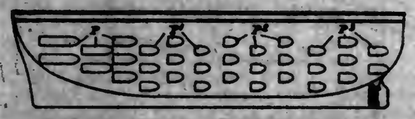
3. In a sewing machine, the combination with the needle and its operating mechanism, of a case for containing the under-thread supply, a frame having a sliding connection with said case exteriorly thereof to support the same and also having an opening or cut-out for the passage therethrough of the needle-thread loop in being passed around the case, means for operating said case and frame to move each in a direction opposite to the other, and means for passing a needle-thread loop around the case.

4. In a sewing machine, the combination with the needle and its operating mechanism, of a case for containing the under-thread supply, a frame having a direct sliding connection with said case exteriorly of the contained thread supply to support the same and also having an opening or cut-out for the passage therethrough of the needle-thread loop in being passed around the case, means for operating said case and frame to move each in a direction opposite to the other, and means for passing a needle-thread loop around the case.

5. In a sewing machine, the combination with the needle and its operating mechanism, of a case for containing the under-thread supply having a guide, a frame coöperating with the guide of said case to slidably support the latter and also having an opening or cut-out for the passage therethrough of the needle-thread loop in being passed around the case, means for operating said case and frame to move each in a direction opposite to the other, and means for passing a needle-thread loop around the case.

[Claims 6 to 38 not printed in the Gazette.]

875,752. DEVICE FOR RETARDING AND STOPPING THE MOTION OF SHIPS. EUGÈNE P. A. VILLETTE, Lille, France. Filed June 27, 1903. Serial No. 163,386.



1. The combination with a ship, of plates pivotally connected at one end to the sides of the ship, and normally lying close against the sides of the ship and adapted to swing in horizontal planes and to occupy positions at an angle to the said sides, said plates being arranged in sets or series, the plates in each set being spaced apart and the plates of the various sets alternating with or being in staggered relation relatively to each other whereby the water passing between the plates of one set will strike against the plates of the succeeding set, and means for operating the sets of plates.

2. The combination with a ship, of plates pivotally connected at one end to the sides of the ship, and normally lying close against the sides of the ship and adapted to swing in horizontal planes and to occupy positions at an angle to the said sides, said plates being arranged in sets or series, the plates in each set being spaced apart and the plates of the various sets alternating with or being in staggered relation relatively to each other whereby the water passing between the plates of one set will strike against the plates of the succeeding set, a rod T connected at one end with each plate at a point intermediate the ends of the plate and operating means for operating the sets of plates comprising levers, each one of which is connected with one of the said rods T.

875,753. WHIP-LOCK. GEORGE H. VOELKER and THOMAS E. LYNCH, Jr., New Orleans, La. Filed May 13, 1907. Serial No. 373,474.



A whip-locking device for use on whip sockets, comprising a collar formed of a single piece of material and having parallel end portions, means connecting said end portions, an upright formed integral with and rising from said collar at a point opposite the parallel end portions, a jaw formed integral with and arranged at a right angle to the said upright and having a notch of right angle form in its inner edge at an intermediate point of its length and also having an enlargement at its outer end and a plurality of apertures arranged in the arc of a circle in said enlargement, a swinging jaw pivoted at a point adjacent to the upright to the fixed jaw and having a notch of right angle form in its inner edge at an intermediate point of its length and also having an aperture arranged to be registered with the different apertures of the fixed jaw, and a lock detachably secured in the registered apertures of the jaws.

875,754. PENHOLDER. CLARENCE E. WALKER, Louisville, Ky. Filed Jan. 21, 1907. Serial No. 353,280.

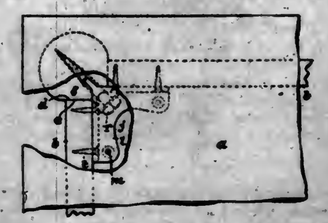


1. A pen-holder having as an integral part thereof an elongated extension which fits snugly within the concave portion of the pen-point, and into which is fashioned or hollowed out a reservoir adapted to hold a quantity of ink, the said reservoir having lateral edges which fit closely to the inner side of the pen, and being provided at the forward end with a beak point which fits closely against the under concave surface of the pen when in position, the said lateral edges and beak point forming a perfect continuous contact with the inner side of the pen as a means for confining and preventing the ink from running out of the reservoir until the pen is put in use, the beak point being provided with a small longitudinal groove or channel for conducting the ink from the reservoir to the point of the pen when in use, all as and for the purposes described.

2. In an ordinary pen-holder a central core or plug having integral therewith an elongation which fits snugly within the concave portion of the pen-point, and into which is fashioned or hollowed out a reservoir having lateral edges which fit closely to the inner side of the pen, and being provided with a beak point which fits against the under concave surface of the pen when it is in position, the said lateral edges and beak point forming a perfect continuous contact with the inner side of the pen as a means for preventing the ink from running out of the reservoir until the pen is put in use, and having as an outlet for the ink a longitudinal groove or channel leading from the reservoir to the point of the pen along the line of split in pen-point, as and for the purposes described.

3. In an ordinary pen-holder for use with any ordinary style of pen-point an elongation solidly connected with the pen-holder as an integral part thereof, said elongation being hollowed or scooped out so as to form a reservoir for containing ink when the pen-point is attached, the said reservoir being provided with means for confining and preventing the ink from running out therefrom consisting of lateral edges which fit snugly to the inner side of the pen and a beak-point at the forward end which fits closely to the inner concave surface of the pen when in position, the beak point having in the apex thereof a longitudinal groove or channel as a means for conducting the ink from the reservoir to the point of the pen as it is pressed to the paper in writing, as and for the purposes described.

875,755. TABLE. EDWIN P. WANNER, New York, N. Y. Filed Feb. 4, 1907. Serial No. 355,532.



1. In a table or the like, the combination, with two parts arranged at an angle to each other and a third part interposed between the adjoining ends of said first named parts, said third part having a recess substantially coincident with the angle represented by the inside faces of said first-named parts, of an angle brace formed to coincide with said angle and having its apex portion snugly fitting said recess and means for securing the angle brace to said parts, substantially as described.

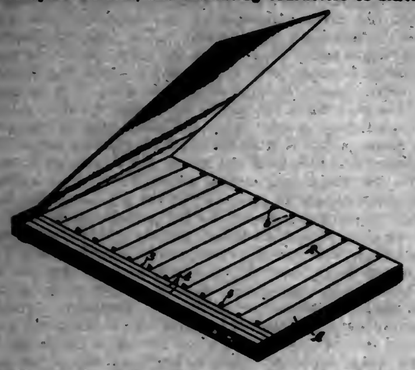
2. In a table or the like, the combination, with two parts arranged at an angle to each other and a third part arranged at the adjoining ends of said parts, said third part having a vertical Y-shaped recess on the inside thereof, of an angle-brace formed to coincide with said angle and having an exterior rib at the apex of its angle and arranged in the angle formed by said first-named parts with its ribbed portion fitting the recess of the third part, and means for securing the angle brace to said parts, substantially as described.

875,756. STENOGRAPHER'S NOTE-BOOK. FRANK W. WARREN, San Francisco, Cal. Filed Feb. 11, 1907. Serial No. 356,768.

1. A stenographer's and like note-book having horizontally ruled pages, with an unruled portion at one side for interlineations, a plurality of parallel vertically disposed indicating characters of different significance located contiguous to the ends of the lines, and lines extending longitudinally on the portion of the page unoccupied by the transverse lines.

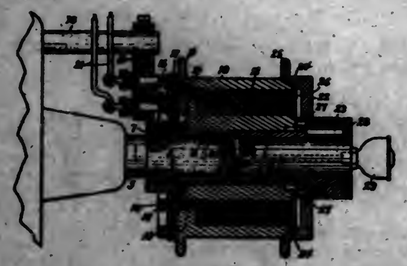
2. In a stenographer's and like note-book, a page hav-

ing transverse horizontal lines and marginal vertical lines upon one side, and indicating characters of different



significance located contiguous to the ends of the horizontal lines.

875,757. MAGNETIC CLUTCH. THOMAS S. WATSON, Milwaukee, Wis. Filed Apr. 1, 1907. Serial No. 365,642.



1. A magnetic clutch, comprising a driving shaft, a coil spring secured thereto at one end, a member secured to the other end of the coil spring, a driven member loosely mounted around the coil spring and normally out of engagement with the other member, and an electro magnet for attracting the driven member and the other member to each other to retard the movement of the said other member and thereby cause the expansion of the coil spring into frictional engagement with the driven member.

2. A magnetic clutch, comprising a driving shaft, a coil spring mounted thereon and secured thereto at one end, an engaging member secured to the other end of the coil spring, a driven member loosely mounted on the coil spring, spring pressed pins for holding the engaging member normally out of engagement with the driven member, and an electro magnet for attracting the driven member and the engaging member to each other to retard the movement of the engaging member and thereby cause the expansion of the coil spring into frictional engagement with the driven member, the spring pressed pins serving to disengage the engaging member from the driven member and permit the coil spring to contract and release the

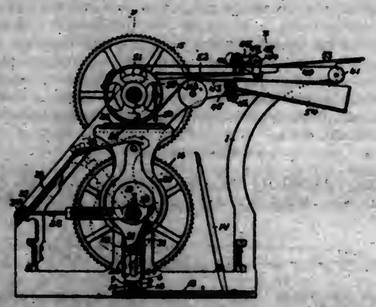
3. A magnetic clutch, comprising a driving shaft, a coil spring mounted thereon and secured thereto at one end, an engaging member secured to the other end of the coil spring, a driven member loosely mounted on the coil spring and having a tapering engaging fit with the engaging member, means for holding the engaging member normally out of engagement with the driven member, and an electro magnet for attracting the driven member and the engaging member to each other to retard the movement of the engaging member and thereby cause the expansion of the coil spring into frictional engagement with the driven member, said means serving to disengage the engaging member from the driven member and permit the coil spring to contract and release the driven member when the magnet is deënergised.

4. A magnetic clutch, comprising a driving shaft, a sleeve mounted thereon and secured at one end thereto, there being a spiral slot in the sleeve forming a coil spring of the intermediate portion thereof, a driven member comprising a casing loosely mounted on the sleeve around the coil spring portion thereof, an electro magnet contained within the casing, an armature member secured to the other end of the sleeve and adapted to be attracted by the magnet into engagement with the casing for retarding the movement of the armature member and causing the coil spring portion of the sleeve to unwind and expand into frictional engagement with the casing, and spring means for disengaging the armature member from the casing when the magnet is deënergised and permitting the coil spring portion of the sleeve to contract and release the casing.

5. A magnetic clutch, comprising a driving shaft, a sleeve mounted thereon and secured at one end thereto, there being a spiral slot in the sleeve forming a coil spring of the intermediate portion thereof, a driven member comprising a cylindrical casing with a concentric cylindrical portion loosely mounted on the sleeve around the coil spring portion thereof, a magnet coil contained within the casing around the inner portion as a core, a pair of collector rings mounted on the casing and connected with the terminals of the magnet coil, brushes engaging the collector rings, a collar mounted on the sleeve against which the casing bears, an armature member keyed to the free end of the sleeve, there being a tapering engaging surface between the armature member and the outer cylindrical portion of the casing, flanges on the casing and the armature member for guiding a belt on the casing as a belt pulley, a ring seated in the end of the casing and protecting the magnet coil, spring pins slidably mounted in the armature member and bearing on the casing for normally holding the armature member out of engagement with the casing, and a lubricant cup mounted on the driving shaft and having communication with the surface thereof within the coil spring portion of the sleeve.

[Claims 6 and 7 not printed in the Gazette.]

875,758. PRINTING-PRESS. CHARLES B. WHITAKER, Ubee, Ind. Filed May 12, 1906. Serial No. 316,498.



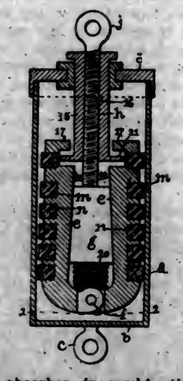
1. In a machine of the class described a frame; a driving shaft; bearings for said shaft in adjustable relation with the frame and means to raise and lower the same; a gyratory frame adapted to carry a form, and having relation with the driving shaft to be actuated thereby; a rotative cylinder having a tympan thereon and being adapted to operate in connection with the form during the gyration of the frame; and suitable mechanism for inking the form.

2. In mechanism of the class described a supporting frame; a movable form suitably supported and mechanism in connection therewith to operate the same; a rotative cylinder mounted in the frame; a supporting idler mounted in the rear upper part of the frame; a tympan in the form of a belt operating over the idler and said cylinder and driven by the latter; a series of endless cords operating over and with the forward portion of the tympan; a series of return idlers for conducting said cords from the lower part of the tympan to the upper part thereof; and drop guides, operating above the tympan and between the cords, and mechanism in connection to periodically actuate the same.

3. In mechanism of the class described a supporting frame having vertical slots in the respective sides thereof; a slide working in each of said slots, each slide having a vertical guide slot therein; suitable mechanism for adjusting said slides vertically; a driving shaft having bearings in said slides; eccentrics mounted on said shaft; a gyratory frame mounted upon said eccentrics and having connection with the guide slots in said slides, and a rotative cylinder mounted in the supporting frame and a tympan thereon adapted to operate in contact with the form on the gyratory frame during part of the movement of the latter.

4. In mechanism of the class described a supporting frame; a driving shaft mounted in adjustable relation with the frame; a gyratory frame mounted in connection with the driving shaft to be actuated thereby; swinging arms loosely mounted upon the driving shaft, each having a rearward extension which has connection with the lower part of the gyratory frame to swing said arm by the movement of the latter; and suitable ink rollers having supported connection with the swinging arms to be actuated thereby.

875,759. SHOCK-ABSORBER. LAWRENCE WHITCOMB, Brookline, Mass. Filed July 10, 1907. Serial No. 383,044.



1. In a shock absorber, in combination, a hollow member capable of being attached to the vehicle spring or axle, a coöperating member within said hollow member, cork inserts in one of said parts, an expander, a threaded rod secured to said expander, a threaded sleeve or nut adjustable on said threaded rod and engaging said coöperating member to limit the movement of said expander and thereby regulate the pressure of said coöperating member, substantially as described.

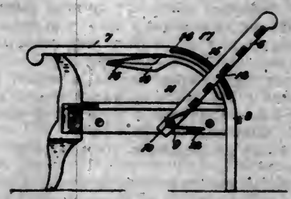
2. In a shock absorber, in combination, a hollow member capable of being attached to the vehicle spring or axle, a coöperating member within said hollow member, cork inserts in one of said parts, an expander capable of being attached to the vehicle body and movable longitudinally to cause said coöperating member to engage said hollow member, and means to vary the movement of the expander and thereby regulate the pressure between said coöperating member and said hollow member, substantially as described.

3. In a shock absorber, in combination, a hollow member, a coöperating member within said hollow member and provided with an inclined inner surface and with cork inserts in its outer surface, and an expanding wedge capable of being attached to the vehicle body and coöperating with said inclined surface, substantially as described.

4. In a shock absorber, in combination, a hollow member, coöperating members within said hollow member, an expander for said coöperating members, a rod to which said expander is connected, and means on said rod to engage said coöperating member and limit the movement of said expander, substantially as described.

5. In a shock absorber, in combination, a hollow member, a coöperating member comprising jaws having inclined inner surfaces, a wedge coöperating with said inclined surfaces, and means connected with said wedge to effect movement thereof, substantially as described.

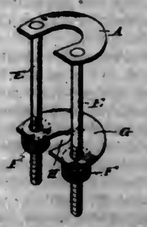
875,760. RECLINING-CHAIR. WILLIAM WHITE, Cleveland, Ohio, assignor of one-half to Saidee P. Hubbard, Cleveland, Ohio. Filed July 22, 1907. Serial No. 384,945.



1. In a reclining chair, the combination with a swinging back having projections at the side, of arms having recesses into which said projections extend, and notched levers which are fulcrumed on the arms and work into said recesses, in position to engage the projections in the notches.

2. In a reclining chair, the combination with a swinging spring-supported back, of arms curved at the rear end to the arc of a circle and having recesses therein, a rod extending across the back and projecting at its ends into the recesses, and levers pivoted under the arms and having notched portions extending into said recesses and arranged to engage the ends of the rod in the notches.

875,761. CLAMP FOR COMPRESSING SPRINGS. FREDERIC R. WICKWIRE, Cortland, N. Y. Filed Sept. 12, 1907. Serial No. 392,533.



1. In combination with a relatively thin plate or bearing member adapted to receive the upper end of a spring, a pair of threaded rods extending downwardly therefrom; a relatively thin member mounted upon said rods adapted to pass between the lower end of the spring or the washer against which the spring bears and the retaining device for the spring; and a nut mounted upon the lower end of each of said rods.

2. In a clamp comprising a U-shaped plate, a pair of threaded rods extending downwardly from said plate; a second plate loosely mounted upon the lower end of said rods, said plate being provided with a slot or opening through which a valve stem may pass; and a nut mounted upon the lower end of each rod below said movable plate.

3. In a clamp, the combination of a plate adapted to afford a bearing for one end of a spring which is to be compressed; a pair of rods extending downwardly from said plate, the lower ends of said rods being threaded; a second plate loosely mounted upon said rods, said plate

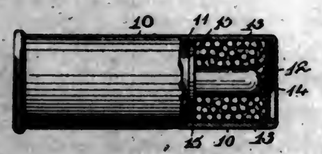
being semi-circular in outline and provided with a slot or opening adapted to receive the lower end of a valve stem, and to permit the passage of a cotter-pin carried by the valve stem into said opening; and a nut mounted upon each of said stems.

4. A clamp for placing a spring under compression comprising a relatively fixed plate against which one end of the spring is designed to bear said plate being relatively thin and adapted to pass between one end of the spring and the member against which it bears; a pair of draw-rods extending from said plate; a movable abutment against which the opposite end of the spring rests, said abutment being relatively thin, and held in its proper position with reference to the spring by said rods; and means for moving the abutment and placing the spring under a state of compression.

5. A clamp for placing a spring under compression comprising a U-shaped plate, the opening therein being of a size sufficient to embrace a projection upon a valve shell or casing; a pair of threaded rods extending downwardly from the outer arms of said U-shaped member and at substantially right angles thereto; a second U-shaped plate, the opening in which is somewhat smaller than that in the upper plate; and a nut mounted upon each of said threaded rods below said second plate.

[Claims 6 and 7 not printed in the Gazette.]

875,762. SPREADER FOR SHELLS. HENRY E. WINANS and FREDERICK SINNOCK, Newark, N. J. Filed June 1, 1907. Serial No. 376,816.



1. An improved shot spreader consisting of a disk to guide the device, and a post having substantially parallel sides and adapted to permit the movement of shot around it, the post projecting from the disk in the direction of its flight.

2. An improved shot-spreader comprising a disk to guide the device through the bore of a gun, and a central straight-sided post secured to and projecting from the disk in the direction of its flight.

3. An improved shot-spreader comprising a post having a smooth exterior, and means on the rear end of the post for guiding the device through the barrel of a gun.

4. An improved shot-spreader comprising a post having transversely arranged guiding means secured to its rear end, and adapted to guide the spreader in a gun barrel.

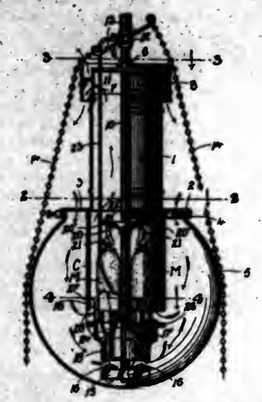
5. An improved shot spreader comprising a cylindrical post secured to a disk and adapted to project from the disk in the direction of its flight.

[Claims 6 to 9 not printed in the Gazette.]

875,763. GAS-LAMP. RICHARD W. ZIESLEIN and WILLIAM RIECHMANN, St. Louis, Mo., assignors, by mesne assignments, to Paris Lamp Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 19, 1907. Serial No. 369,154.

1. A gas lamp comprising a gas-pipe, a hood secured thereto, a valve in the pipe located above the hood, terminal gas nozzles leading from the pipe below the hood, burners above the nozzles spaced a suitable distance therefrom to form a mixing space, a chimney or flue above the burners having its bottom spaced a suitable distance from the top of the burners, and an outer globe closed at the sides and bottom and open at the top, whereby the air fed to the mixing space and to the flue is constrained to pass around the flue through the space between the flue and globe and preheated, substantially as set forth.

2. In a gas lamp, a suitable burner, a flue or chimney mounted above the burner and extending to a point opposite the base of the flame, a globe closed at the sides and bottom and open at the top and enveloping the flue and burner, and constraining the air to pass into the space between the flue and globe whereby the same is heated before supplying the burner, and a gas-nozzle spaced a suitable distance below the burner and discharging thereinto, the air within the globe mixing with the gas thus discharged, substantially as set forth.



3. A gas lamp having a bottom burner casting or casing, gas-discharge nozzles located below the same and spaced a suitable distance therefrom, a flue mounted above the casting and having its bottom spaced a suitable distance above the top of the casting and in substantial contiguity with the base of the burner-flame and an enveloping globe for constraining the passage of the air to a path around the outside of the flue whereby the air is heated, a part of the air passing upward into the flue, and a part mixing with the gas jets escaping from the nozzles into the space beneath the burners of the burner-casting, substantially as set forth.

4. A lamp comprising a gas-supply pipe, a hood mounted thereon, a gas-valve in the pipe above the hood, a pendant or chain for manipulating the valve, a hollow chamber at the lower end of the gas-supply pipe, nozzles terminating the chamber, a casting secured to the pipe a suitable distance above the chamber and provided with open ended burners superposed over the nozzles, means on the casting for supporting a flue, the base of the latter being removed a suitable distance above the top of the casting, and a globe secured to the base of the hood and enveloping the flue, burner casting and terminal chamber of the gas pipe, the globe being open on top and closed at the sides and bottom, the parts operating substantially as and for the purpose set forth.

5. In a gas-lamp, a burner casting having a series of peripheral pins or projections, a ring adapted to be passed over the casting and having excised lobes for the free passage of said pins, a flue, and flue-supporting arms or brackets on the ring, adapted to elevate the bottom of the flue a suitable distance above the upper edge of the casting, the pins serving to support the ring upon a turn of the latter sufficient to bring the excised lobes out of alinement with the pins, substantially as set forth.

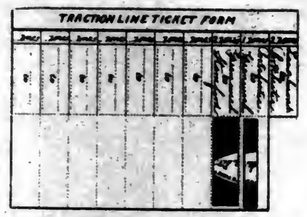
[Claim 6 not printed in the Gazette.]

875,764. COMPOSITION FOR PRODUCTION OF AROMATIC BATHS. ALFRED ZUCKER, Dresden, Germany. Filed Nov. 26, 1906. Serial No. 345,144.

1. The hereindescribed novel composition of matter, consisting of alcohol, soap, formic ether and volatile oil.

2. The hereindescribed novel composition of matter for the production of aromatical baths, consisting of 30 grams of dwarf-pine-oil, 60 grams of formic ether and 120 grams of common soft soap.

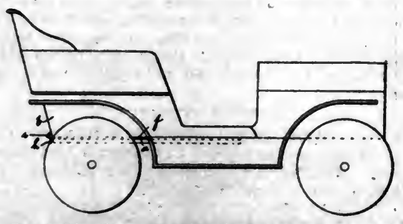
875,765. RAILWAY AND OTHER TICKET. JOHN S. ALEXANDER, New York, N. Y. Filed Sept. 4, 1903. Serial No. 171,942.



1. A passage ticket having sub-divisions, each having marked upon it the distance for which it is intended to serve as fare, each sub-division having a coupon bearing a stamp or stamps marked for a like distance.

2. A passage ticket having sub-divisions, each having marked upon it the distance for which it is intended to serve as fare, each sub-division having a coupon bearing a stamp or stamps marked for a like distance, said ticket having an identifying mark peculiar to the user of the same, and the stamp or stamps upon each sub-division of the ticket also bearing an identifying mark.

875,766. VEHICLE ATTACHMENT. FRANK R. ALLEN, Passaic, N. J. Filed May 15, 1907. Serial No. 373,736.



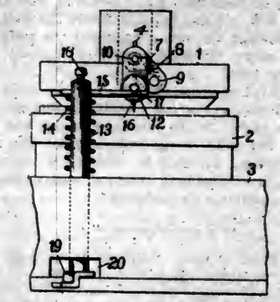
1. In combination with a vehicle body, and the running gear thereof, strips secured to the under side of said body, tracks secured to the running gear and being disposed in vertical alinement with said strips, and guiding members each having a horizontal portion between said strips and tracks and a downwardly and inwardly extending part engaging the top, side, and bottom faces of said tracks.

2. In combination with a vehicle body, and the running gear thereof, strips secured to said running gear, tracks secured to the top face of said strips and having one side projecting beyond the adjacent side of said strips, strips secured to the under face of the vehicle body and being disposed in vertical alinement with said strips of the running gear and guiding members each rigidly secured to said strips of the body and having a portion engaging said side of the track.

3. In combination with the vehicle body and running gear thereof, strips secured to said body and running gear thereof in vertical alinement with one another, tracks carried by said strips of the running gear, and guiding members each having a horizontal part lying between said strips of the body and tracks, a pair of upwardly extending parts to embrace and be secured to the side faces of the strips of the body, and downwardly and inwardly extending parts to engage said tracks.

4. In combination with a vehicle body, and the running gear thereof, strips secured to the under side of said body, and to the running gear, tracks secured to the strips of the running gear and having one of the sides thereof projecting beyond the adjacent side face of said strips of the running gear, and one piece guiding members each having a horizontal portion between said strips of the body and tracks, and having a vertical side member which extends downwardly and inwardly and which incloses said projecting portion of the tracks.

875,767. NEEDLE-PROTECTOR FOR KNITTING-MACHINES. GEORGE L. BALLARD, Norristown, Pa., assignor to Wildman Manufacturing Company, Norristown, Pa. Filed June 4, 1907. Serial No. 377,223.



1. In combination in a needle protector for knitting machines, the depending finger, a support therefor, pivotally supported and depending from said pivot to swing and carry the finger bodily therewith, and means held normally in a lowered position by the said depending support until the same is swung aside by the engagement of said finger with a lump, knot or the like at the needles, substantially as described.

2. In combination in a needle protector for knitting machines, a finger to be engaged by a lump, knot or the like, a support therefor pivotally supported and depending from said pivot to swing and carry the finger bodily therewith, and means restrained by the said pivoted support against upward movement, the point of contact between said support and the said means being in the same vertical plane with the pivot of said support, substantially as described.

3. In combination in a needle protector for knitting machines, a detector finger, straight from end to end and a support therefor, pivoted and depending from said pivot, and means for operating the stop motion restrained by the said support, said straight detector finger being adjustable in its support, substantially as described.

4. In combination in a needle protector for knitting machines, a detector finger straight from end to end, and extending vertically, and a movable support for the said detector finger on which it is vertically adjustable and means controlled by the movement of said support, substantially as described.

5. In combination in a needle protector for knitting machines, a movable support, a detector finger, a clamping pin extending through the movable support and having an opening through which the detector finger extends and means for drawing upon said pin to draw it through the support to clamp the detector finger against the side of said support, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

875,768. RAIL-JOINT AND NUT-LOCK THEREFOR. JAMES B. BAUM, Grand Junction, Colo., assignor of one-half to George R. Hill and Robert A. Hill, one-sixth to James A. Cannell and Alfred Eggers, and one-sixth to Albert A. Miller and Philip Messer, Grand Junction, Colo., and one-twelfth to Thomas P. McGuire and one-twelfth to John Mettras, Mesa county, Colo. Filed Apr. 6, 1907. Serial No. 366,804.



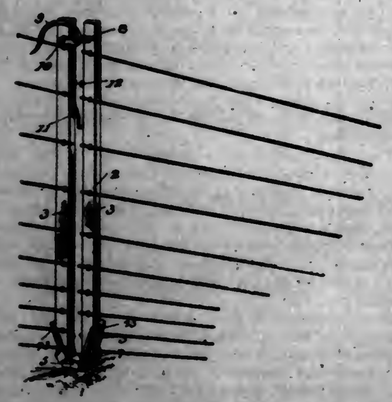
1. A rail joint comprising chair sections, a guideway formed on said sections, a sliding bar extending through

said sections, and fish plates secured to the sides of the rail and extending upon opposite sides of the joint.

2. A rail joint comprising rail chair sections, guideway sections formed on the lower surface of the chair sections, a bar sliding through said guide sections, and disposed between ties, fish plates, bolts passing through said fish plates and through the web portions of the rails, and a recessed nut locking bar held in position on one of the fish plates by bent lugs.

3. A rail joint comprising rail chair sections, guide sections formed thereon, a bar extending through the guide sections, fish plates, bolts passing through the fish plates and through the webs of the rails, nuts on the bolts, a recessed nut locking bar held in position on one of the fish plates, said lugs being bent over the ends of the nut locking bar, substantially as described.

875,769. FENCE-POST. CHARLES S. BEEBE, Peru, Ind. Filed Apr. 27, 1907. Serial No. 370,628.



1. In fences, a post gate comprising a base, swingable post members detachably and loosely confined to and fulcrumed on the base, and means for detachably coupling together the upper ends of the members under tension.

2. A two-part post comprising swingable post members adapted to have the fence wires or fabric secured thereto, fulcrum means for loosely and detachably coupling together the lower ends of said members, and means for detachably locking together the upper ends of said members under tension to maintain the tension of the fence wires and the closed continuity of the fence.

3. A post comprising two swingable members adapted to have the fence wires or fabric secured thereto, a fulcrum base adapted to detachably and loosely couple together the lower ends of said members, the lower ends of said members being fulcrumed on said base, whereby the members can swing laterally thereon to spread at their upper ends, or can be detached therefrom to spread at their lower ends, and means for detachably and pivotally locking together the upper ends of said members.

4. A post comprising two post members adapted to have the fence wires or fabric secured thereto and adapted to be detachably connected to maintain the continuity and tension of the fence, and a base therefor adapted to detachably receive the lower ends of said members, said members being pivotally or loosely coupled to said base to swing laterally.

5. A post comprising two laterally swingable post members adapted to have the fence wires or fabric secured thereto, means for detachably coupling together the upper ends of said members, means for detachably and loosely coupling together the lower ends of said members, and means whereby said members are held against swinging laterally on their lower ends in the same direction.

[Claims 6 to 20 not printed in the Gazette.]

875,770. PATTERN-PAPER LINEN. BENNO BORKOWSKI, Berlin, Germany. Filed Mar. 19, 1907. Serial No. 363,290.

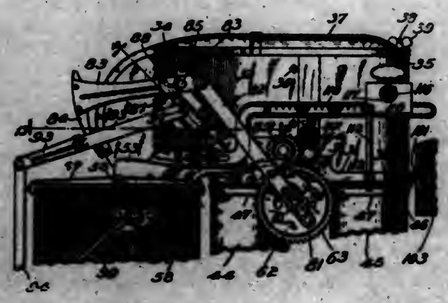


1. Pattern paper etc. for photographic patterns on which a copy of the picture is made in suitable tone, said paper being sensitised and mechanically printed with a network of lines the lines being distinguished from the copy of the picture.

2. Pattern paper for photographic patterns said paper mechanically printed with a network of lines adapted to be distinguished from the copy of the picture, the paper etc. being made sensitive to light in such wise that by different lengths of exposure and subsequent treatment in baths different colors from black to yellow or red result without the printed network of lines being covered after the copy is developed.

3. Pattern paper etc. for photographic patterns said paper sensitive to light and mechanically printed with a network of lines, and with marks numbers, letters and the like printed in the separate squares in one or more colors so grouped that bindings provided on the paper both for single colored (single warp or single weft) fabrics and for multi-colored (multi-warp and multi-weft) fabrics can be used.

875,771. GRAIN ELEVATOR AND WEIGHER. CHESTER BRADFORD and GEORGE L. CHATFIELD, Indianapolis, Ind.; said Chatfield assignor to said Bradford. Filed Apr. 9, 1907. Serial No. 367,201.



1. The combination, in an elevator and weigher, of the elevator legs, the elevator head, an adjustable shaft-bearing mounted in said head, the elevator shaft mounted in said bearing, a weigher-bucket-and-scale mechanism carried by the elevator head, a tripping mechanism shaft mounted in stationary bearings and arranged parallel to the elevator shaft, a tripping mechanism mounted on said shaft, and a floating gear connecting the elevator shaft and the tripping-mechanism shaft, whereby the elevator shaft may be adjusted toward and from the tripping mechanism shaft without disturbing the relations of the tripping mechanism and the weigher-bucket-and-scale mechanism.

2. The combination, in an elevator and weigher, of the elevator structure, the weigher structure, a tripping mechanism adapted to be driven from the elevator mechanism for operating the grain valves and having its shaft arranged parallel to the elevator-mechanism shaft, said elevator mechanism being provided with an adjustable bearing, and a floating gear interposed between the elevator shaft and the shaft of the tripping mechanism, whereby the tension of the elevator chain may be adjusted without disturbing the relations of the tripping mechanism and the weighing mechanism.

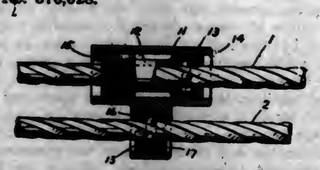
3. The combination, in an elevator and weigher, of an adjustable bearing-structure for the elevator shaft, said elevator shaft mounted therein, means for adjusting said bearing structure, a gear on said shaft, stationary bearings, a trip-mechanism shaft mounted therein, a gear on said shaft, a link pivotally mounted at one end on the trip-mechanism shaft, a link pivotally mounted at one end on the elevator shaft, said links coming together at their other ends, and a third gear engaging with said other two gears and carried by said links where they come together.

4. The combination, in an elevator and weigher, of the elevating mechanism, the weighing mechanism, valves to the discharge-mouth of the elevator and to the weigher bucket, and valve-operating mechanism, said valve-operating mechanism embodying a pivoted lever mounted on the elevator head above the weigher bucket and extending out over said bucket and a link connecting said weigher-bucket valve and the outer end of said lever, whereby said weigher-bucket valve is lifted from above in operation.

5. The combination, in an elevator and weigher, of the weigher-bucket valve mechanism for operating said valve embodying a lever pivoted to the elevator head above and extending over the weigher-bucket, a link connecting said lever to said valve, and mechanism for operating said lever.

[Claims 6 to 25 not printed in the Gazette.]

875,772. LOOM-PICKER. WILLIAM A. BRAMALL and JOHN A. BRAMALL, Moore, Pa. Filed May 31, 1907. Serial No. 376,628.



1. A pair of spindles adjustably secured each to each, one spindle being mounted in the loom frame, a picker slidably mounted upon said spindles and means for sliding said picker to and fro thereon, substantially as described.

2. A pair of grooved spindles secured each to each, one spindle being adjustably mounted in the loom frame, a picker mounted and slidable upon said spindles and a picker stick adapted to actuate said picker, substantially as described.

3. A pair of grooved spindles, one of which is adjustably secured in the loom frame, a picker furnished with bearings adapted to travel in the grooves of said spindles, and means for actuating said picker, substantially as described.

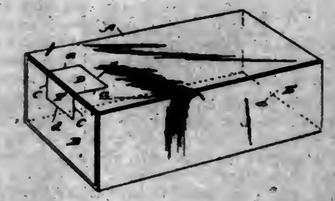
4. A pair of spirally grooved spindles, one of which is adjustably secured in the loom frame, a picker furnished with bearings adapted to travel in the grooves of said spindles, and means for actuating said picker, substantially as described.

5. In a loom having grooved spindles, a picker the base of which is furnished with bearings adapted to travel in the grooves of said spindles and the head of which is adapted to receive a removable picker plug, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

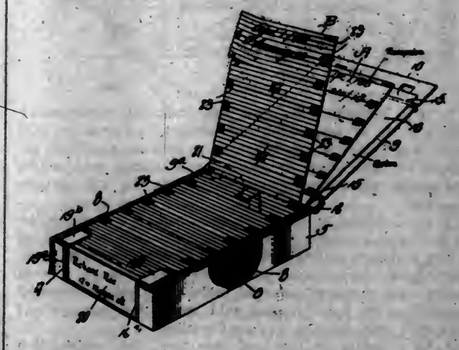
875,773. MATCH-BOX. HERBERT J. BRUNER, Port Huron, Mich., assignor of one-half to Charles N. Runnels, Port Huron, Mich. Filed Sept. 1, 1906. Serial No. 332,966.

1. A match box having flexible walls disposed at an angle to each other to receive matches between them and also having removable, meeting tongues in the meeting edges of the walls.



2. A match box comprising a case of flexible material, and a drawer of similar material, slidably arranged in the case; the said case having a removable tongue in the end of one of its walls, and the drawer having a removable tongue in the edge of its end wall that is adjacent to the said end of the case wall; the said tongues being arranged opposite each other with their free ends meeting, whereby the tongues normally form part of the box and when they are removed an opening is formed partly in the case and partly in the drawer, for the purpose set forth.

875,774. ACCOUNT-KEEPING DEVICE. ROSS D. BURHANS, Keokuk, Iowa. Filed May 4, 1906. Serial No. 315,164.



1. Means for keeping accounts comprising a receptacle having a hinged cover, a carbon surface carried by the inner face of said cover, and a pair of strips located within the receptacle, one of said strips being transparent.

2. Means for keeping accounts, comprising a receptacle having a hinged cover, a carbon surface carried by the inner face of the cover, a blank carried by the outer face of the cover, and a pair of strips within said receptacle, one of said strips having marks arranged in an increasing series.

3. Means for keeping accounts, comprising a receptacle having a hinged cover, a carbon surface carried by the inner face of the cover, a blank carried by the outer face of the cover, and a pair of strips within said receptacle, one of said strips having marks thereon arranged in an increasing series, and the other of said strips being transparent.

4. Means for keeping accounts comprising a receptacle having a hinged cover, a carbon surface carried by the inner face of the cover, a blank carried by the outer face of the cover, and a pair of strips within said receptacle, one of said strips being divided into sections having two sets of numbers, one of which increases, and the other of which decreases from one end.

5. A receptacle formed of an inner and an outer case, the outer case open at its front and cut away on its sides, and having a hinged cover carrying a carbon surface and the inner case having flexible fingers at its front and at its rear, and a label at its front end.

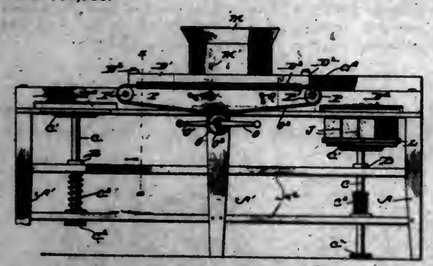
[Claims 6 to 15 not printed in the Gazette.]

875,775. FLOOR. EDWIN BURNHAM, Hoboken, N. J. Filed Aug. 29, 1907. Serial No. 390,592.



A floor plate having an integral short depending lug on its under face formed adjacent one of its edges, said lug having a threaded socket therein, a wedge on the surface which is to support the floor plate, and a second wedge engaging the under face of said plate and seating on said first wedge, and a set screw in said socket having its inner end engaging the second wedge and its head adjacent the said edge of the plate.

875,776. MACHINE FOR MAKING BRICKS. GEORGE BURSON, Winamac, Ind. Filed Feb. 18, 1907. Serial No. 357,988.



1. In a device of the kind described, the combination with a table, of separable molds slidably mounted on said table, removable bottoms arranged in said molds, means arranged on said table for opening and closing said molds, and means for reciprocating said molds, for the purpose described.

2. In a device of the kind described, the combination with a table provided with openings adjacent each end, of spring actuated platforms arranged in said openings, separable molds mounted on said table, slots formed in said molds, pins arranged on said table and means connected to said molds for throwing said molds into engagement with said pins, for the purpose described.

3. In a device of the kind described, the combination with a table carrying a hopper, of separable molds arranged on said table, a shaft mounted on said table carrying pulleys and crank arms, pulleys arranged on said table, and a cable connected to the molds passing around said pulleys, for the purpose described.

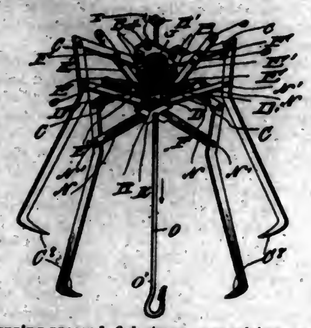
4. In a device of the kind described, the combination with a table provided with spring actuated platforms, of separable molds arranged on said table, means for reciprocating said molds, means for separating said molds over said platform and means for operating said platforms, for the purpose described.

5. In a device of the kind described, the combination with a table provided with spring actuated platforms, adjacent each end, of separable molds slidably mounted on said table, removable bottoms arranged in said molds, dividing plates secured in said molds, means carried by the table for opening and closing said molds, and means for operating said platforms, for the purpose described.

[Claims 6 and 7 not printed in the Gazette.]

875,777. FISH-HOOK. JOHN R. CALLAHAN, Millville, N. J. Filed Apr. 27, 1907. Serial No. 370,668.

1. A spring-pressed fish trap, comprising an apertured plate, a series of spring-actuated levers pivotally connected thereto, the ends of said levers being formed into hooks, an apertured springing plate, toggle link connections between the same and said levers, a bait rod passing through apertures in said plates, and having a movement independent thereof, and means carried by said rod for moving said springing plate, as set forth.



2. A spring-pressed fish trap, comprising an apertured plate, a series of spring-actuated levers pivotally connected thereto, the ends of said levers being formed into hooks, an apertured springing plate, toggle link connections between the same and said levers, a bait rod passing through apertures in said plates, and an adjusting nut mounted upon the bait rod and adapted to bear against said springing plate as the rod is moved longitudinally, as set forth.

3. A spring-pressed fish trap, comprising a plate, a series of levers pivotally connected thereto, the ends of said levers being formed into hooks, an apertured springing plate, toggle link connections between the same and said levers, a third and intermediate plate, a spring interposed between the latter and the plate to which said levers are pivotally connected, and means for springing the trap, as set forth.

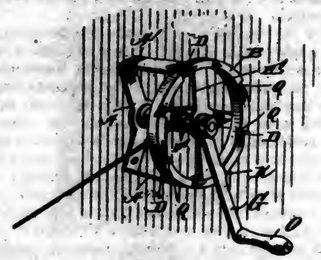
4. A spring-pressed fish trap, comprising an apertured plate, a series of levers pivotally connected thereto, the ends of said levers being formed into hooks, an apertured springing plate, toggle link connections between the same and said levers, a third and intermediate plate, a spring interposed between the latter and the plate to which said levers are pivotally connected, a threaded bait rod passing through registering apertures in said plates, and an adjusting nut mounted upon the threaded portion of said rod and adapted to bear against the springing plate as the rod is moved longitudinally, as set forth.

5. A fish trap, comprising an apertured plate having wings projecting therefrom at angles to the face of the plate, levers pivotally connected to said wings and having hooked ends, an apertured springing plate having wings at angles thereto, toggle links pivotally connecting the levers to the wings of said springing plate, an apertured plate intermediate the springing plate and the plate to which said levers are pivotally connected and provided with wings, adjustable links pivotally connecting the latter to said levers, a threaded bait rod passing through registering apertures in said plates a spring mounted upon said rod and bearing between two of said plates and adapted to normally hold the hooks at their farthest inner throw, an adjusting nut mounted upon the threaded portion of said rod and adapted to bear against the springing plate as the rod is moved longitudinally, as set forth.

875,778. CLOTHES-LINE REEL. OMAR C. CLAYPOOL, Prineville, Oreg. Filed July 1, 1907. Serial No. 381,694.

1. An apparatus for holding clothes lines taut comprising a ratchet ring, a diametrically disposed cross piece fastened to said ring provided with an aperture therein, a stationary support for said ring, a reel journaled in said support and in the aperture of said cross piece and upon which a line is adapted to be wound, a handle bar fixed to said shank and adapted to engage the teeth of the ratchet ring, as set forth.

2. An apparatus for holding clothes lines taut comprising a ratchet ring, a diametrically disposed cross piece fastened to said ring provided with an aperture therein, a spider member having angled arms, the ends of which are fastened to said ring, a shaft journaled in said member and also in the aperture of said cross piece and upon which a line is adapted to be wound, a resilient handle bar fixed to said shaft and adapted to be normally in engagement with the teeth of the ratchet ring, as set forth.



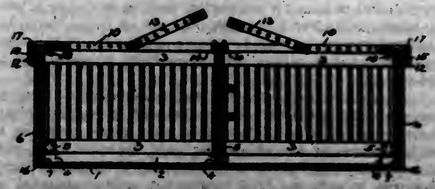
3. An apparatus for holding clothes lines taut comprising a ratchet ring, a diametrically disposed cross piece fastened to said ring provided with an aperture therein, a spider member having angled arms, the ends of which are fastened to said ring, a shaft journaled in said member and also in the aperture of said cross piece and upon which a line is adapted to be wound, a resilient handle bar fixed to said shaft, a portion of said bar being bent at an angle to form a catch for engagement with the teeth of said ring, as set forth.

875,779. RAILWAY-SPIKE. GRANT C. CLOVER, Charlevoix, Mich. Filed Mar. 25, 1907. Serial No. 364,274.



A railroad spike having recesses formed at intervals in its sides, and resilient holding devices secured at their lower ends in the bottom of said recesses, their upper ends turned outward normally on a curved line to catch in the tie to prevent the spike from being pulled out, and being depressed in the recesses when the spike is being driven, in order not to obstruct the latter operation.

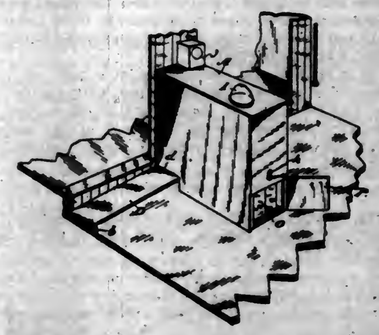
875,780. FOLDING CRATE. ARTHUR W. COATS, Tacoma, Wash., assignor to Robert M. Thompson, Tacoma, Wash. Filed Nov. 10, 1905, Serial No. 286,716. Renewed Dec. 3, 1907. Serial No. 404,964.



1. In a folding crate the combination with a base having ends folding flat thereon and side bars secured thereto and extending higher than said folded down ends; of U-bolts extending through said side bars and said bottom; side panels mounted over said side bars; and straps secured to said side panels and engaging said U-bolts to form hinges therewith.

2. In a folding crate, the combination of a bottom formed of wooden pieces lying across the crate, side bars to which said wooden pieces are secured at their ends, hinge bars extending across said crate from the ends of said side bars, end panels hinged to said hinge bars, U-bolts extending through said side bars and said bottom, side panels hinged to U-bolts, a detached top fitting over and around said hinged ends and sides, and a locking link mounted on said top and engaging said end panels when the crate is unfolded and engaging the bottom when the crate is folded.

875,781. AUTOMATIC FARE-COLLECTOR. JOSEPH H. COLEMAN, Tottenham, Ontario, Canada. Filed May 11, 1906, Serial No. 316,376. Renewed Nov. 21, 1907. Serial No. 403,232.



1. A car; a platform, and a doorway giving ingress to the car from the platform in combination with a collecting receptacle for fares suitably held in position on the platform; a cover for the collecting receptacle provided with a fare slot, and adapted to give a clear view of the contents of the collecting receptacle; means adapted to be automatically operated by a passenger as he passes into the car for "turning down" the fares; and a fare box into which the collecting receptacle discharges, substantially as described.

2. A car; a platform, and a doorway giving ingress to the car from the platform in combination with a collecting receptacle for fares suitably held in position on the platform; means adapted to be automatically operated by a passenger as he passes into the car for "turning down" the fares; and a fare box into which the collecting receptacle discharges, substantially as described.

3. A car; a platform, and a doorway giving ingress to the car from the platform in combination with a collecting receptacle for fares suitably held in position on the platform; a vertically movable platform; and means operated by the vertically movable platform for "turning down" the fares; and a fare box into which the collecting receptacle discharges, substantially as described.

4. In a fare receiver the combination of a chute for fares; a removable box below the lower end of the chute; a cover for the receptacle; positive means adapted to engage and raise the cover as the box is placed in position; means for automatically closing the cover as the box is withdrawn; and a spring lock adapted to lock the cover when the latter is closed, substantially as described.

5. In a fare receiver the combination of a chute for fares; a removable box below the lower end of the chute; a cover for the receptacle; a closing arm hinged above the box adapted to automatically close the cover as the box is withdrawn; and a spring lock adapted to lock the cover when the latter is closed, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

875,782. FAST NUT. WALTER H. COOK, London, England. Filed Apr. 29, 1907. Serial No. 370,953.

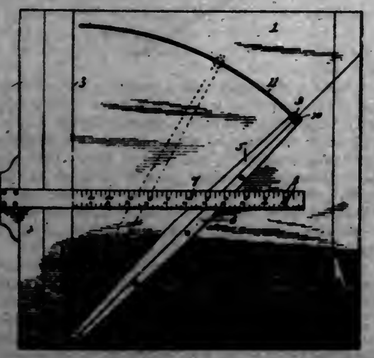


1. As an article of manufacture, a double self contained automatic cushion washer shown and described in this application having upper and lower sections, both parts provided with apertures and adapted to be located below the nut and the upper plate being provided with teeth for engaging the bolt to hold the washer in place, substantially as described.

2. In a fastnut, the combination with a bolt and nut of a double self contained cushion washer, each part provided with apertures, both parts being adapted to be located below the nut and the upper part being provided with teeth, substantially as described.

3. In a fastnut, the combination of a bolt and nut, a double self contained cushion washer, with central apertures, with teeth in the upper plate of the washer, and spring arms secured thereto by means of the extension pieces 1 and 2 for holding the nut in position, substantially as described.

875,783. PROPORTIONAL DIVIDERS. NAPOLEON COTÉ, Montreal, Quebec, Canada. Filed Apr. 8, 1907. Serial No. 367,130.



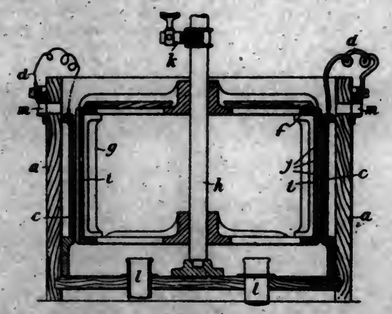
1. In an instrument of the character described, a base, a stop strip rigidly secured thereto, a base line extending along one edge of said base strip, a member slidably mounted on said base member, a scale on the slidable member extending at right angles to said base line, an indicating strip pivoted adjacent one end of said base line, and means for guiding and locking said strip in any adjusted position.

2. In an instrument of the character described, a base, a stop strip rigidly secured thereto, a base line extending along one edge of said base strip, a member slidably mounted on said base member, a scale on the slidable member extending at right angles to said base line, an indicating strip pivoted adjacent one end of said base line, and means for guiding and locking said strip in any adjusted position, said means comprising a slot extending through the base member and a bolt attached to the outer end of the indicating strip and playing through said slot.

3. In an instrument of the character described, a base, a stop strip rigidly secured thereto, a base line extending along one edge of said base strip, a member slidably mounted on said base member, a scale on the slidable member extending at right angles to said base line, an indicating strip pivoted adjacent one end of said base line, and means for guiding and locking said strip in any adjusted position, said means comprising a slot extending through the base member and a bolt attached to the outer end of the indicating strip and playing through said slot and a thumb nut on said bolt for locking the parts in adjusted position.

4. In an instrument of the character described, a base member, a stop strip rigidly secured thereto, a base line on said base member, a movable scale intersecting said base line, an indicating strip pivoted adjacent one end of said base line and coöperating with said scale, and means for guiding said strip and for locking the same in any adjusted position, said means comprising a slot extending through said base member and communicating with a channel in said base member, a bolt playing through said slot and provided with a head traversing the aforesaid channel, said bolt likewise being attached to the aforesaid indicating arm, and a thumb nut adapted to screw upon the outer end of said bolt to thereby clamp the parts in adjusted position.

875,784. APPARATUS FOR THE MANUFACTURE OF COPPER ELECTROTYPES. SHERARD O. COWPER-COLES, London, England. Filed Mar. 5, 1906. Serial No. 304,324.



1. In an apparatus for the electro-deposition of metal the combination with a vat for containing an electrolyte, of a cathode and a perforated anode mounted in said vat and means for continuously forcing the electrolyte through the perforations in the anode perpendicularly toward and against the face of the cathode, substantially as described.

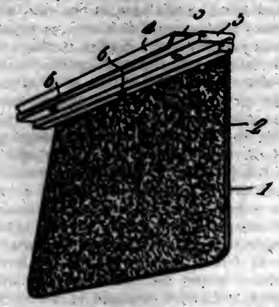
2. In an apparatus for the electro-deposition of metal, the combination with a vat for containing an electrolyte, of a substantially cylindrical cathode stationarily mounted in said vat and a substantially cylindrical and perforated anode rotatably mounted in said vat whereby said electrolyte is agitated, substantially as described.

3. In an apparatus for the electro-deposition of metal, the combination with a vat provided with inlet and outlet ports for an electrolyte, said electrolyte being under pressure, of a cathode stationarily mounted in said vat, a perforated anode rotatably mounted in said vat and means for rotating said anode, substantially as described.

4. In an apparatus for the electro-deposition of metal, the combination with a vat for containing an electrolyte, of cathodes, means for supporting said cathodes in a substantially cylindrical form in said vat, a frame revolubly mounted in said vat and anodes mounted on said revoluble frame in a substantially cylindrical form, substantially as described.

5. In an apparatus for the electro-deposition of metal, the combination with a vat provided with inlets and outlets for an electrolyte, said electrolyte being under pressure, of cathodes, means for supporting said cathodes in a substantially cylindrical form in said vat, a frame revolubly mounted in said vat, and perforated anodes mounted on said revoluble frame in a substantially parallel form, substantially as described.

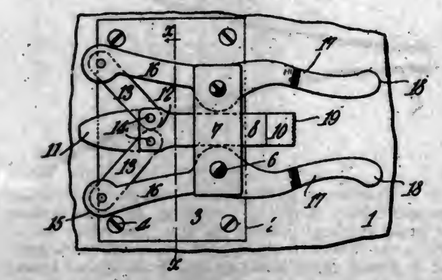
875,785. REFRIGERATOR-GUARD. JAMES F. DAVIS, Sag Harbor, N. Y. Filed May 20, 1907. Serial No. 374,701.



1. A refrigerator guard comprising a casing shield having one face covered with a yielding material, a door sill shield, and a batten secured to the latter shield.

2. A refrigerator guard comprising a casing shield having one face covered with a yielding material, a door sill shield embodying a keeper, and a batten secured to the latter shield.

875,786. BENCH-DOG. MARSHALL C. DAVIS, Wallowa, Oreg. Filed Mar. 28, 1907. Serial No. 365,088.

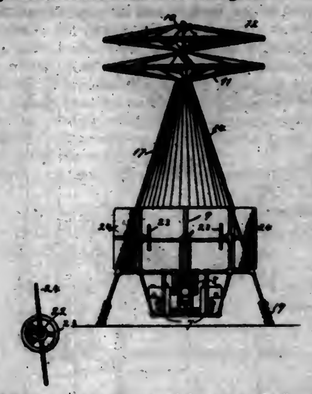


A bench dog comprising a base, oppositely disposed non-overlapping similar pivoted members upon the base, each member comprising a jaw and an arm extending in opposite directions from the pivot thereof, said members having rounded enlargements adjacent their pivots to constitute guides, a cross strip connecting the pivots of the members, a plunger interposed between and held against lateral movement by the guide portions of said members, there being a head at one end of the plunger, said strip and base constituting means to prevent vertical movement of the plunger, means slidably engaged by the plunger to prevent lateral oscillation thereof, and links connecting the plunger and the arms, said links being disposed back of the cross strip and at a point removed from the head of the plunger.

875,787. FLYING OR AIR CAR. SELDEN A. DAY, Paris, France. Filed May 16, 1906. Serial No. 317,232.

1. A flying or air car comprising a car body or carriage, rotative means for elevating said car body or carriage by the generation of downwardly moving air currents, said means rotating on a fixed axis with relation to said body or carriage, and a plurality of independently operable elements for utilising said air currents to give the car a lateral displacement to move the same from place to place.

2. A flying or air car, comprising a car body or carriage, rotative means for elevating said car body or carriage by the generation of downwardly moving air currents, said means rotating on a fixed axis with relation to said body or carriage, and a plurality of independently operable elements for utilising said air currents to give the car an angular displacement to turn the same on its vertical axis or change its direction from left to right.



3. A flying or air car, comprising a car body or carriage, rotative means for elevating said car body or carriage by the generation of downwardly moving air currents, said means rotating on a fixed axis with relation to said body or carriage and a plurality of independently operable elements for utilising said air currents to give the car a lateral displacement to move it from one place to another or an angular displacement to turn it on its vertical axis or change its direction of movement from right to left at the will of the operator.

4. A flying or air car, comprising a car body or carriage, means disposed above said car body or carriage for elevating said car by the generation of downwardly moving air currents, and one or more independently operable blades or vanes mounted on said car body or carriage for utilising said downwardly moving air currents to control the movement of said car.

5. A flying or air car, comprising a car body or carriage, one or more rotatably mounted shafts extending upward therefrom, rotatable means carried by said shaft or shafts for elevating said car by the generation of downwardly moving air currents, means for rotating said shaft or shafts and elevating means, and independently operable elements carried by said car body and located in the path of movement of said air currents, adapted to utilise the same to control the movement of said car.

[Claims 6 to 12 not printed in the Gazette.]

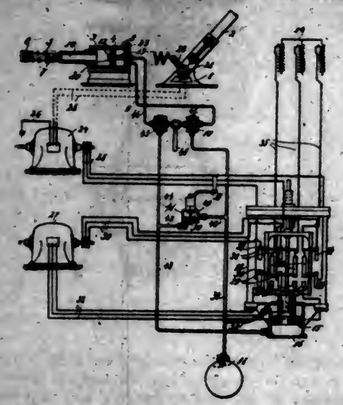
875,788. PRESSURE DEVICE FOR ELECTRIC-CURRENT COLLECTORS. COLOMAN DE KANDÓ, Budapest, Austria-Hungary, assignor, by mesne assignments, to Westinghouse Machine Company, a Corporation of Pennsylvania. Filed May 6, 1905. Serial No. 259,246.

1. The combination with an electric vehicle, of an electric conductor, an electric current collector, a plurality of electric motors for propelling said vehicle, a controller for arranging the connections of said motors for running speeds of different orders, and means for pressing the collector toward the conductor with relatively low pressure when the motor connections are arranged for a running speed of relatively low order, and for pressing the collector toward the conductor with relatively high pressure when the motor connections are arranged for a running speed of relatively high order.

2. The combination with an electric vehicle, of an electric conductor, an electric current collector, a plurality of induction motors for propelling said vehicle, a controller for arranging the connections of said motors in single and in cascade, and means for automatically pressing the collector toward the conductor with a relatively low pressure when the motors are arranged in cascade, and for pressing the collector toward the conductor with relatively high pressure when the motors are connected in single.

3. The combination with an electric vehicle, of an elec-

tric conductor, a current collector, a plurality of motors and fluid-operated means for arranging said motors to vary the speed of the vehicle and for simultaneously varying the pressure of the collector toward the conductor.

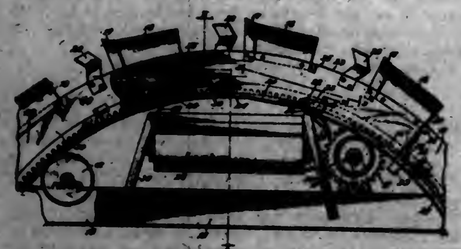


4. The combination with an electric vehicle of an electric conductor, a current collector, a plurality of motors and unitary means independent of the current flowing to the motors for arranging said motors to vary the speed of the vehicle and for simultaneously varying the pressure of the collector toward the conductor.

5. The combination with an electric vehicle of an electric conductor, a current collector, a plurality of motors, a controller, fluid-operated means controlled by said controller for arranging said motors to vary the speed of the vehicle and fluid-operated means simultaneously controlled by said controller for varying the pressure of said collector toward said conductor.

[Claims 6 to 8 not printed in the Gazette.]

875,789. MECHANISM FOR CLEANING EXCAVATOR-BUCKETS. TRUNIS DE YOUNG, Jr., South Holland, Ill. Filed June 8, 1907. Serial No. 378,016.



1. In mechanism of the class described a carrying mechanism, means for propelling said carrying mechanism in a predetermined path, a bucket attached to said carrying mechanism having an open face, parallel to the path of travel of the carrying mechanism, a movable member within the bucket adapted to normally support load within the bucket, and means for automatically moving said supporting member to a position where its load carrying face is slightly out of the bucket through said open face and is then parallel with the path of travel of the bucket.

2. In a conveyer, a bucket open at one side, a member movable within said bucket, a scraper adjacent to the conveyer and means for automatically moving said movable member from a position in which it supports the load within the bucket into contact with said scraper for the purpose set forth.

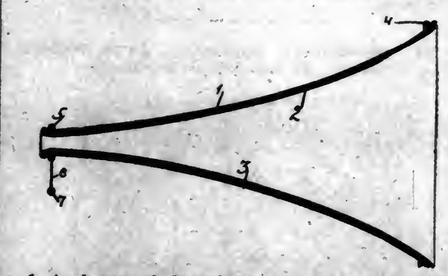
3. In a conveyer a bucket open at one side, a bottom for the load in the bucket pivoted in such a position that as it is tilted it is moved out of the bucket through the opening and automatic means for so tilting said bottom as the load is discharged.

4. In a conveyer a bucket open at one side, a bottom for the load in the bucket pivoted in such a position that as it is tilted it is moved out of the bucket through the opening and a scraper adjacent to the position for discharging the load and automatic means for tilting said bottom into contact with said scraper as the load is discharged.

5. In a trencher, a power driven wheel carrying buckets adapted to dig the earth said buckets being open toward the center of the wheel, means for closing said opening in the wheel in the portion of its circumference where elevation is taking place, a pivoted bottom for each bucket adapted to be engaged by each bucket bottom as it reaches place, a cam near the upper end of said closing means adapted to be engaged by each bucket bottom as it reaches the top of said closing means and tilt the bottom of the adjacent bucket toward the center of the wheel and a scraper adapted to be then engaged by the bottom of the bucket for the purpose set forth.

[Claim 6 not printed in the Gazette.]

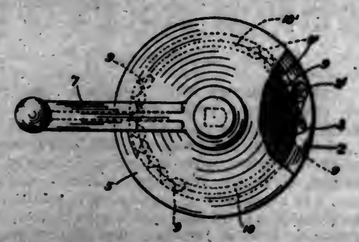
875,790. GRAPHOPHONE-HORN. GEORGE W. DUNCAN, Chicago, Ill. Filed Feb. 18, 1907. Serial No. 358,077.



1. A phonograph horn having a flexible fabric lining arranged loosely therein to provide an air space between the lining and inner wall of the horn, and means for attaching the ends of the lining to the terminals of the horn.

2. A flexible fabric lining adapted to be applied loosely within a phonograph horn, a cord attached to the smaller or inner end of said lining, a ball on the end of said cord whereby said lining may be readily drawn through the smaller end of the horn, and endless elastic fastening cords arranged in the opposite ends of said lining to secure the same to the opposite ends of the horn, substantially as described.

875,791. CONTROLLER-REGULATOR. JOHN P. DURKIN, Philadelphia, Pa., assignor to Durkin Controller Handle Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 31, 1907. Serial No. 390,876.



1. In a controller regulator, in combination with a revoluble shaft, means having a circular way with irregular courses extending transversely to the directions of revolution, means having intersecting ways adapted for registration with said irregular courses, and a ball in said ways.

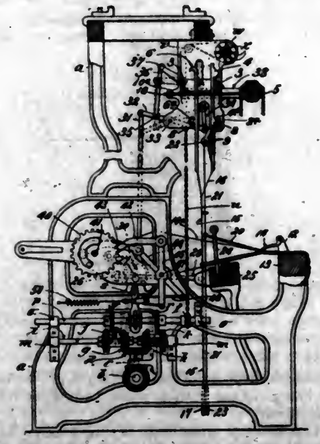
2. In a controller regulator, in combination with a revoluble shaft, a circular way having courses extending transversely to the plane thereof, means having an irregular way with courses adapted for registration with said first named courses, and a ball engaged in said ways.

3. In a controller regulator, a revoluble part having a way with intersecting courses extending transversely to the plane of revolution, a stationary part having a way with intersecting courses respectively adapted for registration with courses of said first named way, and a device adapted to roll in said ways.

4. In a controller regulator, in combination with a revoluble shaft, a stationary part having therein a substantially V-shaped way with a course of variable depth, a member connected to said shaft and having a depending part containing a circular way with courses adapted to register with said first named courses, and a device rolling in said courses.

5. In a controller regulator, a revoluble shaft, a cover fixed to said shaft and having a depending part with a peripheral way therein, a flange overlapping said part and having a way therein, and a ball revoluble in said ways.

875,792. PILE-FABRIC LOOM. JOHN F. DUSTIN, Springfield, Mass. Filed Sept. 3, 1904. Serial No. 223,216.



1. The combination in a pile-fabric loom, of pile wires and loop-formers, and a suitable pattern-mechanism with which said pile-wires and loop-formers are connected, and means whereby said wires and formers may be moved in a plane transverse to the weft threads and in opposite directions, to draw out the pile loops.

2. The combination in a pile-fabric loom, of pile-wires and loop-formers, and a suitable pattern-mechanism with which said pile-wires and loop-formers are connected, and means whereby said wires and formers may be moved transversely of the fabric, and in succession, from one side of the fabric to the other, in a plane transverse to the weft threads and in opposite directions.

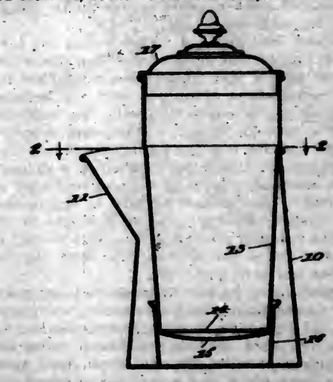
3. The combination in a pile-fabric loom, of the hooks and knife-board of a jacquard pattern mechanism; pile-wires and loop-formers parallel with the warps, and flexible connections extending from the rear ends of the wires and formers to and connected with one end of said hooks, and means for causing the cords to move in opposite directions to effect the upward movement of the pile-wire and the downward movement of the loop-forms by the downward movement of the hook.

4. The combination in a pile-fabric loom, of a jacquard pattern-mechanism comprising a series of hooks, a knife-board, and a rotatable knock off roll for the hooks, said roll having spirally disposed ribs thereon, to effect the disengagement of hooks from the knife-board, and means to rotate the knock off roll in succession in opposite directions, to release the hooks from the knife-board one after the other, beginning alternately from opposite ends of the board.

5. In a pile-fabric loom, a series of pile-wires parallel with the warps, a suitable pattern mechanism comprising a knife-board, a knock-off roll and hooks; means of connection between said hooks and the pile-wires to effect the raising of the wires selectively, together with means on the knock-off roll to disengage the hooks from the knife-board one after the other.

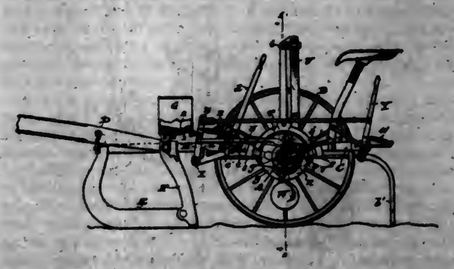
[Claims 6 to 9 not printed in the Gazette.]

875,793. COFFEE-POT. JAMES B. EWER, Chicago, Ill. Filed Nov. 24, 1906. Serial No. 344,814.



In a coffee pot, the combination with an outer vessel downwardly enlarged from its top to its bottom and having the upper portion of its wall bent outwardly to form a spout portion, the said spout portion having its entire inner portion opening into the vessel to afford resiliency to the upper portion of the wall thereof, of an inner vessel located in the outer vessel and frictionally held by the upper part of the wall thereof so that the inner vessel will be suspended within the outer one and its lower end located at a distance from the lower end of the outer vessel, a cover on the upper end of the inner vessel, a perforated disk and a strainer on the lower end of the inner vessel, and an open ended band surrounding the strainer and lower portion of the inner vessel and extended below the lower end of the inner vessel and having its entire lower edge located on the bottom of the outer vessel, substantially as described.

875,794. PLANTER. JAMES FARLEY, Waukesha, Wis. Filed Feb. 9, 1907. Serial No. 356,604.



1. A planter comprising a frame, an axle carried thereby, traction-wheels secured to the axle, a feed-hopper, feed-mechanism for the hopper, a thrust-dog in connection with the feed-mechanism, a tappet-hub loosely mounted on the axle in the path of the thrust-dog, a clutch-member carried by the tappet-hub, a clutch-disk secured to the planter-

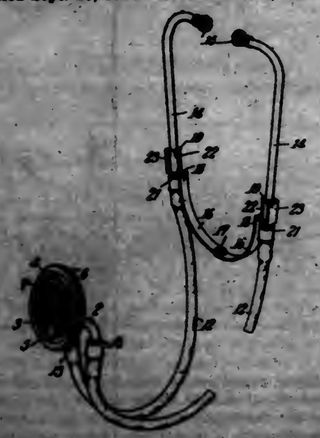
axle, constituting a clutch-member for engagement with the clutch-member of the hub, and a spring for holding the said clutch-members together, the combination of lugs carried by one of the aforesaid clutch-members, a swinging spanner, blocks carried by the spanner, and a gravity controlled weight in connection with the spanner for controlling the position of the blocks with relation to the lugs.

2. A planter comprising a frame having an overhead supporting strut, an axle carried thereby, traction-wheels secured to the axle, a feed-hopper, feed-mechanism for the hopper, a thrust-dog in connection with the feed-mechanism, a clutch-membered tappet-hub loosely mounted on the planter-axle in the path of the thrust-dog, and another clutch-member secured to said axle for engagement with the tappet-hub clutch-member, the combination of a weighted pendulum, and wedge-blocks for engagement with the aforesaid clutch-members, said wedge-blocks being controlled by the pendulum.

3. A planter comprising a frame having an overhead support, an axle carried by the frame, traction-wheels secured to the axle, a feed hopper, feed-mechanism for the hopper, a rock-shaft in connection with the feed-mechanism, a thrust-dog in connection with the rock-shaft, a clutch-face on said tappet-hub, a clutch-disk in spline-connection with the axle, a spring for holding the clutch-members in engagement, lugs on the clutch-disk, a spanner pivoted to the overhead support of the planter-frame, wedge-blocks carried by the spanner adapted to engage the lugs of the clutch-disk, a gravity-controlled weight in connection with the spanner, pivoted marker-arms carried by the planter-frame, and a rod in connection with the marker-arms and the aforesaid rock-shaft.

4. A planter comprising a frame having an upper supporting-strut, an axle carried by the frame, traction-wheels secured to the axle, a feed-hopper, feed-mechanism for the hopper, a rock-shaft, a spring-controlled lever secured thereto and connected to the feed-mechanism, a tappet-hub loosely mounted on said axle, a thrust-dog secured to the lever, the end of which is in the path of the tappet-hub, marker-arms pivoted to the frame, a rod connecting the marker-arms and said lever, a clutch-member on the tappet-hub, an incline face clutch-disk secured to the aforesaid axle for engagement with the clutch-member of said tappet-hub, lugs on the clutch-disk, a spanner pivoted to the upper supporting-strut of the frame, wedge-blocks carried by the spanner adapted to engage the lugs, a weighted pendulum pivoted to said supporting-strut, adapted to engage the inclined face of the clutch disk, and means connecting the pendulum and spanner.

875,795. STETHOSCOPE. DANIEL O. FOSGATE, Chicago, Ill. Filed Sept. 28, 1907. Serial No. 394,998.



1. In a stethoscope, the combination with a transmitter embodying a main diaphragm, of a supplemental diaphragm including an ear piece having a flange to bear against the main diaphragm, and means for holding the diaphragms assembled with the transmitter body.

2. In a stethoscope, the combination with a transmitter body having a threaded periphery, and a main diaphragm, of a supplemental diaphragm having a threaded collar to engage with the body, and an ear piece having a flange to bear against the main diaphragm.

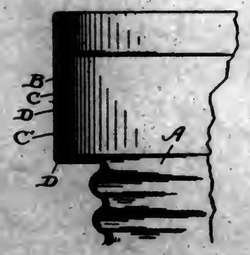
3. In a stethoscope, the combination with a transmitter embodying a main diaphragm, and means for modifying the vibrations thereof, of a supplemental diaphragm, embodying an ear piece having a flange to bear against the main diaphragm, and means for holding the diaphragms assembled with the transmitter body.

4. In a stethoscope, the combination with a transmitter embodying a main diaphragm and means for modifying the vibrations thereof, of a supplemental diaphragm embodying an ear piece, means for transmitting the vibrations of the main diaphragm to the supplemental diaphragm, and means for holding the two diaphragms detachably assembled with the diaphragm body.

5. In a stethoscope, the combination with the ear tubes, of a flexible clamp therefor, and brake members carried by the tubes and coacting with the clamp.

[Claims 6 and 7 not printed in the Gazette.]

875,796. LAMP-BASE. THEODORE W. FRENCH, Jr., Cleveland, Ohio. Filed Mar. 27, 1907. Serial No. 364,756.



1. An incandescent lamp base having a projecting skirt, said skirt being coated with a closely adherent fibrous insulating material.

2. An incandescent lamp base having a skirt, said skirt being coated with an adhesive substance and an outer layer of pliable fibrous insulating material.

3. A lamp base comprising a continuous metallic shell having a skirt, said skirt being coated with an adhesive insulating substance and a layer of absorbent pliable fibrous material.

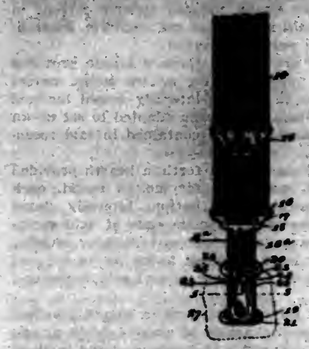
4. A lamp base having a skirt, said skirt coated with a layer of adhesive substance covered by a fibrous material having a coating of insulation thereover.

5. A lamp base having a skirt, said skirt coated with an adhesive substance covered by a fibrous material having thereover a coating of a shellac containing substance.

[Claim 6 not printed in the Gazette.]

875,797. GARMENT-CLASP. MARSHALL B. GARDNER, Aurora, Ill., assignor to S. Florsheim & Son, Chicago, Ill., a Firm. Filed May 10, 1905. Serial No. 259,760.

In a garment clasp, a base member having converging inturned flanges, in combination with a spring clasp member, the sides of which are also converging and provided with bulged portions at the bottom of the neck portion to prevent longitudinal movement of said members when in locked position, the neck portion of said spring clasp member being of less width than the least distance between the inner edges of said inturned flanges and adapted to press the fabric between said flanges, whereby the fabric is wedged between said members upon a forward movement



of said base member or a backward movement of said spring clasp member, substantially as described.

875,798. GARMENT-CLASP. MARSHALL B. GARDNER, Aurora, Ill., assignor to S. Florsheim & Son, Chicago, Ill., a Firm. Filed Oct. 27, 1905. Serial No. 284,674.



1. In a garment clasp, a tongue member having a longitudinal slot formed with substantially parallel edges, in combination with a member having a head and inwardly turned flanges, the head of said member adapted to engage the slot of said tongue member and the sides of said tongue member adapted to slidingly engage said flanges, substantially as described.

2. In a garment clasp, a tongue member having a longitudinal slot formed with substantially parallel edges, and inwardly narrowed sides, in combination with a member having a head and inturned parallel flanges, the head of said member adapted to travel within the slot of said tongue member, the sides of said tongue member adapted to slidingly engage said flanges and the narrowed portions permitting said tongue member to enter between said flanges, substantially as described.

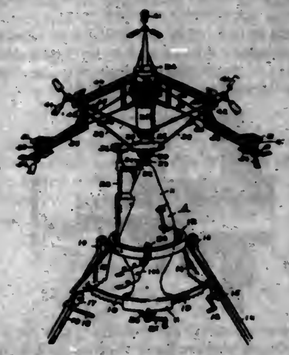
3. In a garment clasp, a tongue member having a longitudinal slot formed with substantially parallel edges, said slot terminating short of one of the ends of said tongue member, in combination with a base plate having parallel flanges, between which, the sides of said tongue member are adapted to travel, and a head member adapted to engage the slot of said tongue member, substantially as described.

4. In a garment clasp, a tongue member having a longitudinal slot formed with substantially parallel edges, in combination with a base member having inturned parallel flanges, a rigid shank interposed between said flanges and covered with a fractional material to form an elongated head, the parallel sides of the tongue member adapted to have a sliding engagement with said flanges, and said elongated head adapted to engage the slot of said tongue member, substantially as described.

5. In a garment clasp a longitudinally slotted member, the sides of which are parallel, and the slot of which terminates short of one end of said tongue member, in combination with a base plate provided with inturned parallel flanges and carrying an elongated head consisting of a metal shank having a coating of frictional material, said head projecting above said flanges, and adapted to engage the slot of said tongue member, and the sides of said tongue member adapted to slidingly engage said flanges, substantially as described.

[Claim 6 not printed in the Gazette.]

875,799. PROPELLER. OSCAR O. GILBERT, San Francisco, Cal. Filed Feb. 8, 1904. Serial No. 192,657.



1. In a propeller, the combination, with suitable supporting means, a collar pivotally mounted therein, segmental members at opposite sides of said collar, means for shifting said segmental members and thus tilting said propeller back and forth, a rack-bar supported by said members, a casing pivotally mounted in said collar the lower end of said casing engaging with said rack-bar, and actuating means engaging the lower end of said casing and said rack-bar for moving said lower end along said bar and thus tilting the propeller laterally.

2. A propeller comprising a main casing propeller blades supported by said casing, driving mechanism therein, a collar, said casing being pivotally mounted in said collar and said collar being mounted in standards, the lower end of said casing engaging with a rack-bar, means for conducting the lower end of said casing across said rack-bar, and means for tilting said casing backward and forward, as set forth.

3. In a propeller, the combination, with a suitable support, of a collar pivotally connected therewith, segmental toothed members on opposite sides of said collar and connected therewith, a rack-bar connecting said members, an inclosing casing for driving mechanism pivotally mounted in said collar the lower end of which casing engages said rack-bar, a driving shaft mounted in and extending through said casing, means for driving said shaft, a cap at the upper end of said shaft, a tubular casing surrounding said shaft, collars surrounding said casing, a framework supported by said cap and said collars, and blades operably mounted in said framework, all substantially as and for the purpose set forth.

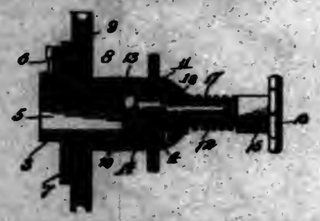
4. In a propeller, the combination with a suitable support, of a collar pivotally connected therewith, segmental toothed members on opposite sides of said collar and connected therewith, a rack-bar connecting said members, an inclosing casing for driving mechanism pivotally mounted in said collar the lower end of which casing engages said rack-bar, a driving shaft mounted in and extending through said casing, means for driving said shaft, a cap at the upper end of said shaft, a tubular casing surrounding said shaft, collars surrounding said casing, a framework supported by said cap and said collars, blades operably mounted in said framework, a gear as 23 and a supporting collar as 32 secured to said casing and said collar engaging said inclosing casing, and a driving shaft as 22 provided with a gear 24 meshing with gear 23, for the purpose set forth.

5. In a propeller, the combination, of a suitable sup-

port, a rack-bar, a pivotally mounted collar, a casing pivotally mounted in said collar and engaging with said rack-bar, means for moving the lower end of said casing along said rack-bar, driving means in said casing, a main driving shaft connected to said driving means and extending through said casing, a cap on said shaft, a casing surrounding said shaft, a framework carrying a plurality of propelling blades supported by said cap and said last mentioned casing, a gear 33 on said casing, and a drive shaft 23 provided with gear 34 meshing with said gear 33, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

875,800. FRICTION CLUTCH-PULLEY. JOHN GILSON, Port Washington, Wis., assignor to Gilson Manufacturing Company, Port Washington, Wis., a Corporation. Filed May 11, 1907. Serial No. 373,061.

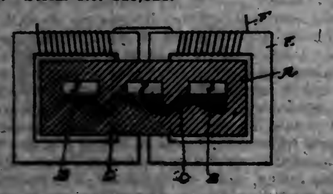


1. In a friction pulley, the combination with a rotatable shaft, of a clutch-member fixed thereon and having a hub and friction-disk, a bolt loosely engaging the hub at one end and threaded at its other end, a second clutch-member slidable upon the outer end of the hub and rotatably engaging the bolt, a pulley loosely mounted on the hub of the fixed clutch-member between the friction-disk and slidable clutch-member, and a nut adapted to move the slidable clutch-member against the outer end of the pulley.

2. In a friction pulley, the combination with a rotatable shaft, of a clutch-member fixed thereon and having a hub and friction-disk, a bolt loosely engaging the hub at one end and threaded at its other end, a second clutch-member slidable upon the outer end of the hub and rotatably engaging the bolt, a pulley loosely mounted on the hub of the fixed clutch-member between the friction-disk and slidable clutch-member, a nut on the threaded end of the bolt having a hand-wheel, and a compression spring on the bolt between the nut and movable clutch-member.

3. In a friction pulley, the combination with a rotatable shaft, of a clutch-member fixed thereon and having a hub and friction-disk, a bolt loosely engaging the hub at one end and threaded at its other end, a second clutch member slidable upon the outer end of the hub and rotatably engaging the bolt, said second clutch-member having a projecting flange, a combination-pulley mounted on the hub and having a wide end which engages the friction-disk and a narrower end with which the movable clutch-member engages and beyond which the flange projects, a nut on the threaded end of the bolt having a hand-wheel, and a compression spring on the bolt between the nut and movable clutch-member, substantially as shown and described.

875,801. CONSTRUCTION OF INDUCTION ELECTRIC FURNACES. GUSTAVE GIN, Paris, France. Filed May 3, 1906. Serial No. 315,023.



1. In a furnace of the type set forth, a hearth provided with a plurality of receptacles for molten metal, each having a longitudinally inclined bottom, laterally closed conduits connecting said receptacles and electro-magnetic means adapted to set up an induced electric current in metal contained in said receptacles and conduits, substantially as and for the purpose specified.

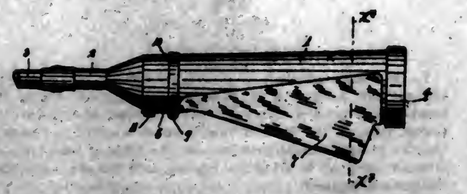
2. In a furnace of the type set forth, a hearth provided with a plurality of receptacles for molten metal, united in an endless system or crucible laterally closed inclined conduits and electro-magnetic means adapted to set up an induced electric current in metal contained in said receptacles and conduits.

3. In a furnace of the type set forth, a hearth provided with a plurality of receptacles for molten metal, each having a longitudinally inclined bottom, laterally closed inclined conduits connecting opposite ends of said receptacles and uniting same in an endless system or crucible and electro-magnetic means adapted to set up an induced electric current in metal contained in said receptacles and conduits.

4. In a furnace of the type set forth, a hearth provided with a plurality of open channels of greater depth at one end than the other, a plurality of laterally closed inclined conduits connecting the shallow end of each channel with the deep end of the adjacent channel and electro-magnetic means adapted to set up an induced electric current in metal contained in said channels and conduits.

5. In a furnace of the type set forth a plurality of open channels each having a longitudinally inclined bottom, the shallow end of each channel being adjacent the deep end of the next succeeding channel, said channels being united in an endless system or crucible by laterally closed inclined conduits and electro-magnetic means adapted to set up an induced electric current in metal contained in said channels and conduits.

875,802. TEAT-CUP FOR MILKING APPARATUS. EZRA E. GOOD, Waterloo, Iowa. Filed Feb. 11, 1907. Serial No. 356,673.



1. A teat cup having a laterally movable squeesing block and a pliable diaphragm yieldingly connecting said block to said cup, and which block and diaphragm are subject to atmospheric pressure, substantially as described.

2. The combination with a teat cup having an opening at one side, of a squeesing block working through said opening and connected at one end to said cup, a pliable diaphragm yieldingly connecting said block to said cup, and a spring yieldingly pressing said block outward, and which block and diaphragm are subject to atmospheric pressure, substantially as described.

3. The combination with a teat cup having an opening in one side, of a squeesing block working through said opening and yieldingly attached to said cup at one end, a pliable diaphragm connecting said block to said cup, a spring yieldingly pressing said block outward, and means for adjusting the tension of said spring, substantially as described.

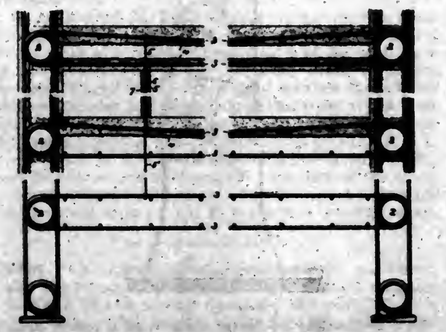
875,803. WIRE-SPLICER. GEORGE M. GRAHAM, Chicago, Ill., assignor to G. A. Edward Kohler, Chicago, Ill. Filed June 1, 1907. Serial No. 376,807.

1. A wire splicer, comprising a nut having a screw threaded orifice of greater diameter than the wire parts to be spliced, and transverse alined holes intersecting the screw threaded orifice and adapted to receive the wire parts, and a clamping plug having a screw threaded periphery and a cone projection adapted to enter the space between the wire parts and force the latter forward and outward into contact with the screw threads of the screw threaded orifice.



2. A wire splicer, comprising a nut having a screw threaded orifice of greater diameter than the wire parts to be spliced, and transverse alined holes intersecting the screw threaded orifice and adapted to receive the wire parts, and a clamping plug having a screw threaded periphery fitting in the screw threaded orifice and a cone projection of greater diameter than the combined width of the wire parts and adapted to enter the space between the wire parts and force the latter forward and outward into contact with the screw threads of the screw threaded orifice.

875,804. REINFORCED CONCRETE BUILDING. GEORGE M. GRAHAM, Chicago, Ill., assignor to G. A. Edward Kohler, Chicago, Ill. Filed Aug. 22, 1907. Serial No. 389,653.



1. The herein described method of forming partitions in reinforced concrete structures, which consists in initially securing the vertical reinforcing partition wires at their upper ends to the wire reinforce of an upper concrete floor, attaching the lower ends of said vertical partition wires to the wire reinforce of a floor beneath, imparting dished form to such floor reinforce by an application of the floor concrete to impose a tension stress upon the vertical partition wires so as to take up the slack thereof, and applying the partition concrete to said vertical partition wires, substantially as set forth.

2. The herein described method of forming partitions in reinforced concrete structures, which consists in initially securing the vertical reinforcing partition wires at their upper ends to the wire reinforce of an upper concrete floor, imparting a dished form to such floor wire reinforce by an application of the floor concrete, attaching the lower ends of said vertical partition wires to the wire reinforce of a floor beneath, imparting a dished form to such floor reinforce by an application of the floor concrete to impose a tension stress upon the vertical partition wires so as to take up the slack thereof, and applying the partition concrete to said vertical partition wires, substantially as set forth.

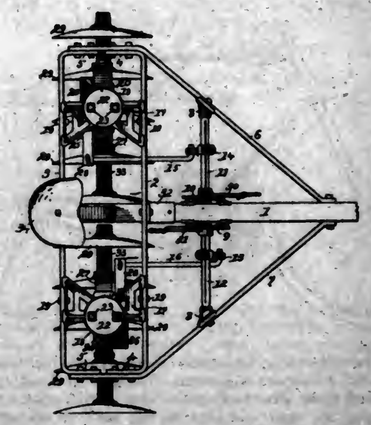
3. In a reinforced concrete structure, the combination of a series of horizontal marginal frames, skeleton wire centerings attached thereto and having a dished form, vertical reinforcing wires attached at their respective ends to said skeleton centerings, and a plastic mass applied to said vertical wires to constitute a partition, substantially as set forth.

4. In a reinforced concrete structure, the combination of a series of horizontal marginal frames formed of round tubing, skeleton wire centerings having webs formed by strands of wire wound around the circular periphery of the frame tubing, the uppermost webs of said centerings having a dished form, vertical reinforcing wires attached at their respective ends to said skeleton centerings, and a plastic mass applied to said vertical wires to constitute a partition, substantially as set forth.

5. In a reinforced concrete structure, the combination of a series of horizontal marginal frames formed of round tubing, skeleton wire centerings having webs formed by strands of wire wound around the circular periphery of the frame tubing, the uppermost webs of said centerings having a dished form, vertical reinforcing wires attached at their respective ends to the dished webs aforesaid, and a plastic mass applied to said vertical wires to constitute a partition, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

875,805. REVERSIBLE DISK HARROW. WILLIAM S. GRAHAM and FREDERIC L. DEWEY, Canton, Ill., assignors to Parlin & Orendorff Company, Canton, Ill., a Corporation of Illinois. Filed June 6, 1906. Serial No. 320,463.



1. In a reversible disk harrow, the combination of a pair of parallel cross bars, a tongue connected to the cross bars at the longitudinal center thereof, oblique brace bars secured to in-turned ends of the cross bars and to the tongue, gang-carrying secondary frames secured to the parallel bars, and gang-controlling rock shafts journaled in bearings on the tongue and on the brace bars, substantially as described.

2. In a reversible disk harrow, the combination of a cross frame, disk gangs pivotally attached to the cross frame, a tongue connected with the cross frame at the longitudinal center thereof, brace bars extending obliquely from the ends of the cross frame to the tongue, and gang-controlling rock shafts journaled in bearings attached to the tongue and to the brace bars, substantially as described.

3. In a reversible disk harrow, the combination of a cross frame, disk gangs pivotally attached to the cross frame, a tongue attached to the longitudinal center of the cross frame, brace bars extending obliquely from the ends of the cross frame to the tongue, rack brackets secured to opposite sides of the tongue, brackets attached to the brace bars, rock shafts journaled in the brackets on the cross bars and the brackets on the tongue, lock levers for the rock shafts coacting with the racks, arms on the shafts and link ends connecting the arms with the disk gangs, substantially as described.

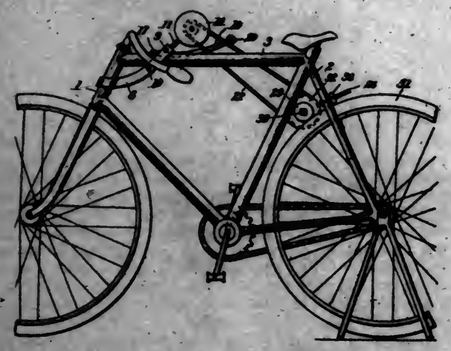
4. In a reversible disk harrow, the combination with a frame, a circular bearing journaled in said frame and having an arched lower surface, and a disk gang, of an arch bar secured to said disk gang and adapted to conform to the arched lower surface of said circular bearing, a clamp

plate adapted to bear against the under side of said arch bar, and means for adjustably clamping said arch bar between said circular bearing and said clamp plate, substantially as described.

5. In a reversible disk harrow, the combination of a frame having a vertical journal bearing, a disk gang, an arch bar attached to the disk gang, a clamp saddle conforming to the upper surface of the arch and having an upward extended pivot conforming to the journal bearing of the frame, a clamp plate adapted to fit the under surface of the arch, a cap plate for the pivotal extension of the clamp saddle, said cap plate being projected over the journal bearing, and bolts extended through the clamp members and the cap plate on opposite sides of the arch bar, substantially as described.

[Claim 6 not printed in the Gazette.]

875,806. GRINDING ATTACHMENT FOR BICYCLES. JAMES P. GRANT, Berkeley, Cal. Filed May 21, 1907. Serial No. 374,873.



1. In a grinding attachment for bicycles, the combination of a clamp provided with a block, a shaft adjustably mounted upon said block, means carried by said block and engaging the same and securing the shaft in an adjusted position, a grinding-wheel carried by said shaft, a pulley fixedly secured to said grinding-wheel, a friction-wheel supported contiguous to said grinding-wheel, and means connecting said friction-wheel and grinding-wheel, whereby, when rotary movement is imparted to said friction-wheel, similar movement will be imparted to said grinding-wheel.

2. In a grinding attachment, the combination of a clamp, a block secured to said clamp, a grinding-wheel carried by said block, a pulley secured to said grinding-wheel, a friction-wheel positioned contiguous to said grinding-wheel, a pulley fixedly secured to said friction-wheel, a belt mounted upon said pulleys, an arm provided with a lower, bifurcated end engaging said block, means adjustably securing said arm to said block, and a tightening pulley carried by said arm and engaging said belt for retaining the same in a tight condition.

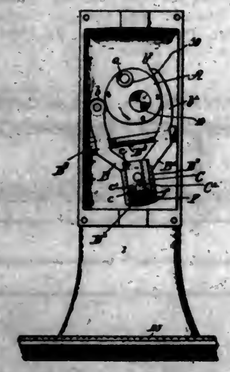
3. A grinding attachment for bicycles, comprising a clamp provided with a substantially U-shaped, resilient body having portions bent back parallel therewith and the extreme outer ends of said bent-portions turned outwardly and constituting braces, a shaft extending through said body and engaging said outwardly turned ends, means for securing said shaft in an adjusted position upon said body, a driving-member carried by said shaft, a driven-member positioned contiguous to said driving-member, and means connecting said driving-member and driven-member, whereby, when movement is imparted to said driving-member, similar movement will be imparted to said driven-member.

4. In a grinding attachment for bicycles, the combination with a frame, of a pair of clamps supported upon said frame, each clamp positioned upon a plurality of bars of said frame, a driving-member adjustably mounted upon one of said clamps, means securing said driving-member in an adjusted position, a driven-member adjustably mounted upon the other clamp, means for securing said driven-member in an adjusted position upon said clamp, and means connecting said driving-member and driven-member, whereby movement of one of said members will impart similar movement to the other member.

5. In a grinding attachment for bicycles, the combination of a clamp, provided with a substantially U-shaped, resilient body, means for clamping said body upon an object, a shaft adjustably mounted upon said body, means for securing said shaft in an adjusted position upon said body, a friction-wheel carried by said shaft, and a pulley carried by said shaft and fixedly secured against independent, rotary movement with respect to said friction-wheel.

[Claims 6 to 8 not printed in the Gazette.]

875,807. MECHANICAL MOVEMENT. LYMON D. GREEN, Dayton, Ohio, assignor to The Davis Sewing Machine Company, Dayton, Ohio, a Corporation of Ohio. Filed July 2, 1906. Serial No. 324,385.



1. A mechanical movement comprising a rotary double-acting disk-cam, and a fork straddling the same with arms of different lengths, the end of the shorter one affording a constant contact point and the inner edge of the longer arm a variable contact point, substantially as and for the purpose described.

2. A mechanical movement comprising a rotary double-acting disk-cam and a fork straddling the same with arms of different lengths, the end of the shorter one affording a constant contact point and the inner edge of the longer arm curved to afford a variable contact point, substantially as and for the purpose described.

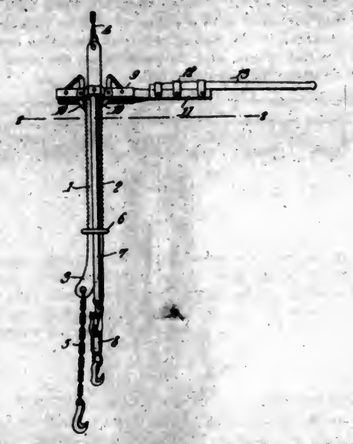
3. A mechanical movement comprising a rotary double-acting disk-cam, and a fork straddling the same with arms of different lengths the end of the shorter one affording a constant contact point and the inner edge of the longer arm struck on the arc of a circle to afford a variable contact point, substantially as and for the purpose described.

4. A mechanical movement comprising a rotary double-acting disk-cam, a fork straddling the same with arms of different lengths and the shorter arm having a roll at its end to engage the cam while the longer arm curves about said roll presenting an extended bearing surface for coaction with the cam.

5. A mechanical movement comprising a rotary double-acting disk-cam, and a fork straddling the same with arms of different lengths and the shorter arm having a roll at its end to engage the cam while the longer arm curves about said roll presenting an extended bearing surface for coaction with the cam at a uniform distance from the roll on both sides of a diametrical line of the cam embracing said roll.

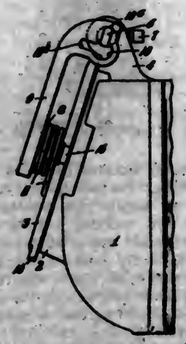
[Claims 6 to 26 not printed in the Gazette.]

875,808. STUMP-PULLER. ERICK A. GRUNDEEN, Carney, Mich. Filed Feb. 18, 1907. Serial No. 357,985.



A puller comprising a bar longitudinally curved at one end and having attaching means at both ends, a strip bent at its middle and having its end portion extending along the opposite sides of the bar, a cross member straddling the bar, clips attached to the outer sides of the cross member and having intermediate portions spaced therefrom, the ends of said strip being pivoted between the sides of the cross member and the clips, pawls pivoted to the cross member at opposite sides of the bar and having ends adapted to engage the edges of the bar, coil springs attached to the other end of said pawls and being connected with the cross member at points beyond the outer side of the pivots of the pawls and a ring surrounding the bar and strip and being retained upon the bar by the curved portion thereof.

875,809. CAR-AXLE-BOX LID. FREDERICK HACHMANN and WALDEMAR ERICKSEN, Minneapolis, Minn., assignors to Acme Manufacturing Company, St. Paul, Minn., a Corporation of Minnesota. Filed Feb. 16, 1906. Serial No. 301,887.



1. The combination with an axle box and a lid, of a lid supporting arm connected to said box by an interlocking pivotal joint, and the said lid being connected to said arm with freedom for lateral movements with respect thereto to and from a seated position on the box, when said arm is interlocked to the said box, substantially as described.

2. The combination with an axle box having an annular lid seat, of a lid-supporting arm connected to said box by an interlocking joint, and a lid having a threaded or spiral engagement with said arm, whereby said lid may be rotated and moved laterally toward and from said arm to and from a seated position on said box, substantially as described.

3. The combination with an axle box, having an annular lid seat, of a lid supporting arm connected to said box by an interlocking pivotal joint, and a lid having a threaded or spiral engagement with said arm, whereby the said lid may be moved laterally toward and from said arm, and to and from a seated position on the box, substantially as described.

4. The combination with an axle box, of a lid-supporting arm connected to said box by an interlocking pivot, arranged to lock said arm in either of two positions, and a lid having a threaded or spiral engagement with said arm, whereby it may be rotated and will be moved laterally with respect to said box, substantially as described.

5. The combination with an axle box, of a lid-supporting arm connected thereto by a pivot joint arranged to lock said arm in a position to hold said lid in a seated position, and a lid having a threaded or spiral engagement with said arm adapting it to rotate and to move laterally with respect to said arm, to and from a seated position with respect to said box, and which lid, when seated against said box, interlocks therewith and holds said arm interlocked with said box, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

875,810. AUTOMATIC FIRE-ALARM. BRUCE C. HALL and FLOYD W. HALL, Elmwood, Ill. Filed Jan. 12, 1907. Serial No. 352,062.



1. Means for electrically connecting the wires of an electric circuit, consisting of a pin electrically connected with one of the circuit wires, a metal collar surrounding said pin and electrically connected with the other circuit wire, a fusible element in contact with said collar and spaced from said pin, said element adapted when fused to contact with both pin and collar.

2. Means for electrically connecting the wires of an electric circuit, consisting of perforated insulating disks spaced apart, a contact member passing through said disks and connected with one of the circuit wires, a collar arranged between said disks and adapted, with said pin, to hold them in position, said collar connected with the other circuit wire, a fusible member inclosed by said disks and collar and so arranged, when fused, as to contact with said pin and collar.

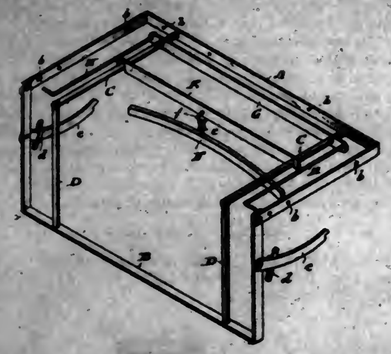
3. Means for electrically connecting the wires of an electric circuit, consisting of non-conducting disks spaced apart and provided with a central opening therethrough, means for holding said disks in their spaced relation, said means consisting of an element electrically connected with one branch of said circuit, and another element connected with the other branch of said circuit, in combination with a fusible means adapted when fused to connect said elements, whereby the circuit will be closed.

4. Means for connecting the wires of an electric circuit, consisting of two disks of non-conducting material spaced apart, a contact member carrying said disks connected with one branch of the circuit and adapted to prevent the removal of said disks therefrom, a fusible member surrounding said contact member and spaced therefrom, and a second contact member surrounding said fusible member, insulated from the first named contact member and connected with the other branch of said circuit, said fusible member adapted, when fused, to electrically connect said contact members.

5. In a device for electrically connecting the wires of an electric circuit, a disk of fusible metal having a hole therethrough, a contact member passing through said hole and

normally spaced from and insulated from said disk, said member connected with one branch of the circuit, a second contact member surrounding the fusible disk and electrically connected with the other branch of the circuit, and means insulating said contacts from each other.
[Claim 6 not printed in the Gazette.]

875,811. GARMENT-SUPPORTER ATTACHMENT FOR RECEPTACLES. EUGENE W. HAWLEY, Milwaukee, and GEORGE H. WERNARY, Racine, Wis., assignors to The Hartmann Trunk Company, Racine, Wis. Filed Nov. 23, 1907. Serial No. 403,486.



1. An attachment for garment receptacles comprising a jointed rectangular frame one section of which is for rigid connection inside the receptacle, jointed rods in connection with the frame-sections, suspension bars in sliding engagement with the rods, and means for supporting the movable section of the attachment in the same plane as the other section of same.

2. An attachment for garment receptacles comprising a jointed rectangular frame one section of which is for rigid connection inside the receptacle, jointed rods in connection with the frame-sections, suspension bars in sliding engagement with the rods, another bar in similar engagement with said rods back of the bars aforesaid, and provided with handles, and means for supporting the movable section of the attachment in the same plane as the other section of same.

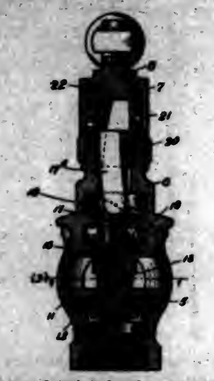
3. An attachment for garment receptacles comprising a jointed rectangular frame one section of which is for rigid connection inside the receptacle, jointed rods in connection with the frame-sections, notched-end braces in pivotal connection with the movable section of the attachment for engagement with stop-guides attachable to walls of said receptacle, and suspension bars in sliding engagement with the rods.

875,812. QUICK-OPENING VALVE. JAMES T. HAYDEN, Chicago, Ill., assignor to Crane Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 2, 1905. Serial No. 272,364.

1. In a quick opening valve the combination with a casing, of a valve stem section having a screw connection of high pitch therewith and constructed to lock against longitudinal movement when at its extreme lower position, and a valve having a screw connection of low pitch with the valve stem section.

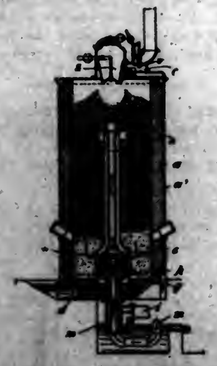
2. In a quick opening valve the combination with a casing, of a valve stem section having a screw connection of high pitch therewith and constructed to lock against longitudinal movement when at its extreme lower position, a valve having a screw connection of low pitch with the valve stem section, and means whereby the valve may be adjusted at its screw connection to any desired angular position and there guided against rotary movement.

3. In a quick opening valve the combination with a casing, of a valve stem section 17 provided with projecting pins, means to revolve the same, a helical slot in the casing flattened at its end for locking the stem by its pins in a closed position, a valve threaded upon said stem section and provided with a series of ribs to engage a projection provided in the casing, whereby the valve may reciprocate but not rotate, and its position on the stem is adjustable, substantially as described.



4. An angular and twisted valve actuating stem in combination with a surrounding operating sleeve mounted to turn with the said stem, and means for moving the stem longitudinally through the sleeve substantially as described.

875,813. GAS-GENERATOR. CARL HEINZ, Görlitz, Germany. Filed Aug. 19, 1907. Serial No. 389,215.



In a gas generator, a casing having a gas delivery pipe passing down through the bottom of the same from the fuel chamber, an air supply pipe passing up through this gas delivery pipe and carrying a hood at its upper end which incloses the upper end of said delivery pipe and is made hollow, an upwardly extending air pipe leading from the upper side of this hood, and a cap-like partition w inclosed within the hood and having its annular side wall depending into the depending hollow part of the hood, for the purpose set forth.

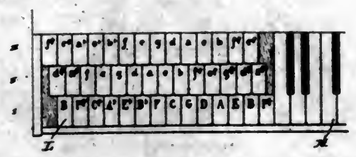
875,814. RAILWAY-GATE. JOHN R. HINTON, Cashmere, Wash. Filed Apr. 11, 1907. Serial No. 367,612.

In a railway gate, the combination, with the railway rails and ties, of a gate-bar provided with gate palings extending transversely of the rails and the pales normally projecting vertically above the said bar, the latter having crank offsets extending below the rails, the said crank offsets having bearings below each rail, and the ends of the gate bar having also vertical weighted arms extending from the ends of the bar vertically downward and in the plane of the paling to hold the gate closed, tread-bars arranged on the inner sides of the rails for a distance beyond opposite sides of the gate to permit several wheels of a train to run upon the tread-bars before the gate is



reached, and crank arms, 21, pivotally connected at each end portion of the tread-bar and in bearings below the rail, in order that the tread bars may be bodily operated and the gate opened before the engine or any other part of the train reaches the pales.

875,815. KEYBOARD FOR MUSICAL INSTRUMENTS. JOSEPH C. HOFBAUER, West Hoboken, N. J. Filed June 7, 1907. Serial No. 377,846.



1. In musical instruments, controlled by means of keyboards, the combination of two separate keyboards and sounding devices controlled by the keyboards; one keyboard being similar to the usual piano keyboard and having a compass of two to four octaves; the second keyboard having keys in three rows parallel to one another and to the first keyboard, the rows being offset laterally with relation to one another, so that their keys may be struck simultaneously in successive parallel series, by the fingers of the left hand; the keys in the lowest row, controlling basses, ranging in bass-clef from C below the staff to C within the staff; the keys in the two upper rows, controlling harmonic accompaniments ranging in pitch one or two octaves higher than said basses, the sounding devices controlled by the keys of each row being tuned successively in fifths from one end of the row to the other; the first keys of the two upper rows controlling the major third and fifth of the note controlled by the first key of the lowest row.

2. In musical instruments a keyboard controlling basses and accompaniments, and consisting of three rows of keys; corresponding sounding devices tuned successively in fifths, the devices controlled by the first keys of the second and third rows being tuned to give the major third and fifth of that controlled by the first key of the first row.

3. An accordion having a melody keyboard, similar to the usual piano keyboard, the keys controlling the notes E and B in each octave being placed slightly out of the rank and nearer to the top edge of the keyboard, the second keyboard controlling basses and accompaniments and consisting of three rows; the first and lowest row controlling the basses and being placed on the bottom of the accordion near the front edge, the second and third rows being placed on the front of the accordion, near the bottom edge; the sounding devices controlled by the keys of each row being tuned successively in fifths, and the sounding devices controlled by the first keys of the rows being tuned to correspond as tonic bass, major third and fifth, substantially as set forth.

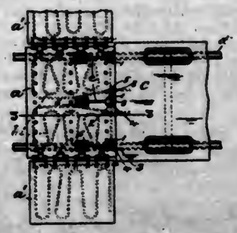
875,816. SNAP-FASTENER. GEORGE A. HOLMES, Newton Center, Mass., assignor to United States Fastener Company, Boston, Mass., a Corporation of Maine. Filed May 7, 1906. Serial No. 315,551.



1. A snap fastener comprising a socket member and a ball member and a pair of locking plates secured respectively to the socket and ball members, said locking plates having offset locking projections at one side adapted to become engaged with each other in the act of engaging said socket and ball members; the said locking plates having apertures fitted around the socket and ball members respectively.

2. A snap fastener comprising socket and ball members, one of said members having a locking plate comprising an offset T-shaped part, and the other member having a locking plate comprising an offset pair of claws adapted to straddle and interlock with said offset T-shaped part in the act of engaging said socket and ball members.

875,817. VEGETATION-DESTROYER. CLARENCE H. HOWARD, St. Louis, Mo., assignor to Railroad Weed Burner Company, St. Louis, Mo., a Corporation of Delaware. Filed Oct. 18, 1907. Serial No. 398,019.

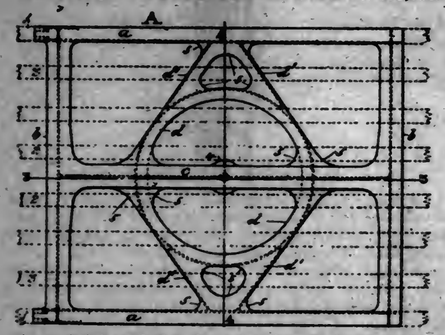


1. In a vegetation-destroyer of the character described, a connecting device for securing the burner casings to the frame or vehicle, consisting of two parts, one part fixed to the said frame and the other part fixed to one of the said casings and vertically slidable laterally and transversely against the first named part, the said parts having respectively, an upright series of bolt-holes therethrough, the holes of one part being adapted to register with the holes of the other part, means for interlocking the parts in the registering position of the said holes, and bolts passed through the said holes and tightened against the said parts, substantially as described and for the purpose set forth.

2. In a vegetation-destroyer of the character described, the means for securing the burner casings to the frame or vehicle, comprising two opposite arms projecting from the said frame and adapted to form a jaw, a bracket fixed at its lower end to one of the said casings, a tongue projecting from the upper end of the bracket and slidable vertically within the jaw, the bracket having shoulders thereat adapted to bear against the upright edges of the said arms, the said arms and tongue having an upright series of bolt-holes formed transversely therethrough respectively, adapted to register with each other, and the said shoulders having projections adapted to engage with corresponding recesses in the said arms in the registering positions of the

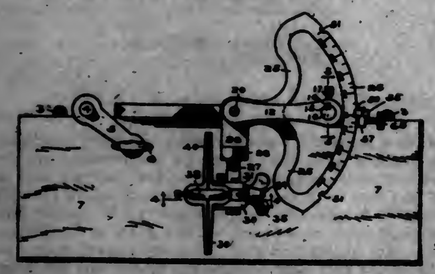
said holes, and bolts passed through the said registering holes, substantially as described and for the purpose set forth.

875,818. CAR-BOLSTER. CLARENCE H. HOWARD and HARRY M. PFLAGER, St. Louis, Mo., assignors to Double Body Bolster Company, St. Louis, Mo., a Corporation of New Jersey. Filed Oct. 28, 1907. Serial No. 398,790.



A car-bolster of the character described, consisting of two opposite end members, and two opposite side members spaced wide apart and united to the end members, the said members being adapted to bear at the top against the car-sills, a middle member spanning and uniting to the side members, and having the body center-plate on its underside, the middle member extending partly between the center sills and having its underside, between each side member and the said plate, concave longitudinally, a ring or analogous member united to the middle member and adapted on its underside to form a circular bearing surface concentric with the said plate for engaging the side-bearings of the truck, and suitable members uniting the said ring to the end members, substantially as described and for the purpose set forth.

875,819. MITER-BOX. ARTHUR D. HUGHES, Laketon, Ind. Filed Jan. 12, 1906. Serial No. 295,754.



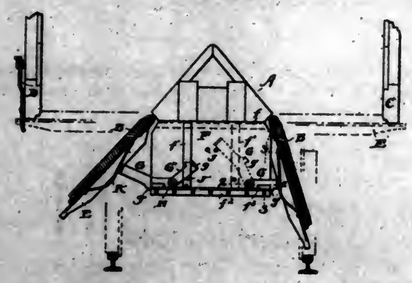
1. In a miter box comprising a bed plate and supporting frame, a vertically disposed post mounted on said frame adjustably about its longitudinal axis, a saw guide supporting said segment carried by said post, a saw guide supported by said segment, and means secured to said post to bring the saw guide at right angles across the bed plate when the segment is set at zero.

2. In a miter box comprising a bed plate and supporting frame, a vertically disposed post mounted on said frame adjustably about its longitudinal axis, a yoke adjustably mounted on said post, means for holding said yoke against rotation, means for securing said yoke to the post, a segment pivotally mounted in said yoke, means to set the segment at given points, a saw guide adjustably secured in said segment, to permit said guide to be turned obliquely to the perpendicular, and means secured to the post to bring its parts at right angles with the plate back.

3. In a miter box comprising a bed plate and supporting frame, a vertically disposed post mounted on said frame adjustably about its longitudinal axis, a yoke adjustably mounted on said post, means to cause said yoke and post to rotate together, a segment pivotally mounted in said yoke, a shaft carried by said yoke, a saw guide adjustably secured to said shaft, and means permitting the jaws of said saw guide to be adjusted with relation to each other.

4. In a miter box comprising a bed plate and supporting frame, a vertically disposed post mounted on said frame adjustably about its longitudinal axis, a yoke vertically adjustably mounted on said post, means to cause said yoke and post to rotate together, a segment pivotally mounted in said yoke, a shaft carried by said yoke, a saw guide adjustably secured to said shaft, means permitting the jaws of said saw guide to be adjusted with relation to each other, and means secured to the vertical post to bring the parts at right angles with the plate back.

875,820. DUMP-CAR. FRANK S. INGOLDSBY, St. Louis, Mo., assignor to The Ingoldsby Automatic Car Company, St. Louis, Mo., a Corporation of West Virginia. Filed July 14, 1905. Serial No. 269,579.



1. In a dump car, the combination of a dumping door, an interchangeable bumping mechanism to receive the impact of the door and limit the movement thereof.

2. In a dump car, the combination of a dumping door, a variable rigid bumping mechanism disconnected from the door and adapted to receive the under side of the door and hold the door in one of a number of different positions.

3. In a dump car, the combination of a dumping door, and a plurality of bumpers therefor, each adapted to support the door in a different position.

4. In a dump car, the combination of a dumping door, and a movable bumper adapted to be rigidly placed to engage beneath said door as it falls and receives the impact of it and support it.

5. In a dump car, the combination of a beam, a support depending therefrom, variable bumping mechanism carried by such support, and a door pivoted to said beam independently of the bumping mechanism, but coöperating with such mechanism.

[Claims 6 to 19 not printed in the Gazette.]

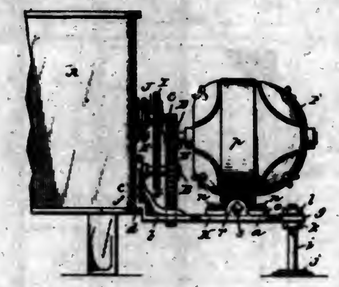
875,821. DEVICE FOR SUPPORTING MOTORS. ALFRED INSINGER, Philadelphia, Pa. Filed July 13, 1905. Serial No. 269,506.

1. The combination, with a support, of a bracket having a step-like arm secured rigidly to said support, a pillar for supporting the free end of said bracket, and a supporting ring for a motor secured to said bracket and transversely adjustable thereon.

2. The combination, with a support, of a bracket rigidly secured to the support, a supporting ring for a motor arranged on the bracket, an adjustable pillar for supporting the outer end of the bracket, and means for adjusting the ring transversely of the bracket.

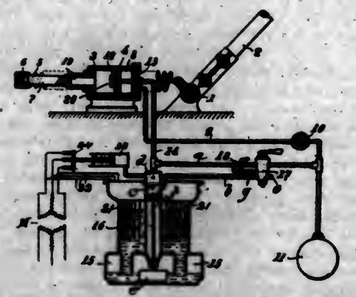
3. The combination, with a support, of a bracket secured to said support, a pillar supporting the free side of said bracket, a track or way on said bracket, a ring for supporting a motor having a groove adapted to fit over said track or way, and means for adjusting and securing said ring on said track.

4. A device for supporting a motor, comprising a bracket having a base formed with elongated slots at each corner, and an elongated slot at right angles to said corner slots, a step-like arm extending from one side of said base, screw-threaded perforated vertical lugs at each end of said



base, a track or way extending lengthwise of the base, and an adjustable pillar for supporting the free side of said bracket.

875,822. PRESSURE DEVICE FOR ELECTRIC-CURRENT COLLECTORS. COLOMAN DE KANDÓ, Budapest, Austria-Hungary, assignor, by mesne assignments, to Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Nov. 27, 1903. Serial No. 182,701.



1. The combination with an electric vehicle, of an electric conductor, an electric current collector, an electric motor for propelling said vehicle, a controller, and means for automatically pressing said collector toward said conductor with relatively low pressure when the controller is set for starting or for running at relatively low speed, and for automatically pressing said collector toward said conductor with relatively high pressure when the controller is set for running at relatively high speed.

2. The combination with an electric vehicle, of an electric conductor, an electric current collector, an electric motor for propelling said vehicle, a controller, and means independent of the current flowing to the motor for automatically pressing said collector towards said conductor with relatively low pressure when the controller is set for starting or for running at relatively low speed and for automatically pressing said collector toward said conductor with relatively high pressure when the controller is set for running at relatively high speed.

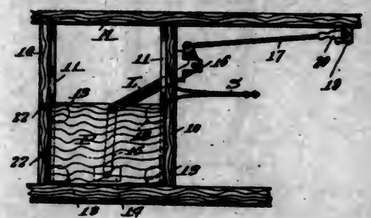
3. The combination with an electric vehicle, of an electric conductor, an electric current collector, an electric motor for propelling said vehicle, a speed controller and means operable from the controller for pressing said collector toward said conductor with relatively low pressure when the controller is set for starting or for running at relatively low speed, and for automatically pressing said collector toward said conductor with relatively high pressure when the collector is set for running at relatively high speed.

4. The combination with an electric vehicle, of means for propelling said vehicle, an electric conductor, an electric current collector, and unitary means independent of the current flowing to the motor for varying the speed of the vehicle and simultaneously varying the pressure of the collector against the conductor.

5. The combination with an electric vehicle, of an electric conductor, a current collector, fluid-operated means for pressing said collector toward said conductor, and means for regulating the pressure of said fluid whereby the pressure of the collector against the conductor is regulated.

[Claims 6 to 18 not printed in the Gazette.]

875,823. MEANS FOR OPENING AND CLOSING PANELS OF MUSICAL INSTRUMENTS. WILLIAM J. KEELEY, New York, N. Y., assignor to Autopiano Company, New York, N. Y., a Corporation of New York. Filed Jan. 5, 1906. Serial No. 294,714.

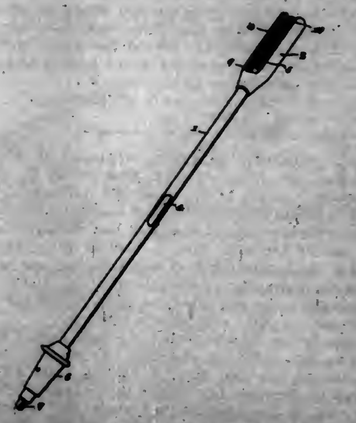


1. A musical instrument having a casing provided with an overhanging part, a sliding panel for the lower portion of said casing, means connected with the panel for operating it comprising a shaft located on the under side of the overhanging part of the casing, and means on the shaft for turning it to operate the sliding panel, the last named means being located under the overhanging portion and near the front thereof.

2. A musical instrument having a casing, a panel fitted to slide thereon, a bell-crank lever pivoted to the casing, a link connecting one arm of the bell-crank lever to the panel, a leaf-spring arranged between the casing and this arm of the bell-crank lever, an operating rod journaled in bearings and provided with a handle the inner end of the operating rod being bent into a crank arm, and a link connecting the bent arm of the crank rod with the other arm of the bell-crank lever.

3. A musical instrument having a casing comprising a cover board, uprights behind the cover board assisting in supporting the upper part of the casing, said uprights having ribs on their opposed faces and a panel slidable along said ribs supported independently of the cover board.

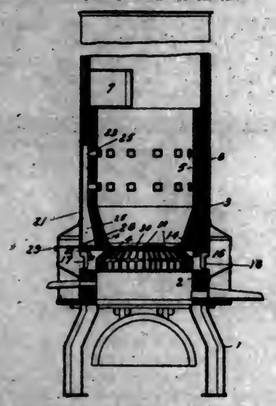
875,824. VETERINARY FLOAT. DAVID O. KNISELY, Topeka, Kans. Filed Jan. 26, 1906. Serial No. 298,012.



A float comprising a hollow head provided with spaced longitudinally disposed guards, a cylindrical carborundum

grinder housed by the head and having its circumference lying within the edges of the guards and its terminals inset from the ends of the head to permit the guards to act as guides when the implement is rocked in rounding off rough corners, a shank rigid with the head, and a shaft rotatable within the shank and secured to the grinder.

875,825. FURNACE. JOHN C. KNOEPPEL, Belmont, N. Y. Filed June 8, 1907. Serial No. 377,939.



1. In a furnace the combination of a series of main twyers of segmental form and filling arcs of the furnace wall, and a key twyer adapted to be moved from within radially into place between and in contact wtih two main twyers.

2. In a furnace the combination of a series of main twyers of segmental form and filling arcs of the furnace wall, and a key twyer adapted to be moved radially into place between two main twyers, said key twyer having the overlapping top plates 9^b.

3. In a furnace having its furnace walls provided with a bosh, a twyer arranged below the bosh; said twyer comprising top and bottom plates and uprights between said plates, said uprights projecting at their tops inwardly toward the center of the furnace and beneath the bosh.

4. In a furnace having its furnace walls provided with a bosh, a twyer arranged below the bosh, said twyer comprising top and bottom plates and uprights between said plates, said uprights projecting at their tops inwardly toward the center of the furnace and beneath the bosh, said twyer being formed in segments, each segment being removable.

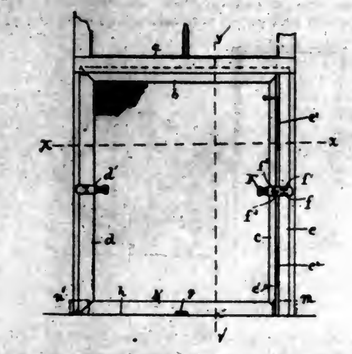
5. A furnace twyer having top and bottom plates and uprights arranged between said plates, said uprights projecting at their tops inwardly toward the center of the furnace, said twyer being provided with a horizontal partition between top and bottom plates.

[Claims 6 to 24 not printed in the Gazette.]

875,826. WINDOW-SCREEN. CHARLES H. KNOWLES, Fairfield, Me. Filed July 18, 1906, Serial No. 326,104. Renewed Nov. 21, 1907. Serial No. 403,190.

1. The herein described window screen having end bars and side bars, a lateral extension bar slidably connected with one of the side bars, a holding plate adjustably mounted on the inner face of said extension bar to extend beyond the outer edge of the extension bar, and a holding plate on the inner surface of the opposite side bar extending beyond the outer edge of said side bar.

2. The herein described window screen having end bars and side bars, a lateral extension bar slidably connected with one of the side bars, a holding plate adjustably mounted on the inner face of said bar to extend beyond the outer edge of the extension bar, means for clamping the holding plate to the side bar, and a holding plate on the inner surface of the opposite side bar extending beyond the outer edge of said side bar.



3. The herein described window screen having end bars and side bars, a lateral extension bar slidably connected with one of the side bars, springs for holding said extension bar in its outer position, a holding plate mounted on the extension bar to extend beyond the outer edge thereof, means for clamping said holding plate to the side bar, and a holding plate on the opposite side bar extending beyond the outer edge of said bar.

4. The herein described window screen having end bars and side bars, a lateral extension bar slidably connected with one of the side bars, springs for holding said extension bar in its outer position, a holding plate provided with horizontal slots, screws passing through said slots for adjustably securing the holding plate to the inner surface of the extension bar, said holding plate being adapted to have its outer end project beyond the outer edge of the extension bar, and a holding plate on the opposite side bar.

5. The herein described window screen having end bars and side bars, one of said side bars being rabbeted out on its inner face, a lateral extension bar held in said rabbet, pins in the inner edge of said extension bar and holes in the side bar for the passage of said pins, springs between the inner edge of the extension bar and the surface of the side bar for forcing the extension bar outward, a holding plate having horizontal slots, screws passing through one or more of said slots for adjustably securing said plate to the extension bar, a thumb screw passing through one of said slots for securing the plate to the side bar and a holding plate on the opposite side bar extending beyond the outer edge thereof.

[Claims 6 to 9 not printed in the Gazette.]

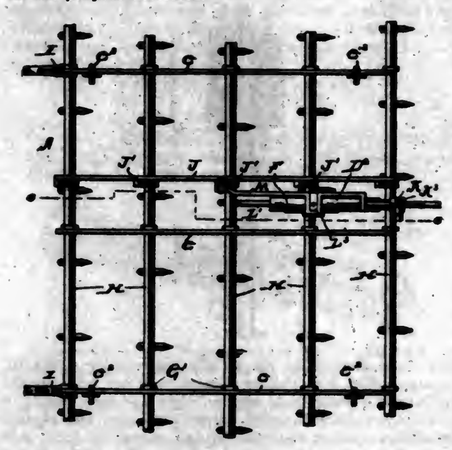
875,827. HARROW. REUBEN A. KOELLER, Colvinpark, Ill. Filed Oct. 7, 1905. Serial No. 281,826.

1. In a harrow, the combination with pivoted tooth bars, of a crank screw mounted on said harrow carrying a bar, connected to said tooth bars, and provided with a U-shaped portion, and a nut mounted on said screw in said U-shaped portion of said bar, for the purpose described.

2. In a harrow, the combination with pivoted tooth-bars, of a bracket mounted on the rear tooth-bars, a crank screw mounted in said bracket carrying a bar connected to said tooth-bars, a nut mounted on said screw working in said bar, and means for locking said crank-screw for the purpose described.

3. In a harrow, the combination with the pivoted tooth bars, of levers connected to said tooth-bars carrying a bar, a crank screw mounted on said harrow, a bar mounted on said crank-screw connected to said lever carried bar and a nut mounted on said screw working in said screw carried bar, for the purpose described.

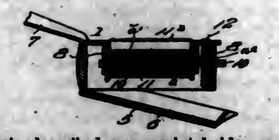
4. In a harrow, the combination with pivoted tooth-bars, of levers connected to said tooth-bars carrying a bar a crank screw mounted on said harrow, a bar mounted on said crank-screw connected to said lever carried bar and provided with a U-shaped portion and a nut mounted on said crank screw, in the U-shaped portion of the said bar, for the purpose described.



5. In a harrow, the combination with pivoted tooth bars, of levers secured to said tooth-bars, a bar connecting said levers, a bracket mounted on said harrow, a crank screw mounted in said bracket, a bar mounted on said screw connected to the bar carried by the levers and a nut mounted on said screw working in said bar carried by the levers.

[Claims 6 to 8 not printed in the Gazette.]

875,828. MANUSCRIPT-HOLDER. RICHARD S. LAFOON, Richmond, Va. Filed Nov. 6, 1905. Serial No. 286,094.



The herein described manuscript holder consisting of a casing having a top, a back, a front and end walls rigidly secured together, a flexible cover secured to the back, and a bottom connected to said cover to form a hinge for said bottom, the top having spaced slits through which the manuscript is adapted to extend, a pair of brackets having diverging arms and inwardly turned feet secured to the under surface of the top of the casing, shafts journaled in said brackets, and spools for receiving a roll of manuscript on said shafts, whereby the top, the back, the front and end walls may be inverted to lie upon said cover and expose the interior mechanism of the casing, substantially as described.

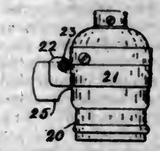
875,829. DEVICE FOR FILING PAPERS AND CARDS. CHARLES LA RUE, New York, N. Y. Filed Apr. 19, 1907. Serial No. 369,171.



1. A filing device for holding paper or cards, consisting of a floor and sides and end, so arranged that the sides and end do not rise exactly vertically from the floor, but instead flare slightly away from each other, and the lines of intersection of the sides with the floor are parallel with each other, and the line of intersection of the end with the floor, cuts at oblique angles the said lines of intersection of the floor with the sides, and the line of intersection of the end with the floor between the two sides is substantially the same length as the cards or papers to be filed, whereby cards upon and vertical to the floor between the sides are by the lower portions of such sides kept overlapping laterally in consecutive order.

2. A filing device for holding paper or cards, consisting of a floor and sides and end, so arranged that the sides and end do not rise exactly vertically from the floor, but instead flare slightly away from each other, and the lines of intersection of the sides with the floor are parallel with each other, and the line of intersection of the end with the floor, cuts at oblique angles the said lines of intersection of the floor with the sides, and the line of intersection of the end with the floor between the two sides is substantially the same length as the cards or papers to be filed, whereby cards upon and vertical to the floor between the sides are by the lower portions of such sides kept overlapping laterally in consecutive order, combined with a follower placed at the same angle as the backs of the cards.

875,830. SOCKET-KEY CLAMP. MAX LOEWENTHAL, Newark, N. J. Filed June 6, 1906. Serial No. 320,440.



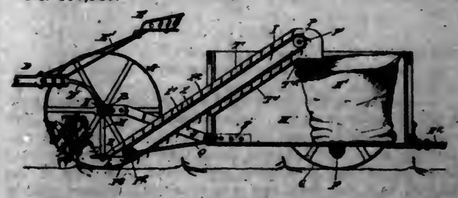
1. The combination of an electric socket, a detachable clamp held in place on the socket and bearing against the key thereof.

2. The combination of an electric socket, an adjustable clamp around the body therof, a part of the clamp bearing against the key of the socket, and means to tighten the clamp in position.

3. The combination with an electric lamp key socket of a ring clamp around the body thereof, ears extending from the clamp and bearing against the key of the socket, and a bolt joining the ears to secure the clamp in place, and to prevent the key being turned.

4. The combination of an electric socket, an adjustable clamp around the body thereof and a portion of said clamp in the path of action of the key of the socket, to prevent fully turning the said key.

875,831. PEA AND BEAN HARVESTER. JAMES C. LONGSTREET, Jackson, Miss. Filed Oct. 18, 1907. Serial No. 397,986.



1. The combination of the front wheels and axle, reciprocating cutting apparatus suspended from the front axle, means for holding the cutting apparatus in working position and for raising and lowering it, a box or receptacle at the rear end of the machine for vines, etc., a slatted conveyer carrying vine-engaging fingers for conveying vines, etc. from the cutting apparatus to the box or receptacle, and a slotted plate or apron interposed between the lower end of the conveyer and the cutting apparatus.

2. A machine for harvesting peas or beans, comprising a box or receptacle for the cut vines or plants, the front wheels and axle, a detachable pivotal connection between the front axle and the box, and cutting apparatus suspended from the front axle and operated by one of the front wheels.

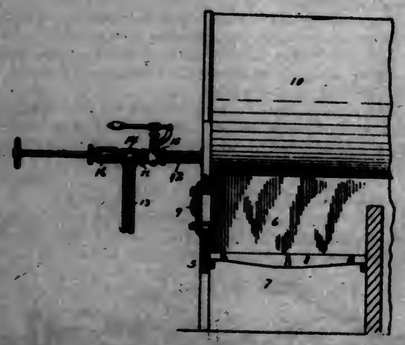
3. A machine for harvesting peas or beans, comprising a box or receptacle for the cut vines or plants, the front wheels and axle, a detachable pivotal connection between the front axle and the box, cutting apparatus suspended from the front axle and operated by one of the front wheels, and means carried by the front axle for elevating and depressing the cutting apparatus and for holding it in operative position.

4. A machine for harvesting peas or beans, comprising a box or receptacle for the cut vines or plants, the front wheels and axle, a detachable pivotal connection between the front axle and box, a stationary cutter bar, hangers suspending it from the front axle, a reciprocating cutter bar, a horizontally arranged crank wheel connected therewith, a vertical shaft on which the crank wheel is secured, gearing connecting this shaft with one of the front wheels, a hanger suspending the shaft from the front axle, and a lever connected with the stationary cutter bar and with the hanger for elevating and depressing the cutting apparatus.

5. A machine for harvesting peas or beans, comprising a box or receptacle for the cut vines or plants, the front wheels and axle, connections between the box and the axle, a cranked rear axle hind wheels carried thereby, cutting apparatus arranged between the front wheels, and a conveyer extending upwardly from the cutting aparatus to the box or receptacle comprising an endless flexible belt, transverse slats secured thereto having rounded outer surfaces arranged close together with grooves between the rounded surfaces and fingers projecting outwardly from the slats.

[Claims 6 and 7 not printed in the Gazette.]

875,832. CLEANING ATTACHMENT FOR FEED-WATER PIPES. CHARLES E. MANN, Hoopeston, Ill. Filed Feb. 6, 1906. Serial No. 299,794.



In a device of the character described for operation with a boiler under pressure, the combination with a feed line comprising vertical and horizontal pipes, a T-coupling connecting said vertical and horizontal pipes which are threaded to engage within, and extend from two of the legs of said coupling, and a gate valve arranged within said horizontal pipe between said boiler and said coupling, of a nipple extending from the other leg of said T-coupling away from said boiler and provided with an internally threaded outer end, a gland engaging therein, a stem arranged through said gland and provided with a handle on its outer end and having a reduced threaded inner end, and a tool detachably carried on said reduced end for engaging within said nipple and said horizontal feed pipe aligned therewith, substantially as described.

875,833. ELECTRIC-ARC LAMP. JOSEPH A. MEAHER, Cleveland, Ohio. Filed Oct. 29, 1906. Serial No. 341,024.



1. In an electric arc-lamp, a solenoid provided with a tubular portion, a stationary tubular core portion mounted in the upper end of said tubular portion of the solenoid, a tubular armature mounted within the lower end of said tubular portion of the solenoid and having its lower end depending from the magnet and provided with an exteriorly-threaded head, a head-block provided with a central opening in its lower portion and an enlarged inverted truncated cone-shaped cavity having the upper edges of its walls threaded to engage said exteriorly-threaded head, an upper carbon clutch-holder comprising a tubular shank portion carried within said tubular armature and extending through said stationary tubular core portion and provided at its lower end with an inverted truncated cone-shaped head movably-mounted and normally sustained within said tubular armature by means of said head-block taking over and forming a seat for said inverted truncated cone-shaped head, radially-extending apertures formed in said head and carrying bearing-balls, and a spring-resisted arc-adjusting-plate mounted above the solenoid and adjustably-secured to and normally carried by the upper end of said carbon clutch-holder.

2. In an electric arc-lamp, a magnet provided with a tubular core portion and a tubular armature provided with a depending exteriorly-threaded head block carrying an adjustably mounted interiorly-threaded head provided with an inverted truncated cone-shaped cavity having a central opening, and a tubular carbon-clutch member provided with a similarly-shaped head mounted in said cavity and having a depending carbon-guide extending through said central opening, said last mentioned head being provided with radially-extending openings carrying bearing-balls adapted to bear against the inclined walls of said cavity.

3. In an electric arc-lamp, an upper carbon holder comprising a tubular shank portion and an inverted truncated cone-shaped head provided with a depending carbon-guide and radially extending openings containing bearing-balls, and a tubular armature taking over said shank portion and provided with an adjustably-mounted detachable exterior head taking over said cone-shaped head and provided with a similarly-shaped cavity the walls of which are adapted to engage said bearing balls and a central opening in its lower portion taking over said depending carbon-guide.

4. In an electric arc-lamp, a lower carbon holder comprising a bracket provided with a depending head having a central opening therein, a tubular portion mounted in said opening and provided about its periphery with a deep spirally-arranged groove, a horizontal slot formed in the front side of said depending head, and a spring-resisted wire loop attached to said bracket diametrically-opposite and taking into said horizontal slot and said spirally-arranged groove.

5. In an electric arc-lamp, a lower carbon holder comprising a bracket provided with a depending head, a tubular shank mounted in said head and provided with a cap or receptacle for supporting the globe, a second tubular shank mounted therein and provided with a spirally-arranged groove, a horizontal slot or opening formed in said depending head and said first mentioned shank mounted therein, and a spring-resisted wire loop attached to said bracket and taking into said horizontal slot and said spirally-arranged groove.

[Claims 6 to 13 not printed in the Gazette.]

875,834. LOOSE-LEAF LEDGER OR TEMPORARY BINDER. LUCENA M. MORDEN, Waterbury, Conn. Filed Mar. 11, 1907. Serial No. 361,647.



1. In a loose leaf binder, the combination of a pair of binder members, a set of studs carried thereby, and duplicate means carried by said binder members for simultaneously releasing some without releasing all or for releasing all of the studs from either binder member.

2. In a loose leaf binder, the combination of a pair of binder members, a set of studs carried thereby, and means for simultaneously releasing some without releasing all for releasing all of the studs from both of said binder members.

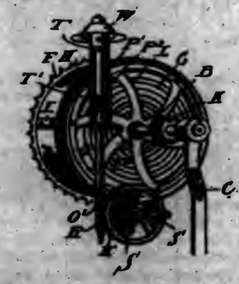
3. In a loose leaf binder, the combination of a pair of binder members, a set of studs carried thereby, and means for simultaneously releasing some without releasing all or for releasing all of the studs from both of said binder members.

4. In a loose leaf binder, the combination of a pair of binder members, a set of studs carried thereby, and means for releasing some or all of the studs from one of said binder members, said means comprising a pair of locking members each having a plurality of locking positions.

5. In a loose leaf binder, the combination of a pair of binder members, a set of studs carried thereby, and means for releasing some or all of the studs from one of said binder members, said means comprising a pair of locking members each having a plurality of locking positions, and means for determining each of said positions.

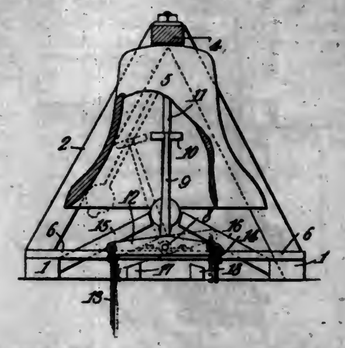
[Claims 6 to 22 not printed in the Gazette.]

875,835. SPEED-REGULATOR FOR SPRING-MOTORS. PETER J. MUELLER, Lamotte, Iowa. Filed May 18, 1907. Serial No. 374,458.



A frictional speed governor apparatus for motors comprising a casing, a vertically mounted shaft therein, a hollow shell telescoping over said shaft, a disk fitted to said shell, a fixed collar upon the shaft, spring arms connecting the disk with said collar, a stop adjustably clamped to the wall of the casing and having a lateral projection on the inner surface thereof in the path of said disk, said stop having a U-shaped shank portion extending over the edge of the casing, the outer end of said shank portion being apertured, a clamping screw carried by said aperture and adapted to bear against the outer edge of the casing, and means for rotating the shaft, as set forth.

875,836. MECHANISM FOR RINGING BELLS. LOUIS H. MCINNIS, Montrose, Miss. Filed Feb. 21, 1907. Serial No. 358,669.



1. In mechanism of the character described the combination with a bell and a clapper therein; of a vibrating arm having an elongated loop or eye at one end through which loosely hangs the bell clapper, means connected to said vibrating arm for rocking the same, and stops for limiting the movement of said arm.

2. The combination with a bell and an oscillatory clapper suspended therein; of an oscillatory arm, means thereon for loosely engaging the clapper, means for limiting the movement of the arm, and means for actuating the arm to propel the clapper against the bell, said clapper being disposed to rebound immediately subsequent to striking the bell.

3. In a device of the character described the combination with a bell and a clapper therein; of a vibrating arm having an elongated loop or eye at one end to loosely engage the clapper, a rock shaft having on one end the said arm and on the opposite end a two-armed lever for oscillating said shaft, and stops to limit the movement of said two-armed lever.

4. In a device of the character described the combination with a bell and a clapper therein; of a vibrating arm having an elongated loop or eye at one end to loosely engage the clapper, a rock shaft having on one end the said arm and on the opposite end a cross arm, means attached to each end of said cross arm to rock said shaft, stops to limit the movement of said vibrating arm, and other stops to arrest the movement of said cross arm.

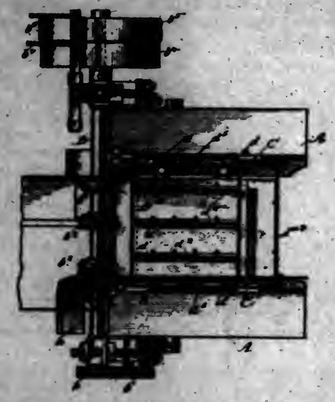
875,837. MACHINE FOR FEEDING SHEETS OF METAL, &c. FINLAY MCINTYRE, Chicago, Ill. Filed Sept. 14, 1906. Serial No. 334,678.

1. In a machine for feeding sheets of metal and the like, the combination with a metal working mechanism, of a feeding mechanism consisting of a roller track, a roller mounted rack engaging said track, automatic carrying means fixed to said rack, and means for automatically moving said rack along said roller track.

2. In a machine for feeding sheets of metal and the like, the combination with a metal working mechanism, of a feeding mechanism, consisting of a roller track, recesses fitted in the face thereof, a roller bearing rack adapted to engage said track and said recesses, automatic carrying means fixed to said rack and means for automatically moving said rack on said track and engaging the same with the said recesses and disengaging it therefrom.

3. In a machine for feeding sheets of metal and the like, the combination with a metal working mechanism, of a feeding mechanism consisting of a roller track, a rack having sliding engagement with said track, automatic

sheet carrying means attached to said rack, and means for actuating said rack, consisting of lever arms attached at one end to said rack, pivoted to the frame of said machine, and adapted to engage at its free end the power shaft of said machine.

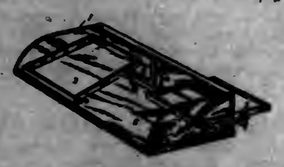


4. In a machine for feeding sheets of metal and the like, the combination with a metal working mechanism, of a feeding mechanism consisting of a track, a roller bearing rack engaging said track, magnets fitted to said rack, and means for automatically moving said magnets into contact with said sheets and automatic means for actuating said rack.

5. In a machine for feeding sheets of metal and the like, the combination with a metal working mechanism, of a feeding mechanism consisting of a track, a roller bearing rack engaging therewith, automatic carrying means fixed to said rack, means for automatically moving said rack along said track, and a movable table adapted to hold said sheets and means for automatically moving said table into contact with said automatic carrying means.

[Claims 6 to 13 not printed in the Gazette.]

875,838. SHOW-CASE. JOHN H. MCKIERNAN and ELMER A. PATRICK, Sharpsburg, Pa., assignors to Edward A. Laurence, Bellevue, Pa. Filed Apr. 8, 1907. Serial No. 366,894.



In a show case, a sliding door, a tray mounted to slide on the bottom of the case and a ball having its ends pivoted to the bottom of the case and its central portion pivotally attached to tray in such a manner that when said tray is in its elevated position said ball inclines upwardly toward the front of the case and when said tray is in its lowered position said ball extends rearwardly in a substantially horizontal position, substantially as and for the purpose set forth.

875,839. HITCHING-STRAP FASTENER. RICHARD NEISEWAM, Excelsior, Minn. Filed June 15, 1906. Serial No. 321,908.

A hitching strap fastener, consisting of an open frame composed of slightly curved side-bars, a bridge uniting their upper edges near the middle, a cross-bar uniting the sides at one end, a spring attached to said cross-bar and adapted to press a strap against said bridge, and a lip uniting the opposite ends of the side-bars and adapted to



be engaged by a snap-hook, substantially as and for the purpose set forth.

875,840. IRONING-BOARD. CHARLES A. OLSEN, Sherman, S. D. Filed Jan. 28, 1907. Serial No. 354,558.



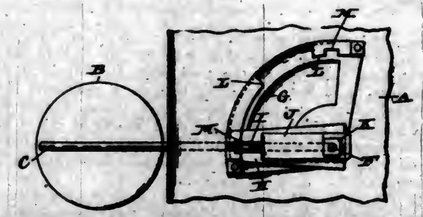
1. An apparatus of the class described, comprising the combination with a fixed support, bracket members secured thereto, of an ironing board, said ironing board having a forward brace, a bracket member fixedly secured thereto, a leg carrying member pivotally secured to said bracket member, a leg adjustably secured to said leg carrying member, a sheet metal hinge member secured to the end of said ironing board, said sheet metal hinge member including an integrally formed hinge bolt and stud receiving portion, a fixed stud held in said receiving portion for coöperating with apertures in one of said brackets, an endwise shiftable bolt held in said receiving portion of the hinge member and adapted to be projected into an aperture in the other bracket member, and means for locking said bolt in its projected position.

2. An apparatus of the class described comprising the combination with a fixed support, bracket members secured thereto, an ironing board having a forward brace, a bracket member fixedly secured thereto, a leg carrying member secured to said bracket member, a leg adjustably secured to said leg carrying member, a sheet metal hinge member secured to the end of said ironing board, said sheet metal hinge member including an integrally formed hinge bolt and stud receiving portion, a fixed stud held in said receiving portion for coöperating with apertures in one of said brackets, an endwise shiftable bolt held in said receiving portion of the hinge member and adapted to be projected into an aperture in the other bracket member, means for locking said bolt in its projected position, said board carried hinge member also including an up-turned and clenched over projecting portion adapted to hold a pad, substantially as shown and for the purposes described.

3. In an ironing table, a fixed support, bracket members secured thereto and having a series of apertures, an ironing board, and adjustable leg secured beneath the same, a sheet metal hinge member secured to said ironing board at one end and comprising a flange for engaging the rear edge of the board, a tubular bolt receiving portion and a second flange projected at right angles to the first flange and adapted to engage the top of the board, a fixed stud held in said tubular bolt receiving portion at one end and projected beyond the same, for entering one of the bracket apertures, an endwise slidable bolt held in said tubular bolt receiving portion, adapted to be projected into an aperture of the other bracket member, said bolt having a finger engaging projection, and said tubular bolt receiving portion having a longitudinal slot to coöperate with said finger engaging projection, substantially as shown and described.

4. In an ironing board, a fixed support, bracket members secured thereto and having a series of apertures, an ironing board, an adjustable leg secured beneath the same, a sheet metal hinge member secured to said ironing board at one end and comprising a flange for engaging the rear edge of the board, a tubular bolt receiving portion and a second flange projected at right angles to the first flange and adapted to engage the top of the board, a fixed stud held in said tubular bolt receiving portion at one end and projected beyond the same, for entering one of the bracket apertures, an endwise slidable bolt held in said tubular bolt receiving portion and adapted to be projected into an aperture of the other bracket, said bolt having a finger engaging projection, said tubular bolt receiving portion having a longitudinal slot to coöperate with said finger engaging projection, and said second flange having a projecting portion with an up-turned and clenched over edge adapted for holding the pad, substantially as shown and for the purposes described.

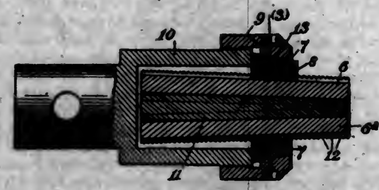
875,841. SIGNAL-LOCK FOR MAIL-BOXES. SAMUEL PATTERSON and JOHN W. WISEMAN, Gonzales county, Tex., assignors of one-third to Oliver T. Payne, Lavaca county, Tex. Filed May 25, 1907. Serial No. 364,292.



1. A signal lock for mail boxes comprising in combination with a mail box having a hole therein, a signal having a staff inserted through said hole, a slotted latch guide secured to the end of said staff, a latch pivotally secured to said guide, and means to engage said latch to hold the signal in an adjusted position substantially as shown and described.

2. A signal lock for mail boxes comprising in combination with a mail box having a hole therein, a plate secured to the inside of the box and having a hole to register with the hole in the box, said plate being provided with a segmental overhanging portion with notches therein, a signal having a staff inserted through the bolt in the box and in the plate, a slotted latch guide secured to the end of the signal staff, and a spring actuated latch pivotally secured to said guide and adapted to engage the notches in the overhanging portion aforesaid, substantially as shown and described.

875,842. ADJUSTABLE TAPER TAP. MAURICE PAULSON, Chicago, Ill., assignor to Crane Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 17, 1905. Serial No. 246,006.



1. The combination of a holder provided with a threaded ring, a two-part taper tap and a movable wedge within the tap adapted to fasten it in the ring in various positions.

2. The combination with a chuck having a recessed end provided with a screw ring, of a plurality of tapping members extending into the recess in the chuck, a wedge interposed between the tapping members, and a clamping ring encircling the tapping members and secured in position by the said screw ring.

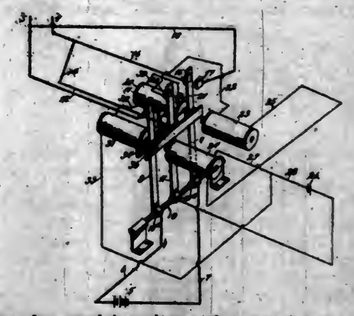
3. The combination of a holder, a two-part taper tap, a threaded taper ring in the holder for containing the tap, and a movable wedge for fastening the parts of said ring.

4. The combination of the ring 7 having a threaded conical opening, the cutters 6, 6^a, fitting therein, and a movable tapered key to tighten the parts in said ring, and means for supporting the ring and preventing the turning of the cutters within the ring.

5. An adjustable taper tap comprising a holder, cutters 6, 6^a, the ring 7 with a conical opening and means for engaging the cutters and preventing their turning within the ring and holder, and a movable wedge for spreading the cutters within said ring, substantially as described.

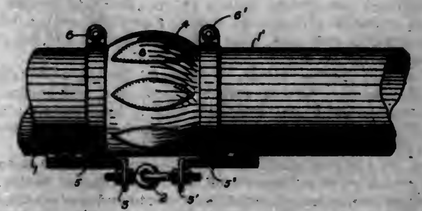
[Claims 6 to 8 not printed in the Gazette.]

875,843. APPARATUS FOR TRACK-CIRCUIT CONTROL. JAMES A. PEABODY, Evanston, Ill. Filed July 25, 1907. Serial No. 385,508.



Means for supplying alternately current to a railway track for track signal control, said supplying means consisting of a battery, adapted to be electrically connected to the track, a pole changer for alternating the direction of flow of current from said battery to the track, and a second battery and vibrator operated thereby for operating said pole changer.

875,844. FLEXIBLE JOINT FOR DREDGER-PIPES. MANUEL R. PEACOCK, Oakland, Cal. Filed Oct. 17, 1905. Serial No. 283,143.



1. A flexible pipe connection comprising two tubular portions adapted to fit the pipe sections to be connected, and a single bulbous enlargement intermediate of said tubular portions and the adjacent ends of the pipe sections, said bulbous enlargements being composed of highly flexible non-metallic material and adapted to be flexed.

2. A connection for pipes or the like comprising a flexible sleeve adapted to fit over the ends of pipes and being swelled or increased in cross-section intermediate of and eccentric to its ends.

3. The combination with two pipe sections, of a connection for said pipe sections comprising a sleeve of substantially circular transverse section adapted to fit over the ends of the pipe sections, the circular section of the sleeve increasing in diameter from both ends to a point intermediate thereof, said enlarged portion of the sleeve being composed of highly flexible non-metallic material and arranged intermediate the adjacent ends of the pipe sections and adapted to be flexed.

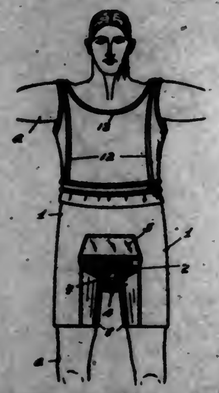
4. A connection for pipes or the like comprising a flexi-

ble sleeve of substantially circular transverse section adapted to fit over the ends of pipes, the circular section increasing in diameter from both ends to a point intermediate thereof, the inner periphery of all of the circular transverse sections of the sleeve passing substantially through a straight line joining the inner circles forming the inner surface of the ends of the sleeve.

5. A flexible pipe connection comprising two tubular portions adapted to fit the pipe sections to be connected, and a single bulbous enlargement intermediate of said tubular portions and the adjacent ends of the pipe sections, said bulbous enlargement being composed of highly flexible non-metallic material and adapted to be flexed, and means for securing said sleeve in place.

[Claims 6 to 20 not printed in the Gazette.]

875,845. SEXUAL ARMOR. ELLEN E. PERKINS, Beaver Bay, Minn. Filed June 24, 1907. Serial No. 380,468.



1. A sexual armor, comprising a flexible garment, a rigid arch plate applied in the crotch thereof and having a segmental central slot, a gate for opening and closing said slot, and a lock for normally securing said gate in its closed position, as and for the purposes set forth.

2. In a sexual armor, a garment having a metallic crotch portion formed with a central slot, and having a gate normally closing said slot, and provided with a lock for securing said gate in its closed position, as and for the purposes set forth.

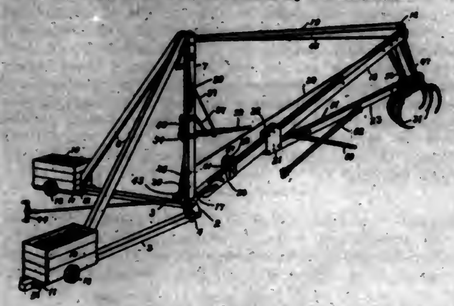
3. In a sexual armor, a garment having a metallic crotch portion, formed with a central slot, and having a perforated gate, and provided with a lock for securing said gate in its closed position, as and for the purposes set forth.

4. In a sexual armor, a flexible garment having a metallic crotch portion formed with a central slot, and having a perforated segmental gate hinged to one end portion thereof and provided at its other end portion with a lock for securing said gate in its closed position, as and for the purposes set forth.

5. The combination with a flexible garment 1, of a metallic arch plate 2 applied to the crotch thereof and having depending flanges 10 with a central slot 3 between the same, plate extensions 5 hinged to the front and rear ends of said arch plate and secured to said garment 1, the perforated segmental gate 4 hinged to the front portion of said arch plate and normally engaging said flanges 10 and closing said slot 3, and a lock applied to the rear portion of said gate for securing the same in a closed position, as and for the purposes set forth.

875,846. HAY AND MANURE GATHERER AND LOADER. JOHN PETERSON, St. Paul, Minn. Filed Sept. 5, 1906. Serial No. 277,057.

1. The combination with a main boom, of an auxiliary boom pivoted thereon, a fork carried by said auxiliary boom, a block and tackle connected to said auxiliary boom and fork and extending to a source of power for simultaneously closing said fork and raising said auxiliary boom, and means carried by said auxiliary boom for positively opening said fork, substantially as described.

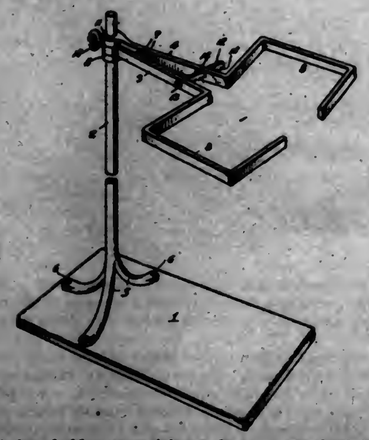


2. The combination with a main boom, of an auxiliary boom pivotally and slidably mounted upon said main boom, means carried by the main boom for adjusting the auxiliary boom back and forth thereon, a gathering fork carried by the auxiliary boom, and means connecting said auxiliary boom and fork with a source of power for simultaneously closing said fork and raising said auxiliary boom without elevating the main boom, substantially as described.

3. The combination, with a main boom, of an auxiliary boom pivoted thereon, a gathering fork supported on said auxiliary boom, suitable connections provided between said auxiliary boom and said fork, and a suitable source of power whereby said fork will be closed and said boom raised simultaneously, and a brake device arranged to clamp the connection between said boom and the source of power, for the purpose specified.

4. The combination, with a mast and a main boom pivoted thereon, of an auxiliary boom pivoted on said main boom, a gathering fork carried by said auxiliary boom, block and cable connections provided between said auxiliary boom and said fork and a suitable source of power, and a brake device arranged on said mast and arranged to clamp the cable connecting said auxiliary boom and the source of power, for the purpose specified.

875,847. BAG-HOLDER. JOHN N. PETERSON and FRANK P. WERNLI, Hazelton, N. D. Filed Mar. 9, 1907. Serial No. 361,604.

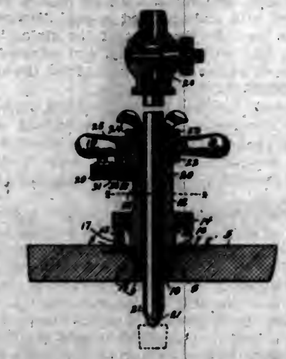


1. A bag holder comprising a base, a standard having attaching feet secured to the base and a cylindrical upper

end, a pair of arms having angular bag engaging jaws at their outer ends, one of said arms having a slot with a beveled bottom wall to provide a stationary pawl and also having a bifurcated end apertured to provide spaced eyes to receive and rotate upon the cylindrical portion of the standard, the other arm having an apertured end or eye to enter between the spaced eyes on the other arm and to receive the cylindrical portion of the standard, a set screw arranged in the apertured end or eye of the second mentioned arm and adapted to impinge against said standard, whereby the second mentioned arm may be adjusted angularly in a horizontal plane and also vertically and the first mentioned arm is permitted to swing toward and from the other and is prevented by moving vertically upon the standard, and a ratchet bar pivoted upon the second mentioned arm and adapted to project through the opening in the first mentioned one and have its teeth engage said stationary pawl, substantially as described.

2. In a bag holder, the combination of two arms having bag engaging jaws, one of said arms being movable toward and from the other and having a transverse opening formed with a beveled wall to provide a pawl, the other arm being formed with a transverse opening having flared ends, a ratchet bar having at one end a reduced portion to enter the last mentioned aperture, said end of the bar being upset to retain it in said aperture, the opposite end of said bar being formed upon its bottom edge with ratchet teeth and being adapted to project through and slide in the aperture in the opposing arm and to engage said pawl, substantially as set forth.

875,848. DEVICE FOR TAPPING BEER-KEGS. CLAUDE W. PLEUKHARP, Columbus, Ohio, assignor of one-third to Columbus D. Saviers and one-third to Charles Staiger, Columbus, Ohio. Filed Aug. 16, 1906. Serial No. 330,777.



1. In a device of the character described, the combination with a tapered threaded bushing adapted to be screwed into the head of a keg and which has an outstanding flange formed upon the upper part thereof, said outstanding flange having key hole slots formed therein and terminating in an annular down-turned flange which extends entirely around the bushing and which serves to space the outstanding flange from the head of a keg to thereby leave an open space beneath said outstanding flange, of a nut, a plurality of studs depending from the underside of the nut and having heads formed thereon which are adapted to engage in the key-hole slots formed in the outstanding flange of the bushing, a barrel threaded into said nut, and a gasket located between said barrel and said bushing.

2. In a device of the character described, the combination with a tapered threaded bushing adapted to be screwed into the head of a keg, said bushing having an outstanding flange formed upon the upper part thereof, said outstanding flange having key-hole slots formed therein and terminating in an annular downturned flange which extends entirely around the bushing and which serves to space the outstanding flange from the head of the keg to thereby leave an open space beneath said outstanding flange, of a nut, a plurality of studs depending from the underside of said nut and having heads formed thereon which are adapted to engage in the key-hole slots formed in the outstanding flange of the bushing, a barrel threaded into said nut, and a gasket located between said barrel and said bushing, said bushing having an annular seat formed in the upper face thereof for the reception of the gasket.

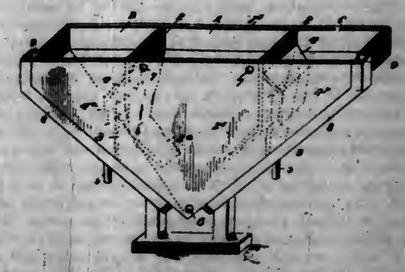
875,849. BARK-PEELER. GEORGE R. RIGHEL and ELMO H. WYKOFF, Alexandria, Pa. Filed Mar. 21, 1907. Serial No. 363,673.



1. A tool for removing bark from trees, the same comprising a transversely curved stripping blade having its front edge sharpened, and a flat chopping blade at the longitudinal edge of the stripping blade.

2. A tool for removing bark from trees, comprising an oblong stripping blade transversely curved and having its longitudinal elements straight and its front edge sharpened, and a flat chopping blade at the longitudinal edge of the stripping blade and set back some distance from the cutting edge thereof.

875,850. WATER-ECONOMIZER FOR JIGS. THOMAS ROWE, Dollar Bay, Mich. Filed Mar. 5, 1907. Serial No. 360,634.



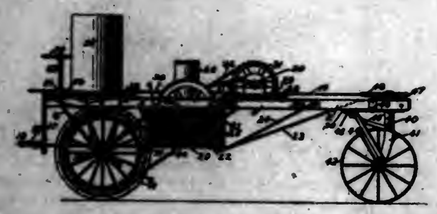
1. In an apparatus of the character described, a receptacle for the reception of tailings, said receptacle having sloping side walls and formed in its front wall at the bottom thereof with a discharge outlet and also formed near the upper edge of its front wall with outlet orifices, and overflow launders connected to the sides of said receptacle and extending down underneath said sides and discharging at the lower ends thereof.

2. In an apparatus of the character described, a receptacle provided with partitions dividing it into two side compartments and a middle compartment, the side compartments being designed for the inflow, the said partitions being sectional and providing circuitous overflow passages from the side compartments to the middle compartment, said receptacle being formed in each of said side compartments, and the middle compartments and at the bottom thereof with discharge outlets and also within the middle compartment and near its upper edge with outlet orifices for clear water, and said receptacle also formed with overflows communicating with the side compartments, as and for the purpose set forth.

3. In an apparatus of the character described, a re-

ceptacle provided with a sectional partition extending thereacross and producing a plurality of compartments, one section of said partition extending from the upper edge of the receptacle downwardly with its lower end angularly disposed and spaced from the bottom wall of the receptacle and said section also provided with an oppositely extending overhanging arm formed with a downwardly projecting extremity and the other section extending upwardly from the bottom of said receptacle within the space between the downward extremity of said arm and the first named section, whereby a circuitous overflow passage is formed from one compartment to the next, and said receptacle formed at its bottom with discharge outlets and near its top with outlet orifices for clear water.

875,851. TRACTION-ENGINE. RICHARD RUSSELL, Stephen, Minn. Filed Feb. 27, 1905. Serial No. 247,571.



1. The combination, with a frame having a forward steering wheel and rear traction wheels, of gas engines supported beneath said frame in front of and contiguous to said traction wheels one on each side of the machine, a driving shaft mounted on said frame between said engines and the steering wheel and connected with said engines and belted to said traction wheels, substantially as described.

2. The combination, with a frame having an oscillating steering wheel at its forward end, of a shaft supported beneath and at the rear end of said frame, a sprocket secured on said shaft and provided with a series of pinions rotatably mounted below the periphery of the sprocket and carried by the sprocket in its rotation, traction wheels mounted on said shaft on each side of said sprocket and having hubs provided with gears that engage said pinions, and a motive power mounted on said frame and connected with said shaft-sprocket, substantially as described.

3. The combination, with a frame having a steering wheel, of traction wheels mounted in bearings on said frame, a driving shaft, a motive power connected with said shaft, sprockets loosely mounted on said driving shaft, clutch mechanisms provided on said shaft and arranged to alternately lock said sprockets, an idle sprocket, and a drive belt connecting said sprockets and said traction wheels whereby the operation of said clutches allows said traction wheels to be driven forward or backward, substantially as described.

4. A traction engine comprising parallel centrally arranged bars 2, side bars 3 having inwardly turned forward ends connected to said centrally arranged bars, cross bars connecting said bars 2 and said side bars, a platform mounted on said bars, a steering wheel provided at the forward ends of said bars 2, traction wheels at the rear end of said bars, a driving shaft connected with said traction wheels, and a motive power connected with said driving shaft.

5. A traction engine comprising the middle angle bars 2, the side angle bars 3 having inwardly turned forward ends 4, secured to said bars 2, a steering wheel mounted on said middle bars, traction wheels mounted in bearings on said bars, a driving shaft, and engines supported beneath said bars in front of said traction wheels and connected with said driving shaft, and operative connections between said driving shaft and said traction wheels.

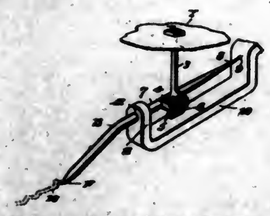
[Claims 6 and 7 not printed in the Gazette.]

875,852. PROCESS OF TREATING ORES. JOSEF SAVELSBERG, Papenburg, Germany. Filed Sept. 17, 1906. Serial No. 335,028.

1. The method of treating pulverulent ores, which comprises mixing them with slag forming materials and carbonaceous fuel and blowing the same until sintered in a pneumatic converter.

2. The method of treating pulverulent ores, free from sulfur, which consists in mixing the ores with slag forming materials and carbonaceous fuel and blowing the same in a pneumatic converter until sintered.

875,853. SOUND RECORDER AND REPRODUCER. MORRIS SCHWARTZ, New York, N. Y., assignor of one-third to Solomon Flaum and one-third to Max Bornstein, New York, N. Y. Filed Mar. 8, 1907. Serial No. 361,314.



1. In a sound recording and reproducing apparatus, the combination of a diaphragm, a stylus rocking on its axis and connected with and actuated by said diaphragm so as to rock it on its axis, the point of the stylus being substantially in line with the stylus.

2. In a sound recording and reproducing apparatus, the combination of a diaphragm, a stylus rocking on its axis and connected with and actuated by said diaphragm so as to rock it on its axis, the point of the stylus being substantially in line with the stylus, and adapted to move laterally as well as toward and away from the record and to vary the groove accordingly.

3. In a sound recording and reproducing apparatus, the combination of a diaphragm, a stylus rocking on its axis and a lateral projection on said stylus connected with and actuated by said diaphragm so as to rock it on its axis, the point of the stylus being substantially in line with the stylus.

4. In a sound recording and reproducing apparatus, the combination of a diaphragm, a stylus rocking on its axis and connected with and actuated by said diaphragm so as to rock it on its axis, the point of said stylus being beveled or truncated obliquely to the axis on which it rocks.

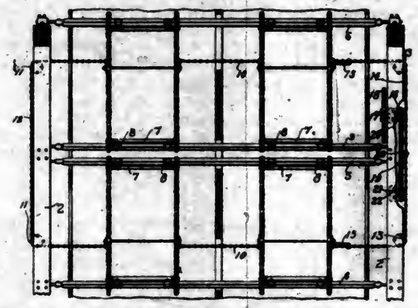
5. In a sound recording and reproducing apparatus, the combination of the diaphragm, a stylus rocking on its axis and connected with and actuated by said diaphragm so as to rock it on its axis, the point of the stylus being substantially in line with the stylus, an adjustable weight connected with said stylus and tending to keep it in normal position.

[Claims 6 and 7 not printed in the Gazette.]

875,854. BRUSH-DRIVE FOR GRAIN-CLEANING MACHINES. CHARLES H. SCOTT, Minneapolis, Minn. Filed Sept. 27, 1904. Serial No. 226,101.

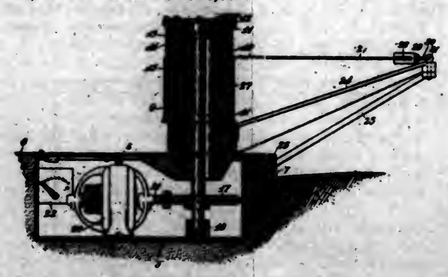
1. In a grain cleaning machine, the combination, with a frame, of screens mounted therein, brush frames arranged in pairs beneath said screens, brushes carried by said frames, means connecting the frame of one pair with the other frame of the same pair, flexible means connecting the frame of one pair with the corresponding frame of the other pair on each side of the machine, a drive chain parallel with said flexible connection, and means connecting said drive chain and one of said flexible connections.

2. In a grain-cleaning machine the combination, with a frame, of a screen supported therein, brush frames arranged to reciprocate beneath said screen, guides whereon said frames are movable, a series of brushes mounted on said frames and adapted to sweep across the under surfaces of said screen, idle wheels mounted in said machine frame at each end of said guides, flexible means attached to said brush frames and passing around said idle wheels, whereby when one brush frame is moved in one direction the other brush frame will be moved in the opposite direction, a drive belt arranged between the idle wheels on one side of the machine and operating in a plane substan-



tially at right angles to the plane of said brush frames and said idle wheels, and said drive belt having a pivotal connection with one of said flexible connections intermediate to its ends, whereby the revolution of said drive belt will impart a back and forth movement to said flexible connections and the reciprocation of said frames beneath said sieves, substantially as described.

875,855. ELECTRIC HOIST OR DRAFT APPARATUS. PATRICK F. SHEVLIN, South Boston, Mass. Filed Dec. 21, 1906. Serial No. 348,866.



1. A draft apparatus comprising in its construction a hollow base, a hollow column extending upwardly from said base, a hollow drum surrounding said column and journaled on bearings surrounding said column, a shaft located within said column, said shaft being connected at its upper end to said drum and being journaled at its lower end on said base, said shaft being of less diameter than the inside diameter of said column, a motor located within said base, and mechanism operatively connecting said motor to said shaft.

2. A draft apparatus comprising in its construction a hollow base, a hollow column extending upwardly from said base, a hollow drum surrounding said column and journaled on bearings surrounding said column, a shaft located within said column, said shaft being connected at its upper end to said drum and being journaled at its lower end on said base, said shaft being of less diameter than the inside diameter of said column, a worm gear fast to said shaft, a worm meshing into said worm gear, and a motor located within said base operatively connected to said worm.

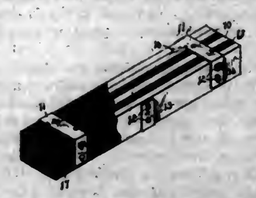
3. A draft apparatus comprising in its construction a hollow base, a hollow column extending upwardly from said base, a hollow drum surrounding said column and journaled on bearings surrounding said column, a shaft located within said column, said shaft being connected at its upper end to said drum and being journaled at its lower end on said base, said shaft being of less diameter than the inside diameter of said column, a motor located within said base, mechanism operatively connecting said motor to said shaft, an arm mounted on said column, and a sheave wheel supported on said arm.

4. A draft apparatus comprising in its construction a hollow base, a hollow column extending upwardly from said base, a hollow drum surrounding said column and journaled on bearings surrounding said column, a shaft located within said column, said shaft being connected at its upper end to said drum and being journaled at its lower end on said base, said shaft being of less diameter than the inside diameter of said column, a motor located within said base, mechanism operatively connecting said motor to said shaft, an arm rotatably mounted on said column, a sheave wheel supported on said arm, and means for preventing rotation of said arm on said column.

5. A draft apparatus comprising in its construction a hollow base, a column extending upwardly from said base, a hollow drum surrounding said column and journaled thereon, a motor located in said base, mechanism operatively connecting said motor to said drum, an arm rotatably mounted on said column, a sheave wheel carried by said arm, and means for preventing rotation of said arm on said column.

[Claims 6 to 9 not printed in the Gazette.]

875,856. RAILROAD-TIE. ALEXANDER F. SHUMAN, Chicago, Ill. Filed May 13, 1907. Serial No. 373,232.



1. A railroad tie consisting of a plurality of planks set edgewise, tie-plates embracing said planks, and bolts passing through said plates and planks, substantially as set forth.

2. A railroad-tie consisting of a plurality of planks set edgewise, slotted tie-plates embracing said planks, and bolts passing through the slots in said plates, and passing transversely through said planks.

3. A railroad-tie consisting of a plurality of planks set edgewise, slotted tie-plates embracing said planks and having spike receiving notches in their edges, and bolts passing through the slots in said plates and passing transversely through said planks.

4. A railroad-tie consisting of a plurality of planks set edgewise, each of said planks having a coating of moisture excluding substance applied individually thereto, and a second coating applied in their assembled relation, and means for clamping said planks together, said means adapted to serve as chairs for the rails.

5. A railroad-tie consisting of a plurality of planks set edgewise, each of said planks being bored transversely to receive bolts and then dipped individually in a moisture excluding substance, and then dipped in their assembled relation, and means for securing said planks together, said means comprising plates embracing said planks and bolts passing through said plates and planks.

[Claim 6 not printed in the Gazette.]

875,857. METHOD FOR THE MANUFACTURE OF WIRE-GLASS. FRANK SHUMAN, Philadelphia, Pa., assignor to The Continuous Glass Press Company, Philadelphia, Pa., a Corporation of New Jersey. Filed June 14, 1902. Serial No. 111,748.

1. The herein described process for making glass consisting in rolling down a mass of glass into a sheet and

during this operation feeding directly into the forward part of the mass of glass near its bottom a meshed wire layer, positively supporting the meshed wire layer in a substantially horizontal plane slightly above the bottom of the sheet of glass and immediately adjacent to the front of the mass of glass so that as the molten glass is moved forward it may flow to the under side through the meshes without depressing the meshed wire and directly into position to form the under side of the sheet of glass, and advancing the place of support of the meshed wire layer at a speed independent of the advancing speed of the rolling down device as the rolling operation proceeds, whereby the meshed wire is always supported immediately adjacent to the front portion of the molten glass.



2. The herein described process for making wire glass consisting in rolling down a mass of glass into a sheet and during the operation feeding into the forward part of the mass of glass near its bottom a meshed wire layer, supporting the meshed wire layer slightly above the support upon which the glass is rolled so that the molten glass may flow to the under side through the meshes, and advancing the place of support of the meshed wire layer as the rolling operation proceeds but at a gradually decreasing speed relatively to the speed of the rolling operation.

3. The herein described process for making a sheet of wire glass, which consists in placing a mass of molten glass upon the table, rolling the mass forward into a sheet, feeding into the mass of glass at its forward part a meshed wire layer during the rolling operation, supporting the meshed wire layer immediately adjacent to the molten glass and at the advancing place where it is being successively highly heated by the glass so that the molten glass may flow to the under side through the meshes and the meshed wire layer supported against sagging, and advancing the place of support by hand independently of the advance of the rolling means to maintain the place of support always adjacent to the glass irrespective of the variations of the distance of the front part of said glass from the rolling means.

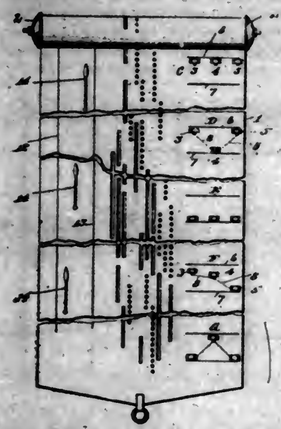
875,858. NOTE-SHEET FOR AUTOMATIC MUSICAL INSTRUMENTS. IRVING B. SMITH, Philadelphia, Pa., assignor to Stokes & Smith Company, Philadelphia, Pa., a Corporation of New Jersey. Filed June 7, 1905. Serial No. 264,085.

1. A perforated note sheet provided at different points throughout its length with indicia each comprising a normal position index and legends co-related thereto and indicative, by reference thereto, of the position with respect to normal which a controlling device of a musical instrument shall sustain to obtain a given musical effect.

2. A perforated music sheet, having thereon at different points throughout its length index lines, and legends arranged adjacent each line and positioned relatively thereto to indicate the exact position a controlling device of a musical instrument is to assume in order to obtain a given musical expression.

3. A perforated music sheet having thereon at different points throughout its length index lines, and legends representing a controlling device of a musical instrument, positioned relatively to each line to indicate the extent of movement to be imparted thereto in order to obtain a certain musical expression.

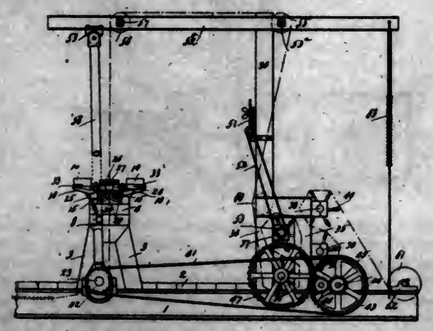
4. A perforated music sheet having thereon a plurality of separately arranged index lines, and a plurality of sets of legends each representing a separate controlling device of a musical instrument positioned relatively to each line to indicate the exact position and extent of movement to be imparted to said device in order to obtain given musical effects.



5. A perforated music sheet having thereon at different points along the sheet a plurality of pairs of parallel index lines, and a legend representing a controlling device of a musical instrument, arranged between each pair of lines and indicating by its location relatively thereto, the extent of movement to be given said controlling device in order to obtain a certain definite result.

[Claims 6 to 8 not printed in the Gazette.]

875,859. WIRE-FENCE MACHINE. PETER W. SOMMER, JOSEPH W. SOMMER, and WILLIAM SOMMER, Peoria, Ill. Filed Sept. 11, 1903. Serial No. 172,745.



1. In a wire fence machine, the combination of a bed frame, a plurality of coilers mounted for horizontal rotation on said frame, standards extending up from the frame to the rear of the coilers, oscillating supports pivotally attached to the upper ends of the standards, and means connected with the forward ends of the oscillating supports over which the finished fabric is carried.

2. In a wire fence machine, means for feeding strand-wires, means for feeding stay-wires thereto, a pulling-out device for intermittingly advancing the strand-wires in equal lengths, and means for lengthening or shortening the stroke of such pulling out device and thereby increase or shorten the space between the stays of the fence.

3. In a wire fence machine, the combination of a bed frame, a series of vertically disposed coilers rotatably mounted at one end of the frame, a pair of standards extending up from the said bed-frame, a pair of longitudinal and parallely disposed frames pivotally attached to the upper end of the bed-frame, means adapted to oscillate the same, and rollers supported by the frames over which the finished fabric is carried.

4. In a wire fence machine, the combination of a plurality of coilers through which strand-wires are fed, mechanism for feeding stay-sections to said coilers, pulling-out mechanism coöperating with said coilers comprising a pivoted frame carrying means around which the strand-wires are carried, an operating shaft, rods operatively connected with said shaft and adjustably connected with parts of the frame, and yielding tension devices secured to the opposite end of the frame, substantially as specified.

5. In a wire fence machine, the combination of an oscillating frame, take-up rolls coöperating therewith, an operating shaft, rods operatively connected at one end with said shaft and at their opposite ends adjustably connected with said frame, and means for continuously operating said take-up rolls.

[Claims 6 to 9 not printed in the Gazette.]

875,860. SIGNALING APPARATUS FOR MAIL-BOXES. THOMAS H. SPARKS, Wichita, Kans. Filed July 10, 1907. Serial No. 383,019.



1. A signal for mail boxes comprising, in combination with a box having a hinged door, two intermeshing segment gears, one of which is fixed to the door, a shaft upon which the other is loosely mounted, signals fixed to said shaft, and means for rotating said shaft as the segments are rocked, as set forth.

2. A signal for mail boxes comprising, in combination with a box having a hinged door, two intermeshing segment gears, one of which is fixed to the door, a shaft upon which the other is loosely mounted, signals fixed to said shaft, a ratchet wheel fixed to said shaft, means for preventing the ratchet wheel from rotating in one direction, and a pawl carried by one of the segment gears and engaging the ratchet wheel, whereby the latter may be given an intermittent movement as the gear segments rock, as set forth.

3. A signal for mail boxes comprising, in combination with a box having a hinged door, two intermeshing segment gears, one of which is fixed to the door, a shaft upon which the other is loosely mounted, signals fixed to said shaft, a ratchet wheel fixed to said shaft, a pawl carried by the box and adapted to prevent the ratchet wheel from rotating in one direction, a pawl carried by the gear segment upon said shaft and adapted to engage and impart an intermittent movement to the ratchet wheel, as set forth.

4. A signal for mail boxes comprising, in combination with a box, a hinged door, a segment gear fixed to said door, a shaft mounted in suitable bearings upon the box, a ratchet wheel fixed to said shaft, a pawl carried by the box and adapted to prevent the ratchet wheel from rotating in one direction, a segment gear journaled upon said shaft and having an angled portion extending over said ratchet wheel, a pawl carried by the angled portion of said gear and adapted to engage the ratchet wheel to impart intermittent rotary movement thereto, and signal arms fixed to said shaft, as set forth.

875,861. AUTOMATIC FOLDING WINDOW-SCREEN. EVERETT S. STANCLIFT, Berkeley, Cal. Filed Aug. 30, 1907. Serial No. 390,821.

1. An automatic foldable window screen comprising, in combination with a window frame and sash working in suitable guideways therein, a screen made up of sections hinged together, one of the end sections of the screen being fastened to the frame and the other to the sash, a guide rod fastened to the frame, connections between the sections and said rod, and a molding movable with the sash and adapted to hold the sections together when the screen is folded, as set forth.



2. An automatic foldable window screen comprising, in combination with a window frame and sash working in suitable guideways therein, a screen made up of sections hinged together, one of the end sections of the screen being fastened to the frame and the other to the sash, a guide rod fastened to the frame, connections between the sections and said rod, a stationary molding fixed to the frame forming a recess intermediate the same and the guideway in which the sash is mounted, a laterally projecting molding upon the sash adapted to close the said recess when the screen is folded therein, as set forth.

3. An automatic foldable window screen comprising, in combination with a window frame and sash working in suitable guideways therein, a screen made up of sections hinged together, one of the end sections of the screen being fastened to the frame and the other to the sash, a guide rod fastened to the frame, connections between the sections and said rod, a stationary molding fixed to the frame forming a recess intermediate the same and the guideway in which the sash is mounted, a laterally projecting molding upon the sash adapted to close the said recess when the screen is folded therein, and a plate fixed to the sash and positioned adjacent to said laterally projecting molding, as set forth.

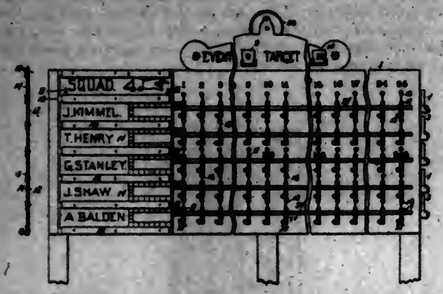
4. An automatic foldable window screen comprising, in combination with a window frame and sash working in suitable guideways therein, a screen made up of sections hinged together, a guide rod fixed to the frame, connections between said rod and the sections of the screen, a strip seated in a recess in the frame, one of the end sections of the screen fastened to said strip and the other end section to the sash, a laterally projecting molding upon the sash designed to hold the sections of the screen folded, as set forth.

875,862. SCORING DEVICE. MERRITT F. STANLEY, Northville, Mich. Filed Feb. 23, 1907. Serial No. 359,004.

1. In a scoring device, the combination of a board, brackets secured thereto, levers mounted thereon, indicators and actuating hooks carried by the levers, a longitudinally extending shaft, knuckles on said shaft having projections in the paths of said hooks, and springs to return the parts to normal position when released.

2. In a scoring device, a board, a score card attached thereto to indicate the contestants, indicators mounted on said board comprising levers and indicating arms, hooks attached to said indicators, shafts mounted on said board, means carried by the shafts to be actuated by said indi-

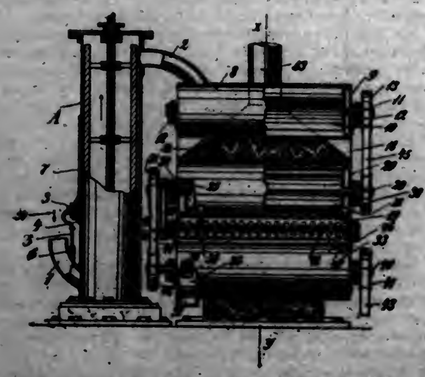
cators, means to return said shafts to normal position, and handles to move said shafts to permit the indicators to resume normal position.



3. In a scoring device, a score board comprising individual cards to indicate the contestants, a frame, indicators mounted on said frame comprising levers and indicating arms, a shaft mounted on said frame and adapted to be actuated by the indicators, means to prevent the indicators returning to normal position and means to actuate the shaft to permit the indicators to return to normal position.

4. In a scoring device, a frame, indicators mounted thereon, a shaft mounted on said frame and adapted to be actuated by the indicators, and means mounted on said shaft to prevent the indicators returning to normal position, said shaft being adapted to turn to release the indicators.

875,863. HUSKING-MACHINE. STEFAN STEINMETZ, Kreuznach, Germany. Filed Feb. 13, 1905. Serial No. 245,500.

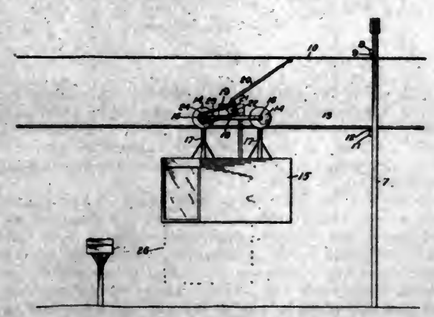


1. In a husking machine, the combination with a first moistening device, of a rotatory rubbing drum of a polygonal cross section (preferably a pentagon or a hexagon) adapted to force the water between the husks and berries of the grain, means conducting the moistened grain from said first moistening device to said rotatory rubbing drum, a first rotatory husking drum, means conducting the rubbed grain from said rotatory rubbing drum to said first rotatory husking drum, a pressed trap-door, a second moistening device controlled by said pressed trap-door, a second rotatory husking drum, a pressed trap-door adapted to discharge the finished husked grain, and means for removing the detached husks.

2. In a husking machine, the combination with a first moistening device, of a rotatory rubbing drum of a polygonal cross section (preferably a pentagon or a hexagon) within a horizontal cylinder with rough internal surface, means conducting the moistened grain from said first moistening device to said rotatory rubbing drum, a first rotatory husking drum within a second horizontal cylinder with rough internal surface and perforated heads, means conducting the rubbed grain from said rotatory rubbing drum to said first rotatory husking drum, a pressed trap-door in said second horizontal cylinder, a second moistening device beneath said pressed trap-door and controlled thereby, a second rotatory husking drum within a third horizontal cylinder with rough internal surface and perforated heads, means conducting the freshly moistened grain from said second moistening device to said second rotatory husking drum, a pressed trap-door in said third horizontal cylinder, and an outlet, said two husking drums being adapted to suck in air from without through the perforations in the cylinder heads and to discharge the husks.

3. In a husking machine, the combination with a horizontal cylinder for a first husking drum, of a trap-door in said horizontal cylinder, a horizontal trough placed with its one end beneath said trap-door, a screw conveyer mounted in said horizontal trough to turn, an outlet at the other end of said horizontal trough, a water cock near said trap-door, a connection between said water cock and a source of water, means for pivotally connecting said trap-door with the plug of said water cock, and means for normally closing said trap-door with a yielding pressure.

875,864. MAIL-DELIVERY SYSTEM. JOHN F. STOUT, Clayton, Ind. Filed June 27, 1907. Serial No. 381,123.



1. The combination, in a mail delivery system, of an elevated track and a car adapted to travel thereupon, the car being provided with a telescoping section operable by the occupant of the car when the latter approaches a mail-box, to deposit mail into or remove mail from the same.

2. The combination, in a mail delivery system, of an elevated track and a car adapted to travel thereupon, the car being provided with a telescoping section adapted to be raised or lowered by the occupant of the car when the latter approaches a mail-box, to deposit mail into or remove mail from the same.

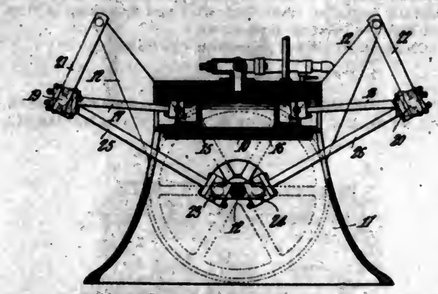
3. The combination, in a mail delivery system, of an elevated track, and a car adapted to travel thereupon, the car being provided with a vertically-movable front section operable by the occupant of the car when the latter approaches a mail-box, to deposit mail into or remove mail from the same.

4. The combination, in a mail delivery system, of an elevated track, and a car adapted to travel thereupon, the car being provided with a vertically-movable front section operable by the occupant of said section, when the car approaches a mail-box, to deposit mail into or remove mail from the same, said section being provided with a door.

5. The combination, in a mail delivery system, of an elevated track, a car adapted to travel thereupon, and suspended above the ground, the floor of the car having an opening formed therein, a section disposed within the car when the latter is in motion, and means operable by the occupant of said section for lowering the same when the car has been stopped adjacent a mail-box, to permit mail to be deposited in or removed from the mail-box.

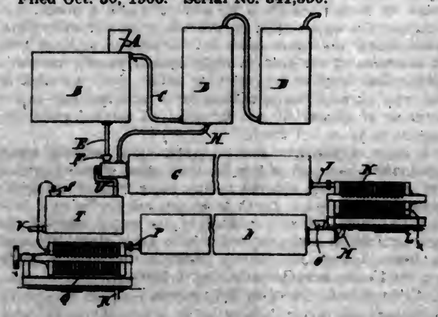
[Claims 6 and 7 not printed in the Gazette.]

875,865. INTERNAL-COMBUSTION ENGINE. ERNEST STUKE, Meridian, Miss. Filed Apr. 11, 1907. Serial No. 367,805.



In an engine, a cylinder open at both ends and provided with an inlet port mid-way of said ends, a supporting frame for the cylinder, a pair of trunk pistons disposed in the cylinder, a crank shaft journaled in the frame and having its axis in a vertical plane that extends through the center of the cylinder, a pair of diametrically opposed crank pins carried by the shaft, arms projecting from the frame, a pair of swinging links connected to said arms, pitman rods extending from the crank pins to the free ends of the links, and a pair of piston rods extending from the pistons and pivotally connected to the links at a point adjacent to the connection between the links and pitman rods, the pitman rod connections with the crank pins being at such an angle as to prevent the rods assuming a position in alinement with each other, whereby the trunk pistons will travel in opposite directions, respectively, during the greater portion of the stroke, and in the same direction at each end of the stroke.

875,866. PROCESS OF OBTAINING ZINC OXID FROM ZINC ORES. HENRY L. SULMAN, London, England. Filed Oct. 30, 1906. Serial No. 341,350.



1. The herein described process for obtaining zinc oxid from zinc ores which consists in dissolving zinc oxid from the ore with sulfurous acid, adding to the solution of bisulfite thus obtained zinc oxid which will precipitate the zinc as monosulfite, and calcining the monosulfite to produce zinc oxid.

2. The herein described process for obtaining zinc oxid from zinc ores which consists in converting zinc into oxid, dissolving the zinc oxid from the ore with sulfurous acid, adding to the solution of bisulfite thus obtained zinc oxid which will precipitate the zinc as monosulfite, and calcining the monosulfite to produce zinc oxid.

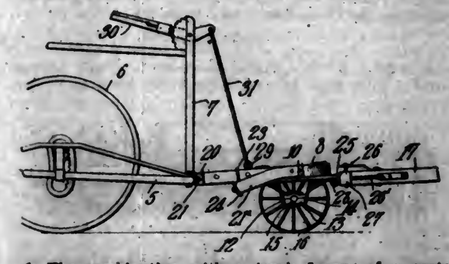
3. The herein described process for obtaining zinc oxid from zinc ores which consists in dissolving zinc oxid from the ore with sulfurous acid, adding zinc oxid to the bisulfite solution thus obtained to precipitate the insoluble monosulfite of zinc, submitting the mixture to attrition to prevent incrustation of the zinc oxid by zinc monosulfite, and calcining the monosulfite to produce zinc oxid.

4. The herein described process for obtaining zinc oxid from zinc ores which consists in converting the zinc into oxid, treating the ore with sulfurous acid solution to dissolve the zinc as bisulfite, separating the bisulfite solution from the residue, adding to the solution zinc oxid which will remove sulfurous acid and precipitate the zinc as monosulfite, separating the zinc monosulfite from the liquor and drying and calcining the same to produce zinc oxid.

5. The herein described process for obtaining zinc oxid from zinc ores which consists in converting the zinc into oxid, treating the ore with sulfurous acid solution to dissolve the zinc as bisulfite, separating the bisulfite solution from the residue, adding to the solution zinc oxid which will remove sulfurous acid and precipitate the zinc as monosulfite, separating the zinc monosulfite from the liquor and drying and calcining the same to produce zinc oxid, and collecting the sulfurous acid evolved for repeated use.

[Claims 6 to 9 not printed in the Gazette.]

875,867. TRUCK. ARCHIE M. TEAL, St. John, Wash. Filed June 14, 1907. Serial No. 379,066.



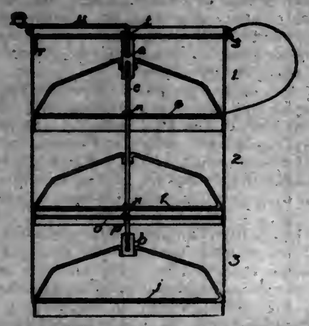
1. The combination with a truck frame, of a caster wheel carried by the frame, a draft tongue pivotally connected with the caster wheel, a draft bar extending laterally from one end of the frame for attachment to a vehicle, and a yoke extending beneath the draft bar and rigidly connected with said draft bar and frame.

2. The combination with a truck including a substantially circular frame, an annulus mounted for rotation on the frame and provided with transverse reinforcing bars, hangers depending from the bars, a wheel mounted for rotation in the hangers, a tongue pivotally connected with the annulus, a draft bar extending laterally from the frame for attachment to a vehicle, and a yoke extending beneath the draft bar and rigidly secured to said draft bar and frame.

3. The combination with a truck including a substantially circular frame, an annulus mounted for rotation in the frame, a wheel journaled in the annulus, a tongue pivotally connected with the annulus, a draft bar extending laterally from the frame, a yoke secured to the frame and extended beneath the draft bar, and means forming a rigid connection between the adjacent end of the yoke and the draft bar.

4. The combination with a truck including a substantially circular frame, an annulus mounted for rotation in the frame and provided with depending hangers, a wheel journaled in the hangers, a tongue pivotally connected with the annulus, a draft bar extending laterally from the frame, a yoke secured to the frame and extending beneath the draft bar, a strip of fibrous material disposed at the closed end of the yoke, and a fastening device embracing the draft bar and extending through the fibrous material for rigidly securing the yoke to the draft bar.

875,868. FLOUR-SIFTER. JERENA E. TRICE, Clay Center, Kans. Filed Jan. 24, 1907. Serial No. 353,792.



A sifter, comprising a top section, a bottom section, and an intermediate section, inter-engaging lugs and L-slots on said sections for holding them detachably connected, a screen at the bottom of each section, a stirrer for each section, a block tapped on two sides attached to the top stirrer, a tapped block attached to the bottom stirrer, a shaft engaging the threads at one side of said block attached to the top stirrer and also engaging the block on the bottom stirrer, and attached to the intermediate stirrer, and an operating crank engaging the threads at the other side of said top block.

875,869. ROCK-DRILL. ROLLAND S. TROTT, Denver, Colo. Filed Sept. 14, 1906. Serial No. 334,659.



1. In a rock drill for changing drill-bits without stopping the engine, a cylinder, a reciprocating non-rotative piston mounted therein, a pawl and ratchet and rifle toothed drill-bit rotating mechanism connected to said piston, a drill-bit in the reciprocative path of said piston, a drill-bit holding chuck arranged to hold said drill-bit, and means including a clutch device for throwing said drill holding chuck into or out of engagement with said drill-bit rotating mechanism when said piston and drill-bit rotating mechanism is in operation.

2. In a rock drill for changing drill-bits without stopping the drilling engine, the combination with an operative rock-drilling cylinder, and a reciprocative non-rotative piston, of a rifled sleeve and nut, and a ratchet toothed pawl mechanism arranged to operatively rotate a drill-bit, a drill-bit holding chuck arranged in operative relation to said drill-bit rotative mechanism, a drill-bit operatively supported by said drill chuck, a clutch surface on said drill-bit rotating mechanism, an opposing clutch surface on said clutch, and means for manually moving said chuck into and out of engagement with said drill-bit rotative mechanism.

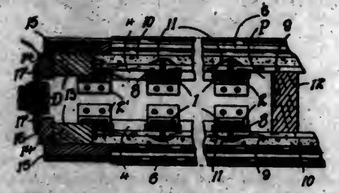
3. In a rock drill for changing rock-drill-bits without stopping the drilling engine, the combination with a cylinder and a piston, of a rifle sleeve, a ratchet wheel, a drill-holding chuck, a manually operating chuck actuating ring and finger pin, and the opposing clutch surfaces between said chuck and said ratchet ring.

4. In a rock drill for changing rock-drill-bits without stopping the drilling engine, the combination of a cylinder, a piston, a drill-bit, and a drill-bit rotating mechanism, provided with a clutch surface, with a drill-bit holding chuck provided with a clutch surface opposing and adapted to register the clutch surface on said drill-bit rotating mechanism, and reciprocally mounted in said cylinder, and means including a finger grasping pin for moving said chuck into and out of engagement with said rotating mechanism's clutch surface.

5. In a rock drill for changing drill-bits in a rock-drilling engine without stopping the engine, the combination of a drill-bit, and a drill-bit striking and rotating mechanism, with a drill-holding chuck reciprocally mounted relative to said rotatable mechanism, means for manually engaging said chuck with and detaching it from said drill-bit rotating mechanism.

[Claims 6 to 13 not printed in the Gazette.]

875,870. SLIDING-DOOR POCKET. ADOLPH WAGNER, St. Louis, Mo. Filed July 31, 1907. Serial No. 386,872.



1. A wall for sliding-door pockets having a series of tees entering as component elements of said wall, the flanges of the tees facing the pocket, and means for securing suitable lathing along the outer faces of the flanges of the tees, said lathing being disposed between said faces and the edges of the tee-webs substantially as set forth.

2. A sliding-door pocket having inclosing side walls composed of a series of tees with flanges facing the pocket, shoes resting on the floor for receiving the bottoms of the tees, a header for securing the flanges of the tees, lathing secured to the flanges of the tees, and a plaster coat carried by the lathing, substantially as set forth.

3. A sliding-door pocket having inclosing side-walls composed of a series of tees with flanges facing the pocket, shoes resting on the floor and receiving the tees, vertical wooden strips secured along the outer faces of the flanges, lathing nailed to said vertical strips, and a coat of plaster on the lathing, substantially as set forth.

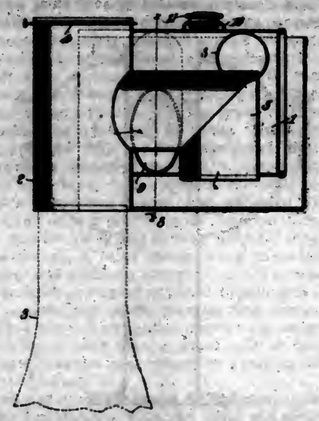
4. A sliding-door pocket having inclosing side-walls composed of a series of tees with flanges facing the pocket, shoes for supporting the bottoms of the tees, a header for securing the upper ends of the tees, vertical strips disposed along the outer faces of the flanges on each side of the webs of the tees, lathing secured to said strips, a reinforcing strip of wire netting passed over the edge of the web of each tee and secured to the lathing, and a covering of plaster for the lathing and netting aforesaid, substantially as set forth.

5. In a sliding-door pocket having inclosing side walls terminating in a pair of tees having flanges directed toward the pocket, a stud secured to the outer face of the outer flange of each tee, a finish strip secured to the side face of each stud, a frame secured to the outer edge of the strip, a friction-strip secured to the finish-strip, the stud having a bottom pin loosely entering the floor to allow for shrinkage, substantially as set forth.

[Claim 6 not printed in the Gazette.]

875,871. INCUBATOR-HEATER. WILLIAM H. WAGNER, Hebron, Nebr. Filed Feb. 7, 1907. Serial No. 356,227.

A boiler for heating systems comprising a water receptacle having a normally closed inlet, outlet and inlet pipes communicating with said receptacle and extending, respectively, from the upper and lower portions of one wall thereof, a chimney, said chimney and receptacle having one wall in common, an angular flue inclosed within the receptacle and disposed to direct products of combustion from the chimney and through the bottom of the receptacle, said flue contacting throughout its length with said wall of the receptacle between the inlet and outlet pipes to prevent direct flow of water from the inlet to the outlet pipe, a jacket spaced from the receptacle and



open at the top, and a removable bottom to said jacket disposed below the discharge end of the flue.

875,872. WIRE-CONNECTOR. JOHN J. WALSH, Yonkers, N. Y., assignor to Yonkers Specialty Company, Yonkers, N. Y., a Firm. Filed Apr. 10, 1905. Serial No. 254,900.



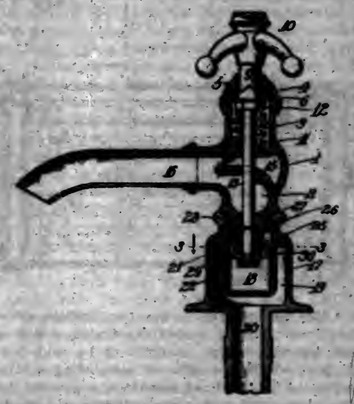
1 in a wire connector, the combination of an internally threaded body portion, having a transverse slot to receive the wires, separating members having bars adapted to lie in the slot between the wires, and a screw in the body portion adapted to press the wires and separating members firmly together, as set forth.

2. In a wire connector, the combination of an internally threaded body portion having a transverse slot to receive the wires, separating washers having diametrically arranged cross-bars adapted to lie between the wires in the slot, and a screw in the body portion adapted to press the wires and washers firmly together, as set forth.

875,873. SELF-CLOSING BASIN-COCK. EARL G. WATROUS, Chicago, Ill. Filed Jan. 18, 1908. Serial No. 411,843.

1. In a self-closing basin cock, a main chamber provided with an inlet port and an outlet port and through which the water must pass from the supply pipe to the discharge spout, a main valve carried by the valve stem within said chamber and controlling the outlet port therefrom, a supplemental chamber arranged within and concentric of the main chamber, and a supplemental valve also carried by the valve stem to move in unison with the main valve and arranged within said supplemental chamber to control the inlet port entering the same towards its upper end, said supplemental chamber being cut off from the water supply when its supplemental valve is closed; substantially as described.

2. In a self-closing basin cock, a main chamber provided with an inlet port and an outlet port, and through which the water must pass from the supply pipe to the discharge spout, a main valve carried by the valve stem within said chamber and controlling the outlet port therefrom, a supplemental chamber and a supplemental valve also carried by the valve stem within said latter chamber and controlling the inlet port thereto, said main valve opening in advance of the supplemental valve at the depression of the valve stem, and said supplemental valve closing in advance of the main valve at the return upward movement of the valve stem; substantially as described.



3. In a self-closing basin cock, a cylindrical chamber provided with an inlet port and an outlet port, and through which the water must pass from the supply pipe to the discharge spout, in combination with a main valve carried by the valve stem within said chamber and controlling the outlet port therefrom, and a supplemental cylindrical valve also carried by the valve stem and controlling the inlet port to said chamber, and a supplemental chamber in which the supplemental valve operates; substantially as described.

4. In a self-closing basin cock, a cylindrical chamber provided with an inlet port and an outlet port, and through which the water must pass from the supply pipe to the discharge spout, in combination with a main valve carried by the valve stem within said chamber and controlling the outlet port therefrom, a supplemental cylindrical valve also carried by the valve stem within said chamber and fitting the walls thereof and controlling the inlet port to said chamber, and a cylindrical chamber which is arranged within the main chamber and in which the cylindrical valve operates, said main valve opening in advance of said supplemental valve at the depression of the valve stem and said supplemental valve closing in advance of the main valve at the return upward movement of the valve stem; substantially as described.

5. In a self-closing basin cock the combination, with the cock body 1 containing the chamber, 2, of the body 17 containing the cylindrical chamber 18 surrounded by the annular chamber 19 and communicating with the chamber 2 by the passage 28 and with the bottom of the chamber 19 by the port 21 and passage 22; in combination with the valve stem 13, the main valve 26 carried thereby within the chamber 18 and controlling the passage 28, and the supplemental valve 25 also carried by the valve stem 13 within the chamber 18 and controlling the port 21; substantially as described.

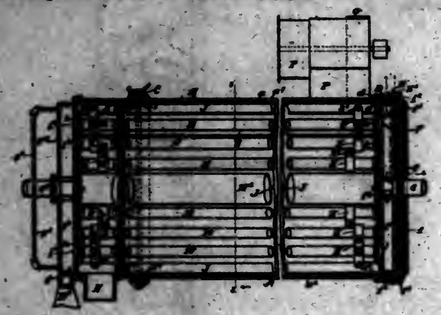
[Claims 6 to 11 not printed in the Gazette.]

875,874. DRIER. JACOB WELNTZ, Cleveland, Ohio. Filed Apr. 30, 1906. Serial No. 314,334.

1. In a drying apparatus, the combination of a stationary cylinder having hollow rotatable heads at its ends; exterior steam pipe connections to said heads; a series of longitudinal pipes within the cylinder connecting heads; and means for rotating said heads and their connecting pipes.

2. In a drying apparatus, the combination of a stationary cylinder provided with material inlet and outlet openings; hollow rotatable heads closing the ends of said

cylinder; exterior steam connections for said heads; a series of longitudinal pipes within said cylinder connecting said heads, said pipes being disposed so as to constitute a cylindrical radiator structure; and means for rotating said heads and connecting pipes.



3. In a drying apparatus, the combination of a stationary cylinder having hollow rotatable heads at its ends; exterior steam pipe connections to said heads; a series of pipes within the cylinder connecting said heads; and a series of longitudinal elevators supported by said connecting pipes; and means for rotating said heads with their connecting pipes and the elevators carried thereby.

4. In a drying apparatus, the combination of a stationary cylinder provided with material inlet and outlet openings; hollow rotatable heads closing the ends of said cylinder; exterior steam connections for said heads; a series of longitudinal pipes within said cylinder connecting said heads, said pipes being disposed so as to constitute a cylindrical radiator structure; a corresponding series of longitudinal elevators mounted upon said pipes and projecting into the annular space between the same and the cylinder shell; and means for rotating said heads, connecting pipes, and elevators.

5. In a drying apparatus, the combination of a stationary cylinder provided with material inlet and outlet openings; hollow heads closing the ends of said cylinder; ball-bearings in the one end of said cylinder wherein the corresponding head is rotatably mounted; a roller bearing adjacent to the other end of said cylinder whereon the other head is similarly supported; a series of pipes within said cylinder connecting said heads; and exterior steam connections for the latter.

[Claims 6 to 9 not printed in the Gazette.]

875,875. BUOY. THOMAS L. WILLSON, Ottawa, Ontario, Canada, assignor, by mesne assignments, to United States Marine Signal Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 11, 1905, Serial No. 291,238. Renewed Nov. 16, 1907. Serial No. 402,533.

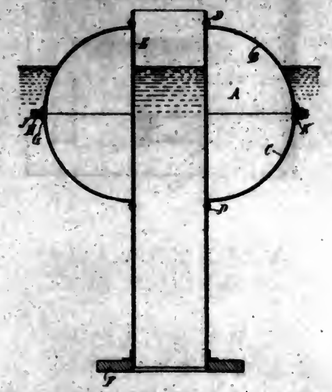
1. A buoy formed substantially of three parts, an axial tubular portion adapted to constitute a gas chamber, and two hemispheroidal plates united circumferentially to each other and each connected to said axial portion and braced thereby.

2. A buoy formed substantially of three parts, two hemispheroidal plates united circumferentially to each other, and an axial tubular portion passing through and outside of both said plates and connected to and bracing said plates.

3. A buoy formed substantially of three parts, an axial tubular portion, and two hemispheroidal plates united circumferentially to each other and each having an opening surrounded by a flange connected to said axial portion.

4. A buoy formed substantially of three parts, an axial tubular central portion B, and two hemispheroidal plates B and C united circumferentially to each other and each connected to said axial portion and braced thereby, said axial portion being extended below the lower plate, and a weight upon the lower end of the axial portion.

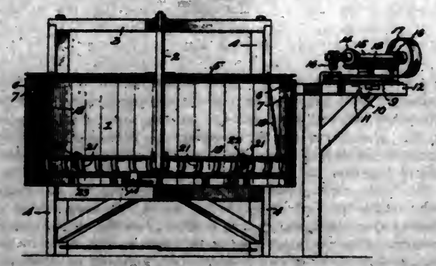
5. A substantially three-part buoy comprising in combination an axial tubular portion B, two hemispheroidal plates B and C each connected to said axial portion and braced thereby, and a stiffening member extending around



the line of juncture of said plates and connected to each of said plates separately to hold them together and to brace them.

[Claims 6 to 9 not printed in the Gazette.]

875,876. APPARATUS FOR AUTOMATICALLY DISCHARGING ORE-PULP SANDS AND OTHER MATERIAL FROM TANKS. JEREMIAH C. WINCHELL and HOWARD H. WINCHELL, Monte Vista, Colo. Filed Mar. 11, 1907. Serial No. 361,733.



1. An automatic ore-sand discharger for cyanid tanks, comprising a tank, a shaft in the center of said tank, a closable discharge aperture in the bottom of said tank, a scraper pivotally and slidably mounted on said shaft within said tank, a rotating sheave rotatably mounted on said shaft, and connected to said scraper by a flexible scraper rotating connection, and means for rotating said sheave.

2. An automatic sand or other material discharging apparatus for cyanid and other tanks, comprising a tank provided with a vertical axial shaft and a closable discharge aperture at the central portion of its bottom, a scraper pivotally and slidably mounted to rotate on said shaft, a power-driven wheel rotatably mounted on said shaft, a flexible connection between said power-driven wheel and said scraper arranged to permit said power-driven wheel to drag said scraper rotatably in said tank and to permit said scraper to feed from the top of said tank to its bottom, and means for rotating said power-driven wheel.

3. An automatic sand or other material discharging apparatus for tanks, comprising the combination of a tank provided with a central shaft, and a valve discharge aperture at its central bottom portion, a sand scraper comprising a plurality of plows cooperatively arranged to move the sand towards the center of the tank, said scraper being pivotally and slidably mounted on said shaft, a power transmitting wheel rotatably mounted above said scraper and provided with flexible connections operatively attached to said scraper and adapted to permit said scraper to be rotatably dragged around in said tank by said power-transmitting wheel and to move slidably on said shaft from the top of said tank to its bottom, and means for rotating said power-transmitting wheel.

4. In an automatically operating ore-sand or other material discharging apparatus for tanks, the combination of the tank provided with the central vertical shaft and the valve controlled discharge aperture, a suitable supporting frame for said tank, and a spider removably secured to said tank's supporting frame, and arranged to support the upper end of said tank's center shaft, with the scraper pivotally and revolubly and slidably mounted on said shaft within said tank, a large sheave wheel mounted on said shaft below said spider, a plurality of power-transmitting wheels revolubly journaled adjacent to said tank, belt connections between said power transmitting wheels and said large sheave wheel, and flexible connections secured to the opposite sides of said sheave wheel and to the opposite ends of said scraper, and means for rotating said power transmitting wheels.

5. In an automatic material discharging apparatus for tanks, the combination with the tank, the shaft in said tank, the central discharge aperture in said tank, and the tank's supporting frame, of a scraper rotatably mounted on said shaft, comprising a bar pivotally and rotatably mounted on said shaft and extending diametrically across the inside of said tank, a plurality of plow blades depending from said bar, said plow blades being set at an angle adapted to progressively move the material within the tank throughout its area towards the center of said tank as said scraper rotates, a sheave revolubly supported at the top edge of said tank, cables extending from said sheave to said scraper and arranged to revolve said scraper in said tank, and a power transmitting belt connected and adapted to rotate said sheave.

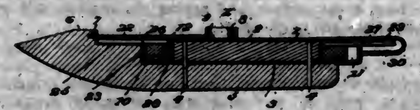
[Claims 6 to 9 not printed in the Gazette.]

875,877. ART OF CAPITALIZING TYPOSCRIPT LETTERS. HENRY WISE, Namacpacan, Philippine Islands. Filed May 8, 1907. Serial No. 372,632.



The art of capitalizing typoscript letters which consists in first imprinting a capitalizing character or sign on the margin of the space to be occupied by the capitalized letter, and then imprinting the said letter in said space and within the said character.

875,878. CUTTER-BAR. ELI J. WOLFROM, Salida, Colo. Filed Feb. 6, 1907. Serial No. 356,103.



1. In cutting apparatus for harvesters, mowers and the like, the combination of a cutter bar having spaced front and rear extensions or projecting parts having horizontal cuts in their opposing vertical faces, and a reversible ledger plate having opposing projections to enter the aforesaid horizontal cuts by means of which the ledger plate is held in place in either adjusted position.

2. In cutting apparatus for harvesters, mowers and the like, a cutter bar comprising a strip and guard fingers, the latter having vertical extensions near their front ends and having cuts extended forwardly from their rear edges, projections extended upward from the strip and having cuts extended rearward from the edges facing the said vertical extensions of the guard fingers, and a reversible ledger plate having corresponding notches in opposite edges to provide spaced projections which are adapted to enter the forwardly extended cuts of the said extensions of the guard fingers and the rearwardly extending cuts of the projections of the aforementioned strip to retain the ledger plate in place in either adjusted position.

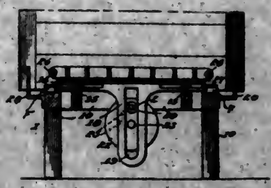
3. In cutting apparatus for harvesters, mowers and the like, the combination of a bar, guard fingers secured to the bar and projecting forward therefrom and having upwardly projecting extensions at their outer ends, said extensions having forwardly extended cuts in their rear walls, projections extended upwardly from said bar and having rearwardly extended cuts in their front walls, said projections corresponding approximately in number and position with the guard fingers, and a ledger plate having corresponding projecting portions at opposite edges to enter the opposite respective forwardly extended and rearwardly extended cuts.

4. In cutting apparatus for harvesters, mowers and the like, the combination of a bar, guard fingers projected forward from said bar and having upwardly projecting extensions at their outer ends having forwardly extended cuts, projections extended upwardly from the said bar and corresponding in position and number with the guard fingers and having rearwardly extended cuts in their front walls, and a ledger plate having registering notches in opposite edges to provide cutters, and having the portions between the notches or cutters corresponding with the aforesaid upwardly extending projections and adapted to enter the respective forwardly extended and rearwardly extended cuts thereof.

5. In cutting apparatus for harvesters, mowers and the like, the combination of a strip, a plate attached to the lower side of said strip and projected beyond the front and rear edges thereof and having upwardly extended flanges to form front and rear races, a second plate secured to the upper side of the strip and having a pendent flange at its forward edge overlapping the front edge of said strip and having its rear portion extended over the rear race to form a housing and an endless or chain cutter encircling the said strip and having portions adapted to operate in the front and rear races.

[Claim 6 not printed in the Gazette.]

875,879. ATTACHMENT FOR BRICK-MACHINES. ELI H. ZEIGLER, Stewartstown, Pa. Filed Sept. 28, 1907. Serial No. 394,993.



1. In a machine of the class described, a reciprocatory platform, a crank through which elongated motion is imparted to said platform, mold box guard strips secured to the platform, and stationary knocker arms disposed in the path of movement of the mold box and arranged to abruptly stop the same without interfering with the movement of the platform.

2. In a machine of the class described, a mold box carrying platform, a supporting means therefor, a vertically slotted yoke depending from the platform, a crank pin arranged to enter said yoke and impart reciprocatory movement to the platform, mold box guard strips arranged near the opposite ends of the platform, and knocker arms arranged to be engaged by said mold box in advance of the completion of the movement of the platform in either direction.

3. In a machine of the class described, a mold box carrying platform, means for imparting thereto a smooth uniform reciprocatory movement, and mold box engaging knocker arms carried by the machine and arranged to ab-

ruptly stop the movement of the mold box without interfering with the movement of the platform.

4. In a machine of the class described, a mold box carrying platform, a frame, anti-friction rollers carried by the frame and supporting the platform, a bar secured to the under side of the platform, and having projecting tongues arranged to enter the guiding slots in the frame, a yoke depending from the bar and provided with a vertically elongated slot, a shaft, a crank disk carried by the shaft and provided with a plurality of openings, a crank pin adjustable into any one of said openings, and an anti-friction roller carried by the crank pin and entering the slots of the yoke, a pair of knocker arms carried by the frame, and mold box guard stripe arranged adjacent the opposite ends of the platform.

875,880. COMBINED HAMMER AND SCREW-DRIVER. ADOLPH J. ZIMMERMANN, New Orleans, La. Filed May 28, 1907. Serial No. 376,062.



In a combination tool, the combination with a handle having a transverse tool head at its upper end, the handle having a longitudinal passage therewithin opening through the opposite end of the handle from the tool head, the end of the passage adjacent to the tool head being closed, said handle having a longitudinally extending interior groove formed in the wall of the passage, said groove having a laterally and downwardly turned angular extension at its upper end and having a laterally and upwardly turned extension at its lower end, said extensions lying at a common side of the groove, of a bit slidably mounted in the passage and having a lateral projection extended into the groove for movement therein and arranged to lie at times in the downwardly turned portion of the upper lateral extension to hold the bit retracted within the handle, and at times within the upwardly turned portion of the lower lateral extension, to hold the bit projected from the handle.

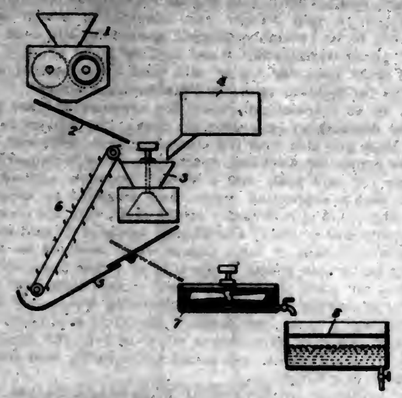
876,881. METHOD OF DISINTEGRATING GRAPHITE. EDWARD G. ACHESON, Stamford township, Welland county, Ontario, Canada. Filed Dec. 17, 1906. Serial No. 348,314.

1. A process for disintegrating graphite, consisting in frictionally mixing graphite with a soluble body and then dissolving said soluble body.

2. A process for disintegrating graphite, consisting in grinding graphite and a soluble body together whereby the two are intimately mixed and the graphite is disintegrated, and then dissolving the soluble body.

3. A process for disintegrating graphite, consisting in mixing graphite with a soluble body, disintegrating the mixture, and then dissolving said soluble body.

4. A process for disintegrating graphite, consisting in finely dividing said graphite, mixing said divided graphite



intimately with a soluble body, disintegrating the mixture, and then dissolving the soluble body.

875,882. DESIGNATION-PLUG FOR TELEPHONE-SWITCHBOARDS. ARTHUR H. ADAMS, Antwerp, Belgium, assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed May 31, 1907. Serial No. 376,684.



1. The combination with a spring jack, of a designation plug having a surface against which a spring of said jack is adapted to bear to hold said plug in place, and a cam surface adapted when the plug is turned from its inserted position to coöperate with said spring to release said plug.

2. The combination with a spring jack, of a designation plug having a flat surface on one side against which a spring of said jack is adapted to bear to hold said plug in place, and a beveled surface upon its opposite side against which said spring is adapted to bear, upon the rotation of said plug from its inserted position.

3. A designation plug comprising a cylindrical body portion having one side cut away at its end to provide a flat surface, and having the opposing side beveled at the end of the plug towards said flat surface.

4. A designation plug comprising a cylindrical body portion having a slotted head upon one end, said body portion being cut away at its opposite end upon one side to form a flat surface, and having the opposite side beveled at the end of the plug.

875,883. LENS-MOUNT FOR EYEGLASSES. LEO F. ADT, Troy, N. Y. Filed Mar. 23, 1906. Serial No. 281,577.



1. In eyeglasses, the combination with a lens having an aperture therein for the fastening device, of a lens mount comprising a body portion and an attaching arm connected to the body portion and having a lens securing portion attached thereto at a point beyond the lens aperture and extending toward said aperture, and a fastening device coöperating with the securing portion to draw it against the lens surface.

2. In eyeglasses, the combination with a lens having an aperture therein for the fastening device, of a lens mount comprising a body portion and the attaching arms for engaging the surfaces of the lens, one of said arms being extended beyond the lens aperture and then doubled back to receive the fastening device.

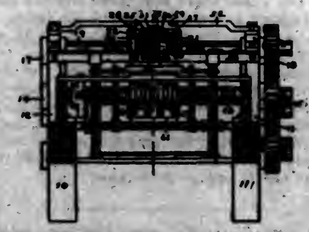
3. In eyeglasses, the combination with a lens having an aperture near one edge thereof for the fastening device, of a lens mount comprising a body portion arranged at the lens edge, and an arm extending inwardly from the body portion to a point beyond the lens aperture and having a securing portion extending back to the said aperture, and a fastening device coöperating with the securing portion of the arm to secure it to the lens.

4. In eyeglasses, the combination with a lens having an aperture near its edge for the fastening device, of a lens mount comprising the body portion arranged at the lens edge, and the apertured attaching arms attached thereto and overlapping the opposite faces of the lens, one of said arms extending inwardly over the lens and beyond the lens aperture and having a securing portion attached thereto at a point beyond the lens aperture and extending back to the lens aperture, and a fastening device coöperating with the attaching arms for securing them to the lens.

5. In eyeglasses, the combination with a lens having an aperture near its edge for the fastening device, of a lens mount comprising a body portion arranged at the lens edge and an attaching arm extending inwardly from the body portion and having a securing portion of spiral form extending to the lens aperture, and a fastening device coöperating with the securing portion to secure it to the lens.

[Claims 6 and 7 not printed in the Gazette.]

875,884. GRIPPING AND FOLDING DEVICE FOR PAPER-BAG-MANUFACTURING MACHINES. PHINEAS L. BARTHOLOMEW, Aurora, Ill. Filed Apr. 26, 1907. Serial No. 370,420.



1. In a gripping and folding device for a paper bag manufacturing machine the combination with the side rails of the machine of a lower shaft; two centrally located disks rigidly secured thereto; two other disks loosely mounted on said shaft and located one between each end of the shaft and one of the rigidly secured disks; a cam on the outer surface of each of the loosely secured disks; a cross-bar secured to the side rails of the machine at a point beneath the said shaft; a plate secured to said cross-bar a second cross-bar secured to said side rails said plate extending forwardly, upwardly and rearwardly around, and secured to, the said loosely mounted disks, and extending rearwardly to a connection with said second cross-bar; said plate having two longitudinal openings designed to receive the aforesaid rigidly secured disks; gripper fingers mounted in said shaft, one immediately outside of each of the loosely secured disks, said gripper fingers being designed to be actuated by the cams on their respective disks, all arranged and combined substantially as shown and described.

2. In a gripping and folding device for a paper bag manufacturing machine an upper shaft; two disks mounted centrally on said shaft and being slightly separated from each other; a lug mounted on each of said disks levers carried by said lugs; a loose ferrule mounted between said disks having an orifice therein; a lug, rigidly secured to said shaft, mounted within said ferrule and provided with a rearwardly projecting portion; a lug mounted on said ferrule; a gripper finger mounted on said lug, said gripper finger being actuated by said levers mounted in the lugs secured to the said disks; two other disks loosely mounted on said shaft, one between each end of the shaft and one of the aforesaid rigidly secured disks; a cam secured to the outer surface of each of said disks; a lever, bearing gripper finger, secured in the shaft immediately outside of each of the said loosely secured disks said levers being designed to be actuated by their respective cams; a cam mounted on the inner portion of one of said disks and designed to actuate the levers which in turn actuate the aforesaid gripper finger secured to the loose ferrule; a cross-bar mounted immediately above said shaft; a plate secured to said cross-bar, said plate extending forwardly, downwardly and rearwardly around the aforesaid loosely secured disks and being secured thereto, the rear portion of said plate being secured to a second cross-bar; said plate having a longitudinal opening centrally located therein and designed to receive the gripper finger secured to the said ferrule, all arranged and combined substantially as shown and described.

3. In a paper bag manufacturing machine, a gripping and folding device comprising in combination an upper shaft, standards above said shaft; two similar disks loosely mounted near the central portion of the said shaft, one on each side thereof; a cross-bar mounted in said standards above said shaft; a second cross-bar secured to said standards, a plate secured to said first cross-bar and extending downwardly, outwardly and rearwardly therefrom around the said disks, and secured thereto, the rear end of said plate being secured to said second cross-bar mounted in said standards; said plate having a centrally located opening therein; a gripper finger located between the said disks; a gripper finger mounted immediately outside of each of said disks; a lower shaft provided with two disks loosely mounted near the central portion thereof; a cross bar below said lower shaft; a plate secured to said cross bar and extending upwardly, forwardly and rearwardly therefrom and secured to said disks, a second cross bar below said lower shaft the rear end of said plate being secured to said second cross bar; a gripper finger located immediately outside of each of said disks; means for operating all of said gripper fingers; means for driving the said shafts, all arranged and combined substantially as shown and described.

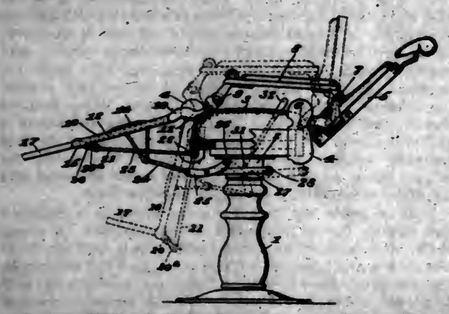
4. In a gripping and folding device for paper bag manufacturing machines, an upper shaft provided near its central portion with two rigidly secured disks; companion lugs one mounted on each of said disks; a spring actuated lever mounted in said companion lugs; a loose ferrule mounted on said shaft between said disks; an orifice in said ferrule; a lug provided with a rearwardly extending portion mounted in said orifice and designed to retard the movement of the said ferrule; an upwardly extending inverted U shaped lug secured to said ferrule; a lever projecting forwardly between the arms of said lug, a gripper finger mounted on said lug and designed to be actuated by said lever projecting forwardly between the arms of the said lug, the rear end of said lever being secured to said second spring actuated lever mounted in the companion lugs secured to the said disks; a cam secured to the said disks; a cam secured to said shaft and designed to operate the spring actuated lever, all arranged and combined substantially as shown and described.

5. In a gripping and folding device for a paper bag manufacturing machine, an upper shaft, a loose ferrule centrally secured thereto, a gripper finger mounted upon said ferrule centrally secured to an upper shaft; an orifice in said ferrule; an inverted U shaped lug on said ferrule; a gripper finger extending the entire width of, and engag-

ing the upper portion of, the said lug said gripper finger extending downwardly on the rear portion of said lug and being provided with a forwardly extending portion projecting between the arms of the inverted U shaped lug; a plait rigidly secured to said lug coil springs secured to the base of said gripper finger the other extremity of said springs being secured to said plate rigidly secured to the said lug; means for raising and lowering the said gripper finger by engagement with the forwardly extending portion, all arranged and combined substantially as shown and described.

[Claims 6 to 8 not printed in the Gazette.]

875,885. BARBER'S CHAIR. EUGENE BERNINGHAUS, Cincinnati, Ohio. Filed Apr. 8, 1905. Serial No. 254,468.



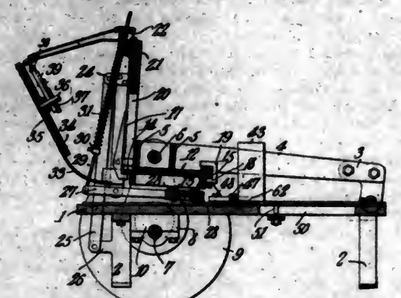
1. A reclining-chair having a seat portion, a leg-rest pivoted at the forward part of the seat portion, a part whereon the seat portion is supported, a slide guided for movement in said seat-supporting part, a lever pivotally-mounted on the seat-supporting part and having connection with said slide, a link, one end of which is connected with the lever and the other end of which has connection with the leg-rest and a clamping device carried by the seat-supporting part for adjustable clamping-engagement with said slide.

2. A reclining-chair having a seat portion, a leg-rest pivoted at the forward part of the seat portion, a back pivoted at the rear part of the seat portion, arms eccentrically-connected with the leg-rest and back to move the parts in unison, a part whereon the seat portion is supported, a slide guided for movement in said seat-carrying part, a lever pivotally-mounted on the seat-carrying part and having connection with said slide, a link, one end of which is connected with said lever and the other end of which has connection with the leg-rest and a clamping device carried by the seat-carrying part for adjustable clamping-engagement with said slide.

3. A reclining-chair having a seat portion, a leg-rest mounted for pivotal-movement, means comprising bracket, link, lever and cam connections for holding the leg-rest against movement when in adjusted position, a foot-rest pivotally-connected with the leg-rest, a short socket or hollow arm held upon the foot-rest, a short pin having a forked outer end and with its other end arranged to slide within said socket or arm, means for securing said forked pin in adjusted position within said hollow arm and thereby form a suitable take-up connection, and a link, one end of which has pivotal-connection with the seat and the other end of which is pivoted to the forked end of said take-up connection, said link being adapted to effect pivotal-movement of the foot-rest relatively to that of the leg-rest when the latter is moved relatively to the seat portion.

875,886. AUTOMATIC CARD-PRINTING PRESS. WILLIAM A. BILLMAN, Colorado Springs, Colo. Filed Apr. 26, 1907. Serial No. 370,428.

1. In a card printing press, a card reservoir, a reciprocating feed bar and guide therefor constituting the bottom of the reservoir, gravity stops in the path of the projected cards for preventing the return movement thereof when the feed bar is retracted, and supporting means for the card for holding the end of the same adjacent to the reservoir above the plane of the bottom of the feed bar but lower than the plane of the top of the feed bar.



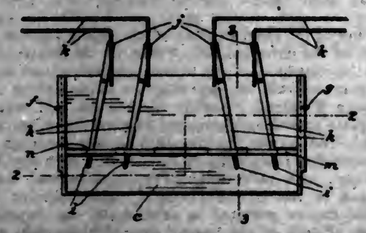
2. In a card printing press, a card reservoir, a reciprocating feed bar and guides therefor constituting the bottom of the reservoir, means for preventing the return movement of a projected card when the feed bar is retracted, and supporting means for the card for holding the end of the same adjacent to the reservoir above the plane of the bottom of the feed bar but lower than the plane of the top of the feed bar.

3. A card printing press comprising a reciprocating feed bar provided with a tongue of less height than the bar, and supports for the end of a projected card adjacent to the card reservoir, supporting said end of the card at a height sufficient to permit the introduction of the tongue of the feed bar under said card and holding said end of the card in the path of the bar back of the tongue.

4. In a card printing press, a reciprocating feed bar, a card reservoir through which said bar is movable, and gravity catches pivoted to fixed portions of the structure on the delivery side of the reservoir, said catches being so pivoted that their upper ends are in the path of and are overridden by the cards when projected from the reservoir and which upper ends move into the path of the cards to prevent return movement of the latter.

5. In a card printing press, a card reservoir, a reciprocating feed bar movable beneath the same, said bar having one end formed with a pushing head and provided with a tongue projecting therefrom of less height than the head, gravity stops adjacent to the delivery end of the reservoir for preventing the return of a projected card, and inclined supports for the end of the card nearest the reservoir for holding said end sufficiently elevated to permit the tongue of the feed bar to engage thereunder.

875,887. ATTACHMENT FOR LEVERS FOR AUTOMATIC-PLAYING MUSICAL INSTRUMENTS. LEVIN BLASIUS, Philadelphia, Pa. Filed June 12, 1907. Serial No. 378,468.



1. In a piano adapted to be used as a manual and self-playing instrument, in combination, a shelf or frame slidably mounted, operating levers for the self-playing mechanism pivotally connected to said shelf or frame, rods adapted to connect said levers and the self-playing mechanism and a loose connection between said levers and rods, whereby said levers may move with said frame and maintain operative connection with said rods.

2. In a piano adapted to be used as a manual and self-playing instrument, in combination, a key board ledge a shelf or frame mounted on the under side of the key-board ledge to move inward and outward, operating levers for the self-playing mechanism pivotally connected to said shelf or frame, rods adapted to connect said levers and the self-playing mechanism and a loose connection between said levers and rods, whereby said levers may move with said frame and maintain operative connection with said rods.

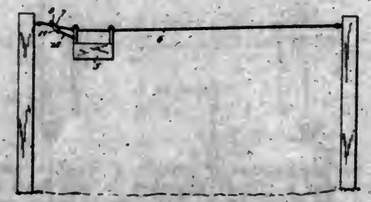
3. In a piano adapted to be used as a manual and self-playing instrument, in combination, a shelf or frame slidably mounted, operating levers for the self-playing mechanism pivotally connected to said shelf or frame, rods adapted to connect said levers and the self-playing mechanism, a hook upon each of said levers in which the corresponding rods rests, whereby said levers may move with said frame and maintain operative connection with said rods.

4. In a piano adapted to be used as a manual and self-playing instrument, in combination, a shelf or frame slidably mounted, operating levers for the self-playing mechanism pivotally connected to said shelf or frame, rods adapted to connect said levers and the self-playing mechanism, and a loose connection between said levers and rods, whereby said levers may move with said frame and maintain operative connection with said rods, the outer end of said frame or shelf having a vertical extension.

5. In a piano adapted to be used as a manual and self-playing instrument, in combination, a shelf or frame slidably mounted, operating levers for the self-playing mechanism pivotally connected to said shelf or frame, rods adapted to connect said levers and the self-playing mechanism, and a loose connection between said levers and rods, whereby said levers may move with said frame and maintain operative connection with said rods, and means carried by said shelf or frame for limiting the movement of said levers on their pivots.

[Claim 6 not printed in the Gazette.]

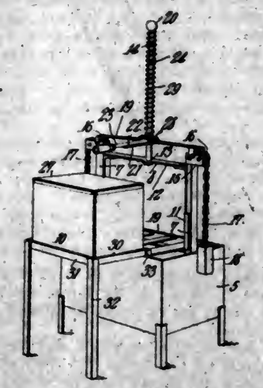
875,888. CARRIER-STOP. JOHN H. BRADLEY, Kenyon, Minn. Filed Feb. 16, 1907. Serial No. 357,703.



A stop for cars of elevated carriers comprising a blank having a notch formed in one edge adjacent to one end and extending diagonally toward said end, the side walls of said notch extending diagonally with respect to the side faces of the blank and the end wall of said notch extending at right angles to the sides thereof, said blank having an opening therein adjacent to its distal end from the notch and between the ends of the notch, said opening being arranged for the reception of an attaching member.

875,889. COOKING APPARATUS. ARTHUR T. BRADSHAW, Philadelphia, Pa. Filed June 19, 1906. Serial No. 322,439.

1. A device of the class described comprising a liquid containing receptacle, spaced standards secured to the receptacle and connected by a transverse bar having an opening formed therein, a carrier arranged within the receptacle and provided with a rod extending through the opening in the transverse bar, laterally extending guide flanges secured to the carrier and engaging the standards, a food receptacle supported by the carrier and movable to operative position within the liquid, a locking member pivotally mounted on the transverse bar and adapted to engage the rod for locking the food receptacle in operative position, and a spring interposed between one end of the rod and the transverse bar for automatically elevating the food receptacle when the locking means is released.

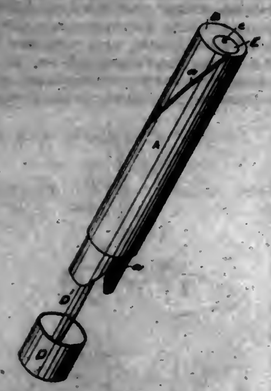


2. A device of the class described comprising a liquid containing receptacle, spaced standards secured to the opposite sides of the receptacle and provided with sprocket-wheels, a transverse bar connecting the free ends of the standards a carrier arranged within the receptacle, sprocket-chains disposed beneath the bar and each having one end thereof secured to the carrier and its opposite end passing over the sprocket-wheels and provided with a weight, a food receptacle supported by the carrier and movable to operative position within the liquid, a notched rod secured to the carriage and extending through the transverse bar, means engaging the notch in the rod for locking the receptacle in operative position, a spring for elevating the carrier when the locking means is released, and a table disposed in alinement with the upper edge of the liquid containing receptacle and adapted to receive the food receptacle when the carrier is in elevated position.

3. A device of the class described comprising a liquid containing receptacle, standards secured to the receptacle and provided with sprocket-wheels, guide flanges forming a part of the carrier and engaging said standards, sprocket-chains passing over the sprocket wheels each having one end thereof secured to the carrier and the opposite end thereof provided with a weight, a transverse bar connecting the standards and provided with a laterally extended arm, a rod secured to the carrier and passing through said bar and provided with a locking notch, a locking lever pivotally mounted on the lateral arm and adapted to engage the notch in the rod for locking the carrier in operative position, and a spring carried by the rod for automatically elevating the carrier when the locking lever is released.

4. A device of the class described comprising a liquid containing receptacle, a carrier arranged within the receptacle and provided with a platform having vertically disposed lugs disposed on opposite sides thereof, an air tight food receptacle supported by the platform and engaging said lugs, a plurality of trays arranged within the receptacle, a rod secured to the carrier for moving the food-receptacle to operative position within the liquid, means for locking the food receptacle in operative position, a spring carried by the rod for elevating the receptacle when the locking means is released, and intake and discharge passages communicating with the interior of the liquid receptacle.

875,890. WEFT-CASE FOR AUTOMATIC WEFT-REPLENISHING LOOMS. HEINRICH O. BRANDT, Manchester, England. Filed Apr. 9, 1906. Serial No. 310,796.



1. A weft case constructed with a spiral slot from end to end to form a passage for the thread a delivery eye at one end and means for retaining the thread therein substantially as described.

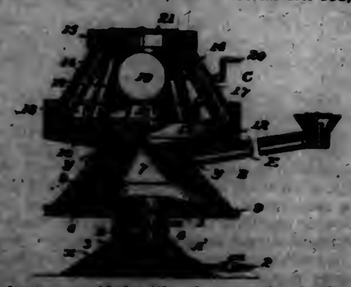
2. A weft case constructed with a slot from end to end to form a passage for the thread a delivery eye at one end a slit to introduce the thread from the slot to the eye and means for closing the eye to retain the thread therein substantially as described.

3. A weft case constructed with a spiral slot from end to end to form a passage for the thread a delivery eye at one end a slit to introduce the thread from the slot to the eye and means for closing the eye to retain the thread therein substantially as described.

4. A weft case comprising in its construction a cylindrical case A open at one end and provided with a slot from end to end to form a thread passage, a cop skewer D', a cap D to which the cop skewer is attached to inclose one end of the case, a cover at the other end provided with slit and eye and a second eye plate placed thereon and covering the slit therein and provided with an eye coincident with the eye of the first plate substantially as described.

5. A weft case comprising in its construction a cylindrical case A open at one end and provided with a spiral slot from end to end to form a thread passage, a cop skewer D', a cap D to which the cop skewer is attached, to inclose one end of the case, a cover at the other end provided with slit and eye and a second eye plate placed thereon and covering the slit therein and provided with an eye coincident with the eye of the first plate substantially as described.

875,891. HEATER. CLARENCE H. BUCHANAN, Washington, D. C. Filed Jan. 15, 1907. Serial No. 352,454.



1. A heater provided with a base portion having a central column 5, a burner for said column arranged within the base, a body portion having a bottom plate extending outward from the column 5 and inclined walls 8 extending upward and inward over the outer edge of said plate, a casing surmounting the said walls 8 and extending outward, and having a top plate 13, a series of inclined tubes extending from the said casing, and an upper casing communicating with said tubes.

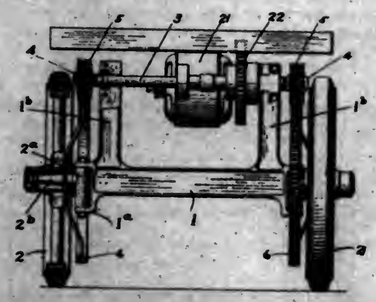
2. The combination of the base portion and its burner, a body portion having inclined walls 8 and a casing above the same, a top portion having a series of inclined tubes 14, a casing 15 to which the tubes extend, a tube 16 extending downward from the upper casing and a horisontal plate 17 to which the said tube extends and arranged above the top plate of the body portion.

3. The combination in a heater, of the base portion, its burner, the body portion, its inclined walls and casing having a top plate 13 with a deflector 22, inclined tubes 14, a casing above the latter comunicating with a downwardly extending tube 16, and a plate 17 extending outward from said tube.

4. The combination in a heater, of a base portion, a burner, a body portion having inclined walls 8, with openings therein, conducting pipes E communicating with said openings, a casing above said openings, and a top portion above said casing comprising inclined tubes 14, an upper casing 15 communicating therewith, a downwardly extending tube 16, and a plate 17.

5. The combination in a heater, of the base portion having a central column and burner arranged therein, a body portion above and supported by said column and having inclined outer walls, and a casing above said body portion, a top portion above said casing, and a deflector 7 arranged centrally within the body portion and conical in form, for the purpose specified.

875,892. MECHANICAL MOVEMENT. TRACY V. BUCKWALTER, Altoona, Pa. Filed Mar. 21, 1907. Serial No. 363,558.



1. The combination of a shaft, a wheel, a universal joint having a pivotal connection to said shaft and a pivotal connection within said wheel, a wheel movable about an axis transverse to said shaft, and means for connecting said wheels so that one is driven from the other.

2. The combination of a journaled shaft, a wheel, a universal joint by which said shaft is connected to and carries said wheel, and a secopd wheel having an axis of oscillation transverse to said shaft, said wheels being connected.

3. The combination of a journaled shaft, a wheel, a ring having a race-way journaled with relation to said shaft, a ring having a race-way journaled with relation to said wheel, balls disposed between said race ways, and a second wheel connected with the first named wheel.

4. The combination of a journaled shaft, a gear wheel, a universal joint by which said shaft is connected to and carries said gear wheel, a traction wheel having a vertical axis of oscillation, and a gear wheel fixed to said traction wheel and connected with said first mentioned gear wheel.

875,893. ELECTRICALLY-OPERATED BAGGAGE-TRUCK. TRACY V. BUCKWALTER, Altoona, Pa. Filed Mar. 21, 1907. Serial No. 363,559.



1. A truck having four wheels movable about a vertical axis, and means adapted to be operated at each end of said truck for simultaneously moving said wheels about said axis.

2. A truck having a pair of wheels at each end, a knuckle joint for each wheel, mechanism for connecting said wheels so that they are movable simultaneously on the axes of their respective joints, and a steering device at each end of said truck for operating said mechanism and simultaneously shifting the respective pairs of said wheels in opposite directions.

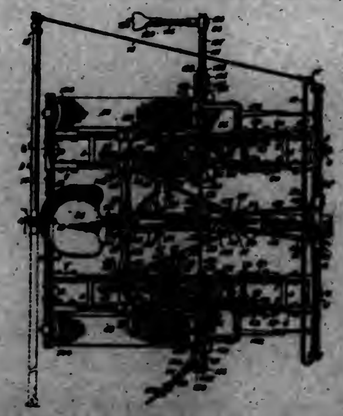
3. A truck having a frame with four relatively fixed points of support, wheels having pivotal connections with said frame at the respective points of support, mechanism connecting said wheels so that they are moved together about their respective pivotal connections, and a lever at each end of said truck for operating said mechanism.

4. A truck having a beam at each end thereof, a platform rigidly fixed to said beam, a pair of wheels having knuckle joint connections with each beam, an arm connected to each knuckle for oscillating a corresponding wheel, links connecting the arms of the respective pairs of wheels, a rock shaft at each end of said truck, an arm fixed to each rock shaft and connected to corresponding pair of wheels, a second arm fixed to each rock shaft, and means for connecting and operating said last named arms together.

5. A truck having a beam, a pair of wheels having pivotal connections with said beam, an arm connected with each of said wheels so as to move it about its pivotal connection, a link connecting said arms, a rock shaft having an arm connected with the first named arms and link and a second arm for rocking it, a fulcrumed arm, means connecting said fulcrumed arm with the second arm of said rock shaft, and means for rocking said fulcrumed arm.

[Claims 6 to 8 not printed in the Gazette.]

875,894. CORN-PLANTER. PEHR CHRISTIANSSON, Carlos, Minn. Filed July 6, 1906. Serial No. 324,982.



1. In a machine of the class described, the combination of a frame, an axle supporting the frame, seed dropping mechanism mounted on the frame at opposite sides thereof, gearing located at opposite sides of the frame and connected with the axle for actuating the seed dropping mechanism, clutches located at a point in advance of the axle for throwing the machine into and out of operation, a foot lever connected with one of the clutches, a hand lever located at the opposite side of the frame and connected with the other clutch, and a seat located in rear of the said lever.

2. In a machine of the class described, the combination of a seed tube, a lever consisting of a single piece and arranged outside of the seed tube and extending alongside the rear wall thereof and having its lower end inclined and extending downwardly and forwardly across the lower end of the seed tube, said lever being fulcrumed between its ends at a point above the inclined lower end, a spring for holding the lever normally in its closed position, a shaft having an arm for actuating the lever to open the seed tube, and gearing provided with means for operating the shaft.

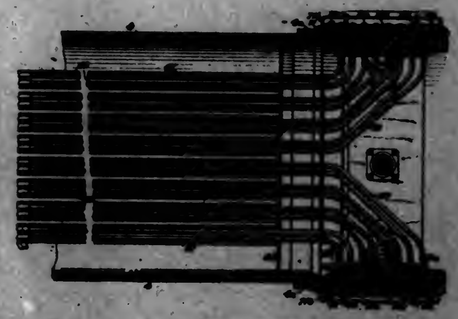
3. In a machine of the class described, the combination of a seed tube, a lever fulcrumed at an intermediate point and having upper and lower arms and forming a cut-off for the seed tube, a spring located in advance of and engaging the upper arm of the lever for holding the latter in its closed position, a horisontal shaft having a depending arm located in rear of the upper arm of the lever and arranged to engage the same for actuating the lever to open the seed tube, and gearing for operating the shaft.

4. In a machine of the class described, the combination of a seed tube, a lever forming a cut-off for the same, a spring for holding the lever normally in its closed position, a rock shaft provided with a tappet and having an arm for actuating the lever to open the seed tube, and sprocket gearing provided at intervals with lugs for engaging the tappet.

5. In a machine of the class described, the combination of a shaft provided with oppositely projecting tappets, a sprocket chain having a lug for engaging one of the tappets to turn the shaft in one direction, and a sprocket wheel arranged to be thrown into operation by the said lug and actuated by the sprocket chain for engaging the other tappet to turn the shaft in the opposite direction.

[Claims 6 to 19 not printed in the Gazette.]

875,895. STEAM-BOILER SUPERHEATER. FRANCIS J. COLE, New York, N. Y. Filed Aug. 9, 1907. Serial No. 387,815.



1. In a steam boiler superheater, the combination of steam headers supported adjacent to the sides of a boiler smoke box, and a plurality of pairs of superheater pipes extending in U form in tubes of the boiler and having their forward portions bent laterally to connections with the steam headers.

2. In a steam boiler superheater, the combination of steam headers supported adjacent to the sides of a boiler smoke box, and a plurality of pairs of superheater pipes extending in U form in tubes of the boiler and having their forward portions bent laterally and downwardly to connections with the steam headers.

3. In a steam boiler superheater, the combination of a steam header supported adjacent to the shell of a boiler smoke box and divided into steam receiving and delivery compartments, and a plurality of pairs of superheater pipes extending in U form in tubes of the boiler and having their forward portions bent laterally to connections with the steam receiving and delivery compartments, respectively.

4. In a steam boiler superheater, the combination of a steam header supported adjacent to the shell of a boiler smoke box and divided into steam receiving and delivery compartments, and a plurality of pairs of superheater pipes extending in U form in tubes of the boiler and having their forward portions bent laterally and downwardly to connections with the steam receiving and delivery compartments, respectively.

5. In a steam boiler superheater, the combination of a steam header supported adjacent to the shell of a boiler smoke box and divided into steam receiving and delivery compartments, a plurality of pairs of superheater pipes extending in U form in tubes of the boiler and having their forward portions bent laterally to communicate with the steam receiving and delivery compartments, respectively, and connections, accessible and adjustable from the outer side of the steam header, securing the forward ends of the superheater pipes thereto.

[Claims 6 to 22 not printed in the Gazette.]

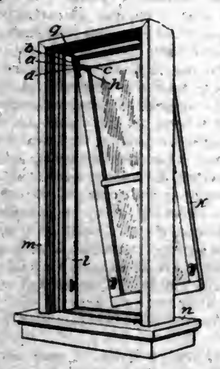
875,896. REGENERATIVE COKE-OVEN. EVENCE COPPÉE, Brussels, Belgium. Filed Aug. 15, 1905. Serial No. 274,316.



1. Regenerating coke-furnaces, without reversing of the current of flames, in which the furnaces are heated simultaneously all over their length in a continuous manner, the series of furnaces comprising five longitudinal canals of which the two outer ones "e" receive the gases of combustion from the furnaces, while the central canal "L" serves to feed to the furnaces the air required for the combustion, the two remaining canals "r r'" forming regenerators, a well of four chambers with which the canals communicate, a bell surmounting said well and which causes, at will, the canals "e" to communicate with any one of the regenerators and the canal "L" with the other regenerator, a second well communicating with the two regenerators at the rear of the furnaces and which causes to communicate, at will, any one of the regenerators with canals leading to boilers, and the other regenerater with the conduit for letting in cold air.

2. In regenerative coke ovens of the kind herein referred to, a battery of coking chambers, having five channels located therebelow, said channels extending longitudinally of the battery, of which the two outer ones e receive the combustion gases from the ovens, the middle one L serves to convey the heated air required for combustion to the ovens, while the two intermediate channels r r' constitute regenerators for alternately taking up heat from the combustion gases and imparting the same to the air supply, a reversing valve chamber with four compartments with which said channels communicate by means of which while the one channel e is made to communicate with one of the regenerators, the air channel L is made to communicate with the other regenerator, a second reversing valve chamber with four compartments communicating with the other end of the channels whereby the one regenerator is made to communicate with a flue leading to boilers, while the other regenerator is made to communicate with the atmosphere substantially as described.

875,897. STORM-WINDOW HINGE. JOHN W. COUNCILOR, Waterloo, Iowa. Filed Jan. 26, 1906. Serial No. 298,017.



1. In combination, a window-frame provided with stops, a sash adapted to be swung outwardly only away from said stops, hanger-members each shaped from a plate bent upon itself to form parallel members spaced apart having registering orifices through their open ends and means whereby said plates may be suspended from said window-frame, and angle-plates attached to said sash and having projecting portions adapted to slide within the slideways in said hanger-members.

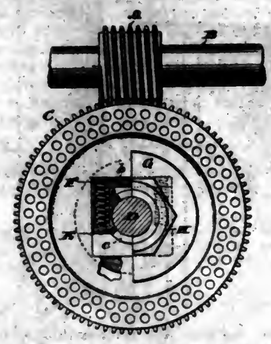
2. In combination, a window-frame provided with casing-strips, a sash fitted in said frame outward of and in contact with said casing-strips, said sash prevented by said strips from swinging inwardly but being free to swing outwardly, hanger-members composed of plates each bent upon itself and spaced apart and closed together at the ends and pivotally suspended from said window-frame, and angle-plates secured to said sash having projections adapted to be received in and slidable within the medial spaces in said hanger-members.

875,898. GEARING. MICHAEL J. DEELEY and ALFRED E. QUINLAN, Sheboygan Falls, Wis. Filed Apr. 22, 1907. Serial No. 369,422.

1. The worm-wheel of a time-wheel mechanism having spring-controlled sliding engagement with its hub to thereby yield to initial contact with the corresponding worm.

2. The worm-wheel of a time-wheel mechanism provided with a square central opening, a rectangular hub for the wheel of less dimension in one direction than the opening aforesaid with which it is engaged, and spiral-springs engaging sockets in said hub to oppose yield of said wheel from normal position.

3. The worm-wheel of a time-wheel mechanism provided with a squared central opening, a rectangular hub for the wheel of less dimension in one direction than the opening aforesaid with which it is engaged and provided with an endless flange opposing one side of said wheel, spiral-springs engaging sockets in the hub to oppose yield of the aforesaid wheel from normal position, a washer engaging an annular screw-threaded extension of said hub



against the other side of the worm-wheel, and a nut run on said hub-extension against the washer.

875,899. DOUBLE-ACTING GAS OR VAPOR ENGINE. OTHO C. DURYEA, Los Angeles, Cal. Filed Feb. 15, 1907. Serial No. 357,586.

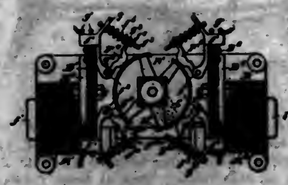


1. In a double acting gas or vapor engine, complementary shells socketed together, piston heads and a rifled piston rod in said shells, a clutch fastened to one of said shells and a rifle sleeve for the piston rod rotatably mounted in the clutch and projecting into the cavities of both shells.

2. A double acting rear compression gas or vapor engine having a rifle bar and sleeve located between and extending into its rear compression chambers.

3. In a double acting rear compression gas or vapor engine the combination with the engine body of an annular clutch in the partition between the rear compression chambers, a rifle sleeve having a hub rotating in said partition and clutch, a stuffing box on one end of the sleeve, and a piston rod connected with the pistons of the engine and having a rifled portion working in the rifled sleeve and a smooth cylindrical portion working in the stuffing box.

875,900. REVERSING-SWITCH. ARTHUR C. EASTWOOD, Cleveland, Ohio. Filed Apr. 19, 1906. Serial No. 312,618.



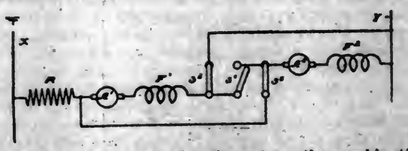
1. In a reversing switch the combination of a rotatable shaft, a collar, or shoulder on said shaft, segmental contact rings carried by and insulated from said shaft above said shoulder, a bearing for said shaft below said shoulder, and a crank removably attached to said shaft below said bearing, the parts being so disposed that the shaft and contact rings which it carries may be readily removed when said shank is detached from said shaft.

2. In a magnetically operated reversing switch the combination of a shaft, contact rings carried thereby, a crank attached to said shaft, a plunger common to two electromagnets attached to the free end of said crank, said electromagnets being open at both ends of their bore so that by detaching the crank from said plunger the plunger may be readily removed.

3. In a magnetically operated reversing switch the combination of a base plate of magnetic material, two standards of magnetic material extending at right angles to said base plate to either side of its middle point, a detachable standard of magnetic material at either end of said base plate and two electro-magnets each mounted upon a central tube, the end of said tubes being supported in the standards carried by said base plate, whereby either of said electro-magnets may be removed by detaching the corresponding end standard without disturbing other parts.

4. In a reversing switch, the combination of a rotatable shaft, contact rings carried thereby, and four groups of stationary contact fingers, coöperating with said rings, said stationary contact fingers being carried by two plates of insulating material, parallel with each other and with said rotatable shaft.

875,901. SYSTEM OF CONTROL FOR ELECTRIC MOTORS. ARTHUR C. EASTWOOD, Cleveland, Ohio. Filed May 22, 1906. Serial No. 318,214.



1. In a controller for electric motors, the combination of switches for controlling the speed of the motor, electromagnetic devices for closing said switches, and means for energizing the closing mechanism of a switch giving a higher motor speed prior to deënergizing the closing mechanism of a switch giving a lower motor speed, and means for causing the closure of each of said switches to depend upon the opening of another of said switches.

2. In a controller for electric motors, the combination of power-actuated switches for controlling the speed of a motor, electro-magnetic devices for closing said switches, means for energizing the closing mechanism of a switch giving a higher motor speed prior to deënergizing the closing mechanism of a switch giving a lower motor speed, and means for preventing the switch giving the higher speed from closing while the switch giving the lower speed is closed.

3. In a controller for electric motors, the combination of power-operated switches for altering the grouping of the motor windings and a master switch for controlling said power-operated switches, said master switch being arranged to energise the operating mechanism of the switch or switches controlling a succeeding grouping of motor windings prior to deënergising the operating mechanism of a switch or switches controlling a preceding grouping of motor windings.

4. In a series-parallel controller, the combination of motor windings, a power-operated switching means for connecting motor windings in series, a second power-operated switching means for connecting motor windings in parallel, and means for energising the closing mechanism of said second switching means before deënergising the closing mechanism of said first switching means.

5. In a series-parallel controller, the combination of motor windings, a power-operated switching means for connecting motor windings in series, a second power-operated switching means for connecting motor windings in parallel, means for energising the closing mechanism of said second switching means prior to deënergising the closing mechanism of said first switching means, and means for preventing said second switching means from closing while said first switching means is closed.

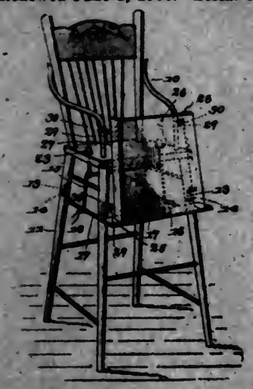
[Claims 6 to 10 not printed in the Gazette.]

875,902. MEANS FOR INSULATING THE SUPPORTS OF ELECTRIC CONDUITS. CARL E. HEDIN, Stockholm, Sweden. Filed Nov. 15, 1906. Serial No. 343,569.



As an improved article of manufacture, an interponent for insulators of electrical conductors formed of a plurality of superimposed caps the sides of which are provided with a series of folds to impart to the caps a relative amount of fullness, said caps being conical in form, whereby when applied to the supports the skirted portions of the caps become massed to assist in the retention of the insulators upon their supports.

875,903. EXTENSION-CHAIR. RICHARD FLEMMING, New Orleans, La. Filed Nov. 12, 1904, Serial No. 232,497. Renewed June 3, 1907. Serial No. 377,045.

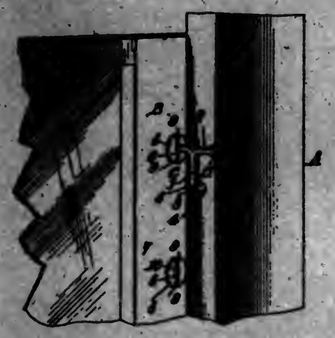


1. A chair having longitudinal sockets in the lower ends of its legs, a substructure having pins for entering said sockets, a hanger member having laterally extended terminals for detachably engaging said substructure, and bolts extending through the seat of said chair, and with hooks at one end for engaging said hanger member, and with nuts upon their other ends bearing upon said seat.

2. A chair having longitudinal sockets in the lower ends of its legs, a substructure having pins for entering said sockets and with a foot rest extending therefrom, a hanger member having laterally extended ends for detachably engaging said substructure, bolts extending through the seat of said chair and with hooks at one end for engaging said hanger member, and with nuts upon the other ends bearing upon said seat, and a guard member resting upon said foot rest and extending vertically and spaced from the front edge of said seat, and means for detachably connecting said guard member to said chair.

875,904. SASH-FASTENER. RICHARD FLEMMING, Jr., New Orleans, La. Filed Nov. 30, 1906. Serial No. 345,748.

1. In a sash fastener, the combination of two relatively movable members, slotted plates secured to one of the members, a locking element provided with oppositely disposed arms which are enlarged at their outer ends to form upwardly and downwardly extending lugs to interlock with the slotted plates, and means for pivotally mounting the element on the member other than the one having the plates.



2. In a sash fastener, the combination with a frame having a plurality of apertures, a shaft mounted in the frame, a plurality of locking elements mounted on the shaft each having a pair of oppositely extending hooks adapted to simultaneously operate through the said apertures, and means for actuating the shaft, of independently movable sashes guided in the frame and having locking apertures adapted to be simultaneously engaged and disengaged by the hooks of the locking elements operating through the apertures in the frame.

3. In a sash fastener, the combination with a window frame and a sash movable relatively thereto, of a slotted locking plate arranged on one of the parts, and a locking member pivotally attached to the other member composed of flat metal having a pair of hooks arranged in alinement and extending edgewise to one another in opposite directions on one side of the pivot of said member and having an attaching portion extending perpendicularly to the hooks and from a point midway of their ends, each hook being arranged to coöperate with the slotted plate as the position of the locking member is reversed about its pivot, each hook being provided with upwardly and downwardly extending enlargements proceeding edgewise from the respective hooks and arranged to coöperate with the ends of the slot in the locking plate to prevent accidental disengagement of the parts.

875,905. SKATE. GILBERT FLETCHER, Houghton, Mich. Filed Apr. 27, 1907. Serial No. 370,632.

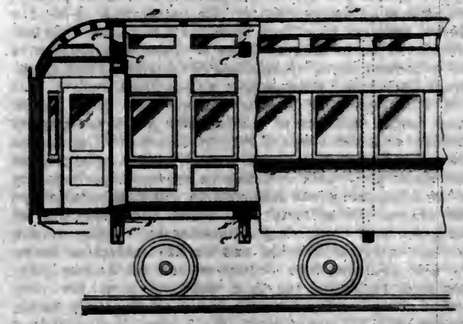


1. A skate comprising a runner having a tongue projecting upward from the forward end thereof, and a shell body comprising shell plates secured at their lower edge to the sides of said runner, and at their forward end to said tongue, and provided on their upper portion with a laterally projecting perforated flange extending along the heel, shank and ball portion of the skate.

2. A skate comprising a runner having a tongue projecting upwardly from the forward end thereof, and a shell body comprising side plates secured at their lower edge to the sides of said runner and at their forward end to said tongue, extending upwardly from said runner in straight inclined lines, and provided with laterally projecting perforated flange extending from the heel to the toe of the skate.

3. A skate comprising a runner, and a shell body having side plates extending in vertically inclined straight lines, and provided with flanges on their lower edges attached to said runner, and having also end flanges, and a laterally projecting perforated flange on the upper portion of said side plates extending the length of the upper portion of the skate forming a continuous bearing for the ball, shank and heel portion of a shoe.

875,906. RAILWAY-CAR. BENJAMIN F. FREEBLE, Brownsville, Pa. Filed June 7, 1907. Serial No. 377,794.



1. In a railway car the combination with a stationary frame of an interior rotary chamber, substantially as described.

2. In a railway car the combination with its frame, of an interior revoluble chamber, and means for supporting and maintaining the same in position, substantially as described.

3. In a railway car the combination with its frame provided with a series of circular tracks, of an interior, rotary chamber provided with trucks and rollers, substantially as described.

4. In a railway car the combination with its exterior frame having interior circular tracks, of an interior rotary frame provided with tracks and rollers, and a stationary floor, substantially as described.

5. In a railway car the combination with its body frame provided with windows and doors and having interior tracks, of an interior rotary frame having a floor supported by a hoop, trucks secured to the floor, and rollers between the hoops and tracks, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

875,907. SPARKING DEVICE. BENJAMIN G. GILBOUGH, Chicago, Ill. Filed Dec. 26, 1906. Serial No. 349,554.



1. In a sparking-device, the combination of a tubular plug adapted for connection with an engine-cylinder, a cylinder mounted thereon and in communication with said plug, a piston movable in said cylinder and having a stem projecting beyond the outer end of the cylinder, a vibratory electrode extending into said tubular plug, an actuating member for said vibratory electrode, and a pawl connected with said actuating member located in the path of the piston-stem, whereby the piston serves during its outward movement to move said actuating member through the medium of said pawl, the pawl being so arranged with relation to the piston-stem as to be released to permit said actuating member to return to its normal position when the piston reaches the outer end of its traverse.

2. The combination of a tubular plug adapted for connection with an engine-cylinder and serving as a fixed electrode, a cylinder mounted on said plug and having its inner end in communication with the interior thereof, a piston in said cylinder having a stem projecting beyond the outer end of the cylinder, a vibratory electrode extending into said plug, a pivoted rock-arm serving to actuate said electrode, a spring-held pawl mounted on said rock-arm and normally located in the path of the piston-stem, and means for limiting the movement of said pawl under the action of its spring, whereby the pawl is released from the piston-stem as the piston reaches the outer end of its traverse, for the purpose set forth.

3. The combination of a tubular plug adapted for connection with an engine-cylinder and constituting a fixed electrode, a cylinder mounted upon said plug and in communication with the interior thereof, a piston movable in said cylinder having a stem projecting beyond the outer end of the cylinder, a vibratory electrode extending into the tubular plug, a rock-arm serving to actuate said electrode in one direction, yielding means tending normally to close the vibratory electrode and to hold said rock-arm in its normal position of rest, a pawl connected with said rock-arm and located normally in the path of the piston-stem, and a spring-held lever having a bearing on the piston-stem and tending to hold the piston at the inner end of its traverse.

4. The combination of a tubular plug adapted for connection with an engine-cylinder and serving as a fixed electrode, a cylinder mounted thereon and in communication with the interior thereof, a piston in said cylinder having a stem projecting beyond the outer end of the cylinder, a vibratory electrode extending into said plug, an actuating member for said vibratory electrode, spring connection between said actuating member and said vibratory electrode tending normally to move the electrode to the closed position and to move said actuating member to its normal position of rest, a spring-held pawl mounted on said actuating member and located normally in the path of the piston-stem, and a spring-held member having a bearing on the outer end of the piston-stem and tending to hold the piston at the inner end of its traverse.

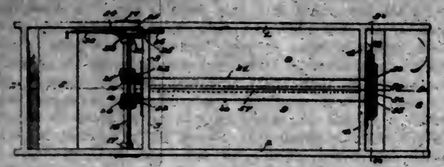
5. The combination of a tubular plug adapted for connection with an engine-cylinder and constituting a fixed electrode, a disk insulatingly mounted on said plug and having a perforation therein, a vibratory electrode extending through said perforation, a cylinder mounted on said disk having its inner end in communication with the interior of said tubular plug, a piston in said cylinder having a stem projecting beyond the outer end of the cylinder, a standard mounted on said disk opposite said cylinder, a rock-arm pivoted on said standard and having cam connection with said vibratory electrode, a spring-held pawl pivoted on said rock-arm and located normally in the path of said piston-stem, and a spring-held member having a bearing on the piston-stem and tending to hold the piston at the inner end of its traverse, for the purpose set forth.

[Claims 6 to 20 not printed in the Gazette.]

875,908. DUMPING-WAGON. JOHN HESSELING, Rochester, N. Y. Filed Feb. 6, 1907. Serial No. 356,975.

1. In a dumping wagon, the combination with a box, movable bottom sections thereon, and connections cooperating with said sections for closing them, of a horizontally movable member attached to said connections

and mounted to reciprocate on the box in one direction or the other to equalise between the connections the tension applied to them.



2. In a dumping wagon, the combination with a box, movable bottom sections thereon and separate connections coöperating with the bottom sections, of a device arranged between said connections for equalizing the tension applied to them and means actuated by the opening movement of one of the sections to adjust said device into a position to cause a relative shortening of the connection of one section and lengthening of the connection of the other section and means for drawing said connections to close the sections.

3. In a dumping wagon, the combination with a box, movable bottom sections thereon, and connections for operating said sections, of a device coöperating with the connections for equalizing the tension applied to them, said device being adapted to be adjusted in one direction to cause a relative shortening of the connection of one section and a lengthening of the connection of the other section to cause the former to be closed in advance of the latter, means actuated by the opening movement of one of the sections to move said device into a position to lengthen its operating connection and means for drawing the connections to close the sections.

4. In a dumping wagon, the combination with a box, movable bottom sections thereon, one of which is adapted to be closed in advance of the other, connections for operating said sections and means for drawing them to close said sections, of an equalising bar guided on the box and attached to the connections, means actuated by the section which is to be closed last for adjusting the bar into a position to cause the operating connection of said section to be shortened relatively to the other connection.

5. In a dumping wagon, the combination with a box having movable bottom doors, a guide arranged on the box, a member mounted thereon and relatively stationary projections located in proximity thereto, of connections coöperating with the doors and said projections and each attached to the member to impart movement thereto in opposite directions and means for drawing the connections to close the doors.

[Claims 6 to 14 not printed in the Gazette.]

875,909. MANUFACTURE OF SULFURIC ACID. NICHOLAS L. HEINZ, La Salle, Ill., and MARCH F. CHASE, Mineral Point, Wis. Filed Apr. 3, 1906. Serial No. 309,560.



1. The method of making sulfuric acid from burner gases; which consists in treating the burner gases, on their way to the vessels containing the contact or catalytic material, with a nitrous compound and steam, thereby purifying and drying them and converting a portion of their SO_2 and SO_3 into sulfuric acid, and finally converting the remainder of their SO_2 into sulfuric acid by passing the gases into contact with catalytic material and finally into an SO_3 absorbing tower; substantially as described.

2. The method of making sulfuric acid from burner gases; which consists in treating the burner gases, on their way to the vessels containing the contact or catalytic material, with a nitrous compound and steam, thereby purifying and drying them, absorbing the niter thus introduced so as to form nitrous vitriol, denitrating the nitrous vitriol so as to form sulfuric acid as a portion of the final product, and obtaining a second portion of the final product by passing the purified and dried gases with their remaining SO_2 into contact with catalytic material and finally into an SO_3 absorbing tower; substantially as described.

3. The method of making sulfuric acid from burner gases, which consists in passing said gases successively through a Glover tower, a flue system, and a Gay-Lussac tower, and admitting into said flue system, a quantity of a nitrous compound and steam sufficient to convert a portion only of the SO_2 present into sulfuric acid and to liquefy in said flue system the sulfuric acid mists present, the amount of steam admitted into one portion of the flue system differing from that admitted into another portion thereof, so as to produce acids of different strengths in the said flue system, appropriate to the elimination of different impurities; substantially as described.

4. The method of making sulfuric acid from burner gases, which consists in passing said gases successively through a Glover tower, a flue system, and a Gay-Lussac tower, admitting into said flue system a quantity of steam and nitric acid sufficient to convert a portion only of the SO_2 present into sulfuric acid and to liquefy in said flue system the sulfuric acid mists, and, then passing the gases still containing a considerable residue of SO_2 through catalytic material and an SO_3 absorption tower, the acid produced in a portion of the flue system being employed to dilute the acid supplied from the Gay-Lussac tower or the Glover tower; substantially as described.

5. The method of making sulfuric acid from burner gases, which consists in passing said gases successively through a Glover tower, a flue system, and a Gay-Lussac tower, admitting into said flue system a quantity of steam and nitric acid sufficient to convert a portion only of the SO_2 present into sulfuric acid and to liquefy in said flue system the sulfuric acid mists, and, then passing the gases still containing a considerable residue of SO_2 through catalytic material and an SO_3 absorption tower, the acid for the Gay-Lussac tower being of more than 60° Baumé and being supplied from the product of SO_3 absorption tower diluted by the product of the Glover tower; substantially as described.

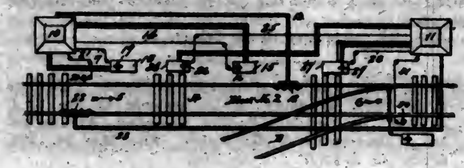
875,910. ELECTRIC CHAIN-WELDING MACHINE. HUGO HELBERGER, Munich, Germany. Filed Feb. 15, 1904. Serial No. 193,651.



1. In an electric welding machine, the combination of a pair of pivotally mounted pressing jaws serving to conduct the current, means for feeding the material to be welded to said jaws, and a member having heads arranged between said jaws and adapted to loosely embrace the material at the welding joint to limit the upsetting.

2. In an electric welding machine, the combination of a pair of pivotally mounted pressing jaws serving to conduct the current, means for feeding the material to be welded to said jaws, means for actuating said jaws to cause them to exert pressure on the material to be welded, and a member having heads arranged between said jaws and adapted to loosely embrace the material at the welding joint to limit the upsetting resulting from the pressure exerted by the pressing jaws.

875,911. SAFETY-SIGNAL SYSTEM FOR RAILWAYS. WILLIAM F. HERTING and FRANK C. CHLAN, Baltimore, Md. Filed Apr. 20, 1907. Serial No. 369,345.



1. In a block signal system for railroads, the combination with the block stations, of means for signaling the approach of a train therein, main and reserve torpedo setting mechanisms disposed alongside the rails and operable from said stations, and engine signal actuating members arranged to be moved to the operative position from their respective stations, substantially as described.

2. In a block signal system for railroads the combination with the block station of means for signaling the approach of a train therein, main and reserve torpedo setting mechanisms disposed at intervals along the road, means for actuating said mechanisms from their respective stations to place a torpedo, and means for registering such actuation within said stations, substantially as described.

3. In a block signal system for railroads the combination with the block station of means for signaling the approach of a train therein, main and reserve torpedo setting mechanisms disposed at intervals along the road, means for actuating said mechanisms from their respective stations to place a torpedo, and engine signal actuating members arranged to be moved to the operative position from their respective stations, substantially as described.

4. In a block signal system for railroads the combination with the block stations of means for signaling the approach of a train therein, main and reserve torpedo setting mechanisms disposed at intervals along the road, means for actuating said mechanism from their respective stations to place a torpedo, means for registering such actuation within said stations, substantially as described.

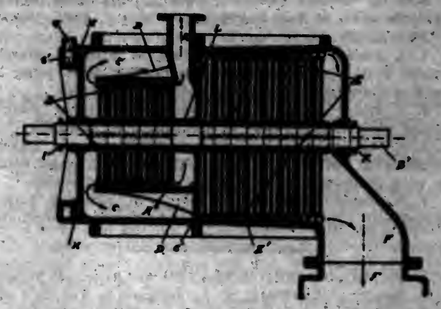
5. In an engine signal for railway block systems, the combination with a lever mounted alongside the rail and operable from the block stations of a lever mechanism carried by the engine and actuated by said lever, a sliding shutter releasable upon the actuation of said mechanism, an alarm bell mounted within the engine cab, a pair of spaced contacts electrically connected to said bell, and a contact shoe carried by said shutter and adapted to complete a circuit through said contacts upon the release of said shutter, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

875,912. TURBINE. BRUNO HEYMANN, Millers, Nev. Filed Aug. 24, 1906. Serial No. 331,840.

1. In construction of the class described, in combination, a high pressure cylinder, a low pressure cylinder, a passage extending about said high pressure cylinder throughout substantially the entire length thereof, means adapted to lead a fluid to said high pressure cylinder, and means adapted to lead the exhaust from said high pressure cylinder through said passage to said low pressure cylinder whereby said high pressure cylinder is jacketed by the steam passing to said low pressure cylinder.

2. In construction of the class described, in combination, a shaft, a high pressure set of vanes mounted thereon, a low pressure set of vanes mounted thereon, means adapted to lead a fluid through said high pressure set of vanes in a predetermined direction, a passage extending about and jacketing said high pressure set of vanes and adapted to receive the exhaust therefrom and lead the same to said low pressure set of vanes, and means adapted to lead said exhaust through said low pressure set of vanes in a direction substantially opposite to that of its passage through said high pressure vanes.



3. In construction of the class described, in combination, a shaft, a high pressure set of vanes mounted thereon, a low pressure set of vanes mounted thereon, means adapted to lead a fluid through said high pressure set of vanes in a predetermined direction, a passage extending about and jacketing said high pressure set of vanes and adapted to receive the exhaust therefrom and lead the same to said low pressure set of vanes, and means adapted to lead said exhaust through said low pressure set of vanes in a direction substantially opposite to that of its passage through said high pressure vanes, said high and low pressure sets of vanes being adapted to exert substantially equal and opposite thrusts upon the shaft upon which they are mounted.

875,913. STABILIZED NITRATED STARCH. FLETCHER B. HOLMES, Woodbury, N. J., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed May 7, 1907. Serial No. 372,416.

1. A stable explosive, consisting of a mixture of nitrated starch and an ammonium salt of an oxygen acid of phosphorus, the latter being in such proportions as to stabilise the nitrated starch.

2. A stable explosive, consisting of a mixture of nitrated starch and from two to five per cent. of an ammonium salt of an oxygen acid of phosphorus.

3. A stable explosive, consisting of a mixture of nitrated starch and a phosphate of ammonia, the latter being in such proportion as to stabilise the nitrated starch.

4. A stable explosive, consisting of a mixture of nitrated starch and from two to five per cent. of a phosphate of ammonia.

5. A stable explosive, consisting of a mixture of nitrated starch and an orthophosphate of ammonia, the latter being in such proportions as to stabilise the nitrated starch.

[Claims 6 to 8 not printed in the Gazette.]

875,914. STABILIZED NITRATED STARCH. FLETCHER B. HOLMES, Woodbury, N. J., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed May 7, 1907. Serial No. 372,417.

1. A stable explosive consisting of nitrated starch mixed with an ammonium salt of an oxygen acid of arsenic, the latter being in such proportion as to stabilise the nitrated starch.

2. A stable explosive consisting of nitrated starch mixed with three per cent. of an ammonium salt of an oxygen acid of arsenic.

3. A stable explosive consisting of nitrated starch mixed with an arsenate of ammonia, the latter being in such proportion as to stabilise the nitrated starch.

4. A stable explosive consisting of nitrated starch mixed with three per cent. of an arsenate of ammonia.

875,915. STABILIZED NITRATED STARCH. FLETCHER B. HOLMES, Woodbury, N. J., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed May 7, 1907. Serial No. 372,418.

1. A stable explosive, consisting of nitrated starch, mixed with a chromate of ammonia, the latter being in such proportion as to stabilise the nitrated starch.

2. A stable explosive, consisting of nitrated starch, mixed with three per cent. of a chromate of ammonia.

3. A stable explosive, consisting of nitrated starch, mixed with neutral ammonium chromate, the latter being in such proportion as to stabilise the nitrated starch.

4. A stable explosive, consisting of nitrated starch mixed with three per cent. of neutral ammonium chromate.

875,916. STABILIZED NITRATED STARCH. FLETCHER B. HOLMES, Woodbury, N. J., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,524.

1. A stable explosive consisting of a mixture of nitrated starch and an ammonium salt of an organic fatty acid, the latter being in such proportion as to stabilize the nitrated starch.

2. A stable explosive consisting of a mixture of nitrated starch and from two to five per cent. of an ammonium salt of an organic fatty acid.

3. A stable explosive consisting of a mixture of nitrated starch and ammonium palmitate, the latter being in such proportion as to stabilise the nitrated starch.

4. A stable explosive consisting of a mixture of nitrated starch and from two to five per cent. of ammonium palmitate.

875,917. STABILIZED NITRATED STARCH. FLETCHER B. HOLMES, Woodbury, N. J., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,525.

1. A stable explosive consisting of a mixture of nitrated starch and a salt of tartaric acid containing ammonium, the latter being in such proportion as to stabilize the nitrated starch.

2. A stable explosive consisting of a mixture of nitrated starch and from two to five per cent. of a salt of tartaric acid, containing ammonium.

3. A stable explosive, consisting of a mixture of nitrated starch and an ammonium salt of tartaric acid, the latter being in such proportion as to stabilise the nitrated starch.

4. A stable explosive consisting of a mixture of nitrated starch and from two to five per cent. of an ammonium salt of tartaric acid.

5. A stable explosive, consisting of a mixture of nitrated starch and neutral ammonium tartrate, the latter being in such proportion as to stabilise the nitrated starch.

[Claim 6 not printed in the Gazette.]

875,918. STABILIZED NITRATED STARCH. FLETCHER B. HOLMES, Woodbury, N. J., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,526.

1. A stable explosive consisting of a mixture of nitrated starch and a salt of pyrotartaric acid containing ammonium, the latter being in such proportion as to stabilise the nitrated starch.

2. A stable explosive consisting of a mixture of nitrated starch and from two to five per cent. of a salt of pyrotartaric acid, containing ammonium.

3. A stable explosive, consisting of a mixture of nitrated starch and an ammonium salt of pyrotartaric acid, the latter being in such proportion as to stabilise the nitrated starch.

4. A stable explosive, consisting of a mixture of nitrated starch and from two to five per cent. of an ammonium salt of pyrotartaric acid.

5. A stable explosive, consisting of a mixture of nitrated starch and neutral ammonium pyrotartrate, the latter being in such proportion as to stabilise the nitrated starch.

[Claim 6 not printed in the Gazette.]

875,919. STABILIZED NITRATED STARCH. FLETCHER B. HOLMES, Woodbury, N. J., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,527.

1. A stable explosive, consisting of a mixture of nitrated starch and a salt of citric acid containing ammonium, the latter being in such proportion as to stabilise the nitrated starch.

2. A stable explosive consisting of a mixture of nitrated starch and from two to five per cent. of a salt of citric acid, containing ammonium.

3. A stable explosive, consisting of a mixture of nitrated starch and an ammonium salt of citric acid, the latter being in such proportion as to stabilise the nitrated starch.

4. A stable explosive consisting of a mixture of nitrated starch and from two to five per cent. of an ammonium salt of citric acid.

5. A stable explosive, consisting of a mixture of nitrated starch and tri-ammonium citrate, the latter being in such proportion as to stabilise the nitrated starch.

[Claim 6 not printed in the Gazette.]

875,920. STABILIZED NITRATED STARCH. FLETCHER B. HOLMES, Woodbury, N. J., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,528.

1. A stable explosive, consisting of a mixture of nitrated starch and an amid of oxalic acid, the latter being in such proportion as to stabilise the nitrated starch.

2. A stable explosive, consisting of a mixture of nitrated starch and from two to five per cent. of an amid of oxalic acid.

3. A stable explosive consisting of a mixture of nitrated starch and oxamid, the latter being in such proportion as to stabilise the nitrated starch.

4. A stable explosive, consisting of nitrated starch and from two to five per cent. of oxamid.

875,921. STABILIZED NITRATED STARCH. FLETCHER B. HOLMES, Woodbury, N. J., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,529.

1. A stable explosive consisting of a mixture of nitrated starch and a substituted urea, in which the oxygen is replaced by an inorganic radical, the latter being in such proportion as to stabilise the nitrated starch,

2. A stable explosive consisting of a mixture of nitrated starch and from two to five per cent. of a substituted urea in which the oxygen is replaced by an inorganic radical.

3. A stable explosive consisting of a mixture of nitrated starch and thio-urea, the latter being in such proportion as to stabilise the nitrated starch.

4. A stable explosive consisting of a mixture of nitrated starch and from two to five per cent. of thio-urea.

875,922. STABILIZED NITRATED STARCH. FLETCHER B. HOLMES, Woodbury, N. J., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,530.

1. A stable explosive consisting of a mixture of nitrated starch and a substitution product of anilin, in which one or more hydrogen atoms of the anilin ring are replaced by univalent elements or radicals, the latter being in such proportion as to stabilise the nitrated starch.

2. A stable explosive, consisting of a mixture of nitrated starch and from two to five per cent. of a substitution product of anilin, in which one or more hydrogen atoms of the anilin ring are replaced by univalent elements or radicals.

3. A stable explosive, consisting of a mixture of nitrated starch and a nitranilin, the latter being in such proportion as to stabilise the nitrated starch.

4. A stable explosive, consisting of a mixture of nitrated starch and from two to five per cent. of a nitranilin.

875,923. STABILIZED NITRATED STARCH. FLETCHER B. HOLMES, Woodbury, N. J., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,531.

1. A stable explosive consisting of a mixture of nitrated starch and a salt of anilin, the latter being in such proportion as to stabilise the nitrated starch.

2. A stable explosive, consisting of a mixture of nitrated starch, and from two to five per cent. of a salt of anilin.

3. A stable explosive consisting of a mixture of nitrated starch and anilin oxalate, the latter being in such proportion as to stabilise the nitrated starch.

4. A stable explosive consisting of a mixture of nitrated starch and from two to five per cent. of anilin oxalate.

875,924. STABILIZED NITRATED STARCH. FLETCHER B. HOLMES, Woodbury, N. J., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,532.

1. A stable explosive consisting of a mixture of nitrated starch and an anilin of an organic aliphatic acid, the latter being in such proportion as to stabilize the nitrated starch.

2. A stable explosive consisting of a mixture of nitrated starch and from two to five per cent. of an anilid of an organic aliphatic acid.

3. A stable explosive consisting of a mixture of nitrated starch and acetanilid, the latter being in such proportion as to stabilise the nitrated starch.

4. A stable explosive consisting of a mixture of nitrated starch and from two to five per cent. of acetanilid.

875,925. STABILIZED NITRATED STARCH. FLETCHER B. HOLMES, Woodbury, N. J., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,533.

1. A stable explosive consisting of a mixture of nitrated starch and a substitution product of toluidin, the latter being in such proportion as to stabilize the nitrated starch.

2. A stable explosive consisting of a mixture of nitrated starch and from two to five per cent. of a substitution product of toluidin.

3. A stable explosive consisting of a mixture of nitrated starch and nitrotoluidin, the latter being in such proportion as to stabilise the nitrated starch.

4. A stable explosive consisting of a mixture of nitrated starch and from two to five per cent. of nitrotoluidin.

875,926. STABILIZED NITRATED STARCH. FLETCHER B. HOLMES, Woodbury, N. J., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,534.

1. A stable nitrated starch, consisting of a mixture of nitrated starch and a salt of toluidin, the latter being in such proportion as to stabilise the nitrated starch.

2. A stable explosive, consisting of a mixture of nitrated starch and from two to five per cent. of a salt of toluidin.

3. A stable explosive, consisting of a mixture of nitrated starch and toluidin oxalate, the latter being in such proportion as to stabilise the nitrated starch.

4. A stable explosive consisting of a mixture of nitrated starch and from two to five per cent. of toluidin oxalate.

875,927. STABILIZED NITRATED STARCH. FLETCHER B. HOLMES, Woodbury, N. J., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,535.

1. A stable explosive, consisting of a mixture of nitrated starch and a toluid of an organic aliphatic acid, the latter being in such proportion as to stabilize the nitrated starch.

2. A stable explosive consisting of a mixture of nitrated starch and from two to five per cent. of a toluid of an organic aliphatic acid.

3. A stable explosive, consisting of a mixture of nitrated starch and acet-toluid, the latter being in such proportion as to stabilize the nitrated starch.

4. A stable explosive, consisting of a mixture of nitrated starch and from two to five per cent. of acet-toluid.

875,928. STABILIZED NITRATED STARCH. FLETCHER B. HOLMES, Woodbury, N. J., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,536.

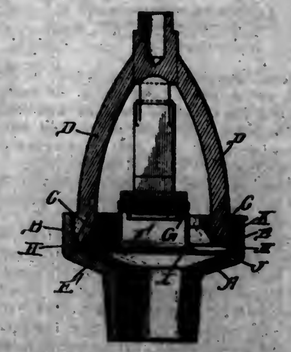
1. A stable explosive, consisting of a mixture of nitrated starch and an amid of an organic aromatic acid, the latter being in such proportion as to stabilize the nitrated starch.

2. A stable explosive, consisting of a mixture of nitrated starch and from two to five per cent. of an amid of an organic aromatic acid.

3. A stable explosive, consisting of a mixture of nitrated starch and benzamid, the latter being in such proportion as to stabilize the nitrated starch.

4. A stable explosive, consisting of a mixture of nitrated starch and from two to five per cent. of benzamid.

875,929. SPRINKLER-HEAD FOR AUTOMATIC FIRE-EXTINGUISHERS. MORTON K. HOPKINS, Chicago, Ill., assignor to Howard D. Pulsifer, Chicago, Ill. Filed June 23, 1906. Serial No. 323,061.



1. As a new article of manufacture a resilient annular diaphragm for sprinkler heads, carrying a valve seat and having a marginal flange on its valve-seat side, substantially as described.

2. As a new article of manufacture a resilient annular diaphragm for sprinkler heads, carrying a seat for the valve and having a marginal flange on its valve-seat side, the flange and diaphragm being united through a bead, substantially as described.

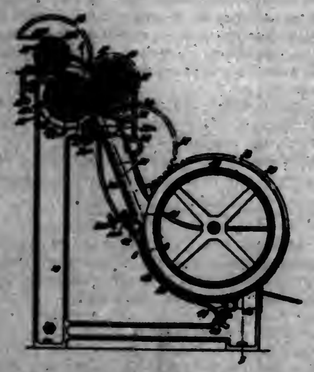
3. A sprinkler head for automatic fire extinguishers,

having, in combination, a base provided with a marginal flange, a resilient annular diaphragm carrying a seat for the valve and having a marginal flange on its valve-seat side, said diaphragm being seated in the base with its flange outward, and a ring secured to the base and engaging the marginal flange of the diaphragm, substantially as described.

4. A sprinkler head for automatic fire extinguishers, having, in combination, a base provided with an annular flange, a resilient annular diaphragm carrying a seat for the valve and having a marginal flange on its valve-seat side, said diaphragm being seated in the base with its flange outward, and a ring having threaded engagement with the annular flange of the base, and having a shoulder engaging the edge of the marginal flange of the diaphragm and a tapering portion entering it, substantially as described.

5. A sprinkler head for automatic fire extinguishers, having, in combination, a base provided with a marginal flange, a resilient annular diaphragm, carrying a seat for the valve and having a marginal flange on its valve seat side, said diaphragm and flange being united through a bend, and said diaphragm being seated in the base so that the bend contacts therewith, and a ring secured to the base and engaging the edge of the marginal flange, whereby the bend is left free to give, substantially as described.

875,930. DOUGH-SHAPING MACHINE. HERMAN HUBO, New York, N. Y. Filed Aug. 8, 1906. Serial No. 329,730.



1. In a dough shaping machine, a pair of feed rollers, and a drum, and a means intervening the drum and feed rolls for leading the dough to the drum and coiling it into a roll as it is being fed to the drum, and an adjustable guard plate coöperating with said intervening means substantially as shown.

2. In a dough shaping machine, a pair of feed rollers and a drum, a ribbed coiling plate, and a guard plate that coöperates with the coiling plate.

3. In a dough shaping machine, a pair of feed rollers and a drum combined with an intervening coiling plate and means on the said coiling plate for preventing the dough from moving laterally off the plate, as set forth.

4. In a dough shaping machine, a pair of feed rolls and a drum combined with an intervening coiling plate having transverse ribs and means at the receiving end for preventing the dough from spreading laterally off the plate, for the purposes set forth.

5. In a dough shaping machine, a pair of feed rollers, combined with a drum, a scraper for each of the said rollers, said scrapers forming a throatway for the passage of the compressed dough sheet, a coiling plate located between the said throatway and the drum, said plate having a member for retarding and turning the end of the dough sheet as it passes through the throatway formed by the scrapers.

[Claims 6 to 14 not printed in the Gazette.]

875,931. SAFETY-COLLAR FOR ABRASIVE WHEELS. DAVID B. HYDE, Santa Ana, Cal. Filed June 6, 1907. Serial No. 377,644.

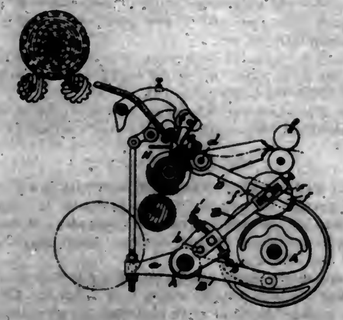


1. A safety clamping plate for use in abrasive or polishing wheels having a bore formed to give a bearing for the arbor which is of limited longitudinal extent, the bore being enlarged at other portions to enable a limited tip of the plate on the arbor.

2. A safety clamping plate for use in connection with abrasive or polishing wheels having a bore with a bearing portion for fitting the arbor, the remainder of said bore flaring from said bearing portion.

3. The combination of a convex sided abrasive wheel and its arbor, of a clamping plate dished to fit the side of the abrasive wheel and having a bore fitting the arbor at a limited longitudinal portion thereof, said bore flaring from such arbor fitting portion, and means for clamping the plate against the wheel.

875,932. COMBING-MACHINE FOR COTTON. JAMES JOLLY, Bolton, and PERCY E. WILLIS, Atherton, England. Filed Sept. 12, 1904. Serial No. 224,162.



1. In a combing machine the combination with the cam A' the cam lever a and the nipper shaft A, the nippers, connected with the shaft A and the detaching rollers G, of an adjustable detaching device operated by the nipper shaft comprising an additional lever B fitted upon the nipper shaft, a detaching lever connected therewith and mounted upon the detaching shaft, and the detaching shaft d which serves as a fulcrum for the detaching lever, substantially as described.

2. In a combing machine the combination with the cam A', the cam lever a, nipper shaft A, the detaching rollers G, and the nippers connected with the shaft A, of an additional adjustable lever B affixed to the nipper shaft, a second lever D which carries the detaching rollers, connected with the lever B and fulcrumed near the rollers, an adjustable disk F on the lever D formed in two parts and provided with a groove in one face and a pin E on the lever B which takes into the groove in the face of the disk substantially as described.

875,933. FOLLOWER AND HOLDER FOR FILES. WILLIAM E. KIMES, Alliance, Ohio. Filed Sept. 5, 1907. Serial No. 391,415.



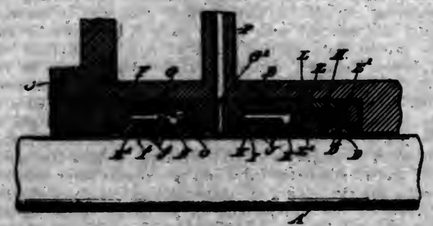
1. A follower and holder for files of the class described said follower consisting of a bar, angled portions located at the ends of the bar and said angled portions provided with integral alternating curved portions, said alternating curved portions located at an angle to the members extended from the bar, substantially as and for the purpose specified.

2. A follower and holder of the class described formed of a single piece of spring wire, consisting of a straight portion, angled portions leading from said straight portion and located at an acute angle to said bar portion, and integral curved card backing portions consisting of two series and the series spaced from each other, substantially as and for the purpose specified.

3. As an improved article of manufacture, a follower of the class described formed of a single piece of spring material, backing members alternately connected together at their bottom and top ends and members extended at an angle to said backing members and an integral bar connecting said angled members, substantially as and for the purpose specified.

4. As an improved article of manufacture, a follower of the class described formed of a single piece of spring material, backing members alternately connected together at their bottom and top ends and members extended at an angle to said backing members and an integral bar connecting said angled members, and the outer backing members provided with elastic covering, substantially as and for the purpose specified.

875,934. ROD-PACKING. CHARLES W. G. KING, Philadelphia, Pa., assignor to The United States Metallic Packing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 27, 1906. Serial No. 336,891.



1. A rod, a packing box therefor, and a packing within the box, comprising a bushing surrounding the rod, a retaining member for holding the bushing at one end of the box, said member being provided with a portion surrounding the bushing and an outwardly projecting rib adjacent the end of the box, a gland in the box, and having a shoulder, split packing rings surrounding the shaft and means for holding them against said shoulder, comprising a follower engaging the packing rings and a spring surrounding the body portion of said retaining member and extending between the rib of the retaining member and said follower.

2. In combination with a reciprocating rod, a packing box through which the rod passes and packing for the rod located within the box and comprising a gland surrounding the shaft and provided with an inwardly projecting flange or rib, packing rings at one side of said rib, a spring for moving them toward the rib, a spring engaging the other side of said rib, and a set of packing rings held in place thereby and means for introducing oil within said gland between said packing rings.

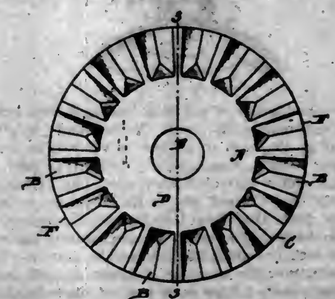
3. In a packing box, a gland provided with an inner rib located between its ends, a set of one or more packing rings between said rib and each end of the box, and a positioning spring for each set of rings acting upon it in an axial direction, each set of rings and its spring being arranged so that the axial thrust of the spring in one direction is taken by said rib.

4. In a stuffing box for a movable rod or member, two separate and independent packing seals for said member, spaced apart from each other, separate resilient means for supporting each seal and means for lubricating said member between said seals.

5. In a stuffing box for a movable member, a floating bushing surrounding said member, one or more packing rings also surrounding said member and means for holding said bushing and rings in place, comprising a retaining member surrounding said bushing, and a helical spring surrounding said member and exerting a thrust against said member and against said rings.

[Claims 6 to 11 not printed in the Gazette.]

875,935. ABRADING-WHEEL. EZRA F. LANDIS, La Salle, N. Y. Filed Aug. 28, 1906. Serial No. 331,748.

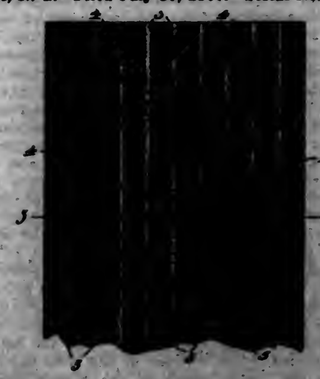


1. An abrading body having a smooth peripheral grinding face, and grooves in at least one of its sides extending inward from said grinding face.

2. An abrading-wheel having a smooth peripheral grinding face, and radially disposed grooves in its sides extending inward from the grinding face, the grooves on opposite sides being arranged out of line.

3. An abrading body having a grinding surface and grooves in opposite sides arranged out of line and of a depth to extend beyond the longitudinal center of said grinding surface.

875,936. ABRADING MATERIAL. EZRA F. LANDIS, La Salle, N. Y. Filed July 30, 1907. Serial No. 385,279.



1. An abrading-material consisting of a foundation of flexible material having abrasive-grits of two different

grades adhesively applied thereto, the two grades of grit being applied in relatively wide and narrow parallel stripe or areas and arranged alternately.

2. An abrading-material consisting of a foundation having abrasive-grits of two different grades applied thereto in relatively wide and narrow stripe or areas and arranged alternately, the grits applied in narrow areas being less abrasive than the grit applied in wide areas, for the purpose set forth.

875,937. NON-REFILLABLE BOTTLE. FELIX LESSER, Portland, Oreg., assignor to Lesser Manufacturing Company, Portland, Oreg., a Corporation of Oregon. Filed Aug. 18, 1906. Serial No. 331,154.



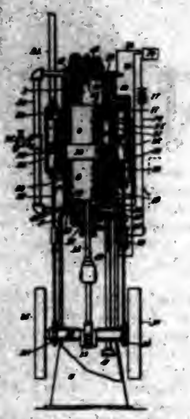
1. The combination of a bottle, having a neck constituting a valve-chamber, the walls thereof made bulging and contracted at the base to provide a valve seat, a protection-stopper therein, comprising a cylindrical body having in its upper end a central vertical cavity and lateral ports entering the base thereof, and in its lower-end a concavity and lateral ports therefrom into the valve chamber, a ball-valve in said lower-end concavity, and means adapted to irremovably lock the protection-stopper in place.

2. The combination of a bottle having a neck constituting a valve-chamber, the walls thereof made bulging and contracted at the base to provide a valve seat, a protection-stopper therein, comprising a cylindrical body having in its upper-end a central vertical cavity and lateral ports entering the base thereof, and in its lower-end a concavity and two lateral ports therefrom into the valve-chamber, a ball-valve in said concavity, protuberances on the walls of the latter arranged to cause the ball-valve to roll in front of and close one of said ports, when the bottle is held in approximately horizontal position, and means adapted to irremovably lock the protection-stopper in place.

3. The combination of a bottle having a neck constituting a valve-chamber, the walls thereof made bulging and contracted at the base to provide a valve-seat, a shoulder near the top of the valve-chamber, a protection-stopper comprising a cylindrical body, the upper-end of which is made with a circumferential groove and a central vertical cavity having lateral ports entering the base thereof, and the lower-end of said stopper being made with a concavity having two lateral ports therefrom into the valve-chamber, a ball-valve in said concavity, protuberances on the walls of the latter arranged to cause the ball-valve to roll in front of and close one of said ports when the bottle is held in approximately horizontal position, and an expanding member in said circumferential groove of the protection-stopper, locking with said shoulder of the neck.

4. A protection-stopper for a non-refillable bottle comprising a cylindrical glass body, the upper-end of which is made with a circumferential groove to receive a locking member, and a vertical cavity having lateral ports entering the base thereof, and the lower-end of said protection-stopper being made with a concavity to receive a ball-valve, and having two lateral ports, and protuberances on the walls of said concavity, arranged to cause the ball-valve therein contained to roll in front of and close one of said ports when the bottle containing the closure devices is held in approximately horizontal position.

875,938. GAS-ENGINE. CHARLES T. LITCHFIELD, Spokane, Wash., assignor to Mono-Cycle Gas Engine and Manufacturing Company, Spokane, Wash., a Corporation of Washington. Filed May 14, 1906. Serial No. 316,804.



1. A gas engine, having a three-part cylinder, the center portion being of larger diameter than the ends and constituting the explosion chamber, and the end portions of less diameter and serving as compression chambers, a three-part piston arranged in said cylinder, the ends of said piston being of substantially the length of the ends of the cylinder and the intermediate portion being of less length than the portion of the cylinder with larger diameter, the said piston having solid working faces adapted to fit close up to their respective cylinder heads to avoid clearance and thereby completely exhaust the cylinders, said compression chambers provided with admission and discharge ports, an admission valve and an exhaust valve for the explosion chamber upon opposite sides of the piston, a piston rod, a shaft to which said piston rod is connected, and connections between the admission and exhaust valves and said shaft.

2. A gas engine, comprising a cylinder having ends of one diameter constituting compression chambers, and an intermediate portion of larger diameter constituting the explosion chamber, a piston whose ends are of substantially the internal area of the ends of the cylinder and the intermediate portion being of less length than the explosion chamber, suction and discharge valves in the ends of the compression chambers, a reservoir connected with the cylinder, a gas supply connected with the ends of the compression chambers, whereby the reciprocation of the piston serves to draw in gas into the compression chambers to compress it and discharge it into the reservoir, and an admission valve and an exhaust valve together controlling the supply of compressed gas to the explosion chamber of the cylinder and its piston for operating the engine.

3. A gas engine, comprising a cylinder having ends of one diameter constituting compression chambers, and an intermediate portion of larger diameter constituting the explosion chamber, a piston whose ends are of substantially the internal area of the compression ends of the cylinder and the intermediate portion being of less length than the explosion chamber, suction and discharge valves in the outer ends of the compression chambers, a reservoir connected with the compression chambers, a gas supply connected with the outer ends of the compression chambers, whereby the reciprocation of the piston serves to draw in gas into the compression chambers, compress it and discharge it into the reservoir, an admission and an exhaust valve controlling the supply of compressed gas to the intermediate explosion chamber upon opposite sides of the piston for operating the engine, and a by-pass valve for automatically regulating the pressure.

4. A gas engine, comprising a cylinder having ends of one diameter constituting compression chambers, and an intermediate portion of larger diameter constituting the explosion chamber, a piston whose ends are of substantially the internal area of the ends of the cylinder and the intermediate portion being of less length than the explosion chamber, suction and discharge valves in the ends of the compression chambers, a reservoir connected with the cylinder, a gas supply connected with the ends of the compression chambers, whereby the reciprocation of the piston serves to draw in gas into the compression chambers, compress it and discharge it into the reservoir, an admission valve and an exhaust valve controlling the supply of compressed gas to the intermediate explosion chamber upon opposite sides of the piston for operating the engine, and a by-pass valve interposed between the suction and discharge valves for automatically regulating the pressure of the gas supply.

5. A gas engine, having a three-part cylinder, the ends of which are supplied with suction and discharge valves and serve as gas compressing chambers, and the intermediate portion of which serves as the explosion chamber, a three-part piston arranged in said cylinder, the opposite ends of which serve as compressing pistons, and the intermediate portion of which serves as a power piston, the said piston having solid working faces adapted to fit close up to their respective cylinder heads to avoid clearance and thereby completely exhaust the cylinders, a valve for admitting the compressed gas to the explosion chamber upon opposite sides of the piston, a shaft with which the piston and the valve are connected, an eccentric interposed between the valve connection and the shaft, and a governor for controlling the position of the eccentric.

[Claims 6 to 12 not printed in the Gazette.]

875,939. CUTTING IMPLEMENT. ABBOT A. LOW, Horseshoe, N. Y. Filed Apr. 25, 1907. Serial No. 370,149.



1. In an implement of the character designated, the combination of a straight cutting blade formed with a straight shank in alinement with said blade and integral therewith, a guard pivoted to the shank adjacent to the inner end of the cutting blade and formed with a rear extension coinciding with the shank of the cutting blade and resting thereon when in its normal position, and a retractile spring situated in coinciding recesses in the opposed inner side of the shank and guard extension and having its opposite ends respectively attached to said opposed parts, for the purpose described.

2. In an implement of the character designated, the combination of a straight cutting blade formed with a straight shank in alinement with said blade and integral therewith, a guard pivoted to the shank adjacent to the inner end of the cutting blade and formed with a rear extension coinciding with the shank of the cutting blade and resting thereon when in its normal position, a retractile spring situated in coinciding recesses in the opposed inner sides of the shank and guard extension and having its opposite ends respectively attached to said opposed parts, the forward portion of the guard being so shaped that when in its said normal position there is a space between its inner side and the cutting edge for the reception of articles to be cut, substantially as and for the purpose described.

3. In an implement of the character designated, the combination of a straight cutting blade formed with a straight shank in alinement with said blade and integral therewith, a guard pivoted to the shank adjacent to the inner end of the cutting blade and formed with a rear extension coinciding with the shank of the cutting blade and resting thereon when in its normal position, a retractile spring situated in coinciding recesses in the opposed inner sides of the shank and guard extension and having its opposite ends respectively attached to said opposed parts, the forward portion of the guard being so shaped that when in its said normal position there is a space between its inner side and the cutting edge for the reception of articles to be cut, said guard being also formed with a longitudinal groove on its inner side and with a relatively broad concave thumb rest upon its upper or outer side for the purpose described.

875,940. PERCUSSIVELY-DRIVEN TOOL. DANIEL L. MASON, Louisville, Ky. Filed Aug. 30, 1904. Serial No. 222,772.



1. In a percussion tool, the combination of means through which to develop driving force by percussion, comprising an impact member, provided with an upwardly extending guide stem, and a downwardly presented tapering socket, and a batter mounted to reciprocate on said stem and impinge the impact member; a connecting and transmitting member having tapered ends, one of which fits the downwardly presented socket of the impact member, a socket in which the other tapered end of the connecting and transmitting member fits and a suitable tool receiving the driving force from said connecting and transmitting member, through the socket last named.

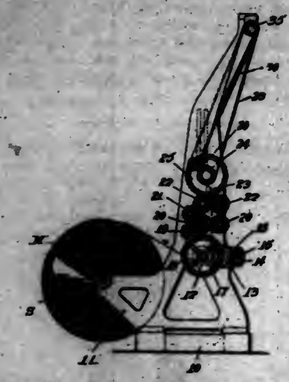
2. In a percussion tool, the combination of means through which to develop driving force by percussion, comprising an impact member, provided with an upwardly extending guide stem, and a downwardly presented tapering socket, and a batter mounted to reciprocate on said stem and impinge the impact member; a connecting and transmitting member having tapered ends, one of which fits the downwardly presented socket of the impact member, a socket in which the other tapered end of the connecting and transmitting member fits and a suitable tool receiving the driving force from said connecting and transmitting member, through the socket last named; said connecting and transmitting member being constructed with an intermediate enlargement providing shoulders against which the sockets abut.

875,941. WINDING-MACHINE. FRANCIS MELSH., Dover, N. H. Filed Dec. 11, 1902, Serial No. 134,798. Renewed June 1, 1907. Serial No. 376,846.

1. In a machine of the class described, the combination of a driven drum, means for supporting a web-roll so that it will rest on the driven drum, and the shaft thereof will rise as the web-roll increases in size, and a second drum engaging the side of said web-roll.

2. In a machine of the class described, the combination of a driven drum, means for supporting a web-roll so that it will rest on the driven drum and its shaft will rise as the web roll increases in size, a second drum engaging the

side of the web-roll, and means for supporting the second drum so that it will swing outwardly as the web-roll increases in size.



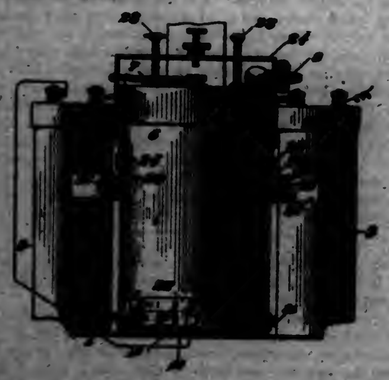
3. In a machine of the class described, the combination of a driven drum, means for supporting a web roll so that it will rest on the driven drum and so that its shaft will rise as the web roll increases in size, a set of swinging bearings, and a drum mounted in the swinging bearings and engaging the side of the web roll.

4. In a machine of the class described, the combination of a driven drum, means for supporting the web roll so that it will rest on the driven drum and its shaft will rise as the web-roll increases in size, a set of swinging arms, a drum journaled in the swinging arms and engaging the side of the web roll, and means for driving said last named drum.

5. In a machine of the class described, the combination of a driven drum, means for supporting a web-roll so that it will rest on the driven drum and so that its shaft will rise as the web roll increases in size, a pair of swinging arms, a second drum mounted in said swinging arms, and a chain and sprocket connection for driving said second drum while the same engages the side of the web roll as it is being wound.

[Claims 6 to 8 not printed in the Gazette.]

875,942. ACETYLENE-LAMP AND LIGHTING DEVICE FOR AUTOMOBILES AND OTHER VEHICLES. SVEND M. MEYER, New York, N. Y., assignor to George Clinton Batcheller, New York, N. Y. Filed Dec. 21, 1905. Serial No. 292,852.



1. An acetylene lamp and self-lighting system for vehicles comprising an acetylene generator and an electric battery mounted together in a connecting frame; a series of suitably arranged lamps, conductors connecting from the battery to the several lamps and a switch closing the circuits through the several lamps for lighting selected lamps at the will of the operator, substantially as described.

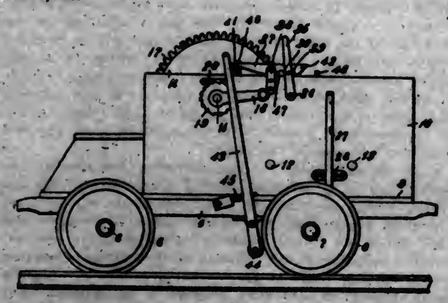
2. The combination of an acetylene generator 6, a bed 26 on which it is removably mounted, electric batteries 9, 9, means for clamping the generator securely to the generator bed and battery cylinders, a series of suitably arranged lamps, conductors connecting the batteries with the several lamps and a switch closing the respective circuits through the several lamps, so as to light selected lamps, substantially as described.

3. The combination of an acetylene generator, a series of lamps supplied with gas therefrom, a generator bed, electric batteries and means for securely and removably mounting the generator cylinder on a supporting frame through the medium of the bed and batteries, electric conductors connecting the several lamps with the batteries, a switch on the generator frame adapted to close the several electric circuits through the respective lamps and an indicator for the switch marked to correspond with the several lamps to enable the lighting of selected lamps, substantially as described.

4. In an acetylene lamp for vehicles, the combination of an acetylene lamp-burner, an incandescing coil for igniting said burner, a thermally deflectable post on which said coil is mounted, means for supporting both ends of the incandescing coil on said post and insulating said ends one from the other, a clamp-collar by which the deflectable post and incandescing coil are removably mounted on the burner, a flexible electrical connection between said collar and one end of the incandescing coil insulated from the other end thereof, electrical connection from one pole of a source of electricity to said clamp-collar and thence to one end of the incandescing coil and electric connection from the opposite pole to the other end of said coil, substantially as described.

5. An acetylene lamp and self-lighting system for automobiles comprising an acetylene generator and an electric battery, a series of suitably arranged lamps, conductors connecting from the battery to the several lamps and a switch closing the circuits through the several lamps for lighting selected lamps at the will of the operator.

875,943. SPRING-PROPELLED HAND-CAR. DAVID N. MCDANIEL, Millwood, Ga. Filed May 6, 1907. Serial No. 372,143.



1. In a hand car, a truck, a train of gears operatively connected with the axle of the truck, a spring for transmitting motion to the gears, a brake bar adapted to engage the teeth, means for moving the brake to operative and inoperative position, and a spring catch adapted to engage the brake bar for automatically locking the same in set position.

2. In a hand car, a truck, a train of gears operatively connected with the axle of the truck, a spring for transmitting motion to the gears, a crank for regulating the tension of the spring, pawl and ratchet mechanism associated with the crank, a brake bar adapted to engage the teeth on one of the gears, means for automatically locking the bar in set position, and means for reversing the direction of rotation of the axle.

3. In a hand car, a truck, spaced uprights secured to the truck, a train of gears disposed between the uprights and operatively connected with the axle of the truck, a winding shaft, a coiled spring one end of which is connected to the winding shaft and the opposite end thereof to one of the gear wheels for transmitting motion to the axle of the truck, a brake adapted to engage the teeth on one of the gears, a catch for locking the brake in set position, and a crank carried by the winding shaft for regulating the tension of the spring.

4. In a hand car, a truck provided with spaced uprights, a plurality of shafts journaled in the uprights, a master gear loosely mounted on one of the shafts, a pinion journaled on the adjacent shaft and meshing with the teeth on the master gear, a gear wheel journaled on a third shaft and meshing with a pinion keyed to and slidably mounted on the axle of the truck, a spring, one end of which is connected to the winding shaft and the opposite end thereof secured to the master gear, for transmitting motion to the axle of the truck, a brake bar pivoted to one of the uprights and adapted to engage the teeth on the master gear, means for locking the brake bar in set position, and means for moving the pinion longitudinally of the shaft to reverse the direction of rotation of the same.

5. In a hand car, a truck provided with spaced uprights, a plurality of shafts journaled in the uprights and including a winding shaft, a master gear loosely mounted for rotation on the winding shaft, a gear wheel journaled on the adjacent shaft and provided with a pinion meshing with the master gear, a gear wheel carried by a third shaft and meshing with the pinion, a pinion slidably mounted on the axle of the truck and adapted to engage the last named gear wheel, a housing interposed between the uprights, a spring arranged within the housing and having one end thereof secured to the winding shaft and its opposite end fastened to the master gear, a reversing bar pivotally mounted on the uprights and provided with a yoke adapted to engage and move the pinion longitudinally of the axle truck for reversing the direction of travel of the latter, a horizontally disposed brake bar pivoted to one of the uprights and adapted to engage the teeth on the master gear, a spring actuating catch for locking the brake bar in set position, and levers pivoted to the sides of the truck and provided with terminal rollers adapted to engage the wheels of said truck.

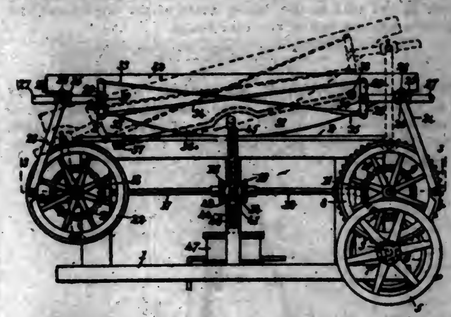
875,944. PAN. MARY A. NASH, Palmyra, Nebr. Filed Mar. 31, 1906. Serial No. 309,138.



A refrigerator drip pan comprising an outer vessel having a series of brackets arranged at suitable distances apart on its upper inner surface, an inner vessel mounted in the outer vessel and having a surrounding rim flange to contact with said brackets to provide a continuous space between the bottoms and walls of the two vessels, said space serving to receive the overflow of the inner vessel, a plurality of diametrically oppositely arranged openings in the flange of the inner vessel, bowed handles with hook ends serving to engage said openings to permit of the same having vertical movement therein, and an arched strip secured centrally to the bottom of the inner vessel which serves to reinforce said brackets when the rim of the inner vessel is arranged thereon, substantially as specified.

875,945. POWER-TRANSMISSION MECHANISM. JOHN L. NELSON, Colona, Colo. Filed Mar. 30, 1907. Serial No. 365,478.

1. A power transmission mechanism comprising a main frame, a weight having curved bearing surfaces, means for applying power directly to the opposite ends of said weight, and compensating mechanism connected with said means.



2. A power transmission mechanism comprising a main frame, a weight having curved bearing surfaces, means for applying power directly to the opposite ends of said weight, compensating mechanism connected with said means, and power receiving mechanism connected with the weight in the vertical central plane thereof.

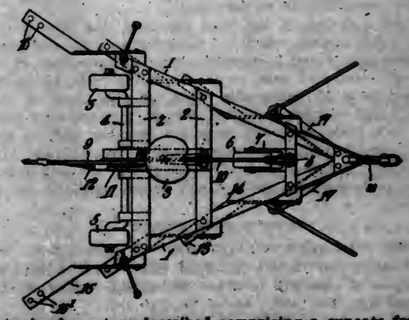
3. A power receiving mechanism comprising a main frame, a weight having curved bearing surfaces adapted to rock on the main frame, driving wheels mounted on the main frame at opposite ends thereof, adapted to rotate in opposite directions, and means for operatively connecting said driving wheels with the opposite ends of said weight.

4. A power transmitting mechanism comprising a main frame, a weight having curved bearing surfaces, means for applying power directly to the opposite ends of said weight, compensating mechanism connected with said means, and links connected with said main frame and weight adapted to prevent longitudinal displacement of said weight on the main frame.

5. A power transmitting mechanism comprising a main frame, a weight having curved bearing surfaces adapted to rock on said frame, means for applying power directly to the opposite ends of said weight, compensating mechanism connected with said means on opposite sides of the weight, connecting rods attached to the lower central portion of said weight at their upper ends, eccentrics pivotally connected to the lower ends of said rods, and a shaft supporting said eccentrics.

[Claims 6 to 8 not printed in the Gazette.]

875,946. WEEDER OR CULTIVATOR. NELS P. NELSON, Lexington, Oreg. Filed Mar. 28, 1907. Serial No. 365,053.



An implement as described comprising a cuneate frame, a blade mounted at the forward end thereof and having a rearwardly curved sharpened portion provided with binate rearwardly disposed diverging inclined end portions having sharpened edges, inclined cutting blades mounted upon the sides of the frames behind the first said blade, the free

ends of the cutting blades on each side of the frame extending in the same general direction, and the free end of each blade on each side of the frame overlapping the next blade in the rear in the line of draft of the implement and at the attached end of the rear blade.

875,947. ADJUSTABLE MAGAZINE-BINDER. JOHN A. OLSON, Minneapolis, Minn., assignor of one-half to Gustaf Olson, one-eighth to Etta Olson, and one-eighth to Perry D. Sherwin. Filed Apr. 4, 1907. Serial No. 366,360.



1. In a device of the kind described, the combination with a sheath having open ends, of one or more coupling rods having hooked ends engageable with the end of said sheath, and a lock device insertible into one of the ends of said sheath and serving to hold the said rod or rods interlocked with said sheath, substantially as described.

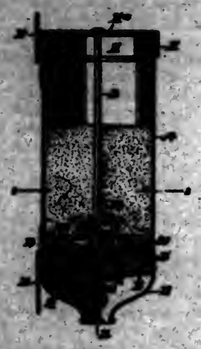
2. In a device of the kind described, the combination with a sheath having open ends, and a longitudinally extended entrance slot, of one or more rods having hooked ends engageable with the ends of said sheath, and a lock plate insertible into one end of said sheath and arranged to close the longitudinal entrance slot thereof, substantially as described.

3. In a device of the kind described, the combination with a sheath having open ends, and entrance slots extending longitudinally from the two ends thereof but at the opposite edges of said sheath, and a multiplicity of rods having hooked ends engageable with the ends of said sheath and adapted to be passed laterally through the entrance slots thereof, and lock devices insertible into the ends of said sheath and arranged to close the longitudinal entrance slots thereof and thereby hold the rods interlocked with said sheath with freedom for lateral adjustments, substantially as described.

4. In a device of the kind described, the combination with a flat metallic sheath 2 having open ends and longitudinal slots 4 and 5 extending from its open ends at the opposite edges of said sheath, coupling rods 14 having hooked ends 15 engageable with the open ends of said sheath and movable laterally through said entrance slots, and lock plates 6 and 7 insertible into the ends of said sheath and having, respectively, stop flanges 8—9 and 11—12, which flanges 9 and 12, respectively, are adapted to close said entrance slots 4 and 5, substantially as described.

875,948. MEASURING DEVICE. FERDINAND L. RACOUILLAT and THOMAS P. REED, San Francisco, Cal., assignors of one-sixth to Frank Shuls, San Francisco, Cal. Filed Apr. 10, 1906. Serial No. 310,912.

In a measuring device, the combination with a body, a chute at the lower end of the body, a stationary inner cover for the body, an outer cup cover mounted to turn upon the body, and a fixed bottom located above the chute and provided with a measuring chamber near the edge extending through from its upper to its lower face, of a shaft mounted to turn in said bottom and in said body, being secured at its upper end to the rotatable cover, disks secured to the shaft located one above and the other below said bottom, each disk having an aperture therein, but at diametrically opposite points, which apertures as the shaft revolves alternately register with the chamber in said bottom whereby the chamber is alternately charged with material and the material discharged therefrom, a



spreaded bar fixed in the body above the upper disk which centrally crosses the measuring chamber in the bottom and extends from side to side of the body, which bar insures the spreading and leveling of the material in the body lying smoothly upon the upper disk as it revolves, and a series of agitating and crushing arms secured to the shaft above the said bar, one series of arms extending over the spaces between the arms of the other series.

875,949. BICYCLE PACKAGE-CARRIER. WILLIAM H. REED, Sawtelle, Cal. Filed May 10, 1907. Serial No. 372,852.



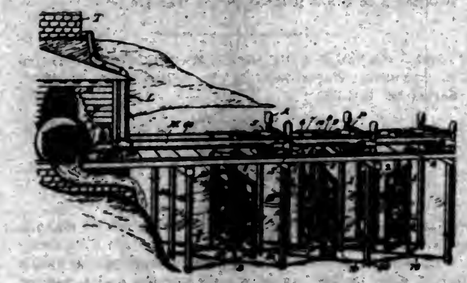
1. A package carrier for bicycles comprising a receptacle having the body thereof formed of sheet metal, the top of which is rolled to form a top rim; a cover for said carrier; and means to lock the front wheel of the bicycle and the cover upon the body.

2. A package carrier for bicycles comprising a receptacle having the body thereof formed of sheet metal, the top of which is rolled to form a top rim; a cover for said carrier; hinges secured upon the rim and adjustably secured to said cover and revoluble on the rim of the body.

3. A package carrier for bicycles comprising a receptacle having the body thereof formed of sheet metal the top of which is rolled to form a top rim, said body having apertures below the rim at the ends whereby the same may be gripped by the rider; a cover for said carrier; and means to lock said cover to the body.

4. A package carrier for bicycles comprising a receptacle having the body thereof formed of sheet metal, the top of which is rolled to form a top rim; said body having apertures below the rim at the ends whereby the same may be gripped by the rider, said body being provided with perforations in the upper portion thereof; a cover for said carrier having a perforation near the front thereof; hinges secured upon the rim and adjustably secured upon said cover, said hinges being revoluble on said rim, and a locking device for said cover comprising a chain having a disk secured on one end thereof, said disk having a perforation therein, and a padlock.

875,950. WAVE-POWER APPARATUS. ALVA L. REYNOLDS and GEORGE A. REYNOLDS, Huntington Beach, Cal. Filed Mar. 18, 1907. Serial No. 363,102.



1. A wave motor comprising a plurality of vertical vanes movable by wave impact and free to revolve in a complete circle, a support for said vanes and power-developing means connected with said vanes.

2. A wave motor comprising a plurality of vertical vanes movable by wave impact and free to revolve in a complete circle, means for pivotally securing said vanes in the path or force of waves, and power-developing means connected with said pivot means.

3. A wave motor comprising a plurality of vertical shafts, vanes on said shafts arranged in the path of the ebb and flow of waves, and free to revolve in a complete circle and means connected with said shafts for developing power.

4. The combination with a suitable support, of a plurality of shafts vertically disposed in said support, vanes secured to said shafts, said vanes being partly or wholly submerged in water in an unobstructed path and free to revolve completely and each adapted to respond to wave impetus independently of each other.

5. The combination with a suitable support, of a plurality of shafts journaled in said support, vertical vanes secured to said shafts, said vanes being vertically adjustable according to the rise and fall of the water.

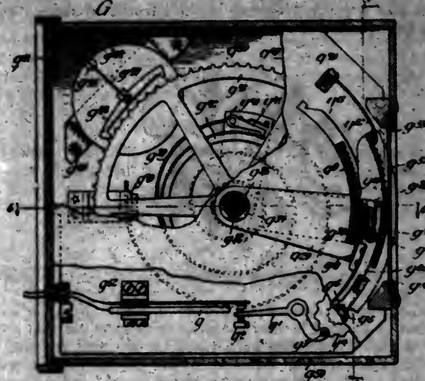
[Claims 6 to 18 not printed in the Gazette.]

875,951. CONTROLLING MECHANISM FOR AUTOMATIC EXCHANGES. JOHN G. ROBERTS, Chicago, Ill., assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed July 10, 1906. Serial No. 326,454.

1. Controlling mechanism for an automatic exchange, comprising a switch, a plurality of movable members associated therewith, said members being adapted to be displaced from their normal resting positions to different distances variable at will, means for causing said members to return to their normal positions, and mechanism for operating said switch actuated by each member upon its return.

2. Controlling mechanism for an automatic exchange, comprising a switch, a plurality of operatively connected movable members associated therewith and adapted to actuate said switch, and means associated with each of said members for varying at will its operative relation to the other members.

3. Controlling mechanism for an automatic exchange, comprising a switch, a plurality of movable actuating members for said switch, means for displacing said actuating members to different degrees variable at will, and mechanism actuated upon the return to its normal position of each of said members for operating said switch.



4. Controlling mechanism for an automatic exchange, comprising a switch, a series of movable actuating members therefor, said members being adapted to be displaced to different degrees, variable at will, from their normal positions, means adapted to effect the return of said members at a predetermined rate of speed, and mechanism made operative upon the return to its normal position of each of said members for actuating said switch.

5. Controlling mechanism for an automatic exchange, comprising a switch, mechanism adapted to be moved at a constant rate of speed, actuating members for said switch associated with said mechanism, and means for varying at will the relation of said members to said mechanism and each other to determine the actuation of said switch.

[Claims 6 to 22 not printed in the Gazette.]

875,952. PROJECTILE. CLAYTON ROCKHILL, New York, N. Y. Filed Mar. 1, 1907. Serial No. 360,069.



1. A projectile having a portion of its body formed of a compact mass of wire coils.

2. A projectile comprising a head, a body and a jacket or outer shell, a portion of the body at the rear of the head of the projectile and within the jacket or outer shell being formed of wire.

3. A projectile comprising a head and body, the body consisting of a core and a mass of wire around the core in position to bear against the rear of the head.

4. A projectile provided with a core extending rearwardly from its head and of lesser diameter than the head and a body of wire wound on said core to form the body of the projectile.

5. A projectile provided with a stepped core projecting rearwardly from its head and of lesser diameter than its head and a body of wire wound on said stepped core.

[Claims 6 to 9 not printed in the Gazette.]

875,953. BAG-CLOSING DEVICE. LARS RÖE, Montreal, Quebec, Canada. Filed Aug. 9, 1906. Serial No. 329,875.

1. In a device of the class described, a curved body member having a slot therein, an eccentrically pivoted cam operating in said slot and provided with a plurality of

notches in one side thereof and an angular corner on the opposite side thereof, a closure strap fixed at one end to said curved member and having its other end passing between the angular corner of said cam and the wall of said slot, and a pivoted locking catch adapted to engage the notches of said cam.



2. A bag tie comprising a body member having a slot therein, a pivoted eccentric operating in said slot and provided with a plurality of notches at one side thereof, a closure strap fixed at one end to said curved member and adapted to be gripped between the eccentric and the wall of said slot, and a curved locking catch adapted to engage the notches of said eccentric.

875,954. DOLL. EDWARD E. ROUBCH, Detroit, Mich., assignor, by mesne assignments, to Charles J. Holton, Detroit, Mich. Filed Feb. 19, 1906. Serial No. 301,739.



1. In a doll, the combination of a body composed of two complementary parts adapted to form the front and back, said parts being secured together by a seam having the free edges turned inwardly, a separate face and back secured to the front and back of the body respectively at their lower edges, and secured at the remainder of their edges between the edges of the body portions, the edges of the separate face and back being inturned as are the edges of the body portions, and sheets of soft material placed between the separate face and back and the body portions respectively.

2. In a doll, the combination of a body composed of two complementary parts adapted to form the front and back, said parts being secured together at their edges with inturned edges, a separate photographic face secured at the bottom to the outside of the front of the body, and at the remainder of its outer edge between the inturned edges of the portions of the body, and a sheet of soft material placed back of the separate face.

3. In a doll, the combination of a body composed of two complementary parts adapted to form the front and back, said parts being secured together with inturned edges, and a separate face secured at its outer edge between the inturned edges of the portions of the body.

875,955. LENS-FASTENING FOR NOSE-GLASSES. GEORGE S. ROW, Indianapolis, Ind. Filed May 9, 1907. Serial No. 372,679.



1. An eye-glass fitting comprising a main body having a lens-receiving finger, a tapered pin carried by said finger, and a spring finger rotably mounted on said main body to coöperate with the lens-receiving finger.

2. An eye-glass fitting comprising a main body having a lens-receiving finger, a pin carried by said finger, and a spring finger coöperating with said first mentioned finger, operate with the lens-receiving finger.

3. An eye-glass fitting comprising a main body having a lens-receiving finger, a tapered end carried by said finger, and a spring finger coöperating with said first mentioned finger, said spring finger having a threaded stem screwed into a threaded opening formed through said main body.

4. An eye-glass fitting comprising a main body having a lens-receiving finger, a pin carried by said finger, and a spring finger coöperating with said first mentioned finger, said spring finger having a threaded stem screwed into a threaded opening formed through said main body.

5. An eye-glass fitting comprising a main body having a lens-receiving finger, a tapered pin carried by said finger and a spring finger rotatably mounted on said main body on an axis at an angle to said tapered pin to coöperate with the lens-receiving finger.

[Claims 6 to 8 not printed in the Gazette.]

875,956. HANDLE FOR BOTTLE-STOPPERS. DAVID B. SANFORD, Watertown, N. Y. Filed Sept. 3, 1907. Serial No. 391,051.



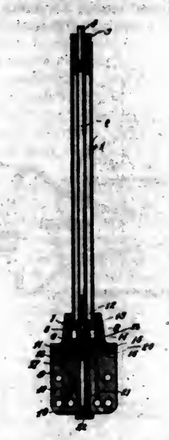
1. A handle for bottle stoppers, comprising a single piece of sheet metal having a body portion and a pair of binding-points formed on one end thereof, the said body portion being bent near its middle at right angles to form a foot adapted when the binding-points are clenched to rest upon the upper side of a bottle stopper, for the purpose of holding the said handle in true vertical position at right-angles to the plane of said stopper.

2. In a handle for bottle stoppers, the combination with a paper disk, of a handle comprising a piece of sheet metal having a portion adapted for a finger-grip, and having an angular foot portion formed below the finger-grip adapted to bear upon the upper side of said disk, and having a pair of integral V-shaped points formed below said foot portion adapted to be driven through the disk and clenched against the underside of said disk beneath said foot portion, for the purpose of rigidly attaching the handle to said disk.

3. In a device of the class described, the combination with a disk bottle stopper, of a metallic handle comprising a portion adapted for a finger-grip having an angle-portion adjoining said finger-grip, and having a plurality of binding-points formed with said angle-portion adapted to pierce said stopper and to be bent and clenched against the underside of said stopper opposite said angle-portion, the said finger-grip, when secured in place, being disposed at right-angles to said angle-portion and also to the plane of said disk.

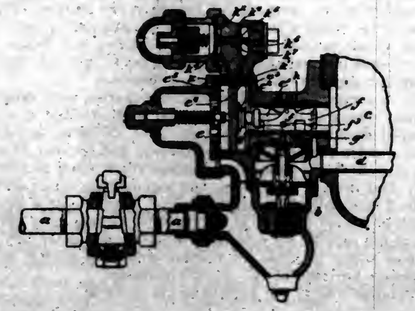
875,957. THERMOSTAT. OLAF SAUGSTAD, Plainfield, N. J., assignor to Davis & Roesch Temperature Controlling Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 8, 1903. Serial No. 176,225.

A thermostatic regulating device comprising as its entire structure a single tube and bar one within the other, connected together at one end unyieldingly against movement in one direction, said tube and bar composed of materials having different co-efficients of expansion, the tube carrying at one end, and rigidly secured thereto concentrically thereof, a valve seat, and the bar carrying a light valve piece spring pressed by means of a light spring toward the valve seat, and having means for bodily lifting the valve piece from its seat as the end of the bar carrying same lifts with respect to the valve seat, a casing for supporting said valve seat, tube and bar, a diaphragm in said casing, and inlet and exhaust valves secured to, and operated by movements of, said diaphragm, said regulator being provided with a motive fluid inlet channel in said casing connecting therethrough to the said valve seat and to the said inlet valve, an opening between the opposite side of said valve seat and one side of said diaphragm, a restricted discharge communicating from said opening to the atmosphere, a discharge opening from the other side of said dia-



phragm to the atmosphere, and a distributing passage between said diaphragm controlled inlet and exhaust valves, substantially as set forth.

875,958. VALVE FOR FLUID-PRESSURE BRAKES. WILLIAM H. SAUVAGE, New York, N. Y. Filed Mar. 5, 1907. Serial No. 360,752.



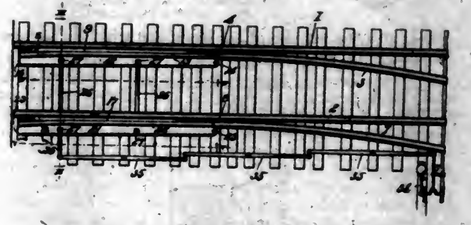
1. In a triple valve for fluid pressure brake systems, a piston chamber having two ports uncovered by the piston in lap position on opposite sides thereof, communication being normally established from one port to the other to permit the transmission of pressure from the train line to the auxiliary reservoir, and a valve normally open but closed by excess of pressure to prevent the transmission of pressure from one of said ports to the other.

2. In a triple valve for fluid pressure brake systems, a piston chamber having two ports uncovered by the piston in lap position on opposite sides thereof, communication being normally established from one port to the other to permit the transmission of pressure from the train line to the auxiliary reservoir, a valve normally open but closed by excess of pressure to prevent the transmission of pressure from one of said ports to the other, and a diaphragm subject to the pressure to control said valve.

3. In a triple valve for fluid pressure brake systems, the combination of a piston chamber having two ports uncovered by the piston in lap position on opposite sides thereof, and normally in free communication, a train line connection communicating with the piston chamber on one side of the piston, an auxiliary reservoir communicating with the piston chamber on the opposite side of the piston and means subject to excess of pressure in the piston chamber to prevent the transmission of pressure from one of said ports to the other.

4. In a triple valve for fluid pressure brake systems, the combination of an auxiliary reservoir, a brake cylinder connection, a slide valve and a graduating valve to control the communication between the auxiliary reservoir and the brake cylinder connection, a leakage channel being provided between the graduating valve and its seat for the transmission of pressure from the auxiliary reservoir to the brake cylinder connection.

875,959. RAILWAY-SWITCH. SAMUEL L. SHELLENBERGER, South McAlester, Okla., assignor of one-half to Edwin D. Chadick, South McAlester, Okla. Filed Jan. 11, 1907. Serial No. 351,876.



1. In a railroad switch, the combination with main line track rails, of branch track rails terminating in juxtaposition to said main line rails, platforms of inverted U-shape in cross section, and a pair of movable switch rails mounted on said platforms and adapted to be shifted into position above said main track rails, substantially as set forth.

2. In a railroad switch, the combination with a pair of main track rails, of a pair of branch track rails terminating in juxtaposition to said main track rails, flanged platforms of inverted U-shape in cross section, and a pair of switch rails pivotally connected to said flanged platform at terminations of said branch rails and movable on the flanged platform into positions above said main track rails, substantially as set forth.

3. In a railroad switch, the combination with a pair of main track rails, of a pair of branch rails terminating in juxtaposition to said main track rails, platforms of inverted U-shape in cross section, and a pair of switch rails pivotally connected to said platform at terminations of said branch rails and movable on the platform into positions above said main track rails; said switch rails being provided with flanges, substantially as set forth.

4. In a railroad switch, the combination with a pair of main track rails, of a pair of branch track rails terminating in juxtaposition to said main track rails, platforms of inverted U-shape in cross section, and a pair of switch rails pivotally connected to said platform at terminations of said branch rails and movable on the platform into positions above said main track rails; said switch rails being provided with flanges having sloping portions at the free ends of the rails, substantially as set forth.

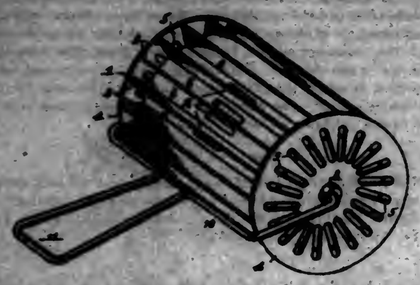
5. In a railroad switch, the combination with a pair of main track rails, of a pair of branch track rails, platforms of U-shape in cross section located adjacent to said main track rails, and having legs hooked under said main track rails, and switch rails pivotally mounted upon said platforms and movable to and from said main track rails, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

875,960. CAKE-CUTTER. BRYCE B. SMITH and GEORGE L. GAY, Jr., Kansas City, Mo., assignors, by mesne assignment, to said Smith. Filed Sept. 29, 1906. Serial No. 336,701.

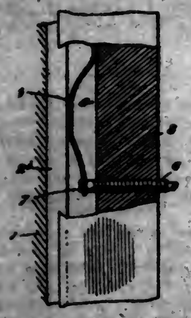
In a cake-cutter, a drum provided with air-holes, blades secured to the periphery of said drum, and extending radi-

ally with respect to its axis, and disks secured to the ends of drum and the blades, provided with air-holes communi-



cating with the interior of the drum and with the pockets formed by the drum, blades, and disks.

875,961. WINDOW-SCREEN. MOSES SOLMSON, Baltimore, Md. Filed Mar. 1, 1907. Serial No. 359,964.



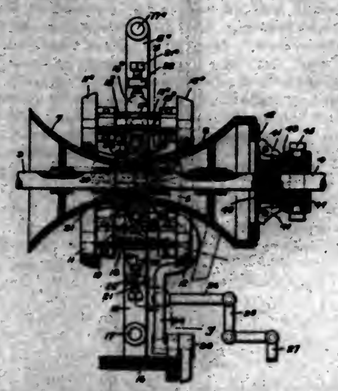
1. In a window frame, the combination of a window screen having grooved edges and adapted to fit upon and slide upon vertical guides in the window frame, a tension spring located in one of the grooves of the screen combined with a screw swiveled to one end of the spring and tapped through the screen for adjustment of the spring from the interior of the screen without removing it from the window.

2. In a window frame, a combination of a window screen having grooved edges, and adapted to fit upon and slide upon vertical guides in the window frame, the combination of a tension spring carried by the screen and bearing on the frame, and an adjusting means, one end of the spring having a swivel connection with the adjusting means, and adapted to be moved by it toward and from the frame to regulate the tension of the spring and the other end of which has a sliding bearing on a flat surface on the screen.

3. In a window frame a combination of a window screen having grooved edges, and adapted to fit and slide upon vertical guides in the window frame, an adjusting screw, and a bow string, one end of which rests on a flat surface on the screen, and the other end of which has a swivel engagement with the screw, and is adapted to be adjusted by it toward and from the frame, the back of the bow engaging the window frame to create friction between the screen and the frame, the amount of which is regulated by turning the screw.

875,962. VARIABLE-SPEED DRIVING-GEAR. GEORGE E. STANLEY, Whitman, Mass., assignor of one-third to Joseph B. White, North Hanson, Mass., and one-third to Frank Puddefoot, Whitman, Mass. Filed Mar. 21, 1907. Serial No. 363,570.

1. In a driving mechanism, the combination with a rotatable cone-shaped friction driving member, of a similarly-shaped friction driven member, a transmitting member adapted to bear against both of said friction members, and to rotate the driven member in the same direction as the driving member and means to swing the transmitting member to cause it to engage different parts of the cone-shaped members.



2. In a driving mechanism, the combination with a rotatable cone-shaped driving member, of a similarly-shaped friction driven member, two transmitting members, one on each side of the friction members, and each adapted to bear against both friction members, and means to move the transmitting members to cause them to engage different portions of the friction members.

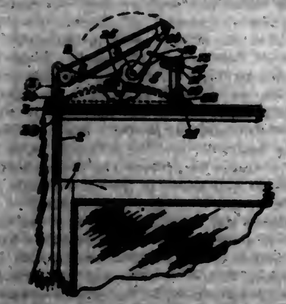
3. In a driving mechanism, the combination with axially-alined rotatable driving and driven cone-shaped friction members, of two transmitting members, one situated either side of the friction members, and each comprising two friction wheels to bear against said members, and means to move said transmitting members to cause them to engage different parts of the cone-shaped members.

4. In a driving mechanism, the combination with axially-alined rotatable driving and driven elements, and a cone-shaped member, carried by each, of a swinging member, and a shaft adjustably carried thereby and friction wheels on said shaft and arranged to engage the friction members.

5. In a driving mechanism, the combination with axially-alined rotatable cone-shaped friction members, of a shaft, friction wheels thereon to engage said friction members, a swinging support for said shaft whereby the latter may be moved bodily to cause the friction wheels to contact with different portions of the friction members.

[Claims 6 to 11 not printed in the Gazette.]

875,963. WEIGHT-COMPENSATOR. WILLIAM C. STEPHEN, St. Louis, Mo. Filed Feb. 23, 1907. Serial No. 358,828.



1. In a weight-compensator, the combination of a cord, one end of said cord being movable and the other end fixed, a lever having a fixed fulcrum, and pulleys journaled in

axial alinement on said lever, said cord passing over said pulleys and causing movement of said lever.

2. In a weight-compensator, the combination of a member to be counterweighted, a lever having a fixed fulcrum having axially alining pulleys thereupon, and means connecting said member to said lever, whereby the movement of said member causes a rocking of said lever.

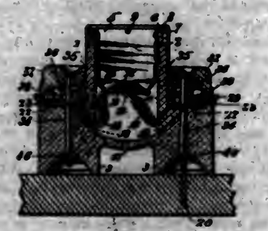
3. In a weight-compensator, the combination of a member to be counterweighted, a lever having a fixed fulcrum having axially alining pulleys thereupon, a cord connecting said member and said lever thereby to actuate the lever on movement of said member, and means to resist the movement of said lever.

4. In a weight-compensator, the combination of a member to be counterweighted, a lever having a fixed fulcrum having axially alining pulleys thereupon, a cord connecting said member and said lever thereby to actuate the lever on movement of said member, and a spring subject to the tension of which said lever moves.

5. In a weight-compensator, the combination of a member to be counterweighted, a lever having a fixed fulcrum having axially alining pulleys thereupon, means connecting said member and said lever thereby to actuate the lever on movement of said member, a spring subject to the tension of which said lever moves, and means intermediate said lever and said spring through which the movement of the lever is communicated to the spring.

[Claims 6 to 25 not printed in the Gazette.]

875,964. OUTDOOR LAMP-RECEPTACLE. JAMES S. STEWART, New York, N. Y., assignor to Annie Stewart, New York, N. Y. Filed June 13, 1906. Serial No. 321,451.



1. An out-door lamp receptacle comprising a body or housing having a threaded shell to receive a lamp and having integral legs for supporting it on a supporting surface, said legs having flat lower surfaces said legs constituting on their opposite sides or faces a support for the circuit wires and said body having inclosed passages from said legs to its interior for the circuit wires.

2. An out-door lamp receptacle comprising an integral body or housing having a pair of integral legs, said body having wholly inclosed ducts or passages leading to said legs, and formed throughout by the material of said integral body, fastening means passed through said legs to hold the housing to a supporting surface, means for securing the circuit wires to said legs and wires passed through said ducts or passages for establishing the electric connections.

3. An out-door lamp receptacle comprising a body or housing with a central cylindrical portion and a pair of legs adjacent thereto and integral therewith, and caps cooperating with said legs and bearing against said cylindrical portion and laterally supported thereby for clamping the circuit wires and producing a downward clamping action thereon.

4. An out-door lamp receptacle comprising a body or housing having a central cylindrical portion forming a lamp socket, and legs adjacent to said housing and forming a support therefor and for the circuit wires, said ducts or passages being wholly inclosed throughout their length, said body having inclosed ducts or passages leading to said legs.

5. An out-door lamp receptacle comprising a body or housing having a pair of legs integral therewith, adapted to support the circuit wires, caps cooperating with said legs, said caps being arranged to bear against a wall of the housing in their clamping action, such wall acting as a fulcrum in the downward clamping action of the caps.

[Claims 6 to 10 not printed in the Gazette.]

875,965. KEY-FASTENER. ANDRE A. SVENSEN, Evanston, Ill. Filed Feb. 1, 1907. Serial No. 355,212.

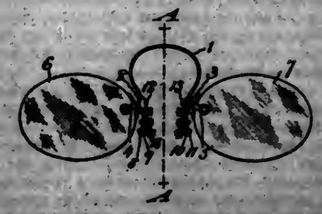


1. In a locking device for association with the lock of a door, the combination with a supporting plate adapted to be secured with respect to the lock, said plate having a keyhole in register with the lock keyhole, a movable plate mounted on the supporting plate and also having a keyhole, hole, spring means tending to hold the movable plate and the keyhole therein in registration with the keyhole in the supporting plate, a lever pivoted to the supporting plate and adapted for engagement with the movable plate, teeth formed upon the supporting and movable plates, said teeth being adapted for engagement with the key after the actuation of the lever.

2. In a locking device for association with the lock of a door, the combination with a supporting plate adapted to be secured with respect to the lock, said plate having a keyhole in register with the lock keyhole, a movable plate mounted on the supporting plate and also having a keyhole, spring means tending to hold the movable plate and the keyhole therein in registration with the keyhole in the supporting plate, a lever pivoted to the supporting plate, said lever having an eccentric portion for engaging the movable plate so that when said lever is actuated, the movable plate will be brought into engagement with an inserted key.

3. In a locking device for association with the lock of a door or the like, the combination with a plate adapted to be secured with respect to the lock, said plate having a keyhole in register with the lock keyhole, a movable plate mounted on the supporting plate and also having a keyhole, spring means tending to hold the movable plate and keyhole therein in register with the keyhole of the supporting plate, said keyholes having teeth about their circular faces, said teeth being adapted for engagement with the shank of a key, a lever pivoted to the supporting plate, said lever having an eccentric portion adapted for engagement with the edge of the movable plate, said teeth being brought into engagement wth an inserted key after the actuation of said lever the end 26' of the lever during actuation being brought into frictional engagement with the supporting plate to assist in holding said lever in its locking position.

875,966. EYEGLASS-FRAME. WILLIAM D. THOMAS, New York, N. Y. Filed Nov. 1, 1906. Serial No. 341,521.



1. The combination with an eye-glass frame, of pad supports depending from the posts of the frame and each having a plurality of screw threaded perforations and nose

pads provided with threaded stems for engagement with the perforations of said depending supports at intervals along said supports whereby the pads may be adjusted bodily toward and away from the surface of the nose and also in different positions along the surface of the nose.

2. The combination with an eye-glass frame provided with bifurcated supports, of nose pads adjustably seated in the branches of the bifurcated supports.

3. The combination with an eye-glass frame provided with bifurcated supports, of nose pads provided with stems, the said stems having a screw threaded engagement with the branches of the bifurcated supports.

875,967. VETERINARY SURGICAL FLOAT. CHARLES TIETZ, Chicago, Ill., assignor to Sharp & Smith, Chicago, Ill., a Corporation of Illinois. Filed Aug. 12, 1907. Serial No. 388,109.



1. In a veterinary surgical float, the combination with a rasp-head, of an adjustable handle comprising a tube provided with a lateral opening, a bearing-plate in the tube having a projection protruding through said opening, a stem telescopically fitting in said tube to be engaged by said plate, and a sleeve rotatably fitting about the tube and provided with an inner cam-surface to engage said projection, for the purpose set forth.

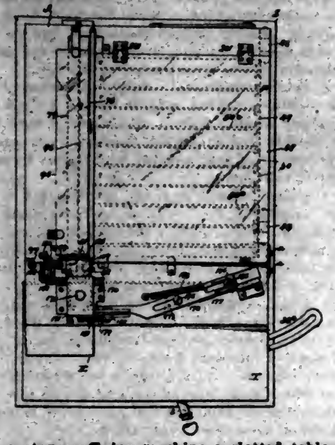
2. In a veterinary surgical float, the combination with a rasp-head, of an adjustable handle comprising a tube provided with a lateral opening, a bearing-plate in the tube having a projection protruding through said opening, a stem telescopically fitting in said tube and having a flattened side engaged by said plate, and a sleeve rotatably fitting about the tube and provided with an inner cam-surface to engage said projection, for the purpose set forth.

3. In a veterinary surgical float, the combination with a rasp-head, of an adjustable handle comprising a tube provided with alining lateral openings, a bearing-plate in the tube having projections protruding through said openings, a stem telescopically fitting in said tube and having a flattened side engaged by said plate, a stop on said stem, and a sleeve rotatably fitting about the tube and provided with an inner cam-surface to engage said projections, for the purpose set forth.

875,968. STAMP-AFFIXING MACHINE. WILLIAM C. VAN VLIET, New York, N. Y. Filed Apr. 24, 1905. Serial No. 257,147.

1. In a stamp affixing machine, a flat table composed of two parts separated to form a space between them to receive a sheet of stamps, means operating in said space for feeding the stamps forward, an auxiliary table composed of two parts separated to form a space to receive stamps from the first named table, means operating in said space of the last named table for feeding a row of stamps forward at right angles to the movement of the stamps in the first named table, a cutter located between the adjacent edges of the said tables a spring for operating said cutter, means for depressing said cutter against the tension of said spring, means for releasing said cutter and spring, a plunger for applying the stamps located at one end of the said auxiliary table and means for moistening the stamps, substantially as described.

2. In a stamp affixing machine, a table for supporting a sheet of stamps, a cover for said table and the stamps thereon, feeders beneath and operating on a lower level than said table, another table at right angles to and spaced from the first named table, a cover for the last named table and the stamps thereon, a cutter located in the space between said tables a spring for operating said cutter, means for depressing said cutter against the tension of said spring, means for releasing said cutter and spring and a feeder operating beneath said last-named table for moving the stamps thereon, substantially as described.



3. In a stamp affixing machine a slotted table for supporting a sheet of stamps, a cover for said table, feeders operating in the slots of said table and against the said cover for moving the stamps forward, an auxiliary table spaced from the said first named table and a cutter located between said tables a spring for operating said cutter, means for depressing said cutter against the tension of said spring, means for releasing said cutter and spring, substantially as described.

4. In a stamp affixing machine a slotted table for supporting a sheet of stamps, a cover for said table, feeders for said sheet of stamps and means for imparting an upward, forward, downward and backward motion to said feeders, an auxiliary table spaced from the said first mentioned table, and a cutter located between said tables a spring for operating said cutter, means for depressing said cutter against the tension of said spring, and means for releasing said cutter and spring, substantially as described.

5. A ratchet wheel, a lever and pawl for rotating the same, a cam on said wheel, a plate held to be reciprocated by said cam, another plate to which the said pawl is pivoted and which is reciprocated by the lever, substantially as described.

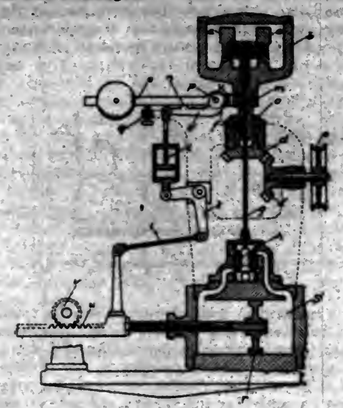
[Claims 6 to 31 not printed in the Gazette.]

875,969. MECHANISM FOR PREVENTING RACING IN PRIME MOTORS. HENRY B. WARREN, Ashland, Mass. Filed Mar. 25, 1907. Serial No. 364,409.

1. In speed regulating mechanism, a servo-motor for the prime-mover, a controller for the servo-motor, centrifugal weights mounted on a support rotated by the prime-mover, operative connection between the centrifugal weights and the controller, means to maintain a definite normal axial position of the support for the weights and means to produce temporary displacement of said support from its normal axial position.

2. In a speed regulating mechanism, a servo-motor for the prime-mover, a controller for the servo-motor, centrifugal weights mounted on a weighted support rotated on a vertical axis, operative connection between the centrifugal weights and said controller, means to maintain a definite normal axial position of said weighted support and means to produce temporary displacement thereof from its normal axial position, when the speed of the prime-mover changes.

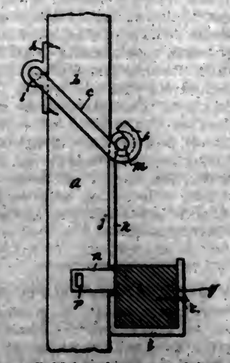
3. In speed regulating mechanism, a servo-motor for the prime-mover, a controller for the servo-motor, a centrifugal governor to operate the controller, a governor support rotated on a vertical axis, gravity operated means to produce and maintain a definite normal axial position of said support, and means to cause temporary displacement thereof, from its normal axial position when the speed of the prime-mover changes.



4. In speed regulating mechanism, a servo-motor for the prime-mover, a controller for the servo-motor, a centrifugal governor to operate the controller, a governor support rotated on a vertical axis, means to produce and maintain a definite normal axial position of said support, and adjustable means to change the definite normal axial position thereof, to regulate the normal speed of the prime-mover as desired.

5. In speed regulating mechanism, a servo-motor for the prime-mover, a controller for the servo-motor, a centrifugal governor to operate the controller, a governor support rotated upon a vertical axis, a bearing for the support, a counterbalance lever to hold the support in a definite normal plane of revolution, and means operated by the servo-motor to temporarily displace the governor support from such normal plane.

875,970. SAFETY SCAFFOLD-BRACKET. JOHN R. WATT, Detroit, Mich., assignor of one-half to John C. Johnson, Detroit, Mich. Filed July 1, 1907. Serial No. 381,625.

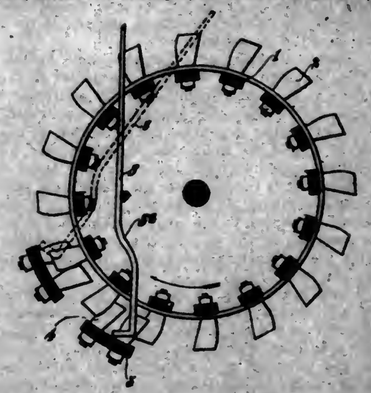


1. A safety scaffold bracket comprising a clevis open at one end thereof formed with parallel arms provided with hooks at their extremities and with a connecting cross arm intermediate said parallel arms, an upright toothed plate having a swiveled engagement intermediate the extremities with the cross arm of the clevis, and a support formed with an upright arm having its upper end removably suspended from the hooks of the clevis, and provided with a support at the lower end thereof.

2. A safety scaffold bracket comprising a clevis open at one end thereof formed with parallel arms provided with hooks at their extremities and with a connecting cross arm intermediate said parallel arms, an upright toothed plate having a swiveled engagement intermediate the extremities with the cross arm of the clevis, and a support formed with an upright arm having its upper end removably suspended from the hooks of the clevis, and provided with a support at the lower end thereof, said arm provided with a cross bar at its upper end to removably engage the hooks of the clevis arms.

3. A safety scaffold bracket comprising a clevis open at one end thereof formed with parallel arms provided with hooks at their extremities and with a connecting cross arm intermediate the parallel arms, an upright toothed plate having a swiveled engagement intermediate its extremities with the cross arm of the clevis, and a support formed with an upright arm having its upper end removably suspended from the hooks of the hanger and provided with a support at its lower end, the upright arm of the support provided with a rearwardly projecting clip, the teeth of said plate projecting downwardly above and below its swiveled engagement with the cross arm.

875,971. CYLINDER AND CONCAVE TOOTH STRAIGHTENER. CARL G. W. WERNICKE, Minneapolis, Minn. Filed May 8, 1907. Serial No. 371,745.



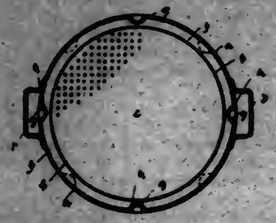
1. A cylinder and concave tooth straightener comprising a metal bar 5 having a laterally bent end 6 and formed with an angular tooth receiving slot 7 that extends into the laterally bent end 6 thereof, substantially as described.

2. A cylinder and concave tooth straightener comprising a metal bar 5, provided at one end with a laterally bent end portion 6, and formed with an angular slot 7 that extends from the body of said bar into the laterally bent end 6 thereof, the said bar 5 being bent or laterally offset at 5^a so as to throw the extended end of said bar approximately into line with that extremity of said slot 7 which terminates in the said laterally bent end 6, substantially as described.

875,972. VESSEL FOR COOKING AND LIKE PURPOSES. AUGUST WESSEL, Hanover, Germany, assignor to Vertriebscentrale für Haushaltartikel (Trisbert & Wessel) G. M. B. H., Hanover, Germany. Filed May 24, 1906. Serial No. 318,498.

1. A vessel comprising an outer receptacle having projections on the inner side of the wall adjacent to the top thereof, and an inner receptacle, centrally positioned within and spaced from the outer receptacle and provided with a peripheral flange located at the bottom thereof and of the same area, approximately, as and occupying the space between the outer and inner receptacles, whereby it is supported on the projections in raised position, the peripheral flange having notches in it in positions which correspond to the projections so that in certain relative positions of the two receptacles the notches register with

the projections and enable the inner vessel to pass the projections.

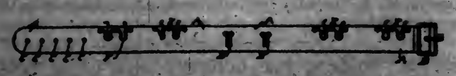


2. A vessel comprising an outer receptacle having convexo-concave inwardly extending projections formed in the wall adjacent to the top thereof, and an inner receptacle, centrally positioned within and spaced from the outer receptacle and provided with a peripheral flange located at the bottom thereof and of the same area, approximately, and as occupying the space between the outer and inner receptacles, whereby it is supported on the projections in raised position, the peripheral flange having notches in it in positions which correspond to the projections so that in certain relative positions of the two receptacles the notches register with the projections and enable the inner vessel to pass the projections.

3. A vessel comprising an outer receptacle having projections on the inner side of the wall adjacent to the top thereof, and an inner receptacle, centrally positioned within and spaced from the outer receptacle and provided with a downwardly flaring peripheral flange located at the bottom thereof and of the same area, approximately, as and occupying the space between the outer and inner receptacles, whereby it is supported on the projections in raised position, the peripheral flange having notches in it in positions which correspond to the projections so that in certain relative positions of the two receptacles the notches register with the projections and enable the inner vessel to pass the projections.

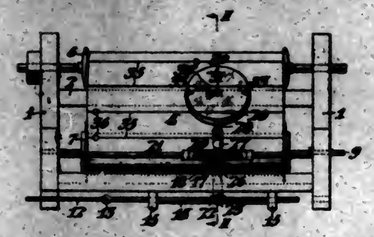
4. A vessel comprising an outer receptacle having convexo-concave inwardly extending projections formed in the wall adjacent to the top thereof, and an inner receptacle, centrally positioned within and spaced from the outer receptacle and provided with a downwardly flaring peripheral flange located at the bottom thereof and of the same area, approximately, as and occupying the space between the outer and inner receptacles, whereby it is supported on the projections in raised position, the peripheral flange having notches in it in positions which correspond to the projections so that in certain relative positions of the two receptacles the notches register with the projections and enable the inner vessel to pass the projections.

875,973. GARMENT-SUPPORTING BELT. FRANC O. WOOD, South Pasadena, Cal. Filed Nov. 11, 1905. Serial No. 287,749.



The wearing apparel abdominal suspending device, consisting of the combination of a flat flexible belt or band having rear attachments of upturned hooks and lateral-frontal attachments each consisting of rigid duplex looped engagers for the buttons between the front and rear of the belt or band, the front attachments having two entrances at the top thereof, the rear and front attachments being arranged so that they respectively engage with the rear strap and buttons at the fronts and sides of trousers and other articles of wearing apparel, and being rigidly constructed and fastened preventing horizontal sliding movement of the buttons so that one or more articles of wearing apparel may be suspended upon the abdominal region of the human body without compression of the abdomen, substantially as described.

875,974. RHYTHM-INDICATOR FOR MECHANICAL MUSICAL INSTRUMENTS. PHILIP WURST, Jr., Philadelphia, Pa., assignor to The Auto-Manual Piano Action Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Oct. 19, 1904. Serial No. 229,161.



1. In a mechanical musical instrument, the combination with a note sheet having symbols spaced longitudinally of said sheet, corresponding to the rhythm and transversely of said sheet in a definite relation to the predetermined position of the tempo controller; of means for progressing said sheet; a controller for varying the rate of movement of said sheet; and a transparent panel carried by said controller and bearing an index mark adapted to be moved to register with the symbols on said sheet, whereby the operator of the instrument may simultaneously vary the tempo and ascertain the precise moment for operating the expression device.

2. In a mechanical musical instrument, the combination with a note sheet having transverse lines spaced longitudinally thereon corresponding to the rhythm, said lines being provided with symbols located transversely of the sheet in a definite relation to the predetermined position of the tempo controller; of means for progressing said sheet; a controller for varying the rate of movement of said sheet; and a transparent panel carried by said member and bearing an index mark adapted to be moved to register with the symbols on said sheet, whereby the operator of the instrument may simultaneously vary the tempo and ascertain the precise moment for operating the expression device.

3. In a mechanical musical instrument, the combination with a note sheet; means for progressing the same; a movable member for controlling the rate of movement of said sheet; an index frame connected with said member comprising opposed pointers; and a transparent panel supported by said frame and bearing an index mark in alinement with said pointers, substantially as set forth.

4. In a mechanical musical instrument, the combination with a note sheet having symbols spaced longitudinally thereof corresponding to the rhythm of the selection, said symbols being located transversely of said sheet in a definite relation to the predetermined position of the tempo controller; of means for progressing said sheet; and a controller for varying the rate of movement of said sheet provided with means coöperating with said symbols to enable the operator to ascertain the precise instant at which an accent or beat occurs.

875,975. REINFORCED CONCRETE FLOORING. WILLIAM P. ANDERSON and LOUIS H. NOLTE, Cincinnati, Ohio, assignors to Ferro-Concrete Construction Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Jan. 2, 1906. Serial No. 294,065.



1. A concrete construction consisting of concrete beams reinforced with longitudinal metal rods and a concrete flooring supported by the beams in combination with

brackets with divergent legs straddling the beams, supporting rods located upon the brackets, rods located transversely to the supporting rods and having upwardly curved arcs formed therein to rest upon the supporting rods.

2. A concrete construction consisting of concrete beams reinforced with longitudinal metal rods and a concrete flooring supported by the beams in combination with brackets located in the concrete and straddling the beams, supporting rods located upon the brackets and rods transverse to the supporting rods, one set of said rods being straight and passing beneath the supporting rods and the other set alternating with the said set and having arcs curved upward and resting upon the supporting rods.

3. A flooring to be molded in position consisting of a flat frame-work with longitudinal channels for molding the beams, brackets straddling the channels at intervals, supporting rods carried by the brackets and rods transverse to the brackets and having upcurved arcs to engage the supporting rods.

875,976. FIREPROOF AND PROTECTING GARMENT. EPHRIAM BALL, Norfolk, Va. Filed Apr. 16, 1907. Serial No. 368,455.



1. A non-combustible garment having an opening therein and spring controlled flaps or coverings adapted to close said opening.

2. A non-combustible garment having an opening, flaps covering the opening, spring means for closing said flaps, and a reinforcing lining on the edges of said flaps.

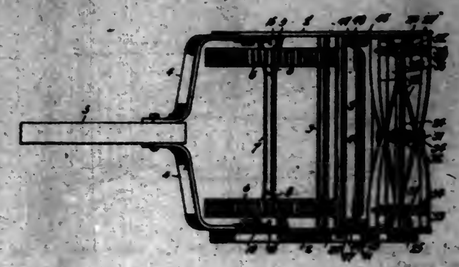
3. A non-combustible garment having an opening in the front thereof, of spring controlled flaps adapted to close said opening, a reinforcing strip around said flaps and shoulder straps having edges or rings therein.

4. A fireproof garment having an opening, flaps adapted to close said opening, resilient means for closing said flaps and an armored hood or cap provided with a convergent front portion.

5. A one-piece fireproof garment provided with an opening self closing flaps adapted to close the opening, shoulder straps provided with fastening means and a hood or visor having rib projecting means, and a flattened extension on said hood provided with projecting eye glasses or peep holes.

875,977. LAWN-MOWER. JOEL G. BARRI, Denver, Colo., assignor of two-thirds to Marcus A. King and Charles G. Houston, Denver, Colo. Filed Dec. 5, 1906. Serial No. 346,454.

1. In a lawn mower, a frame including side pieces, said side pieces being provided with bearing bosses, ground wheels between the side pieces, a shaft carrying said wheels, said shaft being journaled at one end in the bearing boss of one of the side pieces and projecting at its opposite end through the bearing boss on the other side piece, an external drive gear having a hub entering the latter named boss and forming a journal for the projecting end of the shaft, clutch mechanism between said hub and shaft to permit the shaft to turn independently of said gear in one direction, stationary and rotary cutters, and gearing between the rotary cutter and the drive gear.



2. In a lawn mower, a frame having side pieces provided with bearing bosses, a drive gear having a hub journaled in one of said bearing bosses, an axle journaled at one end in the other bearing boss and at its opposite end in the hub of the gear, said hub being provided with clutch teeth, a dog on the axle coöperating with said clutch teeth, stationary and rotary cutting members supported by the frame, and means for operating the rotary cutting member from the drive gear.

3. In a lawn mower, a frame having side pieces provided with bearing bosses, a drive gear having a hub journaled in one of said bearing bosses, an axle journaled at one end in the other bearing boss and at its opposite end in the hub of the gear, said hub being provided with clutch teeth, a dog on the axle coöperating with said clutch teeth, plugs closing the outer ends of the hub and the second named bearing boss, stationary and rotary cutting members supported by the frame, and means for operating the rotary cutting member from the drive gear.

4. In a lawn mower, a frame comprising side plates provided with inwardly extending bearing bosses, a drive gear arranged on the outer side of one of said plates and having a hub journaled in the bearing boss thereof, said hub being provided with internal clutch teeth, an axle journaled at one end in the bearing boss of the other frame plate and at its other end in the hub of the gear, said axle being provided with shoulders, ground wheels keyed on the axle between said shoulders and the respective bearing bosses, a dog upon the axle coöperating with the clutch teeth on the gear hub, detachable plugs closing the outer ends of the hub and boss in which the axle is journaled, stationary and rotary cutting members supported by the frame, and means for operating the rotary cutting member from the drive gear.

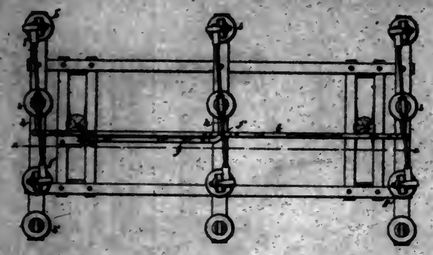
5. In a lawn mower, a frame having bearings, a drive gear having a hub journaled in one of the bearings and provided with internal ratchet teeth, an axle journaled at one end in the other bearing and at its opposite end in the hub of the gear, said axle being provided with a transverse slot, a gravity dog slidably mounted in said slot to coöperate with said ratchet teeth, ground wheels mounted on the axle, stationary and rotary cutting members supported by the frame, and means for operating the rotary cutting member from the drive gear.

[Claims 6 to 8 not printed in the Gazette.]

875,978. ELECTRIC SWITCH. FRANK G. BAUM, San Francisco, Cal. Filed Oct. 24, 1905. Serial No. 284,182.

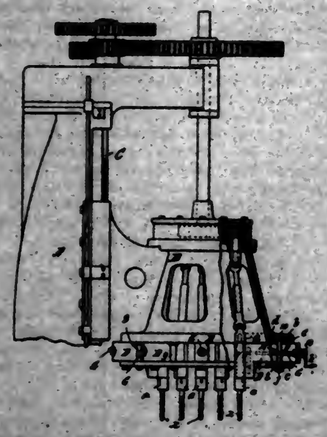
An electric switch for high tension circuits, comprising a frame having upright and horizontal members, three rows of insulators mounted thereon, each row having two fixed insulators and an intermediate swivel insulator, arms carried by said swivel insulators and having portions forming blades at their extremities, metallic clamps on the adjacent fixed insulators and having diverging clips arranged with their openings directed oppositely, and in the path of the blades of said arms, crank arms extending from the swivel insulators, a connecting member or bar

joining the crank arms, a thrust bar connected to said connecting bar, a bell crank connected to said thrust rod,



and an operating rod connected to the other arm of the bell crank.

875,979. MULTIPLE DRILLING-MACHINE. FRANK B. BOCOSSLESKI, Springfield, Mass. Filed Feb. 7, 1906. Serial No. 299,904.

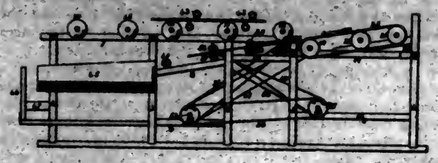


1. In a multiple drilling machine, the combination with a circular head comprising separated rigidly connected circular portions, a series of studs having connections with one of said portions of the head and projecting through and beyond apertures which are provided therefor in the other head portion, of a series of longitudinally slotted drill supporting arms located between said separated circular portions of the head and having sliding engagements about said studs, washers fitted about the studs in said apertures of the one of said circular head portions, and adapted to engage with the several arms, and nuts, screw threading on the extremities of the studs, against said washers, and for crowding the arms to be bound against the stud carrying circular portion of the head.

2. In a multiple drilling machine, the combination with a head made with a circular portion having series of independent sockets within its under side, a series of studs having heads which are fitted rotatably within said sockets, and depend therebelow, and threaded bushings surrounding said studs adjacent their heads and screw engaged in said sockets, being adapted to sustain said studs and to permit rotation thereof, of a series of longitudinally slotted drill supporting arms located below said circular portion of the head and having sliding engagement on said studs, and means connecting the arms with the studs to rotate therewith.

3. In a multiple drilling machine, the combination with a circular head, having a plurality of independent sockets, studs mounted in said sockets for rotation but not for translation, and a plurality of drill supporting arms connected with said studs for longitudinal adjustment thereon and also to swing therewith into and out of radial position with reference to the head.

875,980. SINGEING-MACHINE. WILLIAM W. BURSON, Chicago, Ill., assignor to Burson Knitting Company, Rockford, Ill., a Corporation of Illinois. Filed Apr. 17, 1903. Serial No. 153,087.



1. The combination of means for operating upon stockings carried by boards, means for carrying the boards to the operating means, and means for stripping the stockings from the boards.

2. The combination of burners, means for carrying the boards holding the stockings between the burners and means for stripping the stockings from the boards.

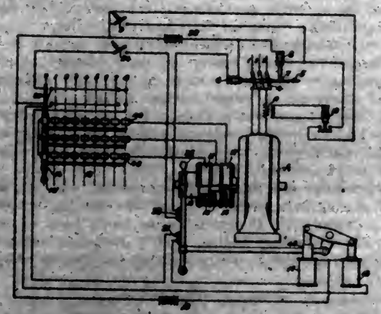
3. The combination of burners, means for carrying the boards holding the stockings between the burners and means for stripping the stockings from the boards on their return movement.

4. The combination of burners, means for carrying the boards holding the stockings between the burners, an endless carrier for returning the boards and means for stripping the stockings from the boards on their return movement.

5. The combination of burners, means for carrying the boards holding the stockings between the burners, means for stripping the stockings from the boards and a receptacle for the boards.

[Claims 6 to 24 not printed in the Gazette.]

875,981. MOTOR-CONTROLLING MECHANISM. HERBERT W. CHENEY, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed June 8, 1906. Serial No. 320,757.



1. In a starter for an induction motor, the combination with said motor, of a resistance in the rotor circuit thereof, means for gradually cutting out said resistance, and means for internally short-circuiting the rotor windings effective when the resistance has been fully cut out.

2. In a starter for an induction motor, the combination with said motor, of a starting resistance connected to the rotor slip-rings thereof, means for cutting said starting resistance out of circuit, and means for connecting the slip-rings internally, said last mentioned means being effective when the starting resistance has been fully cut out.

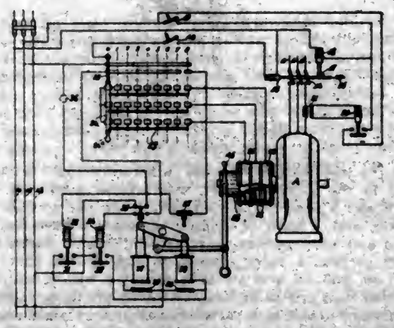
3. In a starter for a rotor-wound induction motor, the combination with said motor, of a starting resistance connected to the rotor slip-rings thereof, manually operated means for gradually short-circuiting said starting resistance, and electrically operated means for connecting said slip-rings internally when the starting resistance has been fully cut out.

4. In a starter for an induction motor, the combination with said motor, of a rheostat in the rotor circuit thereof, means for short-circuiting the rotor windings internally, and means for operating said short-circuiting means when the rheostat is moved into its position of lowest resistance, and for opening said short-circuit when the rheostat is moved out of such position.

5. In a starter for an induction motor, the combination with said motor, of a rheostat in the rotor circuit thereof, means which in one position short-circuits the rotor windings internally, and electromagnetic means for moving said short-circuiting means into operative position when the rheostat is moved into its position of lowest resistance, and for opening said short-circuit when the rheostat is moved out of such position.

[Claims 6 to 43 not printed in the Gazette.]

875,982. MOTOR-CONTROLLING MECHANISM. HERBERT W. CHENEY, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Mar. 30, 1907. Serial No. 365,450.



1. In combination, a device for internally bridging the slip rings of a rotor wound induction motor, two magnets for respectively moving said device into and out of bridging position, and two switches respectively, controlling said magnets and arranged to be automatically opened upon the movements caused by their respective associated magnets.

2. In combination, a device for internally bridging the slip rings of a rotor wound induction motor, a plurality of magnets for operating said device, and a switch controlling each of said magnets which is automatically opened upon the movement caused by its associated magnet.

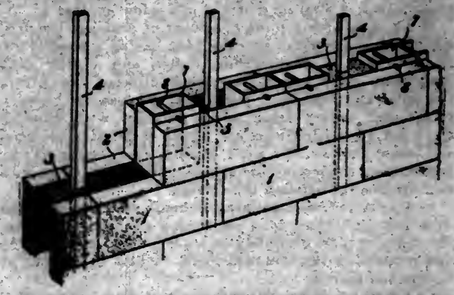
3. In combination, a device for internally bridging the slip rings of a rotor wound induction motor, a magnet for operating said device, a resistance connected across said magnet, and a switch in the circuit of said magnet which is automatically opened upon the operation of the bridging device.

4. In combination, a device for internally bridging the slip rings of a rotor wound induction motor, two magnets for moving said device into and out of bridging position respectively, a resistance connected across each magnet, and a switch in the circuit of each magnet which is opened upon the movement caused by its associated magnet.

5. In combination, an induction motor, an external resistance in the secondary circuit thereof, magnetically operated means in the motor for short circuiting said resistance, and a resistance in shunt to the energizing winding of said means.

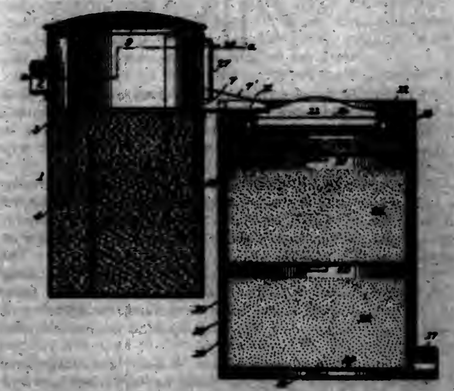
[Claims 6 to 26 not printed in the Gazette.]

875,983. CONCRETE CONSTRUCTION. JOHN B. CLAYTON, Kirkwood, Mo. Filed May 20, 1907. Serial No. 374,643.



A wall construction comprising an inner and outer portion each of which is made up of rectangular-shaped concrete slabs arranged in courses, an approximately ring-shaped device partially embedded in the inner face of each of said slabs, said slabs being so disposed that the ring-shaped devices in the inner portion of the wall are located oppositely to the ring-shaped devices in the outer portion of the wall, concrete posts interposed between said inner and outer wall portions and separated from each other to provide continuous air spaces, a vertically disposed metallic reinforcing member embedded in the concrete in each of said posts, and flexible connecting members secured to the ring-shaped devices in the oppositely disposed slabs of said inner and outer wall portions and being wrapped around the reinforcing members of the concrete posts; substantially as described.

875,984. PORTABLE APPARATUS FOR LIQUEFYING AND PURIFYING SEWAGE. FREDERICK J. COMMIN, Exeter, England, assignor to Cameron Septic Tank Company, a Corporation of Illinois. Filed Jan. 25, 1906. Serial No. 297,890.



1. A portable apparatus for the treatment of drainage comprising primary treating and filter tanks nestable for transportation and separable for installation; the primary treating tank having a nondisturbing inlet and a nondisturbing outlet, and the filter tank comprising an outer casing having a low outlet and a perforated inner casing disposed in said outer casing with a ventilating air passage between them, said inner casing having means for supporting filtering material.

2. A portable apparatus for the treatment of drainage comprising primary treating and filter tanks nestable for transportation and separable for installation; the primary treating tank having a nondisturbing inlet and a nondisturbing outlet, and the filter tank comprising inner

and outer casings disposed one within the other and forming a ventilating air passage between them, said inner casing being provided with movable trays for supporting separate layers of filtering material one below another.

3. An apparatus for the treatment of drainage comprising a portable primary treating tank having a nondisturbing inlet and a nondisturbing outlet, and a filter tank comprising inner and outer casings disposed one within the other and forming a ventilating air passage between them; said inner casing being provided with movable trays for supporting separate layers of filtering material one below another, the walls of said inner casing having perforations connecting the spaces between the trays with said air passage between the castings.

4. A tank for the treatment of house drainage provided with a nondisturbing inlet comprising a lateral inlet opening and a channel extending below and above said opening and communicating therewith, said channel being open at its top and bottom.

5. A septic tank for the treatment of drainage provided with a nondisturbing outlet comprising an outlet channel extending above and below the normal water-line of the tank and having its receiving mouth below said normal water-line, an outlet opening communicating with said channel at said normal water-line, and a supplementary outlet opening communicating with said channel above said water-line.

[Claims 6 to 9 not printed in the Gazette.]

875,985. SOAP CAKE. ARTHUR F. CONERY, Jr., Newark, N. J. Filed Jan. 11, 1907. Serial No. 351,857.



1. As an article of manufacture, a soap cake comprising a body of soap having the form of a body of revolution having a hub portion, and provided with a plurality of channels extending from the periphery inward to such hub portion.

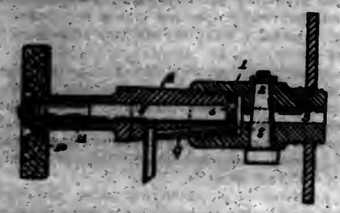
2. As an article of manufacture, a soap cake comprising a cylindrical body of soap having a smooth uninterrupted surface and having in its end faces grooves extending from the outside inward to a point relatively near the center of such cylindrical body.

3. As an article of manufacture, a soap cake comprising a cylindrical body of soap having grooves extending from the outside of the cylinder inwards towards its center, and having near the center an axial opening of non-circular outline.

4. As an article of manufacture, a soap cake comprising a body of soap of cylindrical form having a hub portion provided therein with an opening of non-circular form, and having grooves extending from such hub portion toward the periphery of the cake.

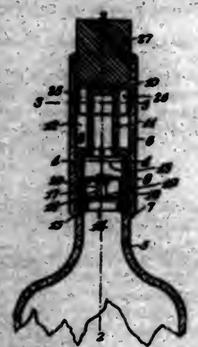
875,986. GAGE-COCK. THOMAS L. DUNN, Reading, Pa., assignor of one-half to Robert H. Dunnicon, Reading, Pa. Filed Apr. 1, 1907. Serial No. 365,606.

In a gage cock a two-part casing, one of which is in the form of a socket adapted to enter a boiler and is provided with a shut-off valve, and the other being adapted to screw into said socket and provided with a steam outlet and having at its inner end a segmental flange, a valve housed within the socket and having a single opening adapted to register with the steam outlet, a pin mounted upon the valve and lying between the ends of the segmental flange, a valve stem, and a spring back handle secured to said



stem, said pin and segmental flange adapted to limit the movement of the valve to a fraction of a revolution.

875,987. NON-REFILLABLE BOTTLE. GEORGE V. DOHERTY, Boston, Mass. Filed Mar. 4, 1907. Serial No. 360,303.



1. In combination, a bottle, a hollow stopper having a hole in the bottom thereof, said stopper consisting of a head and a body portion adapted to fit the neck of said bottle, and a stem of smaller diameter connecting said head and body portion, a valve seat located within said body portion, a valve adapted to slide within said body portion, and an arm pivotally mounted within said body portion, said arm being adapted to swing into contact with said valve to lock said valve against said seat, said stopper having an annular passage extending thereabout between said head and body portion, said stopper being provided with ports connecting the interior thereof with said annular passage above said valve, said head having grooves therein extending from said passage out of the upper end of said stopper.

2. In combination, a bottle, a hollow stopper having a hole in the bottom thereof, said stopper consisting of a head and a body portion adapted to fit the neck of said bottle, and a stem of smaller diameter connecting said head and body portion, a valve adapted to slide within said body portion, an arm pivotally mounted within said body portion, said arm being adapted to swing into contact with said valve to lock said valve against said seat, and two stops adapted to limit the movement of said arm in opposite directions, respectively, said stopper having an annular passage extending thereabout between said head and body portion, said stopper being provided with ports connecting the interior thereof with said annular passage above said valve, said head having grooves therein extending from said passage out of the upper end of said stopper.

3. As an article of manufacture, a hollow stopper provided with an annular groove and passages extending from said groove out of one end thereof, said stopper being provided with two ports connecting said groove to the interior of said stopper, a valve seat located within said stopper below said ports, a valve adapted to slide within said stopper toward and away from said seat, and an arm pivotally mounted within said stopper, said arm being adapted to swing into contact with said valve to lock said valve against said seat.

4. As an article of manufacture, a hollow stopper provided with an annular groove and passages extending from said groove out of one end thereof, said stopper being provided with two ports connecting said groove to the interior of said stopper, a valve seat located within said stopper below said ports, a valve adapted to slide within said stopper toward and away from said seat, and an arm pivotally mounted within said stopper, said arm being adapted to swing into contact with said valve to lock said valve against said seat, and two stops adapted to limit the movement of said arms in opposite directions respectively.

5. In combination a bottle stopper provided with an annular groove in its periphery and passages extending from said groove out of one end thereof, said stopper provided with two ports located above said groove and connecting said groove to the interior of said stopper, said ports being located out of alinement with said passages; a bottle having a neck in which said stopper is fast; a valve seat located below said ports; and a valve adapted to contact with said seat.

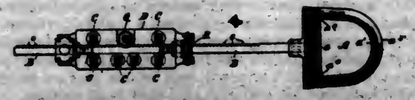
[Claim 6 not printed in the Gazette.]

875,988. PLOW. FRED S. FULLER, Greeley, Colo. Filed Feb. 10, 1905. Serial No. 245,038.



A ditching plow comprising a shear, and mold-boards fixedly connected together and to the shear; the upper ends *a* of the mold-boards being straight and horizontal and describing an obtuse angle and their forward edges *b* meeting at the prow of the plow and being dished or curved from the shear to the upper end of the plow, and each mold-board having a slightly dished or concave forward side *c*, a lower end *d* shorter than its upper end *a* and abutting against and corresponding in length to the upper edge of one arm of the shear, a rearwardly-curved rear edge *e* inclined downward and inward, and an outer edge *f* extending between the lower end *d* and the edge *e* and slightly curved forward.

875,989. COKE-EXTRACTING MACHINE. SYLVESTER GARNER, Covington, Va., assignor to Covington Machine Company, a Corporation of Virginia. Filed Nov. 10, 1906. Serial No. 342,821.



1. A device for drawing coke from coke ovens, consisting of a ram or handle having attached thereto, a flat plate of convenient shape narrowed toward the front and provided with a similarly shaped opening in its interior of size sufficient to enable the coke to fall through it and having a smooth under-surface, and the exterior edges beveled around the front and the sides.

2. A device for drawing coke from coke ovens, consisting of a ram or handle having attached thereto, a flat plate of convenient shape narrowed toward the front and provided with a similarly shaped opening in its interior of size sufficient to enable the coke to fall through it and having a smooth upper and under surface, and the exterior edges beveled around the front and the sides.

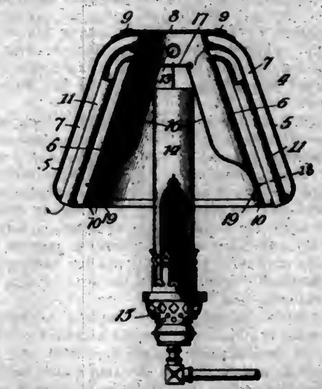
3. A device for drawing coke from coke ovens, consisting of a ram or handle having attached thereto, an auxiliary head composed of a flat plate of convenient shape narrowed toward the front and provided with a similarly shaped opening in its interior of size sufficient to enable the coke to fall through it and having a smooth under surface, and the exterior edges beveled around the front and the sides.

4. A device for drawing coke from coke ovens, consisting of a ram or handle having attached thereto, an auxiliary head composed of a flat plate of convenient shape narrowed toward the front and provided with a similarly shaped opening in its interior of size sufficient to enable the coke to fall through it and having a smooth upper and under surface, and the exterior edges beveled around the front and the sides.

5. In a shovel for drawing coke from coke ovens, the combination of a ram or handle, provided at the end with a suitable cross head, and an auxiliary head formed of a curved bar the bent ends of which are attached to each end of the cross head.

[Claims 6 to 9 not printed in the Gazette.]

875,990. HEATER. HOWARD GIDDINGS, Chicago, Ill. Filed Mar. 12, 1906. Serial No. 305,669. Renewed Nov. 7, 1907. Serial No. 401,165.



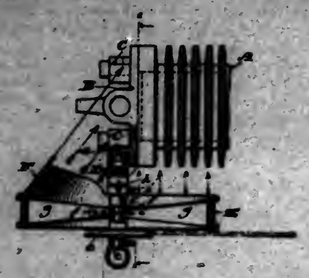
1. A heat-deflector of the character set forth comprising a drum having an inner wall and an outer wall, said drum being provided with openings in its lower end and with openings in its inner wall near its upper end, and pipes between said walls connecting said upper openings with said lower openings, for the purpose set forth.

2. A heat-deflector of the character set forth, comprising an annular drum having an inner wall and an outer wall, said walls being concentric with each other and forming an annular space between them, said drum being provided with openings in its lower end and with openings in its inner wall at its upper end, and pipes between said walls connecting the upper openings with the lower openings, for the purpose set forth.

3. A heat-deflector of the character set forth comprising an annular drum of frusto-conical form closed at its top and having an inner wall and an outer wall, said walls being concentric with the other, and having an annular space between them, the drum being provided with a series of openings in its lower end and with a series of openings in its inner wall at its upper end, and pipes connecting the openings in the inner wall with lower openings, for the purpose set forth.

4. A heat-deflector of the character set forth, comprising an annular drum of frusto-conical form closed at its top and having an inner wall and an outer wall, said walls being concentric with each other, and forming an annular space between them, the drum being provided with a series of openings in its lower end and with a series of openings in its inner wall at its upper end, pipes connecting the openings in the inner wall with lower openings, and a frame secured to the drum adapted to seat the deflector upon a chimney, whereby the heated air and products of combustion rising from the lamp are deflected downwardly through the pipes and discharged at the lower end of the drum, and whereby openings are provided in the lower part of the drum for permitting air to enter said annular space and be discharged therefrom in heated condition.

875,981. AIR-COOLING APPARATUS FOR EXPLOSIVE-ENGINES. JOHN E. GILSON, Port Washington, Wis., assignor to Gilson Manufacturing Company, Port Washington, Wis. Filed May 16, 1907. Serial No. 374,056.



1. An explosive-engine cylinder a rotary fan supported in connection with the cylinder parallel to same, and a circular casing for the fan having a hood-extension inclined inward toward the axis of said fan beyond the cylinder-head.

2. An explosive-engine cylinder, a bracket secured to the head of the cylinder, a rotary fan supported in connection with the bracket parallel to said cylinder and a circular casing for the fan having a hood-extension inclined inward toward the axis of said fan beyond the cylinder head.

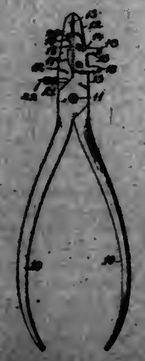
3. An explosive engine-cylinder, a bracket in detachable connection with the head of the cylinder, a rotary fan supported in connection with the bracket parallel to said cylinder, and a circular casing for the fan having a hood-extension inclined inward toward the axis of said fan beyond the cylinder-head.

4. An explosive-engine cylinder having head-bosses, a web connecting the bosses, a bracket attached to the web, a rotary fan supported in connection with the bracket parallel to said cylinder, and a circular casing for the fan having a hood-extension inclined inward toward the axis of said fan beyond the cylinder-head.

5. An explosive-engine cylinder having head-bosses, a web connecting the bosses, a bracket bolted to the web, a rotary fan supported in connection with the bracket parallel to said cylinder, and a circular casing for the fan having a hood-extension inclined inward toward the axis of said fan beyond the cylinder-head.

[Claims 6 to 11 not printed in the Gazette.]

875,992. DENTAL TOOL. HARRY A. GOLLOBIN, Newark, N. J. Filed Mar. 19, 1907. Serial No. 363,221.



1. A dental tool comprising a pair of hinged members having handle portions, the free ends of the jaws of the members having abutting faces adapted to distort a post, a pin projecting from one of the members, a plate secured to one jaw and arranged to shear in conjunction with the other jaw, and burnishing arms on the plate provided with perforations for the reception of a post.

2. A dental tool comprising a pair of hinged members having handle portions, the free ends of the jaws of the members having their abutting faces provided with recesses placed slightly out of alinement to distort a post pressed between them.

3. A dental tool comprising a pair of hinged members having handle portions, the jaws of the members having their abutting faces recessed to distort a post pressed between them, and a plate secured to one jaw and adapted to have a shearing action on the other jaw to cut off the post.

4. A dental tool comprising a pair of hinged members, the jaws of the members being arranged to distort a post placed between them, a plate secured to one jaw and having a shearing action with the other jaw, the shearing edge of the plate being recessed, and burnishing arms projecting from the plate beyond the jaw and having perforations therein.

875,993. SPOOL. PETER HARDMAN, Willimantic, Conn. Filed Feb. 20, 1907. Serial No. 358,361.



1. In a spool, a hollow body portion, a separate head portion therefor, and means for uniting said head and body portions comprising an annular wedge member secured to the outer side of the body portion and entering between said head and body portions.

2. In a spool, a hollow body portion, a separate head portion therefor, and means for uniting said head and body portions comprising an annular wedge member secured to the said body portion and entering within said head portion one surface thereof being serrated.

3. In a spool, a hollow body, a separate head portion therefor, and means for uniting said head portion and body comprising an annular split wedge member provided with a serrated outer surface secured to said body and engaging said head portion.

4. In a spool, a body portion, a spearate head portion therefor, and means for uniting said head and body portions comprising a laminated split wedge portion secured to said body portion and engaging said head portion.

5. In a spool, a body portion, a separate head portion provided with a central tapered aperture, a laminated split wedge member secured to said body portion engaging in said tapered portion of the head to unite said head and body portions.

[Claims 6 and 7 not printed in the Gazette.]

875,994. TIRE. WILLIAM D. HARRIS, Philadelphia, Pa., assignor to Harris Tire & Rubber Co., Philadelphia, Pa., a Corporation of Maine. Filed May 16, 1905. Serial No. 260,707. Renewed Feb. 2, 1907. Serial No. 355,472.

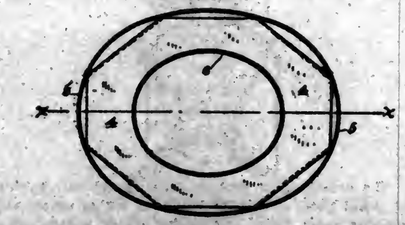
1. A tire including a body of fabric, a tread portion of resilient material outside of the same, and a series of fibers extending through the tread portion in a line substantially perpendicular to the wearing surface thereof and abutting upon a body of fabric, with a second body of fabric engaging said perpendicular fibers for spacing and holding them in position, substantially as described.

2. A tire having a tread consisting of a body of rubber and a body of fabric embedded therein, said body of fabric having weft threads extending in lines substantially parallel to the surface of the tread, with warp threads extending substantially perpendicular to the wearing surface of the tread, said tire having a body portion of fabric supporting said composite tread, substantially as described.



3. A tire having embedded in it a series of fibers extending in lines substantially perpendicular to its outside surface, said fibers being interwoven with each other, substantially as described.

875,995. BANDBOX-STAY FOR HATS. EUGENE C. HARRISON, Danbury, Conn., assignor to The Hine Box and Printing Co., Danbury, Conn., a Corporation of Connecticut. Filed Feb. 25, 1907. Serial No. 359,108.



In combination with a bandbox of ovaloid form, a hat stay flange made from a rectangular section of pasteboard centrally apertured, each of the four corners of said pasteboard being turned downwardly along lines diagonally related to the two sides forming a corner, said turned down corners forming four feet each triangular in form, the base of each triangle being located at the juncture with said stay flange and being so located with respect to the box interior as to contact therewith at each of its ends, thereby forming eight points of contact with the box interior, the location of each of which is determined by the disposition of said bases of the tri-angular feet.

875,996. PORTABLE DERAILER. STANLEY W. HAYNS, Geneva, N. Y. Filed Oct. 18, 1906. Serial No. 339,438.



1. A portable derail, consisting of a wheel-derailing-block adapted to be independently supported upon the rail, and a part carried by said wheel-derailing-block extended downwardly to a point below the base flange of the rail and adapted to engage the tie.

2. A portable derail consisting of a wheel-derailing block formed with an inverted trough-shape recess on its under side adapted to fit over the rail, the sides of the said recess being adapted to engage the base flange of the rail.

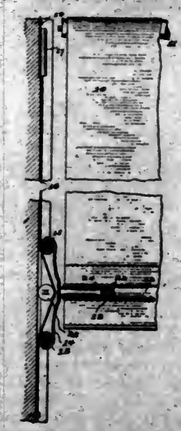
3. In a portable derail, a wheel-derailing block provided with an oblique wheel-flange groove, and formed with an inverted trough-shaped recess adapted to fit down over the rail, the sides of said recess being flared and extended downwardly in position to have supporting bearing against the base flange of the rail.

4. A portable derail comprising a wheel-derailing block and fastening means therefor, said parts being adapted to completely encircle the rail.

5. A portable derail comprising a wheel-derailing block provided with downwardly extending side flanges and vertical angle flanges disposed between said block and the side flanges.

[Claims 6 to 15 not printed in the Gazette.]

875,997. CURTAIN-HOLDING DEVICE. CHARLES L. HOPKINS, Chicago, Ill., assignor to The Curtain Supply Company, Newark, N. J., a Coporation of New Jersey. Filed Oct. 30, 1905. Serial No. 285,027.



1. In a curtain holding device, the combination of a curtain stick, a head at the end of the stick having movement longitudinally of the stick, a flexible band extending along the window casing and passing through the head, spring means secured to the window frame and adapted to maintain the flexible band in a tense condition, and rotary means in the head in engagement with the band upon one side of its center of rotation and adapted to engage the window frame upon its opposite side.

2. In a curtain holding device, the combination of a flexible band extending along the side post of a window frame, a stick carried by the curtain, a head at the end of the stick, a rotary member mounted in the head adapted to engage the window frame upon one side of the center of rotation and to engage the flexible band upon its opposite side, and spring means for maintaining the band in a tense condition, for the purpose set forth.

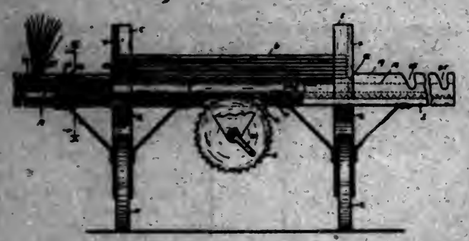
3. The combination of a curtain stick, a head at the end of the stick, a rotary member in the head, a flexible band extending along the window frame and passing through the head, and spring means for tensioning the flexible band, said flexible band engaging the rotary member and holding the latter in engagement with the window casing, substantially as and for the purpose set forth.

4. In a curtain holding device, the combination of a stick, a head at the end of the stick, a rotary member mounted in the head, a flexible band secured at one of its ends to the window casing, means at the other end of the band for maintaining the latter in a tense condition, said band passing through the head, the rotary member in the head normally engaging the window casing and being engaged by the band and thereby prevented from rotating, but adapted to be moved out of engagement with the window frame and thereby permitted to rotate when the stick is canted, so that the device may right itself.

5. The combination with a window frame, of a stick, a band, a band passing through the head, rotary means in the head over which the band passes, spring means for keeping the band taut and adapted to normally hold the rotary member in engagement with the window frame, and means for retracting the stick whereby to move the rotary member out of contact with the window frame so that the curtain may be raised or lowered.

[Claims 6 and 7 not printed in the Gazette.]

875,998. TOBACCO-SPEARING MACHINE. ANDREW HOVEY, Sun Prairie, Wis. Filed May 31, 1907. Serial No. 376,603.



1. In a machine of the described class, the combination of a support for a pile of bars, each adapted to support material such as tobacco plants, of a guide way extending outwardly from one of the piles, and means for successively discharging the bars from the pile, along said guide way,—said guide way being provided with recesses adapted to receive the plants in a position crossing the paths of the bars.

2. In a machine of the described class, the combination of a support for a pile of bars, each adapted to support material such as tobacco plants, of guide ways extending outwardly from the respective ends of the pile and provided with recesses adapted to receive the plants, and a reciprocating device adapted to discharge the bars from the bottom of the pile along said guide ways.

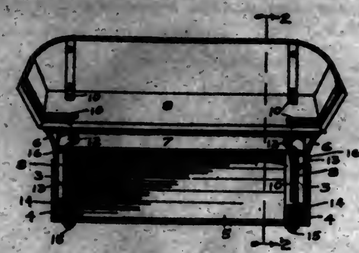
3. In a machine of the described class, the combination of a support for a pile of bars, each adapted to support material such as tobacco plants, of guide ways extending outwardly from the respective ends of the pile and provided with recesses adapted to receive the plants, and a reciprocating device adapted to discharge the bars from the bottom of the pile along said guide ways,—said device comprising a rack bar having a follower post adapted to engage the lowermost bar,—and a hand actuated gear wheel in mesh with the teeth on the rack bar.

4. In a machine of the described class, the combination of a slotted table, standards mounted upon the table and provided with inwardly extending projections, wings adapted to support a pile of bars on the table, a reciprocating device underneath the table provided with a projection extending through the slot therein, to a distance above the table substantially equal to the thickness of one of the bars, a way for the bars extending outwardly from the pile,—said standard having an opening adapted to permit the discharge of the lowermost bar past the standard into said way, and said way being adapted to support material such as tobacco plants, in the paths of the bars.

5. In a machine of the described class, the combination of a slotted table, standards mounted upon said table and provided with inwardly extending projections, and adapted to support a pile of bars on said table, a guide way extending outwardly from the table past the standards, and adapted to permit the discharge of the bottom bars from the pile, means for supporting material such as tobacco plants, at intervals upon the ways in the path of the outwardly moving bars, and a bar actuating member provided with a projection extending through the slot and adapted to push the lowermost bar from the pile.

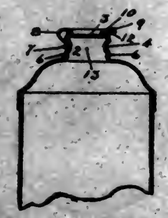
[Claims 6 to 12 not printed in the Gazette.]

875,999. VEHICLE-BODY. MATTHEW R. HULL, Connersville, Ind., assignor to Rex Buggy Company, Connersville, Ind., a Corporation of Indiana. Filed Apr. 16, 1907. Serial No. 368,506.



In a vehicle body, a buck-post iron consisting of a straight body to lay against the longitudinal dimensions of the post, having a foot at right angles and oblique to said body, said body being bent close around the off-set of the buck-frame and terminating with an edgewise bent top end.

876,000. CLOSURE FOR CANS. WILLIAM F. HYATT, Brooklyn, N. Y. Filed Sept. 10, 1904. Serial No. 223,958.

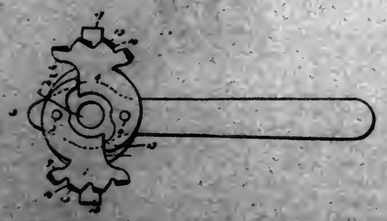


1. The combination with a sheet metal can having a sheet metal neck, of a cover having a spring catch, and a continuous sheet metal reinforcing collar secured to the neck by a bead spun in the sheet metal of the neck and collar, and serving for engagement by the spring catch carried by the cover.

2. In a sheet metal can, the combination with the sheet metal neck, of a continuous sheet metal reinforcing collar secured thereto by an annular bead spun in the neck and collar, a hinge ear integral with the collar and a cover having a hinge ear, said ears being hinged together by interlocking the tip of one in a slot in the other, and a spring catch integral with the cover and adapted to engage with the bead on the collar.

3. In a sheet metal can, the combination with the sheet metal neck thereof turned down inwardly at its mouth, of a metal collar encircling the neck and having a hinge ear integral with it for attachment of the cover and a bead spun in the neck and collar below the inwardly turned mouth, as and for the purpose described.

876,001. JAR-WRENCH. EDWIN F. IVES, Wallingford, Conn. Filed July 12, 1907. Serial No. 383,467.



1. In a jar wrench the combination with the handle and head thereof, of a pair of plates pivoted thereto each plate

formed with ends, and each plate formed with a finger adapted to bear upon the other plate on opposite sides of the pivots, substantially as described.

2. A jar wrench comprising a handle, a head at one end thereof, plates pivoted to said head in line with the longitudinal axis of said handle, said plates formed with outwardly extending jaws and with bearing faces at one side of the pivots, and each plate formed with a finger on the opposite side of the pivots adapted to bear upon the said face of the other plate, substantially as described.

3. The herein described jar wrench comprising a handle, a pair of plates pivoted to each side of the one end thereof, said plates each formed with jaws and each with a bearing face, and each with an inwardly extending finger adapted to bear upon the face of the other plate whereby the movement of either jaw will positively move the other jaw, substantially as described.

4. The herein described jar wrench, comprising a handle, plates pivoted to the outer end thereof in line with the longitudinal axis of the handle, said plates formed with outwardly extending ends, with bearing faces and each with a finger adapted to bear upon the face of the other plate whereby the movement of either jaw will positively move the other jaw, said ends formed with inwardly extending gripping teeth, substantially as described.

876,002. WATER-BOTTLE STOPPER. HENRY P. KRAFT, New York, N. Y., and MAXIMILIAN C. SCHWEINERT, West Hoboken, N. J. Filed Apr. 17, 1906. Serial No. 312,137.



1. A retainer for stoppers of water bottles having a funnel above the stopper, said retainer constituting a complete and separate article of manufacture and being provided with means for connecting one end of the same to a reduced portion of a stopper by hand, such means permitting said stopper to rotate relatively to said retainer, and with means for fastening the opposite end by hand directly to the wall of the funnel.

2. The combination with a hot water bottle having a funnel b extending above its mouth, and a stopper C screwing into the mouth of the bottle and provided at its upper end with a handle f having a portion of reduced width, of a retainer adapted to be fastened at one end by hand directly to the wall of the funnel in a fixed position thereon and to be connected at the opposite end by hand about the reduced portion of the stopper handle f, so as to permit rotation of the stopper relatively to the retainer, said retainer when so connected lying throughout substantially its entire length within the funnel when the stopper is in place, and being flexible and long enough to permit the stopper to lie over the edge of the funnel within easy reach but out of the way while filling the bottle, and being so strongly attached as to hold the loose stopper when the bottle is inverted with the stopper withdrawn.

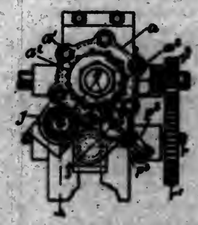
3. The combination with a retainer for water bottle stoppers or the like, adapted to prevent complete separation of the stopper from a bottle, of means for connecting the same to a reduced portion of a stopper, such means comprising a thin flat ring 6 having a single radial cut or passage, the shape and material of said ring permitting its ends to be readily manually separated by movement in a direction transverse to the plane of the ring to permit the passage of the stopper handle into the ring, said passage being normally so small as to prevent accidental escape of the handle out of the ring.

4. A retainer for stoppers of water bottles having a funnel b above the stopper, said retainer being provided at one end with a thin flat metal ring 6 having a single radial cut or passage, said ring adapted to have its ends readily manually separated by movement in a direction transverse to the plane of the ring sufficiently for the passage of the stopper handle into the ring, and said passage being normally so small as to prevent accidental escape of the handle out of the ring, and means for connecting the opposite end of the retainer to the funnel at such a point as to maintain the retainer entirely within the funnel when the stopper is in place, and to permit withdrawal of the stopper out of the funnel.

5. In a retainer for stoppers of water bottles having a funnel b above the stopper with an enlarged edge k, the combination of means for encircling a reduced portion of the stopper and permitting relative rotation of the latter, and a clip j adapted to be forced over the enlarged edge k of the funnel to engage the same frictionally and to thus retain the stopper in connection with the bottle.

[Claim 6 not printed in the Gazette.]

876,003. INTERNAL-COMBUSTION ENGINE. PHILIP C. LAWLESS, Hampstead, England. Filed Oct. 25, 1905. Serial No. 284,404.



1. In an internal combustion engine, a cylinder, a working piston in said cylinder mechanically connected with the crank shaft of the engine, means for supplying a charge of combustible mixture to the cylinder, means for supplying a charge of air to the cylinder, means separating the two charges, and means for transferring the charge of air to the space occupied by the mixture immediately after ignition thereof.

2. In an internal combustion engine, a cylinder, a working piston in said cylinder mechanically connected with the crank of the engine, a free serving piston in said cylinder, means for supplying a charge of combustible mixture to one side of the serving piston, means for supplying a charge of air to the other side of the serving piston, and means for transferring the charge of air to the space occupied by the mixture immediately after ignition thereof.

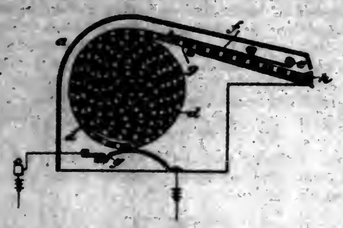
3. In an internal combustion engine, a cylinder, a working piston in said cylinder mechanically connected with the crank shaft of the engine, a free serving piston in said cylinder, means for supplying a charge of combustible mixture to the space between the two pistons, means for supplying a charge of air to the space on the side of the serving piston remote from the working piston, and a channel in said cylinder adapted to place both sides of the serving piston in communication immediately after ignition of the mixture.

4. In an internal combustion engine, a cylinder, a working piston in said cylinder mechanically connected with the crank shaft of the engine, a free serving piston in said cylinder, a piston rod connected with said serving piston and passing out of the cylinder, means for supplying a charge of combustible mixture to the space between the two pistons means for supplying a charge of air to the space on the side of the serving piston remote from the working piston, and grooves in said cylinder adapted on ignition of the mixture and consequent displacement of the serving piston, to place both sides thereof in communication.

5. In an internal combustion engine, a cylinder, a working piston in said cylinder mechanically connected with the crank shaft of the engine, a serving piston in said cyl-

binder, a piston rod connected with said serving piston and passing out of the cylinder, means for supplying a charge of combustible mixture to the space between the two pistons, an inclosed crank case, a valve controlled channel connecting the crank case and the space on the side of the serving piston remote from the working piston, and grooves in said cylinder adapted on ignition of the mixture and consequent displacement of the serving piston to place both sides thereof in communication.

876,004. FIRE-ESCAPE. EMERY LIBERTY, New York, N. Y. Filed Apr. 26, 1906. Serial No. 313,735.

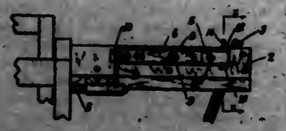


1. In a fire escape the combination of a reel, means for supporting it at the top of a building, means for locking and releasing said reel, a flexible ladder adapted to be wound on said reel, alarm devices located in various parts of the building, an electric circuit connected with said alarm devices for actuating them, a circuit controller disposed adjacent to said reel and in position to be engaged by the ladder when wound on the reel, said circuit controller being released by the unwinding of the ladder and being operative to hold the circuit closed while the ladder is in position for use.

2. The combination of a reel, means for supporting it at the top of a building, a flexible fire escape ladder connected to said reel and adapted to be wound thereon, means for locking and releasing said reel, alarm devices located in various parts of the building, an electric circuit connected with said alarm devices for actuating them, means actuated automatically by said fire escape mechanism for opening and closing said circuit, said means being operative to hold the circuit open while said ladder is being wound and to hold it closed while said ladder is in position for use.

3. In a fire escape the combination of a casing, a reel disposed therein, a flexible ladder adapted to be wound on said reel, means for locking and releasing said reel, a guide plate adjacent to said reel for supporting the free end of the ladder when in folded position, a spring roller disposed adjacent to said guide plate, a flexible strap connected at one end to said roller and provided at its other end with a hook adapted to engage said ladder for starting it when the reel is released and a stop device in said casing engaged by said hook when the ladder is drawn out.

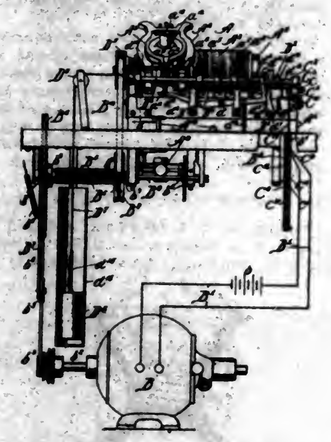
876,005. SHUTTLE-CHECK FOR LOOMS. WILLIAM MASON, Pawtucket, R. I. Filed Mar. 5, 1907. Serial No. 360,729.



1. In a shuttle box, the combination with the front wall and the shuttle-binder, of a metal hinge member upon the shuttle-binder and comprising a semi-cylindrical body portion with plain face and vertical pintle-bearing, and an integral hinge plate, the end of the binder resting against said plain face, and a pivot pin in said pintle-bearing and engaged in said front wall.

2. In a shuttle box, the combination with the front wall and the shuttle-binder, of a metal hinge member upon the shuttle binder and comprising a semi-cylindrical body portion with plain face and vertical pintle receiving opening, a bushing in said opening, an integral hinge plate, the end of the binder resting against the plain face of said plate, a pivot pin in said opening and engaged in said front wall, and clamping and bearing plates engaging opposite ends of the said body portion.

876,006. PHONOGRAPH AND OTHER SOUND-PRODUCING MACHINE. HERBERT S. MILLS, Chicago, Ill. Filed Jan. 17, 1907. Serial No. 352,672.



1. The combination with a movable sound-producing member of a sound-producing machine, of an electric motor operating continuously during the reproducing operation, a member driven by said motor, a power transmission spring connected to said driven member, and means connecting said spring to said sound producing member whereby said sound-producing member is driven by said motor through said spring, and the variations in the speed of the motor is absorbed by the spring, so that the sound-producing member is moved at a constant speed.

2. The combination with a phonograph, of an electric motor, a power transmission spring serving to actuate an operative part of said phonograph, means for transmitting power from said electric motor to said power transmission spring capable of slippage when the pull from the motor exceeds a predetermined maximum.

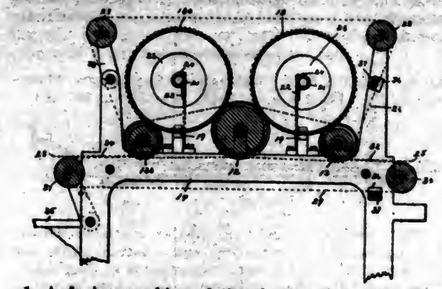
3. The combination with a phonograph, of an electric motor, a power transmission spring serving to actuate an operative part of said phonograph, and belt and pulley connections between said electric motor and said transmission spring.

4. The combination with a phonograph and an electric motor operating continuously during the operation of the phonograph and serving as a source of power therefor, of power-transmitting and motion regulating means for the phonograph, comprising a governor, and a resilient transmission spring rotated by the electric motor and transmitting power therefrom to the phonograph.

5. The combination with a phonograph and an electric motor serving as a source of power therefor, of power transmission and motion regulating means comprising a governor, a power transmission spring serving to actuate the phonograph and governor, and friction transmission means between said power transmission spring and said electric motor permitting acceleration of the speed of the motor without undue acceleration of the speed of the power transmission spring.

[Claims 6 to 30 not printed in the Gazette.]

876,007. MACHINE FOR DRYING SHEET MATERIAL. CHARLES E. MOSS, Boston, Mass. Filed Feb. 27, 1907. Serial No. 359,583.



1. A drying machine of the character stated, comprising a plurality of bed rolls, a hollow cylinder frictionally engaged therewith, means for internally heating the cylinder, and a belt engaged by the cylinder and rolls.

2. A drying machine of the character stated, comprising bed rolls, a hollow cylinder frictionally engaged with the bed rolls, a gas pipe extending into the cylinder and provided with burners, and a belt engaged with the cylinder and rolls.

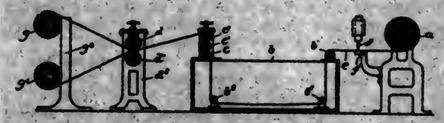
3. A drying machine of the character stated, comprising a plurality of bed rolls, a hollow cylinder frictionally engaged therewith, means for internally heating the cylinder, a belt engaged by the cylinder and rolls, and means for rotating the bed rolls to rotate the cylinder and move the belt.

4. A drying machine of the character stated, comprising a plurality of bed rolls, a hollow cylinder frictionally engaged therewith, means for internally heating the cylinder, a belt engaged by the cylinder and rolls, the belt being composed of a plurality of longitudinal sections arranged edge to edge and separated by crevices, and fixed guides for said sections.

5. A drying machine of the character stated, comprising a plurality of bed rolls, a hollow metal cylinder frictionally engaged therewith, a non-metallic belt engaging the cylinder and rolls, and a non-metallic member between the belt and cylinder to prevent contact between the material being dried and the metal body of the cylinder, the said material being passed between the said belt and the member without contact with metal.

[Claims 6 to 9 not printed in the Gazette.]

876,008. METHOD OF AND MEANS FOR MAKING ROOFING MATERIAL. FREDERICK C. OVERBURY, New York, N. Y., assignor to Flintkote Manufacturing Company, Rutherford, N. J., a Corporation of New Jersey. Filed May 26, 1906. Serial No. 318,903.



1. The herein described method of making material such as described, which consists in providing a strip of fibrous material of abnormal width, forming a weakening line in said fibrous material, saturating or impregnating said fibrous material with water-proofing compound, separating the two halves of the said strip along the said weakened line, and independently accumulating said halves in marketable masses.

2. The herein described method of making material such as described, which consists in providing a strip of fibrous material of abnormal width, saturating or impregnating said material with the water-proofing compound, separating said strip along its central longitudinal line into two independent strips, and winding said independent strips into separate rolls.

3. The herein described process of manufacturing materials such as described, which consists in the steps in the order named, to wit,—providing a sheet of fibrous material of abnormal width, forming a weakening line longitudinally of the said strip, treating the said strip with a water-proofing compound, dividing said strip along the weakening line, and winding the divided portions of the strip into separate rolls, substantially as described.

4. The combination with a reel for a roll of fibrous material of abnormal width, a tank for containing water-proofing compound, means for forming a weakening line longitudinally of said strip, and instrumentalities for separating said strip along said weakening line into two separate narrow strips and separately coiling them.

5. The herein described method of making material such as described, which consists of providing a strip of fibrous material of abnormal width, treating said strip with a water-proofing compound, forming in said strip a weakening line to permit said strip to be separated into two strips each of normal width, and progressively severing the material along said weakened line and simultaneously coiling up the two strips.

[Claims 6 to 8 not printed in the Gazette.]

876,009. ROOFING-STRIP. FREDERICK C. OVERBURY, New York, N. Y., assignor to Flintkote Manufacturing Company, Rutherford, N. J., a Corporation of New Jersey. Filed Mar. 18, 1907. Serial No. 362,987.



As an article of manufacture, an elongated roofing strip serrated at one of its edges and having one of its sides differentiated in color or tint from the other side, both sides being capable of withstanding elemental action, whereby the strip is adapted to be laid with either side outward.

876,010. METHOD OF AND MEANS FOR MAKING ROOFING MATERIAL. FREDERICK C. OVERBURY, New York, N. Y., assignor to Flintkote Manufacturing Company, Rutherford, N. J., a Corporation of New Jersey. Filed Mar. 25, 1907. Serial No. 364,480.



1. A roofing strip machine, comprising means for successively applying an adhesive and a longitudinally interrupted granular coating to a web of roofing material, a narrow longitudinal portion of the web being left uncoated, and web slitting means arranged to act on the said uncoated portion.

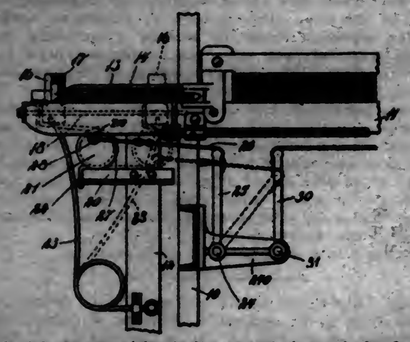
2. A roofing strip machine comprising means for successively applying an adhesive and a plurality of independent longitudinal granular coatings to a web of roofing material, said coatings being separated by a narrow uncoated portion of the web, and means for slitting the web along the said uncoated portion.

3. That improvement in the method of making coated roofing strips, which consists in successively applying an adhesive and a longitudinally interrupted granular coating to a web of flexible roofing material, to form a narrow longitudinal uncoated portion, and slitting the web along said uncoated portion.

4. That improvement in the method of making coated roofing strips which consists in successively applying an

adhesive and a plurality of longitudinal granular coatings to a web of roofing material, said coatings being separated by a narrow longitudinal uncoated portion of the web, and then slitting the web along said uncoated portion.

876,011. PICKING MECHANISM FOR LOOMS. CHARLES F. PERHAM, Lowell, Mass. Filed Aug. 27, 1904. Serial No. 222,480.



1. A loom comprising in its construction a shaft adapted to rotate at a uniform speed, a picker for projecting the shuttle through the shed, a lever or arm actuated by said shaft, and speed accelerating means operated by said lever for imparting to said picker a gradually accelerating motion.

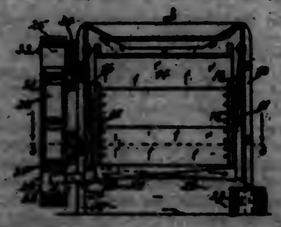
2. In a loom, shuttle-picking mechanism comprising a normally retracted yielding picker, a track, a disk adapted to roll on said track, a flexible band of which one end is secured to said picker, the other end secured to a stationary part, and the intermediate portion curved partially around the periphery of said disk and fastened at one point thereto, and means for causing said disk to roll upon said track.

3. In a loom, shuttle-picking mechanism comprising a normally retracted yielding picker, a track, a disk adapted to roll on said track and having a stud eccentrically located thereon, a flexible band partially encircling the periphery of said disk and fastened by one end to said picker and by the other end to a stationary part, and means connected to said eccentric stud for imparting to said disk a gradually increasing rolling motion.

4. In a loom, shuttle picking mechanism comprising a normally retracted picker, a disk, a surface on which said disk may roll, a flexible band connecting said disk and picker, and means for causing said disk to roll on said surface with a gradually increasing speed.

5. In a loom, picking mechanism comprising a shuttle-box, a slot formed longitudinally therein, a picker adapted to slide in said slot, a spring normally holding said picker at its outward extreme, a lever and speed accelerating means actuated by said lever for propelling said picker toward the inner end of said slot with a gradually increasing motion.

876,012. FANNING-MILL. PERRY POTTERF, Decatur, Ind. Filed Dec. 12, 1906. Serial No. 347,634.



The combination of, a fanning mill having a downwardly inclined grain discharge trough, a stirrup secured thereto near the discharge end, a trough extension held by friction between said stirrup and fanning mill trough, and a sacking elevator connected with and supported by the fanning mill with an opening into the lower end thereof into which said trough extension discharges, substantially as set forth.

876,013. REACH-BAR. WILLIAM H. RAKESTRAW, Bloomington, Ill. Filed Apr. 9, 1907. Serial No. 367,263.

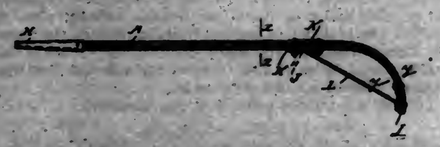


1. The combination, with a tubular reach-bar formed of a trough-shaped main portion, and a bottom plate, said parts having interlocking hook-shaped folds at their edges, and the said folds being arranged parallel with and close adjacent to the under surface of the said bottom plate so that no lateral projections are formed on the said reach-bar, of fastening brackets secured to the end portions of the said bar.

2. The combination, with a tubular reach-bar formed of a trough-shaped plate of sheet metal provided with longitudinal corrugations, and a plate forming one side portion of the said bar, said plates having their side edges overlapped and secured together, of fastening brackets secured to the end portions of the said bar.

3. The combination, with a tubular reach-bar formed of a trough-shaped plate of sheet metal and a plate of sheet metal which forms the bottom of the said bar, the sides of the said trough-shaped plate being shallower at one end of the bar and being provided with longitudinal corrugations which increase in depth as the depth of the said sides diminishes, said plates having their meeting edges overlapped and secured together, of fastening brackets secured to the end portions of the said bar.

876,014. VEHICLE-SHAFT. WILLIAM H. RAKESTRAW, Bloomington, Ill. Filed Apr. 22, 1907. Serial No. 369,587.



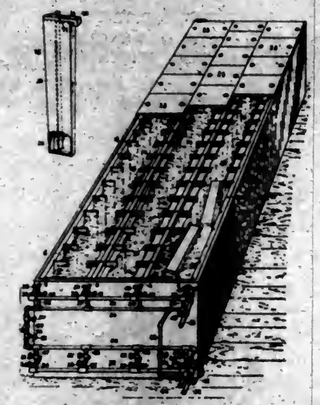
1. A shaft or pole, comprising a substantially rectangular bar of thin sheet metal, the main portion of the said bar being channel-shaped in cross section and provided at the bottom edges of its sides with inwardly projecting hook-shaped folds, and a bottom plate which extends the full width of the bottom portion of the said bar between its said sides and which is provided with hook-shaped folds which interlock with the aforesaid folds.

2. A shaft or pole, comprising a channel-shaped bar of thin sheet metal provided with longitudinal corrugations and having hook-shaped folds at the bottom edges of its sides, and a bottom plate also provided with hook-shaped folds which interlock with the aforesaid folds.

3. The combination, with a pair of tubular shafts, and a crossbar between them, each of the said shafts being formed of plates of thin sheet metal coupled together by interlocking folds arranged at their lower parts and having longitudinal channels between them, of brackets provided with ribs which engage with the said channels, and fastening devices securing the said brackets to the said shafts and crossbar.

876,015. ICE-MAKING MACHINE. THOMAS H. RAY, Somerville, Mass. Filed Mar. 1, 1907. Serial No. 360,027.

1. A hollow cross cut device, used in making artificial ice, comprising a cam having converging ice forming surfaces; means for removably securing the said cross cut device in contact with an ice forming plate of an ice machine; openings in the top portion of the can for the introduction of a warm medium into the can to melt off any film of ice contacting said surface; a partition dividing the interior of the can into two vertical chambers connected to or near the bottom of the can.



2. In an ice machine, a water tank; two or more cooling coils therein; metallic plates adjacent to said coils; an inlet header connected to said coils; an outlet header connected to said coils; a hot gas header; branch pipes connecting said hot gas header with said coils; inlet valves to said coils; outlet valves to said coils; valves in said branch pipes; a valve to control the hot gas header; a pump out pipe connected with said hot gas header, and a valve to control said pump out pipe.

876,016. DRILL-CHUCK. GEORGE R. RICH, Chicago, Ill., assignor to The Whitman & Barnes Manufacturing Company, Akron, Ohio, a Corporation of Ohio. Filed Apr. 22, 1907. Serial No. 369,618.

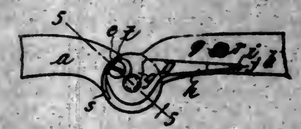


1. In a drill chuck, a hollow chuck body provided with oppositely disposed registering openings from the interior to the exterior thereof, a stop bar adapted to be thrust across said hollow interior through said registering openings, and having guide ways on its ends and a spring curved to embrace the exterior of said chuck body and adapted alternately to be slipped in and out of said guideways to lock and unlock said stop in place.

2. In a drill chuck, a cylindrical chuck body provided with oppositely disposed registering openings from the interior to the exterior thereof, a stop bar having guides in its ends adapted to be thrust lengthwise across said hollow interior and project through said registering openings, and a curved spring adapted to embrace the exterior of said chuck body and fit into said guides, whereby said stop bar may be alternately locked and unlocked.

876,017. ARTIFICIAL LIMB. GEORGE X. ROBERTS, Brattleboro, Vt. Filed Oct. 9, 1907. Serial No. 396,589.

1. In an artificial leg, in combination, upper and lower leg members and overlapped and pivotally jointed bars provided at the side of said members, one bar having a laterally extended, shouldered pivot stud, and the other a hole whereby it may be engaged over, and beyond the shoulder of, said stud, and said latter bar having a plate shiftable thereon, and provided with a recess, opening to the edge thereof, and adapted by such recessed portion to engage with, and be disengaged from, the shouldered pivot.



2. In an artificial leg, in combination,—upper and lower leg members and endwise overlapped, and pivotally jointed, bars provided at the side of said members, one bar having a laterally extended shouldered pivot stud, and the other a hole whereby it may be engaged over said stud, and said latter bar having a plate pivotally connected and to swing thereon, provided with a recess, opening to the edge thereof, adapted by such recessed portion to engage with, and be disengaged from the shouldered pivot, and also provided with a spring-deflective extremity having an angularly turned end for detachable engagement in a socket which is provided therefor in the bar on which said plate is pivotally connected.

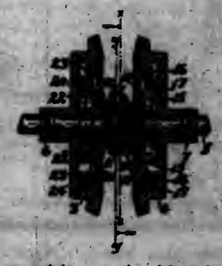
3. In an artificial leg, in combination, upper and lower leg members, bars affixed on the side of said members and endwise overlapped, means for detachably pivotally connecting the one bar to the other, and means for detachably locking one of said bars as a rigid continuation of the other.

4. An artificial leg comprising upper and lower members having bars rigidly affixed on the side thereof and endwise overlapped, with means for detachably pivotally connecting the one bar to the other and means for limiting the extent of swinging movement which one of the said bars may have relatively to the other.

5. An artificial leg comprising upper and lower members having bars rigidly affixed on the side thereof, endwise overlapped, and pivotally connected, one of said bars having a recess in its end portion, and a locking bolt slidably carried on the other of said bars and adapted to be engaged in and disengaged from said recess.

[Claims 6 to 16 not printed in the Gazette.]

876,018. GEARING. SAMUEL S. ROSE, Santa Clara, Cal., assignor to Rose Manufacturing Company, San Jose, Cal., a Corporation of Arizona. Filed Aug. 17, 1906. Serial No. 330,986.



1. Gearing, comprising a pair of loosely mounted gears, a driving shaft, a pinion thereon meshing with said gears, pivotally mounted shoes for bearing against the circular interior of said gears, a shaft for said gears, a collar having two sections mounted between said gears, one of said sections having an annular flange turnable in an end groove in the other section and said collar having a central annular groove, a lever and pins for shifting said collar and means for securing said shoes to said shaft, substantially as described.

2. Gearing, comprising a pair of loosely mounted gears, a driving shaft, a pinion thereon meshing with said gears, pivotally mounted shoes for bearing against the circular interior of said gears, a shaft for said gears, a collar hav-

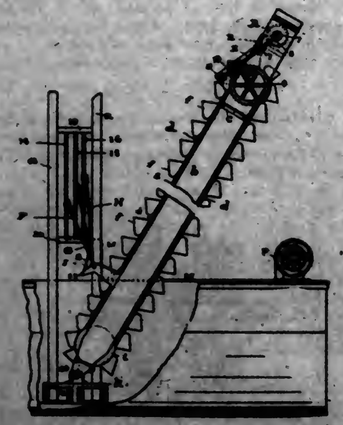
ing two sections mounted between said gears, one of said sections having an annular flange turnable in an end groove in the other section and said collar having a central annular groove, a lever and pins for shifting said collar, a horizontal lever for controlling the last named lever and means for securing said shoes to said shaft, substantially as described.

3. Gearing, comprising a pair of loosely mounted gears, a driving shaft, a pinion thereon meshing with said gears, pivotally mounted shoes for bearing against the circular interior of said gears, a shaft for said gears, a collar having two sections mounted between said gears, one of said sections having an annular flange turnable in an end groove in the other section and said collar having a central annular groove and sleeves surrounding said shaft having arms for pivotally sustaining said shoes, substantially as described.

4. Gearing, comprising a pair of loosely mounted gears, a driving shaft, a pinion thereon meshing with said gears, pivotally mounted shoes for bearing against the circular interior of said gears, a shaft for said gears, a collar having two sections mounted between said gears, one of said sections having an annular flange turnable in an end groove in the other section and said collar having a central annular groove, and flanges forming the walls of said groove a lever and pins for shifting said collar and means for securing said shoes to said shaft, substantially as described.

5. Gearing comprising in combination two oppositely positioned gears, a collar consisting of two sections, each of said sections being arranged to endwise engage the other section, and a shoe pivotally connected to each of said sections so as to bear against the interior of one of said gears upon the lateral movement of said collar in the direction of said gear.

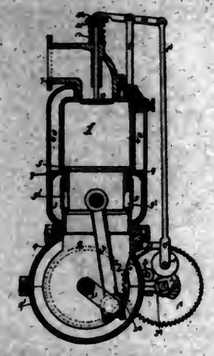
876,019. BUCKET ELEVATOR. JOHN ROSS, Tiburon, Cal. Filed Feb. 20, 1907. Serial No. 358,372.



1. In an endless-chain bucket elevator, a stationary frame, a swinging-frame, sheaves on the swinging-frame carrying the chain of buckets, an electric motor mounted on the swinging-frame above the upper set of sheaves, means connecting the axle of the sheaves with the shaft of the motor, conducting rods on the stationary frame, conductors for connecting the rods with a source of electric power, and a trolley-connection on the swinging-frame adapted to connect the motor in circuit with the source of power through the conducting-rods on the stationary frame in every position of the swinging-frame.

2. In an endless bucket-elevator, a stationary frame, a swinging-frame adjustable at varying angles to the stationary frame, sheaves on the swinging frame for operating the buckets, an electric motor mounted on the swinging-frame, means connecting the motor with said sheaves to drive the same, electrical conductors on the stationary frame, a source of electric power connected thereto, conductors on the swinging-frame connected to the motor and means for maintaining connection between the conductors on the swinging-frame and those on the stationary-frame in all positions of the swinging-frame when in operation.

876,020. TWO-CYCLE GAS-ENGINE. WILLIAM A. SALTER, Cedar Point, Kans. Filed Apr. 18, 1907. Serial No. 368,896.



1. In gas engine, the combination of a cylinder having a combustion chamber and a compression chamber with a communicating passage between them adapted to be opened by a piston at the end of its downward stroke and closed near the beginning of its upward stroke, a source of supply opening into the compression chamber having a throttle therein, and an exhaust valve in the combustion chamber variably timed operatively and adjustably controllable.

2. In a two cycle gas engine, the combination of a combustion chamber and a compression chamber with a communicating passage between them adapted to be opened by a piston at the end of its working stroke, a source of supply opening into the compression chamber, an exhaust valve in the combustion chamber timed to open before the opening of the passages between the combustion and compression chambers, means for varying the volume of the power gas admitted to the compression chamber, and means for varying the timing of the closing of the exhaust valve.

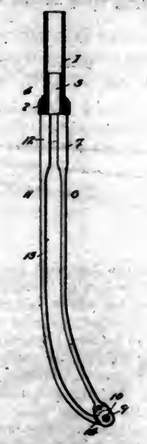
3. In a two cycle gas engine, the combination of a cylinder having a combustion chamber and a compression chamber with a communicating passage between them having a series of ports entirely encircling the combustion chamber, and adapted to be opened by a piston at the end of its working stroke, a supply port to the compression chamber mechanically opened during the pistons upward stroke and closed at or near the beginning of the pistons downward stroke, an exhaust valve in the combustion chamber timed to open before the opening of the inlet ports to the combustion chamber, and means for variably timing its closing points.

4. In a two cycle gas engine, the combination of a cylinder having a combustion chamber and a compression chamber with a communicating gas passage between them adapted to be opened by a piston at the end of its downward stroke, a supply port opening into the compression chamber and adapted to be opened by the piston during its upward stroke, and a variably timed exhaust valve in the combustion chamber mechanically operated.

5. In a two cycle gas engine, the combination of a combustion chamber and a compression chamber with a communicating passage between them adapted to be opened by a piston at the end of its downward stroke, a supply port opening into the compression chamber and adapted to be opened by the piston during its upward stroke, an exhaust valve in the combustion chamber timed to open before the opening of the passage between the combustion chamber and compression chamber and variably timed in its closing points, means for varying the volume of the power gas admitted to the compression chamber, and means for controlling the timing of the closing of the exhaust valve.

[Claims 6 to 10 not printed in the Gazette.]

876,021. SPRING-FORK. MURRAY SCHENCK, Middletown, Ohio, assignor to The Miami Cycle & Manufacturing Company, Middletown, Ohio, a Corporation of Ohio. Filed Mar. 18, 1907. Serial No. 363,137.



1. In a spring fork, the combination of a crown, an axle, and two spring arms at each side of the wheel having their upper ends rigidly secured in the crown and their lower ends separate and secured to the axle.

2. In a spring fork, the combination of a stem, a crown, an axle, two front springs one on each side of the wheel having cylindrical upper ends rigidly secured in the crown, flat spring portions moderately curved, and flattened lower ends embracing the ends of the axle, and two rear springs, one on each side of the wheel having cylindrical upper ends rigidly secured in the crown, flattened spring portions of greater curvature than similar parts of the forward springs, and flattened lower ends pivotally engaging the ends of the axle.

3. In a spring fork, the combination of a crown, an axle, and two spring fork members arranged one in front of the other on each side of the wheel, connected at their upper ends to the crown and at their lower ends independently to the axle; said fork members having a curvature, the concavity of which is presented toward the front, the curvature of the rear members being greater than that of the front members.

4. A spring fork for cycles comprising a head and spring-arms or tines depending therefrom and provided with bearings at their lower extremities, each tine consisting of double resilient arms extending from the head to the bearings.

876,022. SHIELD FOR ENLARGED JOINTS. JOHN H. SCHIFFBAUER, Pittsburg, Pa. Filed Sept. 20, 1906. Serial No. 335,468.



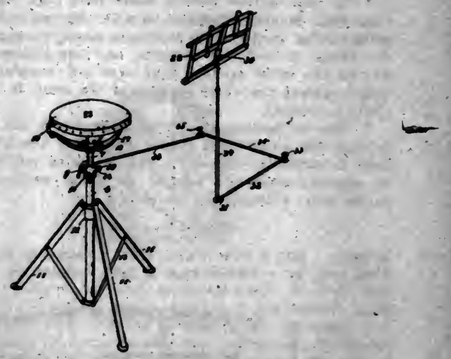
1. A shield of the character specified, composed of sponge or honeycombed rubber having seamless non-porous outer faces and being of concave shape and provided with an opening.

2. A shield of the character specified, having seamless non-porous top and bottom rubber faces, a cushion or cushions interposed between the same, said device being of concave shape with an opening therethrough.

3. A shield of the character specified, having seamless top and bottom non-porous rubber faces and having an interposed sponge or honeycombed rubber cushion or cushions, said device being concave with an opening located non-concentric and having the thickest cushion on the side of the opening where the body portion is widest.

4. A shield of the character specified, having a body provided with an opening therethrough located at one side of the center of the body, said body being composed of sponge or honeycombed rubber with seamless non-porous faces and being thickest on the side of the opening where the body is widest.

876,023. COMBINATION STOOL AND MUSIC-STAND. JOHN J. SCHURGER, Jr., and JOHN TAKACS, Cleveland, Ohio. Filed July 10, 1907. Serial No. 383,014.



1. A folding stool comprising a standard, two sets of radial arms hinged to the top thereof, one set having sockets in their outer ends, and a folding seat having two bows with connecting hinge pieces at their ends, said pieces having depending pins adapted to fit in said sockets, and the other set of arms having means at their outer ends to attach the same to the bows.

2. A folding stool comprising a standard, two pairs of radial arms hinged to the top thereof, and a folding seat having two bows hinged together at their ends, said bows having supporting connections to one pair of arms at the ends of the bows, and to the other pair of arms at the intermediate parts of the bows.

876,024. DRAFTING-PEN CLEANER. WILLIAM A. STEINEMAN, Los Angeles, Cal. Filed Aug. 27, 1907. Serial No. 390,406.



1. A drafting pen cleaner comprising a blade and a sheathing formed of suitable cleaning fabric, detachably fastened on the blade.

2. A drafting pen cleaner comprising a blade having serrations formed thereon and a sheathing formed of suitable cleaning fabric incasing said blade and stretched over said serrations.

3. A drafting pen cleaner comprising a handle and blade inserted in said handle, said blade having serrations in opposite edges near the handle, a sheathing formed of suitable cleaning fabric incasing the blade and engaged by said serrations, and a wedge-shaped push-pin inserted in the handle against the blade to hold the blade detachably in the handle, and the head of the push-pin engaging the end of the sheathing to assist in retaining the sheathing.

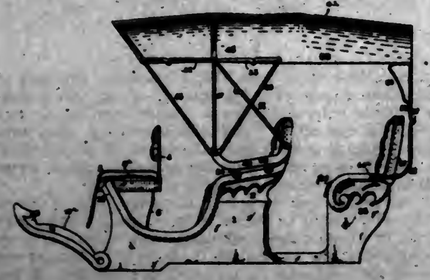
876,025. TRUNK. WILLIAM H. A. STOUT, Philadelphia, Pa. Filed June 10, 1907. Serial No. 378,049.



1. In combination with a trunk body, the reinforcing edge strip B, and bifurcated clip D, the said reinforcing strip having in the angle portion a slot C through which the shank of said clip projects, and the bifurcated clip having the outer portion bent over and adapted to impinge against the outer surface of the strip B, substantially as shown.

2. The reinforcing edge strip B, having in the angular portion the slots C, in combination with the bifurcated clips D, extending through slots C, in pairs and bent over in opposite directions against the inner surface of the trunk body, substantially as shown.

876,026. BODY FOR VEHICLES. FRANKLIN STRATTON, Buffalo, N. Y. Filed Aug. 5, 1905. Serial No. 272,808.



1. The combination with a vehicle body having a permanently fixed seat and a movable seat, of a collapsible top for said body having a rear folding part pivotally connected with the movable seat and adapted to form a covering for said seat when open and to be turned down by the closing of said movable seat, to form a shield to completely inclose one end of the fixed seat.

2. The combination with a vehicle body having a permanently fixed seat and a movable seat, of a top for said body having a folding rear part pivotally connected with the movable seat and adapted to form a top covering for said seat when open and a back shield for completely inclosing the fixed seat when said movable seat is closed and means for locking said folding part in its shielding position.

3. The combination with a vehicle body having a movable seat and a fixed seat, of a top having a collapsible part supported from the fixed seat and a folding part hinged to the collapsible part and pivotal connections between the folding part and the movable seat whereby the closing of the movable seat will turn down the folding portion of the top to completely inclose the rear of the fixed seat.

4. An improved vehicle body and top therefor having a body with at least one movable seat, a top having a folding part and two part pivotal side connections between the folding part of the movable seat whereby the folding part of the top will be folded down by the closing of the movable seat.

5. An improved vehicle body and top therefor having a body with at least one movable seat and one fixed seat, a top having a forward part above and supported from the fixed seat and a rear folding part hinged to the forward part and side connections, each consisting of an upper section pivoted to the folding part and an angular lower section pivoted to the upper section and the movable seat, said folding part being over the movable seat when open and in the rear of the fixed seat when said movable seat is closed, as set forth.

[Claims 6 to 17 not printed in the Gazette.]

876,027. FENCE-POST MOLD. BENJAMIN TANNER, Sturgis, Mich. Filed Apr. 22, 1907. Serial No. 369,590.



1. A mold open at the top and bottom and provided with spaced side walls having longitudinal reinforcing flanges the ends of which are over-lapped and pivotally united, and a roller mounted for rotation at the pivoted ends of the flanges and having its tread surface disposed flush with the lower longitudinal edges of the side walls when the mold is in operative position.

2. A mold open at the top and bottom and provided with spaced side walls having longitudinal reinforcing flanges, the ends of which are over-lapped and pivotally united, one end of each side wall being provided with an inwardly extending stop flange, end walls pivoted to the side walls and engaging the adjacent stop flanges, a roller disposed at the pivoted ends of the flanges and having its tread surface disposed flush with the lower longitudinal edges of the side walls when the mold is in open position, said reinforcing flanges being extended longitudinally beyond the adjacent pivoted end wall to form operating handles, and a fastening device secured to one of said handles and engaging the other for locking the side walls in engagement with the end walls.

3. A mold open at the top and bottom and provided with spaced side walls having longitudinal reinforcing flanges, the ends of which are over-lapped and pivotally united, one end of each side wall being provided with an inwardly extending stop flange, end walls pivoted to the side walls and engaging the adjacent stop flanges, a threaded pin forming the pivotal connection between the over-lapped ends of the flanges and having its lower end bifurcated, a roller journaled in the bifurcated end of the pin, nuts engaging the threads on the pin and bearing against the flanges, said reinforcing flanges being extended longitudinally beyond the adjacent pivoted end wall to form operating handles, and a fastening device secured to one of the handles and engaging the adjacent handle for locking the side walls in engagement with the end walls.

4. A mold open at the top and bottom and provided with spaced side walls, the opposite ends of which are bent laterally to form inwardly extending stop flanges, end walls pivoted to the side walls and engaging the adjacent stop flanges, reinforcing flanges formed integral with the side walls and each having one end thereof overlapping the end of the adjacent flange and its opposite end extended longitudinally beyond the adjacent end wall to form an operating handle, said handles having their longitudinal edges curved downwardly and one of said handles being provided with an opening, a threaded pin forming a pivotal connection between the over-lapped ends of the flanges, a roller journaled in the pin and adjustable vertically of the mold, clamping nuts engaging the threads on the pin for locking the roller in adjusted position, and a hook pivoted to one of the operating handles and engaging the opening in the adjacent handle for locking the side walls of the mold in engagement with the end walls.

876,028. SPINDLE FOR DIAL-LOCKS. WARREN H. TAYLOR, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Apr. 6, 1907. Serial No. 366,807.



1. A spindle for dial locks having a collar independent of the spindle but fixed thereto so as to turn therewith, and a weakening groove in front of and adjacent to said collar.

2. A lock spindle having a collar thereon, and provided with a lip or flange overlapping the outer edge of the collar, and with a weakening groove in advance of said lip.

876,029. SHAFT-SUPPORTER. SAMUEL TRACY, Topeka, Kans. Filed June 3, 1907. Serial No. 377,040.



1. The combination with a shaft holder including a shaft holding arm, of an arm carried by said holder and movable to engage the vehicle springs as and for the purpose set forth.

2. A shaft holder comprising a shaft engaging arm and a supplemental arm for engagement with the springs of the vehicle to hold the same rigid.

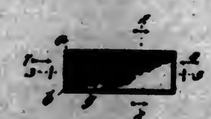
3. A shaft holder including means for sustaining the shafts in an elevated position and means for holding the vehicle springs rigid against downward movement with respect to the vehicle axle during the use of said sustaining means.

4. A shaft holder comprising a shaft engaging arm and a pivotally mounted supplemental arm for engagement with the springs of the vehicle as and for the purpose set forth.

5. A shaft holder comprising a bracket, a shaft supporting arm carried thereby and a pivoted supplemental arm carried thereby and capable of movement to an extended position and engage the vehicle spring, or to a folded position.

[Claims 6 to 11 not printed in the Gazette.]

876,030. PRINTER'S FURNITURE. WALLACE S. WARNOCK, Chicago, Ill. Filed May 11, 1906. Serial No. 316,878.



1. A filler comprising a strip or sheet metal frame formed in jointed sections and a diaphragm inclosed by the frame and serving to prevent relative movement between sections of the frame along the plane of the diaphragm.

2. A filler comprising a strip or sheet metal frame formed in sections dove-tailed together and a diaphragm inclosed by the frame and serving to prevent relative movement between sections of the frame along the plane of the diaphragm.

3. A filler comprising a strip or sheet metal frame formed in jointed sections and a diaphragm inclosed by the frame and serving to prevent relative movement between sections of the frame along the plane of the diaphragm, said frame being grooved to receive the diaphragm.

4. A filler comprising a strip or sheet metal frame formed in sections dove-tailed together and a diaphragm inclosed by the frame and serving to prevent relative movement between sections of the frame along the plane of the diaphragm, said frame being grooved to receive the diaphragm.

5. A filler comprising a strip or sheet metal frame formed in sections, and a diaphragm inclosed by the frame and serving to maintain the sections of the frame together.

[Claims 6 and 7 not printed in the Gazette.]

876,031. BURIAL-CASKET. FRANK N. WATT and HARRY C. KEELOR, Richmond, Ind. Filed May 4, 1906. Serial No. 315,171.



1. In a burial casket the combination, of the body having a hinged top and a hinged front, a lever connected to one of the lower corners of the hinged front and with its arm adapted to describe the segment of a circle inside the casket as the front is opened and closed, a telescopic arm pivoted to the inside of the top and to said arm of the lever, a cam carried on said telescopic arm, a permanent track against which said cam may engage, and a spring adapted to draw inwards on the arm of said lever, all substantially as shown and described and for the purposes set forth.

2. A burial casket comprising in combination a receptacle having a hinged top, and an outwardly and downwardly swinging front, a barrel pivoted at one end to the inside of the top, a lever connected to said front the arm of said lever being operative inside the casket, a wrist-rod secured at one end to said lever and tightly operative in said barrel, and a spring also secured to said lever and having a permanent point of attachment inside the casket, all substantially as shown and described and for the purposes set forth.

3. In a burial casket comprising the receptacle, an upwardly and backwardly swinging top, an outwardly and downwardly swinging front, a lever connected to said front by which the front may be opened and closed, and a telescoping arm pivoted to said lever and to said top whereby the front will normally open and close automatically with the opening and closing of the top, and whereby the top may be opened and closed if the front be held closed, all substantially as shown and described.

4. The combination in a burial casket, a swinging top, a swinging front, and means for indirectly connecting the top and the front whereby the front will normally be operated by the operation of the top, or if the front be held closed the top may be operated independently thereof.

876,032. RUNNING-GEAR FOR VEHICLES. JOHN D. WEEKS, Northumberland, Pa., assignor to Keystone Forging Company, Northumberland, Pa. Filed July 23, 1907. Serial No. 385,132.

1. The combination with an axle and a bolster, of a plate secured to the axle and provided at its rear end with

a boss having a shoulder therein, a king-bolt secured to the bolster and passing through said boss, said king bolt provided with a shoulder seated on the shoulder in the boss, said king-bolt having a conical portion below said boss, a brace, a boss on said brace having a conical bore to engage the conical portion of the king-bolt, and a nut on the lower end of said king-bolt and engaging the boss on the brace.



2. The combination with an axle, a bolster, a bolster iron secured to the bolster, and a perforated arm projecting rearwardly from the bolster iron, of a plate secured to the axle and projecting rearwardly therefrom, a boss on the rear end of said plate and provided with an internal annular shoulder, a king-bolt secured to the bolster and passing through the rearwardly projecting arm on the bolster iron, said king-bolt also passing through the boss on the plate secured to the axle and having an annular shoulder resting on the annular shoulder within said boss, the lower portion of said king-bolt having a conical portion and a threaded portion below the conical portion, a brace provided at its forward end with a boss having a conical bore to engage the conical portion of the king-bolt, and a nut screwed on the threaded portion of the king-bolt and bearing against the boss on the brace.

876,033. LANTERN ATTACHMENT. LEWIS D. WHITING, Millidale, Conn. Filed Sept. 25, 1906. Serial No. 336,066.



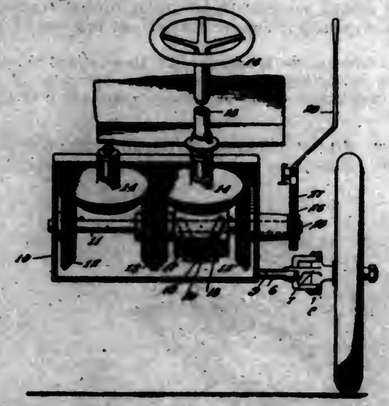
1. The combination of a lantern with a separate supporting base having an under face adapted to rest and stand upon a floor surface for supporting the lantern in an upright position thereon, and an extensible connection between the said base and lantern for holding the lantern at various heights above the said floor surface when the said base is resting thereon.

2. The combination of a lantern with a separate base having an under face adapted to rest and stand upon a floor surface for supporting the lantern in an upright position thereon, and uprights projecting upwardly from the said base and slidingly connected with the lantern for raising and holding the lantern on said uprights at various heights above the said floor surface.

3. The combination of a lantern having side tubes with a separate base and uprights secured to the said base, the said uprights being slidingly fitted friction tight within the said tubes for raising and holding the lantern at different heights on the said base.

4. The combination of a lantern with a separate base, uprights secured to and extending upwardly from the said base, sliding extensions fitted to the said uprights, the said sliding extensions being slidingly connected with the lantern, and means for holding the said sliding extensions when desired from moving on the said uprights.

876,034. STEERING DEVICE FOR AUTOMOBILES. THATCHER P. WILSON and WALTER W. WILSON, Longbeach, Cal. Filed Mar. 11, 1907. Serial No. 361,642.



1. The herein described means to steer an automobile, comprising in combination with the drag link of the automobile, a shifting bar pivotally mounted on the frame, one end of which is slidingly engaged to the drag link, and carrying on the rear end thereof a boss revolubly mounted thereon adapted to enter into a groove in the periphery of a revoluble cylinder; a revoluble cylinder keyed to a gear shaft and having an annular groove therein, the said gear shaft being workably connected with the steering wheel.

2. In a device to steer an automobile, a gear shaft having keyed thereon and spaced apart a pair of miter gears; a duplex miter gear loosely mounted on said shaft in the center thereof; bevel gears disposed in bearings in said frame and adapted to mesh with the bevel gear on said shaft; a steering column mounted on one of the last mentioned bevel gears; a grooved cylinder keyed on said shaft in combination with a shifting bar, one end of which is adapted to enter into the groove in said cylinder and the other end workably connected with the drag link.

3. In a steering device of the character herein described having mounted therein a rotary shaft carrying operating gears; a cylinder keyed on said shaft and having in the periphery thereof an annular groove adapted to receive and engage a roller on the rear end of a centrally pivoted shifting bar; a shifting bar, the other end of the shifting bar carrying a sliding block pivotally connected with the drag link of the automobile, the said gear shaft being operatively connected with the steering wheel.

4. The herein described supplementary steering gear comprising in combination, a hand lever having on the top end thereof a handle and on the bottom end thereof a toothed sector pivoted in the frame of the automobile concentrically with the sector teeth thereon; a rotary shaft carrying on one end thereof a spur gear adapted to mesh with the sector on the lever, the said rotary shaft carrying thereon a grooved cylinder in combination with a shifting bar workably connected at its forward end with the drag link and the rear end adapted to enter the slot in the cylinder and be operated thereby.

5. In a steering device for an automobile, a shaft revolubly mounted on the under frame of the automobile having bevel gear connection with the steering post, a drum keyed to said shaft having in its surface a spiral groove, a shifting bar pivotally and centrally mounted on the frame, a roller on one end of said shifting bar engaging with the groove in said drum, a sliding block mounted on the other end of said shifting bar and pivotally secured to the drag link of the automobile.

876,035. SOUND REPRODUCING AND MODIFYING DEVICE. WILLIAM W. YOUNG, Springfield, Mass. Filed Jan. 10, 1906. Serial No. 295,329.



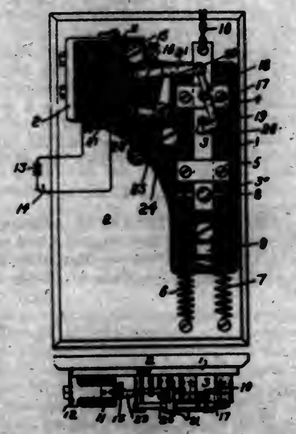
1. A device of the character described, comprising outer walls extended or flanged exteriorly and fastened together at these points, and one or more imperforate inner diaphragms.

2. In combination with a talking machine, an independent device of the character described, adapted to be placed in the sound conduit of the machine, comprising outer walls extended or flanged exteriorly and fastened together at these points, and having one or more air chambers between them.

3. A device of the character described, having outer walls of leather extended or flanged exteriorly and fastened together at these points, and one or more inner diaphragms of vibrative material.

4. The combination of a closed shell adapted to fit into a sound conduit of a talking machine, such shell consisting of pieces of leather attached to each other at their outer edges, and one or more sound modifying devices shaped to fit into said shell whereby one or a plurality of said devices may be employed at will.

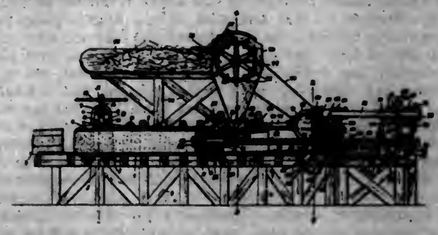
876,036. ELECTRICALLY-CONTROLLED RELEASING DEVICE. RALPH P. BARNES, Schenectady, N. Y. Filed Apr. 1, 1907. Serial No. 365,772.



1. A releasing device consisting of a bolt, a spring for actuating the bolt, a hook pivoted intermediate its ends and engaging the bolt to hold the same against the actuating spring therefor, a toggle arranged at one side of the hook and having its ends pivoted respectively to one end of the hook and to a fixed support so as to form a strut to lock the hook in place when the two members of the toggle are brought into alinement with each other, a pivoted cam lever arranged to engage with the toggle and break the joint thereof so as to trip the hook, an actuating spring for the cam lever, an electromagnet, and an armature for said electromagnet having a shoulder for holding the cam lever in its inoperative position against the tension of its actuating spring.

2. A releasing device consisting of a flat bracket, a spring actuated bolt slidingly mounted on said bracket, a locking hook for said bolt pivoted to said bracket, a toggle pivoted at one end to the hook and at the other end to the bracket, the toggle when straightened being substantially at right angles to the stem of the hook, a cam lever pivoted to the bracket at one side of the toggle, a spring for operating said cam lever to break the joint of the toggle, and an electromagnet rigidly supported by the bracket for normally holding said cam lever in an inoperative position against the tension of the operating spring.

876,037. STRAW-PRESS. HARVEY N. BINGHAM, McTaggart, Saskatchewan, Canada. Filed June 21, 1907. Serial No. 380,171.



1. In a straw press, the combination with a suitable structure and a baling press supported thereon, of a presser head exerting a prolonged pressure on the straw in said baling press at each operation, a rotating screw member reciprocating to the rear of said presser head and secured thereto, means for returning said member actuated at the extreme forward position of said member, and means at the extreme rear position of said member for checking said return movement and permitting the operation of said forward movement, substantially as described.

2. In a straw press, the combination with a suitable structure and a baling press supported thereon, of a presser head, a threaded shaft suitably connected with said presser head and adapted to turn therein and having a threaded portion to its length, a bearing for said shaft at the rear end thereof, a wheel having an internally threaded orifice therethrough corresponding to and turning on the thread of said shaft, means for causing the rotation of said wheel and means for rotating said shaft independently of said wheel, substantially as described.

3. In a straw press, the combination with a suitable structure and a baling press supported thereon, of a presser head, a shaft secured in said presser head and turning therein having a threaded portion to its length and suitably journaled at its rear end, a worm wheel having an internally threaded orifice therethrough corresponding to and turning on said threaded portion of the shaft, a main shaft journaled in suitable bearings in said structure and having a worm intermediate of its length operating the aforesaid worm wheel, and means operated by the rotation of said main shaft for rotating said threaded shaft in a reversed direction, substantially as described.

4. In a straw press, the combination with a suitable structure and a baling press supported thereon, of a presser head, a shaft secured in said presser head and turning therein and extending rearwardly therefrom and suitably journaled at the rear end and having a threaded portion to its length, a worm wheel having an internally threaded orifice therethrough mounted on said threaded portion of the shaft, a main shaft journaled in suitable bearings from said structure and having a worm intermediate of its length operating said worm wheel, a plurality of bearings extending upwardly from said structure and in longitudinal alinement, a shaft parallel to said threaded shaft and journaled in said bearings, a worm wheel mounted

at the end of said parallel shaft and meshing with the worm of said main shaft and operated thereby, and means connecting said parallel shaft with said threaded shaft for returning said threaded shaft by its rapid rotation within said worm wheel through which it extends, substantially as described.

8. In a straw press, the combination with a suitable structure and a baling press supported thereon, of a split presser head having a recess in its forward portion and bolts longitudinally arranged therein holding said parts together, a threaded shaft extending through the rear part of said presser head and turning therein and having a head turning in the aforesaid recess, and a threaded portion extending from said presser head rearwardly and a squared portion extending from said threaded portion rearwardly, a bearing supported on said structure at the rear end thereof, a sleeve having a squared orifice therethrough, through which said squared end extends, said sleeve turning in said bearing, a collar secured on said squared end in proximity to said threaded portion, a sprocket fixedly mounted on said sleeve, a slidably arranged bar secured to said structure having fingers projecting upwardly therefrom to the forward and rear of said collar, a pivoted lever having a forked end straddling said slidable bar and spring-held to mid-position thereon, bearings extending upwardly from said structure and laterally arranged, a main shaft journaled in said lateral bearings and having a worm intermediate of its length, a worm wheel having an internally threaded orifice and mounted on said threaded shaft and turning thereon, bearings extending upwardly from said structure and in longitudinal arrangement and alinement, a shaft journaled in said longitudinally arranged bearings, a worm wheel mounted at the end of said shaft meshing with the worm on said main shaft, a sprocket wheel loosely mounted on said longitudinal shaft, a chain connecting said sprocket with the aforesaid sprocket, said sprocket on said longitudinal shaft having a sleeve extending outwardly therefrom, a clutch mounted on said longitudinal shaft and suitably keyed thereto and adapted to engage said sprocket wheel and having an annular groove into which the aforesaid pivoted lever extends, a ratchet secured to the sleeve extending outwardly from said sprocket and a pawl spring-held in engagement with said ratchet, substantially as described.

[Claim 6 not printed in the Gazette.]

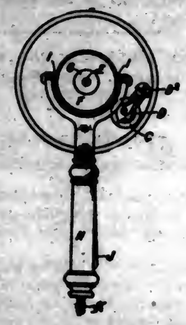
876,038. FRUIT-PICKER'S BUCKET. ERNEST E. BRYAN and WARREN B. TAYLOR, Paonia, Colo. Filed Mar. 13, 1907. Serial No. 362,789.



1. A fruit picker's bucket, having an open top, a bottom hinged to its lower edge, a spring clasp on the under side of the bottom and a catch device on the outside of the lower end of the bucket to engage the spring clasp, a flexible lining fixed in its top to extend down through the bottom and means to suspend the bucket from a person's neck and shoulders in the manner shown and described.

2. A fruit picker's bucket comprising an open-topped receptacle having a hinged bottom, means to retain the hinged bottom closed, a flexible lining fixed on the inside of the upper end of the receptacle and longer than the receptacle and adjustable suspenders detachably connected with the top edge of the receptacle, to operate in the manner stated.

876,039. HAND-MIRROR. HAROLD BURRELL, Sheffield, England. Filed July 8, 1907. Serial No. 382,780.



1. The combination with a suitable support, of a mirror rotatable on said support and having a clear space at one point and an electric lamp carried by the mirror and arranged at the back of said clear space.

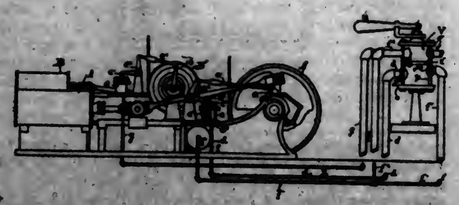
2. The combination with a suitable support and a mirror mounted on said support and rotatable thereon and having a clear space, of a lens arranged in registry with said clear space and an electric lamp carried by the mirror and disposed on the rear of said lens.

3. The combination with a suitable support, of a mirror, and a universal joint connection between the mirror and support whereby the mirror can be rotated and arranged at different angles relatively to the support, the mirror having a clear space and an electric lamp carried by the mirror and arranged in the rear of said clear space.

4. The combination with a rotatable mirror having a clear space, of an electric lamp located at the back of said clear space, a support on which said mirror is rotatably mounted a contact block pivotally connected to said support, spring contacts carried by said contact block, circular conductors carried by the mirror and wires connecting said conductors with the filament of said lamp.

5. The combination with a suitable support and a mirror swiveled on said support and having a clear space or opening, of an electric lamp arranged in the rear of said opening, electrical connections between the said lamp and said support and an electric switch carried by said support.

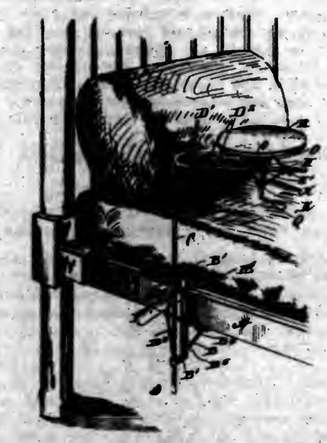
876,040. HOISTING APPARATUS. ELBRIDGE S. COLLEY, Portland, Me., assignor, by direct and mesne assignments, to The Colley Company, Portland, Me., a Corporation of Maine. Filed Feb. 17, 1906. Serial No. 301,545.



1. In a hoisting device, the combination with the main hoisting drum and auxiliary hoisting drum of a friction for each drum, an air operated device for operating each of said frictions, a compressed air reservoir, supply pipes connecting said reservoir with each of said air operated devices, double acting control valve through which both lines of pipe pass and an operating lever for said valve for controlling both lines of pipe and both frictions.

2. In a hoisting device of the class described, the combination with the clutch levers of the main hoisting drum and the trolley drum, of an air cylinder for each lever, a piston therein, a piston rod for said piston operatively connected with the clutch lever, a compressed air reservoir, supply pipes connecting said reservoir with said air cylinders and a double acting controlling valve through which both lines of pipes pass said valve having an operating lever for controlling both lines of pipe and the pressure on both air cylinders.

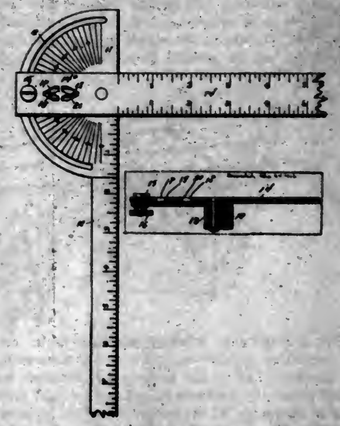
876,041. TABLE ATTACHMENT FOR BEDSTEADS. ALVIN O. CROSNO, Mode, Ill. Filed Sept. 18, 1907. Serial No. 393,551.



1. A table attachment for bedsteads comprising, in combination with the rail of a bedstead, a clamping plate having a lateral extension for engagement with the under surface of the rail, apertured angled portions upon said plate, a rod adjustably held in said apertures, a second plate which is angled and adapted to contact with the opposite face of the rail, screws passing through registering threaded apertures in the plates whereby the latter may be securely held to the rail, rods connecting the angled ends of the plate with the portion thereof which engages the under surface of the rail, horizontally projecting arms upon said adjustably held rod, a rack comprising a plurality of socket members having registering apertures to receive said arms, a table holding rod, socket members in which said table holding rod is adjustably held intermediate the arms, and connections between said socket members, as set forth.

2. A table attachment for bedsteads comprising, in combination with the rail of a bedstead, a clamping plate having a lateral extension for engagement with the under surface of the rail, apertured angled portions upon said plate, a rod adjustably held in said apertures, a second plate which is angled and adapted to contact with the opposite face of the rail, screws passing through registering threaded apertures in the plates whereby the latter may be securely held to the rail, rods connecting the angled ends of the plate with the portion thereof which engages the under surface of the rail, horizontally projecting arms upon said adjustably held rod, a rack comprising a plurality of socket members having registering apertures to receive said arms, a table holding rod, socket members in which said table holding rod is adjustably held intermediate the arms, and rods disposed at inclinations and connecting the socket members, as set forth.

876,042. TRANSFORMABLE PROTRACTOR, SQUARE, &c. ABRAHAM L. DARR, Carroll, Iowa. Filed Oct. 18, 1906. Serial No. 339,876.



1. In a protractor and square combined, two straight measures, each having parallel edges, pivotally connected to produce a square and to fold flat on top of each other, a protractor extending laterally from the end of the under measure to serve as a part of the under measure and the upper straight measure extended across the top of the protractor, as set forth.

2. In a protractor and square comprising two straight measures, each having parallel edges, pivotally connected to produce a square and to fold flat on top of each other, a protractor extending laterally from the end of the under measure to serve as a part of the under measure and the upper straight measure extended across the top of the protractor and means for adjustably fastening the upper measure to the protractor as set forth.

876,043. TOOTH-CROWN. THOMAS A. DAVIS, Warsaw, Ill. Filed April 30, 1907. Serial No. 371,102.



1. A tooth crown connection comprising a post secured to the root, a collar encircling the post, a plate secured to the collar, and conforming to the contour of the upper face of the root, and a crown having a recess for the reception of the collar and permanently secured to said plate and collar.

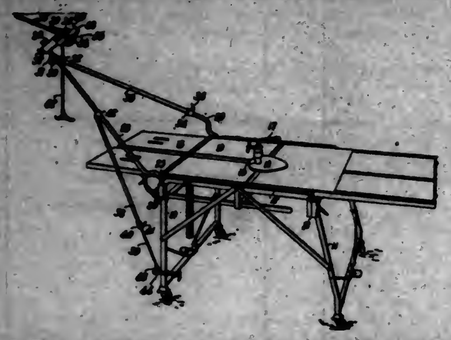
2. A tooth crown connection comprising a post secured to the root and projecting therefrom, a cap including a collar and plate, the collar being arranged to fit around the post, and the plate being shaped to conform to the contour of the upper face of the root, the edge of the plate being turned down or flanged to follow the contour of the outer surface of the root, and a crown having a recess for the reception of the collar and permanently secured to the collar and plate.

876,044. OPERATING-TABLE. JAMES H. DOWNEY, Gainesville, Ga. Filed Mar. 19, 1907. Serial No. 363,306.

1. The combination with a surgical table, of a truss frame comprising a plurality of slidably and pivotally connected members adjustable to varying angular positions with respect to each other and to the table, and a traction apparatus supported by said frame.

2. The combination with a surgical table, of a truss frame comprising a pair of main truss members, one of

which is slidably and pivotally connected to the other, means for locking said members in adjusted position, and a traction apparatus supported by the frame.



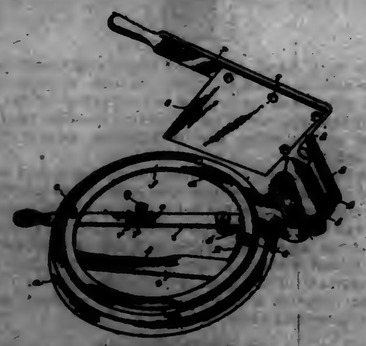
3. The combination with a surgical table, of a truss frame including a pair of main truss members, both of which are swiveled to the frame, the members being slidably and pivotally connected, and one of said members including a plurality of telescopic sections, means for rigidly locking the parts of the frame in adjusted position, and a traction apparatus supported by the frame.

4. The combination with an operating table, of a truss frame including a pair of main members swiveled to the table and adjustable to varying angular positions with respect thereto, a collar to which one of said members is connected, the collar being slidably mounted on the other member, means for rigidly locking the parts in any position of adjustment, and a traction means supported by the frame.

5. The combination with an operating table, of a traction apparatus including a truss frame, the members of which are adjustable with respect to each other and the table, a bracing bar for locking the frame to the table, and a traction means supported by the frame.

[Claims 6 to 12 not printed in the Gazette.]

876,045. COMPUTING CHEESE-CUTTER. HENRY F. DUNN, Elwood, Ind., assignor to Dunn Manufacturing Company, Anderson, Ind., a Corporation of Indiana. Filed Apr. 27, 1904. Serial No. 205,168.



1. In a device for cutting cheese and the like into portions, a knife, a rotary cheese-support, a lever for actuating the rotary cheese-support, a scale on said lever, and means coöperating with said scale for regulating the movement of the cheese-support so as to cut uniform pieces from various cheeses.

2. In a device for cutting cheese and the like into portions, a knife, a rotary cheese-support, a lever for actuating the rotary cheese-support, a scale on said lever, and means movable with reference to the scale for regulating the influence of the throw of the lever upon the movement of the cheese-support.

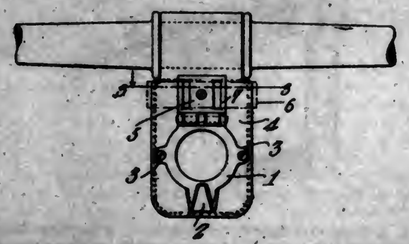
3. In a device for cutting cheese and the like into portions, a knife, a rotary cheese-support, a lever for actuating the rotary cheese-support, a stationary weight scale on the lever, and means movable on the lever with reference to the weight scale for regulating the influence of the throw of the lever upon the movement of the cheese support.

4. In a cheese cutter, the combination of a base, a rotary cheese table thereon, a cutting means, table adjusting means including a lever working in a horisontal plane, a cheese total scale having total weight graduations for different cheeses, a price scale slide, and means operating in connection with said total scale and price scale slide for varying the operation of said table adjusting means, substantially as specified.

5. In a cheese cutter, the combination of a base, a cheese table thereon, a cutting means, table adjusting means including a lever working in a horisontal plane and fulcrumed near one side of said base and provided with a handle at the opposite side thereof, a cheese total scale having total weight graduations for different cheeses, a price scale slide, and means operating in connection with said total scale and price scale slide for varying the operation of said table adjusting means, substantially as specified.

[Claims 6 to 18 not printed in the Gazette.]

876,046. NECK-YOKE RING. AXEL W. EDSTROM, Red Oak, Iowa. Filed Apr. 6, 1907. Serial No. 366,750.



In combination with a neck yoke center, a neck yoke ring comprising an annular body positively attached to the yoke center and having a flange engaging hook, a leaf hinged to the body and having spaced openings and a strap passing through said openings and around the neck yoke center and slidably engaging the same.

876,047. ANIMAL-TRAINER. THOMAS R. FELTS, Selma, Ala. Filed June 11, 1907. Serial No. 378,430.

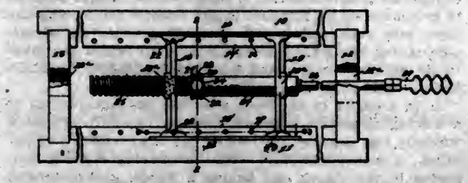


1. In a trainer for animals, the combination with bands adapted to be secured to the leg of an animal, of means to increase the throw of the foot of an animal toward the rear, and independent means to increase the throw of the foot to one side.

2. In a trainer for animals, the combination with bands adapted to be secured respectively above the knee and below the pastern on the front leg of a horse, of an adjustable elastic member connecting the two bands at the rear, and an adjustable elastic member connecting the bands on each side of the leg.

3. In a trainer for animals, the combination with bands adapted to be secured respectively above the knee and below the pastern on the front leg of a horse, of an elastic member connected at its lower end to the band positioned below the pastern, an inelastic adjusting member rigidly secured to the upper end of the elastic member, means providing an adjustable connection between the inelastic member and the band secured above the knee of the animal, elastic members secured at their lower ends to the band below the pastern and relatively weaker than the first-mentioned elastic member, inelastic adjusting straps rigidly secured to the upper end of the side elastic members and means connected to the band above the knee providing an adjustable connection between said band and said side members and their elastic straps.

876,048. EARTH-BORING MACHINE. PATRICK FENTON and FREDRICK W. WARCHTER, Knoxville, Iowa. Filed Apr. 12, 1907. Serial No. 368,095.



1. An earth boring machine, comprising a frame, angle plates on said frame, connected machine heads in said frame and engaging said angle plates, a feed bar mounted in said machine heads, screw connections between said feed bar and one of said machine heads, means for connecting an auger to said feed bar and means for rotating said feed bar.

2. An earth boring machine, comprising a frame, angle plates on said frame, machine heads invertibly mounted on said angle plates, connections between one of said machine heads and the angle plates, a screw box in one of the machine heads, a smooth box in the other machine head, a feed bar mounted in said boxes, an auger attached to said feed bar, and means for rotating said feed bar.

3. In an earth boring machine, angle plates formed with holes, a machine head and pins on said head engaging in said holes.

4. In an earth boring machine, angle plates formed with holes, machine heads, plates connecting said machine heads, and pins on said machine heads adapted to engage in said holes.

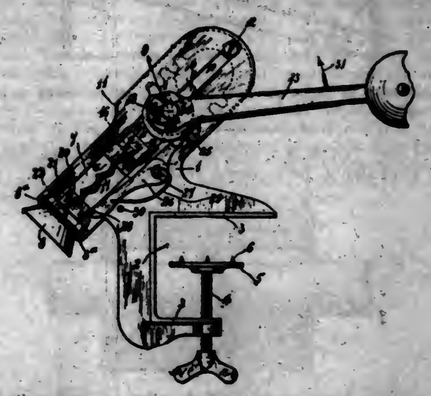
5. In an earth boring machine, machine heads arranged parallel with each other, one of said heads formed with a screw box, the other of said heads formed with a smooth box, plates connecting said heads, means for anchoring said heads, a feed bar mounted in the boxes of said heads, a gear on said feed bar, eye-plates on said feed bar adjacent said gear, a reversible pawl on said eye-plates engaging said gear and a handle removably and replaceably mounted on said eye-plates.

[Claim 6 not printed in the Gazette.]

876,049. CORK-EXTRACTING DEVICE. DANIEL FIALCOFSKY, Sorel, Quebec, Canada. Filed Jan. 28, 1907. Serial No. 354,576.

1. A cork extractor comprising the combination of a body adapted to be attached to a fixed support, a double rack slidably disposed on the body, a segmental gear adapted to successively engage the opposite sides of the double rack, a handle adapted to rotate the gear and provided with a cam surface, a corkscrew rotatably supported on the rack, a follower slidably carried by the body through which follower the corkscrew is disposed, and means coöperating with the cam adapted to lock the follower against movement.

2. A cork extractor comprising the combination of a body adapted to be attached to a fixed support, a double rack slidably disposed on the body, a segmental gear adapted to successively engage the opposite sides of the rack, a handle adapted to rotate the gear and provided with a cam surface, a corkscrew rotatably supported on the rack, a follower slidably carried by the body through



which follower the corkscrew is disposed, a pawl pivoted to the body having one end disposed in the path of movement of the cam and having the other end provided with a shoulder adapted to engage the follower, and resilient means for retracting the pawl from the path of the follower.

876,050. CONVERTIBLE WINDOW-SASH. HARRY J. FOLTZ, Akron, Ohio. Filed Mar. 3, 1906. Serial No. 303,968.

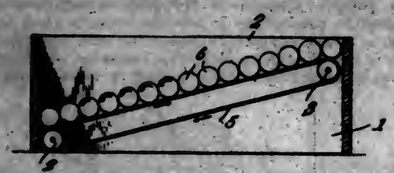


A slidable and tiltable window sash having its stiles divided vertically into outer sliding members and inner tilting members, a pivot connecting each pair of members, a keeper strip disposed longitudinally on the rear side of each sliding member and having its inner longitudinal portion flared away therefrom, and a transversely-slidable locking strip mounted longitudinally on the rear side of each tilting member, being arranged in locking position to overlap the two members and engage tightly behind the flared portion of said keeper strip.

876,051. INCUBATOR-TRAY. JACOB R. FRANTZ, Rock Island, Ill. Filed Aug. 21, 1906. Serial No. 331,507.

A device as described comprising a tray, rollers journaled therein at different altitudes, an endless inclined

apron supported wholly by said rollers and adapted to move around the same, the entire interior area between



the sides of the tray and above the apron being unobstructed.

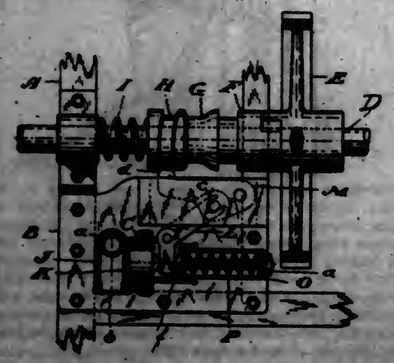
876,052. COUPLING. URI HASKINS, Chattanooga, Tenn. Filed Mar. 4, 1907. Serial No. 360,504.



1. In a device of the class described, a shaft, a member having a longitudinal bore to receive said shaft, said bore being eccentrically enlarged at one side of the shaft to form a space or chamber, a pair of wedging rollers arranged in said space, and adapted for frictionally holding the parts against relative rotation, springs disposed between the pair of wedging rollers, and cap plates removably attached to the ends of the member for retaining the wedging rollers in place.

2. In a device of the class described, a pair of shafts having marginal grooves, a coupling member arranged on the shafts and having a shaft-receiving bore provided with ribs to fit in said grooves, said bore being eccentrically enlarged at one side of the shafts to form a space or chamber, wedging rollers arranged in said chamber, springs disposed between the opposed faces of the wedging rollers, and cap plates detachably engaged with the ends of the coupling member.

876,053. SAFETY-CLUTCH FOR POWER-DRIVING PUMPS. WILLIAM H. HEARD, London, Ontario, Canada. Filed July 11, 1906, Serial No. 325,609. Renewed Nov. 9, 1907. Serial No. 401,493.



1. In a device of the class described the combination of a driving member; a driven member; a clutch whereby they may be put in or out of gear with one another; a sleeve rotatable with the driving member connected to the clutch and having a helical groove formed therein; a lever fulcrumed adjacent to the sleeve and adapted to engage the groove therein; a fluid conduit; and means adapted to be controlled by pressure in the conduit for moving the lever into engagement with the said groove, substantially as described.

2. In a device of the class described the combination of a driving member; a driven member; a shifting clutch whereby they may be put into or out of gear with one another; a sleeve rotatable with the driving member connected to the clutch and having a helical groove formed therein; a lever fulcrumed adjacent to the sleeve and adapted to engage the groove therein; a fluid conduit; means adapted to be controlled by pressure in the conduit for moving the lever into engagement with the said groove and an adjustable spring tensioning device tending to retain the lever in its normal position, substantially as described.

3. In a device of the class described the combination of a driving member; a driven member; a shifting clutch whereby they may be put into or out of gear with one another; a sleeve rotatable with the driving member connected to the clutch and having a helical groove therein; a lever fulcrumed adjacent to the sleeve and adapted to engage the groove therein; a fluid conduit; means adapted to be controlled by pressure in the conduit for moving the lever into engagement with the said groove; an adjustable spring tensioning device tending to retain the lever in its normal position and a spring tending to maintain the clutch in gear, substantially as described.

4. In a device of the class described the combination of a driving member; a driven member; a shifting clutch whereby they may be put into or out of gear with one another; a sleeve rotatable with the driving member connected to the clutch and having a helical groove formed therein; a lever fulcrumed adjacent to the sleeve and adapted to engage the groove therein; a fluid conduit; a cylinder communicating with the conduit; a piston therein; a lever of the first order fulcrumed with one end in contact with the piston and the other in engagement with the clutch lever; an adjustable spring tensioning device tending to maintain the levers in their normal position; and a spring tending to maintain the clutch in gear, substantially as described.

5. In a device of the class described the combination of a driving member; a driven member; a clutch whereby they may be put into and out of gear with one another; a sliding sleeve rotatable with the driving member, connected to the clutch and having a helical groove formed therein; a shifter movably supported adjacent to the sleeve, and adapted to engage the groove therein; a fluid conduit; and means controlled by pressure in the conduit for moving the shifter into engagement with the said groove, substantially as described.

[Claim 6 not printed in the Gazette.]

876,054. MOLD-RAMMING APPARATUS. HENRY HENDERSON, New York, N. Y. Filed Apr. 17, 1907. Serial No. 368,779.

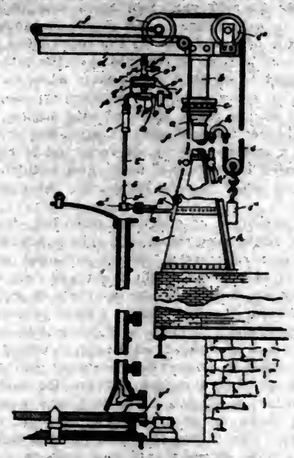
1. Mold ramming apparatus comprising a support swiveling about a vertical axis, a power device suspended therefrom at a point out of line with said axis, and a rammer shaft reciprocated by the power device.

2. Mold ramming apparatus comprising a support swiveling about a vertical axis, a power device suspended therefrom at a point out of line with said axis, a rammer shaft reciprocated by the power device and means for adjusting such point of suspension relatively to said axis.

3. Mold ramming apparatus comprising a vertically and horizontally adjustable support swiveling about a vertical axis, a power device suspended therefrom at a point out of line with said axis, and a rammer shaft reciprocated by the power device.

4. Mold ramming apparatus comprising a vertically and horizontally adjustable support swiveling about a vertical axis, a power device suspended therefrom at a point out of line with said axis, a rammer shaft reciprocated by the power device and means for adjusting such point of suspension relatively to said axis.

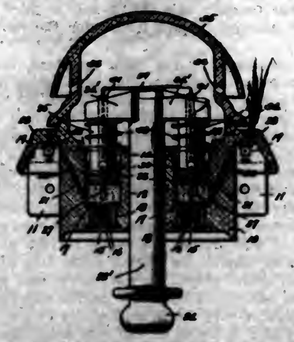
5. Mold ramming apparatus comprising a flexibly suspended support swiveling about a vertical axis, a power device flexibly suspended therefrom at a point out of line



with said axis, and a rammer shaft reciprocated by the power device.

[Claims 6 to 10 not printed in the Gazette.]

876,055. SWITCH. CARL H. HOLLEY, Visalia, Cal., assignor of one-half to Fred G. Hamilton, Visalia, Cal. Filed June 16, 1905. Serial No. 265,629.



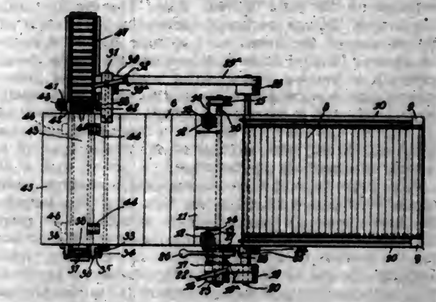
1. In a device of the class specified, a base having a pair of spaced independent oil containing wells, and provided with a pair of laterally projecting hoods, binding posts secured to the base and shielded by said hoods, submerged terminals at the bottoms of the wells, electrical conductors extending from the terminals to the binding posts and passing through openings in the base, the upper ends of said openings being in a horizontal plane above the level of the oil to prevent the escape of the latter, a movable switch member comprising a bar, arms projecting therefrom, stems carried by said arms, circuit closing blades carried by the stems and arranged to engage with the terminals, the base having a vertical passage for the bar, said passage being widened to permit the passage of the stems and arms, and the bodily removal of the switch member through the bottom of such base member.

2. In a device of the class specified, a base member having a pair of spaced independent oil containing wells and provided with a central passage between the wells, the passage being widened transversely, a pair of arms, a bar carrying the same, and movable vertically and revolubly in the central opening, a pair of stems carried by said arm, circuit closing members carried by the stems

submerged terminals at the bottoms of the wells arranged to be engaged by the circuit closing members, and a cap or dome covering the base and spaced thereabove a distance sufficient to permit the insertion and removal of the switch member through the central opening of the base.

3. In a device of the class described, a base member having a pair of spaced and independent oil containing wells, submerged terminals disposed in the wells, current conductors connected to the terminals, there being openings formed in the base for the conductors, the upper ends of said openings being disposed above the level of the oil, a vertically movable switch member comprising a central bar, a pair of arms extending therefrom, stems depending from the bar and provided with openings, metallic collars secured to the ends of the stems and having blades arranged to engage with the submerged terminals, a fusible connection between the collars, well covering rings through which the stems extend, and springs surrounding said stems and tending to hold the rings in place.

876,056. DUMP AND ELEVATOR. DENNIS HOUGHTON, Petersburg, Ill. Filed May 2, 1907. Serial No. 371,448.



1. The combination of a wagon-receiving platform, a horse-power beyond the front end thereof, a pair of posts beside the said front end, having pulleys at the top, a board forming part of the platform, slidable up and down between the posts, a shaft extending across under the platform and having a winding drum at each end with cables extending over the pulleys and connected to the board, and gearing between the horse-power and the shaft.

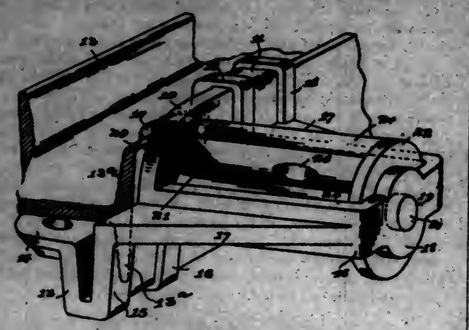
2. The combination of a wagon-receiving platform, a horse-power beyond the front end thereof, a wagon hoist at the front end including a winding shaft, gearing between the horse power and the shaft, including means to engage or disengage the same, and a brake operating on said winding shaft.

3. The combination of a wagon-receiving platform, a horse-power adjacent thereto, a wagon hoist at one end of the platform, a conveyer at the other end, a shaft extending across the rear end of the horse power and driven thereby and having a pulley on each end, and separate gearing between the pulleys and the hoist and conveyer respectively, including a belt, a shifter, and fast and loose pulleys.

876,057. TWO-PART REVERSIBLE BRAKE-BEAM FULCRUM. JAMES W. HOUSER, Hammond, Ind., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Mar. 29, 1907. Serial No. 365,274.

1. A brake-beam fulcrum, comprising a member adapted to be fastened to the brake beam and having a circular aperture blocked or obstructed by the brake beam when the member is secured thereto, said member also having a circular bearing at its end remote from the beam, and a barrel to which the operating lever is adapted to be pivoted, revoluble in said member and having journals fitting in said circular aperture and bearing, said aperture comprising means whereby said barrel may be inserted in and

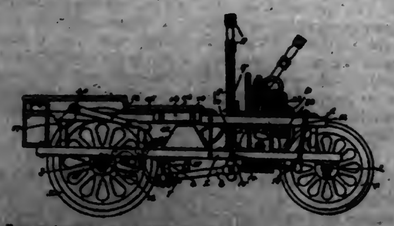
removed from said member when the latter is detached from the brake beam, substantially as described.



2. A brake-beam fulcrum comprising a member having oppositely-disposed gripping-lugs to engage the flanges of the brake beam and spaced apart sufficiently to permit the entrance of the beam between them, whereby by turning the member its lugs are brought into gripping relation with the flanges of the beam, said member having a portion adapted to lie against said flanges and having a circular aperture or bearing, said member also having a yoke or stirrup with a bearing, and a barrel to which the operating lever is adapted to be secured, adapted to fit in said yoke or stirrup and having journals coöperating with said bearings whereby the position of the barrel may be adjusted, substantially as described.

3. A brake-beam fulcrum comprising a member having oppositely-disposed gripping lugs to engage the flanges of the brake beam and spaced apart sufficiently to permit the entrance of the beam between them, whereby by turning the member its lugs are brought into gripping relation with the flanges of the beam, said member having a portion to lie against said flanges and having a circular aperture or bearing, said member also having a yoke or stirrup with a bearing, and a barrel to which the operating lever may be secured, adapted to fit in said yoke or stirrup and having journals coöperating with said bearings whereby the position of the barrel may be adjusted, said circular aperture or bearing comprising means whereby said barrel may be inserted in and removed from said member when the latter is detached from the brake beam, substantially as described.

876,058. RAILWAY MOTOR-VELOCIPEDE. WILLIAM S. HOVEY, Three Rivers, Mich., assignor to The Sheffield Car Company, Three Rivers, Mich. Filed Feb. 23, 1907. Serial No. 358,950.



1. In a structure of the class described, the combination of the frame comprising side rails connected by cross pieces; a pair of traction wheels arranged between the side rails of said frame at the front and rear ends thereof; a crank shaft arranged transversely of said frame in front of the rear traction wheel; a train of gears connecting said crank shaft to the axle of the rear traction wheel, one of the gears of which is adjustably mounted, so that it may be adjusted to connect or disconnect said gears; a bifurcated hand lever arranged between the said side rails of said frame; a pitman connecting said hand lever to said crank shaft; an operator's seat arranged at the rear of said hand lever; foot rests; supporting links for said foot rests; links whereby said foot rests may be detachably connected to said pitman; an engine arranged between the side rails of said frame at the rear of the front traction wheel and in front of the said seat, said hand lever being adapted to straddle said engine in operation; a belt rim on the side of said forward traction wheel; a belt pulley on the crank shaft of said engine; a driving belt; a tightener for said belt; an operating lever for said tightener; a gasolene supply reservoir and battery for said engine located beneath said seat; and a third wheel detachably connected to said frame, for the purpose specified.

2. In a structure of the class described, the combination of the frame comprising side rails connected by cross pieces; a pair of traction wheels arranged between the side rails of said frame at the front and rear ends thereof; a crank shaft arranged transversely of said frame in front of the rear traction wheel; a train of gears connecting said crank shaft to the axle of the rear traction wheel, one of the gears of which is adjustably mounted, so that it may be adjusted to connect or disconnect said gears; a bifurcated hand lever arranged between the said side rails of said frame, the upper portion of said hand lever being detachable; a pitman connecting said hand lever to said crank shaft; an operator's seat arranged at the rear of said hand lever; foot rests; supporting links for said foot rests; links whereby said foot rests may be detachably connected to said pitman; an engine arranged between the side rails of said frame at the rear of the front traction wheel and in front of the said seat, said hand lever being adapted to straddle said engine in operation; a belt rim on the side of said forward traction wheel; a belt pulley on the crank shaft of said engine; a driving belt; a tightener for said belt; an operating lever for said tightener; a gasolene supply reservoir and battery for said engine located beneath said seat; and a third wheel detachably connected to said frame, for the purpose specified.

3. In a structure of the class described, the combination of the frame comprising side rails connected by cross pieces; a pair of traction wheels arranged between the side rails of said frame at the front and rear ends thereof; a crank shaft arranged transversely of said frame in front of the rear traction wheel; a train of gears connecting said crank shaft to the axle of the rear traction wheel, one of the gears of which is adjustably mounted, so that it may be adjusted to connect or disconnect said gears; a bifurcated hand lever arranged between the said side rails of said frame, the upper portion of said hand lever being detachable; a pitman connecting said hand lever to said crank shaft; an operator's seat arranged at the rear of said hand lever; an engine arranged between the side rails of said frame at the rear of the front traction wheel and in front of the said seat, the said hand lever being adapted to straddle said engine in operation; a belt rim on the side of said forward traction wheel; a belt pulley on the crank shaft of said engine; a driving belt; a tightener for said belt; an operating lever for said tightener; a gasolene supply reservoir and battery for said engine located beneath said seat; and a third wheel detachably connected to said frame, for the purpose specified.

4. In a structure of the class described, the combination of the frame, comprising side rails connected by cross pieces; a pair of traction wheels arranged between the side rails of said frame at the front and rear ends thereof; a crank shaft arranged transversely of said frame in front of the traction wheel; a train of gears connecting said crank shaft to the axle of the rear traction wheel, one of the gears of which is adjustably mounted, so that it may be adjusted to connect or disconnect said gears; a bifurcated hand lever arranged between the said side rails of said frame; a pitman connecting said hand lever to said crank shaft; an operator's seat arranged at the rear of said hand lever; an engine arranged between the side rails of said frame at the rear of the front traction wheel and in front of the said seat, the said hand lever being adapted to straddle said engine in operation; a belt rim on the side of said forward traction wheel; a belt pulley on the crank shaft of said engine; a driving belt; a tightener for said belt; an operating lever for said tightener; a gasolene supply reservoir and battery for said engine located beneath said seat; and a third wheel detachably connected to said frame, for the purpose specified.

5. In a structure of the class described, the combination of the frame comprising side rails connected by cross pieces; a pair of traction wheels arranged between the side rails of said frame at the front and rear ends thereof; a crank shaft arranged transversely of said frame in front of the rear traction wheel; a train of gears connecting said crank shaft to the axle of the rear traction wheel, one of the gears of which is adjustably mounted, so that it may be adjusted to connect or disconnect said gears; a hand lever arranged between the said side rails of said frame, the upper portion of said hand lever being detachable; a pitman connecting said hand lever to said crank shaft; an operator's seat arranged at the rear of said hand lever; foot rests; supporting links for said foot rests; links whereby said foot rests may be detachably connected to said pitman; an engine arranged between the side rails of said frame at the rear of the front traction wheel and in front of the said seat; a belt rim on the side of said forward traction wheel; a belt pulley on the crank shaft of said engine; a driving belt; a tightener for said belt; an operating lever for said tightener, and a third wheel detachably connected to said frame, for the purpose specified.

[Claims 6 to 41 not printed in the Gazette.]

876,059. SPLIT KNOB. WILLIAM H. IRONS, Beaver, Pa. Filed Oct. 11, 1906. Serial No. 338,350.



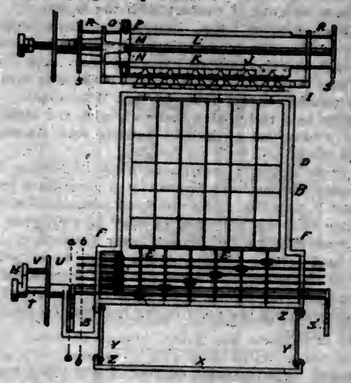
1. A split knob of substantially rectangular cross section composed of a base and a cap, a nail hole through the center of said base and cap, and a pair of registering wire grooves in the opposing faces of said cap and base having a bearing on the wire to be secured equal in length to the bearing of the two abutting edges of said cap and base and parallel thereto, substantially as and for the purpose set forth.

2. A split knob of substantially rectangular cross section composed of a cap and a base, a nail hole through the center of said cap and base, and a pair of registering wire grooves in the opposing faces of said cap and base on one side of said nail hole maintaining a bearing on the wire to be secured of equal length as the bearing between the abutting edges of said cap and base on the other side of said nail hole and parallel thereto, substantially as and for the purpose set forth.

876,060. DEVICE FOR ILLUSTRATING THE TRANSPOSITION OF MUSICAL SCALES. LADISLAW A. JAROS, Chicago, Ill. Filed Sept. 6, 1907. Serial No. 391,740.

1. In a device of the class described, a case having a front made of glass or some other transparent material, a portion of the said front opaque and upon the said opaque portion the representation of a musical staff and clef, a series of triangular prisms visible through said transparent front, sharps and flats on the lateral faces of the said triangular prisms, transverse lines across the said faces of the triangular prisms to coincide with lines of staff on front of case, an index plate and pointer placed on the outside of said case, and means for rotating the triangular prisms so as to display signatures on the said staff in conformity with the said pointer and index plate.

2. In a device of the class described, the combination of a case having a musical staff and a clef on the face thereof, an index plate, and a pointer suitably placed on the outside of said case, and a series of triangular prisms having sharps and flats on the faces, thereof, substantially as shown, for the purpose specified.



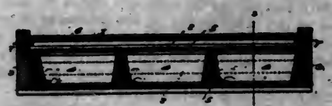
3. In a device of the class described, a series of triangular prisms, sharps and flats on the faces thereof, shafts supporting said triangular prisms in the frame, pinions secured on said shafts, racks in gear with said pinions, bars for actuating said racks, rocker arms for oscillating said bars and means for operating said bars substantially as specified.

4. In a device of the class described, in combination with a case having a musical staff and clef on the face thereof, an index plate, designating characters of the musical scales on the face of said index plate, an index pointer, and means for displaying signatures relatively to the said staff in conformity with the said index plate and pointer.

5. In a device of the class described, in combination with a case having a musical staff and clef on the face thereof an index plate designating characters of the musical scales on the face of said index plate; an index pointer, a shaft rigidly secured to said pointer; members rigidly secured on said shaft, bars to be operated by said members, racks rigidly secured on said bars, pinions in gear with said racks, center shafts rigidly secured in said pinions and signature prisms rigidly secured on said center shafts.

[Claim 6 not printed in the Gazette.]

876,061. FRUIT-CRATE. GEORGE B. KATZENSTEIN, Sacramento, Cal. Filed Aug. 23, 1905. Serial No. 275,411.



1. A crate, a plurality of baskets therein, and a mat of netting in a single piece disconnected from the crate and baskets and covering the bottoms, sides and tops of said baskets, and a cover to the crate disconnected from said netting.

2. A crate, a mat of a single continuous piece of reticulated material laid loosely therein and disconnected from said crate with portions extended above the top of the crate, baskets for fruit placed within said crate and upon said material, with the said material placed over the tops of the baskets and its ends overlapped, and a cover to the crate, all substantially as and for the purpose specified.

3. A fruit shipping package comprising a crate having slatted sides and bottom, a mat of a single continuous piece of reticulated material laid loosely within said crate and disconnected therefrom at all points, with portions extended above the top of the same, baskets for fruit placed within said crate, and upon said reticulated mate-

rial with the said material placed loosely over the tops of the baskets and its ends overlapped thereon, and a cover to the crate also disconnected from said material and disposed above and out of contact with the basket.

4. A fruit-shipping crate, comprising a crate proper, its cover, a single continuous piece of reticulated material loosely laid therein and disconnected from said crate at all points, a plurality of disconnected baskets in said crate and surrounded on all sides by and disconnected at all points from said reticulated material, with the ends of the material overlapped upon said baskets and disconnected from the cover.

5. A crate, a single continuous piece of netting loosely laid therein and entirely disconnected from said crate at all points, a plurality of disconnected baskets in said crate and surrounded on all sides by and disconnected at all points from said netting, and a cover for said crate, the ends of said netting being designed to be overlapped upon the top of the baskets to cover the fruit therein, said netting being entirely disconnected from the cover and at all points surrounding the fruit in the baskets and preventing pilfering thereof.

876,062. RAILROAD-CONDUCTOR'S FOLDER AND CAR-RECORD. ANDREW KEISER, Greensburg, Pa. Filed May 17, 1906. Serial No. 317,265.



1. A folding record of the class described comprising an intermediate portion foldable centrally, side portions foldably connected to the opposite edges of the intermediate portion, and a slate foldably connected at one edge to the intermediate portion at the folding point of the same.

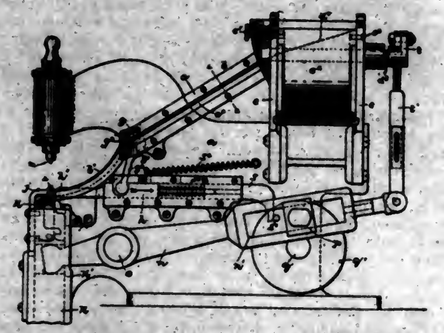
2. A folding record of the class described comprising three sections of card-board or like material flexibly joined at their edges to provide a central section and two side sections, record sheets detachably united at the juncture of two of said sections, and a slate section flexibly secured between two of said sections.

3. A folding car record book comprising three cover sections of paste board or like material, one of said sections being flexibly secured at its opposite edges to the proximate edges of the other sections, record sheets detachably united between two of said sections, and a slate section flexibly secured between two of the cover sections and adapted to be folded to conceal the record sheets and present the slate section in position for writing.

876,063. MACHINE FOR SETTING LACING-HOOKS. WILLIAM H. KINGSTON, Newark, N. J., assignor of one-half to George A. Weld, Winchester, Mass. Filed Dec. 28, 1906. Serial No. 700,487.

1. A machine of the character specified, comprising a hook-guiding chute, a hook-reservoir communicating with the upper end of the chute and having a curved wall, and a segmental hook-separator mounted to oscillate in said reservoir and conforming to said wall and adjacent thereto and having a hook-delivering edge inclined relatively to its axis of oscillation, the lower end of which edge coincides with the chute when the separator is at one extreme of its movement, the distance between the front and rear edges of said separator being greater than the distance between its extremes of oscillation.

2. A machine of the character specified, comprising a hook-guiding chute, a hook-reservoir having a segmental body portion and heads at the ends thereof, and a segmental hook-separator mounted to oscillate in said reservoir and having a hook-delivering edge inclined relatively to its axis of oscillation, said separator being located in close proximity to and substantially parallel with the segmental body portion of the reservoir, the distance between the front and rear edges of said separator being greater than the distance between its extremes of oscillation.



3. A machine of the character specified, comprising a hook-guiding chute, a hook-reservoir having a segmental body portion and heads at the ends thereof, a rock-shaft journaled in said heads, arms attached to said shaft, and a segmental hook-separator attached to said arms and having a hook-delivering edge inclined relatively to its axis of oscillation, said separator being substantially parallel with and in close proximity to the segmental body of the reservoir, and the distance between the front and rear edges of said separator being greater than the distance between its extremes of oscillation.

4. A machine of the character specified, comprising a reservoir composed of a segmental body, heads at the ends thereof, a movable gate forming one side of the reservoir and separated from the segmental body by a longitudinal slot or opening, and a segmental hook-separator mounted to oscillate in the reservoir and in said slot, said separator having an inclined hook-delivering edge.

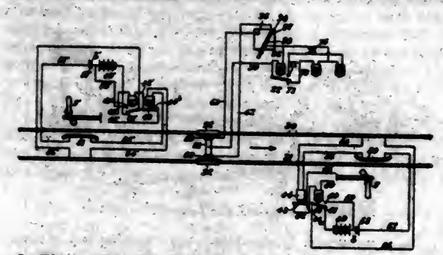
5. A machine of the character specified, comprising a reservoir composed of a segmental body, heads at the ends thereof, a gate hinged at its upper portion to said heads and having its ends and lower edge separated by openings from the heads and segmental body, a locking device to retain said gate in its operative position, a rock-shaft journaled in said heads, arms on said rock-shaft arranged to oscillate in the openings at the ends of the gate, and a segmental hook-separator affixed to said arms and arranged to oscillate in the opening at the lower edge of the gate, said separator being substantially parallel with the segmental body of the reservoir and having an inclined hook-delivering edge.

[Claims 6 and 7 not printed in the Gazette.]

876,064. SINGLE-TRACK SIGNALING AND TRAIN-CONTROLLING SYSTEM FOR RAILWAYS. FRANK E. KINSMAN, Plainfield, N. J. Filed Oct. 10, 1905. Serial No. 282,121.

1. The combination with a pair of traffic rails, of automatic means for governing the power, brake or other movement-controlling medium on a vehicle movable in either direction on said traffic rails, said means including separate devices one associated with one traffic rail for governing said vehicle when moving in one direction and the other associated with the other traffic rail for governing said vehicle when moving in the other direction.

2. The combination with a pair of traffic rails, of automatic means for governing the power, brake or other movement-controlling medium on a vehicle movable in either direction on said traffic rails, said means including a pair of electric circuits one connected with one traffic rail only for governing said vehicle when moving in one direction and the other connected with the other traffic rail only for governing said vehicle when moving in the other direction.



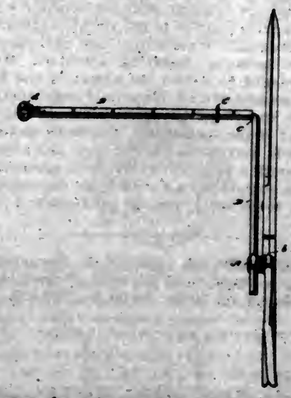
3. The combination with a pair of traffic rails divided into blocks, of automatic means for governing the power, brake or other movement-controlling medium on a vehicle movable in either direction on said traffic rails, said means including a pair of controlling devices located respectively at opposite ends of said block.

4. The combination with a pair of traffic rails divided into blocks, of automatic means for governing the power, brake or other movement-controlling medium on a vehicle movable in either direction on said traffic rails, said means including a pair of electric circuits connected respectively with opposite ends of said block and localized means for supplying current to said circuits.

5. The combination with a pair of traffic rails divided into blocks, of automatic means for governing the power, brake or other movement-controlling medium on a vehicle movable in either direction on said traffic rails, said means including a pair of electric circuits connected respectively with opposite traffic rails at opposite ends of said block.

[Claims 6 to 57 not printed in the Gazette.]

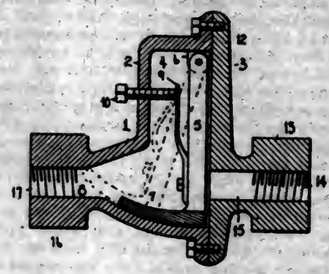
876,065. GAGE FOR SCISSORS. WILLIS B. KITTERMAN, Lynchburg, Va. Filed Aug. 5, 1903. Serial No. 168,362.



1. In a gage for scissors, the combination of an arm made of a piece or bar of metal bent at an angle, a slide on said arm held by friction at any point desired, and a clamp engaging the stem of one of the scissors members; the clamp having an aperture within which the arm may be moved back and forth, and a screw being provided for holding the arm firmly in any desired position, so that the gage may be adjusted to scissors of different lengths.

2. A gage for scissors comprising an arm, a slide held in position on said arm by friction, and a clamp engaging the stem of one of the scissors members and being secured thereto by a thumb screw; said clamp being composed of two separate parts in one of which is an aperture wherein the arm can move, a thumb screw being provided for holding the arm in position.

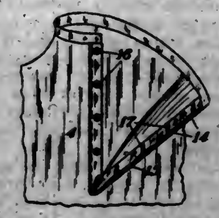
876,066. AUTOMATIC FLUID-PRESSURE REGULATOR. ARCHIE KLEVER, Hannibal, Mo. Filed June 24, 1907. Serial No. 380,491.



1. A fluid pressure regulator comprising a casing having an inlet and a discharge port, a pressure regulating plate hingedly mounted in said casing and adapted to be acted upon by the pressure of the fluid entering the latter, a segmental cut-off shoe formed integral with and projecting laterally from said plate, and adapted to be swung thereby across the discharge port of said casing, a pressure regulating spring arranged on said regulating plate, and an adjusting screw to regulate the tension of said spring, substantially as described.

2. An automatic fluid pressure regulator comprising a casing formed in sections adapted to be secured together to form a fluid-tight joint, one of said sections having formed therein an inlet port and the other section having formed therein a hollow chamber and a discharge port connected thereto, a regulating plate hingedly mounted to swing in the chamber of said sections, a shoe formed on the lower end of the plate and adapted to be swung thereby across the discharge port in said section of the casing, a regulating spring secured to said plate, and an adjusting screw adapted to be screwed into engagement with said spring to regulate the tension thereof, substantially as described.

876,067. FLY-FRONT FOR GARMENTS. FRANCES S. KOLB, Columbus, Ohio. Filed Feb. 4, 1907. Serial No. 355,734.



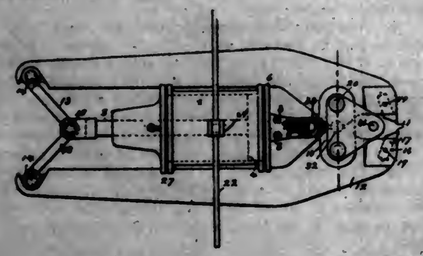
1. A fly front for garments comprising a continuous strip having one side edge unbroken and its other side edge widened throughout a portion of its length, said strip being secured along its unbroken edge to the edges of the openings in said garment, said wider portion being adapted to be folded and secured along said unbroken edge thereof to a garment edge, and adapted to be folded again and secured at intervals along said unbroken edge to said garment edge, said latter fold being provided with button-holes, said narrower portion of said strip, being adapted to be folded and secured along the unbroken edge of said strip to a garment edge, and being provided with buttons.

2. A fly front for garments formed of a continuous strip of material provided with a lateral flap throughout a portion of its length and secured continuously along its unbroken edge to the edges of the opening in the garment, and adapted to be cut partially across its narrow portion adjacent the flap, whereupon both end portions of said strip are folded longitudinally and secured along the unbroken

edge thereof to the garment edge, said folded flap portion being then secured longitudinally along its middle line to said garment and folded again and secured at intervals along its edge to the garment edge, and provided with buttonholes through the outer fold thereof, said narrow folded portion being provided with buttons secured thereto.

3. A fly front for garments comprising a continuous strip of material having one side edge unbroken and the other side edge provided with a flap throughout a portion of its length and secured first by stitching continuously along its unbroken edge to the edges of the opening in a garment, then said strip is cut partially across its narrow portion adjacent said flap and both portions are folded laterally and secured to the edges of the opening in the garment by stitching continuously along the outer edge of said strip, whereupon said narrow portion is secured along its inner edge to said garment and said wider portion is secured along its middle line to said garment and the edges of the cut portion of said strip are secured to said garment, and said wider portion is then folded outwardly and secured to said garment through said folded strip portion at intervals.

876,068. RIVET-CUTTER AND PUNCH. CONRAD H. LAU, Renova, Pa., assignor of one-fourth to Herbert A. Carlton, Harrisburg, Pa. Filed June 4, 1907. Serial No. 377,192.



1. In combination with a cylinder and its piston rod, arms pivotally held by the cylinder projecting beyond the ends thereof, cutters carried by the forward ends of the arms and connections between the rearward ends of the arms and the piston rod whereby movement of the piston rod imparts movement to the arms.

2. In combination with a cylinder and its piston rod, arms pivotally held by the cylinder projecting beyond the ends thereof, cutters carried by the forward ends of the arms, connections between the rearward ends of the arms and the piston rod whereby movement of the piston rod imparts movement to the arms, and means for suspending the cylinder.

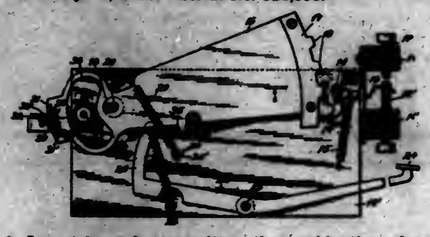
3. In combination with a cylinder and its piston rod, means for supporting the cylinder, arms pivotally held by the cylinder and projecting beyond both ends thereof, cutters carried by the forward ends of the arms, connections between the rearward ends of the arms and the piston rod whereby movement of the piston rod imparts movement to the arms, and means for moving the cylinder on its support.

4. In combination with a cylinder and its piston rod, arms pivotally held by the cylinder projecting beyond the ends thereof, cutters carried by the forward ends of the arms, connections between the rearward ends of the arms and the piston rod whereby movement of the piston rod imparts movement to the arms, a bail carried by the cylinder, and means engaging the bail for supporting the cylinder.

5. In combination with a cylinder and its piston rod, arms pivotally held by the cylinder, cutters carried by the arms, connections between the arms and the piston rod whereby movement of the piston rod imparts movement to the arms, a bail carried by the cylinder, and a sheave engaging the bail for supporting the cylinder.

[Claims 6 to 28 not printed in the Gazette.]

876,069. TELEGRAPH-TRANSMITTER. CHARLES E. LEE, Chicago, Ill., and LEWIS K. MILLER, Brooklyn, N. Y. Filed May 14, 1906. Serial No. 316,593.



1. In a telegraph transmitter, the combination of contacts, a toothed actuator movable into operative relation to the contact on its downstroke and out of operative relation to said contact on its upstroke, and a key lever arranged to raise the actuator to permit its free return.

2. In a telegraph transmitter, the combination of a vibratile contact, an actuator pivoted for oscillation past the vibratile contact and longitudinally movable toward and from said contact, a key for raising said actuator, and means other than the key for longitudinally moving said actuator.

3. In a telegraph transmitter, the combination of a vibratile contact, an actuator pivoted for oscillation past the vibratile contact, and longitudinally movable toward and from said contact, means for oscillating said actuator, and means for guiding said actuator through its pivotal movement in one direction at its forwardmost limit of longitudinal motion, and through its reverse pivotal motion at its rearmost limit of longitudinal motion.

4. In a telegraph transmitter, the combination of a vibratile contact, an actuator pivoted for oscillation past said vibratile contact and longitudinally movable toward and from the latter, means for oscillating said actuator, means for longitudinally moving said actuator into and out of operative relation to the vibratile contact at predetermined points in its oscillating movement, and a governor arranged for coaction with the actuator when positioned in operative relation to the vibratile contact.

5. In a telegraph transmitter, the combination of a plurality of normally depressed actuators, key levers therefor, arranged to elevate the actuators and free them for descent, contact devices operatively associated with the actuators, a centrifugal governor, arranged for coöperation with any of the actuators to receive its moving power therefrom, and means for moving said actuators out of and into operative association with said governor, respectively, as the actuators are elevated and depressed.

[Claims 6 to 10 not printed in the Gazette.]

876,070. AUTOMOBILE. WALTER W. MACFARREN, Pittsburg, Pa., assignor to William H. Donner, Pittsburg, Pa. Filed July 23, 1906. Serial No. 327,328.



1. The combination with a vehicle, of steering mechanism comprising a substantially vertical sectional steering shaft, connection between each section of said shaft and a pair of wheels to steer the same, and a clutch mechanism adapted to connect the said shaft sections so that they will rotate either in the same or opposite directions.

2. The combination with a vehicle, of a substantially vertical sectional steering shaft, connections between each of said shaft sections and a pair of wheels to steer the same, a hand wheel connected to one of said shaft sections, a second hand wheel connected to the other of said shaft sections, each hand wheel operating a different pair of wheels, and a clutch mechanism adapted to connect the said first shaft section with the said second shaft section whereby all four wheels may be steered by the use of one hand wheel simultaneously in either direction.

3. The combination with a vehicle, of a pair of hand wheels, connections between said hand wheels and the vehicle wheels to steer the same independently of each other, and means for connecting said hand wheels to rotate in opposite directions.

4. The combination with a vehicle, of axles, pivotally mounted wheels, two rotative shafts, one for the front wheels and one for the rear, connections between said shafts and said wheels to steer the same, an operative shaft normally in driving engagement with one of said shafts, a second operative shaft normally in driving engagement with the other shaft, clutches on one of said operative shafts, and a movable clutch on the other of said operative shafts between the first clutches, means for moving said movable clutch into engagement with either of said clutches on said operative shaft, and reverse gear mechanism on said last named shaft.

5. The combination with a vehicle, of axles, pivotally mounted wheels, two rotative shafts, one for the front wheels and one for the rear, connections between said shafts and said wheels to steer the same, an operative shaft normally in driving engagement with one of said shafts, a second operative shaft normally in driving engagement with the other shaft, clutches on one of said operative shafts, a movable clutch on the other of said operative shafts between said first named clutches, a cam latch for moving said movable clutch into engagement with either of said clutches on said other operative shaft, and reverse mechanism on said last named shaft.

[Claims 6 to 26 not printed in the Gazette.]

876,071. HOSE-COUPLING. CARY W. MARTIN, Dunkirk, N. Y., assignor to Martin Car Heating Company, Chicago, Ill., a Corporation of West Virginia. Filed Feb. 23, 1904. Serial No. 194,919.



1. In a hose coupling of the class described, a coupler member with its locking lug and wing, having a recess opening laterally adjacent to the engaged position of the lug and wing, with a spring-pressed ball in said recess normally projected therefrom and adapted to engage the complementary coupler member, substantially as described.

2. In a hose coupling of the class described, a coupler member with its locking surface, lug and wing, having a recess which opens through its locking surface, in combination with a spring-pressed ball arranged in said recess and normally projecting from said locking surface to engage the complementary coupler member, substantially as described.

3. In a hose coupling of the class described, a coupler member with its locking lug upon one side and locking wing upon the other side, having a recess opening through its side, in combination with two balls arranged in said recess, one ball protruding therefrom, and a spring provided in the recess and bearing upon the second ball, substantially as described.

4. In a hose coupling of the class described, a coupler member with its locking lug upon one side, and locking wing upon the other, said locking wing having at its inner upper corner a latch recess, and the body of said member having a latch recess closed at the top, and at the bottom opening through the locking surface adjacent to said locking lug, the lower part of said recess being angular, the ball 10, provided in said recess and a spring also in the recess, substantially as described.

876,072. ROPE-DRUM OF HOISTING-ENGINES. THEODOR MATEKE, Distein, Germany, assignor to Sieg-Rheinische Hütten Actiengesellschaft, Freidrich-Wilhelms-Hütte, Germany. Filed Feb. 18, 1907. Serial No. 357,911.



1. A hoisting drum boss made in two parts, one part fixed to its shaft, said shaft being common to both parts, and the other part sleeved upon the first-named part, and frictional coöperating interengaging portions.

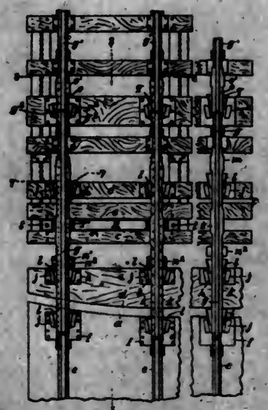
2. A hoisting drum boss made in two parts one part having an annular projection thereon, the other part sleeved upon the first named part and having a corresponding annular recess and means for fastening the parts together.

3. A hoisting drum boss made in parts comprising in combination, a part fixed to the shaft, a part secured to the drum and having an opening through which the hub of the other part passes, a friction ring on the one part, a recess for the reception of the ring on the other part and means for connecting the parts together.

4. A hoisting drum boss made in parts comprising, in combination, a collar fixed to the shaft, a ring connected to the drum and having radial spoke-receiving grooves, a friction ring on the collar, a corresponding groove on the ring and means for fastening the ring to the collar.

5. A hoisting drum boss formed in parts, one having a shaft-receiving portion, and a concentric friction ring, a ring fitted loosely on said boss and having radial spoke-receiving grooves, and a concentric annular groove to receive said ring, means passed through said ring for securing said parts together, and independent releasing means mounted in said ring and engaging said boss.

876,073. LOCKING DEVICE FOR DRAWBRIDGE RAIL-JOINTS. WILLIAM R. MERSHON, Newark, N. J., and HENRY R. LEONARD, Wayne, Pa. Filed May 31, 1907. Serial No. 376,627.



1. A rail locking device comprising a rail seat with sloping jaws upon the same, a rail fitted to the seat between the jaws, and a pair of wedges fitted movably to

the jaws and rail and operated simultaneously to clamp the rail upon the seat between the jaws.

2. A rail locking device comprising a series of seats beneath the rail, such seats having wedge-jaws at opposite sides of the rail, a pair of wedge-bars fitted movably to the opposite sides of the rail and having wedges fitted to the jaws and operated simultaneously to clamp the rail upon all the seats between the jaws.

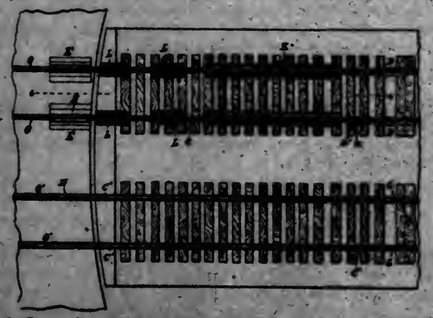
3. A rail joint locking device having a seat with the ends of two rails seated thereon and dovetail jaws at opposite sides of the rail, a pair of wedge-bars fitted movably to the opposite sides of the rails and having dovetail wedges fitted to the jaws, the wedge-bars overlapping the joint of the rails when the wedges are in contact with the jaws, and means for simultaneously moving the wedge-bars upon the rail.

4. A rail joint locking device for draw-bridges, having a rail-seat upon the landing and rail-seats upon the drawbridge, such seats provided with wedge-jaws, rails upon the landing and upon the drawbridge with a separable joint upon the landing seat, a series of wedges movable upon the said rail and fitted to the said seats and connected to operate together, and means for shifting the series of wedges to lock the rail simultaneously upon the bridge and the landing.

5. A rail joint locking device for drawbridges, having a rail-seat upon the landing and rail-seats upon the drawbridge, such seats provided with wedge jaws, rails upon the landing and upon the drawbridge with a separable joint upon the landing seat, a series of wedges movable upon the said rail and fitted to the sides of the rails and to the said jaws, means for shifting the series of wedges to lock the rail upon the bridge and landing, and means for retracting the wedges and moving the same with the bridge-rail, clear from the seat upon the landing, before moving the bridge.

[Claims 6 to 18 not printed in the Gazette.]

876,074. SAFETY DEVICE FOR RAIL CONNECTIONS OF DRAWBRIDGES. WILLIAM R. MERSHON, Newark, N. J. Filed July 17, 1907. Serial No. 384,260.



1. In a drawbridge having a lifting rail, the rail-joint D having, on the outer side of the rail, the rib F arranged to support the wheel-tread when passing over the joint.

2. In a drawbridge having a lifting rail, the rail guide K having the vertical flanges h and h' fitted to the opposite side edges of the rail-flange, the flange h having an integral horizontal lip h² and an integral foot h³, and adjusted to hold the integral lip h² in contact with the side of the rail-head.

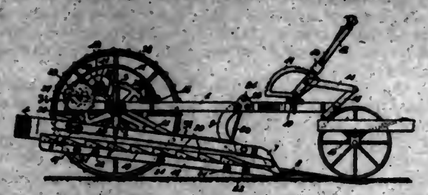
3. In a drawbridge having a lifting rail, the rail-guide L having the two vertical flanges l and l', combined with a lifting rail having the angle-plates P secured to its web and fitted to the inner sides of the said flanges.

4. In a drawbridge having a lifting rail, the combination, with lifting rail having the angle-plates P, of the rail-joint D, the rail-guide K arranged upon the rail where it lifts less than its own height, and the rail-guide L fitted to the rail where it lifts more than its own height.

5. In a drawbridge having a lifting rail, the head-block receiving the joint of the land-rail and the lifting rail, and provided with the tread-piece M, formed of T-rail cross-section, to support the wheel-tread when passing over the joint in such head-block.

[Claims 6 to 8 not printed in the Gazette.]

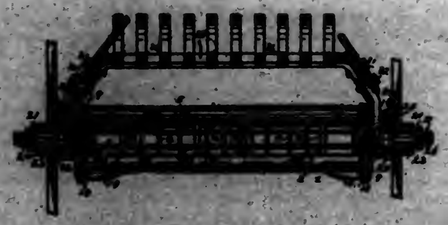
876,075. POTATO-DIGGER. JULIUS MOLD, Sunrise, Minn. Filed Apr. 8, 1907. Serial No. 367,010.



1. In a device of the character described, a supporting frame, a relatively stationary shovel arranged near the front end of said frame, a vibratory screen comprising a number of straight longitudinal bars and a number of longitudinal cutting blades, the latter having a plurality of cutting edges, the upper edges of said bars and blades arranged alternately a predetermined distance apart and extending lengthwise of said supporting frame, longitudinal guard bars having recesses in their upper edges supported by said frame, longitudinal bars secured to the faces of said guard bars, their rear ends extending beyond the rearmost vertical walls of said recesses, bearings secured to the rear ends of said longitudinal bars, and adapted to clamp the outer sides of said guard bars, and means hinged to said bearings for operatively supporting the rear end of said vibratory screen.

2. In a device of the character described, a supporting frame, a relatively stationary shovel, shovel supporting means, a vibratory screen comprising a number of straight longitudinal bars, and longitudinal cutting blades having cutting edges at their upper edges arranged lengthwise of the frame, longitudinal guard bars having recesses in their upper edges near the rear ends, supported by said frame, longitudinal bars adjustably pivoted at their front ends to the inner faces of said guard bars, their rear ends extending beyond the recesses in said guard bars opposite said recesses in said guard bars, and adapted to clamp said guard bars, with means hinged to said bearings for operatively supporting the rear end of said vibratory screen.

876,076. TOBACCO-SEEDER. BENJAMIN MYLOR and THOMAS HEADY, Warsaw, Ky. Filed May 25, 1907. Serial No. 375,667.

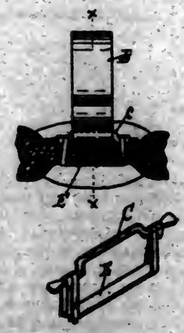


1. In combination, a cylindrical body suitably supported having apertures and recesses, a segmental sleeve embracing the cylindrical body and rotatable thereon, said sleeve being provided with apertures to register with the apertures of the body, perforated lugs carried by the sleeve, and means passing through the perforations of the lugs engaging the recesses of the cylindrical body to hold the sleeve against movement with relation to the cylindrical body.

2. In combination, a suitably supported shaft, a cylindrical body mounted thereon, said body having apertures, angular arms mounted on the shaft, means carried by the angular arms, engaging the cylindrical body to hold said body against rotation on the shaft, an operating handle secured to the angular arms, a harrow structure carried by the angular arms, and a sleeve embracing the cylindrical body and rotatable thereon, said sleeve being provided with apertures to register with the apertures of the body.

3. In combination, a cylindrical body suitably supported having apertures, end caps for the cylindrical body having apertures, a segmental sleeve embracing the cylindrical body and rotatable thereon, said sleeve being provided with apertures to register with the apertures of the body, operating means for the body, said means being provided with a lug to extend within the apertures of the caps of the cylindrical body to hold the said cylindrical body against rotation, and agitating means within the cylindrical body.

876,077. HORSE-PAD HOOK. EDWARD L. MCCLAIN, Greenfield, Ohio, assignor to The American Pad & Textile Co., Greenfield, Ohio, a Corporation of Ohio. Filed Mar. 28, 1907. Serial No. 365,177.



1. The combination of a horse pad, a bar contacting with the inner side of the pad, a hook bar contacting with the outer side of the pad, two prongs extending from each end of the first bar through the pad around and bent over the ends of the hook bar, and a hook journaled upon the hook bar.

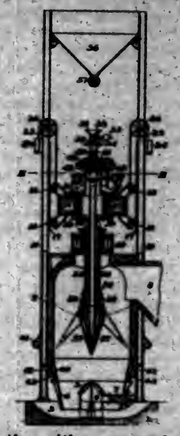
2. The combination of a horse pad, a hook bar upon the outer side of the pad, a hook journaled upon the hook bar, a bar upon the inner side of the pad and with its ends bifurcated and turned into prongs which project through the pad and engage the ends of the hook bar.

876,078. TEMPORARY BINDER FOR PAPERS. HOYT N. MCCLAIN, Chicago, Ill. Filed Feb. 18, 1907. Serial No. 357,823.



A temporary binder consisting of a freely removable individually separate post, one end of said post being provided with a fixed flange like confining head the opposite unheaded end of said post terminating in a rounded unmutilated portion having a circumferential groove, a detachable head adapted to telescope over said unheaded end and having its inner side projecting laterally beyond the post to form a flange like confining surface, and an internal spring locking member seated in said detachable head and adapted to have snap-action engagement with said grooved portion.

876,079. GAS-PRODUCER. NIVEN MCCONNELL, Pittsburg, Pa. Filed May 16, 1907. Serial No. 374,074.



1. The combination with a gas producer, of a vertically movable charging and poking device movable through the top of said producer, and connections for forcing the device downwardly into the bed of fuel; substantially as described.

2. In a gas producer, a downwardly-movable poker formed of a plurality of parts, and connections arranged to spread said parts or move them toward each other; substantially as described.

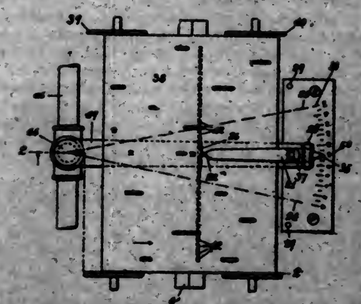
3. In a gas producer, a vertically-movable poker arranged to be forced downwardly into the bed and formed of a plurality of hinged sections; substantially as described.

4. In a gas producer, a vertically-movable poker combined with a fuel feeding device, and connections for spreading or opening parts of the poker and releasing the charge; substantially as described.

5. In a gas producer, a poker formed of two or more tapered parts arranged to be forced downwardly into the bed of fuel, and a feed device arranged to discharge fuel between the parts of the poker; substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

876,080. TEMPO DEVICE FOR MECHANICAL MUSICAL INSTRUMENTS. JAMES O'CONNOR, New York, N. Y. Filed Feb. 15, 1904. Serial No. 193,710.



1. The combination with means for regulating the speed of sheet driving mechanism, of a music sheet provided with sequence symbols extending in a general direction of the length of the sheet, but deviating from side to side to indicate the required variations of the speed regulating means, the symbols being employed in their sequential order to indicate variations in tempo, the unvarying portions being indicated by a repetition of the same symbol.

2. The combination with means for regulating the speed of sheet driving mechanism, of a music sheet provided with sequence symbols extending in the general direction of the length of the sheet but deviating from side to side to indicate the required variations of the speed regulating means, the symbols being employed in their sequential order for the varying portions and each unvarying portion being indicated by a repetition, in the same position relative to the edges of the sheet, of the symbol standing at the beginning of that unvarying portion.

3. The combination with music sheet driving mechanism, of a graduated tempo index, a pivotally mounted tempo lever extending backwardly into coöperation with the said index and having a pointer extending forwardly over the music sheet and swinging upon an arc of a radius smaller than that in which the index portion of the lever swings.

4. The combination with music sheet driving mechanism, of a graduated tempo index, a pivotally mounted tempo lever, coöperating with the said index, and a pointer extending over the music sheet and swinging upon an arc of smaller radius than that of the index portion of the lever, the said pointer being hinged upon the lever to enable it to be swung clear of the music paper.

876,061. NUT-LOCK. GEORGE H. ORR, Toledo, Ohio. Filed Sept. 8, 1907. Serial No. 391,236.



1. The combination with a threaded body, of a sectional nut comprising an inner section having an interior thread to run on the threaded body and an outer end portion threaded so that the threads cross over without engaging the threads of the threaded body, an outer section having an axial bore permitting it to pass over and not engage the threaded body, and an inner end portion threaded to engage the threaded portion of the outer end of the inner section, and means to lock the outer section of said nut to the threaded body.

2. In a nut-lock, the combination with a threaded bolt, of a sectional nut comprising an inner section interiorly threaded to run on the thread of the bolt and an outer end portion having an outer thread crossing over but not engaging the threads of the bolt, an outer section having an axial bore permitting it to pass over and not engage the threaded portion of the bolt and having an inner end portion threaded to engage the threads of the outer end portion of the inner section; and means to lock the outer section of said nut to said bolt.

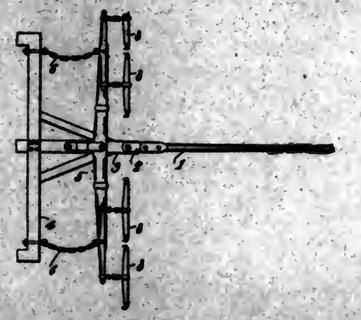
3. In a nut-lock, the combination with a threaded bolt of a sectional nut comprising an inner section interiorly threaded to run on the thread of the bolt and having an outer portion reversely threaded with respect to its interior thread, and an outer section having an axial bore permitting it to pass over and not engage the threaded portion of the bolt and having an inner end portion threaded to engage the outer threaded portion of the inner section; and means to lock the outer section of said nut to said bolt.

4. In a nut-lock, the combination with a threaded bolt, of a sectional nut comprising an inner section interiorly threaded to run on the thread of the bolt, and having a reduced outer end portion exteriorly and reversely threaded with respect to its interior thread, an outer section having an outer end portion with an axial bore permitting it to pass over and not engage the threaded portion of the bolt, and a counterbored inner end portion threaded to run on the exterior thread of the inner section; and means to lock the outer section of said nut to said bolt.

5. In a nut-lock, the combination of a threaded bolt having a diametric key opening, of a sectional nut comprising an inner section interiorly threaded to run on the thread of the bolt and having an outer portion reversely threaded with respect to its interior thread and an outer section having an axial bore permitting it to pass over and not engage the threaded portion of the bolt and an inner end portion threaded to engage the outer threaded portion of the inner section; said outer end portion of the outer section having diametric key openings adapted to be brought into register with the key opening of the bolt, and a key adapted to be inserted through the key openings of the nut and bolt when they are in register, substantially as described.

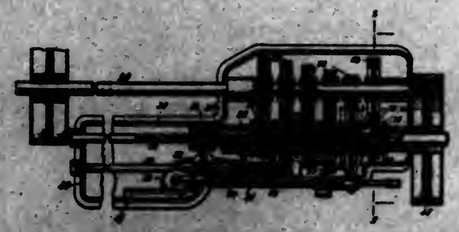
[Claim 6 not printed in the Gazette.]

876,062. JOINTED TONGUE. THOMAS OTTASON, New Hampton, Iowa, assignor of one-fourth to Wayland G. Shaffer and one-fourth to Alva H. Shaffer, New Hampton, Iowa. Filed Nov. 28, 1906. Serial No. 345,525.



A device of the character described comprising a frame, a stub tongue rigidly fixed thereto, a draft evener pivoted to the stub tongue at a point between the ends thereof, stay-chains connecting the ends of the draft evener with said frame and limiting the movement of the evener on its pivot, trees attached to the evener and a tongue pivotally attached to the end of the stub tongue in advance of the evener and having free lateral swing with relation thereto, the pivot which connects the tongue and stub tongue together.

876,083. TRANSMISSION-GEARING. CLARK W. PARKER, Springfield, Mass., assignor to Lamb Knitting Machine Co., Chicopee Falls, Mass., a Corporation of Massachusetts. Filed Mar. 16, 1907. Serial No. 362,693.



1. In mechanism of the class described, the combination with a drive shaft and a driven shaft, of a plurality of gears mounted fast upon one of the said shafts, a plurality of gears for co-action therewith mounted loosely upon the other said shaft, a sliding key mounted in said latter shaft, said shaft provided with a key-way for receiving the same, and reinforcing means secured fast upon the said shaft between the gear-wheels thereon.

2. In mechanism of the class described, the combination with a shaft having a key-way therein, a sliding key fitted to the said shaft, and rotatable members mounted upon said shaft and with which said key is adapted to engage, of reinforcing means for the shaft comprising a ring secured under pressure to the said shaft.

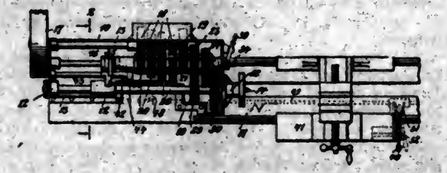
3. In mechanism of the class described, the combination with a shaft having a key-way therein, a sliding key fitted to the said shaft, and rotatable members mounted upon said shaft and with which said key is adapted to engage, of reinforcing means for the shaft comprising split rings, and means for clamping them fast upon the shaft.

4. In mechanism of the class described, the combination with a shaft having a key-way therein, a sliding key fitted to the said shaft, and rotatable members mounted upon said shaft and with which said key is adapted to engage, of reinforcing means for the shaft comprising tapered split rings, and means for clamping them upon the shaft.

5. In mechanism of the class described, the combination with a shaft having a key-way therein, a sliding key fitted to the said shaft, and rotatable members mounted upon said shaft and with which said key is adapted to engage, of reinforcing means for the shaft comprising exteriorly screw threaded tapered split rings, and nuts fitted thereto for clamping them upon the shaft.

[Claims 6 and 7 not printed in the Gazette.]

876,084. TRANSMISSION-GEARING. CLARK W. PARKER, Springfield, Mass., assignor to Lamb Knitting Machine Co., Chicopee Falls, Mass., a Corporation of Massachusetts. Filed May 1, 1907. Serial No. 371,225.



1. In a machine tool, the combination with a main shaft, a drive shaft, and an intermediate or driven shaft, of change speed and reverse gearing between the drive and the driven shafts, direct drive gearing and back gearing between the driven and main shafts, a sliding key in said driven shaft operated from one end of the shaft to control the change speed and reverse gearing connection, and another sliding key in the said driven shaft operated from the other end of the said shaft for controlling the direct drive and back gear, substantially as set forth.

2. In a machine tool, the combination with an inclosed casing adapted to receive and retain oil, a main shaft, a drive shaft, and an intermediate or driven shaft, of change speed and reverse gearing between the drive and driven shafts, direct drive gearing and back gearing between the driven and main shafts, said gearing contained within the said oil casing, a sliding key in said driven shaft operated from one end of the shaft to control the change speed and reverse gearing connection, and another sliding key in the said driven shaft operated from the other end of the said shaft for controlling the direct drive gearing and back gearing.

3. In a machine tool, the combination with a main shaft, a drive shaft, and an intermediate or driven shaft, of a plurality of gear-wheels of different diameters arranged fast upon said drive shaft, a plurality of complementary gears in mesh therewith arranged loosely upon said driven shaft, direct drive gearing and back gearing between the driven and main shafts, the gear-wheels comprised therein upon the driven shaft being loosely mounted thereon, a sliding key mounted in said driven shaft for connecting any one of the first mentioned loose gears in operative connection therewith, another sliding key mounted in said driven shaft for connecting either one of the said loose gears of the direct drive gearing and back gearing in operative relation with the said driven shaft, and separate means for operating the said sliding keys.

4. In a machine tool, the combination with a main shaft, a drive shaft, and an intermediate or driven shaft, of change speed and reverse gearing between the drive and the driven shafts, direct drive gearing and back gearing between the driven and main shafts, a pivoted sliding key in the driven shaft for controlling the change speed and reverse gearing, another sliding pivoted key in the driven shaft for controlling the direct drive gearing and back gearing, and a yielding presser bar engaging both said keys.

5. In a machine tool, the combination with a main shaft, a drive shaft, and an intermediate or driven shaft, of change speed and reverse gearing between the drive and the driven shafts, direct drive gearing and back gearing between the driven and main shafts, a pivoted sliding key in the driven shaft for controlling the change speed and reverse gearing, another sliding pivoted key in the driven shaft for controlling the direct drive gearing and back gearing, a presser bar engaging both said keys, and springs for forcing said presser bar outward.

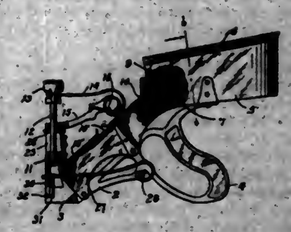
[Claims 6 to 9 not printed in the Gazette.]

876,085. SHUTTLE. GIUSEPPE PAVIA, Allentown, Pa. Filed Mar. 6, 1906. Serial No. 304,444.



The combination of a shuttle body having a bobbin chamber and a recess forming a longitudinal extension of said chamber and opening upwardly through the top of said shuttle body, a bobbin spindle fulcrumed in said body, a substantially horizontal catch fulcrumed between its ends in said recess and having one end bearing on the butt of the spindle, the material of the shuttle body being extended intact under said recess and thus forming the bottom wall of said recess and being formed with a shoulder having one face at right angles to the closed position of the spindle, and a spring interposed between the other end of the said catch and the bottom wall of said recess, said catch and the spindle having the one a lug and the other a notch engageable with each other to lock the spindle against pivotal movement and said spindle having a downwardly projecting lug adapted to engage said face of the shoulder when the spindle is locked down by the catch, substantially as described.

876,086. NAILING-TOOL. MARTIN PEARSON, Robbinsdale, Minn. Filed Mar. 3, 1906. Serial No. 303,991.



1. In a nailing tool, a vertically arranged stock, a driving plunger mounted therein and having a head provided with an annular groove and guards on each side of said head, a spring having its middle portion looped around said head in said groove and passing through said guards, whereby the accidental disengagement of said spring from said head is prevented, an arm mounted on said stock and extending rearwardly therefrom, and said spring having its ends secured to said arm and provided with a suitable coil between said ends and said head, substantially as described.

2. In a nailing tool, a vertically arranged stock, a driving plunger mounted therein and having a head, an arm mounted on the upper end of said stock and extending rearwardly therefrom, the upper portion of said arm being on a level substantially with the upper portion of said plunger, a pin arranged transversely in the upper portion of said arm, and a spring having its middle portion looped

around said head and its ends curved downwardly and coiled around said pin, and the extremities of said coils bearing on said arm, and said spring tending, normally to hold said plunger in a raised position.

3. In a nailing tool, the combination, with a stock, of a vertically moving plunger mounted therein, a nail chute arranged to deliver nails into the path of said plunger, a lever pivoted on said stock and having a curved arm arranged to project across said chute and normally prevent the discharge of nails therefrom, a second lever pivoted on said first named lever and having an arm that is normally out of the path of the nails in said chute, said first named lever having a stop thereon, and a spring device for normally holding said second named lever against said stop and yieldingly holding said first named arm across said chute, and a pin provided on said plunger and arranged to engage said first named lever and move its arm out of the path of the nails and move said second named arm across said chute into the path of the succeeding nails when the one in front has been discharged.

4. In a nailing tool the combination, with a stock, of a vertically moving plunger mounted therein, a nail chute arranged to deliver nails into the path of said plunger, a lever pivoted on said stock and arranged to project across said chute and normally prevent the discharge of nails therefrom, a second lever pivoted on said first named lever and adapted to swing in the same plane therewith and normally out of the path of the nails in said chute, and a single spring arranged to yieldingly hold said first named lever across the path of the nails in said chute, and means on said plunger arranged to engage said first named lever and move it out of the path of the nails and move said second named lever across said chute into the path of the succeeding nails when the first one has been discharged.

876,087. STONE-CUTTING MACHINE. JOHN R. PRESCH, New York, N. Y., assignor to Royden Marble Machinery Company, New York, N. Y., a Corporation of New Jersey. Filed May 17, 1905. Serial No. 260,792.



1. A stone-cutting apparatus including a cutting wheel molded integrally from center to periphery of agglomerated carborundum and having its periphery of greater thickness than its sides.

2. A stone-cutting apparatus including a cutting wheel A molded integrally from center to periphery of agglomerated carborundum, having a peripheral face D and side faces E tapering from the peripheral face to the central portion.

3. A stone-cutting apparatus including a cutting wheel A molded integrally from center to periphery of agglomerated carborundum, having a peripheral face D, a flat-sided central portion F, and side faces E tapering from the peripheral face to the central portion.

4. A stone-cutting apparatus including a cutting wheel molded integrally from center to periphery of agglomerated carborundum and having its periphery of greater thickness than its sides, in combination with means for directing jets of water upon the edges of the periphery.

5. A stone-cutting apparatus including a cutting wheel molded integrally from center to periphery of agglomerated carborundum and having its periphery of greater thickness than its sides, in combination with means for directing jets of water upon the edges and upon the face of the periphery.

876,088. ELECTRIC PISTOL. ERNST O. PFEIL, New York, N. Y. Filed Jan. 28, 1907. Serial No. 354,536.

1. In a device of the character described, the combination with a casing having a barrel, an electric lamp carried by the casing and electrically connected with the battery, contacts included in the circuit of the battery and the lamp, a hammer, a chamber containing a battery arranged between the hammer and the barrel, means for holding an explosive element in the path of the hammer, together with a trigger adapted to move the hammer and complete the circuit through the battery and lamp to simultaneously cause a flash of light and a report from the explosive element.



2. A pistol comprising a casing, a handle and a barrel, an electric lamp supported in the barrel, contacts connected to the poles of the battery and included in the lamp circuit, a trigger having a projection normally engaging one of the contacts and adapted to close the circuit to cause the lamp to flash a light, a hammer operatively connected to the trigger, a chamber containing a battery arranged between the hammer and the barrel and means for supporting an explosive element adjacent to the hammer.

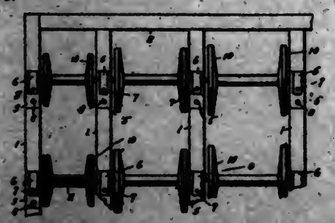
3. A pistol comprising a casing, a handle and a barrel, an electric lamp supported in the barrel, a chamber containing a battery arranged between the hammer and the barrel, an electric circuit including the battery and lamp, contacts connected to the poles of the battery and included in the lamp circuit, and means to close the circuit and cause the lamp to flash a light.

4. In a pistol, the combination with a casing having a projecting portion, of an electric lamp removably held in said projecting portion, a barrel for inclosing the lamp and removably held in the projecting portion, a hammer, means for holding an explosive in the path of the hammer, a battery located between the hammer and the barrel, and means for closing the circuit to cause the lamp to flash a light and to fire the explosive element.

5. In a pistol, the combination with a casing, of an electric lamp supported on the casing, a revoluble battery chamber having a battery, contacts movable with the battery, and electrically connected with the lamp and the battery, devices engaging the contacts and normally in circuit with the lamp and the battery, means for sustaining a plurality of independent explosive elements in the revoluble chamber, means for revolving the chamber, a hammer adapted to engage and fire the explosive elements, a trigger for operating the hammer in one direction, and a cam projection carried by the trigger and adapted to complete the circuit between the contacts of the battery and the lamp so as to simultaneously cause a flash of light and a noise when the trigger is operated.

[Claims 6 and 7 not printed in the Gazette.]

876,089. DISPLAY APPARATUS. ALBERT D. PHILLIPS, Waynesburg, Pa. Filed May 18, 1907. Serial No. 374,378.



In a display apparatus, the combination of a supporting frame comprising parallel bars each provided with a plurality of recesses, hangers fitted in said recesses and having bearings, said hangers provided in their outer faces with slots, springs carried by said hangers and projecting into the slots thereof, and spools having axles seated in the bearings of said hangers and held therein by said springs.

876,090. LATHER-BRUSH. ALBERT J. PRESCOTT, Rochester, N. Y. Filed July 11, 1907. Serial No. 383,273.



A brush for the purpose described consisting of a body portion having bristles at one end, a conical member within the other end, an axial tube extending from said conical member to the bristles, the exterior of said body portion being threaded, and a package interiorly threaded and engaging the threads of the body portion and provided with a conical portion at its outer end conforming to the conical portion of the body.

876,091. RUBBER-HOLDER. FLORA C. REED, Paonia, Colo. Filed Aug. 13, 1906. Serial No. 330,325.



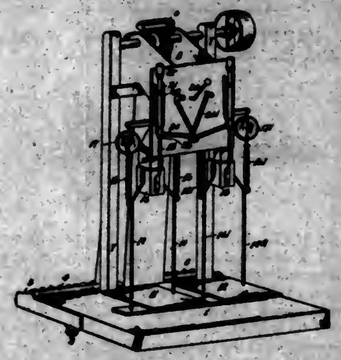
1. An overshoe provided with a strap secured to the inner margin above the heel and having the ends provided with fastening means adapted to be brought together from opposite sides above the instep, and a second strap secured to the inner sole on the inside of the overshoe and having its ends provided with fastening means that are adapted to be brought together above the high point of the instep adjacent to the fastenings of the first-mentioned strap and a short strap connecting the latter with the first-mentioned strap.

2. An overshoe provided with a strap secured to the inner surface of the margin above the heel and having the ends provided with fastening means adapted to be brought together from opposite sides above the instep, and a second strap secured to the inner sole of the overshoe and having its ends provided with fastening means, said ends being brought up above the high point of the instep and connected with the first-mentioned strap.

876,092. BAG FILLING AND WEIGHING MACHINE. CHARLES H. REYNOLDS, Alpena, Mich. Filed May 6, 1907. Serial No. 371,955.

1. A portable weighing machine, having in combination an elevator, a screw conveyer adapted to convey material from a point of storage to the receiving portion thereof, a bifurcated chute into whose unitary upper end said elevator is adapted to discharge material, a pivoted deflector provided with a projecting crank arm whereby either branch of the chute may be closed against the further passage of material therethrough, and means adapted to yieldingly sustain a load of material delivered through one of the branches of the chute up to a specified weight, and to thereafter by the sharp impact of a portion thereof against said crank arm actuate said deflector to close such branch against the further passage of material therethrough, substantially as described.

2. In combination with a pivoted lever arm, a chute, a deflector controlling the passage therethrough, a crank-arm controlling the throw of the deflector adapted to be actuated by the sharp impact thereagainst of one end of said lever arm, a spring adapted to actuate the lever arm, and means for compressing and for suddenly releasing said spring, substantially as described.

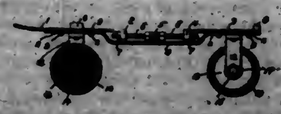


3. In combination with a deflector, a lever adapted to actuate said deflector, a spring actuator for said lever, means for temporarily holding the spring against movement at one end thereof, and simultaneously compressing said spring against said holding means, and means for releasing said spring after being so compressed, substantially as described.

4. A bag filling and weighing machine, having in combination a chute having a single receiving portion and a plurality of discharge branches, means for feeding material thereinto, a deflector controlling the flow through either of the branches of the chute, a pivoted lever arm by whose impact said deflector may be actuated, a spring adapted to accentuate the stroke of the lever arm, and means adapted to support a predetermined quantity of material discharged thereupon from one of the branches of the chute, and after such maximum has been reached to descend and thereby actuate the lever arm and thereby move said deflector to a position of closure with respect to such branch, substantially as described.

5. In a bagging device, in combination with means for hoisting material from a storage point, a delivery chute into whose receiving end the material thus hoisted is delivered, said chute having a plurality of discharge openings, a pivoted deflector whereby either of said openings may be closed; a plurality of vertically movable platforms, means for supporting each of said platforms and the load resting thereupon up to a predetermined weight, and for thereafter quickly dropping the same and means actuated by the descent of a platform whereby said deflector is moved from its position of closure across one of said openings to a similar position across the other and the material previously dropping thereupon through its appurtenant discharge opening of the chute is deflected from further fall therethrough and through the other of said discharge openings, substantially as described.

876,093. ROLLER-SKATE. PETER M. RULLI and JOHN V. MARTRANO, New Haven, Pa. Filed Aug. 23, 1907. Serial No. 389,885.



A roller skate embodying a sole plate and a heel plate each having a depending end, a screw mounted in said depending ends for adjusting said plates towards and away from each other, headed pins carried by each of said plates, a connecting plate having slots receiving the shanks of said headed pins and having a depressed intermediate portion receiving the depending ends of the sole

and bed plates and the adjusting screw, brackets fixedly secured to the connecting plate adjacent each end thereof, axles carried by said brackets, and rollers mounted on said axles.

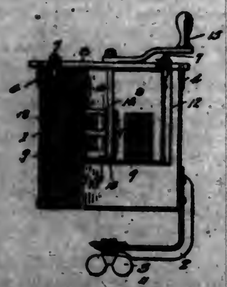
876,094. HAT-PIN. PETER S. RUMBERG, Norway, Mich. Filed Aug. 12, 1907. Serial No. 388,251.



1. A pin of the character described having formed in its larger end a longitudinally disposed bore, and a transversely disposed opening in one side to communicate with said bore, a barbed fastening rod slidably mounted in the bore of said pin, a coiled spring arranged on the outer end of said rod to project the barbed end of the same through the transverse opening in the side of the pin, a recessed head having a centrally disposed aperture, means to secure said head to the end of the pin, and an operating knob secured to the end of said fastening rod and adapted to work through the aperture in said head, substantially as described.

2. A pin of the character described having formed in its outer end a longitudinally disposed bore and a transversely disposed opening to communicate with the inner end of said bore, a radially projecting annular flange on the larger end of said pin, a fastening rod slidably mounted in said longitudinal bore of the pin, a barb on the end of said rod adapted to work through the transverse opening in the side of the pin, a tapered coiled spring arranged around the outer end of said fastening rod and adapted to bear against the flange on the end of said pin, an operating knob on the outer end of said rod to engage said spring, and a head having formed therein a tapered passage adapted to receive and conceal said spring, substantially as described.

876,095. FRUIT-PRESS. WILLIAM RUPPEL, Evanston, Wyo. Filed Apr. 24, 1907. Serial No. 369,946.



1. In a fruit and vegetable press, the combination with a cylindrical containing vessel and a supporting bar engaged on the rim thereof, of a cylindrical casing suspended therein from said bar and provided with perforations in its walls, means for properly spacing the perforated casing in the containing vessel, a spindle journaled in the casing, and a dasher carried by said spindle.

2. A fruit and vegetable press comprising a cylindrical containing vessel, a cylindrical casing suspended therein and provided with perforations, brackets on the sides of the casing to properly space it from the walls of the containing vessel, a spindle journaled in the casing, and a dasher carried by said spindle, said dasher having oppositely curved blades and tubes mounted on the walls of the perforated casing in communication with the casing.

3. A fruit and vegetable press comprising a containing vessel, a supporting bar secured to the rim of said vessel, a casing suspended from said supporting bar and provided with perforations, brackets on the casing to hold the same spaced from the containing vessel a spindle journaled between the bottom of the casing and the supporting bar, and a dasher carried by the spindle having oppositely curved blades to engage the walls of the casing.

876,096. BED-SPRING SUPPORT. EDWARD RYAN, Clinton, Iowa. Filed Mar. 28, 1907. Serial No. 365,038.



1. In combination with a bed or the like spring fabric and a frame on which the same is stretched, a supporting reinforcing wire for the spring fabric, attached to the frame, and a tension and adjusting device for said wire, connected thereto and to the frame end having pivotally connected angle links, an adjusting screw connecting said links, and springs coacting with said screw and links to exert tension on said wire.

2. In a structure of the class described, a spring for the purpose set forth, made of a single wire bent to form oppositely-extending arms, spring coils at the outer ends of said arms, a connecting portion between said arms having a centrally disposed spring coil, and terminal parallel portions, and a spring plate connecting the ends of said parallel portions.

876,097. ALINING MEANS. ALSOM E. SALISBURY, Toledo, Ohio. Filed Mar. 21, 1907. Serial No. 363,566.



An alining device for platforms of weighing trucks, the combination with the side bars of the truck frame, of a platform, a cross bar secured thereto, and inclined projections carried by said cross bar and adapted to contact with the inner sides of the side bars of the truck frame and thereby tend to force the platform to central position on the frame.

876,098. METALLIC SHEATHING. BENJAMIN F. SAVERY, Ann Arbor, Mich. Filed June 1, 1907. Serial No. 376,775.

1. Sheet metal siding comprising metal plates, each folded on itself around wires in transverse, parallel lines and reverted in the form of clapboard courses between each pair of adjacent wires, the lowest fold of each plate being adapted to grip the margin of the adjacent plate.

2. Sheet metal siding comprising metal plates, each folded on itself around wires in transverse, parallel lines and reverted in the form of clapboard courses between each pair of adjacent wires, the lowest fold of each plate being adapted to grip the margin of the adjacent plate and the rear side of each plate presenting narrow bearing surfaces in the same vertical plane.

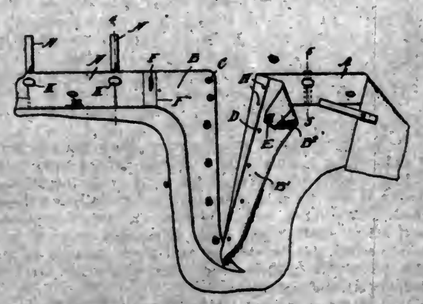
3. Sheet metal siding comprising metal plates, each doubled upon itself around parallel wires in successive transverse folds, and reverted at right angles and extended obliquely up and back between each pair of folds, in the form of a clapboard course, the outer limb of each fold being inset against the wire, and the lower fold of each plate being adapted to receive and grip the upper margin of the adjacent plate.



4. Sheet metal siding comprising metal plates each doubled upon itself around parallel wires in successive, transverse folds, and reverted at right angles and extended obliquely up and back between each pair of folds in the form of a course of clapboards, the outer limb of each fold being inset against the wire, the upper portion of each course below the adjacent wire fold being bent into a plane parallel with the plane of the plate, and the lowest fold of each plate being adapted to receive and grip the upper margin of the adjacent plate.

5. Sheet metal siding comprising metal plates each doubled upon itself in successive, parallel, transverse folds around spaced wires, and turned outward at right angles a short distance below each wire and parallel thereto, and reverted at an interval at right angles, the offset portion extending obliquely back to near the next adjacent wire and thence directly to the wire fold, in a plane parallel to the plane of the plate, the lower fold of each plate being adapted to grip the inserted margin of the adjacent plate.

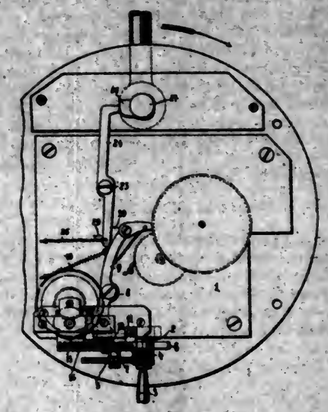
876,099. COMBINED WAISTBAND AND FLY-FRONT. FRANK M. SCHMIDT, Jacksonville, Fla. Filed May 22, 1907. Serial No. 375,147.



1. As an article of manufacture, a combination waist band and fly front, belt straps, suspender engaging hooks having integral eyelet rivets adapted to pass through the waist band and said straps and, when clenched, designed to hold the parts together, as set forth.

2. As an article of manufacture, a combination waist band and fly front having suspender hooks and belt straps fastened thereto, a bar secured to one of the fly fronts, a hook mounted upon the overlapping fly adapted to engage said bar, socket members upon the bar carrying the fly and fasteners upon the opposite fly adapted to engage said socket members, as set forth.

876,100. ODOMETER FOR USE IN CONNECTION WITH FARE-INDICATORS. BERTHOLD SCHNEIDER, Berlin, Germany. Filed Oct. 3, 1906. Serial No. 337,311.



1. The combination with means for indicating when a vehicle is occupied or unoccupied, of means coöperating therewith and released thereby for indicating the distance traversed by the vehicle when occupied, said distance indicating means released when the first mentioned means is shifted to indicate that the vehicle is occupied, means operated from a moving part of the vehicle for indicating the distance traversed by the vehicle when the vehicle is occupied and unoccupied, and an operative connection between the last-mentioned means and the means for indicating the distance traversed by the vehicle when occupied for operating said last-mentioned means when released by the means for indicating whether the vehicle is occupied or unoccupied.

2. The combination with a means for indicating when a vehicle is occupied or unoccupied, of a main and a secondary odometer, said main odometer indicating the total distance traversed by the vehicle when it is occupied and unoccupied, means operated from a movable part of the vehicle for operating said main odometer, said secondary odometer indicating the distance traversed by the vehicle when it is occupied and coöperating with said means for indicating when the vehicle is occupied or unoccupied, means for releasing said secondary odometer when the means for indicating whether the vehicle is occupied or unoccupied is shifted to indicate that the vehicle is occupied, means operated from the operating means for the main odometer for operating said secondary odometer when the latter is released.

3. The combination with a means for indicating when a vehicle is occupied or unoccupied, of a main odometer for indicating the total distance traversed by the vehicle when occupied and unoccupied, an auxiliary odometer for indicating the distance traversed by the vehicle when occupied, means for operating said main odometer, means connected with the means for indicating when the vehicle is occupied or unoccupied for releasing said auxiliary odometer when said means is shifted to indicate that the vehicle is occupied, and means operated from the operating means for the main odometer for throwing into operation the auxiliary odometer when the latter is released.

4. The combination with means for indicating when a vehicle is occupied or unoccupied, of a main odometer for indicating the total distance traversed when the vehicle is occupied and unoccupied, an auxiliary odometer, a rotatable shaft operatively connected with said main odometer for operating it, a cam disk mounted on said shaft, a spring-controlled oscillatory lever adapted to be periodically engaged by said disk, means operated by the means for indicating whether the vehicle is occupied or unoccupied for releasing said auxiliary odometer when the ve-

hicle is occupied, and means actuated by said lever for operating said auxiliary odometer to thereby indicate the distance traversed by the vehicle when occupied.

5. The combination with a means for indicating when a vehicle is occupied or unoccupied, of a main odometer for indicating the total distance traversed, a normally locked auxiliary odometer, a shaft operatively connected with said main odometer, a cam disk mounted on said shaft, an actuating shaft operated by said means for releasing said auxiliary odometer, a spring-controlled oscillatory lever adapted to be engaged by said actuating shaft and thrown into operative relation with respect to said disk, and means for operating the auxiliary odometer to thereby indicate the distance traversed by the vehicle when the latter is occupied.

876,101. WATER-BOTTLE STOPPER. MAXIMILIAN C. SCHWEINERT, West Hoboken, N. J., and HENRY P. KRAFT, New York, N. Y., assignors, by mesne assignments, to A. Schrader's Son, Incorporated, New York, N. Y., a Corporation of New York. Filed Oct. 10, 1902. Serial No. 128,673.



1. The combination with a stopper for water bags, of retaining means comprising a substantially rigid stem connected at its upper end to the stopper and adapted to extend into and to be engaged within the bag to prevent complete separation of the stopper from the bag, said retaining means being attachable to and detachable from the stopper by hand.

2. A retainer for water-bag stoppers, comprising a wire forming substantially a closed figure and having a looped portion giving it resiliency so as to permit squeezing it through the mouth of the bag without permanent distortion.

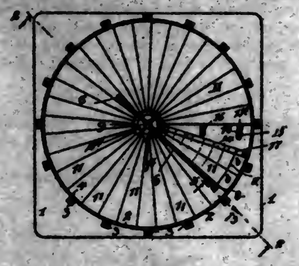
3. A retainer for water-bag stoppers, comprising a wire forming substantially a closed figure pointed at one end to facilitate passing it through the mouth of a bag and looped at its opposite end to give it resiliency and permit squeezing it through the mouth of the bag without permanent distortion.

4. A retainer for water bag stoppers, having means for engagement with a water bag, said retainer being adapted to permit screwing and unscrewing of the stopper, and to prevent complete separation of the stopper from the bag when removed from its socket, and being adapted when such stopper is removed to permit free filling and emptying of the bag, and means whereby the retainer may be connected to a stopper by hand.

5. A retainer for water bag stoppers, having means for engagement with a water bag, said retainer being adapted to permit screwing and unscrewing of the stopper, and to prevent complete separation of the stopper from the bag when removed from its socket, and being adapted when such stopper is removed to permit free filling and emptying of the bag, and means whereby the retainer may be connected to and disconnected from a stopper by hand.

[Claims 6 to 14 not printed in the Gazette.]

876,102. METHOD AND MEANS FOR MAKING GLASS LAMP-SHADES. CLARENCE C. SIBLEY, Perth Amboy, N. J. Filed Apr. 18, 1906. Serial No. 312,348.



1. The method of producing pieces of glass for the production of ornamental glass goods, consisting in preparing a plurality of glass strips having converging side edges, in placing said strips upon a flat surface with their converging edges side by side and edge to edge, holding said strips firmly together in flat form upon said surface, and in making an annular cut in said strips upon a circle described around the center of said series of strips, whereby said strips will all be cut at an equal distance from said center and on the same arc to enable them to be secured together in an ornamental glass article.

2. The method of producing pieces of glass for the production of ornamental glass goods, consisting in preparing a plurality of glass strips having converging side edges, in placing said strips upon a flat surface with their converging edges side by side and edge to edge, holding said strips firmly together in flat form upon said surface, and in making a plurality of annular cuts in said strips at distances apart all described around the center of said series of strips, whereby said strips will be divided into small pieces having their ends curved upon a corresponding axis and their sides correspondingly tapered to enable them to be secured together in an ornamental glass article.

3. An apparatus of the character described comprising a support, a pivot carried thereby, an arm carried by said pivot and provided with a cutter, a guide upon said support disposed radially with respect to the said pivot, and means for holding strips firmly upon said support surrounding said pivot to enable the cutter to make an annular cut in a plurality of strips upon said support at the same distance from said pivot.

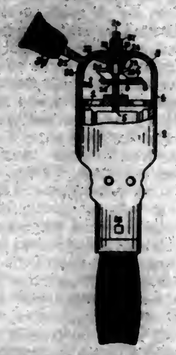
4. An apparatus of the character described comprising a support, an annular ring or frame thereon providing a space to receive strips to be cut, a pivot carried by said support at the center of said ring, a cutter adjustably carried by said pivot, and means for holding a plurality of strips within said space upon said support in position to permit said cutter to make annular cuts in said strips at equal distances from said pivot.

5. An apparatus of the character described comprising a support, an annular frame or ring carried thereby providing a space to receive strips to be cut, a pivot at the center of said space, a guide disposed radially within said space and secured upon said support, means for holding said strips against said guide upon said support, and a cutter adjustably carried by said pivot adapted to make annular cuts at distances apart in strips held upon said support within said space.

[Claim 6 not printed in the Gazette.]

876,103. MASSAGE APPARATUS. HERBERT W. SMITH, Boston, Mass., assignor to Henry M. Ballard, Lynn, Mass. Filed Apr. 23, 1906. Serial No. 313,187.

1. In an apparatus of the class described, in combination, an inclosing casing, a massaging device attached thereto, an electric motor located in said case, a disk or weight mounted on the armature shaft of said motor to be supported thereby and to move transversely thereof, a cam in sliding engagement with said disk to move said disk into a position eccentric with relation to said shaft, a coupling member attached to said cam, a second coupling member having a screw-threaded rod extended through said inclosing casing, a nut engaging said threaded rod on the outside of said casing, and means to secure said nut from movement longitudinally while permitting it to rotate, substantially as described.



2. In an apparatus of the class described, in combination, an inclosing casing, a massaging device attached thereto, a rotatable shaft located in said casing, a motor to rotate said shaft also located in said casing, a disk or weight, a support for said disk or weight carried by and extended transversely of said shaft, and upon which said disk or weight is capable of being moved transversely of said shaft, a cam in sliding engagement with said disk and through which said support is extended, and means located outside of said casing and connected with said cam for effecting movement of said disk or weight transversely of its shaft while said shaft is in rotation, substantially as described.

3. In an apparatus of the class described, in combination, an inclosing casing, a rotatable shaft located therein, means to rotate said shaft, a disk or weight mounted on said shaft, a support for said disk or weight carried by said shaft and upon which said disk or weight is movable transversely, and means located outside of said casing for effecting movement of said disk or weight on its support, substantially as described.

4. In an apparatus of the class described, in combination, an inclosing casing, a rotatable shaft within said casing, a device supported by said shaft to rotate therewith and to permit radial movement with relation thereto, and means exterior to said casing and operatively connected with said device within the casing to effect radial movement of said device, substantially as described.

5. In an apparatus of the class described, in combination, an inclosing casing, a rotatable shaft within said casing, a weight mounted on said shaft, a support for said weight carried by said shaft and extended transversely thereof and upon which said weight is capable of moving radially with relation to said shaft, and means to effect movement of said weight on its support, substantially as described.

876,104. STEERING-KNUCKLE FOR AUTOMOBILES. HINSDALE SMITH, Springfield, Mass. Filed Feb. 13, 1907. Serial No. 357,179.



1. In a steering knuckle, the combination with the fixed axle and a stationary upright post at the end thereof, of a rotatable sleeve bearing a stub journal inclosing said post and having an integral cap covering the top thereof, said sleeve having a lateral axle-receiving opening extending upward from its bottom, whereby the sleeve may be slipped down into position from the upper end of the spindle.

2. In a steering knuckle, the combination with the fixed axle and a rigid upright post at the end thereof, of a rotatable sleeve bearing a stub journal inclosing said post and having a member extending over the top thereof, said sleeve being constructed to be slipped down into position over the upper end of the spindle, and a removable locking member closing the sleeve below said post and receiving the weight sustained by the axle.

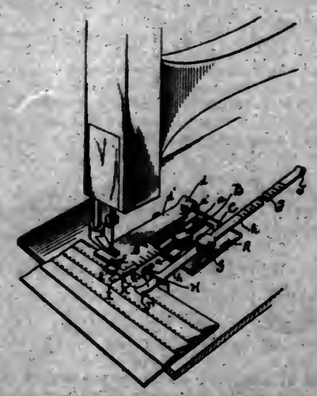
3. In a steering knuckle, the combination with the fixed axle and a rigid upright post at the end thereof, of a rotatable sleeve bearing a stub journal inclosing said post, being constructed to be slipped down into position over the upper end of the spindle, and a removable locking member closing the sleeve below said post.

4. In a steering knuckle, the combination with the fixed axle and a rigid upright post at the end thereof, of a rotatable sleeve bearing a stub journal inclosing said post, and having a removable bearing member extending below and supporting the lower end of said post.

5. In a steering knuckle, the combination with the fixed axle and a rigid upright post at the end thereof, of a rotatable sleeve having a stub journal inclosing said post and extending integrally over the top thereof, said sleeve having a lateral axle-receiving opening extending upward from its bottom, and a removable locking and bearing member supporting the lower end of said post and secured to said sleeve.

[Claims 6 to 15 not printed in the Gazette.]

876,105. TUCKER AND GATHERER FOR SEWING-MACHINES. PETER T. SMITH, Bangor, Me. Filed Dec. 8, 1906. Serial No. 346,917.



1. In a sewing machine attachment, a body having means for clamping it to a sewing machine, a spring plate attached to the body and projecting beyond the same, said plate normally supported at an incline to the body plate and adapted to be depressed by the presser foot of the sewing machine, and having a needle hole therethrough, and a gathering foot adapted to be attached to said spring plate, said foot having a portion projecting down below the under surface of the spring plate.

2. In a sewing machine attachment, a body having means for clamping it to a sewing machine, a spring plate attached to the body and projecting beyond the same, said plate normally supported at an incline to the body plate and adapted to be depressed by the presser foot of the sewing machine, and having a needle hole therethrough, and a gathering foot having a folded over portion adapted to engage with the edge of said spring plate and to clasp the same, said gathering foot having a portion projecting down below the under surface of the spring plate.

3. In a sewing machine attachment, a body having

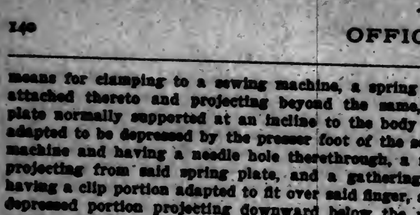
means for clamping to a sewing machine, a spring plate attached thereto and projecting beyond the same, said plate normally supported at an incline to the body plate adapted to be depressed by the presser foot of the sewing machine and having a needle hole therethrough, a finger projecting from said spring plate, and a gathering foot having a clip portion adapted to fit over said finger, and a depressed portion projecting downward below the under surface of the spring plate.

4. In a sewing machine attachment, a body having means for clamping to a sewing machine, a spring plate attached thereto and projecting beyond the same, said plate normally supported at an incline to the body plate adapted to be depressed by the presser foot of the sewing machine and having a needle hole therethrough, a finger projecting from said spring plate, and a gatherer adapted for attachment to said plate, said gatherer comprising a foot portion having a needle opening therethrough and an upwardly extending inclined shank, a returned bend adapted to clasp the edge of the spring plate and finger and an extension from the forward end of said returned end, extending downward to the foot portion but of less width than said foot portion and forming an abutment adapted to fit against the side edge of the spring plate.

5. In an attachment for sewing machines, a body having means for clamping it to a sewing machine, a spring shank formed in one piece with the body bent over from its rear edge and across the upper face of said body, a plate attached to the end of said spring shank and having an opening therethrough for the passage of a needle, said shank and plate standing normally on an incline with relation to the body, and the said plate being adapted to be pressed by the presser foot of the machine, an edge guide attached to said body and longitudinally movable therealong in a line parallel with said spring shank, and a gage bar slidable in the guide, a hook on the end of the bar for forming the tuck, and means for adjusting the gage bar and the guide relatively to each other.

[Claims 6 to 9 not printed in the Gazette.]

876,106. BOX-MAKING MACHINE. ALFRED T. SPENCER and ERNEST C. WYKES, Leicester, England. Filed Feb. 28, 1905. Serial No. 247,763.



1. A box fly attaching machine comprising a reciprocating feeder for carrying the paper to the box, consisting of fixed and movable members, a support for the boxes, means for gluing the paper, a presser bar for pressing the glued end of the paper on to the box, said bar being provided with means for engaging the said movable member and opening the feeder as the latter returns from the support for the purposes described.
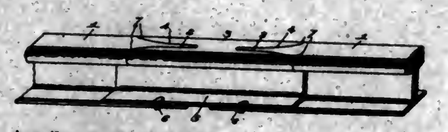
2. A box fly attaching machine comprising a reciprocating feeder for the paper, consisting of a fixed bar arranged transversely of the strip and having an inclined gripping surface, a rod mounted parallel and in proximity thereto on spring supported trunnions and provided with an auxiliary gripping rod for raising the free edge of the paper strip, and means for operating said rod for the purpose described.

3. A box fly attaching machine comprising in combination a reciprocating feeder for the paper consisting of a fixed bar and a movable rod and means to oscillate said rod relatively to the bar, a support for the boxes, a presser bar pivoted on the support for pressing the glued end of the paper on to the inside edge of the box, a shaft, and mechanism controlled thereby for raising and lowering the said presser bar relatively to the box, at the proper times.

4. A box fly attaching machine comprising a frame, a driving shaft, a cam shaft driven therefrom by worm and bevel gear, a clutch on the driving shaft, a foot pedal for throwing said clutch into action, a disk on the cam shaft, a projection on said disk for throwing the clutch out of action at the end of each revolution of the cam shaft, a drum carrying a continuous roll of paper, a support for the box, means for feeding the paper to the box, a device for pressing the glued end of the paper on to the box, a glue tank, means for applying the glue to the paper, shears comprising a fixed and movable blade arranged transversely of the paper and means for operating said movable blade to sever the paper to form the fly.

5. A box fly attaching machine comprising a frame, a drum carrying a roll of paper, friction straps to prevent the paper coming too freely off the drum, a roller shaft, collars adjustable thereon for guiding the paper, a support for the box adjustable on the frame relatively to a pair of shears, a feeder for gripping and carrying the paper to the said support, means on the feeder for raising the end of the paper to avoid contact with the edge of the support, grippers for controlling the supply of paper on to the edge of the box, means for locking the said bar in its inoperative position, a device for gluing the paper, and shears for cutting the paper, said feeding, pressing gluing and cutting operations being operated by and during one revolution of a cam shaft.

876,107. RAILWAY-RAIL JOINT. JOSEPH M. STEELE, Fayette City, Pa. Filed Dec. 10, 1906. Serial No. 347,099.



A railway rail joint comprising an approximately rectangular block having oppositely-disposed V-shaped longitudinally arranged recesses formed in the ends thereof, the outer end walls of said recesses being curved outwardly in opposite directions and with the tread portion thereof cut away to form shoulders, laterally extending flanges on the lower edges of said blocks, the height of the block corresponding to the height of the rail above its flanges and adapted to fit on said rail flanges with the shoulders extending under and engaging the lower face of the rail tread at opposite sides of each rail end, the tread of the rail ends being tapered to fit in the V-shaped recesses of the blocks.

876,108. NEBULIZER OF THE HEAVIER LIQUID HYDROCARBONS. JOHN H. STRINGHAM, Jersey City, N. J., and JOHN B. ELMENDORF, New York, N. Y., assignors, by direct and mesne assignments, to American Combustion Company, a Corporation of New Jersey. Filed Nov. 15, 1906. Serial No. 343,636.



1. A nebulizer of liquid hydrocarbons which consists of a structure having in combination a small centrifugal oil passage closed at one end and having an extremely fine nebulizing outlet at its other end, and having an extremely fine outlet passage extending from said outlet, and having also means admitting oil in extremely limited volume to whirl in the small centrifugal passage toward said extremely fine outlet, whereby the oil is discharged from the nebulizer in an extremely fine mist.

2. A nebulizer of liquid hydrocarbons which consists of a structure having in combination a small centrifugal oil passage closed at one end and having an extremely fine nebulizing outlet at its other end, and having a single extremely fine oil inlet admitting oil to whirl in the small centrifugal passage toward said extremely fine outlet, whereby the oil is discharged from the nebulizer in an extremely fine mist.

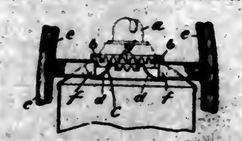
3. A nebulizer of liquid hydrocarbons which consists of a structure having in combination a small centrifugal oil passage having a substantially flat closure at one end and a substantially conical shape at the other end, and an extremely fine nebulizing outlet at the point of the conical end, and means admitting oil in extremely limited volume to whirl in the small centrifugal passage toward the extremely fine outlet.

4. A nebulizer of liquid hydrocarbons which consists of a structure having in combination a small centrifugal oil passage closed at one end and having an extremely fine nebulizing outlet at its other end, and means admitting an extremely fine stream of oil into the small centrifugal passage substantially tangent to the wall thereof and at an angle to the axis thereof, to cause the oil in extremely limited volume to whirl in the small centrifugal passage toward said extremely fine outlet, whereby the oil is discharged from the nebulizer in an extremely fine mist.

5. A nebulizer of liquid hydrocarbons which consists of a structure having in combination a small centrifugal oil passage having an extremely fine oil outlet on one end, an adjustable plug closing the other end, and means admitting oil in extremely limited volume to whirl in the small centrifugal passage toward the extremely fine outlet.

[Claims 6 to 12 not printed in the Gazette.]

876,109. STORM-LANTERN. GUSTAV STÜBGEN, Erfurt, Germany. Filed Apr. 5, 1907. Serial No. 366,631.



1. A storm lantern of the class described, comprising an oil reservoir provided with a plurality of sockets in the crown thereof, elastic lugs forming the walls of said sockets, a burner member mounted within one of the sockets and frictionally held in position by said lugs, and a cap mounted in the other socket and in frictional engagement with the elastic lugs formed in the wall thereof.

2. In a storm lantern of the class described, an oil reservoir, an air feed-chamber, said reservoir and chamber having sockets, elastic lugs formed in the walls of said sockets, and a cap and burner member mounted in the said sockets respectively and held in position by the said elastic lugs.

3. A lantern of the class described, comprising an oil reservoir having an air chamber in the crown thereof, air tubes in communication with the chamber, said reservoir and air chamber having sockets provided with depending cylindrical flanges forming yieldable lugs, a burner mounted in one of the sockets, and a cap mounted in the other socket, the said burner and cap being frictionally held in the sockets by the yieldable lugs.

876,110. PERCOLATOR. CHARLES R. TRUMBELLA, New Britain, Conn., assignor to American Silver Company, Bristol, Conn., a Corporation. Filed Apr. 13, 1906. Serial No. 311,505.

1. In a percolator, the combination of a glass cup having a reduced base portion with a detachable strainer in the form of a shallow cup with vertical sides and a top flange and springs projecting from the said sides to engage the interior of the said base.

tremely fine outlet, whereby the oil is discharged from the nebulizer in an extremely fine mist.

2. A nebulizer of liquid hydrocarbons which consists of a structure having in combination a small centrifugal oil passage closed at one end and having an extremely fine nebulizing outlet at its other end, and having a single extremely fine oil inlet admitting oil to whirl in the small centrifugal passage toward said extremely fine outlet, whereby the oil is discharged from the nebulizer in an extremely fine mist.

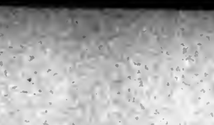
3. A nebulizer of liquid hydrocarbons which consists of a structure having in combination a small centrifugal oil passage having a substantially flat closure at one end and a substantially conical shape at the other end, and an extremely fine nebulizing outlet at the point of the conical end, and means admitting oil in extremely limited volume to whirl in the small centrifugal passage toward the extremely fine outlet.

4. A nebulizer of liquid hydrocarbons which consists of a structure having in combination a small centrifugal oil passage closed at one end and having an extremely fine nebulizing outlet at its other end, and means admitting an extremely fine stream of oil into the small centrifugal passage substantially tangent to the wall thereof and at an angle to the axis thereof, to cause the oil in extremely limited volume to whirl in the small centrifugal passage toward said extremely fine outlet, whereby the oil is discharged from the nebulizer in an extremely fine mist.

5. A nebulizer of liquid hydrocarbons which consists of a structure having in combination a small centrifugal oil passage having an extremely fine oil outlet on one end, an adjustable plug closing the other end, and means admitting oil in extremely limited volume to whirl in the small centrifugal passage toward the extremely fine outlet.

[Claims 6 to 12 not printed in the Gazette.]

876,109. STORM-LANTERN. GUSTAV STÜBGEN, Erfurt, Germany. Filed Apr. 5, 1907. Serial No. 366,631.



1. A storm lantern of the class described, comprising an oil reservoir provided with a plurality of sockets in the crown thereof, elastic lugs forming the walls of said sockets, a burner member mounted within one of the sockets and frictionally held in position by said lugs, and a cap mounted in the other socket and in frictional engagement with the elastic lugs formed in the wall thereof.

2. In a storm lantern of the class described, an oil reservoir, an air feed-chamber, said reservoir and chamber having sockets, elastic lugs formed in the walls of said sockets, and a cap and burner member mounted in the said sockets respectively and held in position by the said elastic lugs.

3. A lantern of the class described, comprising an oil reservoir having an air chamber in the crown thereof, air tubes in communication with the chamber, said reservoir and air chamber having sockets provided with depending cylindrical flanges forming yieldable lugs, a burner mounted in one of the sockets, and a cap mounted in the other socket, the said burner and cap being frictionally held in the sockets by the yieldable lugs.

876,110. PERCOLATOR. CHARLES R. TRUMBELLA, New Britain, Conn., assignor to American Silver Company, Bristol, Conn., a Corporation. Filed Apr. 13, 1906. Serial No. 311,505.

1. In a percolator, the combination of a glass cup having a reduced base portion with a detachable strainer in the form of a shallow cup with vertical sides, and integral springs projecting outwardly from the said sides from between the slits in the metal thereof, substantially as described.



3. In coffee pot or percolator, the combination of the vessel having on its bottom the inwardly turned horizontal flange provided with notches and holding ribs between the said notches, and the stand having an upwardly projecting annular bead and inwardly projecting horizontal flange provided with holding lugs for being engaged by the said flange and ribs of the vessel, substantially as described.

4. In a coffee pot or percolator, the combination of the vessel having on its bottom the inwardly turned horizontal flange provided with notches and holding ribs, and the stand having a top ring provided with an inwardly projecting horizontal flange and holding lugs facing the flange of the said stand which stand is provided with a wedging shaped space between the said flange and lugs of the stand, and arranged to be engaged by the flange and ribs of the vessel substantially as described.

5. In a coffee pot or percolator, the combination of a vessel having on its bottom a holding flange provided with notches, with a stand for the said vessel, the said stand having a top ring provided with lugs adapted to be passed through the said notches and then into engagement with the said flange, and a stop lug on the said holding flange of the said vessel, the said lug projecting from the said flange at one side of one of the said notches.

[Claims 6 and 7 not printed in the Gazette.]

876,111. ATTACHMENT FOR STEAM-SHOVEL SCOOPS. JAMES W. TURNER, Reelsville, Ind. Filed May 16, 1907. Serial No. 373,894.



1. The combination with a scoop of the class described; of a finger, said finger being tapered at one end and having a channel in its lower face, a head removably secured to one end of said finger and a tapered socket fixed to said scoop and adapted to receive the tapered end of the finger.

2. The combination with a scoop of the class described; of a finger; said finger having a slot therein, a head removably secured to one end of said finger; a tapered shank at the opposite end of said finger, having a channel in its lower face, means to secure said finger to the scoop and a tapered socket fixed to said scoop and adapted to receive said shank.

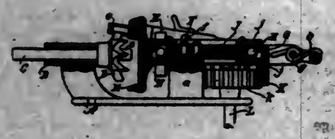
3. The herein described finger for scoops, said finger having a reduced end, a head adapted to fit over and entirely surround the reduced end of said finger, means to

removably secure the head to the reduced end, a tapered shank at the opposite end of said finger, and means to removably secure the finger to an excavating scoop.

4. The combination with a scoop, having a lip at the forward edge thereof; of a finger, said finger having a slot therein to receive said lip, said finger also having a reduced end, a head adapted to fit over and entirely surround said reduced end, means to removably secure the head to the reduced end, a shank at the opposite end of said finger portion, a socket fixed to the scoop and adapted to receive said shank and means to removably secure the finger to the scoop.

5. The combination of a scoop, a socket attached to the scoop, a tooth or finger shank having one end in the socket and having a slot embracing the free edge of the scoop, a head detachably connected with the free end of the shank and bolts or rivets to secure the members together as described.

876,112. ALTERNATING ROTARY GEARING. FRANK B. TYSON, Randolph, Kans. Filed Aug. 21, 1907. Serial No. 389,491.



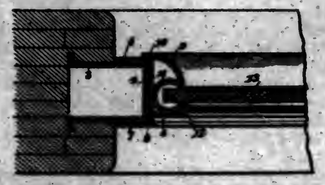
1. In alternating rotary gearing, the combination with a stationary disk, of an inner frame supported upon the said disk and adapted to revolve about the disk as a center, a rack frame pivotally connected with the said inner frame, a driving shaft, a driving pinion on the driving shaft arranged to engage the rack of the said rack frame, means for limiting the movements of the rack frame with respect to said driving pinion, a rack borne by the said inner frame, and a driven shaft and pinion engaging the said rack on the said inner frame, substantially as described.

2. In alternating rotary gearing, the combination with a stationary disk, of an inner frame adapted to revolve about the disk as a center, balls interposed between the said inner frame and the stationary disk, a rack frame pivotally connected with the said inner frame, a driving shaft, a driving pinion on the driving shaft arranged to engage the rack of the said rack frame, means for limiting the movement of the rack frame with respect to said driving pinion, a rack borne by the said inner frame, and a driven shaft and pinion engaging the said rack on the said inner frame, subetantially as described.

3. In alternating rotary gearing, the combination with a stationary disk, of an inner frame supported upon the said disk and adapted to revolve about the said disk as a center, a rack frame pivotally connected with the said inner frame, a spring arranged to press upwardly against the said rack frame, a driving shaft, a driving pinion on the said driving shaft arranged to engage the rack of the said rack frame, means for limiting the movements of the said rack frame with respect to the said driving pinion, a rack borne by the said inner frame, and a driven shaft and pinion engaging the said rack on the said inner frame, subetantially as described.

4. In alternating rotary gearing, the combination with a stationary disk, of an inner frame supported upon the said disk and adapted to revolve about the disk as a center, a rack frame pivotally connected with the said inner frame, a spring arranged to press upwardly against the said rack, a driving pinion, a driving shaft having one end extending beyond said pinion, the driving pinion being arranged to engage the rack of the said rack frame, curved guiding-stops attached to the said rack frame and disposed to encounter the extended end of said driving shaft, a stop attached to said inner frame and disposed to limit the up and down movements of the said rack frame, a rack borne by the said inner frame, and a driven shaft and pinion engaging the said rack on the said inner frame, substantially as described.

876,113. FIREPROOF WINDOW-SASH. GEORGE M. VOLTZ, St. Joseph, Mo. Filed Jan. 22, 1907. Serial No. 353,539.



1. In a window structure of the character described, the combination with a sliding sash comprising a holding frame including guiding means and spaced retaining plates, and a slotted pane-receiving carrier tube mounted in the holding frame between the plates and having a slotted portion exposed therein, of means coacting with the guiding means for guiding the sash in its sliding movement.

2. A window-sash including a side bar having pane-holding means, spaced side flanges projecting from its outer side, forming a guide-way between them, one of said flanges being detachable, and means for securing said detachable flange to the bar independently of the pane-holding means.

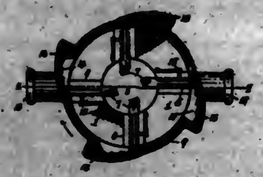
3. A window sash including a side bar having guiding means, spaced retaining plates, one of which is detachable from the bar, means for securing the detachable plate to the bar, and a pane-receiving carrier located between the retaining plates and removable upon the detachment of said retaining plates, said carrier being held against displacement from the bar by the plates.

4. A window sash including a side bar comprising a partition wall having spaced guiding flanges projecting from one side, retaining plates projecting from the other side, and a slotted carrier tube located between and secured to the bar by the retaining plates.

5. A window-sash including a side bar having a partition wall, retaining plates projecting from one side of the wall, a pane-receiving carrier located between the retaining plates, spaced guide flanges projecting from the other side of the partition plate, certain of said flanges and plates being detachable, and means for securing the detachable plate and detachable flange to the partition wall.

[Claim 6 not printed in the Gazette.]

876,114. TAPER-THREAD-CUTTING MACHINE. WILLIAM W. VOSPER, Toledo, Ohio. Filed Sept. 23, 1907. Serial No. 394,076.



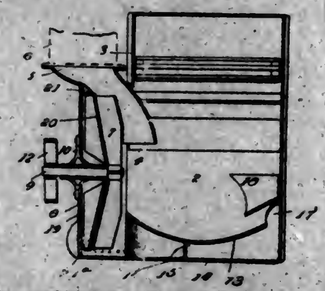
1. In a screw thread-cutting apparatus, the combination with the die-head and work-guide in screw-threaded engagement with each other, of chasers radially movable in the head, and a member rotatably carried by the work-guide and having chaser-engaging surfaces which are stopped in transverse relation to the member and inclined longitudinally of the head.

2. The combination with the die-head and the guide threaded thereto, of radially-movable chasers carried by the die-head, and means rotatably carried by the guide and having a set of chaser-engaging steps for each chaser, the steps of each set running circularly of the die-head and having their surfaces longitudinally inclined to effect a radial movement of the chasers when the die-head and guide have relative longitudinal movements, said means being adapted to turn with the head due to the engagement of the chaser ends with the steps.

3. The combination with the die-head, and the guide to which it is threaded, of radially-movable chasers carried by the die-head with their outer ends protruding therefrom, a casing encircling the die-head and having its inner end contracted and journaled on the guide, said casing having stepped surfaces associated with each chaser, the steps of which are circularly arranged and longitudinally inclined to cause the coacting chasers to move radially when the die-head and guide have relative longitudinal movements.

4. The combination of a work-holder, a die-head rotatably and longitudinally movable upon the the work-holder, radially-movable chasers carried by the die-head, a casing rotatably carried by the work-holder and forming a cup-like member for receiving the die-head, said casing having its wall thickened opposite each chaser and such thickened portions formed interiorly of the casing with series of steps arranged circularly thereof and being longitudinally inclined to cause the chasers coacting therewith to have radial movements when the die-head and work-holder have relative longitudinal movements.

876,115. PNEUMATIC STACKER. EDWARD J. VRAALSTAD, Buffalo, N. Y., assignor of one-half to Buffalo Pitts Company, Buffalo, N. Y., a Corporation of New York. Filed May 4, 1906. Serial No. 315,236.



1. The combination with a threshing machine, of a pneumatic elevator and stacker comprising a straw chamber, a fan at one side thereof for withdrawing the straw and ejecting it into the stacker, a second fan at the same side of the chamber as the first mentioned fan, and means for conducting the blasts from said second fan to said chamber throughout approximately the full length of the side thereof opposite to said fans.

2. The combination with a threshing machine, of a pneumatic elevator and stacker comprising a straw chamber, having a false bottom and an air passage way thereunder opening into said chamber at one side thereof, throughout approximately the full length of such side a fan located in the opposite side of such chamber for ejecting the straw therefrom, and an auxiliary fan for supplying air through said passage-way for feeding the straw to the first mentioned fan.

3. The combination with a threshing machine, of a pneumatic stacker comprising a casing forming a chamber having an outlet opening in one side, a fan located over said opening for feeding the straw into the stacker, a second fan, means for conveying the blasts of such second fan into said chamber at the side opposite the outlet opening, and means for deflecting such blasts toward the bottom of said chamber.

4. The combination with a threshing machine, of a pneumatic stacker comprising a casing forming a chamber having an outlet opening in one side, a fan located over said opening for feeding the straw into the stacker, a second fan mounted on the same shaft as the first mentioned fan, a passage-way in said casing for conveying the blasts of said second fan into said chamber before entering the stacker, and a deflector for directing such blasts toward the bottom of such chamber.

5. The combination with the straw chamber having an opening in one wall and a passage-way leading therefrom beneath said straw chamber and opening into the latter adjacent to the opposite wall thereof, of a fan located at such outlet opening, a casing for such fan, a shaft for the latter, a second fan on such shaft, and a divider between the two fans, the blasts of such second fan being conducted through said passage-way to said chamber.

[Claim 6 not printed in the Gazette.]

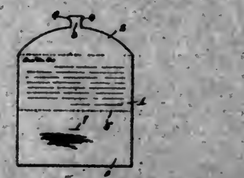
876,116. WIRE-WORKING TOOL. FRANK VSETECKA, Protivin, Iowa. Filed Aug. 19, 1907. Serial No. 389,208.



1. In combination with a wire stretching frame and a winding drum, of cutting edges on said drum, and a head on said frame adapted to co-act with said edges.

2. In combination with a wire stretching frame and a winding drum, of cutting edges on said drum, and a slotted head having cutting edges to co-act with the edges on the drum to sever a wire or the like.

876,117. POSTAL CARD. JOSEPH WALKER, Canonsburg, Pa. Filed Aug. 22, 1906. Serial No. 331,555.



A postal card comprising a body portion terminating in an inclosing and an imperforate retaining flap, said inclosing flap of the same size as and adapted to be folded against the rear face of the body portion and provided with a longitudinal slit at a point intermediate the center thereof and the junction between said flap and body portion, said retaining flap of less width than the body portion, having a curved edge and further provided approximately centrally of its curved edge with a tongue having its free end formed with lateral protuberances, said protuberances further having rounded ends and each of said protuberances further having the edges thereof extending in parallelism with respect to each other, that portion of said tongue extending from the upper edge of the protuberance to its juncture with the retaining flap being of the same width throughout and of a width substantially equal to the length of the said longitudinal slit, said retaining flap adapted to be folded against the rear of the inclosing flap and have the tongue thereof extend through said slit so that the protuberances will engage against the inner face of the inclosing flap thereby securing the flaps together.

876,118. OIL-WELL PUMP. WILLIAM WALLACE, Bakersfield, Cal. Filed Dec. 8, 1906. Serial No. 346,870.

1. In an oil well pump, the combination of a working barrel, a bushing removably seated therein and closely fitting the same, a plunger operable in the bushing, a standing-valve-mechanism, means carried by the plunger for unseating the standing-valve and supporting it from the plunger, and a striking-member carried by the standing-valve and projecting beyond the plane of the outer sides

of the plunger, said bushing having a part projected into the vertical plane of said striking-member and adapted to be engaged thereby whereby said bushing is unseated and removed by and in unison with the plunger and standing-valve-mechanism.



2. In an oil well pump, the combination of a working barrel, a bushing removably seated therein, yieldable means engaging the bushing to lock it in the barrel, a plunger operable in the bushing, a standing-valve-mechanism, means carried by the plunger for unseating the standing-valve, and suspending it from the plunger, and a striking-member carried in unison with the plunger and standing-valve, said member adapted to engage the bushing to first unlock it and then move it lengthwise and finally remove it from the barrel coördinately with the removal of the plunger and standing-valve-mechanism.

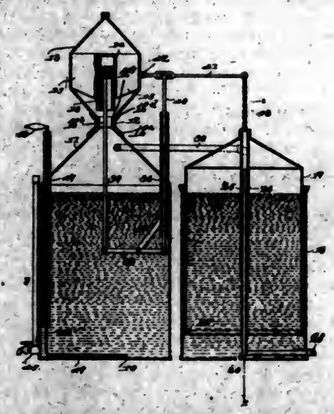
3. In an oil well pump, the combination with the working barrel thereof, the removable plunger and the standing-valve, of normally-separated contacting members one carried by the plunger and the other carried by the standing-valve, said plunger member contacting with the other member when the plunger is elevated for removal, and unseating the standing-valve and suspending said valve from the plunger, and normally-separated contacting members one on the bushing and the other carried by the plunger, said plunger-carrying-member contacting with the bushing-member to first unseat the bushing and then remove it from the barrel in unison with the removal of the plunger.

4. In an oil well pump, the combination with the exterior cylinder or jacket and the upper and lower collars to which its ends are secured, said lower collar having an internal bushing seat, a bushing fitting within the jacket with its lower end resting upon said seat, and its lower edge projecting interior thereto, a plunger fitting the bushing, said plunger carrying a striking-member which is adapted to contact with the projecting edge of the bushing when the plunger is lifted for removal, yieldable latches mounted in the upper collar and normally engaging the bushing to hold it to its seat, said latches yielding to release the bushing under the pressure exerted by the plunger striking-member against the lower end of the bushing whereby the plunger and bushing may be removed in unison.

5. In an oil well pump the combination of the standing barrel, the intermediate barrel fitted thereto, the lower collar to which the upper end of the intermediate barrel is fitted, an upper collar, a jacket extending between and having its ends fitted to said upper and lower collars, a bushing fitting within the jacket and having an interior diameter less than that of the interior of the intermediate barrel, a seat formed on the interior of the lower collar for the lower end of the bushing, said bushing having its lower edge projecting inwardly of the seat, a plunger and plunger suspending connections, said plunger fitting the bushing and having an annular shoulder on its interior near the lower end, a standing-valve adapted to be seated in the standing barrel, said valve having a stem or rod fixed to its upper end and extending into the plunger, a striking-block fixed to the upper and lower ends of said stem, said lower block having a greater diameter than that of the exterior of the plunger and sufficient diameter to allow it to contact with the lower edge of the bushing when raised to the plane thereof, the lower end of said plunger adapted to contact with said lower block to seat the standing-valve in its barrel, and the internal shoulder of the plunger adapted to engage the upper striking-block to unseat the standing-valve, the arrangement of the parts being such that the plunger and standing-valve and their adjuncts and the bushing are removable from the working barrel of the pump in unison.

[Claim 6 not printed in the Gazette.]

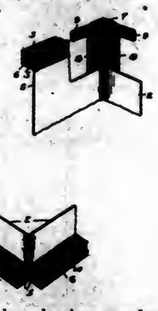
876,119. ACETYLENE-GAS GENERATOR. WILLIAM J. WALSH, Ferris, Tex. Filed May 12, 1906. Serial No. 316,569.



In an acetylene gas apparatus, a generating chamber having a frusto conical upper portion, a throat piece of heavier material than the tank or chamber with a conical flange on its lower end diverging from a vertical opening therethrough at such an angle as to fit snugly on the frusto conical upper portion of the generating chamber, a divergent flange on the upper end of said throat piece between which and the vertical opening is a flat valve seat formed by the top of the throat piece, a carbid chamber having a frusto conical bottom seated in the upper divergent flange of the throat piece, a self closing valve adapted to control the flow of carbid from the carbid chamber to the generating chamber and disposed when closed to rest solely upon the flat top of the throat piece, a cylindrical valve guide within the carbid chamber having a closed top, supporting means for the valve guide, a valve operating rod, a lever fulcrumed in the generating chamber pivoted at one end to the valve rod and at the other end to a second rod passing through the top of said chamber, a slotted lever fulcrumed at one end to a fixed part of the apparatus, said second rod movably engaging the slotted portion of said lever, and a gasometer having a vertically movable bell connected to the other end of the slotted lever.

876,120. KNOCKDOWN BOX. JOSEPH L. WARE, St. Paul, Minn., assignor, by mesne assignments, to The Roberts Lumber Company, a Corporation of Minnesota. Filed Apr. 23, 1906. Serial No. 313,253.

1. A box blank comprising parallel rails and an intermediate flexible panel having portions thereof adjacent to the rails defected and inclosed within the rails, one surface of the panel and the corresponding faces of the rails being substantially flush with each other, and said rails being transversely severed at intervals to permit the blank to be bent to form the walls of a box with the rails extending parallel therewith, substantially as described.



2. A knock-down box having wooden strips forming the top and bottom rails of the sides and ends of the box, each of said strips being provided upon its inner surface with a diagonal slot extending throughout the length of said strip, a continuous sheet or panel of flexible material having its longitudinal edges secured in said slots and bent or folded at right angles to form the corners of the box, and posts fitting the spaces between the contiguous ends of the top and bottom rails at the corner, substantially as described.

3. A knock-down box having top and bottom rails for the sides and ends of the box, each having a slot extending longitudinally therein and a continuous flexible sheet or panel having its longitudinal edges secured in said slots and its inner surfaces flush substantially with the corresponding surfaces of said rails, said panel being bent to form the corners of the box, posts fitting into the spaces between the ends of the side and end rails and bearing on said panel corners, and supporting strips secured to said corner posts between the top and bottom rails substantially as described.

4. A knock-down box having side and end rails for the top and bottom of the box, each having longitudinal slots therein, a continuous flexible sheet or panel having its longitudinal edges secured in said slots, posts fitting into the spaces between the contiguous ends of the side and end rails, and metallic straps securing said posts to said rails, substantially as described.

5. A knock-down box having a flexible plate or panel, and strips secured to the upper and lower edges of said plate or panel on one side thereof, to form top and bottom rails for the sides and ends of the box, said strips being transversely cut at points corresponding to corners of the box, and said panel being bent at such points to bring portions thereof into position to form the sides and ends of the box, and said strips into position leaving spaces between their adjacent ends at their points of severance, and pieces filling said spaces, substantially as described.

[Claim 6 not printed in the Gazette.]

876,121. FIREPROOF DOOR. JAMES A. WHEELER, New York, N. Y. Filed Dec. 11, 1905, Serial No. 291,236. Renewed Nov. 15, 1907. Serial No. 402,329.

1. A fire-proof door composed of a board of solidified asbestos constituting the body of the door, a metal band applied to the edges of said door and having its edges flush with the faces of the door, and a non-metallic band covering the metal band to protect it from rust, as set forth.

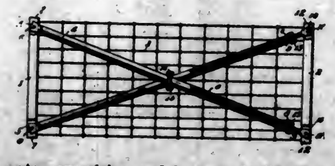
2. The combination with a door-body and separately formed stiles and rails attached to said body, of a metallic band covering the edges of the door and formed with flanges inserted between the door-body and stiles and rails and fastened thereto.

3. The combination with a door-body, and separately formed stiles and rails attached to said body, of a metallic band covering the edges of the door and formed with flanges inserted between the door-body and stiles and rails, and bolts passing transversely through said parts and flanges of the metallic band as set forth and shown.



4. The combination with the door-body consisting of a board of solidified asbestos, and stiles and rails composed of wood and fastened to said body, of a metallic band formed with a central portion extending across the edges of said door and having its marginal portions folded inwardly upon the central portion and terminated in right angled flanges embracing the margin of the door-body as set forth and shown.

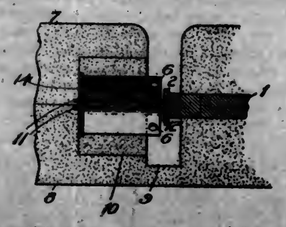
876,122. GATE. ISAAC N. WILLIAMS, Foltz, Ind. Filed Mar. 23, 1907. Serial No. 364,186.



1. A gate comprising end bars, a flexible body portion connecting the end bars, diagonally arranged tubular braces connected to one of the end bars, adjusting means connecting the said braces with the other end bar and adapted to extend the said braces for stretching the flexible body portion of the gate, and a centrally arranged clip receiving and clamping the tubular braces.

2. A gate comprising end bars, a flexible body portion connecting the end bars, and inclined diagonally arranged bracing means composed of telescopic members and connected with the end bars, adjusting devices for extending the bracing means, and means for clamping the diagonally arranged bracing means at the point of crossing.

876,123. TURBINE BUCKET-WHEEL. JAMES WILKINSON, Providence, R. I., assignor to Wilkinson Turbine Company, Birmingham, Ala., a Corporation of Alabama. Filed June 4, 1906. Serial No. 320,113.



1. As an article of manufacture, a turbine bucket wheel comprising a web, a ring of buckets, and a rim cast so as to overlap the periphery of said web and the inner ends of said buckets to unite them and form practically an integral body.

2. As an article of manufacture, a turbine bucket wheel comprising buckets and a wheel web which are independently formed and subsequently connected by a cast metal rim in which both buckets and web are rooted by a cast joint without amalgamation.

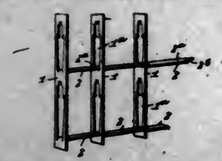
3. As an article of manufacture, a turbine bucket wheel comprising a radially slotted wheel web, a ring of buckets, and an interposed rim cast around the buckets and web so as to overlap the periphery of the latter.

4. As an article of manufacture, a turbine bucket wheel comprising a wheel web, a ring of buckets, and a rim portion cast around the periphery of said web and the inner ends of said buckets, and means to positively lock the embedded portions of said buckets and web in said rim to connect them by a positive-lock, cast-joint, substantially as and for the purposes described.

5. As an article of manufacture, a turbine bucket wheel having a web, a cast rim connected by a cast-joint to said web and formed of a metal having a lower melting point than that of said web, and a ring of individual buckets having perforated ends rooted in said rim by a cast-joint, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

876,124. METAL STRUCTURE. ELMER A. WILSON, Niles, Ohio. Filed Mar. 8, 1906. Serial No. 304,990.



1. Stud members having braces provided with contracted terminal portions and apertures for detachably connecting the braces of one stud-member with the braces of an adjoining stud member.

2. Stud-members having braces with their relatively free ends provided with lateral notches, the braces of one stud member being passed through the brace-formed slot of the adjoining stud-member and having its notches engaging the edges of said slot-walls and one terminal thereof interconnected with the opposite brace.

3. Stud-members having braces with their relatively free ends provided with lateral recesses or notches and their inner portions provided with apertures, the brace of one stud-member being passed through the brace-formed slot of the adjoining stud-member and having its notches engaging the edges of the walls of said slot and one terminal thereof reduced and inserted through the aperture of said adjoining brace and bent or lapped thereon.

4. Stud-members having braces cut therefrom, each brace being widest near its free end and tapering to each end thereof, with lateral notches at its widest point, the notches in the brace of one stud-member adapted to be brought into engagement with the edges of the walls of the slot in the next stud-member.

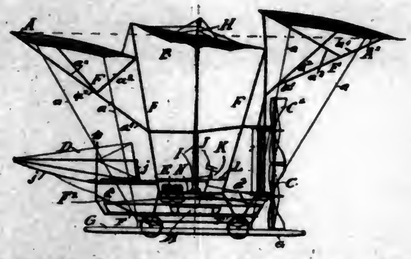
5. Stud-members having braces cut therefrom side by side in pairs, each brace being widest near its free end and tapering to each end thereof, with lateral notches at its widest point, the notches in the brace of one stud-member adapted to be brought into engagement with the edges of the walls of the slot in the next stud-member.

[Claims 6 to 8 not printed in the Gazette.]

876,125. FLYING-MACHINE. FRANZ WONDRA, Schenectady, N. Y. Filed Oct. 11, 1904. Serial No. 227,979.

1. In a flying machine, in combination, with a supporting-frame, aeroplanes carried by said frame at the front and rear and extending to either side thereof, the rear aeroplane being higher than the front aeroplane, vertically oscillating wings pivoted to said frame between said aeroplanes and forming when outspread a third aeroplane similar to the others, and wing-operating mechanism.

2. In a flying machine, the combination, with a supporting frame, of laterally and longitudinally curved aeroplanes mounted thereon and extending transversely thereof to either side of the same at the front and rear of the machine, said aeroplanes being inclined downwardly towards the rear of the machine and the rear aeroplane being higher than the front aeroplane, wings mounted on said frame between said aeroplanes, and means for oscillating said wings.



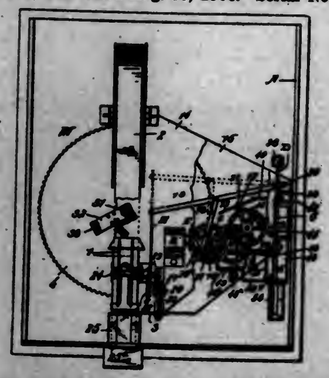
3. In a flying machine, the combination, with a supporting frame, of a shaft extending longitudinally thereto and supported thereby, wings pivoted to said shaft and extending to either side of the machine, upright guide-rods below said wings, crossheads guided vertically on said guide-rods, a connecting-rod connecting each crosshead with its corresponding wing, and means for reciprocating said crossheads.

4. In a flying machine, the combination, with a supporting frame, of wing pivoted thereto, parallel upright guide-rods carried by said frame below said wings, stud-shafts connecting said guide-rods, sprockets mounted on said stud-shafts, chains movable over said sprockets, crossheads movable on said uprights, rods connecting said chains and said crossheads, and means for connecting the latter with the wings.

5. A flying machine comprising a supporting frame, a pair of wings pivoted thereto and each comprising a plurality of swinging panels, means for oscillating said wings, and means operated by each of said wings in its oscillatory movement for operating the panels of the other wing and thereby feathering said wing.

[Claims 6 to 17 not printed in the Gazette.]

876,126. VENDING-MACHINE. GEORGE C. YOCUM, Scranton, Pa. Filed Aug. 30, 1906. Serial No. 332,699.



1. In a coin-operated vending machine, a motor, a coin balance, means operated by the coin balance for releasing and stopping the motor, a chute for delivering coins onto said balance, a device normally arranged to direct coins from the chute on to the balance, and means operated by the motor for moving said device into position to permit

coins to pass from the chute without engaging the balance while the motor is in operation.

2. In a coin operated vending machine, a motor, a coin balance, means operated by the coin balance for releasing and stopping the motor, a chute for delivering coins onto said balance, a deflector normally in the path of coins passing from the chute and adapted to direct coins onto the balance, and means, operated by the motor for moving said deflector out of the path of the coins after the motor has started into operation.

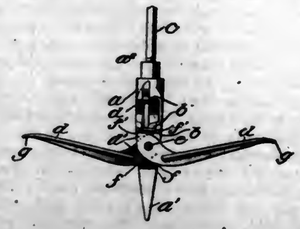
3. In a coin operated vending machine, a motor, a coin balance, means operated by the coin balance for releasing and stopping the motor, a chute for delivering coins onto said balance, a deflector normally in the path of coins passing from the chute and adapted to direct coins onto the balance, means operated by the motor for moving said deflector out of the path of the coins after the motor has started into operation, and a chute arranged to receive coins passing from said first mentioned chute while the deflector plate is out of the path of the coins.

4. In a coin-operated vending machine, a motor, a stationary coin receptacle, a coin balance movable within the receptacle, means operated by the coin balance for releasing and stopping the motor, a chute for delivering coins into said receptacle, a hinged deflector at the upper part of said receptacle, and means for holding said deflector in the path of coins passing from the chute while the motor is stopped and for moving said deflector out of said path when the motor is in operation.

5. In a coin-operated vending machine, a motor, a stationary coin receptacle, a coin balance movable within the receptacle, means operated by the coin balance for releasing and stopping the motor, a plurality of coin retainers supported independently of the balance for retaining a coin upon different portions of the balance, and means operated by the motor for moving said retainers successively to release the coin.

[Claims 6 to 12 not printed in the Gazette.]

876,127. ANCHOR FOR GUYS. FRANK M. ZIMMERMAN, Aurora, Ill. Filed June 6, 1907. Serial No. 377,520.



1. The combination with an anchor-body provided with a point at one end and superimposed transverse slots above said point, of pivoted anchor-blades with ground catching outer ends, and stops at diagonally opposite slot-ends for the pivot-ends of said blades.

2. The combination with a pointed anchor-body provided with a transverse slot, a shoulder and an axial rod, threaded at each end, and an eye on said rod, of pivoted blades in said slot and diagonally opposite stops in said slot.

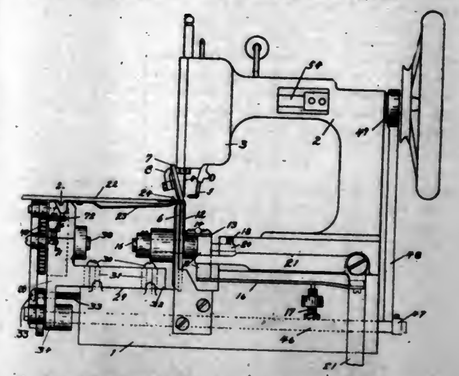
3. The combination with a pointed anchor-body, shouldered at its upper end and provided with an axial rod an eye therefor and superimposed transverse slots above said point, of pivoted anchor-blades in said slots and diagonally opposite stops therefor at each slot-end and outwardly bent ground-catching outer ends for each blade.

876,128. HAND-BAG OR PURSE. JOHN ANTHONY, Attleboro, Mass. Filed Mar. 8, 1907. Serial No. 361,294.

A bag or purse composed of flexible material and having an elastic stiffening bar in its bottom, said bar having pointed ends engaged with the lower corners of the bag or purse, and fastening members for securing the bar in place.



876,129. GLOVE-TIPPING MACHINE. ALBERT M. BANKER, Johnstown, and FRANK CURTIN, Gloversville, N. Y. Filed May 25, 1906. Serial No. 318,623.



1. In a glove-tipping machine, the combination with the stitch-forming mechanism having a vertically operating needle; of a horizontally disposed work-plate having one edge adjacent to the path of the needle; means wholly subjacent to said work-plate for supporting the same in horizontal position; work-clamping mechanism on the under side of said work-plate; and means for retaining the clamped work folded over said edge of said plate.

2. In a glove-tipping machine, the combination with the stitch-forming mechanism; of a horizontally disposed work-plate having one edge adjacent to the path of the needle; means for clamping the work upon the underside of said plate; means for holding the clamped work folded over said edge of said plate; and plate-feeding mechanism on the under side of said plate.

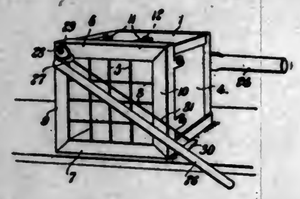
3. In a glove-tipping machine, the combination with the stitch-forming mechanism; of a horizontally disposed work-plate having one edge adjacent to the path of said needle; means for clamping the work upon the under side of said plate; means for holding the clamped work folded over said edge of said plate; a gear-rack on the under side of said plate; and a gear-wheel engageable with said gear-rack and operatively connected with the driving mechanism of the machine.

4. In a glove-tipping machine, the combination with the stitch-forming mechanism; of a slideway; a slide movable along said slideway; a work-plate pivotally connected with said slide upon an axis extending parallel therewith, said plate having one of its edges parallel with said axis and adjacent to said stitch-forming mechanism; and means for holding the work upon said work-plate.

5. In a glove-tipping machine, the combination with the stitch-forming mechanism; of a work-plate having one edge adjacent to said stitch-forming mechanism; separate supports beneath said plate adjacent to said edge and the opposite edge thereof respectively; and work-holding mechanism on the underside of said plate between such supports.

[Claims 6 to 15 not printed in the Gazette.]

876,130. BUTTER-CUTTER. FRANK BARBER, Grand Rapids, Mich. Filed May 13, 1907. Serial No. 373,415.



In a butter cutter the combination with a receptacle having an open end, dividing wires extending across said end, and means movably mounted upon said end for severing material divided by the wires; of a plunger within the receptacle, a stem projecting therefrom and beyond the receptacle, said stem having ratchet teeth, a horizontally oscillatory lever connected to the receptacle, and a plate carried by the lever and disposed when moved in one direction to pass over the teeth and when moved in the opposite direction to engage a tooth and direct the plunger toward the open end of the receptacle.

876,131. BANDOLEER. FRANK R. BATCHELDER, Worcester, Mass, assignor to Mills Woven Cartridge Belt Company, Worcester, Mass., a Corporation of Massachusetts. Filed Feb. 13, 1907. Serial No. 357,214.



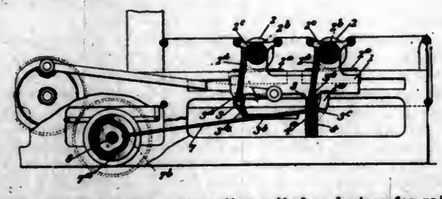
1. A cartridge carrier formed of a woven fabric strip having a neck portion to extend about the neck, and two pendent portions provided with cartridge pockets woven integrally therewith and so arranged that those of both pendent portions open in the same direction when the carrier is in position on the wearer.

2. A cartridge carrier formed of a woven fabric strip having a neck portion to extend around the neck of the wearer, and two pendent portions provided with cartridge pockets woven integrally therewith and on the same side, and so arranged that those of both pendent portions will open in the same direction when the carrier is in position on the wearer.

3. A cartridge-carrier formed of a woven fabric strip having a neck portion to extend around the neck of the wearer and two pendent portions provided with cartridge pockets, the fabric of the neck portion being of softer weave than the fabric of the pendent portions.

4. A cartridge carrier formed of a woven fabric strip having a neck portion to extend around the neck of the wearer, and two pendent portions provided with series of cartridge pockets woven integrally therewith, closing flaps for said pockets woven integrally with the strip, and means for detachably holding the flaps closed.

876,132. THROW-OFF MECHANISM FOR PRINTING MACHINERY. HENRY F. BECHMAN, Battle Creek, Mich., assignor to Duplex Printing Press Company, Battle Creek, Mich., a Corporation of Michigan. Filed May 29, 1907. Serial No. 376,320.



1. In combination, a traveling cylinder, devices for raising and lowering the cylinder mounted on the cylinder carriage, means on the carriage for operating the said devices, a vibrating rock-shaft having one end connected to the devices on the carriage and the other end connected to a relatively fixed member on the frame, and means for rocking said shaft.

2. The combination of reciprocating carriers, a cylinder mounted thereon, devices for raising and lowering the cylinders mounted on the carriers, a rock-shaft journaled on the frame, a vibrating shaft having one end connected with the devices on the carriers and its other end connected with the rock-shaft on the frame, and means for rocking the latter shaft.

3. In a printing press, the combination of reciprocating carriers, a cylinder journaled thereon, eccentric boxes supporting the cylinder trunnions, a rock-shaft mounted on the carrier, and connections between said rock-shaft and eccentric boxes, a rock-shaft mounted on the frame adjacent the carrier, and a swinging shaft connected to the rock-shaft on the carrier and the rock-shaft on the frame, substantially as described.

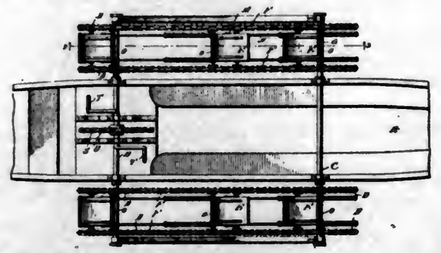
4. In combination, a traveling cylinder, devices for raising and lowering the cylinder mounted on the cylinder carriage, a rock-shaft and connections on the carriage for operating the said devices, a vibrating rock-shaft having one end pivotally connected to the rock-shaft on the carriage and the other end connected to a relatively fixed point on the frame, and means for rocking said swinging shaft.

5. The combination of reciprocating carriers, a cylinder mounted thereon, devices for raising and lowering the cylinder mounted on the carriers, a rock-shaft and connections mounted on the carriers for operating said devices, a rock-shaft journaled on the frame, a vibrating shaft having one end connected by a gimbal joint to the rock-shaft on the carriers and its other end connected by a gimbal joint to the rock-shaft on the frame, and means for rocking the latter shaft.

[Claims 6 to 10 not printed in the Gazette.]

876,133. MARINE PROPULSION. ALBERT E. BEEBE, Mayville, N. D. Filed June 25, 1907. Serial No. 380,737.

1. The combination substantially as herein described of the hull, the shafts journaled thereto, and extending laterally beyond the hull, means for driving one of the shafts, sprocket wheels arranged in pairs on the said shafts on opposite sides of the hull, sprocket chains around the sprocket wheels, cross-bars having at their ends T-heads, one of which is detachable from the cross-bar, means for securing these T-heads to links of the sprocket chains, brace rods extending between the adjacent cross-bars, paddle blades pivoted at their inner edges to their respective cross-bars and arranged in series, the blades of one series opening in one direction and those of the other series opening in the reverse direction, stays extending between said paddle blades and adjacent cross-bars, and made in sections whereby they may be folded in the closing of the paddle blades, and stop devices on the brace rods for engagement by the paddle blades when closed, all substantially as and for the purpose set forth.

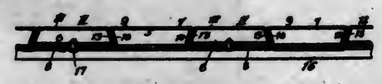


2. A propeller comprising opposite sprocket chains, sprocket wheels receiving the same, cross-bars between the opposite sprocket chains, brace rods between the cross-bars in the direction of length of the sprocket chains, paddle blades pivoted to their respective cross-bars, stays made in sections pivoted together and pivoted at one end to the paddle blades and at their opposite ends to their respective cross-bars, and stops for limiting the closing movement of the paddle blades and mounted on the brace rods, substantially as set forth.

3. The combination with the sprocket chains arranged in pairs, of cross-bars between the sprocket chains, paddle blades pivoted to their respective cross-bars, stay devices for the paddle blades and connecting the same with adjacent cross-bars, and brace rods between the cross-bars, substantially as set forth.

4. A propeller comprising a pair of parallel sprocket chains, having links and pivot pins, cross-bars having at their ends T heads one of each pair of such heads being detachable from its cross-bar, and the said heads being secured to the links of the sprocket chains by the pivot pins of said chains, paddle blades carried by the cross-bars and stay devices for the paddle blades, substantially as set forth.

876,134. METALLIC SHEATHING. LARS J. BERG, Chicago, Ill., assignor to Metallic Sheathing Company, a Corporation of Illinois. Filed Dec. 13, 1906. Serial No. 347,650.



1. A metallic sheathing comprising a continuous body section having formed therein a plurality of dove-tailed channels leaving exposed sections betwen the channels and a plurality of independent strips of dove-tail formation adapted to be inserted into the dove-tailed channels and locked therein, intermediate the exposed sections of the body substantially as described.

2. A metallic sheathing comprising a continuous body section having formed therein a plurality of dove-tailed channels and a plurality of independent strips of dove-tail formation adapted to be inserted into the dove-tailed channels and locked therein, the exposed surfaces of the independent strips and the continuous section being in alinement, substantially as described.

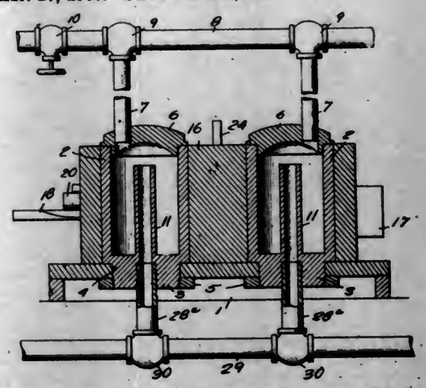
3. A metallic sheathing comprising a continuous body section having formed therein a plurality of dove-tailed channels, leaving exposed sections between the channels a plurality of independent strips of dove-tail formation adapted to be inserted into the dove-tailed channels and locked therein, and forming in conjunction with the exposed sections of the body an attaching surface to which the sheathing is applied, and attaching means, as rivets, passed through the walls of the channels and into the attaching surface and positioned to be concealed when the independent strips are inserted, substantially as described.

4. A metallic sheathing comprising a continuous body section having formed therein a plurality of dove-tailed channels, a plurality of independent strips of dove-tail formation adapted to be inserted into the dove-tailed channels and locked therein, the exposed surfaces of the independent strips and the continuous section being in alinement, an attaching surface to which the sheathing is applied, and attaching means, as rivets, passed through the walls of the channels and into the attaching surface and positioned to be concealed when the independent strips are inserted, substantially as described.

5. A metallic sheathing comprising a body section having a plurality of parallel channels formed therein, each channel having a dovetail formation, a plurality of independent metallic strips each having a cross wall adapted to register with the raised sections between the channels and having side flanges of dove-tail formation adapted to enter the dove-tail channels, and a filling entered into the openings on the interior of the sheathing, substantially as described.

[Claim 6 not printed in the Gazette.]

876,135. MOLD. JULIUS BERTRAM, St. Louis, Mo. Filed Mar. 27, 1907. Serial No. 364,851.



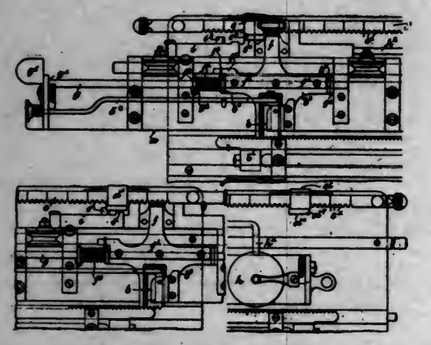
1. In a mold, a base, a pair of parallel disposed hollow mandrels rising from the base and secured thereto by their shank portions, and nuts threaded thereon, said mandrels having water inlets and overflow outlets, said mandrels having a connecting member therebetween having tongue and groove connections with the mandrels, bearing elements positioned to leave a space between them and the mandrels, lugs integral with the apparatus to engage the free edges of the bearing elements to prevent lateral displacement thereof, pivoted levers having spring pressed pins coöperating with the bearing elements, said mandrels having pivoted latches to engage said pivoted levers, said connecting member having pivoted levers for removing said bearing elements.

2. In a mold, a base, a pair of parallel hollow mandrels rising therefrom, said mandrels having water inlets and overflow outlets, said mandrels having a connecting member therebetween, having tongue and groove connections with the mandrels, bearing elements positioned to leave a space between them and the mandrels, lugs integral with the apparatus to engage the free edges of the bearing

elements to prevent lateral displacement thereof, means for holding the bearing elements in position, said connecting member having pivoted levers for removing said bearing elements.

8. In a mold, a pair of parallel disposed hollow mandrels a base therefor, said mandrels having threaded shank portions, to be fixed to said base, nuts to engage said shank portions, said mandrels having a connecting member therebetween having tongue and groove connections with the mandrels, bearing elements positioned to leave a space between them and the mandrels, lugs integral with the apparatus to engage the free edges of the bearing elements to prevent lateral displacement thereof, pivoted levers having spring pressed pins to coöperate yieldingly with the bearing elements, pivoted latches for the levers, said connecting member having pivoted means for removing said bearing elements.

876,136. TYPE-WRITING MACHINE. JOHN H. BIRCH and JAMES S. FOLEY, West Bromwich, near Birmingham, England. Filed Oct. 19, 1906. Serial No. 339,684.



1. A type-writing machine comprising a platen carriage, a rock shaft supported by the carriage and capable of independent movement relative thereto, a carriage stop arm and escapement bracket mounted upon said rock shaft, and a spring interposed between said relatively movable parts to maintain them in their normal positions and to act as a buffer.

2. A type-writing machine comprising a platen carriage, a marginal rail stop or stops, a stop on the carriage coöperating with the rail stop or stops, a rock shaft supported by the carriage, an arm mounted on the rock shaft and constituting a carriage stop, and a torsional spring mounted on the rock shaft for preserving the normal position of the carriage stop in line with the marginal rail stop or stops, for restoring the same to such normal position after it has been raised for clearing a margin stop and to constitute a buffer when moving the carriage to its initial position, combined with means for actuating the rock shaft to move the carriage stop out of the path of the rail stop or stops.

3. A type-writing machine comprising an adjustable margin rail stop or stops, a platen carriage stop carried thereby, coöperating with the rail stop or stops, a rock shaft supported by the carriage and provided with an arm to constitute the carriage stop, said arm normally positioned in the platen of the rail stop or stops, means for rocking said shaft to move the carriage stop out of the plane of the rail stop or stops, a torsional spring mounted upon said rock shaft and adapted to normally maintain said arm in the path of the marginal stop or stops and for restoring said arm to its operative position after the rock shaft has been actuated to raise said arm to admit of the further travel of the carriage to provide for marginal writing, a lever fulcrumed to the carriage and adapted to be depressed by its passage under the said stop projection for rendering active the spring, a bell-ringing mechanism controlled by the lever, and a bell-striker adapted to be operated by said spring when the lever clears the said projection, said lever on the return movement of said carriage adapted to be moved over past the margin stop without affecting the ringing mechanism.

4. A type-writing machine comprising an adjustable margin rail stop or stops, a platen carriage stop carried thereby, coöperating with the rail stop or stops, a rock shaft supported by the carriage and provided with an arm to constitute the carriage stop, said arm normally positioned in the platen of the rail stop or stops, means for rocking said shaft to move the carriage stop out of the plane of the rail stop or stops, a spring, a lever fulcrumed to the carriage and adapted to be depressed by its passage under the said stop projection for rendering active the spring, a bell-ringing mechanism controlled by the lever, and a rotatable shaft carrying the bell-striker and provided with a torsion spring, and a contact adapted to be acted upon by the control lever when the latter is depressed.

876,137. PROCESS OF MAKING CAMPHENE. AUGUSTUS BISCHLER and ANTON BASELLI, Basel, Switzerland, assignors, by mesne assignments, to J. Basler & Cie., Basel, Switzerland, a Firm. Filed Sept. 13, 1906. Serial No. 334,370.

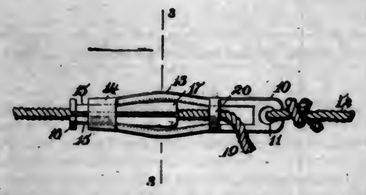
1. The described process for the manufacture of camphene consisting of heating pinene hydrochlorid with an easily fusible, anhydrous metal salt of a higher fatty acid, and distilling the mixture of the reaction in steam in order to separate the camphene.

2. The described process for the manufacture of camphene consisting of heating pinene hydrochlorid with an easily fusible anhydrous metal salt of a higher fatty acid for some hours at about 200° C. and distilling the mixture of the reaction in steam in order to separate the camphene.

3. The described process for the manufacture of camphene consisting of heating pinene hydrochlorid with an easily fusible anhydrous metal salt of a higher fatty acid for some hours at about 200° C. in a vessel provided with a column serving as a reflux condenser and distilling the mixture of the reaction in steam in order to separate the camphene.

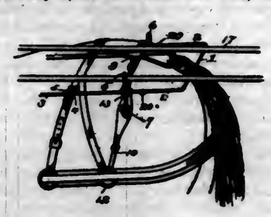
4. The described process for the manufacture of camphene consisting of heating pinene hydrochlorid with an easily fusible, anhydrous metal salt of a higher fatty acid in presence of diethylaniliu at about 200° C. distilling the mixture of the reaction in steam, in order to separate from it the camphene and the diethylaniliu and finally adding an acid to the distillate in order to separate the camphene from the diethylaniliu.

876,138. ROPE-CLAMP. MAX BLUM and JACOB STEIN, Elizabethport, N. J. Filed Apr. 3, 1906, Serial No. 309,586. Renewed June 5, 1907. Serial No. 377,363.



A device of the kind described, comprising a body-portion having bulging side pieces, an eye on one end of the body portion and a cylindrical part on the other end, the eye forming means for attaching one end of a rope, a pair of tapered jaws sliding in the cylindrical part, for grasping the end of a rope, and a ring secured to the side pieces and in line with the jaws to guide the free end of the rope and prevent the entrance of the rope between the sides of the jaws.

876,139. REIN-GUARD. GEORGE W. BORN, Champaign, Ill. Filed May 9, 1907. Serial No. 372,745.



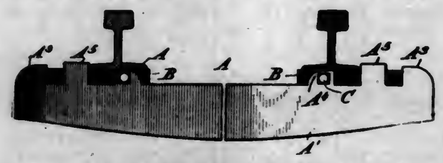
1. A rein guard comprising a rectangular frame, forwardly projecting arms hingedly connected to said frame, means to support the rear ends of said arms in vertical adjustment, and means to secure the forward ends of said arms in longitudinal adjustment on the harness, substantially as described.

2. A rein guard comprising a rectangularly shaped, longitudinally adjustable frame, forwardly projecting arms on said frame, means to adjustably secure the forward ends of said arms to the harness, swiveled supporting bars, and means to adjustably connect the rear ends of said arms with said bars, substantially as described.

3. A rein guard comprising an open frame having hinged forwardly projecting supporting arms, a clip to hold the forward ends of said arms, clamping screws to adjustably secure said ends in said clips, supporting straps adapted to be secured to the harness over the back of the horse, supporting bars having a swivel connection at their lower ends with said straps and adjustably mounted connecting devices arranged on said supporting bars, whereby the rear portions of said arms and said frame are raised and lowered above the back of the horse, substantially as described.

4. A rein guard comprising an open frame having hinged forwardly projecting supporting arms or ends, a clip to hold the forward ends of said arms, set screws to adjustably secure said ends in said clips, supporting straps adapted to be secured to the harness and over the back of the horse, supporting bars having a swivel connection at their lower ends with said strap, clamping blocks arranged on said supporting arms or bars and adapted to receive the arms or ends of said frame, and clamping screws to adjustably clamp said sleeves to said supporting arms and to hold said ends or arms of the frame in adjustable engagement therewith, substantially as described.

876,140. RAILROAD CROSS-TIE. DOCTOR R. L. BOYD, Sumrall, Miss. Filed Jan. 14, 1907. Serial No. 352,266.



1. A trough shaped tie provided with inwardly projecting ends, and upwardly extending spaced lugs on its sides.

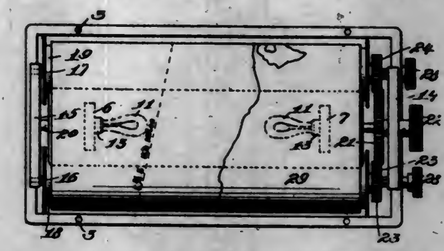
2. The combination with a trough-shaped tie provided with inwardly projecting ends, of wooden blocks arranged in said tie under said ends and means for securing said block in said tie.

3. The combination with a trough-shaped tie provided with downwardly projecting sides and ends, of wood blocks arranged in said tie at each end, inwardly projecting portions formed on the ends extending over said blocks and spaced lugs formed on said sides projecting up above said blocks.

4. The combination with a trough-shaped tie provided with inwardly projecting ends, of blocks extending under said ends, apertured lugs formed on the sides of the tie, lugs projecting up from the side of the tie above said blocks and bolts extending through said apertured lugs and blocks, for the purpose described.

5. A metal trough-shaped tie provided with inwardly projecting ends, of wooden blocks arranged in said tie extending under said ends, provided with transverse bores, apertured lugs projecting up from the side of the tie and a bolt extending through said lugs and blocks.

876,141. CHART-HOLDER. FRANK W. BOYER, New York, N. Y. Filed June 1, 1907. Serial No. 376,784.



1. A chart-holder comprising a casing formed of an upper and a lower section, said upper section provided with a transparent top, a transparent plate supported by said lower section, a pair of rollers supported in said lower section, a chart suitably connected to said rollers, means carried by said rollers whereby each of them can be operated independently, causing thereby the operation in opposite directions of the rollers, an operating means simultaneously engaging with both rollers for operating them, and means for connecting and disconnecting the rollers to and from said operating means to permit of the operation in opposite directions of the rollers independently of each other.

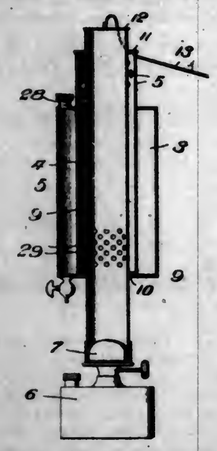
2. A chart-holder comprising a casing provided with a transparent top, a pair of rollers rotatably mounted in said casing and having their axes at one end projecting through one wall of the casing, a chart connected to the rollers and adapted to be wound thereon and unwound therefrom, a pinion loosely mounted on the axis of each of said rollers, adjustable means mounted on the projecting ends of the said axes for connecting the pinions thereto, and means engaging with the pinions and adapted when operated to impart movement to said rollers when said pinions are connected to the axes, said adjustable means adapted to operate said rollers independently of each other when the pinions are disconnected from the axes.

3. In combination, a pair of rotatable rollers, means for supporting the axes of said rollers, means carried by said rollers whereby each of them can be operated independently, causing thereby the operation in opposite directions of the rollers, an operating means simultaneously engaging with both rollers for operating them, a chart connected to the said rollers and adapted to be wound thereon and unwound therefrom when the said means is operated, and means for disconnecting the rollers from said operating means to permit of the operation in opposite directions of the rollers independently of each other.

876,142. INCUBATOR-HEATER. ROSWELL F. BROOKS, Lake City, Iowa. Filed Nov. 6, 1906. Serial No. 342,295.

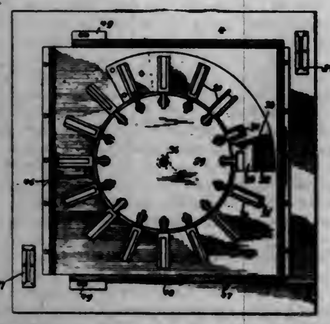
1. In an incubator the combination with a body; of a heating apparatus comprising a boiler having a central opening, an extension having a plurality of openings therein at the upper end of said central opening, a chimney disposed through said central opening and extension and having a plurality of perforations therein, there being an annular vertical passage for the products of combustion between said chimney and the inner wall of the boiler, collars surrounding said chimney and adapted to close the ends of said central opening, said perforations being above the lower collar and within said central opening, a heater

at the lower end of said chimney, a pipe extending through said incubator and having one of its ends secured to the upper end of the boiler and the opposite end thereof secured to the lower end of the boiler, said pipe being constructed in a single section and having curved portions therein and means to regulate the passage of the products of combustion through said heating apparatus.



2. A heater for incubators comprising a tubular boiler having its inner wall extended above its top and having a plurality of openings, a chimney of less diameter than the axial opening through said boiler there being an annular chamber between said chimney and inner wall, said chimney having perforations near the bottom of said chamber, means for closing the upper end of said chamber and embracing said chimney, secured thereto and resting on the top of said extension, and a collar disposed around said chimney at the lower end of the said chamber and snugly fitting the latter and closing its lower end.

876,143. VENDING-MACHINE. ANDREW BROWN, Carnegie, and ANDERSON W. LAWRENCE, Duquesne, Pa. Filed Feb. 11, 1907. Serial No. 356,898.



1. A vending machine comprising a rotatable member mounted upon a vertical axis, a plurality of article holders pivoted upon the member, a stationary holder support arranged below said member, and normally maintaining said holders in an upright position and provided with means to allow of the swinging of a holder upon its pivot to discharge the article carried thereby, a delivery chute adapted to conduct the discharged article, and means for actuating said member to position a holder to swing upon its pivot to discharge the article.

2. A vending machine comprising a rotatable member mounted upon a vertical axis, a plurality of article holders pivoted upon the member, a stationary holder support arranged below said member, and normally maintaining said holders in an upright position and provided with means to allow of the swinging of a holder upon its pivot to discharge the article carried thereby, a delivery chute adapted to conduct the discharged article, means for actuating said member to position a holder to swing upon its pivot to discharge the article, and means for returning a holder to normal position after the article has been discharged therefrom.

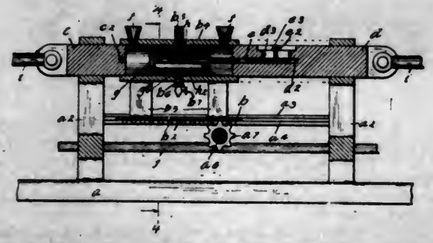
3. A vending machine comprising a rotatable member mounted upon a vertical axis, a plurality of article holders pivoted upon the member, a stationary holder support arranged below said member, and normally maintaining said holders in an upright position and provided with means to allow of the swinging of a holder upon its pivot to discharge the article carried thereby, a delivery chute adapted to conduct the discharged article, a normally locked and manually operated actuating means for said member to shift the latter to position a holder swing upon its pivot to discharge the article, and means for releasing said actuating means.

4. A vending machine comprising a rotatable member mounted upon a vertical axis, a plurality of article holders pivoted upon the member, a stationary holder support arranged below said member, and normally maintaining said holders in an upright position and provided with means to allow of the swinging of a holder upon its pivot to discharge the article carried thereby, a delivery chute adapted to conduct the discharged article, a normally locked and manually operated actuating means for said member to shift the latter to position a holder swing upon its pivot to discharge the article, a means for releasing said actuating means, and means for returning a holder to normal position after the article has been discharged therefrom.

5. A vending machine comprising a rotatable member, a plurality of radially-extending pivoted article holders carried by the member and normally retained in an upright position, a stationary support arranged below the member, maintaining said holders in an upright position and provided with an opening to allow of the pivoting of a holder to discharge an article during the shifting of said member, a shaft to which said member is attached, a delivery chute adapted to conduct the discharged article, means for revolving said shaft to position a holder to allow it swing downwardly in said opening to discharge the article into the chute, and means for returning a holder to normal position after the article has been discharged.

[Claims 6 to 9 not printed in the Gazette.]

876,144. SPOOL-MOLDING MACHINE. WILLIAM BUAKE, Millburn, N. J. Filed Feb. 28, 1907. Serial No. 359,733.



1. In a spool molding machine, a frame, a mold cylinder movable longitudinally thereof, horizontal plungers mounted in the frame and adapted to operate in the cylinder, means for feeding material into the opposite ends of the mold cylinder, and a spool mold mounted in the mold cylinder and movable longitudinally thereof.

2. In a spool molding machine, a frame, a mold cylinder movable longitudinally thereof, horizontal plungers mounted in the frame and adapted to operate in the cylinder, means for feeding material into the opposite ends of the mold cylinder, and a spool mold mounted in the mold cylinder and movable longitudinally thereof, one of said plungers being also provided with a rod which passes centrally through the spool mold.

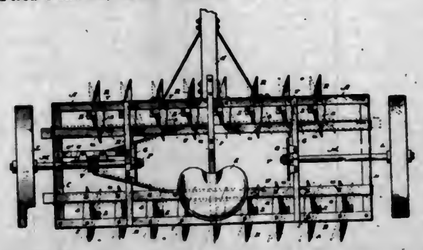
3. In a spool molding machine, a frame, a mold cylinder movable longitudinally thereof, horizontal plungers mounted in the frame and adapted to operate in the cylinder, means for feeding material into the opposite ends of the mold cylinder, and a spool mold mounted in the mold cylinder and movable longitudinally thereof, one of said plungers being also provided with a rod which passes centrally through the spool mold, said spool mold and said mold cylinder being provided with means for discharging liquid therefrom when the pistons are moved inwardly.

4. In a spool molding machine, a frame, a mold cylinder movable longitudinally thereof, horizontal plungers mounted in the frame and adapted to operate in the cylinder, means for feeding material into the opposite ends of the mold cylinder, and a spool mold mounted in the mold cylinder and movable longitudinally thereof, one of said plungers being also provided with a rod which passes centrally through the spool mold, said spool mold and said mold cylinder being provided with means for discharging liquid therefrom when the pistons are moved inwardly, and said spool mold being composed of separate longitudinal parts detachably connected.

5. In a machine for molding spools from fibrous pulp, a frame, a mold cylinder movable longitudinally of the frame, plungers mounted in the opposite end portions of the frame and adapted to operate in the mold cylinder, means for operating said plungers, means for moving the mold cylinder longitudinally of the frame, a spool mold placed in the mold cylinder, and a rod connected with one of said plungers and adapted to pass through the spool mold in the mold cylinder.

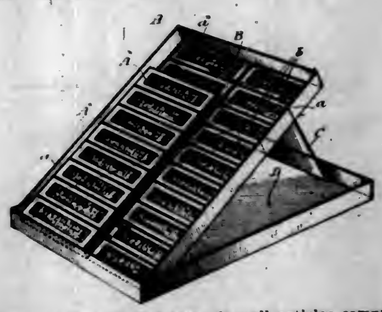
[Claims 6 and 7 not printed in the Gazette.]

876,145. DISK HARROW AND WEEDER. FRANK BUCHET and ELMER A. MULLINIX, Walla Walla, Wash. Filed June 11, 1907. Serial No. 378,377.



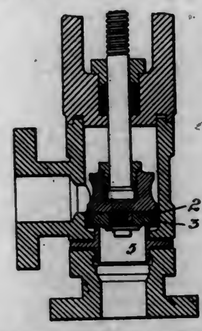
An improvement in disk harrows, substantially as described consisting of a main frame having side bars provided with guide openings and having front and rear bars in advance and in rear of their respective guide openings, slide bars movable laterally in the main frame and guided in the said guide openings, said slide bars being arranged one in rear of the front bar and the other in advance of the rear bar, a lever pivotally supported in connection with the main frame midway between the said slide bars and movable in a lateral direction between said slide bars, detent means for securing said lever in its different positions, links connected at one end with the said lever and extending thence laterally in the same general direction and diverging toward their other ends and connected at said ends one with the front slide bar and the other with the rear slide bar whereby the operation of the lever may move the slide bars in the same direction at each operation of the lever, disks below the front and rear bars, hangers for said disks journaled vertically in the front and rear bars and having for the front disks rearwardly projecting crank arms, and for the rear disks forwardly projecting crank arms, the said front and rear crank arms being pivotally connected with their respective slide bars, whereby the operation of the one lever may operate to tilt the front and rear disks, all substantially as and for the purpose set forth.

876,146. DISPLAY-BOX. ALFRED H. BURT, Buffalo, N. Y., assignor to National Candy Company, Jersey City, N. J., a Corporation of New Jersey. Filed Aug 9, 1907. Serial No. 387,764.



A display box for packages of small articles comprising a tray for holding said packages, the bottom of said tray being covered with printed panels corresponding in size and appearance to said packages.

876,147. VALVE-DISK. ALEXANDER W. CADMAN, Pittsburg, Pa. Filed Jan. 13, 1905. Serial No. 240,917.



1. A reversible disk valve, comprising an inner relatively soft metallic ring, and an outer surrounding retaining ring of harder metal, the inner ring having its peripheral portion constructed to compensate for the shrinkage of the outer ring; substantially as described.

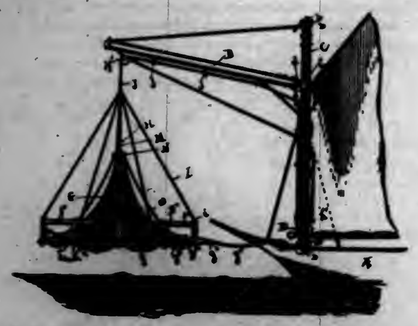
2. A metallic valve disk having a central portion of relatively soft material, formed with a peripheral groove, and a retaining ring of stronger material cast upon the central portion and having a spreading portion engaging the peripheral groove; substantially as described.

3. A valve disk comprising a body portion of copper, and a surrounding ring of brass, the copper having a peripheral groove, and the brass ring being cast upon the copper and having a portion entering the said groove; substantially as described.

876,148. NET-CASTING APPARATUS. GEORGE K. CLOUD, Mobile, Ala. Filed Aug. 5, 1907. Serial No. 387,114.

1. In a net casting apparatus, a conical net, weights in the lower portion of the net, weights near the top of the net, rings connected to the net, a supporting device consisting of a suspended frame, and means thereon for en-

gaging the rings, and means whereby the rings may be released.



2. In a net casting apparatus, a mast, an arm thereon, a block on the arm, cables run thereover, a net support suspended from one cable, a net suspended from a second cable, means for detachably connecting the net to the support, and means operated by a third cable for effecting a detachment of the net and its support.

3. In a net casting apparatus, a mast, an arm thereon, a block on the arm, cables run thereover, a net support suspended from one cable, a net suspended from the support, means for detachably connecting the net to the support, and a head having a series of connections with the means for connecting the net, and a second cable to which the head is connected.

4. In a net casting apparatus, a swinging arm, a block thereon, cables run on the block, a conical net secured to one of the cables, said net consisting of a length of netting having its ends secured by a lacing run through the meshes of the net, a net supporting frame on a second cable, hangers on the supporting frame, rings in the net applied to the hangers, pins extending through the rings and hangers, a head under the control of a third cable, means for connecting the head and pins, whereby movement of the head is communicated to the pins to withdraw the same from the hangers and rings.

5. In a net casting apparatus, a swinging arm, a block thereon, cables run on the block, a conical net secured to one of the cables, said net consisting of a length of netting having its ends secured by a lacing run through the meshes of the net, a net supporting frame formed in sections on a second cable, hangers on the supporting frame consisting of strips of metal embracing the sections of the frame, the depending portions of the hangers lying parallel and having conducting slots, and means for suspending the net from the hangers.

[Claims 6 to 8 not printed in the Gazette.]

876,149. BOTTLE-CAP. CHARLES W. COOK, Evansville, Ind. Filed Apr. 5, 1907. Serial No. 366,541.



A bottle cap consisting of a shell having a depressed central part, an outer circular wall adapted to be crimped around the mouth of the bottle, said wall and depressed part defining an intermediate annular channel, and an annular expansible gasket lying in said channel and of less width than said channel which is adapted to be expanded by the action of crimping the cap on the bottle to form a seal, exposed to the fluid within the bottle, between the cap and bottle mouth.

876,150. BOTTLE. ERNEST L. DIMITRY, New Orleans, La. Filed Mar. 5, 1907. Serial No. 360,682.



1. A non-refillable bottle including a valve casing rotatably mounted within the bottle, a valve carried by the casing, and means for locking the valve against normal movement.

2. A non-refillable bottle including a valve casing rotatably mounted within the bottle, a valve carried by the casing, and means for locking the valve against normal movement, said means being automatically released upon tilting of the bottle beyond the horizontal.

3. A non-refillable bottle comprising a valve casing mounted for movement within the bottle, means for insuring a certain position of the casing relative to the bottle during movement of the bottle, said casing being formed with an inclined valve port and with a pin-recess, a valve movable longitudinally of the port, a pin carried by the valve and freely movable therein, said pin being adapted to engage the pin-recess when the valve is on its seat, the pin being inclined to the plane of movement of the valve, whereby to prevent movement of the valve except upon arranging the bottle in position to gravitate the pin from the recess in the casing.

4. A non-refillable bottle including a valve casing rotatably mounted within the bottle, a valve carried by the casing and movable along a line inclined to the longitudinal axis of the bottle, and means for locking the valve against normal movement.

5. A non-refillable bottle including a valve casing mounted within the bottle, means for insuring a certain position of the casing relative to the bottle during movement of the bottle, a valve carried by the casing and movable along a line inclined to the longitudinal axis of the bottle, and means for locking the valve against normal movement.

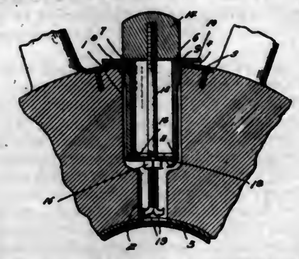
[Claims 6 to 9 not printed in the Gazette.]

876,151. VEHICLE-AXLE LUBRICATOR. CLAUDE R. DODGE, Wonder, Nev. Filed Apr. 8, 1907. Serial No. 366,961.

1. A hub formed with a bore terminating in an oil passage, a securing plate applied to the hub, a cup received in the bore and having threaded engagement with the securing plate, a removable bottom to the cup having an opening therethrough, and a bolt rod for securing the parts of the cup together, said rod having an auger extension for cleaning the oil passage.

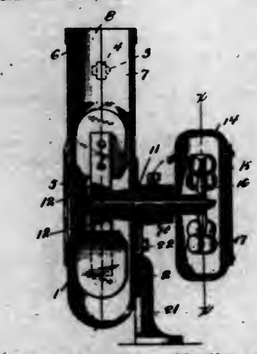
2. An oil cup comprising a cylindrical barrel, removable ends to the barrel, one of said ends having an oil outlet therein, and a rod extending through said ends to clamp the parts together, and means on the exterior of the barrel for securing the cup in place.

3. An oil cup for vehicle axles having removable ends and a clamping rod extending through the cup for securing the ends in place, said clamping rod having a split end forming an auger extension on the end thereof.



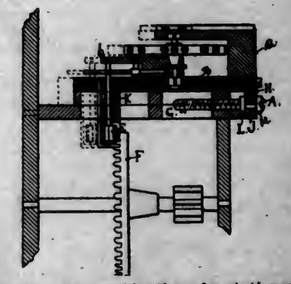
4. A hub having a bore therein terminating in an oil passage, a securing plate on the hub surrounding said bore, a cup having threaded engagement with said plate and provided with removable ends, a clamping rod for securing the ends together, said rod having an auger extension adapted to project in the oil passage.

876,152. COMBINED TURBINE WATER-MOTOR AND FAN-BLOWER. FRANK C. DOUDS, SMITH H. DOUDS, and RALPH A. DOUDS, New Castle, Pa. Filed Oct. 6, 1906. Serial No. 337,789.



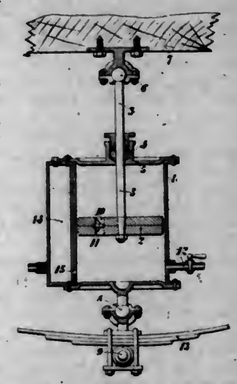
In a water motor fan, the combination of a fan casing formed of two sections secured together and provided with an outlet, one of said sections having an air inlet arranged approximately centrally thereof and the other of said sections provided at a point in alinement with the center of the air inlet with a laterally-extending bearing, said bearing projecting inwardly and outwardly with respect to the section with which it is formed, a bushing mounted within said bearing and having its inner end flush with the inner end of the bearing and its outer end projecting past the outer end of the bearing, means extending through the bearing for securing the bushing in position, a supporting standard for said fan casing connected with one of the sections of the casing, a shaft mounted for rotation in said bushing and extending beyond both ends thereof, a fan mounted on the inner end of said shaft within the fan casing and having its hub abutting against the inner end of the bearing and the inner end of the bushing, a turbine casing mounted on the outer end of said bushing and surrounding the outer end of the shaft, said turbine casing having one side formed of a removable plate whereby access can be had to the said turbine casing, a turbine mounted on said shaft within the turbine casing and having its hub abutting against the outer end of the bushing, said turbine casing provided with an interiorly screw-threaded annular portion constituting a water inlet port arranged tangentially with respect to the turbine, a nipple secured to said screw-threaded portion and extending within the turbine casing, and a water outlet for said turbine casing.

876,153. ADJUSTABLE ESCAPEMENT FOR CLOCKS AND WATCHES. WILLIAM W. DUDLEY and WALLACE R. DUDLEY, Lancaster, Pa. Filed June 16, 1905. Serial No. 265,609.



In a time piece, the combination of a stationary bridge, a slide block mounted upon said bridge, a balance wheel and its bridge mounted upon said slide block, an escapement, including a pinion, mounted upon said slide block, all the parts mentioned being movable with the slide block, and a wheel forming part of the time train with which said pinion meshes and relative to which it moves when the slide block is moved.

876,154. SHOCK-DEADENER FOR VEHICLES. GASTON DUMOND, Paris, France. Filed July 30, 1906. Serial No. 328,465.

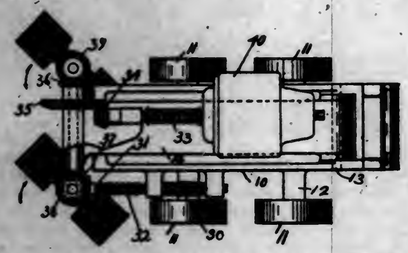


A double-acting shock absorber for vehicles comprising a closed cylinder containing a fluid and an arch-shaped piston of such diameter as to provide a space between it and the wall of the cylinder, thereby establishing communication between that portion of the cylinder above the piston and that portion below it, said piston further provided with a port, and a spring-controlled double-acting valve mounted in said port, said port further establishing communication between that portion of the cylinder above the piston and that portion below it.

876,155. SURFACING-MACHINE. CLAUS A. EDLUND, Providence, R. I., assignor of one-half to Emil Bernstrom, Providence R. I.; Hanna Edlund administratrix of said Claus A. Edlund, deceased. Filed Dec. 13, 1905. Serial No. 291,522.

1. A surfacing machine comprising a supporting frame, a vertical shaft mounted to rotate in said frame, a supporting member rigidly secured to said vertical shaft, a horizontal shaft extended through said supporting member, means for preventing rotation of said shaft oppositely disposed dressing rolls mounted on said horizontal shaft, and means for rotating each roll about said horizontal shaft during the rotation of the vertical shaft.

2. A surfacing machine comprising a supporting frame, provided with a bearing sleeve, a vertical shaft mounted to rotate in said sleeve, a pinion secured to said shaft and resting upon the upper end of said sleeve, whereby said shaft is supported, a supporting member rigidly secured to the lower end of said shaft, a horizontally arranged shaft carried by said supporting member, means for preventing rotation of said shaft, dressing rolls, mounted on said shaft, pinions on said rolls, and a second pinion secured to said bearing sleeve and meshing with the pinions of said rolls.



3. A surfacing machine comprising a supporting frame provided with a bearing sleeve, a vertical shaft mounted to rotate in said sleeve, a pinion rigidly secured to said sleeve, a supporting member rigidly secured to the lower end of said vertical shaft, a horizontal shaft extended through said supporting member, means for preventing rotation of said shaft, oppositely disposed dressing rolls mounted on said horizontal shaft, and pinions connected with said rolls and meshing with the pinion on said bearing.

4. In a machine of the character described, a portable carriage, an actuating motor, two upright shafts, means whereby both of said shafts are driven in opposite directions by said motor, a longitudinally disposed shaft connected at the lower end of each of said upright shafts, two floor dressing rolls mounted to rotate on each of said longitudinal shafts, an apron pivoted at one end in said carriage on which the operating mechanism is mounted, and means for adjusting the free end of said apron to regulate the working pressure of the dressing rolls on the surface to be finished.

5. In a machine of the character described, a carriage, an actuating motor located on said carriage, a pair of upright shafts, means whereby both of said shafts are driven in opposite directions, a plurality of floor dressing rolls connected to and revolved around each of said shafts, means for rotating each roll on its own axis as it is carried around said shaft, an apron pivoted at one end in said carriage on which the operating mechanism is mounted, means for adjusting the free end of said apron to regulate the working pressure of the dressing rolls on the surface to be finished, and means whereby said carriage may be automatically moved to carry said rolls over the surface to be dressed.

[Claims 6 to 10 not printed in the Gazette.]

876,156. CIGAR-CUTTER. WILLIAM E. EDWARDS, Irvington, N. J. Filed Aug. 24, 1907. Serial No. 389,942.



1. In a cigar cutter, the combination of a skeleton frame recessed from one edge and providing an interior slideway, parallel side plates having registering apertures, and a knife mounted in said slideway to move across said apertures.

2. In a cigar cutter, the combination of a skeleton frame recessed from one edge and providing an interior slideway and spring recesses at the opposite sides of said slideway, side plates having registering apertures, a knife mounted in said slideway, and springs in said recesses engaging said knife.

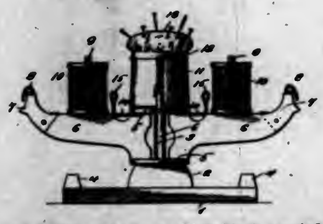
3. In a cigar cutter, the combination of a skeleton frame recessed from one edge and providing an interior slideway and spring recesses at the opposite sides of said slideway, side plates having registering apertures, a knife mounted in said slideway with an inner sharpened edge adapted to move across said apertures and an outer exposed edge, and springs in said recesses engaging said knife and normally holding the same clear of said apertures.

4. In a cigar cutter, the combination of a skeleton frame recessed from one edge and providing an interior slideway and spring recesses at the opposite sides of said slideway having slits at their inner ends, side plates having registering peripheral recesses and inner apertures, a knife mounted in said slideway with an inner sharp edge adapted to move across said aperture and an outer edge exposed by said recesses in the side plates, and leaf springs inserted at one end in said slits and at their other ends engaging the knife normally holding the latter clear of the said apertures.

5. In a cigar cutter, the combination of a skeleton frame recessed from one edge providing opposite parallel slideways and spring recesses extending around the inner ends of and behind said slideways, a knife mounted in said slideways, stops at the outer ends of said slideways, leaf springs projecting from said spring recesses into engagement with said knife and adapted to engage the said inner ends of the slideways, and stops at the outer ends of said slideways.

[Claims 6 and 7 not printed in the Gazette.]

876,157. SPOOL-HOLDER. BERLIN EMPFIELD, Indiana, Pa. Filed Aug. 22, 1907. Serial No. 389,697.



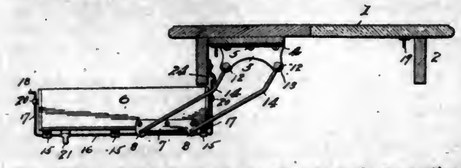
In a spool holder, a base, a pillow-block carried thereby and provided with a central seat, a vertical shaft mounted in said seat, and a spool supporting frame mounted for rotation on said shaft and comprising a pair of spaced disks, a plurality of supporting arms having their inner ends received and held between said disks, spool holding means on each arm, and thread receiving means carried by the outer end of each arm.

876,158. VAT-DYE DERIVED FROM INDIRUBIN AND PROCESS OF MAKING SAME. GADIENT ENGI, Basel, Switzerland, assignor to The Firm of Society of Chemical Industry in Basle, Basel, Switzerland. Filed Mar. 27, 1907. Serial No. 364,910.

1. The herein described process for the manufacture of vat dyestuffs, which consists in treating with a halogen the condensation product called indirubin and derived from indoxyl and isatin.

2. As new products, the polyhalogenated vat-dyestuffs obtained by treating indirubin with more than two atomic proportions of a halogen, constituting in dry state violet crystalline powders, dissolving in concentrated sulfuric acid with a greenish blue to green coloration, soluble in hot aniliu and nitrobenzene with a violet coloration and yielding, when treated with alkaline reducing agents, a bright yellow vat dyeing cotton violet tints fast to washing and chlorin.

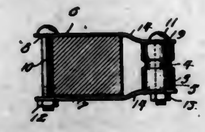
876,159. DRAWER ATTACHMENT. PETER ERICKSON, Whitehall, Mich. Filed Oct. 4, 1906. Serial No. 337,428.



1. The combination with a support and supporting plates secured thereto, of a receptacle, pivot plates secured to said receptacle, parallel supporting bars pivoted in the pivot plates and having their ends journaled in the supporting plates, a spring-actuated latch rod pivotally mounted on the receptacle, keepers for the latch rod, said keepers arranged on the support so as to hold the receptacle either in folded or extended position.

2. The combination with a horizontal support, of brackets secured thereto, a drawer or similar receptacle, pivot plates secured to said drawer, spaced parallel arranged supporting rods journaled in the brackets, said rods having horizontal portions passing beneath the drawer and through the pivot plates carried thereby, a spring-actuated latch rod pivotally mounted on the drawer, means for operating said rod, guards to limit the motion of the latch rod, keepers for the rod, said keepers being located on the support so as to hold the drawer either in extended or in closed position.

876,160. CLAMP. WINN D. FARIS, Medicine Lodge, Kans., assignor of one-half to Frank B. Chapin, Medicine Lodge, Kans. Filed Nov. 20, 1907. Serial No. 403,095.



1. The combination with a cross arm, of an insulating knob having a central opening and being of lesser diameter than the cross arm, and a pair of metal straps having openings, a bolt engaging the openings of the strap at one face of the cross arm, and a bolt engaging the openings in the strap and the opening in the knob at a point adjacent the opposite face of the cross arm.

2. In combination with a cross arm, a pair of resilient metal straps having openings, an insulator knob having a semi-circular depression around its face and a central opening, and being of a lesser diameter than the cross arm, a bolt adapted to engage the openings in the straps at one face of the cross arm, and a bolt adapted to engage the opposite openings in the straps and the central opening in the knob and to clamp the knob between the straps at a point adjacent the opposite face of the arm.

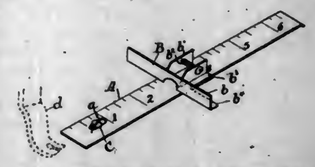
876,161. CLASP. WILLIAM C. FINNEY, Washington, D. C. Filed June 21, 1906. Serial No. 322,720.



1. A clasp formed from a single piece of spring metal comprising a base member and a gripping member, an ear at each side provided with an inclined slot, each ear being crimped to form a groove leading to the slot, the gripping member having an integral longitudinal tongue punched therefrom and bent inwardly toward the base member, and a detachable lever having pivots working in the inclined slots in the ears and a head bearing upon the longitudinal tongue of the gripping member for the purpose of bringing the free ends of the base and gripping members together.

2. A clasp comprising a base member having ears upon its opposite sides, said ears being each provided with an inclined slot, and said base member being centrally punched out between the ears, a gripping member connected to the base member and having a tongue punched therefrom, each end of the tongue being integral with the gripping member, and a lever having pivots fitting loosely in the slots of the ears, the head of the lever bearing upon the said tongue and forcing the same into the opening formed in the base.

876,162. GAGE FOR SEWING-MACHINES. JULIA A. FLOOD, Boston, Mass. Filed Apr. 25, 1907. Serial No. 370,167.

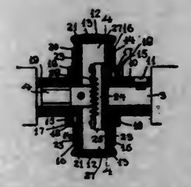


1. The herein described gage for sewing machines consisting of a flat bar having an opening at one end for the passage of a fastening screw and a transverse guide adapted to slide on said bar and having jaws which clasp the edge of said bar and substantially flush with the under face of the same and a tightening screw connecting said jaws.

2. The herein described gage for sewing machines consisting of a flat bar having an opening at one end for the passage of a fastening screw and a guide adapted to slide on said bar, said guide having a vertical flange with a central opening to admit the passage of the screw head and jaws adapted to clasp the edges of said bar extending back from said flange with a space between them wide enough for the passage of the screw head and a tightening screw connecting said jaws.

3. The herein described gage for sewing machines consisting of a flat bar having an opening at one end for the passage of a fastening screw and a guide adapted to slide on said bar, said guide having a vertical flange with a central opening to admit the head of the screw and jaws extending back from said flange and adapted to clasp the edges of the bar each jaw having a vertical flange separated by a space sufficiently wide to allow of the passage of the screw head and a screw passing through said flanges for clamping said jaws.

876,163. POLISHING-WHEEL. JOHN B. FONTAINE, Marlboro, Mass., assignor to George D. Barber, trustee, Worcester, Mass. Filed Dec. 5, 1904. Serial No. 235,420.



1. The combination of a rotating polishing wheel provided with a rigid periphery overhanging to form recessed sides, of a series of pins projecting from the opposite sides

of said wheel within said overhanging periphery and adapted to engage a cloth enveloping said periphery, and means for pressing said cloth against the wheel between said pins and said rigid periphery, whereby the cloth is stretched over said periphery.

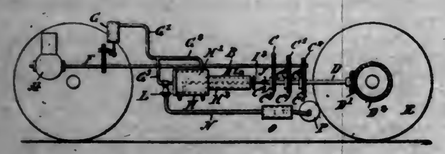
2. The combination of a polishing wheel having a rigid periphery and recessed sides, of a series of pins projecting from the opposite side of said wheel within said recessed sides and adapted to engage a cloth enveloping said periphery, a washer on each side of the wheel, having its circumference extending beyond said pins but within said recessed side, and means for pressing said washers against said wheel, whereby the cloth is stretched over said rigid periphery.

3. The combination of a polishing wheel and polishing cloth to be applied to its rim, of sharpened pins attached to said wheel by which said cloth is temporarily fastened to said wheel, cylindrical pins attached to the hubs of said wheel, annular washers sliding upon said hubs and cam shaped blocks on said washers by which they are held tightly between said cylindrical pins and said wheel, and in contact with said cloth.

4. The combination of a polishing wheel having an overhanging periphery forming recessed sides, of a series of pins projecting from the opposite sides of said wheel between said overhanging periphery and the center of the wheel and adapted to engage a cloth enveloping said periphery, an annular washer on each side of the wheel, means for pressing said washers tightly against said wheel, said washers being provided with concentric slots to receive the ends of said pins and allow the rotation of said washers.

5. The combination of a polishing wheel and polishing cloth to be applied to its rim, of a series of pins projecting from the opposite sides of said wheel adapted to engage said cloth, an annular washer on each side of the wheel, means for pressing said washers tightly against said wheel, said washers being provided with concenrtic slots to receive the ends of said pins and allow the rotation of said washers.

876,164. AUTOMATIC CONTROLLER FOR THE SPEED OF AUTOVEHICLES. THOMAS B. FORD, New York, N. Y. Filed Mar. 28, 1906. Serial No. 308,487.



1. An automatic controller for the speed of autovehicles comprising the motor, the traction wheels, and a shifting device having a pneumatic actuator controlled by the combined action of the motor, running at a uniform rate of speed, and the driven traction wheels running at a varying rate of speed.

2. An automatic controller for the speed of autovehicles, comprising the motor, the traction wheels, a shifting device for controlling the transmission of power from the motor to the traction wheels, and an automatically controlled pressure device for actuating the said shifting device.

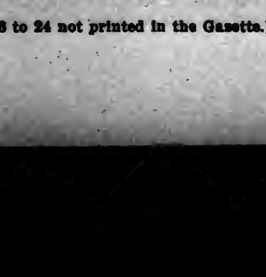
3. An automatic controller for the speed of autovehicles, comprising the motor, the traction wheels, a shifting device for controlling the transmission of power from the motor to the traction wheels, a pressure device for actuating the said shifting device, and means for controlling the said pressure device from the traction wheels.

4. An automatic controller for the speed of autovehicles, comprising the motor, the traction wheels, a series of gearings for imparting different speeds respectively to the traction wheels, a shifter for controlling said gearings and normally maintaining a given ratio of speed between the motor and the traction wheels, a pressure device for actuating said shifter to change the ratio of speed between the normal speed of the motor and the varying speed of the traction wheels, the said pressure device being controlled by a reduction or increase of the speed of the traction wheels.

5. An automatic controller for the speed of autovehicles comprising the motor, the traction wheels, a shifter for controlling the transmission of power from the motor to the traction wheels, and a pressure device having a cylinder provided with connected bores of different diameters, pistons in the said bores, and having a common piston rod connected with the said shifter, and means for delivering pressure to the said cylinder, and controlled by the motor and the traction wheels of the vehicle.

[Claims 6 to 9 not printed in the Gazette.]

876,165. WIRELESS-TELEGRAPH TRANSMITTING SYSTEM. LEE DE FOREST, New York, N. Y., assignor to George K. Woodworth, Boston, Mass. Filed May 11, 1904. Serial No. 207,383.



1. In a wireless telegraph transmitting system, the combination with a transmitting loop antenna, constituting a closed oscillating circuit, of a closed oscillating energising circuit associated therewith and attuned thereto.

2. The combination, at a station for transmitting electric wave impulses, with a plurality of aerial conductors divided into two portions having their upper ends connected together, and connected to earth at their lower ends, to form a complete closed oscillating-radiating loop; of an oscillation source coöperatively associated with said loop; and means for tuning said source and loop with each other.

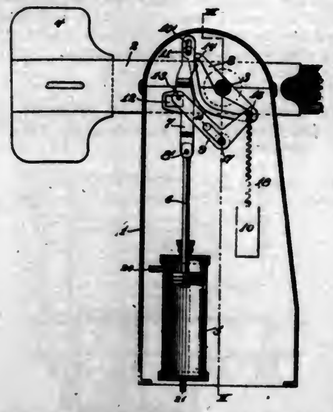
3. The combination, at a station for transmitting electric wave impulses, with a plurality of aerial conductors divided into two portions having their upper ends connected together, and connected to earth at their lower ends, to form a complete closed oscillating-radiating loop; of a separate original closed oscillation-circuit in coöperative relationship with said loop; and means for tuning the loop and original oscillation circuit with each other.

4. The combination, at a station for transmitting electric wave impulses, with a plurality of aerial conductors divided into two portions having their upper ends connected together, and connected to earth at their lower ends, to form a complete closed oscillating-radiating loop; of two inductance coils, one for each side of said loop, means for adjusting said coils; and a separate original closed oscillation circuit adjustably connected to one of said inductance coils.

5. The combination, at a station for transmitting electric wave impulses, with a plurality of aerial conductors divided into two portions having their upper ends connected together, and connected to earth at their lower ends, to form a complete closed oscillating-radiating loop; of two inductance coils, one for each side of the loop; an oscillation source coöperatively associated with said loop; and means for tuning said source and loop with each other.

[Claims 6 to 24 not printed in the Gazette.]

876,166. CROSSING-GATE. JOHN J. GARD, Harvey, Ill., assignor to Buda Foundry & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 25, 1907. Serial No. 353,990.



1. In combination, a gate operating shaft, an operating arm secured thereto and provided with a pair of locking recesses, means for operating the operating arm, and an oscillatory locking arm having connection to the operating means and adapted to engage one of the locking recesses when the operating and locking arms reach either of their two extreme positions.

2. In combination, a gate operating shaft, an operating member secured thereto and provided with lock engaging means, lost motion connections for operating the operating member, and a locking member having a lost motion connection with said operating means and adapted to move the lock engaging means partially to locking position, and a weight for giving the locking member its final movement to locking position.

3. In combination, a gate operating shaft, an operating member secured thereto and provided with lock engaging means, lost motion connections for operating the operating member, and a locking member having a lost motion connection with said operating means and adapted to move the lock engaging means partially to locking position, and independent means for giving the locking member its final movement to locking position.

4. In combination, a gate operating shaft, an operating arm secured thereto and provided with a pair of locking recesses, a locking arm adapted in one extreme position to engage one of said recesses and in the other extreme position to engage the other of said recesses and an operating means connected to the operating arm and the locking arm and adapted to cause the engagement of the locking arm with one of the said recesses when the operating arm reaches one of its extreme positions.

5. In combination, a gate operating shaft, an operating arm secured thereto and provided with a pair of locking recesses, a locking arm adapted in one extreme position to engage one of said recesses and in the other extreme position to engage the other of said recesses and an operating means connected to the operating arm by a lost motion connection and to the locking arm, whereby the locking arm is released from its locking connection with the recesses before the operating means commences to turn the operating arm.

[Claims 6 and 7 not printed in the Gazette.]

876,167. MORTISE-LOCK. LOUIS S. S. GEORGE, Kamloops, British Columbia, Canada. Filed June 29, 1907. Serial No. 381,451.

1. In a lock, a casing, a spindle-operated latch mounted to slide in the casing, a sliding bolt within the casing, independent of the latch, a key, means for operating the bolt by said key, a locking device for the bolt, and a releasing device for said locking device, operated by the said key.

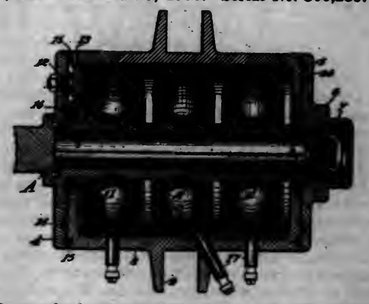


2. In a lock, a cylindrical casing, a spring-controlled spindle-operated latch mounted for movement in the casing, a bolt having independent sliding movement in the casing adjacent the said latch, having a recess therein, and a longitudinal slot and a lever pivoted in the said slot, a key arranged to enter the said slot and engaging with the said lever, and a spring locking device carried by the casing and adapted for engagement with the said bolt, which spring locking device is carried into or out of engagement with the said bolt by the action of the said lever controlled by the movement of the said key.

3. In a lock, the combination with a casing, a bolt mounted to slide in the said casing, the said bolt being provided with a shoe, and an enlargement at the end of the said shoe also mounted for sliding movement in the casing, a spring bearing against said enlargement and an end of the casing, the said enlargement being provided with a recess in its inner forward face, a spindle sleeve passed through the said recess in the said enlargement, being journaled in the said casing, and a cam carried by the said spindle sleeve for engagement with the opposite edges of the recess in said enlargement.

4. In a lock, the combination with a casing, of a bolt mounted to slide in the casing, a shoe for the said bolt provided with a longitudinal slot therein and recesses in its upper face, guides for the upper and lower portions of the said shoe, a release lever pivoted in the slotted portion of the shoe, a spring locking device secured to the said casing, being normally in engagement with the said shoe and in engagement with the said release lever, and a key adapted to actuate the bolt by entering the recesses therein and to operate the said spring lock by operation to and from the release lever.

876,168. VEHICLE-WHEEL. IRA L. GOODRICH, Curpertino, Cal. Filed Feb. 9, 1906. Serial No. 300,239.



1. In a wheel construction, the combination of a stationary axle, a sleeve rotatable thereon, a hollow hub having a limited radial movement relative to the sleeve, annular air cushions between said sleeve and hub, fixed and movable annular flanges at the ends of the sleeve, said hub having annular ends opposing said flanges, said flanges each having an annular groove and a series of balls within said groove and engaging the contiguous surface of the annular end head of the hub, and annular packings between the end heads of the hub and the flanges, one of said pack-

ings being arranged outside of the series of balls and the other packing being arranged inside of the same series of balls whereby a dust-proof joint is formed.

2. In a wheel construction, the combination of a stationary axle, a sleeve rotatable thereon, a hub surrounding the sleeve, annular air cushions between the sleeve and hub, said hub having integral flanges at the ends substantially closing said ends and forming a housing for the air cushions, fixed and movable flanges at the ends of the sleeve opposing the end flanges of the hub, and ball-bearings between the fixed and movable flanges and the contiguous end flanges of the hub, annular packings between the hub and flanges, one of said packings being arranged outside of one of the ball-bearings and the other packing being arranged inside of this same ball-bearing, said cushions having nipples extending through the hub to allow the cushions to be inflated from the outside.

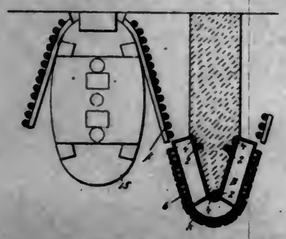
876,169. RECEPTACLE FOR INCANDESCENT LAMPS. GILBERT W. GOODRIDGE, Bridgeport, Conn., assignor to Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed June 14, 1907. Serial No. 379,054.



1. A sign receptacle having laterally projecting lugs at front and back with connecting strengthening ribs.

2. A sign receptacle having a pair of diametrically opposite lugs at the front and a like pair at the back but out of line with those at the front, and ribs connecting the front with the back lugs.

876,170. FLOATING PIER. CHARLES E. GRANT, Allendale, Cal. Filed Sept. 13, 1907. Serial No. 392,759.



1. A floating pier consisting of a buoyant structure, a suitable support with means for connecting the pier to the support to allow the pier to rise and fall, and roller buffers carried by the pier.

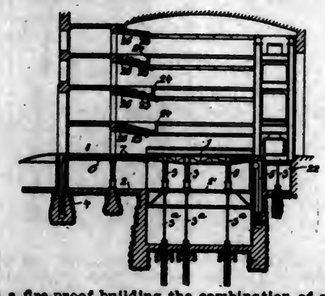
2. A floating pier consisting of a buoyant structure, a suitable support with means for connecting the pier to the support to allow the pier to rise and fall, and roller buffers carried by the pier, said roller buffers being yieldingly supported at one end.

3. A floating pier consisting of a buoyant structure, a suitable support with means for connecting the pier to the support to allow the pier to rise and fall, roller buffers carried by the pier, and means for yieldingly supporting said buffers at both ends.

4. A floating pier consisting of a buoyant structure, a suitable support with means for connecting the pier to the support to allow the pier to rise and fall, roller buffers carried by the pier, and means for yieldingly supporting the upper ends of said buffers in clusters, and for yieldingly supporting the lower ends of said rollers.

5. A floating pier consisting of a buoyant structure, a suitable support with means for connecting the pier to the support to allow the pier to rise and fall, roller buffers carried by the pier, and means for yieldingly supporting the upper ends of said buffers in clusters, and for yieldingly supporting the lower ends of said rollers, said means for supporting the upper ends of said rollers including a cross-head in which a cluster of rollers is pivoted, and a transversely movable beam member connected to the cross-head and slidable in guides in said buoyant structure.

876,171. FIREPROOF BUILDING. PAUL W. GRASZYNSKI, Tempelhof, near Berlin, Germany. Filed May 29, 1907. Serial No. 376,364.



1. In a fire-proof building the combination of an assembly room with two fixed floors superposed one over the other and both provided with openings, a movable floor in the opening of and normally registering with the higher fixed floor and adapted to be lowered into the opening of the under-floor, a counter-weight device for said movable floor, a tappet fixed upon said counter-weight device, an arm provided with a nose, said arm being pivoted to said tappet, a fixed guide adapted to guide said arm and having a rising part, slides adapted to be moved into the opening of the higher floor when the movable floor is lowered for shutting off the assembly room from the under-floor in a fire-proof and smoke tight manner, a tappet on each slide, said tappet being adapted for engagement by the tappet of the counter weight device when said arm is in the rising part of the fixed guide, to move the slides to the closing position, the nose of said arm engaging the tappet of the slide when the movement of the counter-weight device is reversed.

2. In a fire-proof building, the combination of an assembly room with superposed fixed floors, each provided with an opening, a movable floor normally registering with the opening of the upper fixed floor and adapted to be lowered into the opening of the lower floor, slides connected with said movable floor and adapted to be moved into the opening of the upper floor when the movable floor is lowered whereby to shut off the upper floor from the lower floor, supplementary slides in connection with the said slides, and means for moving said supplementary slides laterally with respect to the said first named slides when said first named slides are moved.

3. In a fire-proof building, the combination of an assembly room with two superposed fixed floors, each provided with an opening, a movable floor normally registering with the opening of the upper floor and adapted to be lowered into the opening of the lower floor, slides connected with said movable floor and adapted to be moved into the opening of the upper floor when the movable floor is lowered whereby to shut off the upper floor from the lower floor, supplementary slides in connection with the first named slides, and means for laterally displacing the supplementary slides when the first named slides are moved, said means comprising shears having one end pivoted to the supplementary slides, and a fixed guide for engagement by the other end of the shears.

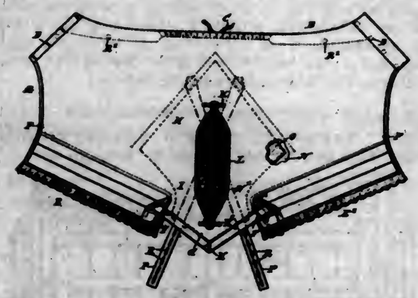
4. In a fire-proof building, the combination of an assembly room with two superposed fixed floors, each provided with an opening, a movable floor normally registering with the opening of the upper floor and adapted to be lowered into the opening of the lower floor, slides connected with said movable floor and adapted to be moved into the opening of the upper floor when the movable floor is lowered whereby to shut off the upper floor from the lower floor, supplementary slides in connection with the first named slides, means for moving said slides laterally with respect to the first named slides when said first named slides are moved, a gallery above the upper floor, curtains mounted above the gallery and adapted to be lowered to shut off the gallery from the interior of the building, and a common actuating device for said movable floor and said curtains whereby to operate said floor and curtains in unison.

876,172. NECKTIE ATTACHMENT. JOHN GROSSENBAUER, Paterson, N. J. Filed Sept. 5, 1906. Serial No. 333,313.



A scarf or tie having the inner apron thereof provided on its inner face with a longitudinally extending loop adapted to receive a member of a clamp to secure the scarf or tie to a shirt bosom.

876,173. CATAMENIAL DRAWERS. FANNY GUTTMAN, New York, N. Y. Filed July 2, 1907. Serial No. 381,829.



1. Sanitary drawers adapted to be opened at the front and along the legs, and having a flap adapted to be fastened to the front of the drawers, portions of the flap forming portions of the said legs and tightening straps secured to the seat of the drawers and arranged to pass under the crotch, the said straps being adapted to be fastened to the front of the drawers.

2. Sanitary drawers having a front flap capable of being opened and closed and forming a continuation of the seat of the drawers, a pad of an absorbent material for removable attachment to the said seat and flap and tightening straps secured to the seat and adapted to be adjustably secured to the front of the drawers.

3. Sanitary drawers having a front flap capable of being opened and closed and forming a continuation of the seat of the drawers, the said seat and front flap having loops, a pad of an absorbent material removably connected at its ends to the said loops, and straps secured to the outside of the seat of the drawers and crossing each other, under the crotch, the said straps being adapted to be secured to the front of the drawers.

4. A sanitary drawers having a front flap capable of being opened and closed and forming a continuation of the seat of the drawers, a pocket formed in the said seat and flap, and having a transversely extending slit at the inside of the drawers, and a sheet of moisture-proof material held in the said pocket and adapted to be removed and replaced by way of the said slit.

5. Sanitary drawers having a front flap capable of being opened and closed and forming a continuation of the seat of the drawers, a pocket formed in the said seat and flap and having a transversely extending slit at the inside of the drawers, a sheet of moisture-proof material held in the said pocket and adapted to be removed and replaced by the way of the said slit, loops on the inner face of the said seat and flap at the ends of the said slit, and a pad of an absorbent material and removably tied at its ends to the said loops.

[Claims 6 to 9 not printed in the Gazette.]

876,174. SAP-COLLECTOR. MOSS HALL, De Funiak Springs, Fla. Filed Oct. 2, 1907. Serial No. 395,495.



1. In a device of the class described, a sap box, and a perforated apron, said apron having a pivotal connection with said box and extending partly over the same, said apron further being extended beyond said box and being adapted to be secured removably to a support, said apron being formed to engage the front of the box.

2. In a device of the class described, a sap box, and an apron, said apron having a pivotal connection with said box and extending partly over the same, said apron further having projections at the lower edge thereof, adapted to secure it to the sides of said box and being provided at the forward edge with a projection adapted to engage at the forward side of the box.

3. In a device of the class described, a sap box having a perforated apron mounted thereupon, said apron having flanges adapted to guide the sap into the box, said flanges having openings, catches mounted upon said sap box and adapted to form pivotal connection with said apron at said openings and means at the lower edge of said apron whereby it may be secured to said sap box.

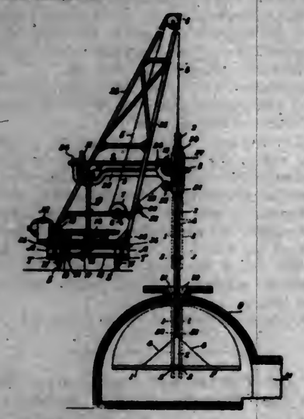
4. In a device of the class described, a sap box, an apron mounted thereupon, the back edge of said box forming a sleeve, and an elongated member arranged within said sleeve and extending laterally therebeyond, the extending ends of said elongated member constituting catches for pivotally securing said apron, said apron at the front edge being provided with an elongated member having laterally extending ends adapted to engage the sides of the box.

5. In a device of the class described, a sap box, an apron mounted upon said sap box, said apron having a sleeve

at its forward edge, and a wire member arranged within said sleeve and projecting therebeyond for securing said apron in position.

[Claims 6 and 7 not printed in the Gazette.]

876,175. COKE-LEVELING MACHINE. JOHN S. HAM, Covington, Va., assignor to Covington Machine Company, a Corporation of Virginia. Filed June 15, 1906. Serial No. 321,830.



1. The combination with a coke oven of the beehive type, of a platform arranged to swing horizontally above the oven on a suitable truck, and to be adjusted vertically at different angles, and a device supported on the platform, arranged to be lowered into the oven from the top, whereby the coke therein may be leveled.

2. The combination with a coke oven of the beehive type, of a platform arranged to swing horizontally above the oven on a suitable truck, and to be adjusted vertically at different angles, and a device supported on the platform, arranged to be lowered into the oven from the top, whereby the coke therein may be leveled by means of arms which automatically spread after introduction into the oven, and which are rotated therein at any desired speed.

3. In a coke leveling machine, the combination of a shaft arranged to be introduced into the coke oven, rotated therein and withdrawn therefrom; two arms attached to the bottom of said shaft arranged to spread automatically after the shaft is introduced into the coke oven; means for imparting a rotary movement to the shaft, means for raising the arms upon the shaft and withdrawing the shaft after rotation as described, and means upon the shaft for adjusting the vertical movement thereof to any desired height of charge in the oven.

4. In a coke leveling machine, the combination of a shaft arranged to be introduced into the coke oven, rotated therein and withdrawn therefrom; two arms attached to the bottom of said shaft, arranged to spread automatically after the shaft is introduced into the coke oven; a conically shaped collar, sliding on the shaft, arranged to assist the spreading of the arms; means for imparting a rotary movement to the shaft, and means for raising the arms upon the shaft and withdrawing the shaft after rotation substantially as described.

5. In a coke leveling machine, the combination of a truck mounted on a track upon a suitable platform, a platform mounted on the truck arranged to swing around a central bearing a frame mounted on the platform, a shaft mounted on the frame arranged to be introduced into the coke oven, rotated therein and withdrawn therefrom; two arms attached to the bottom of said shaft arranged to spread automatically after the shaft is introduced into the coke oven; means for imparting a rotary movement to the shaft, and means for raising the arms and withdrawing the shaft after rotation as described.

[Claims 6 to 13 not printed in the Gazette.]

876,176. PULLEY-BLOCK. BENNETT W. HAMMOND, Oakland, Cal. Filed June 11, 1907. Serial No. 378,429.



1. A pulley, plates located at opposite sides of the pulley, a journal for the pulley, extending between said plates, said journal having shoulders against which said plates abut, and inner and outer packing rings fitted against the pulley, at opposite sides thereof, the inner rings bearing against said plates.

2. A pulley, plates located at opposite sides of the pulley, a journal for the pulley, extending between said plates, said journal having shoulders against which said plates abut, inner and outer packing rings fitted against the pulley at opposite sides thereof, the inner rings bearing against said plates, and spring means encircling the outer packing rings.

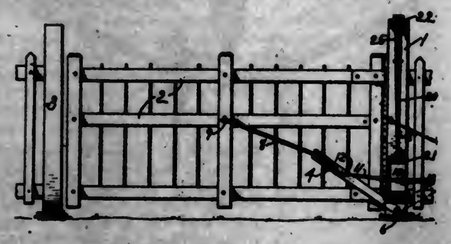
3. A pulley, a journal for the pulley, having shoulders, a packing box in sections at opposite sides of the pulley, means for clamping the sections of the packing box against said shoulders, packing means between the pulley and the packing box, and packing means surrounding the packing box.

4. A pulley, a journal for the pulley, a packing box associated with the pulley, a packing between the pulley and the packing box, a packing surrounding the packing box, and an annular spring for holding the latter packing in place.

5. A pulley, a journal for the pulley, a packing box associated with the pulley, a packing between the pulley and the packing box, a packing surrounding the packing box, an annular spring for holding the latter packing in place, and a strip between said latter packing and spring.

[Claims 6 to 9 not printed in the Gazette.]

876,177. FARM-GATE. ENOS W. HARDEN, Frankfort, Ky. Filed Oct. 21, 1907. Serial No. 398,450.



1. The combination with a gate adapted to swing about a vertical axis; of an operating member adapted to swing upon a horisontal axis; a pitman connecting said operating member and said gate and through which said gate may be operated; a vertically extending guide; a slide

adapted to move upon said guide; a second pitman connecting said slide and operating member and through which said member may be swung upon its axis to swing the gate into an open or closed position; and means for operating said slide.

2. The combination with a gate adapted to swing about a vertical axis, of an operating member adapted to swing upon a horizontal axis; a pitman connecting said operating member and said gate and through which said gate may be operated; a vertically extending guide; a slide adapted to move upon said guide; a second pitman connecting said slide and operating member and through which said member may be swung upon its axis; and means for operating said slide, the relative arrangement of the parts being such that when the slide is in its lowest position the gate will be locked in either its open or closed position.

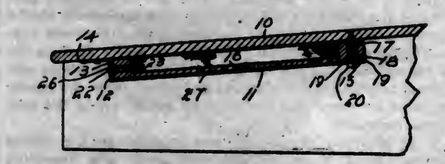
3. The combination with a gate adapted to swing about a vertical axis, of an operating member adapted to swing upon a horizontal axis; a pitman connecting said operating member and said gate and through which said gate may be operated; a vertically extending guide; a slide adapted to move upon said guide; a second pitman connecting said slide and operating member and through which said member may be swung upon its axis; and means for operating said slide, the relative arrangement of the parts being such that when the slide is in its lowest position the end of the second pitman aforesaid connected therewith will be below the end of said pitman connected with the operating member.

4. The combination with a gate adapted to swing about a vertical axis, of an operating member adapted to swing upon a horizontal axis; a pitman connecting said operating member and said gate and through which said gate may be operated; a vertically extending guide; a vertically movable slide guided in its movement by said guide; a second pitman connecting said slide and operating member and through which said member may be swung upon its axis to swing the gate into an open or closed position; and a flexible connection attached to said slide and by means of which it may be moved in a vertical direction.

5. In a device of the class described, a vertical post; a gate hinged to said post; an operating member for swinging said gate, said member being adapted to swing upon a horizontal axis; a pitman connecting said operating member and said gate; a vertically movable slide; a guide secured to said post and adapted to guide said slide in its movement; a second pitman connecting said slide and operating member and through which said member may be swung upon its axis to swing the gate into an open or closed position; a flexible operating member attached to said slide; and a pulley carried by said post and through which said operating member passes.

[Claim 6 not printed in the Gazette.]

876,178. PENCIL-BOX. EDWARD I. HAWK, Divide, Colo. Filed May 2, 1907. Serial No. 371,504.



1. The combination with a support, of a plate provided at one of its ends with an attaching flange which is secured to the under side of the support, a box having a vertical perforation at one end, a bushing in said perforation, the bushing being of a length greater than the thickness of the box at that end, and a pivot screw passed through the plate and through the bushing and into the support, the box being adapted to be swung to position beneath the support and between the same and the plate and to be swung outwardly from beneath the support.

2. The combination with a support, of a plate provided at one of its ends with an attaching flange which is secured to the under side of the support, a box having a vertical perforation at one end, a bushing in said perforation, the bushing being of a length greater than the thickness of the box at that end, a pivot screw passed through the plate and through the bushing and into the support, the box being adapted to be swung to position beneath the support and between the same and the plate and to be swung outwardly from beneath the support, and means for holding the box against such outward swinging movement.

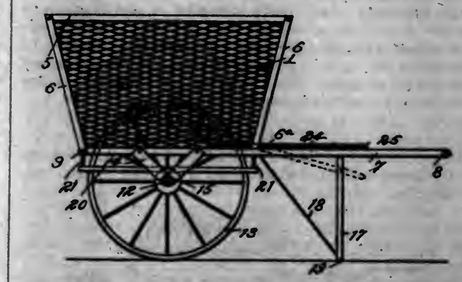
3. The combination with a support, of a plate provided at one of its ends with an attaching flange which is secured to the under side of the support, a box having a vertical perforation at one end, a bushing in said perforation, the bushing being of a length greater than the thickness of the box at that end, a pivot screw passed through the plate and through the bushing and into the support, the box being adapted to be swung to position beneath the support and between the same and the plate and to be swung outwardly from beneath the support, a bolt mounted in one end of the box, the attaching flange upon the plate being provided with an opening into which the bolt is to be shot, and a finger piece carried by the bolt whereby it may be moved.

876,179. STABLE SOLUTION OF HYDROGEN PEROXID AND METHOD OF MAKING SAME. WALTER HEINRICI, Halle-on-the-Saale, Germany. Filed Aug. 2, 1906. Serial No. 328,904. (Specimens.)

1. A process for increasing the stability of a solution of hydrogen peroxid of acid constitution which consists in adding an organic amido-derivative to such solution.

2. A stable solution of hydrogen peroxid containing free acid and an admixture of organic amido-derivatives, substantially as described.

876,180. LEAF-BURNING CART. COLLIER V. HEMENWAY and LEWIS F. KIRK, Pocantico Hills, N. Y. Filed Feb. 28, 1907. Serial No. 359,890.



1. The combination in a wheeled vehicle, of a hopper-shaped foraminous box or body mounted thereon, and a shield supported beneath and spaced from the bottom of the box or body and separated therefrom at all points by a free air space.

2. In a leaf burning cart, the combination of the axle mounted upon wheels, the foraminous body mounted upon and spaced above the axle, and a shield-pan suspended from the body by flexible supports and resting above the axle spaced from the bottom of the body and free to move longitudinally with relation therto.

3. In a leaf burning cart, the combination of a body formed with sides and bottom of foraminous or open-work metal, a pair of wheels and draft apparatus by which said cart may be moved over the lawn, and a screen of imperforate material suspended loosely and freely beneath the body and separated therefrom to permit relative movement of said screen and expose it above and below to the circulation of air.

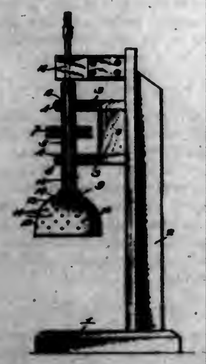
4. The combination of the axle mounted upon wheels,

the foraminous box or body, the standards between the axle and the body for mounting the latter upon the former, the shield-pan, flexible supports connecting the shield-pan with the body and supporting the pan above the axle and spaced from the bottom of the body.

5. In a leaf burning cart, the combination of a foraminous box or body, with an agitator consisting of an open-work metal frame mounted upon a lifting and operating bar or handle, said frame being supported within the foraminous box or body upon the bottom thereof with said bar or handle projecting through one of the walls of the box or body upon which it bears or fulcrums, whereby a burning mass of leaves in the body may be lifted and agitated, as set forth.

[Claims 6 to 9 not printed in the Gazette.]

876,181. EGG-WASHING MACHINE. HARRY W. HENRY, Cortland, N. Y., assignor of one-half to William H. Woolland, Cortland, N. Y. Filed Jan. 14, 1907. Serial No. 352,171.



In an egg washing machine, a frame provided with bearings, a tubular rotary shaft journaled in said bearings, a hollow curvilinear cleaning brush removably threaded onto the end of and for movement with said shaft, means for operating the latter, and a water pipe extending through the shaft concentric with the axis of rotation of and for supplying water to the brush.

876,182. ANNEALING-FURNACE. JAMES A. HERRICK, Philadelphia, Pa. Filed Mar. 17, 1905. Serial No. 250,658.

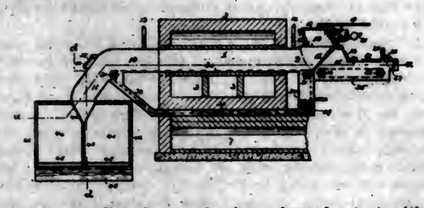


1. The combination of a heated retort having at the delivery end a seal containing a plurality of independent bodies of liquid with means for causing one or more strands of wire to pass through said retort, and successively through the bodies of liquid at the sealed end of the same.

2. The combination of a heated retort having a duplex seal at the delivery end of the same, with means for passing one or more strands of wire through the retort and successively through the bodies of liquid with which said duplex seal is provided.

3. The combination of a heated retort having a liquid seal at the delivery end, means for causing a wire or series of wires to pass through said retort and its seal, a slotted hood for said seal, and a directing roller located in line with the slot in the hood of the seal.

876,183. ANNEALING-FURNACE. JAMES A. HERRICK, Philadelphia, Pa. Filed Mar. 17, 1905. Serial No. 250,659.



1. An annealing furnace having a heated retort with a dry air lock having a water-sealed cover at the inlet end through which material can be charged into the retort.

2. An annealing furnace having a heated retort with a double air lock at the inlet end through either of which materials can be charged into the retort.

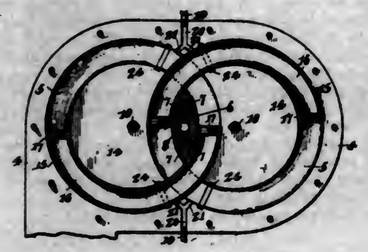
3. An annealing furnace having a heated retort provided at its inlet end with a double air lock, and a valve interposed between the two locks so as to operate in conjunction with either.

4. An annealing furnace having a heated retort with an air lock having a water-sealed cover at the inlet end, said air lock being provided with an escape pipe through which air may be forced from the lock by a non-oxidizing fluid within the retort, substantially as specified.

5. An annealing furnace having a heated retort with an air lock at the inlet end, said air lock having a discharge pipe, a valve for opening and closing communication with the air lock, and a connection between said valve and the valve in the discharge pipe, substantially as specified.

[Claims 6 to 9 not printed in the Gazette.]

876,184. ROTARY ENGINE. ROBERT H. HIGGINBOTHAM, Village Springs, Ala. Filed Feb. 20, 1907. Serial No. 358,342.



1. In a rotary engine, the combination with a casing having side walls and a plurality of intersecting piston chambers, of a web located between the intersecting portions of the chambers and carried by the side walls, shafts passing through the casing and respectively disposed concentrically to the different chambers, supports fixed to the shafts and disposed on opposite sides of the chambers, and pistons carried by the supports and offset from the opposing sides of the same, said pistons operating in the said piston chambers.

2. In a rotary engine, the combination with a casing having piston chambers and associated disk receiving chambers, one of the disk receiving chambers being located on one side of one of the piston chambers, the other disk receiving chamber being located on the other side of the other piston chamber, said piston chambers having spaced intersecting portions, of a web located between the intersecting portions of the piston chambers, shafts passing through the casing and disposed concentrically to the different chambers, disks secured to the shafts and located respectively in the disk receiving chambers, curved pistons carried by the disks and offset from the opposing sides of the same, said pistons operating respectively in the associated piston chambers, and means for insuring a synchronous rotation of the shafts.

3. In a rotary engine, the combination with a casing having intersecting piston chambers, of means for supplying motive fluid to and exhausting it from the chambers, curved pistons operating in the chambers, and means for effecting a synchronous rotation of the pistons, said pistons being circular in cross section and having closure plugs threaded into their ends.

4. In a rotary engine, the combination with a casing having substantially circular intersecting channels constituting piston chambers, of a web defined between the intersecting portions of the chambers and having a vent port therethrough extending from one channel to the other, pistons operating in said channels, and means for supplying motive fluid to and exhausting it from said channels in rear of the pistons.

5. In a rotary engine, the combination with a casing having substantially circular intersecting channels constituting piston chambers, of a web defined between the intersecting portions of the chambers and having oppositely extending vent ports extending from one channel to the other, pistons operating in the said channels, means for insuring synchronous rotation of the pistons, and means for supplying motive fluid to and exhausting it from the channels at or contiguous to their points of intersection.

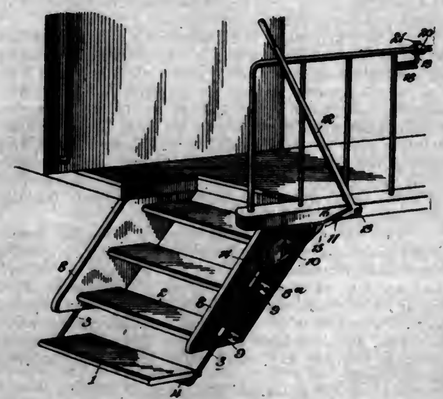
[Claim 6 not printed in the Gazette.]

876,185. TOOTH-BRUSH. CLARA T. HILLMAN, Rochester, Pa. Filed Sept. 7, 1905. Serial No. 277,426.



A tooth brush having a straight handle member terminating at one end in a laterally-extending arc-shaped elliptical portion the extremity of which is rounded, said arc-shaped end provided with bristles projecting radially from three sides and from the rounded extremity thereof.

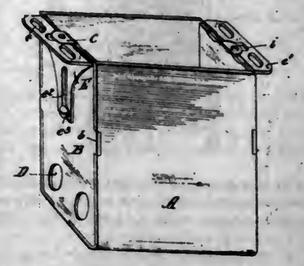
876,186. EXTENSION CAR-STEP. FREDERICK E. HOPKINS, Sterling, N. Y. Filed Oct. 15, 1907. Serial No. 397,549.



1. The combination with car steps provided at opposite sides with guides, of an extension step located beneath the car step, a slidable frame composed of sides movable upwardly and downwardly in the guides, and a transverse bottom connecting portion receiving the extension step and provided at a point between its ends with an approximately U-shaped loop or bend extending forwardly to the front portion of the extension step, fastening devices for securing the loop or bend and the side portions of the bottom of the slidable frame to the extension step, and operating mechanism for raising and lowering the slidable frame.

2. The combination with a car, of an extension step arranged beneath the car steps, a frame slidable on the car steps and extending beneath and supporting the extension step, a lever fulcrumed on the platform of the car and having a short arm, a link connecting the short arm with the outer side of the slidable frame, and a substantially U-shaped keeper arranged to be engaged by the lever, said keeper being provided with an arm having an eye adjustably secured to the railing of the car.

876,187. JUNCTION-BOX. HARRY H. HORNSBY, New York, N. Y. Filed May 12, 1906. Serial No. 316,465.



1. A junction-box having integral outwardly turned ears at the upper edge thereof, brackets at the sides of the box, said brackets having slots therein, screws extending through said slots and entering threaded openings in the sides of the box, and outwardly extending portions on said brackets formed to facilitate securing them to the woodwork of the supporting structure and cut away to provide openings in which said ears are received, substantially as described.

2. A junction-box having integral outwardly-turned ears at the upper edge thereof, brackets at the sides of the box each having two integral portions, one lying at an angle to the other, a slot in one of said portions and an opening in the other, and screws each adapted to extend through either the slot or opening in one of said brackets and to enter a threaded opening in the side of the box, each of said brackets being formed to facilitate securing it to the supporting structure and to provide an opening in which one of said ears is received, substantially as described.

3. A junction-box having integral outwardly-turned ears at the upper edge thereof, brackets at the sides of the box each having a slot therein and an integral portion extending outwardly from the box, and a screw extending through the slot in each bracket and securing the bracket to the box with said outwardly-extending portion either above or below the screw, said outwardly-extending portion on each bracket being formed to facilitate securing it to the supporting structure and to provide an opening in which one of said ears is received, substantially as described.

876,188. SAFETY-CLUTCH FOR ELEVATORS. MARVIN C. HUTCHINGS, Bozeman, Mont. Filed May 28, 1907. Serial No. 376,090.

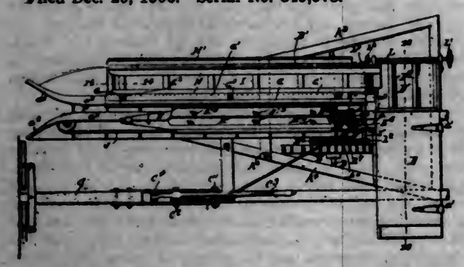
The combination with an elevator shaft provided with toothed guideways, and a car or cage mounted for movement in the guideways, of a frame above the car, a draft bar mounted to slide in the frame, said draft bar being provided with a clevis at its upper end, a spring connected with the frame and exerting downward tension on the draft bar, toothed clutch arms having sliding and guided

movement in the frame of the car to and from the teeth of the guideways, a pair of parallel links connecting each clutch arm with the draft bar, said links extending downwardly and outwardly from the draft bar, and supporting links pivotally connected to the lower links of each pair



and having a common pivotal connection with the car or cage, whereby when the draft bar is moved downward, the clutch arms will engage with the teeth of the guideways.

876,189. COMBINED CORN HARVESTER AND HUSKER. FRANK A. INGERSOLL, New York, N. Y. Filed Dec. 29, 1906. Serial No. 349,978.



1. The combination in a corn harvester, of a main frame having a base portion and an upright portion at the rear end thereof and comprising front and rear posts and also having inclined gathering bars extending downwardly from the upright rear portion to and below the front end of the base portion, said gathering bars being spaced apart forming a passageway for the stalks, a batting roller extending above one of the said gathering bars, an upwardly projecting lip or flange on the other gathering bar and adapted to form a rest or seat for engagement by the lower end of an ear of corn, a trough extending upwardly along the outer side of the bar having the said lip or flange, an ear carrier operating upwardly within said trough, a stalk carrier operating below the gathering bar above which the batting roll operates, a husker arranged between the front and rear posts of the upright portion of the main frame and having husking devices, and means for operating the snapping roll, ear carrier, stalk carrier and husking devices, all substantially as and for the purposes set forth.

2. A corn harvester having a slot or passageway for the stalks, a batting roll inclined upwardly from its front to its rear end at one side of said passageway and an upwardly projecting rib or flange inclining upwardly from its front to its rear end on the opposite side of the passageway and adapted to form a seat or bearing for the lower end of an ear of corn whereby the batter may operate in connection with said flange to snap the ear from the stalk substantially as set forth.

3. The combination in a corn harvester having a slot or passageway for the stalks, of a carrier operating at one side of the passageway and having pins or projections entering the passageway to engage with the stalks, a batting roll inclining upwardly from its front to its rear end above and to one side of the passageway and an upwardly projecting rib or flange inclining upwardly from its front to its rear end on the opposite side of the passageway from the batting roll and adapted to form the seat or bearing for the lower end of an ear of corn whereby it may be snapped from the stalk by the operation of the batting roll and a trough inclining upwardly and rearwardly on the opposite side of the rib or flange from the said batting roll, substantially as and for the purpose set forth.

4. The combination in a corn harvester of upwardly and rearwardly inclined gathering bars spaced apart forming a slot or passageway for corn stalks, a stalk carrier operating below one of said gathering bars, a batting roller operating above the other gathering bar and an upwardly projecting rib or bead above the other gathering bar and adapted to form a seat or bearing for the lower end of the corn stalk whereby the stalk may be snapped by the operation of the batting roll, and means for operating the batting roll and stalk carrier, substantially as set forth.

5. A corn harvester having a batting roll inclined upwardly toward its rear end and provided with longitudinally extending tangentially projecting blades, and an upwardly projecting rib or bead opposite the said batting roll and adapted to form a seat or bearing for the lower end of an ear of corn whereby it may be snapped by the operation of the batting roll, and supports for said rib or flange and for the batting roll, and means for operating the batting roll, substantially as set forth.

[Claims 6 to 13 not printed in the Gazette.]

876,190. ANTHRACENE DYE AND PROCESS OF MAKING SAME. MAX H. ISLER, Mannheim, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Aug. 23, 1907. Serial No. 389,881.

1. The process of producing coloring matter of the anthracene series by treating an amidoanthraquinone with a metal in sulfuric acid solution.

2. The process of producing coloring matter of the anthracene series by treating 2-amidoanthraquinone with copper powder in sulfuric acid solution.

3. As new articles of manufacture the coloring matters of the anthracene series which can be obtained by treating an amidoanthraquinone with a metal in sulfuric acid solution, which coloring matters are insoluble in concentrated sulfuric acid yielding from olive-brown to reddish brown solutions the color of which does not alter on the addition of boric acid, are also soluble in 78% nitric acid giving from yellow-brown to red-brown solutions, and are soluble in alkaline hydrosulfite solution yielding from brown-violet to violet vats which dye cotton substantively yielding from olive-green to brown shades.

4. As a new article of manufacture the coloring matter of the anthracene series which can be obtained by treating 2-amidoanthraquinone with copper powder in sulfuric acid solution, which coloring matter is insoluble in water and in caustic soda solution, is soluble both in concentrated sulfuric acid and in 78% nitric acid yielding reddish brown solutions, and is soluble in alkaline hydrosulfite solution yielding a violet vat which dyes cotton substantively brown shades.

876,191. VEHICLE-WHEEL TIRE. JAMES JACKSON, Gregory, Mich. Filed Dec. 8, 1906. Serial No. 346,906.

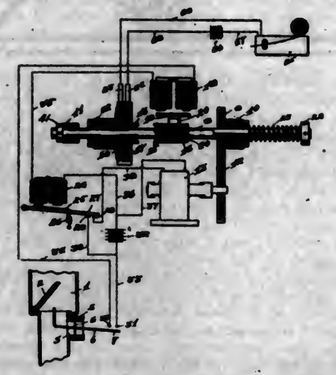
A wheel tire comprising a band having on its bearing surface a rib which is spaced apart in V-shaped form and provided with opposite vertical side walls which terminate

in rounded bearing surfaces, said rib serving to extend continuously across said band and having its ends ter-



minating flush with the opposite side edges of said band, substantially as specified.

876,192. SIGNAL-ALARM SYSTEM. OLIVER B. KAISER, Norwood, Ohio, assignor of one-fourth to Walter S. Ludlow and one-fourth to Walter S. Ludlow, Jr. Filed Apr. 30, 1906. Serial No. 314,455.



1. In a signal system, a signal transmission member, means for driving said member, means for causing the driving mechanism to operate under normal conditions of the system, means for causing predetermined idle operations prior to a signal transmission, and means for restoring the mechanism to normal position immediately upon restoration of the system to normal condition, substantially as described.

2. In a signal sytem, in combination with a fire extinguisher system, power actuating devices, means whereby said power actuating devices are set into activity by a liquid flow of said extinguisher system, a signal transmitting device means in positive driven connection with said power device adapted to move idly for a predetermined time, and positively actuate said signal transmitting device after said predetermined idle movement has elapsed, and means for restoring the actuated parts to their normal position after the activity of the liquid flow has ceased, substantially as described.

3. In a signal system, signal transmission devices to indicate the abnormal condition of the system, means for permitting the system to remain in an abnormal condition for a predetermined time prior to a signal transmission and means to instantly restore the mechanism to normal position upon restoration of the system to normal condition, substantially as described.

4. In a signal system, an actuating device, means for operating said actuating device, a signal actuating mechanism in positive driven connection with said actuating device adapted to be simultaneously operated therewith and moved idly for a predetermined time, means for transmitting a signal after said predetermined idle movement of the signal actuating mechanism has elapsed, and means for restoring the parts to their normal position whenever said actuating device is at rest, substantially as described.

5. In a signal system, signal transmitter mechanism, means for driving said transmitter mechanism, automatically set into motion upon abnormal condition of the system for signal transmission operation, means for causing idle drive for a predetermined time prior to a signal transmission, and means for automatically restoring the parts to normal condition for a second operation prior to or after a signal transmission upon the restoration of the system to normal conditions, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

876,193. WAVE-MOTOR. ELI W. KAPP, Los Angeles, Cal. Filed Apr. 30, 1907. Serial No. 371,150.



1. A floating wave motor the bottom of which is provided with a series of openings to permit of the entrance and discharge of water upon the submersion into, and rise of the motor from the water, respectively, substantially as described.

2. A wave motor the bottom of which is provided with a series of openings and a series of check-valves to permit of the entrance of water upon the submersion of the motor under the water, said valves permitting of the motor rising and falling evenly in the water, substantially as described.

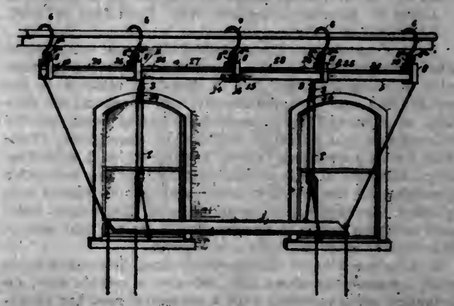
3. A wave motor having a platform formed by the continuation of the top beyond the end of the motor, substantially as described.

4. A wave motor having an air chamber open to the water and formed by the top and walls of the motor and having buoy chamber partitions separating said air chamber from the buoy chamber, whereby upon the submersion and rise of the motor in the water a compression of air is caused, substantially as described.

5. A wave motor consisting of a floating body having a buoying chamber, and having an air compressing chamber, and having an opening in the bottom of said air compressing chamber for the admission and escape of the water on the fall and rise of the floating body, an air intake pipe and an air outlet pipe communicating with said air compressing chamber, and check valves in said pipes, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

876,194. TRACK AND CARRIAGE FOR SWING-SCAFFOLDS. RICHARD KERSEY, Lexington, Ky., assignor of one-half to Wilkerson Turpin Robards, Decatur, Tex. Filed July 30, 1906. Serial No. 328,398.



1. The combination of a track, end hangers supporting the track, casings detachably fitted in the end hangers and

interlocked with the track, pulleys mounted in the end casings, and a carriage provided with flexible connections mounted on the pulleys.

2. The combination of a track composed of spaced side rails, and end hangers receiving the side rails and extending beyond the same to form recesses, end casings detachably fitted in the hangers and engaging the sides or rails, pulleys mounted in the end casings, flexible connections arranged on the pulleys, and a carriage mounted on the track and having the said flexible connections secured to it.
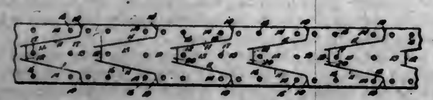
3. The combination of a track having spaced sides or rails, a hanger connecting the sides or rails and extending beyond the same, a casing detachably fitted in the hanger and provided with side recesses to receive the rails and having projecting portions for engaging the ends of the rails, a carriage arranged on the track and provided with a flexible connection, and guiding means arranged within the casing and receiving the flexible connection.

4. The combination of a track composed of spaced substantially L-shaped sides or rails, a rectangular hanger receiving and connecting the sides or rails, a detachable casing fitted in the hanger and interlocked with the sides or rails, a carriage arranged on the track and provided with a flexible connection, and guiding means located within the casing and receiving the flexible connection.

5. The combination of a track, a swing scaffold, a carriage composed of rectangular end frames, wheels mounted within the end frames and arranged on the track, and means for adjustably connecting the end frames to vary the length of the carriage to suit the length of the swing scaffold, hangers depending from the carriage and provided with arms extending upward at opposite sides of the wheels and provided with terminal hooks engaging the upper edges of the said frames, and flexible means for connecting the swing scaffold with the hangers.

[Claim 6 not printed in the Gazette.]

876,195. METAL-HANGER BLANK. OLE O. KITTLESON, Lee, Ill. Filed Apr. 6, 1905. Serial No. 254,148.

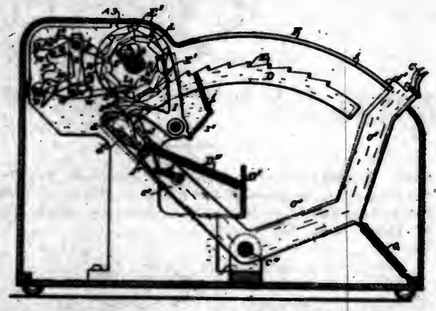


A metal hanger blank having spaced side wings at one end and a single central wing at the other end corresponding in shape to the space between the side wings, said wings being provided with sets of openings, and the said hanger blank being adapted to be used with either end up, and to have either the central or side wings bent over to form a single or a double roller hanger, the openings of the wings being arranged to either receive fastening devices or form pivot openings for the rollers.

876,196. ADDING-MACHINE. ALFRED J. KLUMB and ALVIN W. KRAHN, Milwaukee, Wis. Filed July 29, 1905. Serial No. 271,731.

1. In a machine of the described class, the combination with a registering wheel, a ratchet hub connected therewith, a segmental rack bar in operative relation to the ratchet hub, and an actuating lever for operating the rack bar; of a pivotal stop adapted to engage teeth on the ratchet hub, but normally held out of engagement therewith; and a swinging device carried by said actuating lever, adapted to engage said stop during the retractive movement of the lever, whereby said stop is pushed into position for engagement with teeth on the ratchet hub; said swinging device being arranged to release said stop at the completion of such lever movement.

2. In a machine of the described class, the combination with a registering wheel provided with a ratchet hub; an actuating lever provided with a segmental rack bar adapted to communicate motion to the registering wheel through the ratchet hub; an oscillatory stop normally out of position for engagement with teeth on said ratchet hub, but arranged to be moved into the path of such teeth; a stop actuating member pivotally mounted on the actuating lever; a spring, controlling the normal position of said stop actuating member; and a projection on said stop adapted to be engaged by the stop actuating member when the lever is swung; said member being adapted to engage and pass said projection with yielding pressure thereon during the movement of the lever, whereby said stop is momentarily pushed into position for engagement with teeth on the ratchet hub.



3. In a machine of the described class, the combination with a registering wheel provided with a ratchet hub; an actuating lever provided with a segmental rack bar adapted to communicate motion to the registering wheel through the ratchet hub; an oscillatory stop normally out of position for engagement with teeth on said ratchet hub, but arranged to be moved into the path of such teeth; a stop actuating member pivotally mounted on the actuating lever; a spring controlling the normal position of said stop actuating member; and a projection on said stop adapted to be engaged by the stop actuating member when the lever is swung; said member being adapted to engage and pass said projection with yielding pressure thereon during the movement of the lever, whereby said stop is momentarily pushed into position for engagement with teeth on the ratchet hub; together with another stop normally in contact with the teeth of the ratchet hub and adapted to prevent backward rotation.

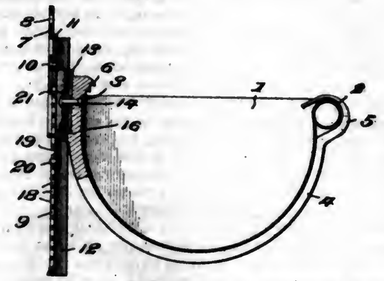
4. In a machine of the described class, the combination of a lever having an intermediate pivotal fulcrum, and two upwardly divergent arms; a rack bar pivotally connected with one of said arms, and extending in the direction of the other arm; a ratchet member in operative relation to the rack bar; and a registering wheel operatively connected with the ratchet member; together with means for applying yielding pressure to the rack bar in the direction of the ratchet member.

5. In a machine of the described class, a key board provided with a series of slots, and having digits thereon arranged in rows substantially parallel to the slots; operating levers, one extending through each slot, and provided with an index for registry with the digits; registering wheels operatively connected with the levers; and springs for retracting the levers; said levers being normally at the outer ends of the slots and each set of digits being arranged on the key board in numerical order and increasing in value inwardly from the levers in normal position.

[Claim 6 not printed in the Gazette.]

876,197. HANGER. ELMER L. KNAB, Rochester, N. Y. Filed June 10, 1907. Serial No. 378,259.

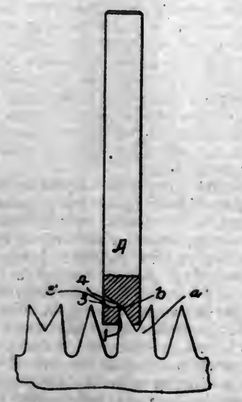
1. The herein described means for supporting gutters, comprising the combination with a hanger, and means thereon to secure the same to a gutter; of a slide block fixed to said hanger, a frame having a plurality of holes therein, said holes being in rows at opposite edges of the frame, a flange at each edge of said frame adapted to receive and slidably hold said block in engagement with the frame and means carried by said block adapted to engage either row of the holes in the frame and hold the hanger in its adjusted position.



2. The herein described means for supporting gutters, comprising a hanger, a slide block on said hanger, a bolt adapted to secure said block to the hanger, means to prevent movement of the block independent of the hanger, a frame having a plurality of holes therein, said holes being arranged in series and staggered with relation to each other, a lever carried by said block and adapted to extend into engagement with the face of the frame and a pin on said lever adapted to be swung into engagement with the holes of either series, and hold the hanger in its adjusted position.

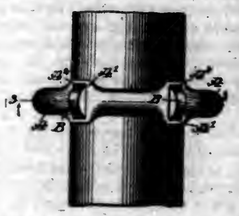
3. The combination with a hanger of the class described; of means to adjustably secure the same to a building, comprising a frame, means to secure said frame to parts of the building, said frame having a plurality of holes therein arranged in series, a flange at each edge of said frame, said flanges extending at an angle to the face of the frame, a slide block carried by the hanger, adapted to enter the space between said flanges and slide therein, a lever pivotally mounted on said slide block and a pin at the free end of said lever, adapted to enter either series of holes in the frame and hold the hanger in its adjusted position.

876,198. SAW-SWAGE. CHARLES A. KNOWLES, Friend, Oreg. Filed Apr. 17, 1907. Serial No. 368,688.



A swage for the drag-teeth of a saw comprising a shank having an anvil end provided with a recess, the outer portion of which recess has one end wall extending in a vertical plane while the opposite wall is inclined from its outer end toward the vertical wall, and in the inner portion of the recess the vertical wall is cut away and the inclined wall is curved toward the space occasioned by cutting away the vertical wall.

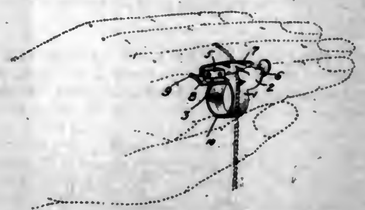
876,199. CURTAIN-POLE RING. JOHN KRODER, New York, N. Y. Filed Oct. 4, 1907. Serial No. 395,907.



1. A curtain pole ring, comprising a ring having a flattened portion provided with a slot, and an anti-friction roller journaled on the ring and extending into the said slot.

2. A curtain pole ring, comprising a ring having a flattened portion provided with a slot, a bearing on the inner face of the flattened portion, and an anti-friction roller journaled on the said bearing and extending into the said slot.

876,200. CUTTER. PHILIP B. LANG, Pittsburg, Pa. Filed Apr. 15, 1907. Serial No. 368,306.

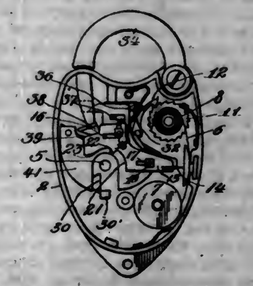


1. A cutter of the type described consisting of a ring or band having forward and rearward extensions, said rearward extension being cut and sheared to provide upwardly extending lugs or holders, a blade detachably mounted between said lugs, said forward extension being bent upwardly to provide a shield for said blade.

2. A cutter consisting of a band or ring having extensions, a blade detachably mounted upon one of said extensions, the other of said extensions being bent upwardly to shield said blade.

3. In a twine cutter, an annular band having a forwardly projecting and a rearwardly projecting extension and with spaced lugs extending therefrom, a blade mounted in said lugs, said forwardly projecting extension having an upwardly-curved forward end and forming a shield in advance of the blade.

876,201. SELF-REGISTERING LOCK. HENRY LANHAM, Rome, Ga., assignor to James L. Black, Rome, Ga. Filed July 10, 1906. Serial No. 325,541.



1. A lock of the class described having a casing, tape carrying spools in said casing, and a plurality of independ-

ently movable key-operated tumblers in said casing, each having means to puncture the tape between the spools.

2. A lock of the class described having a casing, tape-carrying spools in said casing, a plurality of independently movable key-operated tumblers in said casing, each having means to puncture the tape between the spools, a ratchet wheel connected with one of said spools, and a key-operated pawl for the purpose of turning said ratchet wheel step by step.

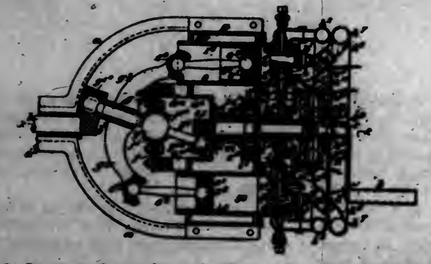
3. In a lock of the class described, means for carrying a tape and a plurality of tumblers disposed side by side, each having a pin to puncture the tape and each having a curved face provided with a projection, the latter for engagement by a key to operate the same for the purpose of puncturing the tape.

4. In a lock of the class described, the combination with tape carrying means, a flange over which the tape passes, said flange having perforations, and a plurality of independently movable key-operable tumblers each having a pin to extend through one of said perforations for puncturing the tape.

5. In a lock of the class described, the combination of two spools, a flange between the spools over which the tape passes from one spool to the other, said flange having perforations, and a plurality of independently movable key-operable tumblers provided with pins to extend through the respective perforations for puncturing said tape.

[Claims 6 to 14 not printed in the Gazette.]

876,202. MOTION-TRANSMITTING DEVICE FOR MOTIVE-POWER ENGINES. ANNIBAL J. B. LEGE, Barnsbury, London, England. Filed Sept. 5, 1905. Serial No. 277,065.



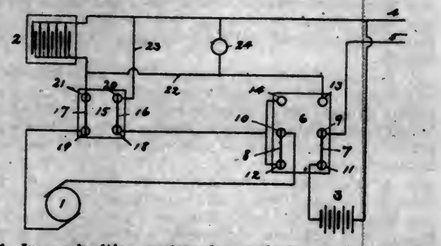
1. In an engine, a frame having a plurality of cylinders arranged in a circle, a main or driven shaft arranged axially of said circle, a power transmitting frame having a universal supporting fulcrum, pistons for the cylinders, piston rods connecting the respective pistons with the power transmitting frame, a cam shaft operated from said power transmitting frame, a plurality of cams arranged side by side on said shaft, an exhaust valve for each cylinder, and mechanism whereby each of the cams on the cam shaft is caused to periodically operate one of the exhaust valves, substantially as described.

2. In an engine, several cylinders arranged in a circle, a main or driven shaft arranged axially of said circle and having an offset, carrier or crank, a secondary or cam shaft in alinement with the main shaft and having a similar offset or crank, a power transmitting frame or disk mounted upon a ball, universal fulcrum or joint arranged axially of said circle and between the ends of the two shafts, piston rods connected by ball or universal joints with their pistons and with the extremities or periphery of the frame or disk, a stud or finger fixed axially with the power transmitting frame or disk and connected with the offset carrier or crank of the main shaft by a universal joint, a secondary finger or stud fixed with the power transmitting frame or disk or its axis and connected by a universal joint with the offset or crank of the secondary shaft, with an exhaust valve for each cylinder, a cam or cams on the cam shaft, and mechanism connecting said cam or cams with the respective exhaust valves, substantially as herein shown and described and for the purpose stated.

3. In an engine, several cylinders arranged in a circle, a main or driven shaft arranged axially of said circle and having an offset, carrier or crank, a secondary or cam shaft in alinement with the main shaft and having a similar offset or crank, a power transmitting frame or disk mounted upon a ball or universal joint arranged axially of the circle between the ends of said shafts, suitable valves to the engine, a cam or cams driven directly or indirectly by the secondary shaft for actuating said valves, a lateral offset from the power transmitting device and a co-acting guide for preventing the rotation of said device, substantially as herein shown and described and for the purpose stated.

4. In an engine, a frame having a plurality of cylinders arranged in a circle, a main or driven shaft arranged axially of said circle, a power transmitting frame having a universal supporting fulcrum, pistons for the cylinders, piston rods connecting the respective pistons with the power transmitting frame, a cam shaft operated from said power transmitting frame, a plurality of cams arranged side by side on said shaft, an exhaust valve for each cylinder, a rod for each exhaust valve, a lever having an arm connected to said rod, each lever having a roller placed to be operated on by one of the cams, substantially as described.

876,203. IGNITION-CIRCUIT CONNECTION. EDWIN S. LINCOLN, Brookline, Mass. Filed May 13, 1907. Serial No. 373,339.



1. In an ignition system for explosive engines or the like, in combination with an electric generator, a secondary cell adapted to be charged thereby, and a source of electric energy independent of either generator or secondary cell; an electric switch having movable conductors adapted to occupy selective operative positions, and electric connections between said generator, secondary cell, and independent source of electric energy, and the switch elements, whereby in one operative position of conductors said independent source of electric energy is placed in circuit with the ignition circuit, and the generator is placed in charging relation to the secondary cell, and whereby in the other operative position of conductors the generator is placed in charging relation to the secondary cell, and both generator and secondary cell are connected in parallel to the ignition circuit.

2. In an ignition system for explosive engines or the like, in combination with an electric generator, a secondary cell adapted to be charged thereby, and a source of electric energy independent of either; an electric switch having movable conductors adapted to occupy selective operative positions, and electric connections between said generator, secondary cell, and independent source of electric energy, and the switch elements, whereby in one operative position of conductors said independent source of energy is placed in circuit with the ignition circuit, and the generator is placed in charging relation to the secondary cell, and whereby in the other operative position of conductors the generator is placed in charging relation to the secondary cell, and both generator and secondary cell are connected in parallel to the ignition circuit, and a second electric switch whereby the charging relation between generator and secondary cell may be interrupted.

3. In an ignition system for explosive engines and the like, in combination with a generator, a storage battery, and a primary cell; a double pole electric switch having movable conductors adapted to occupy two operative positions, and electric connections between generator, storage battery, and primary cell, and the switch elements, whereby in one position of conductors the primary cell is placed in circuit with the ignition system, and the generator is placed in charging relation to the storage battery, and whereby in the other position of the conductors the generator is placed in charging relation to the storage battery, and both generator and storage battery are connected in parallel to the ignition circuit.

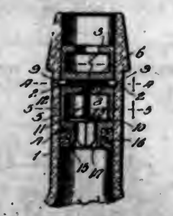
876,204. COMBINED CHALK-SHARPENER AND PAPER-WEIGHT. JULIUS A. LINDEMAN, Chicago, Ill. Filed Aug. 23, 1907. Serial No. 389,856.



1. A combined chalk sharpener and paper weight provided with a chamber and having a plurality of spaced blades extending over the chamber and having sharp upper edges, said chalk sharpener and paper weight being also provided at its upper face with a groove disposed at an angle to the blades and arranged to receive the thumb and finger, whereby a piece of tailors' chalk may be held and guided over the said blades.

2. A combined chalk sharpener and paper weight consisting of a hollow body having an interior chamber and provided with a series of spaced blades extending over the top of the chamber, said body being also provided at opposite sides of the series of the blades with longitudinal grooves presenting transversely curved faces to the thumb and finger, said body and blades being made integral.

876,205. NON-REFILLABLE BOTTLE. WILLIAM T. LOUGHIN, Ballard, Wash. Filed Mar. 23, 1907. Serial No. 364,088.

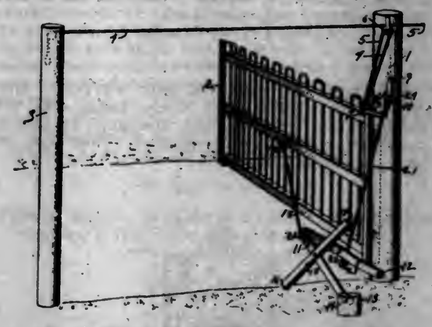


1. The combination of a bottle neck provided with a depression, with a stopper comprising top and bottom apertured disks, vertically extending connecting bars, a central member connected with the bars, an outwardly urged locking device on the said member adapted to engage in the depression of the bottle neck, a valve disposed under the member for closing the aperture of the bottom disk, and a compression spring bearing at one end on the valve and the other end on the said member.

2. A bottle stopper comprising top and bottom apertured disks, side bars connecting the disks, an intermediate disk connected with the side bars and of less diameter than the other disks, outwardly urged spring-pressed members on the central disk, a valve adapted to seat on the top side of the bottom disk for closing the aperture thereof, and a spring anchored at one end on the central disk and bearing at its opposite end on the valve for normally holding the latter closed.

3. The combination of a bottle neck provided with diametrically opposite sockets; with a stopper comprising apertured top and bottom disks, a central disk connected with the others and provided with a diametrically extending bore, and a flange on the bottom disk; a gasket on the flange engaging the interior of the neck; pins arranged in the ends of the bore of the middle disk, a spring arranged with its ends bearing on the pins to hold them in the sockets of the neck, a check valve adapted to seat on the lower disk for closing the aperture thereof, and a compression spring bearing at one end on the valve and at the other end on the middle disk.

876,206. FARM-GATE. JAMES E. MANFORD, Frankfort, Ky. Filed Oct. 21, 1907. Serial No. 398,431.



1. The combination with a gate adapted to swing about a vertical axis, of an operating member adapted to swing upon a horizontal axis; a pitman connecting said operating member and said gate and through which said gate may be operated; a second pitman one end of which is connected to said operating member and through which said member may be swung upon its axis to swing the gate into an open or closed position; a lever to which the other end of said second pitman is connected; a support for said lever; and means for operating said lever to thereby reciprocate said second pitman; the relative arrangement of the parts being such that the fulcrum of the lever, the point of connection of the second pitman therewith, and the point of connection of the second pitman with the operating member are in line when the gate is closed.

2. The combination with a gate adapted to swing about a vertical axis, of an operating member adapted to swing upon a horizontal axis; a pitman connecting said operating member and said gate and through which said gate may be operated; a second pitman one end of which is connected to said operating member and through which said member may be swung upon its axis to swing the gate into an open or closed position; a lever to which the other end of said second pitman is connected, and which lever serves also as a locking means for locking the gate in its closed position; a support for said lever; and means for operating said lever to thereby reciprocate said second pitman.

3. In a device of the class described, a vertical post; a gate hinged to said post; an operating member for swinging said gate, said member being adapted to swing upon a horizontal axis; a pitman connecting said operating member and said gate; a lever carried by said post; and a second pitman connecting said operating member and said lever and through which said operating member may be swung upon its axis to open or close the gate, said second pitman and said lever forming a toggle by which the gate may be locked in its closed position.

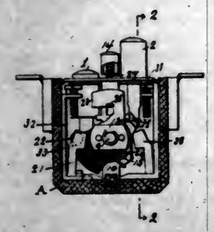
4. In a device of the class described, a vertical post; a gate hinged to said post; an operating member for swinging said gate, said member being adapted to swing upon a horizontal axis; a pitman connecting said operating member and said gate; a second pitman, one end whereof is connected to said operating member and through which said member may be swung upon its axis; a lever carried by said post and to which the other end of said second pitman is connected; a flexible connection for operating

said lever; and a pulley carried by said post and through which said flexible connection passes.

5. In a device of the class described, a vertical post; a gate hinged to said post; an operating member for swinging said gate, said member being adapted to swing upon a horizontal axis; a pitman connecting said operating member and said gate; a second pitman, one end whereof is connected to said operating member and through which said member may be swung upon its axis; a lever carried by said post and to which the other end of said second pitman is connected, said lever and second pitman forming a toggle by means of which the gate may be locked in its closed position; a flexible connection for operating said lever; and a pulley carried by said post and through which said flexible connection passes.

[Claim 6 not printed in the Gazette.]

876,207. PUSH-BUTTON ELECTRIC SWITCH. WILLIAM G. MANN, Bridgeport, Conn., assignor to The Perkins Electric Switch Mfg. Company, Bridgeport, Conn., a Corporation of Connecticut. Filed June 20, 1907. Serial No. 379,950.



1. A push button switch having contacts for connection with more than one circuit, and a push button and circuit closing means operated thereby for each circuit with a spring actuated circuit-breaking blade, a latch to hold the latter and a push button to release said blade to break the circuit.

2. A push button switch having contacts for connection with more than one circuit, and a push button and circuit closing means for each circuit with a circuit-breaking blade, a spring to actuate the latter and adapted to be tensioned by the circuit closing means and a latch for the circuit-breaking blade, and a push button to release it.

3. A push button switch having contacts for connection with more than one circuit, and a push button and circuit closing means for each circuit with a circuit-breaking blade, a spring to actuate the latter and adapted to be tensioned by the circuit closing means, latching means for the circuit-breaking blade, and a push button to release it and devices connecting the circuit-closing means with the circuit-breaking blade to move the latter over to the latched and closed position.

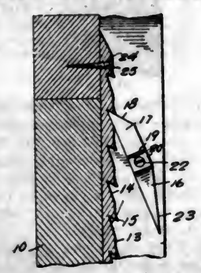
876,208. FENCE CONSTRUCTION. EVAN B. MAXWELL, Pinckneyville, Ill. Filed Feb. 21, 1907. Serial No. 358,626.



1. A fence composed of sections, each comprising a pair of end posts, said posts being formed of sections of boards paralleling each other, bars connecting each pair of end posts the lower ends of said posts having slots therein and channels adjacent the upper end thereof, a base plate for said posts, oppositely disposed notches on the upper edge of said base plates, tapered tongues in the slots at the lower ends of the posts adapted to engage the notches and hold the sections against longitudinal movement, a reach bar adapted to enter the channels in adjacent end posts, stay wires looped around said reach bar, and stakes anchored at a distance from said end posts to which the free ends of said stay wires are secured.

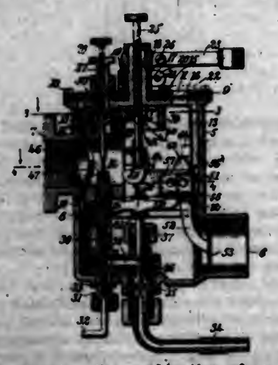
2. A fence of the class described, comprising a pair of abutting posts formed of paralleling boards, a base plate for the lower ends of said posts, said posts having slots in their lower ends to engage the upper edge of the base plate, oppositely disposed notches on the upper edge of said base plate, and a tapered tongue for each post adapted to engage said notches, said tongues being located in the slots at the lower ends of the posts.

876,209. SASH-FASTENER. CORNELIUS H. MESSICK, Mesic, N. C. Filed Feb. 18, 1907. Serial No. 358,138.



The combination, with a rackbar for attachment to the side of a window-sash, of a dog having a weighted holding end adapted to coöperate with the notches in the rackbar to hold the sash in raised or partially raised position, and a lighter and sharper locking end, and a mid portion reduced on one side to narrow its width, said reduced mid portion being provided with a hole extending through it from side to side for the reception of a pivot screw, and the lighter and sharper end of the dog being adapted to engage the top of the rackbar when the weighted end of said dog is thrown back to hold the sash down and locked in closed position.

876,210. CARBURETER. JOHN H. MILLER, Bridgeport, Conn. Filed Aug. 6, 1906. Serial No. 329,373.



1. In a carbureter, the combination of an inlet for a hydrocarbon liquid, an air inlet for the purpose of bringing air into contact with said hydrocarbon liquid so as to form an explosive mixture, a movable baffle plate for partially obstructing the flow of air through said air inlet, a lever supporting said baffle plate, a cylindrical member encircling said lever, and a lug of arcuate form mounted upon said cylindrical member and provided with a bevel face for controlling quantitatively the degree of movement of said lever.

2. In a carbureter, the combination of a spraying nozzle for admitting liquid hydrocarbon, an inlet sleeve for admitting air, a baffle plate of smaller diameter than said inlet sleeve for controlling the admission of air therethrough, mechanism connected with said baffle plate for controlling the supply of liquid hydrocarbon to said spraying nozzle, a throttle, and means controllable by said throttle for regulating the discharging capacity of said spraying nozzle.

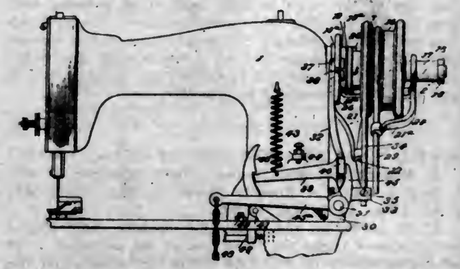
3. In a carbureter, the combination of a casing to be connected with an engine inlet, a swinging baffle for admitting varying amounts of air into said casing, a throttle for opening and closing communication between said casing and said engine inlet, and mechanism controllable by movements of said throttle for restricting movements of said baffle plate.

4. In a carbureter, the combination of a spraying nozzle for vaporizing a liquid hydrocarbon, an inlet for admitting air into contact therewith, a baffle plate movable by pressure and partially obstructing said inlet, said baffle plate being free to swing so as to vary the capacity of said inlet, a throttle for controlling the degree of suction upon air passing said baffle plate, and mechanism connected with said baffle plate and controllable by the swing thereof for regulating the flow of hydrocarbon from said spraying nozzle.

5. In a carbureter, the combination of a casing, a spraying nozzle for vaporizing a liquid hydrocarbon, a valve for controlling the flow of said liquid hydrocarbon from said spraying nozzle, an engine inlet, an air inlet, baffle mechanism controllable automatically by the passage of air through said air-inlet so as to vary the capacity of the latter, a throttle for controlling communication between said engine-inlet and said air-inlet, and connections from said throttle to said spraying nozzle for enabling the position of said throttle to vary directly the capacity of said spraying nozzle.

[Claims 6 and 7 not printed in the Gazette.]

876,211. STOPPING MECHANISM FOR SEWING-MACHINES. HENRY C. MILLER, Waterford, N. Y. Filed May 26, 1905, Serial No. 262,401. Renewed July 31, 1906. Serial No. 328,620.



1. In combinaton, a machine having a power shaft and a fast dog carrying element, a dog movably mounted on the dog carrying element and revolved thereby, and a stop, said dog being moved out of line with the stop by centrifugal force when the dog carrying element exceeds a predetermined speed, and moved into line with the stop by the slowing of the speed of the pulley, to stop the machine in a determinate position.

2. In combination, mechanism having a power shaft and a dog carrying element, a stop movable toward and from the plane of travel of a removable dog, traveling toward the stop, said dog engaging the stop when the speed of the power shaft falls below a predetermined speed, to stop the mechanism at a determinate position.

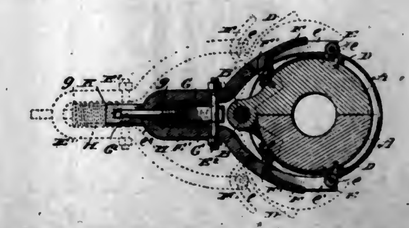
3. In combination, mechanism having a power shaft and a dog carrying element, a movable cushioned stop, and a movable dog which engages the stop when the power shaft revolves below a predetermined speed to stop the mechanism at a determinate point.

4. In combination, mechanism having a power shaft and a dog carrying element, a movable stop, a movable dog which engages the stop, and a spring forcing the dog toward the stop, the dog being thrown from the path of the stop by centrifugal force and thrown toward the stop by the spring when the speed of the pulley falls below a predetermined speed, to stop the mechanism at a determinate point.

5. In combination, mechanism having a power shaft and fast and loose pulleys, a stop, power transmitting means, a movable dog, and a shifter, the shifter transferring the power transmitting means to the fast pulley and moving the stop, the dog being thrown by centrifugal force from the normal path of the stop, the reverse movement of the shifter transferring the power transmitting means to the loose pulley and returning the stop to normal position, the reduction of speed of the power shaft causing the dog to assume normal position to contact with the stop to hold the securing mechanism in a predetermined position.

[Claims 6 to 54 not printed in the Gazette.]

876,212. MOLD. WILLIAM J. MILLER, Coffeyville, Kans. Filed Feb. 4, 1907. Serial No. 355,571.



1. The combination substantially as herein described, of the mold having separable sections and provided on the outer sides thereof with inner tracks or bearings and bars secured at one end to their respective mold sections and projecting thence towards their other ends and spaced at such ends away from such sections, a yoke having its arms embracing the mold sections and slotted for the passage of the track bars thereon, and having adjacent to their free ends rollers to bear upon the tracks or bearings at the outer sides of the mold sections and at the inner sides of the track bars, a plunger operating within the shank of the yoke and slotted longitudinally, a bolt connecting the side bars of the yoke shank and operating in the slot of the plunger, a spring on the plunger and bearing between said bolt and a suitable stop on the plunger, and a pin projecting from the plunger and operating in the body of the yoke shank, substantially as set forth.

2. A mold having separable sections moving on a vertical pivot and provided on the outer sides thereof with inner and outer tracks or bearings and a yoke movable radially to the mold and having its arms embracing the mold and provided with rollers operating upon the outer and inner bearings or tracks, substantially as set forth.

3. A mold having separable sections combined with a yoke having its arms rigid with each other and embracing the mold, and moving radial to the mold and in sliding engagement therewith to points adjacent to or beyond the dead center of the mold, whereby the yoke may close and lock the mold, and means on the mold for engagement by the yoke whereby it may operate to open the mold, substantially as set forth.

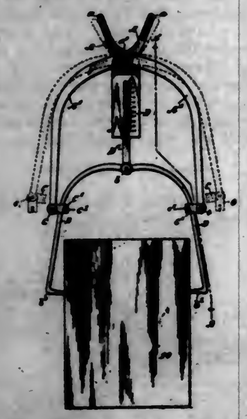
4. The combination with a mold having separable sections, of a yoke having its arms rigid with each other and embracing the mold sections to operate the same, and having its shank provided with side bars spaced apart, a plunger between the said side bars of the yoke shank, and slotted longitudinally, a connecting bolt between the shank of said bars and operating in the slot of the plunger,

and a spring on the plunger operating upon the connecting bolt, substantially as set forth.

5. The combination of a mold having separable sections, and a yoke movable horisontally in a direction radial to the mold and having its arms embracing said sections and moving in sliding engagement therewith to points adjacent to or beyond the dead center of the mold whereby to close the mold and lock it in closed position against internal pressure, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

876,213. COMBINED ICE-TONGS AND WEIGHING-SCALE. WILLIAM B. MOORE, Miami, Fla. Filed Sept. 5, 1907. Serial No. 391,460.



1. A carrying and weighing device, comprising a load-holder, a support therefor on which the load-holder is movable, a weighing means forming a connection between the load-holder and its support, and additional connecting means establishing a sliding connection between the said load-holder and its support.

2. A carrying and weighing device, comprising a load-holder, a support therefor on which the load-holder is movable, a weighing means forming a connection between the load-holder and its support, and additional connecting means establishing a sliding connection between the said load-holder and its support, said additional connecting means being detachable.

3. The combination of supporting means, pivoted gripping arms, means for suspending said gripping arms from said supporting means, the supporting means being capable of movement relatively to said gripping arms, and additional connections between said supporting means and the gripping arms whereby a movement of the supporting means will serve to open or close the gripping arms, said connections being detachable to free the gripping arms from the control of the supporting means.

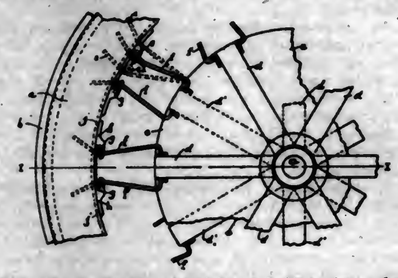
4. An ice tongs, comprising pivoted carrier arms, pivoted gripping arms for engaging a block of ice, weighing devices arranged in connection with the said gripping arms to indicate the weight of the load carried thereby, and operative connections between the carrier arms and gripping arms.

5. An ice tongs, comprising pivoted carrier arms, pivoted gripping arms suspended from the pivot of the carrier arms, and connections between said carrier arms and gripping arms at a point removed from the pivot of the latter to open and close the gripping tongs by movements of the carrier arms, said connections being detachable.

[Claims 6 to 8 not printed in the Gazette.]

876,214. VEHICLE-WHEEL. JOHN H. MORRIS, Omaha, Nebr. Filed June 15, 1906. Serial No. 321,864.

1. A vehicle wheel, comprising a tubular rim, a hub, a disk fixed thereto, hollow spokes fixed to the hub and disk, a pair of springs detachably fixed to the outer end of each spoke and being yieldingly attached to the hollow rim.



2. A vehicle wheel, comprising a hollow rim, a hub, a disk fixed thereto, hollow spokes fixed to the hub and disk, a pair of springs detachably fixed to the outer end of each spoke, the outer ends of which springs extend into the hollow rim, and anti-friction rollers arranged on the hollow rim for engaging the springs.

3. A vehicle wheel comprising an outer section upon the inner side of which are arranged anti-friction bearings in pairs, an inner section upon which are mounted in pairs a series of coil springs having long bent arms which bear upon said antifriction bearings of the outer section and yieldingly retain the inner section concentric of the outer section and all of which arms offer resistance to any force tending to destroy the concentricity of the sections.

4. A vehicle comprising a hollow outer section upon the inner side of which are arranged anti-friction bearings in pairs and openings opposite them, an inner section upon which are mounted in pairs, a series of coil springs, having long bent arms which bear upon said anti-friction bearings of the outer section, and pass through the openings into the hollow rim and which yieldingly retain the inner section concentric of the outer section and all of which arms offer resistance to any force tending to destroy the concentricity of the sections, substantially as described.

5. A vehicle wheel comprising a hollow outer section upon the inner side of which in open slots are arranged anti-friction bearings in pairs, and openings in the rim opposite the pairs in the form of long slots, an inner section upon which are mounted in pairs, a series of coil springs, having long bent arms, which bear upon said anti-friction bearings of the outer section, and whose extreme ends pass through the slots into the hollow rim of the outer section and which yieldingly retain the inner section concentric of the outer section and all of which arms offer resistance to any force tending to destroy the concentricity of the sections substantially as described.

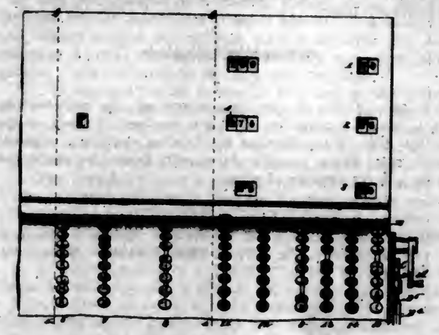
876,215. CASH REGISTER AND INDICATOR. NATHAN E. MORRIS, Jr., Murfreesboro, Tenn., assignor of one-half to Walter A. Roberts, Franklin, Tenn. Filed May 13, 1903. Serial No. 156,929.

1. An indicating and registering machine comprising a set of drums indicating the value of the minuend, a set of drums indicating the value of the subtrahend, and two sets of key banks, one corresponding to the drums indicating the minuend, the other to the drums indicating the subtrahend.

2. An indicating and registering machine, comprising a minuend indicator, a subtrahend indicator, two sets of key banks, one or both sets having ten keys, and the intermediate mechanism between these keys and indicators, substantially as and for the purposes set forth.

3. The combination of remainder indicating drums, a wheel in units train, and a wheel in tens train, a ratchet wheel V^3 in connection with tens wheels, a pawl S^3 to engage said ratchet wheel, a carrying arm V^3 for said pawl, a swinging pawl holding arm G^3 by which to hold the pawl S^3 out of engagement with the ratchet wheel V^3, a plate C^4 on the units wheel for holding the pawl holding arm in position to support the pawl clear of its ratchet wheel and

to permit it to adjust into engagement with said ratchet wheel, and means whereby the pawl may be advanced step by step as and for the purpose set forth.

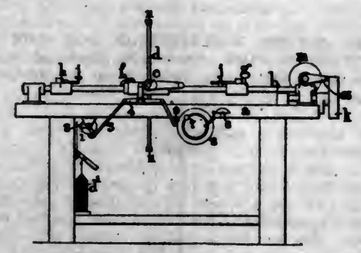


4. In a machine of the character described, the combination of a set of drums indicating the value of the change, a wheel in units train of any order with a wheel in train of next higher order, a ratchet wheel in connection with this higher order, a pawl to engage said ratchet wheel, and means operated from the wheel in train of preceding lower order by which to hold said pawl clear of engagement with its ratchet wheel and to permit it to adjust into such engagement, and means for advancing said pawl by which it will be caused to operate its ratchet wheel as and for the purposes set forth.

5. In a machine of the character described, the combination with a wheel in tens train and a wheel in units train, of a ratchet wheel V^3 in connection with tens wheel, a pawl S^3 to engage said ratchet wheel, a carrying arm V^3 for said pawl, a pawl holding arm G^3 having a lateral pin X^3, and a plate C^4 on the units wheel for engagement with said pin X^3 to hold the arm G^3 in its outermost position for the purpose set forth.

[Claims 6 to 29 not printed in the Gazette.]

876,216. YARN-TESTING MACHINE. JOHN MOSCROP, Manchester, England. Filed Jan. 4, 1907. Serial No. 350,814.



1. In a yarn testing machine, the combination with a lea tester of a flat wrap reel whereon the yarn is wound and supported preparatory to testing, substantially as set forth.

2. In a yarn testing machine, the combination with a lea tester of a rotatable wrap reel for the support of the yarn preparatory to testing and means for steadying or preventing rotation of the reel during the testing operation, substantially as set forth.

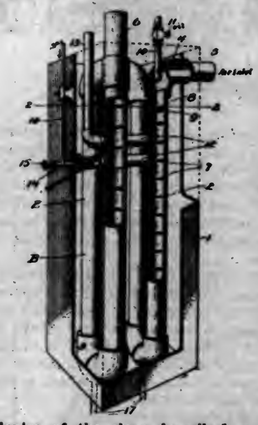
3. In a yarn testing machine, the combination with a lea tester of a rotatable flat wrap reel for the support of the yarn preparatory to testing and means for guiding the yarn during the winding of the same on to the reel, substantially as set forth.

4. In a yarn testing machine, the combination with a lea tester of a rotatable flat wrap reel for the support of the yarn preparatory to testing, and means for automatically stopping the supply of yarn when a sufficient number of strands have been wound on the said reel, substantially as set forth.

5. In a yarn testing machine, the combination consisting of a wrap reel whereon the yarn is wound and supported preparatory to testing, means whereby the yarn is subjected to tension without removal of the same from the said reel, and means for recording the amount of the said tension, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

876,217. GAS-GENERATOR. WILLARD MOWRER, Bloomfield, Nebr. Filed Mar. 21, 1907. Serial No. 363,708.



1. In a device of the class described, a tank, a pipe coil in said tank comprising a plurality of suitably connected vertically disposed pipe sections, foraminous diaphragms or screens disposed at intervals through the pipe sections, a laterally extending air inlet connected with one of the pipes, a perforated disk supported in said pipe adjacent to the air inlet, a vertically disposed valved nozzle extending through the air inlet and directed toward the perforated disk, and a heater disposed in the upper portion of the tank.

2. A gas generating device comprising a tank having drain pipes connected with the bottom thereof, a pipe coil disposed in the tank and including a plurality of suitably connected vertically disposed pipe sections, screens disposed at intervals through the pipe sections, a laterally extending air inlet connected with one of the pipes, a vertically disposed valved nozzle extending through the air inlet into said pipe, a perforated disk supported in said pipe adjacent to the nozzle and the air inlet, and a heating apparatus including a pipe coil connected with the tank and disposed in the upper portion of the latter.

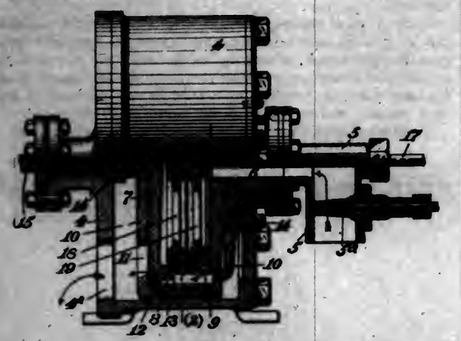
876,218. REVERSIBLE TURBINE. HALLET M. MURPHY, Chicago, Ill. Filed Jan. 16, 1907. Serial No. 352,575.

1. In combination, a fixed cylindrical steam box having ports through its periphery, a rotatable cylindrical casing surrounding the steam box and provided on its periphery with a series of inwardly projecting vanes, and a valve controlling the ports.

2. In combination, a fixed cylindrical steam box having two sets of oppositely directed ports through its periphery, a rotatable cylindrical casing concentrically mounted with respect to the steam box and provided on the inner face of the cylindrical portion with a series of radially directed vanes, and a valve for controlling the ports.

3. In combination, a fixed cylindrical steam box having two sets of oppositely directed ports through its periphery, a rotatable cylindrical casing concentrically mounted with respect to the steam box and provided on the inner face of the cylindrical portion with a series of radially directed

vanes and a reciprocable piston valve fitting the inside of the steam box.



4. In combination, a fixed cylindrical steam box having two sets of oppositely directed ports through its periphery, a rotatable cylindrical casing concentrically mounted with respect to the steam box and provided on the inner face of the cylindrical portion with a series of radially directed vanes, and a reciprocable piston valve having a recessed vanes and a reciprocable piston valve fitting the inside of the steam box.

5. In combination, a fixed cylindrical steam box having two sets of oppositely directed ports through its periphery, a rotatable cylindrical casing concentrically mounted with respect to the steam box and provided on the inner face of the cylindrical portion with a series of radially directed vanes, and a reciprocable piston valve for the inside of the steam box in two sections, each of which is recessed on its periphery and provided with packing.

[Claim 6 not printed in the Gazette.]

876,219. OAR-OPERATING DEVICE. JAMES A. MUSGROVE, Jr., Kilsyth, W. Va., assignor of one-half to Charles Fenwick, Kilsyth, W. Va. Filed Sept. 26, 1905. Serial No. 280,207.



1. In a rowing gear, a pivoted supporting plate, an oar handle connected to the plate, an oar blade connected to the plate, a connection between the handle and blade, and rigid adjustable stops secured to opposite sides of the boat gunwale and beneath the pivoted supporting plate, to positively limit the downward movement of the oar handle, and blade during the operation of rowing.

2. In a rowing gear, a pivoted supporting plate, an oar handle connected to the plate, an oar blade connected to the plate, a connection between the handle and blade, and a rigid adjustable stop secured to the inside of the gunwale of the boat, beneath the pivoted plate, to positively limit the downward movement of the oar handle during the operation of rowing.

3. In a rowing gear, a pivoted supporting plate, an oar handle connected to the plate, an oar blade connected to the plate, a connection between the handle and the blade, and a rigid adjustable stop secured to the outside of the gunwale of the boat beneath the pivoted plate to positively limit the downward movement of the oar blade during the operation of rowing.

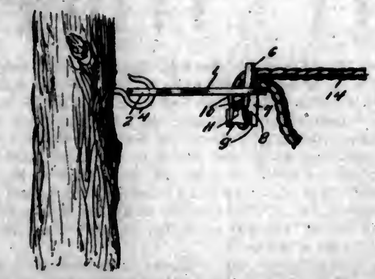
876,220. BOTTLE-CLEANER. GUY E. MCCALMONT, President, Pa. Filed Mar. 2, 1907. Serial No. 360,249.

1. In a cleaning device, a combination of a metal chain, a plurality of cleaning members spaced apart and movable on the chain and each comprising a metal body having a central opening and a sharp peripheral edge, and rings on the ends of the chain to permanently hold the members in place.



2. In a device of the class described, the combination of a chain, a plurality of disks threaded thereon, stops at the ends of the element for holding the disks in place, said disks being tapered outwardly from the center to form a sharp peripheral edge.

876,221. CLOTHES-LINE HOLDER. DAVID C. MCMARLIN, Allegheny, Pa. Filed Mar. 6, 1907. Serial No. 360,860.



A clothes line holder comprising a flat plate having an apertured extension at one end and provided with an opening, two spaced frusto-conical pins on the upper face of said plate adjacent its forward edge, an integral arm depending from the underneath face of the plate and disposed beneath the space between two said pins, and having a right angularly extending foot projecting rearwardly from the arm having a rounded underneath face, an upwardly projecting flange at each end of said foot, and a toothed gripping block pivotally supported from the underneath face of said plate to swing towards and away from said foot, substantially as described.

876,222. WATER DISTRIBUTION FOR THE PREVENTION OF FIRE. GEORGE M. NEWHALL, Philadelphia, Pa. Filed May 22, 1905. Serial No. 261,605.



1. The combination of gravity moved closing means disposed on the inside of a window opening of a building, means at the top of said opening for discharging a spray of water upon the outer surface of said closing means when the latter is in the closed position, and means for catching the water at the lower part of the shutter and conveying it away.

2. The combination of a gravity closed sliding shutter disposed on the inside of a window opening of a building, and means at the top of said window opening for discharging a spray of water upon the outer surface of said shutter when the latter is in the closed position.

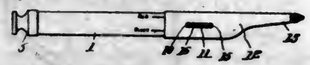
3. The combination of a shutter disposed on the inside of a window opening of a building, means for moving said shutter, and means at the top of said opening operated by the movement of said shutter for discharging a spray of water upon its outer surface when in the closed position.

4. The combination of a building having an opening, a frame for said opening, a shutter for closing said opening, a hollow lintel mounted in said frame and serving as a water reservoir, and a source of water supply communicating with said lintel.

5. The combination of a building having an opening, a frame for said opening, a shutter for closing said opening, a hollow lintel mounted in said frame, a source of water supply, and means operated by the closing movement of said shutter for delivering said water to the hollow lintel.

[Claims 6 to 10 not printed in the Gazette.]

876,223. AUTOMATIC MAGAZINE-PENCIL. JOHN A. NEWMAN and ANDY HAAPALA, Ashtabula Harbor, Ohio. Filed Sept. 6, 1907. Serial No. 391,636.



1. A magazine pencil comprising a revoluble barrel containing a plurality of radial crayon compartments, a nozzle having longitudinal slots therein, a grip in said nozzle, a disk attached to said grip and having lugs extending into the slots in said nozzle, means carried by said disk to lock said barrel in position so that one of said compartments is in alinement with said grip, a plate having lugs also arranged in said slots in said nozzle, and a spring between said plate and disk for the purpose specified.

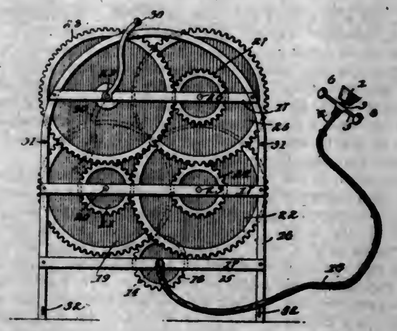
2. A magazine pencil comprising a revoluble barrel containing a plurality of radial crayon compartments, a nozzle having longitudinal slots therein, a grip in said nozzle, a disk attached to said grip and having lugs extending into the slots in said nozzle, a rod passed through said barrel and secured to said disk, means carried by said disk to lock said barrel in position so that one of said compartments is in alinement with said grip, a plate having lugs also arranged in said slots in said nozzle, and a spring between said plate and disk for the purpose specified.

3. A magazine pencil comprising a revoluble barrel containing a plurality of radial crayon compartments, a nozzle having longitudinal slots therein, a grip in said nozzle, a disk attached to said grip and having lugs extending into the slots in said nozzle, a pin on said disk adapted to enter any one of said compartments and lock said barrel in position so that another of said compartments is in alinement with said grip, means to actuate said disk to withdraw said pin from the compartment engaged thereby for the purpose of adjustment, a plate having lugs also arranged in said slots in said nozzle, and a spring between said plate and disk for the purpose specified.

4. A magazine pencil comprising a revoluble barrel containing a plurality of radial crayon compartments, a nozzle having longitudinal slots therein, a grip in said nozzle, a disk attached to said grip and having lugs extending into the slots in said nozzle, a rod passed through said barrel and secured to said disk, a pin on said disk adapted to enter any one of said compartments and lock said barrel in position so that another of said compartments is in alinement with said grip, a plate having lugs also arranged in said slots in said nozzle, and a spring between said plate and disk for the purpose specified.

5. A magazine pencil comprising a revoluble barrel containing a plurality of radial crayon compartments, a nozzle having longitudinal slots therein, a grip in said nozzle, a disk attached to said grip and having lugs extending into the slots in said nozzle, a capped rod passed through said barrel and secured to said disk, a spring arranged between said barrel and the cap on said rod, a pin on said disk adapted to enter any one of said compartments and lock said barrel in position so that another of said compartments is in alinement with said grip, a plate having lugs also arranged in said slots in said nozzle and a spring between said plate and disk for the purpose specified.

876,224. CALK-GRINDER. DANIEL O'NEILL, Lucinda, Pa. Filed July 8, 1907. Serial No. 382,603.



1. The combination with an operating mechanism, of a calk grinder comprising a shaft provided on one end with a frusto-conical, emery wheel, a conical bearing sleeve on the shaft, a transverse grip bar provided with a conical bearing for receiving the sleeve, a collar for retaining the parts in position, nuts on the shaft for locking the collar, said grip bar having conical ends, grips having conical openings for receiving the ends, nuts threaded on the ends of the bar for securing the grips in place, and a flexible shaft connecting the emery wheel shaft and the operating mechanism.

2. The combination with an operating mechanism, of a calk grinder comprising a shaft provided on one end with a frusto-conical emery wheel, a conical bearing sleeve on the shaft, a transverse grip bar provided with a conical bearing for receiving the sleeve, means for retaining the bearing surfaces in contact, said grip bar having conical ends, grips having conical openings for receiving the ends, nuts threaded on the ends of the grip bar for securing the grips in place, and a flexible shaft connecting the operating mechanism, with the emery wheel shaft.

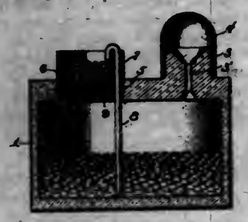
3. The combination with the operating mechanism, a calk grinder comprising a shaft provided on one end with an emery wheel, a grip bar in which the shaft is journaled, a grip on each end of the bar, said grip bar having conical ends, and the grips having conical openings for receiving the ends, said grip bar having integral washers for limiting the inward movement of the grips and a flexible shaft connecting the operating mechanism with the emery wheel shaft.

876,225. INKSTAND. ERNEST J. OSGOOD, Oakland, Cal. Filed May 3, 1907. Serial No. 371,617.

1. In a device of the class described, the combination of a well, a reservoir provided with an opening into which the well fits, and a tube on the well in the form of a siphon for permitting any superfluous ink to pass back to the reservoir from the well, with a device for creating an air pressure in the reservoir to supply ink to the well through the siphon.

2. In a device of the class described, the combination of a reservoir, a well thereon, a removable supply tube or siphon between the well and reservoir, and a de-

vice on the reservoir for controlling the air pressure therein to effect the supply of ink to the well and the return of the superfluous ink from the well to the reservoir through the siphon.

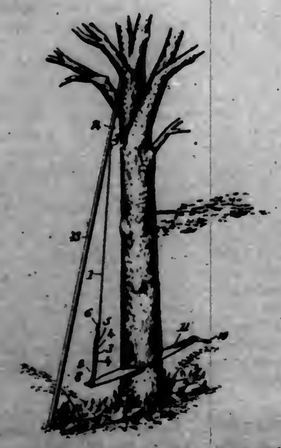


3. In a device of the class described, the combination of a reservoir having an opening for permitting the same to be filled or emptied, a well fitted therein, a siphon on the well having its lower end communicating with the bottom of the reservoir and its upper end extending into the well, and means communicating with the reservoir to change the air pressure therein for effecting the flow of ink to the well or the return of the excessive ink thereof through the siphon.

4. In a device of the class described, the combination of a reservoir having an air passage and an opening, a bulb connected with the passage to change the pressure of air in the reservoir, a stopper for the opening in the form of a well, a siphon communicating with the well and reservoir, and one or more members in the well for regulating the depth of ink in the well and to serve as a protector for the pen during insertion into the well.

5. In a device of the class described, the combination of a reservoir, a well carried thereby, a siphon between the well and reservoir and removably mounted, and a drain port between the well and reservoir and normally closed by the siphon.

876,226. DRAG-SAW GUIDE. SHERMAN S. PEARL, Stehekin, Wash. Filed Jan. 12, 1907. Serial No. 351,948.



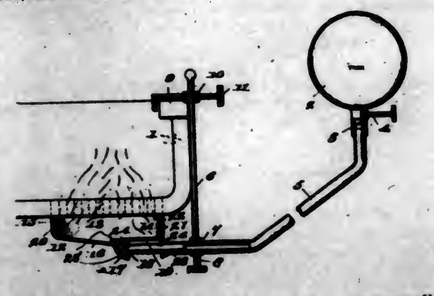
1. A device of the class described, comprising a drag-saw, a rod adapted to be placed against a tree, a cord having means for adjusting the length of the same and adapted to be removably secured to said rod, at a plurality of points and means for removably attaching said cord to said drag-saw.

2. A device of the class described, comprising a drag-saw, a rod adapted to be placed against a tree, a cord having means for adjusting the length of the same and adapted to be removably secured to said rod at a plurality of points on the same, and a hook mounted upon said cord and adapted to attach to a drag-saw at an end of the same.

3. A device of the class described, comprising a rod adapted to be placed against a tree, a cord having a friction clamp at one end adapted to adjust the length of said cord, means for adjustably securing said cord to said rod, and a hook mounted upon said cord and adapted to attach to a drag-saw at an end of the same.

4. A device of the class described, comprising a rod adapted to be placed against a tree, a cord having a hook adapted to attach at an end of a drag-saw, and means for securing said cord adjustably to said rod, said cord having at one end a swivel and a block having perforations, constituting a friction clamp attached to said swivel, said cord passing through said perforations from one side of said block to the other side of said block in alternation.

876,227. FIRE-KINDLER. JOSEPH H. PELHAM, Scranton, Miss. Filed July 13, 1907. Serial No. 383,568.



1. The combination with a pan having a downwardly disposed rear base portion terminating in a depending trough, an ignition means in said trough, the forward base wall of said pan extending in a horizontal plane above said trough, air inlets being provided in the rear and in the forward portion of said pan, of means for introducing a hydrocarbon oil to said pan, and means for supporting said pan below a grate, substantially as described.

2. The combination with a pan forming a heating chamber, of an ignition means in the pan, an oil supply tank, a pipe connection between said tank and said pan, and means for securing said pan beneath the grate, comprising a hanger bar supporting said pipe connection, and provided at its upper end with an adjustable clamping member, substantially as described.

3. The combination with a pan having an inclined rear base wall terminating in a depending trough and provided with air inlets, the front wall of said trough shaped member being apertured, of a brace member comprising a depending plate secured to the front wall of said pan and provided in its depending portion with an aperture aligning with said trough aperture, a pipe passing through said apertures and forming a nozzle within said trough, a tank, a valve for said tank, a pipe communicating with the valved opening of said tank at one end, and at its other end connected to said first-mentioned pipe, and means for supporting said device with said pan beneath a grate comprising a bracket consisting of an arm adjustably connected at one end to said last mentioned pipe and at its other end provided with an adjustable clamp, substantially as described.

876,228. VISE. ABRAHAM J. PEEBLES, Pittsburg, Pa. Filed Feb. 16, 1907. Serial No. 357,744.

1. The combination with a vise having jaws, of a jaw member removably carried by each of the vise jaws, said jaw-members being complemental to each other, the connection between the vise jaw and its jaw member being formed to permit the member to be placed in either one of a plurality of positions relatively to the vise jaw.

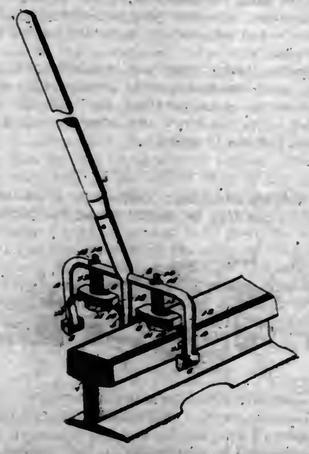
2. The combination with a vise having jaws, each of said jaws having a socket in its gripping face, of a jaw member removably carried by each of the vise jaws, each jaw member having a projecting stem to fit the socket, the stem and socket being complementally formed to permit the jaw member to be placed in either one of a plurality of positions with respect to its vise jaw, said member, when so placed, being positively held against movement relatively to its supporting jaw.



3. The combination with the main jaws of a vise, each formed on its inner face with an angular socket, of supplemental jaws removably seated in said socket, each of said supplemental jaws having an angular stem to fit in the socket of the vise jaw, and having a straight edge on the face carrying the stem to fit against the face of the vise jaw, the opposite face of each of said supplemental jaws being at an acute angle to the rear face, forming a wide and a narrow end on each supplemental jaw, the stem and socket connection permitting the jaw members to be placed in either one of a plurality of positions with respect to the vise jaws, and be retained against movement relative to said jaws.

4. A supplemental jaw for vises, comprising a body substantially triangular in form, one side of which is at direct right angles to the ends and the other side of which is at an acute angle to the ends, and a stem carried by and formed integral with that face of the jaw which is at right angles to the ends, substantially as described.

876,229. TORPEDO-PLACER. PHILIP PETER, Pittsburg, Pa. Filed Aug. 24, 1907. Serial No. 389,962.



1. A torpedo placer comprising parallel members having clip holding shoulders at their ends, an intermediately arranged torpedo receiving member adapted to yield in a direction away from the said shoulders, the receiving member constructed to engage the rail and thus protect the torpedo when the former is subjected to the releasing pressure.

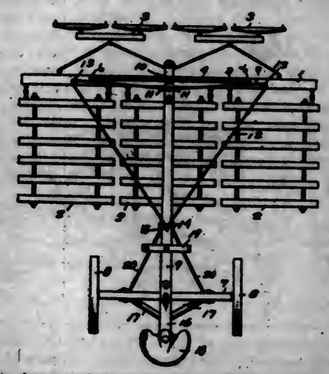
2. A torpedo placer comprising parallel spring clip holding members, an intermediately arranged upwardly yielding torpedo receiving member having depending shoulders or walls adapted to engage the top of the rail and to protect the torpedo from the releasing pressure.

3. A torpedo placer comprising a head having parallel spring clip holding members, an intermediately arranged torpedo receiving member provided with an upwardly projecting single stem passing and movable through said head, the single stem and its opening constructed to prevent a turning movement of the receiving member, an expanding spring located between the head and the receiving member, and means for limiting the downward movement of the said receiver.

4. A torpedo placer comprising parallel spring clip holding members, an intermediately-arranged upwardly-yielding torpedo-receiving member having depending walls for the purpose described, said walls having spring clip receiving notches.

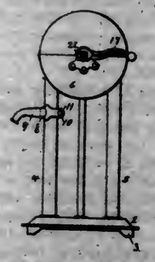
5. A torpedo placer comprising parallel spring clip holding members, an intermediately-arranged upwardly-yielding torpedo-receiving member having depending portions for the purpose described, the depending portions constructed to interlock with the spring clip of the torpedo.

876,230. RIDING ATTACHMENT FOR HARROWS. ANTON PETERSON, Waubay, S. D. Filed May 18, 1907. Serial No. 374,383.



An attachment of the type set forth, comprising in combination a harrow beam, a guide rod carried thereby, and parallel thereto, a wheeled tongue carrying a driver's seat, a vertical post on said tongue carrying a ring, pulleys arranged on said beam adjacent the ends thereof, a rope having its ends secured adjacent the front end of said tongue, said rope being trained over said pulleys and through said ring, and a ring carried by said tongue at its front end and surrounding said guide rod.

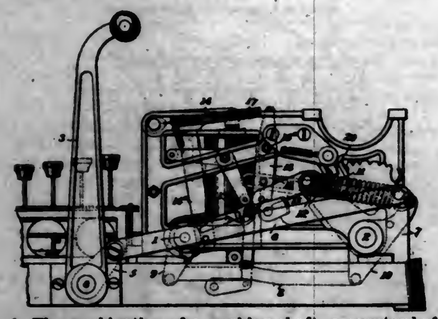
876,231. PUMP. CHARLES E. PFENDER, Evansville, Ind. Filed Aug. 8, 1906. Serial No. 329,739.



The pump herein shown and described comprising an open base having corner supporting lugs, transverse supporting bars extending across said base, chain pipes rising from and supported on said base, an internally threaded sleeve secured to one of the transverse bars and having an upper overhanging rim, a coupling engaged in said threaded sleeve, a supply pipe supported in the coupling having a

lower flaring mouth and a flanged upper rim clamped between the upper end of the coupling and the overhanging rim of the sleeve, the sleeve having its upper end extending up into one of the chain pipes, an angularly outstanding outlet sleeve on one of the pipes, a spout fitting over said sleeve, the spout having rearwardly extending ears adapted to partly embrace the pipe, a clamping bolt secured between said ears, a divided wheel casing supported on the chain pipes, a brace rod surrounding the edge of the lower half of the casing, the upper half of the casing having a depending hooked edge for engagement beneath the brace rod, a spring pressed catch depending from the opposite edge of the upper half for interlocking engagement beneath the brace rod, journal bearings carried by the lower half of the casing, a shaft supported in said bearings, a chain wheel and crank on said shaft, and mechanism for preventing backward rotation of the shaft.

876,232. OPERATING DEVICE FOR CALCULATING-MACHINES. WILLIAM H. PIKE, Jr., South Orange, N. J., assignor to Pike Adding Machine Company, Orange, N. J., a Corporation of New Jersey. Filed June 28, 1906. Serial No. 323,826.



1. The combination of a working shaft, a countershaft, an operating handle, rigid connections between the handle shaft and counter-shaft, an arm loosely mounted on the counter-shaft, a spring connecting said arm and an arm rigid with the counter-shaft, a rigid connection between the working shaft and said loosely mounted arm on the counter-shaft, means for holding the handle and counter-shaft stationary until a predetermined movement of the working shaft is completed, and means actuated by the working shaft at the completion of such movement for releasing the handle and counter-shaft.

2. The combination of a working shaft, a countershaft, an operating handle, rigid connections between the handle shaft and counter-shaft, connections between the counter-shaft and working shaft for operating the working shaft from the handle but not necessarily in unison therewith, means for locking the handle and counter-shaft, and a releasing device adapted to be reciprocated by the working shaft for releasing the counter-shaft and handle, substantially as described.

3. The combination of a working shaft, a counter-shaft, an operating handle rigidly connected with the counter-shaft, an arm loosely mounted on the counter-shaft and rigidly connected with the working shaft, a second arm rigid on the counter-shaft, a yielding connection between said arms on the counter-shaft, means for locking the handle and counter-shaft in one position until a predetermined movement of the working shaft is completed, and means actuated by the loosely supported arm on the counter-shaft for releasing said holding means on the completion of such movement of the working shaft.

4. The combination of a working shaft, a counter-shaft, an operating handle, means for operating the working shaft from the handle but not necessarily in unison therewith, a toggle lock having one member adapted to be moved by the handle whereby said toggle will act to hold the handle at the limit of its movement in one direction, and an arm connected with the working shaft and adapted to engage one member of the toggle to release said toggle lock when a predetermined movement of the working shaft is completed.

5. The combination of a working shaft, a counter-shaft, an operating handle, means for operating the working shaft from the handle but not necessarily in unison therewith, a toggle lock having one member adapted to be moved by the handle whereby said toggle will act to hold the handle at the limit of its movement in one direction, and an arm connected with the working shaft and having a slot receiving a projection on one of the arms of the toggle lock, whereby said lock will be released on the completion of a predetermined movement of the working shaft.

[Claims 6 to 8 not printed in the Gazette.]

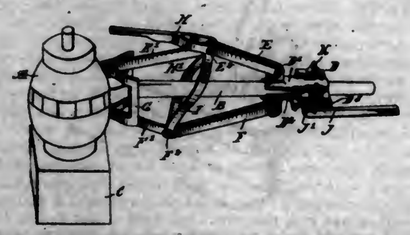
876,233. ELECTRIC-LAMP RECEPTACLE. HERBERT E. PLASS, Newark, N. J., assignor to Howard Miniature Lamp Company, Newark, N. J., a Corporation of New York. Filed Aug. 1, 1907. Serial No. 386,536.



1. An electric lamp receptacle, comprising a cup part containing the lamp terminals with rearwardly projecting prongs and screw, a coöperating cap and a nut threaded onto the screw and adapted to be turned by hand to hold the cap in place.

2. An electric lamp receptacle comprising a cup part containing lamp terminals with rearwardly projecting prongs and screw, a coöperating cap with an insulated nut threaded on to the screw and adapted to be turned by hand to hold the cap in place.

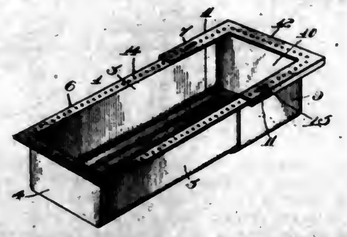
876,234. SPOKE-PULLER. GEORGE L. PERSTON, Townville, Pa. Filed May 28, 1907. Serial No. 376,049.



1. A spoke puller, comprising a clamp for removable attachment to a spoke and formed of two oppositely arranged members, each having an ear at its inner end, a link pivoted to the ear of each clamping member, links pivoted to the first named links, a substantially V-shaped abutment having an opening at the junction of its members for the passage of the spoke and adapted to engage the hub on opposite sides of said spoke, the last named links being pivoted to the abutment between its members and on opposite sides of the opening thereof, an angular lever having members of unequal length and pivoted at the junction of its members on the pivot of two of the links, and links pivoted on the pivot of the other two links and to the shorter member of the said lever.

2. A spoke puller, comprising a clamp for removable attachment to a spoke and formed of two members each provided with an ear at its inner end, a link pivoted to the ear of each clamping member, links pivoted to the first named links, an abutment having oppositely arranged members, the abutment being apertured for the passage of a spoke and adapted to rest upon the hub on opposite sides of said spoke, toggle levers pivoted to the ears of the members of the clamp and between the members of the abutment, on opposite sides of the opening thereof, and means connected with the toggle levers for operating the same.

876,235. ADJUSTABLE FLOWER-BOX. LEONARD G. QUACKENBOSS, Chicago, Ill. Filed Nov. 7, 1904. Serial No. 231,751.



1. In an adjustable plant box, the combination with two telescoping parts, of flanges formed upon the sides of one of said parts, flange members on the sides of the other of said parts formed about and inclosing said flanges, said inclosing flange members and said inner flanges having registering openings, and a pin for insertion into said openings to lock the parts against relative movement.

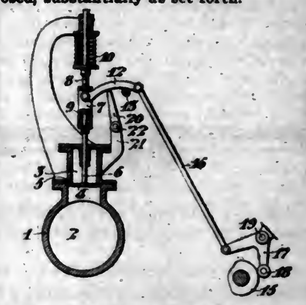
2. In an adjustable plant box, the combination with two telescoping parts having registering corrugated bottoms, of an outwardly extending flange on each of the sides of one of said parts at the top thereof, a flange member at the top of each of the sides of the other of said parts formed about the associated outwardly extending flange to form a runway therefor, said inclosing flange members and said inner flanges having registered openings, and a pin for insertion into said openings to lock the parts against relative movement.

3. In an adjustable plant box, the combination with a body portion having a corrugated bottom, of a flange extending outwardly at the top of each of the sides of said body portion, an end portion telescoped upon said body portion and having a corrugated bottom registering with the corrugated bottom of said body portion, an extending flange at the top of each of the sides of said end portion formed about the associated flange on the body portion to form a runway therefor, a series of openings in said runways registering with a series of openings in said inner flanges, and a pin for insertion into said openings to lock the parts against relative movement.

876,236. INLET-VALVE MECHANISM FOR INTERNAL-COMBUSTION ENGINES. HUGO REINSHAGEN, Cologne, Germany, assignor to The Otto Gas Engine Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 27, 1905. Serial No. 284,627.

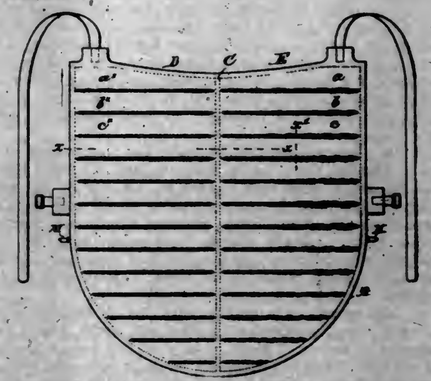
1. In an internal combustion engine, the combination with a valve; of a spring tending to open said valve; a lever provided with means to close said valve; a movable fulcrum for said lever in operative connection with the engine governor; and, an auxiliary fulcrum for said lever; so located that said movable fulcrum is relieved for actuation by the governor when the valve is closed, substantially as set forth.

2. In an internal combustion engine, the combination with a valve; of a spring tending to open said valve; a lever provided with means to close said valve; a movable fulcrum for said lever, comprising an eccentric in operative connection with the engine governor; and, an auxiliary fulcrum for said lever; whereby said movable fulcrum is relieved for actuation by the governor when the valve is closed, substantially as set forth.



3. In an internal combustion engine, the combination with an inlet valve provided with a stem; of a spring yoke connected with said stem; a spring between said yoke and stem permitting relative movement thereof; a spring in operative relation with said yoke, tending to open said valve; a lever pivoted at one end to said yoke and operatively connected at its other end with a cam; a stationary fulcrum for said lever, intermediate of its ends; and, a movable fulcrum for said lever intermediate of its ends, in operative connection with the engine governor; whereby said movable fulcrum is relieved for actuation by the governor when the valve is closed, substantially as set forth.

876,237. CHEST-PROTECTOR. GEORGE H. RIDLON, Revere, Mass., assignor to William Read & Sons, Boston, Mass., a Copartnership. Filed Apr. 16, 1907. Serial No. 368,543.



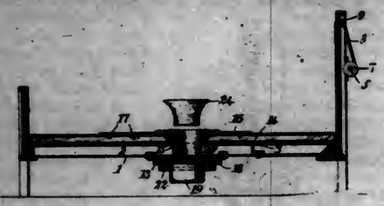
1. A chest protector comprising two layers or sheets A, B, which are united centrally of the chest protector from the top to the bottom thereof thereby to form two separate and independent air chambers, one on each side of said partition.

2. A chest protector having two series of air chambers, the air chambers of each series being connected, and those of one series being entirely independent from those of the other series, and means for inflating separately the air chambers of either series.

876,238. BED FOR THE SICK. RUDOLPH RODS, Kragerö, Norway. Filed Oct. 27, 1906. Serial No. 340,335.

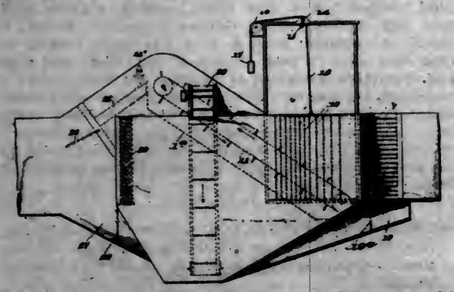
An invalid bed, comprising a bed frame, a spring mattress on the bed frame and formed of hinged sections, means for raising and holding one of the sections of the

mattress in an inclined position, a cushion mattress on the spring mattress, the mattresses having alined openings, stepped guideways secured to the bed frame at opposite sides of the openings of the mattresses, a receptacle



sliding in the lower guideway, and a cover sliding in the upper guideway, the receptacle and cover being provided with handles.

876,239. REFUSE-SEPARATOR FOR BEETS. HARRISON S. ROLLINS, Sterling, Colo. Filed July 21, 1906. Serial No. 327,186.



1. In a refuse separator for beets, the combination with a beet conveying flume being adapted to contain flowing water, of means for catching non-floating deposits comprising a trap located in said flume, means for catching and retaining the floating refuse matter, comprising a trap located outside of said flume but in communication therewith, and means for elevating the separated beets, substantially as described.

2. In a refuse separator for beets, the combination of a flume adapted to transport beets through the main channel thereof, a weed trap located to one side of the said main channel, and thereby adapted to permit said beets to pass along the flume while stopping weeds and floating refuse matter brought thereto, and means diverting the passage of water from said flume to said weed trap to convey said floating refuse to the same, substantially as described.

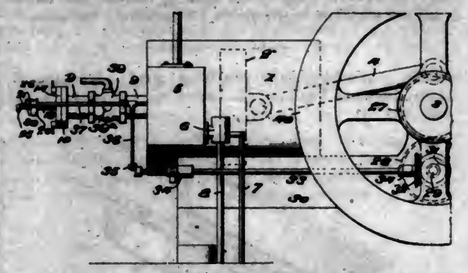
3. In a refuse separator for beets, the combination with a main trough provided with inlet and outlet flumes and adapted to transport beets, of an auxiliary trough located to one side of and in communication with said main trough and inlet flume, a weed trap in said auxiliary trough comprising means for catching and retaining floating refuse matter while permitting said beets to pass, and means diverting laterally the passage of water to said auxiliary trough to convey the floating refuse matter to said weed trap, substantially as described.

4. In a refuse separator for beets, the combination with a main trough provided with inlet and outlet flumes, of an auxiliary trough disposed alongside of and in communication with said main trough and inlet flume, a beet elevator in said main trough, located between the positions of communication of said auxiliary trough with said main trough and inlet flume, and a weed trap in said auxiliary trough and comprising means for catching and retaining floating refuse matter, substantially as described.

5. In a refuse separator for beets, the combination with a main trough provided with inlet and outlet flumes, an auxiliary trough in communication with said main trough and inlet flume, a weed trap in said auxiliary trough to one side of said main trough, comprising a plurality of vertically disposed rods extending substantially across said auxiliary trough, and means for diverting the passage of water to convey the weeds or other floating refuse to said weed trap, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

876,240. STARTER FOR ENGINES. LOUIS P. SCHLAMB, Dull, Ohio. Filed Mar. 8, 1907. Serial No. 361,380.



1. In a device of the class described the combination with a cylinder, a combustion chamber therefor, a driving shaft, a piston in said cylinder and means connecting said piston with the driving shaft; of a tube secured to said combustion chamber, a cock extending through said tube and intersecting the bore therein, a head for one end of said tube, a breech secured to said head and means cooperatively secured to said shaft to ignite a charge of explosive material in said tube whereby the contents of the combustion chamber and cylinder will be exploded.

2. In a device of the class described the combination with an engine having a cylinder, a driving shaft and a combustion chamber on said cylinder; of a tube connected to said combustion chamber, a breech for one end of said tube having a bore through the central portion thereof, a cock extending through said tube midway between the combustion chamber and breech and intersecting the bore in the tube, a firing pin adapted to enter said bore, a spring on said pin, means to hold said spring under tension and releasing means for said pin extending from said pin to the shaft of the engine whereby when said shaft is rotated the pin will be released to explode a charge of combustible material in the tube.

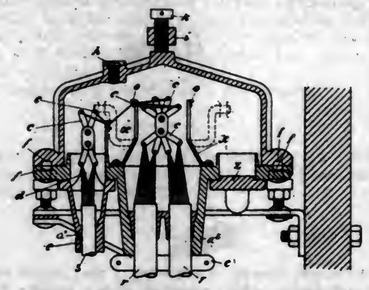
3. In a device of the class described the combination with a cylinder having a combustion chamber thereon; of a tube secured to said combustion chamber and having a longitudinal opening therethrough, a head at one end of said tube, a breech for said tube, means to removably secure said breech to the head, arms on said breech, a block secured to said arms, a firing pin longitudinally movable in said block, a collar on said firing pin, a spring disposed between said collar and block, a trigger adapted to hold said firing pin in its outward position, and means to automatically release said trigger from the firing pin whereby the spring will direct the inner end of said firing pin through a bore in the breech and into engagement with a shell having explosive material therein.

4. In a device of the class described the combination with a cylinder having a combustion chamber thereon; of a tube secured to said combustion chamber, means to secure a shell in said tube, a firing pin, means to direct said firing pin into engagement with said shell under pressure, whereby a cap on the shell will be discharged and the contents of the shell exploded a three-way cock intersecting said tube, whereby the discharge from the shell may be directed into the combustion chamber or through a passage in one side of the tube and additional means to automatically release the firing pin.

5. In a device of the class described the combination with a cylinder and a combustion chamber thereon; of a tube secured to said combustion chamber, means to retain a charge of explosive material in the outer end of said tube, means to automatically ignite said explosive material whereby the gas in the combustion chamber will be exploded, and means extending through said tube between the combustion chamber and explosive material to control the path of the charge in the tube when exploded.

[Claim 6 not printed in the Gazette.]

876,241. UNDERGROUND SYSTEM OF LAYING ELECTRICAL CONDUCTORS. WILHELM SCHREIBER, Munich, Germany. Filed Mar. 28, 1907. Serial No. 365,119.



1. A junction-box for electrical conductors, comprising a base portion provided with tubular extensions to receive the cable ends, a cover or lid, means carried by said base arranged to clamp the lid, said base and said lid having flanges each provided with grooves which register to form a closed tubular channel to receive a sealing material, and openings extending through one of said flanges and connecting with said channels.

2. A junction-box for electrical conductors comprising a base having a tubular opening to receive the end of a cable, a series of connecting members arranged in a group and mounted horizontally above said opening, and a marginal flange secured to the base and surrounding said members and projecting above the lower ends thereof.

3. A junction-box for electrical conductors comprising a base having a tubular opening to receive the end of a cable, and a series of connecting members arranged in a group and mounted horizontally above said opening, and each member having a plurality of connecting arms projecting in the same plane and at different angles to the axis thereof.

4. A junction-box for electrical conductors comprising a base having an integral tubular opening, a series of conducting lamellæ insulated from each other and arranged upon a support extending horizontally above said opening, and a marginal flange surrounding the opening.

5. A junction-box for electrical conductors comprising a base having an integral tubular opening, a plurality of flanged openings having detachable tubular portions extending therefrom and insulated connecting-members arranged upon a support extending horizontally above each of said openings having upper and lower connecting arms.

[Claims 6 to 8 not printed in the Gazette.]

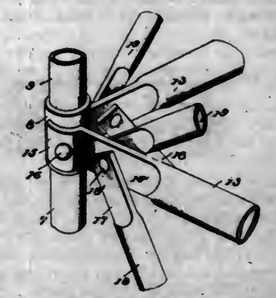
876,242. BUTTON. KARL SCHUSTER, Oakmont, Pa. Filed July 15, 1907. Serial No. 383,735.



1. A button comprising a head having a threaded recess in its inner face, a shank threaded into said recess and having an annular abutment engaging the inner face of the button head, the said shank having an eye at its outer end and provided with threads between said eye and the annular abutment, a nut engaging the threads of said shank and equal in length to the threaded portion of the shank between the annular abutment and the eye, a notched annular flange or head on the outer end of said nut, and means engaging in the eye of said shank for securing the nut thereon.

2. A button comprising a head provided on its inner face with a threaded recess, a shank threaded into said recess and having an annular abutment engaging the inner face of the button head, said shank having an eye at its outer end and provided with threads between said eye and the annular abutment, a nut engaging the threads of said shank and equal in length to the threaded portion of the shank between the annular abutment and the eye, the inner end of said nut being tapered and said inner end engaging the annular abutment of the shank, a notched annular flange or head on the outer end of said nut, and means engaging in the eye of said shank for securing the nut thereon.

876,243. PIPE-DERRICK. HEZEKIAH SHANNON, Cyclone, Pa. Filed Aug. 22, 1907. Serial No. 389,755.



1. A derrick comprising uprights formed of pipes secured together by a screw-threaded coupling, transverse braces formed of pipes and having their ends flattened and curved to conform to the coupling and transverse bolts passing through the curved portion of the braces and through the coupling between the ends of the pipes.

2. A derrick comprising uprights formed of pipes secured together by a screw-threaded coupling, transverse braces formed of pipes and having their ends flattened and curved to conform to the coupling, transverse bolts passing through the curved portion of the braces and through the coupling between the ends of the pipe, obliquely arranged braces formed of pipes and having flattened ends on opposite sides of the flattened portion of the transverse brace, and extending at right angles to each other, and rivets or bolts securing the braces together.

3. A derrick comprising uprights formed of pipes and secured together by screw-threaded couplings, brace-rods secured to said couplings, a crown-block formed of I-beams and resting upon the upper ends of the uprights, and U-shaped bolts passing through the upper ends of the uprights, and through the lower flange of the I-beam, whereby the same is clamped upon the uprights.

4. A derrick comprising uprights formed of pipes and secured together by screw-threaded couplings, brace-rods secured to said couplings, a crown-block formed of two parallel I-beams resting upon the upper ends of the uprights, U-shaped bolts passing through the upper ends of the uprights and through the flanges of the I-beams, sleeves formed of pipes resting between the two I-beams and transverse bolts passing through the I-beams and the sleeves.

5. A derrick comprising uprights formed of pipes and secured together by screw-threaded couplings, brace rods formed of pipes having flattened ends to correspond with the curvature of the couplings, bolts passing through said flattened ends of the braces and the couplings intermediate the pipes, obliquely-arranged brace rods formed of pipes and having flattened ends resting against the flattened end of the first mentioned braces, and bolts securing the flattened ends of the braces together.

876,244. CHUCK. NATHAN A. SHIGON, New York, N. Y. Filed Feb. 6, 1907. Serial 356,018.



A chuck comprising a shank, a head mounted thereon and provided with inclined sockets, jaws slidingly mounted in said sockets, inclined to the axial line of said shank and provided on the inner sides of their rear ends with recesses, and a nut having a threaded engagement with said shank adapted to bear with its face against the end of said jaws, and provided with a flange smaller in diameter than that of the body of the nut, off-set from said body, and adapted to engage the recesses of said jaws.

876,245. COMBINED ROLLER AND ICE SKATE. THOMAS SPACIN, Chicago, Ill. Filed Aug. 15, 1907. Serial 388,599.



1. In a skate, a foot plate having slots passing therethrough, a downwardly-turned slotted tongue formed on the foot plate adjacent to each slot, supporting means carrying supporting plates having projections adapted to enter the slots of the foot plate and tongues, and an eccentrically pivoted and notched button for engaging said projections entering the slots of the foot plate.

2. In a roller skate, a supporting plate having a fork comprising slotted ears through which the axis of the rollers pass, and an elastic material located in the fork of the plate normally forcing said axis to one end of the slots.

3. In a skate, a foot plate having slots passing therethrough, a downwardly-turned slotted tongue carried by the foot plate adjacent to each slot, and supporting plates each composed of a double thickness of metal having projections adapted to engage with the slots in both the plate and tongues.

4. In a skate, a foot plate, supporting plates each composed of a double thickness of metal having their upper portions secured flat together and provided with projections with the lower portions of said thicknesses of metal spread apart for connecting the plates with a supporting means, and downwardly-turned slotted tongues carried by the foot plate adapted to engage the projections of said supporting plates when the supporting plates are applied to the foot plate.

5. In a skate, a foot plate having slots passing therethrough, a downwardly-turned slotted tongue formed integral with the foot plate adjacent to each slot, and supporting means having supporting plates attached thereto, each plate being composed of a double thickness of metal with the flat faces at the upper portions thereof being secured directly together and provided with projections adapted to engage with the slots in the tongues and foot plate.

[Claims 6 and 7 not printed in the Gazette.]

876,246. SPINDLE-BEARING. FRANK C. STEVENS, North Andover, Mass., assignor to Davis & Furber Machine Company, North Andover, Mass., a Corporation of Massachusetts. Filed July 15, 1907. Serial No. 383,731.

1. A rail having a seat, a bearing having a vertically curved or spherical neck and an annular groove at its upper end, the bearing being sustained loosely by the seat, and a spring having its lower end inserted in the groove combined with means to act upon the upper end of and cause said spring to maintain the bearing yieldingly in the seat of said rail.



2. A trough-shaped rail having a seat in its bottom and a removable cover, combined with a bearing having a vertically curved or spherical neck sustained loosely in said seat, and provided above said neck with a spring support, and a spring interposed between said support and the cover and acting to maintain said bearing yieldingly in said seat.

3. A trough-shaped rail having lips, and a covering having shoulders at its sides to engage the under sides of said lips, combined with a spindle and bearing, said cover having a series of holes one for each spindle and yielding means to hold the cover in place.

876,247. ARTIFICIAL POST. HERBERT G. THOMSON, New York, N. Y. Filed Jan. 29, 1906. Serial No. 298,377.



1. A reinforcing frame adapted for use in artificial posts, composed of longitudinal members and tranverse members connected together and bent upon itself to cause the transverse members to form projecting loops for fastening purposes.

2. A reinforcing frame adapted for use in artificial posts, composed of longitudinal members and transverse members electrically welded together and bent upon itself to cause the transverse members to form projecting loops for fastening purposes.

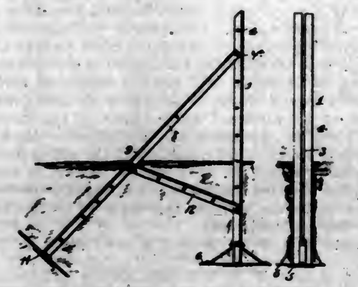
3. The combination with an artificial post of a locking strip to hold the fence against the post, and a loop projecting from the post and surrounding the locking strip and bent upon the strip to hold the strip against the fence.

4. The combination with an artificial post of a locking strip adapted to hold the fence against the post, and fastening devices embedded in the post and having loops projecting from the post, the loops surrounding the locking strip and bent upon it to hold it against the fence.

5. The combination with an artificial post of a locking strip adapted to hold the fence against the post, and fastening devices embedded in the post and having loops projecting from the post, the loops surrounding the locking strip and bent upon it to hold it against the fence, and a shelf upon the post upon which the locking strip is adapted to rest.

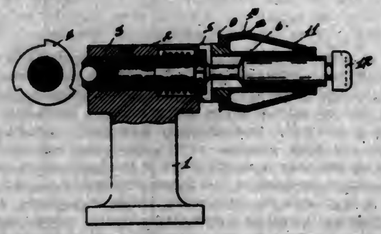
[Claims 6 and 7 not printed in the Gazette.]

876,248. CORNER-POST AND BRACE FOR FENCES. CONRAD H. TIEDEMAN, La Fayette, Ind. Filed Mar. 16, 1907. Serial No. 362,772.



A device as described, comprising an end post of nearly twice the usual length, with about half its length arranged below the surface, the remaining half thereof being arranged above the surface, a diagonal brace having its upper end secured to said end post near its corresponding end, with about half its length anchored underground, a stake, secured to the foot of said brace, standing in an oppositely inclined position to said brace to additionally anchor the aforesaid brace, and a tie-brace between said post and the first-referred to brace and arranged in a diagonally opposite direction to that of said first-referred to brace, said tie-brace being anchored in place in also being buried below the surface of the ground.

876,249. SHOE-IRONER. SAMUEL J. WENTWORTH, Newport, Ky., assignor to The Wentworth Company, Cincinnati, Ohio, a Corporation. Filed July 8, 1907. Serial No. 382,639.



In combination with a beater, a fixed sleeve surrounding the beater, a hollow ironing cylinder rotatively journaled on said fixed sleeve, and adapted to be rotated by drawing the shoe into contact with the ironer, substantially as described.

876,250. LOOSE-LEAF BINDER. HERMAN WIENDAM, Chicago, Ill., assignor to J. S. McDonald Company, Chicago, Ill., a Corporation of Illinois. Filed May 2, 1907. Serial No. 371,436.



1. A lock for loose-leaf binders comprising an upper and a lower clamping-plate, posts projecting from said lower plate to and through openings in said upper plate, an elongated cam located in the interior of said upper plate mediate said openings and a plurality of rocking elements between said cam and each post for transmitting the motion from said cam to said post and clamping the same.

2. A lock for loose-leaf binders comprising an upper and a lower clamping-plate, posts projecting from said lower plate to and through openings in said upper plate, an elongated cam located in the interior of said upper plate mediate said openings, and a plurality of automatically returnable rocking elements between said cam and each post for transmitting the motion from said cam to said post and clamping the same.

3. A lock for loose leaf binding comprising an upper and a lower clamping-plate, posts projecting from said lower plate to and through openings in said upper plate, an elongated cam located in the interior of said upper plate mediate said openings and a plurality of rocking elements between said cam and each post for transmitting the motion from said cam to said post and clamping the same, and a spring engaging the member farthest from said cam for automatically restoring said members to their original positions.

4. A lock for loose-leaf binders comprising an upper and a lower clamping-plate, posts projecting from said lower plate to and through openings in said upper plate, an elongated cam located in the interior of said upper plate, mediate rocking-bars fulcrumed mediate their ends and having one end engaged by said cam, and longitudinally disposed rocking members fulcrumed mediate their ends and adapted to transmit the motion from said rocking-bars to said posts and clamp the same.

5. A lock for loose-leaf binders comprising an upper and a lower clamping-plate, posts projecting from said lower plate to and through openings in said upper plate, an elongated cam located in the interior of said upper plate mediate rocking bars fulcrumed mediate their ends, and having one end engaged by said cam, and longitudinally disposed clamping-jaws fulcrumed mediate their ends and adapted to transmit the motion from said rocking-bars to said posts and clamp the same.

[Claim 6 not printed in the Gazette.]

876,251. SUBSTANCE FOR REMOVING VARNISH OR PAINT. WILLIAM H. ALLEN and WILLIAM J. WEAVER, Detroit, Mich., assignors to Detroit White Lead Works, Detroit, Mich., a Corporation. Filed Mar. 22, 1906. Serial No. 307,380.

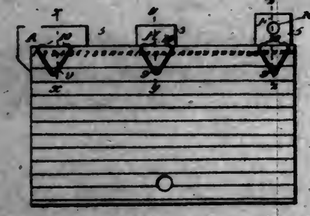
A compound consisting of a ketone and benzol, a crystalline fatty acid and vaseline dissolved therein.

876,252. CARD-INDEX. GEORGE A. BAKER, South Bend, Ind. Filed June 26, 1905. Serial No. 267,041.

1. The combination of a tab having perforations, a wire clip extending through the perforations and having its clasping members disposed upon opposite sides and arranged parallel throughout their lengths with the said opposite sides of the tab and diverging from the perforations, whereby the clip is prevented from sliding in the perforations.

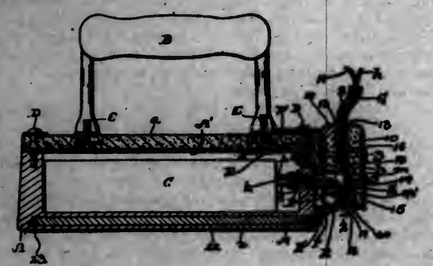
2. A tab or label comprising a piece of stiff material

provided at one end with means for suspending it, and a wire clip piercing said tab and interlocked therewith and



serving as a clasping member to fasten the tab to an object.

876,253. ELECTRIC SAD-IRON. WILLIAM J. BARR, Cleveland, Ohio. Filed May 27, 1907. Serial No. 375,921.



1. The combination, with the body of a sad-iron; an electroheating resistance adapted to participate in the formation of an electric circuit and arranged to heat the said body, and a suitably supported movable contact adapted to participate in the formation of the said circuit and electrically connected or out of electrical connection with the resistance according as the contact is in the one or the other of its positions, of a suitably supported calorically expansible member arranged to be heated by and during the heating of the sad-iron-body by and during the operation of the resistance, and means instrumental in retaining the contact in electrical connection with the resistance and arranged to be rendered inoperative by the calorical expansion of the calorically expansible member to a predetermined extent.

2. The combination of the body of a sad-iron; an electroheating resistance adapted to participate in the formation of an electric circuit and arranged within and instrumental in heating the said body; a suitably supported movable contact adapted to participate in the formation of the said circuit and electrically connected or out of electrical connection with the resistance according as the contact is in the one or the other of its positions; a suitably supported calorically expansible member arranged externally of the resistance and adapted to be heated by and during the heating of the sad-iron-body by and during the operation of the resistance, and means instrumental in retaining the contact in electrical connection with the resistance and arranged to be rendered inoperative by the calorical expansion of the calorically expansible member to a predetermined extent.

3. The combination, with the body of a sad-iron; an electroheating resistance adapted to participate in the formation of an electric circuit and contained within and instrumental in heating the said body, and a suitably supported movable contact adapted to participate in the formation of the said circuit and electrically connected or out of electric connection with the resistance according as the contact is in the one or the other of its positions, of a suitably supported calorically expansible member applied within the sad-iron-body and adapted to be heated by and during the heating of the sad-iron-body by and during the operation of the resistance, and means instrumental in retaining the contact in electrical connection with the resistance and arranged to be rendered inoperative by the calorical expansion of the calorically expansible member to a predetermined extent.

4. The combination, with the body of a sad-iron; a suitably applied electroheating resistance adapted to participate in the formation of an electric circuit and arranged to heat the said body, and a suitably supported movable contact adapted to participate in the formation of the said circuit and electrically connected or out of electrical connection with the resistance according as the contact is in the one or the other of its positions, of a suitably supported calorically expansible member applied within the sad-iron-body and under the resistance and adapted to be heated by and during the heating of the sad-iron-body by and during the operation of the resistance, and means instrumental in retaining the contact in electrical connection with the resistance and arranged to be rendered inoperative by the calorical expansion of the calorically expansible member to a predetermined extent.

5. The combination, with the body of a sad-iron; an electroheating resistance adapted to participate in the formation of an electric circuit and arranged to heat the said body, and a suitably supported movable contact adapted to participate in the formation of the said circuit and electrically connected or out of electrical connection with the resistance according as the contact is in the one or the other of its positions, of a suitably supported calorically expansible rod arranged to be heated by and during the heating of the aforesaid sad-iron-body by and during the operation of the resistance and applied as required to accommodate the calorical expansion of the rod endwise, and means instrumental in retaining the contact in electrical connection with the resistance and arranged to be rendered inoperative by the calorical expansion of the rod endwise to a predetermined extent.

[Claims 6 to 30 not printed in the Gazette.]

876,254. HEEL-REST OR SUPPORT FOR DISPLAYING SHOES. WILLIAM H. BAYNARD, Boston, Mass., assignor to A. E. Little & Company, Lynn, Mass., a Firm. Filed Oct. 18, 1907. Serial No. 397,965.



1. A heel rest for displaying shoes, comprising a thin, flat body having lateral and rearwardly turned extensions, and a plurality of separated positioning members on the body, one of said members being movable manually relatively to the body, said members detachably engaging the breast and back portions of the heel and retaining the latter on the body with the tread of the heel resting on the body, the extensions on the latter preventing tipping.

2. A heel rest for displaying shoes, comprising a flat body having lateral and rearwardly turned extensions, upright lugs on the body to engage the back of the heel of a shoe, and an oppositely located clamping device on the body to detachably engage the heel-breast, the heel tread resting on the body and being restrained from tipping by the extensions.

3. A heel rest for displaying shoes, comprising a flat body having lateral extensions and on which body the tread of a heel is adapted to rest, fixed upright projections on the body, to receive within them the bottom of the heel, and an adjustable clamping member on one of said projections, the back and breast portions of the heel being engaged at a plurality of points and clamped between the projections and the clamping member.

876,255. SELF-LOCKING SEAL. HORACE G. BENTLEY, Denver, Colo. Filed July 25, 1907. Serial No. 385,545.



1. A self-locking seal comprising a casing, a strap attached firmly thereto and provided with an aperture, said strap having a wing provided with an aperture in registration with an aperture in the strap, a flat longitudinally sliding resilient locking member having angled ends resting one upon the outer face of said wing and the other against the adjacent face of the strap, one of said angled ends adapted to be moved by the insertion of the locking member to swing through registering apertures in the strap and wing, and an integral finger upon the wing adapted to bear against said sliding locking member, as set forth.

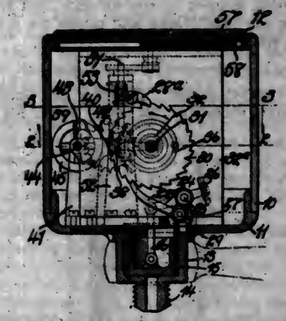
2. A self-locking seal comprising a casing, a strap attached firmly thereto and provided with an aperture, said strap having a wing provided with an aperture in registration with the aperture in said strap, a longitudinally sliding resilient locking member having angled ends adapted to rest one upon the outer face of the wing and the other upon the face of the strap adjacent to its fixed end, said wing provided with an integral resilient finger bearing against and adapted to engage and hold said locking member in a bowed position, so that one of the angled ends of the member may be in the path of the inserted end of the strap, said member being adapted to be moved longitudinally by the inserted end of the strap and one of its angled ends thrown through an aperture in the strap by said integral projection of the wing, as set forth.

3. A self-locking seal comprising a casing, a strap attached firmly thereto and provided with an aperture, said strap having a wing provided with an aperture in registration with the aperture in said strap, a longitudinally sliding resilient locking member having angled ends adapted to rest one upon the outer face of the wing and the other resting in an indenture formed in the strap adjacent to its fixed end, said indenture leading into an aperture formed in the strap, said wing provided with an integral resilient finger adapted to bear against said member and hold the same under tension, the inner angled end resting in said indenture being positioned in the path of the inserted end of the strap and adapted to be moved thereby, the angled ends of the locking member adapted to be thrown into apertures in the wing and strap when in registration with said aperture, as set forth.

876,256. SPEED-INDICATOR. CECIL R. BENTON, Vergennes, Vt. Filed Mar. 20, 1907. Serial No. 363,469.

1. A speed indicator comprising a rotary member having means for driving it, a second member, a torsion spring connecting the two members and driving the second member, means for retarding the spring driven member, a reciprocating member moved by the spring variation, and an operative connection between the said reciprocating member and an indicator.

2. A speed indicator comprising a rotary member having means for driving it, a second rotary member, a torsion spring connection between the two members, means for retarding the spring driven member, a reciprocating member, cam actuated means for moving the reciprocating member from the spring driven member, and means for operating an indicator from the reciprocating member.



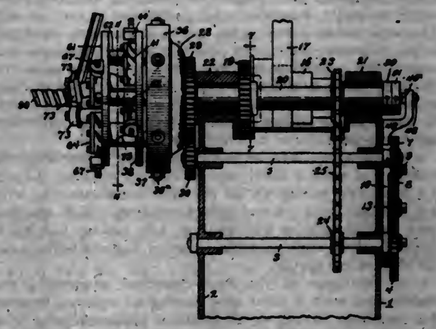
3. A speed indicator comprising a rotary member having means for driving it, a second rotary member, a torsion spring connecting the two members and driving one from the other, means for retarding the spring driven member, an indicator, and an operative connection between the indicator and the spring driven member.

4. A speed indicator comprising a rotary member, a second rotary member, a torsion spring connecting the two members, means for retarding the spring driven member, a reciprocating member, an operative connection between the reciprocating member and the spring driven member, and an indicator operated from the reciprocating member.

5. A speed indicator comprising a rotary shaft having means for driving it, a gear wheel loosely journaled on the shaft, a torsion spring driving the gear wheel from the shaft, retarding means connected with the gear wheel, a reciprocating shaft mounted in the end of the first mentioned shaft, means for moving the reciprocating shaft from the spring driven gear wheel, and an indicator operated from the reciprocating shaft.

[Claims 6 to 10 not printed in the Gazette.]

876,257. MACHINE FOR MAKING FLEXIBLE TUBING. CARL O. BERG, Chelsea, Mass., assignor to James S. Wilson, Chelsea, Mass. Filed Jan. 8, 1907. Serial No. 351,362.

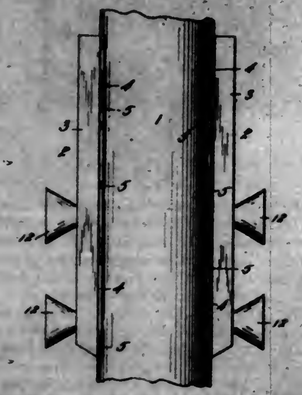


1. In a machine for forming metal tubing, a rotary head block, a series of spinning rolls carried thereby, a reel or strip-supporting member, and means for driving said parts, said rolls acting to spin up the strip into a tube.

2. In a machine for making metal tubing, a rotary gear case, two or more head blocks carried thereby, a series of spinning rolls carried by each head block, a tape-supporting member carried by each head block, means for rotating the head-blocks, and means for positively driving the spinning rolls.

3. In a machine for making metal tubing, a rotary gear case, two or more head blocks carried thereby, a series of spinning rolls carried by each head block, a tape-supporting member carried by each head block, means for rotating the head blocks, and means for positively adjusting the spinning rolls.

876,258. VENTILATOR. CHARLES R. BROOKS, Little Falls, Minn. Filed Mar. 25, 1907. Serial No. 364,369.



1. A ventilator of the class described comprising the combination with a stove pipe, of a conductor, a longitudinal partition in said conductor dividing the same into separate chambers, said conductor having openings in one of its walls arranged at determinate intervals, and partitions in one of said chambers dividing the same into air passages severally having communication with said last named openings, said longitudinal partition having openings therein severally affording communication between said respective air passages and the other of said chambers, said stove pipe having an opening therein communicating with said last named chamber.

2. A ventilator of the class described comprising the combination with a stove pipe, of a conductor, a longitudinal partition in said conductor dividing the same into separate chambers, said conductor having openings arranged in one of its walls at determinate intervals, funnels secured adjacent said respective openings and communicating severally therewith and partitions in one of said chambers dividing the same into air passages severally having communication with said last named openings, said longitudinal partition having openings therein severally affording communications between said respective air passages and the other of said chambers, said stove pipe having an opening therein communicating with said last named chamber.

3. A ventilator of the class described comprising the combination with a stove pipe having an opening therein, of a conductor having an air chamber communicating with said opening, said conductor being provided with air passages independent of one another and having individual communication with said air chamber and with the exterior of said conductor.

4. A ventilator of the class described comprising the combination with a stove pipe having an opening therein, of a conductor having an air chamber communicating with said opening, said conductor being provided with air passages independent of one another and having individual communication with said air chamber and with the exterior of said conductor, and funnels carried by the conductor and communicating with said respective air passages from the exterior thereof.

5. A ventilator of the class described comprising a stove pipe having non-alined openings therein and independent conductors severally communicating with said openings, said conductors also having communication with the exterior thereof.

876,259. NON-REFILLABLE BOTTLE. MARK A. BROWN, Savannah, Ga. Filed Oct. 8, 1906. Serial No. 337,981.



1. A device of the class described comprising a receptacle having a neck provided with a valve seat, a plug fitted within the neck and provided with passages for the discharge of the contents of the receptacle, a valve arranged on the seat, and a spring engaging the valve, said spring being of sufficient strength to maintain the valve normally in engagement with the seat, when the receptacle containing a liquid is in any position, and the valve being adapted to be opened by shaking the receptacle.

2. A device of the class described comprising a receptacle provided with a neck having an interior groove and provided at the bottom thereof with a valve seat, a plug fitted in the neck above the groove and provided with passages for the discharge of the contents and having a flat face at its lower end and provided with a socket or chamber extending upwardly from the said flat face, a spring arranged withing the socket or chamber, and a valve fitted on the seat and having a stem extending into the socket or chamber and engaged by the spring, said valve when at the limit of its outward movement operating to close the lower end of the socket or chamber to exclude a liquid therefrom.

3. A device of the class described comprising a receptacle having a neck and provided with a valve seat at the bottom thereof, a plug having passages and fitted in the neck above the valve seat and spaced therefrom and provided with a flat lower face and having a socket or chamber in the center thereof, a spring housed within the socket or chamber, and a valve provided with a stem extending into the socket or chamber and having its upward movement limited by the engagement of the valve with the lower end of the plug, whereby the lower end of the socket or chamber is closed and the spring is relieved of excessive pressure.

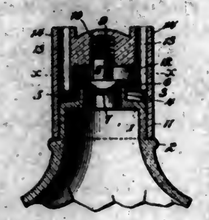
4. A device of the class described comprising a receptacle having a neck provided with a valve seat, a plug fitted in the neck and provided with passages for the discharge of the contents and having a socket or chamber, a spring housed within the socket or chamber and provided at one end with an enlarged coil frictionally engaging the walls of the chamber, the other end of the spring being provided with an inward extension and a valve arranged on the seat and having a stem extending into the socket.

5. A device of the class described comprising a receptacle having a neck provided with a valve seat, a plug fitted within the neck and provided with passages for the discharge of the contents of the receptacle and a recess or socket, a valve arranged on the seat and having a stem working in said socket, and a spring engaging the valve stem and fitted within the said socket, said spring being of sufficient strength to maintain the valve normally in engagement with the seat, when the receptacle containing a liquid is in any position, and the valve being adapted to be opened by shaking the receptacle.

[Claims 6 and 7 not printed in the Gazette.]

876,260. NON-REFILLABLE BOTTLE. MARK A. BROWN, Savannah, Ga. Filed Apr. 11, 1907. Serial No. 367,640.

1. In a device of the class described, the combination of a cap provided with an interior cavity and having a passage spaced from the said cavity, a receptacle provided with a neck extending into the cavity and spaced from the walls thereof to provide a tortuous passage for connecting the neck with the passage of the cap, said neck being also provided with a valve seat, and a valve located within the cavity of the cap and engaging the seat of the neck.



2. In a device of the class described, the combination of a cap provided with an interior cavity and having a passage spaced from the cavity and terminating at the base thereof, a receptacle provided with a neck extending into the cavity and having a valve seat located above the lower end of the passage of the cap, and a valve arranged within the cavity and engaging the seat of the neck.

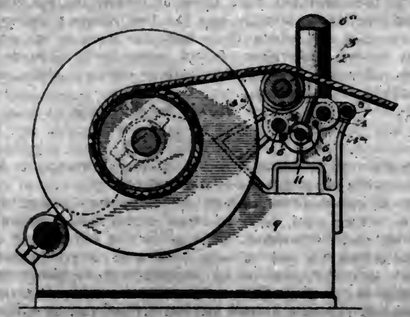
3. In a device of the class described, the combination of a receptacle having a neck, a cap fitted on the neck and provided with a cavity into which the upper end of the neck extends and which is of greater diameter than the same to provide an intervening space, said cap having an outlet located beyond the cavity and communicating with the same at a point below the upper end of the neck, and a valve operating within the cavity at a point above the lower end of the outlet.

4. In a device of the class described, the combination of a cap provided with a cavity closed at the top, said cap being also provided with an outlet passage, a receptacle receiving the cap and extending into the cavity to a point above the lower end of the outlet passage, and spaced from the walls of the cavity to provide a tortuous passage, which connects the neck with the said outlet passage, and a valve engaging the neck.

5. In a device of the class described, the combination of a neck provided with a cavity and having an outlet extending through it at a point beyond the cavity, a receptacle provided at its neck with a cap-receiving portion and having a reduced extension projecting into the cavity and spaced from the walls thereof and provided with a valve seat, and a valve arranged within the cavity of the cap and engaging the said seat.

[Claims 6 to 9 not printed in the Gazette.]

876,261. WINDING-MACHINE. EVERETT B. BRYANT, East Providence, R. I., assignor to The American Ship Windlass Company, Providence, R. I., a Corporation of Rhode Island. Filed June 23, 1906. Serial No. 323,129.



1. The combination, with a drum, of a carriage having means to guide a rope to said drum, means to revolve said drum and to automatically reciprocate said carriage and a loose pipe suitably mounted and forming a bearing for said rope for the purpose specified.

2. The combination, with a drum, of a carriage carrying vertical rolls and a sheave mounted back of the center of said rolls for the purpose specified, means to revolve said drum and to automatically reciprocate said carriage, and a loose pipe suitably mounted and forming a bearing for said rope for the purpose specified.

3. The combination, with a drum, of a diamond screw, a carriage made in two sections, having means to guide a rope to said drum, a swivel nut mounted in a groove formed between the two sections of the carriage and engaging said screw, means to turn the nut at each end of the screw to reverse the movement of said carriage, and means to revolve said drum and screw.

4. The combination, with a drum, of a diamond screw, a carriage made in two sections and carrying vertical rolls and a sheave mounted back of said rolls for the purpose specified, a swivel nut mounted in a groove formed between the two sections of the carriage and engaging said screw, means to turn the nut at each end of the screw to reverse the movement of said carriage and means to revolve said drum and screw.

876,262. SUSPENDER CAST-OFF. JOHN J. BUCHANAN, Waterbury, Conn., assignor to Waterbury Buckle Company, Waterbury, Conn., a Corporation of Connecticut. Filed Apr. 3, 1907. Serial No. 366,084.



1. A castoff comprising a strip having an end formed into a hook with a channel formed at an intermediate portion and with its front and rear sides spaced apart, the opposite end of said strip being inclined and terminating under the hook, the front and rear sides of the strip being bent toward each other and forming a channel disposed above the first said channel.

2. A castoff comprising a strip having its end portion formed into a hook with a channel formed at an intermediate portion and its opposite end portion inclined and terminating under said hook, said castoff having a second channel formed by bending inward the front and rear sides and located between said sides and above the first said channel.

3. A castoff formed of a single strip having at one portion a hook and a channel formed at an intermediate portion with its front and rear sides deflected inward toward and touching each other to form a second channel and its other end portion being inclined and terminating under the hook and being provided with an arcuate extremity.

876,263. SUSPENDER CAST-OFF. JOHN J. BUCHANAN, Waterbury, Conn., assignor to Waterbury Buckle Company, Waterbury, Conn., a Corporation of Connecticut. Filed July 29, 1907. Serial No. 386,140.



1. A castoff comprising a strip having a hook formed at one end and a cordway formed at an intermediate portion with its opposite end inclined and terminating under the said hook, and a second strip attached to the first strip

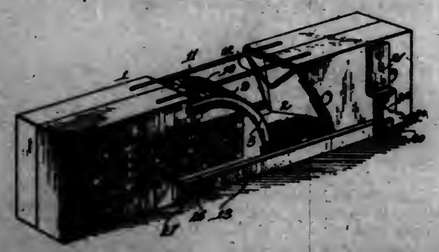
and forming a second cordway and located above the first cordway.

2. A castoff comprising a strip having a hook formed at one end and a cordway formed at an intermediate portion with its opposite end inclined and terminating under the said hook, and a strip attached to the back of the castoff and forming a cordway located above the first said cordway.

3. A castoff comprising a strip having a hook formed at one end and a cordway formed at an intermediate portion with its opposite end inclined and terminating under the hook, a strip having lugs which embrace the edges of the rear portion of the castoff and which forms a cordway located above the first said cordway.

4. A castoff comprising a strip having a hook formed at one end and a cordway formed at an intermediate portion with its opposite end inclined and terminating under the hook, and a U shaped strip intermediate said front and back having means for its attachment to one side of the hook and adapted to engage the opposite side to properly space the said front and back and to form a cordway therebetween.

876,264. MEASURING INSTRUMENT. IRA E. BURLEY, Highwood, Mont., assignor of one-half to John Henry, Highwood, Mont. Filed July 25, 1906. Serial No. 327,687.



1. An instrument of the class described comprising a stock or body having a level, a plumb bar pivotally connected with the stock or body at one side thereof, a substantially U-shaped keeper extending laterally from the stock or body and arranged to receive the free end of the plumb bar, and means located at the said pivot for permitting the plumb bar to have a limited longitudinal movement to introduce it into and remove it from the keeper and for clamping the said plumb bar in engagement with the keeper.

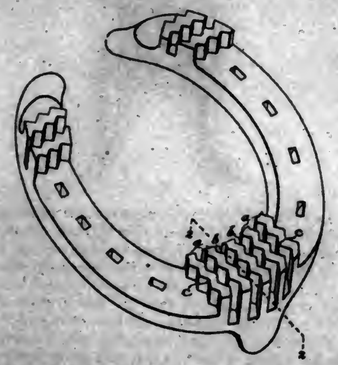
2. An instrument of the class described comprising a stock or body having a level, a plumb consisting of a bar provided with a slot, a pivot passing through the slot and securing the plumb to the stock or body, a keeper consisting of a loop and arranged to receive the plumb, and means mounted on the pivot for clamping the plumb bar in engagement with the keeper.

3. An instrument of the class described comprising a stock or body having a plurality of ratchet notches, a plumb bar, and an adjustable pivot for the plumb bar forming a clamp for the same and having a ratchet head engaging the notches of the stock or body, the latter carrying a level.

4. An instrument of the class described comprising a stock or body having a plurality of ratchet notches, a plumb bar, and a pivot connecting the plumb bar to the stock or body and composed of two adjustable connecting sections, one of the sections being provided with a ratchet head for engaging the ratchet of the stock or body, said body carrying a level at an intermediate point of its length.

5. An instrument of the class described comprising a stock or body having a level, a plumb bar pivotally connected with the stock or body at one end thereof, a keeper extending laterally from the stock or body and arranged to receive the free end of the plumb bar, and means located at the said pivot for permitting the plumb to have a limited longitudinal movement to introduce it into and remove it from the keeper and for clamping the plumb bar in engagement with the keeper.

876,265. HORSESHOE. CHARLES A. CAMPBELL, Philadelphia, Pa. Filed Oct. 18, 1907. Serial No. 398,061.



1. A horse-shoe having the toe portion of its lower face provided with a series of adjacent ridges parallel to each other and to the longitudinal axis of the shoe, whereby there are formed a series of recesses adapted to receive and retain snow or dirt to form a bearing surface for the shoe, substantially as described.

2. A horse-shoe having the toe portion of its lower face provided with a series of adjacent ridges extending substantially from inner to outer edge of said shoe, and being parallel to each other and to the longitudinal axis of the shoe whereby there are formed a series of recesses adapted to receive and retain snow or dirt to form a bearing surface for the shoe, substantially as described.

3. A horse-shoe having the toe portion of lower face provided with a series of ridges running substantially in the direction of travel, and substantially from inner to outer edge of said toe portion, said ridges being adjacent to each other and having substantially vertical sides, whereby they form recesses adapted to receive and retain snow or dirt to form a bearing surface for the shoe, substantially as described.

4. A horse-shoe having the heel and toe portions of its lower face provided with series of ridges projecting beyond said face and extending substantially from inner to outer edge thereof, the ridges of each series being adjacent to each other and having substantially vertical sides whereby they form recesses adapted to receive snow or dirt to form bearings surfaces for the shoe, substantially as described.

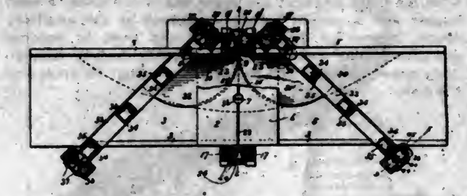
5. A horse-shoe having the heel and toe portions of its lower face provided with series of ridges, the toe ridges extending longitudinally and the heel ridges transversely of the shoe and substantially from the inner to the outer edge thereof, the ridges of each series being adjacent to each other and having substantially vertical sides, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

876,266. MITER-BOX. OSCAR CASSITY, Sturgeon, Mo. Filed May 5, 1906. Serial No. 315,441.

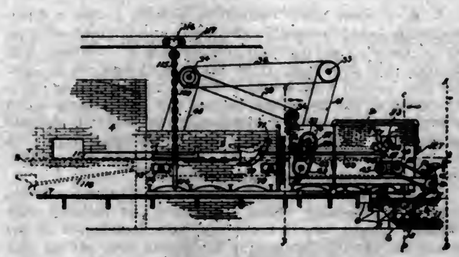
1. In combination, a base, a fixed plate thereon, said plate having slots, movable arms on the base, a series of vertical rollers arranged in pairs carried by each of the arms adjustable one of each pair with relation to the other, and additional rollers positioned above the vertical rollers, the axis of the last named rollers being at right angles to the axis of the vertical rollers and parallel to the arms.

2. In combination, a base, a fixed plate thereon, said plate having slots, movable arms on the base, a series of vertical rollers arranged in pairs carried by each of the arms adjustable one of each pair with relation to the other, and additional rollers positioned above the vertical rollers, the axis of the last named rollers being at right



angles to the axis of the vertical rollers and parallel to the arms, said additional rollers being adjustable one with relation to the other.

876,267. PROCESS AND APPARATUS FOR THE CONTINUOUS PRODUCTION OF SHEET-GLASS. IRVING W. COLBURN and EDGAR WASHBURN, Franklin, Pa., assignors, by direct and mesne assignments, to Colburn Machine Glass Company, Franklin, Pa., a Corporation of New Jersey. Filed Dec. 28, 1904. Serial No. 238,592.



1. The method of making sheet glass, which consists in preparing a mass of molten glass, drawing a continuous sheet of glass therefrom, and during the drawing operation imparting movement to the surface portion of the molten mass away from the medial line toward both edges of the sheet, then heating the sheet to insure its plastic condition, scoring the plastic sheet to obtain a line of cleavage, then lowering the temperature of the glass and separating a section of the sheet along the scored line.

2. The method of making sheet glass, which consists in drawing a continuous sheet of glass of uniform width, scoring the sheet while plastic to obtain a line of cleavage, then lowering the temperature of the glass and separating a section of the sheet along the scored line.

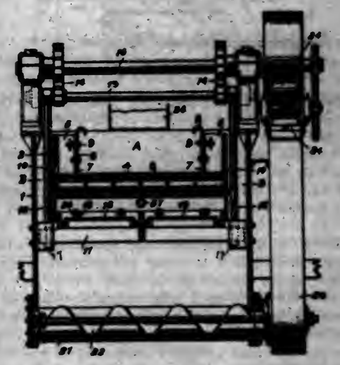
3. The method of making sheet glass, which consists in drawing upwardly a sheet of glass of uniform width, regulating the temperature of the sheet so it can be bent to a horizontal position without breakage, then raising the temperature of the sheet to soften it, then scoring the softened sheet to obtain a line of cleavage, then lowering the temperature of the glass and separating a section of the sheet along the scored line.

4. The method of making sheet glass, which consists in preparing a mass of molten glass, drawing a continuous sheet of uniform width therefrom, scoring the drawn sheet when in a plastic condition to obtain lines of cleavage, lowering the temperature of the glass and separating sections of the sheet along the scored lines.

5. The method of making sheet glass, which consists in preparing a mass of molten glass, drawing a continuous sheet of uniform width therefrom, scoring the drawn sheet when in a plastic condition to obtain lines of cleavage, lowering the temperature of the glass and separating sections of the sheet along the scored lines, and annealing the severed sections.

[Claims 6 to 62 not printed in the Gazette.]

876,268. APPARATUS FOR WASHING COAL, ORE, &c. ALFRED J. DIEMCHER, Pittsburg, Pa. Filed Mar. 5, 1907. Serial No. 360,663.



1. In a machine for washing coal, ore, etc., the combination of a tank having a main and one or more secondary compartments, the main compartment having an outlet for the discharge of light material, a screen arranged transversely of the main compartment below the level of the outlet therefrom, the main and secondary compartments being connected by open ports located above the screen and permitting a free flow of water from the main to the secondary compartments and means for maintaining a flow of water up through the screen and through ports leading to the secondary compartment or compartments, substantially as set forth.

2. In a machine for washing coal, ore, etc., the combination of a tank having a main and one or more secondary compartments, the main compartment having an outlet for the discharge of light material, a screen arranged transversely of the main compartment, the main and secondary compartments being connected by open ports arranged above and adjacent to the screen and means for producing an upward surging of the water in the main compartment and adapted to maintain a constant flow of water from the main compartment unto the secondary compartment, substantially as set forth.

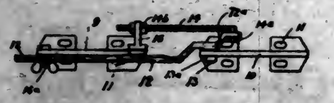
3. In a machine for washing coal, ore, etc., the combination of a tank having a main and one or more secondary compartments, the secondary compartments being adapted to receive the heavy material, said main and secondary compartments being connected at the lower ends, a screen arranged transversely of the main compartment, the main and secondary compartment or compartments being connected by open ports arranged above and adjacent to the screen and means for causing a constant movement of water up through the screen and from the main to the secondary compartments through said port or ports, substantially as set forth.

4. In a machine for washing coal, ore, etc., the combination of a tank, a horizontally arranged screen within said tank, a trap having inlet and outlet ports or openings in or approximately in the plane of the screen, said trap being connected with the tank by an unobstructed passage for the return of water to the tank, means for causing a pulsating flow of the water through the screen and maintaining the water above the screen at a higher level than that in the return passage, substantially as set forth.

5. In a machine for washing coal, ore, etc., the combination of a tank, a screen arranged transversely of the tank a trap having its bottom formed by a portion of the screen and provided with inlet and outlet ports or openings and means for causing a pulsating flow of the water through the screen and maintaining a constant flow of water through such ports, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

876,269. SAFETY DEVICE FOR CLEANING-MACHINES OR RUMBLES. CHARLES FISH, Muncie, Ind. Filed June 17, 1907. Serial No. 379,370.



1. A device of the kind described comprising a frame, a fixed pillow-block and a movable pillow-block mounted on said frame, gears journaled on said pillow-blocks and adapted to mesh with each other, members secured to the said pillow-blocks, a bar pivotally connected to one of said members and a lever fulcrumed on the other member and pivotally connected to the said bar, substantially as described.

2. A device of the kind described comprising a frame, a fixed pillow-block and a movable pillow-block mounted on said frame, gears journaled on said pillow-blocks and adapted to mesh with each other, members secured to the said pillow-blocks, a bar adjustable in length pivotally connected to one of said members and a lever fulcrumed on the other member and pivotally connected to the said bar, substantially as described.

3. A device of the kind described comprising a frame, a fixed pillow-block and a movable pillow-block mounted on said frame, gears journaled on said pillow-blocks and adapted to mesh with each other, members secured to the said pillow-blocks, a bar adjustable in length pivotally connected to one of said members and a lever fulcrumed on the other member and pivotally connected to the said bar, means to support the free end of said lever in positions varied vertically.

4. A device of the kind described comprising a frame, a fixed pillow-block and a movable pillow-block mounted on said frame, gears journaled on said pillow-blocks and adapted to mesh with each other, members secured to the said pillow-blocks, a bar adjustable in length pivotally connected to the member secured to the fixed pillow-block, a lever fulcrumed on the member secured to the movable pillow-block pivotally secured to the said bar, means to sustain the free end of said lever in positions varied so that the center-line of said lever may be on a plane common or at an angle to the center-line of the said connecting bar.

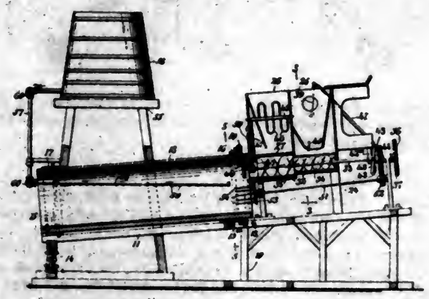
5. A device of the kind described comprising a frame, a fixed pillow-block and a movable pillow-block mounted on said frame, gears journaled on said pillow-blocks and adapted to mesh with each other, members secured to the said pillow-blocks, a bar adjustable in length pivotally connected to the member secured to the fixed pillow-block a lever fulcrumed on the member secured to the movable pillow-block pivotally secured to the said bar, a device connected to the member that is secured on the fixed pillow-block and adapted to support the free end of said lever in positions varied vertically.

[Claims 6 and 7 not printed in the Gazette.]

876,270. CONCRETE-MIXER. ROBERT B. FULTON, Red Cloud, Nebr. Filed Jan. 11, 1906. Serial No. 295,565.

1. A concrete mixer comprising a main frame, a drum rotatably supported in the frame and inclined with respect thereto, a tank supported adjacent to the drum, a pipe leading from the tank into the drum, said pipe being perforated within the drum, a shaft having a disk adjacent to the drum at the upper end thereof, said disk having pins projecting from the face thereof and extending into said drum, an auxiliary frame connected with the main frame at the upper end of the drum, a sand hopper and a cement hopper supported by the auxiliary frame, means for feeding cement and sand in unequal quantities, said feeding means delivering to the hopper immediately above the disk, and means for rotating the drum and disk.

2. A concrete mixer comprising a main frame, a drum rotatably supported in the frame and inclined with respect thereto, means for varying the inclination of the drum with respect to the frame, a tank supported adjacent to the drum, a pipe leading from the tank into the drum, said pipe being perforated within the drum, a shaft having a disk adjacent to the drum at the upper end thereof, said disk having pins projecting from the face thereof and extending into said drum, an auxiliary frame connected with the main frame at the upper end of the drum, a sand hopper and a cement hopper supported by the auxiliary frame, means for feeding cement and sand in unequal quantities, said means delivering to the hopper immediately above the disk, and means for rotating the drum and the disk.



3. A concrete mixer comprising a main frame, a drum rotatably supported within the frame and inclined with respect thereto, an agitator comprising a rotating disk having pins projecting from the face thereof at the end thereof, a sand hopper and a cement hopper delivering to the drum at the upper end thereof and immediately above the agitator, means for feeding sand and cement in definite proportions, means for moistening the material during its passage through the drum, and means engaging the periphery of the drum for rotating the same.

4. A concrete mixer comprising a main frame, a drum rotatably supported within the frame and inclined with respect thereto, means for varying the inclination of the drum, an agitator comprising a rotating disk having pins projecting from the face thereof within the drum at the upper end thereof, means for feeding cement and sand in definite proportions to the drum, said feeding means delivering immediately above the agitator, means for moistening the material during its passage through the drum, and means for rotating the drum.

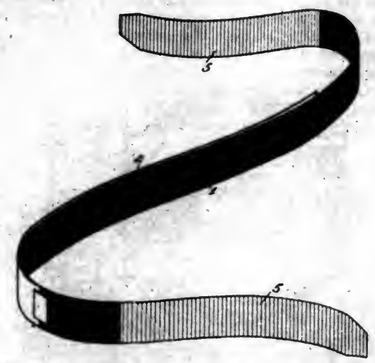
5. A cement mixer, comprising a main frame, a drum rotatably supported in the frame and inclined with respect thereto, means for varying the inclination of the drum with respect to the frame, a gear ring on the outer surface of the drum, an agitator comprising a rotating disk having pins projecting from the face thereof within the drum at the upper end thereof, means for feeding sand and cement in definite proportions to the drum, said feeding means delivering immediately above the agitator, means for moistening the material during its passage through the drum, and means engaging the gear ring for rotating the drum.

[Claim 6 not printed in the Gazette.]

876,271. PHOTOGRAPHIC-FILM CARTRIDGE. HARRY LE B. GRAY, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Original application filed Mar. 20, 1905, Serial No. 250,948. Divided and this application filed Nov. 3, 1905. Serial No. 285,671.

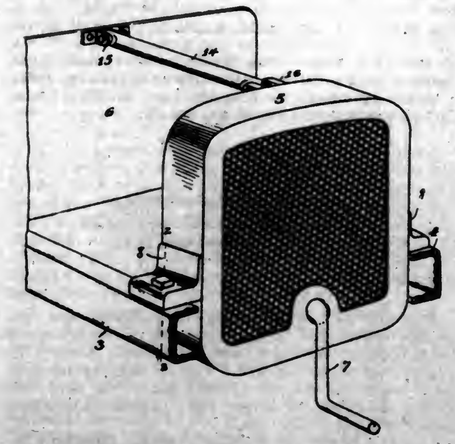
1. A photographic film cartridge composed of a strip of flexible sensitised film and an opaque flexible covering strip or backing longer than the film and to which the latter is attached at one end at a point removed from the end of the covering strip and wound with it in spiral form, the ends of said covering strip beyond the film being provided with a moisture-proof coating.

2. In a photographic film cartridge, the combination with a spool having flanged ends, of a strip of sensitised, flexible photographic film and a flexible, opaque covering strip therefor wound together upon the spool to form a roll between the flanges, the said covering strip being



longer than the film strip and its outer end, extending beyond the latter, being rendered moisture-proof and forming one or more convolutions about the roll.

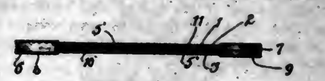
876,272. MEANS FOR FLEXIBLY CONNECTING PARTS OF A VEHICLE TO A FRAME. EDWARD J. GULICK, Mishawaka, Ind. Filed Feb. 21, 1907. Serial No. 358,712.



1. In combination with a frame member, and a supported member, of a socket on one of said members and a ball on the other member to constitute a ball and socket joint, a bolt extending through said members, and a spring surrounding the lower end of the shank of said bolt and secured beneath said frame member, whereby said frame and supported members are yieldingly secured together, substantially as described.

2. In a motor vehicle, in combination, a frame member and a radiator member supported by said frame member, of a socket on one of said members and a ball on the other member to constitute a ball and socket joint, a bolt extending through said ball and socket joint, a spring surrounding the lower end of the shank of said bolt and secured beneath said frame member whereby said frame and radiator are yieldingly secured together, and a pivot bar connected to said radiator and to a support on said vehicle to hold said radiator in its proper vertical position, substantially as described.

876,273. FUSE DEVICE. FRANK B. HALL, Wheeling, W. Va. Filed Dec. 30, 1905. Serial No. 294,026.



1. In a circuit-protecting device, the combination with a supporting member having an opening therethrough, of a fuse conductor passing through said opening to lie partly on one side and partly on the other side of said supporting member, a strengthening member at each side of the supporting member, the fuse conductor parts lying between the supporting member and the strengthening members, and terminal members connected with the ends of said fuse conductor, said terminal member serving to clamp the supporting and strengthening members together.

2. An electric protecting device, consisting of an inner supporting member, outer strengthening members, terminals wrapped about the ends of said supporting member and said strengthening members, and a fuse conductor passing between one strengthening member and the inner supporting member at one side thereof and passing between the other strengthening member and the inner supporting member at the other side thereof.

3. An electric protecting system, consisting of an inner supporting member of insulating material, a strengthening member at each side thereof, terminals wrapped about the ends of the supporting and strengthening members, a fuse conductor electrically connecting said terminals, said conductor passing through an opening in the inner member to lie partly between said inner member and one strengthening member and partly between said inner member and the other strengthening member.

4. An electric protecting device, consisting of an inner supporting member of insulating material, a strengthening member at each side of the inner supporting member, terminals securing said supporting and strengthening members together at the ends thereof, and a fuse conductor electrically connecting said terminals, said fuse conductor passing through an opening in the inner supporting member to lie partly between said inner member and the strengthening member at one side thereof and partly between the inner supporting member and the strengthening member at the other side thereof.

5. An electric protecting device, consisting of a body part of insulating material having an opening therethrough, a fuse conductor passing through said opening to lie partly on one side and partly on the other side of said body part, and terminals for said fuse wire in the form of metallic bands wrapped about the ends of the body part.

[Claims 6 to 11 not printed in the Gazette.]

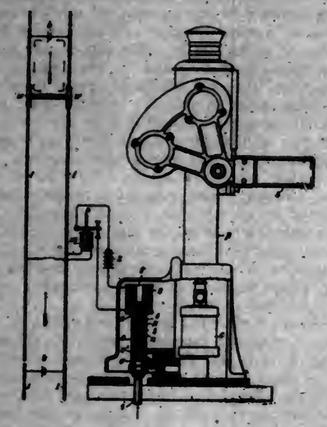
876,274. ELECTRICALLY-CONTROLLED RELEASING DEVICE. CHARLES J. KINTNER, New York, N. Y. Filed Apr. 20, 1906. Serial No. 312,786.

1. A railway signal adapted to be held in a denuite position by a source of applied energy; in combination with a release device for regulating the application of said energy to the signal, and a control solenoid having its core so connected to the release device that should said device fail to operate when the coils or windings of the solenoid are disconnected from a controlling source of electrical energy said core will fall and by its weight impart to the release device a blow adapted to effect the operation thereof, substantially as described.

2. A railway signal operatively connected to a source of a compressed gas, air, or liquid, and provided with an inlet and an outlet valve, both operatively connected to the core of a solenoid included in a control circuit; said core being so connected to both valves that when drawn upward by the coils it surely unseats the inlet valve, by reason of its impact in one direction due to the action of the coils, and releases the outlet valve in the other direction by reason of the action of gravity, substantially as described.

3. An electrically controlled release device adapted to effect the application and discontinuance of a source of

applied energy, embracing releasing means so connected to a solenoid core that when the solenoid is energized it effects an application of the energy, and when said solenoid is demagnetized its core falls by its own weight and gives to the releasing means a blow which surely actuates it, substantially as described.



4. A release device for effecting the application and discontinuance of a source of applied energy, embracing means for permitting the energy to act on a motive device; means for releasing the energy after it has been utilized and a solenoid having its core so connected to both of said means that when drawn upward by the coils it permits the energy to act on the motive device, and when released by demagnetizing the coils it cuts off the energy from the source of supply and releases the applied energy acting on the motive device, the arrangement being such that the solenoid core gives to one of said means a blow due to the action of the coils on the core as it is moved upward and a similar blow to the other means due to the weight of the core in the other direction as it moves downward, substantially as described.

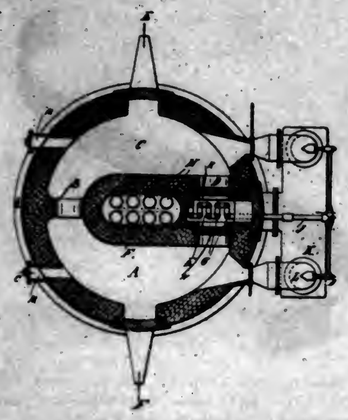
5. Means for controlling the application and use of a source of energy, embracing a solenoid and solenoid core; a double or duplex control device operatively connected to the solenoid core in such manner that when the solenoid core is magnetized the simultaneous release of one part of the control device and the active operation or closure of the other part thereof is surely effected by an impact or blow due to the descending core and attached parts, and when operated in the other direction on energizing the solenoid coil the action is in reverse order and is due to a second impact or blow, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

876,275. SMELTING-FURNACE WITH OIL FIRE. AUGUST KOCH, Hanover-List, Germany. Filed June 27, 1906. Serial No. 322,661.

1. In a furnace of the character described, the combination of a plurality of chambers adapted to be alternately used for melting and preheating, oil vaporizing and air heating chambers located between said melting chambers, so that the heat radiated by the melting chambers will vaporize the oil and preheat the air in said air and oil chambers.

2. In a furnace of the character described, the combination of two melting chambers adapted to be alternately used as melting and preliminary heating chambers, of means for carrying the heated gases from the melting chamber to the preliminary heating chamber, an oil vaporizing chamber and an air heating chamber located between said melting chambers and means for heating the air and oil in said air heating and vaporizing chambers by the refuse gases and the heat generated in the melting chamber during the melting process.



3. In a furnace of the character described, the combination of two melting chambers adapted to be alternately used as melting and preliminary heating chambers, an oil vaporizing chamber an air heating chamber located between said melting chambers and means for utilizing the refuse gases and heat generated during the melting for heating the air and oil in said air and oil heating chambers.

876,276. GUN-CLEANER. DAVID W. LANDES, Boise, Idaho, assignor of one-half to Flora E. Landis, Boise, Idaho, and one-half to Elmer E. Sims, Meridian, Idaho. Filed May 6, 1907. Serial No. 372,170.



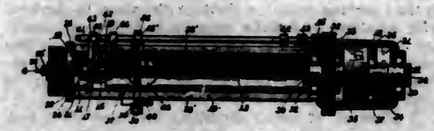
1. A gun cleaner comprising an expansible and contractile cleaner head means for causing the expansion and contraction of the cleaner head, a rotatable member carried by the cleaner rod, and a lock for coupling the rotatable member to the cleaner head and at the same time locking the means for causing the expansion and contraction of the said cleaner head.

2. A gun cleaner comprising a rotatable, threaded stem, a block to which said stem is fixed except against rotation, a nut carried by said stem, cleaner blades mounted on said block and coacting with said nut, means for rotating the stem, and a lock for fixing the stem-rotating means and the stem against rotation in the block carrying the cleaner blades.

3. A gun cleaner comprising a rotatable, threaded stem, a nut carried thereby, cleaner blades in operative relation to the nut, a block carrying said cleaner blades and holding said stem against longitudinal movement but permitting its rotation, a reduced neck formed on said block and provided with bayonet catch grooves, a sleeve fitting said neck and movable longitudinally thereon, and a pin passing through said sleeve and through a slot in the threaded stem and adapted to be moved with said sleeve longitudinally with relation to said stem into and out of the slots in the neck of the block.

4. A gun cleaner comprising a threaded stem provided with an annular groove and with a longitudinal slot, a nut carried by the threaded portion of the stem, cleaner blades provided with cleaner pads and in operative relation to said nut, a block carrying said cleaner blades and having means entering the annular groove in the stem to hold the same against longitudinal movement with relation to the block, a reduced neck formed on said block and provided with angle slots, a sleeve adapted to said neck and having a reduced portion to receive a cleaner rod, and a pin passing diametrically through the sleeve and through the slot in the stem and movable longitudinally with relation to the stem to enter the angle slots formed in the neck of the block.

876,277. KEY-SEAT-BROACHING MACHINE. JOSEPH N. LAPOINTE, Boston, Mass. Filed Oct. 5, 1904. Serial No. 227,271.



1. In a keyseat broaching machine, the combination of a tool holder; stationary bearings for said holder separated from each other; a driving member mounted upon each of said bearings; means interposed between said driving members for reciprocating said tool holder; and means for transmitting motion to said reciprocating means from either of said driving members.

2. In a keyseat broaching machine, the combination of a tool holder; stationary bearings for said holder separated from each other; a driving pulley mounted upon one of said bearings; a gear mounted upon a second bearing; means for driving said gear; means interposed between said gear and said driving pulley for reciprocating said tool holder; and means for transmitting motion to said reciprocating means from either said driving pulley or driving gear.

3. In a keyseat broaching machine, the combination of a tool holder; stationary bearings for said holder separated from each other; a driving pulley mounted upon one of said bearings; a gear mounted upon a second bearing; a pinion meshing with said gear; a driving pulley therefor; means interposed between said gear and said driving pulley for reciprocating said tool holder, and means for transmitting motion to said reciprocating means from either said driving pulley or driving gear.

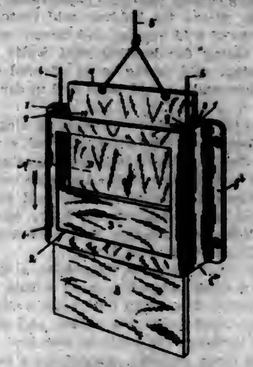
4. In a keyseat broaching machine, the combination of a tool holder provided with a threaded portion; stationary bearings for said holder; a driving member mounted upon each of said bearings; a nut interposed between said bearings and engaging the threaded portion of said tool holder for reciprocating said tool holder; a slidable clutch member keyed thereto; and means for moving said clutch member to engage either of said driving members.

5. In a keyseat broaching machine, the combination of a tool holder; stationary bearings for said holder; a driving pulley mounted upon one of said bearings; a gear mounted upon a second bearing; means for driving said gear; a threaded tool holder in said bearings; a nut thereon interposed between said bearings for reciprocating said tool holder; a slidable clutch member keyed thereto; and means for moving said clutch member to engage either said driving pulley or driving gear.

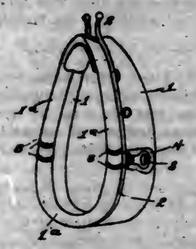
[Claims 6 and 7 not printed in the Gazette.]

876,278. CARD-EXHIBITING DEVICE. GEORGE MAYNARD, San Francisco, Cal. Filed Feb. 19, 1907. Serial No. 358,311.

A device of the character described comprising a casing open at its top and bottom and angular strips secured to the inner sides of the casing forming in combination with the sides of the casing grooves, a card slidable in certain of said grooves and a cover in the remainder of the grooves.

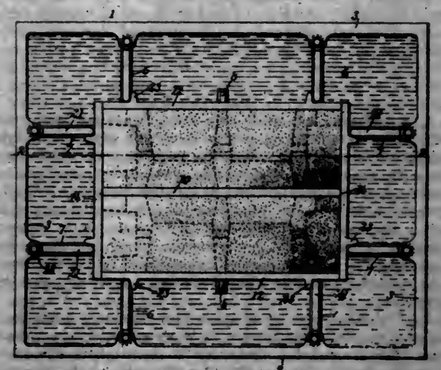


876,279. HORSE-COLLAR PROTECTOR. JOHN MILLAR, Cincinnati, Ohio, and SAMUEL HUMBARD, Knoxville, Tenn.; said Humbard assignor of one-half of his right to said Millar. Filed Apr. 22, 1907. Serial No. 369,686.



A horse collar protector comprising a thin sheet of flexible metal having an inner edge provided with pintles and curved to fit between the collar and the collar-roll, and spring-hooks carried by the pintles and slidably connecting the said plate to the collar.

876,280. CONCRETE-BLOCK MACHINE. FRANK MORCHER, Tiffin, Ohio. Filed Apr. 18, 1907. Serial No. 367,908.



1. A concrete block machine, comprising a casing, a mold within said casing having removable walls, means carried by said casing for holding said walls in position within said casing, said casing being adapted to receive a facing liquid surrounding said mold, and means for removing said liquid from said casing.

2. A concrete block machine, comprising a casing, a mold within said casing having a removable bottom and removable walls, means for holding said bottom normally above the bottom of said casing, and means carried at the sides of said casing for holding said walls in position within said casing, said casing being adapted to receive a facing liquid surrounding said mold and under the bottom of said mold.

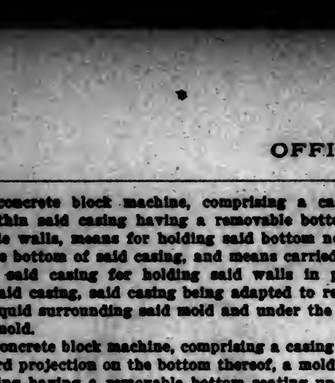
3. A concrete block machine, comprising a casing having an inward projection on the bottom thereof, a mold within said casing having a removable bottom seating upon said projection, and removable walls, adjustable means carried at the sides of said casing for holding said walls in position within said casing, said casing being adapted to receive a facing liquid surrounding said mold, and means for removing said liquid from said casing.

4. A concrete block machine, comprising a casing having guides on the bottom thereof, a mold within said casing having a removable bottom and removable walls, said walls being adapted to move upon said guides, and means within said casing for holding said walls in position.

5. A concrete block machine, comprising a casing having guides on the bottom thereof, a mold within said casing having a removable bottom and removable sides and ends, means for holding said sides normally apart, said ends being normally separated by said sides, and means for holding said ends and said sides in position, said ends and said sides being adapted to move upon said guides.

[Claims 6 to 10 not printed in the Gazette.]

876,281. COMBINATION SENDING AND RECEIVING WIRELESS-TELEGRAPH APPARATUS. ALBERT L. NEW, Los Angeles, and WILLIAM N. HICKMAN, Avalon, Cal.; said Hickman assignor of one-half of his right to said New. Filed Sept. 17, 1906. Serial No. 335,013.



1. A plurality of aerial capacities insulated from each other, a transmitting apparatus in circuit with one of said capacities, a receiving apparatus in circuit with the other capacity, means for varying the strength of the impulse produced by the transmitting apparatus, means electrically connected with the transmitting circuit for indicating in miles the effective radius of an impulse with definite strength, a plurality of ground connections, and means for switching one of said ground connections to the transmitting circuit or another ground connection to the receiving circuit.

2. A plurality of aerial capacities insulated from each other, a transmitting apparatus in circuit with one of said capacities, a receiving apparatus in circuit with the other capacity, means for varying the strength of the impulse produced by the transmitting apparatus, means electrically connected with the transmitting circuit for indicating in miles the effective radius of an impulse with definite strength, a plurality of ground connections, means for switching one of said ground connections to the transmitting circuit or another ground connection to the receiving circuit, a variable resistance in the receiving circuit, a local branch circuit embracing a receiving device connected with the receiving circuit, a variable resistance in the local circuit, a battery of definite strength in said local circuit, and a shunt in said local circuit with a battery of less strength, and a switch for cutting in said shunt.

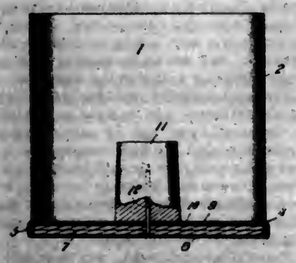
3. A plurality of aerial capacities insulated from each other, a transmitting apparatus in circuit with one of said capacities, a receiving apparatus in circuit with the other capacity, means for varying the strength of the impulse produced by the transmitting apparatus, means electrically connected with the transmitting circuit for indicating in miles the effective radius of an impulse with definite strength, a plurality of ground connections, means for switching one of said ground connections to the transmitting circuit or another ground connection to the receiving circuit, a variable resistance in the receiving circuit, a local branch circuit embracing a receiving device connected with the receiving circuit, a variable resistance in the local circuit, a battery of definite strength in said local circuit, and a shunt in said local circuit with a battery of less strength, and a switch for cutting in said shunt, a wire extending directly from the receiving aerial capacity to ground, and an inductance coil therein.

4. A plurality of aerial capacities insulated from each other, a transmitting apparatus in circuit with one capacity, a receiving apparatus in circuit with the other capacity, variable resistance in the receiving circuit, a local circuit embracing a receiving device in the receiving circuit, a variable resistance in said local circuit, a shunt in said local circuit with a battery, a battery in said local circuit, one of said batteries being of greater power than the other, and a switch for cutting in said shunt circuit, a plurality of ground connections, and means for connecting one ground connection with the receiving circuit or for connecting another ground connection with the transmitting circuit.

5. A plurality of aerial capacities insulated from each other, a transmitting apparatus in circuit with one capacity, a receiving apparatus in circuit with the other capacity, variable resistance in the receiving circuit, a local circuit embracing a receiving device in the receiving circuit, a variable resistance in said receiving circuit, and a shunt for cutting out said condenser, a plurality of ground connections, and a switch for connecting one ground connection with the transmitting circuit or another ground connection with the receiving circuit.

[Claim 6 not printed in the Gazette.]

876,282. DISPENSING-CONTAINER. ORVILLE L. PARMENTER, Racine, Wis. Filed Feb. 8, 1907. Serial No. 356,486.



1. A dispensing container comprising a wall, a bottom, and a dished locking ring embracing the wall, the bottom holding the wall pressed and embossed outwardly into the locking ring.

2. An article, substantially as described, comprising a paper material wall bent into substantially cylindrical form, a bottom arranged within the lower end of the wall, and a locking ring around the lower end of the wall, the wall being expanded into the ring and clamped between the bottom and the ring.

3. A container comprising a wall, a head within the wall, the lower end of said wall being expanded and fitting around the circumferential edge of said head and a locking ring around the wall, the wall being locked between the ring and head.

4. A container comprising an approximately cylindrical wall open at one end, a disk-shaped head within and surrounded by said wall, said wall having an offset portion receiving the edge of said head, and means surrounding the wall and clamping the wall and head together.

5. A container comprising a flexible sheet bent to form a wall, a disk-like bottom within and surrounded by said sheet, and an annularly dished locking ring surrounding said sheet in the plane of said bottom.

[Claims 6 to 8 not printed in the Gazette.]

876,283. CIRCULAR-KNITTING MACHINE. JOHN B. PAXTON and ELLIS I. O'NEILL, Philadelphia, Pa. Original application filed Sept. 30, 1903, Serial No. 175,244. Divided and this application filed Jan. 15, 1906. Serial No. 296,075.



1. In a circular knitting machine, a switch up cam for the half back needles; an arm radially pivoted on the exterior of the cam cylinder and having a projection carrying said cam extending into the plane of the needle butts through an aperature in the wall of the cam cylinder; means whereby said switch up cam may be raised above or thrown below the needle ledge; a second arm pivoted below the needle ledge; and a sorting cam mounted upon said second arm.

2. In a circular knitting machine, a switch up cam for the half back needles; an arm radially pivoted on the exterior of the cam cylinder and having a projection carrying said cam extending into the plane of the needle butts through an aperture in the wall of the cam cylinder; means whereby said switch up cam may be raised against spring pressure above the level of the needle ledge; a swinging trigger by which when so raised said cam is caught and maintained in its raised position until the requisite number of needles have been raised; a tripping cam whereby at the proper point said trigger is released and the switch up cam suffered to fall again below the level of the needle ledge; and a sorting cam yieldingly mounted and pivoted below the level of the needle ledge.

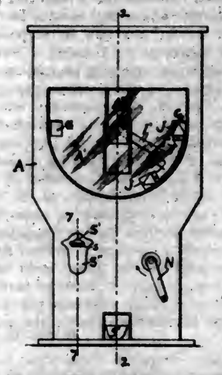
3. In a circular knitting machine, a movable switch up cam; a trigger by which said cam is caught and held in its raised position; a pivoted lever, the arms of which reach around to opposite sides of the cam cylinder; one arm of which carries a cam incline whereby the switch up cam is raised, and the other arm of which carries a tripping cam whereby the trigger is released; and a yielding sorting cam pivoted below the needle ledge.

4. In a knitting machine a movable switch up cam, with means for maintaining it in either its raised or lowered position; and a yielding sorting cam pivoted below the needle ledge and following said switch up cam, the apex of which is directed towards said switch up cam, and which by its act of yielding raises its apex sufficiently to throw the needle butt which caused it to yield into contact with its depressing cam surface.

5. In combination with a switch up cam for a knitting machine, a yielding sorting cam pivoted upon a radial pivot on the outside of the cam cylinder below the needle ledge and carrying within the plane of the needle butts a sorting cam, having two needle guiding surfaces, the apex of said cam being directed towards the switch up cam in a plane between the extreme planes of the action of said switch up cam, the pivotal point of said yielding sorting cam being so situated that when it yields the vertical plane of its apex changes sufficiently to throw the butt of the needles whose contact caused it to yield, into engagement with one of its cam surfaces.

[Claim 6 not printed in the Gazette.]

876,284. VENDING-MACHINE. WILLIAM ROHDE, Cincinnati, Ohio. Filed Aug. 20, 1906. Serial No. 331,815.



1. In a coin operated mechanism and in combination, a coin-chute, an oscillating lever below said coin-chute, a spring controlled catch in said coin-chute movable in one direction but fixed in the opposite direction, the distance between said lever and said catch when nearest together being less than the diameter of the coin to be used in the machine, a crank operated from the outside of the machine, mechanism intermediate said crank and said lever including means whereby said crank is throwu into operative connection with the element ultimately to be actuated upon the interference of a coin between said catch and said lever, substantially as described.

2. In a coin controlled apparatus, an element to be actuated, a manually operated element, and means interposed between the two for imparting movement to the first element upon the operation of the second element, said interposed means comprising two rotatable elements normally disconnected, one of the rotatable elements being actuated upon the operation of the manually operated element, a coupling member movable with the latter rotatable element, an abutment shifted into the path of the coupling member upon the insertion of a check whereby said member is shifted to couple the two rotatable elements to each other and means co-acting with the check after the insertion of the same for locking the abutment against movement until the coupling member is actuated, substantially as described.

3. In a check controlled apparatus, and in combination, an element to be actuated, a handle manually operated, an interposed mechanism for actuating the said element from the handle on the insertion of a check comprising, a rotatable arm, movement transmitting means interposed between the same and said element, a rotatable wheel normally disengaged from the arm, movement transmitting means interposed between the wheel and handle for positively rotating the same when the handle is actuated, a coin chute, a lever having one end in register therewith and designed to be depressed by a check or coin inserted in the chute, a second lever carrying an abutment, a connection between the levers whereby when the first lever is depressed by the check the abutment will be thrown upwardly, a stop surface for the abutment carried by the wheel and having an interrupted portion, and a coupling member carried by the wheel having a part designed to engage the arm and a part to be operated by the abutment located at said interrupted portion of the stop surface, the latter part of the coupling member engaging the abutment, when in its raised position, during the rotation of the wheel whereby the coupling member is shifted to engage the arm to couple the same to the wheel, substantially as described.

4. In a check controlled apparatus, and in combination, an element to be actuated, a handle manually operated, an interposed mechanism for actuating the said element from the handle on the insertion of a check comprising, a rotatable arm, movement transmitting means interposed

between the same and said element, a rotatable wheel normally disengaged from the arm, movement transmitting means interposed between the wheel and handle positively rotating the same when the handle is actuated, a coin chute, a lever having one end in register therewith and designed to be depressed by a check or coin inserted in the chute, a second lever carrying an abutment, a connection between the levers whereby, when the first lever is depressed by the check, the abutment will be thrown upwardly, a stop surface for the abutment carried by the wheel and having an interrupted portion, and a coupling member carried by the wheel having a part designed to engage the arm and a part to be operated by the abutment located at said interrupted portion of the stop surface, the latter part of the coupling member engaging the abutment when in its raised position during the rotation of the wheel whereby the coupling member is shifted to engage the arm to couple the same to the wheel, said abutment moving into the interrupted part of the stop surface after actuating the coupling member whereby the first named lever is permitted to fall and discharge the coin, substantially as described.

5. In a check controlled apparatus, an element to be operated, a handle manually operated, an interposed mechanism for operating the former from the latter upon the insertion of a check comprising, a coin chute, a rotatable wheel geared to the handle, an arm connected to the element to be actuated and normally disconnected from the wheel, a member for coupling the wheel to the arm, an abutment for shifting the coupling member during the rotation of the wheel for engaging the same with the arm whereby the wheel and arm are coupled to each other, a lever co-acting with the coin chute and connected to the abutment to shift the abutment when the lever is shifted by the weight of a check inserted in the coin-chute, the end of the lever and chute being so relatively arranged that the check will be held in the chute until the lever reaches the limit of its downward movement, a stop surface on the wheel co-acting with the abutment for preventing the lever moving to the limit of its downward movement upon the initial insertion of a check, said surface having an interrupted portion and said coupling member having a part to be actuated by the abutment located at said interrupted part whereby on the insertion of a check the latter will depress the lever until the abutment is thrown against the stop surface and said lever will be held up to retain the check in the chute until by the rotation of the wheel the coupling member is brought into co-action with the abutment and is actuated thereby and the interrupted part of the stop surface is brought into register with the abutment whereby the latter continues its upward movement under the weight of the check and the lever is permitted to fall to the limit of its downward movement and release the check from the coin chute, substantially as described.

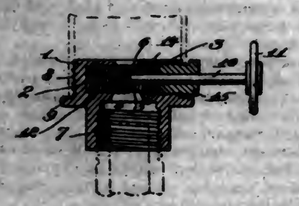
[Claims 6 to 8 not printed in the Gazette.]

876,285. REGULATING-VALVE. ALBERT ULLMANN, Macon, Ga., assignor, by direct and mesne assignments, of one-half to Julius J. Waxelbaum, Macon, Ga. Filed Oct. 12, 1906. Serial No. 338,669. Renewed July 11, 1907. Serial No. 383,230.

1. A regulating valve embodying a housing provided with a series of slots, and a rotatable element provided with screw threads corresponding in contour to the slots, said threads adapted when said member is rotated in one direction to be free of the slots and when rotated in the opposite direction to engage in and close the slots.

2. A regulating valve comprising means constituting a chamber provided with a screw-threaded wall, portions of the channels of the threaded wall cut away to form slots, and a rotatable element provided with screw threads, said threads adapted when the element is rotated in one direction to be free of the slots and when rotated in the opposite direction to engage in and close the slots.

3. A regulating valve comprising a housing provided with a plurality of inlets and a plurality of outlets, and a rotatable screw-threaded element having the threads thereof engaging in said inlets and outlets for simultaneously closing them.

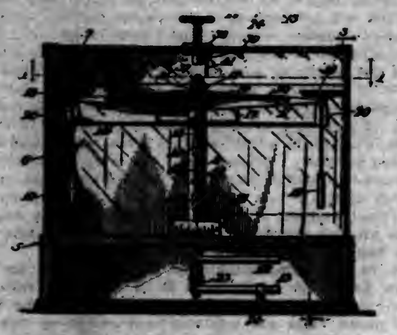


4. A regulating valve comprising a housing having a bore constituting a valve chamber, the wall of said chamber being screw-threaded and with certain of the channels formed by the threads cut away so as to form inlets and outlets, and a rotatable cylindrical element extending into said chamber and having peripheral threads adapted to engage in the threads formed in the wall of the chamber, the threads of said element adapted when the latter is rotated in one direction to be free of the inlets and outlets and when rotated in the opposite direction to close them.

5. A regulating valve comprising a housing having a bore constituting a valve chamber, the wall of said chamber being screw-threaded and with certain of the channels formed by the threads cut away so as to form inlets and outlets, and a rotatable cylindrical element extending into said chamber and having peripheral threads adapted to engage in the threads formed in the wall of the chamber, the threads of said element adapted when the latter is rotated in one direction to be free of the inlets and outlets and when rotated in the opposite direction to close them, said housing provided with means to arrest the inward movement of said element and means extending into the chamber for arresting the movement of said element in the other direction.

[Claims 6 to 25 not printed in the Gazette.]

876,286. SCALE. ERWIN M. WADE, Los Angeles, Cal. Filed June 10, 1907. Serial No. 378,120.



1. In a scale, a beam, supports for said beam, a plurality of horizontally revoluble pointers centrally pivoted on said beam, adjustable weights on said pointers, and a horizontal reading circle for said pointers, said pointers adapted to be placed in positions opposite each other transversely across said beam.

2. In a scale, a beam, a revoluble support for said beam, means to revolve said support, a plurality of revoluble pointers centrally pivoted on said beam, and a reading circle for said pointers, said pointers adapted to be placed in positions opposite each other transversely across said beam.

3. In a scale, a beam, a revoluble support for said beam, means to revolve said support, a plurality of horizontally revoluble pointers centrally pivoted on said beam, a horizontal circular scale secured to said beam upon which the position of the pointers is adapted to be read, and means to revolve said pointers, said pointers adapted to be placed in positions opposite each other transversely across said beam.

4. In a scale, a case, a vertical standard mounted in said case, a horizontal arm secured to said standard whereby said standard may be revolved, a scale beam pivotally mounted on said standard, a plurality of horizontally revoluble pointers centrally pivoted on said beam, a horizontal reading scale for said pointers rigidly attached to said beam, and a horizontally revoluble finger pivotally attached to said case and adapted to contact with said pointers, said pointers adapted to be placed in positions opposite each other transversely across said beam.

5. In a scale, a case, a vertical standard revolubly mounted in said case, a horizontal arm secured to said standard whereby the same may be revolved, a scale beam pivotally mounted on said standard, a pair of horizontally revoluble pointers centrally mounted on said beam, a circular scale rigidly mounted on said beam and on which the positions of said pointers are adapted to be read, and means to revolve said pointers to positions opposite each other transversely across said beam.

876,287. CARBURETER. MORRIS L. WILLIAMS, Philadelphia, Pa. Filed Aug. 11, 1905. Serial No. 273,832.



1. A carbureter having a hydrocarbon passage, a valve for controlling said passage, a plurality of ducts into which said passage discharges, an air passage discharging through said ducts, and a valve for controlling said ducts and air passage.

2. A carbureter having a mixing chamber, a hydrocarbon passage, a valve for controlling said passage, a plurality of passages connected with and leading from said hydrocarbon passage, a plurality of passages connected with and leading from each of said first named plurality of passages to said mixing chamber, an air passage leading to said mixing chamber, and a valve for controlling said passages to said mixing chamber.

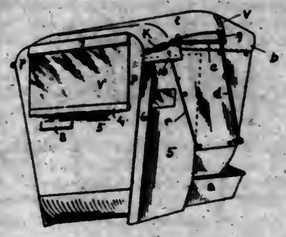
3. A carbureter having a mixing chamber, a hydrocarbon passage, a plurality of passages connected with and leading from said hydrocarbon passage to said mixing chamber, a passage for discharging air into said mixing chamber, and automatic valves connected so that one operates the other, said valves being adapted for maintaining a substantially constant ratio between the flow of hydrocarbon and air through said passages.

4. A carbureter having a passage, a nozzle for discharging hydrocarbon into said passage, a needle valve for controlling said nozzle, means for conveying air into said passage, branching passages connected with and leading from said first named passage, a further passage into which said branching passages discharge, and a valve for controlling said further passage.

5. A carbureter having a passage, a nozzle for discharging hydrocarbon into said passage, a valve for controlling said nozzle, means for conveying air into said passage, a plurality of sub-divided passages connected with and leading from said first passage, an air passage, and a valve for controlling said sub-divided passages and said air passage, said second valve being connected with and operating said first valve.

[Claims 6 to 8 not printed in the Gazette.]

876,288. STORM-FRONT FOR VEHICLES. DANIEL ABGERBRIGHT, Troy, Ohio. Filed Feb. 9, 1907. Serial No. 356,605.



1. A storm front attachment for buggies and similar vehicles, having a bow frame provided with a horizontal slotted brace bar, a front covering for said frame having an opening above the brace bar, curtain brackets secured to the bow frame, horizontal and upright curtain rolls carrying curtains supported by said brackets and adapted to extend over the opening of the front covering and cover in the sides of the vehicle, the branches of said bow frame having each a series of perforations at its lower end portion, and attachment brackets having adjustable securing bolts engaging such perforations, said brackets having slotted arms adapted to have adjustable connection with the securing bolts of the dashboard.

2. The combination with a vehicle having an arched top, of a storm front attachment, having a bow frame provided with a slotted brace bar, a front covering for said frame, having an opening above the brace bar, curtain brackets secured to the bow frame, horizontal and upright curtain rolls carrying curtains supported by said brackets and adapted to extend over the opening of the front covering and cover in the sides of the vehicle, attachment brackets having securing bolts provided with vertically adjustable connection with the branches of the bow frame, said brackets having vertically slotted arms provided with vertically adjustable connection with the dashboard bolts, and a top hood extending in rear of the top of the arch of the vehicle cover, and having a marginal attachment strap.

3. The combination with the rigid or arched top or cover of a buggy or similar vehicle, of a storm front attachment having a top hood extending rearward of the ridge, and a marginal attachment strap in connection with the rear end of the hood, substantially as specified.

876,289. HORSE-COLLAR. FRANCIS H. BELLAMY, Big Sandy, Tenn., assignor to James C. Perkins, Big Sandy, Tenn. Filed Apr. 8, 1907. Serial No. 367,017.

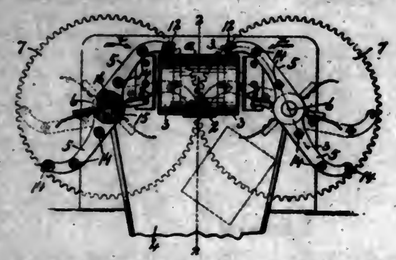


1. An animal collar comprising a cover and a rim secured thereto, a pair of collar plates anchored to said rim, a pair of cushion plates located opposite the first named plates and loosely secured to the rim, and cushion springs confined between the plates.

2. A horse collar comprising a cover or casing, a rim carried thereby, a pair of stationary collar plates anchored to said rim, a pair of relatively movable cushion plates loosely secured to the rim, sockets provided on the opposing faces of the stationary and movable plates, spacing

springs between the plates having their ends engaged in the sockets, and pads interposed between the plates and casing.

876,290. CAN-RIGHTING MACHINE. MERTON D. BLAKESLEE, Casenovia, N. Y., assignor of one-fourth to Henry Burden, Second, Casenovia, N. Y. Filed Oct. 3, 1906. Serial No. 337,319.



1. In a can-feeding and righting machine, two opposite rotary can-feeding elements, means to feed the cans into the path of said elements, each element having associated therewith a can-righting finger adapted to enter the open end of the can which may face that way, and to temporarily suspend said can while said elements are forcing the cans downwardly, whereby the can is caused to tilt by gravity, bottom downward upon the finger which temporarily supports its open end, the continued rotation of said elements withdrawing the supporting finger from the can after the latter is righted.

2. In a can-righting machine, two rotary elements moving toward and from each other, means for feeding the cans one by one between the approaching sides of said elements and fingers on said elements each adapted to enter the open end of the can and to support said open end uppermost while the opposite end tilts downwardly.

3. In a can-feeding and righting machine, two rotary elements revolving about separate axes and each having a righting finger, and means to feed the cans, one by one, with the centers of their ends in registration with the adjacent ends of the moving fingers, one of the fingers entering the open end of the can which faces it whereby the open end of the can is held while the opposite end or bottom is free to gravitate downwardly.

4. In a can-righting machine, two opposite revolving elements arranged side by side on separate parallel axes and having can-righting fingers moving toward each other to engage opposite ends of the cans, and means to feed the cans between the fingers with their ends facing said fingers, whereby one of the fingers is caused to enter the open end of the can.

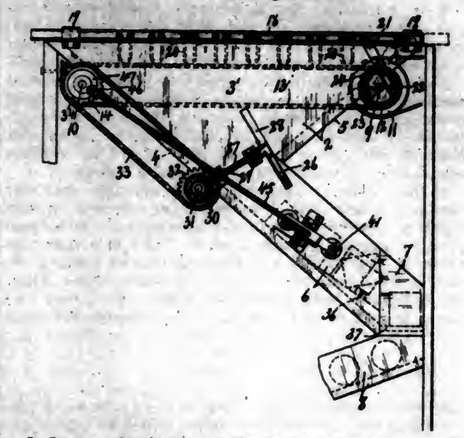
5. In a can-feeding can and righting machine, oppositely arranged can-righting fingers rotating about separate parallel axes and having their ends approaching each other during rotation, a distance less than the length of the can between its ends, and means to feed the cans, one by one, between and with their ends facing said approaching fingers.

[Claims 6 to 12 not printed in the Gazette.]

876,291. MECHANICAL CAN-ROLLER. MERTON D. BLAKESLEE, Casenovia, N. Y., assignor of one-fourth to Henry Burden, Second, Casenovia, N. Y. Filed Feb. 11, 1907. Serial No. 356,876.

1. In a mechanical can roller, a receptacle into which the cans are promiscuously deposited, an inclined can guide, mechanism for agitating and feeding the cans into said guide, additional mechanism for causing the cans to slide endwise along said guide, a second inclined guide at the lower terminal end of the first named guide, and means at the lower terminal end of the first named guide engaged by the cans whereby said cans are tilted to a horizontally rolling position into the second guide.

2. In a mechanical can roller, a hopper having a vibrating inclined bottom upon which the cans are promiscuously deposited, means for vibrating said bottom an inclined chute at the lower end of the inclined bottom of the hopper for receiving the cans discharged from said hopper a sliding bar having can righting fingers in the path of the cans, and means for actuating said bar.



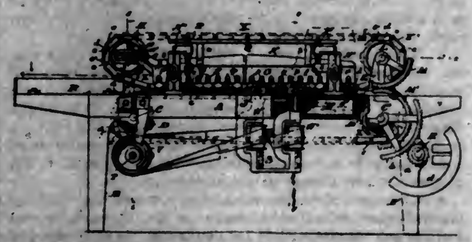
3. In a mechanical can roller, a hopper having a vertically vibratory inclined bottom upon which the cans are promiscuously deposited in quantities, means for vibrating said bottom, an inclined chute at the lower end of the bottom for receiving the cans discharged therefrom a sliding bar having can righting fingers in the path of the cans as they pass from the hopper to the chute, and means for actuating said bar.

4. In a mechanical can roller, a hopper having an inclined bottom upon which the cans are deposited promiscuously in quantities, said hopper having an opening at the low end of the inclined hopper, a sliding agitator movable along the low side of the hopper in the path of some of the cans, and means to operate the agitator.

5. In a mechanical can roller, a hopper having an inclined bottom and an upright wall spaced apart from the low end of the bottom forming an intervening can opening at the low end of said bottom, a reciprocatory agitator having fingers movable along the inside of the upright, and means to operate said agitator.

[Claims 6 to 15 not printed in the Gazette.]

876,292. EDGE-TRIMMER. WILLIAM M. BOENNING, Manitowoc, Wis., assignor to The Veneer Machinery Company, Grand Rapids, Mich., a Corporation of Michigan. Filed June 19, 1907. Serial No. 379,707.



1. An edge-trimmer comprising a pair of endless carriers having their work engaging runs disposed one above the other, means for adjusting the work engaging run of one of the carriers with relation to the other, means for driving the carriers at the same speed, and a driven cutter-head arranged adjacent to the drive-sides of the carriers.

2. An edge-trimmer comprising a table, a trough in the table, an endless driven link-belt in fixed relation with the table, its work engaging run being arranged to travel in the trough, supporting means for the work engaging run, a vertically adjustable endless driven link-belt carried by the table, its work engaging run being opposite the work engaging run of the first named link-belt, driving-gears in connection with the link-belts, and a vertically driven cutter-head disposed adjacent to drive-sides of said link-belts.

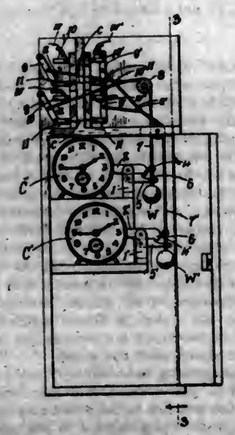
3. In an edge-trimmer, a table having a trough therein, an idle and driven sprocket-wheel in fixed relation with the table at opposite ends of the trough, an endless link-belt carried by the sprocket-wheels, arranged to travel in the trough, each link of the belt being provided with a corrugated outer face, supporting rollers in the table-trough for the link-belt, side-guides for said link-belt in connection with said trough, a driven sprocket-wheel disposed above the first named drive-sprocket and in fixed relation with the table-top, a presser-frame adjustably secured to said table-top, an idle sprocket in connection with the presser-frame, an endless link-belt carried by the last named driven and idle sprocket-wheels, the link-members of the belt being provided with corrugated outer faces, spring-controlled anti-friction rollers carried by said presser-frame and opposing the work engaging run of the last named link-belt, and roughing and finishing driven cutter heads secured to the table adjacent the driven-sides of said link-belts.

4. In an edge-trimmer having a table, an endless driven belt comprising a series of links having corrugated outer faces, the work engaging run of which belt is arranged to travel over the table, and supporting-rollers for the work engaging run of the belt; the combination of standards secured to the table, an adjustable presser-frame in connection with the standards, the presser-frame being disposed above and alined with the work engaging run of the belt, a channel in said presser-frame, spring-controlled housings fitted in the channel roller carried by the housings, an endless driven belt comprising a series of links having corrugated outer faces, the drive-side of which belt is arranged to travel in the housings, and driven cutters disposed at the work engaging runs of the belts.

5. In an edge-trimmer comprising driven endless carriers having corrugated faces, work engaging runs of the carriers being oppositely disposed; the combination of a pair of rotary cutter-heads disposed adjacent to the work engaging runs of the carriers, driving-gears connecting the carriers, and means for adjusting the work engaging runs of said carriers with relation to each other.

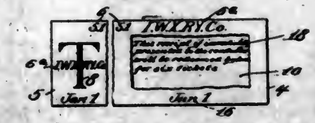
[Claims 6 to 8 not printed in the Gazette.]

876,293. ELECTRIC TIME-SWITCH. FRANK W. BROCK, Chatham, Ill. Filed Mar. 11, 1907. Serial No. 361,764.



In combination with an electric circuit having two independent switch-levers for respectively closing and breaking the circuit, a clock, and an alarm key therefor, a pivoted latch having one end disposed in the path of rotation of the exposed head of said alarm key, a gravity pawl locked against movement by the latch, a weight coupled to a cord and suspended on the pawl, the opposite end of the cord being connected to one of the switch levers and temporarily free from the tension of the weight, the head of the key being adapted to trip the latch at the hour to which the alarm has been set and release the weight whereby the latter pulling on the cord oscillates the switch lever to closed position, and a second clock coöperating with a similar latch, pawl, weight and cord secured to the second switch-lever, whereby at a predetermined hour the release of the second weight is effected, and the pulling on the cord thereof oscillates the second switch-lever to open position and the circuit is broken, substantially as set forth.

876,294. RAILWAY-FARE RECEIPT-TICKET. HARRY N. BROWN, Philadelphia, Pa., and JOHN B. N. CARDOZA, Norfolk, Va., assignors of one-fourth to Edwin C. Hathaway and one-fourth to William R. Allen, Norfolk, Va. Filed Sept. 24, 1907. Serial No. 394,344.



1. A railway fare receipt ticket comprising means to constitute a passenger's receiving portion formed of two superimposed sections, the upper of said sections having marginal portions of its inner face secured to the marginal portions of the opposing face of the lower section thereby providing said upper section with an unattached portion, said lower section having that face opposing the inner face of the upper section provided with a conventional means to constitute said passenger's receiving portion of value, said conventional means concealed by the unattached portion of said upper section.

2. A railway fare receipt ticket comprising means to constitute a passenger's receiving portion formed of two superimposed sections, the upper of said sections having marginal portions of its inner face attached to marginal portions of the opposing face of the lower section thereby providing said upper section with an unattached portion, said lower section having that face which opposes the inner face of the upper section provided with a conventional means for forming said lower section into two divisions, one of said divisions provided with a conventional means to constitute it of value, said conventional means concealed by said unattached portion of the upper section.

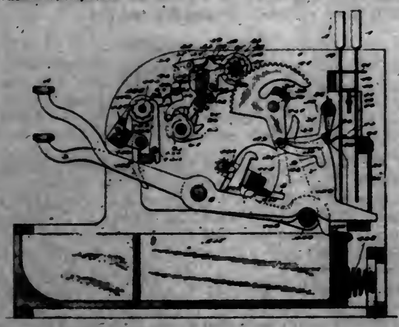
3. A railway fare receipt ticket comprising means to constitute a stub and means to constitute a passenger's receiving portion formed integral with the stub, said passenger's receiving portion formed of two superimposed sections, the upper of said sections having marginal portions of its inner face secured to the marginal portions of the opposing face of the lower section thereby providing said outer section with an unattached portion, said lower section having that face opposing the inner face of the upper section provided with a conventional means to constitute said passenger's receiving portion of value, said conventional means concealed by the unattached portion of said upper section, said stub and passenger's receiving portion provided with a corresponding conventional means to indicate the character of fare received by the conductor for transportation.

4. A railway fare receipt ticket comprising means to constitute a stub and means to constitute a passenger's receiving portion formed integral with the stub, said passenger's receiving portion formed of two superimposed sections the upper of said sections having marginal portions of its inner face attached to marginal portions of the opposing face of the lower section thereby providing said upper section with an unattached portion, said lower section having that face which opposes the inner face of the upper section provided with a conventional means for forming said lower section into two divisions, one of said divisions

provided with a conventional means to constitute it of value, said conventional means concealed by said unattached portion of the upper section, said stub and passenger's receiving portion provided with a corresponding conventional means to indicate the character of fare received by the conductor for transportation.

5. A railway fare receipt ticket comprising means to constitute a passenger's receiving portion formed of two superimposed sections having longitudinal marginal portions thereof secured together, said receiving portion having one section provided with means concealed by the unattached part of the other of said sections for constituting said passenger's receiving portion of value.

876,295. CASH-REGISTER. THOMAS CARNEY, Dayton, Ohio, assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed June 15, 1900. Serial No. 20,383.



1. In a cash register, the combination with a counter, of a series of operating keys each of which is provided with a rigid plate having a slot formed with a portion concentric to the key fulcrum and a portion eccentric thereto, and a registering frame coöperating with both walls of said slots.

2. In a cash register, the combination with a series of registering wheels, registering segments arranged to actuate the registering wheels, and a series of pivotally operated keys having registering slots means connected to said segments and adapted to engage both walls of the registering slots to first move the registering segments so as to actuate the registering wheels and to then lock said segments in such moved position during the remainder of the initial movement of said keys and also during a portion of the return movement.

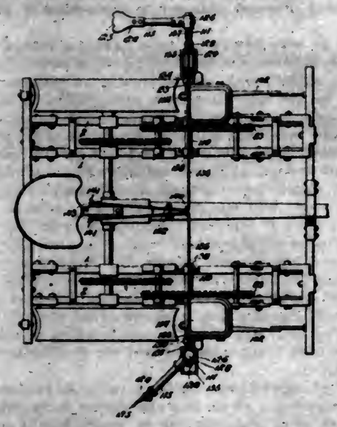
3. In a cash register the combination with a series of totalizing registering wheels, of a series of amount or value keys each of which has a registering slot comprising a cam or operating portion and a portion concentric with the axis of said keys, and connecting mechanism adapted to engage both walls of the slots and arranged to turn the registering wheels.

4. In a cash register, the combination with a series of registering wheels, registering segments arranged to actuate the registering wheels, and a series of pivotally operated keys having an initial and a return movement and formed respectively with registering slots and connecting devices adapted to engage both walls of said slots to transmit the full registering movement of the segments and to then lock the latter before the completion of the final initial movement of said keys.

5. In a cash register, the combination with a series of normally disengaged counter or registering wheels, of a series of keys in a rigid part of each of which is formed an operating cam slot, a registering frame intermediate the counter and said keys and to which the keys become coupled, and means for bringing the registering wheels into engagement with the registering frame when said keys are operated.

[Claims 6 to 37 not printed in the Gazette.]

876,296. HILL-MARKER. PEHR CHRISTIANSSON, Carlos, Minn. Original application filed July 6, 1906, Serial No. 324,982. Divided and this application filed June 4, 1907. Serial No. 377,206.



1. The combination of a shaft, a hill marking arm extending from the shaft, and a blade secured to the arm and provided with a scalloped edge.

2. The combination of a shaft, a hill marking arm extending from the shaft, and a spoon-shaped blade provided at its engaging edge with a plurality of projecting portions.

3. The combination of a horisontal rock shaft, a hill marking arm extending downwardly and rearwardly from the shaft and arranged to be swung upwardly and downwardly into and out of engagement with the ground for marking the same by the rotary movement of the rock shaft, and means for actuating the shaft.

4. A machine of the class described provided at opposite sides with hinged hill marking devices embodying transverse rock shafts and marking arms, means for swinging the hill marking devices upward, and means for operating either of the hill marking devices.

5. In a machine of the class described, the combination of hinged hill marking devices located at opposite sides of the machine embodying transverse rock shafts and hill marking arms, means for operating either of the rock shafts, and flexible connections secured to the hill marking devices for raising and lowering the same.

[Claims 6 to 13 not printed in the Gazette.]

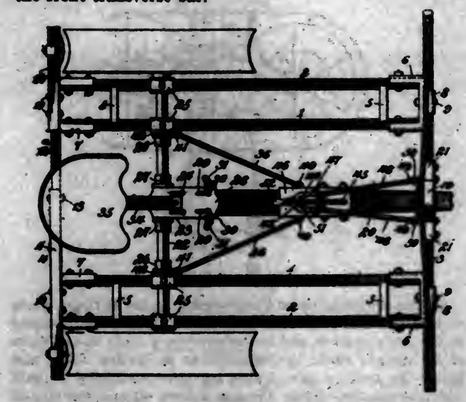
876,297. FRAME FOR AGRICULTURAL MACHINES. PEHR CHRISTIANSSON, Carlos, Minn. Original application filed July 6, 1906, Serial No. 324,982. Divided and this application filed June 4, 1907. Serial No. 377,207.

1. A frame comprising longitudinal side bars or beams, a rear transverse bar consisting of spaced sections secured to the rear ends of the side bars or beams and an intermediate section adjustably connecting the spaced sections, a front transverse bar, and means for adjustably connecting the side bars or beams to the front transverse bar.

2. A frame comprising laterally adjustable bars or beams, a rear transverse bar consisting of spaced flanged sections fixed to the side bars or beams and an intermediate section fixed to one of the flanged sections and adjustably secured to the other, a front transverse bar, and means slidable on the front transverse bar for connecting the side bars or beams with the same.

3. A frame comprising laterally adjustable side bars or beams arranged in pairs, front and rear transverse bars, and metallic yokes secured to the front and rear transverse bars and having their sides secured to the terminals of the side bars or beams and connecting the members of each pair of the same together and to the front and rear transverse bars.

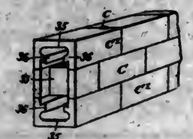
4. A frame comprising laterally adjustable side bars or beams arranged in pairs, a rear transverse bar composed of adjustably connected sections, a front transverse bar, and front and rear yokes connecting the side bars or beams and having parallel flanged sides receiving the same, the rear yokes being fixed to the sections of the rear transverse bar, and the front yokes being provided with sleeves slidable on the front transverse bar.



5. The combination of a frame provided at the front with a substantially arch-shaped member having a recess or opening, an axle located in rear of the said member and supporting the frame, a tongue connected with the axle and operating in the recess or opening, and an adjusting lever mounted on the tongue and provided with a forwardly extending arm connected with the arch-shaped member of the frame for raising and lowering the latter.

[Claims 6 to 15 not printed in the Gazette.]

876,298. BRICK MOLDED FOR WALLS WITH A MONOLITHIC INTERNAL SKELETON. VINCENZO COMPAGNONE, Naples, Italy. Filed May 3, 1907. Serial No. 371,671.



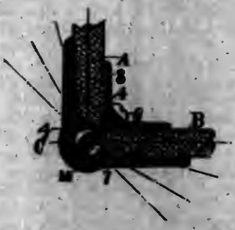
1. A beam or the like, comprising a plurality of rectangular bricks laid in courses, the bricks of the intermediate course being set edgewise and each having its ends recessed and provided with a plurality of transverse partitions, and the bricks of the outer courses being set flatwise and each having in one side face a U-shaped recess, the side walls of which are provided with undercut ribs, the whole being adapted to be filled with cement.

2. A beam or the like, comprising a plurality of bricks laid in courses, the bricks of the intermediate course being set edgewise and each having its ends recessed and provided with a plurality of chambers, and the bricks of the outer courses being set flatwise and each having in one side face a U-shaped recess, the side walls of which are provided with ribs, the whole being adapted to be filled with cement.

3. A beam or the like, comprising a plurality of bricks laid in courses, the bricks of the intermediate course being set edgewise and each having its ends recessed, and the bricks of the outer courses being set flatwise and each having in one side face a U-shaped recess, the side walls of which are provided with undercut ribs, the whole being adapted to be filled with cement.

4. A beam or the like, comprising a plurality of bricks laid in courses, the bricks of the intermediate course each having a recess at each end, and the bricks of the outer courses each having in its side face a longitudinal recess communicating at its ends with the end recess of the intermediate bricks, the whole being adapted to be filled with a bonding material.

876,299. SHOW-WINDOW AND SHOW-CASE CONSTRUCTION. CHARLES M. CONLEY, Cleveland, Ohio, assignor of one-eighth to Ira W. Pence and three-eighths to Amorilus Rogers, Cleveland, Ohio. Filed Oct. 7, 1907. Serial No. 396,242.



1. In glass plate corner constructions, a cylindrical post, in combination with glass plates having channels in their edges curved in cross section to match said post and clamping devices locking said plates and post together comprising inner and outer metallic members adapted to be bent to different angles, and means to bind said devices together with said post and plates.

2. In a corner construction for show windows and cases, a cylindrical tubular post, glass plates cornering on said post having channels shaped to the outside of the said post and adapted to turn thereon to any desired angle, and clamping devices for said parts comprising an outer clamp having a threaded socket, extending into said post, an inner clamping member and a screw engaged in said socket and adapted to tighten said parts.

3. In a corner construction for show windows and the like, a tubular cylindrical post, glass plates having transversely curved channels in their edges fitting upon said posts and clamping devices to secure said plates rigidly upon said posts comprising an outer clamping member having a projection rigid therewith entering said post, and means to engage said projection and lock all said parts together.

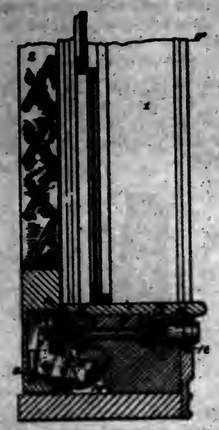
4. In window and show case construction, a cylindrical post, in combination with glass plates having channeled edges bearing directly against said post and means to secure the parts fixedly together comprising an outer clamp having an inwardly extending projection entering said post, an inner angle member and means locking said clamp and angle member together.

5. A construction in show windows and cases comprising two glass plates arranged at an angle to each other and a corner post interposed bodily between the immediate edges of said plates and separating said edges, the said edges shaped to fit closely upon the sides of said post, in combination with inner and outer clamps for said plates, the outer clamp having a projection extending into the said post and the inner clamp locked on said projection.

876,300. BLIND-FASTENING. JOHN S. COURET, New Orleans, La., assignor of one-half to Eugene Montagnet, New Orleans, La. Filed Mar. 18, 1907. Serial No. 363,060.

1. In combination with a window frame having a recess in and an opening through its sill, a blind therefor having a recess registering with the opening in the sill, a plate closing the recess of the blind, said plate having openings, an angular hook carried by the plate within the recess of the blind, said hook extending through one of the openings of the plate and adapted to extend within the recess of the sill when the blind is in closed position, a lug on the hook projecting through a second opening through which the lug

projects being alined with the opening in the sill when the blind is closed, and a spring controlled pin within the opening of the sill adapted to contact with the lug of the hook.



2. The combination with a window frame having a recess in and an opening through its sill, a blind therefor having a recess registering with the opening in the sill, a plate closing the recess of the blind, said plate having openings, an angular hook carried by the plate within the recess of the blind, said hook extending through one of the openings of the plate and adapted to extend within the recess of the sill when the blind is in closed position, a lug on the hook projecting through a second opening through which the lug projects being alined with the opening in the sill when the blind is closed, a spring controlled pin within the opening of the sill adapted to contact with the lug of the hook, and a flange carried by the plate projecting within the opening of the sill when the blind is closed.

876,301. WASHER FOR FIRE-HOSE. SAMUEL CUNNINGHAM, Lockport, N. Y. Filed Aug. 30, 1907. Serial No. 390,768.



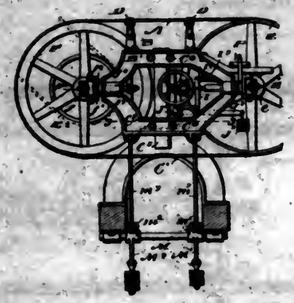
1. A hose washer comprising a pipe, a rotatable perforated sleeve therein, through which the hose is drawn, and means to cause a flow of water through the perforations in the sleeve.

2. A hose washer comprising a pipe, a rotatable perforated sleeve in the pipe and spaced thereon to form an annular water chamber, and a water supply pipe to said chamber.

3. A hose washer comprising a pipe having a water supply inlet in the side thereof, a rotatable sleeve in the pipe, having jet holes therethrough and inclined ribs on the outside thereof, and rings at the ends of the sleeve, one of said rings having jet holes therethrough.

876,302. BAND SAWING-MACHINE. EVAN T. DAVIES, Portland, Oreg. Original application filed Nov. 16, 1906, Serial No. 343,701. Divided and this application filed June 18, 1907. Serial No. 378,812.

1. In an apparatus substantially as described, the combination of a supporting frame having an upright slide, a saw frame consisting of sections fitting together face to face and provided in their inner faces with recesses combining to fit and slide upon the vertical slide of the supporting frame, a band saw, and means for supporting the same, the vertical slide being arranged approximately midway between the ends of the saw frame and in the plane of the band saw.



2. The combination of a supporting frame having a main section and a slide section, the latter having a neck secured to the main section and provided with a slide in the form of an upright shaft having portions projecting above and below the neck, a saw frame movable vertically on said slide, means for setting the saw frame up and down, and means for supporting the band saw on said frame.

3. The combination of a supporting frame having a slide in the form of an upright shaft having portions projecting above and below its connection with the supporting frame, a saw frame fitting midway between its ends upon and movable vertically upon said slide, means for moving the saw frame vertically, and means for supporting the band saw on said frame.

4. A saw frame composed of sections fitting together flatwise and having means for supporting a band saw and provided midway between its ends with coinciding recesses in the inner faces of the sections producing an upright opening forming a bearing and a supporting frame having a slide fitting said opening and upon which the saw frame may be moved vertically, and means for moving the saw frame vertically on said slide.

5. The combination in a saw frame made in similar sections fitted together flatwise and provided in their inner abutting faces with the recesses combining to form an opening, and a supporting frame having a slide in the form of an upright shaft fitting said opening and upon which the saw frame may be adjusted vertically.

[Claims 6 to 9 not printed in the Gazette.]

876,303. MUSIC-HOLDER. EDWIN P. DOEWARD, Marion, Ohio, assignor of one-fourth to Charles E. Carroll, Marion, Ohio. Original application filed Dec. 13, 1906, Serial No. 347,710. Divided and this application filed Mar. 5, 1907. Serial No. 360,700.

1. In a music holder, the combination of a framework and a clamp for the music, said clamp comprising a fixed member and a movable member, the latter having an outwardly extended wing provided with horizontal slots, fastening means passed through said slots to hold the movable clamp member in place and direct the same in its movements towards and from the fixed member, springs located in the outer portions of said horizontal slots and confined between the said fastenings and the closed ends of the slots and normally exerting a pressure to hold the movable clamp member away from the fixed clamp member, and means for advancing the clamp member to grip a piece of music placed between the two clamp members.

2. A music holder comprising a framework, a fixed clamp member, a movable clamp member, one of said clamp members having its end portions deflected towards the other clamp member and one of said clamp members having its gripping face made concave transversely, a wing extending from the movable clamp member and provided with horizontal slots, fastenings passed through said slots for securing the clamp member to the framework and directing said clamp member in its movements, and a cam lever mounted upon one of said fastening means and adapted to advance the movable clamp member towards the fixed clamp member.



3. In a music holder, the combination of a clamp for the music, comprising a fixed member and a movable member, the latter having an outwardly extended wing provided with slots, fastenings passed through said slots and a cam lever for actuating the movable member, mounted upon one of the aforementioned fastenings, and springs mounted in the outer portions of said slots and confined between the same and the said fastenings and normally exerting an outward pressure upon the movable clamp member.

876,304. FINISH-REMOVER. CARLETON ELLIS, Larchmont, N. Y., assignor to Chadeloid Chemical Company, New York, N. Y., a Corporation of West Virginia. Original application filed Sept. 5, 1906, Serial No. 333,383. Divided and this application filed Oct. 1, 1907. Serial No. 395,423.

1. The finish remover comprising approximately denatured grain alcohol 85 gallons, oil of acetone 14 gallons, amyl acetate 1 gallon with 10 pounds of Japan wax and 5 pounds of ceresin wax have been incorporated to retard evaporation.

2. The finish remover comprising approximately denatured grain alcohol 85 gallons, ketonic loosening finish solvent material 14 gallons with which 15 pounds of waxy thickening material, including 5 pounds of ceresin wax has been incorporated to retard evaporation.

3. The finish remover comprising approximately alcohol eighty-five gallons, ketonic loosening finish solvent material fourteen gallons with which fifteen pounds of waxy thickening material including ceresin wax have been incorporated.

876,305. ENGINE-LATHE. JAMES HARTNESS, Springfield, Vt. Filed July 13, 1905. Serial No. 269,477.



1. In an engine lathe, a bed, a spindle located approximately near the bed, a single slide supported directly on the bed and arranged in close proximity to the axis of said spindle, a cutter supported directly on the slide, and means for positively feeding the cutter relatively to said slide towards and from the work held by the spindle substantially as set forth.

2. In an engine lathe, a bed, a single slide or carriage movable longitudinally of the bed, a cutter socketed in said slide, and means for positively adjusting said cutter transversely of the movement of the slide, making it possible to bring the solid metal of the slide close to the work to support the cutter and prevent it from springing, all without the interposition of supplemental slides or lever-like parts.

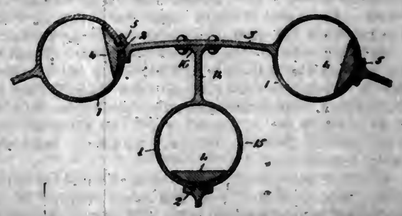
3. In an engine lathe, a bed, a cutter adjustable towards and from the work, a slide mounted directly on and supported by the bed, said slide being longitudinally movable on said bed and having a socket for receiving and directly supporting the cutter without the interposition of additional slides, and a screw on said slide and connected to said cutter for longitudinally adjusting said cutter relatively to said slide.

4. In a lathe, a bed, a longitudinally movable slide mounted directly thereon, having a socket, a cutter closely fitted in said socket and longitudinally movable therein, and means for adjusting said cutter in said socket.

5. In a lathe, a bed, a longitudinally movable slide mounted directly thereon, having a socket, a cutter closely fitted in said socket and longitudinally movable therein, a screw threaded into said slide, and a connection between said screw and said cutter substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

876,306. SHEET-PILING. JESSE T. PYLE, Amarillo, Tex. Original application filed Aug. 16, 1906, Serial No. 330,823. Divided and this application filed Jan. 14, 1907. Serial No. 352,161.



1. A section for sheet piling, comprising a tubular member having a slot extending longitudinally thereof, a web on the opposite side of said member from the slot, means on the end of the web adapted to extend through the slot of a similar tubular member and engage with the interior thereof, and means on the web adjacent said last mentioned means and adapted to fit against the outer wall of the next adjacent tubular member.

2. A section for sheet piling, comprising a tubular member having a slot extending longitudinally thereof, a web on the opposite side of said member from the slot, the outer edge of said web being adapted to extend through the slot of a similar adjacent tubular section, and means adjacent the edge of said web and adapted to engage with the interior and exterior of the tubular member of said adjacent section.

3. A section for sheet piling, comprising a tube having a slot extending the entire length thereof, a web on the opposite side of said tube from the slot, a head on the end of the web adapted to fit within the tube of the next adjacent section, and flanges on the web adjacent said head, adapted to fit against the outer walls of the tube of the said next adjacent section.

4. A section for sheet piling, comprising a tube having a slot extending the entire length thereof, a web secured to said tube, a head on the end of said web adapted to fit within the tube of the next adjacent section, and means whereby the width of said web may be varied.

5. A section for sheet piling, comprising a tube having a slot extending the entire length thereof, a web extending along the opposite side of said tube, a head on said web, a jet tube adapted to extend within said tube, and means carried by said jet tube for closing said slot.

[Claims 6 to 13 not printed in the Gazette.]

876,307. MACHINE FOR THE MANUFACTURE OF WIRE-GLASS. FRANK SHUMAN, Philadelphia, Pa., assignor to The Continuous Glass Company, Philadelphia, Pa., a Corporation of New Jersey. Original application filed June 14, 1902, Serial No. 111,748. Divided and this application filed May 28, 1906. Serial No. 318,280.



1. In a wire glass machine, the table and flattening roller combined with a guide for the meshed wire sheet arranged in front of the flattening roller close to the table and adjustably supported so as to move at a less speed than the flattening roller, and a moving shoe or gun for confining the glass extending from the flattening roller to the guide for the meshed wire.

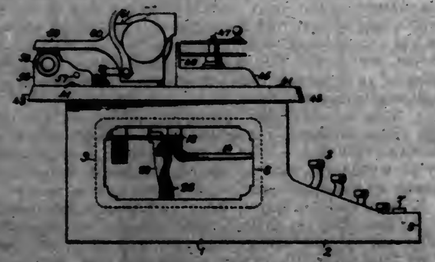
2. In a wire glass machine the combination of a table, a flattening roller, a gun having side walls resting upon the table and moved forward with the flattening roller, and a guide for the meshed wire sheet arranged close to the table and between the side walls of the gun and adjustable relatively to the gun and flattening roller whereby it may be moved forward at a less speed than the said gun and flattening roller.

3. In a wire glass machine the combination of a table, a flattening roller, a gun having side walls resting upon the table and moved forward with the flattening roller, and a guide for the meshed wire sheet arranged close to the table and between the side walls of the gun and adjustable relatively to the gun and flattening roller whereby it may be moved forward at a less speed than the said gun and flattening roller, the said guide consisting of a flat plate over which the wire sheet is fed and a slotted upper part for guiding the wire sheet and holding it down upon the plate portion.

4. In a wire glass machine, a table and roller for flattening the glass, combined with a guiding support for the meshed wire sheet movable with the roller, and means for adjusting the guiding support toward the roller during the rolling operation.

5. In a wire glass machine, a table and roller for flattening the glass, combined with a guiding support having a slotted portion for the meshed wire sheet movable with the roller, and means for forcing the guiding support toward the roller during the rolling operation.

876,308. TYPE-WRITER FRAME. GEORGE A. SMITH, New York, N. Y., assignor of sixteen one-hundred-and-fourths to James W. Hennessey, New York, N. Y., forty-six one-hundred-and-fourths to Arthur Letts, Los Angles, Cal., and twenty-one one-hundred-and-fourths to Frederick H. Ward, Brooklyn, N. Y. Filed Dec. 17, 1906. Serial No. 348,293.



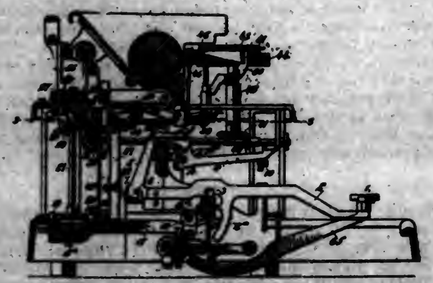
1. In a typewriter frame, a lower frame, an upper or covering frame consisting of raised portions protecting the ribbon ratchets, a vertical plate at the rear of said portions, an inwardly extending rib on the lower portion of said plate, supports for a carriage rail, all of said parts of the upper frame being integral with each other.

2. In a typewriter frame, a lower frame carrying supports for the operating mechanism, an upper or covering frame provided with an integral vertical plate, and raised portions adjacent thereto and inclosing the ribbon ratchets.

3. In a typewriter frame, a lower frame carrying supports for the operating mechanism, an upper or covering frame consisting of raised portions protecting the ribbon ratchets, a vertical plate at the rear of said portions, an inwardly extending rib on the lower portion of said plate, supports for a carriage rail, all of said parts of the upper frame being integral with each other.

4. In a typewriter frame, a lower frame carrying supports for the operating mechanism, an upper covering frame provided with an integral vertical plate having a lower rearwardly-extending rib adapted to support a ribbon-guiding plate.

876,309. RIBBON MECHANISM FOR TYPE-WRITERS. FRANZ X. WAGNER, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Original application filed Nov. 12, 1904, Serial No. 232,413. Divided and this application filed May 18, 1905. Serial No. 260,984.



1. In a typewriter or like machine, a ribbon reverse mechanism comprising a longitudinally shifting shaft having gears for driving one ribbon spool or the other, collars rigidly carried by said shaft between the gears, and rigid shifting fingers arranged between each of the collars and each of the gears and adapted to directly engage the collars.

2. In a typewriter or like machine, a ribbon reverse mechanism comprising a longitudinally shifting drive shaft having gears for driving one ribbon spool or the other, spring-pressed push fingers for shifting said shaft, mechanism for putting the springs of said fingers under tensions, latches for holding the fingers in their set position, and means operated by the movement of the ribbon, for releasing said latches.

3. In a typewriter or like machine, a ribbon reverse mechanism comprising a longitudinally shifting shaft having gears for driving one ribbon spool or the other, collars rigidly carried by said shaft, and rigid shifting fingers each adapted to directly engage one of said collars.

4. In a typewriter, or like machine, a ribbon reverse mechanism comprising a longitudinally shifting shaft having means for driving one ribbon spool or the other, spring-pressed push fingers, pivoted adjacent to the ends of said shaft, arms mounted to turn together with said push fingers, latches normally in the paths of said arms, connections from said latches to the ribbon to swing them aside when the ribbon is nearly unwound from the corresponding ribbon spool, and means arranged to engage said arms for setting the push fingers ready for operation.

5. In a typewriter, or like machine, a ribbon reversing mechanism comprising a longitudinally shifting drive shaft adapted to drive one ribbon spool or the other, spring-pressed push fingers for shifting said shaft, an arm connected with each of said fingers, mechanism connected with the carriage shift key for engaging said arms and bringing the push fingers to their set position, and latches arranged to hold said arms and adapted to be swung away from them by the ribbon when the ribbon nears its end.

[Claims 6 to 10 not printed in the Gazette.]

876,310. PROCESS FOR THE MANUFACTURE OF ISOBORNYL OXALATES FROM CAMPHENE. AUGUSTUS BISCHLER and ANTON BASELLI, Basel, Switzerland, assignors, by mesne assignments, to J. Basler & Cie., Basel, Switzerland, a Firm. Original application filed Sept. 13, 1906, Serial No. 334,370. Divided and this application filed Apr. 17, 1907. Serial No. 368,612.

1. The described process for the manufacture of isobornyl oxalates consisting in reacting upon camphene with anhydrous oxalic acid and separating the isobornyl oxalates from the reaction mass, as described.

2. The described process for the manufacture of isobornyl oxalates consisting in reacting upon camphene with anhydrous oxalic acid in presence of a solvent and separating the isobornyl oxalates from the reaction mass, as described.

3. The described process for the manufacture of isobornyl oxalates consisting in reacting upon camphene with anhydrous oxalic acid in presence of a condensing agent and of a solvent and separating the isobornyl oxalates from the reaction mass, as described.

4. The described process for the manufacture of isobornyl oxalates consisting in heating camphene with anhydrous oxalic acid and separating the isobornyl oxalates from the reaction mass, as described.

5. The described process for the manufacture of isobornyl oxalates, consisting in heating camphene with anhydrous oxalic acid in presence of a solvent and separating the isobornyl oxalates from the reaction mass, as described.

[Claim 6 not printed in the Gazette.]

876,311. PROCESS OF MANUFACTURING CONDENSATION PRODUCTS FROM FORMALDEHYDE, TANNIN, AND AROMATIC MONOHYDROXYL COMPOUNDS. HERMANN HILDEBRANDT, Halle-on-the-Saale, Germany. Filed Feb. 21, 1907. Serial No. 358,579. (Specimens.)

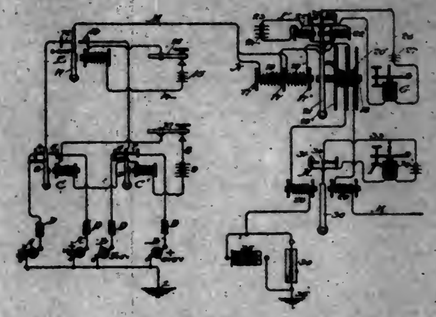
1. The process of manufacturing condensation products from tannin by means of formaldehyde, which process consists in mixing a solution of any substance of the aromatic series containing one free unsubstituted hydroxyl-group and free from substituted oxy-groups, with a solution of a tannin in substantially molecular proportions, adding formaldehyde to the mixture produced largely in excess of the theoretical quantity, pouring the mixture thus obtained in a great excess of hydrochloric acid, to produce condensation, separating the precipitate obtained and drying said precipitate.

2. The process of manufacturing condensation products from tannin by means of formaldehyde, which process consists in mixing a solution of any aromatic compound containing monoxy-benzyl with a solution of tannin in substantially molecular quantities, adding formaldehyde largely in excess of the theoretical quantity, pouring the mixture thus obtained in a great excess of hydrochloric acid, to produce condensation and precipitation, separating the precipitate obtained and drying said precipitate.

3. The process of manufacturing condensation products from tannin by means of formaldehyde, which process consists in mixing an alcoholic solution of thymol with a watery solution of a tannin, in substantially molecular proportions, adding 40% formaldehyde largely in excess of the theoretical quantity, pouring the mixture thus obtained in a great excess of concentrated hydrochloric acid to produce condensation and precipitation, separating the precipitate from the liquid, and then washing the precipitate and drying said precipitate.

4. The herein described condensation product of thymol with formaldehyde and tannin, the said product being insoluble in water, and soluble in alkali, and soluble in alcohol, and melting with decomposition at about 235 degrees centigrade.

876,312. QUADRUPLEX OR MULTIPLEX TELEGRAPHY. LAWRENCE CONNELL, Jr., Portland, Oreg. Original application filed July 2, 1906, Serial No. 324,305. Divided and this application filed Mar. 29, 1907. Serial No. 365,339.



1. In a multiplex telegraph system, the combination with a line wire extending between stations, of a receiving and transmitting apparatus at each station, comprising a neutral relay having an armature, and two main energizing coils, one composed of two differentially-disposed high windings, and the other of two differentially-disposed low windings, one of said high windings and the low winding of similar direction being included in series in said main line, an artificial line connected with the main line at each station, including the remaining two main windings of said neutral relay in series and connected to ground, a sounder and sounder-circuit controlled by said neutral relay, a source of variable strength current connected with said main line at each station, and transmitter mechanism comprising a magnet, an armature therefor, a transmitting key, and a transmitting key circuit controlling the flow of current to line.

2. In a multiplex telegraph system, the combination with a line wire extending between stations, of a receiving and transmitting apparatus at each station, comprising polarised relay and a neutral relay having an armature and two main energizing coils, one composed of two differentially-disposed high windings, and the other of two differentially-disposed low windings, one of said high windings and the low winding of similar directions being included in series in said main line, and one coil of said polarised relay being also included in series in said main line, an artificial line connected with the main line at each station, including the remaining two main windings of said neutral relay in series and the second coil of said polarised relay, and connected to ground, a sounder and sounder-circuit controlled by said neutral relay, a sounder and sounder-circuit controlled by said polarised relay, a source of variable strength current, connected with said main line at each station, a common or non-polarised transmitter mechanism comprising a magnet, an armature therefor, a transmitting key and transmitting key circuit, and a polar transmitter mechanism comprising a magnet, an armature therefor, a transmitting key and transmitting key-circuit.

3. In a multiplex telegraph system, in combination with a line wire circuit and means for transmitting current of two or more differentiated kinds over said circuit, a relay comprising an armature actuated solely by inductive forces and mounted to remain passive in all positions when not subject to inductive force, a main energizing coil having two equal but oppositely-wound high windings, a second main energizing coil having two equal but oppositely-wound low windings, suitable circuit-conductors connecting two of said coils of similar direction with the main line, an artificial line, and suitable circuit-conductors connecting the other two of said windings with said artificial line.

4. In a multiplex telegraph system the combination, with a main line, of a station apparatus comprising a neutral relay, said relay comprising an armature, two main energizing coils arranged at opposite sides of the armature, one of said coils being composed of two differential high

windings and the other, of two differential low windings, one of said high windings and the low winding of similar direction being included in series in said main line, an artificial line connected to the main line, and including the other high and low winding of the neutral relay in series and connected to ground, means for steadying the armature of said relay during instants of no magnetism, and a receiving instrument controlled by said neutral relay.

5. In a multiplex telegraph system the combination, with a main line, of a station apparatus comprising a polarised relay, a neutral relay having an armature and two main energising coils, one of said coils being composed of two differential high windings and the other, of two differential low windings, one of the high windings and the low winding of similar direction being connected in series in said main line and one coil of the polarised relay, an artificial line connected with the main line, said artificial line including in series the other two windings of the neutral relay and the other coil of the polarised relay, means for steadying the armature of the neutral relay during instants of no magnetism, and a receiving instrument controlled by the polarised relay.

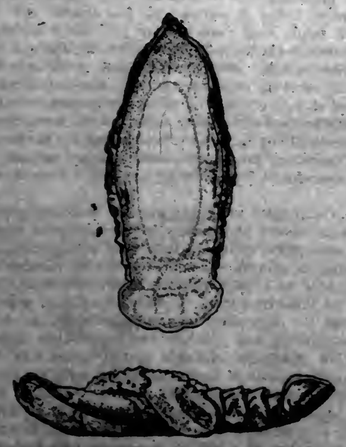
DESIGNS.

38,980. LOCKET OR SIMILAR ARTICLE. WALLACE G. GINDER, St. Joseph, Mo. Filed Nov. 25, 1907. Serial No. 403,833. Term of patent 7 years.



The ornamental design for a locket, or similar article, substantially as shown.

38,981. DISH OR SIMILAR ARTICLE. GEORGE C. THIESEN, Bayonne, N. J. Filed Nov. 27, 1907. Serial No. 404,180. Term of patent 3½ years.



The ornamental design for a dish or similar article, substantially as shown.

38,982. DISH OR SIMILAR ARTICLE. GEORGE C. THIESEN, Bayonne, N. J. Filed Nov. 27, 1907. Serial No. 404,181. Term of patent 3½ years.



The ornamental design for a dish or similar article, substantially as shown.

38,983. DISH OR SIMILAR ARTICLE. GEORGE C. THIESEN, Bayonne, N. J. Filed Nov. 27, 1907. Serial No. 404,182. Term of patent 3½ years.



The ornamental design for a dish or similar article, substantially as shown.

38,984. DISH OR SIMILAR ARTICLE. GEORGE C. THIESEN, Bayonne, N. J. Filed Nov. 27, 1907. Serial No. 404,183. Term of patent 3½ years.



The ornamental design for a covered dish or similar article, substantially as shown.

38,985. PITCHER OR SIMILAR ARTICLE. GEORGE C. THIESEN, Bayonne, N. J. Filed Nov. 27, 1907. Serial No. 404,184. Term of patent 3½ years.



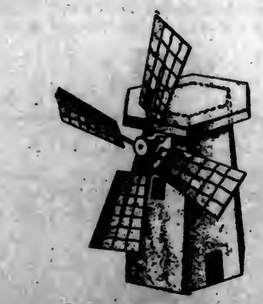
The ornamental design for a pitcher or similar article, substantially as shown.

38,986. CENSER. LOUIS V. ARONSON, Newark, N. J. Filed Aug. 20, 1907. Serial No. 389,416. Term of patent 7 years.



The ornamental design for censers as shown.

38,987. CANDY-BOX. RUFUS C. HUBBARD, Los Angeles, Cal. Filed Sept. 18, 1907. Serial No. 393,566. Term of patent 3½ years.



The ornamental design for a candy box as shown.

38,988. ACETYLENE-LAMP. FREDERIC E. BALDWIN, New York, N. Y. Filed Nov. 14, 1907. Serial No. 402,213. Term of patent 7 years.



The ornamental design for an acetylene lamp, as shown.

38,989. GUARD-RING FOR BRIDLE-BITS. JOSEPH H. GREGORY, Morris Plains, N. J. Filed Oct. 9, 1907. Serial No. 396,688. Term of patent 14 years.



The ornamental design for a guard ring for bridle bits, as shown.

38,990. HEATING-STOVE. WILLIAM THOMPSON, Kalamazoo, and GEORGE W. COPE, Detroit, Mich., assignors to Kalamazoo Stove Co., of Kalamazoo, Mich. Filed Sept. 23, 1907. Serial No. 394,250. Term of patent 14 years.



The ornamental design for a heating stove, substantially as shown.

38,891. AGRICULTURAL BOILER. GEORGE B. PECKHAM, Newark, Ohio. Filed Oct. 29, 1907. Serial No. 399,784. Term of patent 7 years.



The ornamental design for an agricultural boiler, substantially as shown.

38,892. SCREEN-DOOR HINGE. WILLIAM H. BROTHERS, Cleveland, Ohio, assignor to The Columbian Hardware Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 5, 1906. Serial No. 337,642. Term of patent 3½ years.





The ornamental design for a screen door hinge, as shown.

38,893. SHOE-LACE. CHARLES TWEEDIE, Jefferson, Mo. Filed July 29, 1907. Serial No. 386,171. Term of patent 3½ years.



The ornamental design for a shoe lace shown.

38,894. PORTIÈRE. BENJAMIN F. WHITE, Rock Island, Ill. Filed Oct. 2, 1907. Serial No. 395,648. Term of patent 7 years.



The ornamental design for a portière, as shown.

TRADE-MARKS

PUBLISHED JANUARY 7, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 7,052. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) MANUFACTURES ROYALES DE CORSETS P. D. (SOCIÉTÉ ANONYME), Brussels, Belgium. Filed May 29, 1905.



Particular description of goods.—Corsets.

Ser. No. 9,268. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE COOK & BERNHEIMER CO., New York, N. Y. Filed June 27, 1905. Used ten years.

LION

Particular description of goods.—Cocktails.

Ser. No. 9,311. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) MECHANISCHE WEBEREI ZU LINDEN, Hannover-Linden, Germany. Filed July 6, 1905.



Particular description of goods.—Velveteens.

Ser. No. 11,610. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE GOTTSCHALK COMPANY OF BALTIMORE CITY, Baltimore, Md. Filed Aug. 12, 1905. Used ten years.

POINTER

Particular description of goods.—Rye and Malt Whisky.

Ser. No. 12,764. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) MANUFACTURES ROYALES DE CORSETS P. D. SOCIÉTÉ ANONYME, Brussels, Belgium. Filed Sept. 18, 1905.



Particular description of goods.—Corsets.

Ser. No. 13,158. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) J. F. JOHNSON MILLING Co., Bridgeton, N. J. Filed Sept. 30, 1905.



Particular description of goods.—Wheat-Flour.

Ser. No. 14,632. (CLASS 22. FIREARMS, AND EQUIPMENTS AND PROJECTILES NOT OTHERWISE CLASSIFIED.) NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Nov. 14, 1905.

BLACK PRINCE

Particular description of goods.—Shotguns.

Ser. No. 18,988. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) THE WARREN FEATHERBONE CO., Three Oaks, Mich. Filed Apr. 20, 1906. Used ten years.

FEATHERBONE

Particular description of goods.—Whip Stocks or Materials, Whips, and Whip-Lashes.

Ser. No. 19,215. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) MCCORD BRADY CO., Omaha, Nebr. Filed May 1, 1906.

ADVO

Particular description of goods.—Coffee and Tea.

Ser. No. 20,474. (CLASS 52. PACKING-HOUSE PRODUCTS.) NEW YORK BUTCHERS DRESSED MEAT COMPANY, New York, N. Y. Filed June 21, 1906.

ROSE

Particular description of goods.—Animal Oil Derived from Certain Fats of Cattle and Used in Foods.

Ser. No. 20,651. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE GOTTSCHALK COMPANY OF BALTIMORE CITY, Baltimore, Md. Filed June 29, 1906. Used ten years.

POINTER



Particular description of goods.—Rye and Malt Whisky.

Ser. No. 21,357. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) E. MERCK, a Firm, Darmstadt, Germany. Filed Aug. 6, 1906.

CLAVIN

Particular description of goods.—A Derivative or a Substitute for Ergot Used Medicinally.

Ser. No. 21,546. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) JOHN WYETH AND BROTHER, INCORPORATED, Philadelphia, Pa. Filed Aug. 15, 1906.



Particular description of goods.—Medicinal Extracts, Wines, Elixirs, Emulsions, Suppositories, Compressed Tablets, Cachets, and Pills, all Used for Medicinal Purposes.

Ser. No. 21,553. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) JOHN WYETH AND BROTHER, INCORPORATED, Philadelphia, Pa. Filed Aug. 15, 1906. Used ten years.

WYETH'S

Particular description of goods.—Medicated Wines, Elixirs, Syrups, Liquors, Solutions, Emulsions, Glyceroles, Tinctures, Suppositories, Granular Effervescent Salts, Powder Capsules, Soluble Globules, Soluble Elastic Capsules, Medicines Put Up in Tablet, Lozenge, Pill, and Disk Form, Extracts, Resinoids, Digestive Ferments, and Ointments and Pastes, All for Medicinal Purposes.

Ser. No. 21,907. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) JULIA A. SAVAGE, Cambridge, Mass. Filed Sept. 4, 1906.

E-Z-Q-R

Particular description of goods.—Salves, Ointments, and Powders for Application to the Feet.

Ser. No. 22,251. (CLASS 72. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE NATIONAL STRAW PULP CO., New York, N. Y. Filed Sept. 22, 1906.

'NAPULCO'

Particular description of goods.—Straw Fiber or Cellulose Extracted from Straw.

Ser. No. 22,467. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) JOHN CHARLES FREMONT WOODWORTH, Silverbell, Ariz. Filed Oct. 3, 1906.



Yucca Kream

Particular description of goods.—Ointments for Protection Against Insects.

Ser. No. 25,430. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) SEARS AND DICKERSON, Washington, D. C. Filed Feb. 19, 1907.



Particular description of goods.—Sauces.

Ser. No. 26,196. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) ELIODORO GONZÁLEZ P, Caracas, Venezuela. Filed Mar. 25, 1907.



Particular description of goods.—An Alcoholic Beverage Containing Milk, Eggs, Brandy, and Sugar.

Ser. No. 26,482. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) NATIONAL COAL TAR COMPANY, Wilmington, Del., and Boston, Mass. Filed Apr. 5, 1907. Used ten years.

CREOSOTINE

Particular description of goods.—Paints, Stains, and Preservatives for Wood.

Ser. No. 27,116. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) FILTER- & BRAUTECHNISCHE MASCHINEN-FABRIK ACTIEN-GESELLSCHAFT, VORM. L. E. ENZINGER, Berlin, Germany. Filed May 4, 1907.



Particular description of goods.—Bottle Cleaning and Soaking Machines, Barrel and Bottle Filling Machines, Bottle Corking and Closing Machines.

Ser. No. 27,168. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) PETER C. LARKIN, Toronto, Canada. Filed May 6, 1907.

'SALADA'

Particular description of goods.—Coffee.

Ser. No. 27,358. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) H. A. METZ & Co., New York, N. Y. Filed May 14, 1907.

SOLIDOGEN

Particular description of goods.—A Chemical Used to Treat Dyed Goods in Order to Produce More Fast and Stable Results.

Ser. No. 27,383. (CLASS 24. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) ANTON MEBUSEN, SPEZIALHAUS FÜR SPIRITUSGLÜHLICHTUNG, Berlin, Germany. Filed May 15, 1907.

SAEKULAR

Particular description of goods.—Liquid-Burning Lamps, Stoves, Ranges, and Ovens and Parts Thereof for Heating, Lighting, and Cooking Purposes, the Said Parts Including Vaporizers, Burners, Burner-Tops, Burner-Galleries, Lamp-Wicks, Metal Lamp-Shades.

Ser. No. 27,639. (CLASS 14. METALS, UNWROUGHT AND PARTLY WROUGHT.) CAMMELL LAIRD & Co. LIMITED, Sheffield, England. Filed May 25, 1907.

COLPIK

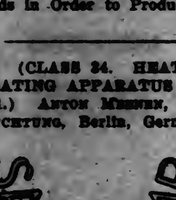
Particular description of goods.—Tool-Steel and Steel in Bar, Rod, Sheet, and other Forms, but Not Including Steel for Coal-Picks.

Ser. No. 27,966. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) NICHOLAS GLEN WILLIAMS, Williams, N. C. Filed June 7, 1907.

OLD NICK

Particular description of goods.—Whisky.

Ser. No. 28,015. (CLASS 23. HAND-TOOLS NOT OTHERWISE CLASSIFIED.) SIMMONS HARDWARE COMPANY, St. Louis, Mo. Filed June 10, 1907.



Particular description of goods.—Screw-Driver Bits, Bit-Braces, Carpenters' Pinch or Wrecking Bars, Screw-Drivers, Post-Hole Diggers, Hammers, Hoes, Hay-Forks, Header-Forks, Manure-Forks, Garden-Forks, Potato-Hooks, Manure-Hooks, Metal-Handling Ladles, Picks, Pick-Eyes, Non-Cutting Carpenters' and Blacksmiths' Pincers, Hand-Rakes, Sledges, Shovels, Rivet-Sets, Nail-Sets, Saw-Sets, Saw-Clamps, Saw-Frames, Implements for the Laying and Finishing of Granitoid, Cement, and Mortar, Garden-Trowels, Coal-Wedges, Wood-Choppers' Wedges, Nail-Pullers, and Wood-Choppers' Mauls.

Ser. No. 28,838. (CLASS 51. MALT PREPARATIONS NOT OTHERWISE CLASSIFIED.) THE MATHIS BREWING COMPANY, Los Angeles, Cal. Filed July 17, 1907.



Particular description of goods.—Beer.

Ser. No. 29,012. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) AUSTIN BISCUIT COMPANY, Chelsea, Mass. Filed July 24, 1907.



Particular description of goods.—Bread, Crackers, and Cake.

Ser. No. 29,155. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) VENUS MANUFACTURING CO., New York, N. Y. Filed Aug. 1, 1907.

YUKON

Particular description of goods.—Garment-Supporters.

Ser. No. 29,260. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) WILLIAM SOUTHWORTH, Paris, France. Filed Aug. 6, 1907.

OSOMA

Particular description of goods.—A Liquid Tonic for the Blood.

Ser. No. 29,302. (CLASS 72. MERCHANDISE NOT OTHERWISE CLASSIFIED.) M. GOTTESMAN & SON, New York, N. Y. Filed Aug. 8, 1907.

G

Particular description of goods.—Paper-Makers' Supplies, Comprising Waste Paper, New and Old Cotton Rags, Jute Waste, Flax Waste, Hemp Waste, Old Rope, Jute Bagging, Gunny Bagging, and Wood-Pulp, These Being Raw Material Used for Paper-Making.

Ser. No. 29,593. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE SHEFFIELD CHEMICAL CO., Sheffield, Iowa. Filed Aug. 26, 1907.

ELK'S HORN

Particular description of goods.—A Remedy for Chilblains.

Ser. No. 29,595. (CLASS 32. FURNITURE AND UPHOLSTERY NOT OTHERWISE CLASSIFIED.) THE J. C. HIRSCHMAN COMPANY, Indianapolis, Ind. Filed Aug. 26, 1907.

Hirschman Guaranty

Particular description of goods.—Cotton, Cotton Felt, Hair, Box-Spring, and Upholstered Box-Spring Mattresses, Feather, Down, and Floss Pillows, and Upholstered Lounges and Davenports.

Ser. No. 29,639. (CLASS 64. MEDICAL AND SURGICAL APPARATUS, APPLIANCES, AND INSTRUMENTS.) HEINRICH A. KAYSAN, Cassel, Germany. Filed Aug. 28, 1907.

Lady's Doctor

Particular description of goods.—Syringes and Surgical Irrigators.

Ser. No. 29,728. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) GEORGE A. SCHMIDT COMPANY, Chicago, Ill. Filed Sept. 3, 1907.

IT

Particular description of goods.—Creams and Cosmetic Preparations to be Applied to the Skin, Skin Powders and Lotions, and Perfumes.

Ser. No. 29,771. (CLASS 15. OILS AND GREASES NOT INCLUDED IN CLASSES 6, 16, AND 50.) JAMES H. BLEASDALE, Cleveland, Ohio. Filed Sept. 6, 1907.



Particular description of goods.—Lubricating Oils and Greases.

Ser. No. 29,784. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) LUCIAN LLOYD, East Lynn, W. Va. Filed Sept. 6, 1907.



Particular description of goods.—A Remedy for Headache, Coughs, Colds, Hoarseness, Croup, and Diarrhea.

Ser. No. 29,795. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) HUGO BECKER, London, England. Filed Sept. 7, 1907.



Particular description of goods.—Starch for Laundry Purposes and Blue for Laundry Purposes.

Ser. No. 29,956. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) AMERICAN MANUFACTURING COMPANY, Fort Worth, Tex. Filed Sept. 13, 1907.



Particular description of goods.—Overalls, Jumpers, Trousers, and Dress-Shirts.

Ser. No. 30,081. (CLASS 24. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) THE READING STOVE WORKS, OBE PAINTER & Co., Reading, Pa. Filed Sept. 19, 1907.

SS

Particular description of goods.—Stoves and Stove Parts.

Ser. No. 30,163. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) THE JACOB J. VOLLRATH MFG. CO., Sheboygan, Wis. Filed Sept. 23, 1907.



Particular description of goods.—Enameled Cast and Sheet Steel Hollow Ware.

Ser. No. 30,224. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) HENRY ERRIC, New York, N. Y. Filed Sept. 26, 1907.



Particular description of goods.—Disinfectants.

Ser. No. 30,357. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) J. A. FOLGER & COMPANY, San Francisco, Cal. Filed Oct. 2, 1907.



The background being red and the poppies yellow.
Particular description of goods.—Coffee.

Ser. No. 30,539. (CLASS 61. JEWELRY AND SOLID AND PLATED PRECIOUS-METAL WARE.) CLARENCE LINZ COMPANY, Dallas, Tex. Filed Oct. 10, 1907.



Particular description of goods.—Jewelry for Personal Wear, and Flat Ware, Hollow Ware, and Tableware Made of Precious Metal.

Ser. No. No. 30,582. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE CLEVELAND VARNISH COMPANY, Cleveland, Ohio. Filed Oct. 14, 1907.



Particular description of goods.—Varnishes, Japans, Varnish-Oils, Lacquers, Enamels, and Paints.

Ser. No. 30,598. (CLASS 72. MERCHANDISE NOT OTHERWISE CLASSIFIED.) ALBERT SIMONSON, New York, N. Y. Filed Oct. 14, 1907.

Norma

Particular description of goods.—Goods Made from Human Hair and Substitutes Therefor, Commercially Known as Hair Goods and Comprising Wigs, Toupees, Pompadours, Parted Pieces, Front Pieces, Bangs, Knots, Coils, Braids, Switches, Puffs, and Pin-Curls.

Ser. No. 30,615. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE CLAFLIN CHEMICAL CO. LIMITED, Windsor, Ontario, Canada. Filed Oct. 15, 1907.

Ba-Ju

Particular description of goods.—Medicine for the Kidneys and Urinary Organs.

Ser. No. 30,650. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) THE REPUBLIC METALWARE CO., Buffalo, N. Y. Filed Oct. 18, 1907.

SAVORY

Particular description of goods.—Metal Roasters.

Ser. No. 30,749. (CLASS 12. MASONRY MATERIALS.) H. W. JOHNS-MANVILLE CO., New York, N. Y. Filed Oct. 28, 1907.

J-M

Particular description of goods.—Felt, Paper, and Asbestos Roofings and Pipe-Covering.

Ser. No. 30,771. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) UNITED DRUG COMPANY, Boston, Mass. Filed Oct. 24, 1907.

Harmony

Particular description of goods.—Perfumery Extracts, Toilet Waters, Cologne, Sachet Powders, Face, Complexion, Rice, and Talcum Powders, Rouge, Cold-Cream, and Skin Food.

Ser. No. 30,783. (CLASS 57. DENTAL MACHINES, APPARATUS, AND SUPPLIES.) MARY J. DOHERTY, New York, N. Y., executrix of the estate of Eugene Doherty, deceased. Filed Oct. 25, 1907.



Particular description of goods.—Dental Rubber.

Ser No. 30,795. (CLASS 59. HOROLOGICAL INSTRUMENTS.) THE ASHCROFT MANUFACTURING COMPANY, Bridgeport, Conn. Filed Oct. 26, 1907.



Particular description of goods.—Clocks.

Ser. No. 30,797. (CLASS 17. WOOD MANUFACTURES NOT OTHERWISE CLASSIFIED.) THE ASHCROFT MANUFACTURING COMPANY, Bridgeport, Conn. Filed Oct. 26, 1907.



Particular description of goods.—Wooden Gage Boards and Frames.

Ser No. 30,806. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) H. C. COHN & CO., Rochester, N. Y. Filed Oct. 26, 1907.

SUPERBA

Particular description of goods.—Neckties.

Ser. No. 30,842. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) NITROX CHEMICAL COMPANY, St. Louis, Mo. Filed Oct. 28, 1907.

NITROX

Particular description of goods.—A Nitro-Oxidising Agent for Use in the Treatment of Human and Veterinary Ailments.

Ser. No. 30,852. (CLASS 52. PACKING-HOUSE PRODUCTS.) SHERMAN COTTON OIL PROVISION CO., Sherman, Tex. Filed Oct. 29, 1907.

DIXIE

Particular description of goods.—Lard Substitutes.

Ser. No. 30,853. (CLASS 52. PACKING-HOUSE PRODUCTS.) SHERMAN COTTON OIL PROVISION CO., Sherman, Tex. Filed Oct. 29, 1907.

JACK FROST

Particular description of goods.—Lard Substitutes.

Ser. No. 30,854. (CLASS 52. PACKING-HOUSE PRODUCTS.) SHERMAN COTTON OIL PROVISION CO., Sherman, Tex. Filed Oct. 29, 1907.

BLUE JAY

Particular description of goods.—Lard Substitutes.

Ser No. 30,878. (CLASS 48. DAIRY PRODUCTS.) HERBERT HENRY BROWN, Philadelphia, Pa. Filed Oct. 30, 1907.



Particular description of goods.—Butter.

Ser. No. 30,878. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) DE WITT GROCERY CO., Brattleboro, Vt. Filed Oct. 30, 1907.



Particular description of goods.—Mince-Meat, Canned Fruits, and Canned Vegetables.

Ser. No. 30,879. (CLASS 26. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) HERBERT H. ROOSA, Lincoln, Nebr. Filed Oct. 30, 1907.



Particular description of goods.—Leather Boots, Shoes, and Slippers.

Ser. No. 30,880. (CLASS 27. RAILWAY EQUIPMENT NOT OTHERWISE CLASSIFIED, AND RAILWAY ROLLING-STOCK.) W. R. SYKES INTERLOCKING SIGNAL COMPANY, LIMITED, Clapham, London, England. Filed Oct. 30, 1907.

SYX

Particular description of goods.—Railway Signal Apparatus and Mechanism for Operating Railway-Switches.

Ser. No. 30,893. (CLASS 54. SEA FOODS.) DODGE & STARKEL, Chicago, Ill. Filed Nov. 4, 1907.

THOR

Particular description of goods.—Smoked Sardines Packed in Oil.

Ser. No. 30,998. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) LEVI S. COUPLIN, Guthrie, Okla. Filed Nov. 4, 1907.



Particular description of goods.—Corn and Bunion Remedy.

Ser. No. 31,000. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) LEA & PERRINS, Worcester, England. Filed Nov. 4, 1907.



Particular description of goods.—A Sauce.

Ser. No. 31,005. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) INDEPENDENT BAKING POWDER CO., Jersey City, N. J. Filed Nov. 4, 1907.

MAGIC

Particular description of goods.—Baking-Powder.

Ser. No. 31,028. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) JOHN MARTIN TOBIN, New York, N. Y. Filed Nov. 6, 1907.

ST. AUBYN

Particular description of goods.—Toilet Cream.

Ser. No. 31,030. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) R & G CORSET COMPANY, New York, N. Y. Filed Nov. 6, 1907. Used ten years.

R&G

Particular description of goods.—Corsets.

Ser. No. 31,053. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) HOMER BRASS WORKS INCORPORATED, Philadelphia, Pa. Filed Nov. 7, 1907.

HB

Particular description of goods.—Cocks, Valves, Faucets, and Strainers.

Ser. No. 31,058. (CLASS 58. GAMES AND TOYS, AND SPORTING GOODS NOT OTHERWISE CLASSIFIED.) F. D. KEES MFG. CO., Beatrice, Nebr. Filed Nov. 7, 1907.

Flexo

Particular description of goods.—Ankle-Bracing Skate Attachments.

Ser. No. 31,104. (CLASS 41. KNITTED, NETTED, AND LACE GOODS.) ROXFORD KNITTING COMPANY, Philadelphia, Pa. Filed Nov. 9, 1907.



Particular description of goods.—Men's Knitted Underwear.

Ser. No. 31,128. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) BRIDGE & BEACH MANUFACTURING COMPANY, St. Louis, Mo. Filed Nov. 11, 1907.

MOHAWK

Particular description of goods.—Stoves and Ranges.

Ser. No. 31,135. (CLASS 54. SEA FOODS.) AKTIEBOLAGET SVERIGES FÖRENADE KONSERVFABRIKER, Gothenburg, Sweden. Filed Nov. 12, 1907.



Particular description of goods.—Preserved Fish.

Ser. No. 31,137. (CLASS 54. SEA FOODS.) AKTIEBOLAGET SVERIGES FÖRENADE KONSERVFABRIKER, Gothenburg, Sweden. Filed Nov. 12, 1907.



Particular description of goods.—Anchovies.

Ser. No. 31,150. (CLASS 68. PUBLICATIONS.) FRANCES TREGO MONTGOMERY, Chicago, Ill. Filed Nov. 13, 1907. Used ten years.



Particular description of goods.—Juvenile Books.

Ser. No. 31,163. (CLASS 28. HAND-TOOLS NOT OTHERWISE CLASSIFIED.) WITHINGTON & COOLEY MANUFACTURING COMPANY, Jackson, Mich. Filed Nov. 14, 1907. Used ten years.

ACME

Particular description of goods.—Agricultural and Similar Forks and Hoes.

Ser. No. 31,166. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED. JOHN A. THROCKMORTON, Sidney, Ohio. Filed Nov. 14, 1907.



Particular description of goods.—Seat-Pads Designed to Protect the Body and Limbs from Cold.

Ser. No. 31,211. (CLASS 14. METALS, UNWROUGHT AND PARTLY WROUGHT.) HENRI L. CONDÉ, Oswego, N. Y. Filed Nov. 16, 1907.

[redacted]

Particular description of goods.—Soldering Metal.

Ser. No. 31,214. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE MORRIS PHARMACAL COMPANY OF NEW YORK, New York, N. Y. Filed Nov. 16, 1907.

VIN-FERROTOL
(MORRIS')

Particular description of goods.—A Liquid Medicinal Preparation Used in the Treatment of Nervous Diseases and as a Tonic and Food.

Ser. No. 31,242. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) MARY GARDNER, St. Louis, Mo., executrix of the estate of Charles J. Moffett. Filed Nov. 18, 1907.

TEETHINA

Particular description of goods.—Teething-Powders.

Ser. No. 31,244. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) IOWA BISCUIT CO., Burlington, Iowa. Filed Nov. 18, 1907.

WILD ROSE

Particular description of goods.—Biscuits, Crackers, Cakes, and Bread.

Ser. No. 31,252. (CLASS 71. TOBACCO PRODUCTS.) ANDREA REY, Tampa, Fla. Filed Nov. 19, 1907.

COCA COLA

Particular description of goods.—Cigars.

Ser. No. 31,258. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) SHERMAN M. TURRILL, Cincinnati, Ohio. Filed Nov. 18, 1907.



Particular description of goods.—Hair-Remover.

Ser. No. 31,273. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) CHARLES J. BIEHLE, St. Louis, Mo. Filed Nov. 21, 1907. Used ten years.



Particular description of goods.—Rye-Bread.

Ser. No. 31,274. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) HOOD RUBBER CO., Boston, Mass. Filed Nov. 21, 1907.



Particular description of goods.—Rubber Boots and Shoes, and Rubber Overshoes, and Rubber Tires for Vehicles.

Ser. No. 31,306. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) BROCKTON CO-OPERATIVE BOOT & SHOE CO., Brockton, Mass. Filed Nov. 22, 1907.

Co-operative

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 31,328. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) METROPOLITAN PAINT & VARNISH CO., Philadelphia, Pa. Filed Nov. 23, 1907.

METROPOLITAN

Particular description of goods.—Paints, Stains, Primers, Fillers, Dry Colors, Enamels, Fresco Colors, White Zinc, White Lead, Varnishes, and Japans.

Ser. No. 31,331. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) UNITED INCUBATOR AND POULTRY SUPPLY MANUFACTURING COMPANY, New York, N. Y., and Boundbrook, N. J. Filed Nov. 25, 1907.



Particular description of goods.—Egg Food and Tonic and Molting-Powder for Fowls and Birds.

Ser. No. 31,333. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) UNITED INCUBATOR AND POULTRY SUPPLY MANUFACTURING COMPANY, New York, N. Y., and Boundbrook, N. J. Filed Nov. 25, 1907.

BANNER

Particular description of goods.—Insecticides and Disinfectants.

Ser. No. 31,334. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) UNITED INCUBATOR AND POULTRY SUPPLY MANUFACTURING COMPANY, New York, N. Y., and Boundbrook, N. J. Filed Nov. 25, 1907.



Particular description of goods.—Insecticides and Disinfectants.

Ser. No. 31,340. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) BEASLEY HARWOOD SHOE CO. INC., Lynchburg, Va. Filed Nov. 25, 1907.

Samoset

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 31,341. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) BEASLEY HARWOOD SHOE CO. INC., Lynchburg, Va. Filed No. 25, 1907.

Newport Boy

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 31,342. (CLASS 17. WOOD MANUFACTURES NOT OTHERWISE CLASSIFIED.) WILLIAM HEAP & SONS, Grand Haven, Mich. Filed Nov. 25, 1907.

BULLDOG

Particular description of goods.—Wooden Water-Closet Seats and Tanks.

Ser. No. 31,343. (CLASS 17. WOOD MANUFACTURES NOT OTHERWISE CLASSIFIED.) WILLIAM HEAP & SONS, Grand Haven, Mich. Filed Nov. 25, 1907.



Particular description of goods.—Wooden Water-Closet Seats and Tanks.

Ser. No. 31,348. (CLASS 8. DETERGENTS.) MAX FRIGL, Prague, Austria-Hungary. Filed Nov. 25, 1907.

MANOL

Particular description of goods.—Soaps.

Ser. No. 31,368. (CLASS 8. DETERGENTS.) G. F. SUTTON SONS & CO., London, England. Filed Nov. 26, 1907.



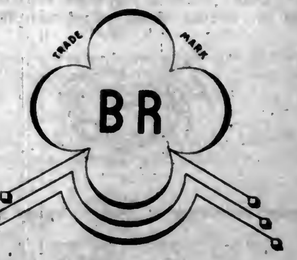
Particular description of goods.—Preparations of Ammonia for Use as a Detergent.

Ser. No. 31,376. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) HOME REMEDY COMPANY, Fredonia, N. Y. Filed Nov. 26, 1907.

GESTOM

Particular description of goods.—Medical Preparations for Dyspepsia, Anemia, Liver Troubles, Gaseous Eructation, and General Debilitated Conditions of the Digestive Organs.

Ser. No. 31,400. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) BERNHARD ROCHOW, New York, N. Y. Filed Nov. 27, 1907.



Particular description of goods.—Skin-Tonics.

Ser. No. 31,422. (CLASS 54. SEA FOODS.) KELLEY-CLARKE CO., Seattle, Wash. Filed Nov. 29, 1907.

MANDARIN

Particular description of goods.—Canned Salmon.

Ser. No. 31,423. (CLASS 54. SEA FOODS.) KELLEY-CLARKE CO., Seattle, Wash. Filed Nov. 29, 1907.



Particular description of goods.—Canned Salmon.

Ser. No. 31,424. (CLASS 54. SEA FOODS.) KELLEY-CLARKE CO., Seattle, Wash. Filed Nov. 29, 1907.



Particular description of goods.—Canned Salmon.

Ser. No. 31,425. (CLASS 54. SEA FOODS.) KELLEY-CLARKE CO., Seattle, Wash. Filed Nov. 29, 1907.



Particular description of goods.—Canned Salmon.

Ser. No. 31,426. (CLASS 54. SEA FOODS.) KELLEY-CLARKE CO., Seattle, Wash. Filed Nov. 29, 1907.



Particular description of goods.—Canned Salmon.

Ser. No. 31,427. (CLASS 54. SEA FOODS.) KELLEY-CLARKE CO., Seattle, Wash. Filed Nov. 29, 1907.



Particular description of goods.—Canned Salmon.

Ser. No. 31,434. (CLASS 54. SEA FOODS.) KELLEY-CLARKE CO., Seattle, Wash. Filed Nov. 29, 1907.



Particular description of goods.—Canned Salmon.

Ser. No. 31,435. (CLASS 54. SEA FOODS.) KELLEY-CLARKE CO., Seattle, Wash. Filed Nov. 29, 1907.



Particular description of goods.—Canned Salmon.

Ser. No. 31,436. (CLASS 54. SEA FOODS.) KELLEY-CLARKE CO., Seattle, Wash. Filed Nov. 29, 1907.



Particular description of goods.—Canned Salmon.

Ser. No. 31,437. (CLASS 54. SEA FOODS.) KELLEY-CLARKE CO., Seattle, Wash. Filed Nov. 29, 1907.



Particular description of goods.—Canned Salmon.

Ser. No. 31,450. (CLASS 54. SEA FOODS.) COLUMBIA CANNING COMPANY, Seattle, Wash. Filed Nov. 29, 1907.



Particular description of goods.—Canned Salmon.

Ser. No. 31,466. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Nov. 30, 1907.



Particular description of goods.—Fertilizers.

Ser. No. 31,469. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Nov. 30, 1907.

STONEWALL

Particular description of goods.—Fertilizers.

Ser. No. 31,470. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Nov. 30, 1907. Used ten years.

Mc GAVOCK

Particular description of goods.—Fertilizers.

Ser. No. 31,471. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Nov. 30, 1907. Used ten years.

DURHAM

Particular description of goods.—Fertilizers.

Ser. No. 31,472. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Nov. 30, 1907. Used ten years.

SOUTHERN FERTILIZER CO'S
COTTON BOLL
GUANO

Particular description of goods.—Fertilizers.

Ser. No. 31,473. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Nov. 30, 1907. Used ten years.

BALDWIN FERTILIZER CO'S
GEORGIA FARMERS
STANDARD.

Particular description of goods.—Fertilizers.

Ser. No. 31,495. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) GEORGE F. SMITH, Woodsboro, Md. Filed Dec. 2, 1907.

ROSE (R) BUD

Particular description of goods.—A Salve.

Ser. No. 31,503. (CLASS 14. METALS, UNWROUGHT AND PARTLY WROUGHT.) HOMER BRASS WORKS, INCORPORATED, Philadelphia, Pa. Filed Dec. 2, 1907.



Particular description of goods.—Rough Castings of Metal Compositions, Brass Castings, Antifriction Metals, Babbitt Metal, and Journal-Bearing Metals.

Ser. No. 31,568. (CLASS 71. TOBACCO PRODUCTS.) MATHEW STANICEK, Chicago, Ill. Filed Dec. 4, 1907.



Particular description of goods.—Cigars.

Ser. No. 31,591. (CLASS 8. DETERGENTS.) ROBINSON BROS. & COMPANY INCORPORATED, Malden, Mass. Filed Dec. 5, 1907.

PINEOL

Particular description of goods.—Medicinal and Toilet Soap.

TRADE-MARKS

REGISTERED JANUARY 7, 1908.

66,892. REMEDIES FOR FEMALE USE. THE BRADFIELD REGULATOR CO., Atlanta, Ga.
Filed September 12, 1907. Serial No. 29,901. PUBLISHED NOVEMBER 5, 1907.

66,893. REMEDIES FOR FEMALE USE. THE BRADFIELD REGULATOR CO., Atlanta, Ga.
Filed September 12, 1907. Serial No. 29,902. PUBLISHED NOVEMBER 5, 1907.

66,894. REMEDIES FOR FEMALE USE. THE BRADFIELD REGULATOR CO., Atlanta, Ga.
Filed September 12, 1907. Serial No. 29,903. PUBLISHED NOVEMBER 5, 1907.

66,895. REMEDIES FOR FEMALE USE. THE BRADFIELD REGULATOR CO., Atlanta, Ga.
Filed September 12, 1907. Serial No. 29,904. PUBLISHED NOVEMBER 5, 1907.

66,896. REMEDIES FOR FEMALE USE. THE BRADFIELD REGULATOR CO., Atlanta, Ga.
Filed September 12, 1907. Serial No. 29,905. PUBLISHED NOVEMBER 5, 1907.

66,897. REMEDIES FOR FEMALE USE. THE BRADFIELD REGULATOR CO., Atlanta, Ga.
Filed September 12, 1907. Serial No. 29,906. PUBLISHED NOVEMBER 5, 1907.

66,898. REMEDIES FOR FEMALE USE. THE BRADFIELD REGULATOR CO., Atlanta, Ga.
Filed September 12, 1907. Serial No. 29,908. PUBLISHED NOVEMBER 5, 1907.

66,899. REMEDIES FOR FEMALE USE. THE BRADFIELD REGULATOR CO., Atlanta, Ga.
Filed September 12, 1907. Serial No. 29,909. PUBLISHED NOVEMBER 5, 1907.

66,900. REMEDIES FOR FEMALE USE. THE BRADFIELD REGULATOR CO., Atlanta, Ga.
Filed September 12, 1907. Serial No. 29,910. PUBLISHED NOVEMBER 5, 1907.

66,901. VETERINARY MEDICINE. JOSEPH A. COTTEN, Kansas City, Mo.
Filed August 19, 1907. Serial No. 29,471. PUBLISHED NOVEMBER 5, 1907.

66,902. OINTMENT. THE DERMATONE COMPANY, Chicago, Ill.
Filed September 20, 1907. Serial No. 30,305. PUBLISHED NOVEMBER 5, 1907.

66,903. ANTIPYRETIC AND ANALGESIC MEDICAL PREPARATION. ETNA CHEMICAL COMPANY, New York, N. Y.
Filed August 3, 1906. Serial No. 11,225. PUBLISHED NOVEMBER 5, 1907.

66,904. CONDITION-POWDER FOR HORSES, CATTLE, SHEEP, AND SWINE. G. C. HANFORD MANUFACTURING CO., Syracuse, N. Y.
Filed September 26, 1907. Serial No. 30,271. PUBLISHED NOVEMBER 5, 1907.

66,905. TABLETS FOR DISEASES OF THE BLOOD AND THE NERVOUS SYSTEM. DR. HUNTER CHEMICAL COMPANY, New York, N. Y.
Filed August 3, 1907. Serial No. 29,196. PUBLISHED NOVEMBER 5, 1907.

66,906. TONIC MEDICINE. BERNARD MILLER, Chicago, Ill.
Filed August 7, 1907. Serial No. 29,273. PUBLISHED NOVEMBER 5, 1907.

66,907. RHEUMATIC REMEDY. MORRIS CHEMICAL CO. Dallas, Tex.
Filed September 11, 1907. Serial No. 29,871. PUBLISHED NOVEMBER 5, 1907.

66,908. CERTAIN MEDICINE. CHRISTIAN T. NELSEN, Chicago, Ill.
Filed September 3, 1907. Serial No. 29,719. PUBLISHED NOVEMBER 5, 1907.

66,909. STOMACH-BITTERS. HERMAN OBERNAUER, Pittsburg, Pa.
Filed October 2, 1907. Serial No. 30,355. PUBLISHED NOVEMBER 5, 1907.

66,910. PHARMACEUTICAL PREPARATION FOR THE SKIN. THE VI-DERMIS CO., Dayton, Ohio.
Filed September 7, 1907. Serial No. 29,790. PUBLISHED NOVEMBER 5, 1907.

66,911 SALVES. WEIL CHEMICAL MFG. CO., Pine Bluff, Ark.
Filed September 3, 1907. Serial No. 29,734. PUBLISHED NOVEMBER 5, 1907.

66,912. ROLLED OATS AND WHEAT-FLOUR. ALLEN BROTHERS COMPANY, Omaha, Nebr.
Filed March 25, 1907. Serial No. 26,203. PUBLISHED NOVEMBER 5, 1907.

66,913. PANCAKE-FLOUR. ALLEN BROTHERS COMPANY, Omaha, Nebr.
Filed March 25, 1907. Serial No. 26,204. PUBLISHED NOVEMBER 5, 1907.

66,914. CERTAIN FOODS. ALLEN BROTHERS COMPANY, Omaha, Nebr.
Filed March 25, 1907. Serial No. 26,212. PUBLISHED NOVEMBER 5, 1907.

66,915. ROLLED OATS. ATCHISON OAT MEAL AND CEREAL CO., Atchison, Kans.
Filed July 20, 1907. Serial No. 29,118. PUBLISHED NOVEMBER 5, 1907.

66,916. CHEWING-GUM. BALTIMORE CHEWING GUM CO., Baltimore, Md.
Filed September 3, 1907. Serial No. 29,733. PUBLISHED NOVEMBER 5, 1907.

66,917. PORTLAND OR HYDRAULIC CEMENT. CHARLES ZUNZ, LIMITED, Brussels, Belgium.
Filed July 22, 1905. Serial No. 10,715. PUBLISHED NOVEMBER 5, 1907.

66,918. WHEAT-FLOUR. COLUMBIA MILL & ELEVATOR COMPANY, Columbia, Tenn.
Filed April 17, 1907. Serial No. 26,764. PUBLISHED MAY 14, 1907.

66,919. CERTAIN METAL MANUFACTURES. JOHN DEWSBURY & SON, Walsall, England.
Filed July 30, 1907. Serial No. 29,115. PUBLISHED NOVEMBER 5, 1907.

66,920. PEANUT-CANDY DREYFUS BROS., Montgomery, Ala.
Filed September 16, 1907. Serial No. 29,996. PUBLISHED NOVEMBER 5, 1907.

66,921. CANNED, DRIED, AND PRESERVED FRUITS AND CANNED VEGETABLES. FRESNO HOME PACKING COMPANY, Fresno, Cal.
Filed August 1, 1907. Serial No. 29,157. PUBLISHED NOVEMBER 5, 1907

66,922. CANNED, DRIED, AND PRESERVED FRUITS AND CANNED VEGETABLES. FRESNO HOME PACKING COMPANY, Fresno, Cal.
Filed August 1, 1907. Serial No. 29,185. PUBLISHED NOVEMBER 5 1907.

66,923. CANNED, DRIED, AND PRESERVED FRUITS AND CANNED VEGETABLES. FRESNO HOME PACKING COMPANY, Fresno, Cal.
Filed August 1, 1907. Serial No. 29,186. PUBLISHED NOVEMBER 5, 1907.

66,924. CANNED, DRIED, AND PRESERVED FRUITS AND CANNED VEGETABLES. FRESNO HOME PACKING COMPANY, Fresno, Cal.
Filed August 1, 1907. Serial No. 29,189. PUBLISHED NOVEMBER 5, 1907.

66,925. ROASTED COFFEE. DANIEL H. HOFFMAN, New Orleans, La.
Filed April 9, 1907. Serial No. 26,579. PUBLISHED NOVEMBER 5, 1907.

66,926. ROASTED AND GROUND COFFEE. DANIEL H. HOFFMAN, New Orleans, La.
Filed April 9, 1907. Serial No. 26,582. PUBLISHED NOVEMBER 5, 1907.

66,927. TELEGRAPHIC APPARATUS AND ELECTRIC BATTERIES. J. H. BUNNELL & Co., New York, N. Y.
Filed August 28, 1907. Serial No. 29,646. PUBLISHED OCTOBER 29, 1907.

66,928. FRESH CURED, COOKED, CANNED, AND SALTED MEATS, LARD, AND SAUSAGE. KINGAN AND COMPANY, LIMITED, Belfast, Ireland; Indianapolis, Ind.; Baltimore, Md., and Richmond, Va.
Filed June 27, 1907. Serial No. 28,421. PUBLISHED OCTOBER 8, 1907.

66,929. FLOUR MADE FROM WHEAT. MINOT FLOUR MILL CO., Minot, N. D.
Filed September 28, 1907. Serial No. 30,262. PUBLISHED NOVEMBER 5, 1907.

66,930. CHEWING-GUMS. NATIONAL CANDY COMPANY, Jersey City, N. J., and St. Louis, Mo.
Filed September 21, 1907. Serial No. 30,126. PUBLISHED NOVEMBER 5, 1907.

66,931. CERTAIN FOODS. REISS & BRADY, New York, N. Y.
Filed December 8, 1906. Serial No. 28,572. PUBLISHED OCTOBER 29, 1907.

66,932. LIME AND READY-MIXED MORTAR. ROCKLAND-ROCKPORT LIME CO., Rockland, Me.
Filed May 21, 1907. Serial No. 27,806. PUBLISHED NOVEMBER 5, 1907.

66,933. BRAIDED SASH-CORD. SAMSON CORDAGE WORKS, Boston, Mass.
Filed July 29, 1906. Serial No. 10,808. PUBLISHED FEBRUARY 6, 1906.

66,934. MACARONI AND VERMICELLI. V. SAVARESE & BROS., Brooklyn, N. Y.
Filed February 15, 1907. Serial No. 26,326. PUBLISHED NOVEMBER 5, 1907.

66,935. HONEY. WM. A. SELSER, Jenkintown, Pa.
Filed September 5, 1907. Serial No. 29,728. PUBLISHED NOVEMBER 5, 1907.

66,936. CERTAIN SEA FOODS. EDWIN SEWELL, Boston, Mass., assignor to Delong Seaman & Company, Boston, Mass., a Firm.
Filed September 27, 1907. Serial No. 30,220. PUBLISHED NOVEMBER 5, 1907.

66,937. SHEET-METAL CHAINS. THE SMITH & EGGE MFG. CO., Bridgeport, Conn.
Filed September 12, 1907. Serial No. 29,934. PUBLISHED NOVEMBER 5, 1907.

66,938. CANDY. UNITED DRUG COMPANY, Jersey City, N. J.
Filed January 29, 1907. Serial No. 24,979. PUBLISHED NOVEMBER 5, 1907.

66,939. CANDY. UNITED DRUG COMPANY, Jersey City, N. J.
Filed January 29, 1907. Serial No. 24,980. PUBLISHED NOVEMBER 5, 1907.

66,940. SILVER-LEAD OR PLUMBAGO FOUNDRY-FACINGS AND PULVERIZED GRAPHITE. THE UNITED STATES GRAPHITE COMPANY, Saginaw, Mich.
Filed September 30, 1907. Serial No. 30,294. PUBLISHED NOVEMBER 5 1907.

66,941. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond, and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed September 28, 1907. Serial No. 30,273. PUBLISHED NOVEMBER 5, 1907.

66,942. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed September 28, 1907. Serial No. 30,279. PUBLISHED NOVEMBER 5, 1907.

66,943. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed September 28, 1907. Serial No. 30,280. PUBLISHED NOVEMBER 5 1907.

66,944. STEAM-CONDENSERS. ALBERGER CONDENSER COMPANY, New York, N. Y.
Filed September 17, 1907. Serial No. 30,026. PUBLISHED NOVEMBER 5, 1907.

66,945. STEAM-CONDENSERS. ALBERGER CONDENSER COMPANY, New York, N. Y.
Filed September 17, 1907. Serial No. 30,027. PUBLISHED NOVEMBER 5, 1907.

66,946. CERTAIN CHEMICAL PREPARATIONS. BOERICKE & TAFEL, Philadelphia, Pa.
Filed September 10, 1907. Serial No. 29,845. PUBLISHED NOVEMBER 5, 1907.

66,947. ANTISEPTIC SILVER SALTS USED FOR GONORRHEA AND EYE DISEASES. CHEMISCHE FABRIK VON HEYDEN AKTIEN-GESELLSCHAFT, Radebeul, near Dresden, Germany.
Filed June 2, 1906. Serial No. 19,269. PUBLISHED NOVEMBER 5, 1907.

66,948. DRIED FRUITS AND CATSUP. DRAKE & COMPANY, Easton, Pa.
Filed June 10, 1907. Serial No. 27,007. PUBLISHED AUGUST 13, 1907.

66,949. CERTAIN CUTLERY AND EDGE-TOOLS. FREEMAN, DELAMATER & Co., Detroit, Mich.
Filed May 21, 1907. Serial No. 27,769. PUBLISHED NOVEMBER 5, 1907.

66,950. SHOTGUNS, RIFLES, AND REVOLVERS. HARRINGTON AND RICHARDSON ARMS COMPANY, Worcester, Mass.
Filed July 23, 1907. Serial No. 28,892. PUBLISHED NOVEMBER 5, 1907.

66,951. BRUSHES. HOLTON & ADAMS, New York, N. Y.
Filed September 26, 1907. Serial No. 30,210. PUBLISHED NOVEMBER 5, 1907.

66,952. DOMESTIC WASHING-MACHINES FOR LAUNDRY PURPOSES. RICHMOND CEDAR WORKS, Richmond, Va.
Filed September 24, 1907. Serial No. 30,185. PUBLISHED NOVEMBER 5, 1907.

66,953. RAZORS. SIMMONS HARDWARE COMPANY, St. Louis, Mo.
Filed September 12, 1907. Serial No. 30,045. PUBLISHED NOVEMBER 5, 1907.

66,954. WHISKY. STITZEL DISTILLING COMPANY, Louisville, Ky.
Filed September 3, 1907. Serial No. 29,720. PUBLISHED NOVEMBER 5, 1907.

66,955. ICE-CREAM FREEZERS. STUDEBAKER & BURR MFG. CO., Chicago, Ill.
Filed May 7, 1906. Serial No. 19,354. PUBLISHED NOVEMBER 5, 1907.

66,956. HAMMERS. WIEGAND & HILGER, LTD., New York, N. Y.
Filed August 28, 1907. Serial No. 29,644. PUBLISHED NOVEMBER 5, 1907.

66,957. OVERALLS. SOLOMON COHEN, New York, N. Y.
Filed August 31, 1907. Serial No. 29,705. PUBLISHED NOVEMBER 5, 1907.

66,958. LEATHER BOOTS AND SHOES. F. MAYER BOOT & SHOE CO., Milwaukee, Wis.
Filed September 14, 1907. Serial No. 29,967. PUBLISHED NOVEMBER 5, 1907.

66,959. RUBBER BOOTS AND SHOES. GOODYEAR'S METALLIC RUBBER SHOE CO., Naugatuck, Conn.
Filed September 16, 1907. Serial No. 30,025. PUBLISHED NOVEMBER 5, 1907.

66,960. SHELLED ALMONDS. HARICHT, BRAUN & Co., Chicago, Ill., and New York, N. Y.
Filed September 18, 1907. Serial No. 30,065. PUBLISHED NOVEMBER 5, 1907.

66,961. SHELLED ALMONDS. HARICHT, BRAUN & Co., Chicago, Ill., and New York, N. Y.
Filed September 18, 1907. Serial No. 30,067. PUBLISHED NOVEMBER 5, 1907.

66,962. SHELLED ALMONDS. HARICHT, BRAUN & Co., Chicago, Ill., and New York, N. Y.
Filed September 18, 1907. Serial No. 30,068. PUBLISHED NOVEMBER 5, 1907.

66,963. SHELLED ALMONDS. HARICHT, BRAUN & Co., Chicago, Ill., and New York, N. Y.
Filed September 18, 1907. Serial No. 30,069. PUBLISHED NOVEMBER 5, 1907.

66,964. SHELLED ALMONDS. HARICHT, BRAUN & Co., Chicago, Ill., and New York, N. Y.
Filed September 18, 1907. Serial No. 30,070. PUBLISHED NOVEMBER 5, 1907.

66,965. SHELLED ALMONDS. HARICHT, BRAUN & Co., Chicago, Ill., and New York, N. Y.
Filed September 18, 1907. Serial No. 30,071. PUBLISHED NOVEMBER 5, 1907.

66,966. RUBBER VEHICLE-TIRES AND RUBBER BOOTS AND SHOES. HOOD RUBBER CO., Boston, Mass.
Filed September 23, 1907. Serial No. 30,167. PUBLISHED NOVEMBER 5, 1907.

66,967. DRESS-SHIELDS AND HOSE-SUPPORTERS. THE KORA COMPANY, New York, N. Y.
Filed September 26, 1907. Serial No. 30,221. PUBLISHED NOVEMBER 5, 1907.

66,968. RUBBER BOOTS AND SHOES. L. CANDEE & Co., New Haven, Conn.
Filed September 16, 1907. Serial No. 30,007. PUBLISHED NOVEMBER 5, 1907.

66,969. RUBBER BOOTS AND SHOES. L. CANDEE & Co., New Haven, Conn.
Filed September 16, 1907. Serial No. 30,008. PUBLISHED NOVEMBER 5, 1907.

66,970. RUBBER BOOTS AND SHOES. L. CANDEE & Co., New Haven, Conn.
Filed September 16, 1907. Serial No. 30,009. PUBLISHED NOVEMBER 5, 1907.

66,971. HOSIERY. RICHMOND HOSIERY MILLS, Chattanooga, Tenn., and Rossville, Ga.
Filed September 6, 1907. Serial No. 29,780. PUBLISHED NOVEMBER 5, 1907.

66,972. BURLAPS. WHITRIDGE, WHITE & COMPANY, Baltimore, Md.
Filed May 4, 1907. Serial No. 27,128. PUBLISHED NOVEMBER 5, 1907.

66,973. RUBBER BOOTS AND SHOES. WOONSOCKET RUBBER COMPANY, Woonsocket, R. I.
Filed September 16, 1907. Serial No. 30,012. PUBLISHED NOVEMBER 5, 1907.

66,974. RUBBER BOOTS AND SHOES. WOONSOCKET RUBBER COMPANY, Woonsocket, R. I.
Filed September 16, 1907. Serial No. 30,013. PUBLISHED NOVEMBER 5, 1907.

66,975. RUBBER BOOTS AND SHOES. WOONSOCKET RUBBER COMPANY, Woonsocket, R. I.
Filed September 16, 1907. Serial No. 30,014. PUBLISHED NOVEMBER 5, 1907.

66,976. ERASER-HOLDERS FOR APPLICATION TO THE ENDS OF LEAD-PENCILS. AMERICAN LEAD PENCIL CO., New York, N. Y.
Filed May 31, 1907. Serial No. 27,786. PUBLISHED NOVEMBER 5, 1907.

66,977. CERTAIN LIGHTING APPARATUS. AURORA MANTLE MANUF'G CO., Aurora, Ill.
Filed September 3, 1907. Serial No. 29,721. PUBLISHED NOVEMBER 5, 1907.

66,978. BOOTS, SHOES, SLIPPERS, AND SANDALS MADE OF LEATHER. HARLAN P. COLE, New York, N. Y.
Filed March 30, 1907. Serial No. 26,262. PUBLISHED NOVEMBER 5, 1907.

66,979. LEATHER BOOTS AND SHOES. W. B. COGGRAVE SHOE CO., Zanesville, Ohio.
Filed September 11, 1907. Serial No. 29,859. PUBLISHED NOVEMBER 5, 1907.

66,980. CERTAIN LEATHER GOODS. J. M. DELANEY & Co., New York, N. Y.
Filed January 4, 1907. Serial No. 24,432. PUBLISHED NOVEMBER 5, 1907.

66,981. BOOTS, SHOES, AND LEATHER. F. BRIGHAM & GREGORY COMPANY, Boston, Mass.
Filed September 3, 1907. Serial No. 29,723. PUBLISHED NOVEMBER 5, 1907.

66,982. SMOKING-TOBACCO. FALK TOBACCO COMPANY, New York, N. Y., and Richmond, Va.
Filed August 28, 1907. Serial No. 29,648. PUBLISHED NOVEMBER 5, 1907.

66,983. CIGARS AND CIGARETTES. FALK TOBACCO COMPANY, New York, N. Y., and Richmond, Va.
Filed September 6, 1907. Serial No. 29,782. PUBLISHED NOVEMBER 5, 1907.

66,984. ASPHALT-OIL. THE GOOD ROADS IMP CO., Cincinnati, Ohio.
Filed June 20, 1907. Serial No. 28,465. PUBLISHED NOVEMBER 5, 1907.

66,985. RUBBER BOOTS AND SHOES. GOODYEAR'S METALLIC RUBBER SHOE CO., Naugatuck, Conn.
Filed September 16, 1907. Serial No. 30,023. PUBLISHED NOVEMBER 5, 1907.

66,986. RUBBER BOOTS AND SHOES. GOODYEAR'S METALLIC RUBBER SHOE CO., Naugatuck, Conn.
Filed September 16, 1907. Serial No. 30,024. PUBLISHED NOVEMBER 5, 1907.

66,987. RUBBER FOOTWEAR AND RUBBER TIRES FOR MOTOR-VEHICLES. HOOD RUBBER CO., Boston, Mass.
Filed August 23, 1907. Serial No. 29,537. PUBLISHED OCTOBER 22, 1907.

66,988. LEATHER BOOTS, SHOES, AND SLIPPERS. MORSE & ROGERS, New York, N. Y.
Filed May 2, 1907. Serial No. 27,071. PUBLISHED NOVEMBER 5, 1907.

66,989. BED AND TABLE LINEN. GEBRÜDER MOSSE, Berlin, Germany.
Filed September 11, 1905. Serial No. 12,484. PUBLISHED NOVEMBER 5, 1907.

66,990. SOAP. THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio, and Kansas City, Kans.
Filed November 4, 1905. Serial No. 14,222. PUBLISHED NOVEMBER 5, 1907.

66,991. CERTAIN RUBBER GOODS. SCANDINAVIAN FUR & LEATHER CO., New York, N. Y.
Filed August 28, 1907. Serial No. 29,634. PUBLISHED NOVEMBER 5, 1907.

66,992. LOOSE-LEAF LEDGERS. CHARLES L. SCHAAR, Chicago, Ill.
Filed June 12, 1907. Serial No. 28,077. PUBLISHED NOVEMBER 5, 1907.

66,992. LEATHER SHOES. STERN & Co. (INCORPORATED), Richmond, Va.
Filed July 12, 1906. Serial No. 10,268. PUBLISHED NOVEMBER 5, 1907.

66,994. CERTAIN LEATHER GOODS. WILLIAM RENNIE THOMLINSON, Partick, Scotland.
Filed May 13, 1906. Serial No. 19,669. PUBLISHED NOVEMBER 5, 1907.

66,995. CERTAIN LEATHER GOODS. WOODWARD & COCHEU, Lynn, Mass.
Filed July 15, 1907. Serial No. 28,804. PUBLISHED NOVEMBER 5, 1907.

66,996. PAPER BAGS. THE CLEVELAND-AKRON BAG CO., Cleveland, Ohio.
Filed August 29, 1907. Serial No. 29,672. PUBLISHED NOVEMBER 5, 1907.

66,997. GRAPHOPHONES. COLUMBIA PHONOGRAPH COMPANY, GENERAL, New York, N. Y.
Filed September 18, 1907. Serial No. 30,057. PUBLISHED NOVEMBER 5, 1907.

66,998. WATCHES AND WATCH-MOVEMENTS. BYRON L. STRASBURGER & Co., New York, N. Y.
Filed September 18, 1907. Serial No. 30,057. PUBLISHED NOVEMBER 5, 1907.

66,999. WATCHES AND WATCH-MOVEMENTS. BYRON L. STRASBURGER & Co., New York, N. Y.
Filed September 18, 1907. Serial No. 30,059. PUBLISHED NOVEMBER 5, 1907.

67,000. WATCHES AND WATCH-MOVEMENTS. BYRON L. STRASBURGER & Co., New York, N. Y.
Filed September 18, 1907. Serial No. 30,061. PUBLISHED NOVEMBER 5, 1907.

67,001. WATCHES AND WATCH-MOVEMENTS. BYRON L. STRASBURGER & Co., New York, N. Y.
Filed September 18, 1907. Serial No. 30,062. PUBLISHED NOVEMBER 5, 1907.

67,002. DOUBLE-WALLED GLASS VESSELS WITH VACUUM BETWEEN THE WALLS. THERMOS-GESELLSCHAFT M. B. H., Berlin, Germany.
Filed March 20, 1907. Serial No. 26,112. PUBLISHED NOVEMBER 5, 1907.

67,003. MEN'S, WOMEN'S, AND CHILDREN'S KNITTED UNDERWEAR. THE TROY KNITTING COMPANY, Troy, N. Y.
Filed September 12, 1907. Serial No. 29,863. PUBLISHED NOVEMBER 5, 1907.

67,004. TOBACCO-POUCHES. WM. WARNE & Co., LIMITED, London, England.
Filed June 15, 1907. Serial No. 28,159. PUBLISHED NOVEMBER 5, 1907

LABELS

REGISTERED JANUARY 7, 1908.

13,964.—*Title:* "THE CINCINNATI ENQUIRER." (For Cigars.) J. A. CHENEY, Findlay, Ohio. Filed October 23, 1907.

13,965.—*Title:* "Y. M. C. A. CIGAR." (For Cigars.) J. H. SACKS, Baltimore, Md. Filed December 2, 1907.

13,966.—*Title:* "LA RITICA." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed December 5, 1907.

13,967.—*Title:* "ESPIOLA." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed December 5, 1907.

13,968.—*Title:* "LA PREMONETTE." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed December 5, 1907.

13,969.—*Title:* "EMINOLA." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed December 5, 1907.

13,970.—*Title:* "CANDY & JEWELRY." (For Confectionery.) L. SCHULMAN & Co., New York, N. Y. Filed December 6, 1907.

13,971.—*Title:* "THE HIGHEST GRADE BUTTER FROM THE MAPLE CREAMERY." (For Butter.) THEO. C. FORD, Frederick, S. D. Filed December 19, 1907.

13,972.—*Title:* "ANCO." (For Coffee.) THE SHERMAN-CONNER MERCANTILE Co., Trinidad, Colo. Filed December 9, 1907.

13,973.—*Title:* "PEPTONOL." (For Extract of Cod-Liver Oil.) STANDARD DRUG & CHEMICAL Co., Philadelphia, Pa. Filed December 7, 1907.

13,974.—*Title:* "CRUCIBLE COUGH REMEDY." (For Cough Remedy.) CHARLES ROLLBERG, Inwood, N. Y. Filed September 11, 1907.

13,975.—*Title:* "YOSEMITE ROYAL FLUSH APERIENT WATER." (For an Aperient Water.) YOSEMITE MINERAL WATER COMPANY, Los Angeles, Cal. Filed December 2, 1907.

13,976.—*Title:* "SOBER UP." (For a Liquid Preparation, Consisting of a Combination of Drugs, Used for the Purpose of Overcoming the Effect of Too Much Intoxicating Liquors.) THE WM. STRAUSS Co., Milwaukee, Wis. Filed September 27, 1907.

13,977.—*Title:* "TIGE-MAR REMEDY CO." (For a Salve.) DAVIES AND MEYERS, Los Angeles, Cal. Filed November 4, 1907.

13,978.—*Title:* "SANATIVE WASH." (For Preparations for Women's Ailments.) LYDIA E. PINKHAM MEDICINE COMPANY, Lynn, Mass. Filed December 6, 1907.

13,979.—*Title:* "STANDARD SOLUBLE SULPHUR COMPOUND." (For a Soluble Sulfur Compound.) STANDARD SOLUBLE SULPHUR COMPANY, New York, N. Y. Filed May 9, 1907.

13,980.—*Title:* "FOXY MA KINDERGARTEN GAME." (For a Game.) HENRY D. GARDY, Philadelphia, Pa. Filed December 5, 1907.

13,981.—*Title:* "HEADLESS RIVETS." (For Rivets.) EDWIN B. STIMPSON COMPANY, New York, N. Y. Filed December 10, 1907.

13,982.—*Title:* "TUBULAR RIVETS." (For Rivets.) EDWIN B. STIMPSON COMPANY, New York, N. Y. Filed December 10, 1907.

PRINTS

REGISTERED JANUARY 7, 1908.

2,189.—*Title:* "COMBO COMIC-NATURE FAKES." (For Comic Cards.) FRANK L. FITHIAN, Haddonfield, N. J. Filed December 2, 1907.

2,190.—*Title:* "MENS APPAREL." (For Men's Apparel.) W. C. BOTH, Chicago, Ill. Filed December 4, 1907.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

MURPHY v. BORLAND.

PATENT INTERFERENCE.

Decided November 20, 1907.

1. INTERFERENCE—DISSOLUTION—MOTION ALTERNATIVE—INDEFINITE.

A motion to dissolve alleging that each of the counts of the issue is anticipated or necessarily limited, so as to prevent them from being read upon the devices of both of the parties in view of seven enumerated patents, is indefinite, because the allegation that the counts are anticipated or limited is in the alternative and the motion does not state which counts are to be urged as anticipated and which limited, nor does it state which of the patents are relied upon for anticipation and which for restriction.

2. SAME—REDECLARED—MOTION TO DISSOLVE RELATING TO OLD AND NEW COUNTS.

A motion to dissolve filed after the redeclaration of an interference with additional counts directed to the old as well as the new counts *Held* to have been properly refused transmission so far as it related to the old counts, no showing being made why this part of the motion was not brought in the proper time.

3. SAME—DISSOLUTION—MOTION COVERING TRANSMISSIBLE AND NON-TRANSMISSIBLE GROUNDS.

The fact that a statement of a ground for dissolution of an interference covers two sets of counts, as to one set of which it is proper to transmit the motion and as to the other of which transmission is improper, is not a sufficient reason for refusing transmission of the motion as a whole. The motion should be transmitted as to the set of counts which would be otherwise transmitted.

4. SAME—SAME—MOTION ALLEGING BAR OF PRIOR KNOWLEDGE AND USE.

A motion to dissolve alleging the bar of prior knowledge and use should not be transmitted. (*Thomson and Unbehend* v. *Hisley*, 96 O. G., 1396; *Davis* v. *Swift*, 96 O. G., 2409; *Shrum* v. *Bowmgarten*, 104 O. G., 577; *Cory et al.* v. *Blakey*, 115 O. G., 1228.)

APPEAL on motion.

LOCK.

Messrs. Seymour & Earle for Murphy.

Messrs. Coburn & McRoberts for Borland.

MOORE, *Commissioner:*

Both parties to this interference have appealed from the decision of the Examiner of Interferences on Murphy's motion to transmit a motion to dissolve. Murphy appeals from the refusal to transmit all grounds of the motion to dissolve except grounds 10 and 11, while Borland appeals from the transmission of these grounds.

This interference was originally declared with two counts, and motions were brought to dissolve the interference and to add additional counts to the interference. The Primary Examiner acted upon the motions on July 9, 1907, and redeclared the interference, adding counts 3 to 9. New preliminary statements were filed covering the invention of the added counts.

Ground 1 of the motion to dissolve was refused transmission for the reason that it is not sufficiently specific. This ground alleges—

> that additional issues (counts) 3, 4, 5, 6, 7, 8 and 9 and each of them are and is anticipated or necessarily limited so as to prevent them and each of them from being read upon the devices of both of the parties, in view of the following anticipatory or restrictive patents and each of them, namely:

Here follow seven enumerated patents. The Examiner of Interferences held that although anticipation is alleged in view of several patents and each of them it appears from the remainder of the motion that Murphy does not rely upon an anticipation of the issue by these patents taken singly, and since this ground does not state how they are to be combined it is not sufficiently specific. While in some of the following grounds of the motion Murphy has combined two or more of these patents, in others he uses them singly. It is not thought that the inference of the Examiner of Interferences is warranted or necessarily true. This ground, however, appears to be clearly indefinite, for the following reasons: The allegation is in the alternative that the counts are "anticipated or necessarily limited;" but the motion does not state which counts Murphy intends to urge as being anticipated and which limited, nor does it state which of the patents cited he relies upon to show anticipation and which for restriction of the counts. Limiting the meaning of the issues is not of itself a reason for dissolving the interference, and the statement "so as to prevent them and each of them from being read upon the devices of both of the parties" leaves the motion indefinite as to which party cannot make the restricted counts or whether the motion contemplates arguing it against each party. The opposite party would evidently be quite at sea as to what would be urged under this ground. Grounds 2, 3, 4, 6, and 12 of the motion are also indefinite, for the same reasons.

Grounds 2, 4, 5, 6, 7, 9, and 12 were refused transmission by the Examiner of Interferences because they "apply to counts in the interference when originally declared." Murphy contends that inasmuch as the interference was redeclared to include additional counts it is a new interference for all purposes and gives him the right to bring a new motion to dissolve respect-

ing the old counts as a matter of course. This contention is unwarranted. The interference retained its old serial number and the preliminary statements on file as to the original counts. Motions to dissolve based upon the same grounds as those formerly urged should not be transmitted as to the original counts, nor should new grounds be transmitted as to said counts, without a proper showing in excuse of the delay in bringing the motion. Borland contends that by analogy to the court practice concerning assignments of error grounds of the motion covering both the original counts and the added counts should not be transmitted because they cover two propositions—the adjudicated matter of the original counts and the new matter of the added counts. It is not the intention in the practice regarding the framing of motions to dissolve to follow the technical rules of the courts, but merely to require that the motions shall clearly and definitely set forth the points to be urged. The fact that a ground includes some counts that cannot be transmitted is believed to constitute no valid reason for refusing transmission as to the remaining counts. All of the grounds except 7 and 9 refused transmission by the Examiner of Interferences for the above reason should not be transmitted for other reasons stated herein.

Although grounds 7 and 9 include both the original and added counts, they are based on matter not urged in the former motion to dissolve, and Murphy has stated reasons in excuse of the delay in not urging said matter sooner. The original counts 1 and 2 stand so related to the added counts that whatever conclusion the Examiner reaches regarding the dissolution of the interference as to the latter counts would probably be applicable to the former. For these reasons grounds 7 and 9 should be transmitted as to all the counts.

Grounds 3, 4, and 5 allege the bar of prior knowledge and use based upon the affidavit of one Plumb. These grounds were properly refused transmission under the well-established practice set forth in *Thomson and Unbehend* v. *Hisley*, (86 O. G., 1596;) *Davis* v. *Swift*, (96 O. G., 2409;) *Shrum* v. *Baumgarten*, (104 O. G., 577;) *Cary, Gebhart, and Martin, Jr.*, v. *Blakey*, (115 O. G., 1328.) Murphy contends that because these decisions refer primarily to the bar of public use the practice set forth therein is not applicable. This contention, however, is not well taken, since the bar of prior knowledge and use alleged in the Plumb affidavit would have to be proved in a manner similar to the bar of public use.

Ground 8 of the motion consists of an argument pointing out alleged error in the decision of the Primary Examiner on the prior motion to dissolve. It was properly refused transmission, as setting forth no proper ground for dissolution.

In Borland's appeal from the transmission of grounds 10 and 11 he urges that these grounds are indefinite in that they do not specifically indicate whether the patents to Roche, cited therein, are to be considered with one or all of the patents to Newell, Munger, and Taylor. It appears to be clear, however, that each of these patents taken singly is relied upon to disclose the "broad idea" mentioned. The terms "basic invention" and "broad idea" are not believed to render these grounds indefinite, as contended by Borland.

Ground 10 states that it applies to counts 4 and 9; but ground 11 does not state what counts it is urged against, and for that reason is indefinite and should not be transmitted. (*Heyne, Haywood, and McCarthy* v. *De Wilbies*, 125 O. G., 669.)

Grounds 7, 9, and 10 should be transmitted. The decision of the Examiner of Interferences is accordingly reversed as to grounds 7, 9, and 11 and is affirmed as to the remaining grounds.

EX PARTE WENZELMANN AND OVERHOLT.

APPLICATION FOR PATENT.

Decided December 6, 1907.

1. INTERFERENCE—DECISION ON PRIORITY—TESTIMONY AS TO PUBLIC USE.

Where after a decision on priority in favor of G. has becom final public-use proceedings are instituted in view of a protest of W. and O., the decision on priority will not be set aside in view of the testimony taken in that proceeding.

2. INTERFERENCE AND PUBLIC-USE PROCEEDING—MATTERS AT ISSUE DIFFERENT.

The matters at issue in an interference and in public-use proceedings are different, and the testimony taken in the latter cannot be held conclusive of the question of priority of invention.

ON PETITION.

WAGON-DUMP OR THE LIKE.

Messrs. Bacon & Milans for the applicants.

MOORE, *Commissioner:*

This is a petition by Wenzelmann and Overholt that, acting under my supervisory authority, I issue an order setting aside the judgment adverse to petitioners in the interference *Gilman* v. *Wenzelmann and Overholt*.

It appears that petitioners' application was involved in an interference with an application of Gilman; that on April 3, 1906, the Examiner of Interferences awarded priority of invention in favor of Gilman, holding that the only witness called to support the testimony of the joint inventors, Wenzelmann and Overholt, failed to corroborate their testimony, and that their testimony alone was insufficient to prove the dates of conception and reduction to practice alleged in their preliminary statement. After the termination of said interference petitioners filed a protest against the issuance of a patent to Gilman, on the ground that the invention was in public use more than two years prior to the filing of Gilman's application. A public-use proceeding was thereupon instituted. Gilman took no testimony in said proceeding, and upon the evidence filed by Wenzelmann and Overholt the Primary Examiner, in a decision in the proceeding rendered August 19, 1907, held that a bar of two years' public use against Gilman's application was established and fixed a limit of appeal to expire September 9, 1907. Petitioners contend hat the same evidence upon which the Primary Examiner found the existence of the public-use bar against Gilman's application also establishes the fact that they are the prior inventors and fills out the proof that was lacking in the interference proceeding; also, that said use was less than two years prior to the filing of their application and does not, therefore, bar them from receiving a patent.

The matters at issue in an interference proceeding and a public-use proceeding are different, and it is for this reason that testimony taken on the question of priority in an interference is not used on the issue of public use without further proceedings, in which the party adversely affected is given an opportunity to cross-examine the witnesses with that issue framed and to produce witnesses to explain the evidence. (*Ex parte Weber*, 101 O. G., 2570.) For the same reason testimony taken in the public-use proceeding cannot be held conclusive of the question of priority of invention and should not be used against Gilman without the institution of a second interference.

The Court of Appeals of the District of Columbia held in *Blackford* v. *Wilder* (127 O. G., 1255) and *Horine* v. *Wende* (129 O. G., 2858) that a second interference upon the same subject-matter should not be instituted between the same parties; also, that the subject-matter of the second interference is *res adjudicata* by reason of the first interference, notwithstanding the fact that this Office had in each of the above cases awarded priority upon the additional testimony taken in the second interference to the party defeated in the first interference. In the second case cited above Wende petitioned that in view of these facts I exercise my supervisory authority and reinstate the first interference. (*Wende* v. *Horine*, 130 O. G., 1311.) The reasons for denying that petition are largely applicable in this case. This petition is even of less merit, for Wenzelmann and Overholt have not requested a reinstatement of the first interference, but that the decision in the interference be arbitrarily set aside.

The contention of Wenzelmann and Overholt that no additional consideration of the testimony taken in the public-use proceeding will be necessary in view of the decision of the Primary Examiner is not warranted, for while the Primary Examiner held that a device embodying the invention in question was constructed and successfully operated at a date more than two years prior to that claimed by Gilman he did not hold that it was the invention of Wenzelmann and Overholt. Petitioners have had their day in the Patent Office so far as proceedings relating to priority of invention are concerned, and if they have a remedy under section 4915 of the Revised Statutes, as they contend, it is an additional reason why the regular order of proceedings should not be disturbed.

It is further noted that the claims of Gilman have not as yet been rejected in his *ex parte* application, and since when rejected he undoubtedly has a right of appeal under section 4909, Revised Statutes, the question of the public-use bar cannot be said to be finally established, as contended by petitioners.

The petition is denied.

EX PARTE THE COBB MANUFACTURING COMPANY.

APPLICATION FOR REGISTRATION OF TRADE-MARK.

Decided November 7, 1907.

1. TRADE-MARKS—DESCRIPTIVE—NOT REGISTRABLE.

A word or phase which is not descriptive of the ingredients or characteristics of an article of merchandise to which it is applied is not registrable if it is descriptive of the uses to which the same may be put.

2. SAME—"SILVER DIP"—DESCRIPTIVE.

The words "Silver Dip" as a trade-mark for a preparation in which silver articles may be dipped or immersed for the purpose of cleaning them is descriptive, and hence not registrable.

ON APPEAL.

TRADE MARK FOR CLEANING COMPOUND FOR SILVER, ETC.

Messrs. Heidman & Street for the applicant.

BILLINGS, *Assistant Commissioner:*

This is an appeal from the decision of the Examiner of Trade-Marks refusing to register the words "Silver Dip" as a trade-mark for cleaning compound. In the applicant's statement it is made to appear by amendment that the article to which the trade-mark is applied is "for cleaning and polishing metals, plate-glass, mirrors, etc., in Class No. 8, Detergents." It appears, however, on the label which has been filed with the application that the merchandise is used "for cleaning and polishing silver and other fine metals." It is also stated that "it finishes the silver like new and delays retarnishing." The following extracts are also taken from the label:

The simplest Cleanest and Quickest means of Cleaning Silver known. Excellent for Plate Glass and Fine Mirrors.

The following directions also appear:

Dip the silver into the jar and stir slightly. Lay aside and wipe briskly with a soft dry cloth. Finish polishing with chamois skin.

Jar should be well shaken before opening. For large pieces put a little of well mixed solution in a saucer, apply with cloth.

As stated by the Examiner, one of the definitions in the *Century Dictionary* of the word "dip" is "Any liquid into which something is to be dipped." The Examiner says:

As an illustration of the use of the word "dip," the following quotation is given:

"The bronzing dip may be prepared by dissolving in 1 gal. hot water ½ lb. each perchloride of iron and perchloride of copper The metal should not be allowed to remain in this dip any longer than is necessary to produce the desired colour. (*Workshop Receipts*, 2d ser., p. 244.)"

The applicant states in his brief:

While it is true that the article—silver, gold or glass—may be dipped into the preparation, there is no suggestion in these words of the qualities, ingredients, or characteristics of the preparation to which it is applied.

The contention that a word or phrase is registrable as a trade-mark because it does not describe the ingredients or characteristics of the article of merchandise to which the word or phrase is applied is not well taken when that word or phrase is clearly descriptive of the uses to which the goods may be put. It is very clear that the words "Silver Dip" signify a preparation in which silver articles may be dipped or immersed for the purpose of cleaning the silver or giving those articles the appearance of silver. This being the fact, and this fact is not controverted by the appellant, it is very clear that any manufacturer who puts upon the market such a preparation has a right to designate it as "silver dip." The principle upon which a word or phrase used as a trade-mark may be refused registration on the ground that it is descriptive is based upon the fact that such word or phrase is open to the use of any one, and consequently is not such an arbitrary or fanciful mark as to make it capable of exclusive appropriation.

The decision of the Examiner of Trade-Marks is affirmed.

WHITTEMORE BROS. & CO. v. C. L. HAUTHAWAY & SONS, INCORPORATED.

CANCELATION.

Decided November 26, 1907.

1. TRADE-MARKS—CANCELATION—SHOWING THAT REGISTRANT WAS NOT THE SOLE USER INSUFFICIENT.

Where a mark was registered under the "ten-years" clause of section 5 of the Trade-Mark Act of 1905, a showing that the

registrant was not the sole user of the mark during the ten years next preceding the passage of that act is not sufficient to justify the cancelation of the mark.

2. SAME—SAME—"EXCLUSIVE USE."

The phrase "exclusive use" in the "ten-years" clause of section 5 of the act of 1905 does not mean "sole use," but the right to exclude others from using.

3. SAME—SAME—TESTIMONY IMPROPER REBUTTAL.

Testimony tending to show use of the mark in issue by parties other than the parties to the controversy *Held* to be improper rebuttal.

4. SAME—SAME—USE OF DESCRIPTIVE TERM.

Where the registrant has shown exclusive use of the word "Hauthaway's" for ten years next preceding the passage of the act of 1905, *Held* that it is entitled to register the mark "Hauthaway's Lynn Burnishing Ink" even if the term "Lynn Burnishing Ink" has become the name of an article of commerce.

APPEAL from Examiner of Interferences.

TRADE-MARK FOR BURNISHING-INK.

Mr. Foust F. Crompton for Whittemore Brothers & Company.

Messrs. Medcod, Salver, Copeland & Dike for C. L. Hauthaway & Sons.

BILLINGS, *Assistant Commissioner:*

This is an appeal from the decision of the Examiner of Interferences dismissing the application of Whittemore Bros. & Company for the cancelation of Trade-Mark No. 47,976, registered to C. L. Hauthaway & Sons, Inc.

The mark is shown and described as consisting of the words "Hauthaway's Lynn Burnishing Ink" and was registered under the "ten-year" proviso of section 5 of the Trade-Mark Act of February 20, 1905. Five grounds for cancelation are assigned. The first three are based on the alleged prior adoption and use by Whittemore Bros. & Co. of a mark identical with that registered by C. L. Hauthaway & Sons, Inc., or so nearly identical therewith as to be likely to deceive purchasers and cause confusion in trade. The fourth ground alleges that C. L. Hauthaway & Sons, Inc., has no title to the mark and also alleges that the mark was not adopted by C. L. Hauthaway & Sons, Inc., until long after its adoption by Whittemore Bros. & Co. The fifth ground is that the use of the mark by C. L. Hauthaway & Sons, Inc., was not exclusive during the ten years next preceding the passage of the act, as it was used by Whittemore Bros. & Co. during that time and long prior thereto.

The Examiner of Interferences has carefully analyzed the testimony, and no useful purpose would be subserved by repeating that analysis here. This testimony clearly shows that the mark as registered has been continuously used by C. L. Hauthaway & Sons, Inc., and its predecessor in business, the firm of C. L. Hauthaway & Sons, since 1872. The testimony offered on behalf of Whittemore Brothers & Co. shows that they have used the words "Lynn Burnishing Ink" since about 1886. One witness, Radley, testifies that he entered the employ of Whittemore Brothers & Co. on November 7, 1872, and that he commenced to manufacture "Lynn Burnishing Ink" a few days later. He does not, however, testify as to any sales of the ink, and his testimony alone is not sufficient to establish a use of the mark as of that date. There is no testimony that Whittemore Brothers & Co. ever used the word "Hauthaway's" in connection with the words "Lynn Burnishing Ink," and, in fact, no such use is claimed.

It has been pointed out in several decisions (*Worcester Brewing Co.* v. *Reuter Co.*, 128 O. G., 1687; *Beech Hill Distilling Co.* v. *Brown Forman Co.*, 128 O. G., 1294; *ex parte Cahn Belt Co.*, 118 O. G., 1936) that the term "exclusive use" as used in the ten-year clause of section 5 of the act of February 20, 1905, does not mean "sole use," but the right to exclude others from using, and that therefore the person who was the first to adopt and use a mark and whose use had been continuous since the adoption would be entitled to register the mark even though others were using it during the ten years.

It follows, therefore, that even if it be held that the marks used by the two parties are so nearly alike as to cause confusion in trade and deceive purchasers the right of C. L. Hauthaway & Sons, Inc., to register its mark would not be affected by the subsequent adoption of Whittemore Brothers & Co. of the mark used by them.

In rebuttal Whittemore Brothers & Co. introduced testimony to show that the term "Lynn Burnishing Ink" was used by others than the parties to this controversy. This testimony was objected to, and it is clearly inadmissible under the pleadings of the case; but even if it could be held admissible under ground 4 of the application for cancelation it is clearly improper rebuttal testimony.

Furthermore, if it be held that this testimony is admissible and that it establishes that the term "Lynn Burnishing Ink" is merely the name of an article of commerce and not capable of exclusive use by any one the right of C. L. Hauthaway & Sons, Inc., to register the mark is not affected thereby. Its use of the term "Hauthaway's" had undoubtedly been exclusive for the ten years next preceding the passage of the Trade-Mark Act. There being, therefore, no bar to the registration by C. L. Hauthaway & Sons, Inc., of the term "Hauthaway's" as a trade-mark for burnishing-ink, there is nothing in the statute to prevent the registration of that term in connection with the name of an article of commerce.

The decision of the Examiner of Interferences dismissing the application for cancellation is affirmed.

ROCKSTROH *v.* WARNOCK.

PATENT INTERFERENCE.

Decided December 11, 1907.

1. INTERFERENCE—MOTION TO DISSOLVE—TIME FOR BRINGING.

A party may under Rule 122 wait till the thirtieth day after the approval of the preliminary statements to bring a motion to dissolve; but if he brings it before the thirtieth day he waives his right to the remainder of the period.

2. SAME—SAME—AMENDED MOTION—TRANSMISSION.

Where a party acting in good faith files a motion which is held to be indefinite and an amended motion curing the informalities is promptly filed within the limit of appeal set from the previous decision, the amended motion should be transmitted.

3. SAME—SAME—SAME—EXPERIMENTAL PROSECUTION.

A party cannot be permitted to prosecute a case experimentally, and where the amended motion does not cure the informalities pointed out in the first decision a third motion is entitled to no consideration.

APPEAL on motion.

PRINTING-PLATE HOLDER.

Mr. Harold Serrell for Rockstroh.

Mr. George L. Cragg and *Mr. L. S. Bacon* for Warnock.

BILLINGS, *Assistant Commissioner:*

This is an appeal by Rockstroh from a decision of the Examiner of Interferences refusing to transmit a motion to dissolve.

The preliminary statements were approved August 18, 1907, and the time within which to bring motion was set to expire September 17, 1907. On August 31, 1907, Rockstroh brought a motion to dissolve on two grounds—(1) that there is no interference in fact; (2) that the party Warnock has no right to make the claim of the issue. The Examiner of Interferences on September 5, 1907, refused to transmit the motion for the reason that it was not accompanied by a statement of the facts relied upon in support of the same of such a definite and particular character as is required by the present practice, as set forth in several decisions, which were cited. The limit of appeal was set to expire September 20, 1907.

Rockstroh did not appeal from this decision; but on September 7, 1907, filed another motion on the same grounds, but enlarging a little as to the facts upon which he relied. On September 11, 1907, the Examiner of Interferences denied this motion, for the reason that, as to the first ground, the particular terms of the counts which were regarded as capable of supporting different meanings were not pointed out, and, as to the second ground, that the particular facts relied on to show that Warnock had no right to make the claims were not set forth with the particularity required by the decisions cited in disposing of the prior motion. The limit of appeal was set to expire September 18, 1907.

Rockstroh did not appeal from this decision, but on September 12, 1907, filed a third motion to dissolve on the same grounds as the other two. The Examiner of Interferences on September 20 refused to transmit the motion, for the reason that the failure to present the motion in proper form at the second attempt must have been due to a lack of care in preparing it and that therefore a third motion was entitled to no consideration. He denied transmission also as to the first ground, for the reason that the language of the issue, which was believed by the moving party to be capable of different meanings, was not specifically stated.

Rule 122 provides that motions must be brought, if possible, not later than the thirtieth day after the preliminary statements have been opened. A party may therefore wait till the thirtieth day to bring his motion; but if he brings it before the thirtieth day he waives all right to the remainder of the period.

It has recently been held in *Gold* v. *Gold* (131 O. G., 1422) that when a party acting in good faith files a motion which is held to be indefinite and an amended motion curing the informalities is promptly filed within the limit of appeal set from the prior decision the Examiner of Interferences should transmit the second or amended motion.

This does not mean, however, that an applicant can bring motions indefinitely. He cannot be permitted to present his case experimentally. The Examiner of Interferences having denied the first motion because it was not sufficiently definite and having cited decisions to show what the requirements of the Office are with respect to such motions, it was incumbent upon the moving party to draw his second motion strictly in accordance with the practice prescribed by these decisions.

Having failed to do so, the third motion is entitled to no consideration. It is true that this motion was filed within the thirty days specified in the rules; but, as pointed out above, the moving party had waived the time remaining after bringing his first motion. Furthermore, the continued repetition of motions is a hardship not only to the opposing party, but to the Office. It unnecessarily consumes the time of every one concerned, causes them to perform much unnecessary labor, and involves the parties in needless expense.

The decision of the Examiner of Interferences is affirmed.

GREEN *v.* FARLEY.

PATENT INTERFERENCE.

Decided December 19, 1907.

INTERFERENCE—PRELIMINARY STATEMENT—AMENDMENT AFTER TESTIMONY TAKEN.

Where a party gave notice at the conclusion of the taking of his testimony that he proposed to bring a motion to amend his preliminary statement to conform to his proofs, but failed to bring the motion until after the testimony of the opposing party was taken and filed, although the error to be corrected by such amendment was known to him at least two months before notice of the proposed amendment was given, *Held* that amendment will not be permitted, as no excuse is offered for the delay and it does not appear that the evidence on which the motion was based was not accessible or would not have been discovered before preparing the original statement had proper care and diligence been exercised.

APPEAL on motion.

TROUSERS-BOTTOMS.

Mr. William H. Finckel for Green.

Mr. E. G. Siggers for Farley.

BILLINGS, *Assistant Commissioner:*

This is an appeal by Green from the decision of the Examiner of Interferences denying his motion for leave to amend his preliminary statement.

Green's original preliminary statement, filed December 6, 1906, was objected to on the ground that it was not sufficiently definite, and he was given time within which to file an amended statement. In his second statement, filed December 26, 1906, Green alleged reduction to practice on May 10, 1905. By his proposed amended statement Green now desires to set up September 6, 1904, as his date of reduction to practice.

Although counsel for Green gave notice on April 8, 1907, at the conclusion of the taking of testimony in behalf of Green, of his intention to file a motion to amend the preliminary statement, the motion to amend was not filed until June 18, 1907, after Farley had taken and filed his testimony. In the notice placed on the record of his intention to move for permission to amend his preliminary statement Green did not state definitely how he proposed to amend it,

but merely that he would move to amend the preliminary statement

in any particulars in which it may require amendment in order to conform to the allegations of fact supported by the foregoing testimony and that he shall use this foregoing testimony in support of such motion. (Green's record, p. 121.)

Farley was ignorant, therefore, until after he had filed his testimony, of the dates upon which Green proposed to stand. The Examiner of Interferences denied the motion on the ground that it was not brought promptly after the discovery of the alleged error and because Green did not exercise proper care and diligence in the preparation of his preliminary statement.

The testimony shows that Green discovered the error months before he made his motion to amend and, it is admitted, at least two months before he gave notice of his intention to make said motion. No satisfactory excuse is offered for the delay. It is claimed that the error was discovered when the time for taking testimony was approaching and Green was searching for testimony to support his case. It does not appear that this evidence was not accessible or would not have been discovered by Green at the time of preparing his original statement if he had used proper care and diligence. If a party is permitted to take his testimony and then to amend his statement to conform to said testimony, the purpose of the preliminary statement, dependent upon its being executed in ignorance of the other party's dates, is not fulfilled and the practice of requiring preliminary statements might as well be abandoned.

No error is found in the decision of the Examiner of Interferences, and it is accordingly affirmed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 28, 1907.

Irwin & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Walter S. Bare, of 227 North Duke street, Lancaster, Pa., for registration of a trade-mark registered to Irwin & Company, of 165 Milk street, Boston, Mass., and no response to the said declaration mailed by the Patent Office in the usual manner to Irwin & Company having been received, and there being no evidence of its having been received by the said Irwin & Company, it is presumed that the company has not received the same. Therefore notice is hereby given to the said Irwin & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that due notice of the declaration of this interference may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 11, 1907.

The Royal Shoe Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Seis, Schwab & Company, of Monroe and Market streets, Chicago, Ill., for registration of a trade-mark and a trade-mark registered to The Royal Shoe Company, of 260 Devonshire street, Boston, Mass., and the notice of said declaration mailed by the Patent Office in the usual manner to the said The Royal Shoe Company having been returned undelivered, notice is hereby given to the said The Royal Shoe Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

The notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.
[BY AUTHORITY OF CONGRESS.]

VOL. 132—No. 2. TUESDAY, JANUARY 14, 1908. PRICE—$5 per year.

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ISSUE OF JANUARY 14, 1908.

Patents	610	No. 876,313 to No. 876,922, inclusive.
Designs	34	No. 38,995 to No. 39,028, inclusive.
Trade-Marks	126	No. 67,005 to No. 67,130, inclusive.
Labels	16	No. 13,953 to No. 13,968, inclusive.
Prints	11	No. 2,191 to No. 2,201, inclusive.
Reissues	3	No. 12,738 to No. 12,740, inclusive.
Total	800	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	2	....	New Hampshire	1	....
Alaska, District of	....	....	New Jersey	25	7
Arizona Territory	....	....	New Mexico Ter'y	....	....
Arkansas	4	....	New York	94	49
California	54	3	North Carolina	3	....
Colorado	13	....	North Dakota	5	1
Connecticut	16	3	Ohio	48	10
Delaware	....	....	Oklahoma	6	....
District of Columbia	5	....	Oregon	2	....
Florida	....	....	Panama	....	....
Georgia	4	....	Pennsylvania	57	13
Hawaii Territory	....	....	Philippine Islands	....	....
Idaho	5	....	Rhode Island	8	1
Illinois	47	14	South Carolina	3	....
Indiana	13	3	South Dakota	1	....
Iowa	10	1	Tennessee	5	....
Kansas	6	1	Texas	11	2
Kentucky	2	1	Utah	2	....
Louisiana	3	....	Vermont	1	....
Maine	4	....	Virginia	1	....
Maryland	5	3	Washington	7	1
Massachusetts	22	15	West Virginia	3	....
Michigan	16	4	Wisconsin	11	1
Minnesota	15	....	Wyoming	1	....
Mississippi	2	....	U. S. Army	....	....
Missouri	16	6	U. S. Navy	....	....
Montana	2	....			
Nebraska	7	1	Total to citizens of the United States	369	140
Nevada	....	....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina	....	....	Natal	....	....
Austria-Hungary	2	....	Netherlands	....	....
Belgium	1	....	Newfoundland	....	....
Brazil	....	....	New South Wales	2	....
British West Indies	....	....	New Zealand	1	....
Canada	12	....	Norway	....	....
Cape Colony	....	....	Persia	....	....
Chile	....	....	Queensland	....	....
China	....	....	Roumania	....	....
Costa Rica	....	....	Russia	....	....
Cuba	....	....	Scotland	1	....
Denmark	1	....	South Australia	....	....
Ecuador	....	....	Spain	....	....
England	24	5	Sweden	2	....
France	1	4	Switzerland	....	....
Germany	24	3	Transvaal, South Africa	....	....
Haiti	....	....	Victoria	1	....
India	1	....	Western Australia	....	....
Ireland	1	....			
Italy	....	1	Total to citizens of foreign countries	75	13
Java	1	....			
Mexico	....	....			

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 28, 1907.

Meade-Van Bokkelen Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Barton Vineyard Company, Limited, of Fresno, Cal., for registration of a trade-mark and a trade-mark registered to the Meade-Van Bokkelen Company, of Chicago, Ill., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Meade-Van Bokkelen Company having been returned undelivered, notice is hereby given to the said Meade-Van Bokkelen Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

Full Names of Applicants.

* * * All applications which disclose the full name of the applicant in the preamble of the specification will be received and considered as a sufficient compliance with Rule 40 of the Rules of Practice. (Order 821.)

When the full first name of the applicant does not appear either in his signature or in the preamble to the specification, the Examiner will, in his first official letter, require an amendment supplying the omission, and he will not pass the application to issue until the omission has been supplied, unless an affidavit shall have been filed setting forth that the full first name of the applicant is the one originally given by him. (Order 800.)

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business January 7, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
308	XVII. Linotyping; Printing; Matrix-Making; Nut and Bolt Locks; Clutches.	Dec. 24	Dec. 7	178
344	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Toilet; Signals; Garment-Supporters.	Dec. 23	Oct. 8	659
173	XXXI. Alcohol; Charcoal and Coke; Ammonia, Water, and Wood Distillation; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Oils, Fats, and Gins; Water Purification; Mineral Oils.	Dec. 16	Nov. 19	209
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Dec. 12	Nov. 8	345
126	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Dec. 9	Sept. 26	309
313	I. Furnes; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Dec. 7	Nov. 7	282
170	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Dec. 7	Nov. 6	219
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Dec. 5	Dec. 5	261
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Fishing and Trapping; Stationery; Stone-Working; Educational Appliances.	Dec. 4	Nov. 4	312
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Dec. 3	Nov. 20	244
347	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Dec. 3	Oct. 24	238
147	XXIX. Coopering; Rods; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking-Tools; Woodworking; Fire-Escapes; Ladders.	Dec. 2	Oct. 4	366
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Towers; Iron Structures.	Nov. 30	Dec. 5	299
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electricity, Medical and Surgical; Electric Signaling; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas, and Canes.	Nov. 25	Nov. 7	326
167	V. Bookbinding; Harvesters; Jewelry; Music.	Nov. 25	Sept. 25	264
282	X. Carriages and Wagons.....	Nov. 23	Oct. 10	460
275	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Nov. 21	Nov. 14	367
312	VII. Games and Toys; Mechanical Movers; Paper Manufactures; Velocipedes; Optics.	Nov. 20	Oct. 26	380
126	II. Bee Culture; Dairy; Labeling; Adhesive Paper Flies and Binders; Presses; Tobacco; Stores-Service Receptacles.	Nov. 19	Oct. 21	300
303	XV. Bread, Pastry, and Confection Making; Coating; Laminated Sheets and Fabrics; Fuel; Glass; Hydraulic Lime and Cement; Paper-Making; Paving; Plastics; Plastic Block and Receptacle Apparatus; Plastic Compositions; Photography.	Nov. 18	Nov. 8	621
124	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Buttons, Eyelet, and Rivet Setting; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus; Harness.	Nov. 18	Nov. 2	385

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Measuring Instruments; Wind-Wheels; Engraving.	Nov. 16	Nov. 25	402
143	IX. Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage; Air and Gas Pumps.	Nov. 16	Oct. 22	291
322	XII. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Nov. 16	Oct. 7	621
362	XXVIII. Internal-Combustion Engines; Miscellaneous Heat-Engine Plants.	Nov. 15	Oct. 9	543
327	XVIII. Steam-Engines; Steam-Boilers; Steam-Engine Valves; Steam and Vacuum Pumps; Injectors and Ejectors.	Nov. 15	Oct. 4	271
182	XXX. Lamps and Gas-Fittings; Fluid-Pressure Regulators; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Nov. 8	Oct. 15	323
320	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Nov. 7	Nov. 6	393
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Nov. 7	Sept. 3	562
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Nov. 6	Oct. 10	385
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Nov. 2	Oct. 25	455
307	XIV. Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal-Ware Making; Tools; Wire-Working; Compound Tools.	Nov. 2	Aug. 24	280
236	XIX. Furnaces; Stoves and Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel.	Oct. 31	Oct. 1	500
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Oct. 29	Sept. 9	552
105	XXVI. Electricity, Generation; Electric Heating and Rheostats; Electric Railways; Motive Power.	Oct. 29	Aug. 2	450
280	XL. Deposit and Collection Receptacles; Special Receptacles and Packages; Check-Controlled Apparatus; Fine Arts; Paper Receptacles; Package and Article Carriers; Wooden Receptacles; Baggage; Lighting-Fixtures; Cloth, Leather, and Rubber Receptacles.	Oct. 23	Sept. 3	781
107	XXXVII. Electricity, Conductors; Electric Lighting; Electricity, General Applications.	Oct. 21	Sept. 6	705
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Oct. 7	Aug. 31	597
321	XXXIX. Water Distribution; Baths and Closets.	Sept. 23	July 8	380
109	XVI. Telegraphy; Telephony.....	Sept. 21	July 5	666
382	XLI. Railway Draft Appliances; Railway-Ties and Fastenars; Railway-Rails and Joints; Resilient Tires and Wheels.	Aug. 26	Aug. 2	1273

Total number of applications awaiting action 18,542

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS.		
	Trade-Marks.....	Jan. 2	Dec. 2	434
	Designs.....	Dec. 26	Dec. 2	56
	Labels and Prints.....	.....	.....	....

Notice.

Coupons unless properly filled out will not be accepted in payment of copies of publications.

PATENTS

GRANTED JANUARY 14, 1908.

876,313. PROCESS OF REDUCING METALLIC SULFIDS AND PRODUCING VANADIUM. FREDERICK M. BECKET, Niagara Falls, N. Y. Filed July 29, 1907. Serial No. 386,087.

1. The process of reducing metallic sulfids, which consists in smelting a charge containing the sulfid, and a reducing agent comprising silicon and carbon.

2. The process of reducing metallic sulfids, which consists in smelting a charge containing the sulfid and a compound of silicon and carbon.

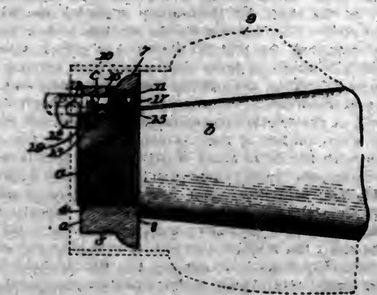
3. The process of reducing metallic sulfids, which consists in smelting a charge containing the sulfid and carborundum.

4. The process of producing alloys, which consists in smelting a charge containing a sulfid of one of the alloying metals, silicon, carbon, and a source of the other alloying metal.

5. The process of producing alloys, which consists in smelting a charge containing a sulfid of one of the alloying metals, a compound of silicon and carbon, and a source of the other alloying metal.

[Claims 6 to 12 not printed in the Gazette.]

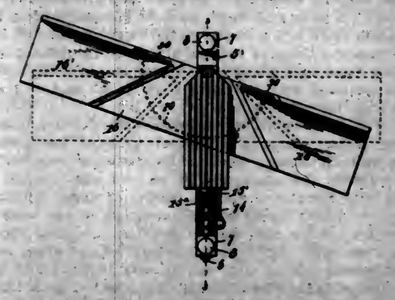
876,314. NUT-LOCK. CHARLES H. BICKNELL, Moline, Ill. Filed Jan. 10, 1906. Serial No. 295,420.



1. The combination with an axle and a hub thereon, said hub having an outwardly projecting overhanging flange, of a nut threaded on the end of said axle and arranged within said flange, said nut having a central internally threaded opening for engaging the end of said axle and also having an axially extending bore or socket between its inner and outer walls and a radial notch in its outer end face extending only between said bore or socket and the central opening of the nut, said axle having a corresponding, radial, outwardly extending notch in its outer end face, a locking bolt in said bore or socket having at its outer end an offset lug or head flattened in a plane extending through the axis of the bolt and adapted to set within the alined notches of said nut and axle and to project beyond the outer end faces both of said nut and of said axle, and a spring in the inner enlarged portion of said bore or socket, coiled about the inner end of said bolt and extending between a shoulder in said bore or socket and a washer fixed to the inner end of said bolt, said bolt being longitudinally movable to shift said head or lug into and out of said notches and rotatable, when said head or lug is withdrawn, to shift the same out of line with said notches, and said head or lug having a transverse opening in its outer portion that normally projects beyond the end faces of said nut and of said axle, substantially as described.

2. The combination with an axle, of a nut threaded thereon having an axially extending bore or socket between its inner and outer walls and a radial notch in the outer face thereof extending only between said bore or socket and the central opening of the nut, said axle having a corresponding outwardly extending notch in its outer face and a spring-held locking bolt in said bore or socket having a flat off-set lug or head arranged in the plane of said bolt and adapted to set within the alined notches of said nut and axle and project beyond the outer faces thereof, said bolt being longitudinally movable to shift said head or lug into and out of said notches and rotatable, when said head or lug is withdrawn, to shift the same out of line with said notches, the portion of said head or lug within the notch of said axle being cut away on one side, substantially as described and shown.

876,315. MITER-BOX. ERICK D. BJORK, Henriette, Minn. Filed Dec. 18, 1905. Serial No. 292,250.

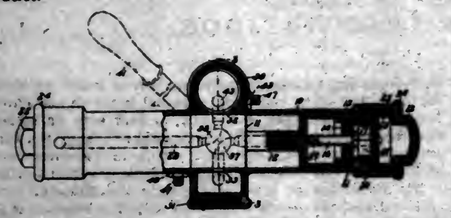


In a miter box, the combination, with a bed, of a base member provided therebeneath and having a longitudinal passage formed therethrough; a rod revolubly engaged in said passage and projecting at opposite ends beyond said base member; a saw-receiving member secured to each end of said rod, one of said saw-receiving members being provided with notches; a latch slidable upon the base member and provided with a longitudinal socket; a block mounted upon the base member in alinement with the latch and having a laterally-projecting finger extending into said socket; a spring interposed between the latch and the block for yieldingly holding the latch in engagement with one of said notches, the spring being carried by the block finger; a depending arcuate rack secured to the bed and concentric with the base member; a bracket secured to one side of the base member; a latch pivoted centrally in said bracket for movement of one of its ends into and out of engagement with said rack; a latterly-projecting ear carried by the base member directly above the opposite end of the latch; and a spring interposed between the ear and the last-mentioned end of the latch, for holding the first-mentioned end thereof in engagement with the rack.

876,316. VALVE. EDGAR J. BLOOM, Tiffin, Ohio. Filed Nov. 14, 1905. Serial No. 287,309.

1. In a flushing valve, a cylindrical casing having inlet and outlet ports arranged diametrically opposite each other leading thereinto, a fluid pressure operated double ended piston arranged within the cylinder and serving to open and close the ports, the opposite ends of said piston being provided with recesses, packing disks in said recesses, adjustable seating rings arranged within the ends of the

cylinder for engagement with said packing rings, cap members spaced from the rings and closing the ends of the cylinder, a valve chamber, a controlling valve or cock, ports or passages leading from the valve chamber to the opposite ends of the cylinder and entering the latter between the rings and caps, and passages for placing said valve chamber in communication with the main inlet and outlet.

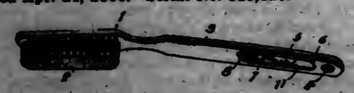


2. The combination in a flushing valve, of a cylindrical casing having inlet and outlet ports arranged diametrically opposite each other, a double ended piston arranged within the casing, the outer ends of the piston being recessed, yieldable packing members secured within said recesses, seating rings secured within the ends of the casing and against which the packing disks may be seated, caps for closing the ends of the casing, said caps being spaced from the rings, a controlling valve or cock arranged within a chamber in the casing, passages leading from said chamber to the opposite ends of the cylinder and entering the same between the caps and rings, an inlet passage leading from the main inlet to the chamber, the chamber ends of all of said passages being of reduced area, and an outlet passage leading from said chamber to the main outlet of uniform cross sectional area throughout its length and of greater area than the other passages.

3. The combination in a flushing valve, of a cylindrical casing having inlet and outlet ports arranged diametrically opposite each other, a double ended piston arranged within the cylinder, the opposite ends of said piston being provided with circular recesses, a washer arranged within the recess, a yieldable packing disk mounted on the washer, a screw for holding said disk in position, a seating ring for said disk, said ring having an annular extension and a non-circular opening part of the way through and being provided with peripheral threads adapted to female threads formed at the end of the cylinder, a threaded cap member for closing the end of the cylinder, said cap member having a packing ring receiving groove, a controlling valve or cock arranged in a chamber in the casing, ports or passages leading from said chamber to the spaces between the caps, and seating rings, and ports between the main inlet and outlet and said chamber.

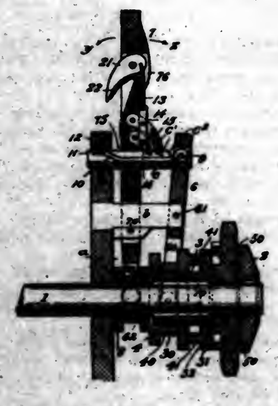
4. The combination in a flushing valve, of the main casing having a cylindrical bore and provided with a main inlet and outlet arranged diametrically opposite each other, a double ended piston arranged within the bore, a controlling valve, there being ports under the control of said valve for establishing communication between the opposite ends of the cylinder and the inlet and outlet, a stem carried by the controlling valve or cock, an operating lever secured to the stem and provided with a pair of oppositely directed arcuate arms, the inner faces of which are grooved, a stop lug extending from the casing into said groove, and adjustable stop screws arranged at the ends of the arcuate arms and serving to engage said stop.

876,317. HANDLE OF BRUSHES AND OTHER MANICURING ARTICLES. ALBA C. BOOTH, Burlington, Vt. Filed Apr. 24, 1906. Serial No. 313,426.



A solid handle of articles for the toilet, having an elongated recess therein having two opposite walls vertical and two opposite walls undercut, and a flexible label within said recess and extending under the undercut walls and retained thereby in the recess.

876,318. CLUTCH MECHANISM. ROBERT H. BOWMAN, Canon City, Colo. Filed Aug. 15, 1907. Serial No. 388,628.

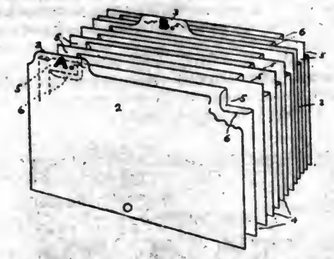


1. In a mechanism of the character described, the combination with the shaft, a disk fixedly held thereon, and a sprocket wheel loosely mounted on the shaft adjacent the disk, said wheel having a clutch face; of a sleeve slidable on the shaft for frictionally engaging the wheel, a clutch sleeve that turns with the friction sleeve and is slidably mounted for clutching with the clutch face of the sprocket wheel, a lever mechanism for moving the two sleeves together toward the sprocket wheel, and another lever mechanism for sliding the clutch sleeve independently of the friction sleeve for the purposes set forth.

2. In a mechanism of the character described, the combination with the drive shaft, a disk fixedly held thereon, and a drive gear loosely mounted on the shaft adjacent the said disk, said drive gear having one face arranged to frictionally engage with the disk 2 and its opposite face provided with clutch portions; of an inner sleeve rotatable with the shaft but slidable thereon for engaging the wheel and frictionally forcing it against the fixedly held disk, an outer sleeve rotatable with, but slidable upon the inner sleeve, said outer sleeve having clutch members adapted to move into engagement with the clutch portions of the drive gear after the said drive gear has been moved into frictional engagement with the shaft disk, a lever for simultaneously moving the inner and the outer disks outwardly toward the gear and another lever mechanism for imparting the supplemental movement to the clutch sleeve whereby to move the said sleeve into a clutch engagement with the gear, substantially as shown and for the purposes described.

3. In a mechanism of the character described, the combination with the shaft, the disk fixedly held thereon, and the transmitting wheel loosely mounted thereon; of the inner sleeve rotatable with and slidably mounted on the shaft, said sleeve including a disk for frictionally engaging the transmitting wheel, said disk having apertures, the wheel having sockets adapted to register with the said apertures, a lever for shifting the said disk on the shaft, a pawl and rack mechanism coöperating with the said lever, a second sleeve mounted on the first sleeve slidable thereon, and rotatable therewith, said second sleeve having projecting studs adapted to extend through the apertures in the disk of the first sleeve and into the sockets of the transmitting gear, a bifurcated lever for engaging the second mentioned sleeve, and a spring latch controlled shifting member for actuating the said lever.

876,319. CARD-INDEX SYSTEM. SELAH S. BRADWAY, Watertown, N. Y. Filed Aug. 14, 1907. Serial No. 388,520.



1. In a card index system, the combination with a series of division cards bearing index letters or numerals, of a series of account cards, each having a notch or dent cut in one upper corner and arranged in alternate sets, the cards of one set having the notches cut in the upper right-hand corners, and the cards of the other set having the notches cut in the upper left-hand corners, substantially as described.

2. In a card index system, the combination with a series of division cards bearing index characters, of a series of sub-division cards having a dent cut in one upper corner of each, and arranged in alternate sets, the cards of one set having dents cut in the upper right-hand corners, and the cards of the other set having dents cut in the upper left-hand corners, and an angular metallic clip secured to each card in a manner to protect the edges of the dent, substantially as described.

3. A card index system, comprising a series of division cards having upwardly projecting portions bearing index letters or numbers, a series of individual account or record cards each having a notch cut in one upper corner, the said cards being disposed in alternate sets of substantially equal number, the cards of one set having the notches cut in the upper right-hand corners, and the cards of the other set having the notches cut in the upper left-hand corners, and a clip to bind and shield the edges of each of said notches, substantially as described.

876,320. CHEMICAL FIRE-EXTINGUISHER. MAX BRESLAUER, Charlottenburg, Germany, assignor to The Firm of W. Graaff & Compagnie, Ges. mit beschr. Haftung, Berlin, Germany. Filed Jan. 8, 1906. Serial No. 295,206.

Chemical fire-extinguisher, in which the filling of the acid-container consists of a solution of phosphoric acid.

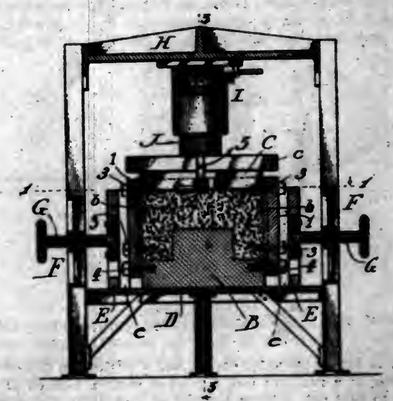
876,321. CHEMICAL FIRE-EXTINGUISHER. MAX BRESLAUER, Charlottenburg, Germany, assignor to The Firm of W. Graaff & Compagnie, Ges. mit breschr. Haftung, Berlin, Germany. Filed Aug. 30, 1906. Serial No. 332,725.

Chemical fire extinguisher, in which the filling of the acid-container consists of anhydrous phosphoric acid.

876,322. MOLDING-MACHINE. LOUIS H. K. BRODIE, Brooklyn, N. Y. Filed Dec. 22, 1906. Serial No. 349,057.

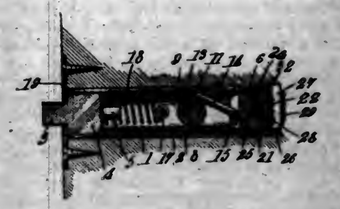
1. A portable mold comprising a base and surrounding walls therefor which are normally connected but detachable, and means for detachably holding said surrounding walls together and in detachable connection with said base, and a top wall, said top wall detachably secured to the said surrounding walls, and means for securing said parts whereby the whole structure may be filled and then subjected to pressure, substantially as shown and described.

2. A portable mold for forming concrete blocks comprising an inwardly and upwardly extended base, four walls surrounding the same which are detachable from each other and are normally attached to the said base, and means connecting them, and a top wall which is also detachably secured to said surrounding walls, whereby the



mold may be filled and then transported to a press, and when pressure is exerted against the said top wall, the walls surrounding the base are moved downwardly with the said top wall, substantially as shown and described.

876,323. LOCK OR LATCH. WILLIAM V. BROWN, Berwick, Nova Scotia, Canada. Filed Mar. 27, 1907. Serial No. 364,881.

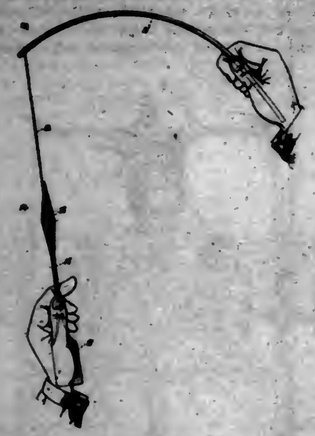


1. In a latch or lock, a cylindrical casing, a cylindrical latch-bolt comprising two cylindrical blocks, one of which has a bevel latch head formed on one face and an axial stud on the other face, segmental connecting strips on diametrically opposite sides of the axis of the latch bolt, a roll-back within the latch-bolt, a knob spindle extending through the roll-back and through the spaces between the connecting strips, a link connection between the roll-back and the rear block of the latch bolt, and a spring surrounding the axial stud on the front block of the latch bolt and having its other end in fixed relation to the casing.

2. In a lock or latch, a cylindrical casing, a cylindrical latch bolt longitudinally movable in and fitted to the casing, a lock bolt movable diametrically across the latch bolt and carried thereby, a key-operated rock shaft for moving the lock bolt, and springs fast on the latch bolt and engaging the lock bolt to retain it in place.

3. In a lock or latch, a cylindrical casing, a cylindrical latch bolt movable longitudinally therein, a spring contained within the latch bolt and tending to move the latter toward the front of the casing, a roll-back within the latch bolt, a link connection between the roll-back and the latch bolt, a lock bolt carried by the latch bolt and movable diametrically across the same, a spring retaining device for the lock bolt, and a key-operated rock shaft engaging the lock bolt.

876,324. GAME APPARATUS. JOSEPH BAUCKER, New York, N. Y. Filed Aug. 22, 1907. Serial No. 389,614.

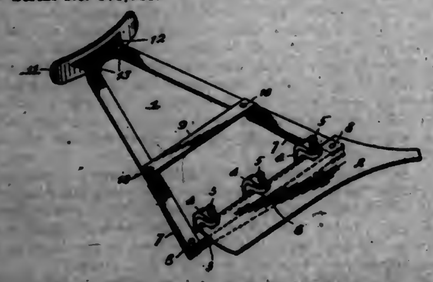


1. A game apparatus comprising a projecting device consisting of a resilient rod, a flexible section secured at one end to said rod, a block secured to said flexible section at its other end, and a shaft having means arranged thereon intermediate its ends adapted to receive the free end of said flexible section to hold said block against said shaft and said shaft attached to said flexible section when said resilient rod is flexed, substantially as specified.

2. A game apparatus comprising a projecting device consisting of a resilient rod, a cord secured thereto at one end, a block secured to said cord at its other end, and an arrow having a transverse recess therein intermediate its head and feather adapted to receive the free end of said cord and hold said arrow attached to said cord under tension of said resilient rod, substantially as specified.

3. A game apparatus comprising a projecting device consisting of a resilient rod, a cord secured thereto at one end, a block secured to said cord at its other end, and an arrow having an enlarged head at one end, a flattened, tapered feather at its other end, and a transverse recess arranged at about the point of balance of said arrow adapted to receive the free end of said cord and hold said arrow attached thereto under tension of said resilient rod, substantially as specified.

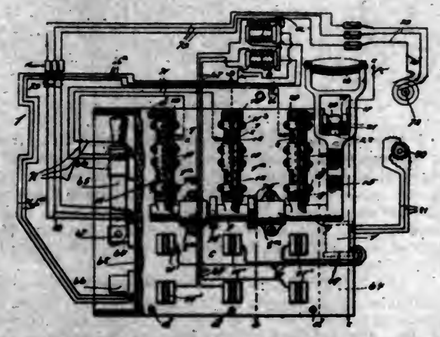
876,325. DEVICE FOR HOLDING PLOWSHARES. PAUL V. BURGESS, Greenwood, Mo. Filed May 11, 1907. Serial No. 373,043.



1. In a device of the character described, an extension handle, a clamping member consisting of a transverse bar connecting the forward ends of said handle, individual clamping-heads spaced apart upon said bar, and clamping-screws adjustably mounted in said heads, and braces secured to the transverse bar and the sides of the handle for reinforcing the same, substantially as described.

2. In a device of the character described, a V-shaped handle, a clamping member comprising a transverse bar secured to the under side of the forward ends of the handle, clamping-heads integral with said bar, clamping-screws adjustably mounted in said heads, and braces secured to the underside of the handle and the underside of the terminals of the transverse bar, substantially as shown and described.

876,326. AUTOMATIC ELECTRICAL RELEASE-STARTER. ANTHONY J. BURNS, Oswego, N. Y. Filed Mar. 15, 1907. Serial No. 362,514.



1. In an automatic release or no voltage starter, an automatic switch, terminals therefor, an oscillatory clutch bar to coöperate with said switch, and a vertically movable member for actuating the clutch bar and an electrically controlled latch bar for supporting said member.

2. In an automatic release starter, an automatic switch, terminals therefor, an adjustable oscillatory clutch bar, releasing means therefor, and electrical operated means for controlling said releasing means.

3. In an automatic release starter, an automatic switch, terminals therefor adjustable means for holding said automatic switch in close contact with its upper set of terminals, a vertically movable member for releasing said adjustable means, an electrically controlled latch bar for releasing said member through the failure of current supply.

4. In an automatic release starter, an automatic switch, knife blades and brushes carried by said switch, an upper and lower set of terminals therefor, adjustable means for holding said brushes in close engagement with the upper set of terminals, and means for releasing said adjustable means.

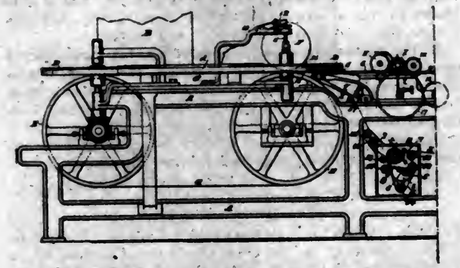
5. In an automatic release starter, a switch, an adjustable lever controlling the same, and a movable member controllable by the current supply and adapted to be released by failure thereof to actuate said lever to release the switch.

[Claims 6 to 36 not printed in the Gazette.]

876,327. CIGARETTE-MACHINE. DANIEL J. CAMPBELL, New York, N. Y., assignor to The American Tobacco Company, a Corporation of New Jersey. Filed Apr. 21, 1898, Serial No. 678,349. Renewed Sept. 19, 1903. Serial No. 173,897.

1. The combination with the filler forming and wrapping devices of a crimped seam continuous rod cigarette machine, and seam closing devices comprising a support within the wrapper and means co-acting with said support to crimp the seam, of means beyond the seam closing devices for inclosing and pressing the cigarettes and thereby correcting irregular formation of the filler due to the use of the interior support and bringing the cigarettes into the form with the filler evenly disposed and filling the wrapper which they would have had except for the use of the interior support, substantially as described.

2. The combination with the filler forming and wrapping devices of a crimped seam continuous rod cigarette machine, and seam closing devices comprising a support within the wrapper and means co-acting with said support to crimp the seam, of a compressing device beyond the seam closing devices for inclosing and pressing the cigarettes and thereby correcting irregular formation of the filler due to the use of the interior support and bringing the cigarettes into the form with the filler evenly disposed and filling the wrapper which they would have had except for the use of the interior support, said compressing device moving with the cigarettes, substantially as described.



3. The combination with the filler forming and wrapping devices and the seam crimping devices of a crimped seam continuous rod cigarette machine, and means for severing the cigarettes from the cigarette rod, of means for pressing the cigarettes into final form after they are severed from the cigarette rod, substantially as described.

4. The combination with the filler forming and wrapping devices and the seam crimping devices of a crimped seam continuous rod cigarette machine, and means for severing the cigarettes from the cigarette rod, of a compressing device for inclosing and pressing the cigarettes into final form after they are severed from the cigarette rod and moving with the cigarettes, substantially as described.

5. The combination with the filler forming and wrapping devices and the seam crimping devices of a crimped seam continuous rod cigarette machine, of means beyond the seam crimping devices for pressing the cigarettes into final form, a carrying belt receiving the cigarettes after they are pressed, and a compressing belt coacting with the carrying belt to hold the cigarettes in form, substantially as described.

[Claims 6 to 47 not printed in the Gasette.]

876,328. HITCHING WEIGHT OR ANCHOR. JOHN H. CHAMBERLIN, Kalamazoo, Mich. Filed Apr. 18, 1907. Serial No. 367,981.

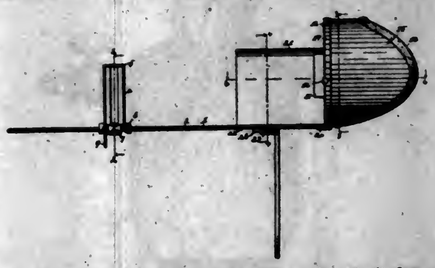


1. In a structure of the class described, the combination of a weight body, square at its base and tapered at its upper end; a pair of substantially parallel laterally-projecting upwardly-curved prongs arranged on each side of and at the corners of said square base of said body, and a connecting ring at the upper end of said body, for the purpose specified.

2. In a structure of the class described, the combination of a weight body, square at its base; a pair of substantially parallel laterally-projecting upwardly-curved prongs arranged on each side of the square base of said body, and a connecting ring at the upper end of said body, for the purpose specified.

876,329. STEREOSCOPE. ELLSWORTH E. CLARK, Kalamazoo, Mich. Filed Apr. 8, 1907. Serial No. 367,063.

1. In a stereoscope, the combination of a shaft formed of sheet metal having an upturned flange at its rear end; a sheet metal lens plate having a rearwardly turned flange at its edge arranged to rest on said shaft against the said flange thereof, said lens plate having retaining tongues on its lower edge passed through said shaft; a hood fitted into said flange on said lens plate, and having retaining tongues at its forward edge passed through said lens plate; and a sheet metal septum A-shaped in cross section having retaining tongues on its lower edges passed through said shaft and on its rear end passed through said lens plate.



2. In a stereoscope, the combination of a shaft formed of sheet metal having an upturned flange at its rear end; a sheet metal lens plate having a rearwardly turned flange at its edge arranged to rest on said shaft against the said flange thereof, said lens plate having retaining tongues on its lower edge passed through said shaft; a hood fitted into said flange on said lens plate, and having retaining tongues at its forward edge passed through said lens plate; and a sheet metal septum having retaining tongues on its lower edge passed through said shaft and on its rear end passed through said lens plate.

3. In a stereoscope, the combination of a shaft formed of sheet metal having an upturned flange at its rear end and a sheet metal lens plate having a rearwardly turned flange at its edge arranged to rest on said shaft against the said flange thereof, said lens plate having retaining tongues on its lower edge passed through said shaft; and a hood fitted into said flange on said lens plate, and having retaining tongues at its forward edge passed through said lens plate.

4. In a stereoscope, the combination of a shaft formed of sheet metal having an upturned flange at its rear end; a sheet metal lens plate having a rearwardly turned flange at its edge arranged to rest on said shaft against the said flange thereof, said lens plate having retaining tongues on its lower edge passed through said shaft; a hood; and a sheet metal septum A-shaped in cross section having retaining tongues on its lower edges passed through said shaft and on its rear end passed through said lens plate.

5. In a stereoscope, the combination of a shaft formed of sheet metal having an upturned flange at its rear end; a sheet metal lens plate having a rearwardly turned flange at its edge arranged to rest on said shaft against the said flange thereof, said lens plate having retaining tongues on its lower edge passed through said shaft; a hood; and a sheet metal septum having retaining tongues on its lower edge passed through said shaft and on its rear end passed through said lens plate.

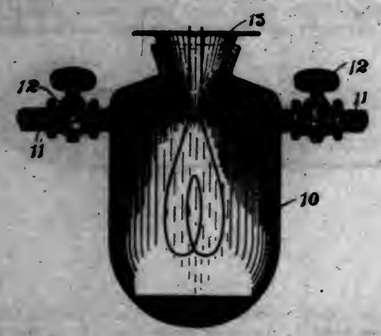
[Claims 6 to 16 not printed in the Gazette.]

876,330. PROCESS OF MAKING INCANDESCENT-LAMP FILAMENTS. WALTER G. CLARK, New York, N. Y., assignor to Parker-Clark Electric Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 4, 1906. Serial No. 337,331.

1. The herein described process of making incandescent electric lamp filaments, which consists in heating a filament in the presence of a mixture composed of a volatile carbonaceous compound together with a volatile silicon compound containing chlorin and also in the presence of a substance having a greater affinity for chlorin than has silicon, whereby the silicon is deposited upon the heated filament.

2. The herein described process of making electric lamp

filaments, which consists in heating the filaments in the presence of a volatile carbonaceous compound, a volatile silicon compound containing chlorin, and vaporizing mercury by the heat of the filament, whereby the freed chlorin combines with the mercury, and the silicon is deposited upon the filament.



3. The herein described process of making incandescent lamp filaments, which consists in heating a filament by passing a current of electricity through it in the presence of a volatile compound containing carbon, and a volatile compound containing silicon and chlorin and also in the presence of a substance having a greater affinity for chlorin than has silicon.

4. The herein described process of making incandescent lamp filaments, which consists in heating a filament by passing a current of electricity through it in the presence of a volatile compound containing carbon, a volatile compound containing silicon and chlorin, and also in the presence of a heated mercury vapor, whereby the mercury vapor absorbs the chlorin freed by the decomposition of the silicon compound.

876,331. PROCESS OF MAKING ELECTRIC-LAMP FILAMENTS. WALTER G. CLARK and HERSCHEL C. PARKER, New York, N. Y., assignors to Parker-Clark Electric Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 30, 1906. Serial No. 345,835.

1. The herein described process of making electric light filaments, which consists in heating a filament by passing a current through it, and thereby depositing silicon on the filament from a volatile chlorid, by breaking up the chlorid through the agency of marsh gas and a reactive agent, and in the presence of a suitable absorbent for the freed hydrochloric acid of chlorin.

2. The herein described process of making filaments for incandescent lamps, which consists in passing an electric current through a filament, in an atmosphere containing marsh gas, olefiant gas, and a reactive agent containing oxygen, together with a volatile silicon compound.

3. The herein described process of making filaments for incandescent electric lamps, which consists in heating a filament by passing an electric current through it in an atmosphere containing marsh gas, olefiant gas, carbon dioxid, and a substance containing silicon, whereby we secure the following reaction:—

$$SiCl_4 + CH_4 + 4C_2H_4 + CO_2 = Si + 4(C_2H_5Cl) + 2(CO).$$

4. The herein described process of making electric lamp filaments which consists in passing a current of electricity through a filament base in a vapor of silicon compound containing chlorin together with a reactive agent, a hydrocarbon and an absorbent to combine with the substance freed by the reduction of the silicon compound.

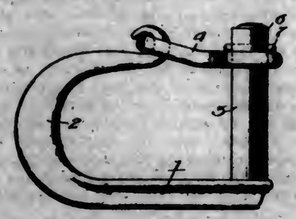
5. The herein described process of making filaments for incandescent lamps, which consists in passing an electric current through the filament, thereby heating it, in an atmosphere containing a silicon compound, marsh gas, olefiant gas, and carbon-dioxid.

876,332. PROCESS OF MAKING INCANDESCENT-LAMP FILAMENTS. WALTER G. CLARK, New York, N. Y., assignor to Parker-Clark Electric Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 14, 1907. Serial No. 352,106.

1. The herein described method of making electric lamp filaments, which consists in heating a carbon filament base in the presence of a volatile carbonaceous compound, a volatile silicon compound containing chlorin, and a substance having a greater affinity for chlorin than has silicon or the combination of silicon and carbon.

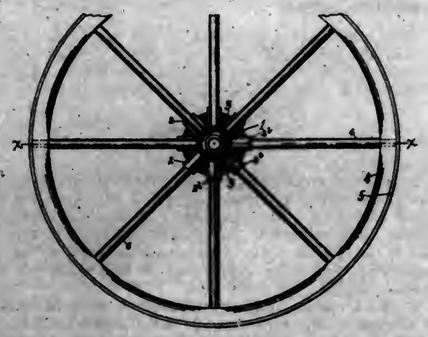
2. The herein described process of making incandescent electric lamp filaments, which consists in passing a current through a filament in the presence of a volatile compound containing carbon and a volatile compound containing silicon and chlorin, and also in the presence of a substance having a greater affinity for chlorin than has the silicon or combination of silicon and carbon.

876,333. CLEVIS. BENJAMIN W. COOK, Poseyville, Mich., assignor to The Cook Clevis Co., Chicago, Ill., a Corporation of Illinois. Filed Feb. 23, 1907. Serial No. 358,824.



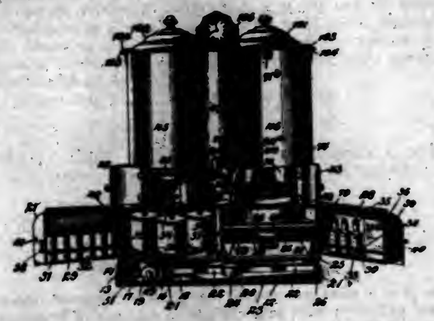
A clevis comprising a metal body having one end bent and having its other end provided with a continuously straight pin and an angular link pivotally connected with the bent end of said body and having an aperture to engage the pin sufficiently to form a frictional lock.

876,334. WHEEL. FRANK J. COOPER, Toledo, Ohio, assignor of one-half to John M. Skinner, Toledo, Ohio. Filed June 16, 1906. Serial No. 322,069.



A wheel comprising a rim, a series of spokes abutting against the rim, a hub having a corresponding series of hollow radial arms integral with the hub, said arms being cleft longitudinally and adapted to receive laterally the inner ends of the spokes, adapted also to be bent from open to closed form to furnish spoke-sockets, and beveled portions upon the hub at the inner ends of the recesses against which beveled portions the inner ends of the spokes abut.

876,335. KITCHEN-CABINET. JAMES H. COUPER, Atlanta, Ga., and WILLIAM L. ALBRIGHT, Cincinnati, Ohio; said Couper assignor to said Albright. Filed Dec. 18, 1906. Serial No. 348,464.



1. A kitchen cabinet comprising a base having compartments, superimposed bins provided with doors arranged contiguous to the base, doors mounted on the base for closing the compartments thereof and projecting beyond the base and engaging the doors of the bins for locking the same in their closed position, and means for locking the doors of the base.

2. A kitchen cabinet comprising a base provided with compartments and having a hinged door, a superimposed bin mounted on the base and provided adjacent to the said hinged door, with a hinged door, one of the said doors being provided with an extended portion overlapping and engaging the other of the said doors, and means for locking the door having the said extended portion.

3. A kitchen cabinet comprising a base, a superimposed casing, independently revoluble upper and lower supports mounted within the casing and the base, and removable receptacles carried by the supports.

4. A kitchen cabinet comprising a base, a superimposed casing, a continuous support extending into the base and into the casing, upper and lower independently revoluble supports located within the casing and the base, and receptacles carried by the supports.

5. A kitchen cabinet having a pivot and provided with a rotary support comprising a bottom having a central opening, a tube extending upward from the bottom at the central opening thereof and receiving the pivot, and radially arranged wings secured to the bottom portion and the tube.

[Claims 6 to 24 not printed in the Gazette.]

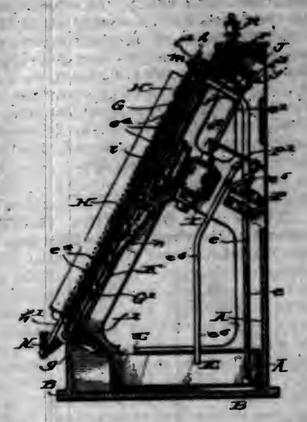
876,336. MACHINE FOR CLEANING PRINTERS' ROLLERS AND THE LIKE. CLARENCE B. CUTLER, Stanhope, N. J., assignor to Henry H. Richardson, Brooklyn, N. Y. Filed Mar. 27, 1906. Serial No. 308,263.

1. The combination of a frame, a plurality of roller scraping elements carried by the frame and moving at relatively different speeds to scrape the surface of the roller, and means for supporting said roller while the latter is resting upon and in contact with the scraping elements.

2. The combination of a frame, means for supporting the roller to be cleaned thereon, a plurality of scraping screws adapted to bear against said roller, and means for driving said screws at relatively different speeds.

3. The combination of a frame, a plurality of roller cleaning devices mounted thereon and adapted to contact with a roller to be cleaned, and means for rotating said devices at relatively different speeds whereby to impart the mean speed of said devices to said roller.

4. The combination of a frame, a plurality of roller cleaning devices each comprising a longitudinally extending spiral screw adapted to contact with the roller to be cleaned, and means for actuating said devices to clean or scrape the roller in a direction longitudinally of its axis.



5. The combination of a frame, a plurality of roller-cleaning elements arranged at an inclination to the frame, and adapted to contact with the roller to be cleaned, means for holding such roller when the latter is resting upon and in contact with the inclined cleaning elements, and means for driving said elements.

[Claims 6 to 14 not printed in the Gazette.]

876,337. CHANGE-SPEED GEAR. HEINRICH DÜNHÖLTER, Berlin, Germany. Filed Apr. 26, 1907. Serial No. 370,397.

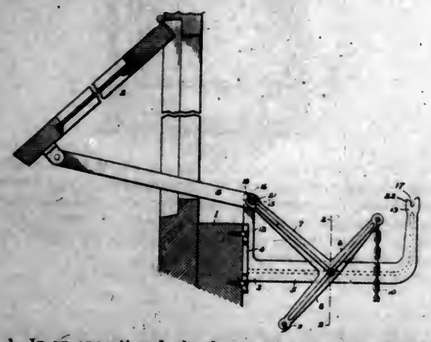
1. The hereindescribed change speed gear for fare indicators comprising: a driving shaft and several driving toothed wheels of different sizes, fixedly mounted on the driving shaft, several driven toothed wheels permanently engaging with the driving toothed wheels, one driven toothed wheel being fixedly, and the other wheels being loosely mounted on the driven shaft, a transmitting wheel (m') loosely mounted on the driven shaft and adapted to be shifted longitudinally, and clutch means for conveying the revolution of the driven toothed wheels for the purpose as described.

2. The hereindescribed change speed gear for fare-indicators, comprising: a driven shaft and two driven toothed wheels, one wheel being fixedly, the other being loosely mounted on the driven shaft, a clutch part (k') fixedly connected with the driven wheel which is loosely mounted on its shaft, a clutch part (k^2) fixed on the driven shaft and of the same diameter as the first mentioned clutch part, a transmitting toothed wheel adapted to be shifted longitudinally and having coupling arms adapted to engage with the said clutch parts.

3. The hereindescribed change speed gear for fare-indicators, comprising: a driven shaft and two driven toothed wheels, one wheel being fixedly, the other being loosely mounted on the driven shaft, a toothed wheel (k') fixedly connected with the driven wheel which is loosely mounted on its shaft, a toothed wheel (k^2) fixedly arranged on the driven shaft and of the same diameter as the toothed wheel (k'), a transmitting wheel adapted to be shifted longitudinally and having coupling arms adapted to engage with the said toothed wheels (k' k^2) respectively.

4. The hereindescribed change speed gear for fare-indicators, comprising: a driven shaft and two driven toothed wheels, one wheel being fixedly, the other being loosely mounted on the driven shaft, a toothed wheel (h') fixedly connected with the driven wheel, which is loosely mounted on its shaft, a toothed wheel (h^2) fixedly arranged on the driven shaft and of the same diameter as the toothed wheel (h'), a clutch-disk rigidly connected with the toothed wheel (h^2) and of the same diameter, a transmitting wheel loosely mounted on the driven shaft and having coupling arms adapted to engage with the toothed wheels (h' h^2) and the said clutch disk.

876,338. DEVICE FOR OPERATING VENTILATORS. IREDELL EACHUS, Philadelphia, Pa. Filed Jan. 31, 1907. Serial No. 354,984.



1. In an operating device for ventilators or the like, the combination of a swinging panel, a pivoted member, a connecting-rod between said panel and said pivoted member, a bracket having a projection formed thereon, a pin carried by said pivoted member adapted to be engaged by said projection to lock said panel, and said pin being loosely mounted in said pivoted member so that it may be forced over said projection by the action of said pivoted member.

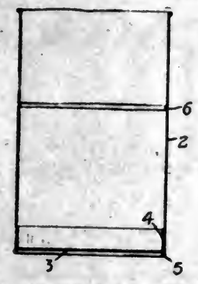
2. In an operating device for ventilators or the like, the combination of a swinging panel, a pivoted member, a connecting-rod, a pin forming the connection between said connecting-rod and said pivoted member, a bracket having bifurcated ends located in the arc through which said pin travels adapted to engage said pin to lock the said panel, and means for loosely mounting said pin in said pivoted member so that it may be disengaged from said bracket by the rotation of said pivoted member.

3. In an operating device for ventilators or the like, the combination of a swinging panel, a bracket, a lever pivoted in said bracket, an arm on said lever, a rod connecting said arm with said panel, said arm having an enlarged aperture formed therein, a pin loosely mounted in the said aperture formed in said arm and said bracket having posts with bifurcated ends thereon adapted to receive said pin and lock said panel.

876,339. MEASURE. LUTHER C. FARMER, Minneapolis, Minn., assignor of one-half to W. A. Mather, Minneapolis, Minn. Filed Sept. 17, 1907. Serial No. 393,406.

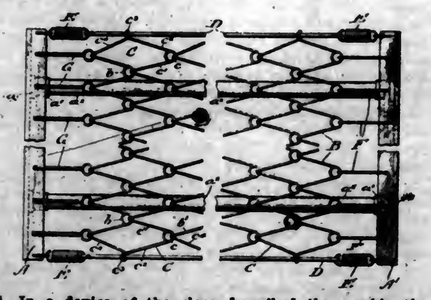
1. A measure comprising a vessel open at both ends and provided with stops in its walls, one stop being located near one end of a vessel and the other stop intermediate to the ends of the vessel, and a bottom plate arranged to slide by gravity between said stops whereby when one end of the vessel is uppermost said bottom plate will slide automatically against one of the stops and adapt the vessel for use as a measure of a certain size and upon inverting the vessel the bottom will slide in a similar manner against the other stop and adapt the vessel for use as a measure of another size.

2. A measure comprising a cylinder open at both ends and provided at one end with a bead 5 forming a stop and at a point near the middle of the cylinder with an inwardly projecting rib 6 also forming a stop, a bottom plate 3 adapted to slide by gravity between said stops and having an annular flange 4 on one side forming a guide for said bottom plate and said plate being adapted to slide against



the stop 5 when one end of the cylinder is turned uppermost and form with said cylinder a measure of a certain size and slide in the opposite direction until said flange engages the stop 6 when the cylinder is inverted and form a measure of another size, substantially as described.

876,340. WIRE FABRIC AND ATTACHING MEANS THEREFOR. MATTHEW W. FLOTO, Chicago, Ill. Filed Mar. 11, 1907. Serial No. 361,657.



1. In a device of the class described the combination with end bars, of a fabric comprising intermediate mutually connected units or members and engaged at its ends to said bars, side units or members engaged to said intermediate units or members having diverging arms, one of said arms of each member provided with a loop and having its end directed approximately parallel with the other arm, a rod extending through said loops and means yieldingly engaging the ends of said rods to said end bars.

2. The combination with end bars of resilient rods connecting corresponding ends, side units or members each provided with a loop to engage the respective rod, intermediate spring units or members engaged to said side units or members and to each other and all of said members having integral coils and hooks, fasteners engaging the coils at one end of the fabric thus formed with one of said bars and members engaging the fabric at the opposite end to the adjacent end bar having coils to receive the hooks of the side and intermediate members and a hook to engage the bar.

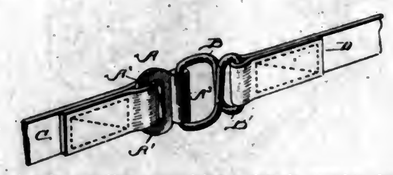
3. A wire fabric composed of intermediate spring units or members comprising a wire twisted to afford a spring coil and integral diverging arms each having a hook at its extremity adapted to engage the coils of an adjacent unit or member, side units or members engaged to the adjacent intermediate units or members comprising a wire twisted to form a spring coil, arms diverging therefrom, one of said arms affording a loop intermediate said coil and the extremity thereof and a hook at the extremity of each arm.

4. As an article of manufacture a spring unit or member comprising a wire or rod adapted to afford a spring coil intermediate the ends, said ends diverging from said coil, one of said ends twisted intermediate the coil and extremity to afford a loop directed at an angle with the coil and a hook at the extremity of each arm.

5. As an article of manufacture a spring unit or member comprising a wire or rod shaped to afford a resilient coil, diverging arms integral therewith, a loop formed by one arm intermediate said coil and extremity and a spring hook formed at the extremity of each arm.

[Claims 6 to 12 not printed in the Gazette.]

876,341. REIN-COUPLING. THOMAS FORSTNER, New Ulm, Minn. Filed Feb. 13, 1906. Serial No. 300,884.

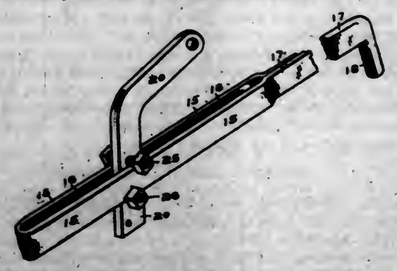


1. A rein coupling comprising a female member formed of a plate having a recessed end, and having a slot formed in said plate to receive the end of one of the reins, and a male member formed of a single piece of wire bent into a loop to receive the end of the other rein, having outwardly extending jaws adapted to fit in the recessed end of the female member, for the purpose described.

2. In a rein coupling, the combination with a female member comprising a plate having an enlarged recessed end, and having a slot formed in said plate adapted to receive the end of the rein, of a male member comprising a loop formed of a single piece of wire adapted to receive the end of the rein, and spring jaws formed by the end of the loop adapted to fit in the recessed end of the female member, for the purpose described.

3. In a rein coupling, the combination with a female member comprising a plate having an enlarged recessed end and having a slot formed in said plate in which the end of a rein is adapted to be secured, of a male member comprising a single piece of wire bent upon itself to form a loop, then crossed and bent outwardly and inwardly toward each other forming jaws adapted to fit in the recesses in the enlarged end of the female member, and a rein adapted to be secured in the loop of the male member, for the purpose described.

876,342. GATE. STEPHEN D. FAY, Indianapolis, Ind. Filed May 31, 1907. Serial No. 376,621.



1. A gate comprising a plurality of longitudinal bars secured at their ends by means of vertical members, hinges for mounting said gate, one of said hinges comprising a hinge-bar provided with a looped end, a latch-piece pivotally secured to the gate-frame and adapted to engage the looped end of the hinge-bar, and means passing transversely through the latch-piece and across the hinge-bar and adapted to bear on said hinge-bar.

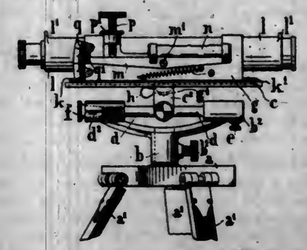
2. A gate comprising a plurality of longitudinal bars secured at their ends by means of vertical members, hinges for mounting said gate, one of said hinges comprising a hinge-bar provided with a looped end, a latch-piece pivotally secured to the gate-frame and adapted to engage the looped end of the hinge-bar, means passing transversely through the latch-piece and across the hinge-bar and adapted to bear on said hinge-bar, and means extending to the free end of the gate for operating the latch-piece.

3. In a gate adapted to vertical adjustment at its free end, a hinge consisting of a hinge-bar provided at its free end with a longitudinal slot, a latch-piece pivotally secured to the gate-frame and adapted to engage the slotted end of the hinge-bar, and means on said latch-piece to automatically grip the hinge-bar when the free end of the gate is elevated.

4. In a gate adapted to vertical adjustment at its free end, a hinge consisting of a hinge-bar provided at its free end with a longitudinal slot, a latch-piece pivotally secured to the gate-frame and adapted to engage the slotted end of the hinge-bar, means on said latch-piece to automatically grip the hinge-bar when the free end of the gate is elevated, and means extending from the free end of the gate to and engaging the latch-piece so that the latter may be freed from the hinge-rod.

5. A gate comprising a plurality of longitudinal bars secured at their ends by means of vertical members, braces secured to both sides of the central portion of the gate-frame to form a truss therefor, hinges for mounting said gate-frame, one of said hinges comprising a hinge-bar provided with a looped end, a latch-piece pivotally secured to the gate-frame and adapted to engage the looped end of the hinge-bar, and means on said latch-piece to automatically grip the hinge-bar when the free end of the gate is elevated.

876,343. ARTILLERY-DIRECTOR. JOHN D. B. FULTON, Newbridge, Ireland. Filed June 5, 1907. Serial No. 377,374.



1. An artillery director for determining the angle of sight, comprising a base, a disk, a universal joint by which the disk is mounted on the base, said joint comprising a cross two coaxial arms of which are fitted to the base while the two other coaxial arms support the disk, a table revoluble on the disk, means for determining the relative position of the table and disk, a sighting instrument attached to the table, and means for indicating the inclination of the sighting instrument.

2. An artillery director for determining the angle of sight, comprising a base, a disk, a universal joint having coaxial members fitted to the base and other coaxial members supporting the disk, means for allowing and preventing relative rotation of said base and disk, a sighting instrument revoluble upon the disk, means for determining the position of the axis of said sighting instrument in relation to the disk, and means for indicating the inclination of the sighting instrument.

3. An artillery director for determining the angle of sight, comprising a base, a disk, coaxial members fitted to the base and like members supporting the disk, the combined members forming a universal joint upon which the disk may tilt, a table revoluble on the disk, said disk having circumferential graduations, a pointer upon the table indicating upon said graduations, a sighting instru-

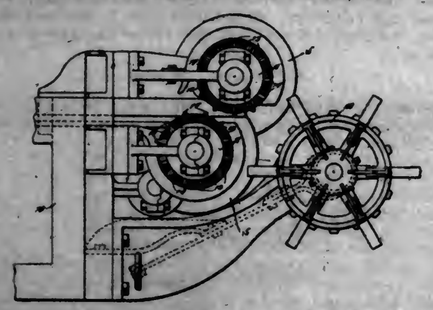
ment attached to said table, and means for indicating the inclination of the sighting instrument.

4. An artillery director for determining the angle of sight, comprising a base, a disk, coaxial members supporting the disk and like coaxial members fitted to the base, said members forming a universal joint upon which the disk may tilt, means for allowing or preventing relative rotation of said base and disk, said disk having circumferential graduations, a sighting instrument revoluble upon the disk, a pointer indicating upon the graduation the relative position of the disk and sighting instrument, and means for indicating the inclination of the sighting instrument.

5. An artillery director for determining the angle of sight, comprising a base, a disk, coaxial members supporting the disk and like members fitted to the base whereby a universal joint is formed between said disk and base, means for allowing and preventing relative rotation of said base and disk, said disk having graduations around its circumference, a sighting instrument revoluble upon the disk, a pointer indicating upon said graduations the relative position of the disk and sighting instrument, and a clinometer attached to the sighting instrument.

[Claims 6 to 12 not printed in the Gazette.]

876,844. MACHINE FOR CLEANING INTESTINES. FRANK GLAS, South Omaha, Nebr., assignor of one-half to himself and one-half to Erwin B. Towl, South Omaha, Nebr. Filed Apr. 22, 1907. Serial No. 369,656.



1. An intestine cleaning machine comprising an intestine support, a cleaning element consisting of bristles and breaking members interspersed among said bristles, and means for supporting and operating said cleaning element.

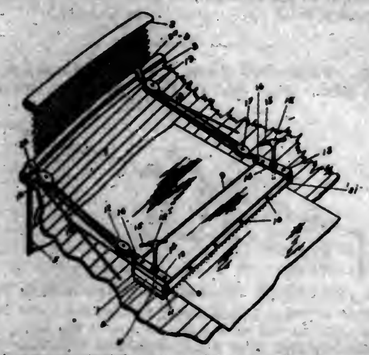
2. An intestine cleaning machine comprising an intestine support, a cleaning element consisting of alternate rows of bristles and breaking members, and means for supporting and operating said cleaning element.

3. An intestine cleaning machine comprising opposed cleaning elements, each consisting of bristles and breaking members interspersed among said bristles, and means for supporting and operating said cleaning elements.

876,845. CANVAS-STRETCHER. JOHN C. GOSS and ANDREW T. HANSEN, Detroit, Mich. Filed July 31, 1907. Serial No. 386,248.

1. A canvas stretcher comprising a pair of parallel, flat rectangular clamping jaws, provided with longitudinal marginal flanges on the upper jaw adapted to close over the corresponding edges of the lower jaw, a clamping hand bolt having a shoulder, said bolt passing through one of said jaws and having screw-threaded engagement with the other of said jaws, and a pair of falls, whose tackle blocks are adapted respectively to detachably engage the clamping jaws at either end and to hook over a fender strake or the like on a ship's side.

2. A canvas stretcher comprising a pair of parallel, wooden clamping jaws, having longitudinal, flat metal flanges secured on the side margins of the upper jaw, adapted to close over the side margins of the lower jaw, a metal cross bar secured across the underside of the lower jaw near each end, a metal cross strap secured on the upper side of the upper jaw near each end, a clamping hand-bolt passing through each cross strap and jaw, having screw-threaded engagement with the corresponding cross bar, eyes formed in each cross-strap extending over the margin of the jaw, and a pair of falls, whose tackle blocks are severally adapted to engage the strap eyes and hook over an adjacent fender strake on the ship's side.



3. A canvas stretcher comprising a pair of corresponding wooden clamping jaws, whose longitudinal margins are parallel, flat metal flange bars secured on the longitudinal margins of the upper jaw, whose depending edges are slightly outwardly flared, and adapted to close over the corresponding margins of the lower jaw, a flat metal cross-bar secured across the underside of the lower jaw at each end thereof, a flat metal cross strap secured on the upper side of the upper jaw across each end thereof, the corresponding apertured ends of said straps projecting beyond the jaws, a clamping bolt passing centrally through each strap and the jaws, having a collar integral with the bolt against the upper face of the strap, and having screw-threaded engagement with a central aperture in the corresponding cross-bar, and a fall secured by a hook on one tackle block to the apertured end of a cross-strap and by a hook on the other block to an adjacent portion of a ship's fender strake.

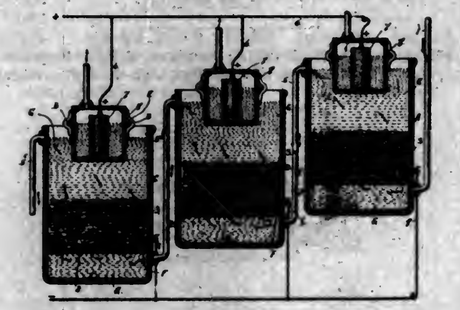
4. A canvas stretcher comprising a pair of flat, rectangular, wooden clamping jaws placed face to face, outwardly flared flange irons secured on the longitudinal edges of the upper jaw, extending over the corresponding edges of the lower jaw throughout their length, metal cross-straps secured on the upper side of the upper jaw across each end, an eyelet integral with each strap projecting from one edge of the jaw, metal cross bars secured on the underside of the lower jaw across each end, shouldered hand bolts passing centrally through each end of the jaws, bearing against the cross-straps and having screw-threaded engagement with the cross-bars, a tail block hooked into the eye of each cross-strap, multiple blocks having hooks adapted to engage a fender strake, and ropes, each attached to the tail blocks and rove through the companion multiple block and the said tail block.

876,846. PROCESS OF PRECIPITATING METALS. JOHN E. GREENAWALT, Denver, Colo. Filed Apr. 3, 1905. Serial No. 253,621.

1. The herein described process of precipitating gold and silver from their chlorid or bromid solutions, consisting in passing the solution through a mass of metallic lead shavings formed by alloying one per cent. or less of zinc with the lead and then finely dividing said alloy.

2. The herein described process of precipitating gold and silver from their chlorid or bromid solutions, consisting in passing the solutions through a mass of metallic lead shavings formed by alloying one per cent. or less of zinc with the lead and then finely dividing said alloy, the solution being heated.

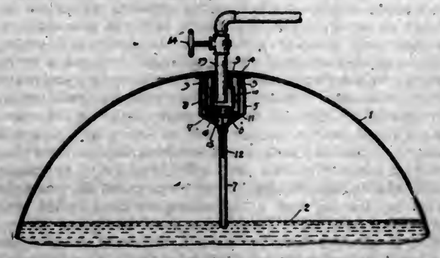
3. The process of precipitating gold and silver from their solutions which consists in passing a solution around and among the metallic surfaces which are slightly soluble in the solution and constituting the cathode element of an electrolytic cell, applying an electric current of a low voltage for the precipitation of the gold and silver and then applying a current of higher voltage to precipitate the metal of the cathode element which has passed into solution during the time of precipitating the gold and silver.



4. The process of precipitating gold and silver from their solutions by passing the solutions around and among metallic surfaces which are slightly soluble in the solution and constituting the cathode element of an electrolytic cell, and applying an electric current to precipitate the gold and silver and also simultaneously reprecipitate the cathode element which has passed into solution.

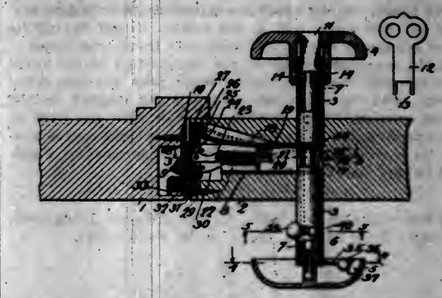
5. The process of precipitating gold and silver from their solutions which consists in passing the solution through a sponge or mass of metallic shavings consisting of lead with one per cent. or less of zinc alloyed therewith and then melting the precipitate, separating the lead from the gold and silver and again using the lead for precipitating purposes as described.

876,847. STEAM-DRIER. ROBERT C. HAGEMAN and GEORGE C. BRODERSON, San Francisco, Cal. Filed Feb. 18, 1907. Serial No. 357,847.



In a steam drier, in combination with a boiler shell, and a steam pipe extending upward therefrom, a wall around said pipe, its upper edge extending above the lower edge of the steam pipe, but open at the top to permit the steam to pass thereover to said pipe, a funnel-shaped receiver connected to the lower edge of said wall and having a drain tube extending downwards therefrom toward the water line of the boiler, a baffle plate supported above the upper end of said tube, and beneath the steam pipe, a second wall extending around the first wall closed at the top to prevent the passage of steam thereover, a third wall supported around the second wall, open at the top to permit the passage of steam thereover to the lower part of the second wall, a funnel-shaped receiver connected to the lower edge of the third wall, a tube leading therefrom down toward the water line of the boiler, and a baffle plate supported between the upper end of said tube and the lower portion of the second wall, the cross-sectional areas of the steam pipe being not less than that of the annular space between said pipe into the first wall, and the cross-sectional area of the annular space between the first and second walls being not less than that between the second and third walls.

876,848. LOCK AND LATCH. THOMAS HALL, New York, N. Y. Filed Apr. 6, 1906. Serial No. 310,216.



1. In a lock and latch mechanism, a latch having pivotal points at two of its extremities and held in normal position against both points, by a spring, substantially as shown.

2. In a lock and latch mechanism, a latch having two pivotal points at its extremities, arranged to swing on either of the pivotal points, and mechanism to stop the swinging, substantially as shown.

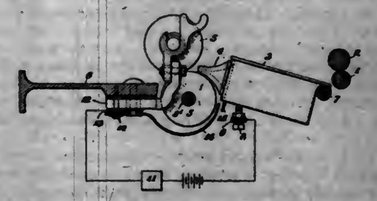
3. In a lock and latch mechanism for a swinging door, a latch having two pivotal points, the latch swinging on one point to open the door, and swinging on the other point when the door is closing, substantially as shown.

4. In a lock and latch mechanism, a swinging latch having two pivotal points and means for preventing it from swinging on one of the pivots to prevent the door from opening, substantially as shown.

5. In a lock and latch mechanism, a latch arranged to swing, to allow the door to close and to swing the opposite way when the door opens and means for preventing it from swinging, thereby securing the door from opening, substantially as shown.

[Claims 6 to 13 not printed in the Gazette.]

876,849. STOP-MOTION. DALLAS B. HATHAWAY, Moosup, Conn., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Jan. 31, 1907. Serial No. 354,998.



1. In a combing machine having sliver-pan supporting means, the combination of the condensing sliver-pan removably resting on said means between the piecing and calender rolls of said machine, said pan being adapted to be bodily moved toward the calender rolls by the action of the sliver and an electric stop-motion circuit adapted to be closed by said movement.

2. In a combing machine, a condensing apparatus comprising a movably mounted sliver pan having electrical contact with the machine frame, and adapted to be bodily moved by the action of the sliver, in combination with an electric stop-motion circuit having one pole connected to said machine frame and the other to an insulated contact

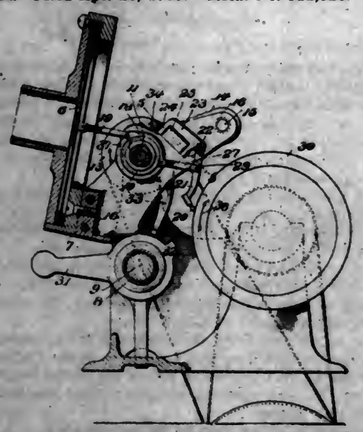
member in the path of movement of said movable sliver pan.

3. In a combing machine, the combination of the supporting rod and set screw, a sliver pan movably supported thereon and an electric stop-motion circuit having one pole connected to the machine frame and the other to an insulated contact member in the path of movement of said sliver pan.

4. In a combing machine, the combination of the sliver pan movably mounted in electrical connection with the machine frame, a sliver apron, an insulated contact finger carried by said apron and a stop-motion circuit having its poles connected respectively with said frame and finger.

5. In a combing machine, the combination of the sliver pan movably mounted, the calender rolls and the sliver apron, with an insulated contact finger carried by the apron and extending beneath the rolls into the path of movement of said sliver-pan and a stop-motion circuit having its poles respectively connected to the machine frame and to said finger.

876,350. GRAPHOPHONE. DANIEL HIGHAM, Bridgeport, Conn. Filed Apr. 16, 1906. Serial No. 312,020.



1. In a phonic apparatus, the combination of the diaphragm, a carriage therefor, sound-amplifying friction means on said carriage, a swinging shaft by which one of the friction members is carried, a stylus connected with said diaphragm through said friction means, and pressed against the sound-record by the weight of said shaft, said stylus being pivoted to a tilting block.

2. In a phonic apparatus, the combination of the diaphragm, a carriage therefor, sound-amplifying friction means on said carriage, a swinging shaft by which one of the friction members is carried, a stylus connected with said diaphragm through said friction means, and pressed against the sound-record by the weight of said shaft, said stylus being pivoted to a tilting block having appreciable inertia.

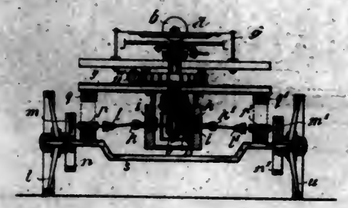
3. In a phonic apparatus, the combination of the diaphragm, a carriage therefor, sound-amplifying friction means on said carriage, a swinging shaft by which one of the friction members is carried, a stylus connected with said diaphragm through said friction means and pressed against the sound-record by the weight of said shaft, and means for lifting said shaft and thereby disengaging said stylus from the sound-record.

4. In a phonic apparatus, the combination of the diaphragm, a carriage therefor, sound-amplifying friction means on said carriage, a swinging shaft by which one of the friction members is carried, a stylus connected with said diaphragm through said friction means, and pressed against the sound-record by the weight of said shaft, means for lifting said shaft, thereby disengaging the stylus from the sound-record, and means for bringing the stylus, when raised, to a central position.

5. In a phonic apparatus, the combination of the diaphragm, of two co-acting elements constituting a friction device, a sound record, a rocking member, a stylus lever pivoted to said rocking member to swing in a plane substantially parallel with the axis of the rocking member, a stylus supported by said lever to contact with said record, connections between one of the friction elements and said stylus lever, and connections between the said friction element and said diaphragm.

[Claim 6 not printed in the Gazette.]

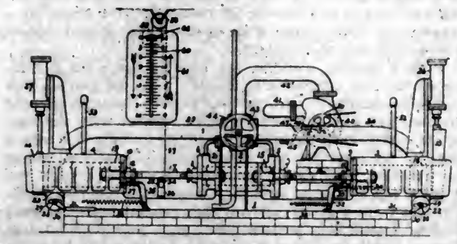
876,351. MOTOR-WAGON. AUGUST HOEDT, Peterawe, near Obersitzko, Germany. Filed Apr. 5, 1907. Serial No. 366,481.



1. In a motor carriage the combination, an axle *a*, a friction wheel *b* on this axle, a friction disk *g* in tangent with the said friction wheel *b*, the axle which is connected with the said friction disk *g*, the gearing *h* running with the friction disk *g*, the casing 15 fixed to the gearing *h*, the differential mechanism *v* in the casing 15, two axles protruding from the said casing made movable and shiftable by the universal joints *k*, k^1 and *l*, l^1 and turnably arranged in the bearings *p*, p^1, springs *q*, q^1 holding the said bearings and fastened on the axle *a*, toothed wheels *m*, m^1 fixed at the ends of the said axles adapted to engage with the teeth of the respective wheels *n*, n^1 the latter wheels being connected with the wheels *t*, *u*, two hollow axles *e*, e^1 on the said axle *a* having guiding ribs *f*, f^1, friction wheels *o*, o^1 having grooves engaging with the said ribs and adapted to be shifted by the socket 4 and 6 which are sliding on the bar 3 having right and left screws, friction clutches 7 and 8 at the utmost ends of the said hollow axles, a bar 9 supported parallel to the axle *a*, arms 10 and rings 12 on this bar the rings of which are adapted to slide in a groove of the hollow axles 23 which are fastened by screws 25 on the axle *a* and also adapted to be coupled with the said friction clutches, means for enabling the coupling consisting of the springs 13 fastened to the rings 12 adapted to press the friction part 22 against said friction clutches 7 and 8, means for steering both the pair of wheels by turning the respective axles in the same but opposite angles, substantially as shown and described.

2. In a motor carriage the combination, an axle *a*, a friction wheel *b* on this axle, a friction disk *g* in tangent with the friction wheel *b*, the axle which is connected with the friction disk *g*, the casing 15 fixed to the gearing *h* the differential mechanism *v* in the casing 15, two axles protruding from the said casing made movable and shiftable by the universal joints *k*, k^1 and *l*, l^1 and turnably arranged in the bearings *p*, p^1, springs *q*, q^1 holding the said bearings and fastened on the axle *a*, toothed wheels *m*, m^1 fixed at the ends of the said axles adapted to engage with the teeth of the respective wheels *n*, n^1 the latter wheels being connected with the wheels *t*, *u*, two hollow axles *e*, e^1 on the said axle *a* having guiding ribs *f*, f^1, friction wheels *o*, o^1 having grooves engaging with the said ribs and adapted to be shifted by the nuts 4 and 6 which are sliding on the bar 3 having right and left screws, friction clutches 7 and 8 at the utmost ends of the said hollow axles, a bar 9 supported parallel to the axle *a*, arms 10 and rings 12 on this bar the rings of which are adapted to slide in a groove of the hollow axles 23 which are fastened by screws 25 on the axle *a* and also adapted to be coupled with the said friction clutches, an axle *w*, the right and left screws 11, 11' on this axle, bogie frames *y*, y^1 provided with rings *c*, c^1 engaging the said screws, conical wheels 18, 19 having holes loosely situated on said axle *w*, rings 29, 30 having holes fixed on said axle, the casing 16 loosely situated on the said axle and having springy bolts 21 which are adapted to go through the said rings 29, 30 into the holes of the conical wheels 18, 19, the lever 5 adapted to shift said casing 16 and to remove the bolts 21 from the conical wheels 18, 19, and means for turning the conical wheels consisting of a conical wheel *d* turnable by hand, substantially as shown and described.

876,352. ICE-MACHINE PRESS. DANIEL L. HOLDEN, New York, N. Y., assignor to Federal Ice Company, New York, N. Y., a Corporation of New York. Filed Apr. 25, 1906. Serial No. 313,560.



1. In an ice machine, a double acting hydrostatic cylinder, a piston therein having piston rods therefor passing from the cylinder at each end, a high and a low pressure valve for fluid flowing to and from the cylinder, tandem ice presses, rams therein co-acting with the cylinder's piston, openings at the lower side of the presses for ice flowing, and rotatable valves having automatic means for opening and closing the openings.

2. In an ice machine, a double acting hydrostatic cylinder, a high and a low pressure valve for its control, an ice press placed at each end of the cylinder, a piston in the cylinder, and double piston rods extending outward therefrom, entering the ice presses and attached to a ram in each press, a valve for ice admission under each press, and means automatically operated by the ram of each press to open the valve as the ram approaches the end of the press adjacent the hydrostatic cylinder.

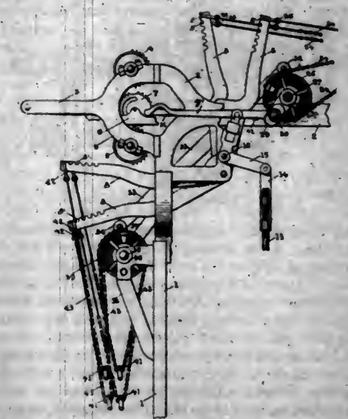
3. In an ice machine, a double acting hydrostatic cylinder, high and low fluid pressure valves for its control, ice presses in alinement therewith, one being at each end, a piston in the cylinder, a ram in each press with means to connect each press ram with the hydrostatic piston for co-acting therewith; an ice valve under each press, and means automatically operative by the ram of each press to open its valve for ice admission thereto as its ram approaches the hydrostatic cylinder, and independent resilient means to automatically close the valve and stop the flow of ice as the ram moves towards the outer end of the press and its inclosing gate.

4. In an ice machine, a hydrostatic cylinder and horizontal piston valves one for high pressure and one for low pressure for its control, ice presses in alinement therewith, a piston in the cylinder, a ram in each press and means for the co-action of the piston and rams, rotatable ice admission valves under the presses, a pump having means to receive ice particles, means to convey the ice particles from the pump to the valves of the presses, and means to alternately put the pump and its connections in communication with one press to the exclusion of the other, and vice versa.

5. In an ice machine, a double acting hydrostatic cylinder, and two ice presses, arranged in alinement, or tandem, the cylinder being intermediate the presses; a piston in the cylinder and a ram in each press, means for the reciprocating motion of the piston and rams, means to close the outer ends of the presses during their act of compressing an ice block, to then open them for the expulsion of the block and again close them; means to gather and supply ice particles to the presses, valves to control the supply of ice particles to the presses, the valves being placed below the presses so that any air passing along with the ice particles shall be free to enter the presses, and means to convey the entering air away from the presses.

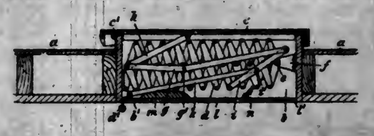
[Claim 6 not printed in the Gazette.]

876,353. LOOM SHEDDING MECHANISM. ELBRIDGE R. HOLMES and ARTHUR S. COWAN, Worcester, Mass., assignors to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed June 18, 1906. Serial No. 322,126.



In the shedding mechanism of a loom of the class described, the combination with the harness jacks, and the harnesses, of two cone pulleys, one located intermediate the harness jacks and the upper edges of the harnesses, and the other located intermediate the harness jacks and the lower edges of the harnesses, and connections, attached at one end to said cone pulleys, and passing over small pulleys, and connected to the harness jacks, and connections from said small pulleys to the harnesses.

876,354. LADDER AND TRAP-DOOR MECHANISM. THOMAS M. HOUGHTON, London, England. Filed July 21, 1906. Serial No. 327,198.



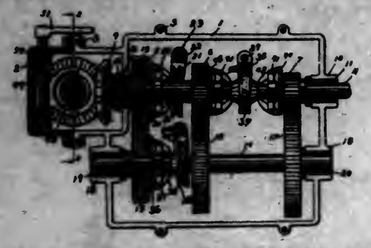
1. In a ladder and trap door mechanism a collapsible ladder hinged or pivoted within the well-hole and adapted to be shortened to occupy a position wholly within said well-hole and extended so as to reach to the floor, levers pivoted within the well-hole, links connecting said levers with the trap door, links connecting said levers with said ladder and a disposition of the pivotal connections of said levers and links to secure the trap door in the open and closed positions.

2. In a ladder and trap door mechanism, a collapsible ladder hinged or pivoted within the well-hole and adapted to be shortened to occupy a position wholly within said well-hole and extended to reach to the floor levers pivoted within said well-hole, door links connecting said levers with the trap door, ladder links connecting said levers with the ladder, and radius links connecting said ladder links with the end wall of the well-hole.

3. In a ladder and trap door mechanism, a collapsible ladder hinged or pivoted within the well-hole and adapted to be shortened to occupy a position wholly within said well-hole and extended to reach to the floor, levers pivoted within said well-hole, door links connecting said levers

with the trap door, ladder links connecting said levers with the ladder, a disposition of the pivotal connections of said levers and links to secure the trap door in the open and closed positions, and radius links connecting said ladder links with the end wall of the well-hole.

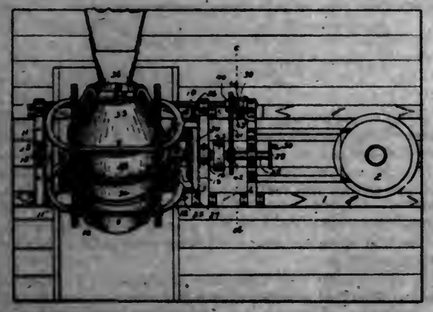
876,355. TRANSMISSION-GEAR. WILLIAM S. HOVEY, Three Rivers, Mich., assignor to Sheffield Car Company, Three Rivers, Mich. Filed Apr. 29, 1907. Serial No. 370,848.



1. The combination of a driving shaft; a gear revolubly mounted thereon; a bevel gear secured thereto; a clutch for securing said gear to said driving shaft; a transmission shaft arranged parallel with said driving shaft; a gear revolubly mounted thereon arranged to mesh with said gear on said driving shaft; a clutch mechanism for securing said gear to said transmission shaft; connections for said clutches whereby, when one is in engagement, the other is released; driving connections for said driving and transmission shafts adapted to be connected or disconnected as desired; a driven shaft arranged transversely of said driving shaft, and driving connections to said bevel gear for the purpose specified.

2. The combination of a driving shaft; a gear revolubly mounted thereon; a bevel gear secured thereto; a clutch for securing said gear to said driving shaft; a transmission shaft arranged parallel with said driving shaft; a gear revolubly mounted thereon arranged to mesh with said gear on said driving shaft; a clutch mechanism for securing said gear to said transmission shaft; and driving connections for said driving and transmission shafts adapted to be connected or disconnected as desired, for the purpose specified.

876,356. MIXING-MACHINE. TYRE C. HUGHES, Kansas City, Mo. Filed Mar. 29, 1904. Serial No. 200,511.



1. In a mixing machine, the combination with an axial supporting shaft, of two vessels mounted on said shaft each vessel being provided with a single opening for receiving and discharging the contents thereof, the openings being disposed in the ends of the vessels distant from each other, means for rotating said vessels around the axis of the supporting shaft, and means for rotating the vessels in a plane at an angle to the plane of rotation around the axis of the shaft.

2. In a mixing machine, the combination with two mixing vessels disposed with their axes in line and having each in its outer end a single opening for receiving and discharging the contents of the vessel, of an axial shaft on which the vessels are mounted and rotatable therewith, means for rotating said shaft and said vessels, a frame in which the shaft is rotatively mounted, and means for revolving the frame together with said vessels and shaft in a plane at an angle to the plane of rotation around the axis of the shaft.

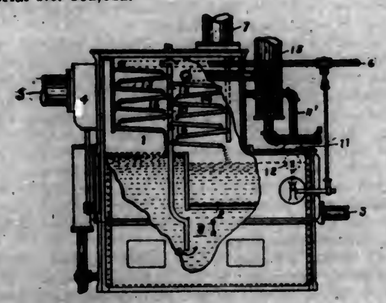
3. In a mixing machine, the combination with a rotatable shaft, of a transverse member mounted thereon and rotatable therewith, two mixing vessels mounted on said transverse member and having their axes coincidental with the axis of the shaft, each vessel having at its outer end a single opening for receiving and discharging its contents, means for rotating said transverse member, said shaft and said vessels around the axis of the shaft, a frame supporting said shaft, and means for revolving said frame in a plane at an angle to the plane of revolution of said vessels around the axis of the shaft.

4. In a mixing machine, the combination with a rotatable shaft, of a transverse member mounted thereon and rotatable therewith, two mixing vessels mounted on said member and having their axes coincidental with the axis of the shaft, each vessel having at its outer end a single opening for receiving and discharging its contents, means for rotating said shaft, member and vessels around the axis of the shaft, a toothed supporting frame in which the shaft is rotatively mounted, a pinion engaging said toothed frame, means for rotating said pinion, and a support on which the frame is revoluble in a plane at an angle to the plane of rotation of the vessels around the axis of the shaft.

5. In a mixing machine, the combination with two mixing vessels disposed with their axes in line, and having each at its outer end a single opening for receiving and discharging the contents thereof, and each vessel having a plurality of blades on its inner periphery, of means for revolving the vessels in two planes of revolution disposed at an angle to each other.

[Claims 6 to 16 not printed in the Gazette.]

876,357. FEED-WATER HEATER AND PURIFIER. JOHN C. JONES, Wynnewood, Pa. Filed July 8, 1907. Serial No. 382,611.



1. A heater comprising two compartments; a raw water inlet in one of said compartments; a condensed water inlet in the other of said compartments; an exhaust steam inlet in said first mentioned compartment; a plurality of trays in staggered relation to one another in said compartments arranged in series below said raw and condensed water inlets and a vertically arranged baffle plate between the two series of trays, substantially as described.

2. A heater comprising two compartments for the reception and treatment of feed water; supply pipes entering said compartments; series of traps below two of said pipes; a filter in one of said compartments, and a by-pass around said filter, substantially as described.

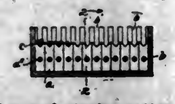
3. The combination of a raw water supply; a condensed water supply; and a steam supply; means intermediate said raw water and condensed water supplies for causing the steam to heat the water supplies in succession, substantially as described.

4. In a heater the combination of raw and condensed water supply inlets; a centrally and vertically arranged partition substantially the height of said heater and separating the said inlets; a plurality of trays in staggered relation to one another; and a steam inlet opening into said heater at one side of said partition, substantially as described.

5. In a heater, a partition substantially the height thereof dividing it into two compartments; a raw water inlet in one of said compartments; a condensed water inlet in the other of said compartments; a steam inlet in said first compartment; a filter; and a by-pass around said filter, substantially as described.

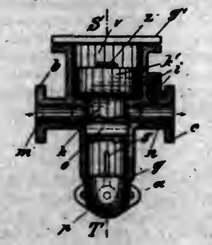
[Claims 6 to 16 not printed in the Gazette.]

876,358. PROCESS OF MANUFACTURING COTTON-COMBS. RALPH JOWETT, Pawtucket, R. I. Filed Jan. 17, 1907. Serial No. 352,699.



The method of manufacturing cotton combs consisting in arranging the requisite number of needles in parallel masses, transferring each of the masses of needles to a receptacle of less depth than the length of the needles, forcing penetrable members against the pointed ends of the needles, clamping the needles in uniformly spaced relations, and applying the needles to a backing member in position for soldering.

876,359. PRESSURE-REGULATOR FOR COMPRESSED-GAS PLANTS. LOUIS KARGER, Ehrenfeld, Germany. Filed May 11, 1906. Serial No. 316,340.

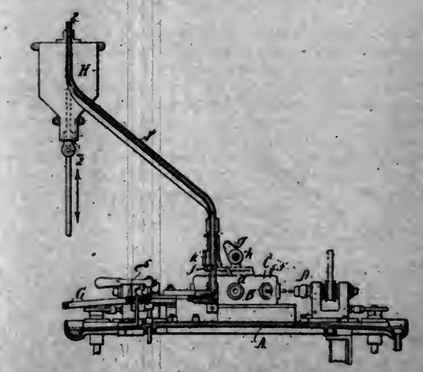


1. In a pressure regulator for compressed gas plants, the combination with a gas-compressor, of a casing comprising a vertical cylindrical part, a chamber below with a shoulder, a wider chamber above and two opposite horizontal passages, which each lead from a circular area up to a triangular opening in the cylindrical part, a connection between the one horizontal passage in said casing and the suction of said gas-compressor, a connection between the other horizontal passage of said casing and the delivery of said gas-compressor, a narrow connection between the lower chamber of said casing and the delivery of said gas-compressor, a cover on said casing, a piston guided in the cylindrical part of said casing and normally resting on the shoulder and adapted to be raised by an excess of the pressure of the compressed gas beyond the maximum determined, so that the piston may strike said cover, said piston being provided with a cross passage of a triangular cross section which in the uppermost position of the piston can register with the two triangular openings in said casing, and means for preventing said piston from turning.

2. In a pressure regulator for compressed gas plants, the combination with a gas-compressor, of a casing comprising a vertical cylindrical part, a chamber below with a shoulder, a wider chamber above and two opposite horizontal passages adjoining the cylindrical part, a connection between the one horizontal passage in said casing and the suction of said gas-compressor, a connection between the other horizontal passage of said casing and the delivery of said gas-compressor, a narrow connection between the lower chamber of said casing and the delivery of said gas-compressor, a cover on said casing, a piston guided in the cylindrical part of said casing and normally resting on the shoulder and adapted to be raised by an excess of the pressure of the compressed gas beyond the maximum determined, said piston being provided with a cross passage which in the uppermost position of the piston can register with the two opposite horizontal passages in said casing, means for preventing said piston from turning, and a buffer on the top of said piston and adapted to strike said cover, a narrow channel being provided in said casing to connect the upper wider chamber with the suction horizontal passage for preventing the formation of an overpressure or a vacuum.

3. In a pressure regulator for compressed gas plants, the combination with a gas-compressor, of a casing comprising a vertical cylindrical part, a chamber below with a shoulder, a wider chamber above and two opposite horizontal passages, which each lead from a circular area up to a triangular opening in the cylindrical part, a connection between the one horizontal passage in said casing and the suction of said gas-compressor, a connection between the other horizontal passage of said casing and the delivery of said gas-compressor, a narrow connection between the lower chamber of said casing and the delivery of said gas-compressor, a cover on said casing, a piston guided in the cylindrical part of said casing and normally resting on the shoulder and adapted to be raised by an excess of the pressure of the compressed gas beyond the maximum determined, said piston being provided with a cross passage of a triangular cross section which in the uppermost position of the piston can register with the two triangular openings in said casing, a longitudinal groove being provided in said piston, a pin in said casing and adapted to engage in the longitudinal groove of said piston, and a buffer on the top of said piston and adapted to strike said cover and to determine the uppermost position of said piston, a narrow channel being provided in said casing to connect the upper wider chamber with the suction horizontal passage for preventing the formation of an overpressure or a vacuum.

876,360. FEEDING MECHANISM FOR LATHES OR OTHER DEVICES. HENRY P. KRAFT, New York, N. Y. Filed Aug. 13, 1904. Serial No. 220,686.

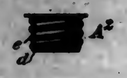


1. Means for feeding blanks to a chuck, comprising in combination a magazine adapted to carry a number of said blanks, a reciprocating member for carrying one blank at a time from said magazine to a position in line with the chuck, a pusher adapted to push said blank from said member into the chuck and means for holding said pusher against said blank while said member is being withdrawn.

2. Means for feeding blanks to a chuck, comprising in combination a magazine adapted to carry a number of said

blanks, a horizontally reciprocating grooved slide arranged to carry one blank at a time from said magazine to a position in line with the chuck, and means for pushing the blank into engagement with the chuck, the forward wall of said groove being arranged to yield in the retracting movement of said slide to permit said wall to pass under said blank.

876,361. PROCESS OF MAKING SOCKET MEMBERS FOR HOT-WATER BOTTLES OR THE LIKE. HENRY P. KRAFT, New York, N. Y., and MAXIMILIAN C. SCHWEINERT, West Hoboken, N. J. Filed Apr. 12, 1907. Serial No. 367,852.



1. The process of making a screw-threaded socket member or the like, which consists in forming the member into appropriate shape, then roughening its walls, and finally screw-threading the roughened wall.

2. The process of making a screw-threaded socket member or the like, which consists in forming the member into appropriate shape, then roughening its wall, and finally screw-threading the roughened wall by bending the metal of such wall.

3. The process of making a screw-threaded socket member or the like, which consists in forming the member into appropriate shape, then nurling its wall, and finally screw-threading the knurled wall.

4. The process of making a screw-threaded socket member or the like, which consists in forming the member into appropriate shape, then nurling its wall, and finally screw-threading the knurled wall by bending the metal of such wall.

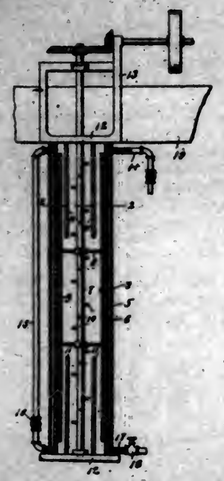
876,362. POWDER-BLOWER. FRANK B. LA MAY, Rochester, N. Y., assignor to American Chemical Manufacturing & Mining Company, Rochester, N. Y. Filed July 26, 1907. Serial No. 385,758.



1. In a powder blower, the combination of a powder receptacle, a tube extending therefrom having a perforated end portion, means for causing a blast of air in the tube, a spring controlled valve for normally closing said perforated portion of the tube, a flexible band passing from said powder receptacle through said tube and connected to said valve, and means on the powder receptacle for actuating said band to open and close the valve.

2. In a powder blower, the combination of a powder receptacle, a tube extending therefrom having a perforated end portion, means for causing a blast of air in the tube, a spring controlled valve for normally closing said perforated portion of the tube, a connection passing through said tube to said valve, and means for actuating said connection to open and to close the valve.

876,363. APPARATUS FOR EXTRACTING OIL. VANDY J. LAUERMAN, Mineral Wells, Tex. Filed Aug. 7, 1907. Serial No. 387,445.

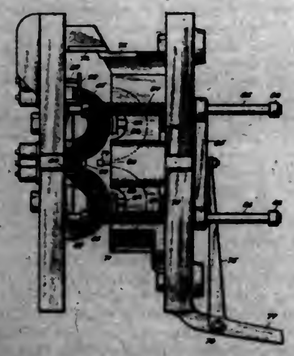


1. An apparatus for extracting oil, comprising a cylinder, a steam-jacket therefor, separate steam-inlets to the cylinder and to the jacket at the same end thereof, an outlet at the opposite end of the jacket, and a connection between said outlet and the inlet to the cylinder, whereby the steam is delivered to one end of the jacket and taken from the opposite end thereof and delivered to the cylinder.

2. An apparatus for extracting oil, comprising a cylinder, a steam-jacket surrounding the same, a steam-inlet to the jacket at the top thereof and an outlet at the bottom, and a pipe connecting the top of the cylinder with the said outlet.

3. An apparatus for extracting oil, comprising a cylinder, a rotatable shaft therein carrying blades arranged parallel thereto, radially presented spikes on the shaft, and stationary blades between the shaft and the blades carried thereby.

876,364. BOTTLE-WRAPPER MACHINE. WILLIAM D. LEGGE, Chicago, Ill., assignor to Universal Bottle Wrapper Company, Chicago, Ill., a Corporation of South Dakota. Filed May 4, 1906. Serial No. 315,248.



1. In a device of the class described, the combination of a pair of opposed dies, one of said dies being movable toward and away from the other and said dies being adapted to co-act with each other for embossing a sheet of material, means acting on the sheet in advance of the dies while the sheet is interposed between said dies, said means being adapted to buckle the sheet to conform approximately with the dies before said sheet is compressed by the dies.

2. In a device of the class described, the combination of a pair of opposed embossing dies, one of the same being movable toward and away from the other, means for imparting a reciprocating movement to said movable die, feed mechanism controlled by said means and adapted to feed a sheet of material into position between said dies when the same are separated, and means adapted to operate in advance of the dies for buckling a sheet to approximately conform to the shape of the dies before said sheet is compressed thereby.

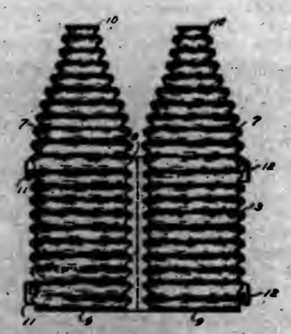
3. In a device of the class described, the combination of a pair of opposed dies, one of said dies being movable toward and away from the other and said dies being adapted to co-act with each other for embossing a sheet of material, and a part mounted on one die extending in advance thereof for buckling the paper to approximately conform to the shape of the dies, said part being adapted to yield to permit the remainder of the die to engage the sheet for pressing the same to form.

4. In a device of the class described the combination of a pair of opposed dies, one of said dies being movable toward and away from the other and said dies being adapted to co-act with each other for embossing a sheet of material, a part mounted on the movable die, being normally extended in advance thereof for buckling the paper to approximately conform to the shape of the dies and being adapted to yield to permit the remainder of the die to engage the sheet for embossing the same, and means for causing said part to recede with said movable die for a certain distance and then to assume its advanced position for discharging the sheet.

5. In a device of the class described, the combination of a pair of opposed dies, one of said dies being movable toward and away from the other and said dies being adapted to co-act with each other for embossing a sheet of material, a part mounted on the movable die and having a limited sliding movement longitudinally of the path of the movement thereof, and a stop adapted to engage said part when said die is moving away from the other die and cause said part to shift on the die for discharging a sheet therefrom.

[Claims 6 to 10 not printed in the Gazette.]

876,365. BOTTLE-WRAPPER. WILLIAM D. LEGGE and LOUIS N. WEIL, Chicago, Ill., assignors to Universal Bottle Wrapper Company, Chicago, Ill., a Corporation of South Dakota. Filed July 30, 1906. Serial No. 328,358.



A bottle wrapper, comprising two similar parts, having corrugated side-walls formed to surround a bottle, said walls being provided with integral flanges extending inwardly at one end of the wrapper to protect the corresponding end of the bottle, each of said parts being provided upon one edge with a pair of oppositely directed hook-like ears adapted to be interlocked for holding together the parts of the wrapper at one side, said parts being joined together at the opposite side.

876,366. COMPOSITION FOR THE PRODUCTION OF FERROUS CARBONATE. JOSIAH K. LILLY, Indianapolis, Ind., assignor to Eli Lilly & Company, Indianapolis, Ind., a Corporation of Indiana. Filed Sept. 1, 1906. Serial No. 333,026. (Specimens.)

1. A composition consisting of a stable solution of a ferrous salt and an alkaline carbonate in a neutral liquid miscible with water and forming a protection against oxidation of the ferrous salt, substantially as described.

2. A composition consisting of a stable solution of ferrous sulfate and potassium carbonate in a neutral liquid miscible with water and forming a protection against oxidation of the ferrous sulfate, substantially as described.

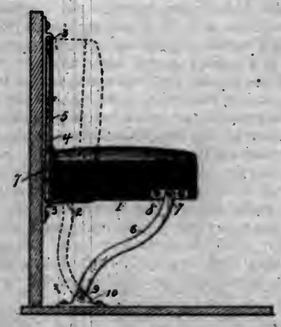
3. A liquid composition consisting of a stable solution of a ferrous salt and an alkaline carbonate in glycerin.

4. A liquid composition consisting of a stable solution of a ferrous salt and potassium carbonate in glycerin.

5. A liquid composition consisting of a stable solution of ferrous sulfate and an alkaline carbonate in glycerin.

[Claim 6 not printed in the Gazette.]

876,367. FOLDING SEAT. EDWARD LINDOW, Toledo, Ohio. Filed June 29, 1906. Serial No. 323,979.

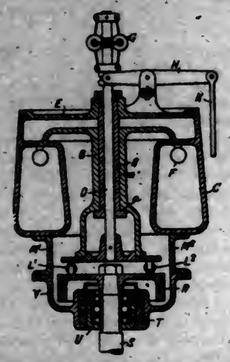


1. In a folding device of the character described, a seat, a pair of legs pivoted at their upper ends to the lower part of the seat near its forward edge, floor-brackets, pivotal connections between the floor-brackets and the lower end of the legs, upright guides at the rear of and above the horizontal plane of the seat, said pivotal connections being disposed in advance of the plane of said upright guides and means upon the seat for slidably engaging said guides.

2. In a folding device of the described character, a seat, a pair of legs disposed at opposite sides of the seat, pivotal connections between the upper ends of the legs and the seat near its forward edge, a pair of floor-brackets adapted to be rigidly secured to a floor, a pair of slotted guide-plates adapted to be secured to a wall at opposite sides of and to the rear of and above the horizontal plane of the seat, said floor-brackets and slotted guide plates being disposed in different vertical planes, and laterally projecting pins at the rear of the seat engaged with and adapted to slide in the slots of said plates.

3. In a folding device of the described character, a series of seats disposed side by side, a pair of legs for each seat, pivotal connections between the upper end of the legs and the forward part of the seat, pivotal connections between the lower end of the legs and the floor, an upright guide-plate having guides for each neighboring pair of seats, said guide-plate being disposed above the horizontal plane of the seat and in a vertical plane back of said floor pivots, and means upon the seats at their rear for slidably engaging said guides.

876,368. APPARATUS FOR DRIVING CENTRIFUGAL MACHINES. WILLIAM A. MACFARLANE, Cathcart, Scotland. Filed Apr. 13, 1907. Serial No. 368,070.



1. In a centrifugal drying machine the combination with a driver, a machine spindle, a driving connection between said driver and spindle, a hollow vertical stud supported from above and around which stud the driver revolves, said stud having thrust and journal bearings to keep the driver in its proper relative position, and a rod passing through said stud and operatively associated with said driving connection.

2. In a centrifugal drying machine the combination with a driver, a machine spindle, a driving connection between said driver and spindle, a hollow vertical stud supported from above and around which stud the driver revolves, said stud having thrust and journal bearings to keep the driver in its proper relative position, means for regulating the speed and acceleration of the machine, and a rod passing through said hollow stud and having an operative connection with said regulating means.

3. In a centrifugal drying machine the combination with a driver, a machine spindle, a hollow vertical stud supported from above and around which stud the driver revolves, said stud having thrust and journal bearings to keep the driver in its proper relative position, a rod passing through said stud, and a clutch including one member carried by the driver and one member carried by said rod.

876,369. COLLAR-STIFFENER. MARTHA MANN, Barmen, Germany, assignor to Band-Industrie Gesellschaft mit beschränkter, Haftung, Barmen, Germany. Filed Apr. 11, 1906. Serial No. 311,110.



As an article of manufacture a collar stiffener comprising two longitudinal strips of a flexible material, a number of transverse steels or stays connecting said strips to form a skeleton or frame said stays being of different lengths and changeably fixed and means to fasten the steels to the strips as described and for the purpose set forth.

876,370. COMBINED FRAME AND FALSE BARREL FOR GUNS. WILLIAM F. MARKHAM and ERNEST S. ROE, Plymouth, Mich., assignors to Markham Air Rifle Company, Plymouth, Mich., a Corporation of Michigan. Filed Apr. 15, 1907. Serial No. 368,232.

1. In a gun, a barrel and a frame formed from an integral sheet metal blank having a shoulder formed along the line of division between the two portions of the blank, the barrel portion having the opposite edges of the blank abutted and being of cylindrical form and the frame portion being of polygonal form having downward extending parallel flanges, for the purpose described.

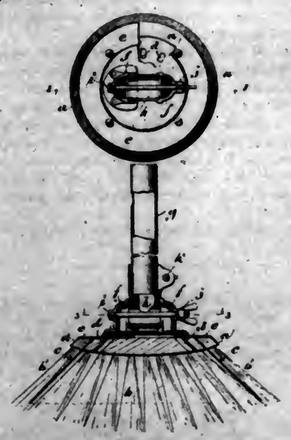


2. In a gun, a barrel and a frame formed from an integral sheet metal blank, and having a shoulder formed along the line of division between the two portions of the blank.

3. In a gun, a barrel and a frame struck up from an integral sheet metal blank, the barrel portion having the opposite edges of the blank abutted on the lower side thereof, and being of cylindrical form, and the frame portion being of polygonal form.

4. In a gun, a barrel and a frame formed from an integral sheet metal blank, the barrel portion having the opposite edges of the blank abutted and being of cylindrical form, and the frame portion being of polygonal form, having a shoulder between it and the cylindrical portion.

876,371. PNEUMATIC BRUSH. FRANK J. MATCHETTE and CHARLES MOUKOS, Milwaukee, Wis.; said Moukos assignor to said Matchette. Filed Feb. 16, 1906. Serial No. 301,329.



1. In a pneumatic brush the combination with the back and bristles, of a flexible deflector surrounding and surrounded by bristles, and an air and dust conduit communicating through the back with the interior of the deflector, substantially as described.

2. In a pneumatic brush the combination with the back and bristles, of a deflector surrounding the interior bristles and surrounded by the exterior bristles, and an air and dust conduit communicating with the space inside of the deflector, substantially as described.

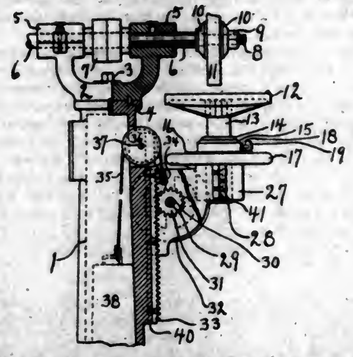
3. In a pneumatic brush the combination with the back and bristles, of a flexible deflector extending from the back towards the free ends of the bristles surrounding and surrounded by bristles, and an air and dust conduit communicating with the space inside of the deflector, substantially as described.

4. In a pneumatic brush the combination with the back and bristles, of a deflector extending from the back towards the free ends of the bristles surrounding and surrounded by bristles, and an extensible tubular handle attached to the back and communicating with the space inside of the deflector, substantially as described.

5. In a pneumatic brush the combination with the back and bristles, of a deflector extending from the back towards the free ends of the bristles and surrounded by bristles, and a tubular handle having an adjustable jointed connection with the back through which it communicates with the space inside of the deflector, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

876,372. SURFACE-GRINDING MACHINE. ROBERT C. MATTHEWS, Peru, Ill., assignor to La Salle Machine & Tool Company, La Salle Ill., a Corporation of Illinois. Filed Sept. 3, 1907. Serial No. 391,097.



1. In a surface grinding machine, the combination of a knee slidably mounted on a pedestal, with a work table adjustably mounted on said knee and comprising a cylindrical member having a threaded portion and a keyseat into which feathers a key which is fastened to said knee and which has a notch to permit the threaded portion of a hand wheel, supported by said knee, to engage the threaded portion of said cylindrical member.

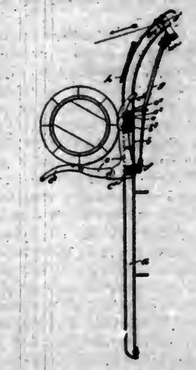
2. In a surface grinding machine, the combination of a knee slidably mounted on a pedestal, with a work table adjustably mounted on said knee and comprising a cylindrical member having a threaded portion and a keyseat into which feathers a key which is fastened to said knee and which has a notch to permit the threaded portion of a hand wheel, supported by said knee, to engage the threaded portion of said cylindrical member, a dust proof ring rigidly fastened to said key, a collar rotatably mounted on said ring, having a pointer fastened thereto projecting to a graduated scale on said hand wheel and a thumb screw for locking said collar.

3. In a surface grinding machine, a micrometer adjustment for the working table comprising a cylindrical member having an external threaded portion and a key seat, a key which feathers in said key seat fastened to the knee, a notch in said key to permit the threaded aperture of the hand wheel, which envelops said cylindrical member and is supported by said knee, to engage the threaded portion of said member, a dust ring rigidly fastened to said key, a collar rotatably mounted on said dust ring, which has a pointer projecting to a graduated scale on said hand wheel and a thumb screw for locking said collar.

876,373. PORTABLE LADDER OR INCLINED WAY FOR RAISING AND LOWERING BARRELS, &c. JOHN MAX, Mile End, London, England. Filed Mar. 2, 1906. Serial No. 303,863.

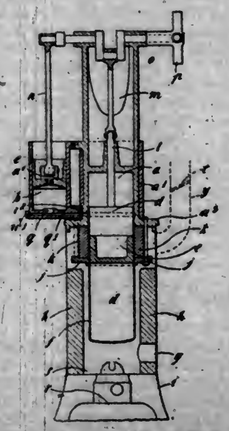
1. Apparatus for raising and lowering goods such as barrels and the like, consisting of a portable ladder or inclined way, a wheeled table adapted to move upon said ladder or inclined way, a supporting cradle pivoted to said table, and a catch for fixedly securing the supporting cradle to said table, said catch being capable of disengaging said supporting cradle so that it may pivot upon the said table, substantially as described.

2. Apparatus for raising and lowering goods such as barrels and the like, consisting of a portable ladder or inclined way, a wheeled table adapted to move upon said ladder or inclined way, a supporting cradle pivoted to said table, a catch for fixedly securing the supporting cradle to said table, said catch being capable of disengaging said supporting cradle so that it may pivot upon the said table, said supporting cradle being provided of angular form and having extensions pivoted to its respective extremities, capable of being respectively turned down, substantially as described.



3. Apparatus for raising and lowering goods such as barrels and the like, consisting of a portable ladder or inclined way, a wheeled table adapted to move upon said ladder or inclined way, a supporting cradle pivoted to said table, and a catch for fixedly securing the supporting cradle to said table, said catch being capable of disengaging said supporting cradle so that it may pivot upon the said table, and a spring catch for automatically securing the table on reaching its uppermost position.

876,374. HOT-AIR ENGINE. ALPHONSE MAYR and JOHN WALLACE, Bombay, India. Filed Oct. 4, 1907. Serial No. 395,948.



1. In a hot air engine a working cylinder and piston, a displacer cylinder comprising a heating part and a cooling part, and a heat insulating part between the heating and cooling parts in combination with a displacer piston consisting of two parts separated by an insulating section, substantially as set forth.

2. In a hot air engine a displacer cylinder comprising an upper cooling part and a lower metallic heating part and an intermediate heat insulating portion separating the

upper and lower metal portions in combination with a displacer piston consisting of upper and lower metal parts and a separating heat insulating part and a working cylinder connected to the displacer cylinder and a separating insulator between the two cylinders substantially as set forth.

3. In a hot air engine a working cylinder and piston, a displacer cylinder comprising a heating part and a cooling part, and a heat insulating part between the heating and cooling parts, an insulating covering around the cooling part in combination with a displacer piston consisting of two parts separated by an insulating section, substantially as set forth.

4. In a hot air engine a displacer cylinder comprising an upper cooling part and a lower metallic heating part and an intermediate heat insulating portion separating the upper and lower metal portions, an insulating covering around the cooling part, in combination with a displacer piston consisting of upper and lower metal parts and a separating heat insulating part and a working cylinder connected to the displacer cylinder and a separating insulator between the two cylinders substantially as set forth.

5. A hot air engine comprising a displacer cylinder consisting of two metallic parts and an intermediate insulating part, a piston in said cylinder comprising two metallic parts and a separating intermediate heat insulating part in combination with a working cylinder supported on the side of the displacer cylinder, insulating plates between the adjacent portions of the working cylinder and displacer cylinder, and a heat insulating covering about the upper end of the displacer cylinder substantially as described.

[Claim 6 not printed in the Gazette.]

876,375. COLLAR AND NECKTIE FASTENER FOR SHIRT-BANDS. JOHN J. A. MILLER, Denver, Colo. Filed Nov. 28, 1906. Serial No. 345,530.

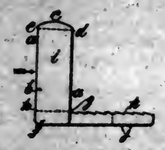


In a collar and neck-tie holder for the neck bands of shirts, a narrow band of metal consisting of a central body or shank portion, consisting of a straight lower end portion and an upper end portion offset at an acute angle and adapted to extend outward and away from the side of said body portion and terminate in a curved end portion, which is bent over upon itself and extends as a tongue portion parallel to and in the same direction from said curved end as the said lower end straight portion of said body or shank portion, said tongue extending below said body portion and having an outwardly curved lip adapted to fit in button holes, a vertically extending base or stop portion extending from the opposite end portion of the body or shank portion from the said tongue portion and bent upon said shank or body portion and extending above the body portion in an opposite direction from said tongue portion, and adapted to prevent said holder and the collar and necktie from accidental displacement from the neck band.

876,376. CLAMP FOR SECURING PLANKS OF SCAFFOLDS TOGETHER, APPLICABLE ALSO FOR USE IN CONNECTION WITH PLANKS FOR OTHER PURPOSES. FREDERICK MITCHELL and FRANCIS GUNN, Manchester, England. Filed Mar. 13, 1907. Serial No. 362,144.

1. An improved scaffold clamp having a rectangular brace to surround the scaffold planks with its top member slightly inclined, a loop projecting at the lower side of said brace having its upper surface inclined and a number of serrated teeth on the upper face of said loop substantially as described.

2. An improved scaffold clamp having a rectangular brace to surround the scaffold planks with its top member slightly inclined, a loop projecting at the lower side of said brace having its upper surface inclined and roughened substantially as described.



3. An improved scaffold clamp having a rectangular brace to surround the scaffold planks with its top member slightly inclined, a loop projecting at the lower side of said brace having its upper surface inclined and provided with a sharp edge substantially as described.

4. An improved scaffold clamp having a rectangular brace to surround the scaffold planks with its top member slightly inclined, a loop projecting at the lower side of said brace having its upper surface inclined and provided with a plurality of points substantially as described.

5. An improved scaffold clamp having a rectangular brace to surround the scaffold planks with its top member slightly inclined, a plate projecting at the lower side of said brace having its upper surface inclined and a number of serrated teeth on the upper face of said plate substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

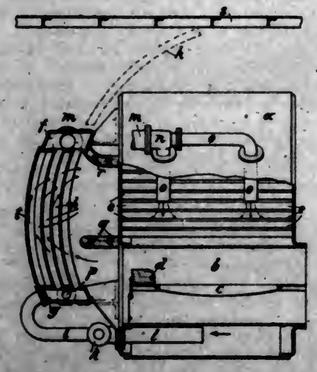
876,377. ROADWAY. GEORGE A. MITCHELL, ARTHUR J. MITCHELL, and ERNEST E. MITCHELL, London, England. Filed Aug. 10, 1907. Serial No. 388,041.

1. A covering for roadways, footways and the like consisting of broken granite, asphalt, bitumen, cement, sand, shell, chalk, carbonate of soda and asbestos.

2. A covering for roadways, footways, and the like consisting of 40 parts of broken granite, 30 parts of asphalt, 10 parts of bitumen, and approximately equal proportions of cement, asbestos, carbonate of soda, chalk, sand, and shell to make up the remaining 20 parts, substantially as set forth.

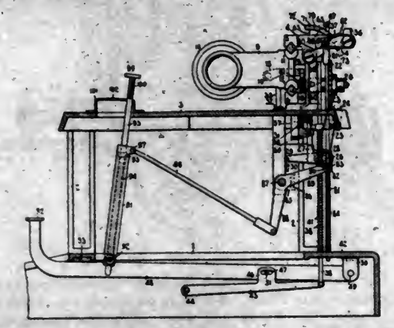
3. A roadway, footway and the like comprising the combination of a foundation of concrete, and a composition spread on said foundation, said composition comprising 40 parts of broken granite, 30 parts of asphalt, 10 parts of bitumen, and approximately equal proportions of cement, asbestos, carbonate of soda, chalk, sand and shell to make up the remaining 20 parts, the ingredients of said composition being previously mixed and boiled, substantially as set forth.

876,378. TUBULAR BOILER. WILHELM MÖLLER, Hamburg, Germany. Filed Mar. 30, 1906. Serial No. 308,885.



A boiler having an upper perforated water chamber above the water level, covers closing said chamber, pipes connecting said chamber with the boiler below the water level, a lower perforated water chamber below the upper water chamber, covers closing said lower chamber, curved pipes connecting the upper and lower chambers and removable through the chamber-perforations, and a feed water pipe entering the lower chamber, substantially as specified.

876,379. TYPE-WRITING MACHINE. HERMAN P. MOORENSS, Weehawken, N. J., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed June 27, 1906. Serial No. 323,667.



1. In tabulating mechanism of a typewriting machine, the combination with the carriage of two stops coöperative with each other to arrest the carriage, and means operative by hand to move both of said stops while the carriage is at rest, said means being composed of an actuating device, and separate connections operative thereby to transmit motion from said device to said stops.

2. In tabulating mechanism of a typewriting machine, the combination with the carriage of two stops coöperative with each other to arrest the carriage, and means operative by hand to move both of said stops while the carriage is at rest, said means being composed of an actuating device, and separate connections operative thereby to transmit motion from said device to said stops, the mechanism of one of said connections being operative independently.

3. In tabulating mechanism of a typewriting machine, the combination with the carriage of two stops coöperative with each other to arrest the carriage, said stops being supported on standards affixed to the frame of the machine, and means operative by hand to move both of said stops while the carriage is at rest.

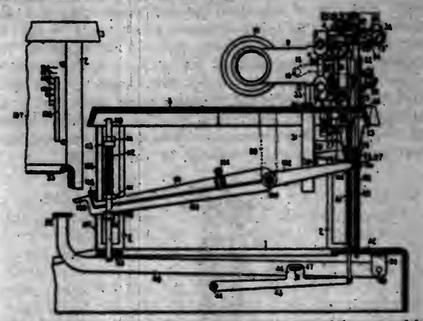
4. In tabulating mechanism of a typewriting machine, the combination with the carriage of two stops coöperative with each other to arrest the carriage, said stops being supported on standards affixed to the frame of the machine, and means operative by hand to move both of said stops while the carriage is at rest, said means including a common actuating device.

5. In tabulating mechanism of a typewriting machine, the combination with the carriage of two stops coöperative with each other to arrest the carriage, and means operative by hand to move both of said stops while the carriage is at rest, said means including two levers pivoted to the frame of the machine and connected with said stops respectively.

[Claims 6 to 68 not printed in the Gazette.]

876,380. TYPE-WRITING MACHINE. HERMAN P. MOORENSS, Weehawken, N. J., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed June 27, 1906. Serial No. 323,668.

1. In tabulating mechanism of a type-writing machine, the combination with the carriage of two stops coöperative with each other to arrest the carriage, and means operative by hand to move both of said stops while the carriage is at rest, said means including a lever pivoted on a fixed axis and connected with one of said stops, and a pivoted actuating device operative on said lever when said device is moved on its pivotal axis, and said device being movable on its pivotal axis when said lever is at rest and being operative to actuate said other stop.



2. In tabulating mechanism of a type-writing machine, the combination with the carriage of two stops coöperative with each other to arrest the carriage, and means operative by hand to move both of said stops while the carriage is at rest, said means including a lever and an actuating device pivoted together, the lever being connected with one of said stops, and the actuating device being operative to impart motion to said lever and the stop connected therewith, and being movable angularly to actuate said other stop.

3. In tabulating mechanism of a type-writing machine, the combination with the carriage of two stops coöperative with each other to arrest the carriage, and means operative by hand to move both of said stops while the carriage is at rest, said means including a lever and an actuating device mounted on a common fixed axis, the lever being connected with one of said stops, and the actuating device being operative to impart motion to said lever and the stop connected therewith, and being movable angularly to actuate said other stop.

4. In tabulating mechanism of a type-writing machine, the combination with the carriage of two stops coöperative with each other to arrest the carriage, and means operative by hand to move both of said stops while the carriage is at rest, said means including an actuating device pivoted at one end to a support and movable at its other end in one direction to actuate one of said stops, and in the opposite direction to actuate the other stop.

5. In tabulating mechanism of a type-writing machine, the combination with the carriage of two stops coöperative with each other to arrest the carriage, and means operative by hand to move both of said stops while the carriage is at rest, said means including an actuating device pivoted at one end to a support on the frame of the machine and extending thence forward beyond the front posts of the frame, said device being movable at its front end upward and downward and being operative when it is so moved to actuate both of said stops.

[Claims 6 to 37 not printed in the Gazette.]

876,381. EQUALIZING MECHANISM. FELIX MUELLER, New York, N. Y., assignor to Standard Stopper Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 14, 1905. Serial No. 241,133.

1. In a bottle capping machine, the combination with a driving mechanism having a constant stroke, of a pair of pressure heads, connections whereby the driving mechanism produces a relative movement between the heads, a pair of arms pivoted at their inner ends, the inner ends of the arms lying nearer the line of movement of the heads than the outer ends and the arms being disposed at an angle to said line of movement which is other than a right angle, means whereby more than a predetermined pressure exerted between the heads causes a spreading movement of the arms, and means for opposing an increasing resistance to the movement of the arms.

2. In a bottle capping machine, the combination with a driving mechanism having a constant stroke, a pair of pressure heads, connections whereby the driving mechanism produces a relative movement between the heads, a pair of arms pivoted at their inner ends, the inner ends lying nearer the line of movement of the heads than the outer ends and the arms being disposed at an angle to said line of movement which is other than a right angle, links pivoted to the outer ends of the arms, a spring connected to one of the links, and supporting means for the spring carried by the other link, whereby when more than a predetermined pressure is exerted between the heads a spreading movement of the arms and links is effected, said movement being increasingly resisted by the spring.



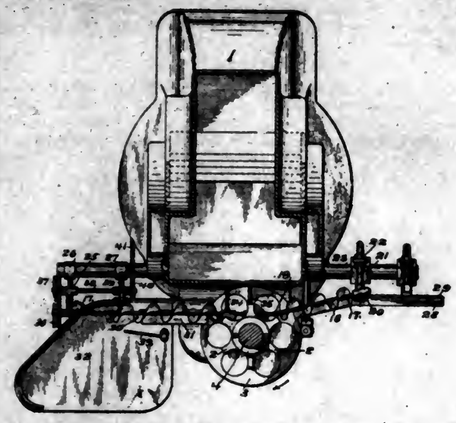
3. In a bottle capping machine, the combination with a driving mechanism having a constant stroke, of a pair of pressure heads, connections whereby the driving mechanism produces a relative movement between the heads, two pairs of arms pivoted at their inner ends, the inner ends of the arms lying nearer the line of movement of the heads than the outer and the arms being disposed at an angle to the line of movement which is other than a rigid angle, a pair of links, said links connecting the outer ends of corresponding arms, a spring secured to one of the links, and supporting means for the spring carried by the other link, whereby when more than a predetermined pressure is exerted between the heads a spreading movement of the arms and links is effected, said movement being increasingly resisted by the spring.

876,382. FEEDING MECHANISM. FELIX MUELLER, New York, N. Y., assignor to Standard Stopper Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 14, 1905. Serial No. 241,134.

1. The combination with a receptacle presenting device, of means for giving it an intermittent movement, a screw conveyer for forwarding the receptacles to the presenting device, and means for automatically presenting the receptacles to the conveyer in an inclined position, the inclination of the receptacles being toward the axis of the conveyer.

2. The combination with a receptacle presenting device, of means for giving it an intermittent movement, a screw conveyer for positively forwarding the receptacles to the presenting device in an inclined position, the inclination of the receptacles being toward the axis of the conveyer, and a support and guide operating respectively on the bottom and side of the receptacles, said support and guide being inclined with respect to the conveyer so that the receptacles may roll down it into the range of action of the conveyer.

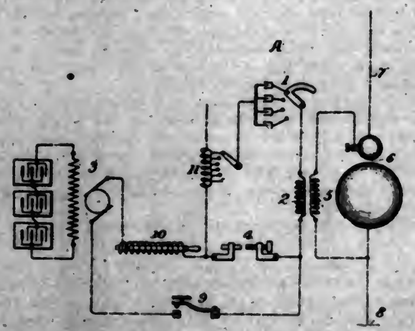
3. The combination with a receptacle presenting device, of means for giving it an intermittent movement, a receptacle support, a screw conveyer for moving the receptacles along the support to the presenting device, a receiving support, a screw conveyer for forwarding the receptacles along the receiving support, and means for continuously operating both conveyers.



4. The combination with a receptacle presenting device comprising a star wheel, of a table on which the receptacle rests, means for giving the star wheel an intermittent movement, a support, a screw conveyer for moving the receptacles along the support and into the range of action of the star wheel, a receiving support, and a screw conveyer for moving the receptacles away from the star wheel and along said support, and means for continuously operating both conveyers.

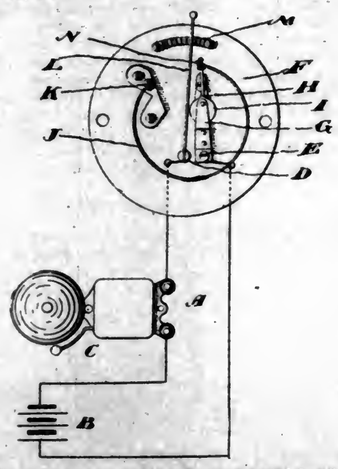
5. In a capping machine, the combination with a capping head, of a presenting device, means for giving the presenting device an intermittent movement, means for producing a relative movement between the head and presenting device to bring the receptacle to be capped into the range of action of the capping head, a receptacle support, a screw conveyer for forwarding the receptacles along the support to the presenting device, a receiving support, a screw conveyer for moving the receptacles along this support away from the presenting device, and means for continuously operating the conveyers.

876,383. MEANS FOR PRODUCING ELECTROMAGNETIC WAVES. JOSEPH MURDAS, Wilkes-Barre, Pa. Filed Jan. 4, 1905, Serial No. 239,632. Renewed Nov. 26, 1907. Serial No. 403,904.



In a means for producing electro-magnetic waves, the combination with a spark gap, of an adjustable condenser, an adjustable inductance, means for adjusting said condenser at will, means for adjusting said inductance at will, a transformer, the primary of said transformer, said inductance and said condenser being connected in series across said spark gap, a second spark gap, an antenna operatively associated therewith, said second spark gap being connected in series with the secondary of said transformer, a direct current source, a second inductance means for varying said second inductance at will, and a key and connections adapted to connect the said second inductance and the said source in series across the first mentioned spark gap, substantially as described.

876,384. AUTOMATIC FIRE-ALARM. SAMUEL MURRAY, Dublin, Ontario, Canada. Filed Apr. 20, 1907. Serial No. 369,332.



1. The combination of a compound metal band fixed at one end; a cam suitably pivoted; a lever arm extending from the cam and to which the other end of the band is connected; and a contact piece with which the cam is adapted to contact when the latter is rocked by the movement of the lever arm by the bending of the compound metal band under the action of heat.

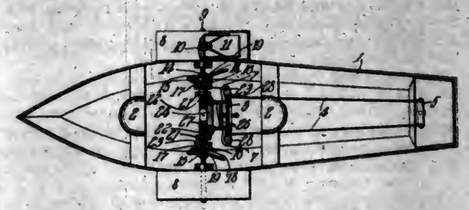
2. The combination of a compound metal band fixed at one end; a cam suitably pivoted; a lever arm extending from the cam and to which the other end of the band is connected; and a contact piece comprising a pivoted arm adjustable to and from the cam and with which the cam is adapted to contact when the latter is rocked by the movement of the lever arm by the bending of the compound metal band under the action of heat.

3. The combination of a metal band fixed at one end; a cam suitably pivoted; a lever arm extending from the cam and to which the other end of the band is connected; and a pivoted adjusting contact piece with which the cam is adapted to contact at a point between its pivot and its end when the latter is moved by the bending of the metal band under the action of heat.

4. The combination of a metal band fixed at one end; a cam suitably pivoted; a lever arm extending from the cam and to which the other end of the band is connected; and a pivoted adjusting contact piece with which the cam is adapted to contact when the latter is moved by the bending of the metal band under the action of heat and a stop for preventing contact of the cam with the contact piece under the action of extreme cold.

876,385. PROPELLING APPARATUS FOR BOATS. JAMES A. MCILWEE, Cripple Creek, Colo. Filed Sept. 16, 1907. Serial No. 393,203.

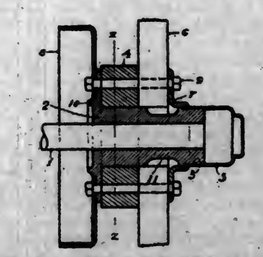
1. The combination with a boat having oppositely disposed seats; of a drive shaft interposed between the seats and having a crank, oscillatory means interposed between the seats and engaging the crank for rotating the shafts, paddle wheels at the sides of the boat, a lever for placing either of said wheels in or out of operative relation with the drive shaft, and means disposed to be engaged by each lever to lock the wheels against movement.



2. The combination with a boat; of a drive shaft journaled therein, means for rotating the shaft, clutch members revoluble with the end portions of the shaft, shafts projecting beyond and alining with the first mentioned shaft, paddles carried thereby, clutch members slidably engaging the projecting shafts, oscillatory means disposed when moved in one direction to shift the slidable clutch member into engagement with the adjoining clutch member of the drive shaft, and when shifted in the opposite direction to uncouple the clutch members and engage the slidable clutch member to lock it and its shaft against rotation.

3. The combination with a boat, paddle shafts journaled thereon, and a drive shaft; of a clutch member movably mounted upon each paddle shaft, and means disposed when moved in one direction to couple said member with the drive shaft, and when moved in the opposite direction to uncouple said member from the drive shaft and place it in engagement with said means to lock the paddle shaft against rotation.

876,386. WHEEL. SAMUEL B. MCMASTER, Columbia, S. C. Filed Aug. 3, 1907. Serial No. 386,928.



1. In combination with a road vehicle, an axle-box having a shoulder, a wheel mounted upon said box, a removable clamping piece, spacing means adapted to either side of the wheel nave, and means for securing said parts together.

2. In combination with a road vehicle and its axle, an axle-box having a shoulder, a wheel mounted thereon, a removable collar, gage changing means adapted to fit between said shoulder and wheel nave, and means for securing said parts together.

3. In combination with a road vehicle and its axle, an axle-box having an integral shoulder, a wheel mounted on said box, a removable clamping piece, spacing blocks carried on either side of the wheel nave between said shoulder and clamping piece, and means for securing said parts together, substantially as and for the purpose set forth.

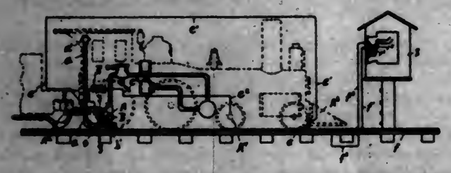
4. In combination with a road vehicle and its spindle, an elongated axle-box having a shoulder, a wheel mounted on said box and having transverse openings through its nave, a removable collar on said box, gage changing pieces having one or more openings registering with the openings in the nave of the wheel and carried between said shoulder and collar, and bolts for securing said collar gage pieces and wheel to the axle-box.

5. In combination with a road vehicle and its spindle, an elongated axle-box having an inner shoulder, a road

wheel mounted on said box and having transverse perforations through its nave, a removable perforated collar for said box, gage adjusting sectors carried on either side of the wheel nave and having perforations registering with the perforations through the nave and collar, and bolts passing through said perforations and positively locking said parts together.

[Claims 6 and 7 not printed in the Gazette.]

876,387. BRAKE-SETTING APPARATUS FOR RAILWAYS. JOHN J. MCNAMER, Norwood, Ohio. Filed Aug. 5, 1907. Serial No. 387,044.



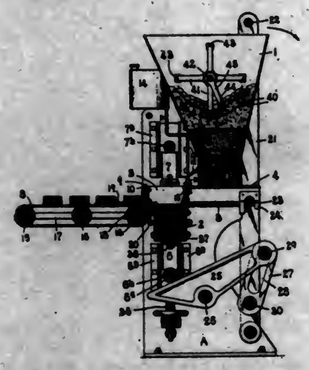
1. In combination with a railway car air brakes located upon the car, a valve carried by the air-brakes and the opening of which actuates the air-brakes, an arm connected to the valve for opening and closing the same, an electro-magnet secured upon the car, an armature mounted adjacent to the magnet so as to be moved thereby when the magnet is energised, means for conveying the movement to the armature of the arm to open and close the valve, a source of electrical energy located upon the car, an electrical contact piece carried by the car adjacent to the tracks and insulated from the wheels of the car, a broken circuit leading from the source of energy in which circuit the electro-magnet is placed, one end of the circuit being connected to said contact piece and the other end being in communication with the wheel of the car, a contact device adjacent to the track and adapted normally to complete electrical communication between the track and the contact piece on the car when the car passes over said contact device and a means whereby an operator may prevent the completion of said communication.

2. In combination with a car having air-brakes, a valve connected to the air-brake the opening of which actuates the same, an arm connected to the valve for opening and closing it, an electro-magnet secured upon the car, an armature mounted adjacent to the magnet to be moved thereby when the magnet is energised, means for conveying the movement of the armature to the arm to open the valve, a source of electrical energy located upon the car, an electrical contact piece carried by the car adjacent to the tracks and insulated from the wheels, a broken circuit leading from the source of energy, in which circuit the electro-magnet is placed, one end of the circuit being connected to the contact piece and the other end being in communication with a wheel of the car, a second electrical contact piece placed adjacent to the track in the path of the contact piece upon the car, a conductor for connecting the second contact piece with the track and a switch located in said conductor for making and breaking the circuit.

3. In combination with a car having air-brakes, a valve connected to the air-brake the opening of which actuates the same, an arm connected to the valve for opening and closing it, an electro-magnet secured upon the car, an armature mounted adjacent to the magnet to be moved thereby when the magnet is energised, means for conveying the movement of the armature to the arm to open the valve, a source of electrical energy located upon the car, an electrical contact piece carried by the car adjacent to the tracks and insulated from the wheels, a broken circuit leading from the source of energy, in which circuit the electro-magnet is placed, one end of the circuit being connected to the contact piece and the other end being in communication with a wheel of the car, a second electrical contact piece placed adjacent to the track in the path of the contact piece upon the car, a conductor for connecting the second contact piece with the track, a switch located in said conductor, an automatic means for holding the switch in a position normally to close said conductor and a means actuated by an operator for throwing the switch to open the said conductor.

4. In combination with a locomotive engine Westinghouse air-brakes upon the engine, a valve located in the train pipe the opening of which applies the brakes, an arm carried by the valve the movement of which opens and closes the valve, an electro-magnet upon the engine, an armature pivoted upon the magnet, a lever for holding the arm of the valve in its closed position, a means for connecting the lever and the armature whereby the movement of the armature toward the magnet releases the arm to open the valve, a contact piece carried by the fender and insulated from the wheels of the engine, an electric battery carried by the engine, a broken circuit leading from the battery in which the armature is included, one of the broken ends of said circuit being connected to the contact piece on the tender and the other end of the circuit being connected to a wheel of the engine, a contact strip mounted adjacent to the rails, a conductor connecting the strip with the rails, and a switch interposed in the conductor for making and breaking the conductor.

876,388. BRICK-PRESS. JOSEPH J. NIETERS, St. Louis, Mo. Filed Mar. 12, 1907. Serial No. 361,978.



1. In a brick-press, a support having rolls journaled thereon, an endless belt mounted on said rolls, means for feeding the bricks onto said belt as they are ejected from the mold box, a toothed wheel connected to one of said rolls, and a toothed bar secured to the member that moves the bricks onto the belt, said bar being adapted to move said toothed wheel; substantially as described.

2. In a brick-press, a hopper for receiving the material from which the bricks are formed, a mold box arranged below the lower end of said hopper and out of vertical alinement therewith, a charging device mounted between said mold box and the hopper for conveying the material from the hopper to the mold box, an endless conveyer arranged adjacent the upper end of the mold box, a roll around which said conveyer passes, a toothed wheel connected to said roll, and a toothed bar pivotally connected to said charging device for actuating said toothed wheel at each operation of the machine; substantially as described.

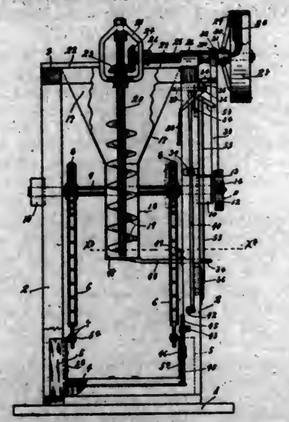
3. In a brick-press, a plunger, a movable member adapted to travel past said plunger, a pad carried by said movable member for applying a lubricant to the pressing face of the plunger, a receptacle for holding a quantity of lubricant, and means actuated by said movable member for tilting said receptacle to discharge the lubricant onto said pad; substantially as described.

4. In a brick-press, a plunger, a movable member provided with a pad for applying oil to the pressing face of said plunger, an oil-holding tank, a movable member for controlling the flow of oil from said tank, and means for actuating said member to supply the pad with oil and thereafter cut off the oil supply; substantially as described.

5. In a brick-press, a plunger, a movable member provided with an oil pad for applying oil to the pressing face of said plunger, a pivotally mounted cup provided with an arm that projects into the path of movement of said member, and means for supplying oil to said cup; substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

876,389. FEED-PACKING MACHINE. JACOB M. NIKOLAI, Madison, Minn. Filed May 31, 1907. Serial No. 376,462.



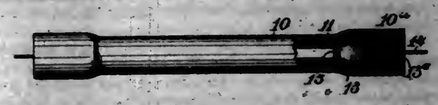
1. In a packing machine of the kind described, the combination with a hopper having a depending spout and a packer working therein, of an edgewise movable valve for closing the lower end of said spout, a yielding device tending to move said valve into an inoperative position, and a latch for securing said valve in an operative position, which latch is releasable at will, substantially as described.

2. In a packing machine of the kind described, the combination with a hopper having a depending spout and a spiral packer working rotatively therein, of a horizontally movable pivoted arm provided at its free end with a flat disk-like head serving as a valve to close the lower end of said spout, a spring applied to said arm and tending to move said valve into an inoperative position, and a pivoted latch dog operative on said arm to hold said valve in an operative position, substantially as described.

3. In a packing machine of the kind described, the combination with a delivery spout and a packer working therein, of a yieldingly mounted platform below said spout, a counter-shaft geared to said packer, a pulley loose on said counter-shaft, a clutch for intermittently connecting said pulley to said shaft, and clutch actuating mechanism comprising a shipper lever, a spring-actuated connection to said shipper lever tending to release said clutch, an intermediately pivoted latching and tripping lever serving to hold said spring-actuated connection out of action when the clutch is set, and a trip carried by said platform operative on said lever to cause the same to release said spring-actuated connection and thereby cause the latter, through said clutch, to release said pulley, substantially as described.

876,390. INCANDESCENT ELECTRIC LAMP. HERSCHEL C. PARKER and WALTER G. CLARK, New York, N. Y., assignors to Parker-Clark Electric Company, Jersey City, N. J., a Corporation of New Jersey. Filed Jan. 24, 1906. Serial No. 297,540.

1. The combination with a relatively high resistance electrical conductor, of a contacting member lying against and making a side contact with the said conductor, the said contacting member being graduated from a higher to lower resistance from one end portion to the other.



2. The combination with a hollow member having a refractory conductive lining, of a contact member filling the end portions of the said hollow member, the contacting member being of gradually varying resistance and contacting along its sides with said conductive lining.

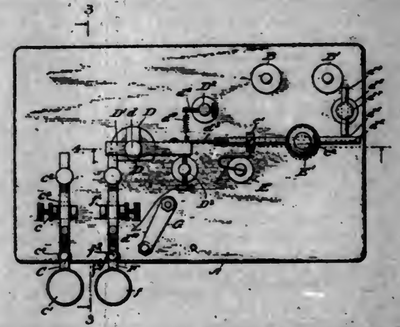
3. The combination with a hollow member having a refractory conductive lining, of a contact portion forming a closure in the end of the said hollow member, the said contact portion being relatively high resistant at its inner end and relatively low resistant at its outer end and contacting along its sides with the conductive lining.

4. The combination with a refractory conductor, of contacts at the end portions of and making a side contact with the conductor, the said contacts being adapted to connect with a source of electrical supply and gradually increasing in resistance from their outer to their inner portions.

5. The combination with a hollow member having a refractory conductive lining, of a contact portion of gradually varying resistance filling the end portions of said hollow member, and making contact along the sides of said contact member and conductor and means for limiting the inward extension of the said contacting portion.

[Claims 6 and 7 not printed in the Gazette.]

876,391. TELEGRAPHIC KEY. ROY K. PATTERSON, Chicago, Ill., assignor of one-half to Martha Patterson, Chicago, Ill. Filed Dec. 29, 1906. Serial No. 350,056.



1. In a telegraphing instrument an electrical circuit, a dash key adapted to make and break said circuit, a vertically acting dot key, a bar contacted thereby when depressed and a vibrating bar resiliently supported by said bar adapted when the vertically movable dot key is contacting said first named bar to vibrate one or more times.

2. In a telegraphing instrument, the combination in an electrical circuit of a dash key adapted to make and break the circuit, a corresponding vertically acting dot key secured adjacent thereto but not connected in the circuit, a support adjacent the end of the dot key, a bar resiliently supported therefrom actuated by vertical movement of the dot key and vibrated by contact between said dot key and the support for the same to make and break said circuit one or a plurality of times for each actuation of said dot key.

3. A device of the class described embracing in combination a telegraphic circuit key for transmitting dashes, a vibrating bar adapted by vibration thereof to make and break said circuit rapidly in transmitting dots, a vibrator bar, resilient means engaged thereto at one end and supporting said vibrating bar at its free end and a vertically

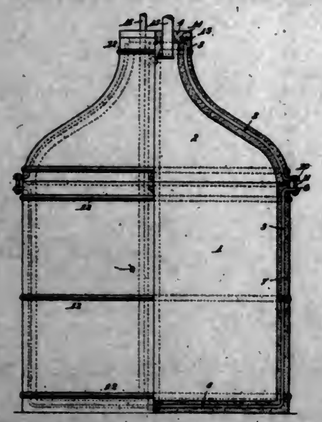
acting key for actuating the vibrator bar, thereby vibrating said vibrating bar and the number of dots transmitted being dependent upon the period of time said key is held depressed.

4. A device of the class described embracing in combination a telegraphic circuit key for transmitting dashes, a vibrating bar adapted by vibration thereof to make and break said circuit rapidly in transmitting dots, a pivoted support having resilient connections with said bar and a vertically acting key adapted to contact and actuate the support thereby actuating said vibrating bar and the number of dots transmitted being dependent upon the period of time said key is held depressed.

5. In a device of the class described a telegraphic instrument embracing in combination with a telegraphic circuit a dash key for transmitting dashes, a similar dot key adjacent thereto but out of circuit, a vibrating bar connected in the circuit and having an inclined face on the side thereof adjacent to and adapted to be engaged by said dot key whereby when said key is depressed said bar is swung horizontally, a rod yieldingly secured to and in alinement with said bar, a spring contact supported adjacent said rod and connected in circuit and adapted to be contacted by said rod rapidly during the period said key is held down and a weight adjustable on the bar for varying the rate of vibration.

[Claims 6 to 12 not printed in the Gazette.]

876,392. CISTERN. ANDREW G. PETERSON, Wahpeton, N. D. Filed June 29, 1906. Serial No. 324,069.

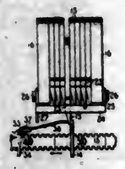


1. A cistern comprising a hollow body made of plastic material in one homogeneous piece, and a plurality of reinforcing metal strips embedded in said body, each metal strip extending diametrically across the bottom of said body, then up the sides in a vertical direction to a point near the top, the ends thereof being bent outwardly to project in a radial direction through and beyond the exterior face of the cistern wall to form attaching lugs.

2. A cistern comprising a hollow body and cover each made of plastic material in one homogeneous piece, a plurality of reinforcing metal strips embedded longitudinally in the side wall of said body, the upper end of each reinforcing strip bent outwardly to project through and beyond the exterior face of the body wall, a plurality of metal reinforcing strips embedded in said cover and in alinement throughout their length with those in the body and bent outwardly at their lower ends to project through and beyond the wall of the cover, and means for connecting each reinforcing strip in said body to an alined strip in the cover.

3. A cistern comprising a body and separable cover each made of plastic material, a plurality of reinforcing metal strips embedded longitudinally in the side wall of said body, the upper end of each reinforcing strip bent outwardly to project through and beyond the exterior face of the body wall, a plurality of metal reinforcing strips embedded in said cover and in alinement throughout their length with those in the body and bent outwardly at their lower ends to project through and beyond the wall of the cover, means for connecting each reinforcing strip in said body to an alined strip in the cover, and reinforcing bands extending horizontally around the exterior of said body and cover and partly embedded in the substance thereof.

876,393. TYPE-WRITING MACHINE. WILLIAM V. PATTERSON, Minneapolis, Minn., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y., a Corporation of New York. Filed May 5, 1905. Serial No. 258,931.



1. In a typewriting and tabulating mechanism, the combination of a carriage; a stop thereon; a stop on the frame of the machine; means for projecting one of said stops into the path of the other stop and for releasing the carriage; and a third stop independent of and unconnected with both of said first named stops and adapted to engage one of said first named stops to prevent rebound of said carriage.

2. In a typewriting and tabulating mechanism, the combination of a carriage; a stop thereon; a stop on the frame of the machine; means for projecting one of said stops into the path of the other stop and for releasing the carriage; and an independently adjustable and separately movable stop adapted to engage one of said first named stops to prevent rebound of the carriage.

3. In a typewriting and tabulating mechanism, the combination of a carriage; a rack bar; a stop mounted on said rack bar and adjustable longitudinally thereof; a second stop; means for projecting one of said stops into the path of the other and for releasing the carriage; and a third stop mounted upon said rack bar and adjustable thereon independently of said first named stop, said third stop being adapted to engage one of the other stops to prevent rebound of the carriage.
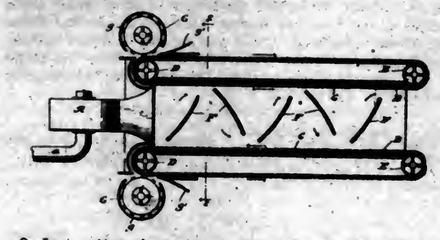
4. In a typewriting and tabulating mechanism, the combination of a carriage; a rack bar disposed longitudinally of said carriage; a column stop adjustable along said rack bar; an anti-rebound stop adjustable on said rack bar independently of said column stop; and another stop adapted to co-act, when the tabulating mechanism is operated, with the said column stop in one direction and with said anti-rebound stop in the opposite direction.

5. In a typewriting and tabulating mechanism, the combination of a carriage; a stop thereon; a stop on the frame of the machine, one of said stops being adapted to co-act with the other after the carriage has been released by the operation of the tabulating mechanism; and a third stop independent of both of the other two stops and unconnected with either, the construction being such that when the carriage is arrested by the co-action between the first named stops, one of the co-acting stops will be embraced between the other and said third stop.

[Claims 6 to 19 not printed in the Gazette.]

876,394. COTTON-CLEANER. FRANK PHELPS, Wellston, Okla. Filed May 1, 1907. Serial No. 371,268.

1. In a cotton cleaner or separator, the combination of a passage through which cotton to be cleaned is forced by an air-current, a plurality of conveyers in said passage facing in different directions and running counter to said air-current and adapted for catching cotton blown thereagainst, means whereby the air current with the cotton carried thereby is directed or deflected successively against said conveyers, and means outside of said passage for removing the cotton from the conveyers.



2. In a cotton cleaner or separator, the combination of a passage through which cotton to be cleaned is forced or carried by an air-current, conveyers in opposite sides of said passage running counter to said air-current and provided with means for catching and retaining cotton blown thereagainst, means for directing or deflecting the air-current successively or alternately against said conveyers, and means outside of said passage for removing the cotton from the conveyers.

3. In a cotton cleaner or separator, the combination of a blast passage through which cotton to be cleaned is forced or carried by an air-current, means for deflecting the air-current against opposite sides of said passage, and cotton collectors traveling along opposite sides of said passage counter to said air-current, and means outside of said passage for removing the cotton from said collectors.

4. In a cotton cleaner or separator, the combination of a blast passage through which cotton is carried by an air-current, means for deflecting said air-current against opposite sides of said passage, and endless belts running in opposite sides of said passage counter to the air-current and returning outside of said passage, said belts being provided with carding-cloth or teeth for catching the cotton blown thereagainst, and revolving brushes coacting with the belts outside of said passage for removing the cotton therefrom.

5. In a cotton-cleaner or separator, a passage for a cotton-conveying blast or air-current and a plurality of conveyers therein traveling contrary to the general direction of the air-current and adapted to collect cotton blown thereagainst, the arrangement being such that the blast or air-current takes a substantially zigzag course first against one conveyer and thence against another.

876,395. LOOSE-LEAF BOOK. WILLIAM P. PITT, Independence, Mo., assignor to Irving-Pitt Mfg. Co., Kansas City, Mo. Filed Nov. 5, 1906. Serial No. 342,009.



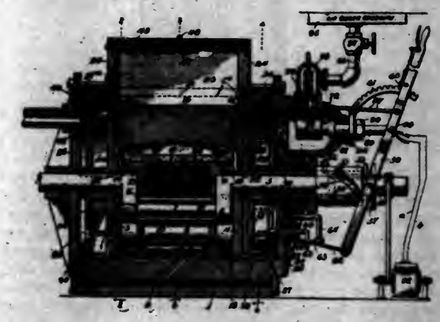
1. The combination with a loose-leaf book having a plurality of rockingly mounted hook-carrying members, of means operated by pressure on the back of the book and adapted to press against and rock said members to open the hooks.

2. The combination with a loose-leaf book having a plurality of rockingly mounted hook-carrying members, of means operated by pressure on the back of the book and provided with projections adapted to press against and rock said members to open the hooks.

3. The combination with a loose-leaf book having a plurality of rockingly mounted hook-carrying members, of a back-plate secured to the back of said book and provided with means operated by pressure on the back of the book and adapted to press against and rock said members to open the hooks.

4. The combination with a loose-leaf book having a plurality of hook-carrying members, and a spring-plate in which said members are rockingly mounted, said plate having openings extending therethrough, of means provided with projections extending through said openings and adapted to press against and rock said members to open the hooks.

876,396. ROTARY MOTOR. JOHN C. REUTER, New York, N. Y., assignor to Reuter Manufacturing Company, Pleasantville, N. J., a Corporation of New Jersey. Filed Oct. 7, 1904, Serial No. 227,600. Renewed June 3, 1907. Serial No. 377,048.



1. In a rotary motor, the combination with a cylinder and a motor shaft having a crank therein, of an epicyclic piston mounted on the crank and comprising inner and outer cylindrical members, and sliding partitions connected to the outer piston member, said outer member being of sufficient dimensions to permit the withdrawal of the inner member and the crank.

2. In a rotary motor, the combination with a cylinder provided with radial grooves and pockets, of an epicyclic piston within the cylinder, a series of partitions, wear plates detachably connected to the ends of the partitions and received within the grooves in the cylinder, means for operatively connecting the inner ends of the wear plates with the piston, whereby said piston effects the reciprocation of the partitions, and wear blocks mounted in the partitions and engaging the periphery of the piston.

3. In a rotary motor, the combination with a cylinder and a motor shaft provided with a separable crank located therein, of a cylindrical piston mounted on the pin of the crank and comprising separable inner and outer members, the outer member being of sufficient dimensions to permit the withdrawal of the inner member therefrom, whereby the motor crank may be removed without disorganizing the piston or the shaft, and the inner piston member removed without disturbing the outer piston member.

4. In a rotary motor, the combination with a cylinder and a motor shaft having a crank therein, of an epicyclic piston mounted on the crank and comprising inner and outer cylindrical members, a wear sleeve within the inner member, and a series of rollers interposed between said wear sleeve and the pin of the crank.

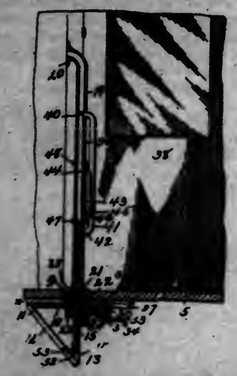
5. In a rotary motor, the combination with a cylinder provided with radial pockets and heads, of sliding partitions movable into the pockets, a piston coöperating with the partitions, and detachable end plates closing the ends of the pockets and constituting separable extensions of the heads.

[Claims 6 to 44 not printed in the Gazette.]

876,397. VESTIBULE-DOOR AND PLATFORM CONTROLLING MECHANISM. FRANK C. REYNOLDS, Columbus, Ohio. Filed Mar. 11, 1907. Serial No. 361,712.

1. In a device of the character described, the combination with a car, of a trap door and a vestibule door, a

member which is vertically movable and capable of rotation, a handle connected to said member, and connections between said member and the trap door and connections between said member and the vestibule door.



2. In a device of the character described, the combination with a car, of a hinged trap door adapted to close the space at the top of the steps of said car, a vestibule door, a tubular member, a rod slidably disposed in said tubular member, a handle adapted to impart vertical movement and rotative movement to said rod, a pinion to which said rod is adapted to impart rotation, connections between said rod and the trap door, and connections between said pinion and the vestibule door.

3. In a device of the character described, the combination with a car, of a hinged trap door adapted to close the space at the top of the steps of said car, a vestibule door, a tubular member, a rod slidably disposed in said tubular member, a handle adapted to impart vertical movement and rotative movement to said rod, a pinion to which said rod is adapted to impart rotation, connections between said rod and the trap door, connections between said pinion and the vestibule door, and automatic means controlled by the movement of the platform for locking the vestibule door in its closed position.

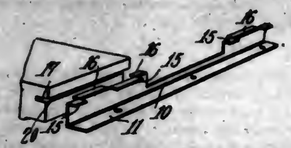
4. In a device of the character described, the combination of a car, of a hinged trap door adapted to close the space at the top of the steps of said car, a vestibule door, a tubular member, a rod slidably disposed in said tubular member, a handle adapted to impart vertical movement and rotative movement to said rod, a pinion to which said rod is adapted to impart rotation, connections between said rod and the trap door, connections between said pinion and the vestibule door, automatic means controlled by the movement of the platform for locking the vestibule door in its closed position, and means for locking said vestibule door in its open position.

876,396. INKING-PAD RECEPTACLE. RICHARD W. ROBERTS, Washington, D. C. Filed Apr. 14, 1906. Serial No. 311,790.



An inking pad receptacle having a cover hinged to one side thereof at the upper edge of such side, and a spring pivoted at its lower end to such side for movement in a vertical plane parallel with such side to dispose the free end of such spring either against such side of the receptacle, below the upper edge thereof, out of the way of the cover, or below such side to engage the hinged side of the cover when the latter is open, said spring having an outwardly extending offset portion near the free end thereof to facilitate grasping of such spring and having its free end curved outwardly, the length of such spring being such that the free end thereof projects beyond the outer side of the cover when the latter is open, and lies against the hinged side of the cover and wholly below the plane of the outer or upper surface thereof when the cover is closed.

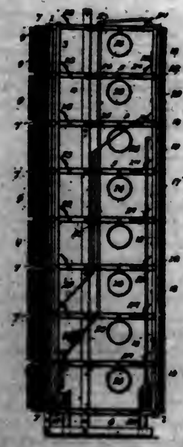
876,399. TILE-FASTENER. HENRY L. ROBINSON, Lake Charles, La. Filed May 9, 1907. Serial No. 372,730.



1. A tile fastener comprising an elongated metallic strip having a web and a continuous base flange at one edge thereof, the web of the fastener being cut away at intervals to pass to the rear of alternate courses of tiles, the edges of the higher portions of the web being slit, and the portions between the slits being bent to form tile engaging ears.

2. A tile fastener comprising an elongated strip forming a web and bent at one edge to form a continuous base flange, the web having alternate higher and lower portions, the lower portions forming supports for engaging against the rear faces of the tiles of alternate courses, and the higher portions of the web being slit and bent to form ears that extend alternately in opposite directions.

876,400. ELECTRICAL DISTRIBUTING-RACK. CHARLES A. ROLFE, Adrian, Mich., assignor, by mesne assignments, to Rolfe Electric Co., Rochester, N. Y., a Corporation of New York. Filed Feb. 17, 1903. Serial No. 143,832.



1. A distributing rack comprising a frame having vertically disposed supporting strips and horizontally disposed cross strips extending between said vertical strips, the latter being formed in sections, which are arranged end to end and extend respectively between adjacent cross strips, the sections on the front side of the rack being for protectors and on the rear side for terminals, the terminal sections being provided with forwardly and rearwardly extending apertures for cross-connecting wires and being provided with connecting clips in the rear of said apertures.

2. In apparatus of the class specified, the combination

with a frame, of strips 10 and 11 arranged end to end across the front of said frame and provided with forwardly and rearwardly extending apertures, a strip 12 secured to the strip 11 and extending rearwardly therefrom, and strips 14, 15 and 16 secured to the strip 12 in the rear thereof, the strips 14 and 15 being provided with cross slots into which are fitted metal terminal clips 19 and 20, substantially as described.

3. In a distributing rack, a clip section comprising a detachable support, a pair of insulating strips 14 and 15 secured to one edge of said support and provided with transverse slots, the strip 15 being outside of the strip 14, clips 19, 19 and 20, 20 provided with ears or lugs 21, 21 and fitted in the slots of said strips, a strip 16 outside of the strip 15, a strip 17 outside of the strip 16, and means for holding the strip 17 in position, substantially as described.

876,401. CANDLESTICK. ARTHUR A. ROLAND, Greenville, Ohio. Filed Feb. 18, 1907. Serial No. 357,915.



The combination of a base provided with a centrally disposed upstanding boss, a socket arranged on the boss, an internally and exteriorly threaded collar nut projecting through the boss and socket and bearing against the under side of the base, a jam nut engaging the collar nut to clamp the base and socket together, a threaded plunger engaging the collar nut, a knob secured to the lower end of the plunger, and disks secured to the upper end of the plunger and being of considerably less diameter than the bore of the socket whereby to obviate binding, the knob and disks operating to prevent the disconnection of the plunger from the socket, thereby to prevent loss of the former.

876,402. HAIR-CURLER. WILLIAM F. SCHACHT, Goshen, Ind. Filed Apr. 8, 1907. Serial No. 367,043.

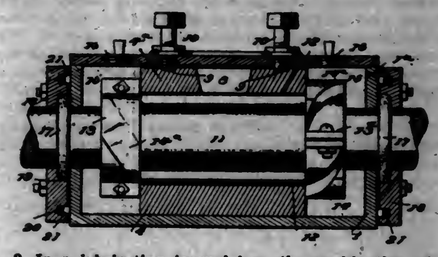


1. As an article of manufacture, a hair curler made of soft resilient material in the form of a pin, having a tapered tip, a perforated head and a finger piece projecting from the head.

2. As an article of manufacture, a hair curler made of soft resilient material in the form of a pin, having a perforated head, a tapered tip provided on one side with a plurality of longitudinally spaced lugs, and a finger piece projected from said head.

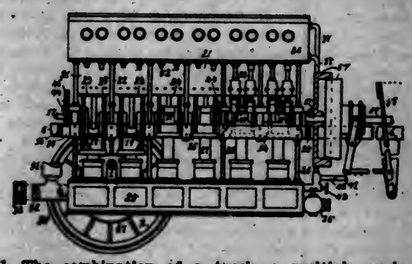
876,403. LUBRICATING JOURNAL-BOX. CHRISTIAN SEIDEL, Youngstown, Ohio. Filed Nov. 24, 1906. Serial No. 344,969.

1. In a lubricating journal box, the combination of a box proper, bearing blocks mounted within the box, a chamber being formed at each end of the bearing blocks, a shaft journaled within the bearing blocks, rollers interposed between the shaft and bearing blocks, a force feeding device mounted upon the shaft, and serving the double function of retaining the rollers in position and of feeding lubricant from the chambers to the rollers.



2. In a lubricating journal box, the combination of a box proper, bearing blocks mounted within the box, a chamber being formed at each end of the bearing blocks, a shaft journaled between the bearing blocks, rollers interposed between the shaft and bearing blocks, collars applied to the shaft at each end of bearing blocks and serving to retain the rollers in position, and blades carried by the collars for feeding lubricant from the chambers to the rollers.

876,404. TRACTION FIRE-ENGINE. WILLIAM H. SHAFER, Cincinnati, Ohio. Filed Aug. 22, 1906. Serial No. 331,607.



1. The combination of a truck, a multiple explosive engine thereon, propelling mechanism for the truck, means for detachably engaging the engine therewith, a multiplex force pump in continuous engagement with the engine, a radiator, a water jacket for the engine, pipes in continuous communication therewith from the radiator, and valve controlled branch pipes leading therefrom to the pump.

2. The combination of a truck, a series of explosive engines mounted thereon and provided with a water jacket, a similar series of pumps connected directly with the respective engines and actuated therewith, propelling mechanism for the truck, means for detachably engaging the engines therewith and means for supplying the jacket with water from the pumps.

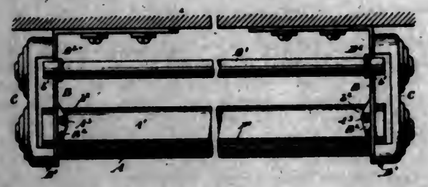
3. The combination of a multiple explosive engine provided with a water jacket and yieldingly supported on traction wheels, a multiplex force pump supported in alinement therewith and having its plungers connected directly with the pistons of the engine, a radiator, branch connections leading from the pump respectively thereto and to the water jacket, propelling mechanism for the traction wheels, and means for detachably engaging the engine therewith.

4. The combination of a multiple explosive engine supported on traction and pilot wheels, a multiplex force pump secured in alinement thereunder and provided with a water jacket, reciprocating rods connecting the pump plungers directly with the respective pistons of the engine, a crank shaft, connecting rods engaging therewith and actuated by the engine, propelling mechanism engaging with the traction wheels, means for detachably engaging the crank shaft therewith a radiator, and valved connections thereto with the pump.

5. The combination of a series of bearings yieldingly

supported on traction and pilot wheels, a crank shaft journaled therein, a series of four-cycle explosive engines supported on the bearings for actuating the shaft and provided with a common water jacket, a similar series of single acting force pumps depending from the bearings in alinement with the engines, reciprocating rods directly connecting the pump plungers with the pistons of the engines, propelling mechanism for the traction wheels, a clutch for detachably engaging the crank shaft therewith a radiator, an open connection thereto with the water jacket, and a valve controlled passage between said connection and the pump.

876,405. CURTAIN-HANGING APPARATUS. THOMAS E. SHEVILL, New York, N. Y. Filed Nov. 10, 1905. Serial No. 286,642.

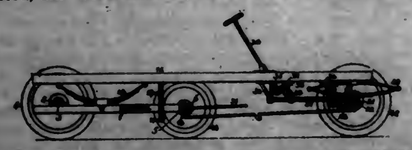


1. In a curtain-hanging apparatus, a pair of bars having plane flat adjacent faces, a flat plane-faced partition between said adjacent faces, said bars and partition adapted to hold a curtain in flat contact with and between them, brackets in which said bars are supported, clamping-rods adapted to grasp the end of a curtain and receive the excess length in a roll thereon, sockets on said brackets to receive said rods and support them and said roll, and caps on the exterior faces of said brackets, serving to cover the latter and the ends of said bars and rods.

2. In a curtain-hanging apparatus, a pair of bars having plane flat adjacent faces, a flat plane-faced partition between said adjacent faces, said bars and partition adapted to hold a curtain in flat contact with and between them, brackets in which said bars are supported, clamping-rods adapted to grasp the end of a curtain and receive the excess length in a roll thereon, sockets on said brackets arranged to receive said rods and support them and said roll, and fixed means extending laterally from one of said bars to engage fixed means on said brackets and constructed to prevent turning of said rods therein.

3. In a curtain-hanging apparatus, a pair of bars having plane faces applied together, brackets having apertures in which the ends of said bars are received, cam-surfaces on the inner faces of said brackets, a notch in each of said cam-surfaces, a pin at each end of said bars arranged to contact with said cam-surfaces and spring said brackets apart as said bars are revolved, and to be engaged in said notches by the return movement of said brackets, to hold said bars against turning.

876,406. MOTOR-VEHICLE. JAMES C. SIMONSON, Rockford, Ill. Filed Mar. 13, 1907. Serial No. 362,218.



1. In a motor vehicle the combination of the platform thereof, a truck supporting one end of the platform and connected thereto about midway of its length, supporting wheels connected to one end of the truck, an axle pivotally connected to the other end of the truck on a horizontal pivot, and supporting wheels connected to the pivoted axle.

2. In a motor vehicle, the combination of the platform thereof, a truck supporting one end of the platform and connected thereto about midway of its length, means holding the truck against lateral movement, supporting wheels connected to one end of the truck, an axle pivotally connected to the other end of the truck on a horizontal pivot, and supporting wheels connected to the pivoted axle.

3. In a motor vehicle, the combination of the platform thereof, a truck supporting the rear end of the platform and connected thereto about midway of its length, supporting wheels connected to the rear end of the truck, an axle pivotally connected to the forward end of the truck on a horizontal pivot, wheel supports pivotally connected to the ends of the pivoted axle, wheels connected to the supports, a front axle connected to the platform, wheel supports pivotally connected to the ends of the axle, wheels connected to the supports of the front axle, and two rods, each connecting the wheel supports on one side of the vehicle.

4. In a motor vehicle, the combination of the platform thereof, a truck supporting the rear end of the platform and connected thereto about midway of its length, supporting wheels connected to the rear end of the truck, an axle pivotally connected to the forward end of the truck on a horizontal pivot, wheel supports pivotally connected to the ends of the pivoted axle, wheels connected to the supports, a front axle connected to the platform, wheel supports pivotally connected to the ends of the axle, wheels connected to the supports of the front axle, two rods each connecting the wheel supports on one side of the vehicle, and a steering apparatus for the pivoted wheel supports.

5. In a motor vehicle the combination of the platform thereof, a truck supporting one end of the platform, means connecting the truck and platform about mid-way of the length of the truck, wheels supporting both ends of the truck and means independent of the means connecting the platform and truck for holding the truck against lateral movement, but permitting it to have a vertical movement.

876,407. INDIVIDUAL TAKE-UP MECHANISM FOR NARROW-WARE LOOMS. ALBERT H. STEELE, Worcester, Mass., assignor, by mesne assignments, to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed May 31, 1905. Serial No. 262,986.



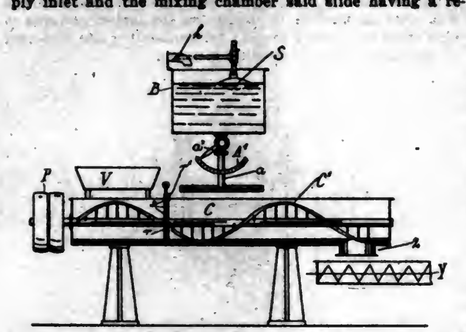
A take-up mechanism for narrow-ware looms, comprising a take-up shaft, a loose pulley on said shaft, said pulley having teeth or corrugations upon its inner surface, a fixed hub for said pulley on the take-up shaft, spring actuated pawls mounted on said fixed hub, and adapted to engage the corrugated or toothed surface on said pulley, levers connected with said pawls, a loose hand-wheel having projections adapted to engage with said levers to disengage the pawls.

876,408. MIXING-MACHINE. ARTHUR STEIN, London, England. Filed Sept. 28, 1905. Serial No. 280,548.

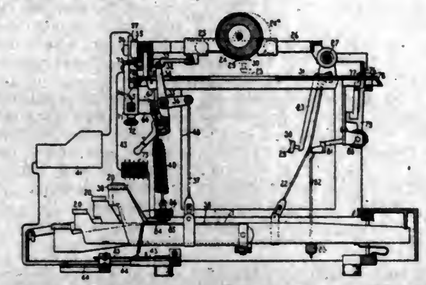
1. In a machine for producing uniform mixtures of saccharine liquids and absorbents a trough-like receiver, a screw conveyer operating therein, a spindle and bearings for such conveyer, a regulator slide between the supply inlet and the mixing chamber said regulator slide embracing the conveyer spindle and means for adjusting the position of the regulator slide.

2. In a machine for producing mixtures of saccharine

liquids and absorbents a regulator slide between the supply inlet and the mixing chamber said slide having a recess embracing the conveyer spindle, means for adjusting the regulator slide and means for retaining it in position.



876,409. COMBINED TYPE-WRITING AND ADDING MACHINE. BURNHAM C. STICKNEY, Elizabeth, N. J., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 13, 1903. Serial No. 152,428.



1. The combination of a writing mechanism, including a series of figure types and also including case-shifting means for rendering the figure types either operative or inoperative; an adding mechanism; and electric circuits operatively connecting said writing mechanism to said adding mechanism; said electric circuits being controlled by said case-shifting means, so as to be rendered inoperative when the figure types are inoperative.

2. The combination of a writing mechanism, including a series of figure types, a series of character types, keys each connected to both a figure type and a character type, and a case-shifting mechanism for enabling the keys to effect impressions of either figure or character types; an adding mechanism; electric circuits operatively connecting said writing mechanism to said adding mechanism; and means operatively connected to said case-shifting mechanism for controlling said circuits.

3. The combination of a carriage; a series of figure types; a series of character types; a series of keys each connected to means for operating both a figure type and a character type; case-shifting means for enabling said keys to operate either said figure types or said character types; an adding mechanism; electric connections from the adding mechanism to said carriage; electric connections from the adding mechanism to said keys; an electric connection from said carriage to said keys; and a controller in the last mentioned connection; said controller including a member connected to said case-shifting means, so as to render the adding mechanism ineffective when said keys are operating said character types.

4. The combination of a series of keys; both figure types and character types controllable by said keys; a case-shifting mechanism for enabling said keys to operate either said character types or said figure types; an adding mechanism; electrical connections from the carriage to the adding mechanism; an electric connection from the carriage to the keys and including the latter in series; electric connections from the keys to the adding mechanism; and a circuit-controller having a part operatively connected to said case-shifting mechanism and adapted to render the adding mechanism inoperative whenever the shifting mechanism is operated to enable said keys to operate said character types.

5. The combination of a carriage; a series of keys; both figure types and character types controllable by said keys; a case-shifting mechanism whereby said keys are enabled to cause either said figure types or said character types to print; an adding mechanism; a series of electrical connections from the carriage to said adding mechanism; a series of controllers having parts both operatively connected to said keys and also connected in series with said carriage; an electrical connection from each of said key-operated controllers to said adding mechanism; and a controller intervening between said carriage and said key-operated controllers; said intervening controller being connected to said case-shifting mechanism so as to complete the circuit when said case-shifting mechanism is adjusted for writing figures, and to break the circuit when the case-shifting mechanism is adjusted for writing characters.

[Claims C to 18 not printed in the Gazette.]

876,410. COVER FOR IRONING-BOARDS. EDWARD STONE, Chicago, Ill. Filed Mar. 23, 1906. Serial No. 307,613.



1. In means for covering ironing boards, a cloth cover adapted to be placed around a board and having open end hems along its edges and holes formed in said hems at spaced intervals, rods removably arranged in said hems, fastening devices integral with said rods and exposed at said openings, means detachably engaging said fastening devices to hold said rods under tension, and means for stretching and holding under tension the ends of said covers.

2. In means for covering ironing boards, a cover adapted to be placed around a board and having open end hems along its edges and holes formed in said hems at spaced intervals, rods removably arranged in said hems, said rods having loops formed integral therewith and projecting through said openings, and means detachably engaging said loops to hold said rods under tension.

876,411. CURTAIN-SHADE BRACKET. JAMES W. TATUM, Durham, N. C. Filed July 12, 1907. Serial No. 383,423.



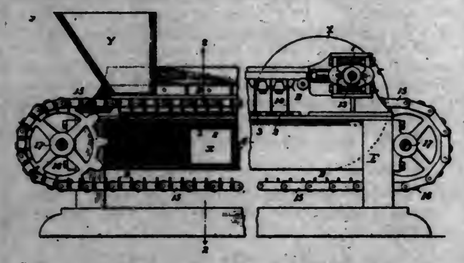
1. The herein described shade-roller bracket, consisting of a head formed of sheet metal having an integral attaching prong projecting from one end thereof and an integral driving projection extending from the opposite end in line with said prong, said head being also provided with an open journal receiving aperture situated beneath the driving projection, the latter forming one wall of and having its extremity extending beyond said aperture and all parts of the bracket lying in the same plane.

2. The herein described shade-roller bracket, consisting of a head stamped from sheet metal having an integral attaching prong projecting from one end thereof and hav-

ing an arrow-head point, and an integral driving projection extending from the opposite end in line with said prong, said head being also provided with an angular opening to receive the journal of a shade roller and said driving projection overhanging the said opening, all parts of the bracket lying in the same plane.

3. The herein described shade-roller bracket, consisting of a head formed of sheet metal having an integral attaching prong projecting from one end, the edge of the head above and below said prong being serrated, and a driving projection extending from the opposite end of the head in line with the prong, said head being also provided with an angular opening located below the driving projection, all parts of the bracket lying in the same plane substantially as described.

876,412. COTTON-GIN. BURCHARD THOENS, New York, N. Y. Filed May 22, 1906. Serial No. 318,206.



1. In a cotton gin, the combination of gripping members arranged to support the seed without permitting it to pass between the same and means for separating and bringing them together to grip the cotton, and wiping members whereby the seeds are carried from the gripping members.

2. In a cotton gin, the combination of gripping members arranged to support the seed without permitting it to pass between the same and means for separating and bringing them together to grip the cotton, wiping members whereby the seeds are carried from the gripping members, and a port and means for drawing an air current through said port to carry the fibers, when released from the gripping members.

3. In a cotton gin provided with a hollow cylinder composed of a series of pairs of separable gripping members, means for separating and bringing said members together, to pinch the fibers between them and wiping members whereby the seeds are separated from the cotton gripped by the gripping members.

4. A cotton gin provided with a casing having separable gripping members with elastic facings, means for separating and bringing said members together, and wiping members whereby the seeds are separated from the cotton gripped by the gripping members.

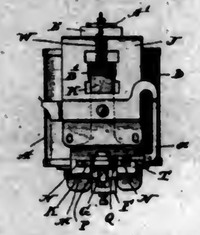
5. A cotton gin provided with a casing having series of pairs of separable gripping members arranged to form spaces when separated less in width than the diameter of the seeds, means for positively separating and bringing the members of each pair together, and wiping members whereby the seeds are separated from the cotton gripped by the gripping members.

[Claims 6 to 10 not printed in the Gazette.]

876,413. POLARISED RELAY. CHESTER H. THORDARSON, Chicago, Ill. Filed Mar. 31, 1904. Serial No. 200,870.

1. In a polarised relay, an electro-magnet having pole-pieces, a movable armature for said electro-magnet, a working member carried by said armature, a polarised armature actuated by the attractive force of said pole-pieces, said polarised armature operating to control the direction of action of said working member.

2. In a polarised relay, a working member arranged to perform work in different directions, an electro-magnet, an armature therefor, connections between said armature and said working member for operating the latter, and means also operated by said magnet for controlling the direction of application of the working member.



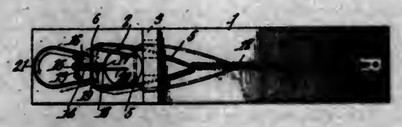
3. In a polarised relay, a working member arranged to perform the work required and adapted to operate in different directions, an electro-magnet, a movable armature therefor, and connections between said movable armature and said working member, in combination with a polarised armature arranged to be operated by said magnet, said polarised armature controlling the direction of application of the work of the working member and independently of the direction of operation of said armature.

4. In a polarised relay, an electro-magnet, a movable armature therefor, a pivotally mounted working member connected to said armature, a polarised armature actuated by said magnet, said polarised armature arranged to control the direction of rocking movement of said working member relative to its actuating armature.

5. In a polarised relay, an electro-magnet, a movable armature therefor, a working member pivotally mounted upon said armature, a polarised armature also actuated by said magnet, said polarised armature arranged to control the direction of rocking movement of said working member upon its pivot upon its supporting armature.

[Claims 6 to 14 not printed in the Gazette.]

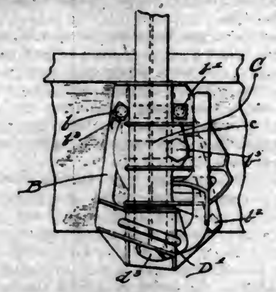
876,414. ANIMAL-TRAP. WILLIAM P. TIPPIT, Fayette, Mo. Filed Apr. 20, 1907. Serial No. 369,315.



1. An animal trap comprising a base having an opening, a strangulating loop movable across said opening longitudinally of said base, an adjustable spring acting on said loop, and a tripping mechanism on the opposite side of said opening from the spring, said tripping mechanism comprising a pivot pin, an angular lever mounted on said pivot pin, one arm of said lever adapted to hold the strangulating loop when set while the other arm, inclined to the base board, is provided with a bait hook approximately in the axis of said opening but at an appreciable distance therefrom.

2. An animal trap comprising a base having an opening, a strangulating loop movable across said opening longitudinally of said base, an adjustable spring acting in a straight line on said loop, and a tripping mechanism on the side of said opening opposite said spring comprising a pivot pin fixed to the bottom of the base board, a coil of wire with two projecting arms pivoted on said pin, one of said arms lying close to said base board and provided with a catch for holding the strangulating loop, and the other arm extending away from said pivot pin at an angle to the base board and provided with a bait holder approximately in the axis of the opening.

876,415. CAR-STAKE AND ATTACHING MEANS THEREFOR. JOHN A. TOOMEY, Chicago, Ill. Filed Jan. 28, 1907. Serial No. 354,378.



1. A car stake, means adapted to lock the same when vertically and horizontally extended, said stake slidable relatively of the car when being adjusted to both positions and means preventing longitudinal movement of the stake in horizontal position.

2. A car stake and gravity acting means automatically locking the same in the vertical and horizontal adjustments and supporting the stake in vertical adjustment.

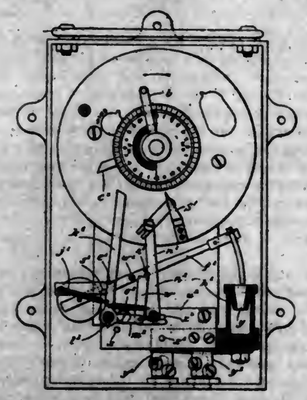
3. The combination with a car stake of mechanism adapted to support and automatically lock the stake in vertical and also in horizontal position, said support adapted to be manually actuated to elevate the stake.

4. The combination with a car of a stake engaged thereto and positively secured from movement when in a vertical position and slidable relatively of the car when turned at an angle with the vertical and means acting to support the stake in vertical position and automatically locking the stake when horizontally extended.

5. The combination with a car of a stake therefor positively secured from movement when in a horizontal and in a vertical adjustment and locking means necessitating lifting the stake before turning to horizontal.

[Claims 6 to 40 not printed in the Gazette.]

876,416. ELECTRIC TIME-SWITCH. ROBERT F. S. VENNER and ROBERT C. GRIESBACH, London, England. Filed Feb. 12, 1907. Serial No. 357,010.



1. An electric time switch comprising in its construction a clockwork provided with a dial, a plurality of clock-hands adapted to turn on the axis of the dial and adjustable in relation to the latter, a pair of operating levers adapted to be turned in one direction by the revolving clock-hands and in the opposite direction by springs, one lever normally being placed in the path of one clock-hand and the other being placed in the path of another clock-hand, a contact lever movable within given limits in a plane parallel to the operating levers, and an electric circuit adapted to be alternately closed and broken by the said contact lever, the first of the said operating levers being shaped as a bell-crank lever and adapted to place the contact lever in one of its extreme positions by spring power, after the corresponding clock-hand has released the said lever, and the second operating lever being adapted to support the contact lever in one of its extreme positions, until it is turned by another clock-hand, substantially as described.

2. In an electric time switch, the combination of an electric working circuit and a clock having a plurality of adjustable clock-hands, with a contact lever having a device for alternately closing and breaking the said working circuit and a device for retaining the contact lever in one of its extreme positions, a two-armed starting lever adapted to be turned slowly in one direction by one of the clock-hands, while storing up energy in a spring, and on its release from the said clock-hand to turn the contact lever rapidly under the influence of the said spring, a retaining lever placed within the reach of the second clock-hand and adapted to support the contact lever in its new position (due to the operation of the starting lever), until the retaining lever is turned by the second clock-hand, and a spring adapted to replace the retaining lever in its starting position, substantially as described.

3. In an electric time switch having a contact lever with mercury contacts adapted to alternately complete and break an electric circuit, and a plurality of revolving clock-hands adapted to control the position of the said contact-lever through suitable intermediate mechanism, the combination of a contact lever having a knife edge extending from the side of the same, with a bell-crank lever adapted to be turned forward slowly between given limits by one of the revolving clock-hands, a spring adapted to withdraw it rapidly, when released by the clock-hand, a pawl pivoted to the short arm of the bell-crank lever and movable within given limits, a retaining lever having its free end placed within the path of the second clock-hand, and a spring adapted to oppose the forward motion of the retaining lever and to withdraw it rapidly after its release from the clock-hand, the upper end of the pawl forming a knife rest adapted to lift one of the said knife edges together with the contact lever, when the bell-crank lever is released, and the side of the retaining lever having a knife rest adapted to support the contact lever in the elevated position until the retaining lever is turned by the clock, substantially as described.

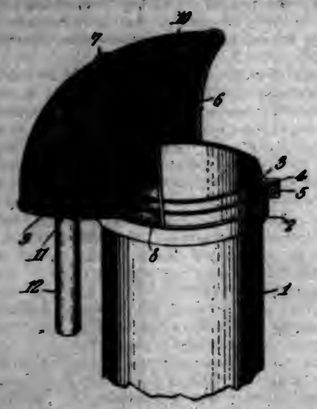
4. An electric time switch comprising in its construction a clockwork provided with a dial, a pair of clock-hands adapted to turn on the axis of the dial, an electric operating circuit including a pair of mercury cups, a contact lever having a pair of contact rods adapted to complete the electric circuit by dipping into the said mercury cups, mechanism intermediate the clockwork and the contact lever, adapted to be turned forward slowly by one of the revolving clock-hands and then to lift the lever rapidly under the influence of a spring so as to break the electric circuit, and a lever intermediate the clock-work and the contact lever adapted to support the contact lever in its elevated position under the influence of a spring, and then to be turned forward by the other clock-hand so as to release the contact lever and allow it to drop, substantially as described and for the purpose specified.

5. An electric time switch comprising in its construction an electric working circuit having for its terminals a pair of mercury cups in proximity to each other, a clock-work with a pair of revolving clock-hands, a contact lever having at its free end a pair of rods adapted to dip into and rise out of the said mercury cups, a two-armed starting lever, adapted to be turned slowly in one direction by one of the clock-hands, while accumulating energy in a spring, and on its release to lift the contact lever under the influence of the said spring, a retaining lever placed within the path of the second clock-hand and adapted to support the contact lever in the elevated position until the retaining lever is turned by the said clock-hand, and a spring

adapted to replace the retaining lever into its working position, after it has been released by the clock-hand, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

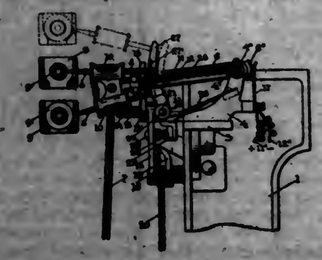
876,417. SPARK-ARRESTER. GUS A. VOLBY, Wentworth, S. D. Filed Jan. 28, 1907. Serial No. 354,466.



1. The combination with a stack having an annular supporting flange; of a split ring rotatably mounted upon the stack and bearing upon the flange, a supporting bow extending from opposite portions of the ring and over the end of the stack, said bow being curved so as to overhang the stack, a loop extending horisontally from the ring, a fabric hood supported by the bow and ring, said hood overhanging the end of the stack and leaving opposite portions of said stack exposed, a fabric bottom upon the horizontal bow, and an outlet tube extending from said bottom, said bottom being disposed below the end of the stack whereby a spark receiving receptacle is produced within the hood.

2. The combination with a stack having an annular supporting flange; of a ring revolubly mounted upon the flange and stack, a fabric hood extending from the ring and disposed to overhang the stack, said hood having a bottom portion beyond and below the upper edge of the stack, said portion constituting a spark receptacle and said stack extending throughout the width, and constituting one wall, of the spark receptacle.

876,418. WEFT-REPLENISHING LOOM. HORACE WYMAN, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Mar 28, 1906. Serial No. 308,403.



1. In a weft replenishing loom, the combination with an electro-magnet carried on a frame and having a movable core for a feeler, of means for engaging and positioning said core, and positively maintaining it in its operative position for a predetermined time.

2. In a weft replenishing loom, the combination with a plurality of electro-magnets carried on a frame, and each magnet having a movable core for a feeler, of means for engaging and positioning each movable core or feeler, and positively maintaining it in its operative position for a predetermined time.

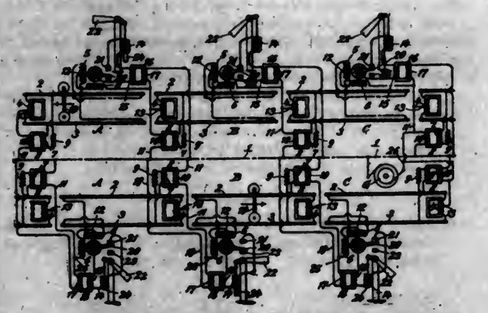
3. In a weft replenishing loom, the combination with an electro-magnet carried on a frame and having a movable core for a feeler, said feeler adapted to enter a shuttle box on the forward beat of the lay and engage the filling carrier therein, of means for moving said filling detector into its forward operative position on the backward movement of the lay, and positively maintaining it in its operative position for a predetermined time.

4. In a weft replenishing loom, the combination with a plurality of electro-magnets carried on a frame and having a pivotal movement in a vertical plane, and each magnet having a movable core for a feeler, of means for moving a movable core into its forward operative position, preparatory to its entering a shuttle and engaging the filling carrier thereon on the forward beat of the lay, and positively maintaining it in its operative position for a predetermined time.

5. In a loom, a movable filling detector feeler to engage the filling in the shuttle, and means to normally position the feeler preparatory to its contacting with the filling, and positively maintaining it in its operative position for a predetermined time.

[Claim 6 not printed in the Gazette.]

876,419. SYSTEM OF AUTOMATIC BLOCK SIGNALING FOR RAILWAYS. SAMUEL M. YOUNG, New York, N. Y. Filed Nov. 1, 1907. Serial No. 400,257.



1. A signaling system for a trackway having a plurality of pairs of tracks divided into block sections and having a single source of energy for the signals and controlling mechanism, in which the traffic-rails of each section constitute separate conductors for the track circuits and a joint track return for the signaling current.

2. A signaling system for a trackway having a plurality of pairs of tracks divided into block sections and having a single conductor supplying energy for the signals and controlling mechanism for the system, in which the traffic-rails of each section constitute separate conductors for the track circuits and a joint conductor for the return signaling current.

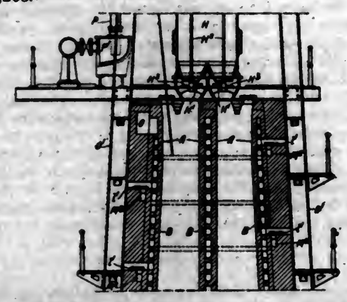
3. In a signaling system, the combination of a trackway divided into sections, signals indicating the location of the vehicles, relays for controlling said signals operatively connected with the rails of each section, a generator having a single conductor supplying current to energize said signals and said relays, and means whereby the rails of each section separately convey the current controlling the operation of said relays and jointly convey the current returning to said generator.

4. In a signaling system, the combination of a trackway divided into sections, cross-bonding conductors between the track-rails, signals indicating the location of the vehicles, local track-circuits controlling the operation of the signal-relays, a generator having a single conductor supplying current to energize said signals and said track-circuits, and means whereby said current is returned to the generator through both rails of the several sections.

5. In a signaling system, the combination of a trackway divided into sections, a single conductor for supplying the signaling current to said sections, reactive cross-bonds between the rails at each end of each track section, track-circuits controlling the operation of the signal relays, branch conductors connected to said supply conductors and to the middle of said cross-bonds, and transformers in said branch conductors whose secondary coils supply current respectively to the signals and to the track-circuits.

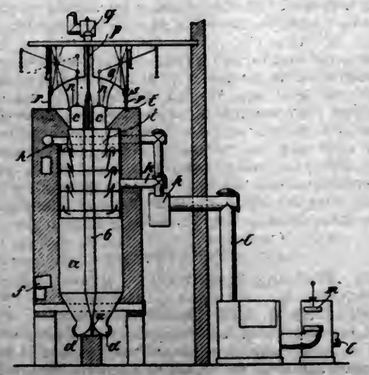
[Claims 6 to 14 not printed in the Gazette.]

876,420. PROCESS OF CARBONIZING COAL. WILLIAM YOUNG, Peebles, Scotland, and SAMUEL GLOVER, St. Helens, England. Filed Nov. 13, 1906. Serial No. 343,268.



The hereindescribed process of producing illuminating and heating gases by the carbonization of coals and like bituminous material, consisting in distilling a charge of coal, subjecting the volatile matters evolved therefrom to the action of radiant heat, causing the degree of said radiant heat to be gradually reduced along the route over which the volatile matters travel, whereby the same will be decomposed to form fixed gases and liberate carbon, and passing the gases through a mass of coal so as to cool the gases and heat the coal, causing the coal to fall into the heated area, and drawing off the gases so cooled.

876,421. KILN FOR COKING PEAT OR SIMILAR MATERIAL. MARTIN ZIEGLER, Beuerberg, Germany, assignor to Oberbayerische Kokswerke und Fabrik Chemischer Produkte Akt. Gesellschaft, Beuerberg, Germany, a Firm. Filed Dec. 4, 1906. Serial No. 346,243.



1. A coke-oven for peat, lignite and wood, comprising in combination a plurality of retorts each vertically constricted in the center and having charging and discharging openings, means adapted to normally close said charging and discharging openings, means for heating said retorts and gas-emission means communicating with said retorts.

2. A coke-oven for peat, lignite and wood, comprising in combination a plurality of retorts each constricted in the center and having charging and discharging openings, means adapted to normally close said charging and discharging openings, step-like walls in said retorts receding from one another, whereby chambers are formed outside said walls and on two sides of the retorts communicating with said retorts, means for heating said retorts and gas-emission means communicating separately with said chambers on each side of the retorts.

3. A coke-oven for peat, lignite and wood, comprising in combination a plurality of retorts each constricted in the center and having charging and discharging openings, means adapted to normally close said charging and discharging openings, step-like walls in said retorts receding from one another whereby chambers are formed outside said walls communicating with said retorts, means for heating said retorts, a gas suction conduit, and a plurality of conduits connected with the latter conduit communicating separately with said chambers at points situated one higher than the other so that the point of connection situated nearer to the said main conduit is lower than the point of connection opposite the same.

4. A coke-oven for peat, lignite and wood, comprising in combination a plurality of retorts each constricted vertically in the center and having charging and discharging openings, means adapted to close said charging openings and means adapted to close said discharging openings, step-like walls in said retorts receding from one another whereby chambers are formed outside said walls communicating with said retorts, said retorts being situated side by side whereby heating flues are formed between the same, fireproof gratings in said flues, means for heating said grates and said flues, a gas suction conduit, and a plurality of conduits connected with the latter conduit communicating separately with said chambers at points situated one higher than the other so that the point of connection situated nearer to the said main conduit is lower than the point of connection opposite the same.

5. A coke-oven for peat, lignite and wood, comprising in combination a plurality of retorts each vertically constricted in the center and having charging and discharging openings, means adapted to normally close said charging openings and means adapted to normally close said discharging openings, step-like walls in said retorts receding from one another whereby chambers are formed outside said walls communicating with said retorts, means for heating said retorts, a gas suction conduit, a plurality of conduits connected with the latter conduit communicating separately with said chambers at points situated one higher than the other so that the point of connection situated nearer to the said main conduit is lower than the point of connection opposite the same, and a valve in said gas suction pipe adapted to close the same and to prevent the admission of air into said retorts when said discharge openings are opened.

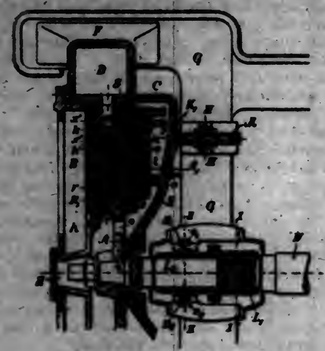
[Claim 6 not printed in the Gazette.]

876,422. ELASTIC-FLUID TURBINE. JAN ZVONIČEK, Brünn, Austria-Hungary. Filed July 5, 1907. Serial No. 382,312.

1. In an elastic fluid multiple stage turbine, a casing, a shaft, a stuffing-box therefor, a running wheel, an active wheel, a partition between said wheels, and relief spaces between said partition and running wheel, the joint surfaces between said wheels, in the relief spaces, and in the stuffing box, lying in planes at right angles to the axis, the width of the spaces being regulated simultaneously upon the axial sliding of the shaft due to expansion and contraction, substantially as described.

2. In an elastic fluid multiple stage turbine, a casing, a shaft, a stuffing-box therefor, a running wheel having laterally projecting blades, rings of stationary blades on the casing alternating with the wheel blades, an action wheel, a partition between said running and action wheels, and relief spaces between said partition and running

wheel, the joint surfaces between said wheels, in the relief spaces, and in the stuffing box, lying in planes at right angles to the axis, the width of the spaces being regulated simultaneously upon the axial sliding of the shaft due to expansion and contraction, substantially as described.



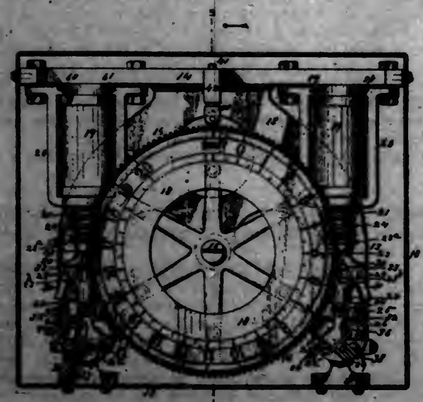
3. In an elastic fluid multiple stage radial turbine, a framing, a shaft, a running-wheel, an end-bearing located adjacent to the latter and adjustably secured in the framing, and a thrust bearing for the shaft, secured to first said bearing, whereby expansion of the shaft can be compensated for, substantially as described.

4. In an elastic fluid multiple stage radial turbine, a framing, and a casing secured thereto by hollow members heated by the steam in the casing, whereby expansion of the shaft is compensated for, substantially as described.

5. In an elastic fluid multiple stage radial turbine, a wheel, a shaft having a thrust bearing, and an action-wheel secured to the wheel instead of direct to the shaft, whereby the shaft bearing can be located closely adjacent to the turbine wheel, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

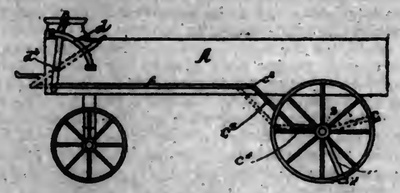
876,423. DEVICE FOR INDICATING THE POSITION OF WATER OR SLUICE GATE VALVES. FRANCIS E. ADAMS, Boston, Mass., and CHRISTIAN W. KRAGH, Madison, Wis., assignors to Coffin Valve Company, a Corporation of Massachusetts. Filed Sept. 7, 1905. Serial No. 277,456.



1. In a device for indicating the position of water or sluice gate-valves, a pair of solenoids provided with outwardly extending sliding cores; extensions rigid with said cores and extending downward or outward therefrom, the cores and extensions being held normally in such position by springs; tubular brackets rigid with said extensions; a dial and pointer or hand; a gear rigid with the dial; ratchet-pawls supported by said extensions and held normally against said gear; retaining pawls supported by said extensions and adapted to be moved into and out of engagement with said gear by the longitudinal reciprocation of the extensions; means for guiding and limiting the reciprocation of the extensions; means for energizing alternately the solenoids and thereby drawing the extensions toward said solenoids; a motor for opening or closing the gate; and an electrical connection between said solenoids and motor, for the purpose set forth.

2. In a device for indicating the position of water or sluice gate-valves, a pair of solenoids provided with outwardly extending sliding cores; the extensions 28 rigid with the cores and held normally downward or outward therefrom by springs and provided with slots 26 and flattened faces 27; stop-pins 25 extending from the frame into engagement with said slots; tubular brackets or holders 28 rigid with the extensions; a dial and pointer or hand; a gear rigid with the dial; ratchet-pawls pivotally supported by said brackets and held normally in engagement with the gear; elbow-shaped retaining pawls 36 pivotally supported by the extensions and provided with the bifurcated outer ends 38; pins extending from said brackets into engagement with the outer ends of the retaining-pawls; a motor for opening or closing the gate; and an electrical connection between said solenoids and motor whereby the solenoids may be energized separately and alternately and the gear which is rigid with the dial actuated by the mechanisms intermediate thereof and the solenoids alternately, for the purpose set forth.

876,424. WHEEL-BLOCK. ANNA J. ALLEN, St. Joseph, Mo. Filed Jan. 13, 1906. Serial No. 295,958.

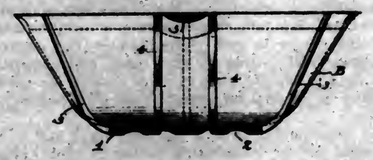


1. A brake-mechanism for road-vehicles, comprising a lever adapted to be fulcrumed to the vehicle-body, a horizontal shaft pivotally secured at one end to the lower portion of the lever, a downward-extending rod pivotally secured to the other end of the horizontal shaft and terminating in a bent, horizontally-extending portion, a collar carried at the end of the horizontal, bent portion and adapted to loosely surround the vehicle-axle, a leg carried by the collar, and a brake-shoe carried at the lower extremity of the leg.

2. A brake-mechanism for road-vehicles, comprising a lever adapted to be fulcrumed to the vehicle-body, an arc-rack for the lever, a horizontal shaft pivotally secured at one end of the lower portion of the lever, a downward-extending rod pivotally secured to the other end of the horizontal shaft and terminating in a bent, horizontally-extending portion, a collar carried at the end of the horizontal, bent portion and adapted to loosely surround the vehicle-axle, a leg carried by the collar, and a brake-shoe carried at the lower extremity of the leg.

876,425. FOLDING WASHBASIN. HUBERT BARCALOW, Philadelphia, Pa. Filed Mar. 5, 1904, Serial No. 196,687. Renewed May 31, 1907. Serial No. 376,500.

1. A portable lining for stationary wash basins consisting of an imperforate bowl-shaped body formed of flexible water-proof material, the upstanding sides of the bowl having external upright stiffening ribs to engage the inner wall of a stationary wash basin and space the upright walls of the bowl therefrom, the bottom of the bowl having external upright stiffening ribs disposed at opposite sides of the center thereof to engage the bottom of the stationary wash basin and support the bottom of the bowl against collapsing and closing the outlet of the basin, the upper peripheral edge of the bowl being unobstructed between the tops of the upstanding flanges to permit of an overflow from the bowl downwardly at the outer side thereof, the bottom ribs being arched to permit of the overflow passing therethrough and into the outlet of the basin.



2. A portable lining for stationary wash basins consisting of an imperforate bowl-shaped body formed of flexible water-proof material and capable of being collapsed and folded when not in use, the upstanding sides of the bowl being provided with upright external stiffening ribs to engage a wash basin and space the bowl therefrom, the bottom of the bowl having an external annular depending rib and intermediate transverse ribs at opposite sides of the middle of the bottom of the bowl and within the annular rib, the upper peripheral edge of the bowl between the upper ends of the upright ribs being unobstructed to permit of overflow from the bowl downwardly at the outer side thereof and the bottom flanges having arches through which the overflow may pass to the outlet of the wash basin.

3. A portable lining for stationary wash basins consisting of an imperforate bowl-shaped body formed of flexible water-proof material and capable of being collapsed and folded when not in use, the bottom of the bowl being provided with external depending flanges at opposite sides of the center thereof to support the bottom of the bowl and prevent the same from collapsing and closing the outlet of a wash basin, the upstanding sides of the bowl having external upright stiffening ribs to engage the walls of a wash basin and space the bowl therefrom, the upper peripheral edge of the bowl having a depression located between a pair of the upright ribs and forming an overflow outlet for the bowl, and the bottom flanges having arches through which the overflow may pass to the outlet of the wash basin.

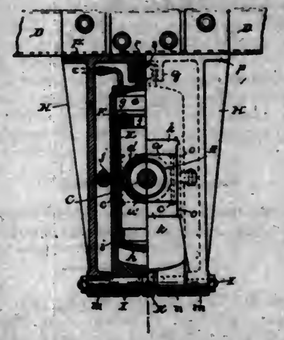
4. A portable lining for stationary wash basins consisting of an imperforate bowl-shaped body formed of flexible water-proof material, the bottom of the bowl having a pendent integral peripheral rib to support the bottom of the bowl and prevent collapsing thereof and closing of the outlet of a wash basin, the upright walls of the bowl being provided with integral external upstanding stiffening ribs to space the bowl from the wash basin with their lower ends engaging the peripheral bottom rib, the upper peripheral edge of the bowl being externally unobstructed between the upright ribs and provided with a depression forming an overflow outlet, one of the upstanding ribs being located at each end of the depression and extended across the bottom of the bowl at opposite sides of the center thereof, the peripheral rib being provided with arches located between the upstanding ribs, the rib extensions within the annular rib also having arches through which the overflow may pass to the outlet of the basin.

5. As a new article of manufacture, a molded bowl-shaped wash basin which is seamless, flexible, water-proof, and capable of being folded into compact form and having solid integral upright stiffening ribs molded upon its exterior to support the bowl when containing a liquid.

[Claims 6 and 7 not printed in the Gazette.]

876,426. PNEUMATIC SUSPENSION DEVICE FOR VEHICLE-BODIES. GEORGE W. BELL, Liverpool, England. Filed Feb. 12, 1906. Serial No. 300,559.

1. The combination with the vehicle body and a supporting axle, of a piston provided intermediate its ends with clamping boxes on opposite sides thereof securing the same in vertical position upon the axle, an inclosing cylinder forming air chambers at opposite ends of the piston and having openings in its sides for the clamping boxes to permit a relative movement between the cylinder and piston, a pedestal depending from the underside of the vehicle body, supporting connection between the lower end of the pedestal and the cylinder, and means for supplying the air chamber above the piston with compressed air.



2. The combination with the vehicle body and a supporting axle, of a pedestal secured to the underside of the body and having a bifurcated lower portion embracing the axle, a piston secured upon the axle adjacent to the pedestal and extending partly above and partly below the axle, a cylinder in which said piston works and forms air chambers in the opposite ends of the cylinder, the air chamber above provided with means for supplying the same with air under pressure, and a connection pivotally securing the cylinder at its lower end to the pedestal free to adjust itself to any lateral movement of the piston.

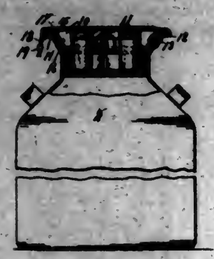
3. The combination with the vehicle body and a supporting axle, of a piston carried by the axle and extending vertically partly above and partly below the same, a cylinder in which said piston freely works and forms air chambers in the opposite ends of the cylinder, a pedestal depending from the underside of the vehicle body adjacent to the cylinder and to which said cylinder is pivotally connected at its lower end free to swing with its upper end in the vertical plane of the axle, springs bearing against the upper end of the cylinder and adapted to maintain the same in its normal position, and means for supplying the air chamber above the piston with air under pressure.

4. The combination with the vehicle body and a supporting axle, of a piston provided intermediate its ends with laterally extending clamping boxes securing the piston upon the axle in vertical position, an inclosing cylinder forming air chambers above and below the piston, the one above provided with means for supplying it with air under pressure for supporting the load thereon, a pedestal depending from the underside of the body adjacent to the cylinder and having its lower portion bifurcated and straddling the axle, a bolt passing through the lower end of the cylinder and pivotally securing it between the bifurcated ends of the pedestal, vertical guide flanges on the pedestal coöperating with the clamping box on the adjacent side of the piston to vertically guide the same, parallel guide flanges on the upper end of the pedestal for guiding the upper end of the cylinder and springs pressing against the upper end of the cylinder on opposite sides thereof.

876,427. COMBINED CAN-TOP AND SAMPLE-CARRIER. GEORGE T. BENSON, Port Huron, Mich., assignor of one-quarter to Herbert L. Nelson, Detroit, Mich. Filed Sept. 7, 1905. Serial No. 277,876.

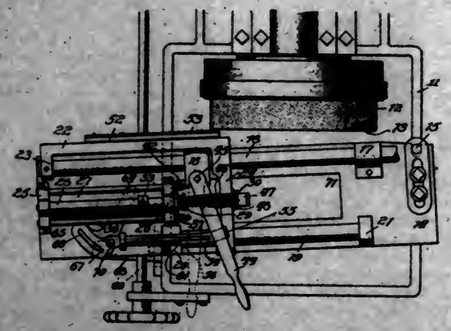
A combined can top and sample carrier, consisting of a top in the form of a receptacle adapted to close a can, provided with a flaring outer opening, a carrier tray in said receptacle adapted to be removed therefrom, said tray having an apertured supporting plate with an upwardly turned marginal flange which coincides with and engages the flaring wall of the can top opening to retain the car-

rier in position, the apertures in said plate being adapted to receive bottles, a cover adapted to close the can top



and to confine the bottles in the carrier, and means for locking the cover to the can top an dthe can top to the can.

876,428. FLUID-PRESSURE-OPERATED GRINDING-MACHINE. JOHN G. BLESSING, New Britain, Conn., assignor to American Cutlery Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 16, 1907. Serial No. 362,656.



1. In combination with a grinding-wheel and a reciprocal work-holder coöperating therewith, fluid-pressure means for operating said work-holder comprising a cylinder, a piston in said cylinder directly connected with the work-holder, a valve-chamber, fluid-pressure inlets and outlets leading from said valve-chamber to said cylinder, and a slide-valve in said valve chamber for controlling the opening and closing of said inlets and outlets.

2. In combination with a grinding-wheel and a reciprocal work-holder coöperating therewith, fluid-pressure means for operating said work-holder comprising a cylinder, a piston in said cylinder directly connected with the work-holder, a valve-chamber, fluid pressure inlet and outlet passages at opposite ends of said cylinder leading from said cylinder through the valve-chamber, a slide-valve in said valve-chamber provided with spaced pistons for controlling the admission into and discharge from the cylinder of the actuating fluid, and means for actuating the valve.

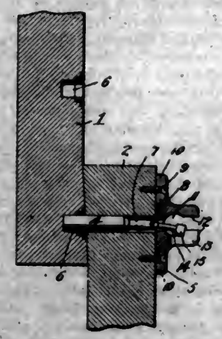
3. In combination with a grinding-wheel and a reciprocal work-holder coöperating therewith, fluid-pressure operating means for said work-holder comprising a cylinder, a piston in said cylinder directly connected with the work-holder, a valve-chamber, a fluid-pressure inlet passage leading from said chamber to the cylinder, and a fluid-discharge outlet for the cylinder in said valve-chamber adjacent to said inlet, a fluid-pressure inlet passage at the opposite end of the cylinder leading into it from said valve-chamber and a fluid-pressure outlet in said valve-chamber adjacent to said last-named inlet, a slide valve in said valve-chamber comprising a rod and spaced pistons, fluid-pressure inlet and outlet ports for the cylinder in each end portion of said chamber, a valve rod, slide valves on the rod for opening and closing the ports at each end of the chamber alternately, and reciprocating means for the rod.

4. In combination with a grinding-wheel and a reciprocal work-holder coöperating therewith, fluid-pressure operating means for said work-holder comprising a cylinder, a piston in said cylinder directly connected with the work-holder, a valve-chamber, fluid-pressure inlets and outlets leading from said valve-chamber to said cylinder, a slide-valve device in said valve-chamber for controlling the opening and closing of said inlets and outlets, and means for shifting the slide-valve to reverse the travel of the piston in the final movement of the work-holder in one direction.

5. In combination with a grinding-wheel and a reciprocal work-holder coöperating therewith, fluid-pressure operating means for said work-holder comprising a cylinder, a piston in said cylinder connected with the work-holder, a valve-chamber, fluid-pressure inlets and outlets leading from said valve-chamber to said cylinder, a spring-controlled slide-valve in said valve-chamber for controlling the opening and closing of said inlets and outlets, catch-mechanism for releasably maintaining said slide-valves in one position against the tension of its spring, and means actuated by said work-holder for engaging said catch to free the valve and allow it to return under the action of its spring to normal condition.

[Claims 6 to 9 not printed in the Gazette.]

876,429. SASH-FASTENER. FREDERIC H. BLEYER, Brooklyn, N. Y. Filed Apr. 4, 1907. Serial No. 366,847.

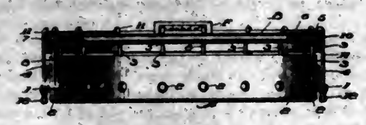


1. A fastener of the character described comprising a holder having a keeper hook, a bolt slidable in said holder, and a locking arm pivoted at one of its ends to said bolt and having a portion at its opposite end to engage said keeper hook, substantially as described.

2. The combination with sliding sashes, one having a transverse opening and the other a socket or seat, a holder or attaching plate upon one of said sashes and recessed to provide a hook-arm having a notch therein, a bolt slidable in the opening in one of said sashes, and a locking arm pivoted to said bolt and having a head upon one of its ends to engage the hook arm of said holder, substantially as described and for the purpose set forth.

3. The combination with sliding sashes, one having an opening extending transversely therethrough, and the other a socket, of a bolt slidable in said opening and having one end reduced to form a shoulder, an operating lever connected with said reduced end, a holder secured upon the sash having the opening therethrough, said holder having an opening of smaller diameter than the opening in the sash and registering therewith, whereby the inward movement of the bolt is limited by the shoulder abutting against the walls of said opening, and means for locking said bolt in projected position.

876,430. STRINGED MUSICAL INSTRUMENT. WILLIAM D. BOHNENBERGER, East Orange, N. J. Filed Mar. 25, 1907. Serial No. 364,498.



1. In a musical instrument, the combination, a rim, standards mounted in said rim, said standards being beveled to an edge on their upper ends, a resounding ring resting on said upper ends of said standards, a vibrating diaphragm drawn over said resounding ring, and means for fastening and adjusting said diaphragm in position on said ring.

2. In a musical instrument, the combination, a rim, bolts extending through said rim, standards mounted within recesses in said rim and resting on said bolts, a resounding ring resting on the upper ends of said standards, a vibrating diaphragm drawn over said resounding ring, and means for fastening and adjusting said diaphragm in position on said resounding ring.

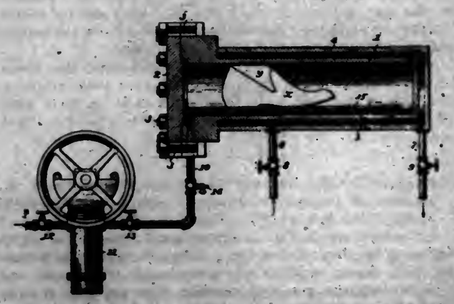
3. In a musical instrument, in combination, a rim, brackets, bolts extending through said rim and securing said brackets thereto, standards fitting in holes in said rim and resting on said bolts, said standards being beveled to an edge on their upper ends, a resounding ring resting on said edges of said standards, a flesh hoop a vibrating diaphragm drawn over said resounding ring and wrapped around said flesh hoop, a stretching hoop above said flesh hoop, said diaphragm being adapted to be gripped between said flesh hoop and said stretching hoop, hooks engaging said stretching hoop and extending through holes in said brackets, and nuts on the lower screwthreaded ends of said hooks whereby the diaphragm is adjusted on said resounding ring.

4. In a musical instrument, in combination, a rim, standards mounted in said rim, said standards being beveled to an edge on their upper ends, a resounding ring resting on said edges of said standards, a space between the top edge of the rim and the resounding ring, a vibrating diaphragm resting on said resounding ring, and means for drawing the diaphragm to the proper tension on said resounding ring.

5. In a musical instrument, a rim, standards mounted in said rim, a diaphragm supporting ring resting on the upper ends of said standards, said upper ends of the standards being shaped to fit the ring, whereby the said ring is held in alinement.

[Claims 6 to 8 not printed in the Gazette.]

876,431. PROCESS OF VULCANIZATION. AUGUSTUS O. BOURN, Bristol, R. I. Filed Dec. 24, 1900. Serial No. 40,926.



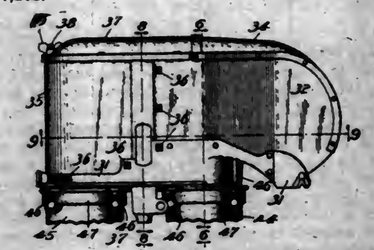
1. The process of vulcanizing consisting in exposing the articles to the action of a surrounding body of air, gradually increasing the temperature of the air, and also gradually increasing the pressure of the air to a pressure above that resulting from expansion by heat.

2. The within described process of vulcanizing consisting in subjecting articles to a surrounding body of air, increasing the pressure of the air to a pressure above that due to expansion by heat, and gradually heating the air to a vulcanizing temperature.

3. The within described process of vulcanizing articles consisting in subjecting the same to a surrounding body of air, gradually heating the air to a vulcanizing temperature, and imparting pressure to the air in excess of that due to expansion by heat.

4. In the vulcanization of vulcanizable compounds, subjecting articles made of such compounds to the action of a body of air the pressure and temperature of which is gradually increased, and thereafter reducing the pressure before the operation is completed.

876,432. ELEVATOR. CHESTER BRADFORD and GEORGE L. CHATFIELD, Indianapolis, Ind.; said Chatfield assignor to said Bradford. Filed Apr. 9, 1907. Serial No. 367,202.



1. The combination, in an elevator head, of a base, a sheet metal body piece, a rigidly attached cap portion, a removable cap portion, and a releasable clamping device, said last named cap portion engaging with the rigidly attached cap portion at one end and being held by the releasable clamping device at the other end.

2. The combination, in an elevator head, of the base, a sheet metal body portion, a rigidly attached cap portion, and a removable cap portion, said removable cap portion having a down-turned external flange and an internal flange, said flanges embracing the upper edge of the body piece when the parts are assembled.

3. The combination, in an elevator head, of a base, a sheet metal body piece forming the sides of the head and secured by its lower edges to said base and provided with openings in the sides through which the shaft bearings extend and wherein said shaft bearings are adjustable, a rigidly attached cap piece secured to the upper edges of said body piece at the snout or discharging end and forming with the ends of said body piece and a corresponding end of the base the discharge opening or snout, and a removable cap piece covering the remaining portion of the top of the head.

4. The combination, in an elevator, of a head built separately from the elevator legs, elevator legs provided with bolt receiving projections, bolts extending parallel with the elevator legs by which said head is removably secured thereto, a boot built separately from the elevator legs, and bolts by which said boot is removably secured thereto.

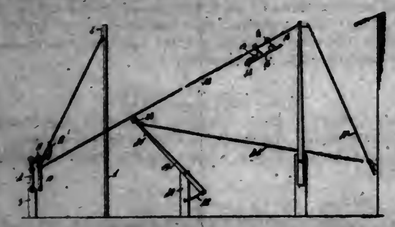
5. The combination, in an elevator head, of a base, side-portions or cheeks rigidly attached thereto, a front cap-portion rigidly attached to said cheeks, a back head-portion detachably connected to the base and the cheeks, and a rear cap-portion detachably associated with the front cap-portion the cheeks and rear head-portion.

[Claims 6 to 8 not printed in the Gazette.]

876,433. RURAL-MAIL-DELIVERY APPARATUS. JAMES M. BRANHAM, Springfield, Ill. Filed Oct. 25, 1906. Serial No. 340,518.

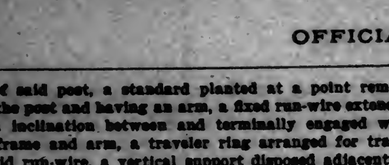
In a device of the class described, a post planted adjacent to a roadway, an open stop frame fixed on the upper

end of said post, a standard planted at a point remote from the post and having an arm, a fixed run-wire extended at an inclination between and terminally engaged with said frame and arm, a traveler ring arranged for travel on said run-wire, a vertical support disposed adjacent to a house, a boom pivoted to said support and provided at its lower end with a weight and at its upper end with a bent arm, a trolley wire extended between and terminally engaged with the bent arm and the traveler ring, a box or car provided with trolleys to travel on said trolley wire, a traction rope connected with the upper end of the



boom and adapted for manual operation to cause the traveler ring to move upward onto the fixed run-wire for inclining the trolley wire downward from the road toward the house, said traveler ring being adapted, when the traction rope is released, to move automatically downward on the run-wire for inclining the trolley wire downwardly from the house toward the road, and a spring actuated locking dog pivoted to the traveler ring and formed for engagement with one of the trolleys to hold the car in normal position, said dog having a projecting portion adapted to contact with the standard arm for automatically releasing the car.

876,434. NON-INTERFERING PARTY-LINE TELEPHONE SYSTEM. WILLIAM R. BROWN, La Fayette, Ind., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 18, 1907. Serial No. 352,925.



1. In a telephone system, the combination with a party telephone line, of a generator at each substation wherewith the parties on the line may selectively signal either central office or the other parties on the line, and means depending upon the position of the switch-hook for changing the selective apparatus from one condition to another, substantially as described.

2. In a telephone system, the combination with a party telephone line having a normally grounded branch at the central office, a magnetic signaling device in said grounded branch, and an annunciator at each subscriber's station bridged between the limbs of the telephone line, a current generating device at each subscriber's station, and means depending upon the position of the switch-hook for including said generator either in a bridge of the line conductors or between the telephone line and ground when the generator is in operation, substantially as described.

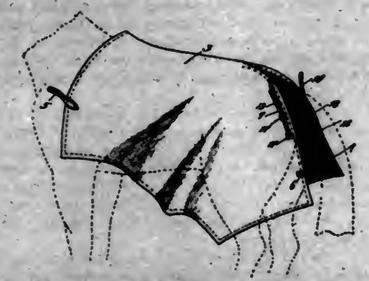
3. In a telephone system, the combination with a party telephone line, of an impedance coil bridged between the limbs of the line at the central office, a magnetic signaling device connected between an intermediate point of said impedance coil and a third conductor, a bridged annunciator at each of the subscribers' stations, a generating device at the subscriber's station, and means depending upon the position of the switch-hook for connecting said generator in a bridge of the telephone lines or between said lines and said third conductor when the generator is in operation, whereby current may be sent either through the signal at the central office or the annunciators at the other subscribers' stations, substantially as described.

4. In a telephone system, the combination with a party telephone line, of a signal at the central office and an annunciator at each of the subscribers' stations, a generator at each of the subscribers' stations, means to direct the current of said generator through the signal at the central office when the receiver hook is in one position and the generator is rotated, and means to direct the current of said generator through the annunciators at the subscribers' stations when the receiver hook is in the other position and the generator is rotated, substantially as described.

5. In a telephone system, the combination with a party telephone line, of a signal at the central office, and an annunciator at each of the subscribers' stations, a generating device at each of the subscribers' stations, means for directing current from said generating device through the annunciators at the subscribers' stations and for excluding the current from the central office signal when the receiver hook is in one position, and means for directing the current of said generator through the central office signal and excluding the current from the line annunciators when the receiver hook is in its other position, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

876,435. HORSE-BLANKET. EDWIN CALDWELL, Burlington, Wis. Filed Jan. 26, 1907. Serial No. 354,269.



1. A blanket having a tail-strap on the under side thereof near its rear end, said blanket being slit longitudinally at the rear, the ends of the tail-strap being secured to the blanket at opposite sides of the slit.

2. A blanket having its rear end portion slit longitudinally, and a tail-strap having its ends secured to said blanket at opposite sides of said slit.

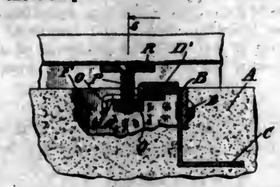
3. A blanket having a tail-strap on the under side thereof near its rear end, said blanket being slit longitudinally at the rear, the ends of the tail-strap being secured to the blanket at opposite sides of the slit, and means for fastening the slit portions of the blanket together.

4. A blanket having a tail-strap on the under side thereof, the rear portion of the blanket being slit longitudinally, the ends of said tail-strap being secured at opposite sides of the slit, and means for adjusting the length of the tail-strap.

876,436. FLOOR. THOMAS CANTWELL, New York, N. Y., assignor of one-half to James O. Beers, Jr., Brooklyn, N. Y. Filed Jan. 4, 1907. Serial No. 350,772.

1. A floor comprising a lower plastic course, a clamp engaging bar secured therein, a laterally projecting flange, an upper course of strips laid transversely of said bar, and a clamp comprising a body member, jaws engaging the upper and lower surface of the flange on said bar, and means for securing the strips of the said upper course to the clamp.

2. A floor comprising a lower plastic course, a clamp engaging bar secured therein, a laterally projecting flange, an upper course of strips laid transversely of said bar, and a clamp comprising a body member, jaws engaging the upper and lower surface of the flange on said bar, and a bolt and nut for securing the strips of the said upper course to the clamp.

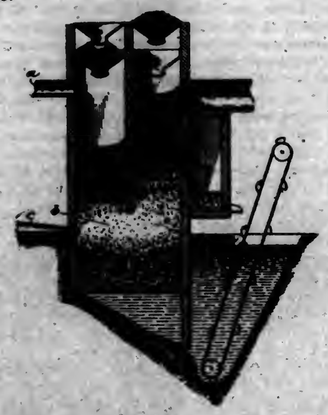


3. A floor comprising a lower plastic course, a clamp engaging bar secured therein, a laterally projecting flange, an upper course of strips laid transversely of said bar, a clamp comprising a body member, jaws engaging the upper and lower surface of the flange of the bar, means for engaging a bolt, and a bolt and nut adapted to engage said clamp and secure the strips of the upper course in position.

4. A floor comprising a lower plastic course, a clamp engaging bar secured therein, a laterally projecting flange, an upper course of strips laid transversely of said bar, and a clamp comprising a body member, subetantially parallel jaws engaging the upper and lower surface of the flange on said bar, and means for securing the strips of the said upper course to the clamp.

5. A floor comprising a lower plastic course, a clamp engaging bar secured therein, a laterally projecting flange substantially flush with the upper surface of said plastic course, an upper course of strips laid transversely of said bar, and a clamp comprising a body member, jaws engaging the upper and lower surface of the flange on said bar, and means for securing the strips of the said upper course to the clamp.

876,437. GAS-CONVERTING PROCESS. GEORGE C. CARSON, Denver, Colo. Filed June 18, 1906. Serial No. 322,235.

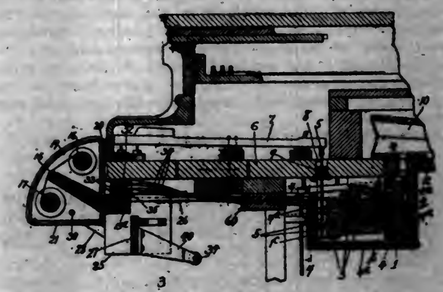


1. The process herein described of creating and maintaining a zone of high temperature within a bed or body of cold carbon with a blast of air forcing or drawing a current of smoke or flue dust from smelting or other furnaces through said body of cold carbon into said zone of high temperature, converting the metallic oxids in said smoke or flue dust into metals and carbon monoxid, with the reaction between said oxids and said carbon converting the non-metallic oxide in said smoke or flue dust into metalloids and carbon monoxid, with the reaction between said oxids and said carbon allowing the metals reduced from said smoke or flue dust to settle with the ash into a body of water, allowing the gas to pass from said zone and pass through cold carbon, absorbing the heat from said gas with said cold carbon, maintaining said cold carbon by continuously charging fresh carbon to said bed or body of carbon, allowing metalloids to pass from said body of carbon into adjacent condensing chambers substantially as described.

2. The process herein described of maintaining a body or bed of carbon with a central zone of high temperature, forcing or drawing gases containing metalloids or metallic fumes through said bed or body of carbon and zone of high temperature, converting said gases into carbon monoxid, and cooling said carbon monoxid by leaving the heat of said carbon monoxid in cool carbon or outer zone of said bed or body of carbon, reducing metals and metalloids from said gas, allowing said metalloids to pass through ports or opening in walls surrounding said bed or body of carbon, into condensing chambers, allowing said metals to settle with ash of consumed carbon from said body or bed into water, giving said water a jig motion, and washing said metals and ash into a pit beneath said body or bed of carbon, removing said metals and ash from said pit, substantially as described.

3. The process herein described of passing a current of gas and flue dust through a bed or body of incandescent carbon, reducing metals and metalloids from said gas and flue dust, collecting said metals and metalloids in the ash from said incandescent carbon and in condensing chambers, cooling said current of gas by passing it through cold carbon, which replaces consumed carbon in said incandescent zone, replenishing the consumed carbon of said incandescent zone with carbon heated by the current of gas leaving said incandescent zone, substantially as described.

876,438. AUTOMATIC PIANO. MELVILLE CLARK, Chicago, Ill. Filed Feb. 8, 1906. Serial No. 300,037.



1. In an automatic square or grand piano, in combination with the piano frame, a foundation board mounted on the under side of the frame; an exhaust bellows, pumper bellows and a pneumatic action all mounted on the foundation board, said board together with said parts mounted thereon being adapted to be detachably secured as a unitary structure to the piano.

2. In an automatic square or grand piano, in combination with the piano frame, an automatic operating mechanism comprising an exhaust air chamber and exhausting devices; a pneumatic action comprising primary and motor pneumatics, said exhaust air chamber and exhausting devices and pneumatic action being detachably mounted upon the under side of the piano frame; a duct board detachably secured to the under side of the key table and means connecting its ducts respectively with the primary pneumatics, in combination with a tracker-board frame and music and take-up rolls and operating mechanism mounted thereon, the tracker board having its ducts adapted to register with the ducts of the duct board, and means for supporting said tracker frame for movement from such registering position rearward to a position underneath the key table.

3. In an automatic square or grand piano, in combina-

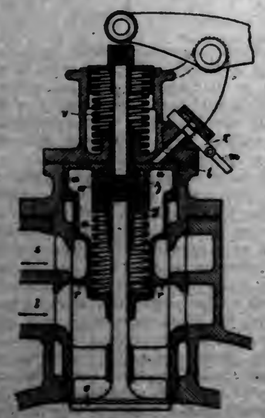
tion with the piano frame, an automatic operating mechanism consisting of a foundation board; an exhaust air chamber and exhausting devices mounted on said board; a primary pneumatic chamber and motor pneumatics mounted thereon exterior to said chamber, being also secured to the foundation board, whereby the parts described may be detachably secured as a unitary structure to the under side of the piano frame; a duct-board detachably secured to the under side of the key table, and means connecting its ducts respectively with the primary pneumatics, in combination with a tracker-board frame and music and take-up rolls and operating mechanism mounted thereon, the tracker-board having its ducts adapted to register with the ducts of the duct-board, and means for supporting said tracker frame for movement from such registering position rearward to a position underneath the key table.

4. In an automatic square or grand piano, in combination with the piano frame, a foundation board, pumpers, an exhaust bellows and an exhaust air chamber mounted on said board, the latter having ducts for communication of the pumpers with the exhaust bellows, and of the exhaust bellows with the exhaust air chamber; motor pneumatics mounted on the exhaust air chamber in position for collapsing by upward movement of their moving walls, the piano frame being apertured in line transverse to the manual keys under the rear ends of said keys, and tracker pins or strikers connected with the motor pneumatics, respectively, operating upward through such apertured frame upon the manual keys rearward of their fulcrums.

5. In an automatic square or grand piano, in combination with the piano frame, key-actuating mechanism mounted upon the under side of the rear part of said frame comprising tracker pins or strikers for operating upward against the under side of the manual keys and pneumatic operating mechanism therefor; a tracker-board, music and take-up rolls and operating mechanism and a rigid frame in which said parts are mounted; a duct board detachably mounted in the under side of the forward part of the piano frame, and connections from such duct board to the pneumatic operating mechanism, the said rigid frame being mounted on the piano frame for movement from a position forward of the manual breast of the piano to a position underneath the key table, the tracker board having its ducts registering with those of the duct board at said forward position.

[Claims 6 to 11 not printed in the Gazette.]

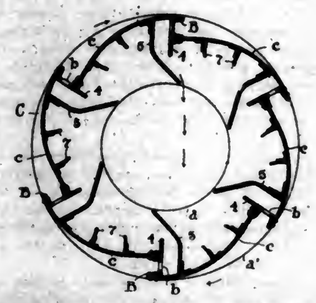
876,439. GOVERNING-GEAR FOR INTERNAL-COMBUSTION ENGINES. WILLIAM J. CROSSLEY, Openshaw, Manchester, and JAMES ATKINSON, Mellor, England. Filed Dec. 17, 1906. Serial No. 348,321.



1. In an internal combustion engine, the combination with the gas valve, a vacuum cylinder, a piston therein and connected with the gas valve, means for controlling the air supply to the vacuum cylinder from the governor and springs operating on the valve piston, arrange to vary the time of opening of the gas valve which closes with the admission valve.

2. In combination, the gas valve, springs operating thereon, the admission valve, springs operating thereon, an air cylinder, a piston therein and connected with the gas valve, a valve controlling the admission of air to the cylinder and means for actuating the valve from the governor.

876,440. DRYING-CYLINDER. WILLIAM M. CUMMER, Cleveland, Ohio. Filed Apr. 29, 1907. Serial No. 370,804.



1. A drying cylinder formed in longitudinal sections having strengthening ribs between adjacent edges of said sections provided with draft openings, and walled draft passages inside the cylinder into which said openings discharge having varying elevation the higher of said walls being bent to an angle of inclination at their inner portions across the plane of the opposite walls into guarding relations.

2. A drying cylinder having longitudinal draft openings through the wall thereof and draft chambers in said cylinder having parallel walls of different elevation on opposite sides lengthwise, one of said walls being bent at an angle of inclination of approximately forty-five degrees laterally and projected across the plane of the opposite wall.

3. A drying cylinder consisting of several longitudinal segmental sections having their meeting edges spaced apart and draft openings between said sections and a walled draft chamber next within said openings, one wall of said chamber being erected on each of said meeting sections and the higher wall having an inclined extension projecting across said chamber and into the interior of the cylinder, thereby serving as a lift on one side and as a deflector on the other and as a guard for said chamber.

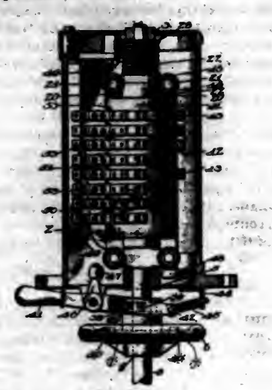
4. A drying cylinder formed in segmental sections lengthwise eccentrically arranged, spacing pieces between the meeting edges of said sections provided with draft openings and draft chambers lengthwise next within said openings provided with parallel walls, one wall being fixed on each meeting section and the higher wall having an inclined inner lifting and deflecting portion, and transversely curved lift blades between said chambers.

5. A drying cylinder having draft openings through the wall thereof and draft chambers in said cylinder provided with parallel continuous walls on opposite sides of said openings, said walls being of different elevations and the higher of said walls having an inclined inner portion projecting toward the plane of the other wall.

[Claims 6 to 8 not printed in the Gazette.]

876,441. MOTOR-CONTROLLING DEVICE. WILLIAM B. DATE, Westfield, N. J., assignor to The Cutler-Hammer Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 14, 1907. Serial No. 362,891.

1. The combination with a motor, of continuously operated means for periodically changing the direction of operation of the motor, and means for stopping the same at a predetermined point.



2. The combination with a motor, of a continuously operated controller therefor, having a movable member, the direction of movement of which is periodically changed to periodically change the direction of operation of the motor, and means for stopping the motor at a predetermined point.

3. The combination with a motor, of a plurality of switches for controlling the direction of operation of the motor, continuously operated means for causing said switches to operate alternately, and means for stopping said motor at a predetermined point.

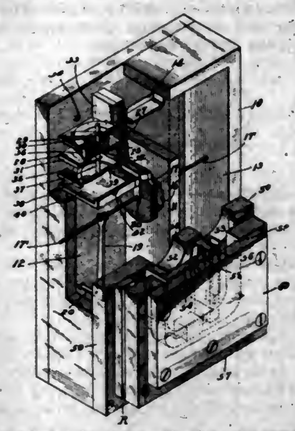
4. The combination with a motor, of a plurality of switches for controlling the direction of operation of the motor, of means for causing said switches to operate alternately, and a switch for controlling the circuit through said motor controlling switches, arranged to remain closed upon the stopping of the motor, until said switch controlling means reaches a predetermined condition.

5. The combination with a motor, of a plurality of switches for controlling the direction of operation of the same, a movable member for causing said switches to operate alternately and adapted to insert and gradually cut out a resistance in the motor circuit upon change of direction of operation thereof, and means for stopping said motor at a predetermined point.

[Claims 6 to 20 not printed in the Gazette.]

876,442. ACCENTING DEVICE FOR AUTOMATIC PLAYERS FOR INSTRUMENTS. FRANCIS W. DRAPER, Richmond, Ind., assignor to Starr Piano Company, Richmond, Ind., a Corporation of Indiana. Filed July 18, 1907. Serial No. 384,322.

1. A solo device for automatic players comprising a pair of main chambers with a passage forming a direct communication between said chambers, a valve adapted to close said passage, a pressure regulator also forming a communication between the two chambers, and a valve-operating pneumatic action mounted in one of said chambers to operate said valve, said valve-operating pneumatic action comprising a power-pneumatic engaging the valve, a main valve chamber communicating with said power-pneumatic and communicating on one side with atmosphere and on the other side with the chamber within which the structure is mounted, a main-valve mounted within said main-valve chamber and adapted to automatically control said communications, a primary-pneumatic for operating said main-valve, a tracker board, a communication between said tracker board and said primary-pneumatic, and means for controlling admission to the atmospheric side of the main valve chamber.



2. A solo device for automatic players comprising a pair of main chambers with a passage forming a direct communication between said chambers, a valve adapted to close said passage, a pressure regulator also forming a communication between the two chambers, and a valve-operating pneumatic train mounted in one of said chambers to operate said valve, said valve-operating pneumatic train comprising a power-pneumatic engaging the valve, a main valve-chamber communicating with said power-pneumatic and communicating on one side with atmosphere and on the other side with the chamber within which the structure is mounted, a main-valve mounted within said main valve chamber and adapted to automatically control said communications, a primary-pneumatic for operating said main-valve, a tracker board, a communication between said tracker board and said primary-pneumatic, and means independent of the tracker board for controlling admission to the atmospheric side of the main valve chamber.

3. A solo device for automatic players comprising a pair of main chambers with a passage forming a direct communication between said chambers, a valve adapted to close said passage, a pressure regulator also forming a communication between the two chambers, and a valve-operating pneumatic train mounted in one of said chambers to operate said valve, said valve-operating pneumatic train comprising a power-pneumatic engaging the valve, a main valve chamber communicating with said power-pneumatic and communicating on one side with atmosphere and on the other side with the chamber within which the structure is mounted, a main-valve mounted within said main valve chamber and adapted to automatically control said communications, a primary-pneumatic for operating said main-valve, a tracker board, a communication between said tracker board and said primary-pneumatic.

4. A solo device for automatic players comprising a pair of main chambers with a passage forming a direct communication between said chambers, a valve adapted to close said passage, a pressure regulator also forming a communication between the two chambers, and a valve-operating pneumatic train mounted in one of said chambers to operate said valve, said valve-operating pneumatic train comprising a power-pneumatic engaging the valve, a main valve chamber communicating with said power-pneumatic and communicating on one side with atmosphere and on the other side with the chamber within which the structure is mounted, a main-valve mounted within said main valve chamber and adapted to automatically control said communications, a primary-pneumatic for operating said main-valve, a tracker board, and a communication between said tracker board and said primary-pneumatic.

5. A solo device for automatic players comprising a pair of main chambers with a passage forming a direct communication between said chambers, a valve adapted to close said passage, a pressure regulator also forming a communication between the two chambers, and a valve-operating pneumatic train mounted in one of said chambers to operate said valve, said valve-operating pneumatic train comprising a power-pneumatic engaging the valve, a main

valve chamber communicating with said power-pneumatic and communicating on one side with atmosphere and on the other side with the chamber within which the structure is mounted, a main-valve mounted within said main valve chamber and adapted to automatically control said communications, a primary-pneumatic for operating said main-valve, a tracker board, a communication between said tracker board and said primary-pneumatic, and means for controlling admission to the atmospheric side of the main valve chamber.

[Claim 6 not printed in the Gazette.]

876,443. PEDAL CONNECTION FOR MUSICAL INSTRUMENTS. OTTO DRESSEL, Philadelphia, Pa. Filed Aug. 16, 1906. Serial No. 330,849.

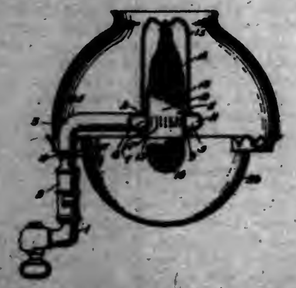


1. A musical instrument having a pedal, a bell, a counterbalanced hammer for striking said bell, and a device operated by said pedal for striking said hammer and causing it to strike said bell.

2. A musical instrument having a pedal, a bell, a hammer having a support about which it oscillates, and a resilient mechanism operated by said pedal to strike said hammer and cause it to strike said bell.

3. A musical instrument having a pedal, a bell, a hammer mechanism for striking said bell, a device operated by said pedal for striking said hammer mechanism and causing it to strike said bell, and means whereby said striking mechanism can be shifted into and out of engagement with said pedal.

876,444. INCANDESCENT GAS-LAMP. HARVEY M. HAGON, New Comerstown, Ohio. Filed Apr. 1, 1907. Serial No. 365,744.



1. In an incandescent lamp, the combination of a reservoir mantle support and a mantle support removably mounted and in communication therewith whereby the gas is fed in opposite directions through the mantle support.

2. In an incandescent gas lamp, the combination of a gas supply, a reservoir mantle support in communication therewith and a mantle support removably mounted and in communication with the reservoir mantle support, intermediate of its ends, whereby gas is conducted through opposite ends of the support.

3. In an incandescent lamp, the combination of a supply pipe, a reservoir mantle support in communication therewith, a mantle support removably connected to said reservoir mantle support and adapted to receive gas through the reservoir mantle support from said gas supply pipe intermediate of its ends, and an upright mantle connected to the upper end of the mantle support and an inverted mantle connected to the lower end of the mantle support.

4. In an incandescent gas lamp, the combination of a supply pipe, a reservoir mantle support removably carried thereby, a mantle support carried by said reservoir support and in communication therewith intermediate of its length, an upright mantle connected to the upper end of said mantle support and an inverted mantle carried by the lower end of the mantle support, both of said mantles being adapted to receive and burn gas simultaneously.

5. In an incandescent lamp, the combination of a supply pipe, a circular reservoir mantle support in communication therewith, a mantle support removably mounted in said reservoir support and adapted to receive gas from said gas supply pipe intermediate of its ends, a mantle surrounding the opposite projecting ends of said mantle support, a shade support carried by the supply pipe, and a shade surrounding the mantle and carried by said support.

[Claims 6 to 13 not printed in the Gazette.]

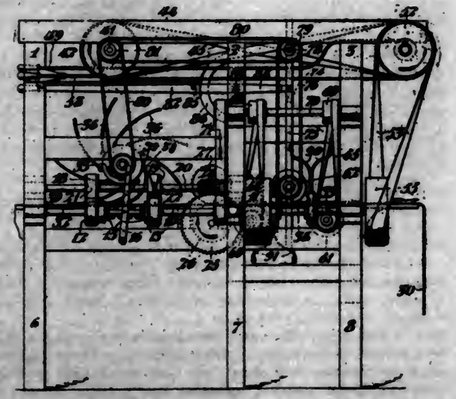
876,445. ELECTROLYTE FOR ALKALINE STORAGE BATTERIES. THOMAS A. EDISON, Llewellyn Park, Orange, N. J., assignor to Edison Storage Battery Company, West Orange, N. J., a Corporation of New Jersey. Filed May 10, 1907. Serial No. 372,919.

1. An alkaline electrolyte for storage batteries, employing lithium hydroxid, substantially as set forth.

2. An alkaline electrolyte for storage batteries, employing sodium or potassium hydrate, and containing about two per cent. of lithium hydroxid, substantially as set forth.

3. A storage battery employing as active materials compounds of nickel and iron, and an alkaline electrolyte employing sodium or potassium hydrate, and containing lithium hydroxid, substantially as set forth.

876,446. CARPET-CLEANING MACHINE. WILLIAM FARMAN, Philadelphia, Pa., assignor of two-thirds to James F. Valentine, Woodlyn, Pa. Filed Apr. 9, 1906. Serial No. 310,607.



1. In a carpet cleaning machine, the combination with a beater drum; of means for supporting the carpet during its progression through the machine; feed rollers below said supporting means; a brushing roll, supported above and in proximity to the path of the carpet; means for simultaneously reversing the direction of rotation of said beater drum and brushing roll; and independent means for reversing the direction of rotation of said feed-rolls, substantially as set forth.

2. In a carpet cleaning machine, the combination of a support for the carpet; brushes below said support; a brush mounted above said support in vertically reciprocatory slide bars; means for driving said brushes; and a hand lever operatively related to said slide bars, whereby the position of the upper brush roll may be varied.

3. In a carpet cleaning machine, the combination of a support formed by guiding wires; brushes below said wires; a brush mounted above the wires in vertically reciprocatory slide bars; a rock shaft; a hand lever secured to said rock shaft; means connecting said rock shaft with said slide bars; and means for regulating the position of said hand lever.

4. In a carpet cleaning machine; the combination of a support for the carpet; a pair of brush rolls below said support; a brush mounted above said support in vertically reciprocatory slide bars intermediate said brush rolls; means for driving said brush; and means for moving said slide bars to regulate the pressure between the carpet and brushes.

876,447. COMPOUND FOR SMOOTHING PLATE-GLASS. FREDERICK H. FINDON, Jr., Freeport, Pa. Filed Feb. 12, 1907. Serial No. 357,088. (Specimens.)

1. The composition of matter for smoothing plate glass preparatory to polishing the same, consisting of a paste composed of emery, alum and water.

2. The composition of matter for smoothing plate glass preparatory to polishing the same, consisting of emery, alum and water in the proportions of about two pounds of emery, one-half an ounce of alum and one pint of water.

876,448. CAST-METAL CAR-BOLSTER. GEORGE G. FLOYD, Granite, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Mar. 25, 1907. Serial No. 364,304.

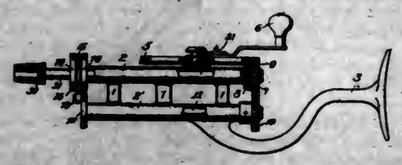


1. A cast metal truck bolster of substantially T-shape in cross-section having an enlargement or bulb at the foot of the vertical portion or leg of the bolster, said enlargement or bulb gradually increasing in thickness to the lower edge of said vertical portion, substantially as described.

2. A cast metal truck bolster of substantially T-shape in cross-section having an enlargement or bulb at the foot of the vertical portion or leg of the bolster, said enlargement or bulb having curved or rounded sides and gradually increasing in thickness to the lower edge of said vertical portion, substantially as described.

3. A cast metal truck bolster of substantially T-shape in cross-section having an enlargement or bulb at the foot of the vertical portion or leg of the bolster, said enlargement or bulb having sides each reversely curved, said enlargement gradually increasing in thickness to the lower edge of said vertical portion, substantially as described.

876,449. GRINDING-MACHINE. JOHN E. FRY, Denver, Colo., assignor of one-half to Morton H. Van Sicklen, Chicago, Ill. Filed Feb. 27, 1907. Serial No. 359,635.



1. In a grinding machine, a rotary member having a wrist pin eccentrically mounted thereon, a grinding head provided with a crank and crank pin, and a pitman connecting said wrist pin and crank pin.

2. In a grinding machine, a rotary member having a wrist pin eccentrically mounted thereon, an oscillatory grinding head provided with a crank and crank pin, the eccentricity of said wrist pin being less than that of said crank pin, and a pitman, whereby an oscillatory movement is imparted to the grinding head by the rotary movement of said rotary member.

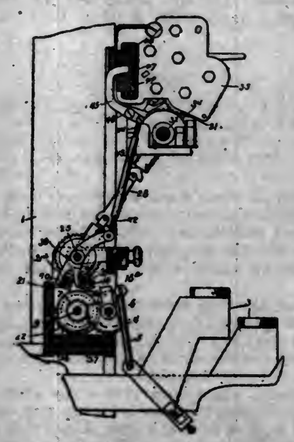
3. In a grinding machine, a rotary member having a wrist pin eccentrically mounted thereon, an oscillatory grinding head provided with a crank and crank pin, a pitman connecting said wrist pin and said crank pin, and means for rotating said rotary member.

4. In a grinding machine, a rotary member having a wrist pin eccentrically mounted thereon, an oscillatory grinding head provided with a crank and crank pin, the eccentricity of said wrist pin being less than that of said crank pin, a pitman whereby an oscillatory movement is imparted to the grinding head by the rotary movement of said rotary member, and means for rotating said rotary member.

5. In a grinding machine, a rotary member having a wrist pin eccentrically mounted thereon, an oscillatory grinding head provided with a crank and crank pin, a pitman connecting said wrist pin and said crank pin, a shaft connected to said rotary member, and gearing for rotating said shaft.

[Claims 6 to 12 not printed in the Gazette.]

876,450. CALCULATING-MACHINE. HYMAN E. GOLDBERG, Chicago, Ill., assignor to Goldberg Calculating Machine Company, a Corporation of Illinois. Filed Jan. 17, 1906. Serial No. 296,491.



1. In a calculating machine the combination of a traveling totalizer, a master member for registering on the same, means including keys for operating said master member, a member operated by said keys and having an intermittent movement, one movement prior to and another subsequent to the movement of said master member, and means operated by said intermittently moving member for preventing the travel of said totaliser during the period of action of said master member upon said totaliser.

2. In a calculating machine the combination of a traveling totaliser, a master member for registering on the same, means including keys for operating said master member, a member operated by said keys and having an intermittent rotary movement always in the same direction, one movement prior to and another subsequent to the movement of said master member, and means operated by said intermittently moving member for preventing the travel of said totaliser during the period of action of said master member upon said totaliser.

3. In a calculating machine, the combination of a traveling totaliser, a master member for actuating the same, figure keys, valuating connections between said keys and said master member, a rotatable shaft having an intermittent rotary movement, one prior to and another subsequent to the movement of said master member, said shaft being connected to said keys to be operated therefrom, means for detaining said totaliser during the operation

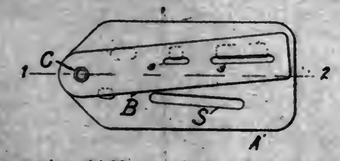
of said master member, and means operated by said shaft for operating said detaining means.

4. In a calculating machine the combination of a traveling totaliser, a master member for registering on the same, means including keys for operating said master member, a member operated by said keys and having an intermittent movement, one movement prior to and another subsequent to the movement of said master member, and a detaining device for preventing travel of the totaliser during the movement of said master member, one part of said detaining device being connected to and operated by said intermittently movable member and another part of said detaining device traveling in unison with the totaliser.

5. In a calculating machine the combination of a traveling totaliser, a master member for registering on the same, means including keys for operating said master member, a member operated by said keys and having an intermittent movement, one movement prior to and another subsequent to the movement of said master member, a rack traveling in unison with said totaliser, a detent adapted to engage said rack and connections between said detent and said intermittently moving member.

[Claims 6 to 46 not printed in the Gazette.]

876,451. ERASING-SHIELD FOR DRAFTSMEN. LEE HALL, Kansas City, Mo. Filed Sept. 19, 1905, Serial No. 279,127. Renewed Apr. 8, 1907. Serial No. 367,070.



1. An erasing shield comprising a base plate, having a slot adapted to expose a portion of a surface over which said plate is posited, and an auxiliary plate carried by and adapted for lateral movement over said base plate, to regulate the width of said slot, for the purpose set forth.

2. An erasing shield comprising a base plate, having a slot therein adapted to expose a portion of a surface over which said plate is posited, a stud on said base plate, and an auxiliary plate mounted on said stud and adapted for movement over said base plate.

3. An erasing shield comprising a base plate, having a slot therein adapted to expose a portion of a surface over which said plate is posited, a stud on said base plate, and an auxiliary plate revolubly mounted on said stud and adapted for movement over the slot in said base plate, for the purpose set forth.

4. An erasing shield comprising a base plate having a perforation adapted to expose a portion of a surface over which said plate is posited, and an auxiliary plate pivoted to said body plate and adapted for movement over said perforation, the perforation in said body plate being so arranged that one of its edges is parallel with one edge of said auxiliary plate when said plate is moved thereover.

5. An adjustable erasing shield consisting of two thin plates pivoted together; the bottom plate perforated to allow the action of an eraser through it, and the top plate adapted to cover a portion of any perforation in the bottom plate, thus forming an opening of any desired narrowness in the bottom plate through which a line may be erased although the same may be very close to adjacent lines.

876,452. HEAD-SCREEN. HENRY C. HARRISON and WILLIAM M. O'BRIEN, Salt Lake City, Utah, assignors to Auto-Mosquito Mask Company, Salt Lake City, Utah. Filed May 7, 1907. Serial No. 372,428.

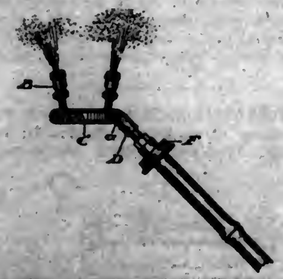
1. A head screen comprising a suitable cap, having a flaring semi-rigid visor around its lower edge, a concavo-convex mask or face protector of wire mesh, connected to and depending from the forward portion of the cap, and the mosquito netting permanently connected to the edges of said mask or face protector and around the lower edge of said cap beneath said visor, and suitably secured to lay along the under side of said visor, and to hang from the edge thereof, substantially as described.



2. A head screen comprising a suitable cap, having a flaring semi-rigid visor around its lower edge, a concavo-convex mask or face protector of wire mesh, connected to and depending from the forward portion of the cap, and the two-part mosquito netting connected by a suitable binding, permanently secured to the edges of said mask or face protector by a second suitable binding, and further secured around the lower edge of the cap beneath said visor to lay along the under side of said visor, and to hang downwardly from the outer edge thereof, substantially as described.

3. A head screen comprising a suitable cap having a flaring semi-rigid visor around its lower edge, a concavo-convex mask or face protector of wire mesh connected to and depending from the forward portion of said cap beneath said visor, and the mosquito netting permanently connected to the edges of said mask or face protector and around the lower edge of the cap beneath said visor, and suitably secured to lay along the under side of said visor from the edges of said mask or face protector around the rear of the cap and to hang from the edge of said visor.

876,453. SPRAY-NOZZLE. WILLIAM H. HEARD, London, Ontario, Canada. Filed Feb. 7, 1906. Serial No. 299,944.



1. In spraying apparatus a fluid conduit bent at an obtuse angle near its discharge end, and a plurality of spray nozzles connected with said end and adapted to discharge at varying angles approximately right angles to the axis of the bent end but all in a substantially forward direction and at an angle to the main part of the conduit, substantially as described.

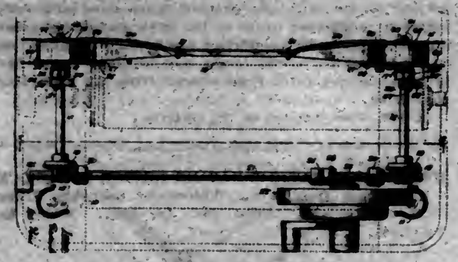
2. In spraying apparatus a fluid conduit comprising a pipe and a chamber connected at one side with the end of said pipe and at an obtuse angle thereto, and a plurality of spray nozzles connected with the chamber at different parts of its forward surface and adapted to discharge in a substantially forward direction but at an angle to the conduit, substantially as described.

3. In spraying apparatus a fluid conduit comprising a pipe and an annular chamber connected at one side with the end of said pipe and at an obtuse angle thereto, and a plurality of spray nozzles connected with the chamber at different parts of its forward surface and adapted to discharge in a substantially forward direction but at an angle to the conduit, substantially as described.

4. In spraying apparatus a fluid conduit comprising a pipe and an annular chamber connected at one side with the end of said pipe and at an obtuse angle thereto, and a plurality of spray nozzles connected with the chamber at different parts of its forward surface and adapted to discharge at varying angles but all in a substantially forward direction and at an angle to the main part of the conduit, substantially as described.

5. In spraying apparatus a fluid conduit comprising a pipe and an annular chamber connected at one side with the end of said pipe and at an obtuse angle thereto, and a plurality of spray nozzles connected with the chamber at different parts of its surface and adapted to discharge at varying angles but all in a substantially forward direction and at an angle to the main part of the conduit, each spray nozzle comprising a part connected with the end and carrying a disgorging needle and a cap longitudinally movable on the said part and provided with a spray aperture opposite the disgorging needle, substantially as described.

876,454. RIBBON MECHANISM FOR TYPE-WRITING MACHINES. FREDERICK HEUSSE, Chicago, Ill., assignor to The Arithmograph Company, Chicago, Ill., a Corporation. Filed Jan. 5, 1906. Serial No. 294,710.



1. In ribbon mechanism for typewriting machines, the combination of the pair of ribbon spools, reversible mechanism for driving either of said spools and friction braking devices associated with said spools and arranged to be automatically thrown into operation with the loose spool and out of operation with the driven spool, substantially as described.

2. In ribbon mechanism for typewriting machines, the combination of the pair of ribbon spools, reversible mechanism for driving either of said spools and a pair of movable, spring brake fingers associated with said spools arranged to be automatically shifted by the movement of said spools into operative relation with the loose spool and out of operative relation with the driven spool, substantially as described.

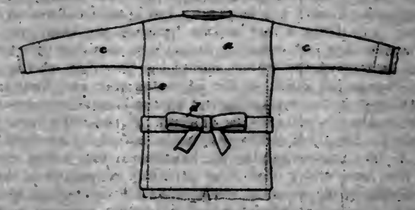
3. In ribbon mechanism for typewriting machines, the combination with the ribbon spools, ribbon guides and spool shafts, and with mechanism for driving either of said shafts, of a pair of brake fingers respectively engaging said shafts, arranged to be shifted by the reversal of said driving mechanism, to bear with increased tension on the loose shaft and with diminished tension on the driven shaft, substantially as described.

4. In ribbon mechanism for typewriting machines, the combination with the ribbon spools, ribbon guides and spool shafts, and with mechanism for driving either of said shafts, of a pair of freely pivoted spring brake fingers, having curved portions bearing on said shafts and arranged to be automatically shifted by their frictional engagement with said shafts to bear with increased tension on the loose shaft and with diminished tension on the driven shaft, substantially as described.

5. In ribbon mechanism for typewriting machines, the combination with the ribbon spools, ribbon guides and spool shafts, and with mechanism for driving either of said shafts, of a pair of friction brake-fingers pivoted to swing freely and having offset curved portions respectively engaging said shafts and arranged to be automatically shifted by the reversal in movement of said shafts, and through their frictional engagement therewith to bear with increased pressure on the loose shaft and with diminished pressure on the driven shaft, said fingers having bent end portions to prevent the disengagement thereof from said shafts, substantially as described.

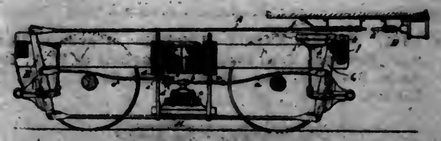
[Claims 6 to 14 not printed in the Gazette.]

876,455. UNDERSHIRT. WILLIAM R. HIRSAND, Chicago, Ill. Filed June 30, 1906. Serial No. 324,120.



A garment of the character described comprising an undershirt having a front, a back consisting of two flaps or extensions integral with the front and adapted to fold one over the other, each flap being substantially rectangular and of the same length and breadth and extending from side to side across the back from the neck to the bottom of the skirt of the garment, a reinforcement of that portion of the front of the undershirt which covers the abdomen, and means to secure the garment around the body of the wearer, substantially as and for the purpose described.

876,456. BRAKE-APPLYING MECHANISM. JAMES M. HINES, Albany, N. Y. Filed Oct. 23, 1907. Serial No. 398,824.



1. In a brake-applying mechanism for four-wheel trucks, a live lever and a dead lever pivotally connected to the respective brake beams, a lower brake-rod connecting said levers, an adjusting rod including take-up mechanism and a lost motion device extending between said levers, whereby an excess movement of the brake-beams toward the wheels changes the reach of the adjusting-rod, and mechanism actuated by the adjusting rod on the release movement of the brakes to change the fulcrum of the dead lever and take up the slack in the system, substantially as described.

2. In a brake-applying mechanism for four-wheel trucks, a live lever and a dead lever pivotally connected to the respective brake-beams, a lower brake-rod connecting said levers, an adjusting rod including take-up mechanism and a lost-motion device extending between said levers, whereby an excess movement of the brake beams toward the wheels changes the reach of the adjusting rod, a tubular guide casing for the adjusting rod supported from the truck, and mechanism actuated by the adjusting rod on the release movement of the brakes to change the fulcrum of the dead lever and take up the slack in the system, substantially as described.

3. In a brake-applying mechanism for four-wheel trucks,

a live lever and a dead lever pivotally connected to the respective brake-beams, a lower brake-rod connecting said levers, a two-part adjusting rod extending between said levers, take-up mechanism connecting the two parts of said rod through a lost-motion device, whereby an excess movement of the brake-beams toward the wheels actuates the take-up device to change the reach of the adjusting rod, and mechanism actuated by the adjusting rod on the release movement of the brakes to change the fulcrum of the dead lever and take up the slack in the system, substantially as described.

4. In a brake-applying mechanism for four-wheel trucks, a live lever and a dead lever pivotally connected to the respective brake-beams, a lower-brake-rod connecting said levers, a two-part adjusting-rod extending between said levers and comprising a part extending from one lever and having a pivoted extension, a tubular guide casing supported from the truck and through which the pivoted extension passes, a rack on the extension, a pawl box sliding on the rack, a part extending from the other brake rod into engagement with the pawl-box, and spaced collars on said part permitting a lost motion between the said part and the pawl-box, whereby an excess movement of the brake-beams toward the wheels moves the pawl-box on the rack to change the reach of the adjusting rod, and mechanism actuated by the adjusting rod on the release movement of the brakes to change the fulcrum of the dead lever and take up the slack in the system, substantially as described.

5. In a brake-applying mechanism for four-wheel trucks, a live lever and a dead lever pivotally connected to the respective brake-beams, a lower-brake-rod connecting said levers, a two-part adjusting-rod extending between said levers and comprising a part extending from one lever and having a pivoted extension, a tubular guide casing supported from the truck and through which the pivoted extension passes, a rack on the extension, a pawl-box sliding on the rack, a part extending from the other brake-rod into engagement with the pawl-box, and spaced collars on said part permitting a lost motion between the said part and the pawl-box, whereby an excess movement of the brake beams toward the wheel moves the pawl-box on the rack to change the reach of the adjusting rod, a pawl-box attached to the upper end of the dead lever, a rack upon which the pawl-box slides, a support for said rack, and a universal joint between the rack and its support, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

876,457. HYDROCARBON-BURNER. ROBERT V. HOFFMAN, Brenham, Tex., assignor of one-half to W. F. Hermann, Brenham, Tex. Filed Jan. 19, 1907. Serial No. 353,101.



1. In a system of the character described, the combination with a burner having a discharge end, of means for supplying fuel to the burner, and a target disposed in line with the discharge end of the burner, said target comprising a plate having a flat face disposed in spaced relation and in opposition to said discharge end, and spaced outstanding inwardly curved muffler walls projecting directly from said face longitudinally of the burner and having their free edges disposed on opposite sides of the longitudinal axis of the burner and in spaced relation to the discharge end thereof.

2. In a system of the character described, the combination with a burner having a discharge end, of means for supplying fuel to the burner, and a target disposed in line with the discharge end of the burner and having spaced outstanding inwardly curved muffler walls on the face that is opposed to said discharge end, said walls having oppositely and inwardly extending flanges along their free edges and being disposed on opposite sides of the longitudinal axis of the burner.

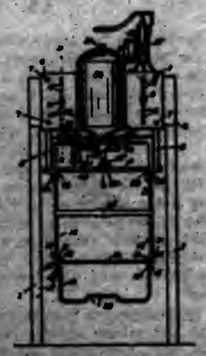
3. In a system of the character described, the combination with a steam generator, of a burner for projecting a flame towards the generator, a connection between the steam generator and burner, means for supplying fuel to the burner, a target interposed between the discharge end of the burner and the generator and constituting a guard for the latter, and outstanding muffler walls on the face of the target that is opposed to the discharge end of the burner, said walls being spaced from the burner and extending longitudinally of said burner on opposite sides of its longitudinal axis.

4. In a system of the character described, the combination with a steam generator, of a burner for projecting a flame towards the generator, a connection between the steam generator and burner, means for supplying fuel to the burner, a target interposed between the discharge end of the burner and the generator and constituting a guard for the latter, and outstanding muffler walls on the face of the target that is opposed to the discharge end of the burner, said walls being spaced from the burner and extending on opposite sides of its longitudinal axis, said walls furthermore having flanges on their free edges that extend toward each other and are disposed in spaced relation to the discharge end of the burner.

5. In a system of the character described, the combination with an elongated burner body having a rear discharge end and including vaporising means, of a fuel supply pipe connected to the body, a target plate located in rear of the discharge end of the burner body and transversely thereof and in the path of the flame from said body, a steam generator set at an inclination behind the target transversely of the burner and having its central portion in line with the path of flame from said body, means for supplying water to the lower end of the generator, and means for conducting steam from its upper end to the burner body, said target constituting a guard that protects the generator from contact with the flame from the burner.

[Claim 6 not printed in the Gazette.]

876,458. AUTOMATIC SPRAYING DEVICE FOR STOCK. HENDERSON HOLLOWELL, Whitewater township, Franklin county, Ind. Filed Jan. 18, 1907. Serial No. 352,881.



1. In an automatic spraying device for stock, the combination of a jointed gate comprising an upper member and a lower member hinged together, a container, a valve therefor, and a connection between said valve and gate for operating said valve, the joint of said gate causing the members thereof to move together when the lower member is pushed from one side and permitting said lower member to move independently of the upper member when pushed from its other side by stock.

2. In an automatic spraying device for stock, the combination of a pivoted gate having an extension above its pivot, a container, a valve therefor, and a connection and catch therefor operatively disposed between said valve and said extension for opening said valve and operating the spray when said extension is swung in one direction, the movement of said extension in the opposite direction being away from said catch for permitting said valve to remain unopened, substantially as described.

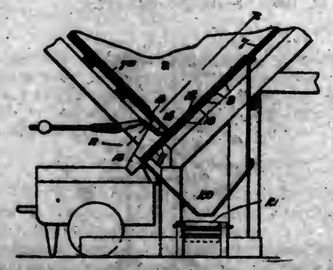
3. In an automatic spraying device for stock, the combination of a primary gate, a subgate hung therefrom, a lug between said gates for causing said gates to move together in one direction and permitting independent movement of said subgate in the other direction, said subgate having an upwardly extending recess in the middle of its lower end, a pivot from which said primary gate is hung, said gates having a counterbalancing upper end above said pivot, a container, a valve therefor, a valve-arm secured to said valve and a link articulated to said valve-arm and having connection with the counterbalancing upper end of said gate, substantially as described.

4. In an automatic spraying device for stock, the combination of a gate-support, a primary gate pivoted thereto having an extension above its pivot, a subgate pivoted at the lower end of said primary gate, a lug between said gates for causing common movement of said gates when said subgate is pushed in one direction and permitting independent movement of said subgate when pushed in the other direction, a container, a valve therefor, a valve-arm for said valve, and a link between said valve-arm and extension, substantially as described.

5. In an automatic spraying device for stock, the combination of a gate-support, a primary gate pivoted thereto having an extension above its pivot, a subgate pivoted at the lower end of said primary gate, a lug between said gates for causing common movement of said gates when said subgate is pushed in one direction and permitting independent movement of said subgate when pushed in the other direction, a container, a valve therefor, a valve-arm for said valve, and a link between said valve-arm and extension, said link having adjustable connection with said valve-arm, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

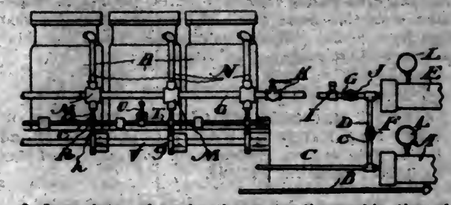
876,459. COKE BIN AND CHUTE. GEORGE F. HUNT, Atlanta, Ga. Filed Nov. 15, 1904. Serial No. 232,907.



In a coke bin, the combination of two walls, having a discharge opening in one of said walls, the other of said walls comprising a plurality of parallel bars of inverted cuneal cross-section, extending transversely to the slope of the wall and having their broad upper surfaces in the same plane, spacing members on each end of each of the several bars and integral therewith in such manner as to form slots enlarging backwardly from the screen surface thus formed; a gate sliding within the first named wall for controlling the discharge of the coke; a transversely slotted chute disposed in the same inclined plane as the slotted wall and forming a continuation thereof; and a hopper common to the slots in the bin wall and the chute.

876,460. STARTING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. HOWARD A. JOHNSTON, Toronto, Ontario, Canada. Filed Feb. 11, 1907. Serial No. 356,739.

1. In an internal combustion motor the combination of a storage air tank; a second tank; a pipe connecting the two; a stop cock in said pipe; a pipe connecting the second tank with the cylinder of the engine; a pressure limiting valve in said pipe; and a stop cock between the pressure limiting valve and the second tank, substantially as described.



2. In an internal combustion motor the combination of a storage air tank; a second tank; a pipe connecting the two; a pipe connecting the second tank with the cylinder of the engine; a pressure limiting valve in said pipe; and a stop cock between the pressure limiting valve and engine, substantially as described.

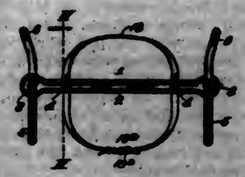
3. In an internal combustion motor the combination of a storage air tank; a second tank; a pipe connecting the two; a stop cock in said pipe; a pipe connecting the second tank with the cylinder of the engine; a pressure limiting valve in said pipe; a stop cock between the pressure limiting valve and the second tank; and a stop cock between the pressure limiting valve and engine, substantially as described.

4. In an internal combustion motor the combination of a storage air tank; a second tank; a pipe connecting the two; a pipe connecting the second tank with the cylinder of the engine; a pressure limiting valve in said pipe; a stop cock between the pressure limiting valve and the second tank; and a supply and an outlet pipe for the first tank, substantially as described.

5. In an internal combustion motor the combination of a storage air tank; a second tank; a pipe connecting the two; a stop cock in said pipe; a pipe connecting the second tank with the cylinder of the engine; a pressure limiting valve in said pipe; a stop cock between the safety valve and the second tank; and a supply and an outlet pipe for the first tank, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

876,461. BRIDLE-BIT. GEORGE F. JUNGERMANN, Kansas City, Mo. Filed Jan. 28, 1897. Serial No. 354,868.



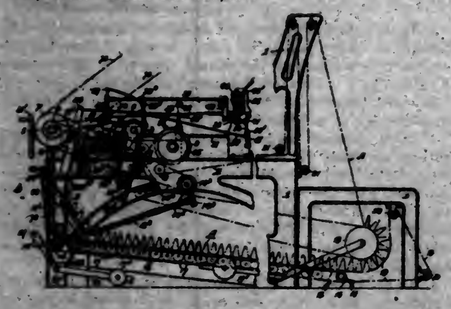
1. A bridle bit comprising a cross bar having diametrical apertures near its ends, a flexible strap passing through said aperture and forming free loops above and below the cross bar, and means attached to the ends of the bar whereby the same may be rotated.

2. In a bridle bit, the combination of a cross bar, a strap inserted diametrically through said bar near the ends of the same and forming free flexible loops on the opposite sides thereof to engage portions of the animal's head, rings provided with diametrical pins passing through the ends of the bar whereby to rotate the same, and reins connected to the rings.

3. A bridle bit comprising a cross bar having a central cranked portion and provided with eyes at its ends, and rings having cross pieces provided with central portions journaled in said eyes and diverging arms at the ends of the said central portion, the rings being formed with a deflected portion and a chord therefor forming a loop therewith.

4. A bridle bit, comprising a cross bar having a central crank portion, apertures at opposite sides of the crank portion and eyes outward of said apertures and having their axes approximately paralleling the axes of the apertures, rings having cylindrical central portions journaled in said eyes, and arms flaring from said central portion, in combination with the cheek straps of the bridle engaging said rings between the rearmost pair of said arms, and reins connected to the rings.

876,462. MACHINE FOR CUTTING THE PILE OF WEFT PILE FABRICS. WILLIAM G. M. KNIGHLEY and HARRY NUTHERWOOD, Huddersfield, England. Filed May 21, 1906. Serial No. 317,907.



1. In a pile cutting machine, the combination, with mechanism for traversing the pile fabric, of a cutter provided with a curved cutting-edge and supported over the said fabric, a pointed loop-guide provided with a longitudinal groove, a knife arranged in the said groove and provided with a straight cutting-edge which bears against the said curved cutting-edge, and means for holding the said cutter and the said knife stationary while the said fabric is in motion and in contact with their said cutting-edges.

2. In a pile cutting machine, the combination, with mechanism for traversing the pile fabric, of a circular cutter supported over the fabric, a loop-guide having a beveled top portion terminating in a point and provided with a longitudinal groove and arranged at an angle to the plane of the fabric, means for adjusting the position of the said guide in a vertical plane, and a knife-blade resting in the said groove with its cutting-edge bearing against the cutting-edge of the said cutter.

3. In a pile cutting machine, the combination, with mechanism for traversing the pile fabric, of a cutter provided with a curved cutting-edge and supported over the said fabric, means for holding the said cutter stationary while the said fabric is in contact with it, adjusting devices for moving the said cutter circumferentially at will, a loop-guide, and a stationary knife-blade carried by the said loop-guide and co-acting with the said cutter to cut the loops of the said fabric.

4. In a pile cutting machine, the combination, with mechanism for traversing the pile fabric, of a support for the cutter mechanism, a head pivoted to the said support, means for turning the said head automatically to the rear on its pivot, a circular cutter carried by the said head, a loop-guide having a beveled top portion terminating in a point and provided with a longitudinal groove, a knife-blade resting in the said groove with its cutting-edge bearing against the cutting-edge of the said blade, and catch mechanism which normally holds the said loop-guide at an angle to the plane of the fabric with its point in a position to enter its loops.

5. In a pile cutting machine, the combination, with mechanism for traversing the pile fabric, of a support for the cutter mechanism, a head pivoted to the said support, means for turning the said head automatically to the rear on its pivot, a circular cutter carried by the said head, a loop-guide having a beveled top portion terminating in a point and provided with a longitudinal groove, a knife-blade resting in the said groove with its cutting-edge bearing against the cutting-edge of the said blade, catch mechanism which normally holds the said loop-guide at an angle to the plane of the fabric with its point in a position to enter its loops, and trip mechanism for automatically releasing the said catch mechanism when the said guide penetrates the fabric.

[Claims 6 to 10 not printed in the Gazette.]

876,463. FASTENING DEVICE FOR HAIR-COMBS. OTTO KLAUSNE, London, England, assignor to Ludwig Schweiger and Robert Meixner, Vienna, Austria-Hungary. Filed Nov. 16, 1906. Serial No. 343,709.



Fastening device for hair combs, comprising, in combination, the two teeth (3) provided at their upper ends with recesses 2, two fasteners consisting of the pins (7), shafts (4) guiding loops (6) at the fulcrum of the said shafts, pressure loops (5) and springs (9) which are placed in the said recess (2), the guiding loops (6) being situated in suitable cavities at the outer edge of the recesses, and a plate (1) for covering the recess, substantially as described and shown and for the purpose set forth.

876,464. CORN GATHERER AND PICKER. JOSEPH E. LARSON and JOHN P. LARSON, Silver Creek, Nebr. Filed June 25, 1906. Serial No. 323,272.



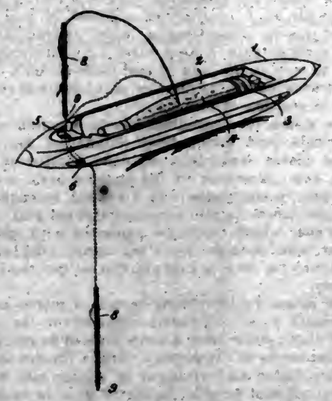
1. In a corn gatherer and picker, the combination of oppositely disposed gathering noses defining a longitudinally extending passage-way, spaced feeding chains arranged to operate longitudinally of the machine at the rear of said noses and forming an extension of the passage-way, rotatably mounted feeding reels arranged longitudinally of the machine on either side of the passage-way and feeding inwardly and downwardly and knives arranged below the feeding reels.

2. In a corn gatherer and picker, the combination of oppositely disposed gathering noses defining a longitudinally extending passage-way for the stalks, a feeding chain extending rearwardly from each of said noses on opposite sides of said passage-way and forming an extension thereof, knives arranged below the chains on either side of said passage-way and means arranged to rotate inwardly and downwardly on opposite sides of said passage-way for holding the corn in contact with the knives.

3. In a corn gatherer and picker, the combination of oppositely disposed gathering noses defining a longitudinally extending passage-way for the stalks, a feeding chain arranged on either side of said passage-way and forming an extension thereof, knives located below said chains on either side of said passage-way, means arranged on opposite sides of said passage-way above the knives and rotating downwardly and inwardly to hold the corn in contact with the knives and means for conveying cut-off ears of corn to a place of deposit.

4. In a corn gatherer and picker, the combination of a supporting frame, oppositely disposed gathering noses, two sets of feeding chains mounted in the rear of said noses, feeding reels journaled in said frame between the chains of the respective sets, receiving troughs disposed below said reels, knives secured to said troughs and conveyer chains in said troughs.

876,465. SHUTTLE-THREADER. JOSEPH N. LE VASSEUR-BELISLE, Manchester, N. H. Filed June 27, 1906. Serial No. 323,633.



A threader for loom-shuttles consisting of spring wire formed into a series of coils or helices and terminating at one end in a spiral forming a tapered point, and between which coils or helices the thread is passed laterally for frictional engagement.

876,466. METHOD OF PREPARING AND STORING CONCRETE. JÜRGEN H. MAGENS, Hamburg, Germany. Filed Aug. 29, 1904. Serial No. 222,648.

1. A method of preparing and storing mixed concrete-cement, concrete, cement-mortar and the like ready for use, which comprises cooling the constituent parts of the mixture, before they are mixed, below the temperature of the air prevailing at the time being, then mixing the same with water and maintaining the mixture in such cooled state and above freezing point until ready for use, whereby the mixture containing the requisite quantity of water for setting the cement may be transported without impairing its setting or binding properties.

2. A method of preparing and storing mixed concrete-cement, concrete, cement-mortar and the like ready for use, which comprises sprinkling the constituent parts of the mixture, sand, gravel, broken stone &c., with cold water, and exposing the so treated constituent parts to evaporate the water, and thereby cool them considerably below the normal temperature, then mixing the cooled constituents with cement and sufficient water to set the cement, and maintaining the mixture in such cooled state until used, whereby the mixture containing the requisite quantity of water for setting the cement may be transported without impairing its setting or binding properties.

876,467. SLOUGH-FILLER. SELDON P. MARSH, Wolseley, Saskatchewan, and NEWTON TIMSON, Winnipeg, Manitoba, Canada. Filed Sept. 20, 1907. Serial No. 393,830.



1. In a wheeled slough filler, the combination with the supporting axle of a pivotally supported forward scoop, and a rearwardly extending draft bar, as and for the purpose specified.

2. In a wheeled slough filler, the combination with the supporting axle, of a framework pivotally supported from the axle by brackets extending downwardly from the framework, and a curved scoop forward of the wheels and carried by the framework, a draft bar extending rearwardly from the axle, means for determining the lower position of the scoop, and a steering gear at the rear end of the draft bar, as and for the purpose specified.

3. In a wheeled slough filler, the combination with the supporting axle, of a curved scoop forward of the wheels and pivotally supported from the axle, a rearwardly extending draft bar, a steering gear at the end of a draft bar, means on the draft bar for the attachment of a draft team, adjustable means for determining the lower position of the scoop, and means whereby the backing of the draft animals raises the scoop, as and for the purpose specified.

4. In a wheeled slough filler, the combination with the supporting axle, of a pivotally supported curved scoop forward of the carriage wheels, a rearwardly extending draft bar, a set of steering wheels supporting the rear end of the draft bar, a scoop operating bar extending rearwardly from the scoop, an inverted U-shaped upright on the draft bar through which the said scoop operating bar passes, an adjustable pin carried by the upright, and a doubly hooked arm connected centrally to the scoop operating bar, and having its lower hooked end slidably connected with the draft bar, as and for the purpose specified.

5. A wheeled slough filler, comprising in combination a set of forward carriage wheels, a removable axle, a rearwardly extending draft bar, a scoop forward of the wheels and pivotally connected to the axle, braces interconnecting the scoop with the axle, and braces between the draft bar and the axle, sleeves on the axle, all of said braces and connecting means for the scoop and the draft bar to the axle, being so designed that the removal of the axle releases the scoop, as and for the purpose specified.

[Claims 6 to 8 not printed in the Gazette.]

876,468. NON-REFILLABLE BOTTLE. GEORGE MARTIN, Rochester, N. Y., assignor of forty-two-and-one-half one-hundredths to William Selwyn Brown and fifteen one-hundredths to Joseph P. Creegan. Filed Mar. 2, 1907. Serial No. 360,251.



1. In a non-refillable bottle, the combination of a longitudinally movable float; a seat above it and a guide projecting downwardly from said seat; a spring finger adapt-

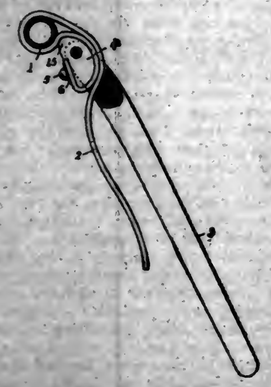
ed to pass beneath said float when the latter is on its seat, and to be held in a retracted position by said float, substantially as shown and described.

2. In a non-refillable bottle, the combination of a longitudinally movable float; a seat above it and a downwardly projecting cage for said float; a spring finger upon said cage, adapted to pass beneath said float when the latter is on its seat, and to be held in a retracted position by said float, substantially as shown and described.

3. In a non-refillable bottle, the combination of a longitudinally movable float; a seat above it and a downwardly projecting cage of spring wire for said float, having the ends of the wire bent inwardly against said float, and adapted to spring beneath it when said float takes its seat; substantially as shown and described.

4. In a non-refillable bottle, the combination of a valve seat; a valve body hinged upon the upper side thereof; a weight hung from said lid; a hollow float, adapted to receive said weight; and a guide support for said float; substantially as shown and described.

876,469. STRAP PIPE-WRENCH. WILLIAM C. MARTIN, Mansfield, and LOUIS H. OGDEN, South Boston, Mass., assignors to Martin & Ogden Wrench Company, a Corporation of Massachusetts. Filed Oct. 7, 1907. Serial No. 396,155.



1. A wrench comprising a handle having a head formed with a pair of parallel walls, a locking cam pivotally supported near one end between said walls, and having its opposite end convex, and a strap having both ends penetrating the space between the convex end of said cam and the surface of said head between said walls, and held by the clamping action of said end and surface.

2. A wrench comprising a handle having a head formed with a pair of parallel walls, a locking cam pivotally supported between said walls and having a shouldered seat at one side and a convex face opposite thereto, a strap having one end located in said seat, and a screw securing said end to said cam.

3. A wrench comprising a handle having a head formed with a pair of walls, a locking cam located between said jaws, a pin penetrating said cam and walls, an inclined surface at the base of said walls coacting with said cam, and a strap secured at one end to said cam and passing through the space between said cam and inclined surface.

876,470. MEANS FOR PROPELLING VESSELS. MARKUS F. MAUS, Lynbrook, N. Y. Filed Mar. 24, 1906. Serial No. 307,903.

1. As a means for propelling vessels, a piston mounted to reciprocate in a longitudinal channel of the vessel's hull, said piston comprising a blade pivoted to swing about an axis transverse to the path of the piston, and adapted to open as the piston moves in one direction, and to close as it moves in the opposite direction, a stop carried by the piston and mounted to turn about an axis transverse to the path of the piston and perpendicular to the first-named axis, to arrest the blade in the closed position either during the forward or during the rearward movement of the piston, and means for reversing the position of said stop.



2. As a means for propelling vessels, a piston mounted to reciprocate in a longitudinal channel of the vessel's hull, said piston comprising a frame provided with anti-friction devices, blades pivoted to said frame about parallel axes transverse to the path of the piston, stops pivoted to the frame about parallel axes likewise transverse to the path of the piston, but perpendicular to the first-named axes, said stops being arranged to engage the blades near opposite edges, either in front or in rear, a connection for causing such stops to move in opposite directions, and means for reversing the position of the stops.

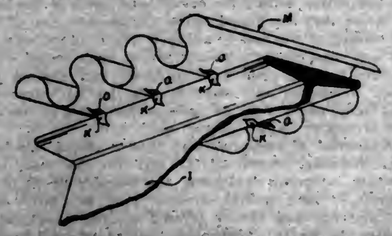
3. As a means for propelling vessels, a piston mounted to reciprocate in a longitudinal channel of the vessel's hull, said piston comprising a blade pivoted to swing about a vertical axis, a stop carried by the piston and mounted to turn in the path of said blade about a horizontal axis transverse to the piston's path, and means for reversing the position of said stop.

4. As a means for propelling vessels, a piston mounted to reciprocate in a longitudinal channel of the vessel's hull, said piston comprising a blade pivoted to swing about an axis transverse to the piston's path, a pivoted stop carried by the piston and arranged to engage said blade, a gear wheel on said stop, a mutilated gear in mesh with said gear wheel, two arms connected with said mutilated gear, and movable operating means adapted to be projected into the path of said arms to reverse the position of the stop.

5. As a means for propelling vessels, a piston mounted to reciprocate in a longitudinal channel of the vessel's hull, said piston comprising a blade pivoted to swing about an axis transverse to the piston's path, a pivoted stop carried by the piston and arranged to engage said blade, a gear wheel on said stop, a mutilated gear in mesh with said gear wheel, a spring tending to bring the two gears into mesh, two arms connected with said mutilated gear and so disposed that one is projected when the other is retracted, and vice versa, and movable operating means carried by the hull and adapted to be shifted into the path of the projected arm to reverse the position and action of the stop.

[Claims 6 to 15 not printed in the Gazette.]

876,471. MEANS FOR REINFORCING CONCRETE. EDMOND G. DU MAZEL, New York, N. Y. Filed Feb. 19, 1907. Serial No. 358,261.



1. A corrugated metal reinforcing member in cross section a series of reversed or substantially S-shaped curves, the corrugations of which form spaces contracted intermediate of the tops and bottoms of the corrugations.

2. Reinforcing members for concrete structures and the like consisting of corrugated metal reinforcing members in cross section a series of reversed or substantially S-shaped curves, the corrugations of which form spaces contracted intermediate of the tops and bottoms of the corrugations.

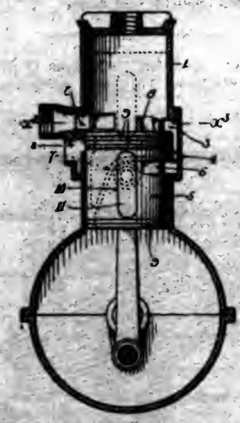
3. A corrugated metal reinforcing member, in cross section a series of reversed or substantially S-shaped curves, the pitch of the corrugations being substantially less than twice their depth.

4. A corrugated metal member, in cross section a series of reversed or substantially S-shaped curves the ratio of the pitch of the corrugations to the depth of same being eleven-eighths.

5. A structure comprising a series of corrugated metal reinforcing members in cross section a series of reversed or substantially S-shaped curves, the corrugations of which form spaces contracted intermediate of the tops and bottoms of the corrugations; whereby the members are sprung the one onto the next preceding and succeeding member to form a continuous and water-tight series of members.

[Claims 6 and 7 not printed in the Gazette.]

876,472. INTERNAL-COMBUSTION ENGINE. HARRY A. MILLER and FRANK M. ADAMSON, Pasadena, Cal., assignors of forty one-hundredths to Frank P. Harris, Pasadena, Cal., and forty one-hundredths to A. T. Hay and twenty one-hundredths to Harry A. Miller, Los Angeles, Cal. Filed Sept. 4, 1906. Serial No. 333,237.



1. A cylinder, a piston therein, the cylinder having inlet and exhaust ports in opposite sides thereof which are opened and closed by the piston, plates carried by the piston and extending longitudinally thereof, said plates having their entire area of wearing surface continuously in sliding contact with the cylinder, the plates having paths of movement out of line with the inlet and exhaust ports for preventing circumferential leakage between the inlet and exhaust ports.

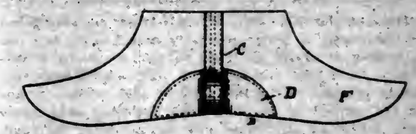
2. A cylinder, a piston therein, the cylinder having inlet and exhaust ports in opposite sides thereof which are opened and closed by the piston, and means between the piston and cylinder at diametrically opposite points of the piston, and on a line at right angles to a line between the inlet and exhaust ports, for preventing leakage between the inlet and exhaust ports circumferentially of the piston.

3. A cylinder, a trunk piston therein, the cylinder having inlet and exhaust ports which are opened and closed by the piston and having a by-pass port, the piston having a port which periodically registers with the by-pass port, and means free from all said ports between the piston and cylinder for preventing lateral leakage circumferentially of the piston between said inlet and exhaust ports.

4. A cylinder, a piston therein, the cylinder having inlet and exhaust ports which are opened and closed by the piston, the piston having longitudinal recesses, plates in said recesses, and a coil spring extending through the piston and bearing against the plates to hold them against the cylinder.

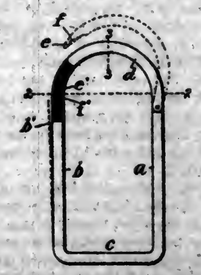
5. A cylinder, a piston therein, a hollow wrist pin in the piston, the cylinder having inlet and exhaust ports which are opened and closed by the piston, the piston having longitudinal recesses, plates in said recesses, and a coil spring in the wrist pin and extending through the piston walls and bearing against the plates to hold them against the cylinder.

876,473. SHOE LINING, BACKSTAY, AND COUNTER. JACOB MITCHELL, Detroit, Mich., assignor to Mitchell Shoe-Lining Company, Royal Oak, Mich. Filed Oct. 29, 1906. Serial No. 341,019.



In shoes, the combination of a lining, a back stay in the form of a narrow elongated strip folded centrally over the top of the lining and having its halves secured to the opposite sides of the lining along the median line thereof, and a counter disposed between the base of the lining and the lower portion of one of the strip-like halves of the stay and secured to both the lining and stay.

876,474. FILE-RING. LUCENA M. MORDEN, Waterbury, Conn. Filed June 1, 1906. Serial No. 319,677.



1. The book-ring herein described having parallel side-portions *a* and *b* with integral foot-portion *c* at the bottom, the side portions being relatively longer than the foot-portion to give them elasticity, the opening section *d* at the top jointed to one of the side portions and its point beveled upon the inner side, the connecting side portion being correspondingly beveled and the opposed beveled faces provided with means for locking them in engagement, and the overlapping of the section *d* upon the side portion resisting any outward strain upon such side portion when the book-ring is in use.

2. The book-ring herein described having parallel side portions *a* and *b* with integral foot-portion *c* at the bottom, the side portions being relatively longer than the foot portion to give them elasticity, the opening section *d* at the top jointed to the side portion *a*, and its point beveled upon the inner side and formed with recess *f* and with transverse tooth *e* at the end, the side portion *b* being correspondingly beveled upon its outer side and formed with shoulder *e'* and recess *f'* to engage the recess and tooth upon the section *d*, the overlapping of the section *d* upon the side portion resisting any outward strain upon such side portion when the book-ring is in use.

876,475. EMERGENCY-BRAKE FOR MOTOR-VEHICLES. ALEXANDER D. MORGAN, West Roxbury, Mass. Filed Feb. 1, 1907. Serial No. 355,266.

1. The combination with a vehicle, of an emergency brake comprising a frame pivotally attached to said ve-

hinie, a drag pivotally attached to said frame by a substantially vertically arranged pin and maintained substantially parallel to the rear axle of said vehicle, and means under the control of the driver for lowering said frame whereby said drag is brought into contact with the road-way over which said vehicle is traveling.



2. The combination with a vehicle, of an emergency brake comprising a frame pivotally attached to said vehicle, a drag pivotally attached to said frame by a substantially vertically arranged pin and maintained substantially parallel to the rear axle of said vehicle, means under the control of the driver for lowering said frame whereby said drag is brought into contact with the road-way over which said vehicle is traveling, and means for automatically returning said frame to its normal position.

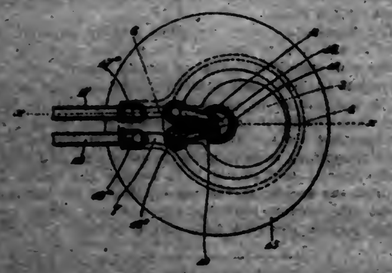
3. The combination with a vehicle, of an emergency brake comprising a frame pivotally attached to said vehicle, a drag pivotally attached to said frame by a substantially vertically arranged pin and maintained substantially parallel to the rear axle of said vehicle, a series of teeth passing through said drag, and means under control of the driver for lowering said frame whereby said drag is brought into contact with the road-way over which the vehicle is traveling.

4. The combination with a vehicle, of an emergency brake comprising a frame pivotally attached to said vehicle, a drag pivotally attached to said frame by a substantially vertically arranged pin and maintained substantially parallel to the rear axle of said vehicle, a series of teeth passing through said drag, means for adjusting and securing said teeth in position, and means under control of the driver for lowering said frame whereby said drag is brought into contact with the road-way over which said vehicle is traveling.

5. The combination with a vehicle, of an emergency brake comprising a frame pivotally attached to said vehicle, a drag pivotally attached to said frame, means maintaining said drag in a position substantially parallel to the rear axle of said vehicle, and means under the control of the driver for lowering said frame whereby said drag is brought into contact with the roadway over which said vehicle is traveling.

[Claims 6 to 8 not printed in the Gazette.]

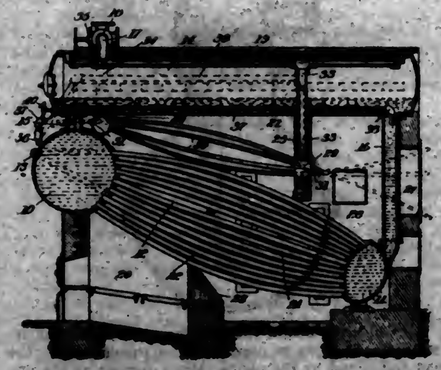
876,476. HYDROCARBON-BURNER. SAMUEL MORRIS, Newark, Ohio; Clara B. Morris administratrix of said Samuel Morris, deceased. Filed Mar. 11, 1907. Serial No. 361,641.



1. In a vapor burner, the combination of an integral casting comprising a base portion provided in its upper surface with a recess wholly concaved in cross section, an oil-vaporizing chamber within the base portion and an upwardly-projecting portion or column at one side of the base portion and containing both a fluid passage-way to the chamber and a return passage-way from the same, a cover-plate supporting said casting and having an opening over said recess, a flange 15 on the cover-plate at the edge of said recess opposite said column to coöperate with the concaved surface and cover-plate for creating commingling currents of vapors and to deflect the burning vapor towards the walls of said chamber and passage-ways, and a nozzle connected with said return passageway and having its discharge end in line with said opening in the cover-plate and at the side of said recess opposite said flange.

2. In a vapor burner, the combination of an integral casting comprising a base portion provided in its upper surface with a recess wholly concaved in cross section, an oil-vaporizing chamber and a steam-generating chamber within the base portion, and an upwardly-projecting portion or column at one side of the base portion and containing independent fluid passage-ways to and return passage-ways from said chambers, a cover-plate supporting said casting and having an opening over said recess, a flange 15 on the cover-plate at the edge of said recess opposite said column to coöperate with the concaved surface and the cover-plate for creating commingling currents of vapors and to deflect the burning vapor towards the walls of said chambers and passage-ways, and nozzles connected with said return passages and having their discharge ends in line with said openings in the cover-plate and at the side of said recess opposite said flange.

876,477. STEAM-BOILER. CHARLES D. MOSHER, New York, N. Y. Filed Dec. 17, 1906. Serial No. 348,299.



1. A superheating-boiler comprising a main evaporating-structure having water-drums and connecting tubes and a steam-outlet, and a superheater connected with said outlet and composed of two drums one of which is supported on one of said water-drums, a connecting group of steam-tubes, and a series of holes formed in one of the drums opposite the ends of the tubes and having removable covers, the arrangement being such that a plurality of the superheater-tubes may be withdrawn through each hole.

2. A superheating-boiler comprising a main evaporating-structure having water-drums and connecting tubes and a steam-outlet, and a superheater connected with said outlet and composed of a pair of drums one of which is supported on one of said water-drums, a series of curved tubes connecting said drums, and a row of holes formed in one of the drums opposite the ends of the tubes and having removable covers, each hole being adapted for the withdrawal of a plurality of said tubes.

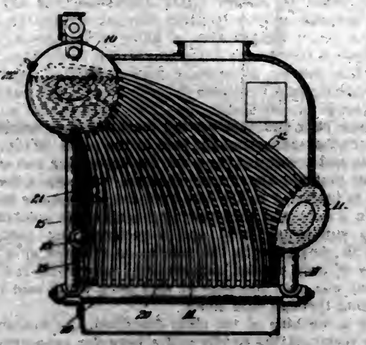
3. A superheating-boiler comprising a main evaporating-structure, a boiler-casing inclosing the same and having an opening for the withdrawal of superheater-tubes, and a superheater overlying the evaporating-structure within the boiler-casing and including a drum having a series of openings provided with covers, and a group of steam-tubes connected with said drum and withdrawable through said openings in the drum and in the casing.

4. A superheating-boiler comprising a main evaporating-structure, a boiler-casing inclosing said structure and having openings in opposite walls for the withdrawal of superheater-tubes, and a superheater overlying said evaporating-structure within the boiler-casing and composed of two drums, each having a series of holes in its wall provided with removable covers, and a group of tubes connecting said drums and withdrawable in opposite directions through said holes and through the respective openings in the walls of the boiler-casing.

5. A superheating-boiler comprising upper and lower water-drums connected by a group of inclined water-tubes, a steam-drum surmounting the upper water-drum, a boiler-casing, and a superheater located within said casing between the boiler-tubes and the steam-and-water drum, and comprising a drum-structure having openings for the withdrawal of tubes, removable covers for said openings, and a group of superheater-tubes connected with said drum-structure and withdrawable between the levels of the upper water-drum and the steam-and-water drum, through said openings and through an opening in the boiler-casing.

[Claims 6 to 8 not printed in the Gazette.]

876,478. STEAM-BOILER. CHARLES D. MOSHER, New York, N. Y. Filed Dec. 24, 1906. Serial No. 349,315.



1. A steam-boiler comprising a furnace, a main evaporating-structure including a drum, and a wall of water-tubes included in the furnace inclosure and forming a secondary evaporating-structure, said tubes having their ends fixed in the drum and spreading fanwise therefrom.

2. A water-tube boiler comprising a furnace, a transverse steam-and-water drum extending across the front of the boiler, a series of main evaporating-tubes emanating from said drum, and a wall of water-tubes emanating from said drum and included in that part of the furnace inclosure which comprises the front and side wall-structure thereof.

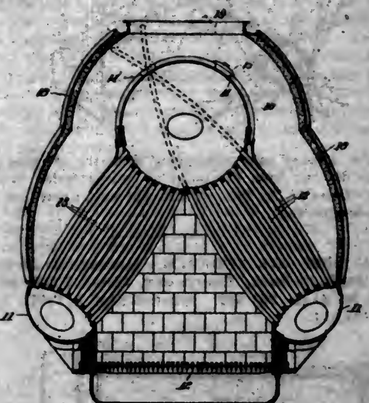
3. A water-tube boiler comprising a furnace, a main evaporating-structure which includes an upper steam-and-water drum, a group of evaporating-tubes located above the furnace, a forward-and-rearward base manifold at the side of the furnace, and a side wall of water tubes having their lower ends fixed in said manifold and their upper ends fixed circumferentially in the steam-and-water drum.

4. A water-tube boiler comprising a furnace having a fire-door and an upper transverse steam-and-water drum at the front of the boiler, a pair of side downtake-pipes leading from said steam-and-water drum, a cross-pipe connected with said downtake-pipes above the fire-door, a front tube-wall composed of water-tubes having their lower ends fixed in said cross-pipe and their upper ends fixed in the steam-and-water drum, said tube-wall being directly exposed to the heat of the furnace combustion-chamber, and a refractory furnace-lining located in front of said front-wall tubes and deriving lateral support therefrom.

5. A boiler comprising a furnace having a refractory lining, a drum having one or more holes provided with removable covers, a group of main evaporating tubes traversed by the furnace gases and having their ends fixed in said drum, and a tube-wall distinct from the main tube-group and located next the furnace lining and exposed to the fire, said wall being composed of water-tubes having their ends fixed in said drum and withdrawable through said hole or holes.

[Claims 6 to 10 not printed in the Gazette.]

876,479. STEAM-BOILER. CHARLES D. MOSHER, New York, N. Y. Filed Dec. 24, 1906. Serial No. 349,316.



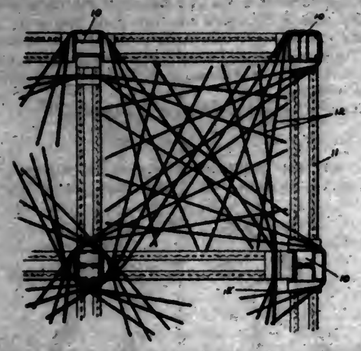
A steam boiler comprising an upper steam-and-water drum formed with an end opening having a removable cover and with holes in its upper wall for the passage of tubes, detachable closers for said holes, a lower water drum, a connecting group of tubes of greater length than the diameter of the steam-and-water drum and so arranged with relation to the said holes that the lines of tube-passage through the latter extend above the top of the steam-and-water drum, the said tubes being substantially smaller than the holes and removable by passing them through the holes partly outside of the boiler and then returning them into the drum and passing them out of the latter through the end opening, and a casing for the flue-gases, having a portion in the line of tube-removal and distant from the steam-and-water drum far enough to permit the lower ends of the tubes to enter said drum but not so far as to permit complete upward withdrawal of the tubes from said drum.

876,480. REINFORCING CONCRETE. OTTO N. MUELLER, Indianapolis, Ind. Filed Nov. 15, 1906. Serial No. 343,645.

1. In a reinforced concrete structure, the combination, with a plurality of separated concrete columns, and the vertical reinforcement therein, of a set of reinforcing members embedded in a column and principally supported thereby, the ends of said set of reinforcing members being separated so as to radiate from the column support across the adjacent floor square to substantially all parts thereof, and a concrete floor square embedding and supported by said radiated ends.

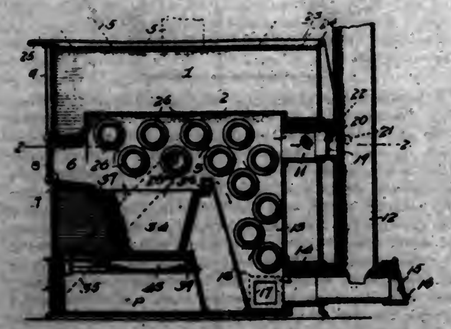
2. In a reinforced concrete structure, a concrete floor-square having a plurality of sets of reinforcing members embedded therein, the said reinforcing members of each set being concentrated at one point in their length and principally supported at or near the point of concentration while the ends of said reinforcing members are separated so as to diverge from the point of concentration into various portions of the floor square.

3. In a reinforced concrete structure, a concrete floor square having a plurality of sets of reinforcing members embedded therein, the said reinforcing members of each set being concentrated at one point in their length and principally supported at or near the point of concentration



while the ends of said reinforcing members are separated so as to diverge from the point of concentration into various portions of the floor square, the said separated ends being unconnected.

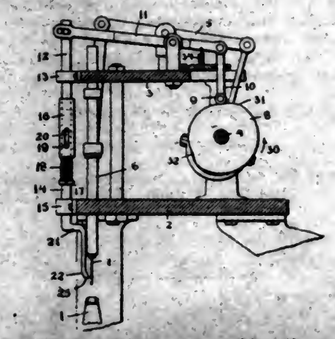
876,481. HOT-AIR FURNACE. MICHAEL J. MURDOCH and JOHN P. LUDT, Youngstown, Ohio. Filed July 1, 1905, Serial No. 267,949. Renewed Sept. 5, 1907. Serial No. 391,511.



1. In a furnace of the class described, the combination of an outer casing having a bottom supporting wall, a closed ash pit chamber arranged within the front lower corner of the casing, a fire pot surmounting the closed ash pit chamber and having a seat at its upper edge, an inner fire chamber casing, having in its lower side a fire opening, received within the seat of the fire pot and provided with a front receiving throat and in rear of the fire pot with a downwardly tapering drop leg extension having a front inclined wall and also a closed lower end seated on the bottom wall of the furnace casing, the front inclined wall of the drop extension being spaced from the fire pot and also from the rear wall of the ash pit chamber, said fire chamber being also provided with an upper outlet flue in the horizontal plane of the receiving throat and at the bottom of the drop leg extension with a lower outlet flue, a plurality of hot air tubes extending transversely across the fire chamber and its drop leg extension, one of said tubes having a sealed connection at one end with a side wall of the fire chamber and provided with apertures communicating with said fire chamber, and at its other end having a pipe connection extending to the front of the outer casing at the bottom thereof, the other of said hot-air tubes being provided at their ends with deflecting elbows lying between the fire chamber and the main outer casing.

2. In a furnace, an outer casing having a bottom wall whose rear edge terminates short of its back wall, an ash pit chamber arranged within the outer casing, a fire pot surmounting the ash pit chamber, an inner fire chamber casing in communication with the fire pot and provided in rear of the latter with a drop leg extension spaced from the fire pot and the ash pit chamber and provided with a closed lower end seated on the rear edge portion of the bottom wall of the outer casing, and a plurality of hot-air tubes extending transversely across the fire chamber and its drop leg extension.

876,482. SEWING-MACHINE FOR BOOTS AND SHOES. NATHANIEL H. MURPHY, Hopkinton, and GEORGE H. PUTNAM, Westboro, Mass., assignors of one-half to David H. O'Connell, Marlboro, Mass. Filed Apr. 21, 1906. Serial No. 313,085.



1. In a boot and shoe sewing machine, the combination of a horn for supporting the sole in the plane of the stitch channel and a reciprocating bar for depressing the edge of the sole outside the stitch channel, whereby a bending strain is imparted to the sole over the edge of the horn.

2. In a boot and shoe sewing machine, the combination with a supporting horn and a reciprocating needle, of means in contact with the sole to be stitched at a point outside of that portion supported by said horn, for bending said sole over the edge of said horn while said needle is passing through said sole.

3. In a machine of the class described, the combination with a reciprocating needle and a horn for supporting the shoe, of means for depressing the outer edge of the sole over the edge of the horn during the passage of the needle through the sole, whereby a bending strain is imparted to the sole in the plane of the stitch channel.

876,483. BEER-TAP. WILLIAM D. MYERS, Canton, Okla., assignor of one-half to E. C. Frazier, Canton, Okla. Filed July 1, 1907. Serial No. 381,802.



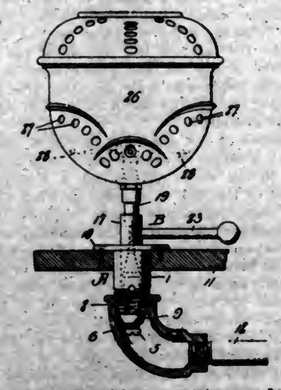
1. A combined bushing and faucet for receptacles comprising a cup-shaped bushing having a threaded circumference and provided with apertures in the wall thereof, a plug valve seated within said bushing and provided with apertures adapted to be brought into registration with the apertures in the wall of the bushing, a threaded ring engaging threads on the inner surface of the bushing and adapted to hold the valve swivelly within the latter, a tubular stem having an angular outlined portion adapted to engage an angular opening in said valve, a handle upon

said stem, a lug projecting therefrom, a shell swiveled upon said stem and recessed to receive said lug to limit the rotary movement of the stem independent of said shell, a handle upon said shell, and means for locking the shell to said valve, as set forth.

2. A combined bushing and faucet for receptacles, comprising a cupshaped bushing having a threaded circumference and provided with apertures in the wall thereof, a flanged valve seated within said bushing and provided with apertures adapted to be brought into registration with the apertures in the wall of the bushing, a threaded ring engaging threads on the inner surface of the bushing and adapted to hold the flanged valve swivelly within the latter, tubular stem having an angular outlined portion adapted to engage an angular opening in said flanged valve, a handle upon said stem, a lug projecting therefrom, a shell swiveled upon said stem and recessed to receive said lug to limit the rotary movement of the stem independent of said shell, a handle upon said shell, means for locking the shell to said valve, consisting of lugs projecting from said shell and adapted to engage behind the flange of the valve to hold the inner end of the stem in the aperture of the valve, as set forth.

3. A combined bushing and faucet for receptacles, comprising a cupshaped bushing having a threaded circumference and provided with apertures in the wall thereof, a flanged valve seated within said bushing and provided with apertures adapted to be brought into registration with the apertures in the wall of the bushing, a threaded ring engaging the inner surface of the bushing and adapted to hold the flanged valve swivelly within the latter, tubular stem having an angular outlined portion adapted to engage an angular opening in said flanged valve, a handle upon said stem, a lug projecting therefrom, a shell swiveled upon said stem and recessed to receive said lug to limit the rotary movement of the stem independent of said shell, a handle upon said shell, diametrically opposite lugs projecting from the inner surface of said shell adapted to be brought into registration with diametrically opposite recesses in the flange of the valve, said lugs upon the shell coöperating with the flange of the valve to hold the stem in said valve, as set forth.

876,484. COUPLING. DONALD MCDONALD, Louisville, Ky. Filed May 15, 1906. Serial No. 317,003.



1. The combination with a gas stove and the supply pipe therefor, of a valved coupling comprising a casing member connected with the supply pipe and provided with a flange by means of which it is supported, a valved plug rotatable in said casing member, and a rotating part provided with a bore; said valved coupling being adapted to support said stove.

2. The combination with the gas stove and a supply pipe, of a coupling member secured to the gas stove, a coupling member connected with the supply pipe adapted by the first mentioned coupling member, to support the stove and comprising a casing which is provided at one end with an attaching flange, and a projecting member within the casing having a longitudinal duct and a tapered outer wall, and projecting into the coupling member secured to the stove.

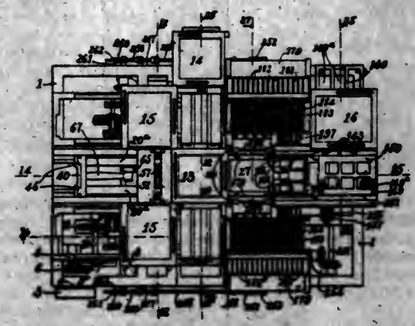
3. The combination with a gas stove and a supply pipe, of a coupling between said parts comprising two members, one of which is secured to the supply pipe and provided with a valved plug and the other of which is detachably mounted on said valved plug and adapted to support the stove.

4. The combination with the gas stove and the supply pipe, of a coupling member connected with the supply pipe for supporting the stove and provided at one end with a flanged portion, a turning plug provided with ducts, within the coupling member, and a second coupling member adapted to seat upon said turning plug to support the stove, and comprising a rotatable portion formed to engage the turning plug and a handle for turning the same.

5. The combination with a gas stove and a supply pipe of a coupling member for mounting the stove above the supply pipe, a valve within said coupling member for controlling the flow of gas therethrough, a flange at one end of the coupling whereby the same is rigidly attached to the floor, and a second coupling member comprising in a single member, a stove support, a coupling member and a valve operating handle.

[Claims 6 to 12 not printed in the Gazette.]

876,485. BOX-MAKING MACHINE. WILLIAM T. MCRAE and WILLIAM W. CANBY, Philadelphia, Pa., assignors to Universal Box Machine Company, Camden, N. J., a Corporation of New Jersey. Filed Jan. 9, 1904, Serial No. 188,342. Renewed Apr. 4, 1907. Serial No. 366,431.



1. In a box-making machine, of the character recited, the combination of the rectangular form, the upper end board hopper, beneath which said form extends, the lower-end board hopper, mechanism for conveying boards from the latter hopper into position beneath said form, the two side board hoppers, the pivoted tilting tables, supports for said tables means for conveying the boards from said side-board hoppers on to the said tables, and mechanism for moving said tables on their supports and to contact with the latter for causing the tables to tilt on their pivots from a horizontal to a vertical position and the converse, substantially as and for the purpose set forth.

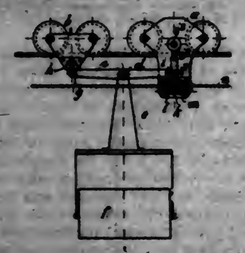
2. The combination of the rectangular form, the upper end board hopper beneath and adjacent to the lower end of which said form extends, the lower end board hopper, the side-board hoppers, mechanism for conveying a board from said lower end board hopper into position beneath said form, mechanisms respectively, for conveying boards from said side-board hoppers and bringing the same into vertical position adjacent to the sides of said form and for maintaining the same in such position, the catches carried by said form, nailing mechanism for securing said side boards and upper and lower end boards together, means for reciprocating said form at predetermined times with relation to said nailing mechanism, the spring-controlled bars for insuring the registry of the side boards with the upper end boards, the drop-plates, and means for bringing the same into position to support the lower end board and side boards when said form is reciprocated to

the forward position, and to maintain said plates in that position during the nailing operation and to subsequently bring said plates out of such position, substantially as and for the purpose set forth.

3. In a machine of the character recited, the combination with a rectangular form, of a series of vertical hoppers adapted to receive boards flatwise, and comprising a vertical upper end board hopper extending above and opening upon the top of said form, a lower end board hopper, and side board hoppers, means for supporting the boards therein, means for carrying a board horizontally from said lower end board hopper into position beneath said form, means for discharging boards horizontally from said side board hoppers, means for bringing said discharged boards into vertical position against the sides of said form, and for maintaining the same in said position, catches carried by said form and adapted to engage the edges of said boards, nailing mechanism for securing the boards together, means for reciprocating said form at predetermined times with relation to said nailing mechanism, and means for actuating said mechanism at predetermined times, substantially as set forth.

4. In a machine of the character recited, the combination with a rectangular form, of a series of vertical hoppers adapted to receive boards flatwise, and comprising a vertical upper end board hopper extending above and opening upon the top of said form, a lower end board hopper, and side board hoppers, means for carrying a board horizontally from said lower end board hopper into position beneath said form, means for discharging a board horizontally from said side board hoppers, means for bringing said discharged boards into vertical position against the sides of said form, spring-controlled catches carried by said form and adapted to engage the edges of said board, a vertical bottom board hopper adapted to receive boards flatwise, means for discharging a board horizontally therefrom, means for bringing said discharged board into vertical position in advance of the form, nailing mechanism, means for actuating the same at predetermined times, and means for the reciprocation of said form at predetermined times with relation to said nailing mechanism, substantially as set forth.

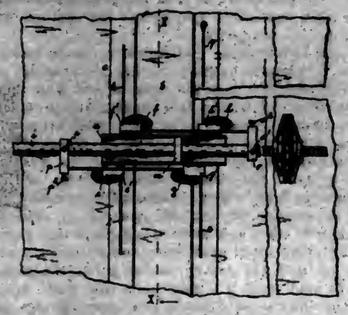
876,486. TROLLEY-CAR FOR WIRE-ROPE OR SUSPENSION RAILWAYS. RUDOLF PFAFFENBACH, Leipzig, Germany, assignor to The Firm of Adolf Bleichert & Company, Leipzig-Gohlis, Germany. Filed Sept. 6, 1907. Serial No. 391,643.



Improved trolley car for rope or suspension railways comprising in combination two vehicular travelers, a supporting member, universal joints connecting said member to the two travelers, a hauling rope gripper comprising a movable member, and connection between the connecting member and movable gripper member whereby the load carried operates upon the movable gripping member.

876,487. DEVICE FOR OPENING AND CLOSING WINDOW-SASHES. ADOLPH PLAGE, New York, N. Y. Filed Apr. 9, 1907. Serial No. 366,894.

1. In a device of the character described the combination of a window sash, a rod movable along the line of the window sash, a collar secured to the rod, a roller bearing supporting the rod, a connecting means between the window sash above and below the plane of the rod, and pulleys intermediate of the ends of the connecting medium, substantially as shown and described.



2. In a device of the character described, the combination of a window frame, a bearing secured thereto, a roller within the bearing, a rod movable horizontally upon the bearing, a collar secured to the rod, and a series of connecting means secured to the window sash above the horizontal plane of the rod, and a series of connecting means secured to the window sash below the horizontal plane of the rod, and pulleys intermediate the ends of the connecting means, substantially as shown and described.

3. In a device of the character described, the combination of a window frame, a bearing secured thereto, a roller within the bearing, a rod upon the bearing movable horizontally, a collar secured to the rod, a series of connecting means secured to the window sash above the horizontal plane of the rod, and a series of connecting means secured to the window sash below the horizontal plane of the rod, substantially as shown and described.

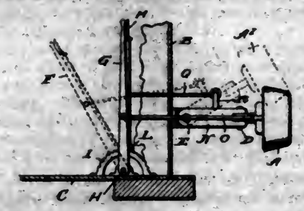
4. In a device of the character described, the combination of a rod, a series of window sash each pivoted at its center, and in the plane of the rod, supporting means between the rod and the fixed structure sustaining the window, whereby the rod is held beyond the vertical plane of the window, connecting means between the free end portion of the window and the rod, and a pulley intermediate of the ends of the connecting means, other connecting means between the other free end portion of the window and the rod, and a pulley intermediate of the ends of said connecting medium, whereby a movement of the rod in one direction will draw the one free end portion of the window toward the plane of the rod, and a movement of the rod in the opposite direction will draw the other free end portion of the window toward the plane of the rod substantially as shown and described.

5. In a device of the character described, the combination of a rod, a series of window sash, each pivoted at its center and in the plane of the rod, a series of collars, each secured to the rod at a point between the sides of the window sash, supporting means between the rod and the fixed structure supporting the window, whereby the rod is held beyond the vertical plane of the window, connecting means between the free end portion of the window and the collar secured to the rod, and other connecting means between the other free end portion of the window and the other collar upon the rod, whereby a movement of the rod in one direction will draw the one free end portion of the window toward the plane of the rod, and a movement of the rod in the opposite direction will draw the other free end portion of the window toward the plane of the rod, substantially as shown and described.

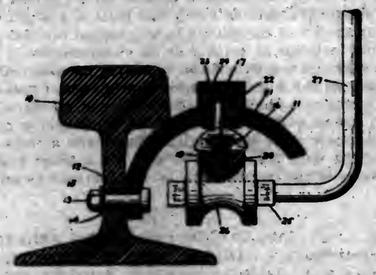
876,488. ADJUSTABLE HEADLIGHT. SAMUEL B. POTTS and ALBERT H. HARBAUGH, Canstown, Ohio. Filed Feb. 5, 1907. Serial No. 355,962.

1. The combination with a vehicle body, of a fixed support, an arm having one end vertically bifurcated to straddle the support and its other end horizontally bifurcated, a head light pivoted in the latter bifurcation, a lever operatively connected with the head light, and a second lever connected with the arm.

2. The combination with a vehicle body, of a fixed support, an arm having one end vertically bifurcated to straddle the support and pivotally connected thereto, and its other end bifurcated, a head light having an extension pivoted in the latter bifurcation, a lever operatively connected with the head light to move it in arcs parallel with the plane of the vehicle body, a second lever operatively connected with the arm to move the latter through planes at right angles to the vehicle body, and means for locking either of the levers at any desired adjustments.



876,489. ELECTRIC-RAILWAY SYSTEM. SAMUEL B. RAFFLEYE and JOHN J. DEVINE, Philadelphia, Pa. Filed Nov. 22, 1906. Serial No. 344,546.



1. In an electric railway system, the combination with a strip of non-conducting material, of means to support the same at approximately one end thereof, said strip being bent or curved so as to extend upwardly from its point of support and thence downwardly and terminating above the level of its point of support, the conductor, and a hanger supporting the conductor and extending through the strip, and means securing the hanger to the strip.

2. In an electric railway system, the combination with a strip of non-conducting material bent or curved to form a concavity beneath it to receive the conductor, of means to support said strip, a recessed device above the strip, the conductor, a hanger supporting the conductor, and extending above the strip into said recess, and non-conducting material in said recess and covering the top of the hanger.

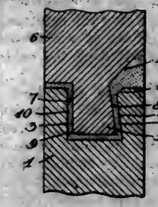
3. In an electric railway system, the combination with a strip of non-conducting material bent or curved to form a concavity beneath it to receive the conductor, of means to support said strip, a recessed device above the strip, a hanger supporting the conductor and extending above the strip into said recess, a nut in said recess engaging the hanger, and non-conducting material in said recess covering the nut and hanger-top.

4. In an electric railway system, the combination with a strip of non-conducting material bent or curved to form a concavity beneath it to receive the conductor, of means to support said strip, the conductor, a hanger composed of a two part clamp provided with opposing inwardly extending flanges engaging grooves in the conductor, a recessed device above the strip, a bolt connected to the hanger and extending through the strip into said recess, a nut on the bolt, and non-conducting material in said recess covering said nut and bolt.

5. In an electric railway system, the combination with a strip of non-conducting material bent or curved to form a concavity beneath it to receive the conductor, of means to support said strip, the conductor, a hanger composed of a two part clamp provided with opposing inwardly extending flanges engaging grooves in the conductor, a recessed device above the strip, a two part bolt, connected to the clamps respectively, and tapered upwardly and extending through a similarly tapered orifice in the strip, a nut in said recess engaging the bolt, and non-conducting material in said recess covering said nut and bolt.

[Claims 6 to 10 not printed in the Gazette.]

876,490. JOINT. HARRY F. RABOR, Barberton, Ohio. Original application filed Feb. 26, 1906, Serial No. 303,046. Divided and this application filed Feb. 4, 1907. Serial No. 355,672.



1. Two sections adapted to be joined together, one of which is provided with a groove, and the other with a rib, one wall of the groove being undercut towards the bottom and beveled at its upper edge and the rib being expanded toward its lower end and the wall of its section being beveled above said rib, said sections being at a distance apart for the reception of cement when the rib is inserted in said groove.

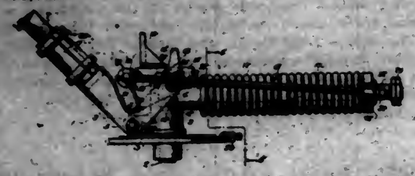
2. Two hollow furnace sections adapted to be secured together in alinement, the upper edge of the lower section being provided with a groove entirely around it, angular in cross section, the outer wall of the groove being undercut toward the bottom and having its upper edge cut away on a bevel, and the lower end of the upper section being provided with an annular rib, of less area in cross section than the groove, and expanded toward its lower end, and adapted to fit in said groove, the lower end of the upper section being tapered on its outer wall entirely around the same, whereby a mouth or entrance is formed to the space between the rib and the walls of the groove, said mouth being higher than said space, and cement within said mouth and space.

876,491. ANTISNORING DEVICE. CARL F. ROHWER, Hot Springs, Ark. Filed Aug. 5, 1907. Serial No. 387,151.



An anti-snoring device comprising an attaching bolt, a loop carried thereby, a hollow spherical pad having a pair of parallel slots through which the loop is threaded.

876,492. TROLLEY-POLE CONTROLLER. OSCAR A. ROSS, Chicago, Ill. Filed Jan. 12, 1906. Serial No. 295,702.



1. In a device of the kind described, a base and a trolley pole, in combination with resilient retaining means, a supporting member provided with two retaining seats therein adapted to support the pole at different angles of inclination, and means for changing the retaining means from one seat to the other, consisting of a disengaging member and a reëngaging member carried by the said supporting member.

2. In a device of the kind described, a pivotally supported trolley pole with a bell crank extension provided with a seat for engagement with a resilient connecting member, and a movable resilient connecting member cooperating with said seat, in combination with adjustable means for forcing said member from its seat when the pole is disengaged from its engagement with the wire permitting the pole to drop below the said wire, and means for normally restoring said connecting member to its seat.

3. A device of the kind described, comprising a base, a trolley pole pivotally supported upon the base provided with a bell crank extension with a depression near its free end and a receding clearance between said depression and the trolley pole, in combination with resilient means for retaining the pole in a normal position provided with a movable member adapted to be positioned in said depression when said pole is in its normal position, and when forced therefrom to move along said clearance, and means for forcing said movable member out of the depression when the trolley pole rises above its normal position.

4. A device of the kind described, comprising a stand, a base, a trolley pole pivotally supported upon the base provided with a bell crank extension with a seat near its free end and a receding clearance between the said seat and the trolley pole, in combination with means for retaining the pole in a normal position provided with a movable member adapted to be positioned in said seat when the said pole is in its normal position, and when forced therefrom to move along said clearance, means for forcing said movable member out of its seat when the trolley pole rises above its normal position, and means for returning the movable member to its seat.

5. A device of the kind described, comprising a stand, a base, a trolley pole pivotally supported upon the base provided with a bell crank extension with a seat near its free end and a clearance between the said seat and the trolley pole, a bell crank lever pivotally supported upon said extension with the free end of one arm extended to and traveling in the plane of said clearance and a stop arranged in the path of the other arm of said bell crank, in combination with means for retaining the pole in a normal position provided with a movable member adapted to be positioned in said seat when the pole is in a normal position, and means for forcing the said movable member out of its seat when the pole rises above its normal position.

[Claims 6 to 14 not printed in the Gazette.]

876,493. TIME-INDICATOR FOR TELEPHONES. JOHN ROUNSEVILL and AUGUST BILMS, Cuxhaven, Germany. Filed July 9, 1906. Serial No. 325,423.

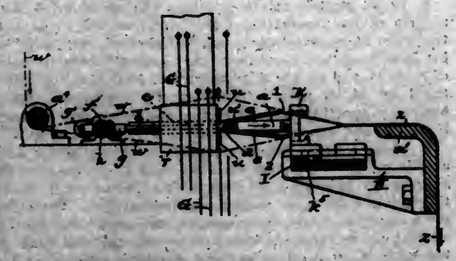
1. Improved time indicator and alarm device of the nature set forth, comprising a minute hand driven around a minute-graduated dial plate, a wheel keyed to the shaft of the minute hand having incisions or teeth at its periphery in accordance with the time intervals allowed as a unit for telephone conversations, an alarm device and means for actuating said alarm device by the aforesaid toothed wheel at the end of every time unit, substantially as set forth.



2. Improved time indicator and alarm device of the nature set forth, comprising a minute hand driven around a minute-graduated dial plate, a wheel keyed to the shaft of the minute hand having incisions or teeth at its periphery in accordance with the time intervals allowed as a unit for telephone conversations, a spring arm having a lateral finger resting on the serrated circumference of the aforesaid wheel, a second spring arm pressing on the first spring arm and having a lateral finger, and an alarm device, whose actuating means are under the control of the lateral finger of the second spring arm, substantially as set forth.

3. Improved time indicator and alarm device of the nature set forth, comprising a minute hand e driven around the minute-graduations b of a dial plate a, a wheel f keyed to the shaft c of the minute hand e behind the dial plate a having incisions or teeth g at its circumference, a spring arm i having a lateral finger k resting on the toothed periphery of the wheel f, a second spring arm l pressing on the spring arm i having a lateral finger m, an alarm driven by a spring work of the usual kind, an anchor n carrying the hammer q for sounding the alarm, and a rod o in attachment with the anchor n, said rod o being under the influence of the lateral finger m, substantially as set forth.

876,494. MEANS FOR PRODUCING SELVAGE IN LOOM-WOVEN FABRICS. LEVI H. SALISBURY, Providence, R. I. Filed Oct. 26, 1906. Serial No. 340,700.



1. In a selvage forming device for looms, the combination of an intermittingly movable reed, spools for carrying thereon warp or binding yarns, a revoluble shaft or spindle, a pair of laterally separated arms carried by the shaft and arranged for guiding the yarns, and mechanism operatively connected with and actuated by said reed for intermittingly rotating said shaft, arms and spools in unison so as to twist the yarns around the end portion of the last delivered weft-thread successively.

2. In a device of the character described, the combination of an intermittingly movable reed, a suitably supported barrel-cam, a hollow shaft having said cam secured thereon and forming a central guide for auxiliary binding-yarns, a pair of oppositely disposed arms pivoted to said shaft for guiding the binding-yarns, and means operatively connected with said cam for intermittingly rotating the latter and said shaft and arm members in unison with respect to the reed's movements, for the purpose hereinbefore set forth.

3. In a device of the character described, the combination with a revoluble tubular shaft or member having a suitable cam-groove formed in its periphery, and a pair of yarn-guides pivoted to said shaft and extending in front thereof, of a reciprocating reed section, and means connected with the latter and engaging said cam-groove for imparting an intermittent rotary movement to the shaft and yarn-guides during each double reciprocation of the reed, for the purpose herein set forth.

4. In a device of the character described having a revolubly mounted shaft, a pair of swinging yarn-guides pivoted thereto and a cam member secured to said shaft having a continuously communicating spiral and longitudinal groove formed in its periphery, the combination therewith of a reciprocating reed section, a connection secured to the reed and being in continuous engagement with said groove, and means for conducting yarns from a source of supply to said guides, substantially as described and for the purpose set forth.

5. In a device of the character described, the combination of a revoluble tubular shaft having a yarn-separating bar or partition therein, a cam or direction changing member secured to the shaft, a reciprocating reed section, means connected with the latter and with said cam for actuating the shaft, a pair of laterally separated yarn-guides movable by and in unison with the shaft, a pair of mechanically revoluble yarn-carrying bobbins having the respective yarns passing therefrom at either side of said bar and through the shaft into the guides, and means for imparting tension to the yarns before they enter the shaft.

876,495. HEATING APPARATUS. WILHELM SCHRAMM and FREDERICK BECKER, New York, N. Y. Filed May 3, 1907. Serial No. 371,756.

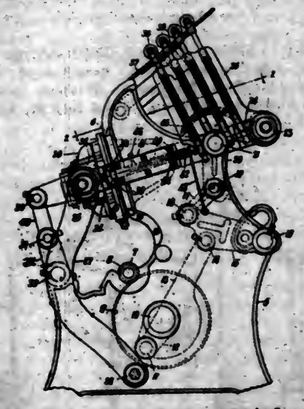


1. A heating apparatus comprising a burner pipe, an open topped casing secured to the mouth of the latter, an adjustable open topped conical body projecting with its apex downwards into the casing towards the mouth of the burner pipe, said body being hollow and having a spiral flange on its circumference, the said flange being a good conveyer of heat, and a heat reflector above said casing and conical body, substantially as set forth.

2. A heating apparatus comprising a burner pipe, an open topped casing secured to the mouth of the latter, and having air-holes at its lower portion and in its bottom a support secured to the top of the said casing, an adjustable open topped conical body suspended from said support and projecting with its apex downwards towards the mouth of the said casing, said body being hollow and having perforations on its circumference, and a spiral flange which is a good conveyer of heat, and a heat reflector above said casing and conical body, substantially as set forth.

3. A heating apparatus comprising a burner pipe, an open topped casing secured to the mouth of the latter, a support at the end of said casing, a rod adjustably borne in said support and projecting centrally downwards towards the mouth of the said burner pipe, an open topped conical body secured to said rod and surrounding the latter, said conical body being hollow and having perforations and a spiral flange on its circumference, the latter being a good conveyer of heat, means for guiding the lower ends of said rod and conical body in vertical direction, and a heat reflector secured to the upper end of the said rod above the casing and the conical body, substantially as set forth.

876,496. PLATEN-LOCKING MECHANISM. ALBERT J. SEAMAN, Faneuil, Mass., assignor to The Imperial Art Press Co., a Corporation of Maine. Filed Apr. 4, 1907. Serial No. 366,314.



1. In a printing press, a frame, a type bed supported on said frame, a platen, mechanism for moving said platen toward and away from said type bed, an inking roll movable across the face of said type bed, a female member provided with a V-shaped notch, said member being fast to said platen, a male member adapted to enter and fit said female member, said male member normally extending part way across the path of said inking roll, and mechanism for moving said male member out of the path of said inking roll.

2. In a printing press, a frame, a type bed supported on said frame, a platen, mechanism for moving said platen toward and away from said type bed, an inking roll movable across the face of said type bed, two female members each provided with a V-shaped notch, said members being fast to opposite sides, respectively of said platen, two male members adapted to enter and fit said female members, respectively, said male members normally extending part way across the path of said inking roll, and mechanism for moving said male members out of the path of said inking roll.

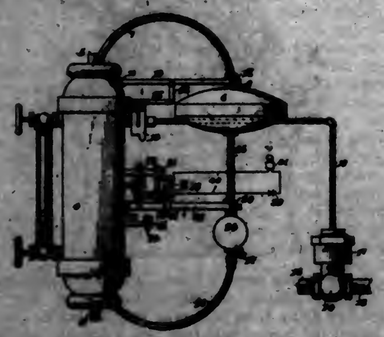
3. In a printing press, a frame, a type bed supported on said frame, a platen, mechanism for moving said platen toward and away from said type bed, an inking roll movable across the face of said type bed, two female members each provided with a V-shaped notch, said members being fast to opposite sides, respectively, of said platen, two male members adapted to enter and fit said female members, respectively, said male members normally extending part way across the path of said inking roll, two springs adapted to move said male members, respectively, into the path of said inking roll, and mechanism for moving said male members out of the path of said inking roll.

4. In a printing press, a frame, a type bed supported on said frame, a platen, mechanism for moving said platen toward and away from said type bed, an inking roll movable across the face of said type-bed, two female members each provided with a V-shaped notch, said members being fast to opposite sides, respectively, of said platen, two male members adapted to enter and fit said female members, respectively, said male members being slidably mount-

ed on said frame, two springs adapted to move said male members, respectively, into the path of said inking roll, and two cams adapted to move said male members, respectively, out of the path of said roll.

5. In a printing press, a frame, a type bed supported on said frame, a platen, mechanism for moving said platen toward and away from said type bed, an inking roll movable across the face of said type bed, a female member provided with a V-shaped notch, said member being fast to said platen, a male member adapted to enter and fit said female member, said male member normally extending part way across the path of said inking roll, mechanism for moving said male member out of the path of said inking roll, and means for holding said male member out of the path of said inking roll.

876,497. STEAM-BOILER INDICATOR. JOHN F. SENTER, Chattanooga, Tenn., assignor of one-half to Morgan Llewellyn, Michael G. Weidner, and J. Harry Street, Chattanooga, Tenn. Filed July 21, 1906. Serial No. 327,216.



1. In mechanism of the class set forth, the combination with a container, of a plurality of movable separate gravity tanks connected to the container, a conduit connecting the tanks separately from their connections with the container, an indicator associated with the tanks, and operating means for the indicator controlled by the movement of said tanks.

2. In mechanism of the class set forth, the combination with a container, of a plurality of movable separate gravity tanks of different sizes connected to the container, a conduit connecting the tanks separately from their connections with the container, an indicator associated with the tanks, and operating means for the indicator controlled by the movement of said tanks.

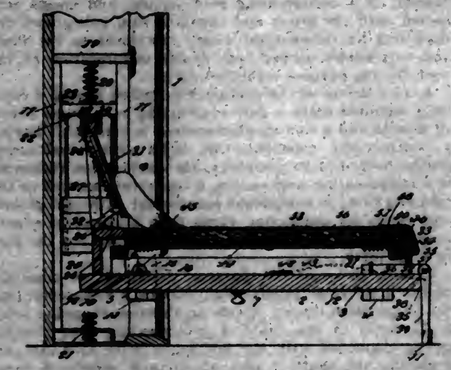
3. In mechanism of the class described, the combination with an upper gravity tank, of a lower gravity tank of less size than the upper tank, a conduit connecting the lower portion of the upper tank with the upper portion of the lower tank, means for admitting liquid to and discharging it from the tanks, and a signal associated with the tanks and operated upon their movement to a predetermined position.

4. In mechanism of the class set forth, the combination with a fluid container, of a movable gravity tank, flexible hose connections between the upper and lower portions of the tank and the container, a lever pivoted at one end on the container and pivotally connected at its other end to the tank, a spring for urging the lever against its downward movement by the tank, and alarm mechanism having portions disposed in the path of movement of the lever.

5. In mechanism of the class set forth, the combination with movable gravity tanks disposed at different elevations, of a conduit directly connecting the tanks, and an alarm actuated by the tanks on a predetermined movement of the same.

[Claims 6 to 13 not printed in the Gazette.]

876,498. FOLDING BED. NATHAN SILVERSON, New York, N. Y. Filed Aug. 24, 1906. Serial No. 331,906.



1. In a folding bed, a frame or support having vertically movable weights on both sides thereof, a bed pivoted in said frame and having a transverse bar for engaging said weights whereby the opening movement of said bed is against the force of said weights, springs depending from near the top of said frame or support designed to form yielding contacts for said weights when said bed is opened, and springs at the bottom of said support to form buffers for said weights when said bed is closed.

2. In a folding bed, a frame or support, a bed pivoted therein, guides or channels in said frame, a weight-carrying frame movable in said guides or channels, a bridge spanning the space intermediate said guides or channels above the range of movement of said weight-carrying frame, a spring depending from said bridge and designed to engage said weight-carrying frame, and connections between the latter and said bed.

3. In a folding bed, the combination with the support having vertically movable weight carrying frames in its opposite walls, of a bed pivotally mounted in said support and having an extension beyond its pivotal connection to the support, and a bar pivotally mounted on said extension and in engagement with said frames.

4. In a folding bed, the combination with the support having vertically movable weight carrying frames in its opposite walls, of a bed pivotally mounted in said support and having a rearward extension, ears or lugs on said extension, vertically disposed arms pivoted to said ears or lugs, and a transverse bar carried by said arms and having its ends engaging said frames.

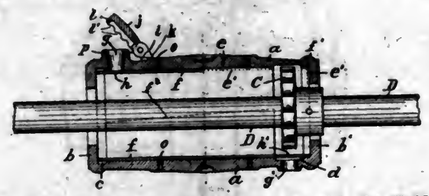
5. In a folding bed, the combination with the support having vertically movable weight carrying frames in its opposite walls, and cross heads at the tops of said frames, of a bed pivotally mounted in said support and having a rearward extension, ears or lugs on said extension, vertically disposed arms pivoted to said ears or lugs, a transverse bar carried by said arms, and plate springs on the upper edge of said bar at or near its ends, such ends extending into said frames and the said cross heads of the latter resting on said plate springs.

[Claims 6 and 7 not printed in the Gazette.]

876,499. STEEL-LINED ROLLER-BEARING. ALFRED P. SLOAN, Jr., Brooklyn, N. Y., assignor to Hyatt Roller Bearing Company, Harrison, N. J., a Corporation of New Jersey. Filed Dec. 12, 1904; Serial No. 236,666. Renewed Jan. 2, 1907. Serial No. 350,430.

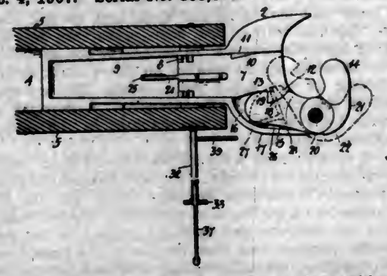
1. In a hanger box, the combination, with the cast-metal casing a divided longitudinally in halves and having flanges b, b' at opposite ends, and the finished cylindrical seat c, of the steel lining f divided longitudinally off of the center line, and means for fastening the halves respectively to the seat in the halves of the casing, the interior of the lining having a finished cylindrical bore, substantially as herein set forth.

2. A hanger box having the cast-metal casing with integral flanges at opposite ends and divided as set forth, and formed with the finished cylindrical seat between the said flanges, and the steel lining f formed in two pieces, each made wider at one end than the other, with their wide and narrow ends fitted together within the casing, and the two pieces secured thereto with the sloping joint at the division of the casing, to facilitate the movement of the rolls upon the lining.



3. In a hanger box, the combination, with the divided cast-metal casing a with integral flanges b, b' at opposite ends, and having the finished cylindrical seat c and the oil-holes g and g' extended through the top and bottom near opposite ends as set forth, of the steel lining f formed in halves fastened respectively to the seat in the halves of the casing and having a finished cylindrical bore, and provided with the holes h and h' arranged to coincide with the casing oil-holes g and g' respectively.

876,500. CAR-COUPLING. GEORGE E. STARBIRD, Elmhurst, Ill., and GEORGE M. FOX, Cut Bank, Mont. Filed Feb. 4, 1907. Serial No. 355,679.



In a car coupling of the Janney type, in combination with the drawhead and the pivoted knuckle having the arm, a lock block in the drawhead mounted for vertical pivotal movement, a revoluble element to open the knuckle and having a tappet arm, and a revoluble and longitudinally movable operating element, having a connection with the lock block to operate the latter and also having a tappet arm to coact with that of the revoluble knuckle-opening element.

876,501. DIFFERENTIAL GEAR. PETER STEINHAUER, St. Louis, Mo. Filed July 15, 1907. Serial No. 383,823.



1. A differential gear for vehicles comprising a shaft, wheels loosely mounted at the opposite ends thereof a rotatable member encompassing the shaft between the wheels, an inner toothed gear carried by each wheel, a gear wheel secured to the shaft adjacent to each wheel, a series of pinions rotatable about their axes carried by the rotatable member adjacent to one of the wheels and meshing with the gear wheel on the shaft and with the gear on the wheel, a series of pinions rotatable about their axes carried by the rotatable member adjacent to the opposite wheel and meshing with the gear wheel, a second series of rotating pinions likewise carried by the rotatable member adjacent to said opposite wheel, said second series being disposed to one side of the first series and along radial lines concentric with the radial lines of disposition of the first series but at a different distance from the common center of said radial lines, said second series meshing with the first series of pinions and with the adjacent gear wheel secured to the shaft, substantially as set forth.

2. A differential gear for vehicles comprising a shaft, wheels loosely mounted at the opposite ends thereof, a rotatable member encompassing the shaft between the wheels, an inner-toothed gear carried by each wheel, a gear wheel secured to the shaft adjacent to each wheel, a series of rotatable pinions carried by the rotatable member adjacent to one of the wheels and meshing with the gear wheel on the shaft and with the gear on the wheel, two series of rotatable pinions disposed along radii diverging from a common center on the axis of rotation of the shaft, carried by the rotatable member adjacent the opposite wheel and respectively meshing the one series with the other, and with the gear wheel on the wheel and the gear wheel on the shaft, the parts operating substantially as set forth.

3. A differential gear for vehicles comprising a shaft, wheels loosely mounted at the opposite ends thereof, a rotatable sleeve encompassing the shaft between the wheels, an inner-toothed gear carried by each wheel, a gear wheel secured to the shaft adjacent to each wheel, a series of rotatable pinions carried by the sleeve adjacent to one of the wheels and meshing with the gear wheel on the shaft and with the gear wheel on the wheel, two series of rotatable pinions disposed along radii diverging from a common center on the axis of rotation of the shaft, carried by the sleeve adjacent the opposite wheel and respectively meshing, the one series with the other, and with the gear wheel on the shaft and with the gear wheel on the wheel, the parts operating substantially as set forth.

4. A differential gear for vehicles comprising a shaft, wheels loosely mounted thereon, and means for imparting rotation to the wheels in reverse directions by a deflection of the shaft from a position corresponding to the travel of the vehicle in a direct line, substantially as set forth.

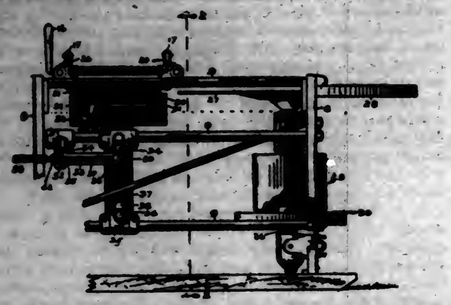
5. A differential gear for vehicles comprising a shaft, wheels loosely mounted thereon, and means for imparting the wheels for imparting thereto respectively rotation in reverse directions by a deflection of the shaft from a position corresponding to the travel of the vehicle in a direct line, substantially as set forth.

876,502. HEADING AND SHINGLE MACHINE. JOSEPH STREET and JOSHUA H. STREET, Chattanooga, Tenn. Filed Oct. 4, 1906. Serial No. 337,464.

1. In a machine for the purposes specified, a frame having a plurality of parallel longitudinal bars on each side, a horizontal revolving circular saw at one end of the frame, transverse shafts clamps securing the transverse shafts to the longitudinal bars and adjustable in their distance from the saw, a carriage to convey the material to be sawed, a cradle to receive and readjust the position of the material after each cut for a new cut, standards for supporting the cradle said standards being longitudinally slotted and supported by the said adjustable transverse shafts which pass through said longitudinal slots.

2. In a machine for the purposes specified, a frame having triplicate parallel longitudinal bars on each side, a pair of transverse shafts adjustably secured one to each of the two lower of said bars so as to be adjustable longitudinally of said bars, a carriage mounted so as to travel longitudinally on the top pair of bars, standards supported by

the transverse shafts, a cradle supported by said vertically slotted standards, said standards and cradle being adjustable to and from the saw by correspondingly adjusting said transverse shafts said shafts passing through said slots of the standards.



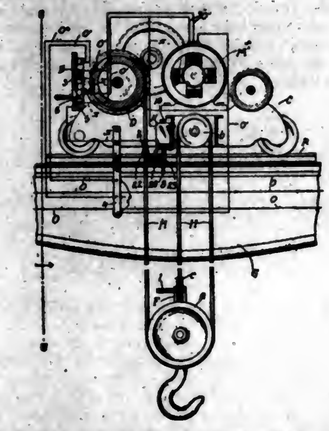
3. In a machine for the purposes specified, a horizontally revolving circular saw, a carriage having a reciprocating travel carrying material against the saw to be operated upon, means for liberating the material for readjustment after each cut, means under the carriage at the opposite end of its travel from the saw for gaging the position of said liberated material, said means comprising a frame, vertically adjustable standards, one at each end of the frame carrying the latter, said standards being vertically slotted, a pair of transverse shafts passing through the slots of the standards, means including one of said transverse shafts for vertically adjusting the standards, means for holding a given adjustment of the standards, and a support on the frame to receive the liberated material.

4. In a heading and shingle machine, a pair of end frames, shafts in a series of horizontal pairs connecting said end frames, a horizontal circular saw mounted adjacent to one of the end frames under the top pair of shafts, a carriage mounted on rollers upon said top pair of shafts, said carriage having a pair of horizontal shafts at right angles to said track shafts, a stationary dog-plate carried by the shafts of the carriage at one side of the carriage, a second dog-plate attached to sleeves slidingly mounted on said last shafts near the other side of the carriage, means for changing the positions of the sleeves on their shafts to clamp and unclamp the material to be operated upon by the machine between said dog-plates, a horizontal frame at the opposite end of the machine from the saw, under the carriage when the latter is at that end of the machine, a pair of horizontal shafts disposed in the same vertical plane under the frame, a pair of standards supporting the horizontal frame, said standards having vertical slots to receive said pair of horizontal shafts whereby the standards are maintained in a vertical position, a tilt-table pivotally connected to the frame and means for tilting the table.

5. In a heading and shingle machine, a pair of end frames, a series of horizontal pairs of shafts connecting said end frames, a horizontally mounted circular saw revolving near one of said end frames, a carriage mounted on the top pair of horizontal shafts means for fastening the material to be operated on by the saw to said carriage so it will extend into the path of the saw and be sawed when the carriage is moved toward the saw so as to bring the material into contact with the latter, a horizontal frame supported on vertical standards under the path of the carriage at the opposite end of the machine from the saw, said standards being vertically slotted, a pair of transverse shafts passing through the slots to guide the standards, a cradle having a pair of bars running longitudinally of the machine, said cradle being mounted in the last-named frame on pivots whereby the cradle may be rocked to alternately raise and lower its rails, means for tilting the cradle in an opposite direction after each cut of the saw.

[Claims 6 to 8 not printed in the Gazette.]

876,503. SAFETY DEVICE FOR ELECTRIC CRANES. MARIUS R. SULIOT, Salem, Ohio, assignor of one-half to Frank Klepetko, New York, N. Y. Filed July 24, 1907. Serial No. 385,358.



1. In combination with a hoisting cable, an electric motor for raising and lowering the same, a contact-box, normally separated contacts confined within the box, a projecting stem operating loosely through the wall of the box and secured to one of the contacts, a tripping lever pivoted in proximity to the box and engaging the stem aforesaid, devices actuated by the cable for moving the lever and actuating the stem, and forcing the contacts together within the box, conducting shunt-wires leading from the contacts, an energising coil in the circuit of the shunt, a circuit breaker for the electric motor, the energising of the shunt coil opening the breaker and breaking the circuit to the motor upon movement of the tripping lever by the devices actuated by the cable, substantially as set forth.

2. In combination with an electric motor, a fall-block and cable actuated thereby, a circuit-breaker in circuit with the motor, a contact-box, contacts within the box, springs for normally separating said contacts, a handle coupled to one of the contacts and normally resting on the box, an insulated reciprocating stem coupled to the second contact and projecting through the opposite wall of the box, a shunt-circuit having its terminals leading from the main feeders to the contacts through the walls of the box, a main tripping lever hinged at one end and engaging the end of the projecting stem aforesaid, a second or supplemental tripping lever having one end engaging the main lever at a point moved from the fixed end of the latter lever, and devices on the fall-block for raising the main lever whereby the contacts are forced into engagement and the shunt circuit is closed, and an energising coil in the shunt circuit for opening the circuit-breaker and breaking the circuit to the motor, substantially as set forth.

3. In combination with an electric motor, a fall-block and cable actuated thereby, a circuit-breaker in circuit with the motor, a fiber-contact-box, contacts within the box, springs for normally separating the contacts, a handle coupled to one of the contacts and normally resting on top of the box, an insulated reciprocating stem secured to the second contact and projecting through the bottom of the box, a shunt-circuit having its terminals leading from the main feeders to the contacts through the walls of the box, a main tripping lever hinged at one end and engaging the end of the projecting stem aforesaid, a second or supplemental tripping lever having one end bearing against the main lever, a button on the cable engaging and tripping said supplemental lever for an over-lowered position of the fall-block, devices on the fall-block for raising the main lever for an over-wound position of the cable, whereby, and for the tripped position of either lever the contacts are forced into engagement and the shunt circuit is closed, and an energising coil on the shunt for opening the circuit breaker and breaking the circuit to the motor, substantially as set forth.

876,504. CLOSURE FOR OIL-CANS, JUGS, &c. GUY T. TABLER, Royse City, Tex. Filed Oct. 15, 1906. Serial No. 339,046.



1. A device of the character described comprising two pivotally connected members, one of which is provided with a resilient cone-shaped vessel engaging member adapted to be contracted for entrance into the mouth of the vessel.

2. A device of the class described, comprising two members having interlinked connection, the free terminal of one member being provided with a coiled cone-shaped vessel-engaging head the upper whirls of which are adapted to be contracted for entrance into the mouth of the vessel, and the free terminal of the other member being formed for attachment to a closure.

876,505. LIFTING-SHACKLE. COLEMAN A. TERRY, New York, N. Y. Filed May 29, 1907. Serial No. 376,301.



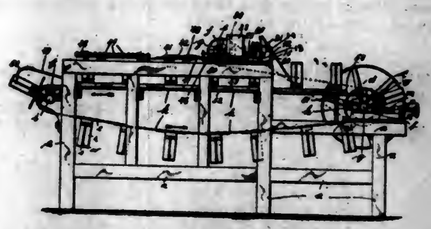
1. In a lifting shackle, the combination with a lifting member having an eye-piece and a portion laterally offset therefrom, of a clamp plate pivoted freely to said offset portion, said clamp plate having an opening therethrough substantially corresponding to the cross section of the object to be lifted.

2. In a lifting shackle, the combination with a lifting member having an eye-piece and a portion laterally offset therefrom, of a clamp plate pivoted freely to said offset portion, said clamp plate having an opening therethrough substantially corresponding to the cross section of the object to be lifted, and a stop for preventing the said clamp plate from moving upward beyond a substantially horizontal position.

3. In a lifting shackle, the combination with a lifting member having an eye-piece and a portion laterally freely offset therefrom, of a clamp plate pivoted freely to said offset portion, said clamp plate having an opening therethrough substantially corresponding to the cross section of the object to be lifted, and a guard arranged in proximity to said clamp plate for protecting same.

4. In a lifting shackle, the combination with a lifting member having an eye-piece and a portion laterally offset therefrom, of a clamp plate pivoted freely to said offset portion, said clamp plate having an opening therethrough substantially corresponding to the cross section of the object to be lifted, and a guard plate pivoted to said lifting member having a portion arranged to partially surround said clamp plate.

876,506. BOX-MAKING MACHINE. EDWIN L. THURBER, New York, N. Y., assignor to Dunham Manufacturing Company, a Corporation of New York. Filed Jan. 8, 1907. Serial No. 351,324.



1. In a machine of the class described, the combination of a holder for the carton; mechanism for moving said holder; a stationary flap-folding device having a curved surface; and a guide for directing the flap into said folder, said guide being in advance of the folder and serving to raise the flap preparatory to its entry into the folder.

2. In a machine of the class described, the combination of a carton-holder formed with a slot; a rod which extends through and is freely movable in said slot and the ends of which project beyond the opposed slotted walls of said carton-holder; and devices which are adapted to rub simultaneously against both ends of said rod to force the carton from said holder.

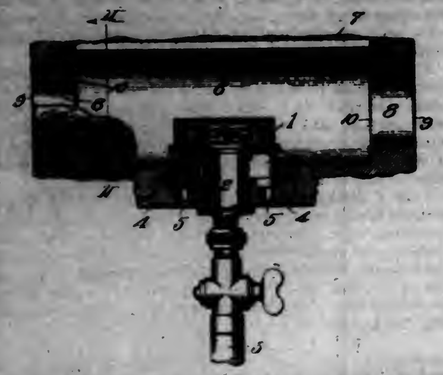
3. In a machine of the character described, the combination of a supporting frame; a holder for the carton, said holder being formed with a slot; mechanism for moving said holder relatively to said frame; an ejecting rod which extends through and is freely movable in said slot and the ends of which project beyond the opposed slotted walls of said holder; and a pair of inclined arms mounted on said frame, each of said arms being positioned to rub against one of the projecting ends of said ejecting rod to force the carton from its holder.

4. In a machine of the class described, the combination of a holder for the carton; mechanism for moving said carton-holder; a pair of interconnected shafts, one of which is spring-controlled and the other of which is controlled by said holder; mechanism mounted on said other shaft and adapted to be engaged by said holder in its travel; and a flap-folding device mounted on one of said shafts.

5. In a machine of the class described, a flap-folding mechanism comprising a pair of coöperating parallel shafts, one of which is spring-controlled and the other of which is provided with an arm for turning the same; a flap-folder upon one of said shafts; and means for swinging said arm to turn said shafts.

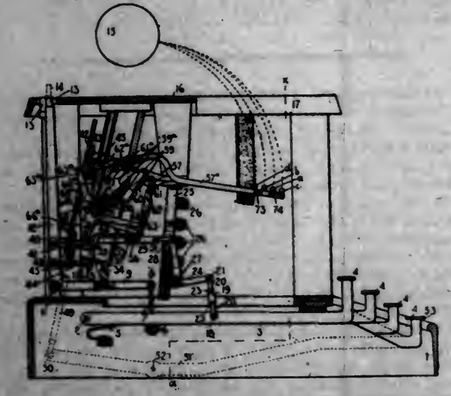
[Claims 6 and 7 not printed in the Gazette.]

876,507. GAS-BURNER. EDWIN G. VAN ZANDT, St. Louis, Mo. Filed Mar. 26, 1907. Serial No. 364,590.



A gas burner comprising an initial burner, and a shell surrounding said initial burner having internal flanges at its ends providing restricted end vents and having a V-shaped vent in the upper portion of its wall extending longitudinally of the shell and terminating at its internal flanges, substantially as set forth.

876,508. TYPE-WRITING MACHINE. GEORGE B. WEBB, Westfield, N. J., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y., a Corporation of New York. Filed Sept. 1, 1903. Serial No. 171,509.



1. In a front strike typewriting machine, the combination of a platen, segmentally arranged upwardly and rearwardly striking type carriers pivoted to fixed supports, key levers, intermediate actuating means between said key levers and type carriers, said means comprising substantially horisontally disposed segmentally arranged slides, and means for operatively connecting any slide with any one of a plurality of said type carriers.

2. In a typewriting machine, the combination of type carriers, key levers, actuating slides operatively connected to said key levers, a connector connected to each slide to receive a lateral movement relatively thereto and adapted to coöperate with any one of a plurality of said type carriers to actuate it, and means for moving said connectors.

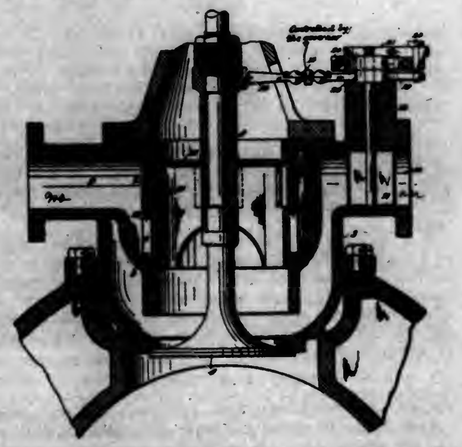
3. In a typewriting machine, the combination of type carriers, actuating levers operatively connected thereto, key levers, actuating slides operatively connected to said key levers, a connector movably connected to each slide and adapted to coöperate with any one of a plurality of said actuating levers, and means for simultaneously moving all of said connectors.

4. In a front strike typewriting machine, the combination of type carriers, actuating slides, guides for guiding the slides in their movements, means movably connected to each slide for operatively connecting it to any one of a plurality of type carriers, key actuated means for moving the connecting means of each slide into operative connection with a type carrier, key levers, and operative connections between the key levers and said slides to actuate the type carriers connected therewith.

5. In a front strike typewriting machine, the combination of type carriers, longitudinally movable actuating slides, a fixed guide for guiding the slides in their longitudinal movement, means pivoted to each slide for operatively connecting it to any one of a plurality of type carriers, a movable guide for guiding the pivoted connecting means of the slides, key actuated means for moving the movable guide, key levers, and operative connections between the key levers and said slides to actuate the type carriers connected therewith.

[Claims 6 to 39 not printed in the Gazette.]

876,509. GAS-ENGINE MIXING-VALVE. ARTHUR J. WEST, Pittsburg, Pa., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Sept. 1, 1904. Serial No. 222,969.



1. In combination in a gas engine, an admission valve, a rotatable reciprocably mounted gas valve, an air valve, a variably reciprocable member dependent upon the engine speed for controlling said air and gas valves and a regulable lost motion connection between said air valve and said member.

2. In combination in a gas engine, a reciprocable admission valve, a gas valve, an air valve, a movable member dependent upon the engine speed for regulating said air valve, a lost motion connection between said member and said air valve, and means for varying the amount of said lost motion.

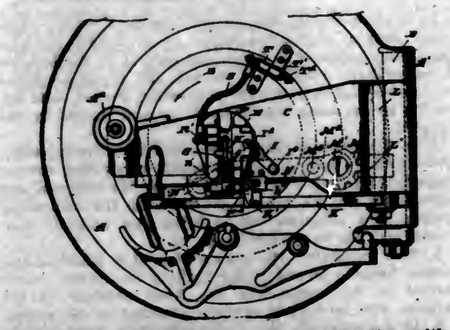
3. In combination in a gas engine, a reciprocable admission valve, a gas throttling piston-valve movable with said admission valve and rotatable to vary the gas supply, an air valve and means operatable during the reciprocations of said admission valve and dependent upon the engine speed for controlling said gas and air valves to vary the gas and air supplies.

4. In combination in a gas engine, a reciprocable admission valve, a gas throttling piston-valve movable with said admission valve and rotatable to vary the gas supply, an air valve, means operatable during the reciprocations of said admission valve and dependent upon the engine speed for controlling said gas and air valves to vary the gas and air supplies and instrumentalities for varying the relative proportions of air and gas admitted.

5. In combination in a gas engine, a mixture admission valve, a ported valve casing axially in line therewith, a rotatable piston-valve carried by the admission valve stem within said casing and provided with ports at times adapted to register with the ports of said casing, an air supply, a displacer head carried by said admission valve stem within said casing, means for varying the relative proportions of air and gas passing said admission valve, and instrumentalities for rotating said piston valve to vary the effective area of said ports coincident with the speed variations.

[Claims 6 to 17 not printed in the Gazette.]

876,510. FIRING MECHANISM FOR ORDNANCE. HARRY T. WHEELER, Washington, D. C. Filed Apr. 1, 1907. Serial No. 365,760.



1. In a breech loading gun, the combination with a receiver for the primer mounted on the breech block, of a wedge sliding in a guide way in said receiver, means operated by the breech operating mechanism for automatically reciprocating said wedge, independent means operable by hand for reciprocating said wedge, combined percussion and electric firing mechanism carried by said wedge, and means for automatically locking said firing mechanism against operation except when the breech block is in the closed and locked position, with means for locking said firing mechanism against percussion firing, but without affecting the electric firing, substantially as described.

2. In a breech loading gun, the combination with a receiver for the primer mounted on the breech block, of a wedge sliding in a guide way in said receiver, means operated by the breech operating mechanism for automatically reciprocating said wedge, independent means operable by hand for reciprocating said wedge, a spring impressed hammer pivoted to said wedge and provided with an insulated head adapted to close an electric circuit through the primer when in the firing position, means for automatically locking said hammer out of the firing position except when the breech block is closed and locked and the wedge is in the closed position, and means for cocking and releasing said hammer, with means for locking said hammer against percussion firing, when desired, substantially as described.

3. In a breech loading gun, the combination with a receiver for the primer mounted on the breech block, of a wedge sliding in a guide way in said receiver, means operated by the breech operating mechanism for automatically reciprocating said wedge, independent means operable by hand for reciprocating said wedge, a spring impressed hammer and a cocking lever pivoted to said wedge and swinging about different centers, means for automatically holding said hammer out of the firing position except when the breech block is closed and locked and the wedge is in the closed position, and means actuated by said cocking lever for cocking and releasing said hammer, substantially as described.

4. In a breech loading gun, the combination with a receiver for the primer mounted on the breech block, of a wedge sliding in a guide way in said receiver, means operated by the breech operating mechanism for automatically reciprocating said wedge, independent means operable by hand for reciprocating said wedge, a spring impressed hammer provided with an insulated head adapted to close an electric circuit through the primer when the hammer is in the firing position, and a cocking lever, both pivoted to said wedge and swinging about different centers, means for automatically holding said hammer out of the firing position except when the breech block is closed and locked and the wedge in the closed position, and means actuated by said cocking lever for cocking and releasing said hammer, with means for locking said cocking lever and said hammer together when desired, and thus preventing backward motion of said hammer and prohibiting percussion firing, but permitting electric firing, substantially as described.

5. In a breech loading gun, the combination with a receiver for the primer mounted on the breech block, of a wedge sliding in a guide way in said receiver, means operated by the breech operating mechanism for automatically reciprocating said wedge, independent means operable by hand for reciprocating said wedge, combined percussion and electric firing mechanism carried by said wedge, and means for automatically locking said firing mechanism against operation except when the breech block is in the closed and locked position, with means for locking said firing mechanism against percussion firing, but without affecting the electric firing, an extractor for the primer case mounted in the receiver, and means controlled by the reciprocation of the wedge for operating said extractor, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

876,511. PUSH-BUTTON SNAP-SWITCH. JOHN A. YORK, Hartford, Conn., assignor to The Arrow Electric Company, Hartford, Conn., a Corporation of Connecticut. Filed July 29, 1907. Serial No. 385,977.



1. An electric switch mechanism having movable contacts, a lock plate connected with and adapted to move the contacts, a cam plate, push buttons connected with and adapted to move the cam plate, a tumbler adapted to be moved by the cam plate in and out through the supporting plate into and out of the path of the lock plate, and a spiral spring adapted to be placed under tension by the movement of the push buttons and to throw the lock plate and movable poles after the tumbler has been withdrawn from the lock plate by the movement of the cam plate, substantially as specified.

2. An electric switch having movable contacts, a lock plate connected with and controlling the movement of the contacts, push buttons, a cam plate connected with the push buttons, a tumbler moved substantially parallel with the axis of the movable contacts by the movement of the cam plate, and a spring for throwing the lock placed under tension by the movement of the cam plate, substantially as specified.

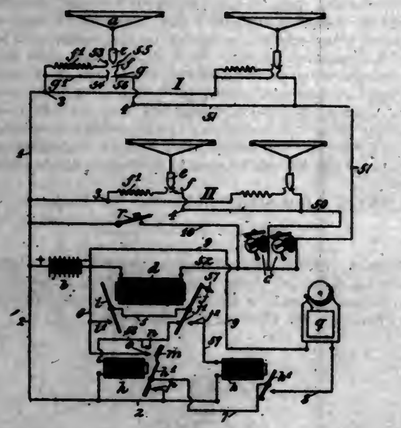
3. An electric switch having movable contacts, a lock plate controlling the movement of the contacts, push buttons, a cam plate moved by the movement of the push buttons, a tumbler moved by the movement of the cam plate transversely of the plane of movement of the lock plate, and a spring for throwing the lock plate made tense by the movement of the cam plate, substantially as specified.

876,512. FIRE-ALARM SYSTEM. MARTIN A. ABRAHAMSON, Copenhagen, Denmark. Filed Feb. 1, 1905. Serial No. 243,642.

1. In a fire alarm system, a primary circuit, thermostats therein controlling the circuit through the system, electro-

magnets energised by current in said circuit, armatures controlled by said magnets under different current conditions regulated by the thermostats, two auxiliary circuits controlled by said armatures, and a third circuit controlled by said two secondary circuits.

2. In a fire alarm system, a main circuit, thermostats therein controlling the current through the system, electro-magnets energised by current through the system, armatures controlled by said magnets under different conditions which are dependent upon the thermostats, two auxiliary circuits closed under different operative current conditions by said armatures, electro-magnets one in each of two said auxiliary circuits, armatures controlled by last mentioned electro-magnets, and a third circuit controlled by last mentioned armatures under one operative current condition to send a fire alarm.



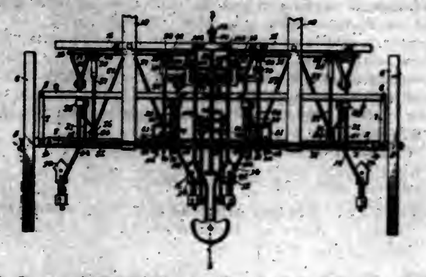
3. In a fire alarm system, a main circuit, thermostats therein, a resistance in shunt with the circuit and included in the circuit by said thermostats, a pair of electro-magnets in the circuit, armatures for said magnets one of which is operated by current when directed through the resistance by said thermostats and the other armature operated under other current conditions controlled by the thermostats, an auxiliary circuit closed by the first mentioned armature to give a danger signal, a second auxiliary circuit closed by both armatures to give a trouble signal, and a third circuit closed by the two secondary circuits being closed in succession.

4. In a fire alarm system, a main circuit, thermostats therein to control three current conditions, no current, full current and an intermediate current condition, a pair of magnets and their armatures, a second circuit, a magnet therein and its armature operated by the intermediate current condition on one of the magnets in the main circuit to give a trouble signal, a fire alarm circuit open at two points, one of said points closed by the said magnet armature in the secondary circuit, a third circuit closed by the second magnet in the main circuit to give a fire signal and simultaneously close the second open point in the fire alarm circuit.

5. In a fire alarm system, the combination with a circuit containing thermostats, of relay magnets contained in said circuit, armatures therefor of different sensitiveness, a local circuit having two branches, a magnet in each branch, an armature for each magnet, an alarm circuit open at two points, the relay armature of lesser sensitiveness adapted to close one of the branch circuits to operate the armature of the magnet therein to close one of the points to indicate a trouble call and the relay armature of greater sensitiveness to close the other branch circuit to operate the armature of the magnet therein to complete the alarm circuit, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

876,513. CULTIVATOR. SILAS E. BAILOR, Tarkio, Mo. Filed Jan. 31, 1907. Serial No. 355,140.



1. In a cultivator, the combination of a frame, oscillatory hangers pivotally mounted on the frame, cultivating devices arranged in gangs and carried by the hangers in an oscillatory movement thereof, and adjusting means for raising and lowering the cultivating devices, said adjusting means being also mounted on and carried by the hangers.

2. In a cultivator, the combination of a frame, oscillatory hangers mounted on the frame, cultivating devices hingedly connected with and carried by the hangers, and adjusting means for raising and lowering the cultivating devices, said adjusting means being also hingedly connected with the hangers.

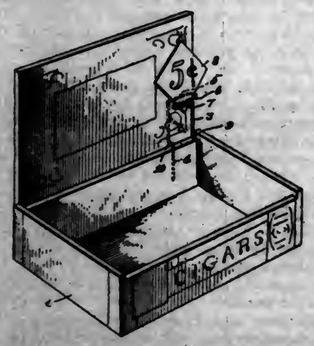
3. In a cultivator, the combination of a frame, longitudinal hangers hinged at the back to the frame, arches carried by and connecting the front portions of the hangers, and cultivating devices connected to the arches.

4. In a cultivator, the combination of a frame, oscillatory hangers hinged at the back to the frame, means hinged to the front portions of the hangers and connecting the same, and cultivating devices carried by the hangers in their oscillatory movement.

5. In a cultivator, the combination of a frame, oscillatory hangers hinged at the back to the frame, means hinged to the front portions of the hangers and connecting the same, and cultivating devices pivotally connected with the hangers and carried by the same in their oscillatory movement, said cultivating devices being arranged to swing upwardly and downwardly.

[Claims 6 to 39 not printed in the Gazette.]

876,514. BOX-COVER HOLDER. WILLIAM R. A. BALL, St. Thomas, N. D. Filed Apr. 22, 1907. Serial No. 369,563.



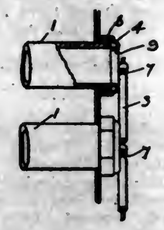
1. A holder for box lids, embodying a front vertical arm adapted to be disposed against the inner sides of the box and lid, a rear vertical arm adapted to be disposed against the outer sides thereof, and a horizontal loop integrally connecting said arms at their tops.

2. A holder for box lids, embodying front and rear arms united at their tops, said front arm adapted to be disposed against the inner sides of the box and lid, and said rear arm adapted to be disposed against the outer sides thereof, said arms being formed into shoulders intermediate their length adapted to fit respectively over the upper edge of the rear wall of the box and under the projecting lower edge of the box lid.

3. A holder for box lids, embodying front and rear vertical arms united at their tops by transverse connecting portions, said front arm adapted to be disposed against the inner sides of the box and lid, and said rear arm adapted to be disposed against the outer sides thereof, said arms being disposed at opposite ends of said transverse connecting portions, whereby the front arm may lie in the box corner while the rear arm may engage the box and lid at a distance from the edge thereof.

4. A holder for box lids, formed of a single piece of metal, and embodying front and rear vertical arms adapted respectively to contact with the inner sides of the box and lid and with the outer sides thereof, said arms being united at their tops by horizontal portions bent to form a clip for the box lid and a separate clip adapted to removably receive the tag.

876,515. ELECTRICAL BINDING-CLIP. BRADBURY L. BARNES, Providence, R. I. Filed Dec. 17, 1906. Serial No. 348,145.



1. A device of the character described comprising a conduit, a conduit binding nut and bushing, and a pliable binding finger adapted to be bent around the conductor said finger being electrically connected to said conduit.

2. A device of the character described, comprising a conduit, a guide bushing attached to said conduit, and a pliable binding finger adapted to be connected to the conductor by being bent around the same, said finger being electrically connected to said conduit.

3. A device of the character described, comprising a conduit, a guide bushing attached to the end of said conduit, and a pliable binding finger connected to said bushing, said finger having a free end adapted to be bent around the conductor to make a ready connection thereto.

4. A device of the character described comprising a conduit, a binding nut, a guide bushing attached to said nut, and a pliable binding finger connected to said bushing, said finger having a free end adapted to embrace the conductor.

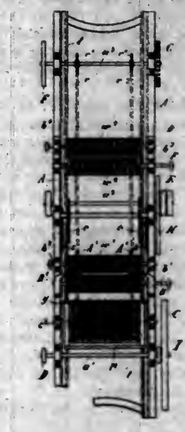
5. A device of the character described, comprising a conduit, a binding nut, a guide bushing supported in position by said nut, and a pliable binding finger electrically connected to said conduit and also supported in position by said nut, said finger having a free end adapted to embrace the conductor.

[Claims 6 to 11 not printed in the Gazette.]

876,516. METHOD AND MEANS FOR PREPARING THE BACKS OF BOOKS FOR BINDING. HERMANN D. BAUMFALK, Bant, Germany. Filed Jan. 21, 1907. Serial No. 353,394.

1. The method of preparing the backs of books for binding, which consists in piling the leaves into books, roughening the back edges of the piles, and then loosening the roughened edges.

2. The method of preparing the backs of books for binding, which consists in piling the leaves into books, compressing the piled leaves in such a manner that a narrow portion at the back is left uncompressed, roughening the edges of the uncompressed portion, releasing the pressure to a greater distance from the back, and bending the released portion first to one side and then to the other.



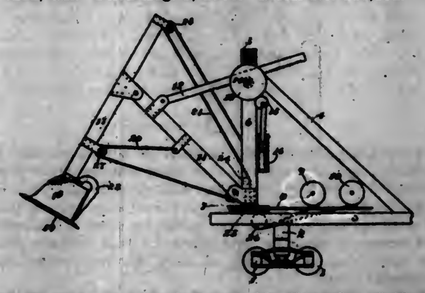
3. An apparatus for preparing the backs of books for binding, having in combination, a number of roughening rolls, a number of loosening rolls behind the roughening rolls and with means on their surface to bend out the leaves.

4. In an apparatus for preparing the backs of books for binding, a frame, a number of distance pieces mounted in the frame, and removable wedge-shaped strips in the planes of the distance pieces.

5. An apparatus for preparing the backs of books for binding, having in combination, a frame, a number of distance pieces each consisting of a rigid plate and two longer sheets of metal, between which the plate is attached and a number of removable wedge-shaped strips between the projecting parts of the sheets of metal.

[Claims 6 to 17 not printed in the Gazette.]

876,517. STEAM-SHOVEL. JOSEPH J. BENEDICK, Oakland, Cal. Filed Aug. 2, 1907. Serial No. 386,691.



1. In a steam shovel, the combination of a platform, a vertical frame carried thereby, a mast pivoted at its top in said frame and at the bottom in the platform, a boom pivoted at its lower end to the mast and near the bottom thereof, a rigid arm pivoted to the boom, means on the mast to forcibly raise or depress the raising arm, and a shovel carried by the boom.

2. In a steam shovel, the combination of a platform, a frame carried thereby, a mast pivoted at its top in said frame and at its bottom on said platform, a boom carried by the mast and adapted to have a movement in a vertical plane, a raising arm pivoted at its end to the boom, means to forcibly raise and depress the raising arm, a shovel

carried by the boom, and means to forcibly raise and depress the shovel.

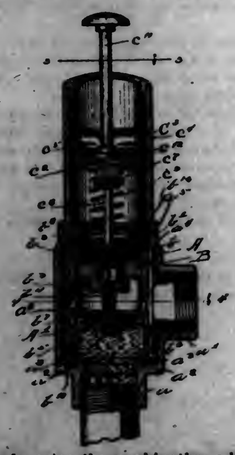
3. In a steam shovel, the combination of a platform, a frame carried thereby, a mast pivoted at its top in the frame and at the bottom on the platform, a boom carried by the mast and having a movement in a vertical plane, a raising arm pivoted at one end to the boom and extending through the mast, means carried by the mast to forcibly raise and depress the raising arm and boom, a shovel carried by the boom, and means to forcibly raise and depress the shovel.

4. In a steam shovel, the combination of a platform, a frame carried thereby, a mast pivoted in the frame and on the platform, a boom carried by the mast and adapted to be moved in a vertical plane with respect to the mast, a raising arm carried at one end by the boom and passing through the mast, means to forcibly raise and depress said arm and the boom, a shovel carried by the boom at its end, means to raise and means to depress the shovel.

5. In a steam shovel, the combination of a platform, a frame carried thereby, a mast pivoted in said frame and on the platform, a boom pivoted at its lower end to the mast and near the lower end thereof, a raising arm pivoted at one end to the boom and passing through the mast, an engine carried by the mast, a gear connected to the engine and adapted to raise or depress the arm, a shovel carried by the boom, means to raise the shovel and means to pull the shovel toward the platform.

[Claims 6 to 9 not printed in the Gazette.]

876,518. FLUSHING-VALVE. ROBERT A. BROOKS, Chicago, Ill. Filed Apr. 23, 1906. Serial No. 313,153.



1. In a flushometer the combination with a casing affording a water chamber, of an inlet and an outlet pipe connected therewith, a valve seating automatically to close the inlet pipe, a manually operated vent valve acting to start the flow whereby the automatic valve is unseated and means operated by fluid other than the flushing fluid for controlling the closing of both the vent valve and automatic valve.

2. In a device of the class described the combination with a casing having an inlet and an outlet, a partition dividing said casing into a plurality of chambers, an automatically closing valve adapted to seat on one side of the partition to close the communication between the inlet and outlet, a passage connecting opposite sides of the automatically closing valve, a manually unseated vent valve adapted to close the same, fluid controlled means regulating the rate of closing of said vent valve and a spring adapted to aid in closing the automatic valve.

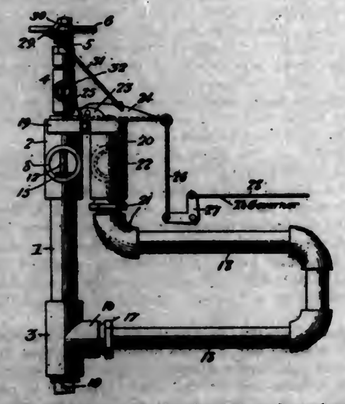
3. In a device of the class described the combination with the outlet, and an inlet pipe of a manually opened valve seating automatically to close the inlet pipe at either of two limits of travel and a passage opening therethrough, a vent valve controlling said passage and fluid controlled means for regulating the closing of the vent valve in said closure.

4. In a device of the class described the combination with a casing having an inlet and an outlet pipe of chambers therein, a piston in one of said chambers, a stem extending downwardly therefrom into a lower chamber, a closure on the end of said stem to close the inlet, a passage through the piston, stem and closure affording communication between the inlet and above the piston, a normally seated vent valve for said passage adapted when unseated to admit pressure above said piston to open the closure, a passage through the piston approximately parallel with the aforesaid passage, a closure above the piston adapted to close said passage to automatically move the piston in one direction by inlet pressure and means movable with the vent valve adapted to automatically unseat said closure above the piston prior to seating the inlet closure.

5. In a device of the class described the combination with a casing having an inlet and an outlet orifice, a partition affording a valve seat, a piston movable above the partition, a stem engaged thereto projecting beyond said partition, a closure thereon controlling the inlet, a plurality of passages through said piston, one extending through the stem and closure, a manually unseated vent valve opening one of said passages to admit inlet pressure above the piston, a valve adapted to close the other passage by inlet pressure and means automatically seating said vent valve and simultaneously unseating the valve controlling the other passage.

[Claims 6 to 35 not printed in the Gazette.]

876,519. CHARGE-FORMING DEVICE FOR INTERNAL-COMBUSTION ENGINES. WILLIAM BROTHERS, Cly, Pa., assignor of one-half to Edward W. Spangler, York, Pa.; Mary F. Spangler, The Security Title and Trust Company, and York Trust Company executors of said Edward W. Spangler, deceased. Filed Sept. 11, 1906. Serial No. 334,115.



1. A charge-forming device for internal combustion engines, comprising a mixing chamber, and a normally open fluid supply and a continuously open air supply therefor, combined with a stationary mixing core arranged in said mixing chamber and having its upper end arranged opposite the air inlet and seated against the fluid supply, whereby the fluid is directed into said core and spread into a film thereon adjacent said air inlet.

2. A charge-forming device for internal combustion engines, comprising a mixing chamber, and a normally open fluid supply and a continuously open air supply therefor, combined with a stationary mixing core arranged in said mixing chamber and having its upper end arranged opposite the air inlet and seated against the fluid supply, whereby the fluid is directed onto said core and spread into a film thereon adjacent said air inlet, and a series of baffles rigidly secured to said core below said air inlet.

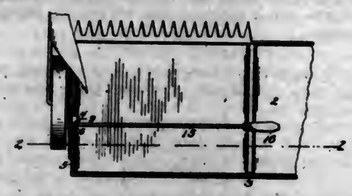
3. A charge-forming device for internal combustion engines, comprising a mixing chamber, and a normally open fluid supply and a continuously open air supply therefor, combined with a stationary mixing core arranged in said mixing chamber and having its upper end arranged opposite the air inlet and seated against the fluid supply, whereby the fluid is directed onto said core and spread into a film thereon adjacent said air inlet, and a series of stationary baffle blades on said core below said air inlet.

4. A charge-forming device for internal combustion engines, comprising a mixing chamber, and a normally open fluid supply and a continuously open air supply therefor, combined with a stationary mixing core arranged in said mixing chamber and having its upper end arranged opposite the air inlet and seated against the fluid supply, whereby the fluid is directed onto said core and spread into a film thereon adjacent said air inlet, and a series of stationary reversely arranged baffle blades on said core below said air inlet.

5. A charge-forming device for internal combustion engines, comprising a mixing chamber, a fluid supply and an air supply therefor at its upper end, a drainage opening in the bottom of said chamber, a mixing core arranged in said chamber and having a serrated foot for supporting said core above said drainage opening and having a slightly tapered and grooved upper end seated against said fluid supply, whereby the fluid is directed onto said core and spread into a film thereon opposite said air supply, and a series of baffles secured to said core below the air supply.

[Claims 6 to 9 not printed in the Gazette.]

876,520. GRAIN-BINDER ATTACHMENT. MILLER BROWN, Richmond, Mo. Filed June 13, 1907. Serial No. 378,780.



1. In combination with the platform and elevating canvas, of a binder, a clamp arranged on one of the frame bars of the platform and adapted to be adjusted longitudinally thereof, a connecting strip connected at one end to said clamp and extending longitudinally across the platform, and an elongated bridge member hingedly connected to the free end of said connecting strip adapted to work against the elevating canvas.

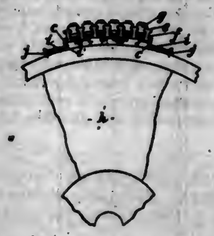
2. In combination with the platform and elevating canvas, of a grain binder, a vertically disposed clamp adjustably arranged on one of the platform frame bars, an adjusting member secured to one edge of said clamp, a connecting strip secured at one end to said adjusting member and extending entirely across the platform, and an elongated bridge member hingedly connected to the free end of said connecting strip and adapted to work against the elevating canvas.

3. In a grain binder attachment, the combination of a clamp comprising a bar-engaging member having a central longitudinal recess in one face and a vertical series of transverse apertures extending therethrough, and a clamping plate removably secured to the recessed face of said bar-engaging member, an adjusting member arranged at one edge of said bar-engaging member adapted to be adjusted in either one of the transverse apertures thereof, a connecting strip secured at one end to said adjusting member, and a bridge member hingedly connected to the free end of said strip.

4. An attachment for grain binders comprising a vertically disposed clamp, an adjusting member adjustably secured to one edge thereof, a horizontally disposed connecting strip attached at one end to said adjusting member, and an elongated bridge member hingedly connected to the free end of said connecting strip.

5. In a grain binder attachment, the combination of a clamp adapted to be removably secured to one of the frame bars of a grain binder platform, an adjusting member adjustably secured to one side of said clamp, a connecting strip secured at one end to said adjusting member and adapted to extend across the platform canvas of a grain binder, and an elongated bridge member hingedly connected to the free end of said connecting strip and adapted to work against the elevating canvas of a grain binder.

876,521. FLEXIBLE FORM FOR HOLDING AND ASSEMBLING TYPE. SUMNERS BROWN, London, England. Filed Jan. 14, 1907. Serial No. 352,155.



1. In a rotary printing machine, a flexible form composed of two chains of pivoted interlocking links, grooved transverse bars engaging with said chains and supported thereby and type characters fitting in the grooves of said bars and interlocking therewith, the whole constituting a flexible form adapted to be wound on a type cylinder.

2. In a flexible type form adapted to be fastened on a printing cylinder, a pair of chains consisting of overlapping pivoted links in combination with transverse type-bars supported by said chains and type characters fitting said bars, the said links and bars being adapted to hold said type characters in place on a cylinder substantially as set forth.

3. In a flexible type-form for a cylinder, a pair of chains each consisting of a series of L shaped links, overlapping and pivoted to each other in their lower parts and recessed on top, in combination with transverse type-holding bars fitting in said recesses, interlocking with the walls thereof and type-characters fitting on said bars and interlocking therewith substantially as set forth.

4. In a flexible type-form for printing cylinders, a flexible chain consisting of a series of flat L form plates, forming links the lower parts of which overlap each other and are pivoted together, each link being adapted to receive means for supporting type characters substantially as set forth.

876,522. FLEXIBLE-STRIP FORM FOR HOLDING TYPE. SUMNERS BROWN, London, England. Filed July 20, 1907. Serial No. 384,828.



1. In combination with a rotating printing cylinder or carrier, a series of flexible metallic strips, type-holding bars attached to said strips and composing with them a flexible form, type-characters fitting into the intervals between said bars and held therein and means for flexibly securing said form to said cylinder substantially as set forth.

2. In combination with a rotary printing cylinder or

carrier, a series of flexible metallic strips, a series of transverse type-holding bars, grooved in their sides, fastened to said strips at intervals and composing therewith a flexible form and type characters fitting into the intervals between said bars and interlocking with them by lateral grooves and projecting parts substantially as set forth.

3. In combination with a rotary printing cylinder or carrier, a series of flexible strips, a series of transverse type-holding bars fastened at intervals thereto and constituting a flexible type-holding form therewith, holding springs engaging the ends of said strips and studs on the cylinder engaging the said springs substantially as set forth.

4. In combination with a rotary printing cylinder or carrier, a series of flexible metallic strips, a series of transverse type-holding bars fastened at intervals thereto and constituting a flexible type-holding form therewith, means for attaching said form to said cylinder, and type-characters fitting into the intervals between said bars and into grooves in their sides substantially as set forth.

5. A flexible printing form consisting of strips and bars arranged transversely to each other and leaving intervals of proper width to receive type-characters, the said bars being adapted to engage and hold such characters before the said form is applied to the cylinder substantially as set forth.

876,523. WICK ATTACHMENT FOR LAMPS AND OTHER BURNERS. ETHELBERT W. BURROWS, Warren, Pa. Filed Apr. 5, 1907. Serial No. 366,540.



1. A wick attachment comprising a pair of side wicks adapted to fit against the opposite sides of a central wick, and a clamp having two sides provided with substantially L-shaped tongues extending inwardly from the side edges of the clamp and interposed between the central and side wicks and clamping the latter to the inner faces of the sides of the clamp, and means for connecting the sides of the clamp to cause the side wicks to frictionally engage the central wick and permit the latter to slide through the attachment.

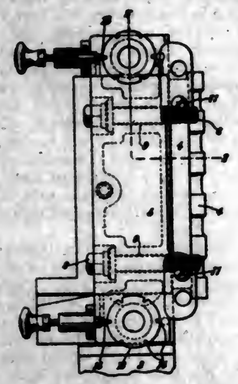
2. A wick attachment comprising a pair of side wicks, and a clamp composed of two sides connected together and provided at their side edges with tongues embracing the wicks at the side edges thereof, and a catch carried by one side of the clamp for engaging the tongues of the other side for holding the clamp and the side wicks in engagement with a central burning wick.

3. A wick attachment comprising a pair of side wicks, and a clamp consisting of sides, a resilient connecting portion, upper and lower tongues for engaging the side wicks, and a substantially T-shaped catch extending from one side of the clamp and having its arms arranged to engage the tongues of the other side of the clamp.

876,524. ADJUSTABLE TRIMMING-KNIFE FOR LINOTYPE-MACHINES. FRANCIS J. CAINE, Hounslow, and GEORGE H. MITTON, Wimbledon, England, assignors to Linotype & Machinery Limited, London, England. Filed June 11, 1906. Serial No. 321,285.

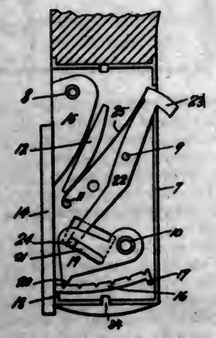
1. In linotype trimming apparatus the combination with the adjustable and non-adjustable knives, the knife block to which the adjustable knife is secured, the vise frame to which the non-adjustable knife is secured, and the studs with nuts thereon, tying the knife block and vise frame together, of a nipple screwed into the knife block and concentric with each of the studs, and bearing at one end against the vise frame.

2. In a linotype machine the combination with the adjustable and non-adjustable knives, the knife block to which the adjustable knife is secured, the vise frame to which the non-adjustable knife is secured, and the studs with nuts thereon, tying the knife block and vise frame together, of a flanged nipple screwed into the knife block and concentric with each of the studs and bearing at one end against the vise frame, recesses in the flange of the nipples and a spring detent adapted to engage the said recesses.



3. In linotype trimming apparatus the combination with the adjustable and non-adjustable knives, the knife block to which the adjustable knife is secured, and the studs with nuts thereon, tying the knife block and vise frame together, of a flanged nipple screwed into the knife block and concentric with each of the studs and adapted to bear at its opposite ends against respectively the vise frame, and the nut on the respective stud, recesses in the flange of the nipple, and a spring detent adapted to engage the said recesses.

876,525. CHAIR-IRON. FRANKLIN CHICHESTER, Poughkeepsie, N. Y. Filed Dec. 31, 1906. Serial No. 350,239.



1. A chair lock composed of a casing, a supporting member pivoted thereto and provided with means for securing it to a chair seat, the said means consisting of a portion projecting beyond the casing and adapted to engage a second and complemental member on the chair seat, a rack secured to said supporting member and projecting within said casing, a latch pivoted to said casing near one side, extending toward the other side and provided with a tooth adapted, when lowered, to engage the said rack, and an operating lever, pivoted in said casing, and provided with an engaging device engaging the said latch, within said casing, and a thumb piece extending beyond the said casing, all substantially as set forth.

2. A chair lock composed of a casing, a supporting member pivoted thereto and provided with means for securing it to a chair seat, the said means consisting of a portion projecting beyond the casing and adapted to engage a second and complemental member on the chair seat, a rack secured to said supporting member and projecting within said casing, a latch pivoted to said casing near one side, extending toward the other side and provided with a tooth adapted, when lowered, to engage the said rack, and an operating lever, pivoted in said casing, and provided with an engaging device engaging the said latch, within said casing, and a thumb piece extending beyond the said casing, and a spring engaging said operating lever, all substantially as set forth.

3. A chair lock composed of a casing, a supporting member pivoted thereto and provided with means for securing it to a chair seat, the said means consisting of a portion projecting beyond the casing and adapted to engage a second and complemental member on the chair seat, a rack secured to said supporting member and projecting within said casing, a latch pivoted to said casing near one side, extending toward the other side and provided with a tooth adapted, when lowered, to engage the said rack, and an operating lever, pivoted in said casing and provided with an engaging device engaging the said latch, within said casing, and a thumb piece extending beyond the said casing; the length of the operating lever from its pivot to that part which engages with the latch and that of the latch from its pivot to the part which engages with the operating lever, when the latch is down, being so proportioned and arranged that, the engaging device of the lever will engage the latch, when it is down, at a point which is substantially in a line drawn from the lever pivot to the latch tooth and at least as far from the latch pivot as that point on said line which is nearest to the latch pivot, as and for the purpose set forth.

4. A chair lock composed of a casing, a supporting member pivoted thereto and provided with means for securing it to a chair seat, the said means consisting of a portion projecting beyond the casing and adapted to engage a second and complemental member on the chair seat, a rack secured to said supporting member and projecting within said casing, a latch pivoted to said casing near one side, extending toward the other side and provided with a slot and a tooth adapted, when lowered, to engage the said rack, and an operating lever, pivoted in said casing, and provided with an engaging device extending into the latch slot, engaging the said latch, within said casing, and a thumb piece extending beyond the said casing, all substantially as set forth.

5. A chair lock composed of a casing, a supporting member pivoted thereto and provided with means for being secured to a chair seat, said means consisting of an extension in the form of one portion of a mortise and tenon joint, adapted to engage a second portion of a mortise and tenon joint secured to a chair seat, a rack secured to said supporting member, a latch pivoted to the casing near one side, extending well toward the other side and provided with a tooth engaging the rack, and an operating lever having a thumb piece, pivoted in said casing and provided with an engaging device engaging said latch near the end furthest from the pivot, all combined substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

876,526. DENTAL EXTRACTOR. OTAKAR CHOLINSKÝ, Prague, Austria-Hungary. Filed May 31, 1907. Serial No. 376,536.



1. A dental extractor, comprising, a member comprising a handle and at right angles thereto a straight shank presenting a jaw, and a complementary member comprising a handle and at right angles thereto a spirally twisted shank embracing the first shank, and also presenting a jaw, substantially as described.

2. A dental extractor, comprising, a member having a handle and at right angles thereto a straight shank presenting a jaw, and a complementary member having a handle and at right angles thereto a twisted shank adapted to receive the first said shank, and also presenting a jaw, one of said members having a projection and the other one a recess adapted to accommodate said projection, substantially as described.

3. A dental extractor comprising a member having a handle, a straight shank at a right angle thereto carrying a jaw, and a heel in continuation of the handle beyond the junction with the shank, in combination with a complementary member comprising a handle and a spirally twisted shank at a right angle thereto carrying a jaw and arranged to embrace the straight shank of the first named member, substantially as described.

876,527. SPRING-SEAT STRUCTURE. JAMES H. COOK, Detroit, Mich., assignor to Detroit Wire Spring Co., Detroit, Mich., a Corporation of Michigan. Filed Apr. 30, 1906. Serial No. 314,375.



1. In a spring seat structure, the combination of the crossed metal straps, one of said straps having a locking member which passes through the other strap, a spring seated on said straps at their point of crossing and a locking bar engaging the lower coil of said spring and said locking member.

2. In a spring seat structure, the combination of a plurality of metal straps crossing at right angles, a number of said straps being provided with apertures and the remaining portion of said straps being provided with loops which pass through said apertures to tie the straps together, springs seated upon said straps at the juncture thereof, and a locking bar passing over the lower coils of said springs and through said loops to tie the parts together.

3. The combination in a spring seat structure, of the longitudinally extending strap adapted to support a spring having a loop formed therein, a transverse strap having an aperture to receive said loop, a spring mounted upon said crossed straps, and a locking rod passing over the lower coil of said spring, and through said loop.

4. In a spring seat structure, the combination of the crossed straps, one of which is provided with an aperture and the other with a loop passing through said aperture, a coiled spring seated upon said crossed straps, and means engaging in said loop and bearing upon the spring to lock said spring in position.

5. In a spring seat structure, the combination of the crossed straps forming a support for the spring, one strap having an aperture therethrough, and the other having a projecting member which engages in said aperture, means for locking the straps together and the spring thereto, and means for preventing lateral movement of the spring.

876,528. RAZOR-STROP OR DEVICE FOR STROPPING RAZORS OR BLADES. ALEXANDER CRAIG, Blackley, England. Filed Aug. 20, 1907. Serial No. 389,329.

1. A razor stropper comprising a casing, an exposed drum mounted in connection therewith, a spindle contained therein, a rotatable endless band between said drum and spindle, and means for supporting the razor to be stropped, as set forth.

2. A razor stropper having a casing, an exposed drum journaled at the foot thereof, a spindle contained in said casing, an endless rotatable band around said drum and spindle, and a sheath or sleeve for receiving the razor and secured to said casing, substantially as described.

3. A razor stropper consisting of a casing, a revoluble expdsed drum located at the foot, a spindle, a support for said spindle, an endless flexible band between spindle and drum, additional spindles or guiding means for said band, a sheath or sleeve disposed and held between the stretches of said band, substantially as set forth.



4. A self-contained razor stropper having a casing, an exposed drum located at the foot of said casing, a spindle located at the top, a flexible support for said spindle, an endless stropping band intermediate of said drum and spindle, and a removable sheath or sleeve acting as a razor support, substantially as described.

5. A self-contained razor stropper having a casing, an exposed drum journaled at the base of said casing, a spindle located at the top, a flexible spindle support, an endless stropping band around said drum and spindle, additional guide rolls, springs for the drum and guide rolls, and a sheath or sleeve for supporting the roller to be stropped, substantially as described and shown.

[Claim 6 not printed in the Gazette.]

876,529. FRUIT-CONVEYER. MILTON B. DORMAN, Mill Hall, Pa. Filed Mar. 4, 1907. Serial No. 360,427.

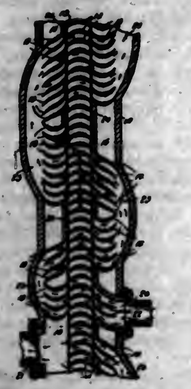


The described fruit conveyer comprising a series of short fabric chute sections, and a square deflector within each chute section, said deflectors being successively oppositely positioned and alternately inclined in opposite directions each deflector being stuffed to retain its outline for the purpose set forth.

876,530. STEAM-TURBINE. FREDERICK A. DOUSE, Seattle, Wash. Filed Mar. 16, 1907. Serial No. 362,586.

1. In a steam turbine, in combination, a casing having inlet and outlet openings and having annular chambers in each side provided with recesses, a wheel rotatably mounted within the casing and provided with a rim, buckets of concavo-convex form disposed on said rim with their convex surfaces disposed in the direction of rotation of the wheel, a band secured to the outer extremities of the wheel buckets, a plurality of blades of substantially crescent shape and a plurality of blades of compound curved contour arranged in said annular chambers, the said different types of blades arranged in groups of successively increasing numbers in each chamber, the said blades of crescent shape disposed to present the convex faces opposite to the direction of the wheel and the other blades arranged in diagonal planes with their inner edges disposed in the direction of the revolution of the buckets.

2. In a steam turbine, in combination, a casing having inlet and outlet openings and having annular chambers in each side provided with recesses, a wheel rotatably mounted within the casing and provided with a rim, buckets of concavo-convex form disposed on said rim with their convex surfaces disposed in the direction of rotation of the wheel, a band secured to the outer extremities of the wheel buckets, a plurality of blades of substantially crescent shape and a plurality of blades of compound curved contour arranged in said annular chambers, the said different types of blades arranged in groups of successively increasing numbers in each chamber and alternating upon the opposite sides of the wheel progressively from the intake opening to the discharge.



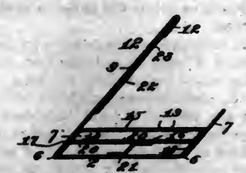
3. In a steam turbine, in combination, a casing having inlet and outlet openings and having annular chambers in each side provided with recesses, a wheel rotatably mounted within the casing and provided with a rim, buckets of concavo-convex form disposed on said rim with their convex surfaces disposed in the direction of rotation of the wheel, a band secured to the outer extremities of the wheel buckets, a plurality of blades of substantially crescent shape and a plurality of blades of compound curved contour arranged in said annular chambers, the said different types of blades arranged in groups of successively increasing numbers in each chamber and alternating upon the opposite sides of the wheel progressively from the intake opening to the discharge, and blades of approximately crescent shape interposed in one of said annular chambers between the intake opening and the wheel and arranged in oblique planes to direct the incoming steam against the buckets.

4. In a steam turbine, in combination, a casing having inlet and outlet openings and having annular chambers, one at each side, provided with recesses, a wheel rotatably mounted within the casing and provided with circumferentially and transversely disposed steam passages that form rim buckets, a plurality of blades of a definite curvature arranged in one of the annular chambers, and a plurality of blades of another definite curvature arranged in the other annular chamber, one set of said shaped blades being disposed to present their impacting faces opposite to the direction of the wheel, and the other set of blades being arranged in diagonal planes with their inner edges disposed in the direction of the revolution of the buckets.

5. In a steam turbine, in combination, a wheel, a casing formed of two sections, each section having an annular chamber, the two sections incasing the wheel, one of the casing sections having an inlet, the other section having an outlet, the said wheel having transversely disposed steam passages in its periphery, the impacting faces of which are disposed in the direction of rotation of the wheel, and a plurality of oppositely disposed sets of blades having a compound contour, the said blades being arranged in each annular chamber, the said annular chambers having recesses to receive the said several sets of blades.

[Claims 6 to 10 not printed in the Gazette.]

876,531. FOLDABLE BOX. CHARLES F. A. EDDY, San Bernardino, Cal., assignor of one-half to Benjamin Hammett Norton, New York, N. Y. Filed Nov. 28, 1906. Serial No. 345,513.



1. A box of knock-down formation, comprising a bottom, side and end walls, a cover, each flexibly associated to allow the collapsing of the box, a plurality of trays for supporting the contents of the latter, and each having connection with both of said opposite side walls thereof which permit said trays to collapse within the box, and a tray having connection with one side wall and with the cover, the intermediate tray having openings and the remaining trays also provided with decreased openings with respect to the openings in the intermediate tray for supporting articles.

2. A foldable egg box comprising a bottom, cover, side and end walls, each flexibly associated to allow the collapsing of the box, and a plurality of superposed perforated trays, each formed of one continuous piece of material and having crease lines near opposite side edges thereof to provide flexible means bent at right angles to the said trays for connection with the opposite side walls of the box to hold the trays spaced from each other and to allow the same to automatically collapse within the said box, the intermediate tray having increased perforations with respect to the perforations in the remaining trays to correspond to the larger diameter of the eggs, the latter being suspended and out of contact with the said box.

3. A knock-down box comprising a body of one piece of material forming a bottom, top, side and end walls, and superposed perforated trays having opposite flexible connection with the side walls of the box which permit the same to automatically collapse within the latter.

4. A knock-down box having a bottom, top, side and end walls, normally collapsed, and perforated trays flexibly connected to the interior face of the said side walls and adapted to be automatically shifted to superposed horizontal position when the side walls of the box are moved at right angles to the bottom of the latter.

5. A knock-down box having a normally folded body, and perforated trays flexibly secured to the body at the interior of the same and automatically shiftable to superposed relation with respect to each other when the said body of the box is erected to operative position for receiving its contents.

876,532. FINISH-REMOVER. CARLETON ELLIS, Larchmont, N. Y., assignor to Chadeloid Chemical Company, New York, N. Y., a Corporation of West Virginia. Filed July 23, 1907. Serial No. 385,177.

1. The composition for removing finish consisting of antimonyl chlorid, benzol and wood alcohol.

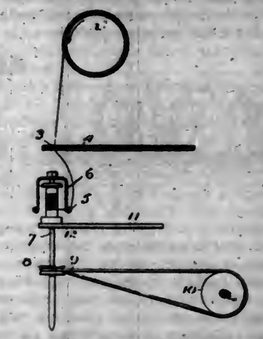
2. The composition for removing finish consisting of benzol, wood alcohol and a chlorinated compound of antimony soluble in benzol.

3. The composition for removing finish comprising benzol, alcohol and a chlorinated compound of a heavy metal soluble in benzol.

4. The composition for removing finish comprising an alcohol, benzol and a chlorinated compound of antimony soluble therein.

5. The composition for removing finish comprising finish solvent material, including an alcohol and a benzolic solvent, and a chlorinated compound of antimony soluble therein.

876,533. PROCESS OF PRODUCING AND FORMING TWISTED FILAMENTS FROM VISCOSE OR SIMILAR MATERIAL. CHARLES A. ERNST, Lansdowne, Pa., assignor to Silas W. Pettit, Philadelphia, Pa. Filed Jan. 17, 1906. Serial No. 296,492.



1. The process of forming a twisted thread of artificial silk, which consists in winding upon a spool a thread consisting of a plurality of untwisted filaments, conducting said thread from said spool to a suitable spinning head, and simultaneously twisting the same for the entire distance between the spinning head and the point of the delivery of the thread from the spool.

2. The method of forming a twisted thread of artificial silk, or similar material, which consists in forming a thread composed of untwisted parallel continuous filaments, winding said untwisted filaments in open courses upon spools, and then unwinding said untwisted thread, and simultaneously twisting the same from the point where it leaves the spool, to catch any loose end or broken filament and bind it in with the unbroken filaments while they are being twisted together.

3. The process of forming a twisted thread of artificial silk, which consists in winding in separated convolutions upon a spool a thread consisting of a plurality of untwisted filaments, conducting said thread from said spool to a suitable twisting head, and twisting said thread the entire distance between said twisting head and the point where it leaves the spool.

4. The process of twisting a thread composed of a plurality of untwisted filaments, which consists in unwinding said thread from a spool upon which it is wound in separated convolutions, twisting said thread for the entire distance between said head and the point where the thread leaves the spool, whereby any loose or broken filaments will be caught by the unbroken filaments being twisted as they leave the spool, and the twisting of all the filaments will be continued without any interruption of the twisting operation.

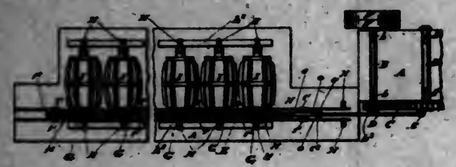
5. The method of twisting filaments into a twisted thread, which consists in winding a thread composed of substantially parallel and untwisted filaments upon a spool, with each convolution of a course separated by a considerable distance from the other convolutions in the same course, delivering said thread from said spool directly to a suitable twisting machine and twisting the same for the entire distance between the twisting mechanism and the surface of the spool, whereby any loose or broken filament is caught at its point of delivery from said spool by the unbroken filaments as they are twisted at said point.

[Claims 6 and 7 not printed in the Gazette.]

876,534. MACHINE FOR AGING AND AGITATING WHISKY. DWIGHT FARNUM and CLARENCE R. ANDERSON, Denver, Colo. Filed Jan. 28, 1907. Serial No. 354,494.

1. In a machine for agitating and aging liquor, the combination of a driving shaft rotatably journaled in its bearings, a pinion fixed on said shaft, said pinion meshing

into a crank wheel mounted on another shaft rotatably journaled in its bearings; a crank-pin on said crank wheel engaging a connecting-rod attached to one end of a rack-beam, said rack-beam supported throughout its length by a series of axles, each axle journaled in a pair of suitable wheels; with guards suitably supported, over the pair of wheels nearest the point where the connecting rod is attached, as and for the purpose specified.



2. In an agitating and aging machine, the combination of the driving shaft; with means for imparting a reciprocating rectilinear motion to the rack-beam; a series of cages or baskets suitably journaled in bearings mounted on a stationary rigid frame; each cage or basket having a relatively immovable gear wheel attached, said gear meshing with said rack-beam and receiving its motion therefrom, causing each cage to assume a reciprocating rotary motion substantially as specified.

3. In an agitating and aging machine the combination of the rack beam supported at frequent intervals by an axle journaled in suitable wheels with means for reciprocating said rack-beam; guards for said wheels to roll in and on; with said rack-beam engaging a series of consecutive gear wheels, each gear fastened to a separate shaft and each shaft carrying a cage adapted to receive a barrel or cask, for the purpose specified.

4. In an agitating and aging machine, the combination with the rack-beam and means for reciprocating it of a rigid stationary frame, a series of bearings connected to said frame and a series of cages or baskets mounted upon shafts, said shafts journaled in said bearings, each cage being adapted to receive a barrel or cask; movable wedges to hold said barrel or cask in place; a door hinged to said cage and means for holding said door secure when closed, substantially as described.

5. The combination of the curved T-iron cross-bars forming the cage or basket body with the heads; spiders rigidly connected to said heads, each spider having an extended sleeve or hub integral with itself; said sleeve or hub keyed or shrunk onto a shaft stem; with means for holding in place a barrel or cask and the whole adapted to be rotatably mounted in fixed bearings and to engage a rack-beam, with means for reciprocating said rack beam.

[Claim 6 not printed in the Gazette.]

876,535. PIANO. ROBERT FRÖMSDORF, Leipsig, Germany, assignor to Ludwig Hupfeld, Aktiengesellschaft, Leipsig, Germany. Filed Mar. 26, 1907. Serial No. 364,573.



1. In a piano provided with a player, in combination, a keyboard, a board serving as hand-rest, located at the front of the keyboard on a level therewith and capable of being brought below and slid under it, and expression and like levers which terminate at said hand-rest board, their ends being capable of being brought before the keyboard or below the same as desired, substantially as described.

2. In a piano provided with a player, in combination, a keyboard, a board serving as a hand rest, located at the front of the keyboard and capable of being turned down for the purpose of being brought below it, and expression levers which terminate at and are carried by said hand rest board, their ends being capable of being brought before the keyboard or below the same as desired, substantially as described.

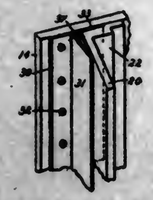
3. In a piano provided with a player, in combination, a keyboard, a board serving as hand-rest, located at the front of the keyboard and sliding below it, and expression and like levers which terminate at and are carried by said hand-rest board, their ends being capable of being brought before the keyboard or below the same as desired, substantially as described.

4. In a piano provided with a player, in combination, a keyboard, a board serving as a hand rest, located at the front of the keyboard and capable of being turned down and slid below it, and expression and like levers which terminate at and are carried by said hand-rest board, their ends being capable of being brought before the keyboard or below the same as desired, substantially as described.

5. In a piano provided with a player, in combination, a keyboard, a board serving as a hand-rest, located at the front of the keyboard, and capable of being brought below it, expression and like levers carried by the hand-rest board and having jointed extensions which terminate at said hand-rest board, the ends of said extensions being capable of being brought before the keyboard or turned back as desired, substantially as described.

[Claim 6 not printed in the Gazette.]

876,536. RANGE. WILLIAM M. FULTON, Waterloo, Iowa. Filed Apr. 5, 1906. Serial No. 310,160.



1. In a range, the combination of a removable flue-hood having slotted flanges adapted to contact with said back-plate, staples fixed to said back-plate adapted to enter and project through the slots in said flanges, and proper means for causing said staples to removably secure said hood to said back-plate.

2. In a range, the combination of a back-plate, a flue-hood removably connected to said back-plate, suitable means for supporting and removably connecting said flue-hood to said back-plate, and a resilient seal for the joint between said hood and back-plate composed of a bent strip one edge of which is fastened to the back-plate and the other edge free and clasped between the hood and the back-plate.

3. In a range, the combination of two overlapping plates, a resilient body having a middle longitudinal fold and outwardly bent edges, one of said edges secured to one plate and the other edge removably engaged between the same plate and the surface of the overlapping plate.

4. In combination with the back-plate of a range and a removable flue-hood whose forward edges are arranged to contact with said back-plate about its flue-opening, a resilient seal composed of a body whose longitudinal edges lie in the same plane with a longitudinal crimp between them, one edge of said body affixed to said back-plate and the other edge clasped between said back-plate and the edge of said flue-hood to form a seal between them.

5. In a range, the combination of its overlapping plates, a resilient strip having one longitudinal edge secured to one plate and its other longitudinal edge clasped between said plate and the overlapping surface of the other plate, the free edge of said strip adapted to bind against one of the angles of the edge of the latter plate.

876,537. ELASTIC WHEEL. LOUIS A. GARCHEY, Paris, France. Filed Mar. 6, 1906. Serial No. 304,591.

1. An elastic hub comprising two separate concentric rings, an elastic body interposed between said separate parts of the hub, so as to take the one part along with the other until a limited strain on the elastic body is reached, and a rigid device for taking along the one part of the hub with the other entering into effect when the limit of strain allowed for the elastic body has been surpassed, substantially as described and shown and for the purpose set forth.



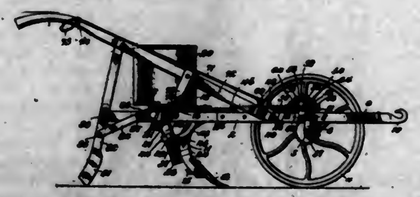
2. An elastic hub comprising two separate concentric rings, an elastic body interposed between and connected with said separate parts, flanges projecting from the outer periphery of the inner ring and flanges projecting from the inner periphery of the outer ring overlapping the flanges of the inner ring, balls interposed between the flanges of the inner ring and the outer ring, and a device for uniformly pressing said balls on their rolling-face, substantially as described and shown and for the purpose set forth.

3. The flanges of the inner hub-ring having boxes at uniform distances apart from each other on their outer end, spiral springs in said boxes and cylinders open at their inner end inserted into the open ends of said boxes, balls on the outer surface of the closed end of said cylinders, and steel-plates fixed to the outer hub-ring serving as rolling-faces for the balls, substantially as described and shown.

4. The sliding-cylinders in the spring-boxes having perforations in the closed end for the passage of the lubricant to the balls.

5. The rigid device for taking up the strain on the elastic body when exceeding the limit, consisting of pivots screwed into the flanges of one hub-ring, rollers on said pivots and windows provided in the flanges of the other hub-ring for the reception of the rollers, substantially as described and shown and for the purpose set forth.

876,538. SEED-PLANTER. JOHN H. GARDNER, Dalton, Ga. Filed Mar. 2, 1907. Serial No. 360,161.



1. In a machine of the class described, the combination of a hopper having separate compartments, a single seed spout arranged to receive seed from both of the said compartments, a seed slide provided with a plurality of openings arranged to alternately carry seed from the compartments of the hopper to the seed spout, and a valve or cut-off operating in the seed spout for retaining one charge of seed therein until the next charge is delivered to the spout.

2. In a machine of the class described, the combination of a hopper provided at its bottom with a slot, a partition dividing the hopper into separate compartments, spaced scrapers mounted at opposite sides of the partition and extending into the slot of the bottom, a seed spout located beneath the scrapers, and a seed slide provided with a plurality of openings arranged to alternately carry seed from the compartments to the seed spout.

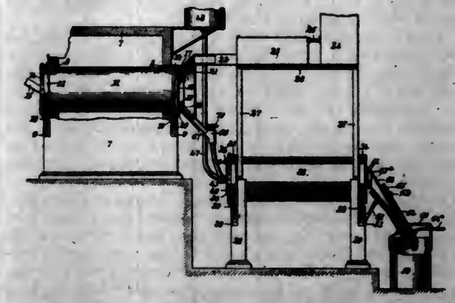
3. In a machine of the class described, the combination of a hopper provided in its bottom with a transverse slot, a partition dividing the hopper into separate compartments and extending across the slot, a seed spout located beneath the partition, a seed slide provided with a plurality of openings arranged to alternately carry seed from the compartments to the seed spout, adjustable plates carried by the seed slide for varying the size of the said openings, and spaced scraping devices mounted at opposite sides of the partition at points above the seed spout and extending into the slot.

4. In a machine of the class described, the combination of a frame having spaced side bars, a supporting plate mounted on the side bars and provided with depending flanges for engaging the same, said plate being also provided with upwardly projecting lugs, a hopper supported by the lugs and spaced from the said plate, a seed slide located between the bottom of the hopper and the supporting plate, and a seed spout secured to and depending from the supporting plate.

5. In a machine of the class described, the combination of a hopper provided in its bottom with a transverse slot, a bar extending across the slot, a partition located above the bar and dividing the hopper into separate compartments, a supporting plate located beneath the bar and having an opening, a seed spout extending from the opening, a seed slide having openings arranged to alternately carry the seed from the said compartments to the said spout, and plates or wings mounted on the said bar at opposite sides of the partition and depending therefrom to scrape the seed from the slide.

[Claims 6 to 30 not printed in the Gazette.]

876,539. REVOLVING ORE-TANK. ALLEN J. GARVER, Clarkston, Wash., assignor to himself and Jonathan McAssey, Clarkston, Wash. Filed Jan. 10, 1907. Serial No. 351,669.



1. The combination of a revoluble ore tank provided with a disk, a pipe connected with said disk and adapted to discharge comminuted ores into said tank, said pipe being so connected with said disk as to permit the rotation thereof while said ore is being discharged thereinto, a second pipe connected with said disk so as to permit the rotation of said cylinder, said second pipe being adapted to discharge a solution into said cylinder, said pipes being connected directly together at a point immediately adjacent to said disk, and means for discharging from said cylinder an admixture of ore and solution.

2. The combination of a revoluble cylinder provided with means whereby it may be actuated, means for feeding ores and a solution into said cylinder while in motion, spouts mounted within said cylinder and revoluble therewith, for the purpose of discharging ores and solution therefrom, and an outlet member communicating with said spouts for receiving materials discharged therefrom.

3. The combination of a revolving tank, means for feeding thereinto quantities of ore and a solution for acting upon said ore, and a condenser connected substantially steam-tight with said cylinder, for the purpose of condensing the vapors from said solution.

4. The combination of a roaster, a revoluble ore tank,

means for turning said tank, and a steam pipe connection from said roaster to said ore tank.

5. The combination of a revoluble cylinder, means for continuously feeding a solution thereinto, mechanism for feeding ores into said cylinder, a stationary discharge member connected with said cylinder for permitting egress therefrom of said ores and said solution, while said cylinder is in action, and a condenser connected with said stationary discharge member.

[Claim 6 not printed in the Gazette.]

876,540. CLEANING-BRUSH. ROBERT T. GILLESPIE, Bloomfield, N. J. Filed Oct. 26, 1906. Serial No. 340,759.



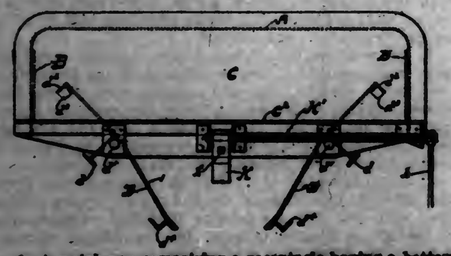
1. A cleaning implement comprising a main shank portion provided with terminal cheeks and a rear holding loop, a brush having its rear portion pivoted between said cheeks, an operating rod pivotally connected with said brush terminal, a sliding thumbpiece, an adjustable pin-and-hole locking device to hold the thumb terminal in fixed position with relation to the shank, a spring, and an embracing centering box for the spring, substantially as set forth.

2. A cleaning implement comprising a main shank portion provided with terminal cheeks and a rear holding loop, a brush having its rear portion pivoted between said cheeks, an operating rod pivotally connected with said brush terminal, a sliding thumb piece, an adjustable pin-and-hole locking device to hold the thumb terminal in fixed position with relation to the shank, a spring device adapted to hold the thumb terminal into engagement with the shank, and an embracing box therefor secured to the thumb piece, substantially as set forth.

3. In a cleaning implement of the class described, the combination of a main shank, a pivoted brush extremity and an operating rod, a sliding terminal connected with the rear end of the operating rod and provided with a spring box embracing the main shank, a spring therein adapted to hold the thumb terminal into engagement with the shank, and pin-and-hole locking mechanism arranged to hold the parts in relatively fixed position, substantially as set forth.

4. The combination with the main shank or handle having a holding terminal and provided with a series of openings, of a relatively movable operating terminal for the actuating rod comprising a plate having a spring box embracing the main shank, a pin projecting from the terminal adapted to make engagement with one of said openings, and a spring within the spring box adapted to hold the parts into locking engagement with each other, substantially as set forth.

876,541. WEIGH-PAN. FRANK C. GREENE, Cleveland, and CHARLES G. PALMER, East Cleveland, Ohio, assignors, by mesne assignments, to said Greene. Filed Aug. 18, 1906. Serial No. 274,682.



1. A weigh-pan comprising a receptacle having a bottom member lying within the planes of the sides of said receptacle and unsymmetrically pivoted on an axis intermediate of its own sides, said member being counterweighted so as to normally rest in a closed position when said receptacle is empty.

2. A weigh-pan comprising a receptacle having a bottom member lying within the planes of the sides of said receptacle and unsymmetrically pivoted on an axis intermediate of its own sides, said member being counterweighted so as to normally rest in a closed position when said receptacle is empty and to be swung into an open position by the contents of said receptacle when the latter is loaded; and independently controlled means adapted to retain said bottom member in its closed position.

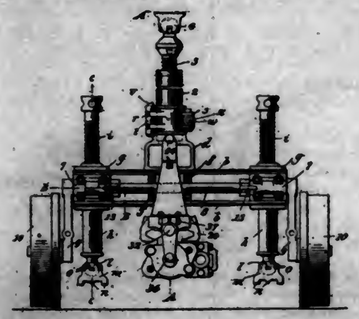
3. A weigh-pan comprising a receptacle having a bottom member lying within the planes of the sides of said receptacle and pivoted on an axis intermediate of its own sides, such pivotal axis lying to one side of the center of gravity of said member, the portion of such member on the opposite side of such axis being adapted to receive an excess of the load when said receptacle is loaded.

4. A weigh-pan comprising a receptacle having a bottom member lying within the planes of the sides of said receptacle and pivotally attached at points intermediate of its own sides to said receptacle, and adapted to have an excess of weight on one side of its pivotal axis when said receptacle is empty whereby said member is swung shut, and to have an excess of weight on its other side when said receptacle is loaded, whereby said member is swung open; and independent means for retaining said member in its closed position.

5. A weigh-pan comprising a receptacle having a bottom composed of two members lying within the planes of the sides of said receptacle and respectively pivoted on axes intermediate of their sides, such members normally having an excess of weight on one side of their respective axes when said receptacle is empty and being adapted to receive an excess of weight on the other side thereof when said receptacle is loaded.

[Claims 6 to 16 not printed in the Gazette.]

876,542. CHANNELING-MACHINE. HARRY V. HAIGHT, Sherbrooke, Quebec, Canada, assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 31, 1906. Serial No. 332,836.



1. The combination with a tool carrying member, of a movable truck, means for rigidly supporting the truck, devices for movably supporting the truck arranged to be moved into and out of their supporting position independently of the means for rigidly supporting the truck, and means supporting the said tool carrying member from and beneath the truck.

2. The combination with a tool carrying member, of a truck, means for rigidly supporting the truck, wheels for movably supporting the truck arranged to be moved into and out of their supporting position independently of the means for rigidly supporting the truck and means supporting the said tool carrying member from and beneath the truck.

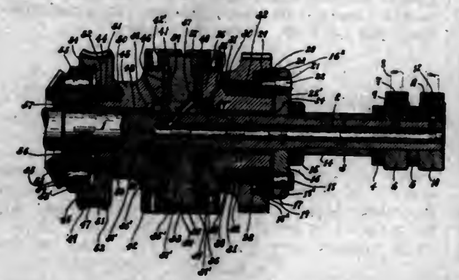
3. The combination with a tool carrying member, of a movable truck, lifting jacks carried by the said truck upon opposite sides of the tool carrying member and means supporting the said tool carrying member from and beneath the truck and between the lifting jacks.

4. The combination with a tool carrying member, of a wheeled truck, means supporting the said tool carrying member from and beneath the truck to oscillate horizontally, a pair of lifting jacks carried by the truck at opposite sides of the said supporting means, and a vertically extensible columnar member mounted upon the truck.

5. The combination with a tool carrying member, of a wheeled truck, means supporting the said tool carrying member from and beneath the truck to oscillate horizontally, a pair of lifting jacks carried by the truck at opposite sides of and in horizontal line with the said supporting means, and a vertically extensible columnar member mounted upon the truck in the vertical plane of the said lifting jacks.

[Claims 6 to 12 not printed in the Gazette.]

876,543. FRICTION-CLUTCH. BENGT M. W. HANSON, Hartford, Conn., assignor to Pratt & Whitney Company, Hartford, Conn., a Corporation of New Jersey. Filed Apr. 25, 1906. Serial No. 313,536.



1. The combination, with a shaft, of an element keyed thereto, and having projections; a clutch-device having perforations of greater diameter than said projections whereby, play of the projections in said perforations may take place, and a driven member having a clutch-surface adapted to be engaged by said clutch-device.

2. The combination, with clutch-members, one of which is movable toward and from the other, and one of which is provided with perforations, of another member having projections of less diameter than said perforations; and means for actuating one of said clutch-members toward and from the other clutch-member.

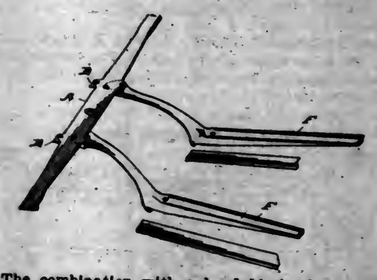
3. A clutch comprising a device having an inclined engaging-surface, said device provided with sockets; spring actuated plungers in said sockets; a disk having a complemental inclined engaging surface, and provided with perforations; and a carrier for said disk having projections fitted in, and of less diameter than said perforations, whereby the disk may yield bodily substantially as set forth.

4. The combination, with a clutch-member having an inclined engaging-surface, of a support for said member; a second clutch-member having perforations; and a complemental inclined engaging-surface; a carrier for said second clutch-member and yieldable bodily in a line away from the axis of said member; projections on the carrier, and of less diameter than the perforations of the second clutch-member; spring-actuated plungers carried by one of the clutch-members; and means for causing a clutch engagement between the members.

5. The combination, with a shaft, of a device keyed thereto; projections carried by said device; a clutch-member having openings of greater diameter than said projections; and a clutch-member adapted to engage the other clutch-member, one of said clutch-members being movable bodily in a line perpendicular to the clutch-axis.

[Claims 6 to 9 not printed in the Gazette.]

876,544. HEAD-BLOCK-PLATE AND PERCH CONNECTION. LESTER E. HICKOK, Brooklyn, N. Y., assignor of one-half to The Cleveland Hardware Company, Cleveland, Ohio. Filed Mar. 26, 1907. Serial No. 364,583.



1. The combination with a head block plate having a perforated lug and a seat with a recess or hole, of a perch iron with an end fashioned to fit the seat and provided with a boss and a hole in line with the hole in the lug on the plate.

2. The combination with a head block plate having perforated lugs at its front and rear edges and a seat with a recess or perforation, said seat being in line with one of the lugs, of a perch iron having an end with a boss and a hole in line with the hole in the rear lug on the plate.

3. The combination with a head block plate having integral perforated lugs at its front and rear edges, of a perch iron with an end located below the lug at the rear edge of the plate and provided with a hole matching the hole in the rear lug; and means consisting of a boss and hole for interlocking the plate and the end of the perch iron.

4. The combination with a head block plate having front and rear perforated lugs, a seat C, and recess or hole E, of a perch iron having at the end a boss G, inclined surface H, a countersunk surface I, and a hole.

5. The combination with a head block plate having front and rear perforated lugs and a recess E, of a perch iron provided with a boss and a countersunk surface with a hole to match the rear perforated lug on the plate.

876,545. ANTIRATTLER FOR FIFTH-WHEELS. LESTER E. HICKOK, Brooklyn, N. Y., assignor of one-half to The Cleveland Hardware Company, Cleveland, Ohio. Filed Mar. 26, 1907. Serial No. 364,584.



1. The combination with a vehicle gear having upper and lower fifth wheel members, of a concavo-convex plate spring with one end rigidly fixed, the other end in frictional contact with a part of the gear, and the surface between the ends thereof bearing against the lower fifth wheel member.

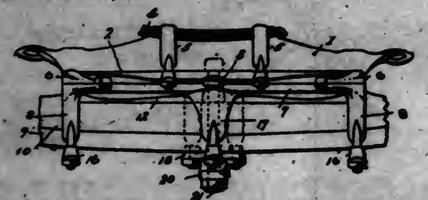
2. The combination with a vehicle gear having upper and lower fifth wheel members, of a concavo-convex plate spring having ears at one end and in loose frictional contact with a part of the gear, the opposite end being fixed and immovable, and the surface between the ends of the spring bearing against the lower fifth wheel member.

3. A concavo-convex plate spring perforated at one end and having two ears at the other end, in combination with a perch iron, the lower fifth wheel member, and the projecting lug of the upper fifth wheel member; a bolt being passed through the lug, spring, and perch iron.

4. The combination of a vehicle gear, of a perch or perch iron having a recess therein and a coiled spring within the

recess, a lower fifth wheel member, and a plate spring interposed between the coiled spring and the said fifth wheel member, said plate spring being fixed at one end only and the other end frictionally engaging the perch iron.

876,546. VEHICLE-GEAR. LESTER B. HICKOK, Brooklyn, N. Y., assignor of one-half to The Cleveland Hardware Company, Cleveland, Ohio. Filed May 24, 1907. Serial No. 375,458.



1. The combination in a vehicle gear, of an axle; an axle cap cut away at the top central portion to form a space 11, a metallic plate provided with a perforated lug and seats, located within the said space 11; a lower fifth wheel member having clip bolts and with its ends engaging the seats at the ends of the metallic plate; clip yokes; a three pronged clip straddling the lug of the metallic plate; an axle yoke; a head block plate; and a king bolt.

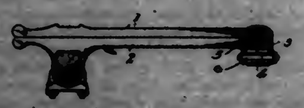
2. The combination in a vehicle gear, of an axle or cap with a space 11 at its top central portion; a metallic plate located within and fitting the space 11; a clip surrounding the axle or axle and cap and the metallic plate; a yoke for the clip; a lower fifth wheel member with its ends interlocking with the ends of the metallic plate and provided with clip bolts; and yokes for the clip bolts.

3. The combination in a vehicle gear, of an axle or cap with a space 11 at its top central portion; a metallic plate located within and fitting the space 11, said plate having seats and flanges 14, 14, and a hole for a king bolt; a clip surrounding the axle or axle and cap and the metallic plate; a yoke for the clip; a lower fifth wheel member engaging the seats and flanges at the ends of the metallic plate, and having clip bolts; and yokes for the clip bolts.

4. The combination with an axle or axle and cap having a space 11 at the top central portion, of a metallic plate provided with a perforated lug 15, said plate located within and fitting the space 11; a three pronged clip straddling the said lug 15; an axle yoke with a hole 19 for the king bolt, and holes for the prongs of the clip; a lower fifth wheel member engaging the ends of the said metallic plate and provided with clip bolts; and yokes for the clip bolts.

5. The combination with an axle, of a cap cut away at the top portion to form a space 11; a metallic plate seated within said space 11; a clip and yoke passed around the axle, cap and plate at the center; a lower fifth wheel member with clip bolts, the ends of the said member engaging the ends of the metallic plate; and yokes for the clip bolts; whereby the axle and cap are strengthened at the central portions thereof.

876,547. ANTIRATTLER FOR FIFTH-WHEELS OF VEHICLES. LESTER B. HICKOK, Brooklyn, N. Y., assignor of one-half to The Cleveland Hardware Company, Cleveland, Ohio. Filed May 24, 1907. Serial No. 379,459.

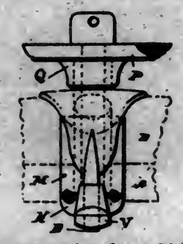


1. The combination with an upper fifth wheel member, of two depending ears, extending below the lower fifth wheel member, each of said ears having a horizontal perforation at the end; a concavo-convex spring with a seat for a bolt; and a horizontally disposed bolt engaging the seat in the spring and passed through the perforations in the ears; said bolt maintaining said spring against endwise movement and with its ends holding the lower member against the upper member.

2. The combination with an upper fifth wheel member having a recess, of a U-shaped clip fitted to and located within the recess and provided with two depending ears extending below the lower fifth wheel member, each of said ears having a horizontal perforation at its end; a concavo-convex spring with a seat for a bolt; and a horizontally disposed bolt engaging the seat in the spring and passed through the perforations in the ears; said bolt maintaining said spring against endwise movement and with its ends holding the lower member against the upper member.

3. The combination with the upper and lower fifth wheel members, of a concavo-convex spring; a clip and bolt for holding the spring in place; and a wearing plate provided with notches 8, 8, for engaging the depending ears 3, 3, said plate being interposed between the spring and the bottom surface of the lower member.

876,548. KING-BOLT CONNECTION FOR VEHICLES. LESTER B. HICKOK, Brooklyn, N. Y., assignor of one-half to The Cleveland Hardware Company, Cleveland, Ohio. Filed May 27, 1907. Serial No. 375,892.



1. A king bolt connection for vehicles, comprising an axle and bed; an integral yoke and perforated post; a clip with a threaded bolt end and nut, and also a slot within which the upper end of the post is located; a head block plate with a perforated lug; a perforated brace head; and a king bolt and nut.

2. The combination with an axle, of an integral axle yoke and post, said axle yoke being perforated at the end and the post longitudinally perforated; a clip having a threaded bolt end and an eye or slot adapted to pass over the upper end of the post; and a nut for the threaded bolt end.

3. An integral yoke and post, said yoke being perforated at the end and located at right angles to the post, and said post longitudinally perforated and provided with an enlargement or flange near the free end.

4. An integral yoke and post, said yoke being perforated at the free end, and said post longitudinally perforated and provided with a flange or englargement N and flanges M, M, as and for the purpose set forth.

5. The combination with a yoke and a post having a flange or enlargement N, of a clip with a threaded bolt end and an elongated hole or slot of larger dimensions than the free end of the post.

876,549. EGG-BEATER. JOHN A. HOFFMAN, Cleveland, Ohio, assignor of one-half to William G. Black, Cleveland, Ohio. Filed Apr. 1, 1907. Serial No. 365,684.

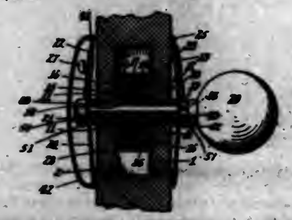
1. An egg-beater having a beater frame and a twisted shank formed of a single piece of wire and having parallel beater sides and a horizontal bottom with central pivot point, in combination with a hollow handle having a double opening of the shape substantially of figure 8 in its bottom engaging said twisted stem, a spring in said handle bearing upon said stem, and a fixed spirally twisted mixing strip centrally of said beater.

2. An egg-beater having a beater frame formed of a single piece of wire with substantially parallel sides and a right angled bottom having a central depression forming a pivot point and inclined top portions terminating in a spirally wound shank, and a strip of twisted sheet metal fixed centrally in said beater frame from bottom to top, a tubular handle and a cap on the lower end thereof operatively engaging said shank to cause said beater to rotate in reverse directions alternately.



3. An egg-beater comprising a beater member formed of a single piece of wire and having parallel sides *b*—*b* and a central bottom depression 8 and the ends thereof wound about each other and forming a shank, in combination with a hollow handle and a spring in the top thereof and a socketed plate beneath said spring forming a bearing for said shank, and a cap fixed on the bottom of said handle and having an opening in its center constructed to cause the shank and beater to rotate as downward pressure is applied to the handle.

876,550. COMBINATION DOOR-LOCK. BRUNO J. HOFHEINE, Los Angeles, Cal. Filed Dec. 12, 1906. Serial No. 347,555.



1. A door lock comprising an operating spindle, an operating tumbler carried by said spindle and having projections on opposite sides, said tumbler also having an obliquely inwardly extending slot, a tumbler rotatably mounted on each side of said operating tumbler and provided with projections to engage the projections of the operating tumbler, and having a radially inwardly extending slot, and a bolt mounted to move radially to and from the spindle and having a projection to engage and work in the slots of the tumblers.

2. A door lock comprising an operating spindle, an operating tumbler carried by said spindle and having projections on opposite sides, said tumbler also having an obliquely inwardly extending slot, a tumbler rotatably mounted on each side of said operating tumbler and provided with projections to engage the projections of the operating tumbler, and having a radially inwardly extending slot, and a bolt mounted to move radially to and from the spindle and having a projection to engage and work in the slots of the tumblers, and spring means for pressing the bolt to force its projection into said slots, the projection of the bolt having a bridge portion to work in the slot of the operating tumbler.

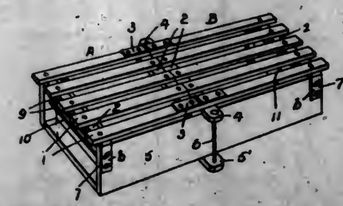
3. A door lock comprising an operating spindle, an operating tumbler carried by said spindle and having projections on opposite sides, said tumbler also having an obliquely inwardly extending slot, a tumbler rotatably mounted on each side of said operating tumbler and provided with projections to engage the projections of the operating tumbler, and having a radially inwardly extending slot, and a bolt mounted to move radially to and from the spindle and having a projection to engage and work in the slots of the tumblers, and dial and index means to indicate the angular position of the lock spindle.

4. A door lock comprising an operating spindle, an operating tumbler carried by said spindle and having projections on opposite sides, said tumbler also having an obliquely inwardly extending slot, a tumbler rotatably mounted on each side of said operating tumbler and provided with projections to engage the projections of the operating tumbler, and having a radially inwardly extending slot, and a bolt mounted to move radially to and from the spindle and having a projection to engage and work in the slots of the tumblers, and dial and index means to indicate the angular position of the lock spindle, one of the operated tumblers having one of its projections adjustably mounted thereon to change the angular position thereof.

5. In a combination door lock, three tumblers mounted in close order end to end, and separate supporting arbors for said tumblers the arbors for the two outer tumblers having flanges for holding the tumblers together.

[Claims 6 to 9 not printed in the Gazette.]

876,551. CRATE-COVER FOR WAGON-BODIES. ALBERT HOPPE, Leavenworth, Kans. Filed Apr. 23, 1907. Serial No. 369,747.



A crate cover for wagon-beds consisting of two sections, front and rear, hingedly connected, and composed of longitudinal and transverse bars, said crate-cover being provided at its corners with metallic angle pieces, one arm of each of which is secured to the cover and the other arm extending down and provided with holes for the reception of means to secure the crate cover to the wagon-bed, the inner cross-bar of the front section being extended, extended portions being provided with holes to adapt them to be secured to the wagon-bed.

876,552. SOCKET-SHELL. HARVEY HUBBELL, Bridgeport, Conn. Filed Mar. 5, 1907. Serial No. 360,784.



1. A socket shell comprising members having interlocking threads, one of said members being provided with a

guide collar separated from its threaded portion by an annular space to receive the other member.

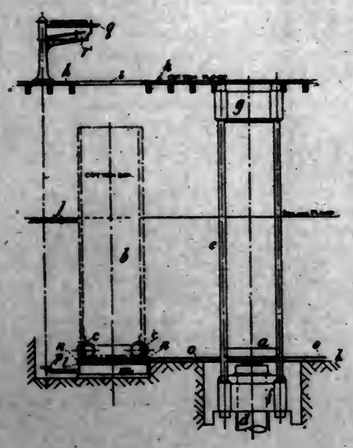
2. A socket shell member provided upon one edge with a thread and contiguously thereto with a guide collar, leaving a space between said thread and collar, substantially as described, for the purpose specified.

3. A socket shell member provided upon one edge with a thread and with a guide collar lying exteriorly to the thread leaving a space between said thread and the collar, substantially as described, for the purpose specified.

4. A socket shell comprising members having interlocking threads, one of said members being provided with a guide collar lying exteriorly to the thread, and separated therefrom by an annular space receiving the other member.

5. A socket shell comprising members having interlocking threads, one of said members being provided with a guide collar separated from its threaded portion by an annular space to receive the other member, and one of said members being formed with a slot to receive the shank of a key.

876,553. BALING-PRESS. JAMES A. HUTTON, Woodlands, and WILLIAM H. HIMBURY, Springfield, Cheadle, England. Filed Sept. 7, 1907. Serial No. 391,767.



The combination of a baling press, a press-box to be used in such baling-press and adapted to be moved on rails into position for filling and for the pressing of materials therein, rails divided into parts of which one serves for the movement of the press-box to and from the press from and to a weighing machine and another serves to support the press-box when in position for filling, a weighing machine in connection with the part of the rails used to support the press-box in position for filling and an indicator in connection with such weighing machine whereby materials to be pressed can be weighed in the press-box, substantially as hereinbefore described.

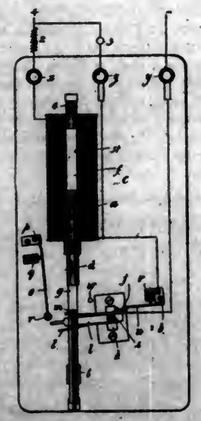
876,554. PERPETUAL DAILY CALENDAR. RICHARD INCH and HERMAN CRAMER, Jr., Sonora, Cal. Filed Apr. 9, 1907. Serial No. 367,218.

An improved perpetual calendar consisting of a single back having three slots on each side of its center, the slots being arranged one above the other on each side, three pads secured to the back one above the other, one of said pads having sheets indicating the days of the week, the second pad having sheets indicating the months, and the third pad having sheets with numbers indicating the days of the months, each of said pads having its sheets adapted



to turn right and left and to enter and be held flat by said slots.

876,555. AUTOMATIC SWITCHING DEVICE FOR USE IN FLASH ADVERTISING. LEONARD K. JOB, Notting Hill, London, England. Filed Dec. 27, 1905. Serial No. 293,489.

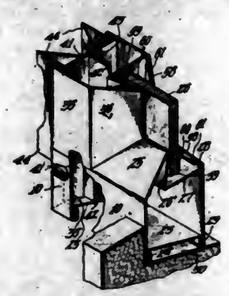


In an automatic switching device for use in flash advertising, the combination with the electric lamps to be controlled, the source of current, and the electric connections for the same, of a pivoted arm carrying a switch contact, a spring upon each side of said arm, a spring held roller adapted to catch the free end of said arm, a screw for adjusting said roller, and electromagnetically operated means for pressing against either of the springs upon the arm, so that said arm is caused to move suddenly past the spring held roller.

876,556. METALLIC WINDOW-SASH. EDWARD H. JOHNSON, Los Angeles, Cal. Filed Mar. 27, 1907. Serial No. 364,791.

1. A metal window sash frame having the ends of the end rails on the outside of the ends of the side rails and bent back around the outside edges of the side rails and having the ends of the side rails terminating on a line with the outside edges of the end rails and secured thereto by lap seams.

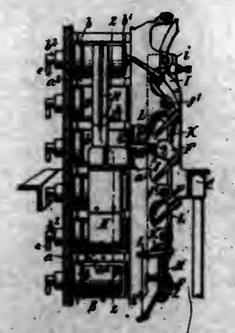
2. A metal window sash frame composed of side and end rails having vertical parallel faces and intermediate portions bent to form bearing ledges and locking ledges, each rail being formed of a continuous piece of metal, the ends of said rails overlapping; closure plates for the outer portions of said rails, all of said parts being secured together by lap seams; and locking strips provided with bearing and supporting ledges and locking pockets.



3. In a metal window sash frame side rails having vertical parallel faces and intermediate portions bent to form bearing ledges and locking ledges, each rail being formed of a continuous piece of metal; closure plates for the outer portions of said rails, said closure plates being formed of continuous strips of metal bent in the center to form guiding grooves, in combination with retaining strips having tongues adapted to enter said guiding grooves.

4. The combination of a metal window sash frame having guide grooves in the vertical edges thereof, said grooves being open at the bottom and closed at the top; and detached retaining strips having guide tongues projecting into the grooves of the sash frames.

876,557. CAN-TESTING MACHINE. OLIVER J. JOHNSON, Wheeling, W. Va. Filed Jan. 2, 1907. Serial No. 350,362.



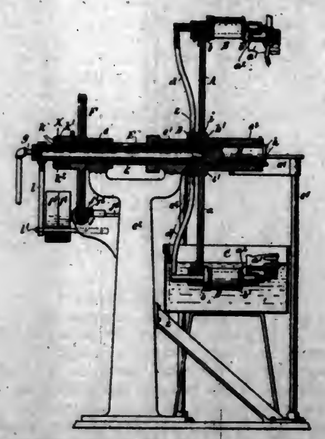
1. In a can testing machine, the combination of a movable can holder, means for automatically opening and closing said can holder, a release lever pivoted to a part of said opening and closing means, and an actuating device for said release lever, said release lever being arranged to engage said actuating device when placed in one position to move said operating lever, and to pass by said actuating device without engagement therewith when in another position, substantially as set forth.

2. In a can testing machine, the combination of a movable can holder, an operating lever therefor, devices arranged to engage said lever and move it to open and close said can holder, a release lever pivoted to said operating lever, and an actuating device for said release lever, said release lever being arranged to engage said actuating device when placed in one position to move said operating lever, and to pass by said actuating device without engagement therewith when in another position, substantially as set forth.

3. In a can testing machine, the combination of a rotary carrier, a can holder mounted thereon, an operating lever for said can holder, devices arranged to engage said lever and move it to open and close said can holder, a release lever pivoted to said operating lever to swing from a lateral position to a position radially of said carrier, and an actuating device for said release lever arranged to engage the lever only when it is placed in the radial position, substantially as set forth.

4. In a can testing machine, the combination of a rotary carrier, a can holder mounted thereon, an operating lever for said can holder having a stud projecting radially outward relative to said carrier, devices arranged to engage said lever stud and move said lever to open and close said can holder, a release lever pivoted to said operating lever to swing from a lateral position to a position in which it extends radially inward relative to said carrier, and an actuating device for said release lever arranged to engage the lever when it is placed in the radial position, substantially as set forth.

876,558. CAN-TESTING MACHINE. OLIVER J. JOHNSON, Wheeling, W. Va. Filed Apr. 3, 1907. Serial No. 366,134.



1. In a can testing machine, the combination of a moving carrier provided with a can holder, a main air pipe, and means for establishing and interrupting communication between said main air pipe and said can holder comprising relatively stationary and movable parts, one of which parts is separable from said carrier and is constructed and arranged so that it is removable from the machine independently of said carrier or its parts, substantially as set forth.

2. In a can testing machine, the combination of a rotary carrier provided with can holders, a main air pipe, branch air passages movable with said carrier and leading to said can holders, and means for establishing and interrupting communication between said main air pipe and said branch passages comprising a valve and valve seat, one of which rotates with said carrier and one of which is separable from said carrier and is constructed and arranged so that it is removable from the machine independently of said carrier or its parts, substantially as set forth.

3. In a can testing machine, the combination of a rotary carrier provided with can holders, and air passages leading to said can holders, a stationary air conduit arranged axially with respect to said carrier, a rotary part cooperating with said conduit to establish and interrupt communication between the same and said air passages, said stationary conduit being separable from said carrier and constructed and arranged so that it is removable from the machine independently of said carrier or its parts, substantially as set forth.

4. In a can testing machine, the combination of a rotary carrier provided with can holders, and passages leading to

said holders, means for rotatably supporting said carrier, a main pipe, and means for controlling communication between said main pipe and said passages comprising parts, one of which rotates with said carrier, one of said parts being separable from said carrier supporting means and removable from the machine independently of said supporting means and said carrier whereby it can be removed without disturbing the carrier, substantially as set forth.

5. The combination of a rotatable carrier provided with can holders, and passages leading to said holders, a hollow supporting shaft for said carrier, a main pipe, and means located within said hollow shaft and controlling communication between said main pipe and carrier passages, said means being removable from said hollow shaft independently of said carrier, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

876,559. GEAR FOR LIFTING AND TRANSPORTING CARGO AND THE LIKE GOODS. SIMON J. E. JÖRGENSEN, Melbourne, Victoria, Australia. Filed July 13, 1906. Serial No. 326,101.

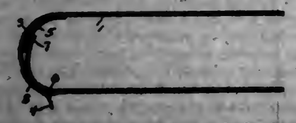


1. In a gear for lifting and transporting goods the combination of a frame, a roller journaled therein, suspending means connected to the lower part of the frame, said means being in the same plane as the roller, the upper part of said frame being to one side of the vertical plane of the roller and a track for said roller.

2. A gear for lifting and transporting goods comprising a frame, a roller therein, the top portion of said frame being out of vertical alinement with the roller, a depending hook connected to the lower end of the frame, said hook being in vertical alinement with the roller and a track for the roller.

3. A gear for lifting and transporting goods comprising a frame consisting of a bar having one end doubled over upon itself and a hook at its other end, said doubled over end being bent to one side, a roller journaled within the doubled over end, said roller having flanges thereon, the extreme end of the bar projecting below the roller to form a guide, a rail upon which the roller is adapted to travel, and abutting plates projecting above the rail at certain points and adapted to contact with the flanges of the roller.

876,560. HORSE-BLANKET. WILLIAM S. KATZENMEYER, Lakewood, Ohio. Filed May 9, 1907. Serial No. 372,794.



1. A horse blanket comprising a body having breast flaps at one end, one of which is longer and adapted to overlap the other, and longitudinally spaced means on one flap, one of which is arranged on the inner face of said flap and adapted to coöperate with longitudinally spaced means on the outer face of the other flap to provide a fastening for said flaps.

2. A horse blanket comprising a body having breast flaps at one end, one adapted to overlap the other, and longitudinally spaced coöperating fastening means arranged on said flaps, one fastening member on one flap being spaced from the outer end of said flap and arranged on its inner face, and the other fastening member arranged adjacent said outer end, the other flap having its longitudinally spaced fastening members arranged on its outer face to coöperate with the fastening members on said first mentioned flap.

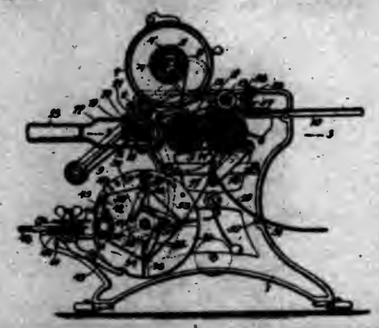
3. A blanket of the class described comprising a body having breast flaps at one end, one of said flaps being adapted to overlap the other, and longitudinally spaced means arranged on the outer face of one flap and cooperating with longitudinally spaced means arranged on opposite faces of the other flap to provide a fastening for said flaps.

4. A horse blanket comprising a body having breast flaps at one end, one of said flaps having two longitudinally spaced buckles and the other adapted to overlap it and having correspondingly longitudinally spaced straps arranged on opposite faces and adapted to coöperate with said buckles to provide a fastening means for said flaps.

5. A blanket comprising a body having oppositely disposed breast flaps at one end, one of said flaps having two longitudinally alining buckles, and the other adapted to overlap it and having corresponding straps on opposite faces adapted to coöperate with said buckles to provide a fastening means for said flaps.

[Claim 6 not printed in the Gazette.]

876,561. COPYING-MACHINE. AUGUSTUS D. KLABER, London, England. Filed Mar. 14, 1907. Serial No. 362,316.



1. In a copying machine, the combination of a supply roller on which a continuous web is wound, two copying rollers between which the web and impression sheets pass, means for rotating one of said rollers, a receiving roller on which the web is wound after passing between the copying rollers, comprising end-members and parts extending between the same, and means for moving said parts toward and from the center of the roller, substantially as set forth.

2. In a copying machine, the combination of a supply roller on which a continuous web is wound, two copying rollers between which the web and impression sheets pass, means for rotating one of said rollers, a receiving roller on which the web is wound after passing between the copying rollers, comprising end-members and a plurality of parts extending between the same, and an operating device for simultaneously moving said parts toward and away from the center of the receiving roller, substantially as set forth.

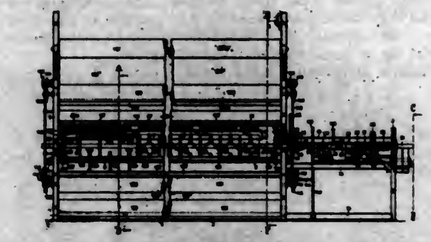
3. In a copying machine, the combination of a supply roller on which a continuous web is wound, two copying rollers between which the web and impression sheets pass, means for rotating one of said rollers, a receiving roller on which the web is wound after passing between the copying rollers, comprising end-members having grooves therein, parts extending between said end-members and entering said grooves at their ends, and rotatable members adjacent to said end-members and coacting with said parts to move them toward and away from the center of the roller, substantially as set forth.

4. In a copying machine, the combination of a pair of copying rollers between which the impression sheets and the copying web pass and means for holding said rollers in copying position and equalizing pressure between corresponding ends thereof comprising means for permitting movement of the ends of one of said rollers, rigid connections between each of said ends and a stationarily-mounted part equidistant between them, and adjustable devices in said connections, substantially as set forth.

5. In a copying machine, the combination of side-frames, a copying roller journaled therein, a second copying roller supported on the frames adjacent thereto, a cross-bar extending between the side-frames, a pressure-bar pivotally mounted thereon, connections between the ends of said pressure-bar and the ends of one of said rollers, and means for varying the length of one of said connections, substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

876,562. MACHINERY FOR EMBROIDERING A FABRIC WITH PILE-THREADS IN PATTERNS. FRANZ KLEUTGEN, Benel, Germany. Filed Aug. 19, 1905. Serial No. 274,894.



1. A machine for embroidering a fabric with pile threads in patterns having in combination with a frame, means for holding a fabric, a set or series of needles, means for automatically bringing any one of the needles of said set or series to the working point of said set or series and into the working position, means for stabbing the working needle through the fabric and means for moving a fabric and said set or series of needles relatively to each other step by step.

2. A machine for embroidering a fabric with pile threads in patterns having in combination with a frame, means for holding a fabric, a set or series of needles, means for automatically bringing any one of the needles of said set or series to the working point of said set or series and into the working position, means for stabbing the working needle through the fabric and means for moving a fabric and said set or series of needles relatively to each other step by step in two directions crossing one another at right angles.

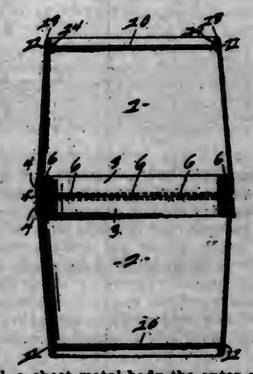
3. A machine for embroidering a fabric with pile threads in patterns having in combination with a frame, means for holding a fabric, a plurality of sets or series of needles, means for automatically bringing any one needle of said sets or series of needles to the working point of its set or series of needles and into the working position, means for stabbing the working needles through the fabric and means for moving a fabric and said sets or series of needles relatively to each other step by step.

4. A machine for embroidering a fabric with pile threads in patterns having in combination with a frame, means for holding a fabric, straight guides attached to the frame parallel to the fabric-holders, a carriage adapted to run on said guides, a plurality of pushers in said carriage movable at right angles to said guides, a needle in each of said pushers, pins vertically movable in said carriage and corresponding to the number of said pushers, a drum below said carriage, means for rotating said drum, two ridges or cams surrounding said drum, and adapted to receive between them one of said pins and move the carriage, a pattern apparatus adapted to press each of said pins down to said drum, a slide movable at right angles to said guides and having a projection engaging with one of said pushers, means for reciprocating said slide and means for moving a fabric and said needles relatively step by step.

5. A machine for embroidering a fabric with pile threads in patterns having in combination with a frame, means for holding a fabric, straight guides attached to the frame parallel to the fabric-holders, a plurality of carriages adapted to run on said guides, a plurality of pushers in each of said carriages movable at a right angle to said guides, a needle in each of said pushers, pins vertically movable in said carriages and corresponding to the number of said pushers, a drum below each of said carriages, means for rotating said drums, two ridges or cams surrounding each of said drums and adapted to receive between them one of said pins and move the carriage, a pattern apparatus adapted to press one pin in each carriage down to its drum, a slide movable at a right angle to said guides and having projections corresponding to the number of said carriages, each engaging with one of the pushers of its carriage, means for reciprocating said slide, means for progressing said drums and projections simultaneously and step by step parallel to said guides, and means for moving a fabric and said needles relatively step by step.

[Claims 6 to 11 not printed in the Gazette.]

876,563. METALLIC BARREL. JOSEPH H. LA FAVE, Defiance, Ohio. Filed Nov. 19, 1906. Serial No. 344,049.



In a barrel, a sheet metal body the outer edges of which are upturned to form a chime and provided with spaced elongated slots adjacent to the chime, and a sheet metal head having marginal tongues to enter the slots in the body, the upturned edge of the body forming the chime abutting against the head, substantially as described.

876,564. TORPEDO-BOAT. SIMON LAKE, Berlin, Germany. Filed Mar. 22, 1907. Serial No. 363,941.



1. A torpedo boat, provided with a firing tube, a hatch into which it opens, a storage tube also opening into said hatch and alined with the firing tube and having a loading hatch, and means for closing the said hatch.

2. A torpedo boat, provided with a firing tube, a storage tube alined with the firing tube and having a vertical extension projecting through the vessel to provide a loading hatch, and means for closing the hatch.

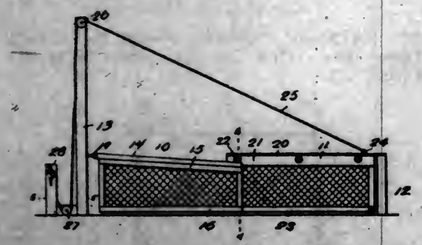
3. A torpedo boat, having a superstructure, and torpedo firing tubes held in the space formed by the superstructure and top of the hull of the vessel, a storage tube alined with the firing tube and having an extension which projects through the said superstructure to provide a loading hatch and means for closing the hatch.

4. A torpedo boat, having a superstructure, and torpedo firing tubes held in the space formed by the superstructure and hull of the vessel, a storage tube alined with the firing tubes, combined loading and storage tubes also in alinement with the firing tubes and each having an extension which projects through the superstructure to provide a loading hatch, and a cover for the said hatch.

5. A torpedo boat, having a superstructure, and torpedo tubes held in the space formed by the superstructure and hull of the vessel and fore and aft of the said vessel, storage tubes alined with the fore firing tubes, combined loading and storage tubes alined with all of the aforementioned tubes and adjacent to the aft firing tubes, the said combined loading and storage tubes having extensions which project through the superstructure to provide loading hatches through which the torpedoes are lowered and passed to the remaining tubes.

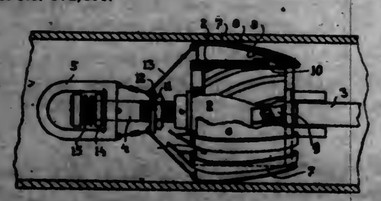
[Claims 6 to 20 not printed in the Gazette.]

876,565. GATE. KATHARINA LANDAN, Waterloo, Iowa. Filed Feb. 18, 1907. Serial No. 357,899.



A tilting gate formed in two sections, one section being hinged to its support at its upper rear end, and having its upper bar inclined forward and downwardly, and the other section having its upper bar provided with rollers adapted to run on the upper bar of the first-mentioned section, whereby the two sections may be brought together side by side or extended, one in advance of the other, combined with a cable attached at one end to the second section and at the other end to a reeling device, means for supporting and operating the latter and pulleys and supporting means for the pulleys.

876,566. TUBE AND FLUE CLEANER. FRANZ H. LEHNERT, Dresden-Plauen, Germany. Filed May 2, 1907. Serial No. 371,468.



1. In a pipe cleaner, in combination, a shaft; a housing secured thereto; a rotary tool driving device mounted in the housing; an elastic packing located outside the housing and adapted to bear against the wall of the pipe being cleaned; and a spring basket surrounding the said elastic packing; substantially as described.

2. In a pipe cleaner, in combination, a shaft; a housing secured thereto; a rotary tool driving device mounted in the housing; an elastic packing located outside the housing and adapted to close the space between the housing and the wall of the pipe being cleaned; springs surrounding said packing and secured at their front ends to the housing and having a limited radial movement at their rear ends; substantially as described.

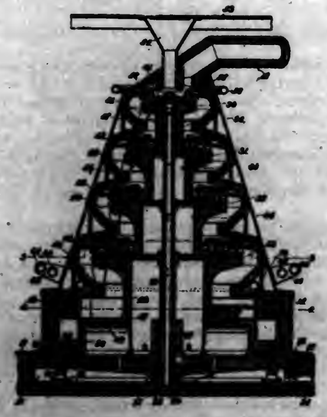
3. In a pipe cleaner, in combination, a shaft; a housing secured thereto; a rotary tool driving device mounted in the housing; an elastic packing located outside the casing and adapted to close the space between the housing and the wall of the pipe being cleaned; an assemblage of springs surrounding said packing and secured to the housing; and means for regulating the passage of the pressure agent through the housing; substantially as described.

4. In a pipe cleaner, in combination, a shaft; a housing presenting peripheral perforations secured thereto; a rotary tool driving device mounted in the housing; an elastic packing located outside the housing and adapted to close the space between the housing and the wall of the pipe being cleaned; a spring basket surrounding said packing and an annular rotary member located between said housing and packing and presenting perforations corresponding with those in the housing, whereby the flow of the pressure agent through said latter perforations can be regulated; substantially as described.

5. In a pipe cleaner, in combination, a shaft; a housing secured thereto; a rotary tool driving device mounted in the housing; an elastic packing located outside the casing and adapted to close the space between the housing and the wall of the pipe being cleaned; an assemblage of springs surrounding said packing and secured at the front end of the housing; and means for regulating the resiliency of the springs; substantially as described.

[Claim 6 not printed in the Gazette.]

876,567. FURNACE FOR ROASTING ORES. ALVA D. LEE, Brookline, Mass. Filed Apr. 3, 1907. Serial No. 366,065.



1. In a roasting furnace provided with an ore inlet at the top, the combination of a hollow revoluble member beneath said inlet; a plurality of projecting shelves secured thereto at various levels; a plurality of cylindrical casings surrounding said revoluble member between said shelves; and means for supplying heat to the bottom of said furnace.

2. In a roasting furnace provided with an ore inlet at the top, the combination of a revoluble member beneath said inlet provided with a plurality of projecting shelves at various levels, each shelf being of greater diameter than the one above it; a casing surrounding said revoluble member; and means for supplying heat to the bottom of said furnace.

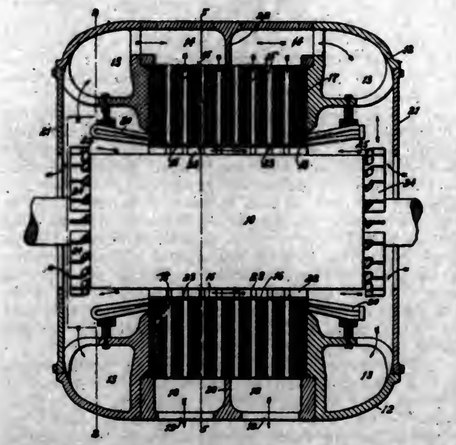
3. In a roasting furnace provided with an ore inlet at the top, the combination of a revoluble member beneath said inlet provided with a plurality of projecting shelves at various levels, each shelf being of greater diameter than the one above it; a casing surrounding said revoluble member; fixed blades secured to the casing coöperating with each shelf; and means for supplying heat to the bottom of said furnace.

4. In a roasting furnace provided with an ore inlet at the top, the combination of a revoluble member beneath said inlet provided with a plurality of downwardly inclined projecting shelves at various levels and of various diameters; a casing surrounding said revoluble member; and means for supplying heat to the bottom of said furnace.

5. In a roasting furnace provided with an ore inlet at the top, the combination of a revoluble member beneath said inlet provided with a plurality of projecting shelves at various levels; a casing surrounding said revoluble member; an annular extension on said casing beneath each shelf; and means for supplying heat to the bottom of said furnace.

[Claims 6 to 25 not printed in the Gazette.]

876,568. DYNAMO-ELECTRIC MACHINE. CHARLES E. LORD, Norwood, Ohio, assignor to The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed June 7, 1905. Serial No. 264,158.



1. In a dynamo-electric machine, a stationary member having a core formed of groups of laminæ spaced apart to provide ventilating passage-ways through which a cooling medium is adapted to be forced, means for forcing a cooling medium through said passage-ways, a rotatable member, and means for preventing said cooling medium from passing from the passage-ways in said stationary member into the air-gap between the stationary member and the rotatable member.

2. In a dynamo-electric machine, a stationary core made up of groups of laminæ spaced apart to form ventilating passageways therebetween, a rotatable member, means for forcing a blast of air through said passageways, and means for preventing said blast of air while passing through said stationary core from entering the air-gap between the rotatable member and stationary core.

3. In a dynamo-electric machine a stationary member provided with ventilating passage-ways, a rotatable member, means for causing a current of air to flow through the air-gap between said members and a current of air to flow through said ventilating passage-ways, and means for preventing the latter current of air, while passing through the stationary member, from entering said air-gap.

4. In a dynamo-electric machine, a rotatable field-magnet, and a stationary armature having a core formed of groups of laminæ spaced apart to provide ventilating passage-ways, which permit a flow of air from the periphery of the machine through said passage-ways and out again at the periphery of the machine, in combination with means for confining the air to said passage-ways in its passage through said stationary armature core so as to prevent same from entering the air-gap between the rotatable field-magnet and the armature.

5. In a dynamo-electric machine, a rotatable field-magnet, and a stationary armature having ventilating passage-ways which permit a flow of air from the periphery of the machine through said passage-ways and out again at the periphery of the machine, in combination with means for confining the air to said passage-ways while flowing through said stationary armature so as to prevent same from entering the air-gap between the rotatable field-magnet and the armature, and means for causing a flow of air over the periphery of the field-magnet substantially parallel to the axis thereof.

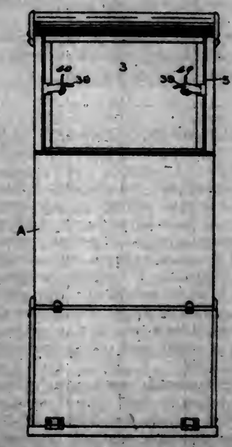
[Claims 6 to 31 not printed in the Gazette.]

876,569. HAIR-WAVER. FRANK W. LOWE, Boston, Mass. Filed June 10, 1907. Serial No. 378,086.



A hair waver composed of a continuous wire frame bent to provide a pair of longitudinal sides and an intermediate longitudinally extending open slot therebetween, the terminal portions of said wire extending transversely at the opposite end of the frame from the slot opening, and an eyelet about the opposite sides of which said terminal portions are bent, said eyelet being clamped thereon to connect the same, and an elastic loop connected to said eyelet, substantially as described.

876,570. ADVERTISING-SIGN. LOUIS J. LUNDGREN, St. Paul, Minn., assignor, by mesne assignments, to Mechanical Advertising Sign Company, St. Paul, Minn., a Corporation of Minnesota. Filed Oct. 26, 1904. Serial No. 230,008.



1. The combination with a casing, of vertical runways arranged in the sides thereof, a series of signs loosely supported in said runways, means for raising and lowering said signs consisting of a slidably supported carriage,

means for alternately raising and lowering said carriage, and means carried by said carriage for engaging with said signs to raise and lower the same in said runways.

2. The combination with a casing, of a series of signs loosely supported therein, means for successively raising and lowering said signs in said casing consisting of a vertically slidable carriage, means for alternately raising and lowering said carriage, means carried by said carriage for successively engaging with said signs to raise the same in said casing, means for supporting one sign at a time in the top of said casing, and means carried by said carriage for lowering said supporting sign to normal position upon the raising of a succeeding sign.

3. The combination with a casing, of a series of signs loosely supported therein, means for successively raising and lowering said signs consisting of a vertically slidable carriage, vertical threaded rods arranged in connection with said carriage, means for oppositely rotating said rods, a pawl carried by said carriage, tripping mechanism for throwing said pawl into engagement alternately with said rods when in raised or lowered position, arms carried by said carriage to engage with said signs and raise the same in the upward movement of the carriage, means for supporting each sign in raised position, means for releasing said supported sign and means carried by said carriage for lowering the same when the next sign is carried to raised position.

4. The combination with a casing, of vertical runways in the sides thereof, a series of signs loosely supported in said runways, means for raising and lowering said signs consisting of a pair of threaded vertical rods, means for oppositely rotating said rods, a carriage slidable upon said rods, a pawl carried by said carriage, tripping mechanism for turning said pawl alternately into engagement with said rods when said carriage is in raised or lowered position, arms carried by said carriage for engaging with said signs to raise the same, means for supporting each sign in raised position, and means carried by said carriage for receiving said raised sign and lowering the same when the next sign is raised.

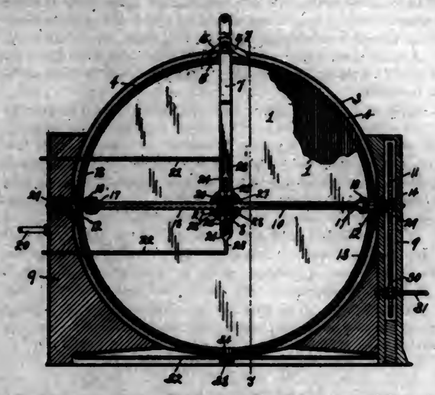
5. The combination with a casing, and endless runways in the sides thereof, of a series of signs provided with projections extending into said runways, means for raising and lowering said signs consisting of a pair of threaded vertical rods, means for oppositely rotating said rods, a carriage slidable upon said rods, a pawl carried by said carriage, tripping mechanism for throwing said pawl into engagement alternately with said rods when the carriage is in raised or lowered position, arms carried by said carriage to engage with the projections of said signs successively to raise the same, dogs arranged to engage with and hold each raised sign in supported position until the next sign is raised, and means carried by said carriage for gradually lowering said supported sign when released.

[Claim 6 not printed in the Gazette.]

876,571. POWER-TRANSMITTING MECHANISM. ROBERT D. MAYO, Conneaut, Ohio. Filed Apr. 3, 1907. Serial No. 366,066.

1. A power transmission mechanism, comprising oppositely revolving members having coaxial series of teeth formed on their contiguous surfaces, an oscillatory element movable to impart simultaneous reverse rotation to said members, a shaft disposed between said members, a loose pinion carried by said shaft in position to engage the teeth on said members, a sleeve feathered to the shaft, coöperating clutch-members carried by the pinion and sleeve whereby the same may be thrown into and out of engagement by a movement of the sleeve and means for controlling the movement of the sleeve.

2. A power transmission mechanism comprising two spaced rotary members having coaxial series of teeth on their inner surfaces, means for driving said members in opposite directions, a shaft disposed between said members, a pinion loosely carried by the shaft and meshing with the teeth on both members, clutch means for throwing the shaft into or out of fixed connection with the pinion, a second pinion meshing with said teeth, and a balance-wheel axially fixed to said latter pinion to revolve therewith.



3. A power transmission mechanism comprising two spaced rotary members having their inner surfaces formed with coaxial series of teeth, means for revolving said members in opposite directions, a shaft mounted between said members, two pinions loose on said shaft and meshing with the teeth on both members at opposite sides of its axis and having their inner hub ends formed with clutch surfaces, a sleeve feathered to said shaft and having its ends formed with clutch-surfaces, and means for moving the sleeve to engage the clutch surface on either pinion whereby to rotate the sleeve and shaft therewith.

4. A power transmission mechanism comprising spaced rotary members having their contiguous faces formed with coaxial series of teeth, oscillatory means for revolving said members in opposite directions, a shaft mounted between said members, two pinions loosely carried by the shaft and engaging the teeth on both members at opposite sides of its axis whereby the pinions are oppositely rotated, said pinions having inner clutch parts, a sleeve feathered to the shaft and having its ends fashioned to engage the clutch parts on the pinions, means for moving the sleeve for its ends to engage the clutch part of either pinion or to remain neutral thereto, a second pinion meshing with said two sets of teeth, and a balance-wheel axially fixed to said latter pinion to revolve therewith.

5. In combination two laterally spaced ratchet-wheels having their inner surfaces formed with coaxial rows of teeth, a lever having a common axis with said wheels, pawls carried by the lever for communicating opposite rotation to the two wheels from an oscillatory movement of the lever, a shaft disposed between the wheels, two pinions loosely carried by the shaft and engaging the teeth on both wheels on opposite sides of their axis, a clutch member fixed to each pinion, a sleeve feathered to the shaft intermediate the pinions, a clutch-member carried at each end of the sleeve to coact with the clutch of the contiguous pinion, means for moving the sleeve to throw either clutch into engagement whereby to revolve the shaft in either direction, and a balance-wheel connected to and continuously driven in one direction by the ratchet-wheels.

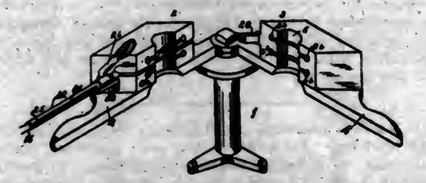
[Claims 6 and 7 not printed in the Gazette.]

876,572. ROPE-SPLICING DEVICE. WILLIAM MELLAND, Altrincham, and WILLIAM H. NIELD, Heaton Mersey, England. Filed Mar. 27, 1907. Serial No. 364,939.



A device for use in splicing the unraveled strand ends of a rope comprising a flexible link coupling having a loop at each end and loops intermediate its ends, and a straight portion between each pair of loops, said straight portion being of substantially the same length as the loop.

876,573. KNOT-TYING APPARATUS FOR BAGS, &c. CARLOS D. MYERS, Cleveland, Ohio, assignor of one thirty-second to F. W. Griffin, one sixty-fourth to Frank R. Williams, and one sixty-fourth to George Bates, Cleveland, Ohio. Filed Feb. 13, 1907. Serial No. 357,147.



1. In an apparatus for forming knots around the necks of bags and the like, the combination of a die having a central recess for the reception of the neck of a bag and a knot-forming passageway therein surrounding said recess, and means for depositing twine or similar material within said passageway, substantially as specified.

2. In an apparatus for forming knots around the necks of bags and the like, the combination of a die having a central recess for the reception of the neck of a bag and a knot-forming passageway therein surrounding said recess, means for depositing twine or similar material within said passageway, and means for applying the twine thus deposited within the passageway around the neck of the bag, substantially as specified.

3. In an apparatus for tying knots around the necks of bags and the like, the combination of a pair of blocks or die sections each having a fractional recess therein and fractional passageways adapted, when the said blocks or sections are brought together, to form a complete recess and a complete passageway, and means for depositing twine or similar material within said passageway, there being a channel in each block or section establishing communication between the fractional passageways and the fractional recesses therein, substantially as specified.

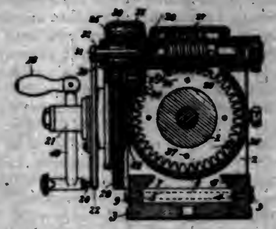
4. In an apparatus for tying knots around the necks of bags and the like, the combination of a pair of blocks or die sections each having a fractional recess therein and fractional passageways adapted, when the said blocks or die sections are brought together to form a complete recess and a complete passageway, means for threading twine or similar material through said passageway, there being a channel establishing communication between said complete passageway and said recess, and means for contracting or closing around the neck of the bag or other object the twine threaded in said passageway during the withdrawal of the twine-threading means therefrom, substantially as specified.

5. In an apparatus for forming knots around the necks of bags and the like, the combination of a die having therein an aperture or recess for the reception of the neck of the bag, said die having also a passageway therein surrounding said aperture, the said passageway being so arranged as to form the desired knot and said die having a relatively narrow channel connecting said passageway with said aperture or recess, and a flexible twine-carrier of greater diameter than said channel and adapted to be inserted into said passageway, substantially as specified.

[Claims 6 to 29 not printed in the Gazette.]

876,574. INDEXING OR DIVIDING HEAD. EDWARD J. MCCLELLAN, New York, N. Y., assignor to The Garvin Machine Company, a Corporation of New York. Filed Mar. 29, 1907. Serial No. 365,284.

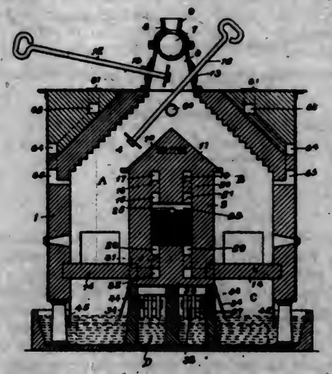
1. In a dividing head, a work spindle having a gear, a worm meshing with said gear, an index shaft, a plurality of gear trains of different pitch ratio between said index shaft and said worm, and means for rendering any desired gear train operative.



2. In a dividing head, a work spindle having a gear, a worm meshing with said gear, an index shaft, a train of gearing of unit ratio between said shaft and said worm, a second train of gearing adapted to rotate said spindle through quarters or sixths of a revolution by unit turns of said shaft, and means for rendering either of said gear trains operative.

3. In a dividing or indexing mechanism, a bed, a base adjustable thereon and having interior curved or arcuate flanges, a stock having dove-tailed grooves to engage said flanges and having a concentrically curved peripheral portion between the flanges, said curved portion having a plurality of taper sockets, a bolt in said bed adapted to enter said sockets, and positive means for impelling the bolt into locking relation in the sockets.

876,575. GAS-PRODUCER. WILLIAM J. MCCLURG, Pittsburg, Pa. Filed Aug. 9, 1907. Serial No. 387,845.



1. A gas producer having in combination two generating chambers connected above the normal fuel level in said chambers, independent air and steam passages adapted to be heated by the combustion of fuel in said chambers, two series of combined air and steam passages connected with the independent passages and connected respectively to the generating chambers below the normal fuel level, means for directing the combined air and steam into one or the other of said chambers and means for causing a flow of air and steam into the producer and a flow of gas from the producer.

2. A gas producer having in combination two chambers connected above the normal fuel level in said chambers, independent air and steam passages formed in the division wall between said chambers, a chamber connected to said independent passages, two series of flues extending from said chamber to a point below the normal fuel level in the generating chambers, a reversing valve for causing the air and steam to flow into either of said passages and means for causing a flow of air and steam into the producer and a flow of gas from the producer.

3. A gas producer having in combination two chambers connected above the normal fuel level in said chambers,

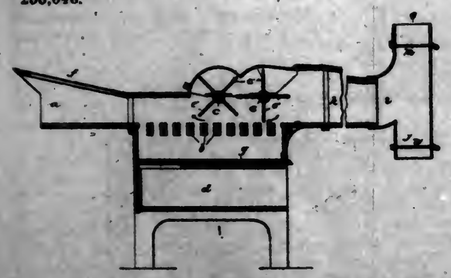
air and steam passages adapted to be heated by the combustion of the fuel in said chambers and connected to the generating chambers at points below the normal fuel level, valves for directing the air and steam into one or the other of said chambers, two series of gas scrubbers connected respectively to the lower portions of the generating chambers and means for causing a flow of air and steam into the producer and a flow of gas from the producer.

4. A gas producer having in combination two chambers connected above the normal fuel level in said chambers, independent air and steam passages adapted to be heated by the combustion of fuel in said chambers, two series of combined air and steam passages connected with the independent passages and connected respectively to the generating chambers at points below the normal fuel level, means for directing the combined air and steam into one or the other of said chambers, an air engine connected respectively to the air passages and to the lower portions of the generating chambers and valves arranged in said connections whereby the said engine may act to force air into said producer or exhaust the gas therefrom.

5. A gas producer having in combination a generating chamber, water receptacles arranged below the generating chamber, means for supporting the charge in the generating chamber, and means for causing the generating gases to pass through the water in said receptacles.

[Claims 6 and 7 not printed in the Gazette.]

876,576. APPARATUS FOR CLEANING WASTE. JOHN R. MCDONALD, Charlotte, N. C., and STANLEY G. MILLER, Philadelphia, Pa. Filed Apr. 11, 1905. Serial No. 255,043.



1. Apparatus for cleaning and extracting foreign material from waste, mill sweeps and the like, comprising a casing, a grid in said casing, means for inducing a current of air through said casing to draw the stock above said grid, beating mechanism above the grid operating upon the stock, and a regulable air inlet below the grid serving to admit air in sufficient quantities to support only the light material of the stock and prevent the same falling through the grid.

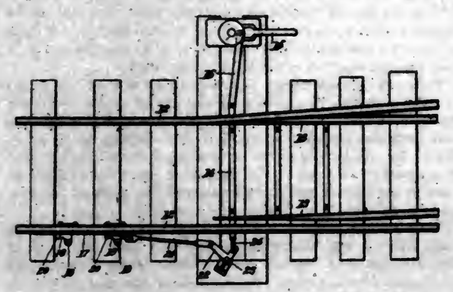
2. Apparatus for cleaning and extracting foreign material from waste, mill sweeps and the like, comprising a casing, a grid in said casing, means for inducing a current of air through said casing to draw the stock above said grid, rotary beating mechanism above the grid operating upon the stock, and a regulable air inlet below the grid serving to admit air in sufficient quantities to support only the light material of the stock and prevent the same falling through the grid.

3. Apparatus for cleaning and extracting foreign material from waste, mill sweeps and the like, comprising a casing, transverse bars forming a grid in said casing, means for inducing a current of air through the casing to draw the stock above the grid, rotary shafts having radial arms above the grid, the movement of said arms adjacent to the grid being in opposition to the movement of the air current, and means for admitting air below the grid in regulable quantities sufficient to support only the lighter material in the stock.

4. Apparatus for cleaning and extracting foreign material from waste, mill sweeps and the like, comprising an opener for preliminarily loosening the stock, a casing receiving the stock from the opener, a grid in said casing, means connected with the discharge end of the casing for inducing a current of air through the casing to draw the stock above the grid, rotary beating mechanism above the grid operating upon the stock on the grid in opposition to air current, and a regulable air inlet below the grid to admit air to support the light material of the stock.

5. Apparatus for cleaning and extracting foreign material from waste, mill sweeps and the like, comprising an opener for preliminarily loosening the stock, a casing receiving the stock from the opener, a grid in the casing, a receptacle for heavy material below the grid, rotary beating mechanism in the casing above the grid, a discharge flue connected with said casing, an exhaust fan for communicating with said flue, and a dust collector into which said flue discharges.

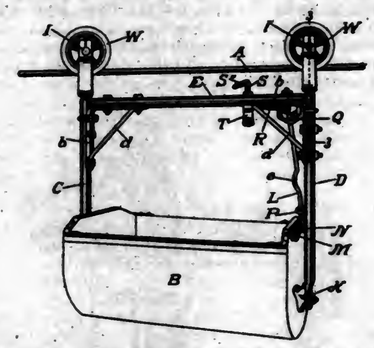
876,577. SAFETY APPLIANCE FOR RAILWAY SWITCHES. JOHN W. MCMANAMA, Waltham, Mass., assignor, by direct and mesne assignments, to Boston Safety Switch Company, Boston, Mass., a Corporation of Maine. Filed May 10, 1907. Serial No. 372,935.



1. In a railway switch, in combination, a single track portion, a branch track portion, the latter including movable switch rails, a hand-operated switch-throwing lever connected with the switch rails, and a switch-throw-completing mechanism, adapted to be actuated by a wheel moving on one of the single track rails toward the switch, to complete the throw of the switch rails in either direction when they have been left incompletely thrown, said mechanism comprising a longitudinally and vertically movable push bar located beside one of the rails of the single track portion, and supported with its upper edge flush with the tread of said rail when the switch is completely thrown, and connections between said bar and the switch rails, organized to support the bar with its upper edge above the tread of the adjacent rail when the switch rails are left incompletely thrown in either direction, and thus cause the bar to be engaged by a wheel approaching the switch, the bar being movable endwise in one direction by the wheel when the switch is nearly closed, and in the opposite direction when the switch is nearly open, and the said connections being also organized to convert an endwise movement of the push bar into a lateral movement of the switch rails, whereby when the switch rails have been left incompletely thrown in either direction, the throw will be completed by the action on the push bar of the first wheel approaching the switch on the single track portion.

2. In a railway switch, in combination, a single track portion and a branch track portion, the latter including movable switch rails, a hand-operated switch lever connected with the switch rails, a longitudinally and vertically movable push bar located beside one of the rails of the single track portion and having the main portion of its upper edge flush with the tread of said rail when the switch is fully opened or fully closed, the end portion of the upper edge of said bar which is farthest from the switch being inclined, and connections between said bar and the switch rails, organized to support the bar with the main portion of its upper edge above the tread of the adjacent rail when the switch rails are left incompletely thrown in either direction, and thus cause the bar to be engaged by a wheel approaching the switch, the inclined edge of the push bar being first engaged and coöperating with the wheel in causing a movement of the bar away from the switch when the switch rails are nearly thrown to one position, and toward the switch when the switch rails are nearly thrown to the opposite position, the said connections being also organized to convert an endwise movement of the push bar into a lateral movement of the switch rails.

876,578. ELEVATED CARRIER. ALBERT H. NELLER, Fairfield, Iowa. Filed May 16, 1907. Serial No. 374,054.



1. In elevated carriers, an overhead track, swiveling brackets carrying wheels to run upon the track, a receptacle, and hangers to support the receptacle, the upper ends of said hangers being tubular and the lower ends of the brackets being inserted in said tubular ends, and adapted to swivel therein.

2. In elevated carriers, an overhead track, swiveling brackets carrying wheels to run upon the track, a receptacle, upright tubular hangers to support the receptacle, the lower ends of the brackets being inserted in the upper ends of the hangers, and being adapted to swivel therein.

3. In elevated carriers, an overhead track, swiveling brackets carrying wheels to run upon the track and having their lower ends tubular, a receptacle, upright tubular hangers to support the receptacle, the lower ends of the brackets being inserted in the upper ends of the hangers, and being adapted to swivel therein, and a bolt being inserted in the tubular part of the bracket and fitted to hold it in swiveling position.

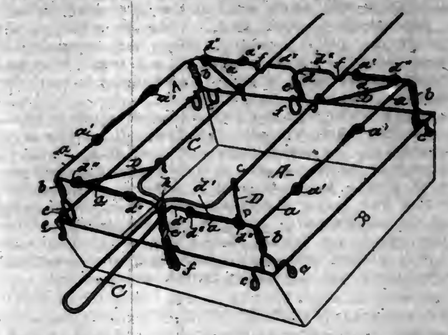
4. In elevated carriers, an overhead track, swiveling brackets carrying wheels to run upon the track and having their lower ends tubular, a receptacle, upright tubular hangers to support the receptacle, the lower ends of the brackets being inserted in the upper ends of the hangers, and being adapted to swivel therein, an eye bolt being inserted in the tubular part of the bracket and a pin or an equivalent passed through the hanger and through the eye of the bolt so as to hold it in swiveling position.

5. In elevated carriers, an overhead track, a receptacle, hangers to support the receptacle and having tubular upper ends, swiveling brackets having their upper ends fitted to carry track wheels, and their lower ends inserted in the tubular ends of the hangers, and fitted to swivel therein, and the wheel carrying end of the bracket being offset from its swivel end, so the center of the wheel will be in line with the center of the swivel.

[Claims 6 to 25 not printed in the Gazette.]

876,579. MEAT-ROASTING APPARATUS. LOUISE NELSON, Oakland, Cal. Filed Feb. 23, 1906. Serial No. 302,386.

1. A meat-roasting frame formed of sections of wire with overlapping portions slidably fitted one to the other, said sections comprising pairs of wires with divergent portions and twisted shanks, the lower ends of the shanks being fashioned into hook-form to enable them to fit over the vertical edge of a pan or other support.

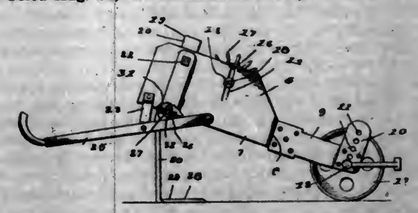


2. A meat-roasting frame formed of sections of wire slidably connected, said frame having foot-portions of substantially hook-form adapted to fit over the vertical edge of a support, and a fork extending across said frame and beyond opposite sides thereof, said frame having depressed seats or rests for the members of the fork.

3. A meat-roasting frame formed of sections of wire slidably connected, said frame having foot-portions of substantially hook-form adapted to fit over the vertical edge of a support, and a fork extending across said frame and beyond opposite sides thereof, and hooks loosely hung on the frame and adapted to hook into engagement with the fork.

4. A meat roasting device comprising a frame formed of slidably joined sections, said frame having foot-portions of substantially spring-clip form, and metal blocks having vertical edges over which the foot-portions of the frame are detachably fitted.

876,580. WEEDER. FRANCIS M. NEWLAND, Alger, Ohio. Filed Aug. 30, 1906. Serial No. 332,677.



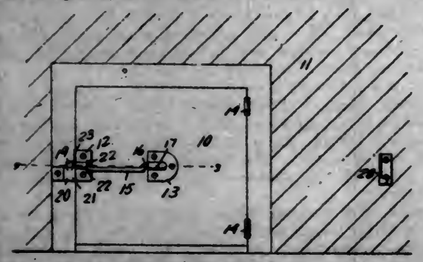
1. A reversible weeder comprising a frame including spaced sides and a forward connecting end; a forward extension connected to said end portion and disposed longitudinally of the frame; a depending perforated strip secured to the front end of said extension; a centering wheel adjustably secured to said strip; a rotatable, spiked drum mounted in said frame adjacent the lower edge thereof; a transversely disposed knife having its opposite ends slotted and bent upwardly against the corresponding frame sides; bolts secured to said frame sides and engaged in said slots, to permit said knife to be vertically adjusted; a strap connecting the frame sides at their upper edges; a standard having a bent lower end engaged with said strap; a forwardly extending stalk cutting blade disposed at the upper end of said strap; and a pair of handles secured intermediate their ends to said frame sides, for reversing the position of said frame, to throw the drum and transverse knife, and the stalk-cutting blade into operation according as the frame is in normal or inverted position.

2. A reversible weeder comprising a frame including spaced sides and a forward connecting end; a forward extension connected to said end portion and disposed longi-

tudinally of the frame; a depending perforated strip secured to the front end of said extension; a centering wheel adjustably secured to said strip; a rotatable, spiked drum mounted in said frame adjacent the lower edge thereof; a transversely disposed knife having its opposite ends slotted and bent upwardly against the corresponding frame sides; and bolts secured to said frame sides and engaged in said slots, to permit said knife to be vertically adjusted.

3. A weeder comprising a frame including spaced sides; a centering wheel secured to said frame; a rotating drum mounted in the lower portion of said frame; a strap connecting the frame sides at their upper edges and provided with a longitudinal slot; a knife projecting upwardly and having a shoulder provided with a bolt for sliding engagement in said slot; brackets secured to the frame sides; and handles secured intermediate their ends to said brackets, whereby the frame may be reversed, and either the drum or the knife thrown into operation.

876,581. LATCH. MARTIN J. OSTUL, Minneota, Minn. Filed Apr. 13, 1907. Serial No. 368,019.



1. In combination with a door and its casing, a latch including a pair of fastening plates secured to the door, and a bolt mounted therein for limited rotation; and a keeper for said bolt secured to the casing and adapted to detachably engage one end of said bolt, one of said fastening plates having an internal channel and the door having an opening registering with said channel and through which the opposite end of said bolt extends, whereby said bolt may be operated and the door unlatched from either side.

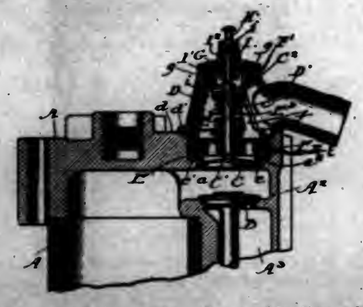
2. In combination with a door and its casing, a latch including a pair of fastening plates secured to the door, and a bolt mounted at opposite ends therein for limited rotation; a keeper secured to the casing and provided with a seat into which the adjacent end of the bolt is movable into and out of engagement; and means formed upon one of said plates for retaining said bolt in operative position at all times.

3. In combination with a door and its casing, a latch including a pair of fastening plates secured to the door, and an U-shaped bolt mounted at opposite ends therein for limited rotation; a keeper secured to the casing and provided with a seat into which the adjacent end of the bolt is movable into and out of engagement; and means formed upon one of said plates and disposed upon opposite sides of the adjacent bolt end for limiting the rotary movement of said bolt, to maintain the bight portion of the latter out of contact with the door at all times.

4. In combination with a door and its casing, a latch including a pair of fastening plates secured to the door, and an U-shaped bolt mounted at opposite ends therein for limited rotation; a keeper secured to the casing and provided with a seat into which the adjacent end of the bolt is movable into and out of engagement; and a pair of ears projecting laterally from the plate adjacent said keeper and disposed upon opposite sides of the corresponding bolt end, for limiting the rotary movement of said bolt, to maintain the bight portion of the latter out of contact with the door at all times.

5. In combination with a door and its casing, a latch including a pair of fastening plates secured to the door, and an U-shaped bolt mounted at opposite ends therein for limited rotation; a keeper secured to the casing and provided with a seat into which the adjacent end of the bolt is movable into and out of engagement; and a pair of ears projecting laterally from the plate adjacent said keeper and disposed upon opposite sides of the corresponding bolt end, for limiting the rotary movement of said bolt, to maintain the bight portion of the latter out of contact with the door at all times, the other plate having an internal channel and the door having an opening registering with said channel and through which the opposite end of said bolt extends, whereby said bolt may be operated and the door unlatched from either side.

876,582. INLET-VALVE MECHANISM FOR EXPLOSIVE-ENGINES. WILLIAM OTTAWAY, Aurora, Ill., assignor to Aurora Automatic Machinery Company, Aurora, Ill., a Corporation of Illinois. Filed Mar. 7, 1906. Serial No. 304,725.



1. In an explosive engine, the combination with the cylinder thereof provided with a valve opening and with an annular casing-seat surrounding said opening, of a valve casing or shell having at its inner end an annular bearing surface fitting said casing-seat, and an opening at its outer end, and clamping means embracing a clamping member which is connected with the cylinder inside of the said casing-seat, and a nut having screw-threaded engagement with said clamping member and which bears against the outer end of the said shell or casing to clamp the same against said casing-seat.

2. In an explosive engine, the combination with the cylinder thereof provided with a valve opening and with an annular casing-seat surrounding the said opening, of a valve casing provided at its inner end with an annular bearing surface fitting said seat, a clamping member embracing a ring having screw-threaded engagement with the said cylinder inside of said casing-seat, and a nut having screw-threaded engagement with the said clamping member and which bears on the outer end of said shell or casing to clamp the same against said casing-seat.

3. In an explosive engine, the combination with the cylinder thereof provided with a valve opening and with an annular casing-seat surrounding said opening, of a valve casing provided at its inner end with an annular bearing surface fitting said seat, and at its outer end with an opening, a ring having screw-threaded engagement with the cylinder inside of said casing-seat, a second ring rigidly connected with and forming an outward extension of said first named ring and which is located in the outer part of the casing, and a nut having screw-threaded engagement with the said outer ring and which bears on the outer end of the shell or casing to clamp the latter against the said casing-seat.

4. In an explosive engine, the combination with a cylinder provided with a valve opening and a seat ring fitted in said opening of a locking ring for locking said seat ring in place, a removable valve casing, and a nut engaging a screw threaded aperture in said locking ring for locking the casing in place.

5. In an explosive engine, the combination with the cylinder provided with a valve opening, and a seat ring fitted in said opening, of a screw threaded locking ring entering said opening to lock said seat ring in place, and provided with an extension, a valve casing, a nut having screw threaded engagement with an opening in said extension and between which and the cylinder the casing is locked in place.

[Claims 6 to 8 not printed in the Gazette.]

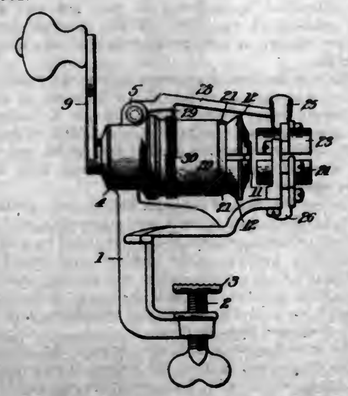
876,583. PROCESS OF TANNING. GEORGE H. PENDLETON, Busch, Okla. Filed June 25, 1907. Serial No. 380,785.

1. The process of tanning hides, pelts, and the like, which consists in first introducing the hide or pelt into a bath containing a tanning and coloring material, allowing it to remain therein for a period of time, afterwards adding gum arabic, oil of hops and extract of cherry to said bath, and allowing the hide or pelt to remain in the final compound until tanned.

2. The process of tanning hides, pelts, and the like, which consists in softening the hide or pelt, introducing the same into a bath consisting of water, an alkali, ammonia, and a coloring and tanning material, allowing it to remain therein, then adding to the bath gum arabic, oil of hops and extract of wild cherry, and allowing said hide or pelt to remain therein until tanned.

3. The process of tanning hides, pelts, and the like, which consists in first softening the hide or pelt and removing the flesh therefrom, preparing a preliminary bath by boiling together water, soda and ammonia, afterwards adding gum gambier and boiling the same, allowing the bath to cool, placing the hides or pelts therein for a predetermined period, adding to said bath, gum arabic, oil of hops and extract of wild cherry, allowing the hide or pelt to remain until tanned, removing the hide or pelt from the final bath, and oiling said hide or pelt.

876,584. CARTRIDGE-CRIMPER. GEORGE T. PHILLIPS, Voluntown, Conn. Filed July 22, 1907. Serial No. 384,901.



1. A cartridge crimper comprising a cartridge-holding clamp, rotatable mechanism for engaging and crimping a cartridge held in the clamp, and means controlled by the clamp for controlling the crimping action.

2. A cartridge crimper having a cartridge-holding clamp, a rotatable and radially movable crimping jaw, a feed sleeve embracing and rotatable with the jaw and capable of endwise movement thereon to force the same inwardly, the sleeve being provided with a spiral guideway, and means controlled by the clamp for engagement with the spiral guideway to move the sleeve endwise under the rotary movement thereof.

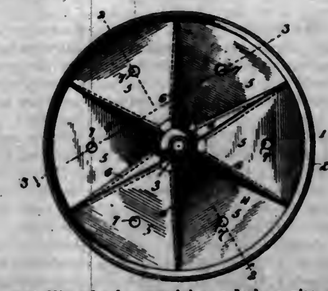
3. A cartridge crimper having a rotatable and radially movable crimping jaw, a feed sleeve embracing and rotatable with the jaw and capable of endwise movement thereon to force the same inwardly, and means arranged to feed the sleeve endwise under the influence of the rotary movement thereof.

4. A cartridge crimper comprising a bifurcated rotatable tube, a pair of rotatable radially movable crimping jaws having pivotally-connected shanks working in the bifurcated portions of the tube, a spring normally tending to separate the jaws, a center element embraced by the jaws, a pivot pin common to the center and the shanks of the jaws and piercing the tube one end of the pin projecting externally of the tube, a feed sleeve embracing the tube and having a longitudinal guideway receiving the projecting end of the pin, said sleeve having portions coöperating with the jaws to force the latter inwardly when the sleeve is slid forward, and means to feed the sleeve endwise when the tube is rotated.

5. A cartridge crimper having a cartridge holding clamp, a center element, a rotatable and radially movable crimping jaw coöperating with the center element, a feed sleeve embracing and rotatable with the jaw and capable of endwise movement thereon to force the same inwardly, and means arranged to feed the sleeve endwise under the influence of the rotary movement thereof.

[Claim 6 not printed in the Gazette.]

876,585. WHEEL FOR WHEELBARROWS. SAMUEL F. PHILLIPS, Ashboro, N. C. Filed June 8, 1907. Serial No. 377,974.

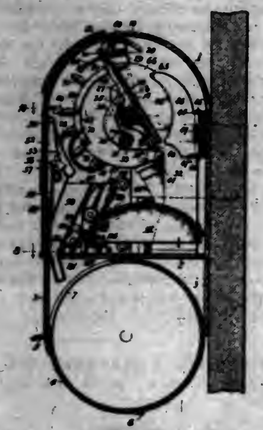


1. A metallic wheel comprising a hub, a rim, and a single plate connecting the hub and the rim and formed integral with the same and consisting of an annular series of inwardly tapered substantially sector-shaped portions arranged in staggered relation and extending from the hub to the rim and having their outer portions united with the latter in a plane coincident with the median line of the rim, and radial web portions connecting the sector-shaped portions and tapered outwardly from the hub to the rim.

2. A metallic wheel comprising a hub, a rim, and a single plate connecting the hub and the rim and formed integral with the same and consisting of an annular series of inwardly tapered substantially sector-shaped portions arranged in staggered relation and extending from the hub to the rim and having their outer portions united with the latter in a plane coincident with the median line of the rim, and radial web portions connecting the sector-shaped portions and tapered outwardly from the hub to the rim, said web portions forming depressions or recesses located alternately at opposite faces of the plate of the wheel.

3. A metallic wheel comprising a hub, a rim, and a single plate connecting the hub and the rim and formed integral with the same and consisting of an annular series of inwardly tapered substantially sector-shaped portions arranged in staggered relation and extending from the hub to the rim and having their outer portions united with the latter in a plane coincident with the median line of the rim, and radial web portions connecting the sector-shaped portions and tapered outwardly from the hub to the rim, said web portions forming depressions or recesses located alternately at opposite faces of the plate of the wheel, and the web portions at each recess being arranged at an obtuse angle to the sector-shaped plate forming the back of the recess.

876,586. COIN-REGISTERING MECHANISM. FRANK D. POWELL and CHARLES S. ELLIS, Chicago, Ill., assignors to American Coin Register Company, Chicago, Ill., a Corporation of Illinois. Filed June 22, 1904. Serial No. 213,671.



1. The combination with a coin receptacle, of a registering tape or strip protected against unauthorized manipulation, means for automatically feeding the same step-by-step into said coin receiving receptacle, each step representing a predetermined unit of coin value, a primary inclosure having a plurality of coin-slots for the insertion of coins of different values to initiate their deposit in said coin receptacle, means in operative proximity to said slots for transferring coins therefrom respectively to said coin receptacle, and means in operative connection with said coin transferring means, for actuating said registering tape one step for each unit of value of each coin deposited.

2. The combination with a coin receptacle, of a registering tape or strip protected against unauthorized manipulation, a locked or sealed inclosure, means for intermittently feeding a predetermined portion of said tape into said locked or sealed inclosure, with each impulse of the feeding mechanism, such impulse representing a unit of coin value, a plurality of coin openings for the insertion of coins of different denominations, means for transferring said coins to said coin receptacle and means for imparting one or more forward movements to said intermittent feeding mechanism with each coin deposited, the number of said movements being determined by the value of the coin in units, assuming the coin of smallest value provided for to represent one movement.

3. The combination with a coin receptacle, of a coin registering mechanism inclosed within a locked or sealed inclosure, said mechanism consisting of a registering tape, means for feeding said tape out of said inclosure through a restricted aperture into a secondary locked or sealed inclosure constituting said coin receptacle, means for receiving and transferring coins of different values through said primary locked or sealed inclosure to said coin receptacle, and means for automatically imparting one or more impulses to said tape feeding mechanism, according as a coin representing one or more units of value is deposited therein.

4. The combination with a coin receptacle adapted to receive coins of different denominations, of a coin registering mechanism inclosed within a primary locked or sealed inclosure, said mechanism consisting of a registering tape, means for feeding said tape step-by-step out of said primary inclosure through a restricted aperture into a secondary locked or sealed inclosure constituting said coin receptacle, means for receiving and transferring coins of different values through said primary inclosure to said coin receptacle, means for imparting one or more impulses to said tape feeding mechanism according as a coin representing one or more units of value is deposited therein, and means for severing said tape and shielding said aperture when said coin receptacle is opened.

5. A device of the class described, in which is combined within a locked or sealed inclosure a plurality of independently movable coin-carriers, a normally inert primary actuating mechanism common to all of said carriers, said mechanism being arranged to be connected with any one of said carriers, by means of a proper coin, a separate coin receptacle common to all of said carriers, a secondary actuating mechanism to their respective normal positions mined extent by each of said carriers, independent means for returning an actuated carrier and said secondary actuating mechanism to their respective normal positions after the release of a coin from the carrier, and means controlled by said secondary actuating mechanism for producing a record of the value of said coin and conveying the same to said coin receptacle.

[Claims 6 to 20 not printed in the Gazette.]

876,587. ROCKER-BOTTOM CAR. HERMAN C. PRIEBE, Blue Island, Ill. Filed Mar. 30, 1907. Serial No. 365,458.



1. The combination of the car body having a hopper bottom therein, a plurality of doors extending transversely across the bottom of said car, rocker shafts upon which said doors are mounted, and means for rocking or tilting said doors to open position.

2. A car having a hopper bottom therein, a plurality of door sections extending transversely of said car and opening downwardly at each side of the hopper bottom, rocker shafts extending transversely of said car and approximately mediate of the width of the door sections, and means for rocking or tilting the aforesaid door sections on said shafts.

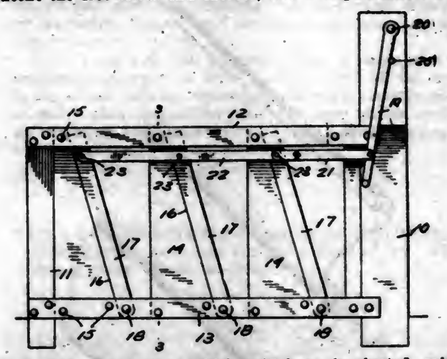
3. The combination of a hopper bottom car, rocker shafts extending transversely of said car, a plurality of door sections mounted upon frames adapted to tilt or rock on said shafts approximately mediate of the width of said door sections, U-bolts extending around said shaft and secured to the door frame, and supports for said door sections when in opened position.

4. The combination of a hopper bottom car, rocker shafts extending transversely of said car, a plurality of door sections mounted upon and adapted to be tilted on said shafts approximately mediate of the width of said door sections, links secured to the outer edges of said door sections, a rod extending parallel with said doors to which said links are loosely secured and means for actuating said rod to open or close said door sections.

5. The combination of a hopper bottom car, a plurality of door sections opening from the bottom of said car, rocker shafts upon which said door sections are mounted approximately mediate of the width thereof, rods journaled in bearings secured to the car, links connected to said rods and to the outer edges of the door sections, and means for operating said rods to raise and lower the door sections.

876,588. CATTLE-STANCHION. LUDWIG T. RASMUSSEN, Nevada, Iowa. Filed July 31, 1907. Serial No. 386,477.

In stanchions, the combination with a frame including end posts, upper and lower bars connecting the same, spaced vertical bars held in fixed relation between said upper and lower bars, and bars pivoted to said lower bar at corresponding sides of said several fixed bars, and being movable towards and away from said fixed bars, of a horizontal bar pivoted to the upper ends of all of said pivoted bars, a lever pivoted at its upper end to one of said posts, said lever depending from its pivot, a link pivoted to the end of the said bar having pivotal connection with said pivoted bars, the said link being pivoted to said lever adjacent the free lower end thereof, and a displaceable bolt



engaged in the post to which said lever is pivoted, said bolt being designed to engage said lever at opposite sides thereof to prevent displacement of the same from either of the positions to which it may be moved on its pivot.

876,589. BROOM-HOLDER. CHARLES S. REES, Philadelphia, Pa., and WILLIAM FISCHER, Jr., Patterson, N. J.; said Fischer assignor to said Rees. Filed July 3, 1907. Serial No. 382,111.

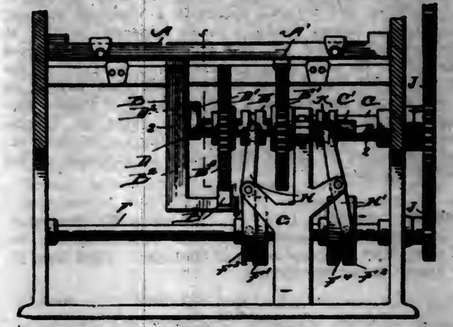
1. In a broom holder having a metallic resilient frame member, two broom engaging friction rollers supported thereby, the rollers having circumferential grooves, a coinciding portion of the said frame member engaging in said grooves whereby said rollers are held in place.

2. A broom holder formed from wire comprising two arms bent intermediate to their ends to form triangular portions, rollers carried by the extremities of the said arms, said rollers having circumferential grooves, the triangular portion of the arms co-acting and engaging with the grooved portions of the rollers.

3. A broom holder comprising a frame gripping rollers supported at the extremities of said frame and means for varying the gripping tension of the rollers, the frame being provided with the means for engaging the circumference of the rollers for retaining them in position upon the extremities of the frame.

876,590. RECIPROCATING-MOTION PRINTING-PRESS. CLIFFORD L. ROBINSON, New York, N. Y., assignor of one-third to Frank S. Streep, New York, N. Y. Filed Aug. 9, 1906. Serial No. 329,835.

1. The combination with a printing press bed movable in opposite directions, of loosely mounted gear wheels, of oppositely arranged rack bars supported by the bed and adapted to be engaged respectively by said gear wheels, a clutch slidably mounted between said gear wheels and adapted to engage alternately with each, means for holding said clutch out of engagement with both of said gears when the bed reaches its limit of travel in either direction, and means for starting the bed upon a return movement independently of the gear wheels.



2. In a device of the kind described, upper and lower rack bars, a shaft, gear wheels loose on the shaft and engaging respectively the rack bars, a sliding clutch between the gear wheels, a second shaft, a grooved cam thereon, and levers pivoted midway their ends, the ends of the levers engaging respectively opposite sides of the peripheries of the cam and clutch as and for the purpose set forth.

876,591. JAR-SEALING AND VACUUM-RELEASING DEVICE. JARROT L. ROLLINS, Colfax, Cal. Filed May 7, 1907. Serial No. 372,352.



1. The combination with a jar or can and a cover therefor, said cover having a depending flange with grooves on the under side thereof connecting with the interior of the jar, of a sealing medium for the cover, said medium including a flexible, compressible cord bent to fit the sealing groove of the jar, having its lower surface substantially non-absorbent and having a coating of sealing material adherent to its upper surface.

2. The combination with a jar or can having a sealing groove or channel and a cover for the jar having a depending flange adapted to enter the groove of the jar, said flange being provided with grooves in its underside leading to the interior of the jar, of a sealing medium, said medium consisting of a substantially flexible compressible cord coiled to fit the sealing groove or channel of the jar, with its lower surface substantially non-adherent, and its upper surface carrying a fusible sealing material of such length as to fill the groove of the jar, said cord having an uncoated extension capable of extending across and being seated upon the jar cover.

3. A jar and can sealing and unsealing device consisting of a coiled flexible cord having a semi-coating of fusible sealing material, a jar having a groove around its periphery, a cover having a flange fitting the inner portion of the groove, and having channels made to communicate with the interior of the jar, said cord being seated in the bottom of the groove and covered by the fused and subsequently hardened medium and means by which the cord and sealing medium are removed to expose the channels.

4. A jar or can having a peripheral groove or channel at the top, with the outwardly inclined outer wall, a cover having a flange fitting the inner portion of said groove, said flange having openings communicating with the in-

terior of the jar, a compressible cord fitting the groove or channel, having its lower surface substantially non-adherent, and the upper surface carrying a coating of sealing material, and an extension of said cord whereby it may be removed from its seat.

5. A jar or can having a peripheral groove around its top, a cover having a flange fitting the inner portion of said groove, and forming therewith a V-shaped channel, said flange having channels in its underside leading to the interior of the jar, and said cover having grooves formed in its top, a compressible cord bent to fit the circumferential groove of the jar, said cord having its lower surface non-adherent, and a coating of fusible sealing material upon its upper surface filling the circumference of the groove, said cord having an uncoated extension seated in one of the grooves or channels on the top of the cover.

876,592. BANANA-CRATE. THEODORE H. RUDDIMAN, Detroit, Mich., assignor to Banana Steel Crate Co., Detroit, Mich., a Corporation of Michigan. Filed Mar. 16, 1905. Serial No. 250,899.



A banana crate comprising a plurality of metal hoops having inwardly extending flanges, a plurality of vertical staves crossing the outer faces of said hoops and rigidly secured thereto, a bag having encircling flexible strands, depending within the crate, hooks movably mounted in the flanges of said hoops and engaging said strands to suspend the bag within the crate frame.

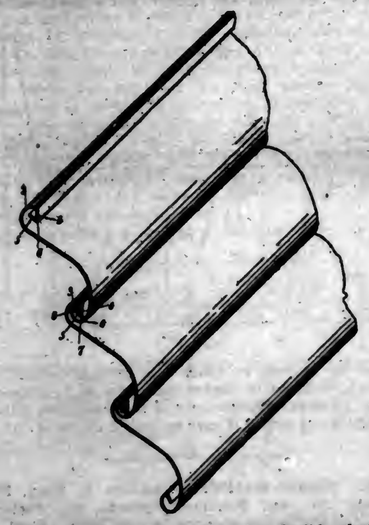
876,593. FLEXIBLE OR ROLLING METALLIC SHUTTER. ALBERT RUSH, Columbus, Ohio. Filed May 31, 1907. Serial No. 376,506.

1. A flexible shutter or curtain constructed chiefly of slats each consisting of a strip of sheet metal having its upper portion provided with a bearing member substantially V-shaped in cross section and its lower portion provided with a roll having a downwardly extending tongue to enter the cavity of such V-shaped member in an adjoined slat.

2. A flexible shutter or curtain constructed chiefly of slats each consisting of a strip of sheet metal having its upper portion provided with a bearing member substantially V-shaped in cross section and its lower portion provided with a roll and a downwardly extending tongue to enter the cavity of the V-shaped member on an adjoined slat, the said V-shaped member and tongue being on opposite sides of the slat.

3. A flexible shutter or curtain constructed chiefly of slats each consisting of a strip of sheet metal having its upper portion provided with a bearing member V-shaped in cross section with flat sides, and its lower portion provided with a roll and a downwardly extending tongue to enter the cavity of the V-shaped member on an adjoined slat.

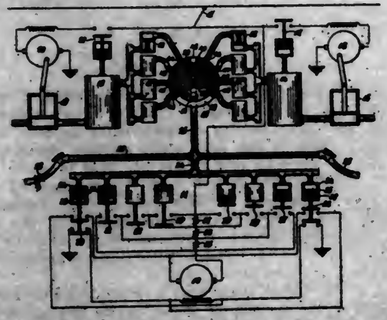
4. A flexible shutter or curtain constructed chiefly of slats each consisting of a strip of sheet metal having its upper portion provided with a bearing member substantially V-shaped in cross section, and its lower portion provided with a roll and a downwardly extending flat tongue to enter the cavity of the V-shaped member of an adjoined slat.



5. A slat for the construction of a flexible shutter or curtain, consisting of a strip of metal having its upper portion provided with a bearing member substantially V-shaped in cross section and its lower portion provided with a roll having a downwardly extending tongue to enter the cavity of such a V-shaped member on a similar slat.

[Claims 6 to 8 not printed in the Gazette.]

876,594. CONTROL SYSTEM. GEORGE B. SCHLEY, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Dec. 31, 1906. Serial No. 350,129.



1. In a multiple unit control system, a single pipe extending throughout the train, and means for controlling the motor circuits of the several cars for forward, stop or reverse conditions therefrom.

2. In a multiple unit control system, a single pipe extending throughout the train, and branch connections in the several cars for securing forward, stop or reverse conditions of the car motors by varying the fluid pressure in said pipe.

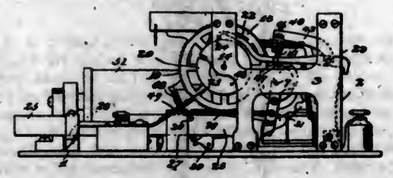
3. In a multiple unit control system, a single pipe extending throughout the train, branch connections therefrom within the several cars, and fluid-operated devices within the several cars and operable from the train pipe for setting the motors to forward, zero or reverse movement.

4. In a multiple unit control system, a single pipe extending throughout the train, fluid-operated devices within the several cars for controlling the speed and direction of the motors thereof, and branch connections from said pipe to said devices.

5. In a multiple unit control system, a single pipe extending throughout the train, fluid-operated devices within the several cars for controlling the motor circuits thereof, and branch connections from said pipes to said devices for arranging said motor circuits in any desired relation by varying the fluid pressure in said pipe.

[Claims 6 to 18 not printed in the Gazette.]

876,595. ELECTRICAL REGISTER AND SYSTEM THEREFOR. LOUIS A. SCHMIDT, Chicago, Ill. Filed Nov. 2, 1903. Serial No. 179,569.



1. In combination, a tally mechanism comprising a series of tally wheels each provided with a circumferentially disposed series of cams, a corresponding series of levers operatively engaged with the respective cams, a contact actuating device common to all of said levers, a line contact operable by said contact actuating device, a magnet actuated ratchet and gear mechanism for successively returning each of said counters to an initial position, a relay at the receiving station, a repeater at the receiving station adapted to operate synchronously with the main magnet of the subscriber's instrument, an electrically actuated counter at the receiving station, a circuit operably connected with said electrically actuated counter and controlled by said relay.

2. In combination with a circuit extending from station to station, an electrically controlled register at a sending station, a repeater at a receiving station in circuit with the register at the sending station and electrically controlled to operate synchronously with the latter, a transmitting mechanism at the sending station operated by the sending register and adapted to effect current variations differentiated from those which operate said sending register and repeater, a relay at the receiving station responsive to the current variations of the transmitting mechanism, a recording mechanism operable through said relay, and means for intermittently interposing and withdrawing resistance from the circuit whereby the sending register and repeater are operated without operating the relay.

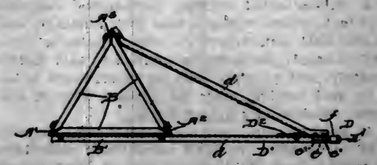
3. In an apparatus for electrically transmitting readings, an electro-magnetically operated register at a sending station, an electro-magnetically operated repeater at a receiving station, a circuit extending through said register and repeater, means for interposing and withdrawing resistance in said circuit for the purpose of operating said register and repeater without completely interrupting the circuit, a relay at the receiving station connected in said circuit and unresponsive to the reductions of current effected by the introduction of said resistance, a transmitting mechanism operatively connected with the register at the sending station, and adapted to effect current variations to which said relay is responsive, an auxiliary circuit controlled by said relay, and a recording mechanism controlled by said auxiliary circuit.

4. In combination, an electrically controlled register at a sending station, a repeater at a receiving station in circuit with the sending register and electrically controlled to operate synchronously with the latter, a transmitting mechanism connected with the sending register and adapted to effect current variations differentiated from those which operate said sending register and repeater, a relay at the receiving station responsive to the current variations of the transmitting mechanism, and a recording mechanism operable through said relay.

5. In an apparatus for electrically transmitting tactual readings, an electro-magnetically operated register at a sending station, an electro-magnetically operated repeater at a receiving station, a ground-to-ground circuit extending through said register and repeater, a transmitting mechanism operable by the register at the central station, and comprising means for opening and closing the circuit successively and correspondingly to a tactual reading, a relay at the receiving station included in the main circuit and also included in a shunt to the main circuit, an interrupter interposed in one of the circuits extending through said relay, an auxiliary circuit controlled by the armature of said relay, and a register operable by said auxiliary circuit.

[Claims 6 to 10 not printed in the Gazette.]

876,596. TRANSMISSION-TOWER. DANIEL R. SCHOLES, Chicago, Ill., assignor to Aermotor Company, Chicago, Ill., a Corporation. Filed May 21, 1907. Serial No. 374,964.



1. A transmission tower having a plurality of corner posts, and a cross-arm made of two members secured to the corner posts and having portions of unequal lengths projecting outward therefrom.

2. A transmission tower having a plurality of corner posts, and a cross-arm made of two members secured to the corner posts and having portions of unequal lengths projecting outward therefrom, one of said projecting portions lying in the plane of two of the corner posts.

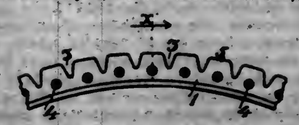
3. A transmission tower having a plurality of corner posts, and a cross-arm made of two members secured to the posts and having portions of unequal lengths projecting outward therefrom, one of said members having also a portion forming a brace extending between two of the corner posts and secured thereto.

4. A transmission tower having a plurality of corner posts, and a cross-arm made of two members secured to the posts and having portions of unequal lengths projecting outward therefrom, one of said members being straight and having a portion forming a brace extending between two of the corner posts and secured thereto.

5. A transmission tower having a plurality of corner posts, and a cross-arm made of two members secured to the posts and having portions of unequal lengths projecting outward therefrom, and a tensile brace secured at one end to the cross-arm and at the other end to the tower above the cross-arm.

[Claims 6 to 15 not printed in the Gazette.]

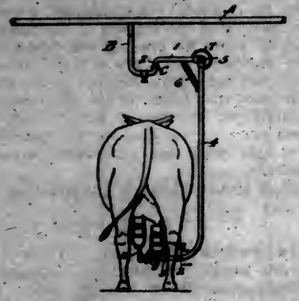
876,597. VEHICLE-TIRE. FRANK A. SHIBERLING, Akron, Ohio. Filed May 2, 1906. Serial No. 314,864.



An elastic vehicle tire having the tread thereof provided with a circumferentially-extending series of transverse notches suitably spaced apart, said notches extending partially through the tire, said tire further provided

with a circumferential series of transversely-extending openings, said openings being uninterrupted and having flaring ends, and a contracted intermediate portion.

876,598. MILKING-MACHINE. DAVID T. SHARPLES, West Chester, Pa. Filed Dec. 5, 1906. Serial No. 346,424.



1. A fluid-actuated milking mechanism comprising a pair of teat-presses each provided with inflatable wall sections and fluid distributers therefor, a pulsator device arranged to supply the inflating medium to said distributers alternately, and a reciprocator device arranged to be operated by said medium after its passage through the wall sections, substantially as set forth.

2. A fluid-actuated milking mechanism comprising a pair of teat-presses provided respectively with inflatable wall sections and fluid distributers, a carrying-arm for said presses having a vertically swinging member to which one of them is attached, and pulsator and reciprocator devices on said arm substantially as set forth.

3. In a fluid-actuated milking mechanism the combination with inflatable teat-presses, of a pulsator comprising a main fluid-cylinder having separate valve-controlled ports communicating respectively with said inflatable presses and with an exhaust, and a secondary valved cylinder having separate conduits communicating with said inflatable presses and serving to control the main fluid-cylinder substantially as set forth.

4. In a fluid-actuated milking mechanism the combination with reciprocatively mounted inflatable teat-presses, of a pulsator comprising a main fluid-cylinder having separate valve-controlled ports communicating respectively with said inflatable presses and with an exhaust, and a secondary valved cylinder having separate conduits communicating with said inflatable presses and serving to control the main fluid-cylinder, said conduits being intermediately connected to a reciprocator device having a cut-off piston arranged to simultaneously impart relative reciprocating movement to the teat-presses.

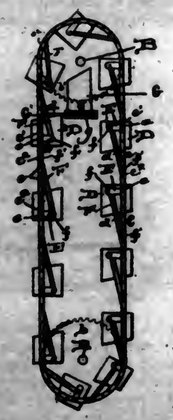
5. In a fluid-operated milking mechanism, a teat press having a casing provided with a side wall lining comprising a plurality of inflatable pads arranged side by side to form a single pressing finger, said pads being adapted to cumulatively expand when inflated.

[Claims 6 to 20 not printed in the Gazette.]

876,599. ELEVATOR. LEVI M. SHAW, Chicago, Ill. Filed Feb. 24, 1906. Serial No. 302,717.

1. In an elevator, the combination of an upper set of carrying wheels, a lower set of carrying wheels, a carrier driven by the carrying wheels, a plurality of buckets or receptacles, each bucket or receptacle pivotally mounted adjacent to its outer bottom corners on the carrier, for the main body of the bucket or receptacle to project inside of the carrier, a lever adjacent to the bottom of and extending transversely of each bucket or receptacle, and a draw-rod pivotally connected to the carrier and to the inner end of each lever, substantially as described.

2. In an elevator, the combination of an upper shaft, a lower shaft, a pair of carrying wheels on each shaft, a chain or belt for each set of upper and lower carrying wheels, a plurality of buckets or receptacles each bucket or receptacle pivotally mounted adjacent to its outer bottom corners on the chains or belts, for the main body of the bucket or receptacle to project inside of the chains or belts, a lever transversely extending on the end of each bucket or receptacle, adjacent to the bottom and a pull arm or rod for each lever, pivotally connected to the inner end of the lever and to the chain or belt, substantially as described.



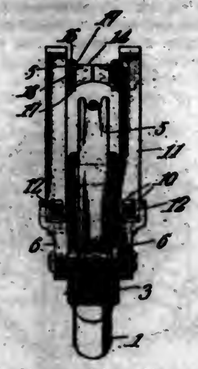
3. In an elevator, the combination of an upper shaft, a lower shaft, a pair of carrying wheels on each shaft, a chain or belt for each set of upper and lower wheels, a plurality of buckets or receptacles, a rod for each bucket or receptacle adjacent to the outer bottom corners pivotally mounting the bucket or receptacle on the chains or belts, for the main body of the bucket or receptacle to project inside of the chains or belts, a lever transversely extending on each end of each bucket or receptacle, adjacent to the bottom and an arm or rod for each lever pivotally connected to the inner end of the lever and to the chain or belt, substantially as described.

4. In an elevator, a support, bearings at the top and bottom of the support, a shaft mounted in the upper bearings, a shaft mounted in the lower bearings, a pair of carrying wheels for each shaft, a chain or belt for each set of upper and lower carrying wheels, a plurality of buckets or receptacles, a rod for each bucket or receptacle adjacent to the outer bottom corners pivotally mounting the bucket or receptacle on the chains or belts, for the main body of the bucket or receptacle to project inside of the chains or belts, a lever on each end of each bucket or receptacle, adjacent to the bottom and an arm or rod for each lever pivotally connected to the inner end of the lever and to the chain or belt, substantially as described.

5. In an elevator, a support, bearing at the top and bottom of the support, a shaft mounted in the upper bearings, a shaft mounted in the lower bearings, a pair of carrying wheels for each shaft, a chain or belt for each set of upper and lower carrying wheels, a plurality of buckets or receptacles, a rod for each bucket or receptacle adjacent to the outer bottom corners pivotally mounting the bucket or receptacle on the chains or belts, for the main body thereof to project inside of the chains or belts a lever transversely extending on each end of each bucket or receptacle, adjacent to the bottom an arm or rod for each lever pivotally connected to the inner end of the lever and to the chain or belt, and a vessel or receiver at the upper end of the support and into which the buckets or receptacles successively discharge, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

876,600. TROLLEY-GUARD. CHARLES W. SHEEHAN, Lubec, Me. Filed Oct. 11, 1907. Serial No. 396,996.

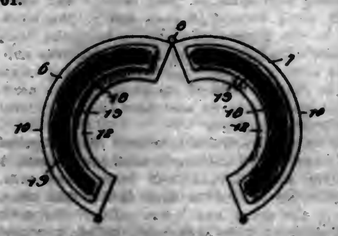


1. A trolley guard comprising side arms, one on each side of the trolley wheel having pivotal supports at their lower ends out of line with the axis of the trolley wheel and springs normally tending to hold the arms in vertical position but yielding to strains in either direction tending to turn these arms about their pivots, and two gates one on each arm near the free end of the arm, the said gates being mounted on pivots arranged longitudinally with reference to the arms, and springs controlling the gates to hold them normally in line one with the other with their free ends too close to permit the passage of the trolley wire.

2. A trolley guard comprising two arms flanking the trolley wheel and spring controlled to normally assume an upright position when the trolley wheel is in engagement with the trolley wire, and each movable about an axis eccentric to the axis of the trolley wheel and spring-controlled gates one on each arm and bridging the space between the arms above the trolley wire when the wheel is in engagement therewith, the said gates yielding in a direction at right angles to the direction of yield to the arms.

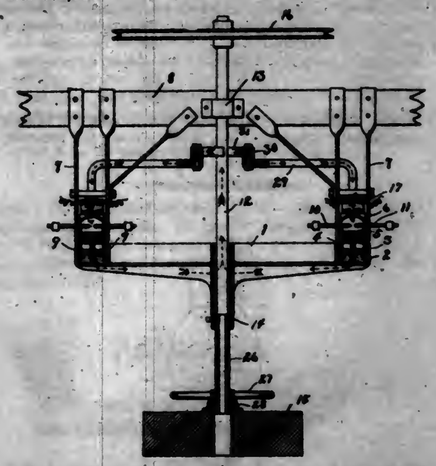
3. A trolley guard comprising brackets attachable to a trolley head and each having an ear spaced away from the corresponding portion of the trolley head, an arm pivotally supported by each bracket and having spaced ears housed in said bracket, a spring engaging the arm and bracket and tending to normally maintain the arm in an upright position when the trolley wheel is in engagement with the trolley wire, and gates having spaced ears mounted on a pivot pin carried by a corresponding arm, and a spring surrounding the pivot pin of the gate and engaging both the gate and the arm for maintaining the gate in normal position at right angles to the arm and over the trolley wire when in engagement with the trolley wheel.

876,601. GLAND OR SWAB HOLDER. WILLIAM SLAYDON, Denison, Tex. Filed Mar. 25, 1907. Serial No. 364,561.



As an article of manufacture, a gland or swab comprising a box formed in two parts hinged together at one side and separably connected at the other, one side at its inner edge being provided with a perforated flange to keep the packing in the gland, the other side having openings covered with fine woven-wire bound with lengths of wire, both secured in place by solder.

876,602. CEMENT-BURNING FURNACE. WILLOUGHBY E. SNYDER, Nazareth, Pa. Filed Mar. 11, 1907. Serial No. 361,640.



1. In a cement-burning furnace the combination with a rotatory annular hearth provided with a stationary reverberatory hood, of a set of arc-electrodes operatively disposed within the hood above the hearth, the members of the set being staggered so that the series of arcs produced between said members covers the entire width of the hearth, an electro-magnet located above said set of arc-electrodes, and means for securing a continuous current from said electro-magnet downward upon the hearth, substantially as described.

2. In a cement-burning furnace the combination with a rotary annular hearth, a stationary reverberatory hood inclosing the same, and draft-compelling means adapted to produce a current of air in opposition to the direction of movement of the hearth, of a set of arc-electrodes operatively disposed within the hood above the hearth, the individual carbons composing the set being staggered so as to produce a series of arcs extending diagonally across the entire width of the hearth, an electro-magnet located above said set of arc-electrodes and means for securing a current from said electro-magnet through the hearth, to concentrate and increase the effect of the arc-electrodes, substantially as described.

3. In a cement-burning furnace the combination with a rotatory hearth and reverberatory hood provided with draft-compelling means adapted to produce a current of air within the hood in opposition to the direction of rotation of the hearth, of a set of arc-electrodes operatively disposed within the hood above the hearth, the individual carbons composing the set being staggered so as to produce a series of arcs covering the entire width of the hearth, substantially as described.

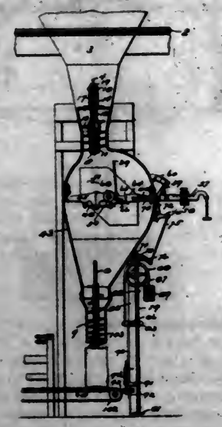
4. In a cement-burning furnace the combination with a rotary hearth and reverberatory hood provided with draft-compelling means adapted to produce a current of air within the hood in opposition to the direction of rotation of the hearth, of a series of sets of arc-electrodes operatively disposed within the hood above the hearth, the carbons composing each set being staggered so as to produce a series of arcs covering the entire width of the hearth, the distance between each set of arc-electrodes progressively diminishing from the charging end to the discharge end of the hood, substantially as described.

5. In a cement-burning furnace the combination with a

rotatory hearth and reverberatory hood provided with draft-compelling means adapted to produce a current of air within the hood in opposition to the direction of rotation of the hearth, of a series of sets of arc-electrodes operatively disposed within the hood above the hearth, the carbons composing each set being staggered so as to produce a series of arcs covering the entire width of the hearth, the interval between each set of arc-electrodes and the next progressively diminishing from the charging end to the discharge end of the hood, and means for vertically adjusting the hearth relatively to the arc-electrodes, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

876,603. FLOUR-PACKER. EDWIN G. STAUDE, Minneapolis, Minn. Filed Mar. 23, 1904. Serial No. 199,645.



1. In a packer, a feed mechanism comprising a primary and a secondary feed device concentrically and vertically arranged, and a mechanism for operating them.

2. In a packer, a feed mechanism comprising two concentrically and vertically arranged augers arranged to deliver a comparatively large and a small quantity of material, respectively, and means for operating said feed mechanism for the purpose specified.

3. In a packer, a feed mechanism comprising two concentrically and vertically arranged augers, one constituting a primary and the other a secondary feed, and mechanism for starting said augers simultaneously and operating said secondary feed after the movement of the primary feed has been arrested and means for arresting the movement of said primary feed.

4. In a packer, a tilting scale beam, a hopper carried thereby, a movable sack platform and mechanism preventing premature movement of said hopper and actuated by the movement of said platform to release said hopper.

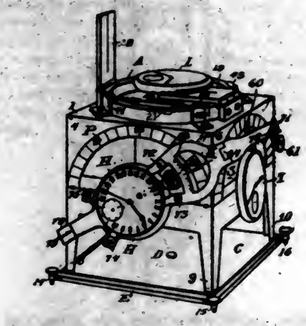
5. In a packer, a scale beam, a revolving hopper having oppositely arranged chambers, a movable sack platform and mechanism preventing premature movement of said hopper and arranged to be actuated by the movement of said platform to release said hopper.

[Claims 6 to 15 not printed in the Gazette.]

876,604. COMBINATION OF MEANS FOR SURVEYING AND NAVIGATION. ROBERT L. STEVENS, Hartwell, Ohio. Filed Feb. 18, 1907. Serial No. 358,105.

1. In combination, a segmental scale arranged with its plane vertical, a level arranged to properly set said scale, and a watch movably mounted adjacent to said scale in such a position that the hands of the watch may be used to read latitude and longitude, substantially as described.

2. In combination a segmental scale arranged with its plane vertical, a level arranged to properly set said scale, and a watch movably mounted adjacent to said scale in such position that a line drawn from the center of the watch through its highest number and extended beyond may be read upon said scale in divisions or fractions thereof, substantially as described.



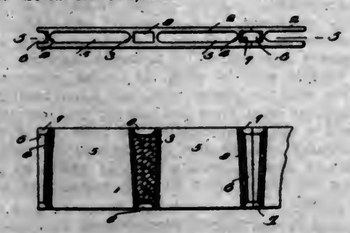
3. In combination, a compass, means for leveling the same, a watch movably mounted concentric with said compass and adjacent thereto in such a position that the hands of said watch may be used as pointers for the divisions of said compass, substantially as described.

4. In combination a compass, means for leveling the same, a watch movably mounted concentric with said compass and adjacent thereto in such a position that a line drawn from the center of the watch through its highest number and extended beyond may be read upon the divisions of said compass, substantially as described.

5. In combination a compass, means for leveling the same, a segmental scale arranged with its plane vertical and controlled by said leveling means, a watch movably mounted adjacent to said scale in such a position that its hands may be used as pointers for said scale, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

876,605. FIREPROOF WALL AND PARTITION. JOHN D. SULLIVAN, Salt Lake City, Utah. Filed Apr. 30, 1907. Serial No. 371,034.



1. A wall or partition composed of superposed rows of blocks, each block having spaced-apart sides and webs connecting said sides at their centers and ends, vertical grooves being formed in each end of the block and recesses in the upper and lower ends of the central webs, and plastic binding material in said grooves and recesses, the end webs of the blocks of one row being located in line with the central webs of the blocks of the next adjacent row, the spaces between said sides and the central and end webs forming conduits.

2. A wall or partition composed of superposed rows of blocks, each block having spaced-apart sides and webs connecting said sides at their centers and ends, vertical grooves being formed in each end of the block and recesses in the upper and lower ends of the central webs, said grooves at their ends being belled, and plastic binding material in said grooves, the belled ends thereof and said recesses, the end webs of the blocks of one row being located in line with the central webs of the blocks of the next adjacent row, the spaces between said sides and the central and end webs forming conduits.

3. The wall block herein-described consisting of two spaced-apart sides and webs formed integral with said sides at the centers and ends thereof, long narrow conduits being formed between said sides and closed at the ends by said webs, grooves being formed between said sides at the ends thereof and recesses in the opposite ends of the central web.

4. The herein-described block for walls or partitions composed of fireproof material and formed with spaced-apart sides, each side having metallic reinforcing therein, such block having webs connecting said sides at or near its ends and at a point intermediate said ends, the latter web having recesses in its opposite ends, and the end webs having grooves formed therein.

876,606. PIPE-COVERING. MAURICE SULLIVAN, New York, N. Y., assignor to Sullivan Insulation Company, a Corporation of New York. Filed July 25, 1907. Serial No. 385,462.



1. In a heat-insulating pipe covering the combination of angular, arc-shaped strips of sheet metal, the vertical part cut or slitted, the horizontal part adapted to fit the surface of the pipe; a strip of sheet metal supported on the ends of the slitted or cut terminals of pairs of said arc-shaped strips, ears of connecting pieces fixed to said strip to unite one arc-shaped section of sheet metal with another similar section, and a coating of heat-insulating material applied to the exterior surface.

2. A pipe covering comprising a frame formed of pairs of clamps, each clamp consisting of an angular, arc-shaped strip of sheet metal, the vertical portion slit or cut, and the horizontal portion adapted to fit the surface of the pipe, a combined connecting member and shield consisting of an arc-shaped strip of sheet metal uniting the slitted edges of pairs of clamps, means for uniting one connecting member and shield with an adjacent connecting member and shield, and a coating of heat-insulating material applied to the exterior surface.

3. A sheet metal pipe covering having two arc-shaped flanges adapted to fit the pipe, an intermediate section fixed to the flanges by two strips, each strip fixed at an angle with respect to said section and flanges, slits or cuts in the sheet metal extending from one flange to the other and a coating of heat-insulating material applied to the surface.

876,607. BELT-COUPLING. OLOF N. TEVANDER, Chicago, Ill., assignor, by mesne assignments, to Flexible Steel Lacing Company, a Corporation. Filed Aug. 20, 1906. Serial No. 331,406.



1. An improved article of manufacture, comprising a metallic belt coupling member composed of a pivot bar portion adapted to serve as the pivot of a like member and two sets of integral prongs projecting therefrom, adapted to be clenched upon the end of a belt, substantially as described.

2. An improved article of manufacture, comprising a metallic belt coupling member composed of a pivot bar portion adapted to serve as the pivot of a like member and two relatively staggered sets of integral prongs projecting therefrom, adapted to be clenched upon the end of a belt, substantially as described.

3. An improved hinge-like metallic belt lacing or coupling, comprising two interlocked members or parts, each serving as the pivot for the other and each provided with belt engaging jaws, substantially as described.

4. An improved hinge-like metallic belt lacing or coupling, comprising two self-interlocked members or parts, each serving as the pivot for the other and each provided with belt engaging jaws composed of a plurality of clenchable prongs, substantially as described.

5. An improved hinge-like metallic belt lacing or coupling, comprising two self-interlocked members or parts, each serving as the pivot for the other and each provided with belt engaging jaws, composed of two relatively staggered sets of clenchable prongs, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

876,608. CONVEYING MECHANISM. HARRY C. TRIPP, Chicago, Ill., assignor, by mesne assignments, to The Under-Feed Stoker Company of America, Chicago, Ill., a Corporation of New Jersey. Filed Apr. 26, 1901. Serial No. 57,602.



1. The combination with a receptacle, of a conveying screw, and a deflector *g* provided with a hole through which the conveying screw passes, the said deflector being provided with an inclined surface toward which the material fed by the screw is directed, which inclined surface serves to direct the material upwardly, the said deflector terminating in a wedge beneath the screw, substantially as described.

2. The combination with a receptacle, of a conveying screw, and a deflector *g* provided with a hole through which the conveying screw passes, the said deflector being provided with an inclined surface toward which the material fed by the screws is directed, which inclined surface serves to direct the material upwardly, the said deflector terminating in a wedge beneath the screw, the said wedge being located upon one side of the vertical plane cutting the longitudinal axis of the screw, substantially as described.

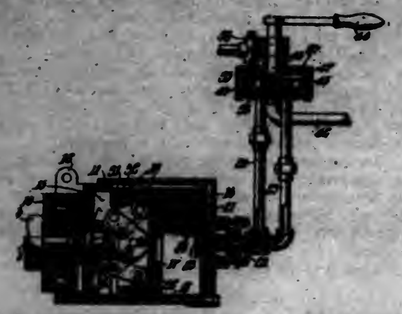
3. The combination with a screw conveyer, a passage way within which the conveyer is disposed, of a deflector, having a deflecting surface located beneath the conveyer to determine the lateral distribution of the material carried by the conveyer, said deflecting surface being located upon one side of the vertical plane cutting the longitudinal axis of the conveyer, substantially as described.

876,609. CLUTCH-OPERATING MECHANISM. HARRY L. TURNEY, Portland, Oreg. Filed Aug. 5, 1907. Serial No. 387,160.

1. In clutch operating mechanism, a revoluble shaft, a cylinder secured thereto, a thrust block extending through one end of the cylinder, a pair of pivotally mounted cam levers arranged in the cylinder and engaging the thrust block, and a piston disposed in the cylinder and operatively connected to said cam levers, said levers being arranged to automatically lock when the clutch has been moved to engaging position.

2. In clutch operating mechanism, a revoluble shaft, a cylinder secured thereto and having inner and outer heads, the inner head being centrally bored, a thrust block extending through the inner head, a clutch operating thrust pin engaged by said block, a piston in the cylinder, a pivotally mounted self locking cam lever arranged to en-

gage the thrust block, and a connecting means between the cam lever and the piston.



3. In clutch operating mechanism, a revoluble shaft, a cylinder secured thereto and provided with inner and outer heads, means for controlling the admission and exhaust of an operating fluid, the inner head of the cylinder being centrally bored, a thrust block extending through the inner head of the cylinder, a clutch operating thrust pin with which the block engages, a pivotally mounted cam disposed in the cylinder and engaging the thrust block, said cam having an extended arm and arranged in one position to automatically lock and hold the thrust pin in clutch engaging position, a piston in said cylinder, and a link connecting said piston to the cam.

4. In clutch operating mechanism, a revoluble shaft, a cylinder mounted thereon and having inner and outer heads, the inner head being centrally bored, a cylindrical thrust block extending through the inner head of the cylinder and provided with a packing ring, an endwise movable thrust pin with which the block engages, a piston arranged in the cylinder, a pair of oppositely disposed cam levers pivoted within the cylinder and arranged to engage the thrust block, and links connecting said cam levers to the piston.

5. In clutch operating mechanism, a revoluble shaft having a threaded end, a nut mounted on the threaded end of the shaft and having a threaded periphery, a cylinder having an extended portion screwed on the nut, the inner head of said cylinder having a central bore, a cylindrical thrust block mounted on the bored portion of the head, an endwise movable thrust pin engaged by the block, a pivot pin supported within the cylinder, a pair of eccentric cam levers mounted on the pin and engaging against the inner end of said thrust block, a piston in the cylinder, and links connecting the cam levers to said piston.

[Claim 6 not printed in the Gazette.]

876,610. TONGUE FOR VEHICLES. ARTHUR M. WARNER, Almont, Mich. Filed May 9, 1907. Serial No. 372,783.

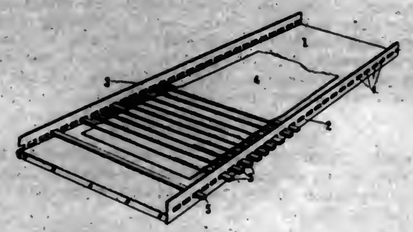


1. In a wagon tongue, the combination of a pair of longitudinally extending, overlapping angle bars to form the pole, which angles bend outward and then back to form a supporting frame, plates secured to said angle bars to stiffen the tongue at the point where the angle bars diverge, a bearing for the king bolt secured to said plates, cross bars secured to said angle bars in the rear of said plates, brackets secured to said angle bars, and bearings for the queen-bolts secured to said brackets and angle bars.

2. In a wagon tongue, the combination of a pair of longitudinally extending angle bars secured together to form the pole, plates secured to said angle bars intermediate their ends, a bearing for the king bolt secured to said plates, and bearings for the queen bolt mounted on said angles.

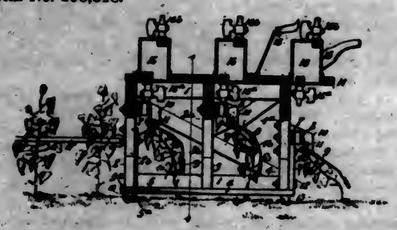
3. A wagon tongue comprising a pair of longitudinally extending overlapping angle bars, separating spools between the lower flanges of the angle bars, and rivets passing through the flanges and the spools.

876,611. PLAITING-MACHINE. FRANK E. WARNER, Binghamton, N. Y. Filed Sept. 25, 1907. Serial No. 394,552.



A plaiting machine comprising a bed; rectangularly-apertured strips along opposite edges thereof; thin, flat plaiting stripe, uniform in length, breadth and thickness, pairs of which are adapted to detachably engage and substantially fill, opposed apertures in the side stripe, substantially as described and for the purpose set forth.

876,612. BOLL-WEEVIL EXTERMINATOR. GEORGE W. WATKINS, Rosebud, Tex. Filed Oct. 21, 1907. Serial No. 398,518.



1. In a machine of the class described, a main frame including side bars and a series of transverse walls each having openings for the passage of the plant, combined with means for applying a fumigant to the leaves of the plant, substantially as shown and described.

2. In a machine of the class described, a main frame including side bars and a series of transverse walls each having openings for the passage of the plant, combined with means for applying a fumigant to the underside of the leaves of the plants, substantially as shown and described.

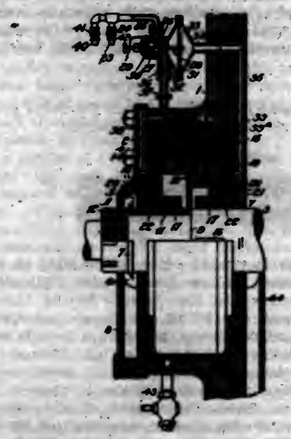
3. A machine of the class described, comprising a main frame having sides and a bottom and transverse walls, said walls and said bottom having passage openings for the plant, means for adjusting the area of said openings, a bar carried by said transverse walls and adapted to be held across said openings, substantially as shown and described.

4. A machine of the class described, comprising a main frame having sides and a bottom and transverse walls, said walls and said bottom having passage openings for the plant, means for adjusting the area of said wall openings, a bar carried by said transverse walls and adapted to be held across said openings, and a rod held at the rear of said bar and across said openings, substantially as shown and described.

5. A machine of the class described, comprising a main frame having sides and a bottom and transverse walls, said walls and said bottom having passage openings for the plant, means for adjusting the area of said wall openings, a bar carried by said transverse walls, a rod held at the rear of said bar and across said openings, an absorbent cloth secured to said bar and passed between said bar and said rod, and means for moistening said cloth, substantially as shown and described.

[Claims 6 to 10 not printed in the Gazette.]

876,613. SHAFT-PACKING. JAMES WILKINSON, Providence, R. I., assignor to Wilkinson Turbine Company, Birmingham, Ala., a Corporation of Alabama. Filed May 7, 1906. Serial No. 315,667.



1. In a revoluble shaft packing, the combination with a revoluble shaft, of a stationary closure surrounding the shaft, a revoluble element mounted with a slip fit on said shaft and disposed in said closure, an annular chamber in said element, a disk fixed on said shaft and disposed in said annular chamber, and a liquid sealing medium to pack the joints between said element and the disk and closure.

2. In a revoluble shaft packing, the combination with a stationary packing chamber, of a revoluble shaft which passes therethrough, a ring mounted with a slip fit on said shaft and revoluble therewith in said chamber, said ring having one or more working faces which co-act with the walls of said chamber, an annular chamber in said ring, sealing liquid in and around said ring, and a rotatable disk which coöperates with said liquid to substantially axially balance itself and the ring.

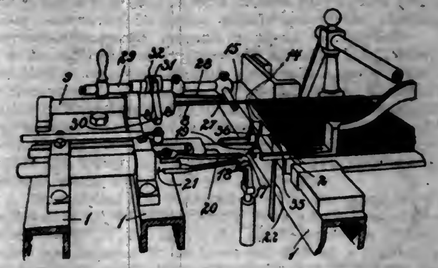
3. In a revoluble shaft packing, the combination with a stationary casing supplied with liquid, of a revoluble casing also supplied with liquid, a revoluble shaft surrounded by said casings which are disposed one within the other, and a disk fixed with a pressure tight joint to said shaft and partly submerged in the liquid in said revoluble casing.

4. The combination with an internally chambered ring, of a revoluble shaft on which said ring is mounted with a slip fit, a closure which receives said ring, working faces on the ring adapted to co-act with the opposite side walls of said closure, a liquid surrounding said ring and adapted to seal the clearance between said faces and closure, and means to substantially axially balance the said ring.

5. In a revoluble shaft packing, the combination with a shaft, of an annularly chambered ring mounted with a slip fit on said shaft and revoluble therewith, a circumferential slot in the inner wall of the ring, a revoluble disk mounted pressure tight on the shaft and adapted to enter the ring chamber through said slot, ample axial clearance being left between the ring and disk, a stationary casing in which said ring rotates with close axial clearances, and a liquid sealing medium in said casing and ring which co-operates with said parts, as and for the purposes described.

[Claims 6 to 25 not printed in the Gazette.]

876,614. MACHINE FOR MAKING FALSE REEDS FOR LOOMS. WILBUR E. WINGATE, Lawrence, Mass., assignor of one-half to Emmons Loom Harness Company, Lawrence, Mass., a Corporation of Massachusetts. Filed July 27, 1905. Serial No. 271,434.



1. A machine for making false reeds, comprising means for maintaining two side cords in position, means for passing connected lengths of a transverse cord or thread between the side cords progressively from one to the other, and instrumentalities for binding the transverse thread or cord to the side cords.

2. A machine for making false reeds, comprising means for maintaining two side cords in position, means for passing connected lengths of a transverse cord or thread between the side cords progressively from one to the other, and instrumentalities for knotting the stretches of the transverse thread to one of the side cords and braiding them to the other of said cords.

3. A machine for making false reeds, comprising an eye needle having a channel in which is secured a side cord, means for holding a second side-cord parallel thereto, carrying means for passing connected lengths or stretches of a continuous thread transversely between said side cords, instrumentalities for making a twisted loop in the thread and passing the same over the end of the eye needle, and instrumentalities for braiding the thread to the second cord.

4. A machine for making false reeds, comprising an eye needle having a channel in which is secured a side cord, and having an eye in its side through which a thread contained in the channel may be drawn, means for holding a second side cord parallel thereto, carrying means for drawing lengths of a continuous thread from said eye and carrying them transversely across to the second cord, knotting instrumentalities for making a twisted loop in a length of the thread and passing the same over the end of the needle and the cord therein, and braiding instrumentalities for tying the lengths of thread to the second cord.

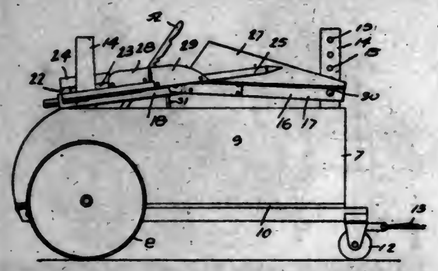
5. A machine for making a false reed comprising an eye needle at one side of the machine having a channel for the reception of a cord and a thread, and having an opening in its side through which the thread may be drawn, provisions for holding and feeding a second cord at the other side of the machine and parallel to said eye needle, a spoon movable in a vertical plane adjacent the second cord, forks movable transversely of the machine for carrying a bight of thread from the eye needle and depositing the same in the hook of the spoon, braiding instrumentalities adapted to carry the bight around said second cord and tie the same thereto with a locking thread, and knotting instrumentalities adapted to form a twisted loop in one length of the thread and pass it over the end of the eye needle.

[Claims 6 to 9 not printed in the Gazette.]

876,615. CORN-TOPPER. SAMUEL E. WOODS, Lockwood, Okla. Filed June 8, 1907. Serial No. 377,954.

1. The combination, of a wagon body having a pair of uprights mounted therein adjacent the opposite ends of one of its side boards; a corn-topping device carried by said uprights and consisting of a jointed guide-plate comprising a front member and a rear member, a blade disposed parallel with and in spaced relation to the rear edge

of the last-mentioned member, and a guide-arm adapted to direct the corn to said blade; and means adapted for engagement with said rear member when the joint between the latter and said front member is broken to retain said members in adjusted position with respect to each other.



2. The combination of a wagon body having a pair of uprights mounted therein adjacent the opposite ends of one of its side boards; a corn-topping device carried by said uprights and including a jointed triangular guide-plate comprising a front member and a rear member, a blade disposed parallel with and in spaced relation to the rear edge of the last-mentioned member, and a guide arm inclined outwardly and forwardly of the wagon body and adapted to direct the corn to said blade; and means adapted for engagement with said rear member when the joint between the latter and said front member is broken to retain said members in adjusted position with respect to each other.

3. The combination of a wagon body having a pair of uprights mounted therein adjacent the opposite ends of one of its side boards; a corn-topping device carried by said uprights and including a jointed supporting bar disposed longitudinally of the wagon body, a two-part guide-plate having each member thereof secured to the adjacent member of said bar, a guide arm inclined outwardly and forwardly of the wagon body and connected to the rear member of said bar, and a blade connected at opposite ends to the latter member and to said guide-arm, said guide-arm being adapted to direct the corn to said blade; and means adapted for engagement with the rear member of said guide-plate when the joint between the members of said bar is broken to retain said members in adjusted position with respect to each other.

4. The combination of a wagon body having a pair of uprights mounted therein adjacent the opposite ends of one of its side boards; a corn-topping device carried by said uprights and including a jointed supporting bar, a guide-plate carried by said bar and comprising a triangular front member fastened to the front member of said bar and a triangular rear member fastened to the rear member thereof, said triangular members having their mutually adjacent inner edges disposed parallel with each other and at right-angles to said bar, a guide-arm inclined outwardly and forwardly of the wagon body and connected to the rear member of said bar, and a blade connected at opposite ends to said last-mentioned member and said guide-arm and disposed in spaced relation to the rear edge of the rear member of said guide-plate, said guide-arm being adapted to direct the corn to said blade; and means adapted for engagement with the rear member of said guide-plate when the joint between the members of said bar is broken to retain said members in adjusted position with respect to each other.

5. The combination of a wagon body having a pair of uprights mounted therein adjacent the opposite ends of one of its side boards, the forward upright having a vertically arranged series of perforations formed therethrough; a corn-topping device carried by said uprights and including a supporting bar comprising a front member and a rear member hinged together, said front member having a laterally-projecting pin for engagement in one of the perforations in said forward upright, a guide-plate carried by said bar and comprising a triangular front member fastened to the front member of said bar and a triangular rear member fastened to the rear member thereof, said triangular members having their mutually-adjacent inner edges disposed parallel with each other and at right-angles to said bar, a guide-arm inclined outwardly and forwardly of the wagon body and connected to the rear member of said bar, and a blade connected at opposite ends to said last-mentioned member and said guide-arm and disposed in spaced relation to the rear edge of the rear member of said guide-plate, said guide-arm being adapted to direct the corn to said blade; means adapted for engagement with the rear member of said plate, when the joint between the members of said bar is broken to retain said members in adjusted position with respect to each other; and a stop carried by one of said members for engagement with the upper edge of the adjacent side board of the wagon body.

876,616. CUSHION-TIRE. CASIMIR ZEGLEN, Chicago, Ill. Filed Jan. 28, 1907. Serial No. 354,565.



1. In a cushion tire, an outer rubber layer on which is formed the tread and an inner flexible multi-ply fabric made of closely woven fiber strands having high tensile strength, wherein the filling threads are superposed one on the other and the closely spaced warp threads are interlaced through the filling threads entirely from one side of the fabric to the other, thus binding the superposed filling threads together in a mass of single thickness to produce a thick compact fabric, the material of said rubber layer being pressed into the surface interstices of the fiber to permanently join the rubber and fabric together.

2. In a cushion tire, an outer rubber layer on which is formed the tread and an inner flexible multi-ply fabric made of closely woven fiber strands having high tensile strength, wherein the filling threads are superposed one on the other and the closely spaced warp threads are interlaced through the filling threads entirely from one side of the fabric to the other, thus binding the superposed filling threads together in a mass of single thickness to produce a thick compact fabric, the material of said rubber layer being pressed into the surface interstices of the fiber to permanently join the rubber and fabric together, said filling threads being straight and inextensible and extending around the cross-section of the tire.

3. In a cushion tire, an outer rubber layer on which is formed the tread, and an inner flexible, multi-ply layer made of closely woven fiber strands having high tensile strength wherein the filling threads are superposed one on the other and the warp threads are interlaced through the filling threads entirely from one side to the other of the fabric to bind the superposed filling threads in a mass of single thickness, said warp threads extending circumferentially of the tire and pressed compactly together at the tread portion of the tire and being woven more loosely in the fabric at the sides thereof.

4. In a cushion tire, an outer rubber layer on which is formed the tread and an inner flexible multi-ply fabric made of closely woven silken strands, wherein the filling threads are superposed one on the other and the closely spaced warp threads are interlaced through the filling threads entirely from one side of the fabric to the other, thus binding the superposed filling threads together in a mass of single thickness to produce a thick compact fabric, the material of said rubber layer being pressed into the surface interstices of the fiber to permanently join the rubber and fabric together.

5. In a cushion tire, a thick reinforcing silken fabric of multi-ply structure, wherein the filling threads, are superposed one upon the other and are united by the warp-threads which are interlaced through the filling threads entirely from one side to the other of the fabric.

[Claim 6 not printed in the Gazette.]

876,617. SHOW-CASE. JOSEPH F. BIERBND, Los Angeles, Cal. Filed July 17, 1907. Serial No. 384,222.

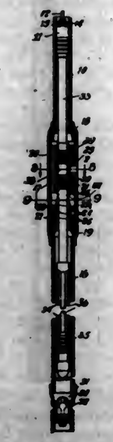


1. In a device of the character described a top and bottom glass retaining frame, glass therein, joining means for the front corners of said glasses comprising slotted members, the glasses fitted into such slots, the corners of said slotted members meeting at right angles, means joining the inner ends of said slotted members, and a reinforcing rod disposed in the corner formed by the meeting of such slotted members, and fitted into said top and bottom frames, as described.

2. In a device of the character described a show case comprising top and bottom glass retaining members, glasses therein, suitable rear supporting posts therefor, and front corner clamps for said glasses comprising two slotted members engaging said glass, the inner corners of said members meeting at right angles to each other, and a cross member disposed across from the inner end of each of said members and formed as a part thereof, as described.

3. A show case comprising top and bottom glass therein, rear corner posts dovetailed into the bottom retaining member and tenoned into the top retaining member, means securing them in such positions, joining means for the front corners of said glasses comprising slotted members engaging said glasses, the corners of said slotted members meeting at right angles, means joining the inner ends of said slotted members, and a reinforcing rod disposed in the corner formed by the meeting of such slotted members, and fitted into said top and bottom retaining members, as described.

876,618. PUMP. SIDNEY R. BLANCHARD, Ottawa, Ill., assignor to The Ottawa Banking & Trust Company, Ottawa, Ill., a Corporation of Illinois. Filed Dec. 11, 1906. Serial No. 347,339.



1. In a pump, the combination with the pump barrel provided with a valve at its lower end, of a valved piston reciprocating in the upper end of the barrel, a plunger barrel reciprocating in the lower end thereof and connected to and movable with the piston, a stationary piston in said plunger barrel, and means for removably locking said stationary piston in place.

2. In a pump, the combination with the pump barrel provided with a valve at its lower end, of a valved piston reciprocating in the upper end of the barrel, a plunger barrel reciprocating in the lower end thereof and connected to and movable with the piston, and a stationary piston removably fixed in said plunger barrel, said barrel being constructed to permit withdrawal of the pumping mechanism upwardly through the upper end thereof.

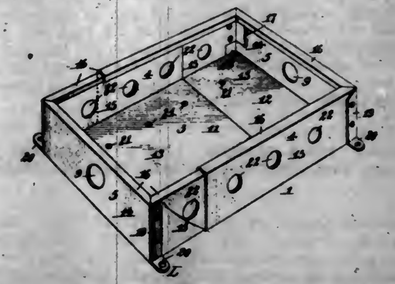
3. In a pump, the combination with the pump barrel provided at its lower end with a valve, of a valved piston reciprocating in the upper end of the barrel, a plunger barrel reciprocating in the lower end thereof, a stationary piston within said plunger barrel, a rod connecting the reciprocating piston with said plunger barrel, and a holder within the pump barrel carrying said stationary piston through which holder said rod reciprocates.

4. In a pump, the combination with the pump barrel provided at its lower end with a valve, of a valved piston reciprocating in the upper end of the barrel, a plunger barrel reciprocating in the lower end thereof, a stationary piston within said plunger barrel, a holder within the pump barrel which carries the stationary piston, means for releasably locking said piston holder within the barrel, and a rod connecting said reciprocating piston with the plunger barrel and sliding through said holder, the cylinder being constructed to permit the pumping mechanism to be withdrawn upwardly through the upper end thereof.

5. In a pump, the combination with the pump barrel provided at its lower end with a valve, of a valved piston reciprocating in the upper end of said barrel, a plunger barrel reciprocating in the lower end thereof, a rod connecting the reciprocating piston with said plunger barrel, a stationary piston in the plunger barrel, and a holder carrying said stationary piston, through which said rod slides, said piston holder dividing the pump barrel into upper and lower parts, and a by-pass connecting said parts around the piston holder.

[Claims 6 to 12 not printed in the Gazette.]

876,619. JUNCTION-BOX FOR ELECTRIC WIRES. LOUIS P. BLIEMEISTER, Buffalo, N. Y., assignor of one-half to William R. Jeseph, Buffalo, N. Y. Filed July 20, 1906. Serial No. 327,058.



1. A junction-box for electric-wires constructed of metal and comprising a body-portion having the upper edge of its side and end walls bent inward and rearward to form a rearwardly opening channel, and a cover having its marginal portion bent rearward and inward to form an inwardly opening channel.

2. A junction-box for electric-wires consisting of telescoping-sections having one or more walls thereof provided with openings for the circuit wires, said sections being movable with reference to each other to bring part or all of the openings of both sections into registration or to move the same out of registration.

3. A junction-box for electric-wires consisting of a body-portion having telescoping sections provided in the side walls thereof with openings and having in the rear walls thereof screw-holes, said section being movable with reference to each other to bring all or part of said openings and screw-holes of one section into registration with the openings and screw-holes of the other section.

4. A junction-box for electric-wires comprising a telescoping-body portion and a telescoping-cover, said body-portion having openings for the introduction of circuit wires.

5. A junction-box for electric-wires comprising a telescoping-body having two sections fitting one within the other, each section having openings for the introduction of wires, and the openings of one section being brought into or moved out of registration with the openings in the other section when contracting or expanding the box, and a telescoping cover having two sections, each section of the cover being hinged to the corresponding section of the body.

[Claims 6 to 9 not printed in the Gazette.]

876,620. THILL-COUPLING. CHRISTOPHER C. BRADLEY, Syracuse, N. Y. Filed Mar. 26, 1907. Serial No. 364,641.



1. A thill coupling comprising a coupling pin and opposed jaws, one jaw being pivoted to the other and extending some distance from the pivot at the opposite side of the jaw proper, and a spring pivotally attached at one end to the extension and having its other end adapted to swing across the arc of movement of its pivot between the extension and thill iron of the fixed jaw in sliding contact with the latter.

2. A thill coupling comprising a fixed jaw and a movable jaw hinged thereto, and having a grip face at one side of its pivot and an arm at the opposite side of its pivot, the fixed jaw having an extension overlying the arm, and a spring having one end attached to the arm and its other end in sliding engagement with the extension of the fixed jaw.

3. A thill coupling comprising a fixed jaw having an extension, a movable jaw provided with an arm projecting under the extension and pivoted to the fixed jaw, and a spring pivotally attached at one end to the arm and having its opposite end in sliding contact with the extension of the fixed jaw and movable across the arc of movement of its pivotal connection with the arm.

876,621. DOOR-HANGER. JOHN H. BURKHOLDER, Ashland, Ohio. Filed Apr. 29, 1907. Serial No. 370,983.



1. In a door hanger, the combination of a hanger member, a screw carried by said hanger and depending therefrom, a door member having a lateral arm, a traveler engaging said arm and adapted to be moved longitudinally thereof, means rotatably mounted on said arm and operatively connected to said traveler, and a nut rotatably mounted in said traveler and adapted to engage said depending screw, whereby provision is made for the lateral and vertical adjustment of the door.

2. The combination of a hanger member, a screw depending therefrom, a door member having a lateral arm, and a nut rotatably mounted at one end of said arm, with a traveler connected with and mounted to be moved longitudinally of said arm and having a screw for engagement with said nut, and a nut rotatably mounted in said traveler for engagement with the screw carried by the hanger member to provide for the lateral and vertical adjustment of a door.

3. The combination of a hanger member, a screw pivotally connected therewith and depending therefrom, a door member having a lateral arm provided with a guide channel, and a nut rotatably mounted in one end of said arm, with a traveler mounted in said lateral arm and movable longitudinally in said guide channel, said traveler having a screw portion for engagement with said nut, and a nut rotatably mounted in said traveler and adapted to engage the screw carried by the hanger member, whereby a door may be vertically and laterally adjusted.

4. In a door hanger, the combination with a hanger member, a connecting member comprising a screw depending from said hanger member, a door member having a lateral arm provided with a V-shaped channel having inturned flanges along the edges thereof, one end of said channel being closed, and a nut having a groove therein rotatably mounted on the end closure of said channel, of a traveler mounted to be moved longitudinally in said channel and having a screwthreaded arm for engagement with said nut, a nut rotatably mounted in said traveler and engaging the screw carried by said hanger member and coacting therewith to connect said door and hanger members for vertical and lateral adjustment.

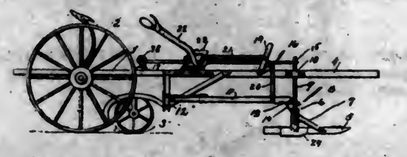
876,622. OIL-PUMP. DEDERICK F. COLLDREWEIH, Coalinga, Cal. Filed Feb. 13, 1906. Serial No. 300,945.



1. The combination with a well tube, of a pump barrel and contained mechanism slidable within said tube, a seat upon which the pump barrel is supported, a divergent head for the pump barrel, said head having a reduced upwardly extending tubular portion, and having its sides longitudinally slotted, a yoke having its cross bar extending through the slot of said extension and having its lower ends provided with latches to slidably engage the divergent portion of said head, and a spring encircling the tubular extension of the head and bearing upon the cross bar of the yoke whereby the latches are forced into engagement with the divergent portion of the head to lock the barrel in place.

2. The combination with a well tube of a pump barrel and contained mechanism slidable within said tube, a seat upon which the pump barrel is supported, a divergent head for the pump barrel, said head having a reduced upwardly extending tubular portion, and having its sides longitudinally slotted, a yoke having its cross bar extending through the slot of said extension and having its lower ends provided with latches to slidably engage the diverged portion of said head, and a spring encircling the tubular extension of the head and bearing upon the cross bar of the yoke whereby the latches are forced into engagement with the divergent portion of the head to lock the barrel in place, a plunger rod extending through the head and through the cross bar of the yoke, and a collar upon said rod adapted to be raised into the tubular extension of the head and into contact with the cross bar of said yoke whereby the yoke is raised and the catches disengaged to allow the bar to be removed from the tube.

876,623. GUIDE FOR ROW CULTIVATING AND ROOT HARVESTING MACHINES. GEORGE F. CONNER, Port Huron, Mich. Filed Mar. 27, 1906. Serial No. 308,273.



1. A pilot for the purposes specified comprising a frame, a horizontally disposed member pivoted at its rear end to the frame, a member adapted to bear against and slide along a row, pivotally secured to the forward end of the horizontally disposed member, having vertically movable engagement with the frame, means for raising the frame in relation to the row-following member, and means for swinging the row-following member, detachably interlocked with the frame.

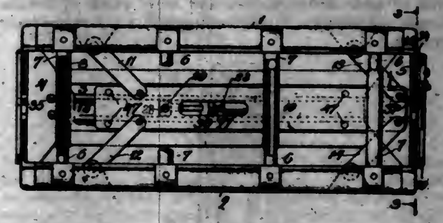
2. The combination with the frame of a root-working machine of a pilot comprising a brace pivoted at its rear end to the frame, a vertically disposed yoke pivoted to the forward end of the brace and to the main frame, and vertically movable in the frame, a row-following member tiltable between the arms of the yoke, and a lever for raising the frame relative to the pilot, adjustably mounted on the frame.

3. The combination with the frame of a root-working machine of a pilot comprising a brace horizontally disposed beneath the frame, and pivotally secured thereto at its rear end, a downturned yoke having a vertical stem pivotally secured to the forward end of the brace, and slidably and rotatably secured to the frame, a row-following slide tiltable between the arms of the yoke, a horizontal crank arm on the stem linked to an operating lever on the frame, and a lifting lever adjustably secured on the frame, operatively connected with the brace.

4. The combination with the frame of a root-working machine supported by a pair of traction wheels, of a row-following pilot vertically adjustable in the forward portion of the frame, connected to the rear portion of the frame by a brace pivoted at one end to the pilot and at the other end to the rear portion of the frame, said pilot being pivoted to turn horizontally, and adjusting levers adapted to secure the pilot and frame.

5. The combination with the main frame of a root-working machine, whose rear portion is supported by a pair of traction-bearing wheels of a pilot comprising a row-following member carrying the forward part of the frame, vertically adjustable therein, secured to the rear portion of the frame, by a brace pivoted at its forward end to the row-following member and at its rear end to the frame.

876,624. BINDER. ROBERT J. COPELAND, Toronto, Ontario, Canada. Filed Mar. 20, 1907. Serial No. 363,458.



1. In a binder in combination, two separable members; mechanical means for positively clamping said members towards one another; and a coöperating releasable friction clutch for permitting the quick release and separation of said members.

2. In a binder, two separable binding stripe; a reciprocating member; means movably connecting said stripe with said reciprocating member whereby said strips may be moved in opposite directions with the reciprocation of said reciprocating member; means for actuating said reciprocating member; and a releasable friction clutch for operatively connecting said means and said reciprocating member.

3. In a binder, two separable binding stripe; a reciprocating member; means movably connecting said strips with said reciprocating member whereby said strips may be moved in opposite directions with the reciprocation of said reciprocating members; screw means for actuating said reciprocating members; and a releasable friction clutch for operatively connecting said screw means and said reciprocating member.

4. In a binder, two separable binding stripe; a reciprocating member, means movably connecting said stripe with said reciprocating member whereby said stripe may be moved in opposite directions with the reciprocation of said reciprocating member; screw means for actuating said reciprocating member; a releasable friction clutch for operatively connecting said screw means and said reciprocating member; and means coöperating with said clutch whereby a predetermined movement of said screw means will release said clutch to permit a free opening and closing of said binder stripe independently of said screw means.

5. In a clamping mechanism for binders, the combination of a mechanical power and a one way friction grip whereby slack may be taken up independently of said mechanical power.

[Claims 6 to 21 not printed in the Gazette.]

876,625. GATE-VALVE. JARED R. DE REMER, Glenwood Springs, Colo. Filed Jan. 24, 1906. Serial No. 297,714.

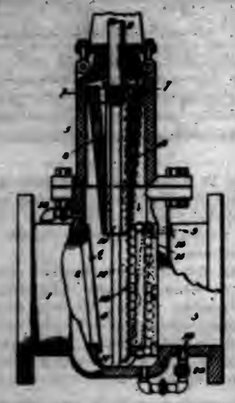
1. In a gate valve, the combination with the casing having inlet and outlet sides, of roller bearings on said outlet side between the latter and the adjacent valve disk, said bearings being confined upon the casing but rotatable and bodily movable in contact with the valve as the latter is actuated in either direction.

2. In a gate valve, a casing having inlet and outlet chambers and an intermediate valve chamber, a valve movable vertically in said valve chamber, guides for said valve, ball bearings interposed between said valve and said outlet chamber, and raceways for said ball bearings secured to the wall between said outlet and valve chambers.

3. In a gate valve, a valve casing having vertically disposed ribs, the valve, grooved webs extending therefrom and engaging said ribs, two series of ball bearings with which said webs engage, and a continuous raceway for each series of bearings located between said webs and the outlet of the casing and mounted in said casing.

4. The combination with the casing having a central valve chamber and inlet and outlet chambers, of the vertically movable valve having grooved webs extending

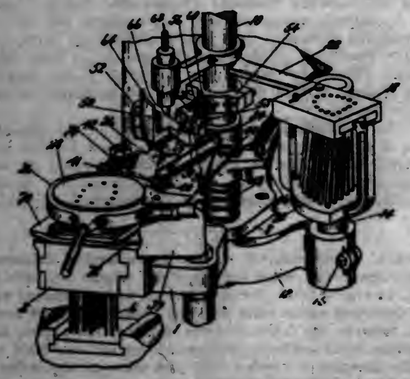
therefrom, guides in said valve chamber with which said webs engage, two series of ball bearings mounted in the walls of said outlet chamber and with which said webs engage, and boxings having continuous raceways for said bearings.



5. In a gate valve having inlet and outlet chambers and an intermediate valve chamber, a by-pipe leading from said inlet chamber into said valve chamber above the valve seat, and an outlet by-pipe leading from a lower portion of said valve chamber into said outlet chamber.

[Claim 6 not printed in the Gazette.]

876,626. MACHINE FOR INSERTING NAILS. MARY E. ELLIOTT, Lawrence, Mass., executrix of Alvin D. Elliott, deceased, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 24, 1905. Serial No. 251,800.



1. In a machine of the class described, the combination with a die block provided with nail receiving passages, of a nail transferrer for supplying nails to the die block arranged to be moved laterally of the die block, and means for depressing said transferrer into close relation to the die block at approximately nail delivering position of said transferrer.

2. In a machine of the class described, the combination with a die block provided with nail receiving passages, of a nail transferrer for supplying nails to the die block arranged to be moved laterally of the die block from nail delivering into nail receiving position, and means for elevating said transferrer with relation to the die block at the initial portion of its movement into nail receiving position.

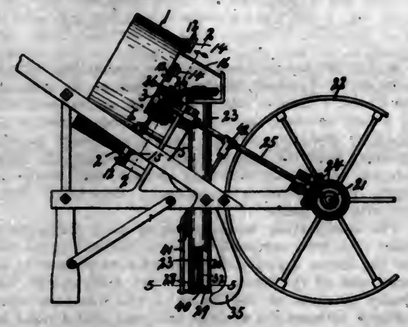
3. In a machine of the class described, the combination with a die block provided with nail receiving passages, of a nail transferrer for supplying nails to the die block preliminary to the attaching operation, and means for supporting said transferrer arranged and constructed to permit movement of the transferrer laterally of the die block and also vertical movement of the transferrer with relation to said die block.

4. In a machine of the class described, the combination with a die block provided with nail receiving passages, of a nail transferrer for supplying nails to the die block, means for supporting said transferrer arranged and constructed to permit movement of the transferrer laterally of the die block and also vertical movement of the transferrer, and means for controlling the path of the transferrer constructed to move said transferrer into close relation to the die block at approximately the end of movement of the transferrer into nail delivering position.

5. In a machine of the class described, the combination with a die block, of a nail transferrer, means for supporting said transferrer arranged to permit horizontal movement of the transferrer laterally of the die block and also a vertical movement of the transferrer, means tending to maintain said transferrer in an elevated position, and means arranged in the path of the transferrer constructed to deflect said transferrer downwardly at approximately the end of its movement into nail delivering position over said die block.

[Claims 6 to 8 not printed in the Gazette.]

876,627. SEPARATOR FOR COLLATED ARTICLES. BENJAMIN F. ENNIS, Syracuse, N. Y. Filed May 20, 1907. Serial No. 374,679.



1. In a separator for collated articles, a rotary hopper containing the collated articles and provided with an open pocket receiving a limited number of said articles, said pocket having a movable gate and means to open said gate at regular intervals in the rotation of the hopper for discharging a predetermined number of said articles from the pocket, and means to receive said discharged articles to conduct them away from the hopper.

2. In a separator for collated articles, a rotary inclined hopper having a series of pockets traveling in an inclined plane, each pocket having a portion of one side movable, and means for actuating said movable side during the rotation of the hopper.

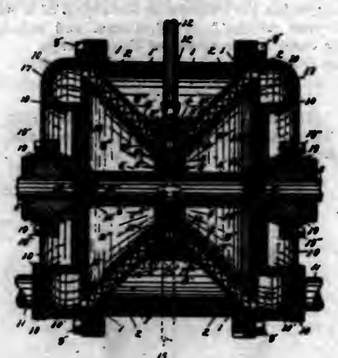
3. In a separator for collated articles, a rotary hopper and actuating means therefor, a series of movable gates in the hopper each adapted to receive and retain a predetermined number of said articles during a part of one revolution of the hopper, and means for opening said gate to discharge said articles during the rotation of the hopper.

4. A separator for collated articles comprising a revoluble drum and actuating means therefor, said drum having its bottom disposed in an inclined plane, a series of rocking gates journaled in said botton in close proximity thereto, and means for rocking said gates during the rotation of the drum.

5. A separator for collated articles comprising a rotary hopper having its axis disposed in an inclined plane and adapted to contain the collated articles, a fixed chute within the drum and a series of movable selectors mounted in the drum each selecting and conveying a predetermined number of said articles from the bottom of the drum to a position over the mouth of the chute, and means for operating said selectors to discharge the articles therefrom as they are successively brought to a position over the mouth of the chute, whereby said articles fall into said chute.

[Claims 6 to 12 not printed in the Gazette.]

876,628. TURBINE-ENGINE. HARVEY B. FULMER, Los Angeles, Cal. Filed Apr. 18, 1907. Serial No. 369,006.



1. An engine comprising a stationary and a revolving portion, the said stationary portion having channels forming an integral part thereof, increasing in depth from the point where the steam or elastic fluid is admitted to the outer circumference thereof, where the steam or elastic fluid is exhausted therefrom, a rotary portion having channels made integrally therewith, having angles increasing from the point of admission of the steam or elastic fluid to the outer circumference thereof, where the steam or elastic fluid is exhausted from the engine.

2. In turbine engines, having a stationary portion, means for supporting the same, and a revolving truncated cone portion and means for supporting and rotating the said truncated cone within the stationary portion or bowl, the said revolving portion provided with blades forming angles increasing from the inner to the outer portions thereof.

3. In engines comprising stationary and rotary portions, one adapted to revolve within the other, the said stationary and rotary portions having steps upon their adjacent surfaces and a series of rows of angular blades and channels in said steps made integral with said portions, and means for the inlet and outlet of steam or elastic fluid between the revolving surfaces of said portions.

4. Turbine engines provided with stationary and revolving portions, means for supporting the same and for revolving one within the other, the said portions being provided with rows of angular blades and channels made integral with said portions, the said blades and channels of the two portions being arranged at opposing angles, means for admitting steam or other elastic fluid between the adjacent surfaces of said portions, and means for conveying the exhausted steam or fluid from between said portions.

5. In a turbine engine, a pair of stationary bowls, a pair of rotary cones, each cone being nested with its respective bowl, the adjacent surfaces of each nested bowl and cone having circular steps with oblique channels cut therein, the depth of said channels increasing in each succeeding step toward the outer steps.

[Claims 6 to 17 not printed in the Gazette.]

876,629. HORSESHOE. FRANK B. GARDNER and JAMES E. GROSJEAN, Lima, Ohio, assignors to The Humane Horseshoe Co., Lima, Ohio, a Corporation of Ohio. Filed Aug. 30, 1906, Serial No. 332,670. Renewed June 15, 1907. Serial No. 379,260.



1. A calk carrying plate adapted to have its forward end connected to a horseshoe and its rear portion movable, a cushioning element engaging the movable portion of the plate, and a pin and elongated slot connection for movably connecting the movable portion of the plate to a horseshoe, said pin further constituting means for retaining said cushioning element in position and further acting as a stop to arrest the movement in either direction of the said movable part of the plate.

2. A calk carrying plate having one portion thereof fixed to a horseshoe and its other portion offset, a cushioning element interposed between the offset portion and the shoe, and a headed pin and elongated slot connection for detachably securing said offset portion to the shoe, said pin constituting means for limiting the movement of said offset portion in either direction.

876,630. MEANS FOR LOCKING CAPS TO SOCKET SHELLS, CANISTERS, &c. ARTHUR C. GAYNOR, Bridgeport, Conn. Filed Feb. 25, 1907. Serial No. 359,054.



1. A sheet metal receptacle having a cylindrical upper portion provided with a plurality of series of outwardly projecting inclined ribs struck up from the metal of the receptacle, vertical spaces being provided between the series, the ribs in each series being parallel and the vertical spaces being longer than the ribs, and a cap for said receptacle, said cap having a cylindrical portion provided with a corresponding plurality of series of inwardly projecting inclined ribs struck up from the said cylindrical portion, vertical spaces being formed between said ribs, the inclined ribs upon one member passing between the inclined ribs upon the other member to act as screw threads when the cap is rotated relatively to the receptacle.

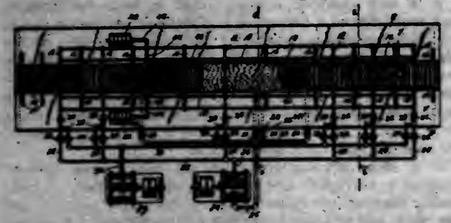
2. The combination with a member provided with a series of outwardly projecting ribs struck up from the metal, of a corresponding member having a series of inwardly projecting ribs struck up from the metal, and means for preventing backward movement of the members relatively to each other.

3. The combination with a member provided with a plurality of series of outwardly projecting inclined ribs struck up from the metal and having cross-ribs between them near their rear ends and blank spaces between the series, of a corresponding member having a plurality of series of inwardly projecting inclined ribs struck up from the metal with blank spaces between the series, said inwardly projecting ribs riding over the cross-ribs when the members are rotated and the ends of the inwardly projecting ribs springing to place in front of the cross-ribs whereby the members are locked together.

4. The combination with a member provided with a plurality of series of outwardly projecting ribs, having cross-ribs between them near the rear ends, of a cor-

responding member having a plurality of series of inwardly projecting ribs, said inwardly projecting ribs riding over the cross-ribs when the members are rotated and the ends of the inwardly projecting ribs springing to place in front of the cross-ribs, substantially as described, for the purpose specified.

876,631. APPARATUS FOR TREATING LIVE STOCK. FRANK C. GOFF, Denver, Colo. Filed July 15, 1907. Serial No. 383,923.



1. An apparatus for treating live stock, including a skeleton runway for the passage of the animals, spraying devices arranged adjacent thereto, and platforms extending outwardly from the runway for catching the liquid which flies beyond the limits of the runway.

2. An apparatus for treating animals, including a skeleton runway, spraying devices mounted adjacent thereto, and liquid collecting platforms extending beyond the limits of the runway.

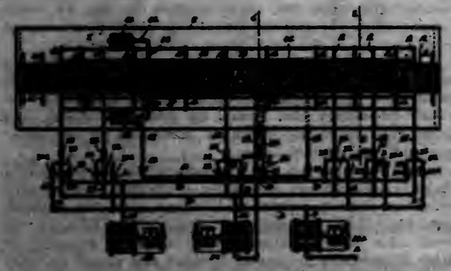
3. An animal treating apparatus including a skeleton runway, means arranged along the runway for delivering fluid jets thereto, and means extending laterally beyond the sides of the runway for collecting the liquid splash.

4. An animal treating apparatus including a skeleton runway, means arranged along the runway for delivering fluid jets thereto under pressure, and means extending laterally beyond the sides of the runway for collecting the liquid splash.

5. An animal treating apparatus including a skeleton runway, and bow-shaped conduits extending over the runway and equipped with nozzles arranged to deliver fluid jets in the runway, and means extending laterally beyond the sides of the runway for collecting the liquid splash, substantially as described.

[Claims 6 to 32 not printed in the Gazette.]

876,632. PROCESS OF TREATING ANIMALS. FRANK C. GOFF, Denver, Colo. Filed July 16, 1907. Serial No. 384,061.



1. A process for the treatment of live stock, consisting in first subjecting the animals to the action of a gas in the form of spray, and subsequently applying liquid in the form of spray.

2. A process for the treatment of live stock, consisting in first subjecting the animals to the action of a gas in the form of spray for cleansing purposes; second, applying liquid in the form of spray; and finally again subjecting them to the action of sprays of gas.

3. A process for the treatment of live stock, consisting first in subjecting the animals to the action of gas in the form of spray; second, applying liquid in the form of spray to the upper part of the animals and immersing the lower parts in a liquid, substantially as described.

4. A process for the treatment of live stock, consisting in first subjecting the animals to sprays of gas; second, subjecting them to the action of liquid by applying sprays thereof to a portion of the animal, while the other portion is immersed in the liquid; and finally applying a gas under pressure to the animals whereby the surplus liquid is removed.

5. A process for the treatment of live stock, consisting in first subjecting the animals to the action of a cleansing fluid delivered in the form of sprays, and subsequently subjecting them to the action of liquid sprays.

[Claims 6 to 9 not printed in the Gazette.]

876,633. MIXING AND KNEADING MACHINE. WILLIAM GRAY and MALCOLM E. GRAY, Rochester, N. Y. Filed Sept. 28, 1906. Serial No. 336,571.



1. In a mixing and kneading machine; at each of two approximately opposite points at the lower edge of the pail or pan an inwardly turned projection; a plate adapted to be removably secured to a suitable support and adapted to engage with one end over the projection on one side of the pail or pan; a member mounted on the other end of such plate, movable relatively thereto and adapted in its operative position to engage over the projection on the other side of the pail or pan and means for operating such member and for locking the same in such operative position.

2. In a mixing and kneading machine; at each of two approximately opposite points at the lower edge of the pail or pan an inwardly turned projection; a plate adapted to be secured to a suitable support and adapted to engage with one end over the projection on one side of the pail or pan; a member mounted on the other end of such plate, movable relatively thereto and adapted in its operative position to engage over the projection on the other side of the pail or pan and means for operating such member and for locking the same in such operative position.

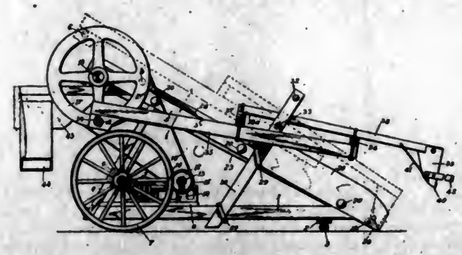
3. In a mixing and kneading machine; an inwardly turned finishing roll at the lower edge of the pail or pan; a plate adapted to be removably secured to a suitable support and adapted to engage with one end over the finishing roll on one side of the pail or pan; a member mounted on the other end of such plate, movable relatively thereto and adapted in its operative position to engage over the finishing roll on the other side of the pail or pan and means for operating such member and for locking the same in such operative position.

4. In a mixing and kneading machine; an inwardly turned finishing roll at the lower edge of the pail or pan; a plate adapted to be secured to a suitable support and adapted to engage with one end over the finishing roll on one side of the pail or pan; a member mounted on the other end of such plate movable relatively thereto and adapted in its operative position to engage over the finishing roll on the other side of the pail or pan and means for operating such member and for locking the same in such operative position.

5. In a mixing and kneading machine; an inwardly turned projection on the side wall of the pail or pan at each of two approximately opposite points and below the bottom; a plate adapted to be removably secured to a suitable support and adapted to engage with one end over the projection on one side of the pail or pan; a member mounted on the other end of such plate, movable relatively thereto and adapted in its operative position to engage over the projection on the other side of the pail or pan and means for operating such member and for locking the same in such operative position.

[Claim 6 not printed in the Gazette.]

876,634. DREDGER AND SCRAPER. CHARLES H. GUNN, Marysville, Cal. Filed May 1, 1907. Serial No. 371,348.



1. In a device of the character described an inclined conveyer, drive pulleys journaled at the top thereof, means for rotating said pulleys, pitmen pivotally secured to the rims of said pulleys, a scraping means in operative connection with said pitmen, and means whereby oscillating movement imparted to said pitmen will cause said scraper to cut and draw earth to said conveyer, as specified.

2. In a device of the character described a frame, cranks journaled therein means for rotating the same, pitmen pivotally secured to said cranks, a scraping means secured to said pitmen, and means restricting the oscillation of such pitmen, as described.

3. In a device of the character described, base beams, upright beams movably secured to said base beams, a roller disposed between said upright beams, cranks held upward from said base beams, means for driving said cranks, pitmen pivotally secured to said cranks and extending along the outside of said upright beams, cross beams on said pitmen disposed to the front and rear of said upright beams, longitudinal beams secured to said cross beams and extending over said roller and between said upright beams, a scraper secured to the outer ends of said longitudinal beams, and a conveyer in operative connection with said scraper, as specified.

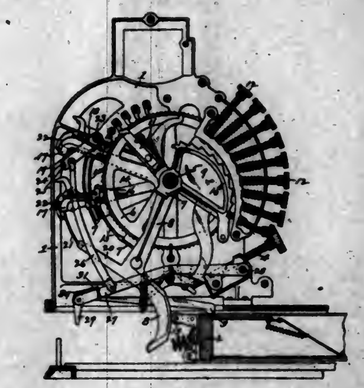
4. In a device of the kind described a conveyer, an oscillating scraper in operative connection therewith and a spading bar held outward from the rear of said scraper, as specified.

5. In a device of the character described a conveyer, an oscillating scraper in operative connection therewith and a serrated spading bar held outward from the rear of said scraper, as specified.

[Claims 6 to 10 not printed in the Gazette.]

876,635. CASH-REGISTER. HENRY S. HALLWOOD, Columbus, Ohio, assignor to The International Register Company, Columbus, Ohio, a Corporation of Ohio. Filed Mar. 9, 1906. Serial No. 305,036.

1. In a register, an adding member, a pawl for moving said member to cause the same to add, mechanism for moving said pawl, and means for preventing the overthrow of said member, said means becoming operative only when an attempt is made to produce overthrow of the member and before the pawl has come to rest at the end of its operative stroke.



2. In a register, an adding wheel, a pawl for turning said wheel, mechanism for moving said pawl, and means for preventing the overthrow of said wheel, said means become operative only when an attempt is made to produce overthrow of the wheel and before the pawl has come to rest at the end of its operative stroke.

3. In a register, an adding wheel, a member engaging and turning said wheel, and means for preventing the overthrow of said wheel, said means being adapted to engage said member and lock the same to the wheel only when attempt is made to produce overthrow and before the member has come to rest at the end of its operative stroke.

4. In a register, an adding wheel, a pawl engaging and turning said wheel, mechanism for moving said pawl, and means for preventing the overthrow of said wheel, said means being adapted to engage said pawl and lock the same to the wheel only when attempt is made to produce overthrow and before the pawl has come to rest at the end of its operative stroke.

5. In a register, a toothed adding wheel, a pawl for engaging the teeth of said wheel, mechanism for moving said pawl, and means for locking the pawl to said wheel, said means becoming effective only when an attempt is made to produce overthrow of the wheel and before the pawl has come to rest at the end of its operative stroke.

[Claims 6 to 30 not printed in the Gazette.]

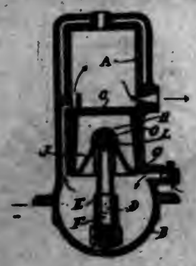
876,636. TRUNK-PISTON CLOSURE. WILLIAM T. HARDER, New Bedford, Mass. Filed May 11, 1907. Serial No. 373,098.

1. In a trunk piston closure, the combination with a piston, of a closure comprising a base having a housing thereon, the said housing being closed at the top and open at the bottom and having downwardly and outwardly inclined portions to permit the swing of the pitman rod, and means constructed and arranged to secure the said closure within the piston.

2. In a trunk piston closure, the combination with a piston, of a closure comprising a base having a housing thereon, the said housing being closed at the top and open at the bottom and having outwardly and downwardly inclined portions to permit the swing of the pitman rod, a wrist pin, the said piston and housing having apertures constructed to receive the said wrist pin whereby the closure is secured within the piston.

3. In a trunk piston closure, the combination with a piston, of a closure comprising a base having a housing

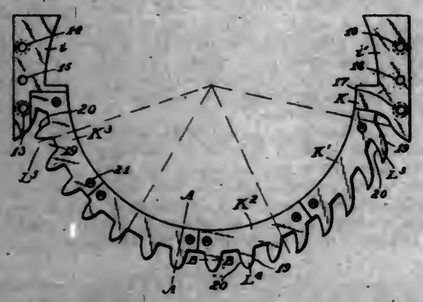
thereon, the said housing being closed at the top and open at the bottom, a wrist pin, the said piston and housing having apertures constructed to receive the said wrist pin whereby the closure is secured within the piston.



4. In a trunk piston closure, the combination with a wrist pin, of a piston having internal projecting portions provided with passages adapted to receive the wrist pin, a piston closure comprising a base having a housing thereon, the upper part of said housing being arranged between the said projecting portions of the piston and having apertures for the passage of the said wrist pin whereby the closure is secured to the said piston.

5. A hollow trunk piston having its lower end closed by a plate or base having a housing thereon, the said housing being closed at the top and open at the bottom and having outwardly and downwardly inclined portions to permit the swing of the pitman rod, the said piston and housing having apertures constructed to receive a wrist pin.

876,637. MOWER. WILLIAM W. HARR and HENRY H. HARR, Noblesville, Ind., assignors of one-third to Albert Garver, Otisco, Ind. Filed Sept. 14, 1906. Serial No. 334,576.



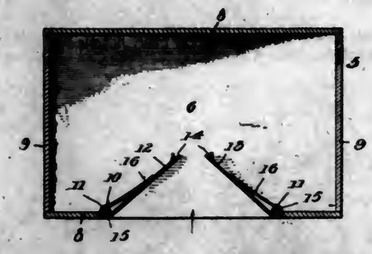
1. A mower including a curved finger-bar having a series of tapering cutting fingers of which the fingers on one end portion of the finger-bar are longer than the remaining fingers and curved away from the end of the finger-bar, the finger that is nearer said end being the longer and having the greater amount of curvature, the adjacent fingers successively having less length and amount of curvature, and the remaining fingers of the series being substantially normal to the finger-bar, all the fingers having curved cutting sides.

2. A mower including a frame beam having end members provided with screw-bolts, a curved finger-bar having supporting ears engaged by the screw-bolts and provided with set-screws engaging the end members, a knife-disk mounted rotatively on the beam, and knives attached to the disk.

3. In a lawn mower, a curved finger-bar having in each end portion thereof two bolt-holes and holding bolts in the bolt-holes, each end portion having also a set-screw therein between the two bolts, a frame to support the end portion of the finger-bar adapted to be engaged by the holding bolts and the set-screws, a disk supported rotatively by the frame, and cutting knives secured to the disk, substantially as shown and described.

4. In a lawn-mower, a curved finger-bar having in each one of its two end portions two bolt-holes spaced apart, each end portion having also a set-screw hole between the two bolt-holes, and cutting fingers on the finger-bar having different shapes in plan, the different fingers on one end portion of the finger-bar differing slightly one from another successively from the end of said portion to the middle portion of the finger-bar, each finger being curved and differing in length from the other fingers of said end.

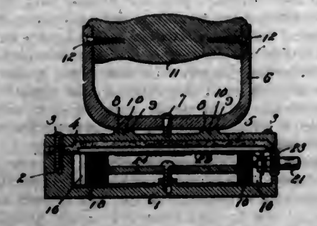
876,638. TRAP. CLAUDE N. HARRINGTON, Avon, Minn. Filed Sept. 16, 1907. Serial No. 393,162.



1. A trap of the class described comprising an inclosure, the inclosure having an opening in one of its walls, gates pivotally mounted within the opening, the gates having their outer ends toothed and inner ends curled, and springs disposed within the curled ends of said gates, each spring having one end fixed independently of the curled end of the gate within which it is located and the other end being attached to said gate.

2. A trap of the class described comprising a cage having an opening in one of its walls, vertically extending rods secured within the opening at opposite sides thereof, gates located within the opening, the gates having their outer ends toothed and their inner ends curled about the rods, and springs secured to the rod and to the gates for holding the gates with their toothed ends in spaced relation.

876,639. ELECTRIC SAD-IRON. WILLARD M. HARWOOD, Ontario, Cal. Filed May 27, 1907. Serial No. 375,911.



1. In a device of the character described, a body, heaters therein and loosely supported and disconnected from said body and extending substantially to the toe and constructed to radiate the heat directly to the toe and heel of the body and means independent of the cover and detachably secured to the bottom for holding said heaters in place.

2. In a device of the character described, a body, cores therein, insulating material covering the cores and wires wound upon said insulation and extending substantially the entire length thereof to bring the same well into the toe of the body and means connected to the bottom of the body and pressing laterally against said cores to keep them in place.

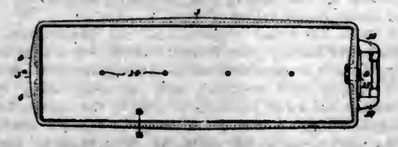
3. In a device of the character described, a chambered body, heaters therein, and a wedge interposed between said heaters for holding said heaters against the sides and bottom of the chamber of the body.

4. In a device of the character described, a chambered body, cores wound with insulating material and wire disposed within said body, insulating material between the cores and the walls of the body, and an insulated wedge securing device interposed between said cores and secured to the bottom of said body for holding the cores in place.

5. In a device of the character described, a chambered body, cores therein wound substantially their whole length, insulation between the wires and the cores and between the wires and the walls of the body, and a removable wedge interposed between said cores and secured to the bottom of said body for holding the cores in place and for forcing the cores upon the bottom and sides of the body.

[Claims 6 and 7 not printed in the Gazette.]

876,640. FURNACE CHARGING-BOX. GUSTAV A. HASSEL, McKeesport, Pa., assignor to Pittsburgh Steel Foundry, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Aug. 6, 1907. Serial No. 387,376.



1. A furnace charging-box consisting of an integral cast-metal structure having sloping side-walls each formed with a bellied-flange, and means formed integral with an end-wall of the box for engaging a charging-arm.

2. A furnace charging-box consisting of an integral cast-metal structure comprising side and end-walls each formed with a bellied-flange, means formed integral with one end-wall for engaging a charging-arm, and strengthening-ribs formed integral with the opposite end wall.

3. A furnace charging-box consisting of an integral cast-metal structure comprising sloping side-walls formed with a bellied-flange, straight end-walls formed with a bellied-flange, means formed integral with one end-wall for engaging a charging-arm, and strengthening-ribs formed integral with the opposite end-wall.

4. A cast-metal furnace charging-box consisting of an integral structure comprising sloping side-walls having their upper edges flanged, said flanges being widest at the center of the box and diminishing as they approach the ends, end-walls, and means formed integral with an end-wall for engaging a charging-arm.

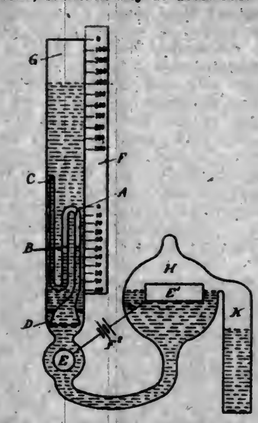
876,641. VOLTAMETER. HENRY S. HATFIELD, Hove, England. Filed Oct. 14, 1907. Serial No. 397,342.

1. An electric gas voltameter comprising a sealed and calibrated tube containing an electrolyte and an electrode from which gas is given off, and a self-emptying, three-limbed calibrated tube which collects the gas and which is contained within the sealed tube into which it periodically empties, substantially as described.

2. An electric gas voltameter comprising a sealed and calibrated tube containing an electrolyte and an electrode from which gas is given off, and a self-emptying, three-limbed tube for the gas having a collecting funnel contained within the sealed tube into which it periodically empties, substantially as described.

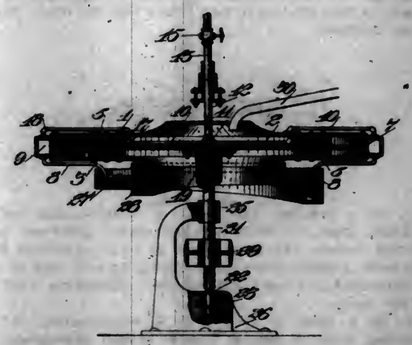
3. An electric gas voltameter comprising a self-emptying, three-limbed calibrated tube, and a sealed and calibrated tube into which the three-limbed tube periodically empties, the emptying level of the three-limbed tube being approximately the same as the level of the free surface of the liquid in the sealed tube, substantially as described.

4. An electric gas voltameter comprising a sealed and calibrated tube having a bulb and an overflow tube to maintain constant the liquid level in the bulb, and a self-emptying, three-limbed calibrated tube contained within the sealed tube, substantially as described.



5. An electric gas voltameter comprising a sealed tube containing an electrolyte and an electrode from which gas is given off, and a self-emptying three-limbed calibrated tube having a downwardly extending U branch in both limbs of which the gas simultaneously accumulates and which is connected with the sealed tube into which it periodically empties, substantially as described.

876,642. CENTRIFUGAL CONCENTRATOR. EDWARD HEARING and FRED A. DUDLEY, Kellogg, Idaho. Filed June 5, 1907. Serial No. 377,352.



1. A concentrating apparatus consisting of a plurality of horisontally revoluble superposed disks, independent separating chambers carried by the disks at the periphery thereof and having openings thereinto, each of said chambers consisting of a separate casting independently fitted to the apparatus, means for supplying the separable material to be delivered outwardly by centrifugal force, and caused to pass over the openings into the separators, and pipes whereby water under pressure is delivered into the separators so as to form a counter current through the receiving openings.

2. In an apparatus for concentrating ores, a horisontally revoluble circular structure, said structure being formed of sections whose adjacent ends are spaced from each other, means for supplying material near the center to be carried outwardly by centrifugal action, a series of closed independent chambers located around the periphery and fitted to the spaces between the sections of the structure, said chambers having entrance openings from the central space, and means for supplying water to the

chambers to exert a counteracting pressure to the centrifugal action.

3. In a concentrating apparatus, a pair of horizontal superposed revoluble disks having a rim common to both, said rim being formed of sections whose adjacent ends are separated, independent castings fitted to the spaces between the separated ends of the rim sections and having interior chambers with openings thereto from the central space and having discharge openings in the bottoms, an intermediate disk of less diameter than the outer ones and revoluble therewith, means to supply material upon the central portion of said disk to be delivered outwardly against the perforated rim, and means to return waste material towards the center beneath the center disk.

4. In a concentrating apparatus, a pair of horizontally revoluble disks of substantially equal diameter, a third disk of less diameter disposed between the first named disks, separating blocks to which the disks are fixed, and by which the distance between them is determined, a rim fixed to the peripheries of the upper and lower disks, said rim being formed of sections whose adjacent ends are spaced from each other, independent castings fixed to the rim and filling the spaces between the rim sections, said castings forming concentrating chambers and having depressions and inlet openings connecting with the central space, means for supplying material upon the central portion of the intermediate disk whereby it is distributed outwardly by centrifugal action, a centrally disposed water supply, a cross with radial arms leading outwardly therefrom, and connecting with the concentrating chambers, means for regulating the water pressure within said chambers whereby lighter material is prevented from entering and is caused to return beneath the central disk, discharge pipes connecting with the bottom of the concentrating chambers, and launders into which the ore from said pipe and the tailings from the bottom disk, are respectively delivered.

876,643. WATER-COLOR PRINTING. CHARLES S. HERRMANCE, San Francisco, Cal. Filed Feb. 25, 1907. Serial No. 359,064.



1. In a printing apparatus, a reciprocating bed, a printing form, ink-wells and superposed absorbent pads carried thereby and so disposed as to be saturated from the wells, a distributing roller having its periphery formed of separated absorbent surfaces, each registering with one of the pads.

2. In a printing apparatus, a reciprocating bed, a printing form or surface, ink-wells and superposed absorbent pads carried by the bed, a roller revoluble in the plane of travel of the pads and form, said roller having its peripheral surface covered with separated sections of absorbent material, and each section having its area of the size and registering with the pad from which it receives its supply.

3. In a printing apparatus, a reciprocating bed, a printing form or surface carried thereby, continuous surfaced inking and distributing rollers journaled above one portion of the bed, and a fountain and supply means therefor, inkwells and superposed absorbent pads carried by the other portion of the bed, and a roller with independent inking sections on its surface, said sections registering with corresponding pads and sections of the form.

4. In a printing apparatus, a form having a non-absorbent base and raised absorbent printing surfaces, an ornamental border and like raised portions formed of absorbent filaments stitched through the base, a reciprocating bed upon which said form is carried, and ink and color supply devices therefor.

876,644. CAR-FRAME CONSTRUCTION. JOHN J. HENNESSY, Milwaukee, Wis. Filed June 4, 1907. Serial No. 377,178.



1. In a car-frame construction, the combination with center-sills having slots formed therein, of a body-bolster having separated recesses or pockets to receive the center-sills, and a plate having a laterally extending groove, said plate extending across the recesses and through the center-sills, and a transversely extending flange on the body-bolster adapted to fit into the groove of said plate.

2. In a car frame construction, the combination with a pair of center-sills each having a slot formed therein, of a body-bolster having disunited recesses to receive the center-sills and formed with an upwardly projecting flange adjacent to a wall of each recess, and a plate formed with grooves adapted to receive the said flanges, said plate attached to the bolster and extending across the recess and through the center-sills.

3. In a car-frame construction, the combination with center-sills having slots formed therein, of a body-bolster comprising a tension-member, a compression-member and a web joining said members, said tension-member having disunited cut away portions to receive the center-sills, an integral web-portion located between the cut away-portions, and a plate for replacing the cut away portions attached to the tension-member and extending through the slots of the center-sills.

4. In a car-frame construction, the combination with center-sills provided with slots, of a body-bolster having separated recesses to receive the center-sills, an integral web-portion located between the recesses, longitudinally extending flanges 10 projecting from the tension-member of the bolster, a reinforcing plate located between the said flanges and extending across the recesses and through the slots of the center-sills, and means for securing the plate to the tension-member.

5. In a car frame construction, the combination with center-sills having slots formed therein, of a body-bolster having separated recesses to receive the center-sills, upwardly projecting flanges adjacent to each recess, longitudinally extending flanges, and a plate bridging the recesses and extending through the center-sills, said plate located between the longitudinally extending flanges and formed with means for engaging the upwardly projecting flanges.

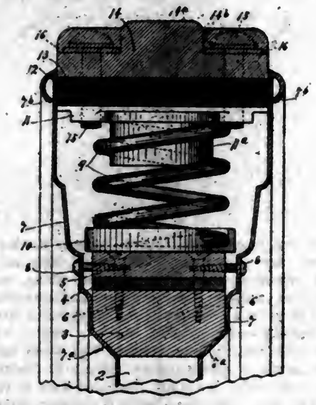
[Claims 6 and 7 not printed in the Gazette.]

876,645. SPRING-CUSHIONED TIRE. ISAAC HODGSON, Minneapolis, Minn., assignor to The Automatic Wheel & Rim Co., Minneapolis, Minn., a Corporation of New Jersey. Filed Mar. 16, 1906. Serial No. 306,366.

1. The combination with a wheel rim, of armor plates applied thereto and extending circumferentially outward thereof, a yielding tension band made up of a multiplicity of pliable folds working between and having frictional engagement with the inner surfaces of both of said armor plates, radially disposed circumferentially spaced coiled springs interposed between said rim and said tension band, and tread devices applied to the exterior of said yielding tension band, substantially as described.

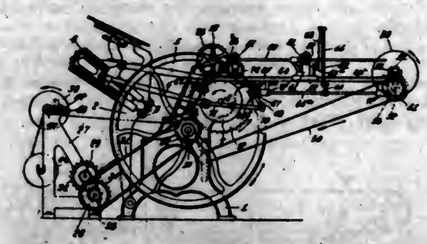
2. In a resilient tire, a plurality of radially disposed circumferentially spaced coiled springs, and a pliable tension band made up of inner pliable folds and an outer yielding metallic reinforcing band, substantially as described.

3. The combination with a wheel rim, of armor plates applied thereto and extending circumferentially outward thereof, a yielding tension band made up of pliable inner folds and an outward thin metal reinforcing band, said tension band working frictionally between said armor plates, radially disposed circumferentially spaced coiled springs interposed between said rim and said tension



band, and tread devices applied to the exterior of said tension band, substantially as described.

876,646. TAG AND LABEL PRINTING PRESS. FREDERICK C. JAMIESON, Montreal, Quebec, Canada. Filed Feb. 10, 1906. Serial No. 300,392.



1. In a printing mechanism, the combination of a frame provided with horizontal, parallel runners, each runner provided with a longitudinally extending bead, a knife-supporting bracket carried by said runners, said bracket provided with transverse grooves, the beads of said runners positioned within said grooves, a transverse knife carried by said bracket, means for vertically moving said knife upon said bracket, and means for feeding a printed web or strip to said bracket, in the path of movement of said transverse knife.

2. In a printing mechanism, the combination of a frame provided with horizontal, parallel runners, each runner provided upon its upper face with a longitudinally extending bead, a longitudinally adjustable knife-supporting bracket carried by said runners, said bracket provided with grooves and with depending guide flanges, the beads of said runners positioned within the grooves of said bracket, vertically movable and rotatable cutting means carried by said bracket, and means for feeding a web or sheet of printed material to said bracket in the path of movement of said cutting means.

3. In a printing mechanism, the combination of a frame provided with horizontal, parallel runners, a longitudinally, adjustable knife-supporting bracket carried by said runners, a knife carried by said bracket, a rockable shaft secured upon said frame contiguous to said runners, an arm keyed to said rockable shaft and capable of being adjusted longitudinally thereof, a link connecting said arm and knife, a beveled gear fixedly secured to one end of said rockable shaft, an arm provided with a beveled gear, carried by said frame, said last mentioned gear meshing with the first mentioned gear, a double link connected to said last mentioned arm, means for actuating said double link for imparting rotary movement to said beveled gears for rocking said shaft, and thereby vertically moving said knife, and means for feeding a web or sheet of printed material to said bracket in the path of movement of said knife.

4. In a printing mechanism, the combination of a frame provided with horizontal runners, a knife-supporting bracket carried by and adjustable longitudinally of said runners, a table provided with longitudinally extending, parallel slots, said table carried by said knife-supporting bracket, fastening means carried by said bracket and positioned within the slots of said table for securing the table in an adjusted position, said table being capable of transverse adjustment upon said bracket, cutting means carried by said bracket, and means for feeding a printed web or sheet to said bracket in the path of movement of said cutting means.

5. In a printing mechanism, the combination of a frame provided with a horizontal supporting bracket, of a longitudinally adjustable knife-supporting bracket carried by said horizontal bracket, said knife-supporting bracket comprising parallel standards, a horizontal base member connecting said standards, a table carried by said base member and adjustable transversely thereof, vertically movable cutting means carried by said knife-supporting bracket, rotatable guiding means carried by said knife-supporting bracket, a plurality of co-acting, rotatable, cutting knives carried by said bracket, and means for feeding a web or sheet of printed material to said knife-supporting bracket between said knives and in the path of movement of said cutting means.

[Claims 6 to 19 not printed in the Gazette.]

876,647. GOVERNOR FOR STEAM-ENGINES. JOHN W. KLEINHAN, Alexander, N. D. Filed Feb. 27, 1907. Serial No. 359,580.



1. In a device of the character described, the combination of a casing, a valve seat adjustably mounted within the casing, a valve coöperating with the valve seat, a transverse shaft mounted upon the casing, and a cam carried by the shaft for adjusting the valve seat with reference to the valve.

2. In a device of the character described, the combination of a casing, a cylindrical valve seat adjustably mounted within the casing and provided at its end portions with packing rings for producing a close connection with the casing, a valve mounted within and coöperating with the valve seat, a transverse shaft journaled in the casing, and a cam carried by the shaft and engaging the valve seat for adjusting the same.

3. In a device of the character described, the combination of a casing, a valve seat located within said casing, a valve slidable within the valve seat and coöperating

therewith, a governor mechanism having an operative connection with the valve, an extension projecting from the valve seat and provided with a laterally elongated opening, a shaft journaled in the casing and extending through the opening, and an eccentric mounted upon the shaft and engaging the opening to adjust the valve seat.

876,648. REEL-CLAMP. CHARLES B. KUHL, Sioux City, Iowa. Filed June 6, 1907. Serial No. 377,663.



1. A clamp comprising an encircling body portion provided at one end with an opening, a cross bar closing the outer side of said opening, and a latch lever pivoted to the opposite end of said encircling body and having an offstanding projection at its pivoted end to engage with the inner side of the aforesaid cross bar closing the outer side of the opening at the opposite end of said encircling body when the clamp is closed.

2. A clamp comprising an encircling body provided at one end with an opening, a cross bar closing the outer side of said opening, a latch lever pivoted to the opposite end of said encircling body, and a knuckle joint between the latch lever and encircling body and having a projection upon the outer side of the knuckle to draw the end portions of the encircling body together, the joint between the latch lever and encircling body partly entering the said opening at one end of the encircling body when the clamp is closed.

3. A clamp comprising an encircling body having an opening at one end, a cross bar closing the outer side of said opening, a latch lever pivoted to the opposite end of the encircling body, and a knuckle joint between the latch lever and encircling body, said latch lever having portions pressed outward from the knuckle to form a fulcrum to engage with the aforesaid cross bar at the outer side of the opening of said encircling body.

4. A clamp comprising an encircling body having an opening at one end, a cross bar closing the outer side of said opening, a latch lever pivoted to the opposite end of the encircling body, and a knuckle joint between the latch lever and encircling body, the knuckles of the latch lever having cuts extended inward and having portions bordering upon the cuts pressed outward to form projections to engage with the aforesaid cross bar at the outer side of the said opening to hold the clamp closed.

5. A clamp comprising hinged members, one of said members having an opening at its free end, a cross bar closing the outer side of said opening, a latch lever pivoted to the free end of the other member, and a knuckle joint between the latch lever and the member to which said latch lever is connected, said knuckle joint having a projection upon its outer side to engage with the aforementioned cross bar to effect contraction of the clamp and serving to secure the same when closed.

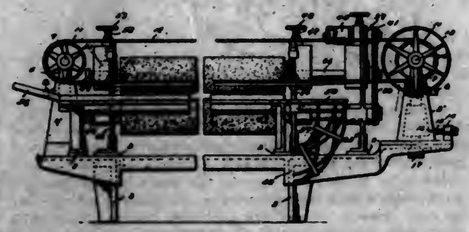
876,649. HOE. CHARLES A. LONG, Spokane, Wash. Filed Apr. 15, 1907. Serial No. 368,279.

1. As an article of manufacture, a hoe comprising a blade having a convexed front face and a concaved rear face, said blade comprising oppositely extending tapered wings terminating at their outer ends in cutting points and terminating at their front ends in the common front point, said wings furthermore having outer cutting edges, a shank having a connection with the upper portion of the blade and serving to maintain said blade in substantially horizontal position, and a rib projecting from the front convexed face of the blade and extending from the shank to said common point, said rib being disposed centrally of the blade, being tapered from the shank to the point and having its upper edge sharpened to cut roots and the like in advance of the severance of the roots and the like by the opposite outer edges of the wings.



2. As an article of manufacture, a blade having a convexed upper face and a concaved under face, said blade comprising oppositely extending tapered wings, terminating at their rear ends in cutting points and terminating at their front ends in a common front point, said wings furthermore having outer cutting edges, a shank having a connection with the upper portion of the blade and maintaining the same in substantially horizontal position, and a rib projecting from the upper convexed face of the blade and extending from the shank to said common front point, said rib being disposed centrally of the blade, being tapered from the shank to the point and having its upper edge sharpened to cut roots and the like in advance of the severance of the roots and the like by the outer edges of the wings, said blade furthermore having a groove in its under concaved side and said groove extending to the rib but having a depth that is less than the corresponding height of the rib, and means engaging the shank for operating the blade.

876,650. SOLDER-WIPING MACHINE. ROBERT M. LOVELL, Baltimore, and AARON G. FAHRNEY, Highlandtown, Md. Filed Aug. 21, 1905. Serial No. 275,084.



1. In a solder wiping machine, the combination of opposite tables, feeding belts arranged over the tables, inner pairs of wipers between the tables, and wipers being spaced apart from each other, and shields over the wipers.

2. In a solder wiping machine, the combination of opposite tables, feeding means arranged over the tables, and upper and lower rotary wipers between the tables, the upper wipers being adjustable relatively to the lower wipers to accommodate cans of different diameters.

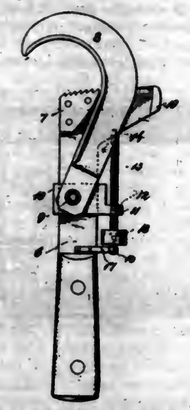
3. In a solder wiping machine, the combination of opposite tables, rotary wipers between the tables, cleaners engaging the wipers, and feeding means arranged over the tables.

4. In a solder wiping machine, the combination of opposite tables, feeding devices over the tables, pairs of rotary wipers between the tables, adjustable bearings for a portion of the wipers, and means for vertically adjusting the feeding devices.

5. In a solder wiping machine, the combination of opposite tables, feeding means arranged over the said tables, and rotary wipers between the tables, each of the wipers at one end having a releasing device to permit them to be removed.

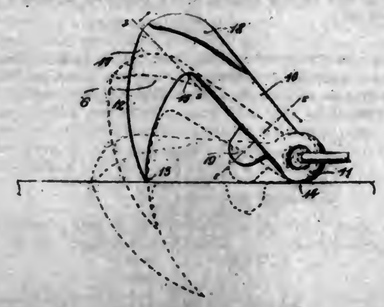
[Claims 6 to 24 not printed in the Gazette.]

876,651. PIPE-WRENCH. ERNEST F. LUBKE and EDMUND C. REED, near Arlington, Tex. Filed Sept. 9, 1907. Serial No. 392,014.



In a wrench, the combination of a handle-bar having an offset portion at the front end with a face forming an inner jaw and a pivoted hooked outer jaw, split to form two branches extending on opposite sides of the handle-bar, the inner jaw extending between said branches, a cuff slidable on the handle and located between the said branches, and pivotally connected thereto, and having a tapped extension at the rear side, and a non-traveling screw working through said extension and between the branches of the outer jaw and having a bearing at one end in said offset portion of the handle bar.

876,652. LOGGING-GRAB. HAROLD F. MARTIN, West Pike, Pa. Filed May 31, 1907. Serial No. 376,543.

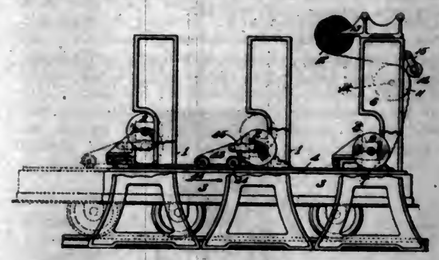


1. A logging grab comprising a shank, an eye at one end of the shank, a log entering bit at the other end of the shank, and a wedge integral with the shank and wholly between the eye and the bit, substantially as set forth.

2. A logging grab having a shank, an annular eye at one end of the shank, an arc-shaped bit at the other end of the shank, the center of curvature of said bit being substantially at the bottom of the said eye, and a log-entering wedge on the shank located wholly between the eye and the bit, substantially as and for the purpose set forth.

3. The herein described logging grab consisting of a short straight shank, an eye at the forward end of the shank, an arc-shaped bit projecting downwardly from the rear end of the shank and forming therewith a sharp bend, the point of the bit being chisel-shaped and wider than the intermediate portion thereof, the center of the curvature of the bit being substantially at the bottom of the eye, and the sides of the bit being convex and meeting in a thin back portion, a wedge formed on the lower edge of the shank between the eye and the said bend, and the upper rear portion of the grab being provided with a wide head, substantially as set forth.

876,653. WIRE-GLASS-ROLLING APPARATUS. ANTON MEYER, St. Louis, Mo., assignor of fifty-one one-hundredths to James W. Allison, St. Louis, Mo. Filed Apr. 22, 1907. Serial No. 369,670.



1. In a wire glass rolling apparatus, the combination of a carriage, a pressure roll surmounting said carriage, movable means supporting said roll, wire cloth devilery means, movable means supporting said wire cloth delivery means coöperable with said roll supporting means, and wire cloth shearing means operable by the means supporting said wire cloth delivery means, substantially as set forth.

2. In a wire glass rolling apparatus, the combination of a carriage, a pressure roll surmounting said carriage, movable means by which said pressure roll is supported, wire cloth delivery means arranged for coöperation with said roll, movable means by which said wire cloth delivery means is supported, and shearing mechanism operable through the medium of said means by which said wire cloth delivery means is supported, substantially as set forth.

3. In a wire glass rolling apparatus, the combination of a carriage, a pressure roll surmounting said carriage, vertically movable means by which said pressure roll is supported, wire cloth delivery means arranged for coöperation with said roll, vertically movable means by which said wire cloth delivery means is supported, and shearing mechanism operable through the medium of said means by which said wire cloth delivery means is supported; said means for supporting said wire cloth delivery means being susceptible of movement independent of said roll supporting means, substantially as set forth.

4. In a wire glass rolling apparatus, the combination of a carriage, a pressure roll surmounting said carriage, and geared thereto, a wire cloth delivery drum geared to said pressure roll, vertically movable means by which said drum is supported, wire cloth shearing mechanism associated with said drum supporting means, and means operable by said carriage whereby said drum supporting means is moved to operate said shearing mechanism, substantially as set forth.

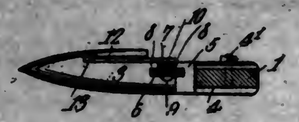
5. In a wire glass rolling apparatus, the combination of a carriage, a pressure roll, lift rods by which said pressure roll is supported, a wire cloth delivery drum coöperating with said pressure roll, lift rods by which said drum is supported, and lever mechanism connecting said pressure roll supporting and drum supporting rods, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

876,654. CUTTING APPARATUS FOR MOWERS. WALTER J. NEEDHAM, Myra, Tex. Filed Mar. 18, 1907. Serial No. 362,969.

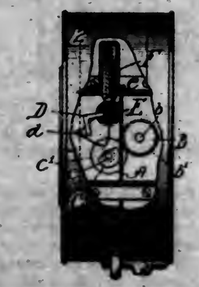
A cutting apparatus as described comprising a rail, guards mounted upon the same and having transversely disposed channels with oppositely disposed lugs located at

the upper edges thereof, a cutter bar mounted for reciprocation in said channels and having a portion lying between



said lugs and being retained in the channels by the lugs and knives mounted upon said bar.

876,655. WATCHMAN'S CLOCK. ABRAHAM A. NEWMAN, Chicago, Ill. Filed Dec. 4, 1906. Serial No. 346,275.



1. The combination with a cylinder having three series of characters, of means engaging the cylinder and adapted to be engaged by a key and in the turning thereof to rotate said cylinder and bring the proper series of characters into position to be acted upon by the key.

2. The combination with a cylinder having three series of characters, one series of said characters being normally in position to be engaged by the keys, and means engaging said cylinder and adapted to be engaged by a key and in the turning thereof to rotate said cylinder to bring the second series of characters into position to be operated upon by said keys and when acted upon by another set of keys to bring said third series of characters into position to be acted upon.

3. The combination with a cylinder having three series of characters one of which is normally in position to coöperate with a suitable key, of means engaging the cylinder and adapted to be engaged by certain of the keys as they are turned for rotating the cylinder to bring the second and third series of characters successively in position to be operated upon by the keys.

4. The combination with a cylinder having different series of characters, of a segment having means of engagement with the cylinder and adapted to be engaged by suitable keys as they are turned to rotate said cylinder to bring the proper series of characters in position to coöperate with the keys.

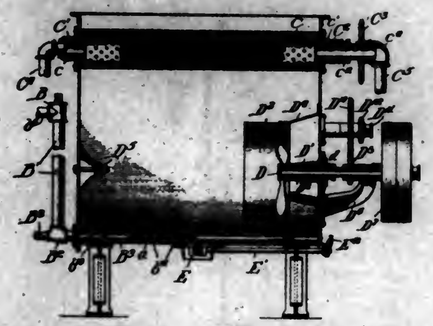
5. The combination with a cylinder having different series of characters and lying on one side of the position normally occupied by the dial of the device, of a segment lying to the opposite side of the normal position of the dial and having means of engagement with the cylinder whereby motion of the segment will rotate the cylinder, said segment being adapted to be engaged by a suitable key as it is turned and to rotate the cylinder and bring the proper series of characters into position to be acted upon.

[Claim 6 not printed in the Gazette.]

876,656. WASHING-MACHINE. JOHN T. H. PAUL, Chicago, Ill., assignor to H. Goldman & Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 6, 1906. Serial No. 329,216.

1. In a machine of the character set forth, the combination of a casing, a spreader supported in the casing, and a propeller operating to propel the filter-mass and washing fluid toward said spreader.

2. In a machine of the character set forth, the combination of a casing, a water supply-pipe communicating with the casing at one end thereof near the bottom of the casing, a spreader connected with the same end of the casing at a higher point, a propeller arranged opposite said spreader, and an induction port communicating with the interior of the casing near the upper portion thereof.

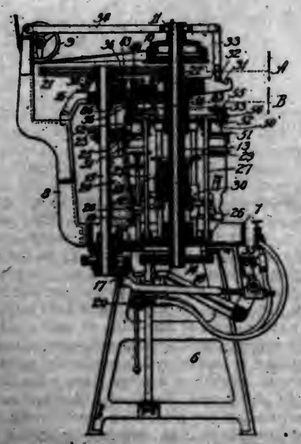


3. In a machine of the character set forth, the combination of a casing, a water-supply pipe connected therewith, a spreader supported at one end of the casing, a tubular housing open at both ends supported at the other end of the casing in axial alinement with said spreader, and a rotary propeller in said housing, for the purpose set forth.

4. In a machine of the character set forth, the combination of a casing, an injector-pipe equipped with an injector, a union connecting said pipe with the lower portion of the casing, an air-pipe extending through said union and into the casing and provided within the casing with perforations, and an eduction port connected with the upper portion of the casing.

5. In a machine of the character set forth, the combination of a casing, a conical spreader in said casing and supported on one end thereof, a tubular housing supported on the other end of said casing, and a propeller in said tubular housing.

876,657. BOTTLE-WASHER. JOHN T. H. PAUL, Chicago, Ill., assignor to E. Goldman & Co., Inc., Chicago, Ill., a Corporation of Illinois. Filed May 4, 1907. Serial No. 371,835.



1. In a bottle-washing machine, the combination with the rotatory bottle-rack, of means for rotating it by a step-by-step movement, consisting of a rotatory crank-finger, a notched wheel journaled in position on the frame of the machine to be engaged at the notches in succession by said finger, a circumferential series of uniformly spaced teeth on the upper rack-head, a shaft journaled on said frame and geared to said wheel, and a cross-head on said shaft provided with end-studs adapted to embrace said teeth, one at a time, and work between them, for the purpose set forth.

2. In a bottle-washing machine, the combination with the rotatory bottle-rack, of means for rotating it by a step-by-step movement, consisting of a peripherally recessed rotatory disk carrying a crank-finger, a notched wheel provided with arc-shaped peripheral recesses between the notches and journaled in position on the frame of the machine to be engaged at its notches in succession by said finger, a circumferential series of uniformly-spaced teeth on the upper rack-head, a shaft journaled on said frame and geared to said wheel, and a cross-head on said shaft provided with end-studs adapted to embrace said teeth, one at a time, and work between them, for the purpose set forth.

3. In a bottle-washing machine, the combination with the rotatory bottle-rack, of means for rotating it by a step-by-step movement, consisting of a rotatory crank-finger, a notched wheel on a shaft carrying a gear-wheel and journaled in position on the frame of the machine to cause said finger to engage the notches in succession, one in each rotation of the finger, a circumferential series of uniformly spaced teeth on the upper rack-head, an idler-pinion journaled on said frame to mesh with said gear-wheel, and a pinion journaled to mesh with said idler on a shaft journaled on the frame, and carrying a cross-head provided with end-studs adapted to embrace said teeth, one at a time, and work between them, for the purpose set forth.

4. In a bottle-washing machine, the combination with the rotatory bottle-rack, of step-by-step driving means therefor, bottle-clamps each consisting of upper and lower socket-members with a spring-supported bottom-brush rotatably confined in the upper member, gear connections between the rack and brushes for rotating them by the movement of the rack, and a cam in the path of the brush-supports for depressing the brushes against the resistance of their springs, for the purpose set forth.

5. In a bottle-washing machine, the combination with the rotatory bottle-rack, of step-by-step driving means therefor, a ring rotatably supported on the upper rack-head, said ring being provided with inner and outer gear-teeth and geared at its outer teeth to said driving means, bottle-clamps having upper rotatable socket-members depending from the said rack-head, brushes in said members on spindles journaled in said head, and pinions on the upper ends of said spindles meshing with said inner teeth on the ring, for the purpose set forth.

[Claims 6 to 11 not printed in the Gazette.]

876,658. WHIP-SOCKET. CHARLES E. PIERCE, Edmore, N. D. Filed May 21, 1907. Serial No. 374,814.

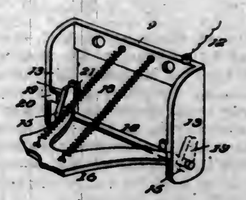


1. In a whip socket, the combination of a tubular casing, a clamping spring mounted within the tubular casing, a swinging arm adapted to engage the clamping spring to move the same into an operative position, and a spring detent to prevent accidental movement of the swinging arm.

2. In a whip socket, the combination of a tubular casing, a clamping spring mounted within the tubular casing and having one of its ends secured thereto, a swinging arm adapted to engage the clamping spring to move the same into an operative position, and a spring detent to prevent accidental movement of the swinging arm, the free end of the clamping spring having a sliding engagement with the spring detent.

3. In a whip socket, the combination of a tubular casing, a clamping spring mounted within the casing and provided with a shoulder, a swinging locking arm adapted to engage the clamping spring to force the same into an operative position, the said swinging arm engaging the before mentioned shoulder upon the clamping spring and being limited in its swinging movement in one direction thereby, and a detent for holding the swinging arm against accidental movement.

876,659. ELECTRIC RAILWAY. ORLANDO D. PRESCOTT, New York, N. Y. Filed May 25, 1906. Serial No. 318,715.



In an electric railway, the combination with the way or tracks and the working conductor arranged adjacent the way and parallel thereto, of a frame designed to be rigidly mounted on a car movable on said way, a conductor wire leading from said frame to the car motor, said frame having side arms, a shaft connecting said arms, a trolley support having plates or flanges journaled on said shaft and forming engaging lugs or projections, stops on the inner faces of said arms designed to co-act with said lugs to limit the movement of said support, said plates or flanges contacting with the faces of said arms, and a trolley or current collecting shoe carried by said support and engaging said working conductor, all of said parts comprising the trolley support being of conducting material, for the purpose stated.

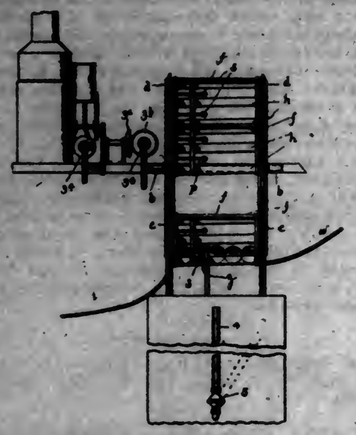
876,660. APPARATUS FOR COOKING CANNED GOODS. JAMES P. RITCHIE, New Tazewell, Tenn. Filed Mar. 12, 1907. Serial No. 361,961.

1. In apparatus of the class described, the combination of a tank, sprocket mechanism having opposite endless upright chains, transverse carriers hung from said chains, said carriers having run-ways inclined slightly to the horizontal, a gate normally closing the lower end of the run-way of each said carrier, and means for automatically operating said gate to discharge the cans.

2. In apparatus of the class described, the combination of a tank, sprocket mechanism having opposite endless upright chains, transverse carriers hung from said chains, said carriers having run-ways inclined slightly to the horizontal, a feed track leading to one of said carriers, a discharge track leading from the opposite ends of the carriers, and means for automatically discharging the cans from the carriers, including a gate normally closing the lower end of each runway.

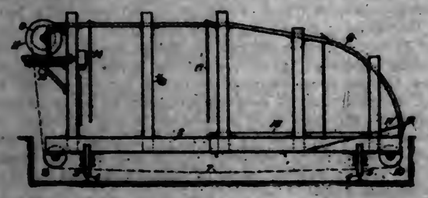
3. In apparatus of the class described, a tank, opposite upper and lower pairs of sprocket wheels, opposite endless chains connecting said sprocket wheels, transverse bars connecting links of opposite chains, pivoted transverse carriers hung from said bars and having each a runway inclined slightly to the horizontal, a gate normally

closing the lower end of each run-way, and means for automatically operating said gate to discharge the cans.



4. In apparatus of the class described, the combination of a tank, sprocket mechanism having opposite endless upright chains, transverse carriers hung from such chains, said carriers having run-ways inclined slightly to the horizontal, a gate normally closing the lower end of each run-way, said gate having an arm extension carrying an anti-friction roller, and cam means adapted to engage such roller for automatically operating said gate to discharge the cans.

876,661. TONGS-CARRIER. WILLIAM E. SANDFORD, Zanesville, Ohio. Filed Aug. 20, 1906. Serial No. 331,228.



1. In pipe welding apparatus, a tong carrier, and means containing a cooling medium in the path of the carrier, said carrier being arranged to raise the tongs from the cooling medium into a vertical position and then transport and deposit them at the opposite side of the carrier; substantially as described.

2. In pipe welding apparatus, a vertical frame-work, an endless carrier arranged to travel thereon in an elongated path, and having devices for engaging and conveying tongs and a receptacle for a water bath through which the tongs pass during at least a part of their travel; substantially as described.

3. In pipe welding apparatus, a movable frame-work having a tongs carrier arranged to travel thereon and provided with means for supporting the tongs at one side of the frame-work; substantially as described.

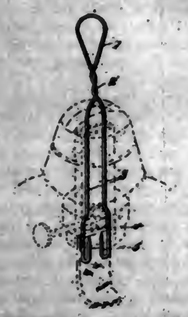
4. In pipe welding apparatus, a movable frame-work having a flexible tongs carrier arranged to travel thereon, and means carried by the frame-work for cooling the tongs as they are moved by the carrier; substantially as described.

5. In pipe welding apparatus, an endless carrier, a water bath or trough near the carrier, said carrier having supports for the tongs and being arranged to gradually lift the tongs from the water bath or trough into a vertical position on their return movement; substantially as described.

876,662. CORNMEAL PRODUCT. ERWIN W. SIMONS, Schuyler, Nebr. Filed Dec. 27, 1905. Serial No. 293,510.

A corn meal product comprising meal formed by drying or parching corn "germs" while they are in their natural form and state until the same are reduced to a crisp state, whereby the tendency of the "germs" to become rancid is obviated, and grinding the said "germs", and ordinary corn meal blended with the first mentioned meal.

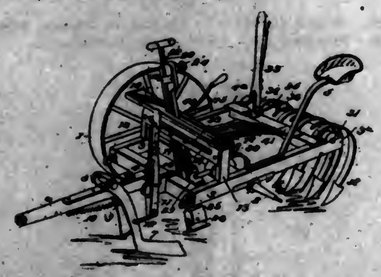
876,663. LAMP-WICK HOOK. MYRTLE O. SMITH, Weston county, Wyo. Filed May 27, 1907. Serial No. 376,000.



1. A lamp wick threader comprising a handle and a pair of spaced arms in alinement therewith, the said spaced arms having the extremities thereof returned inwardly and constituting rearwardly extending wick engaging prongs which are located between the spaced arms and protected thereby, the said prongs being arranged in the same plane with the spaced arms.

2. A lamp wick threader formed of a single length of material which is doubled upon itself and the doubled portions twisted together at an intermediate point, a finger-loop being located at one end of the wick threader while the opposite end comprises a pair of spaced and parallel arms provided at an intermediate point with corresponding outwardly extending offsets, the extremities of the arms being returned inwardly and rearwardly extending wick engaging prongs, said prongs and arms being arranged in the same plane.

876,664. COTTON CHOPPER AND CULTIVATOR. WILLIAM J. SMITH, Redboiling Springs, Tenn. Filed Apr. 17, 1907. Serial No. 368,730.



1. A machine of the character described, comprising a framework, standards mounted on said framework a transversely extending guide bar supported by said standards, a hoe stock pivotally mounted in the framework to vibrate transversely, the guide bar being provided with a slot and the stock passing upwardly through said slot, a spring secured to said stock and to the guide bar, and adapted to hold said guide bar at one end of the slot, a revoluble axle upon which the framework is mounted, and a series of tappets carried by the axle and adapted to strike the stock below the pivot thereof, as and for the purpose set forth.

2. A machine of the character described, comprising a traveling framework, a revoluble axle on which said framework is carried, a hoe stock pivotally mounted to vibrate transversely in said framework, a hoe carried by said stock, the stock being provided with a projecting lug, a series of tappets secured to the axle and adapted to strike said lug successively, a spring connected to said stock and designed to return the same to normal position, and means for stopping the return movement of the stock at different points in its traverse, whereby to vary the throw of said stock.

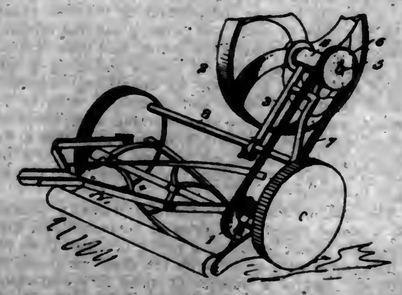
3. A machine of the character described, comprising a frame work, a revoluble axle upon which said frame work is mounted, standards mounted on said frame work, a transversely extending guide bar supported by said standards and provided with a slot, a hoe stock pivotally mounted in the frame work to vibrate transversely and passing upwardly through a slot in said guide said stock being provided with a laterally projecting lug, a hoe carried by said stock, and a series of tappets carried by the axle and adapted to successively strike said lug, and a spring connected to the stock and the guide bar and adapted to return the stock to its normal position after being struck by the tappets.

4. A machine of the character described, comprising a supporting frame work, traveling wheels therefor, and a revoluble axle for the traveling wheels and on which said frame work is mounted, standards projecting upwardly from the frame work, a transversely extending guide bar mounted on said standards and provided with a slot, a transversely vibrating hoe stock pivotally mounted intermediate of its ends in the frame work, the upper end of said stock passing through the slot in the guide bar, said stock being provided with a laterally projecting lug, a series of tappets mounted on the axle and adapted to successively strike said lug, a spring secured to said stock and the guide bar, a hoe shank carried by said stock and vertically adjustable therein, means for holding said shank at different adjustments, and a hoe carried by said shank.

5. A machine of the character described, comprising a traveling frame work, a hoe stock pivotally mounted within said frame work to vibrate in a transverse plane, said stock being provided with a groove, a hoe shank mounted in said groove and slidable therein, means for holding said shank at different elevations in the stock, said shank being provided at its lower end with a head, a hoe mounted in said head, the head being provided with an arm and the stock with a sheath adapted to accommodate said arm, and means for vibrating said stock.

[Claim 6 not printed in the Gazette.]

876,665. LAWN-MOWER. EARL M. STAPLETON, Cedar Vale, Kans. Filed Jan. 9, 1907. Serial No. 351,535.

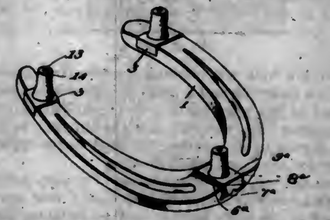


1. The combination in a lawn mower of a rotary cutter shaft, a cross bar, a gear wheel applied to the rotary cutter shaft, a frame mounted upon the cross bar of the mower and carrying a bearing, a shaft journaled in the bearing, a fly wheel carried by the shaft, a gear wheel rigid with the shaft, and a chain connecting the two gear wheels, the said frame having a swinging movement upon the cross bar whereby compensation can be made for any slack in the chain.

2. The combination in a lawn mower of a rotary cutter shaft, a cross bar, a gear wheel applied to the rotary cutter shaft, a frame applied to the cross bar and comprising a member having one end thereof bifurcated to receive the cross bar of the lawn mower, the arms of the bifurcation carrying inwardly extending lugs formed with inclined faces, while the opposite end of the frame carries a bearing, a gripper block arranged between the arms of the said bifurcation, a set screw for drawing the arms together and causing the inclined faces of the lugs to engage the gripper block and force the same against the cross bar, a shaft journaled in the before mentioned bearing, a fly wheel carried by the shaft, a gear wheel rigid with the shaft, and a chain connecting the two gear wheels, the swinging movement of the frame upon the cross bar enabling compensation to be made for any slack in the chain.

3. The combination in a lawn mower of a rotary cutter shaft, a cross bar, a gear wheel applied to the rotary cutter shaft, a frame applied to the cross bar of the mower and comprising spaced members carrying a bearing at one end thereof while their opposite ends are bifurcated to receive the cross bar, the arms of the bifurcations carrying inwardly extending lugs formed with inclined faces, gripper blocks arranged between the said bifurcations and upon opposite sides of the said transverse bar, one of said gripper blocks having inclined faces for coöperation with the inclined faces of the lugs, set screws for drawing the bifurcations together, a shaft journaled in the bearing, a fly wheel carried by the shaft, a gear wheel rigid with the shaft, and a chain connecting the two gear wheels, the swinging movement of the frame upon the cross bar enabling compensation to be made for slack in the chain.

876,666. HORSESHOE-CALK. DUDLEY STONE, North Liberty, Iowa. Filed Apr. 9, 1907. Serial No. 367,144.



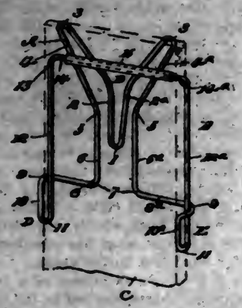
A horseshoe provided at its toe portion with spaced flanges having locking walls, and a toe calk provided with corresponding shoulders adapted to be slipped between and engaged with said flanges, said toe calk being formed with a projecting lip adapted to be bent over the outer edge of the shoe, and the shoe being formed at its front edge with a recess for the reception of said lip, the said lip being provided at its edge with a notch.

876,667. PAPER-CLIP. MELVIN E. THOMPSON, Port Allegany, Pa. Filed Dec. 7, 1906. Serial No. 346,782.

1. A paper clip formed of a single strip of spring material and comprising a pair of jaws spring pressed towards each other, both of said jaws yielding laterally to accommodate packages of different widths, one of said jaws yielding laterally under tension, while the opposite jaw comprises spaced side pieces which are controlled in their lateral yielding by the spring tension in the first mentioned jaw and which are provided at their extremities with lateral projections having a sliding connection with each other.

2. A paper clip formed of a single piece of spring material and comprising a pair of jaws spring pressed toward each other, one of said jaws comprising spaced connected side pieces yielding laterally under tension and terminating

with oppositely extending members carrying loops at their extremities, the said loops being arranged in a plane at approximately right angles to the plane of the jaw, while the opposite jaw comprises spaced and approximately parallel side pieces extending from the before mentioned loops



and provided at their extremities with lateral extensions having a sliding connection with each other whereby the side pieces of the second mentioned jaw maintain their parallel relation when the first mentioned jaw yields laterally.

876,668. INKSTAND. WALTER I. TISDALE, McNeill, Miss. Filed Apr. 9, 1907. Serial No. 367,145.



1. In an ink well, the combination of a body portion provided with a reservoir and a dipping well, a feed opening being formed in the body portion and establishing communication between the reservoir and the dipping well, and a closure adapted to close either the inlet to the dipping well or the before mentioned feed opening.

2. In an ink well, the combination of a body portion provided with a reservoir and a dipping well, a feed opening being formed in the body portion and establishing communication between the reservoir and the dipping well, and a spring arm adapted to close either the inlet to the dipping well or the before mentioned feed opening.

3. In a device of the character described, the combination of a body having a reservoir formed therein and comprising a feed portion provided with a chamber the lower portion of which is in the nature of a dipping well, a feed opening being provided which communicates between the reservoir and the dipping well, a tubular member extending downwardly into the chamber of the feed portion, and a member normally closing the tubular member and designed to be moved to close the feed opening.

4. In a device of the character described, the combination of a body having a reservoir formed therein and comprising a feed portion provided with a chamber, a dipping well being formed at the bottom of the chamber and a feed opening being provided which communicates between the reservoir and the dipping well, a tubular member extending within the chamber, and a spring arm located within the chamber and normally closing the tubular member, the said spring arm being adapted to also close the feed opening.

5. In an ink well, the combination of a body portion provided with a reservoir and a dipping well, a feed opening being formed in the body portion and establishing communication between the reservoir and the dipping well, and a spring arm arranged within the dipping well and normally closing the inlet to the dipping well, the said spring arm being adapted to be deflected to close the before mentioned feed opening.

876,669. TELEGRAPHIC TRANSMITTER. DANA S. TSOTSI, Fruitvale, Cal. Filed Apr. 6, 1906. Serial No. 310,876.



1. In a telegraphic transmitter, the combination of a rotatable shaft, means for rotating the same, a series of make-and-break disks loose on the shaft, a circuit-closing lever to each disk, an annular fixed guide inclosing the edge of each disk, said guide provided with an opening, key-operated means including a latch of the disk and a pinion on the shaft, said latch having a member to engage the pinion and thereby lock the disk to the shaft, and having a second member to enter the opening in the guide and thereby disconnect the disk from the shaft at the end of a complete revolution.

2. In a telegraphic transmitter, the combination of a rotatable shaft, means for imparting continuous rotary motion thereto, a series of circuit-making-and-breaking disks loose on the shaft, a circuit-closing lever to each disk, an annular fixed guide inclosing the edge of each disk, key-operated means comprising a latch on each disk and a pinion on the shaft, said latch having a member to engage the pinion and thereby lock the disk to the shaft, and having a second member adapted to engage said guide to hold the disk against movement and disconnect the disk from the shaft at the end of the complete revolution.

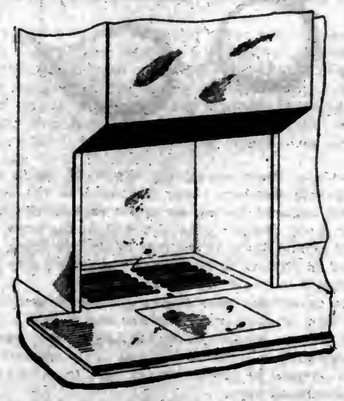
3. In a telegraphic transmitter, a plurality of circuit-making and breaking levers, a rotatable cam-disk to each lever having alternating projections and depressions adapted to produce by a rotative movement of the disk a predetermined number of vibrations of the lever, a contact member independent of the disk, engageable by the lever to make and break a sending circuit, a continuously rotated shaft, means including a latch on the disk for operatively connecting any disk or number of disks in succession with the shaft, and means comprising a fixed guide for the disk having a catch into contact with which the latch is moved, to disconnect each disk from the shaft at the end of each revolution.

4. In a telegraph transmitter, a plurality of circuit-making and breaking levers, a rotatable disk to each lever having projections arranged in predetermined order to produce a given number and character of vibrations in the lever, a contact member independent of the disk engageable by the lever to make and break a sending circuit, a continuous rotating shaft from which said disks are normally disengaged, key-operated means including a latch pivotally secured to each disk for operatively connecting the disks in selected order and succession with or into the shaft, and means for disconnecting each previously connected disk, said last named means comprising a fixed guide for the disk having an opening into which a part of the said latch is projected to thereby lock the disk against movement.

5. The combination of a stationary frame, a rotatable shaft, a motor therefor, a series of rotatable cam disks, key-operated means including a spring actuated pawl on a disk engageable with a pinion on the shaft for connecting at will any disk or a number of disks in predetermined order with the rotatable shaft, means operating by the rotation of each disk for opening and closing an electrical circuit in time with the movement of the disk, and means for disconnecting the disk from the shaft after each movement, said last named means comprising an annular fixed guide in which the edge of the disk is mounted, said guide having an opening into engagement with which the latch is projected to thereby lock the disk against movement.

[Claims 6 to 12 not printed in the Gazette.]

876,670. FIREPLACE. HARRY M. WALKER, Maplesville, Ala. Filed Apr. 9, 1907. Serial No. 367,143.



A fire place comprising a back, sides and an open front, a hearth having an opening in the rear portion thereof and also provided with a second opening in the forward portion thereof, the said hearth being substantially on a level with the floor, a grate removably mounted within the first mentioned opening, a cover for the second mentioned opening, a box located under the grate and provided with an open side, and an ash pan slidably mounted within the box and removable through the open side thereof and the second mentioned opening in the hearth.

876,671. BED-PAN. GEORGE M. WHITE, Pittsburg, Pa. Filed May 8, 1907. Serial No. 372,471.



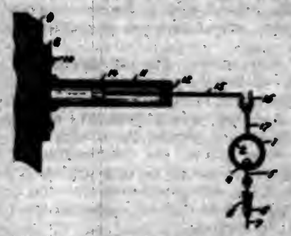
1. A bed-pan comprising a bowl provided with a continuous outwardly-projecting flange the front portion of which is formed with a shoulder, a cover formed with an opening, a wire frame around which the outer edge of the cover is bent, and a second wire frame around which the inner edge of the cover is bent, said second frame resting on shoulder.

2. A bed pan comprising a bowl provided with a continuous outwardly-projecting flange, the front portion of which is formed with a shoulder, and a cover formed with an opening, the inner edge of said cover being reinforced, the forward portion of said reinforced edge mounted upon said shoulder.

3. A bed pan comprising a bowl provided with a continuous laterally-projecting flange, the front portion of which is formed with a shoulder, a cover formed with an opening, said cover having the rear portion thereof depending downwardly towards the opening and the forward portion upwardly inclined towards said shoulder, means for reinforcing the inner edge of said cover, the forward part of said reinforced inner edge resting upon said shoulder, and means for reinforcing the outer edge of said cover.

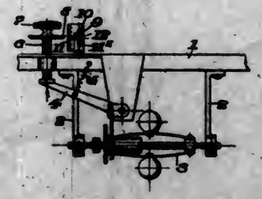
4. A bed pan comprising a bowl provided with a continuous laterally-projecting flange, the front portion of which is formed with a shoulder, a cover formed with an opening, said cover having the rear portion thereof depending downwardly towards the opening and the forward portion upwardly inclined towards said shoulder, means for reinforcing the inner edge of said cover, the forward part of said reinforced inner edge resting upon said shoulder, and means for reinforcing the outer edge of said cover, said reinforced outer edge of said cover abutting against the edge of said flange, and means for securing the cover to the flange.

876,672. CURTAIN-POLE. JOHN WILLIAMS, Allegheny, Pa. Filed Sept. 24, 1907. Serial No. 394,350.



The combination with adjustable brackets, each comprising a tubular extension having an apertured guide in the outer end, a piston in the tubular extension having a rod working through the apertured guide block and provided on its outer end with a hook, of a telescopic curtain pole suspended from said hooks, and curtain supporting means carried by said pole.

876,673. SPEED REGULATOR AND INDICATOR. WARREN W. WOOSTER, Berlin, N. J. Filed Apr. 9, 1907. Serial No. 367,286.



1. In a device of the character described, a lever, a set screw co-acting with said lever to adjust the same, a disk on said set screw, graduations on said disk and a scale adjacent said screw having graduations thereon from which readings may be taken depending upon the position of the disk.

2. In a device of the character described, a lever, a set screw directly engaging and co-acting with said lever, a graduated member carried by said set screw, a scale independent of and coacting with said graduated member and having graduations thereon with which said member registers whereby the speed of the device can be determined and means for adjusting said scale parallel with said set screw.

3. In a device of the character described, a lever, a set screw having its end resting directly upon and co-acting with said lever, a disk on said set screw, a head on said set screw above said disk and of smaller diameter, and a scale adjustably mounted adjacent said disk from which readings can be taken directly by said disk.

4. In a device of the character described, a lever, a set screw co-acting with said lever, a plate having graduations thereon, ears suitably supported, and means for adjustably connecting said scale with said ears whereby said scale can be adjusted with respect to the mechanism.

5. In a device of the character described, a lever, a set screw coacting with said lever, a yoke carried by said set screw and a scale adjustably mounted adjacent said set screw and seated in said yoke.

[Claim 6 not printed in the Gazette.]

876,674. WIRE-SPLICER. EDWARD YOUNG, Frederick, Ill. Filed May 16, 1907. Serial No. 373,948.



1. In a wire splicer, the combination of complemental members having a sliding and a pivotal connection, each member being formed with a channel receiving one of the wires and also with means for engaging the end of the wire.

2. In a wire splicer, the combination of telescoping sleeves, each of the sleeves being formed with a slot and being provided with means for engaging a wire, the said slots being designed to be turned into registry with each other, and means for turning the sleeves.

3. In a wire splicer, the combination of telescoping sleeves, each of the sleeves being provided with a slot and also with a notch communicating with the slot, the said slots being designed to register with each other, and means for turning the sleeves.

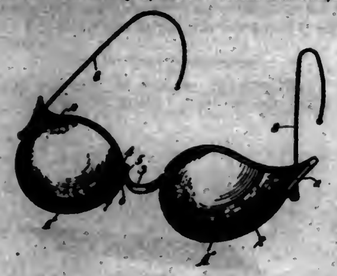
876,675. COMBINATION-TOOL. JACOB J. ALBRECHT, Syracuse, N. Y. Filed Aug. 27, 1907. Serial No. 390,393.



1. A combination tool comprising a tubular shell having an enlarged portion hexagonal in cross section, and a reduced portion square in cross section, a screw driver having a shoulder abutting against the end of the reduced portion and provided with a shank fitting in the angular reduced portion and extended centrally through the shell and terminating in a threaded end, a nut engaging the threaded end of the shank and adjacent end of the shell, and a member fitting over the nut and adjacent end of the tubular shell and provided with an angular portion for the reception of a wrench, the cap serving to lock the nut against rotation relatively to the shell.

2. A combination tool comprising a tubular shell having an enlarged portion hexagonal in cross section, and a reduced portion square in cross section, a screw driver having a shoulder abutting the end of the reduced portion and provided with a shank fitting in the angular reduced portion and extended centrally through the shell and terminating in a threaded end, and a nut engaging the threaded end of the shank and adjacent end of the shell.

876,676. EYE-SHADE. JOHN W. ALDERSON, San Francisco, Cal. Filed May 8, 1907. Serial No. 372,499.

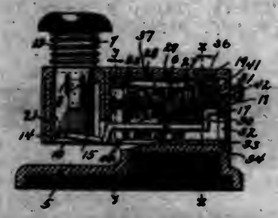


1. An eye shade comprising a pair of shade members, each of said members being fashioned in the form of a spherical segment having an upper edge in the form of a reverse curve whereby said edge will fit the brow over the eye and extend down at the side of the eye along the temple, and an adjustable nose piece connecting said members at a point below said upper edge.

2. An eye-shade comprising two eye-shade-members, each in the form of a spherical segment and having a reversely curved edge to enable the member to extend over the eye and downward in front thereof and to the sides of the eye for the purpose of protecting the eyes from horisontal as well as vertical rays.

3. An eye-shade comprising two eye-shade-members, each in the form of a spherical segment to extend over the eye and downward in front thereof and to the sides of the eyes for the purpose of protecting the eyes from horisontal as well as vertical rays, said nose-piece forming a connection between the shade members at a point below the top edges of the latter, said nose piece being vertically and horisontally adjustable.

876,677. STAMP. CHARLES S. ANDERSON, Columbus, Ohio. Filed May 13, 1907. Serial No. 373,258.



1. In a device of the character described, the combination with a base portion, of a removable magazine adapted to be inserted within said base portion, a stamping member carried by said magazine a manually operable plunger carried by the base portion adapted to engage and depress the stamping member when the magazine is in position within the base, and means for locking said stamping member against movement after it has been actuated a predetermined number of times.

2. In a device of the character described, the combination with a casing, of a removable magazine adapted to be inserted within said casing, a counting member carried by said magazine, a stamping member, a plunger carried by the casing and adapted to depress said stamping member, and key controlled means for locking said stamping member against movement after it has been actuated a predetermined number of times.

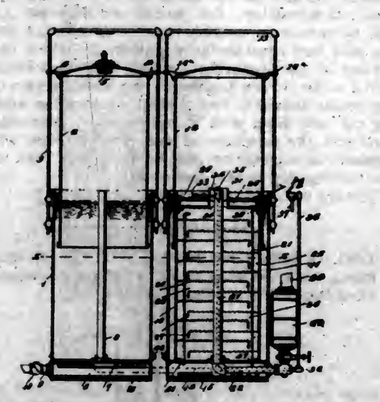
3. In a device of the character described, the combination with a casing, of a removable magazine adapted to be inserted within said casing, a counting member carried by said magazine, a stamping member carried by said magazine, a plunger adapted to depress said stamping member said plunger being carried by the casing, means for locking said stamping member against movement after it has been actuated a predetermined number of times, and an inking mechanism for said stamping member.

4. In a device of the character described, the combination with a plurality of counting disks each having a notch in its periphery, of a key controlled locking member adapted to engage in said notches, a stamping member which when actuated actuates said counting disks, and means for locking said counting member against movement after it has been actuated a predetermined number of times.

5. In a device of the character described, the combination with a supporting base, of a magazine adapted to be slipped within said base, a plunger carried by said base, a stamping member carried by the magazine adapted to be depressed by said plunger, a key controlled locking member, means for locking said stamping member against movement after it has been actuated a predetermined number of times.

[Claim 6 not printed in the Gazette.]

876,678. CARBURETER. J FRANK ANDRES, St. Louis, Mo. Filed July 11, 1907. Serial No. 383,282.



1. In a carbureter, the combination of a series of horizontal partitions arranged one above the other and spaced apart and having openings at alternate opposite ends, baffles pendent from the inner edges of the openings and formed of wire gauze, said baffles having their lower edges terminating a short distance from the partitions next below, and means for circulating the hydrocarbon and air through the generator in opposite directions.

2. In a carbureter, the combination of a gasometer comprising a lower fixed cylinder and an upper movable gas bell, a generator arranged within said lower cylinder, an oil tank located within the upper portion of said lower cylinder and adapted to supply oil to the generator, and an oil pipe for supplying hydrocarbon to the oil tank and having an extension in communication with the space of the movable gas bell, and having an overflow extended to about the level of the oil in the said oil tank.

3. In a carbureter, the combination of a gasometer comprising a lower cylinder and an upper gas bell, a generator arranged within said lower cylinder, an oil tank located within the upper portion of said lower cylinder and adapted to supply oil to the generator, and an oil pipe for supplying hydrocarbon to the oil tank and overflow extended to approximately the level of said oil tank to prevent flooding of the machine.

4. In a carbureter, the combination of a gasometer comprising upper and lower members, a generator arranged with said lower member of the gasometer, an oil tank located within the upper portion of the aforesaid lower member of the gasometer, means for supplying liquid fuel to the oil tank, a pipe leading downwardly through the generator from the bottom of the oil tank, an approximately horisontal pipe exterior to the gasometer and provided with a manually operable and automatically actuated valve, and a vertical pipe having connection with said horisontal pipe and extending within the generator to supply hydrocarbon thereto from the aforesaid oil tank.

876,679. NITROBENZANTHRONE COMPOUND AND PROCESS OF MAKING SAME. OSCAR BALLY, Mannheim, and HUGO WOLFF, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Nov. 27, 1906. Serial No. 345,294.

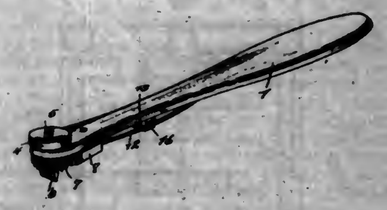
1. The process of producing nitrobenzanthrone compounds by treating a hereinbefore defined benzanthrone body with nitric acid.

2. The process of producing nitrobenzanthrone compounds by treating a hereinbefore defined benzanthrone body with nitric acid in the presence of a solvent.

3. As new articles of manufacture the nitrobenzanthrone compounds which can be obtained by treating a hereinbefore defined benzanthrone body with nitric acid which new compounds can be obtained in the form of from yellow to green crystals which are soluble in concentrated sulfuric acid yielding from brown to yellow red solutions and in twenty-three per cent. oleum yielding from brown to red solutions.

4. As a new article of manufacture nitrobenzanthrones which can be obtained by treating benzanthrone with nitric acid in nitrobenzene solution which new compound can be obtained in the form of greenish yellow needles melting at a temperature of about two hundred and forty-four degrees centigrade and which is soluble in concentrated sulfuric acid yielding a non-fluorescent golden yellow solution and in twenty-three per cent. oleum yielding a carmine solution which upon warming is converted into a dull olive-green.

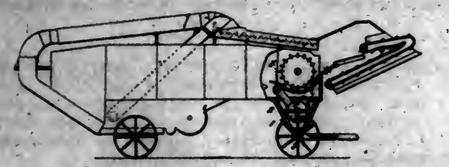
876,680. RATCHET SCREW-DRIVER. JAMES P. BARTHOLOMAY, Roxbury, Mass. Filed Oct. 14, 1907. Serial No. 397,357.



1. A ratchet screw driver comprising a handle, a holder for the screw driver rotatably mounted therein, a ratchet wheel movable therewith, a double pawl pivotally mounted on the handle, a flexible rod extending lengthwise of the handle and connected with the pawl for holding it in either position, and a lug on the handle between the ends of the rod over which the rod is movable and with either side of which the spring is engageable, the opposite sides of said lug being recessed to receive the rod.

2. The improved ratchet screw driver herein described comprising a flat handle with an opening therethrough, a button having a shank passed through said opening and having a concaved head upon one side of the handle, a ratchet wheel on said shank upon the opposite side of said handle, a screw driver held in said shank, a double pawl pivotally mounted on the under side of said handle, a flexible rod extending lengthwise of the handle with one end secured to the handle and the other to said pawl, and a fixed lug on said handle between the ends of said rod and over which said rod can be sprung, said lug having recessed sides with either of which said flexible rod is engageable by reversing its position.

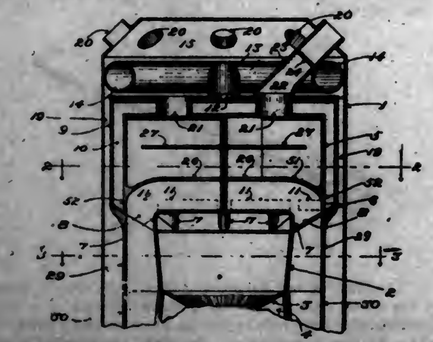
876,681. COMBINED THRESHER AND SEPARATOR. CHARLES BATER, Watertown, S. D., and GEORGE F. BATER, Ohaton, Alberta, Canada. Filed Apr. 3, 1907. Serial No. 366,149.



1. In a combined thresher and separator, the combination of air pipes at opposite sides of the machine and having inner horizontal extensions, a blast pipe coupled to the said inner horizontal extensions and having a lateral discharge, a shaft passed centrally through the blast pipe and the said inner horizontal extensions, spiders located within the blast pipe and fast thereto and receiving the said shaft to which they are made fast so as to turn therewith, a lever secured to the outer end of the shaft to effect turning thereof, and means for securing the lever in an adjusted position.

2. In a combined thresher and separator, fan blowers located in the space formed below the threshing mechanism, air pipes extended from the casings of the fan blowers and terminating in inner horizontal extensions which aline transversely, a blast pipe connecting the said inner horizontal extensions and having a lateral discharge, a shaft passed centrally through the blast pipe and the said inner horizontal extensions and journaled with reference to the latter, spiders arranged within the blast pipe and fast thereto and to the said shaft, a lever attached to the said shaft and means for securing the lever to the blast pipe in an adjusted position.

876,682. HOT-AIR FURNACE. ARTHUR M. BEALE, Boston, Mass. Filed Jan. 14, 1907. Serial No. 352,082.



1. A hot-air furnace having an air-drum above the combustion-chamber thereof, with a series of depending diverging partitions dividing the upper portion of the combustion-chamber into non-communicating vaults and having outlets for the products of combustion at the outer ends of the said vaults, the said partitions having within the same air-passages, discharging upward into the air-drum adjacent the center of the latter, and the walls of the said air-passages being exposed to the direct action of the products of combustion.

2. A hot-air furnace having a fire-pot, and a roof over the said fire-pot downwardly concave, the said furnace constructed with air-passages adjoining the said roof, extending inwardly over the fire-pot and discharging upward through said roof, and with outlets for the products of combustion between the outer portions of said passageways, below the concavity of the roof.

3. A hot-air furnace having a fire-pot, and a roof over the said fire-pot downwardly concave, and constructed with air-passageways adjoining the said roof, extending inwardly over the fire-pot and discharging upwardly through the central portion of the said roof, with radially-extending vaults separated from one another between the said passage-ways, and with the outlets between the outer portions of said passageways and below the concavity of the roof, for the products of combustion.

4. A hot-air furnace having a fire-pot, a roof over the said fire-pot, radiating partitions dividing the upper portion of the combustion-chamber into non-communicating vaults, the said partitions having formed therein deep and narrow air-passageways discharging upward through the central portion of the said roof, and the furnace having outlets for said vaults at the periphery of the combustion-chamber, between the outer portions of the said partitions, and located above the lower edges of the partitions, through which outlets the products of combustion flow outwardly from said vaults.

5. In a hot-air furnace, in combination, the fire-pot, a drum above the fire-pot, the bottom of the said drum constituting the roof of the combustion-chamber, the said drum having legs depending from the said roof and extending radially inward along the roof at the top of the combustion-chamber, and within which fresh air flows and is warmed in passing into the interior of the drum, the said legs constituting partitions by which the upper portion of the combustion-chamber is divided transversely into a series of non-communicating vaults separated from the center outward, and a shell surrounding and inclosing the said drum with a narrow space intermediate the shell and the periphery of the drum through which the products of combustion pass on their way from the combustion-chamber to the smoke-exit.

[Claims 6 to 12 not printed in the Gazette.]

876,683. REPEATING TORPEDO-CANE. ROSCOE BEAN, Berea, Ohio, assignor to W. B. White, Cleveland, Ohio. Filed Mar. 5, 1906. Serial No. 304,153.



1. In a torpedo cane, the combination, with the explosion chamber, a plunger reciprocating therein, a torpedo passage in said plunger, a bracket carried by said plunger adjacent to said passage, lugs formed on said bracket, and a separate magasine adapted, when filled, to be removably fitted over said lugs and in communication with said passage.

2. In a shooter, the combination, with a part carrying explosives and having a passage-way therefor, of a cut-off or stop standing normally in contact with the explosive nearest the discharge end of the passage and adapted to move to and from such position without impinging an explosive, of another part having a resting place adapted to receive the fed torpedo and to actuate said cut-off or stop from normal position as said parts approach or enter explosion position.

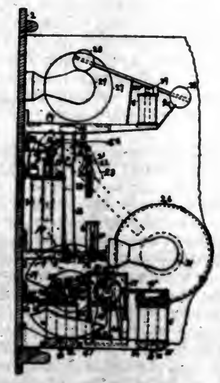
3. In a shooter, a plunger carrying the magasine and having a torpedo passage-way, a spring actuated cut-off or stop, carried by the plunger, standing normally in contact with the torpedo nearest the discharge end of the passage-way, and adapted to move to and from such torpedo without impinging it, a barrel in which the plunger is mounted having a resting place to receive and hold the fed torpedo and adapted to actuate said cut-off or stop when the plunger moves in relation to said barrel.

4. In a shooter, the combination, with a plunger having a torpedo passage-way and carrying a spring actuated cut-off or stop which stands normally in contact with the torpedo nearest the discharge end of the passageway and adapted to move to and from such torpedo without impinging it, of a barrel adapted to receive the fed torpedo and to actuate said cut-off or stop when the plunger moves in relation to said barrel.

5. In a shooter, the combination, with an explosion chamber and a plunger having a torpedo passage-way, of a cut-off or stop comprising a spring-pressed bar secured to the plunger and extending across said passage-way and normally in contact with the torpedo nearest the discharge end of the passage-way.

[Claims 6 to 9 not printed in the Gazette.]

876,684. BLOCK-SIGNAL APPARATUS. ALEXANDER BEVAN, Providence, R. I. Filed Mar. 8, 1907. Serial No. 361,211.



1. In an electric signal, a signal circuit normally open, a pair of insulated terminals in said circuit, an oscillatory shaft, an insulated circuit controller and ratchet wheel mounted thereon, a pair of magnets on either side of said shaft, an armature frame mounted on and pivoted to each pair of magnets, a reciprocating pawl supported on said armature frame, means for securing all of the magnets at both ends whereby said magnets and their pawls are firmly held in exact operative relation to the ratchet wheel, and means whereby the said circuit controller may be operated to control the signal circuit to actuate the signal.

2. In an electric signal, a target, a target magnet circuit normally open, a pair of insulated terminals in said circuit, an oscillatory shaft, an insulated circuit controller and a ratchet wheel mounted thereon, a pair of magnets on either side of said shaft, an armature frame pivoted to each pair of magnets, a reciprocating pawl mounted on said armature frame, means for securing all of the magnets at both ends whereby said magnets and their pawls are firmly held in exact operative relation to the ratchet wheel, and means whereby the said circuit controller may be operated to control said target magnet circuit to actuate the target.

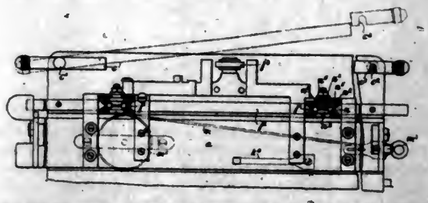
3. In an electric signal, a target, a target magnet circuit normally open, a pair of insulated terminals in said circuit, an oscillatory shaft, an insulated circuit controller and a ratchet wheel mounted thereon, a pair of magnets on either side of said shaft, a T-shaped back-iron for closing the magnetic circuit between each pair of magnet-cores and also to serve as a means for securing said magnets to their supports, an armature frame pivoted to each pair of magnets, a reciprocating pawl mounted on said armature frame, means for securing all of the magnets at both ends whereby said magnets and their pawls are firmly held in exact operative relation to the ratchet wheel, and means whereby the said circuit controller may be operated to control the target magnet circuit to actuate the target.

4. In a signal, the combination of a counterbalanced target normally held by gravity to the safety position, a plunger magnet, a tubular core in said magnet for moving said target, a counterbalance therefor, and means for energizing said magnet to carry the target to the danger position.

5. In a signal, the combination of a counterbalanced target normally held by gravity to the safety position, a plunger magnet, a tubular core in said magnet for moving said target, a weight, means whereby said weight is given a variable leverage to counterbalance said core, and means for energizing said magnets to carry the target to the danger position.

[Claims 6 to 30 not printed in the Gazette.]

876,685. TYPE-WRITING MACHINE. JOHN H. BIACH and JAMES S. FOLEY, West Bromwich, England. Filed Oct. 19, 1906. Serial No. 339,683.



1. In a typewriting machine, the combination with a supporting frame, a carriage mounted to operate thereon, and a platen frame shiftable transversely on the carriage and having one side detachably connected to the latter, of a shifting rail mounted on the supporting frame and detachably connected to the platen frame, the shifting rail being movable laterally of its length only for shifting the platen transversely of the carriage and a catch for locking the platen frame to the shifting rail and for permitting its detachment from the latter.

2. In a typewriting machine, the combination with a supporting frame, a pair of platen-supporting links thereon, a guide rail carried by the supporting links, a traversing platen frame connected to the rail, a traversing platen carriage, a second pair of links fulcrumed to and swinging from the platen carriage and supporting the platen frame, a system of grooved rollers mounted upon the platen frame and adapted to traverse the said rail, and a catch carried by the platen frame and guided to move into and out of cooperation with the under side of the said rail for detachably locking the platen frame in operative position.

3. In a typewriting machine, the combination with a supporting frame, of a traversing carriage guided thereon, a pair of vertically-arranged links pivotally supported on the carriage, a platen frame having one of its longitudinal sides pivotally connected to the upper ends of the said links, a second pair of links mounted on the supporting frame and coöperating at their upper ends with the opposite side of the platen frame for guiding the latter for movement in substantially a horizontal plane.

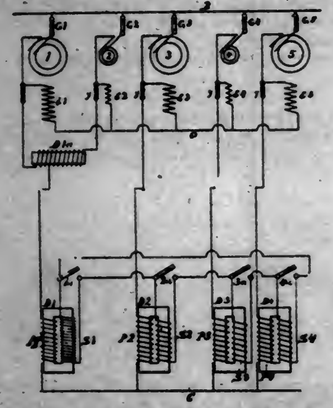
4. In a typewriting machine, the combination with a supporting frame, of a traversing carriage guided thereon, a pair of links pivotally mounted on the carriage, a platen frame detachably engaging the said links a second pair of links mounted on the supporting frame and having a guide rail connecting them, supporting rollers on the platen frame coöperating with the upper side of the said rail, and a catch movable into and out of coöperative relation with the under side of the rail for detachably locking the platen frame thereon.

5. In a typewriting machine, the combination with a supporting frame, of a traversing carriage mounted to operate thereon, a pair of links pivotally mounted on the carriage and provided with open bearings at their upper ends, a platen frame having projections adapted to detachably en-

gage the open bearings of the said links, catches on the links for locking the said projections in coöperative relation therewith, shifting links pivotally mounted on the supporting frame, and a catch for detachably connecting the shifting links to the platen frame.

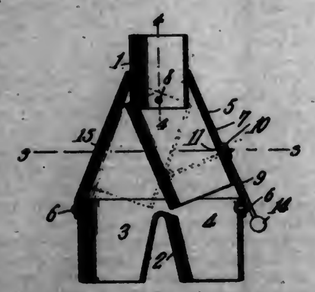
[Claims 6 to 9 not printed in the Gazette.]

876,686. MEANS FOR OPERATING ALTERNATING-CURRENT MACHINES IN PARALLEL. MORGAN BROOKS and MILTON K. AKERS, Urbana, Ill. Filed Jan. 18, 1907. Serial No. 352,923.



The combination of a plurality of alternating current machines connected in parallel circuit, electric transformers, primary-coils for said transformers included in series circuit with the respective machines, and the secondary coils of a given phase, for said transformers connected in a closed series circuit with one another, and self-synchronizing reactance coils in circuit with the respective machines.

876,687. WATER CUT-OFF. WILLIAM Z. BROWN, Peoria, Ill. Filed May 18, 1907. Serial No. 374,348.



1. In a water cut-off of the character described, the combination with a casing having a slot in one of its walls provided with an enlarged portion, and a valve mounted to operate in the casing and having an attaching portion arranged to operate through the said slot, of a locking member having an enlarged portion capable of passing through the enlarged portion of the slot and coöperating with the walls of the casing adjacent to the reduced portion thereof, the said member being pivotally connected to the said attaching portion and movable longitudinally thereon for locking and unlocking the valve relatively to the casing.

2. In a water cut-off, the combination with a casing having a keyhole slot in one of its walls, and a valve mounted to operate in the casing and having a staple thereon arranged to register with and extend through the said slot, of a locking member pivotally attached to the staple and operable longitudinally thereof to interpose an enlarged portion on the member between the staple and the wall of the casing adjacent to the narrowed portion.

3. In a water cut-off, the combination with a casing having a keyhole slot in one of its walls, and a valve pivoted to turn in the casing and having a staple thereon, of a locking member having its inner end doubled and forming an eye to slidingly receive the staple, one end of the doubled portion being arranged to engage the inner side of the casing adjacent to the slot when the outer end of the member is resting in the reduced portion thereof, the staple on the valve being arranged to operate through the slot and to receive the doubled portion of the locking member between it and the outer side of the casing, and a weight on the outer end of the locking member and serving to retain the latter in both locked positions.

4. In a device of the character described, the combination with a casing provided with a vertical slot in one of its walls having an upper enlarged portion and a lower reduced portion, and a valve mounted to turn in the casing, of a locking member having its inner end pivotally attached to the valve and capable of a vertical movement relatively thereto, the locking member having an inner enlarged portion wider than the reduced portion of the slot and narrower than the enlarged portion thereof arranged to engage the inner wall of the casing when the valve is in one position, and to pass through the slot and move downwardly to engage the outer walls of the casing adjacent to the reduced portion of the slot when the valve is in a different position.

5. In a device of the character described, the combination with a casing having a keyhole slot therein, and a valve pivoted within the casing having a staple thereon adapted to operate through the enlarged and reduced portions of the slot, of a locking member having its inner end doubled and pivotally and slidably engaging the staple on the valve, the doubled portion being narrower than the enlarged portion of the slot and wider than the reduced portion thereof and adapted to engage the inner wall of the casing when the valve is in one position, and slidable vertically on the staple when the latter projects through the slot, the doubled portion of the locking member moving between the staple and the adjacent outer wall of the casing and locking the valve in a different position.

876,688. REPAIR-BUCKLE. GEORGE A. BUCHHOLTZ, Waterford, Wis. Filed Feb. 18, 1907. Serial No. 357,864.

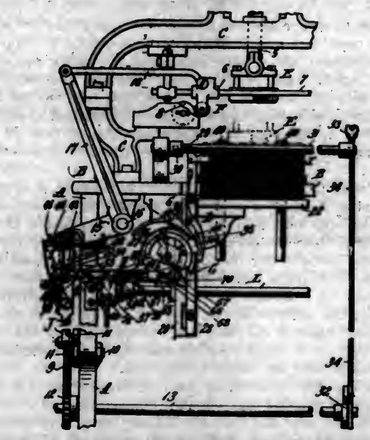


1. As an article of manufacture, a repair buckle comprising a rectangular frame including side portions and connecting end portions, a central transverse pivot bar formed integral with the side portions, and having a reduced central portion, said side portions having their central portions offset upwardly to throw the end portions below the plane of the pivot bar, said side portions having upwardly turned extensions beyond one end portion, a connecting top member formed integral with said extensions, a tongue having an end bent into an eye and engaged with the reduced portion of the pivot bar for pivotal movement of the tongue thereupon, and a second tongue having a bifurcated end and resultant spaced portions, said spaced portions being bent to form eyes and engaged with the pivot bar at opposite sides of the first named tongue, said tongues being movable upon the pivot bar to bring their free ends into and out of engagement with the end portions of the frame.

2. In a buckle, the combination with a frame including side portions and a connecting transverse pivot bar having a reduced central portion, of a tongue having one end bent to form an eye pivotally engaged with said reduced portion

of the bar, and a second tongue having a bifurcated end and resultant spaced portion, said spaced portion being bent to form eyes pivotally engaged with the pivot bar at opposite sides of the first mentioned tongue.

876,689. ENVELOP-MACHINE. FRANK A. BURNETT, Holyoke, Mass. Filed Jan. 8, 1906. Serial No. 295,038.



1. In an envelop machine, the combination with a constantly reciprocatory gummer-picker, and a vertically movable blank pile support, of a horizontally reciprocatory gum-supplying roll movable to positions under, and away from under the gummer-picker, a rocking lever for operating the gum-supplying roll, and a cam-actuated rod provided with a latch movably mounted thereon, for engaging and imparting in its working thrusts, rocking movements to said gum roll operating lever, said latch being capable of movement for disengagement from said lever, and means, between the pile support and said latch, and actuated by such support and the lowering thereof to place the latch in its disengaged position.

2. In an envelop machine the combination with a constantly reciprocatory gummer-picker, and a vertically movable blank pile support, of a horizontally reciprocatory gum supplying roll movable to position under, and away from under the gummer-picker, a rocking lever for operating the gum supplying roll, and a cam-actuated rod provided with a latch movably mounted thereon, for engaging and imparting in its working thrusts, rocking movements to said gum roll operating lever, said latch being capable of movement for disengagement from said lever, means intermediate between the pile support and said device on the cam rod, and actuated by the support on the lowering thereof to render said latch non-operable on the said rocking lever, and a locking device having means for imparting thereto regularly reciprocatory movements timed with relation to the movements of the said cam rod, and operable as a lock against an unseasonable operation of said intermediate means.

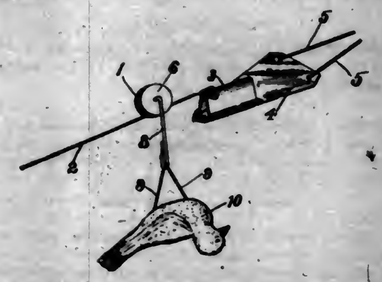
3. In an envelop machine the combination with the gum roll actuating cam rod having a latch movably mounted thereon and the vertically movable blank pile support having a cam, of a thrust rod between the cam on said support and the cam rod latch for the purpose set forth.

4. In an envelop machine, the combination with the gum roll actuating cam rod having a latch movably mounted thereon and having a spring operable thereagainst, and the vertically movable blank pile support having a cam, of a thrust rod between the cam on said support and the cam rod, and means for yieldingly forcing the thrust rod towards such cam, for the purpose set forth.

5. In an envelop machine, the combination with the gum roll actuating cam rod having a latch movably mounted thereon, provided with an extension rib, and having a spring operable against said latch, and the vertically movable blank pile support having a cam, of a thrust rod, between the cam on said support and the cam rod, constructed with an adjustable section adjacent said latch extension rib, and means for yieldingly forcing the thrust rod towards such cam, for the purpose set forth.

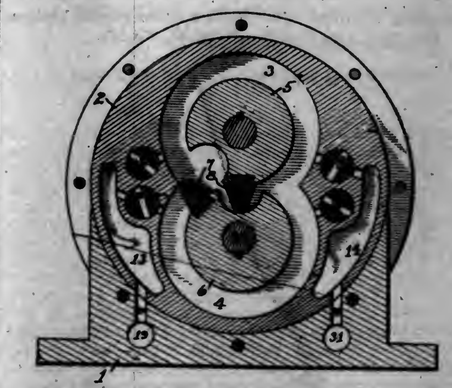
[Claims 6 to 10 not printed in the Gazette.]

876,690. KITE ATTACHMENT. CHARLES B. CARROLL, East St. Louis, Ill. Filed Aug. 6, 1907. Serial No. 387,347.



The combination with a kite and its string, of a plate arranged in the string, a lug arranged on the top of the plate and with which the lower portion of the string is connected, a grooved pulley adapted to travel on the string and to be thrown from the string by said lug, a hanger carried by the grooved pulley, and an object suspended from the hanger.

876,691. ROTARY ENGINE. FREDERICK A. CLEVELAND, New York, N. Y. Filed Oct. 26, 1906. Serial No. 340,650.



1. In a rotary engine having a series of pairs of coöperating cylinder cores therein, division plates between said pairs of cores, said casing being formed with inlet and outlet valve chambers, steam chests formed in said casing having communication with said inlet valve chambers, and a rotary valve in each of said valve chambers, the valves of the outlet valve chambers extending on opposite sides of the division plates and each being formed with a pair of diametrically opposed openings which lead from the periphery thereof inwardly to a point adjacent the centers of said valves.

2. In a rotary engine, a base, a casing thereon, said casing having chambers with pairs of coöperating cylinder cores therein, a pair of steam chests formed in the casing for each pair of cores arranged one on each side of said cores, passages extending longitudinally through the base on each side thereof, vertical passages leading from said

longitudinal passages into said chests, a third passage leading from each chest to said cores, a rotary valve in said third passage, fourth passages leading into said chambers, and rotary valves in said fourth passages.

3. In a rotary engine, a casing having a series of separated chambers therein, a pair of coöperating cylinder cores in each chamber, a steam chest on each side of each chamber, a longitudinal steam passage for each steam chest, a vertical passage connecting each chest with its respective longitudinal passage, a common inlet pipe having two branches one leading to one of said longitudinal passages and the other to the other longitudinal passage, a valve in said pipe and means to rotate said valve.

876,692. FIREPLACE OR STOVE. ELLINOR C. L. CLOSE, London, England. Filed July 19, 1907. Serial No. 384,625.



1. In a portable stove, the combination with a back plate having its side edges turned up so as to form channels, the diameters of which are greater than the distance between the turned up edges and the back plate, and wings provided with parts adapted to be sprung into said channels thereby pivotally connecting said wings and back plate, substantially as described.

2. In a portable stove, the combination with a back plate having its side edges turned up so as to form channels, greater in diameter than the distance between the turned up edges and the back plate and wings provided with circular ribs adapted to be sprung into said channels, substantially as described.

876,693. FLOOR-JACK. GEORGE H. COLDWELL, Rockton, Pa. Filed Jan. 8, 1907. Serial No. 351,369.



A floor jack comprising a handle, a shank having one end fitted into the handle and its other end formed into a sharp fulcrum terminal, the middle portion of the shank being laterally enlarged and flat, a link having one end bifurcated and pivotally straddling the flat portion of the shank and its free end laterally enlarged and provided with a top flange projecting in advance of the enlargement, a pair of set screws piercing the flange, and a liner member fitting in the seat between the flange and the outer end of the link and held therein by the set screws, substantially as described.

876,694. REINFORCED CONCRETE CONSTRUCTION. FRANÇOIS N. COMITOT, Chicago, Ill. Filed Nov. 3, 1906. Serial No. 341,945.



1. Means for reinforcing concrete consisting of a bar having two flanges centrally located between the top and bottom thereof on opposite sides and extending the entire length thereof, each provided with a row of apertures, and a row of rods on each side of the said bar having their central portions lying under the said flange and their ends projecting up through said apertures the portion of rods above and below the said flange lie adjacent the sides of the bar.

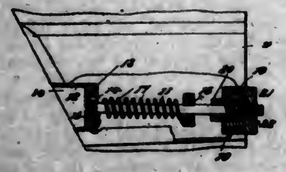
2. Means for reinforcing concrete consisting of a metal bar having flanges on opposite sides centrally located between the top and bottom thereof and extending the entire length thereof, having apertures therein, and rods on each side of said bar having their central portions lying one upon the other below the said flanges and their ends projecting up through the said apertures and above the said bar, the portion of the rods below the top of the bar impinging against the sides of the latter and the parts above the bar forming tie rods adapted to be embedded in the concrete for the purpose described.

3. Means for reinforcing concrete consisting of a metal bar having flanges on opposite sides centrally located between the top and bottom thereof and extending the entire length thereof with apertures therein, and rods lying partially below and partially above said flanges, the portions of the rods below the top of the bar impinging against the sides of the latter the parts above the flanges forming tie rods adapted to be embedded in the concrete, and bends or crooks near the ends of said rods for increasing their binding effect.

4. A concrete construction consisting of a bar having longitudinal flanges on opposite sides centrally located between the top and bottom thereof and extending the entire length thereof with apertures therein, two rows of rods having their central portions lying below the flanges and their ends projecting up through said apertures to form tie rods, the portion of the rods below the top of the bar impinging against the sides of the latter and concrete inclosing the whole.

5. Means for reinforcing concrete consisting of a bar having two flanges on opposite sides centrally located between the top and bottom thereof and extending the entire length thereof, each provided with a row of apertures, and a row of rods on each side of said bar having their central portions lying under the said flange and their ends projecting up through the apertures on an incline and then bent parallel with the said bar, the said upper ends overlapping each other the portion of the rods below the top of the bar impinge against the sides of the latter.

876,695. OIL ATTACHMENT FOR HANDSAWS AND THE LIKE. FRANK CULBERTSON, Jackson, Miss., assignor of one-third to John Mosal, Jackson, Miss. Filed June 24, 1907. Serial No. 380,578.



1. A lubricating attachment for saws comprising a reservoir mounted upon the saw blade and provided with a discharge opening, a valve controlling the said discharge opening, and a valve stem slidably mounted upon the reservoir for actuating the valve the said valve stem having an air inlet therein which is opened when the valve is opened.

2. A lubricating attachment for saws comprising a reservoir mounted upon the saw blade and provided with a discharge opening, a valve controlling the discharge opening, a valve stem slidably mounted upon the reservoir for actuating the valve, and a spring surrounding the valve stem and normally holding the valve upon its seat, the said valve stem having an air inlet therein which is automatically opened when the valve is opened.

3. A lubricating attachment for saws comprising a reservoir provided with an outwardly flared discharge opening the contracted portion of the opening being formed with a peripheral notch, a valve coöperating with the valve seat, and a valve stem extending through the discharge opening and serving as a means for actuating the valve.

4. In a tool, the combination of a blade, a stock applied to the blade, a reservoir carried by the stock, a valve seat at one end of the reservoir, said valve seat being flared outwardly and the contracted end being formed with notches, a valve coöperating with the valve seat, and a valve stem connected to the valve and passing through the contracted end of the valve seat.

5. A lubricating attachment for saws comprising a reservoir mounted upon the saw blade, a valve mechanism controlling the discharge of the reservoir, a hollow cap for the reservoir, a plug for the hollow cap, and a valve stem extending through the plug and hollow cap and serving as a means for controlling the valve mechanism, the said valve stem being formed with an air inlet designed to communicate with the interior of the reservoir when the valve is open.

[Claim 6 not printed in the Gazette.]

876,696. JEWELER'S GAGE. CHARLES J. DAUNER and CARL A. WERRMANN, Cincinnati, Ohio. Filed May 22, 1907. Serial No. 375,059.



1. A gage of the character described, comprising a base plate provided with laterally bent ends, one of said ends being formed with a slot parallel with the face of the base plate, a slide mounted to work through said slot and provided at one end with an angularly disposed extremity adapted to co-act with the said slotted end of the base plate, the said slide containing graduations indicating standard ring sizes, the base plate being formed with a longitudinal slot, and a set screw working in said slot and secured to the slide.

2. A gage of the character described, comprising a base plate provided with laterally bent ends, one of said ends being formed with a slot palallel with the face of the base plate, a slide mounted to work through said slot and provided at one end with an angularly disposed extremity adapted to co-act with the said slotted end of the base plate, the said slide containing graduations indicating standard ring sizes, the base plate being formed with a longitudinal slot, and a set screw working in said slot and secured to the slide, the base plate being provided on opposite sides of said longitudinal slot with graduations of millimeters and inches and fractions thereof, respectively, and the slide being formed at its laterally exposed extremity with oppositely projecting lugs serving as pointers for the various graduations.

3. A gage of the character described, comprising a base plate and a slide adjustably mounted thereon, said base plate being provided with a laterally bent end formed with a longitudinal slot and graduations at the sides of said slot, a gage for settings adjustably mounted in said slot and provided with oppositely extending lugs adapted to co-act with the graduations of the said end, and a set screw adapted to hold said setting gage at different adjustments with the slot.

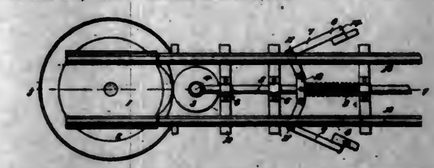
876,697. LAWN-MOWER GRASS-RECEPTACLE. DAVID G. DAVIS, Ellensburg, Wash., assignor of one-half to George R. Bradshaw, Ellensburg, Wash. Filed Aug. 6, 1907. Serial No. 387,384.



1. The combination with a lawn mower of a receptacle, means for receiving cut grass from said mower, means for moving said grass receiving means, and a stop projecting from the side of said receptacle for limiting the movement of said grass receiving means.

2. The combination with a mower, of a receptacle, means for pivotally securing one end of said receptacle to said mower, means for supporting the other end of said receptacle, a movable member for receiving grass from said mower, means for moving said member, and means for stopping suddenly the movement of said member whereby the grass upon said member will be thrown into said receptacle.

876,698. SAFETY MEANS FOR LOCOMOTIVE TURNTABLES. JOHN W. DE LONG, Ironton, Ohio, assignor of one-third to Hattie Ketterer, Russell, Ky. Filed June 14, 1907. Serial No. 379,091.



1. In combination with a turntable, and a track terminal coöperating therewith, chocks for the rails of the track terminal, movable supports for said chocks, and a spring actuated rod or bar connected with said movable supports and adapted when held under restraint by the turntable under normal conditions to throw the chocks clear of the said tracks, and when released from the restraining influence of said turntable to throw the chocks in position upon the said rails to arrest the movement of rolling stock towards the turntable.

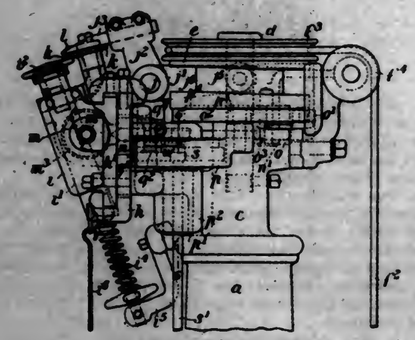
2. In combination with a turntable and a coöperating track terminal, pivoted supports of bell crank form, chocks carried by one arm of said pivoted supports, and a spring actuated rod or bar having connection with the other arm of said pivoted supports and adapted to throw the chocks clear of the rails of the track terminal when the turntable is in normal and to throw said chocks across the path of said rails when the turntable is moved from the given position.

3. In combination of a railway track, oppositely disposed pivoted bell cranks, chocks supported by the longitudinal arms of said bell cranks, a spring actuated rod or bar arranged medially between said rails, a cross head applied to said rod or bar, and means connecting the ends of the cross head with the horisontal arms of the aforesaid bell cranks.

4. In combination with a turntable, a track terminal, a spring actuated rod or bar arranged medially between the rails of the track terminal and adapted to be engaged by the turntable and subject its actuated spring to tension under normal conditions, oppositely disposed bell cranks having their horisontal arms connected with a

spring actuated rod or bar, and chocks supported by the longitudinal arms of said bell cranks and held clear of the rails of the track terminal when the rails of the turntable aline with the rails of the track terminal, and said chocks being thrown across the path of the aforesaid track terminal rails when the turntable is moved from a normal position.

876,699. MACHINE FOR SEPARATING OR INDENTING STITCHES ON BOOTS AND SHOES. MARK T. DENNE, Rushden, England. Filed Feb. 24, 1906. Serial No. 302,736.



1. In a machine for separating or indenting the stitches on boots and shoes, the combination with an indenting tool, a slide carrying the same, and means for reciprocating the said slide including a forked or slotted lever operatively connected with said slide, a block movable longitudinally of said lever in its fork or slot, a shaft passing through the pivot of said lever and operatively connected with said sliding block to move the same longitudinally of said lever, substantially as described.

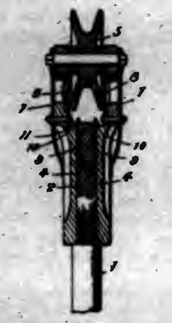
2. In a machine for separating or indenting the stitches on boots and shoes, the combination with an indenting tool, a slide carrying the same and means for reciprocating said slide including a forked or slotted lever operatively connected with said slide, a block having rack teeth and movable longitudinally of said lever in the slot of the same, and a shaft passing through the pivot of said lever and provided with a pinion engaging the rack upon said block to move the same, substantially as described.

3. In a machine for separating or indenting stitches on boots and shoes, the combination with the indenting tool and a slide carrying the same, of means for reciprocating the said slide comprising a forked or slotted lever operatively connected with said slide, a block movable longitudinally of said lever in its fork or slot, a shaft passing through the pivot, of said lever operatively connected with said block, said shaft extending downward and provided with means whereby the operator may turn said shaft and means for returning said shaft to normal position, substantially as described.

4. In a machine for separating or indenting stitches on boot and shoe soles, the combination with a table or work support mounted on a sliding bar, and a spring tending to force the said work support upward, of a rotating notched disk operatively connected with said sliding bar and a reciprocating detent for engaging said disk and locking it from movement, and means for withdrawing and applying said detent, substantially as described.

5. In a machine for separating or indenting the stitches on boot and shoe soles, the combination with a table or work support mounted on a sliding bar provided with rack teeth, of a shaft having a pinion engaging said rack, said shaft having a toothed disk upon the same, a reciprocating detent and means for automatically withdrawing the detent from the disk at the time the feed of the machine takes place, substantially as described.

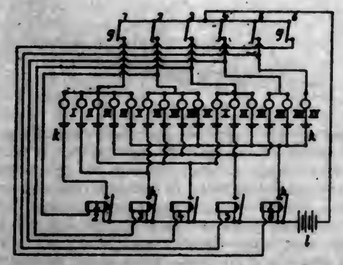
876,700. TROLLEY-HARP. BENJAMIN L. DRESSER, Uxbridge, Mass. Filed Mar. 19, 1907. Serial No. 363,182.



1. In combination, a trolley harp provided with a socket extending therethrough and with outwardly facing shoulders communicating with said socket, of a pole adapted to be inserted within said socket and outwardly facing spring hooks secured to the end of said pole and arranged to slip through said socket and spring outwardly into engagement with said shoulders.

2. In combination with a trolley harp provided with a socket extending therethrough and with outwardly facing shoulders communicating with said socket, of a trolley pole provided with a reduced shank adapted to be slipped into said socket and with oppositely facing recesses at the extremity of said shank and spring hooks secured in said recesses and facing away from each other whereby when the shank is slipped into the socket the said hooks will spring outwardly into engagement with the shoulders and fasten the harp to the pole.

876,701. ELECTRIC SWITCH. HEINRICH DREWELL, Charlottenburg, Germany. Filed Mar. 9, 1907. Serial No. 361,589.



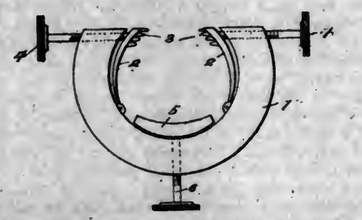
1. In means for closing an optional branch of a circuit which is divided into a plurality of branches, the combination of a series of switches, a source of current, conductors connecting said switches with one pole of said source of current, another series of switches, conductors connecting the latter with the other pole of said source of current and a plurality of branch conductors arranged in groups connected with said sets of switches in groups, each group of branches connected with the one series of switches having one branch in common with the groups of branches connected to the other series of switches, with a plurality of devices adapted to permit the passage of an electric current in one direction only, one of said devices being inserted in each of said branches as set forth.

2. In means for closing an optional branch of a circuit which is divided into a plurality of branches, the combination of a series of switches, a source of current, conductors connecting said switches with one pole of said source of current, another series of switches, conductors connecting the latter with the other pole of said source of current and a plurality of branch conductors arranged in groups, said groups of branch conductors being each connected in order to switches of one of said series of switches and said branch conductors being connected in order in different groups to switches of the other series of switches, whereby shunts are provided for the current flowing in a branch directly from one of said series of switches to the other, with a plurality of devices adapted to permit the passage of an electric current in one direction only, one of said devices being inserted in each of said shunts as set forth.

3. In means for closing an optional branch of a circuit which is divided into a plurality of branches, the combination of a series of switches, a source of current, conductors connecting said switches with one pole of said source of current, conductors connecting said switches with one pole of said source of current, a series of automatic switches each having an energizing coil, conductors connecting said automatic switches and one end of said coil with the other pole of said source of current, a plurality of conductors connecting the other end of said coils in order with all but one of said former series of switches, and a plurality of branch conductors arranged in groups connected with said set of switches in groups, each group of branches connected with the one series of switches having one branch in common with all the groups of branches which are connected to the switches of higher number of the other series than that of the concerned switch in the former series, with a plurality of devices adapted to permit the passage of an electric current in one direction only, one of said devices being inserted in each of said branches as set forth.

4. Means for closing an optional branch of a circuit which is divided into a plurality of branches, comprising in combination a series of switches, a source of current, conductors connecting said switches with one pole of said source of current, another series of switches, conductors connecting the latter with the other pole of said source of current, a plurality of branch conductors arranged in groups connected with said set of switches in different groups, each group of branches connected with the one series of switches having one branch in common with the groups of branches connected to the other series of switches, whereby shunts are provided for the current flowing in a branch directly connecting two switches of said two series of switches, and a plurality of polarized cells, one of the latter being inserted in each of said shunts as set forth.

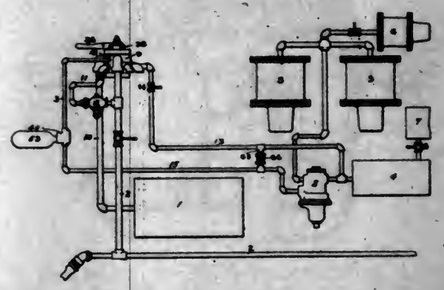
876,702. HOSE-BAND CLAMP. JOSEPH B. DRISCOLL, Louisville, Ky. Filed June 12, 1907. Serial No. 378,624.



In a hose band clamp, the combination of an approximately U-shaped frame, the inner face of which lies on the arc of a circle, oppositely facing swinging jaws mounted upon the two limbs of the U frame, clamping screws extending through the limbs of the U frame and engaging the said jaws, a clamping block located intermediate of the clamping jaws, and a screw threaded through the base of the U frame and engaging the clamping block.

876,703. ENGINEER'S BRAKE-VALVE. FRANK H. DUKESMITH, Meadville, Pa., assignor to The Dukesmith Air Brake Company, Pittsburg, Pa., a Corporation of West Virginia. Filed Dec. 28, 1905. Serial No. 293,639.

1. In an automatic air-brake system, the combination of an engine brake cylinder, triple valve, and auxiliary reservoir and connections between the same, a main reservoir, a train pipe, and an engineer's valve connected to the main reservoir and train pipe, and having an independent connection to the engine triple valve and arranged to connect the main reservoir either to the train pipe or to both the train pipe and the engine triple valve supply pipe.



2. In an automatic air-brake system, the combination of an engine brake cylinder, triple valve, and auxiliary reservoir and connections between the same, a main reservoir, a train pipe, and an engineer's valve connected to the main reservoir and train pipe, and to the engine auxiliary reservoir, and arranged to exhaust the auxiliary reservoir to the atmosphere independently of exhausting the train pipe to the atmosphere.

3. In an automatic air-brake system, the combination of an engine brake cylinder, triple valve and auxiliary reservoir and connections between the same, a main reservoir, a train pipe, and an engineer's valve connected to the main reservoir, the train pipe, and the engine auxiliary reservoir, and having an independent connection to the engine triple valve and arranged to connect the main reservoir either to the train pipe or to both the train pipe and the engine triple valve supply pipe, and to exhaust the engine auxiliary reservoir to the atmosphere independently of exhausting the train pipe to the atmosphere.

4. In an automatic air-brake system, the combination of an engine brake cylinder, triple valve, and auxiliary reservoir and connections between the same, a main reservoir, a train pipe, and an engineer's valve connected to the main reservoir, the train pipe, and the engine auxiliary reservoir, and arranged to exhaust the auxiliary reservoir to the atmosphere independently of exhausting the train pipe to the atmosphere, and a valve in the auxiliary reservoir connection arranged to connect said reservoir to the atmosphere independently of the engineer's valve.

5. In an automatic air-brake system, the combination of engine brake cylinder, triple valve, and auxiliary reservoir and connections between the same, a main reservoir, a train pipe, and an engineer's valve connected to the main reservoir and train pipe and having an independent connection to the engine triple valve, said engineer's valve being arranged to connect the main reservoir to the train pipe while holding the triple valve supply pipe closed.

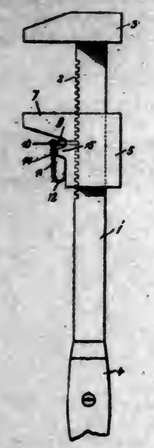
[Claims 6 to 11 not printed in the Gazette.]

876,704. WRENCH. HOWARD T. DUNCAN, Enon Valley, Pa. Filed Oct. 4, 1907. Serial No. 395,816.

1. In a wrench, the combination with a toothed shank having a fixed jaw, and a detachable handle, of an adjustable jaw slidably mounted upon said shank, said jaw having openings formed therein, a slide movably mounted in one of said openings for engaging said toothed shank, lugs carried by said jaw, a U-shaped spring pivotally mounted between said lugs, and connecting with said slide and bearing against said jaw.

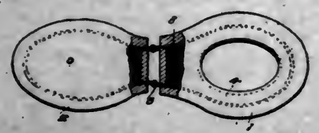
2. In a wrench, a shank having a fixed jaw and provided on its inner face with teeth, a movable jaw on the shank, and movable toward and from the fixed jaw, the said movable jaw having an opening, a slide in said opening, a sub-

stantially U-shaped spring pivoted on the outer face of the movable jaw having one arm thereof bearing against the



outer face of the jaw and the other arm pivotally-connected to the outer end of said slide.

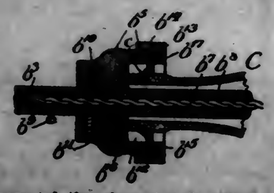
876,705. COMMODE OR CLOSET SEAT. CLEVENGER A. EASTMAN and RICHARD H. BETHEL, Charlotte, N. C. Filed Apr. 4, 1907. Serial No. 366,406.



1. A closet seat and its lid provided with wire mesh embedded therein and with reinforcing wires extending therethrough and conforming substantially to the marginal outlines thereof but lying within the margins, the extremities of said wires projecting from the ends of the seat and lid and hinged together.

2. A closet seat and its lid, provided with wire mesh embedded therein and with reinforcing wires extending therethrough and conforming substantially to the marginal outlines thereof but lying within the margins, the extremities of said wires projecting from the ends of the seat and lid and hinged together, and a transverse reinforcing wire embedded in the seat at the rear of the usual opening therein with its ends secured to the reinforcing wire of said seat.

876,706. BOTTLE-WASHER. GEORGE FAILING, Tulsa, Okla. Filed May 17, 1907. Serial No. 374,285.

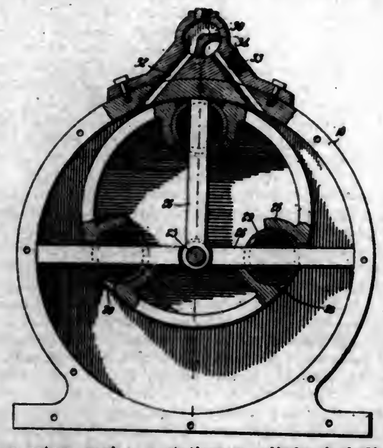


1. In means of the character described, the combination of rotary brush-holding means, a brush carried thereby, a collar on said brush-holding means having a bore for receiving a bottle-neck, a gasket at the base of said bore, a flexible washer carried by said collar and having an inner circumference of less diameter than the diameter of said bore and means for securing said flexible washer to said collar.

2. In means of the character set forth, the combination of rotary brush-holding means, a brush carried thereby, a collar carried by said brush-holding means and having a bore for receiving a bottle-neck, a flanged annular nut having connection with said collar, and a flexible washer interposed between said nut and the adjacent end of said collar.

3. In means of the character set forth, the combination of a brush, a holder for said brush, a collar on said holder having an enlarged bore, a gasket in said bore, a flanged annular nut having threaded connection with said collar, and a flexible gasket confined between said nut and the adjacent end of said collar.

876,707. ROTARY ENGINE. ANDREW F. FORD, Winona, Wash. Filed Apr. 8, 1907. Serial No. 367,088.



In a rotary engine, a stationary cylinder including opposite heads, a shaft extending through the central portion of one of the heads, a piston carrying shaft extending through the opposite head and disposed eccentrically thereto, the second head being provided with a circular recess struck from the center of the piston carrying shaft, and the first head having an annular groove concentric with said shaft, a drum piston secured to the piston carrying shaft and fitting in the recess and groove and in part supported by the walls thereof, the piston being provided with elongated slots extending from end to end thereof, the walls of the slots being curved, hollow rocking blocks mounted in the slots, said blocks being cylindrical in form and of a length equal to the width of the piston, the ends of said blocks fitting in the recess and the annular groove, and one end of each block being provided with a removable end plate, each block having a pair of diametrically opposed slots of a length less than that of the blocks, piston wings pivotally mounted on the first named shaft and extending through the slots of the blocks, and packing fitting within the hollow blocks and bearing against the sides of the piston wings, substantially as specified.

876,708. PENHOLDER. WILLIAM E. FORMAN, Centergrove, Ala. Filed Apr. 20, 1907. Serial No. 369,323.

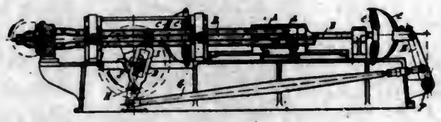
1. In a pen holder, the combination of a stem, a tube carried by one end of the stem and provided with an extension, and a spring sleeve fitting within the tube and provided with an extension corresponding to the before mentioned extension of the tube and coöperating therewith to provide a clamp for the pen point.

2. In a pen holder, the combination of a stem, a tube carried by one end of the stem and provided with an extension, a spring sleeve fitted within the tube and provided with an extension corresponding to the before mentioned extension of the tube and coöperating therewith to form a clamp for the pen point, and means carried by one of the extensions for holding the same apart while positioning the pen point.



3. In a pen holder, the combination of a stem, a tube carried by one end of the stem and provided with an extension, a spring sleeve fitted within the tube and formed with an extension corresponding to the said extension of the tube and coöperating therewith to form a clamp for the pen point, and a finger-piece carried by the extension of the sleeve and passing loosely through the extension of the tube.

876,709. MACHINE FOR FORGING AND WELDING METALLIC RINGS. JOSEPH GIRLOT, Laeken, Belgium. Filed Apr. 16, 1906. Serial No. 312,062.



1. In a machine for making metallic rings, oppositely faced hammers, a support therefor and for the ring to be operated on between the same, a pivoted lever for each hammer operatively connected thereto, a connection between said levers and means in connection with one of said levers for giving said levers a vibratory movement.

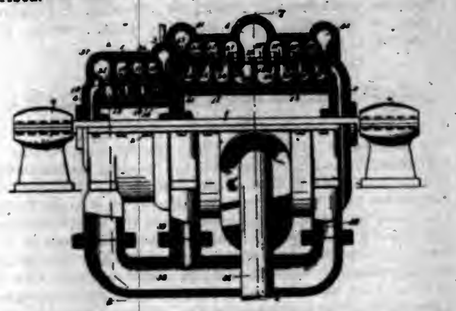
2. In a machine for making metallic rings, oppositely faced hammers, a support therefor and for the ring to be operated upon between the same, a pivoted lever for each hammer, a spring connection between each of said levers and its hammer, a link connection between the levers, and means in connection with one of said levers for giving said levers a vibratory movement.

3. In a machine for making metallic rings, oppositely faced hammers, a support therefor and for the ring to be operated upon between the same, a pivoted lever for each hammer operatively connected thereto, a link connection between said levers, one of said levers having a slot, in combination with a driving shaft provided with a crank pin working in the slot of said lever whereby a vibratory movement is given to said levers which rendera the striking travel of the hammers quicker than their return.

876,710. TURBINE. RICHARD H. GOLDSBOROUGH, Washington, D. C. Filed May 14, 1906. Serial No. 316,731.

1. In a turbine, the combination of a casing, a rotor therein, a plurality of annular series of vanes on said rotor, means for directing steam through a primary portion of said series of vanes and discharging it at one end of the casing, means for conducting such discharge simultaneously to the two end series of the remaining series of vanes, and means for directing the discharge in opposite directions through said remaining series of vanes, substantially as described.

2. In a turbine, the combination of a casing, a rotor therein, a plurality of annular series of vanes on said rotor, means for directing steam through a primary portion of said series of vanes and discharging it at one end of the casing, means for conducting such discharge simultaneously to the two end series of the remaining series of vanes, means for directing the discharge in opposite directions through said remaining series of vanes, and a common exhaust arranged intermediate of said remaining series for receiving the discharge therefrom, substantially as described.



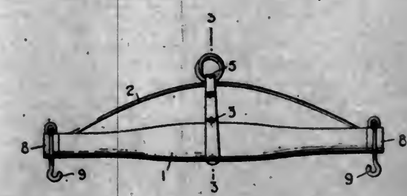
3. In a turbine, the combination of a casing, a rotor therein, a plurality of annular series of vanes on said rotor, means for directing steam through a primary portion of said series of vanes and discharging it at one end of the casing, and means for conducting such discharge simultaneously to the series of vanes at the other end of the turbine casing and to the series of vanes adjacent such primary portion, substantially as described.

4. In a turbine, the combination of a casing, a rotor therein, a plurality of annular series of vanes on said rotor, means for directing steam through a primary portion of said series of vanes and discharging it at one end of the casing, means for conducting such discharge simultaneously to the series of vanes at the other end of the turbine casing and to the series of vanes adjacent such primary portion, and means for directing the discharge in opposite directions through the remaining series of vanes, substantially as described.

5. In a turbine, the combination of a casing, a rotor therein, a plurality of annular series of vanes on said rotor, means for directing steam through a primary portion of said series of vanes and discharging it at one end of the casing, means for conducting such discharge simultaneously to the series of vanes at the other end of the turbine casing and to the series of vanes adjacent such primary portion, means for directing the discharge in opposite directions through the remaining series of vanes, and a common exhaust arranged intermediate of said remaining series for receiving the discharge therefrom, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

876,711. WHIFFLETREE. WILLIAM GRAFE, Viola, Idaho. Filed May 13, 1907. Serial No. 373,432.



A device of the type set forth, comprising a wooden stock, a clip secured thereto at a central point, said clip being provided with a rearwardly projecting portion formed with convolutions affording a centrally located recess on the outer face of said clip and upper and lower recesses on the inner face of said clip and a truss rod having its ends secured to the ends of said stock, said truss rod projecting rearwardly and at a central point engaging in said central recess, said upper and lower recesses being adapted to receive suspension means for said stock.

stantially U-shaped spring pivoted on the outer face of the movable jaw having one arm thereof bearing against the



outer face of the jaw and the other arm pivotally-connected to the outer end of said slide.

876,705. COMMODE OR CLOSET SEAT. CLEVENGER A. EASTMAN and RICHARD H. BETHEL, Charlotte, N. C. Filed Apr. 4, 1907. Serial No. 366,406.



1. A closet seat and its lid provided with wire mesh embedded therein and with reinforcing wires extending therethrough and conforming substantially to the marginal outlines thereof but lying within the margins, the extremities of said wires projecting from the ends of the seat and lid and hinged together.

2. A closet seat and its lid, provided with wire mesh embedded therein and with reinforcing wires extending therethrough and conforming substantially to the marginal outlines thereof but lying within the margins, the extremities of said wires projecting from the ends of the seat and lid and hinged together, and a transverse reinforcing wire embedded in the seat at the rear of the usual opening therein with its ends secured to the reinforcing wire of said seat.

876,706. BOTTLE-WASHER. GEORGE FAILING, Tulsa, Okla. Filed May 17, 1907. Serial No. 374,285.

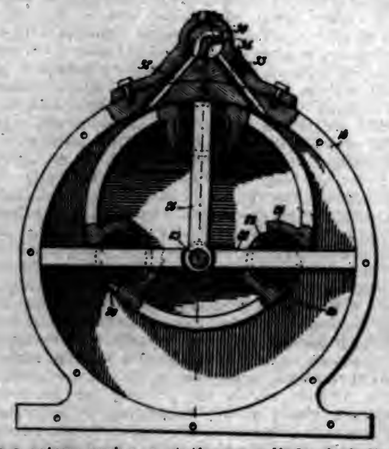


1. In means of the character described, the combination of rotary brush-holding means, a brush carried thereby, a collar on said brush-holding means having a bore for receiving a bottle-neck, a gasket at the base of said bore, a flexible washer carried by said collar and having an inner circumference of less diameter than the diameter of said bore and means for securing said flexible washer to said collar.

2. In means of the character set forth, the combination of rotary brush-holding means, a brush carried thereby, a collar carried by said brush-holding means and having a bore for receiving a bottle-neck, a flanged annular nut having connection with said collar, and a flexible washer interposed between said nut and the adjacent end of said collar.

3. In means of the character set forth, the combination of a brush, a holder for said brush, a collar on said holder having an enlarged bore, a gasket in said bore, a flanged annular nut having threaded connection with said collar, and a flexible gasket confined between said nut and the adjacent end of said collar.

876,707. ROTARY ENGINE. ANDREW F. FORD, Winona, Wash. Filed Apr. 8, 1907. Serial No. 367,088.



In a rotary engine, a stationary cylinder including opposite heads, a shaft extending through the central portion of one of the heads, a piston carrying shaft extending through the opposite head and disposed eccentrically thereto, the second head being provided with a circular recess struck from the center of the piston carrying shaft, and the first head having an annular groove concentric with said shaft, a drum piston secured to the piston carrying shaft and fitting in the recess and groove and in part supported by the walls thereof, the piston being provided with elongated slots extending from end to end thereof, the walls of the slots being curved, hollow rocking blocks mounted in the slots, said blocks being cylindrical in form and of a length equal to the width of the piston, the ends of said blocks fitting in the recess and the annular groove, and one end of each block being provided with a removable end plate, each block having a pair of diametrically opposed slots of a length less than that of the blocks, piston wings pivotally mounted on the first named shaft and extending through the slots of the blocks, and packing fitting within the hollow blocks and bearing against the sides of the piston wings, subetantially as specified.

876,708. PENHOLDER. WILLIAM E. FORMAN, Centergrove, Ala. Filed Apr. 20, 1907. Serial No. 369,323.

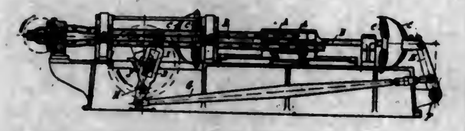
1. In a pen holder, the combination of a stem, a tube carried by one end of the stem and provided with an extension, and a spring sleeve fitting within the tube and provided with an extension corresponding to the before mentioned extension of the tube and coöperating therewith to provide a clamp for the pen point.

2. In a pen holder, the combination of a stem, a tube carried by one end of the stem and provided with an extension, a spring sleeve fitted within the tube and provided with an extension corresponding to the before mentioned extension of the tube and coöperating therewith to form a clamp for the pen point, and means carried by one of the extensions for holding the same apart while positioning the pen point.



3. In a pen holder, the combination of a stem, a tube carried by one end of the stem and provided with an extension, a spring sleeve fitted within the tube and formed with an extension corresponding to the said extension of the tube and coöperating therewith to form a clamp for the pen point, and a finger-piece carried by the extension of the sleeve and passing loosely through the extension of the tube.

876,709. MACHINE FOR FORGING AND WELDING METALLIC RINGS. JOSEPH GIBLOT, Laeken, Belgium. Filed Apr. 16, 1906. Serial No. 312,062.



1. In a machine for making metallic rings, oppositely faced hammers, a support therefor and for the ring to be operated on between the same, a pivoted lever for each hammer operatively connected thereto, a connection between said levers and means in connection with one of said levers for giving said levers a vibratory movement.

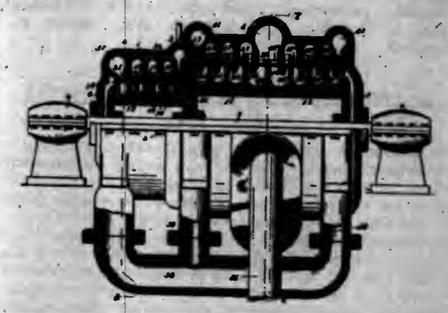
2. In a machine for making metallic rings, oppositely faced hammers, a support therefor and for the ring to be operated upon between the same, a pivoted lever for each hammer, a spring connection between each of said levers and its hammer, a link connection between the levers, and means in connection with one of said levers for giving said levers a vibratory movement.

3. In a machine for making metallic rings, oppositely faced hammers, a support therefor and for the ring to be operated upon between the same, a pivoted lever for each hammer operatively connected thereto, a link connection between said levers, one of said levers having a slot, in combination with a driving shaft provided with a crank pin working in the slot of said lever whereby a vibratory movement is given to said levers which renders the striking travel of the hammers quicker than their return.

876,710. TURBINE. RICHARD H. GOLDSBOROUGH, Washington, D. C. Filed May 14, 1906. Serial No. 316,731.

1. In a turbine, the combination of a casing, a rotor therein, a plurality of annular series of vanes on said rotor, means for directing steam through a primary portion of said series of vanes and discharging it at one end of the casing, means for conducting such discharge simultaneously to the two end series of the remaining series of vanes, and means for directing the discharge in opposite directions through said remaining series of vanes, substantially as described.

2. In a turbine, the combination of a casing, a rotor therein, a plurality of annular series of vanes on said rotor, means for directing steam through a primary portion of said series of vanes and discharging it at one end of the casing, means for conducting such discharge simultaneously to the two end series of the remaining series of vanes, means for directing the discharge in opposite directions through said remaining series of vanes, and a common exhaust arranged intermediate of said remaining series for receiving the discharge therefrom, substantially as described.



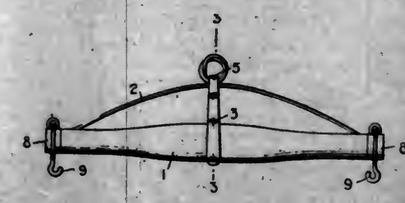
3. In a turbine, the combination of a casing, a rotor therein, a plurality of annular series of vanes on said rotor, means for directing steam through a primary portion of said series of vanes and discharging it at one end of the casing, and means for conducting such discharge simultaneously to the series of vanes at the other end of the turbine casing and to the series of vanes adjacent such primary portion, substantially as described.

4. In a turbine, the combination of a casing, a rotor therein, a plurality of annular series of vanes on said rotor, means for directing steam through a primary portion of said series of vanes and discharging it at one end of the casing, means for conducting such discharge simultaneously to the series of vanes at the other end of the turbine casing and to the series of vanes adjacent such primary portion, and means for directing the discharge in opposite directions through the remaining series of vanes, substantially as described.

5. In a turbine, the combination of a casing, a rotor therein, a plurality of annular series of vanes on said rotor, means for directing steam through a primary portion of said series of vanes and discharging it at one end of the casing, means for conducting such discharge simultaneously to the series of vanes at the other end of the turbine casing and to the series of vanes adjacent such primary portion, means for directing the discharge in opposite directions through the remaining series of vanes, and a common exhaust arranged intermediate of said remaining series for receiving the discharge therefrom, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

876,711. WHIFFLETREE. WILLIAM GRAFE, Viola, Idaho. Filed May 13, 1907. Serial No. 373,432.



A device of the type set forth, comprising a wooden stock, a clip secured thereto at a central point, said clip being provided with a rearwardly projecting portion formed with convolutions affording a centrally located recess on the outer face of said clip and upper and lower recesses on the inner face of said clip and a truss rod having its ends secured to the ends of said stock, said truss rod projecting rearwardly and at a central point engaging in said central recess, said upper and lower recesses being adapted to receive suspension means for said stock.

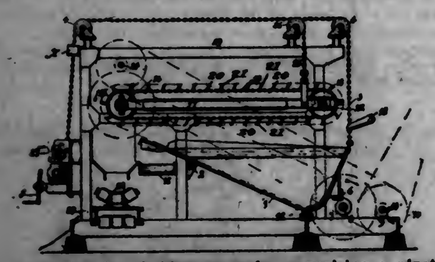
876,712. METHOD OF AND MEANS FOR UTILIZING THE HEAT IN FURNACES OF THE CHANNEL TYPE. GUSTAF GRÖNDAL, Djursholm, Sweden, assignor to Metallurgiska Aktiebolaget, Stockholm, Sweden, a Corporation of Sweden. Filed Oct. 14, 1905. Serial No. 282,765.



1. Method of utilising the heat in furnaces having a preliminary heating compartment, a cooling compartment and an intermediate burning chamber, in which latter the fuel is fed and burned, and through which compartments and chamber the goods or articles are fed intermittently, said method consisting in feeding air over the goods in the cooling compartment to, and using it for combustion in the burning chamber, said air being in larger quantity than is necessary for the combustion of the fuel required for producing the necessary heat in the burning chamber, and leading the superfluous quantity of air heated in the cooling compartment past the burning chamber and introducing it together with the products of combustion from the burning chamber into the preliminary heating compartment to there deliver its heat to the goods.

2. A channel furnace with gas firing for burning ore briquets and the like, consisting of a preliminary heating compartment, a cooling compartment and an intermediate burning chamber, in which latter the fuel is fed and burned, and trucks passing through said compartments and chamber and on which the goods or articles are placed, means for introducing air through the cooling chamber into the burning chamber, and in larger quantities than is necessary for use in the burning chamber, and said furnace being provided with a controllable conduit for that portion of the air not necessary for the combustion of the gas, the said conduit being made to issue from the cooling compartment and being led past the burning chamber and opening at a suitable point into the preliminary heating compartment of the furnace together with a controllable conduit leading from the furnace and opening into the preliminary heating channel, whereby the products of combustion mingle with the surplus air from the cooling chamber to effect the preliminary heating desired.

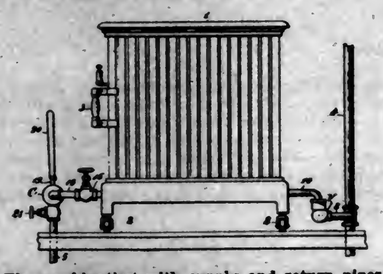
876,713. ORE-CONCENTRATOR. PETRUS HJERDIN, Stockholm, Sweden, assignor to Metallurgiska Aktiebolaget, Stockholm, Sweden, a Corporation of Sweden. Filed July 11, 1907. Serial No. 383,306.



Apparatus for shaking ore pulp, comprising a pivoted receptacle, means for shaking it, means for raising the receptacle to run off the water, and an endless scraping means with devices for lowering the latter into the receptacle and withdrawing the same therefrom.

876,714. RADIATOR MOUNTING AND CONNECTION. MICHAEL J. HARKINS, MICHAEL J. RICKARD, and PATRICK J. COWLEY, New York, N. Y. Filed July 24, 1906. Serial No. 327,590.

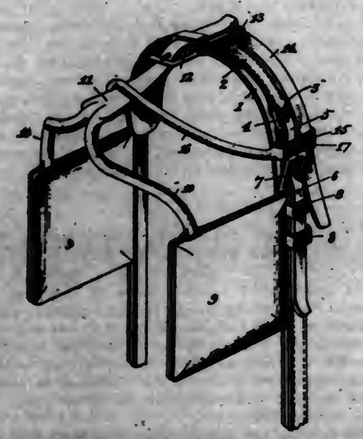
1. The combination with supply and return pipes for a heating fluid, an upright radiator disposed between said pipes, a pivotal coupling device which couples said radiator at one side to one of said pipes the pivotal axis of the coupling being upright, a readily detachable coupling which connects the radiator at its other side with the other pipe for the fluid, said coupling having a horizontal axis and comprising a fixed and a rotative member, one on the radiator and the other on the fluid-carrying pipe, said coupling members being so disposed as to engage for interlocking when the radiator is moved into place about its pivotal connection at the other side.



2. The combination with supply and return pipes, and a radiator between the same of a coupling device V between the supply pipe and the radiator, said device having a stuffing-box with an upright axis and connected on one side with the supply pipe, a pipe 10, one end of which is secured to and in communication with the radiator and the other end having a rotatable bearing in the said stuffing-box, and a detachable, interlocking coupling between the radiator and the discharge pipe.

3. The combination with supply and return pipes, and a radiator provided with rolling supports disposed between said pipes, of a pivotal coupling with an upright axis between the radiator and the supply pipe, and a detachable interlocking coupling between the radiator and the return pipe, said coupling comprising the member 16, carried by the radiator, the fixed discharge pipe 18, and a member 17, rotatively mounted on the pipe 18 and adapted to engage the member 16.

876,715. BRIDLE. SAMUEL D. HAWK, Minneapolis, Kans. Filed Nov. 22, 1906. Serial No. 344,640.

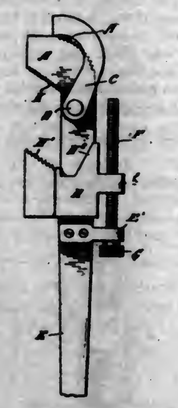


1. In a bridle, a crown-piece, a fixed strap on the forward edge of said crown-piece, blinds connected with the ends of said fixed strap, a movable throat-latch strap on the rear edge of said crown-piece, a strap secured to the top of the crown-piece and looped around said fixed strap and the movable throat-latch strap, a buckle in the forward loop of said strap secured to the top of the crown-piece, and spreaders secured at their outer ends to said blinds and engaged at their inner ends by said buckle.

2. In a bridle, a crown-piece, a fixed strap on the forward edge of said crown-piece, blind-supports, blinds secured to said blind-supports, adjustable cheek billets connecting said blind-supports with the ends of said fixed strap, a movable throat-latch strap on the rear edge of said crown-piece, a strap secured to the top of said crown-piece and looped around said fixed strap and said movable throat-latch strap, a buckle in the forward loop of said strap secured to the top of the crown-piece, and spreaders secured at their outer ends to said blinds and engaged at their inner ends by said buckle.

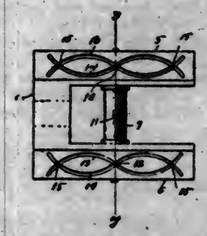
3. In a bridle, a crown-piece, a fixed strap on the forward edge of said crown-piece extending but part way toward the ends thereof, rings in the lower ends of said fixed strap, blind-supports over-lapping at their upper ends the lower ends of said crown-piece, blinds secured to said blind-supports, buckles in the upper ends of said blind-supports, double cheek billets looped in said rings with each billet secured at one end to the adjacent blind-support and engaged at the other end by the adjacent buckle, a movable throat-latch strap on the rear edge of the crown-piece, a strap secured to the top of the crown-piece and looped around said fixed strap and said movable throat-latch strap, a buckle in the forward loop of said strap secured to the top of the crown-piece, spreaders secured at their outer ends to said blinds and engaged at their inner ends by said buckle in the forward loop of the strap secured to the top of the crown-piece, a brow-band looped at its ends around the cheek billets and the ends of the throat-latch strap, and clips clamped around the looped ends of said brow-band between the cheek billets and the ends of the throat latch strap.

876,716. PIPE-WRENCH. JOHN HUGHES, Hartford, Conn. Filed Oct. 23, 1907. Serial No. 398,813.



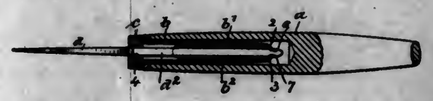
A wrench comprising a fixed jaw and shank, said jaw having a curved series of teeth upon one edge thereof and an inclined series of teeth upon the opposite edge, a curved toothless pivotal jaw having arms, one of which is pivotally mounted upon each side of the shank of the fixed jaw, a bracket arm fixed to said shank, a screw swiveled therein, a sliding jaw mounted upon the shank of the fixed jaw and provided with a laterally projecting apertured lug through which the threaded screw passes, said sliding jaw having an inclined series of teeth and projecting portions at one end of the sleeve of the movable jaw, the edges of said projection being inclined, one upon either side of the shank of the fixed jaw, as shown and described.

876,717. LUBRICATION OF CROSS-HEADS. JAMES JOHNSON, Floreffe, Pa. Filed Aug. 1, 1907. Serial No. 386,594.



An engine cross head having an integral cross pin, said head and pin having a passage therethrough, the passage extending transversely of the head and longitudinally of the pin and closed at the sides of the head, said pin having a vertical passage communicating with the passage extending longitudinally through the pin, the said cross head having vertical passage also communicating with the passage extending transversely through the cross head, the upper face of the cross head provided with compound curved grooves, the said grooves crossing each other sectionally and communicating at their crossing point with the vertical passages in the cross head.

876,718. IMPLEMENT-HANDLE. OTTO KAMPFE, New York, N. Y. Filed July 19, 1907. Serial No. 384,506.



1. In an implement handle and in combination, a handle of suitable material tubular at one end, a tubular member, oppositely disposed arms connected therewith and the free ends of which are in-turned toward one another, the open end of the handle being adapted to receive this tubular member, and a ferrule connected to the free end of the tubular member and coming against the end of the handle and centrally perforated to receive the tang of a tool.

2. In an implement handle and in combination, a handle of suitable material, tubular at one end, a tubular member, oppositely disposed arms connected therewith and the free ends of which are in-turned toward one another, the open end of the handle being adapted to receive this tubular member, and a ferrule connected to the free end of the tubular member and coming against the end of the handle and centrally perforated to receive the tang of a tool and the surface of the tubular member roughened for connection under tension with the ferrule and under compression in the handle.

3. The combination with the handle *a* hollow or tubular at one end, of a tubular member of metal *b*, oppositely disposed spring arms b^1 b^2 formed integral with said tubular member and having in-turned ends 2 3, a ferrule *c* centrally perforated at 4 and transversely slotted at 5 to receive the tang and shoulder of an interchangeable tool and provided with a recess on the side opposite to the transverse slot to receive the free end of the tubular member when forced into connection therewith, the tang of the tool having oppositely disposed end notches to receive the in-turned ends of the aforesaid arms.

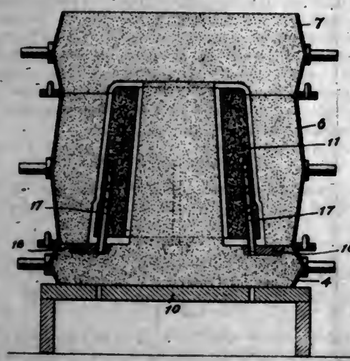
4. The combination with the handle *a* hollow or tubular at one end and formed of hard rubber or celluloid adapted to expand with heat and contract with cold upon a subsequently inserted member, of a tubular member adapted to be forced into the hollow end of the handle and held by the contraction of the same upon cooling, oppositely disposed spring-arms b^1 b^2 formed integral with said tubular member and having in-turned ends 2 3, a ferrule *c* centrally perforated at 4 and transversely slotted at 5 to receive the tang and shoulder of an interchangeable tool

and provided with a recess on the side opposite to the transverse slot to receive the free end of the tubular member when forced into connection therewith, the tang of the tool having oppositely disposed end notches to receive the in-turned ends of the aforesaid arms.

5. In combination with a handle of suitable material tubular at one end, a tubular member adapted to be held therein and having oppositely disposed inwardly extending spring arms, a ferrule, recessed for connection with one end of said tubular member and perforated and slotted to receive the shank and shoulder of an interchangeable tool and to come against the free end of the handle and means at the ends of the spring arms and end of the shank of the tool, whereby the tool is engaged and held within the handle.

[Claims 6 and 7 not printed in the Gazette.]

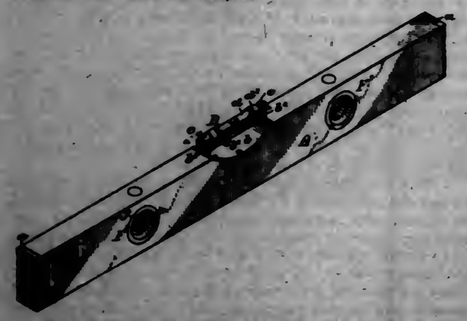
876,719. MOLD FOR HOLLOW ARTICLES. EDWARD KERR and JAMES SMITH, Pittsburg, Pa. Filed May 2, 1907. Serial No. 371,460.



1. A core for casting hollow articles having in combination therewith a series of anchor rods extending into the core, and anchors secured to the projecting ends of said pipes and projecting radially beyond the perimeter of the the core.

2. A mold for casting hollow articles having in combination mold sections, a shaping matrix formed therein, one of said sections having recesses outside of the matrix for the reception of the core anchors, a core having a series of anchor rods secured therein and shoes or anchors secured to said rods and projecting radially beyond the perimeter of the core and adapted to seat in the recesses when the core is in position in the mold.

876,720. LEVEL. ERNEST A. KING, Philadelphia, Pa., assignor to Henry Disston & Sons Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 31, 1907. Serial No. 390,945.

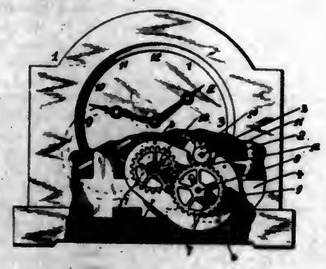


1. The combination in a level, of a body portion having a recess in one edge, a handle section mounted in the recess, and a horizontal level section carried by the handle section, substantially as described.

2. The combination of a body portion having a curved recess in one edge, a handle consisting of a handhold and a curved plate, said plate being curved on the same line as the recess in the body portion, and a horizontal level section mounted on the handhold of the handle section, substantially as described.

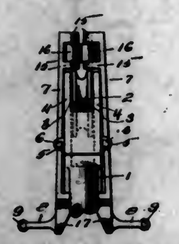
3. The combination in a level, of a body portion, a handle section secured to one edge of the body portion, a horizontal level section carried by the handhold of the handle section, and two sights one near one end of the body portion the other near the other end, and partially inclosed glasses in the sights both facing the same way, substantially as described.

876,721. WINDING-INDICATOR FOR TIMEPIECES. ALBERT G. KOUNTS, Pittsburg, Pa. Filed Nov. 14, 1905. Serial No. 287,295.



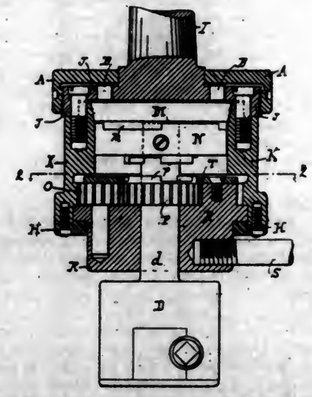
The combination with a clock including a casing, a frame for the clock mechanism, said mechanism including a winding arbor, an extended second-hand arbor, and a dial having apertures opposite the winding arbor and the extended second-hand arbor, of two plates spaced apart and connected to the frame of the clock mechanism and provided with alined slots, a shaft adjustably supported in said slots, a gear carried by said second-hand arbor, a gear carried by said shaft and engaging the first mentioned gear, and a disk carried by said winding arbor and provided with a radial stud adapted to intermittently engage the teeth of the gear adjacent thereto.

876,722. TROLLEY. JOSEPH H. KROEN, Monaca, Pa. Filed July 23, 1906. Serial No. 327,359.



The combination with a trolley pole terminating at its upper end in a harp extending at an inclination and a trolley wheel journaled in said harp, said harp having each of its side faces provided with a pair of lugs, one of the lugs of each pair of lugs arranged in proximity to the vertical edge of its respective face and the other lug of said pair positioned at one side of the center of its respective face, the lugs of each pair arranged in parallelism with respect to each other, of a guard comprising a pair of arms extending in a vertical direction with respect to the harp, said arms extending between said lugs and each of which has its upper end formed with a pair of inwardly-extending protuberances, one of the protuberances of each pair arranged over the other protuberance of the pair, and each of said protuberances provided in close proximity to its free end with an opening, bolts extending through the lugs for pivotally-connecting the arms thereto, vertically-extending friction rollers positioned between the said pairs of protuberances, said rollers abutting, means extending through the openings of the protuberances for connecting the rollers to the arms, each of said arms furthermore provided with an inwardly-extending portion at its lower end, the top of said inwardly-extending portions arranged in close proximity to the lower face of the harp, each of said inwardly-extending portions provided with a recess, a laterally-extending apertured arm formed integral with the outer face of each of the arms at the lower end thereof, a spring interposed between the inwardly-extending portions of the arms engaging in said recesses and having the ends extending in the arms, and a trolley rope attached to the apertured arms.

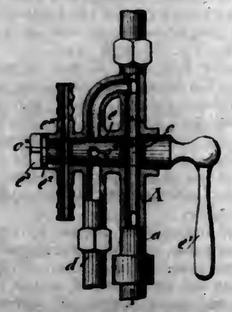
876,723. TAP-HOLDER. WILBUR A. LEONARD, New Haven, Conn., assignor to Geometric Tool Company, New Haven, Conn., a Corporation of Connecticut. Filed May 27, 1907. Serial No. 375,948.



1. A tap holder having a shank, shell and chuck with a friction disk in the shell, a screw cap and pins to bear on the disk to adjust the friction of the latter against the shell.

2. A tap holder having a shank and shell with a chuck, a reversing clutch in the shell, a friction disk with which the movable member of the clutch may engage, and means for adjusting the friction of the disk in the shell.

876,724. CONTROLLING STOP-COCK FOR BEER APPARATUS. CHARLES MELDAU, New York, N. Y. Filed Nov. 13, 1906. Serial No. 343,254.



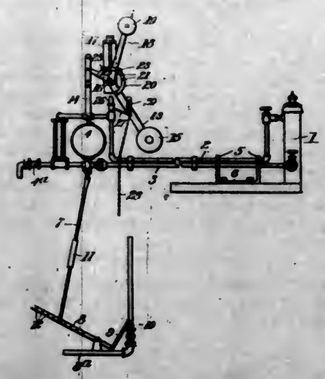
1. In beer apparatus, the combination, of a beer-pipe leading from the barrel, a pipe for supplying air to the barrel, a pipe for supplying water to the beer-pipe, and means for closing said air-supply pipe and simultaneously opening a passage leading from said water-pipe to the beer-pipe.

2. In beer apparatus, the combination, of a beer-pipe leading from the barrel, a pipe for supplying air to the barrel, a pipe for supplying water to the beer-pipe, and a single stop-cock which closes the beer-pipe and the air-pipe and simultaneously opens the water-pipe whereby when the air is cut off from the barrel the beer-pipe is flushed.

3. In beer apparatus, the combination, with a beer-pipe leading from the barrel, of a pipe for supplying air under pressure to the barrel, a pipe to supply water to the beer-pipe, and a single stop-cock arranged in the beer-pipe intermediately of its length adjacent to the connection of the latter with the water-pipe and operative to close the air-pipe to cut off the supply of air and to simultaneously establish communication between the water-pipe and the beer-pipe.

4. In beer apparatus, the combination of a beer-supply pipe, a water-pipe connected to said beer-supply pipe intermediately between the ends of the latter, a pipe which supplies air to the barrel, a stop-cock which opens said beer-supply pipe below its connection with the water-pipe and opens said air-pipe while simultaneously closing the water-pipe, a by-pass pipe connecting the beer-supply pipe at opposite sides of said stop-cock, and a valve in said by-pass pipe.

876,725. FEED-WATER GOVERNOR. JOSEPH B. MOWRY, Mansfield, Ohio. Filed Mar. 25, 1907. Serial No. 364,402.



1. In a device of the character described, the combination, with a vessel, of a receptacle, pipes connecting said vessel and receptacle, means carried by said receptacle for governing the supply of water to said vessel, a weighted lever pivoted to a fixture and adapted to balance said receptacle, and a weighted arm mounted on the same pivot with, and adjustable with relation to said lever for the purpose specified.

2. In a device of the character described, the combination, with a vessel, of a receptacle, pipes connecting said vessel and receptacle, means carried by said receptacle for governing the supply of water to said vessel, a weighted lever pivoted to a fixture and adapted to balance said receptacle, a segment on said lever arranged opposite its pivot, a weighted arm mounted on the same pivot with said lever, and means carried by said segment whereby said arm may be adjusted relative to said lever.

3. In a device of the character described, the combination, with a vessel, of a receptacle, pipes connecting said vessel and receptacle, means carried by said receptacle for governing the supply of water to said vessel, a weighted lever pivoted to a fixture and adapted to balance said receptacle, a segment on said lever arranged opposite its

pivot, a weighted arm mounted on the same pivot with said lever, pins adapted to be inserted in any of a series of holes in said segment, and cam-washers on said pins whereby said arm may be adjusted relative to said lever.

4. In a device of the character described, the combination, with a vessel, of a receptacle, pipes connecting said vessel and receptacle, means carried by said receptacle for governing the supply of water to said vessel, a weighted lever pivoted to a fixture and adapted to balance said receptacle, a whistle mounted on one of said pipes and having a projecting operating arm and a trip on the weighted end of said lever and adapted to engage said arm when said lever drops.

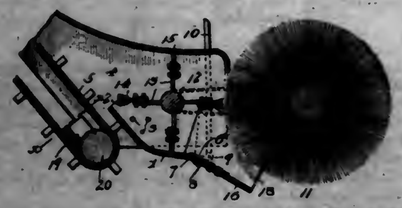
5. In a device of the character described, the combination, with a vessel, of a receptacle, pipes connecting said vessel and receptacle, a valved steam supply pipe to a pump for supplying water to said vessel, a lever pivoted on said supply pipe, a rod connecting said lever with said receptacle, a weighted lever pivoted to a fixture and adapted to balance said receptacle, and a weighted arm mounted on the same pivot with, and adjustable with relation to said weighted lever for the purpose specified.

876,726. INK-WELL. WILLIAM W. OWENS, Glencoe, Ohio. Filed May 27, 1907. Serial No. 375,860.



In an ink well, a body having a semispherical concavity formed therein, a closure removably secured upon said body over said concavity, said closure comprising a cap, a centrally depending funnel, a resiliently supported valve carried by the funnel and movable into and out of the lower end thereof, said valve normally closing the funnel, an annular enlargement carried by said cap, and a depending funnel carried by said enlargement and alining with the first mentioned funnel, said enlargement and its funnel being located above the plane of the body of the cap, said enlargement being removable with the cap as a unitary structure.

876,727. STREET-SWEEPER. CHARLES K. PEVEY, Worcester, Mass. Filed June 9, 1905. Serial No. 264,461.

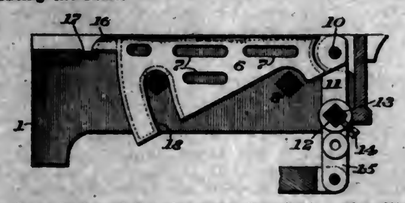


In a machine of the character described, the combination, with a stationary pan, and a broom of a series of flexible plates independently hinged to a common rod and forming a continuation of said pan, said rod having a series of fingers extending therefrom, one below each of said plates, and means to rotate said rod whereby all of said plates will be raised simultaneously.

876,728. GRATE. JAMES REAGAN, Philadelphia, Pa. Filed May 28, 1907. Serial No. 376,120.

1. In a shaking grate, a series of hollow lifting fire bars having perforated wings, connecting rods for said lifting fire bars, and means for actuating the same.

2. In a device of the character described, a series of hollow lifting fire bars having perforated wings, means for pivoting each of said bars adjacent one end thereof, a connecting rod for said lifting fire bars, and means for actuating the same.



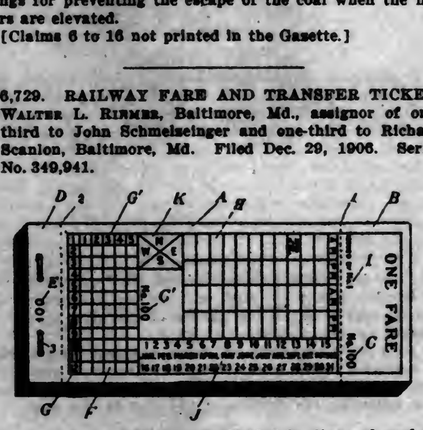
3. In a device of the character described, a plurality of choppers, means for rocking the same, a plurality of lifting bars pivoted at one end and alternated with said choppers, said lifting bars having wings depending from each side of said lifting bars and means for actuating said lifting fire bars wherby one end thereof is raised.

4. In a device of the character described, a plurality of choppers, a plurality of lifting fire bars intermediate said choppers, a rocking bar for said choppers, means for actuating the rocking bar a connecting bar for said lifting fire bars, and means for actuating the latter.

5. In a device of the character described, a plurality of choppers, a connecting rod therefor, a plurality of hollow lifting fire bars intermediate said choppers, a connecting rod for said fire bars, means for actuating said choppers, means for actuating said fire bars, said fire bars having wings for preventing the escape of the coal when the fire bars are elevated.

[Claims 6 to 16 not printed in the Gazette.]

876,729. RAILWAY FARE AND TRANSFER TICKET. WALTER L. RIMMER, Baltimore, Md., assignor of one-third to John Schmeiseinger and one-third to Richard Scanlon, Baltimore, Md. Filed Dec. 29, 1906. Serial No. 349,941.



1. A series of tickets each divided by lines of perforation into three parts, binding means through the parts at one end of the several tickets, the central part of each ticket containing the complete printed matter of an ordinary transfer, including a calendar, a time indicator, and a list of transfer junctions, and the other end part of each ticket being a single undivided coupon bearing matter indicating payment of a single fare.

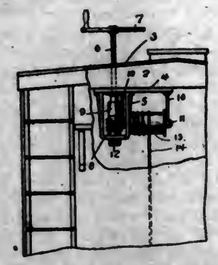
2. A series of tickets, each divided by lines of perforations into three parts, binding means through the parts at one end of the several tickets, the central part of each ticket containing the usual printed matter for a transfer and the other end portion provided with the words "One fare" printed thereon and adapted to be detached upon the collecting of the said ticket or transfer and delivered to the passenger, substantially as described and for the purpose as set forth.

3. A series of tickets each divided by lines of perforations into three parts, binding means through the parts at one end of the several tickets, the central part of each ticket containing the usual printed matter for a transfer, and the other end parts having the words "One fare" printed thereon together with a number corresponding with a like number remaining on the canceled ticket.

4. A series of tickets each divided by lines of perforations into three parts, binding means through the parts at one end of the several tickets, the central part of each ticket containing the usual printed matter for a transfer and the opposite end portion having printed thereon the words "One fare" and adapted to be detached upon the delivery of the transfer and retained by the passenger, substantially as described and for the purpose set forth.

5. A series of tickets, each divided by lines of perforations into three parts, binding means through the parts at one end of the several tickets, the central part of each ticket containing the usual printed matter for a transfer, the other end parts each bearing matter indicating that they are good for a fare substantially as described and for the purpose as set forth.

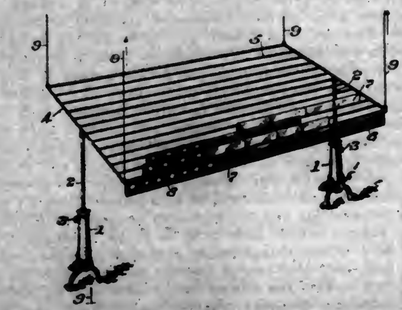
876,730. CAR-BRAKE-OPERATING MECHANISM. NICKLOS RUSHE, Rankin, Pa. Filed Oct. 28, 1907. Serial No. 399,444.



1. In a car brake operating mechanism, the combination with a car and the roof thereof, of brackets suspended from said roof, a shaft journaled in one of said brackets and extending above said roof, a brake wheel carried thereby, a reinforced worm mounted upon said shaft, said reinforcement comprising a tapering sleeve, a shaft journaled in the other of said brackets, a gear wheel carried by said shaft and meshing with said worm, a drum carried by said shaft, and a chain or cable connecting with said drum, substantially as, and for the purpose described.

2. In a car brake operating mechanism, the combination with a car and the roof thereof, of brackets suspended from said roof, a vertically disposed shaft journaled in one of said brackets, a reinforced worm carried thereby, a horizontal shaft journaled in the other of said brackets, a gear wheel carried by said shaft and meshing with said worm, a drum fixed on said shaft, and a chain or cable connecting with said drum, substantially as described.

876,731. AMUSEMENT NOVELTY OR THEATRICAL DEVICE. FREDERICK W. SCHMIDT, Philadelphia, Pa. Filed Oct. 9, 1906. Serial No. 338,143.



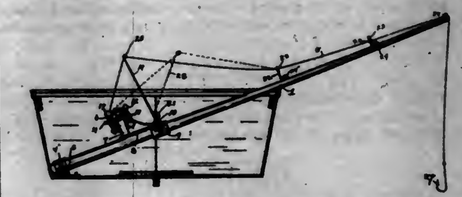
1. In a device of the character described, a frame comprising end and side members, rods connected between said end members, means for shifting the position of the frame between the horizontal and vertical and maintaining it in any intermediate position, and loose coverings for said rods coöperating to form a picture thereon in the positions of said frame approaching the vertical position and to show the single width of said loose coverings only in the horizontal position.

2. A supporting device consisting of a marginal frame and members carried thereby and movable objects adapted to straddle said members, and to be freely supported thereby said objects having thereon portions of designs adapted when the objects are systematically arranged, to form together in some position of the frame a well defined design.

3. In a device of the character described, a frame composed of a plurality of members, means carrying said frame adapting it to be placed in horizontal or vertical position, and removable objects having designs thereon, swingingly supported on said members so as in some position of the frame to form together a well defined design.

4. In a device of the character described, standards adjustable in height, a frame pivoted to said standards comprising end members secured thereto, and side members, rods secured between said end members parallel to said side members, and removable coverings for said rods forming portions of a picture in some positions of the frame.

876,782. AUTOMATIC FISHING-TACKLE. HENRY A. SCHMIDT, Milwaukee, Wis. Filed May 1, 1907. Serial No. 371,322.



1. In a device of the described class the combination of a fish pole, a revoluble reel, a vibratory line supporting arm, and a plurality of stationary line supporting arms affixed at one end to one side of said pole and a fish line supported at one end from said reel and at its free end from said vibratory and stationary arms.

2. In a device of the described class the combination of a fish pole, a revoluble reel, a friction roller bearing connected with one end of the reel, a yielding brake bearing rigidly connected at one end with the pole and adapted to bear at its free end upon the periphery of said roller bearing, a vibratory line supporting arm, and a plurality of stationary line supporting arms, affixed at one end to one side of said pole and a fish line supported at one end from said reel and at its free end from said vibratory and stationary arms.

3. In a device of the described class the combination of a fish pole, a revoluble reel, a vibratory line supporting arm provided at its free end with a line retaining loop and means for securing the fish line to said loop, and a plurality of stationary line supporting arms affixed at one end to one side of said pole and a fish line supported at one end from said reel and at its free end from said vibratory and stationary arms.

4. In a device of the described class the combination of a fish pole, a transverse bar affixed to one end of said pole and adapted to prevent the same from rolling upon its support, a revoluble reel, a vibratory line supporting arm and a plurality of stationary line supporting arms, affixed at one end to one side of said pole and a fish line supported at one end from said reel and at its free end from said vibratory and stationary arms.

5. In a device of the described class the combination of a fish pole, a transverse bar affixed to one end of said pole adapted to prevent the same from rolling upon its support, a revoluble reel, a supporting shaft therefor a roller bearing attached to one end of the reel supporting

shaft, a yielding bearing rigidly connected at one end with said pole and adapted to bear at its opposite end upon said roller bearing, a vibratory arm and a plurality of stationary line supporting arms affixed at one end to one side of said pole, a fish line supported at one end from said reel and at its opposite end in said vibratory arm, and means for temporarily securing said line to the free end of said vibratory arm, all substantially as and for the purpose specified.

876,733. DESIGN-TRANSFERRING APPARATUS. ARTHUR G. SCHULTZ, New Orleans, La. Filed Sept. 7, 1907. Serial No. 391,812.



An apparatus for the purpose described, comprising a bed having a group of apertures, a plurality of pegs removably arranged in some of the apertures, a holder of V-shape in plan adjustable toward and from the group of apertures and adjustably connected with the bed, standards fixed to and rising from the bed, at a point in rear of the holder, a vertically swinging lever fulcrumed between the standards and having a rearwardly extending arm, a tractile spring interposed between said arm of the lever and the bed, and a pad of a nature to take up and apply ink, grease or the like, connected with and carried by the forward portion of the lever.

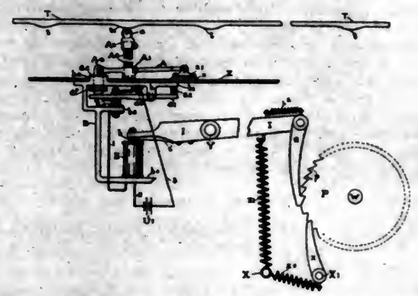
876,734. DETACHABLE FERRULE. CHESTER A. SCOTT and ALLEN F. WHIPPLE, Fort Bragg, Cal. Filed Mar. 26, 1907. Serial No. 364,679.



A detachable tip ferrule for canes, umbrellas, and the like, consisting of a socket member secured to the cane and provided with a threaded seat, and a detachable ferrule member provided with a partition having an opening therein, and a tip or buffer passing through the partition, and provided with a flange to rest upon said partition, said ferrule being threaded to fit the seat of the socket member.

876,735. ANNUNCIATOR. LAFAYETTE S. SCOTT, Rochester, N. Y. Filed Dec. 3, 1906. Serial No. 346,180.

1. The combination with a vehicle having a predetermined path of travel of an annunciator on said vehicle comprising, a series of independent and independently operable character-carrying forms each having a series of characters thereon, a case adapted to expose to view in legible arrangement one character only at a time on each form and means tending to hold each form with either a blank or a character thereon exposed to view; an independent operating element for each such form carried by and projecting outwardly from such vehicle; a member at each predetermined point where it is desired to change the indication given by the annunciator arranged in the pathway of each projecting operating element corresponding to a character form to be advanced and for each step or space of one character thereon which such form is to be advanced to give the desired next indication, each said member being adapted to engage and operate such projecting element and connections between each projecting operating element and corresponding character-carrying form whereby as each such element is engaged by a member in the path thereof the corresponding form is advanced to expose the next character thereon.



2. The combination with a vehicle having a predetermined path of travel of an annunciator on said vehicle comprising, a series of independent and independently operable character-carrying forms each having a series of characters thereon, a case adapted to expose to view in legible arrangement one character only at a time on each form and means tending to hold each form with either a blank or a character thereon exposed to view; an independent operating element for each such form carried by and projecting outwardly from such vehicle; a member at each predetermined point where it is desired to change the indication given by the annunciator arranged in the pathway of each projecting operating element corresponding to a character form to be advanced and for each step or space of one character thereon which such form is to be advanced from its zero or initial position to give the desired next indication, each said member being adapted to engage and operate such projecting element; connections between each projecting operating element and corresponding character-carrying form whereby as each such element is engaged by a member in the path thereof the corresponding form is advanced to expose the next character thereon and means for returning to its initial position each character-carrying form not already at such initial position before each such advancement therefrom to give such desired changed indication.

3. The combination with a vehicle having a predetermined path of travel of an annunciator on said vehicle comprising, a series of independent and independently operable character-carrying forms each having a series of characters thereon, a case adapted to expose to view in legible arrangement one character only at a time on each form and means tending to hold each form with either a blank or a character thereon exposed to view; two independent operating elements for each form carried by and projecting outwardly from such vehicle; a member at each predetermined point where it is desired to change the indication given by the annunciator arranged in the path of the first one of each such pair of projecting operating elements corresponding to a character form to be returned to its zero or initial position and for each space or step of one character thereon which the form is to be moved to return the same to its zero or initial position, each said member being adapted to engage and operate such first projecting element, and at each such predetermined point a member arranged in the path of the second one of each such pair of projecting operating elements corresponding to a character-carrying form to be advanced from its zero or initial position and for each step or space of one character thereon which such form is to be advanced from such zero or initial position to give such changed indication, each said last named member being adapted to engage and operate the second one of such pair of projecting operating elements; connections between the first one of each such pair of projecting operating elements and the corresponding character-carrying form whereby as such first element is engaged by a member in the path thereof the corresponding form is moved the space of one character thereon and connections between the second one of each such pair of projecting elements and corresponding form whereby as such second element is engaged by a member in the path thereof such form is advanced to expose the next character thereon.

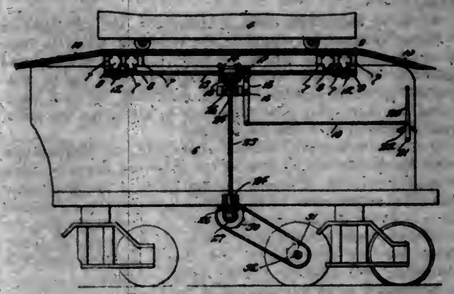
4. The combination with a vehicle having a predetermined path of travel of an annunciator on said vehicle comprising, a series of independent and independently operable character-carrying forms each having a series of characters thereon, a case adapted to expose to view in legible arrangement one character only at a time on each form and means tending to hold each form with either a blank or a character thereon exposed to view; two independent operating elements for each form carried by and projecting outwardly from such vehicle; a series of members at each predetermined point where it is desired to change the indication given by the annunciator arranged in the path of the first one of each such pair of projecting operating elements corresponding to a character form to be returned to its zero or initial position, the number of members in said series equal to or more than the number of steps or spaces of one character thereon which such form is to be moved to return the same to its zero or initial position, each said member adapted to engage and operate such first projecting element, and at each such predetermined point a member arranged in the path of the second one of each such pair of projecting operating elements corresponding to a character-carrying form to be advanced from its zero or initial position and for each step or space of one character thereon which such form is to be advanced from such zero or initial position to give such changed indication, each said last named member being adapted to engage and operate the second one of such pair of projecting operating elements; connections between the first one of each such pair of projecting operating elements and the corresponding character-carrying form whereby as such first element is engaged by a member in the path thereof the corresponding form is moved the space of one character thereon until and only until the zero or initial position thereof is reached and connections between the second one of each such pair of projecting operating elements and corresponding form whereby as such second element is engaged by a number in the path thereof such form is advanced to expose the next character thereon.

5. The combination with a vehicle having a predetermined path of travel of an annunciator on said vehicle comprising, a series of independent and independently operable character-carrying forms each having a series of characters thereon, a case adapted to expose to view in legible arrangement one character only at a time on each form and means tending to hold each form with either a blank or a character thereon exposed to view; an independent electrically controlled mechanism for advancing each form the space of one character thereon at a time; a source of electric energy; an independent operating element carried by and projecting outwardly from such vehicle for each such independent electrically controlled mechanism; a member at each predetermined point where it is desired to change the indication given by the annunciator arranged in the path of each projecting operating element corresponding to a character form to be advanced and for each step or space of one character thereon which such form is to be advanced to give the desired next indication, each said member being adapted to engage and operate such projecting element and means whereby each such electrically controlled mechanism is actuated from such source of electric energy once as each corresponding projecting operating element is engaged by a member in the path thereof.

[Claims 6 to 10 not printed in the Gazette.]

876,736. LOCOMOTIVE-TENDER LOADER. FILER S. SUE, Gem, Kans. Filed Oct. 10, 1907. Serial No. 396,748.

1. In a locomotive tender loader, elevated tracks, one upon each side of the main track, loading cars mounted on said tracks, a locomotive tender provided with an auxiliary track, and means for moving said auxiliary track outward in line with the elevated tracks and inward over the tender.

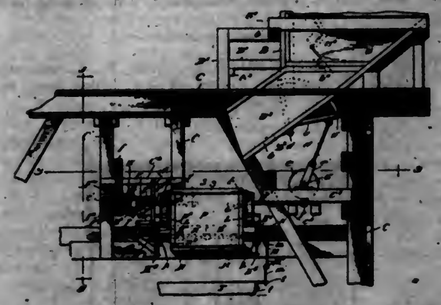


2. In a device of the character described, an elevated track at the side of a main track, loading cars mounted on said elevated track, a locomotive tender, guide ways on said tender, transversely disposed rack bars moving between said guide ways, an auxiliary track mounted on said rack bars, and means for moving said rack bars inward and outward.

3. In a device of the character described, elevated tracks at the sides of a main track, loading cars on said elevated tracks, and a locomotive tender provided with means for moving said cars from the elevated tracks to a position to discharge their loads into the tender and return said cars in line with the elevated tracks.

4. In a device of the character described, the combination of an elevated track at the side of a main track, cars supported upon said track, a locomotive tender provided with an auxiliary track, and means for moving said track transversely of the tender to carry the loading cars to points of discharge and return.

876,737. SYSTEM FOR AUTOMATICALLY LOADING CARS. WILLIAM J. SELLECK, Riverside, Conn. Filed July 13, 1906. Serial No. 326,062.



1. In an automatic loading system, the combination with a plurality of loading apparatus, of means at each apparatus actuated by a moving conveyance for depositing a predetermined quantity of material in said conveyance, whereby the conveyance will be loaded by the quantities of material separately deposited therein as it successively passes the several loading apparatus.

2. In an automatic loading system, the combination with a plurality of movable loading apparatus, of means at each apparatus actuated by a car moving relatively thereto for depositing a predetermined quantity of material in said car whereby the car will be loaded by the quantities of material separately deposited therein as it successively passes the several loading apparatus.

3. In an automatic loading apparatus, the combination with a receptacle for receiving material from a supply

thereof, of means for delivering a predetermined quantity of material to said receptacle, and means controlled by a conveyance moving relatively to said apparatus for discharging the material from the receptacle to the conveyance.

4. In an automatic loading apparatus, the combination with an oscillating receptacle for receiving material from a supply thereof, of means for delivering a predetermined quantity of material to said receptacle, and means controlled by a conveyance moving relatively to said apparatus for oscillating said receptacle to discharge the material therefrom into the conveyance.

5. In an automatic loading apparatus, the combination with an oscillating receptacle for receiving material from a supply thereof, of means for delivering a predetermined quantity of material to said receptacle, means controlled by a conveyance moving relatively to said apparatus for oscillating said receptacle to discharge the material therefrom into the conveyance, and means for automatically returning said receptacle to its initial position.

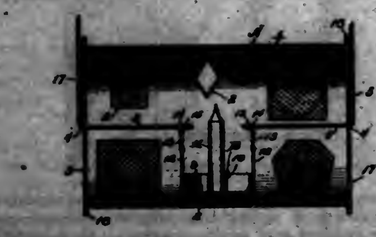
[Claims 6 to 18 not printed in the Gazette.]

876,738. ADJUSTABLE SHADE OR CURTAIN HOLDER. GEORGE F. SHERMER, Columbus, Ohio. Filed June 28, 1907. Serial No. 381,227.



A curtain or shade holder having a guide cleat with a longitudinal guide slot therein, a bracket formed of a plate having a tongue lying against the face of said cleat, and connected by a bend to the body of the bracket, said tongue having an ear struck inwardly from the material thereof projecting into the said slot, the opening formed by striking out said ear having an edge at said bend whereby the forming of said tongue is facilitated, a bolt having a head engaging said ear to prevent rotation of said bolt, said bolt having a shank extending up through said slot, and a nut on said shank for clamping said bracket.

876,739. ILLUMINATED TOY. JOHN F. SIEVER and WILLIAM H. NEFFLEN, Keyser, W. Va. Filed Sept. 11, 1907. Serial No. 392,385.



1. In a toy, the combination of a rotatable body having light emitting openings therein and adapted to be rotated by contact with the surface over which it is moved, a source of light within the body, and a handle connected with both ends of the body for moving the same.

2. In a toy, the combination of a rotatable body having light emitting openings therein and adapted to be rotated by contact with the surface over which it is moved, a source of light within the body, peripheral runners on the body, and a handle on which the body turns.

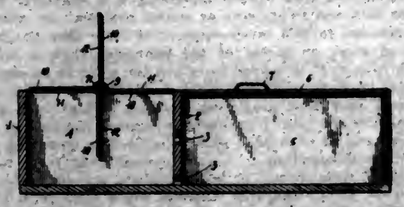
3. In a toy, the combination of a rotatable drum having light emitting openings in its cylindrical wall, transparent coverings for certain of the openings, a candle holder within the drum, and a handle attached to the drum for moving the same.

4. In a toy, the combination of a rotatable drum having light emitting openings, a candle holder within the drum, means for supporting the holder to maintain a pendent position during the rotation of the drum, and a handle attached to the drum for moving the same.

5. In a toy, the combination of a rotatable hollow body having light emitting openings, alining members coinciding with the axis of rotation of the body and having their inner ends spaced apart, a candle holder supported on the inner end of the members, and a handle connected with the drum for actuating the latter.

[Claims 6 to 8 not printed in the Gazette.]

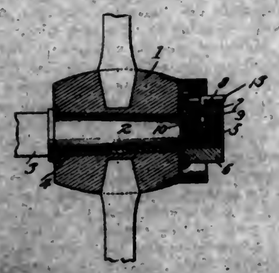
876,740. DEVICE FOR ATTRACTING FLIES. BENJAMIN W. SIMS, Waxahachie, Tex. Filed Sept. 13, 1907. Serial No. 392,777.



1. A device for attracting flies comprising a casing, a shaft mounted to rotate in said casing, radially disposed bait holders secured to said shaft, means for rotating said shaft and bait holders, a partition in said casing provided with the openings and providing a chamber at one side of said partition, said chamber having a window and a removable cover.

2. A device for attracting flies comprising a casing having a partition therein, said partition being provided with openings, a shaft mounted to rotate on the upper edge of said casing, bait holders carried by said shaft, wings carried by said shaft at right angles to said bait holders, means for rotating said bait holders and wings, and a sliding cover having a window attached thereto, substantially as described.

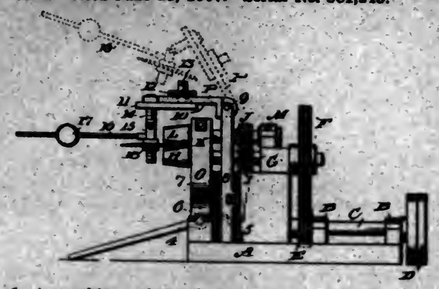
876,741. NUT-LOCK. FRED R. SMITH, Braddock, Pa. Filed June 11, 1907. Serial No. 378,432.



1. The combination of a nut having a radially extending opening, a right-angularly bent pin extending into the opening, means for urging the pin inwardly, a plate attached to the nut and having a cam over which the outer portion of the pin moves, and a threaded member engaged by the pin.

2. The combination of a nut having an opening at one side, a pin movable longitudinally therein, a laterally extending finger on the pin, a spring urging the pin inwardly, a plate removably secured to the nut, a cam formed on the plate to be engaged by the finger, and a threaded member having a depression into which the pin engages.

876,742. MACHINE FOR SHARPENING PLOW-SHARES, DISKS, &c. DAVID H. SNEED, Stonewall, Okla. Filed June 28, 1907. Serial No. 381,245.



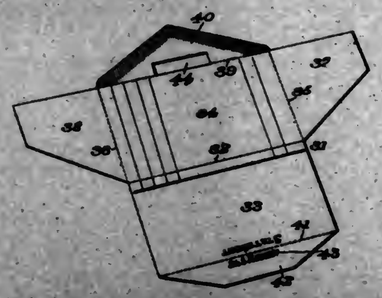
1. A machine substantially as herein described, comprising a main frame, a drive shaft, a roller shaft geared with the drive shaft, and having a pinion, a roll or die on said shaft, a second roller shaft having a pinion meshing with that of the first said shaft, and provided with a roll or die coöperating with that on the first shaft, a bearing for the rear end of the second shaft, a bearing frame having at its upper end a bearing for the front end of the second shaft, said bearing frame having side bars extending down on opposite sides of the shafts, and provided at its lower end with a portion having an opening for an eccentric, an eccentric in said opening, and means for turning the eccentric whereby the operation of the eccentric will move the movable die toward and from its mate.

2. A machine substantially as described, comprising a main frame, opposing rolls and their shafts, a work holder, a carrier supporting said holder at one end, and frame bars secured to the main frame and projecting upwardly along the opposite sides of the roll shafts, and affording a pivotal support at their upper ends for the swinging carrier, substantially as set forth.

3. The combination with a main frame, and the roll shafts, of a swinging carrier pivoted at one end to the frame, and a work holder having a pivotal connection with the other section of the carrier and adapted to support the work to be operated upon, and a weighted arm in connection with said work holder, whereby to hold the work to the rolls or dies, substantially as set forth.

4. The combination of the main frame having bearings for a roller shaft, a roller shaft journaled in said bearings, a second roller shaft operating with said first shaft, bars extending from the main frame upwardly on opposite sides of the said shafts, a swinging carrier pivoted at one end to the upper ends of said bars, and work holding devices supported by said swinging carrier, substantially as set forth.

876,743. SELF-INCLOSING BILL-HEAD OR STATEMENT. JOHN SOUDER, Philadelphia, Pa. Filed Apr. 1, 1907. Serial No. 365,658.



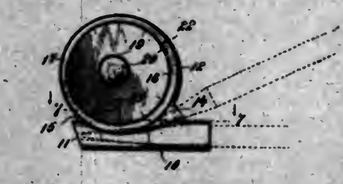
1. A device of the character described, comprising a single sheet forming two foldable portions, and a securing flap secured to one of said portions, said flap being provided with an aperture through which data on an underlying portion is visible when the device is folded.

2. A device of the character described, comprising a single foldable sheet scored and perforated intermediate its ends to form two portions, a third portion secured to one of said portions, and a securing flap for the other of said portions, said flap having an aperture through which data on one of said portions is visible when the device is folded.

3. A device of the character described, comprising a foldable sheet scored and perforated intermediate its ends to form two portions, a securing flap and side flaps attached to one of said portions, and said securing flap having an aperture through which data on an underlying portion is visible when the device is folded.

4. A device of the character described, comprising a foldable sheets scored and perforated intermediate its ends to form two portions, a locking portion secured to one of said portions, side flaps and a securing flap attached to the other portion, and said securing flap having an aperture through which data on an underlying portion is visible when the device is folded.

876,744. PENCIL-SHARPENER. CHARLES SPIRO, New York, N. Y. Filed Sept. 25, 1907. Serial No. 394,471.



1. A pencil sharpener comprising a pencil socket having a supporting plate extended therefrom, and a blade having a circular cutting edge disposed at an angle to the longitudinal axis of said socket.

2. A pencil sharpener comprising a pencil socket having a supporting plate extended therefrom, and a blade having a circular cutting edge disposed at an angle extending diagonally to the longitudinal axis of said socket.

3. A pencil sharpener comprising a pencil socket having a supporting plate extended therefrom, and a blade having a circular cutting edge disposed at an angle to the longitudinal axis of said socket and in a plane traversing the path of a cord thereof.

4. A pencil sharpener comprising a pencil socket provided with a supporting plate disposed diagonally to the longitudinal axis thereof, a blade having a continuous circular cutting edge pivotally mounted upon said plate, and means for retaining said blade in adjusted position.

5. In a pencil sharpener, a pencil socket, a supporting plate extended therefrom, a blade having a continuous circular cutting edge mounted upon said plate, and a clamping screw extending through said blade and threaded into said plate.

[Claims 6 to 17 not printed in the Gazette.]

876,745. CHECK-HOLDING DEVICE. FRANCIS P. SWEENEY, Fayette City, Pa. Filed Mar. 30, 1907. Serial No. 365,499.



1. In a device of the class described, the combination of a hook, a keeper for the hook, and a lead-operated

actuating member adapted on its working movement to move said keeper into its operative relation.

2. In a device of the class described, a hook, a keeper for the hook having a bifurcated portion to straddle said hook when the keeper is in its operative position, and a load-operated actuating member operable on its working movement to cause the said bifurcated portion to straddle the hook.

3. The combination of a car, a hook supported exteriorly of the car, and means separate from the hook and operated by a load in the car for bridging the space between the hook and car.

4. The combination of a car, a hook mounted exteriorly of the car, a pivotally mounted load-operated member in said car, and a keeper for the hook extending through a wall of the car, rigidly connected with said member, and movable into its operative position when the member is acted upon by the load in the car.

5. In a device of the class described, the combination of a car, a plate situated exteriorly of the car, bolts extending through the wall of the car for holding the plate in place, the nuts for the bolts being within the car, a hook held in place by said plate, a swinging plate in the car, and a keeper for the hook having a bifurcated portion at its outer end, the inner end of the keeper extending through said swinging plate and being held to the latter by a nut, said swinging plate being movable in an operative direction by the material in the car to cause said bifurcation to straddle said hook.

[Claims 6 to 8 not printed in the Gazette.]

876,746. SAFETY-VALVE. JOHN H. THIELE, New York, N. Y. Filed Apr. 24, 1907. Serial No. 370,008.



1. The combination of a cylindrical shell, brackets disposed within said cylindrical shell, a tray connected with said brackets and supported thereby, said tray being provided with a deep central portion, a volume of liquid contained within said tray, a funnel mounted within said cylindrical shell and connected thereto, so as to form a partition, thus dividing said shell into different compartments, a pipe fitted into said funnel and extending therefrom below the level of said liquid, and means for admitting a fluid under pressure into the compartment containing said tray.

2. The combination of a shell, a funnel disposed within said shell and connected gas-tight thereto so as to form separate compartments within said shell, a tray separate from said shell, brackets mounted upon said shell for supporting said tray, means for admitting pressure of an aeriform body into the compartment of said shell containing said tray, a heavy liquid located within said tray, and a pipe connected with said funnel and extending below the level of said liquid in said tray.

876,747. LEVEL-INDICATOR FOR PLOWS. GEORGE W. THURMOND and EUGENE THURMOND, Woodlawn, S. C. Filed May 16, 1907. Serial No. 374,000.



1. A plow provided with means for indicating to the plowman while plowing around a hillside the fact that he is deviating from a substantially level course, substantially as described.

2. A plow provided with means comprising a level for indicating to the plowman, while the plow is in motion, whether or not it is following a substantially level course around a hillside, substantially as described.

3. A plow provided with means consisting of a level provided with a pivoted weight for indicating to the plowman, while plowing around a hillside, whether he is going up hill or down hill, substantially as described.

4. A plow provided with means consisting of a level, comprising a weight, indicators and pivotal connections between said weight and indicators, whereby the plowman is notified if he deviates, while plowing, from a substantially level course, substantially as described.

5. The combination of a plow and the level indicator, consisting of the base, the pivoted indicators mounted on said base, the Y-shaped link, links connecting the same and said indicators, and a weight pivoted to said Y-shaped link, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

876,748. RIDING ATTACMENT FOR HARROWS. THOMAS C. TOBIN, Adams, Wis. Filed Sept. 17, 1906. Serial No. 334,838.

1. In a riding attachment for harrows, the combination with a harrow provided with teeth adjusting mechanism including a lever and means for locking it in adjusted position, of a truck arranged in advance thereof and having a draft connection with the harrow, a combined foot and hand lever supported upon the truck, and a flexible connection between said lever and the adjusting lever.

2. In a riding attachment for harrows, the combination with a harrow comprising sections, each embodying tooth carrying bars and an adjusting lever therefor provided with means for locking it in adjusted position, of a wheeled truck arranged in advance of the harrow, a pair of combined hand and foot levers mounted upon the truck, and flexible connections between said levers and the respective adjusting levers of the harrow sections.

3. In a riding attachment for harrows, the combination of a harrow comprising sections, each including a series of tooth-carrying bars provided with adjusting mechanism including a lever and means for locking it in adjusted position, a draft bar connected with said harrow sections, a wheeled truck arranged in advance of the harrow, draft members detachably connected with each other and pivotally connected with the draft bar and truck, a seat supported on the truck, combined hand and foot levers arranged upon the truck on opposite sides of said seat, and flexible connections between said truck and the respective adjusting levers of the harrow sections.

4. A draft truck for harrows comprising a wheeled supporting frame, a seat mounted upon the frame, and combined hand and foot levers arranged upon the frame on opposite sides of the seat.

5. A draft truck for harrows comprising a wheeled supporting frame, a seat mounted upon the frame, yokes arranged on opposite sides of the seat and having the free ends of their arms pivoted to the frame and their cross portions arranged to be engaged by the feet of the driver, thus adapting the yokes to serve as foot levers and hand levers connected with the outer arms of said yokes.

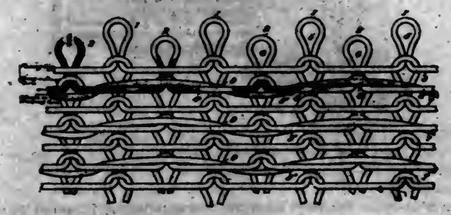
[Claim 6 not printed in the Gazette.]

876,749. POST-BINDER. WALTER L. VAN DE WIELE, Yonkers, N. Y. Filed May 24, 1907. Serial No. 375,476.



The combination in a loose leaf binder, of a pair of clamping plates, each of which is adapted to be connected to a cover-section, a pair of posts located upon one of said plates, one post being provided near either end thereof, the other of said clamping plates being hollow and having openings near either end thereof adapted to receive said posts, a longitudinally movable locking plate located in said hollow plate, said locking plate having formed upon one of its edges at either end thereof similarly disposed inclined portions adapted for engagement with said posts, the opposite edge of said plate lying in contact with said hollow clamping plate throughout its whole extent, said locking plate having rack teeth formed thereon intermediate said inclined portions and a pinion operable from a position exterior to said clamping plate engaging said rack teeth and adapted when rotated to move said locking plate in either direction thereby engaging or disengaging said inclined portions with said posts to lock or unlock said clamping plates.

876,750. FABRIC. EUGENE VERMILYEA and RALPH HAMMERSLEY, Waterford, N. Y. Filed Dec. 24, 1906. Serial No. 349,347.



1. A knitted fabric, comprising three yarns two of which constitute the base fabric and are formed into two sets of looped ribs, and the third yarn being tied twice only between three rows of one set of said ribs and entirely free from the other set of said ribs, said third yarn being substantially parallel with the floats of the ribs of the base fabric where not tied thereto.

2. A fabric knit from two yarns, all of the knit loops of which appear in wales upon one face, loops of each yarn being drawn through loops of its own kind, and a fleecing yarn on the opposite face, said fleecing yarn being laid in substantially taut between certain of the connecting legs of the knit stitches so as to appear on the back, first on one side and then on the other side of the connecting legs into which it engages.

3. A fabric knit from two yarns, all of the knit loops of which appear in wales upon one face, loops of each yarn being drawn through loops of its own kind only and having a fleecing yarn laid in substantially straight between certain of the connecting legs of the knit stitches on the opposite face.

4. A fabric knit from a series of yarns, all of the knit loops of which appear in wales upon one face, loops of each yarn being drawn through loops of its own kind only and having a fleecing yarn laid in substantially straight between certain of the connecting legs of the knit stitches on the opposite face.

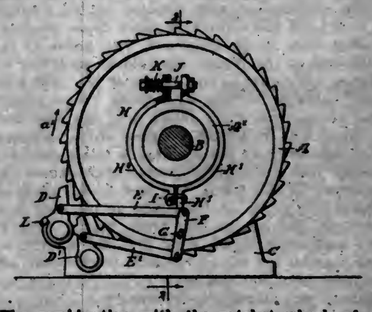
5. A fabric knit from two yarns in wales of loops of different sizes, all of the knit loops of which appear in wales upon one face in rows of alternate sizes, loops of each yarn being drawn through loops of its own kind only and having a fleecing yarn laid in substantially taut between certain of the connecting legs of the knit stitches on the opposite face.

876,751. INK-WELL. SAMUEL WAGNER, Allegheny, Pa. Filed July 2, 1907. Serial No. 381,916.



An ink well comprising a receptacle having a screw-threaded portion, a depending funnel arranged in said receptacle and having a laterally extending annular flange resting upon the edges thereof, said funnel extending in close proximity to the bottom of the receptacle and having a small contracted opening at the lower end thereof, the lower portion of said funnel being contracted and curvilinear in contour in vertical section, and a cap mounted upon said flange and provided with a depending screw threaded flange engaging the screw threads of said receptacle thereby forming a closure for the top of the receptacle and fixedly securing said funnel in position, said cap approximately centrally thereof provided with an auxiliary depending funnel of truncated cone shape in contour.

876,752. AUTOMATIC PAWL-OPERATING MECHANISM. WILLIAM E. WALDRON, New Castle, Pa. Filed May 18, 1907. Serial No. 374,473.

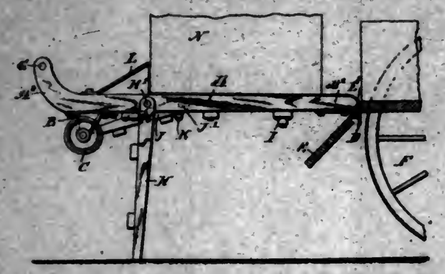


1. The combination with the ratchet wheel, of a friction device in connection therewith, said device comprising friction bands having a yielding connection at one end and a link connection at the other end, one of said bands being extended at the link connection, an equalising lever pivoted by its center to the extended portion, pawls normally engaging the ratchet wheel, and links connecting the ends of the equalising lever with the respective pawls, whereby when the ratchet wheel is rotated in a reverse direction, the pawls will be moved out of contact with the wheel.

2. The combination with a ratchet wheel, of pawls normally engaging the wheel, a friction device in connection with the hub of the ratchet wheel, an equalising lever pivoted by its center to the friction device, links connect-

ing the ends of the lever with the respective pawls whereby when the ratchet wheel is rotated in a reverse direction, the pawls will be moved out of contact therewith.

876,753. HAND-TRUCK. WILLIAM WARNER, Red Bluff, Cal. Filed Sept. 18, 1907. Serial No. 393,431.



1. A hand truck having a truck frame provided with a pivoted short leg and a pivoted long leg, of which the short leg is used as a fulcrum for swinging the wheeled end of the truck off the ground, and the long leg is used for supporting the truck in an approximately horizontal position at the time the truck handles embrace a support on the wagon, and the wheeled end of the truck has been lifted up by the truckman.

2. A hand truck comprising a truck frame, terminating at the rear or handle ends in hooks for engagement with a support on a wagon, the forward end of the said frame having a handle for swinging the truck up on the said supported hooks as a fulcrum, wheels journaled on the said forward end of the truck frame, and a leg pivoted on the said truck frame near the forward end thereof.

3. A hand truck, comprising a truck frame terminating at the rear or handle ends in hooks for engagement with a support on a wagon, the forward end of the said frame having a handle for swinging the truck up on the said supported hooks as a fulcrum, wheels journaled on the said forward end of the truck frame, a leg pivoted on the said truck frame near the forward end thereof, and retaining lugs at or near the forward end of the truck frame.

4. The combination with a wagon having a hinged end gate, of a hand truck having a truck frame provided with a handled shoe at the front end with hooks at the rear handled end of the frame, the said hooks being adapted to engage the pintle of the hinge of the said end gate, wheels journaled on the said truck frame, and a leg pivoted on the said truck frame near the said wheels.

5. The combination with a wagon having a hinged end gate, of a hand truck having a truck frame provided with a handled shoe at the front and with hooks at the rear handled end of the frame, the said hooks being adapted to engage the pintle of the hinge of the said end gate, wheels journaled on the said truck frame, a leg pivoted on the said truck frame near the said wheels, and retaining lugs on the top of the said truck frame adjacent to the fulcrum of the said leg.

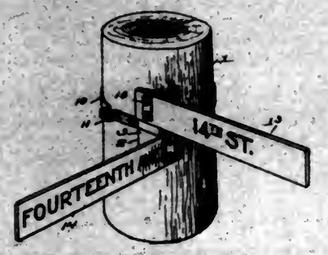
[Claim 6 not printed in the Gazette.]

876,754. STREET-SIGN. ALBERT O. WARNER, Denver, Colo. Filed Oct. 23, 1906. Serial No. 340,188.

1. A device of the character described, comprising a plate, means for securing the plate in position, a sign board pivotally mounted upon said plate, and a cushioning member contacting with said sign board for holding the same in position.

2. A device of the character described, comprising a plate, means for securing the plate to a pole, means for pivotally securing signs on said plate, means for varying the angle of said signs and means positioned between said plate and said sign for compensating for any shrinkage in said sign.

2. A device of the character described, comprising a plate, said plate formed with a plurality of apertures therein and a plurality of elongated apertures therein, means passing through some of said apertures for pivotally securing signboards to said plate, and means passing through said elongated apertures for securing said signboards at any desired angle.

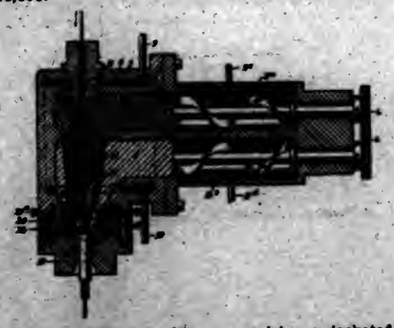


4. A device of the character described comprising a plate, means for securing the plate in position, a plurality of signboards pivotally secured to said plate, and a cushioning member positioned between each of said signboards and said plate for firmly holding said signboards in position.

5. In a device of the class described, the combination of a support, a plate, a strap passing around the plate and the support, and a plurality of signboards secured to the plate and preventing any slipping of the strap.

[Claims 6 and 7 not printed in the Gazette.]

876,755. WIRE-COATING MACHINE. HOWARD H. WEBB, Yonkers, N. Y., assignor of one-half to Arthur H. Hyde, Yonkers, N. Y. Filed Mar. 26, 1907. Serial No. 364,608.



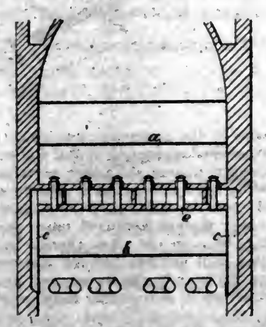
1. A wire coating machine, comprising a jacketed cylinder having two bores, each provided with a supply hopper, right and left hand feed screws in the bores respectively and geared together, a jacketed head secured to the cylinder and having bores registered with the bores of the cylinder and provided with a lateral extension, a nozzle having a conical bore and adjustably mounted in the extension of the head, a conical nozzle secured to the partition separating the bores of the head and extending into the conical nozzle, and a tubular guide secured in the wall of the head opposite the extension and extending into the last named nozzle, the said guide having a conical inner end, and means for centering the inner end of the guide in the conical nozzle.

2. A wire coating machine, comprising a cylinder having two bores, each having an inlet for the admission of the material, screws in the bores of the cylinder and geared together, a head secured to the cylinder and having two bores registering with the bores of the cylinder and provided with a lateral extension, a nozzle having a conical bore and secured in the extension of the head, a conical nozzle secured to the partition separating the bores of the head and projecting into the nozzle of the extension, and a tubular guide secured in the wall of the head opposite the extension and extending into the conical nozzle, the said guide having a conical inner end.

3. In a wire coating machine, a head having two bores and provided with a lateral tubular extension, a plug having a bore and secured to the extension, a collar fitting loosely in the extension, screws for adjusting the collar in the extension, a nozzle having a conical bore and carried by the collar, a conical nozzle secured to the partition separating the bores of the head and extending into the nozzle in the extension, a tubular guide secured in the wall of the head and projecting into the conical nozzle, said guide having a conical inner end, and means for feeding plastic material into the bores of the head.

4. In a wire coating machine, a head having two bores and provided with a lateral tubular extension, a plug having a bore secured to the extension, a collar in the tubular extension and of less diameter than the same, said collar having two bores, the outer one being the smaller and screw threaded, screws screwing into the extension into engagement with the collar, a nozzle having a conical bore and screwed into the smaller bore of the collar, a conical nozzle secured to the partition separating the bores of the head and projecting into the nozzle in the extension, a tubular guide secured to the wall of the head projecting into the conical nozzle, the guide having a conical inner end, and means for feeding plastic material into the bores of the head.

876,756. MALT-KILN. HEINRICH WETTIG, Erfurt, Germany, assignor to The Firm of J. A. Topf and Soehne, Erfurt, Germany. Filed Sept. 23, 1907. Serial No. 394,124.



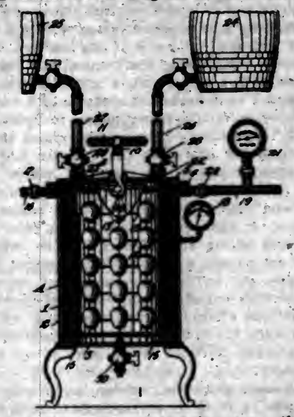
In a three stage kiln, having lateral circulation passages, an air distributing chamber located between two of the stages said air distributing chamber being divided into separate compartments, each of said compartments being in communication with one or more of the lateral circulation passages, substantially as described.

876,757. APPARATUS FOR PRESERVING EGGS. HANS J. WINTHERLICH, Omaha, Nebr., assignor of one-third to Will R. Smith and one-third to Anton M. Lundgard, Council Bluffs, Iowa. Filed May 16, 1907. Serial No. 374,004.

1. In an apparatus for preserving eggs, the combination of a receptacle, means for supporting eggs therein, a vacuum producing means connected with the receptacle, means for subjecting the receptacle and contents to heat for opening the pores of the eggs and killing the germs, and separate means for supplying antiseptic and sealing solutions to the receptacle.

2. In an apparatus for preserving eggs, the combination of a receptacle, egg holders therein, a steam jacket for the receptacle, a vacuum producing means connected with the receptacle, separate devices connected with the receptacle for supplying preserving and sealing solutions independently, and a drainage means for the vessel.

3. In an apparatus for preserving eggs, the combination of a receptacle, a heating jacket therefor, a removable cover for the vessel, a spraying device carried by the cover and arranged within the vessel, separate means connected with the device for supplying solution to the vessel without removing the cover from the vessel, a drain for the vessel, and means for drawing off air from the vessel.

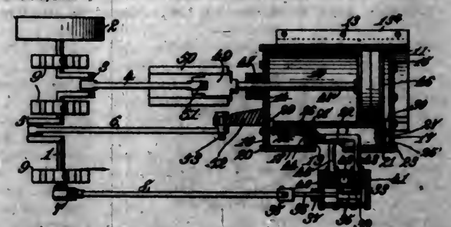


4. In an apparatus for preserving eggs, the combination of a receptacle, a removable cover, means for heating the vessel, means for creating a vacuum in the vessel, a spraying device on the cover, separate tanks, and flexible connections between the tanks and device.

5. In an apparatus for preserving eggs, the combination of a vessel, a removable cover, a cross-bar extending across the cover and adjustably connected with the body of the vessel, a clamping screw on the cross-bar arranged to bear on the cover for clamping the latter in place, a liquid supplying device fixed on the cover, and valve-controlled conduits for separately supplying preserving and sealing solutions to the vessel.

[Claims 6 and 7 not printed in the Gazette.]

876,758. STEAM-ENGINE. HENRY C. WOLF and LEO S. WOLF, Catawissa, Pa. Filed May 15, 1907. Serial No. 373,803.



1. In a steam engine, the combination of a reciprocatory steam cylinder, a reciprocatory piston within the cylinder, means to operate the cylinder and the piston in relatively opposite directions, a pair of hollow extensions projecting laterally from one side of the cylinder and forming piston chambers communicating with the ends of the cylinder, pistons mounted in each of said chambers and each of which is formed with a centrally disposed opening, a steam-conducting pipe communicating with the opening in and fixedly connected to each of the pistons, and means for alternately establishing communication between each of said pipes with a steam supply and the atmosphere.

2. In a steam engine, the combination of a reciprocatory steam cylinder, a stationary housing therefor provided at one side with a pair of cut-away portions, one arranged above the other and oppositely disposed, a pair of hollow extensions projecting from one side of the cylinder and

each communicating with the cylinder, said extensions oppositely disposed and arranged one above the other and extending through said cut-away portions, a reciprocatory piston in said cylinder, a crank shaft, connections between the crank shaft and said piston, an arm extending from one end of the cylinder, a connection between the crank shaft and said arm, a piston mounted in each of said hollow extensions and having a centrally-disposed opening, a steam conducting pipe communicating with the opening in and fixedly connected to each of the pistons, and means for alternately establishing communications between each of said pipes with a steam supply and the atmosphere.

3. In a steam engine, the combination of a reciprocatory steam cylinder, a reciprocatory piston in said cylinder, a crank shaft, connections between the crank shaft, cylinder and piston for operating the cylinder and piston in relatively opposite directions, a pair of hollow extensions projecting from one side of the cylinder, communicating therewith and oppositely disposed with respect to each other, a pair of protuberances projecting from the cylinder heads and acting as a closure for the outer ends of the hollow extensions, a piston head arranged in each of the extensions and having an opening, and oppositely disposed steam pipes communicating with the openings in the piston heads and alternately communicating with a steam supply and with the atmosphere for alternately establishing communication between the cylinder, steam supply and the atmosphere.

4. In a steam engine, the combination of a reciprocatory steam cylinder, a reciprocatory piston in said cylinder, a crank shaft, connections between the crank shaft, cylinder and piston for operating the cylinder and piston in relatively opposite directions, a pair of hollow extensions projecting from one side of the cylinder, communicating therewith and oppositely disposed with respect to each other, a pair of protuberances projecting from the cylinder heads and acting as a closure for the outer ends of the hollow extensions, a piston head arranged in each of the extensions and having an opening, oppositely disposed steam pipes communicating with the openings in the piston heads and alternately communicating with a steam supply and with the atmosphere for alternately establishing communication between the cylinder, steam supply and the atmosphere, and a housing for said cylinder, said housing provided with cut-away portions to allow of the shifting of the hollow extensions when the cylinder is reciprocated.

876,759. COON AND MINK TRAP. JOHN B. YOUNG, Halliday, Ark. Filed May 10, 1907. Serial No. 372,934.

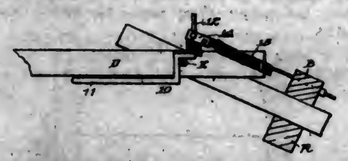


1. A mink and coon trap, consisting of a box 1, substantially square, having an opening 2, and a door 3, and a perforation 10, in its top, and an opening and door in one of its sides and a hole 9, in one of its ends; a wire gauze basket seated in the center of said box, immediately under the door 3; a rod 11, passing up through said perforation, having on its upper end a head 20; a spiral spring 13, working around said rod, and between said head 20, and the top, of the box; a yoke 12, secured to the lower end of said rod, and adapted to work up and down immediately in front of the hole 9; a lock-bar 18, hinged immediately under the hole 9; a trigger 14, hinged immediately to the rear of said lock-bar, and adapted to be raised and lock said bar; a double crank lever, having an arm 17, adapted to raise the free end of said lock-bar, and a lever 16, having an arm 18, adapted to raise the free end of the trigger 14, substantially as shown and described, and for the purposes set forth.

2. The combination of a box, provided with door openings permitting ingress to and egress from said box, a hole in the wall of said box and a perforation in the top thereof a wire gauze basket, situated on the inside of said box; a yoke, working up and down on the inside of said box, immediately in rear of said hole, carrying on its upper end a rod, which passes up through a perforation in the top of said box; said head, secured on the upper end of said rod; a spiral spring, working around said rod and between said head and the top of the box, and trigger mechanism, consisting of a lock-bar and a trigger, said spring adapted to throw said loop up when said trigger is thrown, substantially as shown and described, and for the purposes set forth.

3. The combination of a box, provided with top and side openings, to permit ingress to and egress from said box; a hole in the wall of said box and a perforation in the top thereof; a yoke, working on the inside of said box and immediately in the rear of said hole, and having a rod extending up through the perforation in said box; a trigger mechanism having a lock-bar hinged immediately under said hole and adapted to work over the lower part of said loop and hold said loop down; a trigger, hinged immediately to the rear of said lock-bar and adapted to hold the free end of the same down, with means for throwing said loop up when the trigger mechanism is released, substantially as shown and described, and for the purposes set forth.

876,760. WAGON-TONGUE SUPPORTER. FRED ABRAMS and WILLIAM A. DOYLE, Minden, Nebr. Filed Apr. 6, 1907. Serial No. 366,819.



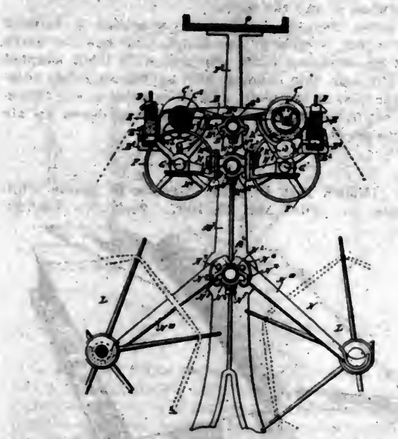
1. In a device of the character described, the combination with a transverse supporting rod of a U-shaped tongue supporting member, having the upper portions of its legs offset and resting upon said rod as a pivot, a member slidably arranged upon the upper portions of said legs, above the offset thereof, springs arranged upon the upper portion of said legs between the offset thereof and said member, and forcing said member upward and retractile coil springs having their ends rigidly secured and their forward ends connected to said sliding member, substantially as described.

2. In a device of the character described, the combination with a transverse supporting rod of a U-shaped tongue supporting member, having the upper portions of its legs offset and resting upon said rod as a pivot, a sliding yoke frame mounted upon said legs above the offset thereof, retractile coil springs having their rear ends rigidly secured and their forward ends connected to said sliding frame, and means for normally pressing said sliding yoke frame upward on said legs, substantially as described.

3. In a device of the character described, the combination with a transverse supporting rod, of a U-shaped tongue supporting member having the upper portions of its legs offset and resting upon said rod as a pivot, a sliding yoke mounted upon said legs above the offset thereof, a second yoke within which said first yoke is pivotally mounted, retractile coil springs having their rear ends rigidly secured and their forward ends connected to said last named yoke, and means for normally pressing said sliding yoke frames upward on said legs, substantially as described.

876,761. SPOOLING-MACHINE. FREDERICK L. ATHERTON, Paterson, N. J. Filed Apr. 24, 1906. Serial No. 313,461.

1. A machine of the class described provided with a frame having standards, and tubes connecting the standards with each other, a reel bearing attached to the said tube and comprising a head clamped to the said tube, an arm having a segmental slot and a segmental bearing face fitting the said tube, and a bolt held on the said head and engaging the said segmental slot.



2. A machine of the class described provided with a frame having standards, and tubes connecting the standards with each other, a reel bearing attached to the said tube and comprising a head made in sections, clamped to the said tube, an arm having a segmental slot, and a segmental bearing face fitting the said tube, and a bolt held on the said head and engaging the said segmental slot.

876,762. DETACHING DEVICE. ANDREW BARNA, Puritan, Pa. Filed July 8, 1907. Serial No. 382,703.



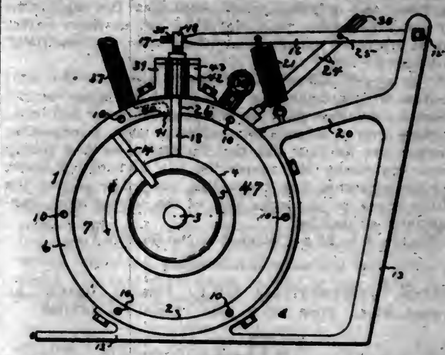
1. A coupling hook for cable drawn cars, embodying a body portion, an engaging arm formed integral therewith and projecting therefrom at an acute angle, and a projection at the junction of said body portion and arm forming a hand piece.

2. The combination with a coupling hook embodying a bifurcated end adapted to straddle a coupling plate, of a coupling pin having a headed lower end and vertically movable in apertures in said bifurcated end, said headed end passing freely through the aperture in the lower bifurcation and adapted to fit into a recess in the upper bifurcation and to be retained therein against complete withdrawal.

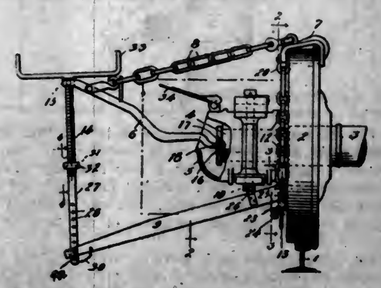
3. The combination with a hauling cable, a guide post therefor, and a car hauled thereby, of a coupling hook connected with said car and detachably engaging said cable in such manner that the movement of said car on a curve as it approaches said guide post will cause said coupling hook to be automatically disengaged from said cable through the combined turning movement of said car and the leverage of said post on said cable.

876,763. ROTARY ENGINE. EDWARD H. BARRETT, Dunlap, Iowa. Filed Sept. 25, 1906. Serial No. 336,124.

A rotary engine, in combination, comprising a circular casing having inlet and outlet ports, a rotatable shaft provided with a core portion disposed centrally of the circular casing and having a cam mounted thereon, said core portion having a radially disposed piston thereon; a sliding-plate mounted upon and traversing the circular casing, the link 16 having a pivotal end-mounting upon the frame and an opposite pivotal end-mounting upon the sliding-plate, the outwardly-extending recessed arm 24 of the cam slidably mounted upon the transverse arm 31 intermediate the ends of link 16, and the spring 21 connecting link 16 with the frame, substantially as described.



876,764. RAILWAY JOURNAL-BOX APPLIANCE. WILLIAM F. BENTLEY, Baltimore, Md. Filed Sept. 23, 1907. Serial No. 394,016.



1. In a car journal box lifting mechanism, the combination with a supporting bar adapted to engage the end of the car axle, of a supporting hook adapted to engage the car wheel, a connection between said supporting bar and hook, a lifting lever, a fulcrum for the lifting lever, a connection between the fulcrum and the supporting hook, and a lifting screw connecting the supporting bar and lifting lever, substantially as specified.

2. In a car journal box lifting mechanism, the combination with a supporting bar adapted to engage the end of the car axle, of a supporting hook adapted to engage the car wheel, a connection between said supporting bar and hook, a lifting lever, a fulcrum for the lifting lever, a connection between the fulcrum and the supporting hook, and a lifting screw connecting the supporting bar and lifting lever, said lifting lever having an adjustable piece to engage the journal box, substantially as specified.

3. In a car journal box lifting mechanism, the combination with a supporting bar adapted to engage the end of the car axle, of a supporting hook adapted to engage the car wheel, a connection between said supporting bar and hook, a lifting lever, a fulcrum for the lifting lever, a connection between the fulcrum and the supporting hook, and a lifting screw connecting the supporting bar and lifting lever, said supporting hook having a pair of integral arms, and the connection between the supporting hook and the fulcrum being a pair of chains extending one on each side of the journal box and car axle, substantially as specified.

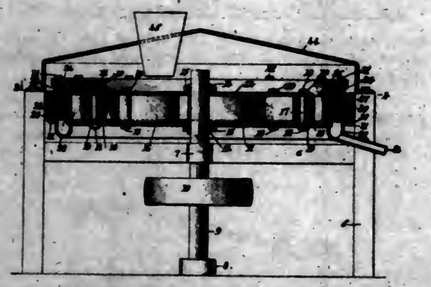
4. In a car journal box lifting mechanism, the combination with a supporting bar adapted to engage the end of the car axle, of a supporting hook adapted to en-

gage the car wheel, a connection between said supporting bar and hook, a lifting lever, a fulcrum for the lifting lever, a connection between the fulcrum and the supporting hook, and a lifting screw connecting the supporting bar and lifting lever, said supporting bar having a swivel nut at its outer end for the lifting screw, substantially as specified.

5. In a car journal box lifting mechanism, the combination with a supporting bar adapted to engage the car wheel, a connection between said supporting bar and hook, a lifting lever, a fulcrum for the lifting lever, a connection between the fulcrum and the supporting hook, a lifting screw connecting the supporting bar and lifting lever, and an adjusting link connecting the lower end of the lifting screw to the outer end of the lifting lever, substantially as specified.

[Claims 6 to 26 not printed in the Gazette.]

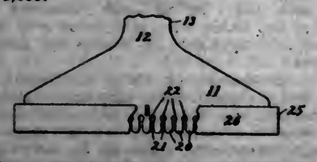
876,765. CENTRIFUGAL MILL. HERMAN BESSER, Alpena, Mich. Filed Oct. 2, 1906. Serial No. 337,069.



1. The combination of a revoluble member, a link mounted thereupon and free to swing outward by centrifugal force, a roller mounted upon said link and provided with a stepped surface, and a grinding plate mounted within the plane of rotation of said roller and provided with a stepped surface disposed adjacent to the path of said roller.

2. The combination of a wearing ring provided internally with a stepped surface, a revoluble grinding member provided with a stepped surface mating that of said wearing ring, the diameter of said revoluble wearing member being greater at one end thereof than at the other end in consequence of its stepped surface, and a revoluble disk engaging the end of larger diameter of said revoluble member for the purpose of maintaining said revoluble member in a definite plane relatively to said wearing ring, and means for actuating said revoluble member relatively to said wearing ring.

876,766. HORSE-CLEANING IMPLEMENT. WALTER F. BLAISDELL, Brooklyn, N. Y. Filed May 14, 1907. Serial No. 373,659.



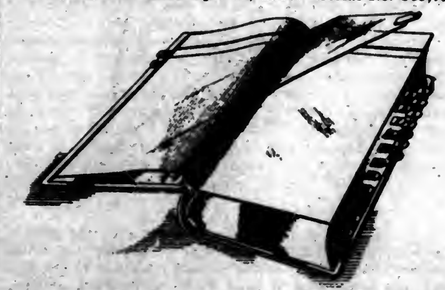
1. A horse cleaning implement comprising a vacuum chamber open at its bottom and the lower edge of which is provided with means for raking the hair, consisting of a comb with blunt teeth having spaces for the admission of air between the same.

2. A horse cleaning implement comprising a vacuum chamber open at its bottom and the lower edge of which is provided with means for raking the hair, consisting of a comb with blunt teeth and provided with air inlets adjacent to the teeth.

3. A horse cleaning implement comprising a vacuum chamber open at its bottom and the lower edge of which is provided with means for raking the hair, consisting of a comb with blunt teeth, and an external guard with an air space between it and the teeth.

4. A horse cleaning implement comprising a vacuum chamber which is open at the bottom and has the lower edges of its inclosing walls provided with teeth adapted to raise the hair, said chamber also having air inlets adjacent to the base of the teeth, and an external guard inclosing the teeth and so related thereto as to leave an air space between it and the teeth.

876,767. INDEX FOR BOOKS. GEORGE W. BOGGS, Philadelphia, Pa. Filed Apr. 23, 1907. Serial No. 369,733.



1. An index device comprising a plurality of index sheets each of which sheets is provided at the inner margin with a strip of adhesive material and at the outer margin with a projecting tab having an index designation.

2. An index device comprising a plurality of index sheets having straight portions at the top and at the inner edges respectively, these portions being substantially at right angles to each other, said sheets also having projecting tabs provided with index designations, the tabs being arranged in regular steps, the top right hand corner of each sheet except the first being clipped at an angle.

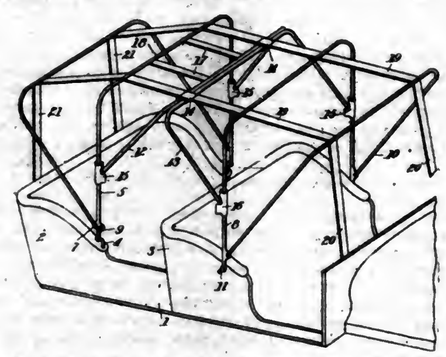
3. An index device comprising sheets arranged in three sets, the first and last sets consisting of sheets whose length is not more than one-half the length of the longest sheet of the intermediate set, all of said sheets having projecting tabs provided with index designations and arranged in regular steps, the tabs of the first and intermediate sets extending from the top to the bottom of the index device, while the tabs of the last set extend from the top to an intermediate point of the index device.

4. An index device comprising sheets arranged in three sets, the first and last sets consisting of sheets whose length is not more than one-half the length of the longest sheet of the intermediate set, all of said sheets having projecting tabs provided with index designations and arranged in regular steps, the tabs of the first and intermediate sets extending from the top to the bottom of the index device, while the tabs of the last set extend from the top to an intermediate point of the index device, the top right hand corner of each sheet of the last and intermediate sets being clipped at an angle, substantially as and for the purpose set forth.

5. An index device, comprising a plurality of blank sheets arranged to receive memoranda, each of which sheets is provided at the inner margin with a coating of adhesive material and at the outer margin with a projecting tab having an index designation.

876,768. EXTENSION TOP OR CANOPY FOR VEHICLES. ALBERT L. BOWEN, Worcester, Mass., assignor to Charles K. Pevey, Worcester, Mass. Filed June 20, 1907. Serial No. 379,962.

1. A canopy frame for vehicles comprising a rear section and a front extensible section, each having an upright bow, a pair of short bows pivotally mounted on said upright bows and having their upper horizontal portions hinged together, and flexible connections between the short bow pivoted to the rear upright bow and said rear upright bow for the purpose specified.



2. A canopy frame for vehicles comprising a rear section and a front extensible section, each having a main or upright bow, a pair of short bows pivotally mounted on said upright bows and having their upper horizontal portions hinged together, and flexible connections between said hinged portions of said short bows and the upper horizontal portion of the upright bow of the rear section for the purpose specified.

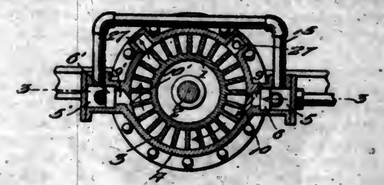
3. In a canopy frame for vehicles, the combination, with a plurality of long bows and short bows, of pivot-clamps mounted on said long bows and having means to pivot said short bows, said clamps having projecting lugs provided with tongue and grooved ends respectively adapted to engage each other when said bows are folded, and means to secure said bows in their folded position.

4. In a canopy frame for vehicles, the combination, with a plurality of long bows and short bows arranged between them, of pivot clamps mounted on said long bows and having means to pivot said short bows, said clamps having two sets of projecting lugs, one set being arranged above the pivots and having their ends grooved to fit the vertical portions of said short bows, the other set of lugs being longer and arranged below said pivots with their ends tongue and grooved respectively and adapted to engage each other when said bows are folded, and means to secure said bows in their folded positions.

5. In a canopy frame for vehicles, the combination, with a plurality of long bows and short bows arranged between them, of pivot clamps mounted on said long bows and having means to pivot said short bows, said clamps having flexible portions to engage the opposite sides of said long bows and adapted to be bent to conform to different sizes of bows, said clamps also provided with two sets of projecting lugs, one set being arranged above the pivots and having their ends grooved to fit the vertical portions of said short bows, the other set of lugs being longer and arranged below said pivots with their ends tongue and grooved and adapted to engage each other when said bows are folded, and means to secure said bows in their folded positions.

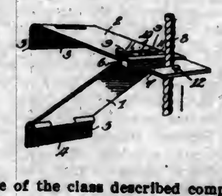
876,769. MOTOR FOR AUTOMOBILES. RALPH R. BROWN, Livermore, Cal. Filed May 6, 1907. Serial No. 372,023.

1. In a device of the class described, a shaft or axle, a turbine mounted thereon and having radial blades, a casing inclosing the turbine and having oppositely disposed valve chests communicating with the interior of the casing through oppositely extending ports, a duct connecting the valve chests, slide valves mounted for reciprocation in the chests and governing the passage of steam through the ports, said valves being provided with stems extending through the ends of the chests, suitably guided flexible elements connected with the valve stems to effect movement of the valves in opposite directions, and means for supplying motive fluid to one of the valve chests.



2. In a device of the class described, a shaft or axle carrying a turbine, a casing inclosing the turbine, oppositely disposed valve chests connected with the casing, a conduit connecting the valve chests, slide valves in the chests, means for independently operating the valves, and means for supplying steam to one of the valve chests from a plurality of boilers.

876,770. ROPE-HOLDING DEVICE. WILLIAM BRUNDELL, Portland, Oreg. Filed Mar. 5, 1907. Serial No. 360,662.



1. A device of the class described comprising a member provided with a rope-receiving slot open at one side to permit a rope to be inserted or removed laterally, means for mounting the member to swing, a second member mounted to swing, and a guide on the second member slidably engaging on the first to move longitudinally thereof and adapted to directly engage a rope extending through the slot.

2. In a device of the class described, the combination of a plate having a transversely extending slot extending inwardly from one edge, a second member, separate pivots on which the members swing, a guide fixed on the free end of the second member and movable longitudinally on the first member and adapted to pass over the slot to directly engage a rope therein, and a spring fixed on the first member and bearing against the guide for urging the latter across the slot.

3. In a device of the class described, the combination of a plate having a transversely extending slot extending inwardly from one edge, a second member, separate pivots on which the members swing, a guide fixed on the free end of the second member and movable longitudinally on the first member and adapted to pass over the slot to directly engage a rope therein, a spring fixed on the first member and bearing against the guide for urging the latter across the slot, and a stop on the first member disposed between the free extremity thereof and the slot.

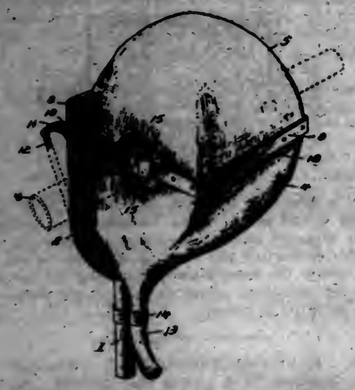
876,771. COVER AND DRAIN ATTACHMENT FOR SPRINKLER-HEADS. EUGENE F. CARDELL, Providence, R. I. Filed Aug. 21, 1907. Serial No. 389,556.

1. In combination with a supply pipe carrying a sprinkler head, a casing adapted to be applied to said pipe to inclose the sprinkler head, said casing being provided with an outlet for the water discharging from the head.

2. In combination with a supply pipe carrying a sprinkler head, a casing adapted to be applied to said pipe to inclose the head, said casing being composed of sections and having means for maintaining the sections in closed position, one of said sections being provided with an outlet for the water discharging from the head.

3. A sprinkler head casing comprising relatively movable sections, one of said sections having an outlet, means

for holding the sections normally closed, and a handle for supporting and manipulating the casing.

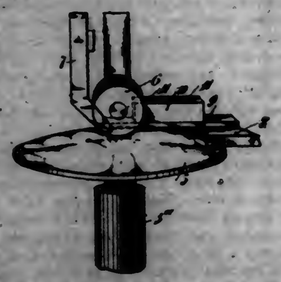


4. A device of the class described comprising a manipulating handle, a casing carried thereby and comprising sections, one movable relatively to the other, said sections adapted to surround a pipe and sprinkler head, an outlet connected with one of the sections, and means for normally maintaining the casing in closed condition.

5. A device of the class described comprising a manipulating handle, a casing carried thereby and composed of upper and lower sections, the latter being relatively movable to the former and provided with an outlet, said sections being adapted to inclose a pipe and sprinkler head carried thereby, means acting upon the lower section to normally hold it closed, and the contact upon said section to engage a pipe whereby said section may be opened.

[Claims 6 and 7 not printed in the Gazette.]

876,772. GAGE FOR SKIVING-MACHINES. MICHAEL CAVANAGH, New York, N. Y. Filed Aug. 7, 1907. Serial No. 387,398.



1. A gage for skiving machines, comprising a rectangular wearing plate of wear-resisting material, and a superposed clamping block beyond which said plate extends at both ends and which is detachable in order to permit the reversal of said plate so that different sides thereof may be brought into action.

2. In a skiving machine, the combination, with the feed-table rotatable in a horizontal plane and the fixed part at the side of said table, of a gage comprising a reversible rectangular wearing plate extending tangentially to said feed-table, and a clamping block superposed on said wearing plate by which the latter is clamped to said fixed part.

876,773. MERCURIAL THERMOSTATIC CIRCUIT-CLOSER. FRANK COUSOE, London, England. Filed Aug. 16, 1907. Serial No. 388,597.

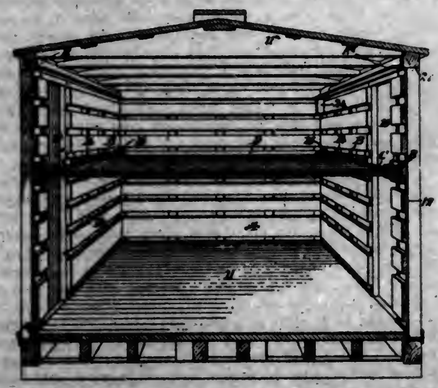
1. In a circuit closer, the combination of a tubular member of insulating material, a column of mercury disposed within said tubular member and provided with a break filled with rarefied air, and electrical connections for different portions of said column located upon opposite sides of said break.



2. In a thermostatic circuit closer, the combination of a glass receptacle provided with a hollow bulb and with a tubular stem communicating therewith, said bulb and said stem both containing mercury, a portion of which is arranged to form a column, said column being broken and having a minute portion of rarefied air intermediate of its ends thus separated, and electrical connections for portions of said column located upon opposite sides of said portion of air.

3. In a thermostatic circuit breaker, the combination of a receptacle, electrical connections for different portions of said receptacle, and two distinct bodies of mercury disposed within said receptacle, each body of mercury communicating electrically with one of said electrical connections, said bodies of mercury being separated by a minute portion of rarefied air and otherwise completely filling said receptacle.

876,774. COMBINATION STOCK-CAR. THOMAS M. CREPAR, Jamestown, N. D., assignor of one-eighth to Guy A. Adams, Stutsman, N. D., one-eighth to Frank C. Defield, Fargo, N. D., one-eighth to Frank W. Washikek, Pasco, Wash., and one-eighth to George M. Carden, Blackstone, Va. Filed May 25, 1907. Serial No. 375,677.



1. In stock cars, a car, deck brackets secured to the inner side walls of the car, deck planks having their ends removably fitted in the brackets, and storage brackets for the deck planks located above the deck brackets.

2. In stock cars, a car provided with a door opening, main brackets fixed to the inner walls of the car at each side of its door opening, bridging brackets located at the door openings, removably supported by the fixed or main brackets, and deck planks, the ends whereof are removably received by the said brackets.

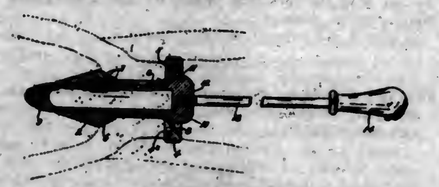
3. In stock cars, a car provided with a door opening, U-shaped brackets horizontally secured to the inside of the car on each side of the door opening, bridging brackets for the door opening, also U-shaped in cross section, removably and slidably mounted in the said first named brackets, deck planks, the ends of which are received in said brackets, and means for locking the bridging brackets to the first named brackets, and both brackets to sundry of the deck planks.

4. In stock cars, a car provided with a door opening, U-shaped brackets horizontally secured to the inside of the car on each side of the door opening, bridging brackets for the door opening, also U-shaped in cross section, removably and slidably mounted in the said first named brackets, deck planks, the ends of which are received in said brackets, and means for locking the bridging brackets to the first named brackets, and both brackets to sundry of the deck planks, and auxiliary brackets for the storage of the deck planks, secured to the sides of the car above the U-shaped brackets.

5. In a stock car, the combination with brackets horizontally located at the inner side portions of the car between its top and bottom portions, and deck planks removably supported by the brackets, of auxiliary brackets also secured to the inner sides of the car but above the first named brackets, the upper brackets being adapted for the storage of the deck planks, a door located between one end of one of the auxiliary brackets and an adjacent end of the car, and means for locking the said door closed.

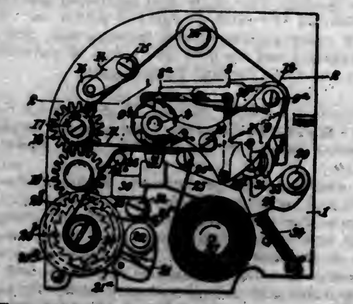
[Claims 6 to 8 not printed in the Gazette.]

876,775. VETERINARY DILATOR AND IMPREGNATOR. IMMER O. CRITTENDEN, Cleveland, Ohio. Filed Nov. 22, 1906. Serial No. 344,528.



An instrument of the class described, including an impregnator comprising a tubular shank provided at one end with a projecting annular flange and at its other end with an integral outstanding truncated-cone-shaped head and with an outstanding integral truncated-cone-shaped shoulder having its inclined surface roughened and extending in an opposite direction from the inclined surface of the head, the bases of the said head and shoulder being coincident.

876,776. CASH-REGISTER. FREDERICK DEGENHARDT and RICHARD DEGENHARDT, New York, N. Y. Filed Sept. 19, 1906. Serial No. 335,216.

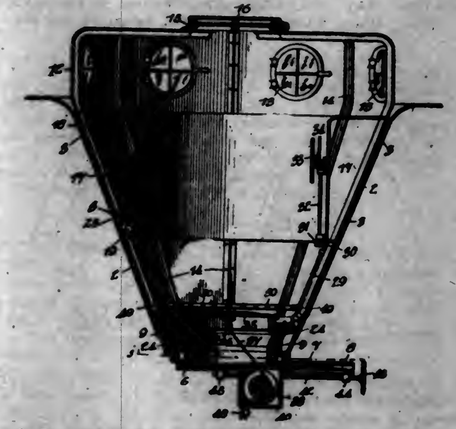


1. The combination of a plurality of rotatably mounted nested sleeves, each provided on the end with a registering disk, and on the opposite end with a ratchet wheel, detents mounted on the said sleeves adjacent to said disks pivoted levers adapted to engage said detents, and clock operated mechanism adapted to engage and rotate said ratchet wheels.

2. The combination of a plurality of rotatably mounted nested sleeves provided on one end with registering disks, and on the opposite end with ratchet wheels, detent wheels having V-shaped notches mounted on said sleeves adjacent to said disks pivoted levers adapted to engage said detents, and clock operated mechanism adapted to engage and rotate said ratchet wheels.

3. The combination of a plurality of rotatably mounted nested sleeves, each having a different diameter from the other, registering disks attached to the end of said sleeves adjacent to each other, detent wheels connected with said registering disks, pivoted levers adapted to engage and hold said detent wheels against rotary movement in any direction, ratchet wheels attached to the opposite ends of said sleeves, and a pivoted clock operated pawl adapted to engage the teeth of said ratchet wheels.

876,777. MEANS FOR EFFECTING ESCAPE OF OCCUPANTS FROM SUNKEN VESSELS. DON A. DEMPSTER, Los Angeles, Cal. Filed June 12, 1907. Serial No. 378,616.



1. In combination with a submarine boat a turret adapted to contain the occupants of the boat, a conning tower superposed on said turret, said turret having a threaded portion for engagement with a correspondingly threaded socket of said boat when said turret is held from movement, one of said threaded portions being slidably mounted to move toward and away from the other of said threaded portions and means for rotating the other of said threaded portions, substantially as described.

2. In a device of the character described, the combination with a submarine boat having a socket portion built therein, of a releasable vessel arranged therein having a threaded portion for engagement with a correspondingly threaded portion of said socket when said vessel is immovably held therein, one of said threaded portions being slidably mounted to move toward and away from the other of said threaded portions and means for rotating the other of said threaded portions, substantially as described.

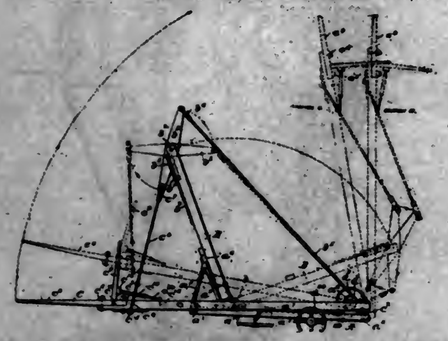
3. In a device of the character described, the combination with a submarine boat having a socket portion built therein provided with an opening therethrough, of a releasable vessel for engagement within said socket having interiorly locked entrance and exit openings, a sliding gate mounted below said socket portion to close said opening therethrough, a cable attached to said vessel and extending through said gate, a water-tight chamber secured upon said gate below the opening therethrough and means for operating said cable to draw said vessel within said socket, substantially as described.

4. In combination with a submarine boat, a turret adapted to contain the occupants of the boat, a conning tower superposed on said turret, said turret having a threaded portion for engagement with a correspondingly threaded socket of said boat when said turret is held

from movement therein, means for holding said turret immovably therein, one of said threaded portions being slidably mounted to move toward and away from the other of said threaded portions and means for rotating the other of said threaded portions, substantially as described.

5. In combination with a submarine boat having a socket portion built therein, a turret adapted to contain the occupants of the boat, said turret being constructed to engage within said socket portion and having a portion thereof projecting beyond the surface of said boat to form a conning tower, said turret having a threaded portion for engagement with a correspondingly threaded portion of said socket when said turret is held from movement therein, means for holding said turret from movement within said socket, one of said threaded portions being slidably mounted to move toward and away from the other of said threaded portions and means for rotating the other of said threaded portions, substantially as described.

876,778. HAY-STACKER. CHRISTOPHER C. DENENNY, Felton, Minn. Filed Aug. 22, 1907. Serial No. 389,664.



1. A hay stacker comprising a base, a roller journaled transversely thereof and provided at its center with a drum of greater diameter than the roller, a draft rope secured to the drum and winding thereon, a fork provided with side bars hinged to the base adjacent to the ends of the roller, loops connected with the side bars near the free ends thereof, standards hinged to the sides of the base at the opposite end from the roller, bars pivoted by their centers to the free ends of the standards, a link connecting one end of each bar with the adjacent loop, ropes connected with the other ends of the bars, and winding on the roller, a slotted bracket on the upper end of each of the standards, a shaft having its ends received in the slots of the brackets and projecting therebeyond to engage the side bars of the fork when said fork is lifted to a vertical position, a spring connecting each end of the shaft with the respective standard whereby to normally retain said shaft at the lower ends of the slots, and a stop on the base for supporting the standards when the fork is in its lowered position.

2. A hay stacker comprising a base, a roller journaled transversely thereof and provided at its center with a drum of greater diameter than the roller, a draft rope secured to the drum and winding thereon, a fork provided with side bars hinged to the base adjacent to the ends of the roller, standards hinged to the sides of the base at the opposite end from the roller, bars pivoted by their centers to the free ends of the standards, a link connecting one end of each bar with the adjacent side bar of the fork, ropes connected with the other ends of the bars and winding on the roller, a slotted bracket on the upper end of each of the standards, a shaft having its ends received in the slots of the brackets, and projecting therebeyond to engage the side bars of the fork when said fork is lifted to a vertical position, a spring connecting each end of the shaft with the respective standard, whereby to normally retain said shaft at the lower ends of the slots, and a stop on the base for supporting the standards when the fork is in its lowered position.

3. A hay stacker comprising a fork composed of a pair of connected side bars, one end of the pair being fixed, and the other provided with means for supporting a load of hay, said means comprising a pair of cross bars connecting the free ends of the fork, a plurality of horizontal fingers connected with the cross bars, and a plurality of vertical fingers pivoted to the horizontal fingers, and means for varying the angle of inclination of the vertical fingers, said means comprising a bar connecting said fingers, telescoping shafts connecting the ends of the bar with the side bars of the fork, and means for fixing said shafts in their adjusted position.

4. A hay stacker comprising a base, standards hinged to the sides of the base, a slotted bracket on the upper end of each of the standards, a shaft having its ends received in the slots of the bracket and projecting therebeyond, a spring connecting each end of the shaft with the respective standard, a fork having one end hinged to the base, and adapted to engage the projecting ends of the shaft for the purpose set forth.

5. A hay stacker comprising a fork provided at one end with means for supporting a load of hay, said means comprising a plurality of horizontal fingers, and a plurality of vertical fingers pivoted to the horizontal fingers, and means for varying the angle of inclination of the vertical fingers, said means comprising a bar connecting said fingers, telescoping shafts connecting the ends of the bar with the fork, and means for fixing the shafts in their adjusted position.

[Claim 6 not printed in the Gazette.]

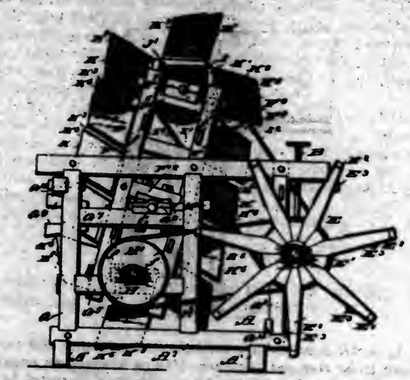
876,779. PUZZLE. BERNARD J. DEVER and BERTRAM J. DELBRIT, Philadelphia, Pa. Filed June 14, 1907. Serial No. 379,017.



A puzzle comprising a base having a central goal, a passage around the same communicating therewith at opposite points, and non-communicating labyrinthine passages on opposite sides of the first mentioned passage and communicating therewith at opposite points, out of line with the communicating points between such first mentioned passages and the goal, and pieces to traverse such passages and to be directed to such goal.

876,780. WATER-ELEVATOR. WILLIAM G. DOUGHERTY, Pocatello, Idaho. Filed July 19, 1907. Serial No. 384,540.

1. A water elevator substantially as herein described comprising a main frame, a drive shaft, bearings in the main frame for said drive shaft, means for raising and lowering said bearings, water wheels on the drive shaft, pulleys on the drive shaft at the opposite sides of the main frame, an elevator frame having upper and lower shafts provided with pulleys and with wheels for an endless elevator, belts connecting the pulleys of the upper and lower shafts of the elevator frame with the pulleys of the drive shaft, bearings in the main frame for the lower shaft of the elevator frame, an intermediate shaft projecting from the elevator frame, bearings for said intermediate shaft, means for adjusting said bearings up and down in the main frame, and an endless elevator having buckets and extending around the wheels of the upper and lower shafts of the elevator frame, substantially as set forth.



2. The combination of a main frame, an elevator frame therein, an endless elevator, shafts supporting said endless elevator, pulleys on said shafts, a drive shaft having pulleys geared with the elevator pulleys, and water wheels on the drive shaft and having trough shaped buckets, substantially as set forth.

3. The combination of a main frame, an elevator frame having upper and lower shafts, bearings in the main frame for the lower shaft of the elevator frame, an intermediate shaft projecting from the elevator frame, beams in the main frame having bearings for said intermediate shaft, keys above and below said beams whereby they may be adjusted vertically, an endless elevator in the elevator frame, and a drive shaft, and means for operating the endless elevator therefrom, substantially as set forth.

4. The combination of a main frame, an elevator frame therein, upper and lower shafts in the elevator frame and provided with wheels for supporting and operating an endless elevator, an endless elevator extending around said wheels and having buckets, pulleys on the upper and lower shafts of the elevator frame, a drive shaft journaled in the main frame and having water wheels and pulleys, and belts connecting the pulleys of the drive shaft, respectively with the pulleys on the upper and lower shafts of the elevator, substantially as set forth.

5. In a water elevator the combination of a main frame, an elevator frame, an endless elevator carried by the frame, upper and lower shafts in the elevator frame for driving the endless elevator, and an intermediate shaft projecting from the elevator frame, bearings in the main frame for said shaft, and means for adjusting said bearings up and down in the main frame, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

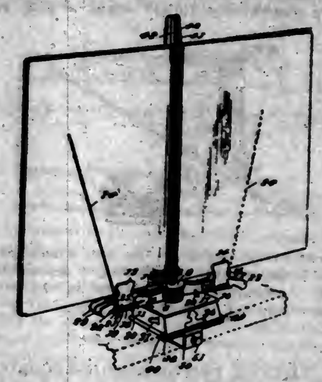
876,781. MUSIC-LEAF TURNER. EDWIN P. DORWARD, Marion, Ohio, assignor of one-fourth to Charles F. Carroll, Marion, Ohio. Filed Dec. 13, 1906. Serial No. 347,710.

1. In a music leaf turner, the combination of a support, leaf turning arms mounted upon the support, means for actuating the leaf turning arms, leaf clamps carried by the arms, and rods carried by the said clamps.

2. In a music leaf turner, the combination of a series of leaf turning arms, leaf clamps pivotally connected thereto, and leaf engaging and supporting rods detachably fitted to said leaf clamps.

3. In a music leaf turner, the combination of a support, leaf turning arms mounted upon the support, clamps carried by the leaf turning arms, said clamps being formed with sockets, and rods received within the sockets.

4. In a music leaf turner, the combination of a support, leaf turning arms mounted upon the support, and clamps carried by the leaf turning arms, each of said clamps comprising companion gripping members one of which is slotted to form a bar while the opposite gripping member is pivoted upon said bar.



5. In a music leaf turner, the combination of a support, leaf turning arms mounted upon the support, and clamps carried by the leaf turning arms, each of said clamps comprising companion members, one of said members being formed with a bar and carrying a strap engaging the said bar, while the opposite complemental member is pivoted upon the said bar.

[Claims 6 to 16 not printed in the Gazette.]

876,782. PROCESS FOR THE MANUFACTURE OF ARTIFICIAL STONE. HEINRICH DRESLER, Creusthal, Germany, assignor to Cöln-Müsener Bergwerks Actien Verein, Creusthal, Germany, a Corporation of Germany. Filed Feb. 14, 1906. Serial No. 301,041.

1. The process of manufacturing artificial stone, which consists in grinding slag, mixing it with water, pressing it, and then subjecting it for a considerable time to the action of carbonic acid gas under pressure at the ordinary temperature substantially as described.

2. The process of manufacturing stone, which consists in grinding slag, mixing it with lime and water, pressing the mixture into molds, and then subjecting the same to carbonic acid gas under pressure for a considerable time at the ordinary temperature, substantially as described.

876,783. METHOD OF MAKING MOLDED ARTICLES. HEINRICH DRESLER, Creusthal, Germany, assignor to Cöln-Müsener Bergwerks Actien-Verein, Creusthal, Germany. Filed Dec. 8, 1906. Serial No. 346,973.

1. The process of making molded articles, which consists in grinding slag, molding the same, placing the molded articles in a chamber, establishing a vacuum in said chamber, and finally introducing carbonic acid into said chamber, substantially as described.

2. The process of making molded articles, which consists in grinding slag without the addition of lime, mixing the ground material with water and molding it, placing the molded articles in a chamber, establishing a vacuum in said chamber, and allowing carbonic acid gas gas to flow into said chamber, substantially as described.

876,784. LAMP-FILLER. HUGH ELLIS, Brownville, Me. Filed June 13, 1907. Serial No. 378,836.

1. A lamp filler comprising a threaded funnel adapted to be connected to the filling orifice of a lamp or lantern, an arm secured to the funnel and provided with a cross bar having downwardly turned edges, a plug provided with spaced arms having depressions in which the cross bar is fitted, and a spring arm connected to the plug and provided with a downturned lip for engaging the cross bar, and a finger hold for operating the plug.

2. A lamp filler comprising a threaded funnel adapted to be connected to the filling orifice of a lamp or lantern, an arm connected to the funnel and provided with a cross bar having downwardly turned edges, a plug provided



with spaced arms hinged to the arm connected to the funnel, said spaced arms each having a depression to engage said downwardly turned edges on the cross bar, and a finger hold for operating the plug.

876,785. TAG FOR PHONOGRAPHIC-RECORD CASES. JOHN W. ELLIS, Portland, Me. Filed Sept. 8, 1906, Serial No. 333,819. Renewed Sept. 27, 1907. Serial No. 394,904.



1. A cap of the type described having a concavity provided therein, a tag disposed within said concavity, means attaching the tag for rotation and a weight applied to the tag for holding the same in a predetermined position.

2. A cap of the type described, a tag rotatively mounted thereon and a weight carried by the tag for maintaining the latter in a predetermined position.

3. A cap of the type described having a concavity, a tag arranged in said concavity, a pintle for rotatively securing the tag in place, and a weight applied to the tag for holding the same in a predetermined position.

876,786. CORN-POPPER. NICHOLS W. EMMER, Gas, Kans. Filed July 10, 1907. Serial No. 383,101.

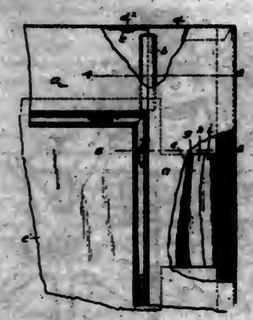


1. The combination with a complete cooking utensil including a skillet body and connected handle, of agitating mechanism removably mounted in the body, and an operating shaft extending through the handle and removably connected to said mechanism, whereby said mechanism and shaft may be removed from the utensil to permit the ordinary uses of the latter.

2. A corn popper comprising a cooking utensil of skillet form including a body and handle, a cover for said body, a shaft loosely held between the cover and bottom of the body, agitators carried by the shaft, and a removable operating shaft mounted in the handle.

3. A corn popper comprising a cooking utensil of skillet form including a body and handle, a cover for said body, a shaft loosely held between the cover and bottom of the body, a series of inclined blades radiating from the shaft, and an operating shaft removably mounted in the handle.

876,787. FIREPROOF DOOR. JOHN O. EMRICH, Allegheny, Pa. Filed Apr. 22, 1907. Serial No. 369,523.



1. In a fire-door having suitable hollow stiles and rails adapted to be clamped together, clamps adapted to engage said stiles and rails, sheets of fire retarding material having an intervening air space arranged within the stiles, rails and panels, pins extending through the door, and means on the ends of the pins for supporting the sides of the stiles and rails and the interiorly arranged parts compactly together.

2. In a fire-door having hollow stiles and rails, a clamp adapted to engage said stiles and rails, sheets of fire retarding material arranged within the stiles and rails and panels, a lock carrier formed inside a stile, pins extending through the door, and means on the ends of the pins for supporting the sides of the stiles and rails, and the interiorly arranged parts compactly together.

3. In a fire-door having hollow stiles and rails, interiorly re-inforced hinge bearings, a lock carrier or support carrying a lock independently of the stile, pins extending through the rails and stiles and having means connected thereto for supporting the sides of the door.

4. In a fire-door, the combination of hollow steel stiles and rails, sheets of steel, wire-glass, and asbestos arranged interveningly between the walls of the stiles and rails and panels, pins extending through the structure, and means on the end of the pins adapted to support the sides of the stiles and rails and the interior parts compactly together.

5. In a metallic door, hollow stiles and rails having interiorly re-inforced hinge bearings, a lock carrier or support carrying a lock independently of the stile, pins extending through the rails and stiles, and means connected to the pins for supporting the sides of the door, and means for securing a molding to said pins.

[Claims 6 to 10 not printed in the Gazette.]

876,788. METALLIC DOOR. JOHN O. EMRICH, Allegheny, Pa. Filed July 3, 1907. Serial No. 382,106.



1. In a metallic door inner hollow stiles and rails, having outer stiles and rails, an inner frame formed around the margin of the space between the inner stiles, pins adapted to engage the stiles and rails, and means connected to the ends of the pins for holding the parts in fixed position.

2. In a metallic door inner hollow stiles and rails, and outer stiles and rails, an inner frame formed around the margin of the space between the inner stiles, pins adapted to engage the stiles and rails, and means for supporting a molding or finish at each end of said pins.

3. In a metallic door inner hollow stiles and rails, and outer stiles and rails, the outer stile having interiorly reinforced hinge bearings, pins extending through said stiles

and rails, and means connected to the ends of the pins for supporting the parts compactly together.

4. In a metallic door inner hollow stiles and rails, and outer stiles and rails, a lock carrier or support carried on the inner stile, pins extending through said stiles and rails, and means connected to the ends of the pins for supporting the parts compactly together.

5. In a metallic door inner hollow stiles and rails, and outer stiles and rails, the outer stile having interiorly reinforced hinge bearings, a lock carrier or support within the outer stile, pins engaging the stiles and rails and means connected to the ends of the pins for supporting the parts compactly together.

[Claims 6 to 13 not printed in the Gazette]

876,789. SCRAPER. WILLIAM ERDMANN, Madison, Wis. Filed Aug. 28, 1907. Serial No. 390,520.



1. The combination with the stock, the blade holding clamp member, and means for mounting the blade holding clamp member on the stock, of means carried by the stock and coöperatively connected with the aforesaid mounting means for causing the blade carrying clamp member to clamp the blade against the stock substantially as shown shown and described.

2. The combination with the stock, the blade holding clamp member having blade receiving recesses and the blade therein, of securing means passed through the clamping member and the stock for holding the clamping member to the stock, and means for tightening up or loosening said securing means to clamp or release the blade, substantially as shown and described.

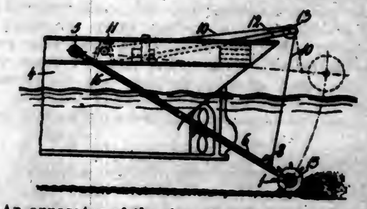
3. The combination with the stock, the blade holding clamp member having blade receiving recesses and the blade therein, of securing means passed through the clamping member and the stock for holding the clamping member to the stock, means for tightening up or loosening said securing means to clamp or release the blade, said last named means comprising a pair of bridge members carried by the stock and coöperatively connected with the securing means, and means carried by one of said bridge members for exerting a tension on said securing means to draw the blade holding clamp member tightly against the blade, substantially as shown and described.

4. The combination with the stock, the blade holding clamp member having blade receiving recesses and the blade therein, of securing means passed through the clamping member and the stock for holding the clamping member to the stock, means for tightening up or loosening said securing means to clamp or release the blade, said last named means comprising a pair of bridge members carried by the stock and coöperatively connected with the securing means, means carried by one of said bridge members for exerting a tension on said securing means to draw the blade holding clamp member tightly against the blade, and a yieldable pad interposed between the blade and the blade holding clamp member and the stock, substantially as shown and described.

5. The combination with the stock, the blade holding clamp member and the blade, and bolts for securing the blade holding member to the stock, of tension devices for said bolts to coöperate with the blade holding clamp members, substantially as shown and described.

[Claims 6 to 8 not printed in the Gazette.]

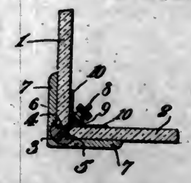
876,790. APPARATUS FOR REMOVING MUD FROM CHANNELS. JOHANN P. ERMELING, Buitenzorg, Java. Filed June 29, 1907. Serial No. 381,532.



1. An apparatus of the class described, comprising members pivotally connected at opposite sides of a vessel, a drum having a plurality of blades arranged in staggered relation to one another rotatably mounted at the free ends of said members, mechanism coöperative with said drum for rotating the same, an outwardly diverging pair of jibs having guide pulleys, a hoisting windlass, chains connected to said members passing over the pulleys and adapted to be wound upon the windlass to regulate the position of the drum, and braces for said members.

2. An apparatus for removing mud from navigation channels comprising a pair of stays pivotally supported at one end on each side of a vessel, a drum rotatably mounted between the outer ends of the said stays and provided with a plurality of blades, a pair of chains attached to said drum, a hoisting windlass for said chains, and a divergent pair of jibs carrying guide pulleys for said chains, substantially as described.

876,791. PANE-SECURING MEANS. NOAH FELLS, New York, N. Y. Filed Dec. 15, 1906. Serial No. 347,978.



1. A device for securing the meeting edges of glass panes, comprising a bead arranged to engage and overlie said meeting edges, said bead being formed on the inner surface with a plurality of angular depressions extending throughout the length of the bead and each adapted to receive the edge of one glass pane, the converging edges of said depressions meeting in a point and being respectively equal to the thickness of the edge of the glass pane with which said recess co-acts, a clamping member engaging the bead and bearing on the outer surfaces of the glass pane beyond the bead, a binding member to bear on the inner surfaces of the pane, and means projecting from the clamping member and adjustably connected with the binding member to secure said members in clamping relation on the pane.

2. A device for securing the meeting edges of glass panes, comprising a bead centrally formed on its rear surface with a triangular projection, the meeting edges of said projection being equal in width to the thickness of the edges of the glass panes with which they co-act, a clamping member recessed to receive the bead and adapted to overlie the same and bear against the glass panes beyond the bead, a binding member to bear against the inner surfaces of the panes, and a threaded pin carried by the clamping member and adapted to project through the bead, the triangular projection thereon, and the binding member, and a nut to engage said pin beyond the binding member, the extent of the triangular projection serving to permit the arrangement of the inner surfaces of the glass panes in immediate juxtaposition and prevent contact of the edges of said panes.

876,792. PROCESS OF MAKING CHAINS. MAX FRASLER, Pforzheim, Germany. Filed July 8, 1907. Serial No. 382,790.

The process of soldering wire chain links, consisting in heating wire having a solder core which will unite surfaces even when it is only at softening point, and in stopping the heating when the core is plastic but still below its melting point, whereby the core ends are caused to protrude and unite, and after mutually flattening each other to shut the entire joint, substantially as described.

876,793. ATTACHMENT FOR SPADES, SHOVELS, AND HANDLES. AMOS FOSSEL, Gilbert Station, Iowa. Filed July 16, 1907. Serial No. 384,027.



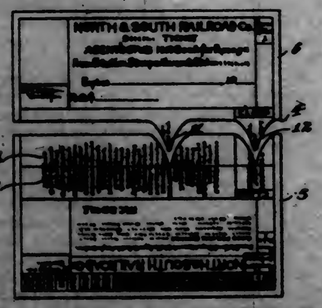
1. A tamping block having a slot in its upper side for the reception of the lower end of a shovel blade, and an opening for the reception of the lower end of a handle.

2. A tamping block having a slot in its upper side for the reception of the lower end of a shovel blade, and an opening for the reception of the lower end of a handle, such opening communicating with the slot.

3. A tamping block having a slot in its upper side for the reception of the lower end of a shovel blade, an opening for the reception of the lower end of a handle, such opening communicating with the slot, and a clamping device in such slot and opposite such opening, for the purpose set forth.

4. A tamping block having a slot in its upper side for the reception of the lower end of a shovel blade, an opening for the reception of the lower end of a handle, such opening communicating with the slot, and a clamping device in such slot and opposite such opening, such clamping device having a set screw for operating the same.

876,794. TICKET. EDMUND D. FRITCH, Chicago, Ill., and GEORGE DERWAY, Washington, D. C. Filed Nov. 12, 1907. Serial No. 401,363.

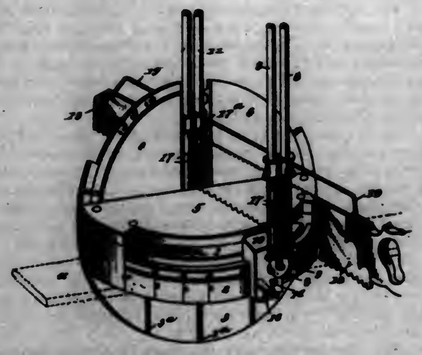


1. A railway ticket comprising a portion designated as a passenger's portion, and a portion designated as an agent's stub detached therefrom, said ticket having printed thereon side by side two duplicate rows of names indicating stations, the names of all of said stations excepting the destination station in one row appearing on the passenger's portion, and the name of said destination station missing on the passenger's portion alone appearing on the agent's stub; substantially as described.

2. A railway ticket comprising a portion designated as a passenger's portion having an indentation therein, and a portion designated as an agent's stub detached therefrom having a laterally projecting prong thereon, said ticket having printed thereon side by side two duplicate rows of names indicating stations and each name in one row being reversed with respect to the alining name in the other row, all of said names excepting the destination station of one row appearing on said passenger's portion, and said destination station of one row alone appearing on the laterally projecting prong of the agent's stub registering with the similarly shaped identation in the adjacent margin of the passenger's portion; substantially as described.

3. A railway ticket comprising a portion designated as a passenger's portion and having indentations therein, and a portion designated as an agent's stub detached therefrom having laterally projecting prongs thereon, said ticket having printed thereon side by side two duplicate rows of designations indicating stations and classes of travel and each designation in one row being reversed with respect to the alining designation in the other row, all of said designations excepting the destination station and class of the ticket of one of said rows appearing on said passenger's portion and said destination station and class of the ticket of one row alone appearing on the laterally projecting prongs of the agent's stub registering with the similarly shaped indentations in the adjacent margin of the passenger's portion, substantially as described.

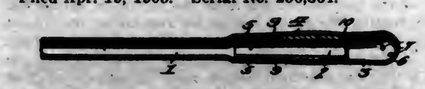
876,795. MITER-BOX. CHARLES C. GALENTINE, Redondo, Cal. Filed Apr. 5, 1907. Serial No. 366,512.



1. The improved miter-box comprising a horisontal base portion formed of a plate having a pendent part provided with a rim socket and a front arc bar which is separated from the horisontal plate by a slot, a block which is slidable on the arc bar, a disk which is supported in a vertical plane on the rear part of the base and held rotatably in the socket thereon, rear saw guides having a pivot and a socket in which such pivot is held on the back of the disk, front saw guides arranged parallel to the rear ones, a top bar connecting both pairs and a lower bar connecting their lower ends, the same passing through the block on the arc bar and being adapted for rotation therein, whereby the two sets of posts may be set together at various vertical angles and the front posts may be adjusted laterally around the rear posts as a center, substantially as described.

2. In a miter-box, the combination, with a frame comprising a horisontal plate and a pendent rear plate, of a vertical disk held rotatably on such rear plate and having on its back a cylindrical socket, rear saw-guides having a cylindrical pivot journaled in the socket, front saw-guides supported vertically, a bar connecting the upper ends of both sets of guides, and a front arc bar whereon the front saw-guides are supported slidably, as shown and described.

876,796. NOZZLE. ERNEST GERLACH, New York, N. Y. Filed Apr. 19, 1905. Serial No. 256,364.



A nozzle for colon tubes integrally formed and comprising a head, a tube, and a body portion, the head being of greatest diameter at the relatively forward or free end, with the wall of the head conveying from said free end toward the rear, the body portion being of appproximately barrel shape, the diameter of the head being greater than the greatest diameter of the body and applied flexible tube, the tube of the nozzle being of cylindrical form and converging toward the rear or free end, the body portion being arranged between the tube and head and being of materially less diameter at its juncture with these parts than the proximate portion of the respective head and tube, whereby opposing shoulders are formed at the juncture of the body portion with the tube and head, the interior diameter of the tube and body portion being equal throughout their length, and the interior diameter of the head being greater than that of the body portion.

876,797. MANUFACTURE OF HOSIERY. GEORGE H. GILBERT, Germantown, Pa. Filed Aug. 27, 1906. Serial No. 332,192.



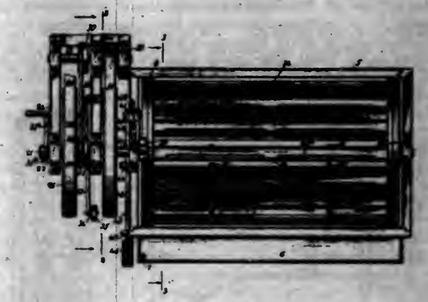
1. A stocking composed of a single knitted web having a complete color scheme covering the entire exterior thereof, and an uncolored surface on the interior of the same, substantially as described.

2. A stocking composed of a single knitted web having a complete color scheme covering the entire exterior of the stocking and having an uncolored surface on the interior of the foot, substantially as described.

3. A stocking composed of a single knitted web having a complete color scheme covering the entire exterior of the stocking and having the heel, sole and toe provided with an uncolored interior surface, substantially as described.

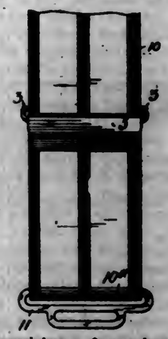
876,798. BOTTLE-WASHING MACHINE. JESSE W. GREER, Mount Pleasant, Tex. Filed Apr. 27, 1907. Serial No. 370,633.

1. The combination of a vat for holding a cleansing liquid, a revoluble drum extending into said vat and provided with troughs extending longitudinally of said drum, and parallel with the axis thereof, each of said troughs being provided with a lid hinged thereto, means for securing said lid relatively to said troughs, and a spacing member adapted to engage a bottle within said troughs, and also adapted to engage a portion of said troughs for the purpose of compensating for differences in the sizes of the bottles as compared with the sizes of said troughs.



2. The combination of a pair of revoluble heads, a plurality of slats connected together so as to form a trough of substantially V-shape in cross section, a lid hinged upon said trough and adapted to swing relatively thereto, a spring latch mounted upon said lid and adapted to engage a portion of said trough for the purpose of holding said lid securely thereon, and a spacing member mounted within said trough and adapted to press a bottle upon the said spring latch, and means for turning said revoluble heads.

876,799. BUCKLE. IRVING A. GREY, New York, N. Y. Filed May 7, 1907. Serial No. 372,398.



1. A buckle comprising a frame having side bars and a lower cross bar, a cross bar slidably mounted upon said side bars adapted to grip a strap between said cross bars, and a lever pivotally supported by said frame and having its gripping portion located in front of said slidable cross bar when the latter is pulled down by the strap to grip the strap by pressing it against the front face of said cross bar.

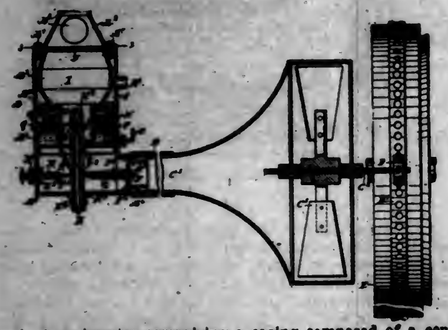
2. A buckle comprising a frame having side bars and a lower cross bar, a cross bar slidably mounted upon the side bars, and a lever pivotally carried by the frame to co-act with the slidable cross bar, the distance between said side bars being less than the length of the lever to conceal the slidable cross bar behind the lever.

3. A buckle comprising a frame having side bars and a lower cross bar, a cross bar carried by the side bars and bent vertically between its ends to provide a front working face that is greater in length than the distance between the side bars, to shorten the normal width of a strap pressed against said bar while permitting an overlying strap to retain its full width, and a lever connected with the buckle to co-act with said bent cross bar.

4. A buckle comprising a wire bent to form a lower cross

bar and side bars extending upwardly therefrom, a cross bar slidably mounted upon said side bars and bent vertically between its ends to provide a working surface of greater length than the distance between said side bars, to shorten the normal width of a strap pressed against said bar while permitting an overlying strap to retain its full width, and a lever pivotally connected with said frame.

876,800. CARBURETER. EMIL GUNDELACH, New York, N. Y., assignor of one-half to Robert J. Ehlers, New York, N. Y. Filed June 18, 1906. Serial No. 322,285.



1. A carbureter comprising a casing composed of a central, a top and a bottom section, said top section being rotatable upon the central section and provided with outlets for communicating with the working chamber of the engine, said central section being provided with a mixing chamber whose walls are spaced apart from the wall of the section, and with an oil reservoir provided with a supply pipe below the mixing chamber, and a central inlet from the bottom section to the mixing chamber, a spraying device within the inlet, said device comprising a pipe extending through the bottom section and communicating with the reservoir, the outer end of said pipe being screw threaded, a nut engaging said end for retaining the bottom section in place, and a tube within the pipe and provided with a nozzle, said nozzle co-acting with the open end of the pipe to form a contracted opening through which the liquid is sprayed, said tube having openings in the sides thereof and provided with a valve at its outer end, a float valve controlling the supply pipe of the reservoir, said bottom section being provided with an air inlet, a valve controlling the inlet, said valve having a stem projecting through the opposite side of the bottom section from the air inlet, a spring normally seating the valve, means for regulating the tension of the spring, and a fan for forcing air through the inlet.

2. A carbureter, comprising a casing composed of a central, a top, and a bottom section, said top section being adjustable with respect to the central section, and provided with outlets for communicating with the working chamber of the engine, the central section being provided with a mixing chamber whose walls are spaced apart from the walls of the section, and with an oil reservoir provided with a supply pipe below the mixing chamber, and a central inlet from the bottom section to the mixing chamber, a spraying device within the inlet and communicating with the oil reservoir, a float valve controlling the supply pipe of the reservoir, said bottom section being rotatable on the central section, and provided with an air inlet, a valve controlling the inlet, said valve having a stem projecting through the opposite side of the bottom section from the air inlet, a spring normally closing the valve, means for regulating the tension of the spring, and a fan for forcing air through the inlet.

3. A carbureter, comprising a casing composed of a central, a top, and a bottom section, said top section being adjustable on the central section and provided with outlets for communicating with the working chamber of the engine, said central section being provided with a mixing chamber whose walls are spaced apart from the walls of the section, and with an oil reservoir provided with a supply pipe below the mixing chamber, and a central inlet from the bottom section to the mixing chamber, a spraying device within the inlet, said spraying device having communication with the oil reservoir, said bottom section being rotatable with respect to the central section and provided with an air inlet, a valve controlling the inlet, said valve having a stem projecting through the opposite side of the bottom section from the casing, a spring normally seating the valve, means for regulating the tension of the spring, and a fan for forcing air through the inlet.

4. A carbureter, comprising a casing composed of a central, a top, and a bottom section, said top section being adjustable with respect to the central section, and provided with outlets for communicating with the working chamber of the engine, said central section being provided with a mixing chamber whose walls are spaced apart from the walls of the section to provide a space for a heating medium, and with an oil reservoir below the mixing chamber, and a central inlet from the bottom section to the mixing chamber, a spraying device within the inlet, said device communicating with the oil reservoir, said bottom section being rotatable with respect to the central section, and provided with an air inlet, a spring-pressed valve controlling the inlet, means outside of the casing for adjusting the tension of the spring, and a fan for forcing air through the inlet.

5. A carbureter, comprising a casing, composed of a central, a top, and a bottom section, said top section being rotatable and provided with outlets for communicating with the working chamber of the engine, said central section being provided with a mixing chamber and with a central inlet leading from the bottom section to the mixing chamber, an oil reservoir encircling the inlet, a spraying device within the inlet, said bottom section being provided with an air inlet, a valve controlling the inlet, and a fan for forcing air through the inlet.

876,801. BARREL. JOHN J. HENRY, Greenview, Ill. Filed Dec. 29, 1906. Serial No. 350,086.



The herein described collapsible barrel comprising a series of staves, keepers secured to said staves at two points on their inner surfaces, a plurality of staves in which the keepers are omitted, spring wire rings extending through said keepers on the inside of the barrel, said rings each having a hook at one end, heads secured at each end of the barrel, and hoops surrounding the outer side of the barrel for holding the heads in place.

876,802. CORN-HUSKING MACHINE. JOHN HEITRICH, Grand Island, Nebr. Filed Apr. 27, 1907. Serial No. 370,636.

1. The combination with the inclined husking rollers, of spaced shafts journaled above and longitudinally of the rollers, each of said shafts being provided with oppositely arranged cranked portions, bars connecting the corresponding cranked portions of the shafts, plates pivoted by one corner at spaced intervals to the bars, a stop for limiting the downward motion of the plates, and springs normally acting to depress the plates, said plates having their lower edges rounded and provided with pointed projections for the purpose set forth.

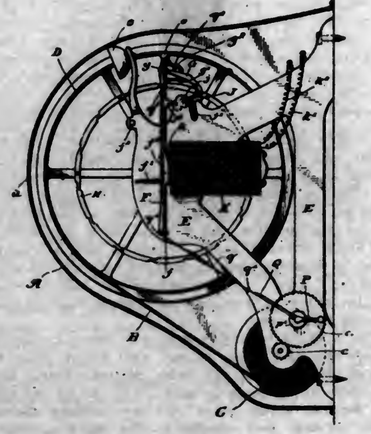
2. The combination with the inclined husking rollers, and the frame for supporting said rollers, of spaced shafts journaled above and longitudinally of said rollers, each of said shafts having oppositely arranged cranked portions, bars connecting the corresponding cranked portions of the shafts, said bars being journaled on said cranked portions, and a plurality of spring pressed plates pivoted to each bar, said plates depending below the bar and having their lower edges corrugated.



3. The combination with the inclined husking rollers, of a plurality of bars mounted for transverse reciprocation above the rollers, each of said bars being provided with a plurality of spring pressed plates depending therefrom, and adapted to engage the corn on the rollers, said plates having their lower edges corrugated.

4. The combination with the husking rollers, of plates arranged transversely thereof, said plates being normally spring-pressed towards the rollers and having their lower edges rounded and provided with notches for the purpose set forth, and means for moving said plates transversely of the rollers in proximity to the rollers in one direction and remote from the rollers in the other direction.

876,803. STREET OR STATION INDICATOR. POLK M. HIGGINS and LEE D. HARMES, Houston, Tex. Filed Oct. 1, 1906. Serial No. 337,016.

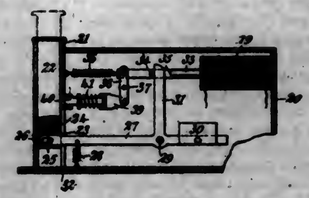


1. A street or station indicator for cars comprising, in combination, a case having a display-opening, a tape bearing the names of streets or stations which are successively displayed therethrough, a supply-spool and a takeup drum in said case, the tape adapted to wind onto said drum from said spool, a ratchet-wheel on said drum, a lever arranged beside said drum and carrying a spring-actuated pawl engaging said ratchet-wheel, said lever being spring-held in normal position, and an electro-magnet mounted beside said drum and adapted to be temporarily energized for operating said lever to effect an intermittent motion of said drum, the lever being drawn by said magnet when energized, means for rewinding the tape onto said spool from said drum, and means controlled by the rewinding instrumentality for withdrawing said pawl from said ratchet-wheel.

2. A street or station indicator for cars comprising, in combination, a case having a display-opening, a tape bearing the names of streets or stations which are successively displayed therethrough, a supply-spool and a take-up drum in said case, the tape adapted to wind onto said drum from said spool, a ratchet-wheel on said drum, a lever arranged beside said drum and carrying a spring-actuated pawl engaging said ratchet-wheel, said lever being spring-held in normal position, and an electro-magnet mounted beside said drum and adapted to be temporarily energized for operating said lever to effect an intermittent motion of said drum, the lever being drawn by said magnet when energized, a detachable crank for operating said spool to rewind said tape thereon, said crank having a flange, and a lever and a cord connecting said lever with said pawl, said lever adapted to be engaged by said flange when said crank is applied and thereby operated to pull said cord and disengage said pawl from said ratchet-wheel.

3. In a street or station indicator for cars, the combination with a name-bearing medium adapted to be intermittently moved for successively displaying the names thereon, of an actuating mechanism therefor comprising a ratchet-wheel having internal and external teeth or notches oppositely faced, a lever mounted beside said ratchet-wheel carrying a spring-actuated pawl engaging said ratchet-wheel on one rim, means holding said lever in normal position, an electro-magnet adapted to be temporarily energized for drawing said lever thereto, whereby an operation of said ratchet-wheel is effected, a spring-retracted detent normally out of engagement with but adapted to engage the other rim of said ratchet-wheel, and means whereby said detent is moved into engagement with said ratchet-wheel by said lever when drawn by said magnet.

876,804. ELECTRIC SAFETY SYSTEM. HOMER A. HILL, Delafield, Wis. Filed Feb. 18, 1907. Serial No. 357,894.



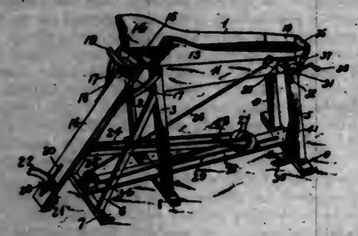
1. A trip comprising a casing provided with a tubular portion, a plunger mounted within said tubular portion, a lever loosely pivoted to said plunger for the purpose of raising the same, said lever being provided with a projecting arm, a solenoid provided with a movable core having a pin disposed upon one side of said projecting arm, and a shoulder upon the opposite side thereof, a spring for retracting said core, and a pawl for supporting said plunger when the same is raised by said lever.

2. A trip comprising a casing provided with a tubular portion, a plunger mounted within said tubular portion, a lever loosely pivoted to said plunger for the purpose of raising the same, said lever being provided with a projecting arm, a solenoid provided with a movable core having a pin disposed upon one side of said projecting arm, and a shoulder upon the opposite side thereof, a spring for retracting said core, a pawl, and connections from said pawl to said core for the purpose of retracting said pawl when said spring draws said core back to its normal position.

3. A trip comprising a casing, a plunger movable in relation to said casing, a lever mounted within said casing and provided with a portion for raising said plunger, a solenoid provided with a movable core, said core being connected with said lever for the purpose of raising said plunger, a spring for retracting said core, a pawl for supporting said plunger when raised, a lever pivotally connected with said core, a yoke pivoted to said lever and connected with

said pawl, and a spring connected with said pawl and with said yoke for the purpose of normally maintaining the latter in a predetermined relative position.

876,805. DEVICE FOR CULLING AND DISCHARGING APPLES, POTATOES, &c. PETER HUBERTY, Le Sueur, Minn. Filed Apr. 22, 1907. Serial No. 369,661.



1. The combination of a table, consisting of a top 15, legs 2, 3, 4 and 5, side-boards 13 and 14, spout 10, and a gate 36; a beam, provided with a curved bar 19, secured near its upper end; a curved bar 22, and stop 23, adjustably secured near the lower end of said beam, hinged to the rear end of said table; a base-board 28, carrying a rail 29, and secured to the base-beams 7, 8 and 9, of said table; push-bars 24 and 25, their rear ends secured to the beam 16; a block 26, secured between the front ends of said bars; wheels 27, journaled between the front ends of said bars and running on each side of the track 29; a pulley 34, secured to the rear end of said base-board; a drum 30, journaled in the front end of said table; a ratchet wheel 31, secured on the axle of said drum; a dog 32, adapted to lock said ratchet wheel; a crank handle 33, adapted to rotate said spool; a cable 35, having its lower end secured to the axle of wheels 27, passing thence under pulley 34, and its upper end secured to the drum 30; a gate 36, hinged to the front end of said spout; arms 37, adapted to close said gate; a treadle 39, hinged to the lower cross-beam 9; a beam 40, secured to said treadle and to said arms 37, and a spiral spring 41, secured to said treadle and said leg 5, substantially as shown and described and for the purposes set forth.

2. The combination of the table 1, provided with legs mounted on cross-beams; side boards, one secured to each side of said table; a spout, secured to the front end of said table; a gate, hinged to the front end of said spout; arms, hinged to said spout and to said gate, and adapted to open and close the same; a treadle, hinged to the front cross-beam; a bar, its lower end hinged to said treadle, and its upper end to one of said arms, said bar, treadle and arms adapted to open said gate, and a spring secured to said treadle and one of the legs of said table and adapted, through said treadle, bar and arm to close said gate, substantially as shown and described and for the purposes set forth.

3. The combination of a table, having side boards, its legs resting on cross-beams; a beam, hinged by means of side bars to the rear end of said table; a curved bar, its ends turned up, mounted on said beam near its upper end; a curved bar, its ends turned up, adjustably mounted on said beam near its lower end, and a stop, secured to the lower edge of said last mentioned bar, said beam, bars and stop adapted to hold a barrel, the free end of said beam to be elevated sufficiently high to empty the contents of the barrel onto the table, substantially as shown and described, and for the purposes set forth.

4. A table, provided with side boards, its legs and braces being secured to cross-beams; a spool, provided with a ratchet dog and handle, journaled in the front end of said table; a base-board, secured to the said cross-beams; a rail, longitudinally secured on said base-board; a pulley, secured to the rear end of said base-board; a beam, hinged to the rear end of said table; push-bars, hinged to the lower face of said beam; a block, secured between and near the front ends of said bars; wheels, journaled between the front ends of said bars; a cable, having its lower end secured to said block, passing thence under said pulley, its upper end secured to said spool, said cable adapted to be wound around said spool, to draw said push-bars backwardly, and thereby raise the free end of said hinged beam, substantially as shown and described and for the purposes set forth.

876,806. PROCESS OF PRESERVING. EDWARD JANITZKY, Pymble, near Sydney, New South Wales, Australia. Filed May 28, 1906. Serial No. 319,141.

A process of preserving animal substances in the form of meats consisting in placing the substance in an air-tight chamber, withdrawing the air therefrom, and then forcing in oxygen gas heated to a temperature of from 60 to 90 degrees C. and under a pressure of from 1 to 40 pounds.

876,807. COMBINED SCREEN AND WASHSTAND. ANNA L. JONES, Lynchburg, Va. Filed Apr. 17, 1907. Serial No. 368,725.



1. A new combined article of furniture, comprising a central and outer screen sections hinged together and adapted to be folded or collapsed one upon another, the said outer sections being disposed rearwardly and maintained at an angle to each other and to the central section, an intermediate and a lower shelf connecting said rearwardly directed screen sections, and a closure arranged to close the opening between said shelves and thus provide a closed compartment below the intermediate shelf, the space between the screen sections above the compartment being open.

2. As a new article of furniture, a screen comprising an intermediate and outer screen sections of substantially uniform dimensions, said outer sections being disposed rearwardly at an angle to each other and to the intermediate section, upper, lower and intermediate shelves arranged between and secured to the outer sections, and doors for closing the opening between the lower and intermediate shelves to provide a compartment.

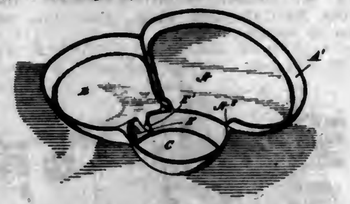
3. As a new article of furniture, an ornamental screen comprising an intermediate and outer screen sections of substantially uniform dimensions, said outer sections being disposed rearwardly at an angle to each other and to the intermediate section, a lower and an intermediate shelf connecting the outer sections, and a closure for closing the opening between the said shelves.

4. As a new article of furniture, a screen comprising a central screen section and substantially similar outer screen sections hinged to the opposite vertical edges of the central section and disposed rearwardly at an angle thereto and to each other, said outer sections being foldable upon opposite sides of the central section, and shelves removably attached to the outer screen sections at the rear side of the screen, and a closure for the space between two adjacent shelves.

5. As a new article of furniture, an ornamental screen comprising an intermediate and outer screen sections, said outer sections being disposed rearwardly and at an angle to each other and to the intermediate section, a mirror in the front face of the latter section, a shelf below said mirror, an intermediate and a lower shelf connecting said rearwardly directed screen sections, and a closure arranged to close the opening between said shelves and thus provide a closed compartment below the intermediate shelf, the space between the screen sections above the compartment being open.

[Claim 6 not printed in the Gazette.]

876,808. CEREAL-DISH. LORIN T. KINERT, Boise, Idaho. Filed Sept. 7, 1907. Serial No. 391,805.



1. The dish herein described, comprising two supply compartments and a serving compartment, one of the supply compartments and the serving compartment being on the same level and having an intermediate partition provided with a comparatively contracted opening for the discharge of cream or the like from such supply compartment to the serving compartment, and the other supply compartment being above the level of the serving compartment and having a rim interrupted or broken away at the juncture of the said supply compartment with the serving compartment, whereby material may be conveniently scraped from such supply compartment into such serving compartment, and the supporting device for such supply compartment, substantially as set forth.

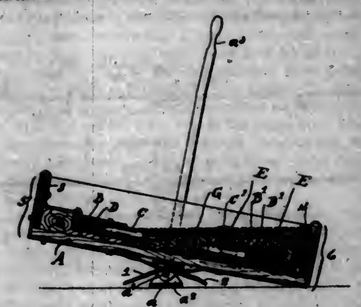
2. A dish for cereals and the like, made with two supply compartments and one serving compartment, the latter and one of the supply compartments being on the same level, and the other supply compartment being above the other two compartments and having a rim interrupted or broken away at its juncture with the serving compartment, the rim or partition between the serving compartment and the first said supply compartment being provided with a comparatively contracted opening, substantially as set forth.

3. A dish made with two supply compartments and one serving compartment, a comparatively contracted opening being provided between one of the said supply compartments and the serving compartment, and the other supply compartment being arranged above the serving compartment and having a rim interrupted or broken away at the juncture of said supply compartment with the serving compartment substantially as set forth.

876,809. ELECTRIC SWITCH OR CUT-OUT. ISIDOR KITSEE, Philadelphia, Pa. Filed Oct. 14, 1905. Serial No. 282,816.

1. In an electric switch, a receptacle, a support upon which said receptacle is tiltably mounted, means to tilt said receptacle, a stationary contact arranged within said receptacle, a movable contact also arranged in said receptacle, a carriage upon which said movable contact is mounted, and circuit connections for said contacts.

2. In an electric switch, a receptacle, a support upon which said receptacle is tiltably mounted, a stationary contact arranged within said receptacle, a movable contact also arranged in said receptacle, a carriage upon which said movable contact is mounted, conductors included in said contact and normally projecting therefrom, circuit connections for said conductors, and a non-conducting fluid within the receptacle to cover the meeting points of the contacts.



3. In an electric switch, a tiltable receptacle, two metallic contacts arranged in said receptacle and each provided with a carbon normally projecting in advance thereof and adapted to be operated in alinement with said contacts, a carriage arranged within said receptacle and upon which one of said contacts is mounted, whereby the same is moved towards and away from the other contacts, and means for causing such movement of said carriage.

4. A device of the class described consisting of a retainer or receptacle adapted to be tilted to one side or the other, two contacts in said receptacle, at least one of said contacts carried by a movable carriage, means to connect the terminal of a circuit to said contacts, and means to tilt said receptacle.

5. Means to connect and to break a current-carrying circuit, said means embracing a receptacle adapted to be tilted, said receptacle containing the terminals of said circuit, at least one of said terminals being carried by a movable carriage.

[Claims 6 to 8 not printed in the Gazette.]

876,810. ANTHRACENE DYE AND PROCESS OF MAKING SAME. MAX A. KUNZ, Mannheim, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Nov. 21, 1906. Serial No. 344,480.

1. The process for the production of anthracene coloring matter by heating a 2.2'-dimethyl-1.1'-dianthraquinonyl body and treating the resulting compound with a halogenizing agent.

2. The process for the production of anthracene coloring matter by heating a 2.2'-dimethyl-1.1'-dianthraquinonyl body with a condensing agent and treating the resulting compound with a halogenizing agent.

3. The process for the production of anthracene coloring matter by heating a 2.2'-dimethyl-1.1'-dianthraquinonyl body with alcoholic potash and treating the resulting compound with a halogenizing agent.

4. The process for the production of anthracene coloring matter by heating 2.2'-dimethyl-1.1'-dianthraquinonyl with alcoholic potash and treating the resulting compound with a halogenizing agent.

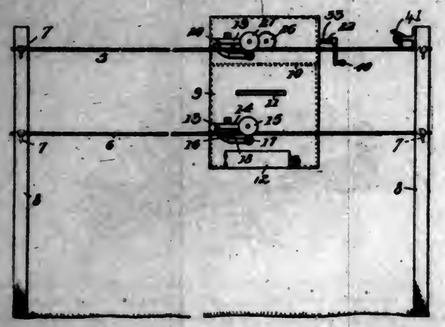
5. The process for the production of anthracene coloring matter by heating a 2.2'-dimethyl-1.1'-dianthraquinonyl body and treating the resulting compound with sulfuryl chlorid.

[Claims 6 to 10 not printed in the Gazette.]

876,811. AUTOMATIC MAIL-BOX. OSCAR A. LARSON, Grove City, Minn. Filed July 29, 1907. Serial No. 386,029.

1. In a conveying system, for rural routes, the combination with a track, of a carrier arranged for movement over the track, an outwardly extending shaft mounted upon the carrier, means for revolving the shaft, a drive roller mounted upon the carrier and engaging the track,

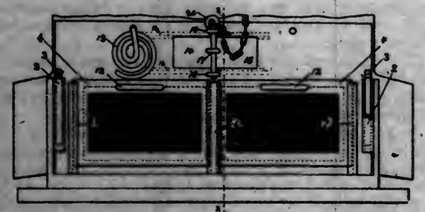
a gear carried by the shaft, a gear carried by the drive roller and meshing with the first named gear, and a dog mounted adjacent to the track and arranged for engagement of one of said gears to prevent rotation of the drive roller.



2. A conveyer for mail carrying systems comprising a box a shaft revolubly mounted in the box, a drive roller carried by the box, a gear train between the drive roller and the shaft, reversing gears meshing with a portion of said gear train, means for revolving the shaft, and a gear carried by the shaft, said shaft being arranged for sliding movement to break the first named gear train and to mesh the gear carried by the shaft with the reversing gear.

3. In a mail carrying system, the combination with a track wire, of a carrier box, a bracket secured to said box and including a stationary arm, a roller revolubly mounted upon said arm, an arm pivoted to the first named arm at one end, a retaining roller mounted upon the pivoted arm, said rollers being arranged for the reception of the track wire therebetween and a spring secured to the two arms to hold the pivoted arm yieldably against movement away from the stationary arm.

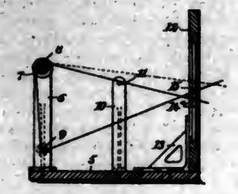
876,812. MORTAR FOR PULVERIZING-MILLS. JOHN LAVAGNINO, Irvine, Cal. Filed Jan. 17, 1907. Serial No. 352,787.



In a pulverizing mill having downwardly extending channels on the side of the mortar or pan, individual tapering or wedge-shaped screen frames removably secured in said channels, each frame comprising an apertured box to receive the screen, a gasket of flexible material between said box and screen, and an apertured plate in said box over said screen, substantially as described.

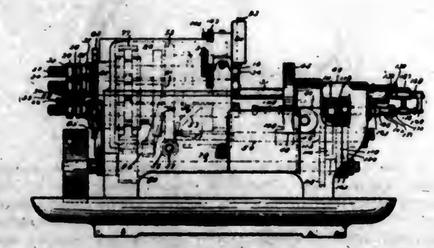
876,813. HAND-LOOM. ROSA K. LENOX, New York, N. Y. Filed July 28, 1906. Serial No. 328,216.

A hand loom for the purpose specified, comprising a base, uprights near the rear edge of the base, a spool-supporting spindle removably engaged with the upper portions of the uprights, a guide bar at the lower portion of the uprights, another guide bar forward of the first-named guide-bar and on a higher plane, and a frame or plate extended upward from the front edge of the plat-



form and provided with longitudinal slots, and perforations alternating with the slots.

876,814. AUTOMATIC SCREW-MACHINE. HARRY B. LESTER, West Hartford, Conn. Filed June 16, 1905. Serial No. 265,596.



1. A screw machine having a rotatable spindle head, mechanism for rotating the head, spindles carried by the head, mechanism for rotating the spindles, means for feeding a rod through each spindle, means for clamping a rod in each spindle, mechanism for operating the feeding means, mechanism for operating the clamping means, adjustable means for connecting the feed operating mechanism with either one or all of the feeding means, and adjustable mechanism for connecting the clamp operating mechanism with either one or all of the clamping means whereby the feeds and clamps may be operated singly or collectively, substantially as specified.

2. A screw machine having a rotatable spindle head, mechanism for rotating the head, spindles carried by the head, mechanism for rotating the spindles, means for feeding a rod through each spindle, means for clamping a rod in each spindle, mechanism for operating the feeding means, mechanism for operating the clamping means, and means constructed to connect the feed operating mechanism with either one or all of the feeding means and coincidently connect the clamp operating mechanism with one or all of the clamping means so that when the feeding means are operated singly the clamping means will be operated singly but when the feeding means are operated collectively the clamping means will be operated collectively, substantially as specified.

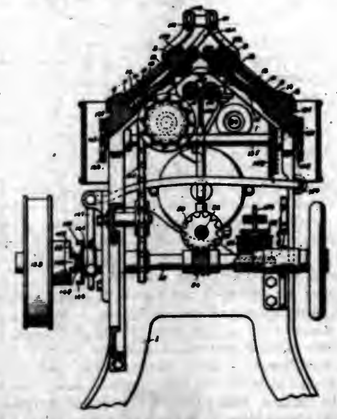
3. A screw machine having a rotatable spindle head, spindles carried by the head, mechanism that encircles and is mounted directly upon the head and engages the head and the spindles so that it rotates the spindles and also rotates the head both by direct friction and through the spindles, means for feeding a rod through each spindle, means for clamping a rod in each spindle, mechanism for operating the feeding means, mechanism for operating the clamping means, means for connecting the feed-operating mechanism with the feeding means, and means for connecting the clamp operating mechanism with the clamping means, substantially as specified.

4. A screw machine having a rotatable spindle head, mechanism for rotating the head, spindles carried by the head, mechanism for rotating the spindles, feed tubes movable longitudinally in the spindles, mechanism for reciprocating the feed tubes, chucks carried by the spindles, mechanism for closing the chucks, and an adjustable device constructed to in one position connect the feed tube reciprocating mechanism with only one feed tube and to in another position connect the feed tube reciprocating mechanism with all of the feed tubes, substantially as specified.

5. A screw machine having a rotatable spindle head, mechanism for rotating the head, spindles carried by the head, mechanism for rotating the spindles, feed tubes movable longitudinally in the spindles, mechanism for reciprocating the feed tubes, chucks carried by the spindles, mechanism for closing the chucks, and rotarily adjustable and longitudinally movable means when in one position connect the feed tube reciprocating mechanism with and cause the feed of only one feed tube and in another position connect the feed tube reciprocating mechanism with all and cause the simultaneous feed of all the feed tubes, substantially as specified.

[Claims 6 to 71 not printed in the Gazette.]

876,815. KNITTING-MACHINE. ELIHU LIPPITT, Philadelphia, Pa. Filed Oct. 19, 1905. Serial No. 283,374.



1. In a machine of the character described, needle beds, pattern chain drums adapted to carry a series of pattern chains, said chains being made up of links of varying thicknesses by which the needles are put into or out of operative position, means for revolving said drums intermittently to produce a predetermined pattern or shape of garment, means for reciprocating one of said drums longitudinally, means for simultaneously moving the needle bed acting in conjunction therewith, and means for controlling this reciprocatory movement.

2. In a knitting machine of the character described, two needle beds each carrying a series of needles, said beds being set at an angle to each other, one of said beds being fitted in guides to have a to and fro longitudinal movement, a pattern chain drum arranged beneath each of the beds, said drums adapted to carry pattern chains for putting the needles into or out of operative position, means for connecting one of said drums with the longitudinally moving needle bed whereby said bed and drum will reciprocate in unison, means for intermittently reciprocating said bed and drum, a pattern wheel, means for revolving said wheel, and a pattern chain carried by said pattern wheel for controlling the intermittent reciprocations of the bed and drum, as specified.

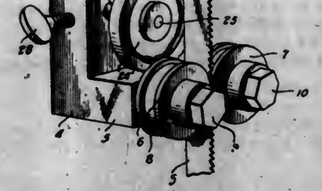
3. In a knitting machine of the character described, two needle beds in which the needles are set, one of said beds adapted to slide to and fro longitudinally to form cross stitches, a cam adapted to impart this to and fro movement to said bed, mechanism for intermittently actuating said cam, and a pattern chain carried by a suitable wheel for controlling the intermittent movements of said cam, whereby they are made at a predetermined time, as specified.

4. In a knitting machine, a stationary needle bed, a reciprocating needle bed, a bracket secured to the last named bed and overhanging the frame of the machine, a pattern chain drum located beneath the reciprocating needle bed, said drum being coupled to a shaft at one end so as to have a limited reciprocating movement and be driven by said shaft, a shaft to which the opposite end of said drum is secured, the last named shaft being connected to the bracket from which it receives a corresponding reciprocating movement with the needle bed, a cam for imparting these reciprocating movements to the bracket, mechanism for intermittently actuating said cam, a pattern chain for controlling the intermittent movements of said cam, and mechanism for operating said pattern chain.

5. In a knitting machine as herein described, mechanism for reciprocating one of the needle beds and the needle pattern chain drum connected therewith and controlling the times of said reciprocations for producing cross stitches in a predetermined pattern, consisting of the cam 83 for reciprocating said needle bed and drum, a lever 90 carrying a pawl adapted to engage ratchet teeth upon said cam to revolve the latter step by step, a cam 93 adapted to actuate the lever 90, a lock bar 96 adapted to hold the lever 90 out of the field of operation of the cam 93 during predetermined periods, a lever 101 connected to said lock bar, a chain wheel, a pattern chain running thereon, said chain being composed of links of varying thicknesses whereby the lever 101 is raised at predetermined times and to predetermined heights for imparting a corresponding movement to the lock bar, a ratchet 105 carried by the chain wheel and a lever 107 carrying a pawl engaging the last named ratchet wheel, said last named lever being constantly operated by the cam 93 to give an intermittent movement to the pattern chain wheel, as and for the purpose set forth.

[Claims 6 to 9 not printed in the Gazette.]

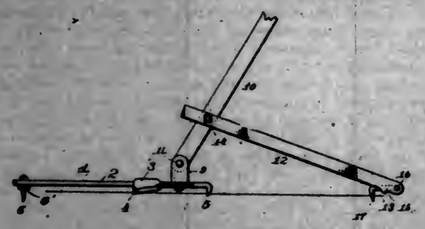
876,816. ROLLER-GUIDE FOR BAND-SAWS. ELZA C. LIPPMANN and ROBERT MCKINNEY, Simmons Switch, Ark. Filed July 12, 1907. Serial No. 383,543.



The herein described band saw guide comprising a body formed in its upper portion with vertical and horizontal openings arranged adjacent to its opposite sides and also formed in its bottom beneath the vertical opening with a recess or open portion which provides two depending arms, one of which latter has a transverse threaded aperture and the other a forwardly projecting enlargement forming a stationary bearing block, a transversely slidable block arranged in the recess or open portion of the body between said arms and formed with a reduced rear portion to provide the shoulder 15 to engage the front face of the body, said reduced rear portion of the slidable bearing block being formed with a vertical slot to register with the vertical opening in the body, the front portion of said slidable bearing block being formed with a threaded socket, a suspending and clamping bolt passed vertically through the slot in the slidable bearing block and through the vertical opening in the upper portion of the body, the head of said bolt being engaged with the bottom of the slidable bearing block, a clamping nut upon the upper threaded end of the bolt engaged with the top of the body for securing said slidable bearing block in an adjusted position, a set screw arranged

in the threaded opening in one of said arms for sliding the slidable bearing block upon said bolt toward the stationary bearing block when the bolt is loosened, headed screws engaged with the threaded sockets in the two bearing blocks, opposing guide rollers journaled upon said screws and adapted to engage the opposite sides of the saw, a sleeve slidable in the horizontal opening in the upper portion of the body, a set screw for securing said sleeve in an adjusted position and a guide disk journaled in said sleeve and adapted to engage the back edge of the saw, substantially as set forth.

876,817. CARPET-STRETCHER. JACOB B. LOGAN, Ina, Ill. Filed Aug. 9, 1906. Serial No. 329,839.

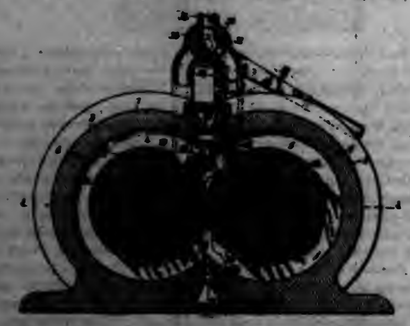


1. A carpet stretcher comprising a base, a standard pivotally mounted thereon for angular movement in a plane parallel thereto, a lever pivotally mounted on said standard, the pivot of the said lever being at right angles to that of said standard, a stretcher foot pivotally connected to said lever, and a device attached to said stretcher foot and having carpet engaging points.

2. A carpet stretcher having a base comprising a longitudinal spring bar, provided at its front end with a downturned point, and at its rear end with a downturned point and a device to hold said end of the bar above the carpet on the floor, and an arched cross bar secured to said spring bar and having its ends beveled to form carpet engaging points, in combination with a lever connected to the base and a stretcher element connected to and operated by the said lever.

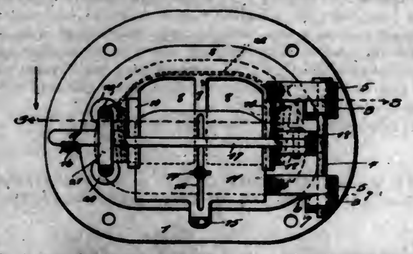
3. A carpet stretcher comprising essentially a base member, a lever connected thereto, a stretcher foot pivotally connected to said lever and comprising a fork frame, having inwardly extending stops, and a bar pivotally mounted in said fork frame to bear under and above said stops at will, and having carpet-engaging teeth, substantially as specified.

876,818. ROTARY ENGINE. EDWARD E. LOAD, Springvale, Me. Filed Apr. 12, 1907. Serial No. 367,763.



In a rotary engine, in combination, a case having two communicating barrels, piston drums mounted in said barrels rolling upon each other and having projecting heads adapted to inclose a part of the interior of said barrels above and below the axes of said drums, steam passages leading to said barrels for driving said piston drums in forward or reverse direction, exhaust valves disposed respectively above and below said axes, a two-way admission valve in alinement with said exhaust valves and admitting to either of said steam passages, a lever attached to said admission valve for operating the same, levers attached to said exhaust valves for operating the same, and a link pivotally attached to all of said levers.

876,819. FURNACE-DOOR. HAZE H. MAGWIRE, Montpelier, Idaho. Filed Nov. 21, 1906. Serial No. 344,523.



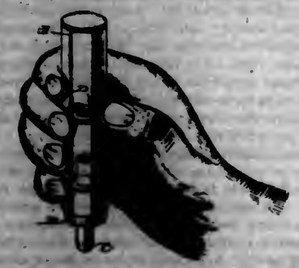
1. A door for furnaces having an opening formed therein and provided adjacent the sides of said opening with vertical overhanging flanges, a plate slidably held between said flanges and having a portion of its material formed with a vertical slotted opening, said door being formed with a horizontal threaded stud projecting through said slotted opening and a wing nut carried upon said stud and designed to bear frictionally against said plate.

2. A door for furnaces having an opening formed therein and provided on its rear face adjacent to the sides of said opening with vertical overhanging flanges arranged in downwardly converging relation and a hood embodying straight sides having beaded front edges engaged with said flanges and an inclined rear portion.

3. A door for furnaces having an opening formed therein, vertical overhanging flanges having a downwardly convergent disposition on the rear face of said door adjacent to the sides of said opening, a shoulder formed on the top end of each flange, a hood having sides, and an inclined rear portion, beads on the front ends of said sides engaged with said flanges, and upward extensions formed on the tops of said hood sides to project over the said shoulders of said flanges and seat thereon to hold the hood against downward movement.

4. A door for furnaces having an opening formed therein, a post extending vertically across said opening at the center of the latter, vertical overhanging flanges projecting from the front face of said door adjacent the sides of said opening, a plate slidably held between said flanges and engaging the front face of said post, said plate being formed with a vertical slot which alines with said post and is closed at its rear thereby, a stud projecting from said post through said slot, and a nut on said post bearing against said plate.

876,820. PUZZLE. WILLIAM H. MALTBIE, Baltimore, Md. Filed Dec. 27, 1906. Serial No. 349,655.



1. A puzzle comprising a tubular transpicuous body open at one end, a diaphragm within said body and having an opening for discharge through it of movable devices, a stopper in the open end of the body and a tube extending through said stopper and projecting at its outer end beyond the same and closed at said outer end and extending at its inner end beyond the inner end of the stopper and open at such inner end forming a pound in alinement with the opening in the diaphragm for the reception of movable devices discharged through said opening, substantially as set forth.

2. A puzzle comprising a transpicuous body, a diaphragm within the same and having an opening and a pound below the diaphragm and in alinement with the opening therein for the reception of movable devices discharged through the opening in the diaphragm, the upper end of the pound being sufficiently below the diaphragm to permit the movable devices discharged through the opening in the diaphragm to pass outside the upper end of the pound, substantially as set forth.

3. A puzzle having a transpicuous body, an apertured diaphragm within the same and a pound below the diaphragm and in alinement with the aperture therein and spaced from the diaphragm and from the walls of the body to form a pocket or chamber below the top of said pound for the reception of movable devices which may escape the pound, substantially as set forth.

4. A puzzle comprising a tubular body having an apertured diaphragm, a stopper in one end of the body and a tube within the stopper and open at its inner end in position to receive movable devices discharged through the aperture in the diaphragm, substantially as set forth.

5. A puzzle comprising a body open at one end and having an apertured diaphragm, a stopper in the open end of the body, and a pound carried by said stopper in position to receive devices discharged through the opening in the diaphragm.

[Claims 6 to 8 not printed in the Gazette.]

876,821. HYDRAULIC PRESS. THOMAS H. MAPP, Surry Hills, near Sydney, New South Wales, Australia. Filed Aug. 6, 1906. Serial No. 329,465.

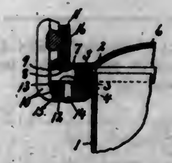


1. In a hydraulic press, the combination of a press head, a top box vertically movable on the head, a fixed bottom box over which the top box is also vertically movable, means in the bottom box for compressing the material in the top box, and means for moving the top box and for holding the latter in rigid relation to the top of the fixed bottom box.

2. In a hydraulic press, the combination with a fixed bottom box, of a press head disposed over the upper extremity of the bottom box, a top box vertically movable on the head and over the upper extremity of the bottom box, a main ram movable in the bottom box and operative to force the material into the top box, and double acting cylinders having plungers provided with piston rods secured to the top box, the top box being held fixed on the upper extremity of the bottom box for an interval by the plungers and piston rods of the said cylinders, and raised vertically by the plungers and piston rods to leave the compressed material exposed for removal.

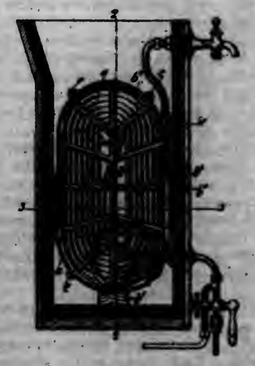
3. In a hydraulic press, the combination with a bottom box, a press head disposed over the upper extremity of the bottom box, a top box slidable on the press head and conjunctively operative with the upper end of the bottom box, a cut-off slide mounted in the top box, a main ram in the bottom box, and double acting cylinders having plungers provided with piston rods connected to the top box.

876,822. BURIAL-CASE. JOHN MAXWELL, Oneida, N. Y. Filed Dec. 29, 1905. Serial No. 293,777.



A burial case comprising a body having a portion folded upon itself near the upper edge to form a reinforced flange with a vertical shoulder extending above the flange, a gasket seated upon said flange and bearing against said shoulder, a lid bearing upon said gasket and projecting beyond the same and spaced from said flange, and a cam device swinging from said flange and operating upon said projecting portion of the lid.

876,823. COOLING-COIL FOR BEER APPARATUS. CHARLES MELDAU, New York, N. Y. Filed Nov. 13, 1906. Serial No. 343,253.

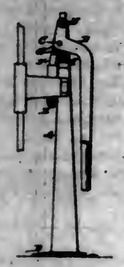


A supporting-frame for a cooling-coil embodying opposing integral sections, each consisting of an outer rim-portion having sleeve-shaped portions to embrace the inlet and outlet ends of the coil and provided with guide-ribs at its side edges, a longitudinal center rib, and lateral ribs connecting said center rib with said rim-portion.

876,824. AUTOMOBILE-JACK. JOSEPH C. MOORE, Cedar Rapids, Iowa. Filed Feb. 8, 1907. Serial No. 356,333.

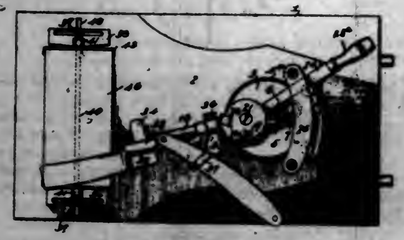
A jack for automobiles, and the like, comprising a bifurcated standard, a hand-lever pivoted at its upper end,

a cross-piece of the standard forming a stop for said lever when fully depressed, a stirrup pivoted to the upper end



of the lever, and suitably padded, substantially as described.

876,825. DEVICE FOR HONING AND STROPPING RAZORS. GEORGE W. MOSBY, Red Bank, N. J. Filed Oct. 4, 1907. Serial No. 395,979.



1. In a device of the character described, the combination with a hone, of an oscillating shaft, a blade clamp carried thereby, an oscillating arm, pinion and rack connection between the shaft and arm, and means adapted to contact with said pinion for regulating the extent of rotation of the pinion.

2. In a device of the character described, the combination with a hone, of an oscillating shaft, a blade clamp carried thereby, an oscillating arm, pinion and rack connection between the shaft and arm, and means adapted to contact with said pinion for regulating the extent of engagement of the rack by the pinion.

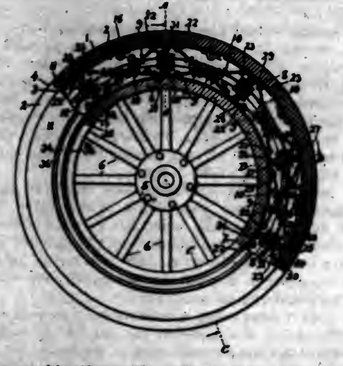
3. In a device of the character described, the combination with a hone, of an oscillating shaft, a blade clamp carried by the latter, an oscillating arm, an operating handle, mechanism automatically operated by the movement of said handle to turn the shaft a partial turn at each end of its oscillating movement, without necessitating the rotation of said handle, a weight projecting at an angle to the shaft, and a razor handle holding fork on said weight.

4. In a device of the character described, the combination with a rod pivotally supported to swing in a horizontal plane, of a shaft having rotary connection with one end of the rod, a blade clamp on the shaft, a disk having rotary mounting on the rod, an arm to turn the disk and swing the arm and shaft, a toothed rack on the disk meshing with a pinion on the shaft, and devices adapted to contact with said pinion for limiting the length of the rack and the consequent turning movement imparted to the pinion and shaft.

5. In a device of the character described, the combination with a rod pivotally supported to swing in a horizontal plane, of a shaft having rotary connection with one end of the rod, a blade clamp on the shaft, a disk having rotary mounting on the rod, an arm to turn the disk and swing the arm and shaft, a toothed rack on the disk meshing with a pinion on the shaft, and means mounted in said rack for adjusting the length thereof cooperating with the pinion and regulating and the consequent turning movement imparted to the pinion and shaft.

[Claims 6 to 11 not printed in the Gazette.]

876,826. WHEEL-TIRE. THOMAS J. MCCARTHY, Los Angeles, Cal. Filed Aug. 24, 1906. Serial No. 331,915.



1. The combination with a wheel and a separate tire, of radial springs pivotally anchored at both ends therebetween, and similarly-anchored quasi-tangential springs alternately running in opposite directions at each side of the radial springs and crossing one another longitudinally of the tire and wheel-rim.

2. The combination of an inwardly-channeled tire, an outwardly-channeled wheel, oppositely-located fittings having a plurality of lugs and respectively secured at regular intervals in the channels of the tire and wheel-rim, radial springs flexibly anchored to central lugs on the opposite fittings, and peripheral springs running longitudinally of the tire and wheel-rim on each side of the radial springs and likewise connected with corner lugs of staggered fittings.

876,827. CAISSON CONSTRUCTION. ALEXANDER Z. MCLEOD, New York, N. Y. Filed Apr. 16, 1907. Serial No. 368,571.



1. A caisson provided with a working chamber in the bottom thereof, a receptacle placed in said chamber and provided with a cover and a bottom, a stand pipe extending down through the caisson and into the receptacle at or near the bottom thereof, means for filling said receptacle with excavating material, and means for supplying air and water under pressure to said receptacle and for supplying air to said working chamber.

2. A caisson provided with a working chamber in the bottom thereof, a receptacle supported in said chamber, means for supplying material to said receptacle from the bottom of the working chamber, a stand pipe extending vertically through the caisson and into said receptacle and down approximately to the bottom thereof, a high pressure air pipe extending vertically through the caisson and into said receptacle, a water pipe extending vertically through the caisson and into the receptacle, and means for supplying air to the working chamber.

3. A caisson provided with a working chamber in the bottom thereof, a receptacle supported in said chamber, means for supplying material to said receptacle from the bottom of the working chamber, a stand pipe extending vertically through the caisson and into said receptacle and down approximately to the bottom thereof, a high pressure air pipe extending vertically through the caisson and into said receptacle, a water pipe extending vertically through the caisson and into the receptacle, and means for supplying air to the working chamber, the top of said receptacle being also provided with a cover having an aperture, and means for opening and closing the same.

4. A caisson provided with a working chamber in the bottom thereof, a receptacle supported in said chamber, means for supplying material to said receptacle from the bottom of the working chamber, a stand pipe extending vertically through the caisson and into said receptacle and down approximately to the bottom thereof, a high pressure air pipe extending vertically through the caisson and into said receptacle, a water pipe extending vertically through the caisson and into the receptacle, and means for supplying air to the working chamber, the top of said receptacle being also provided with a cover having an aperture, and means for opening and closing the same, consisting of doors mounted above and below said cover, and means for operating said doors.

5. A caisson provided with a working chamber in the bottom thereof, a receptacle within said chamber and closed at the top and open at the bottom, said receptacle being also provided with an inner bottom having a central hand opening, and means for closing the same, a stand pipe extending vertically through the caisson and down through the cover of the receptacle into the bottom portion thereof, a filling pipe connected with the top portion of the receptacle and extending to the bottom portion of the working chamber, means for supplying water under pressure to said receptacle, means for supplying air under pressure to said receptacle, and means for supplying air to the working chamber.

[Claims 6 to 11 not printed in the Gazette.]

876,828. INSULATOR. ROSS C. MCNUTT, Mendota, Ill. Filed Mar. 21, 1907. Serial No. 363,706.



1. As an article of manufacture, an insulator comprising a molded body of suitable material, an internally threaded member anchored in the lower end thereof, a metal cap fitted on the lower end of the body and having apertures in its bottom, and anchoring devices extending through the apertures and embedded in the said body.

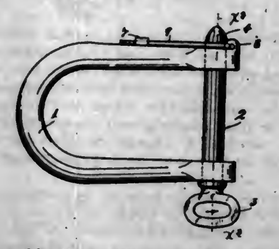
2. As an article of manufacture, an insulator comprising a molded body of cement, a metal cap fitted on the lower end thereof to form an armor, and members anchored in the body for holding the cap in place and serving as a reinforce for the body.

3. As an article of manufacture, an insulator comprising a molded body having a peripheral groove adjacent its upper end, a shell fitted on the lower end thereof, and members anchored in the body and extending through the shell to hold the latter in position.

4. As an article of manufacture, an insulator comprising a molded body, an internally threaded metal thimble having transversely and longitudinally extending flanges serving to anchor the thimble in the body, and a metal cap fitted on the body and having an opening in its bottom registering with the thimble.

5. As an article of manufacture, an insulator comprising a molded body of cement having a peripheral groove adjacent its upper end, an internally threaded member anchored in the lower end of the body, a metal cap fitted on the lower end of the body and provided with an opening in its bottom registering with the member, headed rods passing through the cap for holding the latter in place and having bent portions for anchoring the rods in the body.

876,829. INTERLOCKING CLEVIS. TIDEMAND NELSON, Starbuck, Minn. Filed Aug. 19, 1907. Serial No. 389,244.



1. The combination with a clevis yoke having seats formed in the prongs thereof, of a clevis bolt fitting said seats, lock shoulders and releasing shoulders formed on the opposite sides of said bolt, a pair of laterally spaced lock springs carried by one of the prongs for engagement with said lock shoulders to lock the clevis bolt in working position, and the releasing shoulder for releasing the lock springs from the lock shoulders under a rotary movement of the clevis bolt, substantially as described.

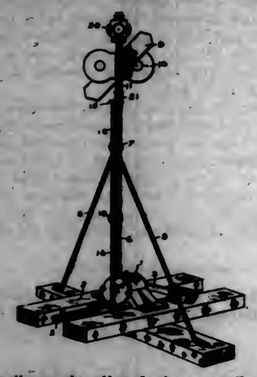
2. The combination with a clevis yoke having seats formed in the prongs thereof, of a clevis bolt fitting said seats, lock shoulders and releasing shoulders formed on the opposite sides of said bolt, a pair of laterally spaced lock springs carried by one of the prongs for engagement with said lock shoulders to lock the clevis bolt in working position, and the releasing shoulder for releasing the lock springs from the lock shoulders under a rotary movement of the clevis bolt, and means for guiding the free ends of said lock springs, substantially as described.

3. The combination with a clevis yoke having seats formed in the prongs thereof, one of said prongs being provided with a pair of laterally spaced guide lugs, of a headed clevis bolt fitting said seats and having a tapered end, lock shoulders and releasing shoulders formed on opposite sides of said bolt, a pair of laterally spaced lock springs, lugs on the guide lug equipped prong for securing said lock springs thereto, said lock springs having engagement with the lock shoulders to lock the clevis bolt in working position, and having their free ends guided by the guide lugs, and the releasing shoulders releasing said lock springs from said lock shoulders under a rotary movement of the clevis bolt, substantially as described.

876,830. SWITCH-STAND AND SIGNALING DEVICE THEREFOR. HARRY C. ODENKIRK, Cleveland, Ohio. Filed Oct. 15, 1906. Serial No. 338,929.

1. In a railway signaling device, a staff upon which the signal is mounted, a sleeve surrounding said staff, said sleeve being provided with a cam slot, a pin or lug pro-

jecting from said staff into said cam slot, and means for moving said sleeve longitudinally of said staff and for preventing said sleeve from rotating, said movement of the sleeve causing the cam slot to engage the said pin or lug and thus turn the staff to operate the signal.



2. In a railway signaling device, a staff upon which the signal is mounted, a sleeve surrounding said staff, said sleeve being provided with a cam slot, a pin or lug projecting from said staff into said cam slot, means for moving said sleeve longitudinally of said staff and for preventing said sleeve from rotating, said movement of the sleeve causing the cam slot to engage the said pin or lug and thus turn the staff to operate the signal, and a protecting casing for said sleeve.

3. In a railway signaling device in combination with a switch stand, a member to which the signal is attached, a second member movable with respect to said first mentioned member, a cam on one of said members, a lug on the other member projecting into the path of movement of said cam, a shaft in the switch stand, and means connecting said shaft with the second member for moving the same, said movement resulting through the engagement of the cam and lug in operating the signaling device.

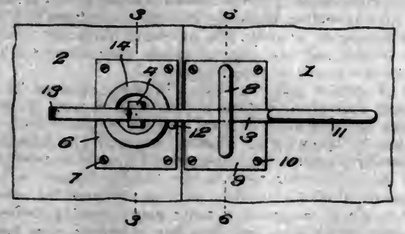
4. In a switch stand and signal, a horisontal shaft, a crank or disk on said shaft, a signal post, a signal staff journaled in said post, a sleeve surrounding said staff above the post, said sleeve being provided with a cam groove, a pin or lug carried by the signal staff and projecting into said cam groove, and a rod connecting said crank or disk with the said sleeve, whereby, when the switch stand shaft is oscillated, the sleeve will be moved up or down and the cam slot and pin will rotate the signal staff.

5. In a switch stand and signal, a horisontal shaft, a crank or disk on said shaft, a signal post having a groove in its lower end, a signal staff journaled in said post, a pin passing through said post and into said groove for holding the staff in position, a sleeve surrounding said staff above the post, said sleeve being provided with a cam groove, a pin or lug carried by the signal staff and projecting into said cam groove, and a rod connecting said crank or disk with the said sleeve, whereby, when the switch stand shaft is oscillated, the sleeve will be moved up or down and the cam slot and pin will rotate the signal staff.

876,831. DOOR-FASTENER. SALVE OLSON, Walworth, Wis. Filed Aug. 1, 1907. Serial No. 386,547.

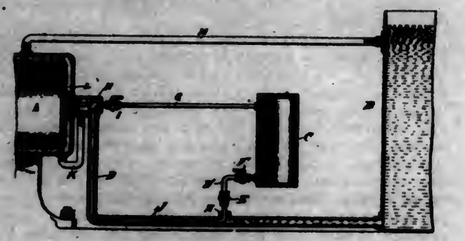
1. In a fastener of the class described, the combination with a wall and a door therefor; of a bar, a bolt extending through said door, ears at the outer end of said bolt, between which said bar is pivoted, a handle at one end of said bar, a keeper, a plate carrying said keeper, said plate being secured to the wall and a stop pin adapted to limit the downward movement of the bar.

2. In a fastener of the class described, the combination with a wall and a door therefor; of a bar, a bolt extending through said door, ears at the outer end of said bolt, between which said bar is pivotally mounted, a swivel plate between said ears and door, a rib on said plate, a stop pin adapted to limit the downward movement of said bar, a keeper secured to said wall, adapted to be engaged by said bar, and a handle on said bar.



3. In a fastener of the class described, the combination with a wall and a door therefor; a bolt extending through said door, ears at the outer end of said bolt, a bar pivotally secured between said ears, a handle at one end of said bar, a keeper on said wall adapted to be engaged by said bar, said keeper having an inclined, inner face, whereby the bar and the door, in which the same is secured, will be moved inwardly and a curved terminal at the opposite end of said bar, adapted to be swung into engagement with the wall and form a leverage for the bar, when an outward pull is made on the handle, thereby opening said door.

876,832. GAS-ENGINE COOLER. FRANCIS L. ORR, Thurman, Iowa. Filed Apr. 10, 1907. Serial No. 367,346.



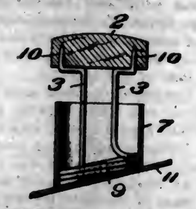
1. The combination with a gas engine, of a storage-tank, a series of gas passageways providing communication between the engine and storage-tank, valves in said passageways, a water-tank, and passageways providing circulation between said water-tank and the engine jacket, a gas passageway in the series thereof being arranged within the water circulating passageway.

2. The combination with an internal combustion engine employing a cylinder having a water-jacket, of a water-tank, a series of water conveying pipes between the said tank and the jacket, a storage-tank, a series of gas conveying pipes between the tank and the engine cylinder, one of the series being inclosed for a part of its length in one of the water pipes, and valves in the gas pipes controlling the passages therethrough.

3. The combination in a gas-engine starter, comprising a storage-tank, gas exhaust and supply conveying pipes providing storing and starting means between the engine and storage-tank, and controller valves in said pipes, of cooling means comprising a water-tank, and circulating passageways connecting the engine jacket with said water-tank, the gas exhaust or storing pipe being arranged within the water-circulating passageways, adapted to be cooled by water circulating between the engine and water-tank.

876,833. POULTRY-ROOST. SPENCER PERCIVAL, North Pender Island, British Columbia, Canada. Filed Dec. 22, 1906. Serial No. 349,099.

1. A roost of the class described comprising a flanged cup, a standard having a flanged base supported on the bottom of said cup parallel therewith, and a roost secured to the upper end of said standard.



2. A roost comprising a cup having a slanting bottom, a coil fitting snugly within said cup with its lower face inclined to correspond to the slant of said bottom, standards extending upwardly from said coil and a roost supported on the upper ends of said standards.

876,834. COMBINED POTATO DIGGER AND SEPARATOR. ROBERT L. PETTIT, Great Falls, Mont. Filed Dec. 22, 1906. Serial No. 349,136.



1. A potato digger including a shovel and a separator having a conveyer arranged intermediate the shovel and separator, said conveyer being arranged to gradually increase the rate of travel of the material from the shovel toward the separator.

2. The combination of a potato digger having a shovel and a separator, of a conveyer arranged between the shovel and separator and comprising a series of independent screw sections arranged in alinement for simultaneous and uniform movement.

3. The combination of a potato digger having a shovel and a separator, of a conveyer arranged between the shovel and separator and comprising a series of independent screw sections arranged in alinement for simultaneous and uniform movement, the convolutions of the respective sections being differently spaced.

4. The combination of a potato digger having a shovel and a separator, of a conveyer arranged between the shovel and separator and comprising a series of independent screw sections arranged in alinement for simultaneous and uniform movement, the convolutions of the section adjacent the shovel being increasingly spaced from the shovel end toward the opposite end.

5. The combination of a potato digger having a shovel and a separator, of a conveyer arranged between the shovel and separator and comprising a series of independent screw sections arranged in alinement for simultaneous and uniform movement, the convolutions of each section being increasingly spaced from each other toward the discharge end of the section, and the convolutions of each section being a greater distance apart than the convolutions of the preceding section.

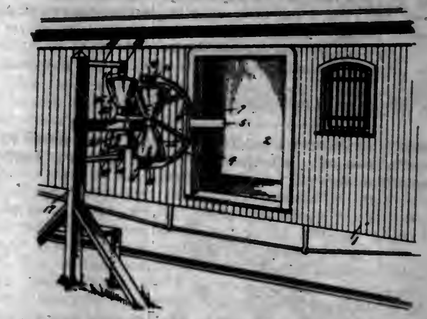
[Claims 6 to 8 not printed in the Gazette.]

876,835. MAIL-BAG CATCHER. ERNEST PILAND, Toppenish, Wash. Filed May 18, 1907. Serial No. 374,322.

1. The combination of a support, a pair of fixed arms mounted thereon, mail bag holding devices on the arms, a fixed arm disposed between the said pair and at one side of the common plane of the latter, and means on the third arm for catching the mail bag.

2. In an apparatus of the class described, the combination of a pair of arms, bag holding devices thereon, a third arm arranged at one side of the first-mentioned arms, a bag catching device on the third arm, and a common mounting for the arms on which the latter swing.

3. In an apparatus of the class described, the combination of a car having a doorway, a bag catching device, a bag holding device, and a common means for the devices for permitting them to swing into and out of the doorway.



4. In an apparatus of the class described, the combination of a car having a doorway, a bag catching device, a bag holding device, a common means for the devices for permitting them to swing into and out of the doorway, and means for locking the devices in outstanding position.

5. In an apparatus of the class described, the combination of a car having a doorway, a frame hingedly mounted to swing in and out of the doorway and provided with a pair of spaced arms, bag engaging means on the arms, a member rigidly secured to the frame and extending to a point in front of the arms, and a bag catcher on the front side of the said member.

876,836. ANTIFRICTION-BEARING. HENRY R. PLIMPTON, 2d, Newton Center, Mass. Filed Mar. 26, 1907. Serial No. 364,605.

1. In an anti-friction bearing, the combination of oppositely-disposed members having bearing surfaces, a plurality of rotatable load-supporting members interposed therebetween, and a plurality of rotatable spacing members movable into operating position by centrifugal force.

2. In an anti-friction bearing, the combination of two annular concentric members having oppositely-disposed bearing surfaces, two series of rotatable load-supporting members interposed therebetween and contacting with said surfaces, and a plurality of radially movable rotatable spacing members interposed between said series and between each pair of adjacent load-supporting members.

3. In a roller bearing, the combination of two members having oppositely disposed concentric bearing surfaces, rotatable load-supporting members interposed therebetween, and a plurality of rotatable spacing members adapted when in operative position to contact solely with said load-supporting members the outer surfaces of said spacing members being in rolling engagement with said load-supporting members.

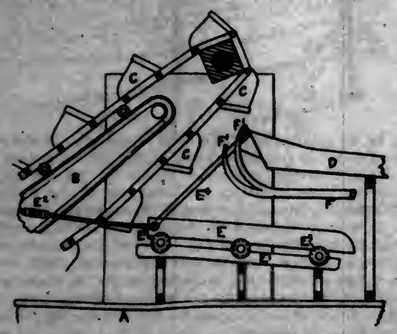
4. In an anti-friction bearing, the combination of two members having oppositely disposed bearing surfaces, rotatable load-supporting members interposed therebetween, and an annular row of rotatable spacing members, each of said spacing members being interposed between a pair

of adjacent load-supporting members and when in operative position contacting solely with the bearing surfaces of said load-supporting members.

5. In an anti-friction bearing, the combination of a plurality of members having oppositely disposed concentric bearing surfaces, a plurality of rotatable load-supporting members interposed therebetween, and a plurality of rotatable spacing members movable radially by centrifugal force into engagement solely with said load-supporting members.

[Claims 6 to 14 not printed in the Gazette.]

876,837. BUCKET-CLEANING SAVE-ALL. WALTER E. POTTS, Dunedin, New Zealand. Filed Mar. 26, 1907. Serial No. 364,744.



1. In an apparatus of the class described, the combination of a conveyer, one or more fluid jets for removing the adherent material from said conveyer, and a chute adjustably connected to the conveyer ladder for collecting said material.

2. In an apparatus of the class described, the combination of a conveyer, a dumping chute, one or more fluid jets for removing the adherent material from said conveyer, and a chute adjustably connected to the conveyer ladder for collecting said material.

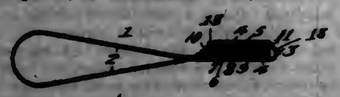
3. In an apparatus of the class described, the combination of a conveyer, one or more fluid jets for removing the adherent material from said conveyer, a chute adjustably connected to the conveyer ladder for collecting said material, and a plurality of bars interposed between the conveyer and the adjustable chute for breaking the material in its descent from the conveyer to the chute.

4. In an apparatus of the class described, the combination of a conveyer, one or more fluid jets for removing the adherent material from said conveyer, protective hoods for said jets, and a chute adjustably connected to the conveyer ladder for collecting said material.

5. In an apparatus of the class described, the combination of a conveyer, a dumping chute, one or more fluid jets for removing the adherent material from said conveyer, a chute adjustably connected to the conveyer ladder for collecting said material, a plurality of breaking bars interposed between the conveyer and the adjustable chute, and rollers for supporting said chute.

[Claim 6 not printed in the Gazette.]

876,838. CAR-SEAL. EDWARD S. PRIOR, Omaha, Nebr. Filed Apr. 17, 1906. Serial No. 312,159.



1. A car seal comprising a blank having a rectangular portion and alining major and minor strips, the latter strip being of greater length than the width of the rectangular portion and doubled successively on itself a number of times and extending across the said rectangular portion, the major strip being doubled to form a loop and having its extremity bent back on itself to engage the doubled portions of the minor strip, the ends of the rectangular portion being bent over the interlocking parts of the strips and forming a housing open at both ends, and soldered joints between the edges of the rectangular portion and two of the bends of the minor strip that extend out of the ends of the housing.

2. A car seal comprising a sheet metal blank having a rectangular portion and alining major and minor strips extending oppositely from the long edges of the said portion, the minor strip being doubled back on itself in a large curve adjacent one edge of the said portion and doubled back at an intermediate point in a smaller curve at the opposite edge of the said portion and finally bent backwardly at its extremity, the major strip being bent into a loop and doubled twice on itself in a large and small bend, the extremity of the major strip bearing against the rectangular portion and engaged with the bent minor strip by a lateral movement, and the ends of the rectangular portion being bent one after the other over the interlocking parts of the strips, and means for securing the ends of the rectangular portion together.

3. A car seal comprising a blank having a rectangular portion and alining major and minor strips extending oppositely from the long edges of the portion, the minor strip being bent back on itself at three points, the bends being of successively diminishing size from the inner to the outer end of the said strip, the larger and intermediate bends being spaced apart a distance greater than the width of the said rectangular portion, the major strip being doubled twice on itself and interlocked with the minor strip by a lateral movement and bearing directly on the said rectangular portion, the ends of the rectangular portion being bent over the interlocking parts of the strips to form a housing therefor open at both ends through which the largest and intermediate bends of the minor strip extend, and soldered joints between the edges of the rectangular portion and projecting bends of the minor strip.

876,839. RED DYE AND PROCESS OF MAKING SAME. RUDOLF PUMMERER, Ludwigshafen-on-the-Rhine, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation of Germany. Filed Sept. 14, 1907. Serial No. 392,839.

1. The process of producing coloring matter by acting on a 2.3-diketo-dihydro-(1)-thionaphthene compound with an indoxylic compound.

2. The process of producing coloring matter by acting on 2.3-diketo-dihydro-(1)-thionaphthene with 3-oxy-(1)-thionaphthene.

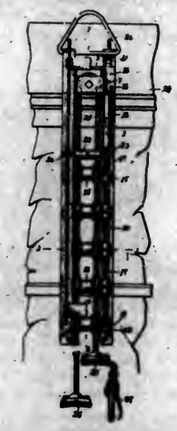
3. The process of producing coloring matter by acting on 2.3-diketo-dihydro-(1)-thionaphthene with 3-oxy-(1)-thionaphthene in the presence of a condensing agent.

4. As new articles of manufacture the coloring matters which can be obtained by acting on a 2.3-diketo-dihydro-(1)-thionaphthene compound with an indoxylic compound, which coloring matters consist when dry of from violet to brownish red powders and are soluble in benzene yielding from violet to yellowish red solutions and in concentrated sulfuric acid yielding from brown to green solutions and are soluble in alkaline hydrosulfite yielding vats which dye cotton from blue to red shades, and in the form of their sulfoacids dye cotton from blue-violet to brown-red shades.

5. As a new article of manufacture the coloring matter which can be obtained by acting on 2.3-diketo-dihydro-(1)-thionaphthene with 3-oxy-(1)-thionaphthene, which coloring matter consists when dry of a red powder and gives a yellowish red solution in benzene and an olive-brown solution in concentrated sulfuric acid, and dyes cotton from an alkaline hydrosulfite vat scarlet-red shades and in its sulfonated form dyes wool red.

876,840. FIRE-ESCAPE. AUGUST REUTER, New York, N. Y. Filed June 8, 1907. Serial No. 377,845.

1. In a fire escape, in combination, a guide frame, a plurality of members mounted to slide therein, means for resiliently holding said members apart, a rope passing around said members and passing from side to side thereof in a zig-zag course whereby resistance is offered to the passing of said rope, and means for supporting the weight carried by said rope upon said first means.

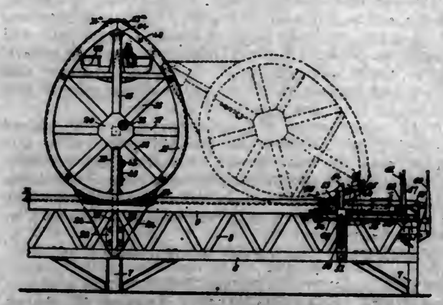


2. In a fire escape, in combination, a guide frame, a pulley supported thereupon, a rope passing over said pulley adapted to support a weight, a plurality of friction members, springs separating said friction members and adapted to be compressed by the weight upon said pulley, whereby the resistance to said rope increases with the increase of weight on said pulley.

3. In a fire escape, in combination, a guide frame, a plurality of non-rotatable spools supported in said frame, springs between said spools and tending to hold the same apart, a pulley supported on said springs, and a rope passing in a zig-zag path around said spools crossing the axes of said springs between said spools and passing over said pulley.

4. In a fire escape, in combination, a guide frame, guide stems supported therein, a plurality of sleeves slidably mounted in said stems, springs disposed around said stems between said sleeves, spools having their ends supported upon said sleeves, and a rope passing around said spools and supported by said springs whereby an increase of weight on said rope may press said spools toward each other.

876,841. OBSERVATION-SWING. WINFIELD S. RITCH, New York, N. Y. Filed Nov. 9, 1907. Serial No. 401,421.



1. A device of the character described, comprising tracks, rocking mechanism supported thereupon, an observation car mounted upon said rocking mechanism and carried thereby, and cords wound partially upon said rocking mechanism and disposed parallel with said tracks for the purpose of maintaining said rocking mechanism in a predetermined plane relatively to said tracks.

2. The combination of tracks, rockers of elliptical form engaging said tracks, an observation car mounted upon said rockers, and means for partially counterbalancing the weight of said observation car.

3. The combination of a track, rockers mounted thereupon, an observation car carried by said rockers, a counterweight connected with said rockers, and means for shifting the position of said counterweight for the purpose of varying the counterbalancing effect thereof relatively to said observation car.

4. The combination of tracks, a pair of rockers of substantially elliptical form engaging said tracks, an observation car mounted upon said rockers at a point remote from the geometrical center thereof, rails mounted upon said rockers, a counterweight connected movably with said rails, and means controllable at will for shifting the position of said counterweight relatively to said rails.

5. The combination of a track, rockers mounted thereupon, mechanism mounted upon said rockers for the purpose of carrying passengers, a scale to be temporarily engaged by said rockers for the purpose of indicating the approximate aggregate weight of the passengers carried, a counterweight for partially counterbalancing the weight of said passengers, and means for connecting said scale with said rockers and disconnecting the same therefrom at will.

[Claims 6 to 8 not printed in the Gazette.]

876,842. DENTAL TOOL. LEO S. ROBINSON, Alameda, Cal. Filed July 18, 1906. Serial No. 326,602.



1. In a dental tool, the combination of a tubular expansive mandrel, a sleeve fitting the end of the mandrel, a dental disk, a flange and washer between which the disk is held, and a nail passed through the washer and disk and forced into the tube to expand the latter against the sleeve and hold the disk in fixed position between said flange and washer.

2. A rotary dental tool comprising a hollow stem, a flanged sleeve fitting an end of the stem, a nail driven into the end of the stem embraced by said sleeve to expand the stem against the sleeve, and a dental annulus clamped between a member carried by the outer end of the nail and the flange on the adjacent end of the sleeve.

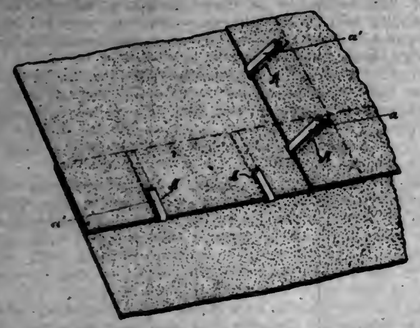
3. A brush comprising a hollow expansible stem, a sleeve to embrace an end of the stem, a nail of larger diameter than the bore of the stem driven into the end of the stem embraced by the sleeve, opposed co-acting members surrounding the nail, said members consisting of a flange on the sleeve and a washer carried by the nail, and a brush comprising a bundle of fibers bound around their middle with said nail passed lengthwise through the bundle and driven into the stem to fold the bristles and spread them radially between said flange and washer and unite the bristles, sleeve, washer and stem in a rigid unitary structure.

4. A rotary dental tool comprising a hollow stem, a sleeve fitting an end of said stem, a flange at the end of said sleeve, a brush comprising a bundle of fibers bound around their middle, a nail of larger diameter than the bore of said stem extending through the center of the bundle of fibers and into the end of the portions of the stem embraced by said sleeve, said nail being provided with means for clamping the bundle of fibers against said flange.

876,843. FASTENER FOR ROOFING. AUGUST H. ROHVER, Buffalo, N. Y. Filed Nov. 19, 1906. Serial No. 343,994.

1. A fastener for roofing comprising a metallic strip doubled over upon itself, the doubled-over portion being provided with a prong adapted to be driven through the

roofing material to contact with the lower portion of said metallic strip.



2. A fastener for roofing comprising a metallic strip doubled over upon itself, the doubled-over portion being provided with a transversely disposed prong adapted to be driven through the roofing material to contact with the lower portion of said metallic strip.

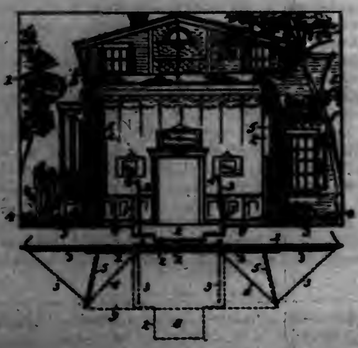
3. A fastener for roofing comprising a metallic strip formed at one end with a point adapted to be driven into the roof boards, such strip being doubled over upon itself, the doubled-over portion being shorter than the other portion and terminating in a prong adapted to be driven through the roofing material to contact with the lower portion of said metallic strip.

4. The combination with overlapping sheets of roofing; of a fastener therefor comprising a metallic strip secured to the under sheet and doubled over upon itself so as to clasp the edge of the upper sheet, such doubled-over portion of the strip being provided with a triangular prong disposed interiorly of its lateral edges and adapted to be driven through such upper sheet and to contact with the lower portion of said metallic strip.

5. The combination with overlapping sheets of roofing; of a fastener therefor comprising a metallic strip secured to the under sheet and doubled over upon itself so as to clasp the edge of the upper sheet, such doubled-over portion of the strip being provided with a transversely disposed, slightly recurved prong adapted to be driven through such upper sheet to contact with and be clenched upon the lower portion of such strip.

[Claims 6 and 7 not printed in the Gazette.]

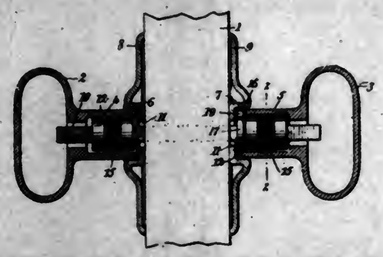
876,844. DROP-CURTAIN. MARCUS L. SICKELS, New York, N. Y. Filed Feb. 28, 1907. Serial No. 359,882.



1. A theatrical drop curtain having portions of two different scenes depicted thereon, a plurality of flaps hingedly attached to the curtain and having upon their opposite sides scenic representations respectively complemental to the portions of the two scenes upon the curtain, and means for moving the flaps.

2. A theatrical drop curtain having portions of two different scenes depicted thereon, a plurality of flaps hingedly attached to the curtain and having upon their opposite sides scenic representations respectively complemental to the portions of the two scenes upon the curtain and operating cords attached to the flaps and leading to the rear face of the curtain.

876,845. FASTENING FOR DOOR-KNOBS. JOSEPH F. SMART, Stamford, Conn. Filed May 2, 1907. Serial No. 371,391.



1. In a fastening, in combination, a spindle, a pair of collars non-rotatably mounted on said spindle, an eccentrically disposed locking ring mounted between said collars on said spindle and which may assume a position concentric with said collars, and a member having a tubular shank received over said collars and adapted to rotate said locking collar and jam same within said tubular shank.

2. In a fastening, in combination, a spindle, a pair of collars non-rotatably mounted upon said spindle, a hub non-rotatably mounted on said spindle between said collars, an eccentric ring rotatably mounted on said hub between said collars and adapted to assume a position concentric with said collars, and a member having a tubular shank adapted to slide over said collars and affording means for jamming said parts by a rotation of said eccentric collar on said hub.

3. In a fastening, in combination, a spindle, a pair of collars non-rotatably mounted on said spindle, an eccentrically disposed locking ring mounted between said collars on said spindle and which may assume a position concentric with said collars, a member having a tubular shank received over said collars and adapted to rotate said locking collar and jam the same within said tubular shank, and a slidable collar non-rotatably mounted on said spindle and having means for engaging said tubular shank to prevent a reverse rotation of said member.

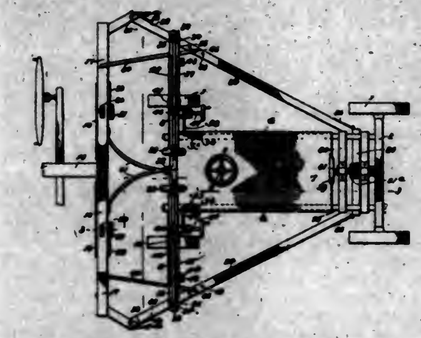
4. In a fastening device, in combination, a spindle of angular form, collars having angular openings non-rotatably mounted on said spindle, a hub having an angular opening and mounted on said spindle between said collars, an eccentric ring rotatably mounted on said hub and adapted to assume a position concentric with said collars, and a member having a tubular shank received over said collars and adapted to rotate said eccentric ring to jam said shank upon said collars and said ring.

5. In combination, a spindle adapted to be passed through a door, collars non-rotatably mounted on said spindle near the ends thereof, eccentric rings rotatably mounted on said spindle between said collars, and knobs having tubular shanks received over said collars and adapted to jam said eccentric rings within said shanks by a rotation of said knobs.

[Claims 6 and 7 not printed in the Gazette.]

876,846. ROAD-MACHINE. STEPHEN W. SMITH, Douglasville, Ga. Filed May 28, 1907. Serial No. 376,208.

1. A machine of the character described, comprising a traveling support, a laterally extensible frame work suspended from said support, means for extending and contracting said frame work, and scrapers carried by the frame work.



2. A machine of the character described, comprising a traveling support, a frame work suspended from the support and consisting of a laterally extensible front cross beam, a rear cross beam, and rearwardly converging longitudinal beams hinged at their rear ends to the rear cross beam, means for extending and contracting the front cross beam, and grading or scraping devices carried by the frame work.

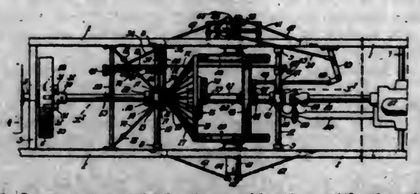
3. A machine of the character described, comprising a traveling support, a scraper framework suspended from the support, and means for raising the front and rear ends of the framework from the support, the means for raising the front end of the framework being independent of the means for raising the rear end.

4. A machine of the character described, comprising a traveling support, a scraper framework extended from the support, means for suspending the rear end of the frame work at different elevations from the rear end of the support, and means for raising and lowering, from the support, either side of the framework at the front thereof, one side independently of the other.

5. A machine of the character described, comprising a traveling support, a laterally extensible scraper frame work suspended from the support, means for extending and contracting the framework, and means for raising and lowering the front end of the frame work.

[Claims 6 to 16 not printed in the Gazette.]

876,847. FRICTION TRANSMISSION-GEAR. GEORGE T. STAMM, Los Angeles, Cal. Filed Mar. 18, 1907. Serial No. 363,119.



1. In a motor vehicle, in combination with the side frame members of the vehicle, intermediate friction wheels carried by the side frame members, a driving shaft, a driving friction disk carried by the driving shaft, a driven shaft, a driven friction wheel on the driven shaft, and means for moving the driving friction disk against the intermediate friction wheels and simultaneously bending the side frame members of the vehicle to move the intermediate friction wheels against the driven friction wheel.

2. In a motor vehicle, in combination with the side frame members of the vehicle, intermediate friction wheels carried by the side frame members, a driving shaft, a driving friction disk carried by the driving shaft, a driven shaft, a driven friction wheel on the driven shaft, means for moving the driving friction disk against the intermediate friction wheels and simultaneously bending the side frame members of the vehicle to move the intermediate friction wheels against the driven friction wheel, and means for adjusting the driven friction wheel radially of the intermediate friction wheels.

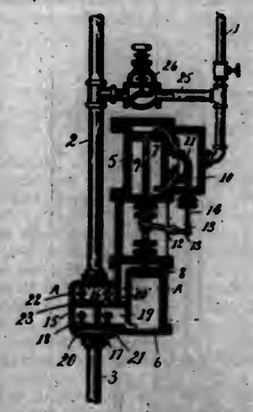
3. In a motor vehicle, in combination with the side frame members of the vehicle, intermediate friction wheels mounted on the side frame members, said friction wheels adapted to be moved longitudinally of their axis when the side frame members are bent, said side frame members preventing the friction wheel from being moved longitudinally of the vehicle, a driving friction disk, a driven friction disk, and means for bending said side frame members and moving said intermediate friction wheels into contact with the driven friction disk and moving said driving friction disk rearwardly into contact with the intermediate friction wheels.

4. In a motor vehicle, in combination with the side frame members of the vehicle, intermediate friction wheels carried by the side frame members, a driving shaft, a driving friction disk carried by the driving shaft, a driven shaft, a driven friction wheel on the driven shaft, means for moving the driving friction disk against the intermediate friction wheels and simultaneously bending the side frame members of the vehicle to move the intermediate friction wheels against the driven friction wheel, and means for adjusting the driven friction wheel radially of the intermediate friction wheels and for clutching said driven shaft with the driving shaft.

5. In a motor vehicle, a driving shaft, a driven shaft, a driving friction disk on the driving shaft, a threaded sleeve for shifting the driving shaft longitudinally, the driving shaft being rotatable in the sleeve, a non-revoluble nut engaging said threaded sleeve, a driven friction wheel on the driven shaft, side frame members of the motor vehicle, intermediate friction wheels mounted on the side frame members, and means for turning the threaded sleeve and bending the side frame elements to shift the driving shaft and force the driving friction disk against the intermediate friction wheels and moving the intermediate friction wheels into contact with the driven friction wheel.

[Claims 6 to 11 not printed in the Gazette.]

876,848. PUMP OPERATED BY COMPRESSED AIR. DANVILL W. STARRETT, San Francisco, Cal. Filed Feb. 12, 1904, Serial No. 193,231. Renewed Apr. 8, 1907. Serial No. 367,071.



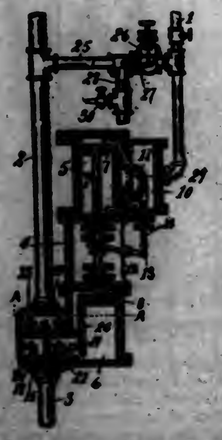
1. In an apparatus of the character described, the combination of the compressed air pipe, the water discharge pipe, the inlet valve for the water, the check valve therefor at the bottom of said water discharge pipe, a pump discharging into the space between the inlet and check valves and having a piston operated by the compressed air, and a passage from the compressed air pipe to the water discharge pipe sufficiently large in relation to the

compressed air pressure and the height of the discharge pipe to distribute the air therein sufficiently to reduce the weight of the water upon the check valve below the compressed air pressure whereby said pressure can operate the pump water through said check valve, substantially as described.

2. In an apparatus of the character described, the combination of a compressed air pipe, a water discharge pipe, an inlet valve, a check valve at the bottom of the water discharge pipe, and a pair of cylinders having pistons therein of substantially uniform diameter, said pistons being connected to work in unison, one of said cylinders being connected with the compressed air pipe to act as a compressed air motor, and the other cylinder being connected with the chamber between the inlet and check valve to act as a pump, and a passage from the compressed air pipe to the water discharge pipe sufficiently large in relation to the height of the discharge pipe and the compressed air pressure to distribute the air in said discharge pipe sufficiently to reduce the weight of the water upon the check valve below the compressed air pressure, whereby said pressure can operate said pistons to force water through said check valves, substantially as described.

3. In an apparatus of the character described, the combination of a compressed air pipe, a water discharge pipe, a chamber at the bottom of said water discharge pipe having two lower compartments each having an inlet valve therein, a cylindrical pump, the opposite ends of which connect respectively with said compartments, a compressed air cylindrical motor having a piston substantially equal in diameter to the pump piston and connected therewith to move in unison, said compressed air motor being connected with the compressed air pipe to be operated thereby, an upper compartment having check valves communicating respectively with the lower compartments, said upper compartment also communicating with the water discharge pipe, and a passage from the compressed air pipe to the water discharge pipe sufficiently large to distribute the air through the latter pipe so as to reduce the weight of the water upon either of said check valves below the compressed air pressure, whereby the pump can operate under said compressed air pressure to force water therethrough, substantially as described.

876,849. PUMP OPERATED BY COMPRESSED AIR. DANVILL W. STARRETT, San Francisco, Cal. Filed Apr. 27, 1904, Serial No. 205,128. Renewed Apr. 12, 1907. Serial No. 367,808.



1. In an apparatus of the character described, the combination of the compressed air pipe, the water discharge pipe, the inlet valve for the water, the check valve therefor at the bottom of said water discharge pipe, a pump discharging into the space between the inlet and check valves and having a piston operated by the compressed air, a passage from the compressed air pipe to the water discharge pipe sufficiently large in relation to the compressed air pressure and the height of the discharge pipe to distribute the water in said discharge pipe sufficiently to reduce the weight of the water upon the check valve below the compressed air pressure whereby said pressure can operate to pump water through said check valve, and an exhaust pipe leading to said passage from the exhaust chamber of the pump, substantially as described.

2. In an apparatus of the character described, the combination of the compressed air pipe, the water discharge pipe, the inlet valve for the water, the check valve therefor at the bottom of said water discharge pipe, a pump discharging into the space between the inlet and check valves and having a piston operated by the compressed air, a passage from the compressed air pipe to the water discharge pipe sufficiently large in relation to the compressed air pressure and the height of the discharge pipe to distribute the water therein sufficiently to reduce the weight of the water upon the check valve below the compressed air pressure whereby said pressure can operate to pump water through said check valve, an exhaust pipe leading to said passage from the exhaust chamber of the pump, and a nozzle in said passage to draw the air along said exhaust pipe, substantially as described.

3. In an apparatus of the character described, the combination of a compressed air pipe, a water discharge pipe, an inlet valve, a check valve at the bottom of the water discharge pipe, and a pair of cylinders having pistons therein of unequal diameters, said pistons being connected to work in unison, one of said cylinders being connected with the compressed air pipe to act as a compressed air motor, and the other cylinder being connected with the chamber between the inlet and check valve to act as a pump, a valve reducing the pressure of the compressed air and suitably located in correspondence with the inequality of the pistons to cause the pressure of the piston operated direct by the compressed air to balance the water pressure, and a passage from the compressed air pipe to the water discharge pipe sufficiently large in relation to the height of the discharge pipe and the compressed air pressure to distribute the water in said discharge pipe sufficiently to reduce the weight of the water upon the check valve below the compressed air pressure, whereby said pressure can operate said pistons to force water through said check valves, substantially as described.

876,850. WEATHER-STRIP. WILLIAM VAN HORN, Piqua, Ohio. Filed Apr. 15, 1907. Serial No. 368,277.



A packing for windows, doors and like closures, the same consisting of a strip of spring sheet metal having a longitudinal edge portion reflexed or bent upon itself to form a closing lip or flange, the lip and strip being transversely curved in opposite directions, whereby their convex sides face.

876,851. PROCESS OF PREPARING PURE LITHIUM COMPOUNDS. WALTER B. WADMAN, Bayonne, N. J., assignor to Hygienic Chemical Company, of New Jersey, a Corporation of New Jersey. Filed Oct. 17, 1906. Serial No. 339,282.

1. The process of preparing pure lithium compounds from solutions containing a mixture of lithia sulfate and potash sulfate, consisting in adding thereto ammonia in an amount sufficient to render the potash sulfate insoluble, then removing the same from the liquid, then removing the ammonia, and finally precipitating the lithia from the solution in the form of a carbonate.

2. In a process of preparing pure lithium compounds from solutions containing a mixture of lithia sulfate and potash sulfate, the improvement which consists in adding thereto ammonia in an amount sufficient to render the potash sulfate insoluble.

3. In a process of preparing pure lithium compounds from solutions containing a mixture of lithia sulfate and potash sulfate, the improvement which consists in adding thereto ammonia in an amount sufficient to render the potash sulfate insoluble, and subsequently separating it from the solution.

4. In a process of preparing pure lithium compounds from solutions containing a mixture of lithia sulfate and potash sulfate, the improvement which consists in adding thereto ammonia in amounts sufficient to render the potash sulfate insoluble, and precipitating the iron aluminium and manganese in the mixture as hydroxids.

876,852. CUTTING AND FACING TOOL. WINFIELD S. WATSON, Memphis, Tenn. Filed Jan. 17, 1907. Serial No. 352,738.



1. A tool for cutting buttons and the like, comprising a tubular tool holder, a tubular split saw held in the tool holder by its resiliency, a filler and carrier held in the said tubular saw, and a facing tool held on the said filler and carrier.

2. A tool for cutting buttons and the like, comprising a holder, a tubular split saw in the holder, a wooden filler and carrier fitting snugly in the saw and held therein by friction, and a facing tool carried by the said filler and carrier.

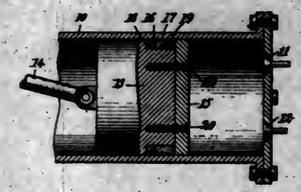
3. A tool for cutting buttons and the like, comprising a tubular saw having a cut-out portion at one end, and a facing tool within the said tubular saw and having its cutting edge opposite the cut-out portion of the saw, whereby it is adapted to be reached by a grinding device by way of the said cut-out portion in the tubular saw.

4. A tool for cutting buttons and the like, comprising a holder, a tubular split saw in the holder, a filler and carrier fitting snugly in the saw and held therein by friction, said filler and carrier extending from the upper end of the saw to a point near the lower end thereof and provided with a longitudinal groove extending the length thereof, and a facing tool in the groove of the filler and carrier and projecting beyond the lower end of the same.

876,853. PISTON. PAUL A. WILLE, New York, N. Y. Filed June 26, 1907. Serial No. 380,902.

1. A piston having an annular recess in the body portion thereof, a thin sheet metal band forming the outer wall of said recess, a resilient packing in engagement with the rear side of said band, and detachable means secured to the body of said piston for closing the end of said recess and retaining the packing in position.

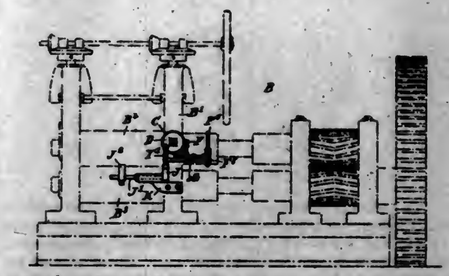
2. A piston having an annular recess in the body portion thereof, a thin sheet metal band forming the outer wall of said recess, a packing in engagement with the rear side of said band, and a plate forming the end of the piston and closing the end of said annular recess.



3. A piston having an annular recess in the body portion thereof, a thin sheet metal band forming the outer wall of said recess, a packing in engagement with the rear side of said band, and a detachable plate forming the end of the piston and closing the end of said annular recess.

4. A piston having a detachable plate forming the end thereof and having an annular recess encircling the piston adjacent said plate, a thin flexible sheet metal band forming the outer wall of said recess and having an inwardly-directed flange at one end thereof, and a resilient packing within said recess and between said band and the body of the piston, said packing serving to hold the band outward against the cylinder irrespective of the irregularities in the latter.

876,854. RECORDER. ROBERT A. WOOD, New York, N. Y. Filed June 20, 1906. Serial No. 322,559.



1. A recorder for attachment to rolling mills and other machines, comprising a revoluble card carrier driven from the machine and carrying an indicator card, a stylus for the said card and normally held out of contact with the same, and mechanism for moving the said stylus into contact with the said card, and having operating means projecting into the path of the work passing through the machine.

2. A recorder for attachment to rolling mills and other machines, comprising a revoluble card carrier driven from the machine and carrying an indicator card, a stylus for the said card and normally held out of contact with the same by the action of a spring, a bell crank lever engaging the said stylus, and a rock shaft having arms, one engaging the said bell crank lever and the other projecting into the path of the work passing through the machine.

3. A recorder for attachment to rolling mills and other machines, comprising a revoluble card carrier having means for removably supporting an indicator card, a driving mechanism for the said carrier and driven from the machine to which the recorder is applied, a spring pressed slidable stylus for the said card and normally held out of engagement by the action of its spring, a bell crank lever engaging the said stylus, and a rock shaft having arms, one for engagement with the said bell crank lever and the other for engagement by the work passing through the machine.

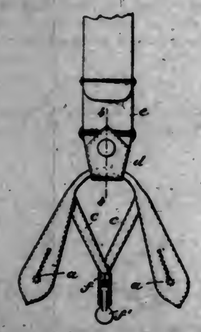
4. A recorder for attachment to rolling mills and other machines, comprising a revoluble card carrier, means for normally supporting an indicator card on the carrier, a driving mechanism for the said carrier and driven from

the machine to which the recorder is applied, a spring pressed slidable stylus for the said card and normally held out of engagement by the action of its spring, an adjustable support for the said stylus, a bell crank lever engaging the said stylus, and a rock shaft having arms, one for engagement with the said bell crank lever and the other for engagement by the work passing through the machine.

5. A record attachment for rolling mills, comprising a revoluble card carrier, means for operating the card carrier from the machine to which the recorder is applied, a stylus for the card, a sliding and spring pressed holder for the stylus, said holder having a slot at its outer end, a bell crank lever having one member engaging the slot of the stylus holder, and a rock shaft, having two arms, one of which extends into the path of the material passing through the mill, and the other engaging the other member of the bell crank lever.

[Claims 6 to 8 not printed in the Gazette.]

876,855. SUSPENDER-END. CLEOPHES B. WYANT, Chicago, Ill. Filed July 1, 1904. Serial No. 215,021.



1. A suspender end consisting of a neck and buttonhole tabs, integral; a separate strap consisting of two ends and a neck, the necks of the strap and said suspender-end welded together, the ends of said strap joined to and engaging a garment supporting clasp thereby forming a loop, the suspender-end and clasp-supporting loop joined together being attachable to or detachable from the loop supporting the suspender-end and engaging the suspender-strip by one operation, substantially as set forth.

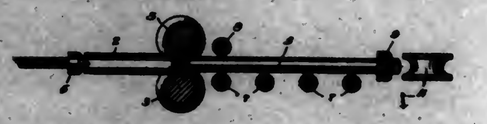
2. The combination of a suspender strip, a suspender-end-supporting-loop thereon adapted to be opened, a suspender-end comprising buttonhole tabs and a neck connecting said tabs and made integral therewith, said neck being formed to engage the loop, the neck of a separate strap united within the neck of the suspender-end and a clasp secured to and uniting the lower ends of the strap forming a clasp-supporting loop, the ends of the strap extending from the main body at points each side of the center of the neck and at an angle thereto, combined button-hole-tabs and clasp-supported loop, the ends of the strap extending from and from the suspender-end-supporting-loop and as one part.

3. In suspenders, the combination of a suspender end cord, a separately formed loop and clamping means secured to the ends of said loop, the end cord and loop having their middle portions secured together.

4. In suspenders, the combination of a suspender end cord, having a folded center, a separately formed loop held within the fold of said center, and clamping means secured to the ends of said loop.

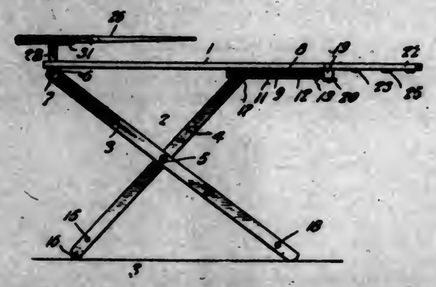
5. In suspenders, the combination of a buckle piece, a suspender end cord, a separately formed loop secured to said end cord, said end cord and loop both passing through said buckle piece, and clamping means secured to the ends of said loop.

876,856. MANUFACTURE OF SEAMLESS TUBING. GEORGE H. BLAXTER, New Brighton, Pa. Filed June 25, 1906. Serial No. 323,189.



In the manufacture of seamless tubing, the process of forcing a heated tubular blank between reducing means over and onto a mandrel bar, and then reducing the tube surrounding the mandrel bar between said bar and outside reducing means.

876,857. IRONING-BOARD. FRANCIS M. BUGBEE, North Kingsville, Ohio. Filed May 23, 1906. Serial No. 318,385.



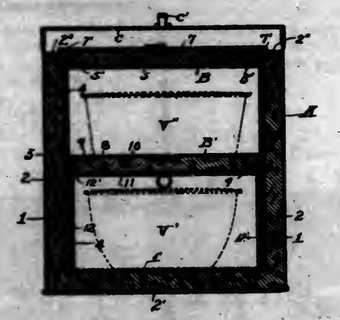
1. In a device of the class described, a frame comprising two pairs of crossed pivoted legs, a table pivoted at one end to the upper ends of one pair of said legs, locking bars secured longitudinally upon the underside of the table and provided with engaging teeth or ratchets, pins carried at the upper ends of the other pair of legs and engaging said teeth or ratchets to hold the frame in unfolded condition, springs secured upon the bars near one end of the latter for retaining the pins connected with the legs in engagement with the teeth upon the bars, said springs being yieldable to permit the pins to ride over the teeth, and headed pins connecting the free ends of the springs with the bars beyond the teeth, the free ends of the springs being freely movable upon said headed pins.

2. In a device of the class described, a supporting frame comprising crossed pivoted legs arranged in pairs, a table sustained by the frame, toothed locking bars secured longitudinally upon the underside of the table, said locking bars being provided with longitudinal recesses, laterally extending engaging members carried by one pair of legs and engaging the toothed bars, retaining springs secured upon the undersides of the toothed bars near one end of the latter, and headed fastening members extending from the opposite ends of the toothed bars through apertures in the springs near the free ends of the latter, and serving to guide the ends of said springs in their outward movement from the toothed bars and also constituting stops for engaging members carried by the legs of the supporting frame.

876,858. FIRELESS COOKER. WILLIAM C. CLINGEN, Lake Bluff, Ill., assignor to The Fireless Cooker Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 15, 1907. Serial No. 368,268.

1. A fireless cooker, comprising a receptacle, open at the top and closed at the bottom, to contain a food vessel, in combination with a vapor bell or trap, open at the bottom and closed at the top, to inclose the vessel within the receptacle and also close the top of said receptacle, the bottom and sides of said receptacle and the top of said bell being insulated to retard the radiation of heat from the food, whereby the food vapors are retained and maintained within the closed vessel for a long period of time.

2. A fireless cooker, comprising a metal receptacle, open at the top and closed at the bottom, to contain a food vessel, in combination with a metal vapor retaining bell or trap, open at the bottom and closed at the top, said bell fitting within said receptacle and closing the top thereof, and a larger metal receptacle whereto the upper edges of the first mentioned receptacle are joined, the space between said receptacles being filled with insulating or nonconducting material and the top of said bell containing non-conducting material; whereby the vapors from hot food within the receptacle are retained and maintained therein for a long period of time, substantially as and for the purpose specified.

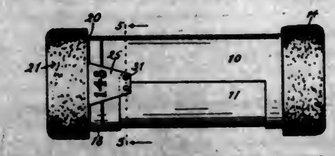


3. A fireless cooker, comprising a metal receptacle having heat retaining bottom and side walls, said receptacle being closed at the bottom and open at the top to receive a food vessel, in combination with a vapor retaining bell having a closed, heat retaining top, which closes the top of said receptacle, the sides or walls of said bell extending to the bottom of said receptacle, inclosing the food vessel therein, substantially as and for the purpose specified.

4. A fireless cooker, comprising a metal receptacle, having heat retaining bottom and side walls and open at the top, to contain a food vessel, in combination with a metal bell extending to the bottom of said receptacle and having a closed, heat retaining top, provided with a horizontal flange resting upon the top of said receptacle and closing the annular space between the same and the top of the bell, substantially as and for the purpose specified.

5. A fireless cooker, comprising a metal receptacle having heat retaining bottom and side walls and open at the top to receive, a food vessel, in combination with a metal bell or trap fitting said receptacle and having a closed, nonconducting or heat retaining top which closes the top of said receptacle, and a like metal bell of less height than the first mentioned bell, fitting within the same and also provided with a closed nonconducting top, substantially as and for the purpose specified.

876,859. PNEUMATIC CARRIER. MAJOR R. COLLINS, Indianapolis, Ind., assignor to Taisey Pneumatic Service Company, Indianapolis, Ind., a Corporation of Indiana. Filed Apr. 26, 1907. Serial No. 370,506.



1. In a pneumatic carrier, the combination with inner and outer cylindrical shells, of means removably secured at one end of said shells and extending over a portion of the cylindrical surface of the outer shell for receiving the number of the carrier.

2. In a pneumatic carrier, the combination with the inner and outer shells and felt ends, of a disk removably secured between one felt end and the adjacent shell and having on its periphery a number plate adjacent to and conforming to the curvature of the outer shell.

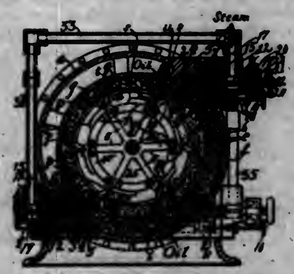
3. In a pneumatic carrier, inner and outer shells one insertible in the other longitudinally, said outer shell having an opening with one margin extending transversely thereof, and means secured to the end of the inner shell and projecting beyond said marginal line in said opening whereby the two shells will be prevented from escaping from each other.

4. In a pneumatic carrier, the combination of inner and outer cylindrical shells, the inner shell being longitudinally insertible in the outer shell and the outer shell having an opening in its periphery for the insertion of cash or the like with a marginal line transversely of the outer shell and nearer the open end thereof, and a plate secured to the end of said inner shell and projecting beyond said marginal portion of the outer shell whereby the two shells are held from independent longitudinal movement.

5. In a pneumatic carrier, the combination of inner and outer cylindrical shells, the inner shell being longitudinally insertible in the outer shell and the outer shell having an opening in its periphery for the insertion of cash or the like with a marginal line transversely of the outer shell and nearer the open end thereof, and a plate secured to the end of said inner shell and projecting over said marginal portion of the outer shell whereby the two shells are held from independent longitudinal movement.

[Claims 6 to 9 not printed in the Gazette.]

876,860. TURBINE-ENGINE. HARRY I. CROMER, Chicago, Ill. Filed May 3, 1906. Serial No. 315,013.



1. In a turbine engine the combination of a rotary wheel having peripheral blades, a casing forming an operating chamber in which such wheel is mounted and provided with compressible fluid and liquid inlet passages communicating with separate sources of supply and leading tangentially into the chamber, said chamber having imperforate end wall portions extending from the peripheral wall of the chamber inward past the periphery of the wheel and adapted to retain an annular revolving current of liquid in the operating chamber, and having a compressible fluid outlet leading from the chamber at a point toward the axial center of the wheel from the outer annular water-containing portion of the chamber.

2. In a turbine engine, the combination of rotary wheel mechanism having lateral blades, and a casing forming a chamber in which such wheel mechanism is mounted provided with a compressible fluid nozzle and a liquid inlet nozzle leading tangentially into the chamber in position to discharge intermixed currents of compressible fluid and liquid against the wheel mechanism for rotating it, said chamber having an annular centrally perforated end wall adapted to retain a revolving annular current of water in the chamber and permit the escape of compressible fluid and thereby separate the compressible fluid from the liquid in the said chamber.

3. In a turbine engine, the combination of rotary wheel mechanism provided with peripheral blades, a casing forming an inner annular operating chamber in which the wheel mechanism is mounted, and an outer water containing chamber forming a water passage which partly en-

circles the operating chamber and wheel and opens into the operating chamber at a tangent with relation to the wheel mechanism, said operating chamber having an end wall extending from the peripheral wall of said chamber inward past the periphery of the wheel mechanism toward the axial center thereof and adapted to retain a revolving annular current of water in the operating chamber, said end wall having an opening inside the outer annular water retaining portion thereof adapted to permit the escape of compressible fluid from the chamber and thereby separate the said compressible fluid from the liquid in the chamber, and a compressible fluid inlet nozzle mounted adjacent to the inlet opening of the liquid passage in position to discharge a current of compressible fluid into the liquid and tangentially into the operating chamber.

4. In a turbine engine, the combination of a casing forming an annular inner operating chamber and a lateral water containing passage which partly encircles and leads tangentially into the operating chamber, a fluid inlet nozzle communicating with a compressible fluid supply passage and opening into the liquid inlet passage in position to discharge a current of compressible fluid through the liquid passage and tangentially into the operating chamber, wheel mechanism having peripheral blades mounted in the operating chamber, means for permitting the escape of compressible fluid from the operating chamber and retaining a revolving annular current of water in said chamber, thereby separating the compressible fluid from the liquid in said chamber, and means for permitting the escape of compressible fluid from and retaining the liquid in the lateral water containing chamber or passage.

5. In a turbine engine, the combination of a casing having inner peripheral and end wall portions forming an annular inner operating chamber adapted to retain an annular current of water and provided with a central outlet opening in the end wall portion of the operating chamber for permitting the escape of compressible fluid from the chamber, a wheel rotatably mounted in the chamber and provided with radial blades having their outer peripheral edges extending laterally beyond the outer edge of the outlet opening of the operating chamber, a liquid inlet nozzle opening into the operating chamber tangentially with relation to the wheel, and a fluid inlet nozzle opening into the operating chamber tangentially with relation to the wheel and communicating with a compressible fluid supply passage.

[Claims 6 to 17 not printed in the Gazette.]

876,861. ART OF FINISHING SURFACES OF HEELS, SOLES, &c. WILLIAM W. CROOKER, Lynn, Mass., assignor to Frank E. Wachtler, Boston, Mass. Filed Apr. 5, 1907. Serial No. 366,642.

1. That improvement in the art of finishing surfaces of heels, etc., which consists in applying a preliminary coating containing wax in emulsion, and then applying a finishing coating adapted to be united by heat with the first coating.

2. That improvement in the art of finishing surfaces of heels, etc., which consists in applying a preliminary coating containing wax in emulsion, and then applying a finishing coating containing oleaginous matter in solution which unites with the wax in the preliminary coating.

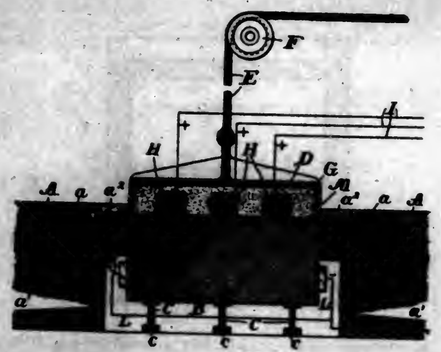
3. That improvement in the art of finishing surfaces of heels, etc., which consists in applying a preliminary coating containing wax in emulsion and an alkaline solution of coloring matter, and then applying a finishing coating containing an alcohol, which restores the loss of strength in the coloring matter caused by the alkaline solvent thereof.

4. That improvement in the art of finishing surfaces of heels, etc., which consists in applying successive coatings, adapted to be united by heat, one containing wax in emulsion and an alkaline solution of coloring matter, while the other contains ingredients which combine with the wax and the coloring matter in solution to make the finished surface waterproof and strengthen the color.

5. That improvement in the art of finishing surfaces of heels, etc., which consists in applying a preliminary coating containing coloring matter, an alkaline and oleic acid, said coating also containing a vegetable wax in emulsion, and then applying a finishing coating adapted to be united to the preliminary coating by heat.

[Claims 6 to 8 not printed in the Gazette.]

876,862. METHOD FOR THE CEMENTATION OF STEEL. CLELAND DAVIS, U. S. Navy, assignor, by mesne assignments, to Carnegie Steel Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Apr. 10, 1901. Serial No. 55,124.



1. The process of treating previously formed iron or steel plates which consists in heating one face of the solid plate to an approximately molten condition by means of a heavy current of electricity, and carburizing said molten face, substantially as described.

2. The process of treating previously formed iron or steel plates which consists in heating one face of the solid plate to approximately molten condition by means of a heavy current of electricity, and carburizing said molten face and in maintaining the opposite face of said plate at a lower temperature, substantially as described.

3. The process of treating armor plate, which consists in applying carbon to one side of the plate and screening said carbon and that side of the plate from air, in passing a heavy current of electricity through said carbon and through said plate, and simultaneously blowing air on the opposite side of the plate, substantially as described.

4. The method of making hardened steel plates, consisting in applying carbon to one face of the solid plate, screening such portion of the plate from air, heating the carbon covered face to an approximately molten condition by a heavy current of electricity, and maintaining the opposite portion of said plate at a lower temperature; substantially as described.

5. The method of treating iron or steel plates, consisting in applying carbon to one face of the plate, screening such face from the air, and then applying an electric current to such face to raise it to an approximately molten condition; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

876,863. CHANNELER. CLARENCE A. DAWLEY, New York, N. Y. Filed Apr. 3, 1907. Serial No. 366,130.



1. A channeler comprising in combination a tool cylinder, a pulsator, means connecting the same, and independent supports for said pulsator and tool cylinder and means connecting said supports to cause them to move together.

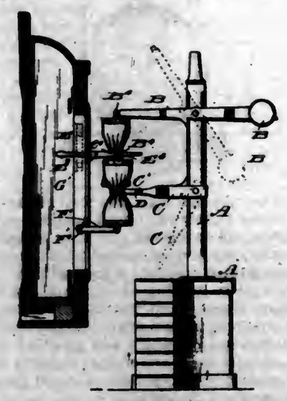
2. A channeler comprising in combination a tool cylinder, a pulsator, means connecting the same, independent supports for said tool cylinder and pulsator arranged to move together, and feed mechanism for said supports.

3. A channeler comprising in combination a tool cylinder, a truck carrying the same, a pulsator, a support therefor, a cableway on which said support is mounted, and means connecting said pulsator and tool cylinder.

4. A channeler comprising in combination a tool cylinder, a truck carrying the same, a pulsator, a support therefor, a cableway on which said support is mounted, means connecting said pulsator and tool cylinder, and means for feeding said truck and support together.

5. A channeler comprising in combination a tool cylinder, a truck carrying the same, a pulsator, a support therefor, a cableway on which said support is mounted and arranged to be suspended, said support in close proximity to said tool cylinder.

876,864. MAIL-BAG CATCHING AND DELIVERING APPARATUS. JAMES B. DAWSON, Pioneer, Mont. Filed Apr. 17, 1907. Serial No. 368,745.



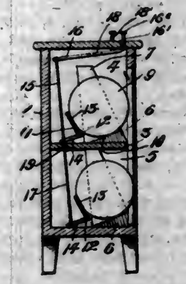
1. In a mail receiving and delivering apparatus a station crane having a pivoted arm and provided at its outer end with hooks facing in opposite directions and with an intermediate outwardly projecting extension, the latter having means for connection with a mail sack and the hooks being provided with pivoted latches having arms projecting at an angle to each other and the butt portions provided with faces for engagement by a spring, and a spring engaging said faces for holding the latch in different positions, an arm above said first arm and provided with means for connection with a mail sack, a car hook having a sack receiving hook provided in its throat with a latch device and having on its outer side a fastening for connection with the upper end of a mail sack, a latch for holding said car hook in position for use, and a pivoted bail on the car and provided with means for connection with the lower end of a mail sack suspended from said hook, substantially as set forth.

2. A pivoted car hook provided with means for receiving and delivering mail sacks and having an inwardly projecting arm combined with a latch springing into engagement with said arm for holding the car hook in position for the reception and delivery of sacks, substantially as set forth.

3. A car having a door-way, a pivoted car hook provided with means for the reception and delivery of mail sacks, and a pivoted bail in the door-way below said car hook and having means for connection with the lower end of a sack, suspended from said hook, the cross-bar of said bail swinging into the door-way when the bail is not in use, substantially as set forth.

4. A mail receiving and delivering apparatus comprising a station crane having a pivoted arm provided at its outer end with hooks facing in opposite directions and with an intermediate outwardly projecting extension having means for connection with a mail sack, an arm above said first arm and provided with means for connection with the mail sack, a car hook having a sack receiving hook provided in its throat with a latch device and having on its outer side a fastening for connection with the upper end of a mail sack, a latch for holding said car hook in position for use, and a pivoted bail on the car and below the car hook and provided with means for connection with the lower end of the mail sack suspended from the car hook, substantially as described.

876,865. PHONOGRAPHIC-RECORD CABINET. ROBERT A. DENOVAN, Dalkeith, Ontario, Canada. Filed Apr. 3, 1907. Serial No. 366,218.



1. A phonographic record cabinet provided with upper and lower compartments, each provided with a plurality of record receptacles, said cabinet being provided with a door-way at the front thereof for said compartments, and retaining means at the lower front portions of the respective receptacles of the compartments to support and hold the records from forward movement, ejecting devices in the compartments to engage the records and hold them in engagement with said retaining devices, and operating means for said ejecting devices.

2. A phonographic record cabinet provided with upper and lower compartments, each having a plurality of record cells or receptacles therein, retaining means for holding the record disks from forward movement in said cells, ejecting devices holding the disks from rearward movement and adapted when operated to force the same forward, operating rods extending upwardly from said devices to the top of the upper compartment, and sets of levers connected respectively with the rods of the ejecting devices in the upper and lower compartments, said levers having operating devices at the top of the cabinet arranged in distinguishing rows.

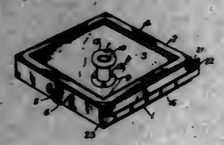
3. A phonographic record cabinet provided with a record receptacle, retaining means for normally holding the record disk from forward movement therein, an ejecting device at the rear of the receptacle adapted for holding the disk from rearward movement, and means for operating said ejecting device to project the disk forward.

4. A phonographic record cabinet provided with a door-way, a plurality of record receptacles therein having downwardly and rearwardly inclined shelves to support the records therein, projecting devices engaging the records to hold them in contact with the shelves, and means for individually operating said projecting devices.

5. A phonographic record cabinet provided with a record receptacle, a downwardly and rearwardly inclined support at the base of the receptacle, a bell crank lever at the rear of the receptacle, one arm of which is arranged to engage the rear edge of a disk occupying the receptacle to hold the same from downward movement on the inclined support, and means connected with the other arm of said lever for rocking the same to project the disk forwardly.

[Claims 6 and 7 not printed in the Gazette.]

876,866. TICKET-HOLDER. WILLIAM A. DOWNING and JAMES T. MCHUGH, Pittsburg, Pa. Filed May 17, 1907. Serial No. 374,118.



1. A ticket holder, comprising a box or casing, a reel centrally disposed within said box, a guide of U-shape in cross section communicating at one end with an opening in the box and extending along one side of the box, said guide bearing numbered graduations and having a projecting arm.

2. A ticket-holder comprising a box or casing, a revoluble sleeve centrally arranged within said box, and adapted to support a rolled ticket strip, a guide communicating at one end with an opening in the box, and carrying a ticket severing projection at its opposite end, said guide bearing numbered graduations, and being of less width than the ticket strip.

3. A ticket-holder comprising a box or casing, a flanged stationary sleeve secured to the bottom of the box, a revoluble flanged sleeve supported upon said stationary sleeve, a guide curved at one end, and communicating with a corner slot of the box, said guide being U-shaped in cross-section and extending parallel to one side of the box through the box thereof and terminating in a ticket severing arm, and bearing on its exposed face a series of numbered graduations, spaced to conform to the length of the tickets within the box.

4. A ticket-holder comprising a box or casing, a revoluble reel support within the box to receive a ticket strip wound thereon, a guide of U-shape in cross-section communicating at one end with a slot in the box through which the outer end of the ticket strip extends, said guide being of less width than the ticket strip and bearing numbered graduations, the distance being equal to the length of the tickets on the strip.

5. The combination with a ticket-holder comprising a box, a revoluble reel therein, a ticket strip wound upon said reel, a guide to receive said strip as it is drawn from the reel and an indicator attached to one side of the box adjacent to the end of the guide from which the ticket strip issues, said indicator being provided with numbered graduations, and adapted to rest upon a table or support.

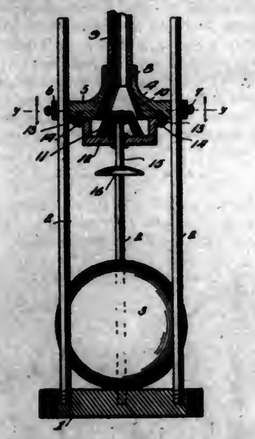
[Claim 6 not printed in the Gazette.]

876,867. VALVE. TIMOTHY A. DUGGAN, New Orleans, La. Filed Mar. 8, 1907. Serial No. 361,884.

1. A device of the character described comprising a guide frame, a head slidably adjustable on the guide frame and provided with an inlet port and a depending support, a supply pipe connected with the head and communicating with the inlet port, means for securing the head in adjusted position, a gravity opening valve adapted when open to rest upon said support and movable upward to control the inlet in the head, a stem connected with said valve and slidably movable through the support, a shoe carried by the lower end of said stem, and a float movable in the guide frame below the head and adapted on its upward movement to engage said shoe.

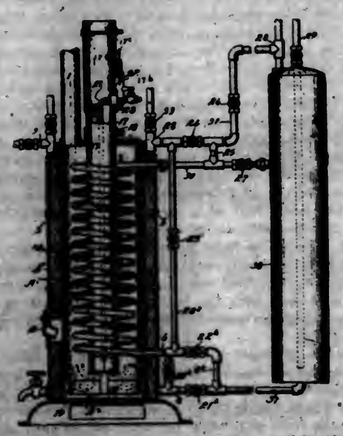
2. A device of the character described comprising a guide frame, a head supported thereby and provided with a supply pipe connection and an inlet port, a support upon the base of the head, a gravity opening valve adapted when open to rest upon said support and vertically movable to control the port in the head, a stem connected with the valve and movable through said support and provided at its lower end with a contact shoe, and a float movable in the guide frame and adapted to engage said shoe and impart upward closing movement to the valve.

3. A device of the character described comprising a guide frame, a head vertically adjustable thereon and provided with a supply pipe connection and an inlet port, means for securing the head in adjusted position, a support upon the base of the head, a gravity opening valve adapted when open to rest upon said support and vertically movable to control the port in the head, a stem connected with the valve and movable through said support and provided at its lower end with a contact shoe, and a float movable in the guide frame and adapted to engage said shoe and impart upward closing movement to the valve.



4. A device of the character described comprising a base, guide rods rising therefrom, a head provided with a supply pipe connection, an inlet port and arms slidably engaging said rods, fastening devices carried by the arms to secure the head in adjusted position, a support upon the base of the head, a gravity opening valve adapted when open to rest upon said support and vertically movable to control the port in the head, a stem connected with the valve and movable through said support and provided at its lower end with a contact shoe, and a float movable in the guide frame and adapted to engage said shoe and impart upward closing movement to the valve.

876,868. WATER-HEATER. EMANUEL W. DUNN, San Jose, Cal. Filed Feb. 14, 1907. Serial No. 357,257.



1. In a water-heating apparatus, the combination of a vertically-disposed casing having an interior chamber with a surrounding water-space, a coil located within said chamber, connections between the coil and the said water-space, water supply and distributing means, closures for the top and bottom of said chamber, an escape-flue from the upper part of the chamber, a hydro-carbon fuel-pipe leading down within the coil and discharging at the lower end, a centrally-disposed air-pipe inclosing said fuel-pipe, and a burner-plate located in the lower part of said chamber, upon the surface of which plate the fuel is discharged and ignited, and from which it is delivered radially and below the bottom of the air-pipe to rise around the coil and within said chamber.

2. In a water-heating apparatus, the combination of a vertically-disposed casing having an interior chamber with a surrounding water-space, a coil located within said chamber having connection with said water-space, water supply and distributing means, a refractory base closing the lower end of the chamber, and forming a burner-plate, a fuel-supply pipe extending vertically down through the center of the coil and discharging fuel directly upon the burner-plate, an air-supply pipe open at both ends and inclosing the fuel-pipe, and extending downwardly to a point contiguous to the burner-plate, means for adjusting the air and oil pipes with relation to the burner-plate, a closed top for the interior chamber, and a discharge flue from the upper portion of said chamber.

3. In a water-heating apparatus, the combination of a casing having an interior chamber with a surrounding water-space, a coil vertically-disposed in said chamber having circulating connection with said water-space, water supply and discharge means, a down-draft air-flue contiguous to said coil, a fuel-supply pipe extending downwardly through the air-flue to a point near the bottom thereof, a burner-plate located contiguous to the lower end of the air-flue and beneath the oil-pipe whereby a downward and outward projection of the products of combustion is effected, a closed top for the said chamber, and a discharge flue for the products of combustion.

4. In a water-heating apparatus, the combination of a casing having an interior chamber with the surrounding water-space, a coil vertically-disposed in said chamber having circulating connection with said water-space, a burner-plate located below the coil and forming a closure for the bottom of said chamber, a down-draft air-flue contiguous to the coil, the lower end of the flue being located near the surface of the burner-plate, a fuel discharge pipe extending downwardly through the flue and terminating contiguous to the burner-plate, and inlet and outlet pipes connecting with the bottom and top of the water-space of said casing.

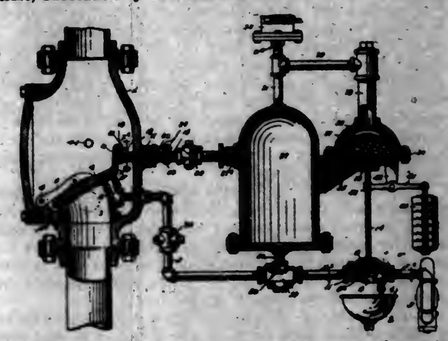
5. In a water-heating apparatus, the combination of the casing having an interior chamber with a surrounding water-space, a coil vertically-disposed in said chamber and having circulating connection with said water-space, means within said chamber for heating said coil said means including a hydro-carbon supply pipe and an inclosing down-draft air-pipe, both entering the chamber to a point above the lower end thereof, a storage tank, connections between the upper and lower ends of said tank and the coil, means connecting said tank with the water-space of the casing, and a branch connection between the lower part of the storage tank and the bottom of the coil.

[Claims 6 to 9 not printed in the Gazette.]

876,869. WET-PIPE ALARM-VALVE. CHARLES B. GARRETT, Minneapolis, Minn., assignor, by direct and mesne assignments, to The Globe Automatic Sprinkler Company, Minneapolis, Minn., a Corporation of Minnesota. Filed Dec. 31, 1904. Serial No. 239,065.

1. In an alarm valve, a casing forming part of a water conduit, two supplemental fluid passages leading from said casing, a check valve within said casing directly controlling the inlet thereto and said two supplemental fluid passages, and means coöperating with said supplemental passages to cause an alarm, substantially as described.

2. In an alarm valve, a casing forming part of a water conduit, two supplemental fluid passages leading from said casing, a check valve within said casing directly controlling the inlet thereto, and said two supplemental fluid passages, liquid-actuated means coöperating with said supplemental passages, to cause an alarm when said check valve opens a predetermined amount for a predetermined time, substantially as described.



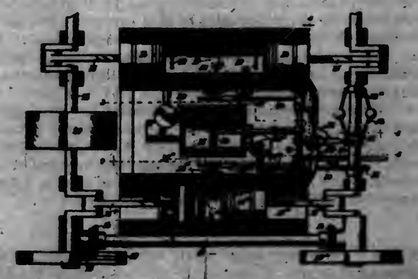
3. In an alarm valve, a casing forming part of a water conduit, primary and secondary supplemental outlet passages leading from said casing, a check valve in said casing controlling the inlet thereto and the said two supplemental passages, an accumulation chamber receiving from said secondary passage and discharging into said primary passage, and means actuated by a predetermined accumulation of water in said accumulation chamber, to cause an alarm, substantially as described.

4. In an alarm valve, a casing forming part of a water conduit, primary and secondary supplemental outlet passages leading from said casing, said primary passage having a normally open drain, and an accumulation chamber receiving from said secondary passage and draining into said primary passage, and a valve actuated by a predetermined accumulation of water in said accumulation chamber, to close the drain of said primary passage, substantially as described.

5. In an alarm valve, a casing forming part of a water conduit, primary and secondary supplemental outlet passages leading from said casing, a check valve within said casing controlling the inlet thereto, and said two supplemental outlet passages, a normally open drain leading from said primary outlet passage, an alarm device, an independent outlet leading from said primary supplemental passage to said alarm device, an accumulation chamber receiving from said secondary passage and draining into said primary passage, and a valve for closing the drain of said primary passage, itself arranged to be moved to close said drain, by a predetermined accumulation of water in said accumulation chamber, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

876,870. INTERNAL-COMBUSTION ENGINE. FINIS C. GORDON, Asotin, Wash. Filed Nov. 9, 1905. Serial No. 286,523.



1. In an internal combustion engine, two working cylinders, a vaporiser for each cylinder, a double-acting fuel pump having its ends respectively in connection with the vaporisers, a double acting mixture pump having its ends respectively in connection with the vaporisers and the cor-

responding working cylinders, and a governor controlled means for operating said pumps.

2. An internal combustion engine having, in combination, two working cylinders, pistons operating therein, a crank shaft connected to both of said pistons, two vaporisers, one for each of said cylinders, a double acting fuel pump delivering to each of said vaporisers, a double acting mixture pump connecting said vaporizers with their respective cylinders, a rock shaft, an arm attached thereto, means operatively connected to said crank shaft for oscillating the arm, and means connected to said arm for operating both of said pumps.

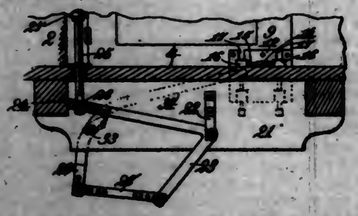
3. In an internal combustion engine, a working cylinder, a crank shaft, a rock shaft, an arm attached to said rock shaft, means connecting said crank shaft and said rock shaft for oscillating the latter, a liquid fuel pump, an explosive mixture pump, means connecting said arm to both of said pumps for operating the latter, and a governor for varying the effective length of said arm.

4. In an internal combustion engine, a working cylinder, a crank shaft, a rock shaft, an arm attached to said rock shaft, means for oscillating said rock shaft and arm from the crank shaft, a liquid fuel pump, a vaporiser receiving fuel therefrom, an explosive mixture pump delivering to said cylinder, means connecting said arm to both of the pumps for operating the same, and a governor for varying the points of connection between the arm and said pumps.

5. In an internal combustion engine, a working cylinder, a piston operating therein, a crank shaft connected to said piston, a vaporiser, a liquid fuel pump delivering to said vaporiser, a mixture pump connected to said vaporiser and delivering to said cylinder, and a single governor-controlled means for operating both of said pumps.

[Claim 6 not printed in the Gazette.]

876,871. CAR VESTIBULE-DOOR AND TRAP. CHARLES E. GRIFFITH, Philadelphia, Pa. Filed Aug. 20, 1907. Serial No. 389,387.



1. The combination in a car of a vestibule door and a trap, said trap being hinged to the car and also having a vertically adjustable hinged connection with the door.

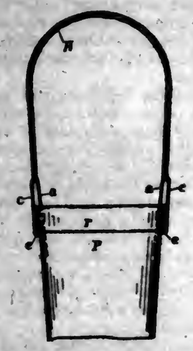
2. The combination in a car of a vestibule door and a trap hinged to the car and comprising flexibly connected sections, one of which is connected with said door by a vertically adjustable hinged connection.

3. The combination in a car of a vestibule door, a trap when closed to cover the steps of said car, a hinge member connected with the trap, a hinge member fastened to the door and comprising vertically adjustable blocks, and a rod carried by said blocks and to which said first mentioned hinge member is connected.

4. The combination in a car of a vestibule door and a trap, said trap comprising two sections hinged to each other along a line extending obliquely thereof, the sections of the trap being united with the car and vestibule door respectively by hinged connections, and one of said hinged connections being vertically adjustable.

876,872. DETACHABLE BAIL FOR FLOWER-POTS. GEORGE B. HART, Rochester, N. Y. Filed Mar. 1, 1907. Serial No. 360,114.

1. A detachable bail for flower pots and like articles comprising a plurality of wires twisted together, the free ends of one or more of such wires at each end of such bail adapted to extend downwardly on the inside of the side wall of the vessel and the free ends of one or more of the remaining wires at each end of the bail hooked and adapted to extend downwardly on the outside of and engage under a rim or projection on the outside of the wall of such vessel.

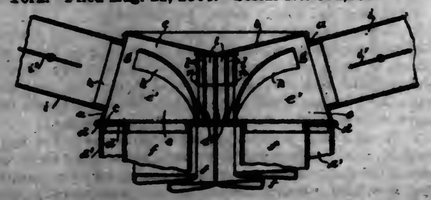


2. A detachable bail for flower pots and like articles comprising a plurality of wires twisted together, the free ends of one or more of such wires at each end of such bail adapted to extend downwardly on the inside of the side wall of the vessel and the free ends of one or more of the remaining wires at each end of the bail hooked and adapted to extend downwardly on the outside of and engage under a rim or projection on the outside of the wall of such vessel, the free end or ends of the wires at each end of the bail arranged to engage on the side of the wall of the vessel opposite that side of the bail where they enter the twisted portion thereof.

3. A detachable bail for flower pots and like articles comprising a plurality of wires secured together at points removed from their free ends to secure a springing action thereof, the free ends of one or more of such wires at each end of such bail adapted to extend downwardly on the inside of the wall of the vessel and the free ends of one or more of the remaining wires at each end of the bail hooked and adapted to extend downwardly on the outside of and engage under a rim or projection on the outside of the wall of such vessel.

4. A detachable bail for flower pots and like articles comprising a plurality of wires secured together at points removed from their free ends to secure a springing action thereof, the free ends of one or more of such wires at each end of such bail adapted to extend downwardly on the inside of the side wall of the vessel and the free ends of one or more of the remaining wires at each end of the bail hooked and adapted to extend downwardly on the outside of and engage under a rim or projection on the outside of the wall of such vessel, the free end or ends of the wires at each end of the bail arranged to engage on the side wall of the vessel opposite that side of the bail where they are secured together.

876,873. HOOD FOR HOT-AIR FURNACES. ELBERT O. HASKINS, Rutherford, N. J., assignor to Abendroth Brothers, Port Chester, N. Y., a Corporation of New York. Filed Aug. 21, 1906. Serial No. 331,437.



1. A hood for hot air furnaces comprising a shell, a series of partitions dividing said shell interiorly into a number of compartments, such compartments being in communication with one another and each adapted in its lower portion to receive the rising heated air from around the furnace, a connection for an outlet distributing pipe from each of the said compartments, and means in each of the said compartments for deflecting the heated air from the intake pipe through its compartment and into the corresponding outlet distributing pipe.

2. A hood for hot air furnaces comprising a shell, a series of partitions dividing said shell interiorly into a number of compartments, such compartments being in communication with one another and each adapted in its lower portion to receive the rising heated air from around the furnace, a connection for an outlet distributing pipe from each of the said compartments, means in each of the said compartments for deflecting the heated air from the intake pipe through its compartment and into the corresponding outlet distributing pipe and a damper in each outlet distributing pipe.

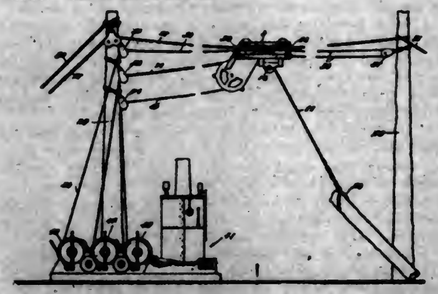
3. A hood for hot air furnaces comprising a shell, a series of partitions dividing said shell interiorly into a plurality of communicating compartments each adapted in its lower portion to receive an air inlet pipe, an outlet distributing pipe from each of the said compartments and a closing means therefor whereby the normal circulation of heated air is continued through the said compartments when any outlet distributing pipe therefrom is shut off.

4. A hood for hot air furnaces, comprising a hollow shell in the form of a truncated cone, a series of vertical radially placed partitions extending from the outer member of the said shell to points equally distant from the center thereof, thereby dividing the said shell interiorly into a number of compartments, each adapted in its lower portion to receive an inlet pipe, a connection for an outlet distributing pipe from each of said compartments, a series of deflectors, one for each compartment, each deflector extending from the inner edges of the said partitions to a point adjacent to the connection for the said outlet distributing pipe, and a series of dampers pivotally mounted to operate automatically at the inner edges of the said partitions.

5. A hood for hot air furnaces, comprising a shell, a series of vertical radially placed partitions extending the depth of the hood and from the outer member of the said shell to points equally distant from the center thereof, thereby dividing the said shell interiorly into a central compartment and a number of independent compartments communicating therewith each adapted in its lower portion to receive the heated air from around the furnace and a connection for an outlet distributing pipe from each of the said compartments.

[Claim 6 not printed in the Gazette.]

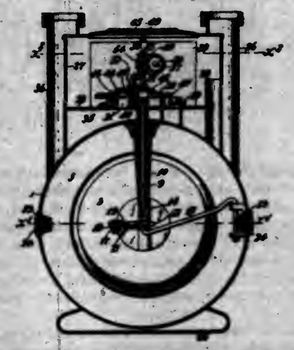
876,874. SLACK-PULLING SKIDDING DEVICE. JOSEPH A. HAUSFELDER, Los Angeles, Cal. Filed Jan. 17, 1907. Serial No. 352,843.



1. In combination, a traveling carriage, two traveling-drum parts on said carriage, an out-haul rope connected to said carriage, two stationary drums, a rope connecting each of said stationary drums with one of said traveling-drum parts to operate inversely, one of said ropes being extended beyond its traveling-drum part for connection with an object to be hauled, and a stationary drum connected to said out-haul rope.

2. In combination, a traveling carriage, two traveling-drum parts on said carriage, a supplemental-drum mounted in said carriage in alinement with one of said drum parts; two stationary drums, a rope connecting each of said stationary drums with one of said traveling-drum parts to operate inversely, one of said ropes being wound around its traveling-drum part and the supplemental drum, and extended beyond the carriage for connection with an object to be hauled.

876,875. GAS-METER. THOMAS HENNING, CHARLES E. HENNING, and WILLIAM J. HENNING, Pasadena, Cal. Filed Mar. 13, 1907. Serial No. 362,236.



1. In a gas meter, the combination with a cylindrical case, of the diaphragm therein provided with a flexible portion extending to the wall of the case, said wall having an annular groove to receive said flexible portion, in combination with a clamping ring extending within said flexible portion and pressing the same outwardly into the groove.

2. In a gas meter, the combination with a case, of movable diaphragms therein provided with flexible portions extending to the walls of the case, and a swinging member pivoted on the walls of the case at opposite sides and extending across the case and having pivotal connection to the diaphragms, to guide the same in its movement.

3. In a gas meter, the combination with a case and the removable diaphragms, of a shaft rotatably mounted in the case and having a crank, a link connection from one diaphragm to said crank, an arm rigidly carried by said crank, a member adjustable on said arm, and a link connection from said member to the other diaphragm, the case having diametrically opposite openings in line with one position of said adjustable means, and removable means for closing said openings.

4. In a gas meter, the combination with the operating crank shaft and the rotary valve member, of an adjustable crank means connecting said shaft and member and comprising two angularly adjustable members, one connected to the crank shaft and the other having pivotal connection with the valve member.

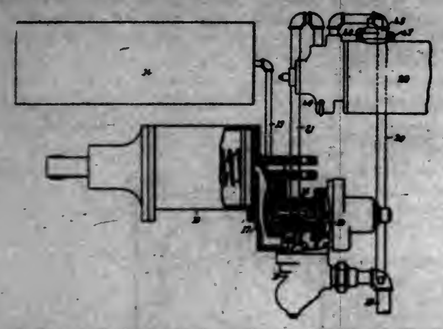
5. In a gas meter, the combination with the gas pressure operated shaft, provided with an adjustable crank, a rotary valve operated by the crank, another shaft having crank connection to the valve member to be operated thereby, a worm and detachable means for securing it to its shaft, and a dial operating worm wheel engaging said worm.

[Claims 6 to 8 not printed in the Gazette.]

876,876. AUTOMATIC PRESSURE RETAINING AND GRADUATING RELEASE DEVICE FOR AIR-BRAKES. EVAN B. HILLMAN and LOUIS E. ROBERTS, Chico, Cal.; said Roberts assignor to said Hillman. Filed Feb. 14, 1907. Serial No. 357,308.

1. In an air brake system, the combination with the brake pipe, brake cylinder, auxiliary reservoir and triple valve, of means for controlling the exhaust from said

triple valve, said means including a chamber normally containing air at a lower pressure than that within the brake pipe, and means operated by the difference in pressure between the chamber and the brake pipe for opening or closing the exhaust from the triple valve.



2. In an air brake system, the combination with the brake pipe, brake cylinder, auxiliary reservoir, and triple valve, of means for controlling the exhaust from said triple valve, said means including a chamber normally containing air at a lower pressure than that within the brake pipe, a movable member controlled by the relative pressures within said chamber and said brake pipe, and a port closing member operatively connected to said movable member.

3. In an air brake system, the combination with the brake pipe, brake cylinder, auxiliary reservoir and triple valve, of means for controlling the exhaust from said triple valve, said means including a chamber, a conduit connecting said chamber and said brake pipe, said conduit including a pressure-reducing valve, a movable member having one surface thereof subjected to the pressure within said chamber and the other surface thereof subjected to the pressure within the brake pipe, and a port closing member carried by said movable member.

4. In an air brake system, the combination with the brake pipe, brake cylinder, auxiliary reservoir and triple valve, of means for controlling the exhaust from said triple valve, said means including a chamber, a conduit connecting said chamber and said brake pipe, said conduit including a pressure-reducing valve, a cylindrical chamber in communication with the first mentioned chamber and having one end thereof in communication with said chamber and the other end thereof in communication with said brake pipe, a piston within said cylinder, and a port closing member carried by said piston.

5. In an air brake system, the combination with the brake pipe, brake cylinder, auxiliary reservoir and triple valve, of means for controlling the exhaust from said triple valve, said means including a cylindrical chamber, means for placing one end of said chamber in direct communication with the brake pipe, means for placing the other end of said chamber in communication with the brake pipe, said last mentioned means including a pressure-reducing valve, a movable member within said cylindrical chamber, and a port closing member operatively connected to said movable member.

[Claims 6 to 10 not printed in the Gazette.]

876,877. WALL-BOX FOR ELECTRIC SWITCHES. RODOLPHUS W. HOLLIS, Atlanta, Ga. Filed June 18, 1906. Serial No. 322,219.

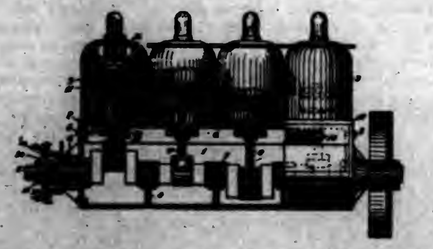


1. In a wall-box for electric switches, the box, flanges on the front end thereof, a plate perforated and countersunk to receive screw heads and means for holding the countersunk sides of said plates against their respective flange.

2. In a wall-box for electric switches, the box, flanges on the front thereof, a plate perforated and countersunk to receive screw heads and means for holding the countersunk sides of said plates against their respective flange, consisting of lips formed upon said flanges by turning backwardly and inwardly their extended ends.

3. In a wall-box for electric switches, the box, flanges on the front end thereof, a plate perforated and countersunk to receive screw heads and means for holding the countersunk sides of said plates against their respective flange, said flanges being perforated with holes smaller than and in line with each of the countersunk perforations in said plate.

876,878. EXPLOSIVE-ENGINE. WILLIAM H. HOOPER and FRED S. HUTCHINS, San Francisco, Cal. Filed Dec. 19, 1905. Serial No. 292,427.



1. In a gas engine, an engine frame or structure comprising a crank case, a separately formed slide valve chamber secured to the crank case, and a cylinder secured to the slide valve chamber; said three parts being in longitudinal alinement, with said valve chamber in the intermediate position.

2. In a gas engine, a crank-case, an engine cylinder, a slide-valve chamber between the crank-case, and cylinder, such parts being secured rigidly together, a gas inlet passage opening into the slide-valve chamber, a slide-valve in said chamber, a crank shaft, a connecting rod, a ball seated in the slide-valve and through which such connecting rod passes, a piston, a passage from the lower part of the cylinder to the upper part of the cylinder, a valve controlling the exit of fresh gas from the lower part of the cylinder to the said passage and a valve controlling the admission of gas to the cylinder above the piston.

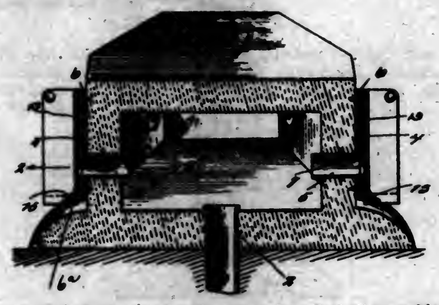
3. In a gas engine, a crank case, slide-valve chamber, slide-valve and cylinder, a piston, a connecting rod passing through the slide-valve and operating the same by its oscillation, a gas inlet to the cylinder beneath the piston, and an exhaust outlet in the cylinder adapted to be opened by the piston when at the lower extremity of its stroke.

4. In a two-cycle gas engine, a gas inlet for admitting gas beneath the piston, a slide valve controlled by the connecting rod for opening and closing said inlet, an outlet leading into the cylinder above the piston, and an exhaust outlet from the cylinder opened by the downward motion of the piston and closed by its upward motion.

5. A multiple cylinder engine, having a crank-case beneath and common to all the cylinders, a crank shaft passing through the crank-case and having bearings therein, cranks on said shaft located relatively to the respective cylinders so as to cause their respective pistons to control the inlet, compression and exhaust, progressively, a slide valve for each cylinder operated by its connecting rod, inlet openings to said cylinders from a common inlet pipe, and exhaust outlets from said cylinders to a common exhaust pipe.

876,879. IRRIGATION-GATE BOX. RILEY H. HOWARD, Riverside, Cal. Filed June 27, 1907. Serial No. 381,056.

1. In a device of the character described, the combination with an immovable channel member, having an open-ended tubular shell forming an outlet for the immovable member when used in connection with a cement irrigation box, of a pivoted member conforming to the shape of the immovable member for closing said outlet, said pivoted member designed to have a close contact with the said immovable member.



2. In a device of the character described, the combination with an immovable channel member, having an open-ended tubular shell forming an outlet for the immovable member when used in connection with a cement irrigation box, of a pivoted member conforming to the shape of the immovable member for closing said outlet, said pivoted member designed to have a close contact with said immovable member, said pivoted member having a projection used for opening the same.

3. A gate for cement irrigation boxes, comprising a U-shaped body member, having a tubular shell designed to be incased within the wall of said cement irrigation box, a pivoted member for closing the inlet to said box formed by the tubular shell, said pivoted member conforming to the shape of the body member.

4. A gate for cement irrigation boxes, comprising a U-shaped body member having a tubular shell designed to be incased within the wall of said cement irrigation box, a pivoted member for closing the inlet to said box formed by the tubular shell, said pivoted member conforming to the shape of the body member, said pivoted member having a projection used for opening the same, said U-shaped body member having a spring member to engage said projection, so as to secure the pivoted member against the pressure of water in the gate box.

5. In a gate for irrigation boxes, the combination with an immovable member having a tubular shell, designed to be incased in the wall of the irrigation box, of a pivoted member conforming to the shape of the immovable member for closing the tubular shell, said pivoted member having a projection, said immovable member having a spring member to engage said projection.

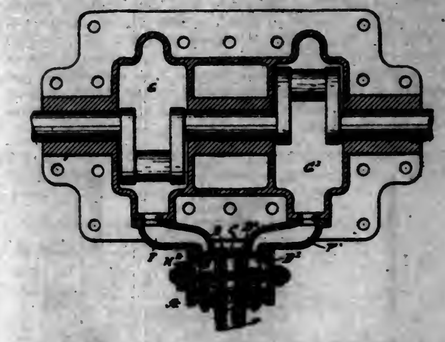
[Claim 6 not printed in the Gazette.]

876,880. VALVE MECHANISM. LOUIS J. JOHNSON, Terre Haute, Ind. Filed May 2, 1907. Serial No. 371,428.

1. A valve mechanism for controlling the supply of the combustible mixture for a gas engine, comprising a pair of connected valves moving in unison and alternately to and from their seats by the simultaneous compression and suction action of the engine.

2. A valve mechanism for two-cycle gas engines having multiple cylinders, comprising a valve casing having connection with the combustible mixture supply and with the cylinders of the motor, and connected valves for controlling the flow of the combustible mixture through the casing from the said supply alternately to the said cylinders, the valves moving alternately to and from their seats by the compressing and suction action of the pistons in the said cylinders on the change of the stroke of the said piston.

3. A valve mechanism for two-cycle multiple cylinder gas engines, comprising a casing having spaced valve seats forming a central chamber connected with the combustible mixture supply and delivery chambers connected with the crank cases of the engine, and valves mounted to move in unison and alternately to and from the said seats.



4. A valve mechanism for two-cycle multiple cylinder gas engines comprising a casing having spaced valve seats forming a central chamber connected with the combustible mixture supply and delivery chambers connected with the crank cases of the engine, and valves having a common valve stem for the valves to move in unison and alternately to and from their seats.

5. A valve mechanism for two-cycle multiple cylinder gas engines comprising a casing having spaced valve seats forming a central chamber connected with the combustible mixture supply, and delivery chambers connected with the crank cases of the engine, valves having a common valve stem for the valves to move in unison and alternately to and from their seats, and means for adjusting the valves to regulate the lift therof.

[Claim 6 not printed in the Gazette.]

876,881. GARMENT-SUPPORTING CLASP. WILLIAM W. JOHNSON, Meadville, Pa., assignor to The Spirella Company, Meadville, Pa., a Corporation of Pennsylvania. Filed Jan. 10, 1907. Serial No. 351,602.



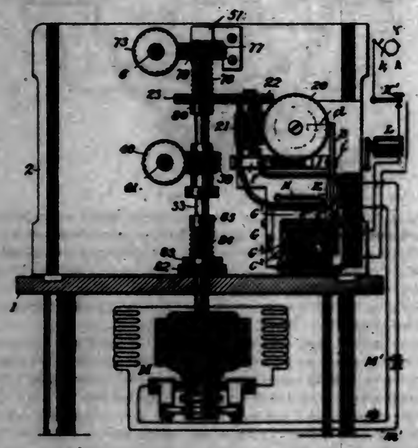
The combination with the body plate formed on one end with a garment-engaging hook, of a lever pivoted to the opposite end of said body plate and extending with its free end toward the aforesaid hook and formed on the opposite end with a thumb-piece disposed in approximately the same plane with the lever, and the clamping-plate interposed between the said lever and body-plate and pivoted to the lever adjacent to the pivoted end thereof substantially as set forth and shown.

876,882. CIRCUIT-CONTROLLER FOR ELECTRIC MOTORS. JOHN M. JOY, New York, N. Y., assignor to Page Machine Company, New York, N. Y., a Corporation of New York. Filed Mar. 1, 1906. Serial No. 303,676.

1. The combination with an electric motor and a circuit therefor, of a circuit controller constructed to cut out the current after a predetermined motion of the motor and comprising two members relatively movable with respect to each other one of which has motion corresponding in time to the movements of the motor, and an electro-mag-

netic device for controlling the relations of the two members.

2. The combination with an electric motor and a circuit therefor, of a worm connected to be driven from the motor, current after a predetermined motion of the motor and comprising two members relatively movable with relation to each other, connections between the motor and one of said members whereby said member has a motion corresponding in time to the movements of the motor, and an electro-magnetic device controlling the operative relations of the two members.



3. The combination with an electric motor and a circuit therefor, of a circuit controller constructed to cut out the current after a predetermined motion of the motor and comprising two members relatively movable with relation to each other, connections between the motor and one of said members, whereby said member has a motion corresponding in time to the movements of the motor, an electro-magnetic device controlling the operative relations of the two members, and a separate circuit including said electro-magnetic device and means for controlling said circuit.

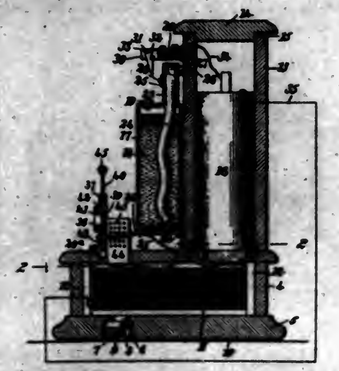
4. The combination with an electric motor and a circuit therefor, of a rotating worm, an arm adapted to engage the worm and operating to control the circuit of the motor, and an electro-magnetic device controlling the arm and its engagement with the worm.

5. The combination with an electric motor and a circuit therefor, of a worm connected to be driven from the motor, an arm adapted to engage the worm and operating to control the circuit of the motor, an electro-magnetic device controlling the arm in its engagement with the worm, and a separate circuit including said electro-magnetic device and means for controlling the same.

[Claims 6 and 7 not printed in the Gazette.]

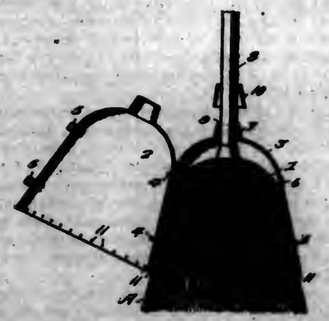
876,883. CIGAR CUTTER AND LIGHTER. APOLLINARIUS VON KASPIS, Pittsfield, Mass., assignor of one-half to Addis K. Botsford, Saranac Lake, N. Y. Filed Dec. 14, 1906. Serial No. 347,810.

The combination of an upright supporting member, a lamp pivotally mounted upon said supporting member and adapted to rock directly toward and away from the same, said lamp having a substantially cylindrical form and normally resting in an upright position against said supporting member, a contact member mounted upon the upper end of said lamp, a spring contact member mounted upon said supporting member and disposed partially within the path of said first-mentioned contact member, a leaf spring connected with said supporting member and engaging the under side of said lamp so as to force the same upward, a tongue connected with the bottom of said lamp and projecting outwardly therefrom for the purpose of tilting said



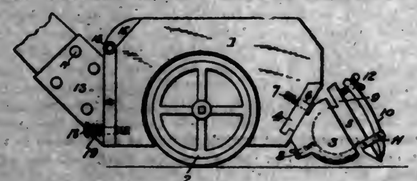
lamp, and mechanism engaging the outer edge of said tongue for the purpose of actuating the latter.

876,884. BROOM-PROTECTOR. JOHN KENNY, Amherst, Nova Scotia, Canada. Filed Oct. 24, 1906. Serial No. 340,423.



The combination of a broom comprising a head and a handle, with a protector comprising a two part shell or casing having continuous unperforated walls and semi-frusto-conical handle-engaging portions, handle-gripping means on the said portions, rings permanently and hingedly connecting the parts of the casing together at one side, spring catches for locking the parts of the casing together around the head at the opposite side to form a closed and tight housing around the head, gripping means on the parts of the casing for engaging the head, and a hollow frusto-conical member frictionally held on the said portions and co-operating with the latches to hold the parts in locked position.

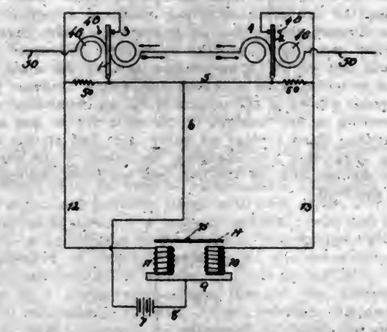
876,885. FLOOR-SCRAPER. ARTHUR KILBURY, Elkhart, Ind. Filed Mar. 23, 1907. Serial No. 364,153.



A scraper embracing a carrying-head, a scraper-bit carrying means connected to said carrying-head, and a handle-socket-casting having lateral extensions with their upper

ends pivotally suspended from offset studs of said carrying head, said lateral extensions having bolts passing through them, near their lower ends, and said bolts equipped with springs delivering their pressure or stress upon said handle-socket casting.

876,886. CABLE TELEGRAPHY. ISIDOR KITSEE, Philadelphia, Pa., assignor of one-half to William J. Latta, Philadelphia, Pa. Filed Mar. 3, 1906. Serial No. 304,033.



1. In the relaying of telegraphic impulses impressed upon a line with great capacity, two local circuits normally balanced as to each other, two polarized receivers connected to the line, each of said local circuits including as a part thereof the armature of one of said receivers, said armatures being each responsive only to current of a polarity opposite to that required for operating the other, whereby the balance of said circuits is destroyed, and means associated with said local circuits and actuated by the current of either for translating the impulses of the line when the balance of the local circuits is destroyed.

2. In the relaying of telegraphic impulses impressed upon a line with great capacity, two local circuits normally balanced as to each other and each including a stationary contact, two polarized receivers connected to the line, and in series as to each other, each of said local circuits including as a part thereof the armature of one of said receivers, said armatures coöperating with said contacts to normally close the local circuits, each of said armatures being responsive only to current of a polarity opposite to that required for operating the other, whereby the balance of said circuit is destroyed, and means associated with said local circuits and actuated by the current of either for translating the impulses of the lines when the balance of the local circuits is destroyed.

3. In a system of telegraphy, the combination with a line of transmission, of two polarized devices connected to the line and in series as to each other, each of said devices having a normal or zero position, and two local circuits each of which is closed by one of said devices when in its zero position, one of said devices being responsive to the flow of a positive impulse to change its zero position, and the other responsive to the flow of a negative impulse to change its zero position.

4. In a system of telegraphy, means to receive and translate true reversals, including two local circuits normally of equal resistance, whereby said circuits are balanced as to each other, means for increasing the resistance of one of said circuits through an impulse of one polarity, and for increasing the resistance of the other of said circuits through an impulse of opposite polarity, and an electro-magnetic device responsive to the changes of resistance of said local circuits.

5. In the relaying of telegraphic impulses impressed upon a line with great capacity, two local circuits normally balanced as to each other, two polarized receivers connected to the line of transmission, a stationary contact in each of said local circuits, an armature for each of said receivers, each of said circuits including one of said armatures as a part thereof, said armatures having a normal or zero position in contact with said stationary contacts, whereby said circuits are maintained normally in balanced relation to each other, said armatures being responsive to impulses of opposite polarity, and an electro-magnetic device associated with said local circuits and actuated by the current of either for translating the impulses of the line when the balance of the local circuit is destroyed.

[Claims 6 to 15 not printed in the Gazette.]

876,887. SLEEPER ATTACHMENT FOR DAY-COACHES. JOSEPH A. SHIRES, Denver Colo. Filed Feb. 4, 1907. Serial No. 355,735.



1. In a sleeper attachment for railway cars, the combination with the car, of a deck composed of flexible material extending lengthwise of the car and supported by the seat backs, substantially as described.

2. In a sleeper attachment for cars, the combination with the car seats, of a strip of flexible material stretched lengthwise of the car and supported by the seat backs, substantially as described.

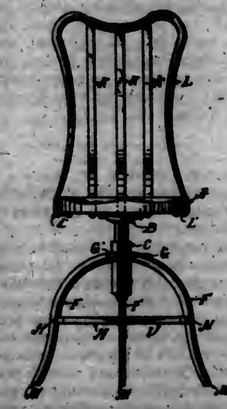
3. In a sleeper, the combination with the car, of a strip of flexible material stretched lengthwise of the car and supported below the seat backs by said seats, substantially as described.

4. In a sleeper attachment for cars, the combination with the car, of a strip of flexible material stretched lengthwise of the car and supported by the seats, substantially as described.

5. In a sleeper attachment for cars, the combination with the car, of upper and lower strips of flexible material extending lengthwise of the car and supported by the seats, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

876,888. METAL FURNITURE. MILLARD E. STOCKWELL, Grand Rapids, Mich., assignor to Acme Door and Glass Company, Los Angeles, Cal., a Corporation of California. Filed Jan. 18, 1904. Serial No. 189,468. Renewed June 8, 1907. Serial No. 377,044.



1. An article of furniture including a seat provided with four legs, three braces having a detachable interlocking connection with three of the legs, and a fourth brace hav-

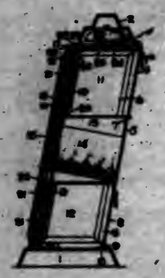
ing a detachable connection with two legs and a positive and direct connection with one of the other braces and outside the legs.

2. In combination with the tubular legs F F F, cross braces H H H provided with hooks engaging with the said legs, a brace I provided with a hook which may be removed readily from the legs, and suitable means for bolting the brace I to one of the braces H, substantially as described.

3. In combination with the legs F F F, made of tubular material, the braces H provided with the hooks H' bent in the form described, the braces I provided with the hook I', and a suitable bolt for attaching the brace I to one of the braces H whereby the same may be readily removed therefrom, substantially as described.

4. In combination with the legs F, the braces H, the brace I, the braces H and I provided with hooks, substantially as described, the leg support C provided with lugs, whereby the upper ends of the legs are secured to the said lugs, substantially as described.

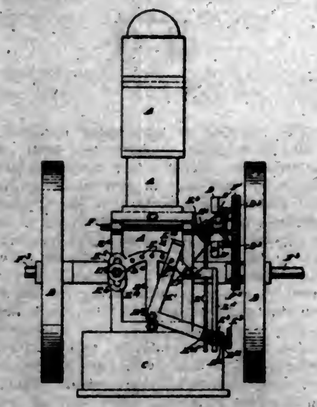
876,889. DISPLAY-CASE. WARREN A. VAN BROCKLIN, Alden, N. Y. Filed May 28, 1906. Serial No. 319,072.



A display cabinet for chewing-gum in elongated packages, consisting of a base, elongated vertical transparent side walls secured to and rising from said base and having their front and rear edges upward and rearward inclined, an elongated transparent front wall inclined upward and rearward from said base and constituting a door, being supported along one of its longitudinal edges by a spring hinge, a rear wall extending upward from the base at an inclination corresponding to that of the front wall, the four walls being of substantially the same width, a pair of horizontal shelves supported within said walls and dividing the interior of the cabinet into upper and lower gum-compartments of substantially equal horizontal dimensions and an intermediate compartment, devices secured to the inner face of the front wall or door opposite the gum-compartments for holding an upright layer of transversely-disposed gum packages immediately in rear of the transparent material of said door, and a top surmounting said walls.

876,890. ENGINE. GEORGE W. WILSON, Cayuga, Ind., assignor of one-third to Frank M. Malone and one-third to Daniel Wilson, Cayuga, Ind. Filed Apr. 20, 1907. Serial No. 369,382.

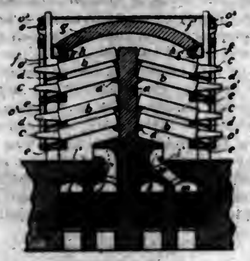
1. In a speed regulator for explosive engines, the same comprising a main frame suitably fulcrumed to the main portion of the engine and having a link-like head provided with an elongated slot and a cogged inner wall, a downstanding arm, a downstanding portion provided with an elongated slot, and a series of openings between the fulcrum point and the link-like head; a grooved tension block mounted freely in the elongated slot of the downstanding portion and provided with an annular groove and a threaded opening; a tension spring adjacent the downstanding portion of the main frame rigidly secured at its upper end to the tension pin; a tension pin mounted freely in a suitable opening in the main frame of the engine adjacent to the gear shaft; a tension arm rigidly secured upon the inner projection of the tension pin and provided with an instanding pin at its upper end; a friction roller mounted freely upon the instanding pin of the tension arm; a thumb-wheel having a threaded stem mounted in a suitable opening in the tension block for manipulating its point against the tension spring and provided with a lock-nut for rigidly securing it; a hand-wheel mounted freely upon the through-pin of the main portion of the engine and provided with an instanding collar having a cogged gear at its inner end which meshes with the cogged inner wall of the elongated slot of the link-like head and a lock-nut upon the through-pin of the main portion of the engine for rigidly securing it; and an angle-lever fulcrumed at the lower end of the downstanding arm of the main frame and provided with a forked end which operates in the annular groove of the tension block, an instanding pin for insertion in the openings of the main frame, and an outstanding finger-hold at its upper end; and all for adjusting, regulating and changing the speed of the engine in the manner and for the purposes set forth, substantially as specified.



2. In a speed regulator for explosive engines, the same comprising a tension pin mounted freely in a suitable opening in the main portion of an explosive engine adjacent the gear shaft and the governor sleeve; a tension arm rigidly secured at its inner end upon the inner projection of the tension pin and provided at its outer end with a rigid instanding pin having a friction roller mounted freely thereon and operating against the inner annular collar of the governor sleeve; a tension spring rigidly secured at its inner end to the outer projection of the tension pin; and suitable means adjacent and operating against the tension spring for manipulating the same for the purpose of adjusting, regulating and changing the speed of the engine, substantially as specified.

3. In a speed regulator for explosive engines, the same comprising the governor sleeve mounted freely upon the revoluble gear or drive shaft of the engine; the revoluble gear or fly wheel rigidly secured upon the revoluble gear or drive shaft provided with suitable means for imparting a longitudinal movement to the governor sleeve; a tension pin mounted freely in a suitable opening in the main portion of the engine adjacent the gear shaft and the governor sleeve; a tension arm rigidly secured at its inner end upon the inner projection of the tension pin and provided at its outer end with a rigid instanding pin having a friction roller mounted freely thereon and operating against the inner annular collar of the governor sleeve; a tension spring rigidly secured at its inner end upon the outer projection of the tension pin; and suitable means adjacent and operating against the tension spring for manipulating the same for the purpose of adjusting, regulating and changing the speed of the engine at will, substantially as specified.

876,891. REGENERATIVE RETORT-FURNACE. RICHARD ZIESING, Cleveland, Ohio. Filed Apr. 6, 1906. Serial No. 310,236.



1. In a furnace of the class described, the combination with regenerative chambers positioned upon either side of a center-wall, of combustion-chambers positioned above the latter and communicating with each other, and a distributing system for a gaseous medium positioned at the front or outer faces of the furnace, whereby combustion is augmented at intervals adjacent to the contents of the combustion-chambers, substantially as set forth.

2. In a regenerative retort furnace, the combination with combustion-chambers, of regenerators disposed beneath said chambers, a center-wall dividing the said regenerators and combustion-chambers but affording communication therebetween, and a distributing system associated with the front or outer faces of the combustion-chambers and adapted to supply a gaseous medium at intervals to the contents thereof, whereby gradual combustion is secured and the heating is equalized, substantially as set forth.

3. In a regenerative retort furnace, the combination with a system of regenerative chambers, of combustion-chambers connected therewith and with each other, adapted to receive the retorts under treatment, transverse ducts positioned at the front of the furnace at intervals between such retorts, and a distributing system connected therewith adapted to supply a gaseous medium for furthering combustion adjacent to the outer faces of the furnace, substantially as set forth.

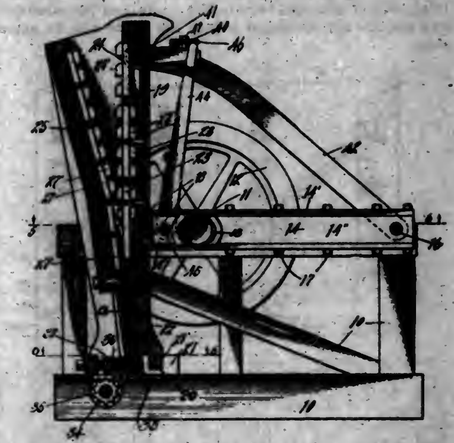
4. In an improved Siemens furnace, the combination with a system of regenerative chambers, of combustion-chambers connected therewith and with each other, adapted to receive the retorts under treatment, a center-wall dividing said chambers except at the upper portion of the furnace, hollow shelves extending transversely along the outer faces of the combustion-chambers, and a distributing system of piping connected therewith and adapted to supply a gaseous medium for furthering combustion at intervals throughout the contents of the furnace, substantially as set forth.

5. In a regenerative retort furnace, the combination with combustion chambers, of a center-wall separating them except at the upper portion of the furnace, regenerators positioned beneath each of said combustion chambers and respectively communicating therewith, transverse ducts positioned along the outer or front faces of said combustion-chambers, and means for supplying therethrough to the outer portions of said combustion-chambers, a suitable gaseous medium for furthering combustion, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

876,892. ORE-CRUSHING MACHINE. JOHN B. ALSEBS, Los Angeles, Cal. Filed June 11, 1906. Serial No. 321,277.

1. An ore crushing machine provided with crushing jaws whose upper ends are more widely separated than the lower ends thereof; mechanism to give one of said jaws a vertical motion and the top of the other jaw a movement toward and from the jaw having the vertical motion; and mechanism to hold the lower end of said last jaw in spring pressed engagement with the bottom of the vertically moving jaw.



2. In an ore crushing machine of the character described herein, an operating lever pivoted at one end thereof; a vertical crushing jaw vertically movable and loosely engaged by the free end of the operating lever; and mechanism to oscillate the free end of the operating lever vertically.

3. In an ore crushing machine of the character described herein, an operating lever pivoted at one end thereof; a crushing jaw having projecting sides provided with recesses therein near the upper end thereof; a shaft passing through said recesses; L-shaped levers mounted on said shaft, said levers extending within said recesses; supports for said shaft; and pitmen connecting the free end of said operating lever with said L-shaped levers; and means to oscillate the free end of said operating lever.

4. In an ore crushing machine a vertically moving crushing jaw having the upper and central portions of its crushing face lying in a vertical plane and the lower portion of the crushing face sloping downwardly and rearwardly from the plane of the other portions of the face; means to reciprocate said jaw vertically; an opposing jaw having a crushing face yieldingly held in contact with the face of the other jaw at the bottom and diverging therefrom to the top of the jaw; means to hold the lower end in yielding engagement with the opposed jaw; and means to move the upper end of said last jaw toward and from the upper end of the opposed jaw.

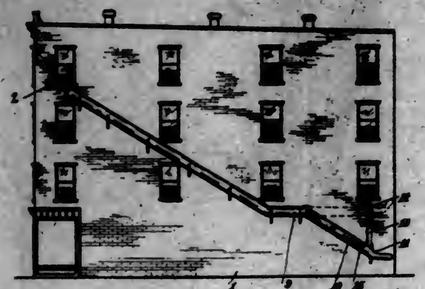
5. In an ore crushing machine of the character described herein, a crushing jaw; mechanism to cause said jaw to reciprocate vertically; a second jaw oppositely disposed to said vertical jaw; and mechanism to move the upper end of said opposed jaw toward and from the vertical jaw.

876,893. FIRE-ESCAPE. WILLIAM R. ARNOLD, Chicago, Ill. Filed June 10, 1907. Serial No. 378,212.

1. In a fire escape, the combination with a building or other structure provided with openings, of a tubular chute having its upper end directed into communication with the uppermost opening and provided intermediate its ends with fixed branch passage ways for communication with the remaining openings of the building or other structure, a bottom arranged within the chute, and a guide rail arranged within the chute.

2. In a fire escape, the combination with a building or other structure provided with openings, of a tubular chute having its upper end directed into communication with the uppermost opening and provided intermediate its ends with fixed branch passage ways for communication with the remaining openings of the building or other structure,

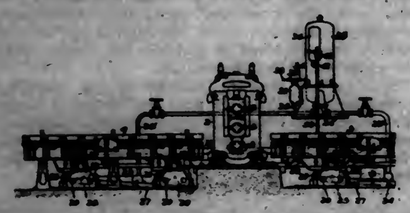
the lower end of the chute being directed out of the plane of the remaining portion thereof, a member hingedly connected to the chute and forming an extension thereof, a false bottom arranged within the chute and its extension, and a guide rail arranged within the chute and its extension.



3. In a fire escape, the combination with a building or other structure provided with openings, of a chute having its upper end directed into communication with the uppermost openings and provided intermediate its ends with fixed branch passage ways for communication with the remaining openings of the building or other structure, the lower end of the chute being directed out of the plane of the remaining portions thereof, a member hingedly connected to the chute and forming an extension thereof, a false bottom arranged within the chute and its extension, false bottoms arranged in the branch passage ways, and a guide rail arranged within the chute, the extension of the chute and the branch passage ways.

4. A fire escape comprising a chute having branch passage ways and also having one end directed out of alinement with its body portion, a false bottom arranged in the chute and its branch passage ways, a guide rail arranged in the chute and its branch passage ways, an extension for the chute hingedly connected to the latter, and a false bottom and a guide rail disposed in said extension.

876,894. TABLE-OPERATING MECHANISM FOR ROLLING-MILLS. FLORENCE C. BIGGERT, Jr., Pittsburg, Pa., assignor to The United Engineering & Foundry Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed June 15, 1907. Serial No. 379,163.



1. A vertically movable table, a motor and connections for raising and lowering the table, a counterbalance and cushioning device for the table, and connections between the table and the counterbalance for operating said device to cause it to act upon the table in two different directions during the movement of the table, substantially as described.

2. A vertically-movable table, a motor and connections for raising and lowering the same, and a counterbalancing mechanism arranged to under-balance the table in its high position and over-balance it in its low position; substantially as described.

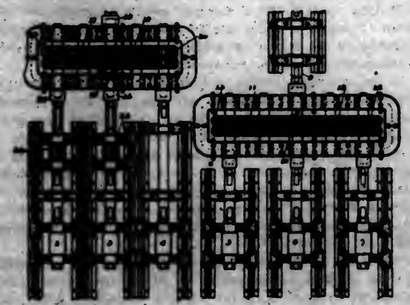
3. A vertically movable table, a motive device for raising and lowering the table, counterbalancing mechanism, and connections between the mechanism and the table for causing the counterbalancing mechanism to reverse its action upon the table at an intermediate point in the movement of the latter, substantially as described.

4. A vertically-movable table, mechanism for raising and lowering the same, a cushion chamber arranged to contain an elastic fluid medium under pressure, and connections between the table and the cushion chamber whereby the rise and fall of the table effects the expansion and compression of said medium to counterbalance and cushion the table in opposite directions during different portions of its movement; substantially as described.

5. A vertically-movable table, mechanism for raising and lowering the table, a cylinder having a piston connected to the table movement, a cushion chamber, and a conduit connecting the cylinder and cushion chamber and adapted to contain a liquid; substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

876,895. TANDEM MILL. CHARLES W. BRAY, Pittsburg, Pa., assignor to American Sheet & Tin Plate Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Feb. 9, 1905. Serial No. 244,869.



1. A tandem sheet or plate mill having a series of two-high sets of plain-faced rolls, at least one of the first sets having positively driven upper and lower rolls; substantially as described.

2. A tandem sheet or plate mill having a series of two-high sets of plain-faced rolls, at least two of the first sets having positively driven upper and lower rolls; substantially as described.

3. A tandem sheet or plate mill having a plurality of two-high sets of plain-faced rolls, each set having positive driving connections for the upper and lower roll, the upper roll being counter-balanced; substantially as described.

4. A tandem sheet or plate mill consisting of two-high sets of rolls, having at least one of the first sets provided with positive driving connections for the upper and lower rolls, and succeeding sets having a positively-driven lower roll and an upper jump roll, said rolls being plain-faced; substantially as described.

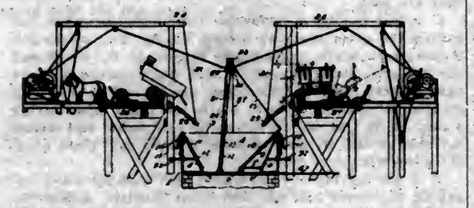
5. A tandem sheet or plate mill having at least two two-high sets of plain-faced rolls with intermeshing driving gears common to both, at least one of said sets having positively-driven upper and lower rolls; substantially as described.

[Claim 6 not printed in the Gazette.]

876,896. COMBINATION DUMP AND HOPPER. TIMOTHY CARROLL, Anaheim, Cal. Filed Apr. 10, 1907. Serial No. 367,461.

1. The combination of a plurality of dumps and a hopper between said dumps having lateral and central openings, a lid for the central opening, elongated covers respectively hinged between the central opening and the lateral openings on opposite sides of said central opening, and means for swinging the covers to alternatively cover and uncover said openings substantially as and for the purpose set forth.

2. The combination of a plurality of dumps and a hopper between said dumps having lateral and central openings, lids for the several openings, means for opening and closing said lids, covers hinged between the central openings and the lateral openings on opposite sides of said central opening, and means for swinging the covers to alternatively cover and uncover said openings, and to form chutes substantially as and for the purpose set forth.



3. A hopper having in its bottom lateral openings, hinged lids for said openings, means for raising and lowering said lids, hinged elongated covers arranged to cover alternatively one or all but one of said openings at one time, or uncover all of said openings simultaneously, and means for raising and lowering said elongated covers.

4. A hopper having a plurality of openings in the bottom thereof, hinged lids for each of said openings, means for alternately isolating one of said openings from another or both of the others, and means for controlling said means for isolating said openings.

5. A hopper having lateral openings, and a central opening between said lateral openings, hinged lids for each of said openings, hinged elongated covers arranged to alternatively cover one or two of said openings at one time, or to uncover all of said openings simultaneously, and means for raising and lowering said elongated covers.

[Claims 6 to 10 not printed in the Gazette.]

876,897. LOW-CUT SHOE. WILLIAM G. CLOPTON, Baltimore, Md., assignor of one-half to Jacob C. Moser, Baltimore, Md. Filed Sept. 20, 1907. Serial No. 393,754.



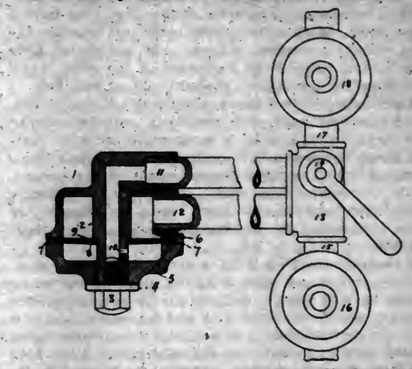
1. A shoe having a band on its inside below the surrounding edges of the opening,—said band being spaced from the heel end of the shoe and extending in a direct line crosswise of the opening adjacent the counter and being loosely sustained at opposite sides of the shoe and extending forwardly from the counter.

2. A shoe having a band on its inside below the edges of the opening which extend rearwardly along the opposite longitudinal sides of the shoe and said band also extending from one side of the counter to the other and adjacent but spaced from the rear of the shoe and said band being loosely sustained at the sides of said counter.

3. A shoe having a band on its inside below the edges of the opening, said band extending continuously along one inner side of the shoe and crossing over to the opposite inner side adjacent the counter but spaced from the end of the shoe and then extending along said opposite inner side of the shoe and means for sustaining said band loosely between its ends.

4. A shoe having a band wholly on the inside thereof extending along the opposite inner side surfaces and across at the heel but spaced from the end of the shoe, and said band being sustained by said inner side surfaces and forming an opening inside of the shoe of less area than the shoe opening whereby to draw the side of the shoe in against the foot when the latter is inserted in the shoe.

876,898. OIL-BURNER. MAHLON S. CONLY, Los Angeles, Cal. Filed Apr. 4, 1907. Serial No. 366,451.



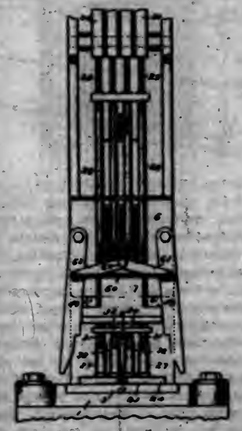
1. In a liquid fuel burner, a casing, a diaphragm dividing said casing, said diaphragm having a portion cut from its edge, a rotatable wear-resisting member at each side of said diaphragm and means to supply liquid fuel and steam respectively to the spaces on each side of said diaphragm.

2. In a liquid fuel burner, substantially cup shaped upper and lower casing members, a flexible disk held between said members, a conduit leading to each of the spaces within said upper and lower members and rotatable wear-resisting rings on each side of said flexible disk.

3. In a liquid fuel burner, a casing member, a post therein, a shoulder on said post, a disk on said post contacting with said shoulder, a ring on each side of said disk, a lower casing member having a portion of its circumference rabbeted and means to clamp said members together.

4. In a liquid fuel burner, a casing member, a post within said member, a shoulder on said post, said shoulder being in a plane passing outside the rim of said member, a flexible disk on said post, a second casing member and means to clamp said members together so that fluid-tight joints are formed at the edge of said disk and between said shoulder and said disk.

876,899. PRESS. NATHAN W. CRANDALL, Hartford, Conn., assignor to The Perkins Corporation, Hartford, Conn., a Corporation of Connecticut. Filed July 27, 1906. Serial No. 328,119.



1. A press having feed tubes, a vertically movable slide, means for moving said slide vertically, punches carried up and down by said slide, a horizontally movable slide

having stock recesses, a cam projection from the vertical slide engaging and causing the movement of the horizontal slide, horizontally movable blades for transferring material from beneath the feed tubes to beneath the punches, and connections between the horizontal slide and the blades whereby the movement of the slide causes the movement of the blades, substantially as specified.

2. A press having feed tubes, a vertically movable slide, means for moving said slide vertically, punches carried up and down by said slide, a horizontally movable slide having stock recesses, a cam projection from the vertical slide engaging and causing the movement of the horizontal slide, horizontally movable blades for transferring material from beneath the feed tubes to beneath the punches, and means for moving the blades, substantially as specified.

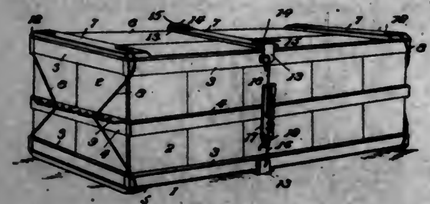
3. A press having feed tubes, a vertically movable slide, means for moving said slide vertically, punches carried up and down by said slide, a horizontally movable slide having stock recesses connected with and moved by the movement of the vertical slide, and horizontally movable blades connected with and moved by the movement of the horizontal slide for transferring material from beneath the feed tubes to beneath the punches, substantially as specified.

4. A press having feed tubes, a vertically movable slide, means for moving said slide vertically, punches carried up and down by said slide, slides having stock recesses movable toward the front and back, connected with and moved by the movement of the vertical slide and connected with each other so as to move oppositely, and blades movable horizontally for transferring material from beneath the feed tubes to beneath the punches, substantially as specified.

5. A press having feed tubes, a vertically movable slide, punches carried up and down by the slide, a horizontally movable slide having stock recesses, means whereby the horizontal slide is moved by the movement of the vertical slide, horizontally movable blades, means whereby the blades are moved by the movement of the horizontal slide, for transferring material from beneath the feed tubes to beneath the punches, and latches adapted to engage and temporarily hold down the vertical slide, substantially as specified.

[Claims 6 to 8 not printed in the Gazette.]

876,900. BOX OR CRATE. MILO N. EDWARDS, Glenwood Springs, Colo. Filed Jan. 29, 1906. Serial No. 298,484.



1. A box or crate having its bottom and cover provided at their ends with cross bars, binding wires secured to the outer faces of said cross bars and carried over the ends thereof, said wires being of such length as to permit of their being drawn toward each other at their centers, transversely of the body of the box or crate at the ends thereof, and means for attaching such wires at their centers to said ends when so drawn toward each other.

2. A box or crate having its bottom and cover provided at their ends with cross bars, the ends of said cross bars being beveled, binding wires secured to the outer faces of said cross bars and carried over the beveled ends thereof, said wires being of such length as to permit of their being drawn toward each other at their centers, transversely of the body of the box or crate at the ends thereof, and means for attaching such wires at their centers to said ends when so drawn toward each other.

3. A box or crate having its bottom and cover provided at their ends with brace bars, binding wires secured to the outer faces of said brace bars and passed over the ends thereof, such wires being of such length as to permit of their being drawn toward each other at their centers, transversely of the box or crate at its ends, and rack plates secured to the ends of said box or crate with which said wires are designed to engage and by which they are held.

4. A box having a removable cover, binding wires engaging the cover and the bottom of the box, means for binding such wires, angle plates secured to the cover and the bottom, wires secured to said angle plates, a plate having teeth in one of its edges, one of said wires being secured to one end of said plate, the other wire having a loop at its free end for engaging said teeth, and means movable on one of said wires for holding said plate when the wires are under tension.

5. A box having a removable cover, binding wires engaging the cover and the bottom of the box, means for binding such wires, angle plates secured to the cover and the bottom, wires secured to said angle plates, a plate having teeth in one of its edges, one of said wires being secured to one end of said plate, the other wire having a loop at its free end for engaging said teeth, means movable on one of said wires for holding said plate when the wires are under tension, and a locking wire mounted in said plate designed to prevent the release of said means from the latter.

876,901. PROCESS OF FILTERING VISCOSE AND SIMILAR VISCOUS SUBSTANCES. CHARLES A. ERNST and GEORGE O. HAMLIN, Lansdowne, Pa., assignors to Silas W. Petitt, Philadelphia, Pa. Original application filed Apr. 24, 1905, Serial No. 257,100. Divided and this application filed May 11, 1907. Serial No. 373,031.



1. The method of filtering viscose and similar viscous substances, which consists in forcing the same, under pressure, through a filtering body which is subjected to a greater pressure than that to which the substance being filtered is subjected.

2. The method of filtering viscose and similar viscous substances, which consists in forcing the same, under pressure, through a filtering body which is subjected to a mechanical pressure independent of and greater than that to which the material being filtered is subjected.

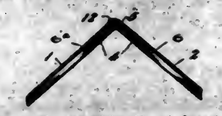
3. The method of filtering viscose and similar viscous substances, which consists in forcing the substance being filtered through a fibrous filtering body, such filtering body being subjected to a pressure independent of and greater than that to which the material being filtered is subjected.

4. The method of filtering viscose and similar viscous substances, which consists in forcing the fibers of a fibrous filtering body into close contact with each other and holding the fibers substantially immovable with respect to each other, by subjecting the said filtering body to external pressure and then forcing the viscose through said body under pressure less than that to which the filtering body is subjected.

876,902. LOCKET AND SIMILAR ARTICLE. JAMES A. FULLER, Providence, R. I., assignor to The Firm of Hamilton & Hamilton, Jr., Providence, R. I. Filed July 3, 1907. Serial No. 381,985.

1. In a locket or the like, the combination of a top and a bottom member, a hinge comprising two leaves, a block pivoted separately to each leaf, and rings, one secured in each locket member and having recesses accommodating the hinge leaves.

2. A concealed joint locket comprising two locket members, a hinge comprising a block, two pins passing through the block and two leaves each formed of a flat blank with a central aperture, the side members of which are bent around the pins to form pivots and the end members of which lie against each other, one surface of each of the leaves being soldered to one of the locket members, and recessed rings, one overlying each of the leaves and serving to hold the free member of the leaf in position.



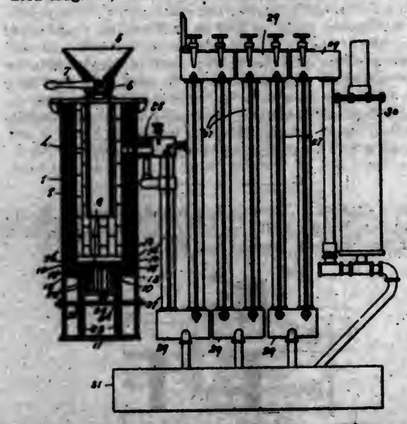
3. In a locket, the combination of a top and a bottom member, a hinge comprising two leaves each formed of a flat blank with a central aperture and folded upon itself to provide a pin socket and one of the members of each leaf so formed being secured to one of the locket members, a block, and two pins, one in each end of the block, engaging the sockets formed in the corresponding hinge leaves.

4. A locket comprising two dished members arranged with their concaved faces together, a hinge entirely concealed when the locket is closed and connected to the locket members at different distances from their edges so as to cause the edge of one member to lie within the adjoining edge of the other member when the locket is opened, and rings, one for each member, overlying parts of the hinge and serving to retain the hinge in assembly.

5. A locket comprising two dished members arranged with their concave faces together, a hinge entirely concealed when the locket is closed and connected to the locket members at different distances from their edges so as to cause the edge of one member to lie within the adjoining edge of the other member when the locket is opened, and rings, one for each member, overlying parts of the hinge and serving to retain the hinge in assembly; one of the rings having a portion cut away to accommodate the edge of the opposite locket member when the locket is opened.

[Claim 6 not printed in the Gazette.]

876,903. GAS-PRODUCING FURNACE. CHARLES GAMBE, Fort Worth, Tex. Original application filed May 24, 1907, Serial No. 375,393. Divided and this application filed Aug. 20, 1907. Serial No. 389,351.



1. A gas producing furnace having a casing, a lower grate and an upper grate mounted in said casing, extensions on each side of said furnace into which said grates may be shifted, means for moving said grates alternately into and out of said extensions, and means for collecting the products of combustion and separating the gas therefrom.

2. A gas producing furnace comprising a casing, a combustion chamber in said casing, a fire brick lining for said combustion chamber, shifting grates one above the other below said combustion chamber made in sections, extensions on each side of said furnace for said upper and lower grate sections alternately, and means for shifting said grates into and out of said extensions.

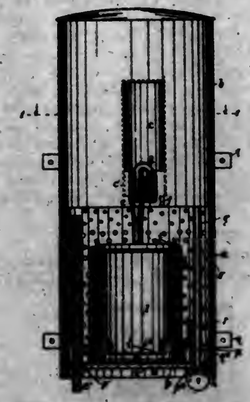
3. A gas producing furnace having a combustion chamber, shifting grates below said combustion chamber, extensions on each side of said furnace for said grates, bearing boxes on each side of said grates having slots therein receiving the edges of said grates, said grates having bearings operating in said boxes, and screw shafts engaging said bearings for moving said grates.

4. A gas producing furnace having a combustion chamber, shifting grates below said chamber made in sections, extensions, one on each side of said furnace, boxes on each side of said grates having slots forming ways for said grates, said grates having bearings moving in said boxes, and screw shafts having right and left threads and engaging the bearings of said grates to move the sections of said grates in opposite directions.

5. A gas producing furnace having a combustion chamber, shifting grates below said chamber made in sections, extensions, one on each side of said grates, a box on each side of said grates having a slot for receiving the edges of said grates, said grates having bearings moving in said boxes, right and left screw-threaded shafts journaled in said extensions and engaging said bearings for moving the sections of said grates in opposite directions, and gearing for driving said shafts.

[Claims 6 and 7 not printed in the Gazette.]

876,904. VAPORIZER FOR DISINFECTANTS. JULIAN G. GOODHUE and HUBERT K. HENRY, Chicago, Ill., assignors, by direct and mesne assignments, to Absolute Disinfecting Company, a Corporation of Illinois. Filed Apr. 19, 1906. Serial No. 312,530.



1. In a disinfecting apparatus the combination with a tank-holder and a tank in said holder provided with an interior side-chamber, open at its lower end and hermetically sealing said tank, of a siphon provided with a capillary core and a closable vent, in said chamber and a discharge-pipe under the siphon-discharge and within said holder substantially as specified.

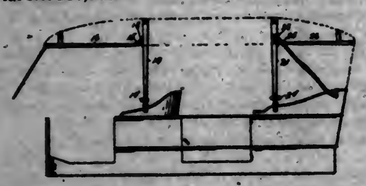
2. In a disinfecting apparatus the combination with a cylindrical and foraminated tank-holder and an end-closed tank in its upper portion provided with a side-opening closed by an inner chamber extending downward below said opening, and having its lower end open, of a siphon in said chamber and a discharge-pipe under the siphon discharge and within said holder substantially as specified.

3. In a disinfecting apparatus the combination with a foraminated tank-holder, of superimposed tanks therein,

the upper tank provided with an interior open-bottomed side-chamber hermetically sealing its contents, said chamber provided with a siphon, and a discharge-pipe under the discharge of said siphon and in said tank-holder, the lower of said tanks hermetically sealed by a sealing-pan, wicking in said pan to evaporate its liquid and to pass the vapor thereof through said foraminations substantially as specified.

4. In a disinfecting apparatus the combination with a foraminated tank-holder, of superimposed tanks therein, the upper tank axially revoluble and having an interior open-bottomed side-chamber and provided with a siphon, and a discharge-tube to the discharge of said siphon, said tube circumferentially adjustable in said holder, said lower tank hermetically sealed with an evaporating-pan, adapted to form liquid seal and containing a circular wicking substantially as specified.

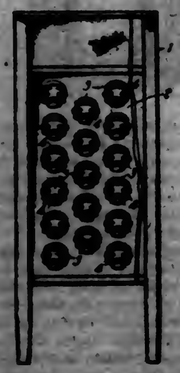
876,905. CARRIAGE-TOP. WILLIAM J. HOSKYNS, Detroit, Mich., assignor to The Auto Accessories Manufacturing Company, Detroit, Mich. Filed Aug. 10, 1907. Serial No. 387,966.



1. In a carriage top, in combination with a standard bow adapted to be attached to the seat of a carriage, a folding bow provided with a bent cross-bar adapted to engage within the arch of the standard and support the flap of the cover when the folding bow and the standard bow are closed together, an attachment to which said folding bow may be connected at the bottom of said standard bow, and an attachment to which said bow may be connected near the spring of the arch of said standard bow, substantially as described.

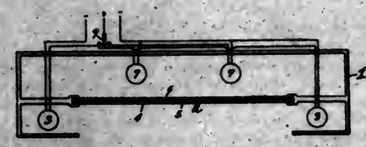
2. In a carriage top, in combination with a pair of standard bows, a horisontally disposed bow pivotally attached to each standard bow near the spring of its arch, means for detaching said horizontal bow from its connection with the standard bow and reconnecting each bow with its standard near the bottom, and means for engaging the two standard bows together, substantially as described.

876,906. WASHBOARD. JOHN H. JONES, Morrilton, Ark. Filed Jan. 31, 1907. Serial No. 355,077.



A washboard having a rubbing surface provided with bulb-like projections having corrugations extending transversely across the upper and lower ends thereof, and with corrugations formed thereon between said top and bottom corrugations with their inner ends spaced apart, the outer ends thereof and of said top and bottom corrugations being curved downwardly to shed water and carry with it dirt washed from the clothes.

876,907. EXHIBITING DEVICE. WILLIAM V. D. KELLEY, Newark, N. J., assignor of one-half to Howard S. Jones, Brooklyn, N. Y. Filed Apr. 30, 1906. Serial No. 314,892.



1. An exhibiting device comprising a translucent medium having a plurality of sectional pictures, the respective sections being alternately arranged, and a screen having opaque sections coinciding with the sections of one picture to render it invisible in transmitted light, said latter picture being only visible in reflected light, substantially as described.

2. An exhibiting device comprising a picture made of alternately arranged contrasting sections on a translucent medium, said picture being visible in reflected light, and an opaque screen behind said picture having sections coinciding with the sections of said picture whereby to render said picture invisible in transmitted light, substantially as described.

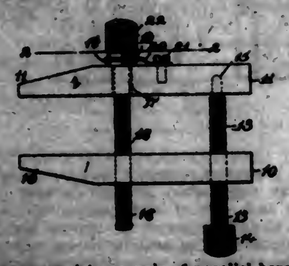
3. An exhibiting device comprising a picture made of alternately arranged contrasting sections on a translucent medium, said picture being visible in reflected light, and an opaque screen behind said picture having sections coinciding with the sections of said picture whereby to render said picture invisible in transmitted light, and a second picture rendered visible in transmitted light between the opaque sections of said screen, substantially as described.

4. In an exhibiting device, the combination of a plurality of superposed pictures and an intervening translucent medium, one of the pictures having a background contrasting therewith in part to render said picture visible by transmitted light, and harmonising in part with the other picture to render said other picture at the same time invisible in transmitted light, substantially as described.

5. In an exhibiting device, the combination of a plurality of superposed pictures and an intervening translucent medium, one of the pictures having a background contrasting therewith in part to render said picture visible by transmitted light, and harmonising in part with the other picture to render said other picture at the same time invisible in transmitted light, the latter being only visible in reflected light, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

876,908. CLAMP. LUDVIG LJUNGLOF, Newark, N. J., assignor to Brown & Sharpe M'f'g Co., Providence, R. I. Filed May 9, 1907. Serial No. 372,827.



1. A clamp comprising a pair of parallel bars, a pair of screws, both screws being in threaded engagement with one bar, and one screw bearing on the abutting face of the second bar, the second screw passing loosely through the second bar and engaging the opposite side of the second bar, whereby the second bar is caused to tilt in one direction by the action of the screws, and a spring bearing on one of the screws, and the second bar eccentric thereto tending to force a tilting of the second bar in opposition to the action of the screws.

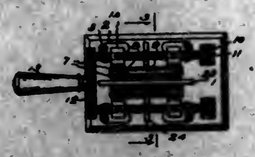
2. A clamp comprising a pair of parallel bars, a screw passing through one bar and bearing on the abutting face of the second bar, a second screw passing through one bar and being in screw engagement therewith and being arranged in sliding relation to the second bar, a collar on the outside of the second bar, and a plate secured to the second bar, the second screw having an annular groove with which the plate is in engagement.

876,909. HEAT-REFLECTOR. BARRETT C. OBLINGER, Independence, Mo., assignor of one-half to Albert Henry Clay Beatty, Independence, Mo. Filed Oct. 3, 1906. Serial No. 337,261.
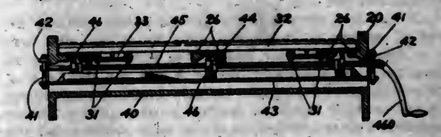


The combination with a stove, of a reflector device comprising a structure having a permanently open draft outlet and a ported wall arranged above the plane of the latter, a damper supported on the wall and rotatable on the vertical axis thereof for opening and closing the ports, stops on the wall, an actuating rod connected with the damper and having means for engaging the stops to limit the movement of the damper, a support having an opening through which the rod extends and in which the latter is fulcrumed at a point intermediate its ends, and a handhold on the rod at a point exterior of the stove.

876,910. ELECTRIC SWITCH. CHARLES G. PERKINS, Hartford, Conn., assignor to The Perkins Corporation, Hartford, Conn., a Corporation of Connecticut. Filed Feb. 19, 1906. Serial No. 301,794.



An electric switch having a base, an insulated bar hinged to the base, a line terminal fastened to the base near the hinged end of the bar, a fuse terminal fastened to the base near the hinged end of the bar, a line terminal fastened to the base near the free end of the bar, a fuse terminal fastened to the base near the free end of the bar, said fuse terminals being adapted to be connected by a fuse that extends parallel with the bar, an electrical contact carried by the bar and adapted to be engaged with and disengaged from the line and fuse terminals near the hinged end of the bar and an electrical contact insulated from the former contact and adapted to connect the line and fuse terminals near the free end of the bar, substantially as specified.

876,911. MEANS FOR LUBRICATING SANDPAPERING-MACHINES. JAMES L. PERRY, Smithville, N. J., assignor to H. B. Smith Machine Company, Smithville, N. J., a Corporation of New Jersey. Original application filed Sept. 24, 1906, Serial No. 336,059. Divided and this application filed Apr. 10, 1907. Serial No. 367,802.



1. In a sand papering or analogous machine, the combination with the table, and longitudinally extending orificed ways thereon, of the endless carrier adapted to travel on said ways, and means to convey a lubricating material through the orifices in the ways and apply it to the inner face of the carrier.

2. In a sand papering or analogous machine, the combination with the table, and longitudinally extending orificed ways thereon, of the endless carrier adapted to travel on said ways, a trough adapted to contain a lubricating material, and means for conveying the lubricating material from the trough through the orifices in the ways to the inner face of the carrier.

3. In a sand papering or analogous machine, the combination with the table, and longitudinally extending orificed ways thereon, of the endless carrier adapted to travel on said ways, a trough adapted to contain lubricating material, a shaft and brushes on the shaft extending both into said trough and said orifices.

4. In a sand papering or analogous machine, the combination with the table, and longitudinally extending orificed ways thereon, of the endless carrier adapted to travel on said ways, a transversely extending trough beneath all the ways, a transversely extending shaft between the ways and the trough, and brushes on the shaft extending into the trough and into the respective orifices in the ways.

876,912. FLEXIBLE STAY-BOLT. HARVEY A. PIKE, New York, N. Y. Filed Oct. 16, 1906. Serial No. 339,223.



1. A stay-bolt structure, comprising the usual bolt, a sleeve-plug fitting the plate of a boiler-shell and having a

seat for said bolt-head, said bolt having a central bore, means carried by the sleeve-plug for normally retaining said bolt in place, and a flexible connecting member between said retaining means and the bolt.

2. A stay-bolt structure, comprising a bolt having the usual threaded end and a head at the opposite end, a sleeve plug fitting the plate of a boiler-shell and having a seat for said bolt-head, said bolt having a central bore, means carried by the sleeve-plug for normally retaining said bolt in place, said means having an aperture communicating with the bore of the bolt, and a flexible connecting member between said retaining means and the bolt.

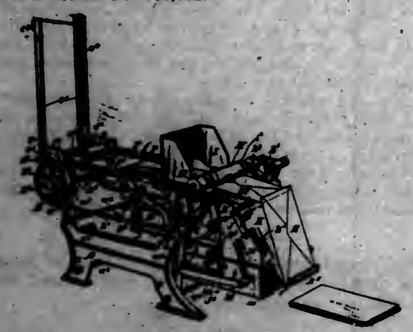
3. A stay-bolt structure, comprising the usual bolt, a sleeve-plug fitting the boiler-shell and having a seat for the head of said bolt, a separate threaded member engaging said sleeve-plug for normally retaining the bolt in place, and a flexible connecting member between said retaining members and the bolt.

4. A stay-bolt structure, comprising a bolt suitably secured at one end to one portion of a boiler-shell and having a head at the other end of the same, a sleeve-plug fitting the other shell and having a seat for the head of said bolt, a separate threaded member engaging said sleeve-plug for normally retaining the bolt in place, and a flexible connecting member between said retaining member and the bolt.

5. A stay-bolt structure, comprising the usual bolt, a sleeve-plug fitting the boiler-shell and having a seat for the head of said bolt, said bolt being centrally bored, an independent plug engaging said sleeve-plug for normally retaining the bolt in place, and a tube extending from said retaining plug and entering the bore of the bolt.

[Claims 6 to 12 not printed in the Gazette.]

876,913. ENVELOP-ADDRESSER. RUSSELL N. ROGERS, Chicago, Ill., assignor to Rogers Addresser Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 20, 1906. Serial No. 297,001.



1. In an addressing machine, a type plate holder or magazine, in combination with plate inking means, a rotary printing mechanism, rotary plate feeding means operating to convey plates from the magazine to said printing mechanism, an envelop holder, one member of said mechanism being in position to frictionally engage and draw down the front envelop in said holder, and intermittent feed controlling means below said member and coacting with said mechanism to complete the withdrawal of an envelop from said holder after it has been drawn down by said member.

2. In an addressing machine, printing rolls, in combination with means for feeding type-plates between said rolls, an envelop holder adjacent to said rolls, one of said rolls adapted to draw envelops from said holder, envelop stops for preventing the passage of envelops between said rolls, and means for retracting said stops upon the arrival of a printing plate at the printing rolls.

3. In an addressing machine, the combination of a printing mechanism with automatic means for feeding envelops, face down, to said printing mechanism, and means whereby each envelop while leaving the printing mechanism is caused to invert the next preceding envelop, substantially as described.

4. In an addressing machine, the combination of a printing mechanism with an envelop holder adjacent thereto a portion of said mechanism being adapted to withdraw envelops from said holder, intermittent envelop stopping and releasing means actuated by said mechanism, and envelop inverting means upon the delivery side of said printing mechanism, substantially as described.

5. In an addressing machine, two rolls, in combination with means for feeding type-plates between said rolls intermittently, an envelop holder so positioned that one of said rolls is adapted for frictional engagement with the forward envelop in the holder, intermittent envelop stopping and releasing means, and means for rotating the said rolls, substantially as described.

[Claims 6 to 50 not printed in the Gazette.]

876,914. SELF-FEEDER FOR ADDRESSING-MACHINES AND THE LIKE. RUSSELL N. ROGERS, Chicago, Ill., assignor to Rogers Addresser Company, Chicago, Ill., a Corporation of Illinois. Original application filed Jan. 20, 1906, Serial No. 297,001. Divided and this application filed June 18, 1906. Serial No. 322,212.



1. In a feeding mechanism of the class described, a box or holder having an open front and adapted to contain a loose pack of sheets or envelops, in upstanding position, in combination with means for feeding the latter forward in said box, flexible restraining devices or supports provided at the bottom of said holder, a frictional drawing roll presenting its side to the ends of said supports and another roll in substantial contact with and coöperating with said drawing roll, substantially as described.

2. An envelop feeding mechanism comprising a holder having an open front and an inclined bottom, in combination with envelop supporting fingers provided at the bottom of said holder, a frictional drawing roll presenting its side to the ends of said fingers, a coöperating drawing roll, and envelop stopping and releasing means, relatively between said rolls, substantially as described.

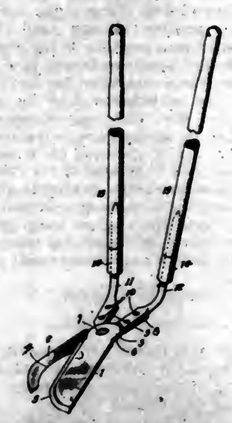
3. An envelop feeding mechanism comprising a pair of rolls, the circumference of the larger of which is substantially equal to the length of an envelop, in combination with an envelop holder adjacent to the smaller roll to present the side of an envelop in frictional contact therewith, and envelop stop and releasing means in the intake opening between said rolls and actuated in time with the rotation of said rolls, substantially as described.

4. In an envelop feeding mechanism, an envelop holder or magazine, having an inclined bottom, an open front and a closed back to support envelops in rearwardly inclined position, in combination with a drawing roll arranged for rotation adjacent to the lower edge of said holder, to first partly and then completely withdraw an envelop from said holder and envelop stop and releasing devices extending beneath said roll and means intermittently operating said devices, substantially as described.

5. In an envelop feeding mechanism, an envelop holder or magazine having an inclined bottom and an open front, in combination with a frictional drawing roll adjacent to said holder to engage the front envelop therein, envelop supporting fingers upon said holder, envelop stopping and releasing fingers arranged beneath said holder, and coöperating drawing means for extracting an envelop from the holder when released, substantially as described.

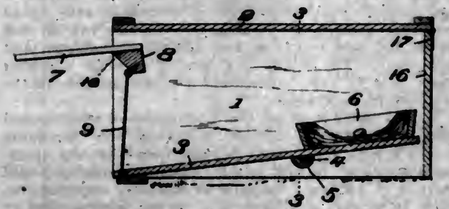
[Claims 6 to 22 not printed in the Gazette.]

876,915. VEGETABLE CUTTER AND TRIMMER. HENRY RUFTY and MELVIN RUFTY, Fremont, Ohio. Filed Sept. 14, 1907. Serial No. 392,906.



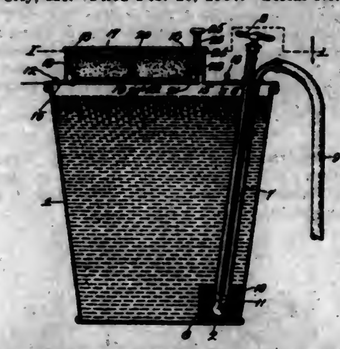
A vegetable trimmer comprising pivotally connected blades, one of said blades being formed with a concaved cutting edge, the concavity of said edge adjacent the free end of the blade being on a curvature of less radius than the curvature of the remainder of said edge, the cutting edge of the remaining blade being straight for the greater portion of its length and curved at the free end on a curvature approximately corresponding to the curvature at the free end of the other blade.

876,916. POULTRY-NEST. JOHN A. SECREST, Langdon, Kans., assignor of one-fifth to John L. Duncan, one-fifth to Charles K. Mauck, one-fifth to Barter E. Cole, and one-fifth to Hance B. Ferguson, Langdon, Kans. Filed Mar. 20, 1907. Serial No. 363,496.



In a device of the class described, the combination with a receptacle; of a floor pivotally mounted in said receptacle and extending the full length thereof, the pivot point of said floor being nearer the rear end thereof, a nest mounted on the inner end of said floor, a cup at the forward end of said floor and to one side thereof adapted to receive weights to form a balance for said nest, a swinging cover for said receptacle, a gate at the open end of said receptacle, comprising a bar pivotally secured within said receptacle and a plurality of slats secured at their upper ends to said bar, the pivot point of said bar being located adjacent one edge of the bar, whereby the weight of said bar will be at one side of the pivot point thereof, a pitman pivotally secured between the forward end of the floor and the edge of the bar opposite the pivot point thereof, whereby when the nest is occupied, the floor will be swung upon its pivot point and the gate closed.

876,917. FIRE-EXTINGUISHER. HENRY SIEBEN, Kansas City, Mo. Filed Feb. 19, 1907. Serial No. 358,237.



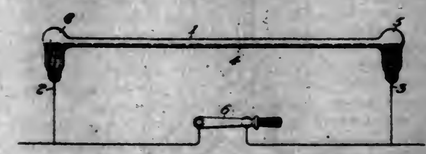
1. A bucket, a cover therefor having an opening, a cage bearing a hinged relation to said cover and normally closing the opening thereof, and a chemical basket carried and surrounded by said cage and provided with a movable bottom.

2. A bucket, a cover therefor having an opening, a cage bearing a hinged relation to said bucket, and a chemical basket carried and surrounded by said cage and provided with a movable bottom, means for holding the bottom closed, and means for disengaging the holding means for permitting the bottom to open and discharge the contents of the basket into the water.

3. A bucket, a cover therefor having an opening, a cage bearing a hinged relation to said bucket, and a chemical basket carried and surrounded by said cage and provided with a hinged bottom, means to hold the bottom normally closed and a push rod to disengage said means and permit the bottom to swing down.

4. The combination of a bucket, a cover therefor provided with an opening, a perforated cage provided with flanges at its lower end and hinged to said cover at the rear margin of said opening and adapted to close said opening normally, means to fasten said cage in fixed relation to the cover, a basket depending into the perforated cage and tapering downwardly and having its upper side closed, a bottom for the basket hinged to the same at one end, means for holding the bottom of the basket normally closed, and means for effecting the opening movement of said bottom.

876,918. CIRCUIT-BREAKER. PERCY H. THOMAS, Montclair, N. J., assignor to Cooper Hewitt Electric Company, New York, N. Y., a Corporation of New York. Original application filed Dec. 10, 1903, Serial No. 184,540. Divided and this application filed Jan. 6, 1905, Serial No. 239,839. Renewed Feb. 19, 1907. Serial No. 358,218.



1. The combination with an electric circuit and a main switch included therein, of a circuit breaker in shunt to the switch, the said circuit breaker including a suitable container having mercury electrodes connected initially by a thin body of mercury, said body being so proportioned as to be vaporized by the passage of current upon the opening of said switch.

2. The combination with an electric circuit and a main switch included therein, of a gas or vapor electric circuit breaker in shunt to said switch, the said circuit breaker including a suitable hermetically sealed and completely exhausted container having mercury electrodes therein

initially connected by a thin body of mercury of such dimensions as to be vaporized by the passage of current therethrough on the opening of the switch.

3. The combination with an electric circuit, and a main switch included therein, of a circuit-breaker in shunt to the switch, the said circuit-breaker being composed of a suitable container having mercury electrodes connected by a thin body of mercury.

876,919. COMBINATION-TOOL. JAMES M. WALLACE, Spartanburg, S. C., assignor of one-half to Richard Webb Thomson, Spartanburg, S. C. Filed Sept. 4, 1907. Serial No. 391,308.



1. In a device of the character described, the combination of a stock having one end thereof bifurcated to form a bottle opener, the said stock having a groove formed therein, and a blade pivoted within the groove, the point of the blade normally projecting between the arms of the bifurcation.

2. In a device of the character described, the combination of a stock having one end thereof bifurcated to form a bottle opener, one of the arms of the bifurcation being shorter than the opposite arm, the said stock also having a groove formed therein, and a blade pivoted within the groove, the point of the blade normally projecting between the arms of the bifurcation.

3. In a device of the character described, the combination of a stock having one end thereof bifurcated to form a bottle opener, the said stock also having a groove formed therein, and a blade pivoted within the groove, the said blade being curved so as to coöperate with the stock to form a can opener and the point of the blade normally projecting between the arms of the bifurcation.

876,920. HYDRAULIC JACK, PUNCH, AND SIMILAR MACHINE. JOHN WEEKS, Locust Valley, N. Y., assignor of one-half to Henry C. Dudgeon, Locust Valley, N. Y. Filed Nov. 24, 1906. Serial No. 344,833.



1. The combination in a machine of the class stated of two pumps of different capacities, both located in the ram of the jack, one near the top of the ram, the other near the bottom thereof, both receiving their force liquid from the same reservoir and discharging it into the same force chamber.

2. The combination in a machine of the class stated of two pumps of different capacities, both located in the ram of the jack, one near the top of the ram, the other near the bottom thereof, the pistons of both pumps being mounted upon the same piston rod which is smaller than the pump chamber and connecting passages through which it passes, both pumps receiving their force liquid primarily from the same reservoir and discharging it ultimately into the same force chamber.

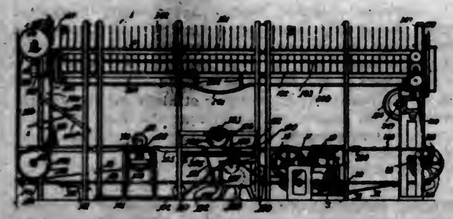
3. The combination in a machine of the class stated of two pumps of different capacities, the chamber of the larger one being cut in the body of the ram near the top thereof, the smaller one being located near the bottom of the ram, the pistons of both pumps being upon the same piston rod which is smaller than the pump chambers.

4. The combination in a machine of the class stated of two pumps of different capacities located at different ends of the ram, a water space connecting the two pump chambers, both of the pistons mounted upon the same piston rod which is smaller than the pump chambers and connecting water space, an ingress valve in the smaller piston and means to throw out of operation the larger pump.

5. The combination in a machine of the class stated of two pumps of different capacities located at different ends of the ram, the larger one discharging through an intermediate waterway into the smaller pump chamber and thence through the piston of the smaller pump and means whereby both pumps may be simultaneously operated or the smaller one only.

[Claim 6 not printed in the Gazette.]

876,921. MATCH-MACHINE. WILLIAM E. WILLIAMS, Chicago, Ill., assignor to The Diamond Match Company, New York, N. Y., a Corporation of Illinois. Filed June 13, 1903. Serial No. 161,255.



1. In a match machine, the combination with splint supplying mechanisms, splint dipping mechanism, and match ejecting mechanism, of separate and independent match carriers, and means for impelling said carriers to and past the said mechanisms in succession, said means including devices for feeding the carriers end to end across the said supplying and dipping mechanisms, and also devices for feeding the carriers through a drying space, side by side, preparatory to their passage to the said ejecting mechanism.

2. In a match machine, the combination of separate and independent match carriers, mechanism for supplying splints row by row to said carriers, mechanism for applying composition to said splints, means for impelling said carriers to and past the said mechanisms, a drying conveyer to support said carriers in upright position side by side, means for transferring the carriers to the said conveyer, match ejecting mechanism, and means for transferring the carriers thereto from the drying conveyer.

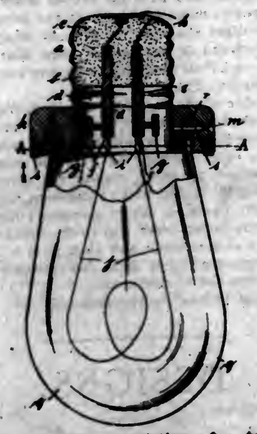
3. In a match machine, the combination with splint supplying mechanism, splint dipping mechanism, and match ejecting mechanism, of separate and independent match carriers, and means for impelling said carriers to and past the said mechanisms in succession, said means including a set of chains for impelling the carriers through the supplying mechanism, a set of chains for impelling the carriers through the dipping mechanism, a set of chains for elevating the carriers, a set of chains for receiving the carriers and conducting them in upright position side by side through a drying space, and devices for feeding the carriers to and past the ejecting mechanism.

4. In a match machine, the combination of independent match carriers, traveling supports therefor, elevating mechanism, means whereby said carriers are successively removed from the said supports and engaged with said elevating mechanism, a drying conveyer having means to receive and support said carriers in upright position, and means whereby the carriers are successively removed from the elevating mechanism and transferred to the drying conveyer.

5. In a match machine, the combination of independent match carriers, traveling supports therefor, elevating mechanism, means whereby said carriers are successively removed from the said supports and engaged with said mechanism, a drying conveyer having means to receive and support said carriers in upright position, means whereby the carriers are successively removed from the elevating mechanism, and transferred to the drying conveyer, match ejecting mechanism, and means whereby the said carriers are transferred from the drying conveyer to the ejecting mechanism.

[Claims 6 to 57 not printed in the Gazette.]

876,922. ELECTRIC LAMP. JOSEPH DE MARTINO, Brees-port, N. Y., assignor of three-tenths to Charles B. Davis and three-tenths to Charles H. Kinley, Brees-port, N. Y., and one-tenth to James Francis Burke, Pittsburg, Pa. Filed Jan. 12, 1907. Serial No. 351,926.



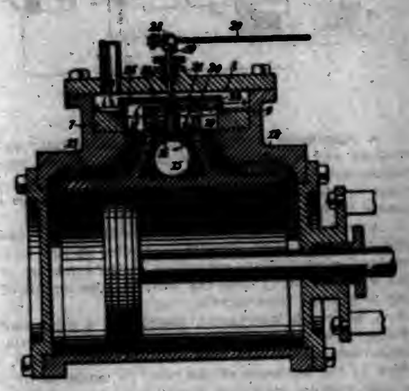
1. An electric lamp consisting of a top; a base-ring secured to said top and formed with a groove the walls of which are perforated; a carrier-ring mounted in said groove and formed with a perforation adapted to register with the perforations in the walls of said groove; means for detachably securing said base-ring and carrier-ring together; a globe mounted in said carrier-ring; and a filament carried by said top and inclosed by said globe.

2. An electric lamp consisting of a top; filament-holding means mounted therein; a filament carried by said means; a base-ring connected with said top and having formed in its lower face a V-shaped groove and provided with holes one of which connects said groove with the interior of said top and the other of which connects said groove with the external atmosphere; a carrier-ring shaped to fit into said groove and formed with a hole adapted to register with the holes in said base-ring; a globe mounted in said carrier-ring; and means for detachably securing said base-ring and carrier-ring together.

REISSUES.

12,738. ENGINE-VALVE. BERNARD HANSON, Schroyer, Kans. Filed Nov. 18, 1907. Serial No. 402,750. Original No. 854,036, dated May 21, 1907, Serial No. 338,733.

1. The combination with an engine cylinder having a steam chest thereupon and having spaced ports communicating with the interior of the steam chest and an intermediate exhaust port, of a block removably disposed within the steam chest and having ports registering with the steam ports of the cylinder and an intermediate opening registering at all times with the exhaust port of the chest, and a passaged valve mounted to oscillate on the said block and arranged to establish communication between the ports of the block and the intermediate opening, and to establish communication between the ports and the interior of the steam chest alternately.
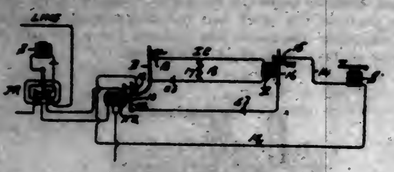


2. The combination with an engine cylinder having a steam chest thereupon and having spaced ports communicating with the interior of the steam chest and an intermediate exhaust port, of a block removably disposed within the steam chest and having ports registering with the steam ports of the cylinder and an intermediate opening registering at all times with the exhaust port of the chest, and a passaged valve mounted to oscillate on the said block and having in its under side a central recess and radial recesses leading to the said central recess, the latter being at all times in register with the said intermediate opening, and the said radial recesses being adapted to register alternately with the ports in the said block, the said valve having a transverse passage and ports leading thereto from the under side of the valve, the said transverse passage opening at one end into the steam chest, and the said valve ports being adapted to register alternately with the said block ports.

3. The combination with an engine cylinder having a steam chest thereupon and having spaced ports communicating with the interior of the steam chest, and an intermediate exhaust port, of a block removably disposed within the steam chest and having ports registering with the steam ports of the cylinder and an intermediate opening registering with the exhaust port of the chest, a web extending across the intermediate opening, a stem journaled in the web, and a passaged valve mounted upon the stem, said valve being arranged for movement, to establish communication between the ports of the block and the intermediate opening and to establish communication between the ports and the interior of the steam chest alternately.

4. A valve mechanism for engines, comprising a block having spaced ports therein and an intermediate opening, a web extending transversely of the opening, a stem journaled in the web, and a disk mounted upon the stem for movement therewith, said disk having a recess in its under face communicating with the intermediate opening of the block, and having a pair of recesses in its under surface outwardly of the central recess and communicating therewith, said disk having a pair of passages, one diametrically opposite each of the second-named recesses and having a third passage communicating with the first-named passages and with a surface of the disk other than the under surface thereof, said disk being movable to bring its first-named passages and corresponding recesses into registration with the ports of the block alternately.

12,739. **TELEGRAPH SYSTEM.** JOHN J. GEHEGAN, Newark, N. J. Filed Dec. 7, 1907. Serial No. 405,629. Original No. 872,226, dated Nov. 26, 1907, Serial No. 385,440.



1. A telegraphic instrument comprising a relay and its armature and a local sounder controlled by the relay in combination with means, including an induction coil, controlled by the armature of the relay, to act on the local sounder circuit to prevent false signals.

2. A telegraph instrument, comprising a relay and its armature and a local sounder controlled by the relay in combination with means controlled by the armature of the relay to momentarily open the local sounder circuit of the relay to prevent false signals.

3. A telegraph instrument, comprising a relay and its armature and a local sounder controlled by the relay in combination with means, including an induction coil, controlled by the armature of the relay to momentarily open the local sounder circuit of the relay to prevent false signals.

4. A quadruplex telegraph system, having a neutral relay and a polarized relay and their local sounder circuits in combination with means, including an induction coil, controlled by the armature of the neutral relay to act on the local sounder circuit of the neutral relay to prevent false signals.

5. A quadruplex telegraph system, having a neutral relay and a polarized relay and their local sounder circuits in combination with means controlled by the armature relay to momentarily open the local sounder circuit of the neutral relay to prevent false signals.

[Claim 6 not printed in the Gazette.]

12,740. **FIBROUS-STOCK FEEDER.** STEPHEN W. WOODBURY, Newton Highlands, Mass., assignor to Sydney Harwood, Newton, Mass., and John H. Harwood, Brookline, Mass., Copartners. Filed June 4, 1907. Serial No. 377,267. Original No. 843,126, dated Feb. 5, 1907, Serial No. 312,280.



1. In a machine of the character specified, the combination of a toothed conveyer, a vibratory evener-comb cooperating therewith for removing surplus material, a vibratory clearer coöperating with the evener-comb to prevent the material clogging and matting upon the same, and a link connection between the evener and clearer for causing the comb and clearer to move in unison and at different relative speeds, the clearer having a faster movement imparted thereto.

2. In a machine of the character specified, the combination of a toothed conveyer, a vibratory evener-comb comprising a shaft mounted in bearings, outer bearings pivotally mounted upon the shaft of the evener, means for securing the pivoted bearings in an adjusted position, a clearer mounted upon the pivoted bearings and adapted to coöperate with the evener, and connecting means between the evener and clearer for causing the two to move in unison but at different relative speeds.

3. In a machine of the character specified, the combination of a toothed conveyer, a shaft, a vibratory evener-comb mounted upon said shaft to oscillate therewith, bearings pivotally mounted upon the shaft carrying the evener-comb, means for securing said bearings in an adjusted position, a second shaft mounted in the pivoted bearings, a clearer-comb mounted upon the second shaft to oscillate therewith, arms projected from the shafts carrying the evener and clearer, a link connecting said arms to cause them to move in unison but at different relative speeds, and means for imparting movement to one of said arms.

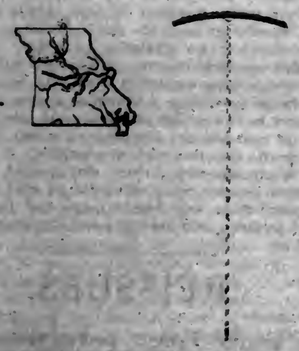
4. In a feeder of the character described, the combination with the toothed conveyer apron and the vibratory evener comb coöperating therewith, of a second vibratory comb coöperating both with the evener comb and with the toothed conveyer, means to oscillate the evener comb, and means to oscillate the second vibratory comb to cause it, during its forward or operative stroke, first to clear the evener comb and then partially to remove surplus material from the conveyer apron.

5. In a feeder of the character specified, the combination with the toothed conveyer, of a vibratory evener-comb cooperating therewith for removing surplus material, a second vibratory comb coöperating with the evener-comb and with the toothed conveyer, means for causing the two combs to move in unison and at different relative speeds, the latter comb having a faster movement imparted thereto, whereby the latter comb will in its forward movement first clear the evener comb and then pass it by, partially to remove surplus material from the conveyer before such material reaches the evener comb.

[Claim 6 not printed in the Gazette.]

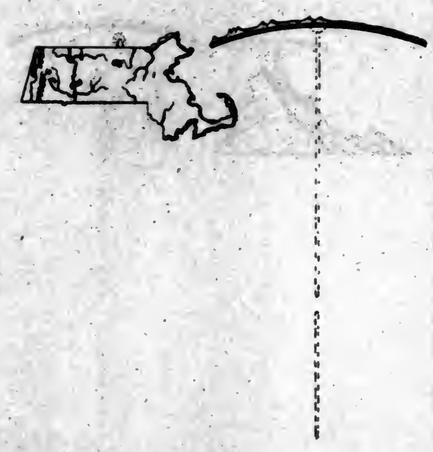
DESIGNS.

38,995. **CHARM, PIN, OR SIMILAR ARTICLE.** SAUL ROBERT JACOBS, Alameda, Cal. Filed July 5, 1907. Serial No. 382,404. Term of patent 7 years.



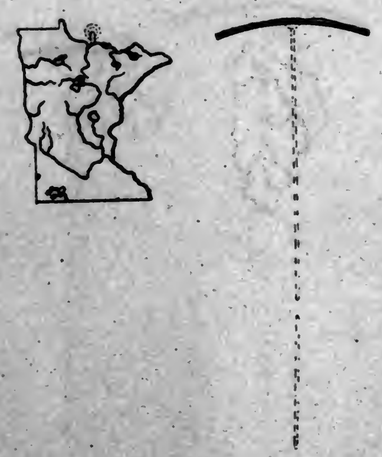
The ornamental design for a charm, pin, or similar article as shown.

38,996. **CHARM, PIN, OR SIMILAR ARTICLE.** SAUL ROBERT JACOBS, Alameda, Cal. Filed July 5, 1907. Serial No. 382,405. Term of patent 7 years.



The ornamental design for a charm, pin, or similar article as shown.

38,997. **CHARM, PIN, OR SIMILAR ARTICLE.** SAUL ROBERT JACOBS, Alameda, Cal. Filed July 5, 1907. Serial No. 382,406. Term of patent 7 years.



The ornamental design for a charm, pin, or similar article as shown.

38,998. **CHARM, PIN, OR SIMILAR ARTICLE.** SAUL ROBERT JACOBS, Alameda, Cal. Filed July 5, 1907. Serial No. 382,407. Term of patent 7 years.



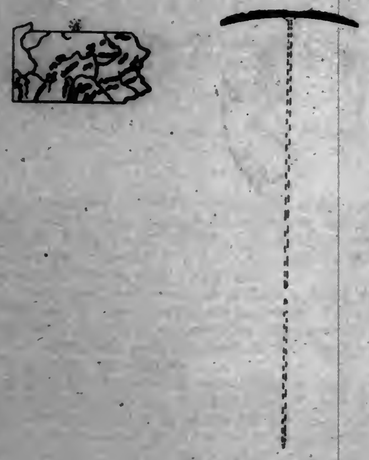
The ornamental design for a charm, pin, or similar article as shown.

38,999. **CHARM, PIN, OR SIMILAR ARTICLE.** SAUL ROBERT JACOBS, Alameda, Cal. Filed July 5, 1907. Serial No. 382,408. Term of patent 7 years.



The ornamental design for a charm, pin, or similar article as shown.

39,000. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed July 5, 1907. Serial No. 382,409. Term of patent 7 years.



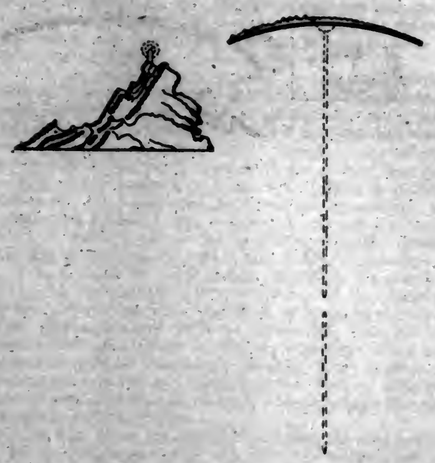
The ornamental design for a charm, pin, or similar article as shown.

39,001. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed July 5, 1907. Serial No. 382,410. Term of patent 7 years.



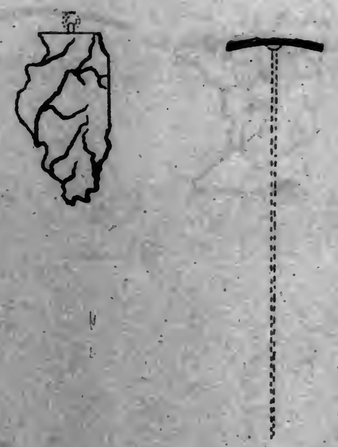
The ornamental design for a charm, pin, or similar article as shown.

39,002. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed July 5, 1907. Serial No. 382,411. Term of patent 7 years.



The ornamental design for a charm, pin, or similar article as shown.

39,003. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed July 5, 1907. Serial No. 382,412. Term of patent 7 years.



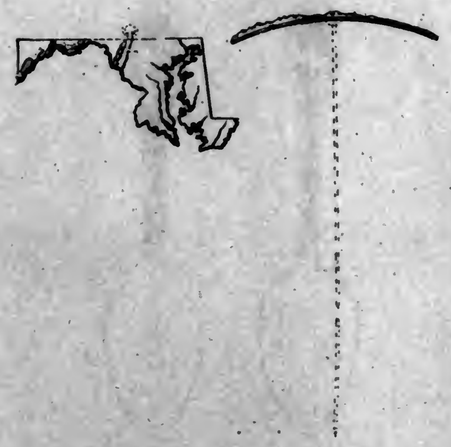
The ornamental design for a charm, pin, or similar article as shown.

39,004. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed July 5, 1907. Serial No. 382,413. Term of patent 7 years.



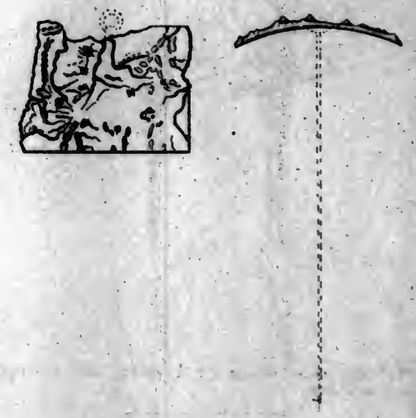
The ornamental design for a charm, pin, or similar article as shown.

39,005. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed July 5, 1907. Serial No. 382,414. Term of patent 7 years.



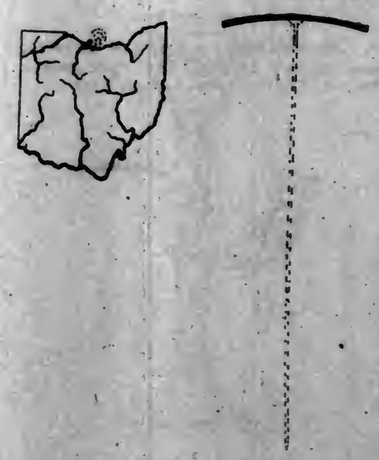
The ornamental design for a charm, pin, or similar article as shown.

39,006. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed July 5, 1907. Serial No. 382,415. Term of patent 7 years.



The ornamental design for a charm, pin, or similar article as shown.

39,007. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed July 5, 1907. Serial No. 382,416. Term of patent 7 years.



The ornamental design for a charm, pin, or similar article as shown.

39,008. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed July 5, 1907. Serial No. 382,417. Term of patent 7 years.



The ornamental design for a charm, pin, or similar article as shown.

39,009. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed June 12, 1907. Serial No. 378,618. Term of patent 7 years.



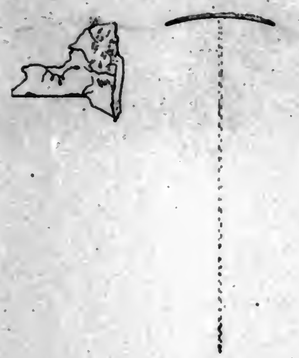
The ornamental design for a charm, pin, or similar article as shown.

39,010. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed June 12, 1907. Serial No. 378,619. Term of patent 7 years.



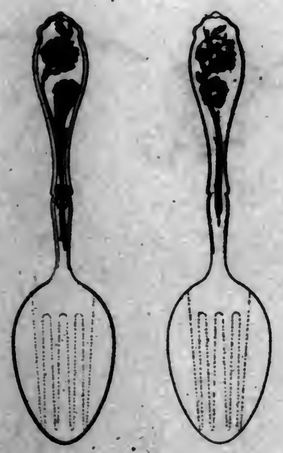
The ornamental design for a charm, pin, or similar article as shown.

39,011. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed June 12, 1907. Serial No. 378,620. Term of patent 7 years.



The ornamental design for a charm, pin, or similar article as shown.

39,012. SPOON OR SIMILAR ARTICLE. WILLIAM A. JAMESON, Niagara Falls, N. Y. Filed Oct. 4, 1907. Serial No. 395,974. Term of patent 14 years.



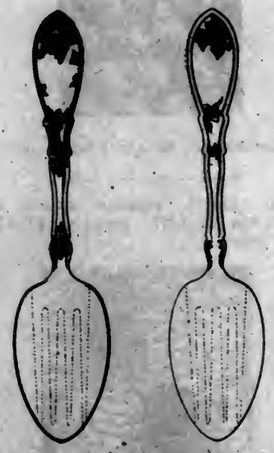
The ornamental design for a spoon or similar article as shown.

39,013. SPOON OR SIMILAR ARTICLE. WILLIAM A. JAMESON, Niagara Falls, N. Y. Filed Oct. 4, 1907. Serial No. 395,975. Term of patent 14 years.



The ornamental design for a spoon or similar article as shown.

39,014. SPOON OR SIMILAR ARTICLE. WILLIAM A. JAMESON, Niagara Falls, N. Y. Filed Oct. 4, 1907. Serial No. 395,976. Term of patent 14 years.



The ornamental design for a spoon or similar article as shown.

39,015. SPOON OR SIMILAR ARTICLE. WILLIAM A. JAMESON, Niagara Falls, N. Y. Filed Dec. 3, 1907. Serial No. 404,967. Term of patent 7 years.



The ornamental design for a spoon or similar article as shown.

39,016. PEDESTAL AND JARDINIÈRE. EDWARD L. COLLIS, Cincinnati, Ohio. Filed Nov. 16, 1907. Serial No. 402,568. Term of patent 7 years.



The ornamental design for a pedestal and jardinière as shown.

39,017. CABINET FOR TALKING-MACHINES. JOHN C. ENGLISH, Camden, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Sept. 4, 1907. Serial No. 391,407. Term of patent 14 years.



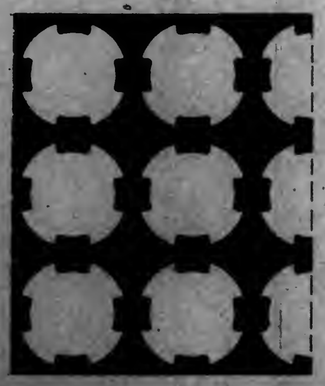
The ornamental design for a cabinet for talking machines as shown.

39,018. VEHICLE-BODY. ROBERT MCA. LLOYD, Oyster Bay, N. Y., assignor to General Vehicle Company, a Corporation of New York. Filed Oct. 10, 1907. Serial No. 396,861. Term of patent 14 years.



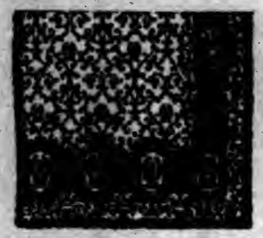
The ornamental design for a vehicle body, as shown.

39,019. TILING. ALFRED A. SPADONE, New York, N. Y., assignor to The Gutta Percha & Rubber Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Oct. 28, 1907. Serial No. 399,618. Term of patent 14 years.



The ornamental design for tiling as shown.

39,020. LACE CURTAIN. WILLIAM HARDY, Philadelphia, Pa., assignor to John Bromley and Edward Bromley, Copartners, trading as John Bromley & Sons, Philadelphia, Pa. Filed Dec. 7, 1907. Serial No. 405,621. Term of patent 3½ years.



The ornamental design for a lace curtain as shown.

39,021. PILE FABRIC. FREDERIC E. KIP, Montclair, N. J. Filed Nov. 25, 1907. Serial No. 403,826. Term of patent 7 years.



The ornamental design for a pile fabric, as shown.

39,022. PILE FABRIC. FREDERIC E. KIP, Montclair, N. J. Filed Nov. 25, 1907. Serial No. 403,827. Term of patent 7 years.



The ornamental design for a pile fabric, as shown.

39,023. PILE FABRIC. FREDERIC E. KIP, Montclair, N. J. Filed Nov. 25, 1907. Serial No. 403,828. Term of patent 7 years.



The ornamental design for a pile fabric, as shown.

39,024. PILE FABRIC. FREDERIC E. KIP, Montclair, N. J. Filed Nov. 25, 1907. Serial No. 403,829. Term of patent 7 years.



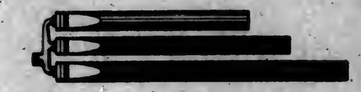
The ornamental design for a pile fabric, as shown.

39,025. ERASER. EBERHARD FABER, New York, N. Y. Filed Feb. 6, 1906. Serial No. 299,840. Term of patent 14 years.



The ornamental design for an eraser as shown.

39,026. HORN. CLAUD H. FOSTER, Cleveland, Ohio. Filed Feb. 17, 1906. Serial No. 301,708. Term of patent 7 years.



The ornamental design for a horn, as shown.

39,027. RUBBER HEEL. WILLIAM A. KÖNEMAN, Milwaukee, Wis. Filed Sept. 19, 1907. Serial No. 393,740. Term of patent 7 years.



The ornamental design for a rubber heel, as shown.

39,028. BOX. GUSTAV A. KRUTTSCHNITT, Newark, N. J. Filed Aug. 27, 1907. Serial No. 390,408. Term of patent 7 years.



The ornamental design for a box, as shown.

TRADE-MARKS

PUBLISHED JANUARY 14, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 181. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE UNION DISTILLING CO., Cincinnati, Ohio. Filed Apr. 1, 1905.

ANCHOR

Particular description of goods.—Whisky.

Ser. No. 1,307. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) N. P. PRATT LABORATORY, Atlanta, Ga. Filed Apr. 12, 1905.



The body of the tube above and below the annular band is red.

Particular description of goods.—Epsom Salts, Sulfate of Lime, Carbonic-Acid Gas, and Sodium-Phosphate Compounds.

Ser. No. 13,010. (CLASS 25. LOCKS AND SAFES.) THE H. B. IVES COMPANY, New Haven, Conn. Filed Sept. 25, 1905. Used ten years.

IVES

Particular description of goods.—Sash-Locks and Door-Bolts.

Ser. No. 13,244. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) THE SAWYER CRYSTAL BLUE COMPANY, Boston, Mass. Filed Oct. 3, 1905. Used ten years.



The trade-mark appearing in red.

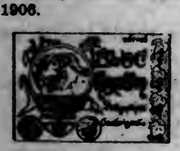
Particular description of goods.—Washing-Blue.

Ser. No. 19,467. (CLASS 8. DETERGENTS.) ERICKA MFG. CO. INC., Springfield, Mass. Filed May 12, 1906.



Particular description of goods.—Soaps.

Ser. No. 20,113. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) LOUIS FÉRET, Paris, France. Filed June 7, 1906.



Particular description of goods.—A Perfumed Antiseptic Preparation for the Relief of Irritation Resulting from Shaving.

Ser. No. 21,635. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) GEO. G. SNOW CO., Brockton, Mass. Filed Aug. 17, 1906.



Particular description of goods.—Leather Boots and Shoes.

Ser. No. 22,451. (CLASS 18. AGRICULTURAL AND DAIRY MACHINERY AND PARTS OF SUCH MACHINERY.) THE GEORGE WORTHINGTON COMPANY, Cleveland, Ohio. Filed Oct. 3, 1906.

ADELBERT

Particular description of goods.—Lawn-Mowers.

Ser. No. 23,524. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) JAMES MORTON YOUNG, Jr., Waycross, Ga. Filed Nov. 21, 1906.



Particular description of goods.—A Remedy for Torpid Liver, Sick Headache, Biliousness, Dizziness, Dyspepsia, Sour Stomach, Indigestion, Loss of Sleep, and Malarial Poison.

Ser. No. 25,616. (CLASS 8. DETERGENTS.) SMITH, KLINE AND FRENCH COMPANY, Philadelphia, Pa. Filed Feb. 26, 1907. Used ten years.

FRENCH'S

Particular description of goods.—Soaps.

Ser. No. 26,824. (CLASS 9. EXPLOSIVES.) THE PETERS CARTRIDGE COMPANY, Cincinnati, Ohio. Filed Apr. 20, 1907.

P.C.C.

Particular description of goods.—Ammunition, Comprising Cartridges, Powder, Primers, Caps, and Loaded Shotgun-Shells.

Ser. No. 26,825. (CLASS 22. FIREARMS, AND EQUIPMENTS AND PROJECTILES NOT OTHERWISE CLASSIFIED.) THE PETERS CARTRIDGE COMPANY, Cincinnati, Ohio. Filed Apr. 20, 1907.

P.C.C.

Particular description of goods.—Ammunition, Comprising Cartridge-Shells, Shot, Paper Shotgun-Shells, Bullets, and Gun-Wads.

Ser. No. 26,826. (CLASS 9. EXPLOSIVES.) THE PETERS CARTRIDGE COMPANY, Cincinnati, Ohio. Filed Apr. 20, 1907. Used ten years.

P

Particular description of goods.—Ammunition, Comprising Cartridges, Powder, Primers, Caps, and Loaded Shotgun-Shells.

Ser. No. 26,827. (CLASS 22. FIREARMS, AND EQUIPMENTS AND PROJECTILES NOT OTHERWISE CLASSIFIED.) THE PETERS CARTRIDGE COMPANY, Cincinnati, Ohio. Filed Apr. 20, 1907. Used ten years.

P

Particular description of goods.—Ammunition, Comprising Cartridge-Shells, Shot, Paper Shotgun-Shells, Bullets, and Gun-Wads.

Ser. No. 27,391. (CLASS 12. MASONRY MATERIALS.) PORTLAND-MONSON SLATE COMPANY, Portland, Me. Filed May 15, 1907.

PORTLAND-MONSON SLATE CO. PORTLAND, ME.

Particular description of goods.—Kitchen-Sinks, Laundry-Tubs, and Urinals of Slate.

Ser. No. 28,068. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) IRA ROBERT BLACKBURN, Dayton, Ohio. Filed June 12, 1907.

BLACKBURN'S

Sul-phor-ine

(ABSORBIVE)

Particular description of goods.—A Compound Medicinal Preparation for Internal Use for the Blood.

Ser. No. 28,348. (CLASS 18. AGRICULTURAL AND DAIRY MACHINERY AND PARTS OF SUCH MACHINERY.) JOSEPH DICK, Canton, Ohio. Filed June 24, 1907.

BLIZZARD

Particular description of goods.—Feed and Ensilage Cutters.

Ser. No. 28,435. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) SYLVANIA KING, Pomeroy, Wash. Filed June 27, 1907.



Particular description of goods.—Chow-Chow.

Ser. No. 29,017. (CLASS 52. PACKING-HOUSE PRODUCTS.) SCHWARZSCHILD AND SULZBERGER COMPANY, Chicago, Ill., and New York, N. Y. Filed July 24, 1907. Used ten years.

HARRISON

S.&S.CO.

U.S.A.

Particular description of goods.—Oleo-Oil Prepared for Use in the Manufacture of Oleomargarine or Artificial Butter.

Ser. No. 29,028. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) BROOKMAN MANUFACTURING COMPANY, Chicago, Ill. Filed July 25, 1907. Used ten years.



Particular description of goods.—Bird-Seed and Bird Food.

Ser. No. 29,557. (CLASS 8. DETERGENTS.) SOLON PALMER, New York, N. Y. Filed Aug. 24, 1907.

Alberta

Particular description of goods.—Toilet Soap.

Ser. No. 29,755. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) DURANT ELECTRIC SUPPLIES CO., Chicago, Ill. Filed Sept. 5, 1907.

IRONITE

Particular description of goods.—Insulated Wire.

Ser. No. 30,077. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) SANDERS DUCK AND RUBBER COMPANY, St. Louis, Mo. Filed Sept. 19, 1907.

BULL FROG

Particular description of goods.—Rubber Boots.

Ser. No. 30,205. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal. Filed Sept. 25, 1907.

GREEN CORD

The cord being printed in green.

Particular description of goods.—Canned Fruits—Namely, Apples, Apricots, Blackberries, Cherries, Raspberries, Strawberries, Grapes, Nectarines, Peaches, Pears, Plums, and Loganberries—and Dried Fruits—Namely, Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, and Raisins.

Ser. No. 30,266. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) LEVI STRAUSS & CO., San Francisco, Cal. Filed Oct. 8, 1907.

[illegible]

Particular description of goods.—Men's Outer Shirts, Men's Pants, Overalls, Jumpers, and Blouses.

Ser. No. 30,433. (CLASS 27. RAILWAY EQUIPMENT NOT OTHERWISE CLASSIFIED, AND RAILWAY ROLLING-STOCK.) RAILWAY STEEL SPRING COMPANY, New York, N. Y. Filed Oct. 5, 1907.

R

Particular description of goods.—Railway-Car Springs, Railway-Car Wheels and Tires Thereof, and Oil-Box Covers for Railway Rolling-Stock.

Ser. No. 30,914. (CLASS 35. BELTING, HOSE, AND MACHINERY PACKING.) STRONG MACHINERY & SUPPLY CO., New York, N. Y. Filed Nov. 1, 1907.

Particular description of goods.—Hydraulic Packing.

Ser. No. 31,041. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) CARMEL WINE COMPANY, New York, N. Y. Filed Nov. 7, 1907.

CARMEL

Particular description of goods.—Cognacs and Cordials.

Ser. No. 31,064. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) FRONSIN & KELLY, Philadelphia, Pa. Filed Nov. 7, 1907.

Selco

Particular description of goods.—Men's and Boys' Coats, Vests, and Trousers and Women's and Girls' Coats, Outer Vests, Dress-Skirts, and Dress-Waists.

Ser. No. 31,067. (CLASS 63. PUBLICATIONS.) SELF-EDUCATOR PUBLISHING CO., INC., New York, N. Y. Filed Nov. 8, 1907.

SELF-EDUCATOR

Particular description of goods.—A Monthly Magazine.

Ser. No. 31,125. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) BRIDGE & BEACH MANUFACTURING COMPANY, St. Louis, Mo. Filed Nov. 11, 1907. Used ten years.

SUPERIOR

Particular description of goods.—Stoves and Ranges.

Ser. No. 31,143. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) GEO. B. BEST, Englewood, N. J. Filed Nov. 12, 1907.

PLANTOXINE

Particular description of goods.—A Remedy for the Following Diseases: Influenza, La Grippe, Hay-Fever, Hay-Asthma, Rose-Cold, and Chronic Malaria.

Ser. No. 31,149. (CLASS 58. GAMES AND TOYS, AND SPORTING GOODS NOT OTHERWISE CLASSIFIED.) A. G. SPALDING & BROS., New York, N. Y. Filed Nov. 13, 1907.

AVILO

Particular description of goods.—A Game in Which a Spool or Double Spinning-Top is Used.

Ser. No. 31,151. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) HOOD RUBBER COMPANY, Boston, Mass. Filed Nov. 13, 1907.

SPEARHEAD

Particular description of goods.—Rubber Boots, Rubber Shoes, Rubber Overshoes, and Rubber Tires for Motor-Vehicles.

Ser. No. 31,188. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) S. T. W. SANFORD & SONS, Long Island City, N. Y. Filed Nov. 15, 1907. Used ten years.

Particular description of goods.—A Remedy for Diseases of the Liver.

Ser. No. 31,198. (CLASS 51. MALT PREPARATIONS NOT OTHERWISE CLASSIFIED.) MINNEAPOLIS BREWING COMPANY, Minneapolis, Minn. Filed Nov. 15, 1907.

ZUMALWEISS

Particular description of goods.—Beer.

Ser. No. 31,201. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) GREELEY PRINTERY OF ST. LOUIS, St. Louis, Mo. Filed Nov. 16, 1907.

FLUFFY RUFFLES BREAD

The circular field being green.

Particular description of goods.—Bread.

Ser. No. 31,205. (CLASS 37. PAPER AND PAPER MANUFACTURES NOT OTHERWISE CLASSIFIED.) STANDARD PAPER M'F'G. CO., Manchester, Va. Filed Nov. 16, 1907.

NE PLUS ULTRA

Particular description of goods.—Stereotype Matrix-Paper and Stereotype Tissue-Paper.

Ser. No. 31,206. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) BIDDLE N. HUNT, Stratford, N. J. Filed Nov. 16, 1907.

The heart, with exception of parallelogram in center, is red.

Particular description of goods.—Powdered Veterinary Medicine Used as a Tonic for Animals.

Ser. No. 31,212. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) CHARLES SCOTT SMITH, Pueblo, Colo. Filed Nov. 16, 1907.

Particular description of goods.—A Remedy for Falling Hair.

Ser. No. 31,215. (CLASS 68. PUBLICATIONS.) GEORGE FOARDE, Baltimore, Md. Filed Nov. 16, 1907.



Particular description of goods.—Cards Containing Culinary Recipes.

Ser. No. 31,233. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ROBERT B. IRVING, New York, N. Y. Filed Nov. 18, 1907.

PLASMONMILK

Particular description of goods.—A Food Product or Ingredients of Foods Manufactured from Casein.

Ser. No. 31,250. (CLASS 72. MERCHANDISE NOT OTHERWISE CLASSIFIED.) HOUSEMAN & THOMPSON, LIMITED, Newcastle-upon-Tyne, England. Filed Nov. 19, 1907.



Particular description of goods.—Wax-Wire Used for Making Vent-Holes in Molds for Castings.

Ser. No. 31,292. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal. Filed Nov. 22, 1907.



The shield being red and alternate stripes yellow.
Particular description of goods.—Dried Fruits, (Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, and Raisins.)

Ser. No. 31,293. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal. Filed Nov. 22, 1907.



The shield being blue and alternate stripes red.
Particular description of goods.—Dried Fruits, (Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, and Raisins.)

Ser. No. 31,294. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal. Filed Nov. 22, 1907.



The shield being red and alternate stripes green.
Particular description of goods.—Dried Fruits, (Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, and Raisins.)

Ser. No. 31,295. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal. Filed Nov. 22, 1907.



The shield being red and alternate stripes blue.
Particular description of goods.—Dried Fruits, (Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, and Raisins.)

Ser. No. 31,296. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal. Filed Nov. 22, 1907.



The shield being red and alternate stripes purple.
Particular description of goods.—Dried Fruits, (Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, and Raisins.)

Ser. No. 31,297. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal. Filed Nov. 22, 1907.



Particular description of goods.—Dried Fruits, (Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, and Raisins.)

Ser. No. 31,298. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal. Filed Nov. 22, 1907.

STRIPE BRAND

Particular description of goods.—Dried Fruits, (Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, and Raisins.)

Ser. No. 31,324. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) BOKSCHEKY AND ROTKOWITZ, New York, N. Y. Filed Nov. 23, 1907.

TRIUMPH

Particular description of goods.—Cough Mixtures, Remedies for Corns and Diseases of the Blood, Dyspepsia or Stomach Pills, Toothache Drops and Pellets, Headache-Powder, Tooth-Powder, Hair-Dyes, and Baby and Anti-sweat Powder.

Ser. No. 31,325. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) THOMAS A. SUTTON, Johnstown, N. Y. Filed Nov. 23, 1907.

TULIP

Particular description of goods.—Hand-Bags.

Ser. No. 31,329. (CLASS 71. TOBACCO PRODUCTS.) FRANK SCHWARB, Cincinnati, Ohio. Filed Nov. 23, 1907.

SENATE



Particular description of goods.—Cigars.

Ser. No. 31,332. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) UNITED INCUBATOR AND POULTRY SUPPLY MANUFACTURING COMPANY, New York, N. Y., and Boundbrook, N. J. Filed Nov. 25, 1907.

BANNER

Particular description of goods.—Egg Food and Tonic and Molting-Powder for Fowls, Remedies for Indigestion, Roup, Canker, Cholera, Diarrhea, Chicken-Pox, Swelled Head, Scaly Legs and Leg Weakness in Fowls and Birds, Tonics for Birds, Turkey-Pills, Laxative Tablets, and Remedies for Worms in Dogs.

Ser. No. 31,346. (CLASS 37. PAPER AND PAPER MANUFACTURES NOT OTHERWISE CLASSIFIED.) KOCHMANN-STALLFORTH CO., New York, N. Y. Filed Nov. 25, 1907.

K.S.Co.-Lincrusta-K.S.Co.

Particular description of goods.—Decorative Fabric for Walls and Ceilings.

Ser. No. 31,352. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) HALL & RUCKEL, New York, N. Y. Filed Nov. 25, 1907.

FLORILINE

Particular description of goods.—A Toilet Preparation Used as a Hair and a Skin Tonic and a Preparation for Cleansing and Preserving the Teeth.

Ser. No. 31,365. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) LEA PIENAS, Rotterdam, Holland. Filed Nov. 26, 1907.

ABBEY

Particular description of goods.—A Remedy for All Affections of the Chest, Lungs, and Glands and for the Rickets, Whooping-Cough, and Asthma.

Ser. No. 31,377. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) F. AUGUST LUTTJEN, St. Louis, Mo. Filed Nov. 26, 1907.

Uericolina

Particular description of goods.—A Remedy for Diseases of the Kidneys, Bladder, and Prostate Gland.

Ser. No. 31,380. (CLASS 71. TOBACCO PRODUCTS.) SAMUEL REID TOBACCO COMPANY, St. Paul, Minn. Filed Nov. 26, 1907.

R

Particular description of goods.—Plug-Tobacco.

Ser. No. 31,389. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) KELLEY REMEDY COMPANY, Fairmont, W. Va. Filed Nov. 26, 1907.

ALKALO PEPSO BILE

Particular description of goods.—A Remedy for Gall-Stones.

Ser. No. 31,399. (CLASS 23. HAND-TOOLS NOT OTHERWISE CLASSIFIED.) BONNEY VISE & TOOL WORKS, INC., Philadelphia, Pa. Filed Nov. 27, 1907. Used ten years.

BONNEY

Particular description of goods.—Wrenches and Vises.

Ser. No. 31,406. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) ALFRED W. MORRIS, Philadelphia, Pa. Filed Nov. 27, 1907.

"Victorine"

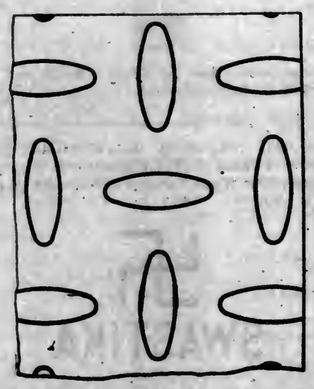
Particular description of goods.—Boiler-Cleaning Compounds.

Ser. No. 31,407. (CLASS 37. PAPER AND PAPER MANUFACTURES NOT OTHERWISE CLASSIFIED.) GEORGE LA MONTE & SON, Nutley, N. J., and New York, N. Y. Filed Nov. 27, 1907.



Particular description of goods.—Safety-Paper, Such as is Used for Railroad and other Tickets, Bank-Checks, Bank-Drafts, and other Checks and Drafts, Bills of Exchange, Promissory Notes, and All Vouchers of Value.

Ser. No. 31,408. (CLASS 37. PAPER AND PAPER MANUFACTURES NOT OTHERWISE CLASSIFIED.) GEORGE LA MONTE & SON, Nutley, N. J., and New York, N. Y. Filed Nov. 27, 1907.



Particular description of goods.—Safety-Paper, Such as is Used for Railroad and other Tickets, Bank-Checks, Bank-Drafts, and other Checks and Drafts, Bills of Exchange, Promissory Notes, and All Vouchers of Value.

Ser. No. 31,445. (CLASS 37. PAPER AND PAPER MANUFACTURES NOT OTHERWISE CLASSIFIED.) THE CLEVELAND-AKRON BAG CO., Cleveland, Ohio. Filed Nov. 29, 1907.

TYRITE

Particular description of goods.—Paper Bags.

Ser. No. 31,447. (CLASS 11. LEATHER BLACKINGS AND DRESSINGS.) KYLE & COMPANY, Chicago, Ill. Filed Nov. 29, 1907.

BLACK HAWK

Particular description of goods.—Shoe-Polishes.

Ser. No. 31,485. (CLASS 4. ABRASIVE AND POLISHING MATERIALS NOT INCLUDED IN CLASSES 8 AND 16.) THE CUDAHY PACKING CO., Chicago, Ill., and South Omaha, Nebr. Filed Nov. 30, 1907.

Dutch Hand Soap



Particular description of goods.—An Abrasive Soap.

Ser. No. 31,498. (CLASS 8. DETERGENTS.) CHAS. W. YOUNG & CO., Philadelphia, Pa. Filed Dec. 2, 1907.

HONK HONK

Particular description of goods.—Soft Soaps.

Ser. No. 31,544. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) THE "NEW WAY" MOTOR COMPANY, Lansing, Mich. Filed Dec. 4, 1907.



Particular description of goods.—Stationary and Marine Internal-Combustion Engines.

Ser. No. 31,558. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) CHARLES F. SHARKEY, Somerville, Mass. Filed Dec. 4, 1907.

REVERSA

Particular description of goods.—Chemical Substances Used in a Process of Making a Printing-Plate by Photo-Engraving.

Ser. No. 31,561. (CLASS 35. MUSICAL INSTRUMENTS AND TALKING-MACHINES AND SUPPLIES THEREFOR.) STRAUSS, BROTHERS & CO., New York, N. Y. Filed Dec. 4, 1907.

DIABOLO

Particular description of goods.—Harmonicas.

Ser. No. 31,562. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) THE STANDARD RIVET COMPANY, Boston, Mass. Filed Dec. 4, 1907.

S

Particular description of goods.—Staples.

Ser. No. 31,573. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) DAVID N. ARMSTRONG, Bridgeport, Conn. Filed Dec. 5, 1907.

LITE PULR

Particular description of goods.—Threading and Cutting-Off Machines.

Ser. No. 31,587. (CLASS 70. STATIONERY NOT OTHERWISE CLASSIFIED.) ABA L. SHIPMAN'S SONS, New York, N. Y. Filed Dec. 5, 1907. Used ten years.

COMMON-SENSE

Particular description of goods.—Temporary Binders.

Ser. No. 31,602. (CLASS 70. STATIONERY NOT OTHERWISE CLASSIFIED.) LOUIS C. WITKOWSKI, Washington, D. C. Filed Dec. 6, 1907.

WIZARD

Particular description of goods.—Stylographic Pens.

Ser. No. 31,609. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE LOWE BROTHERS CO., Dayton, Ohio. Filed Dec. 7, 1907.

LINDURO

Particular description of goods.—Enamel Paint.

Ser. No. 31,626. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) ISIDORE KRIPPER & CO., New Orleans, La. Filed Dec. 9, 1907.

OZONE

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 31,658. (CLASS 10. FERTILIZERS.) ALABAMA COTTON OIL COMPANY, Montgomery, Ala. Filed Dec. 10, 1907.



Particular description of goods.—Fertilizers.

Ser. No. 31,664. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) A. E. LITTLE & COMPANY, Lynn, Mass. Filed Dec. 11, 1907.



Particular description of goods.—Boots and Shoes of Leather and Leather and Cloth.

Ser. No. 31,665. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) UNITED STATES WHIP COMPANY, Westfield, Mass. Filed Dec. 11, 1907.



SWASTIKA

Particular description of goods.—Whips.

TRADE-MARKS

REGISTERED JANUARY 14, 1908.

67,005. MACHINES FOR SHARPENING PENCILS. FREDERICK EDWARD VESEY BAINES, Blackheath, England.
Filed July 31, 1907. Serial No. 29,128. PUBLISHED NOVEMBER 12, 1907.

67,006. CERTAIN METAL ARTICLES. ALFRED DEWSBURY, Walsall, England.
Filed September 3, 1907. Serial No. 29,714. PUBLISHED NOVEMBER 12, 1907.

67,007. CERTAIN MACHINES AND PARTS THEREOF. JONAS & COLVER, LIMITED, Sheffield, England.
Filed August 20, 1907. Serial No. 29,476. PUBLISHED NOVEMBER 12, 1907.

67,008. ABRASIVE METAL-POLISHES. THE T. W. ARMSTRONG CO., New York, N. Y.
Filed September 18, 1907. Serial No. 30,040. PUBLISHED NOVEMBER 12, 1907.

67,009. BAKING-POWDER. THE BENNETT COMPANY, Omaha, Nebr.
Filed September 24, 1907. Serial No. 30,179. PUBLISHED NOVEMBER 12 1907.

67,010. HORSESHOE-NAILS. THE CAPEWELL HORSE NAIL COMPANY, Hartford, Conn.
Filed September 30, 1907. Serial No. 30,315. PUBLISHED NOVEMBER 12, 1907.

67,011. GERMICIDES AND DISINFECTANTS. HIPPOLYTE DEPERDUSSIN, Paris, France, assignor to The Pasteur Vaccine Company Limited, London, England. A Firm.
Filed August 12, 1907. Serial No. 29,345. PUBLISHED NOVEMBER 12, 1907.

67,012. CERTAIN PHOTOGRAPHIC SUPPLIES. EASTMAN KODAK CO., Rochester, N. Y.
Filed October 9, 1907. Serial No. 30,508. PUBLISHED NOVEMBER 12, 1907.

67,013. SPARK-PLUGS. JEFFERY-DEWITT COMPANY, Newark, N. J.
Filed September 17, 1907. Serial No. 30,028. PUBLISHED NOVEMBER 12, 1907.

67,014. ACID COMPOUNDS FOR LAUNDRY SOURS. M. D. SLEMMER & COMPANY, Chicago, Ill.
Filed July 8, 1907. Serial No. 28,640. PUBLISHED NOVEMBER 12, 1907.

67,015. BASE-BALLS. A. J. REACH COMPANY, Philadelphia, Pa.
Filed October 12, 1907. Serial No. 30,573. PUBLISHED NOVEMBER 12, 1907.

67,016. CIGARS. ALLMENS DISTILLING COMPANY, Kansas City, Mo.
Filed June 28, 1907. Serial No. 28,447. PUBLISHED NOVEMBER 12, 1907.

67,017. REMEDIES FOR COUGHS AND COLDS. ARISTÓTELES ALVARADO, New York, N. Y.
Filed September 24, 1907. Serial No. 30,192. PUBLISHED NOVEMBER 12, 1907.

67,018. SMOKING-TOBACCO. RALPH W. ASHCROFT, New York, N. Y.
Filed August 9, 1907. Serial No. 29,315. PUBLISHED NOVEMBER 12, 1907.

67,019. SMOKING-TOBACCO. RALPH W. ASHCROFT, New York, N. Y.
Filed August 23, 1907. Serial No. 29,532. PUBLISHED NOVEMBER 12, 1907.

67,020. BITTERS AND MEDICINAL CORDIALS. B. S. FLERSHEIM MERCANTILE CO., Kansas City, Mo.
Filed August 19, 1907. Serial No. 29,449. PUBLISHED NOVEMBER 12, 1907.

67,021. CERTAIN MUSICAL INSTRUMENTS. THE CABLE COMPANY, Chicago, Ill.
Filed October 9, 1907. Serial No. 30,500. PUBLISHED NOVEMBER 12, 1907.

67,022. CERTAIN MUSICAL INSTRUMENTS. THE CABLE COMPANY, Chicago, Ill.
Filed October 9, 1907. Serial No. 30,499. PUBLISHED NOVEMBER 12, 1907.

67,023. CERTAIN JEWELRY. CROSSMAN COMPANY, New York, N. Y.
Filed September 18, 1907. Serial No. 30,043. PUBLISHED NOVEMBER 12, 1907.

67,024. SMOKING-TOBACCO, CHEWING-TOBACCO, CIGARS, AND CIGARETTES. GLOBE TOBACCO COMPANY, Detroit, Mich.
Filed October 13, 1906. Serial No. 22,673. PUBLISHED NOVEMBER 12, 1907.

67,025. HAIR-TONIC. JOHN B. JOHNSON, Kansas City, Mo.
Filed September 12, 1907. Serial No. 29,920. PUBLISHED NOVEMBER 12, 1907.

67,026. STOMACH-BITTERS. SOLOMON LEVINSON, Seattle, Wash.
Filed September 21, 1907. Serial No. 30,147. PUBLISHED NOVEMBER 12, 1907.

67,027. CIGARS. MORRIS HILLER LIPMAN, New York, N. Y.
Filed September 26, 1907. Serial No. 30,217. PUBLISHED NOVEMBER 12, 1907.

67,028. CIGARS. MORRIS HILLER LIPMAN, New York, N. Y.
Filed September 26, 1907. Serial No. 30,218. PUBLISHED NOVEMBER 12, 1907.

67,029. CERTAIN TOYS. THE M. LINDSAY RUBBER MANUFACTURING COMPANY, New York, N. Y., and Washington, D. C.
Filed September 21, 1907. Serial No. 30,137. PUBLISHED NOVEMBER 12, 1907.

67,030. CIGARS. LUCY J. MENDEZ, New York, N. Y.
Filed October 9, 1907. Serial No. 30,513. PUBLISHED NOVEMBER 12, 1907.

67,031. CERTAIN MEDICINAL PREPARATION. MERCER DRUG COMPANY, Trenton, N. J.
Filed August 12, 1907. Serial No. 29,369. PUBLISHED NOVEMBER 12, 1907.

67,032. REMEDY FOR DISEASES OF THE BOWELS. F. A. PATRICK, Palestine, Tex.
Filed June 1, 1907. Serial No. 27,838. PUBLISHED NOVEMBER 12, 1907.

67,033. MEDICINAL CORDIAL-WINE. CHARLES J. ULRICI, New York, N. Y.
Filed August 22, 1907. Serial No. 29,532. PUBLISHED NOVEMBER 12, 1907.

67,034. TOOTH-CLEANING PREPARATIONS IN TABLET FORM. ALBERT WESTLAKE, New York, N. Y.
Filed April 18, 1906. Serial No. 18,896. PUBLISHED JULY 2, 1907.

67,035. PROPRIETARY MEDICINES FOR THE TREATMENT OF COUGHS AND COLDS. ALBERT RUSSELL WHITE, Philadelphia, Pa.
Filed June 2, 1906. Serial No. 20,169. PUBLISHED NOVEMBER 12, 1907.

67,036. CERTAIN FOODS. ALART & MCGUIRE, New York, N. Y.
Filed March 19, 1907. Serial No. 26,059. PUBLISHED JUNE 18, 1907.

67,037. EGG-NOODLES AND MACARONI. ANGER BAKING COMPANY, New York, N. Y.
Filed September 6, 1907. Serial No. 29,781. PUBLISHED NOVEMPER 12, 1907.

67,038. MINCE-MEAT. ATMORE & SON, Philadelphia, Pa.
Filed November 20, 1905. Serial No. 14,810. PUBLISHED NOVEMBER 12, 1907.

67,039. MINCE-MEAT. ATMORE & SON, Philadelphia, Pa.
Filed November 20, 1905. Serial No. 14,811. PUBLISHED NOVEMBER 12, 1907.

67,040. CANNED FRUITS, CANNED VEGETABLES, VINEGAR, AND PICKLES. A. F. BECKMANN & CO., New York, N. Y.
Filed September 30, 1907. Serial No. 30,203. PUBLISHED NOVEMBER 12, 1907.

67,041. CANNED BARTLETT PEARS. RAFAEL S. BESTON, New York, N. Y.
Filed June 14, 1905. Serial No. 8,094. PUBLISHED NOVEMBER 12, 1907.

67,042. ACETYLENE AND OIL LIGHTING APPARATUS. BOAS RODRIGUES ET CIE., Paris, France.
Filed April 4, 1907. Serial No. 26,442. PUBLISHED NOVEMBER 12, 1907.

67,043. TOMATO-SAUCE. VINCENZO DEL GAIZO, Naples, Italy.
Filed October 5, 1906. Serial No. 22,551. PUBLISHED NOVEMBER 12, 1907.

67,044. BLANKETS. THE ESMOND MILLS, Enfield, R. I.
Filed October 3, 1907. Serial No. 30,206. PUBLISHED NOVEMBER 12, 1907.

67,045. HEATING-FURNACES. FRANK FIEDLER, Akron, Ohio.
Filed May 15, 1907. Serial No. 27,378. PUBLISHED NOVEMBER 12, 1907.

67,046. BUTTER AND CREAM. G. W. SIMPSON & CO., Boston, Mass.
Filed October 3, 1907. Serial No. 30,204. PUBLISHED NOVEMBER 12, 1907.

67,047. TABLE-SYRUP. HALPEN, GREEN & CO., Philadelphia, Pa.
Filed September 30, 1907. Serial No. 30,201. PUBLISHED NOVEMBER 12, 1907.

67,048. OLIVE-OIL. HANNAN & HOGG, Chicago, Ill.
Filed October 2, 1907. Serial No. 30,354. PUBLISHED NOVEMBER 12, 1907.

67,049. CANNED VEGETABLES. ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill.
Filed September 26, 1907. Serial No. 30,231. PUBLISHED NOVEMBER 12, 1907.

67,050. CANNED VEGETABLES. ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill.
Filed September 26, 1907. Serial No. 30,232. PUBLISHED NOVEMBER 12, 1907.

67,051. CANNED VEGETABLES. ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill.
Filed September 26, 1907. Serial No. 30,233. PUBLISHED NOVEMBER 12, 1907.

67,052. CANNED VEGETABLES. ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill.
Filed September 26, 1907. Serial No. 30,249. PUBLISHED NOVEMBER 12, 1907.

67,053. CANNED VEGETABLES. ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill.
Filed September 26, 1907. Serial No. 30,250. PUBLISHED NOVEMBER 12, 1907.

67,054. CERTAIN PAPER. JAMES R. CROMPTON & BROTHERS LIMITED, near Bury, England.
Filed October 9, 1907. Serial No. 30,515. PUBLISHED NOVEMBER 12, 1907.

67,055. COFFEES. NORTON & CURD COFFEE CO., Louisville, Ky.
Filed September 23, 1907. Serial No. 30,168. PUBLISHED NOVEMBER 12, 1907.

67,056. RAISINS. PADDOCK & FOWLER COMPANY, New York, N. Y.
Filed January 20, 1906. Serial No. 16,344. PUBLISHED NOVEMBER 12, 1907.

67,057. PEPPERS, ARTICHOKES, AND DRY MUSHROOMS. P. PASTENE & CO., Boston, Mass.
Filed September 16, 1907. Serial No. 29,967. PUBLISHED NOVEMBER 12, 1907.

67,058. WHEAT-FLOUR. THE REA-PATTERSON MILLING COMPANY, Coffeyville, Kans.
Filed January 2, 1907. Serial No. 24,385. PUBLISHED MARCH 5, 1907.

67,059. CANDY. ABRAHAM B. SCHOFF, Philadelphia, Pa.
Filed July 12, 1907. Serial No. 28,754. PUBLISHED NOVEMBER 12, 1907.

67,060. CERTAIN FLOURS. SIEGEL COOPER & CO., Chicago, Ill.
Filed May 13, 1905. Serial No. 5,414. PUBLISHED NOVEMBER 12, 1907.

67,061. CERTAIN FOOD. THE SOUTHERN COTTON OIL COMPANY, Jersey City, N. J.; New York, N. Y.; Savannah, Ga., and Gretna, La.
Filed July 27, 1905. Serial No. 10,899. PUBLISHED NOVEMBER 12, 1907.

67,062. CERTAIN FOOD. THE SOUTHERN COTTON OIL COMPANY, Jersey City, N. J.; New York, N. Y.; Savannah, Ga., and Gretna, La.
Filed September 28, 1907. Serial No. 30,216. PUBLISHED NOVEMBER 12, 1907.

67,063. SILK PIECE GOODS AND SILK-MIXED PIECE GOODS. SUSQUEHANNA SILK MILLS, New York, N. Y.
Filed September 25, 1907. Serial No. 30,202. PUBLISHED NOVEMBER 12, 1907.

67,064. WHEAT-FLOUR. THORNTON & CHESTER MILLING COMPANY, Buffalo, N. Y.
Filed September 3, 1907. Serial No. 29,715. PUBLISHED NOVEMBER 12, 1907.

67,065. COFFEE. THE W. W. HARPER CO., Zanesville, Ohio.
Filed October 3, 1907. Serial No. 30,410. PUBLISHED NOVEMBER 12, 1907.

67,066. CERTAIN BELTING. THE B. F. GOODRICH COMPANY, Akron, Ohio.
Filed October 5, 1907. Serial No. 30,431. PUBLISHED NOVEMBER 12, 1907.

67,067. BLEACHED AND UNBLEACHED COTTON PIECE GOODS. BOOTT MILLS, Lowell, Mass.
Filed September 7, 1906. Serial No. 21,958. PUBLISHED NOVEMBER 12, 1907.

67,068. BLEACHED AND UNBLEACHED COTTON PIECE GOODS. BOOTT MILLS, Lowell, Mass.
Filed September 7, 1906. Serial No. 21,966. PUBLISHED NOVEMBER 12, 1907.

67,069. COTTON PIECE GOODS. BOOTT MILLS, Lowell, Mass.
Filed October 3, 1906. Serial No. 22,470. PUBLISHED NOVEMBER 12, 1907.

67,070. GOLD PASTE FOR DECORATING. WILLIAM D. DALGLEISH, Glenbrook, Conn.
Filed September 10, 1907. Serial No. 29,856. PUBLISHED NOVEMBER 12, 1907.

67,071. CERTAIN FOODS. LIBBY, MCNEILL & LIBBY, Chicago, Ill.
Filed February 8, 1907. Serial No. 25,206. PUBLISHED NOVEMBER 12, 1907.

67,072. RUBBER-SHEET MACHINERY PACKING. MORGAN & WRIGHT, Detroit, Mich.
Filed August 15, 1907. Serial No. 29,400. PUBLISHED NOVEMBER 12, 1907.

67,073. CERTAIN LUBRICATING MATERIALS. FELICIA V. MORSE, Canton, Mass.
Filed September 24, 1906. Serial No. 22,372. PUBLISHED NOVEMBER 12, 1907.

67,074. MACARONI. P. PASTENE & CO., Boston, Mass.
Filed September 16, 1907. Serial No. 29,965. PUBLISHED NOVEMBER 12, 1907.

67,075. COTTON PIECE GOODS. SMITH, HOGG & CO., New York, N. Y.
Filed September 19, 1907. Serial No. 30,088. PUBLISHED NOVEMBER 12, 1907.

67,076. COTTON PIECE GOODS. SMITH, HOGG & CO., New York, N. Y.
Filed September 19, 1907. Serial No. 30,089. PUBLISHED NOVEMBER 12, 1907.

67,077. COTTON PIECE GOODS. SMITH, HOGG & CO., New York, N. Y.
Filed September 19, 1907. Serial No. 30,090. PUBLISHED NOVEMBER 12, 1907.

67,078. COTTON PIECE GOODS. SMITH, HOGG & CO., New York, N. Y.
Filed September 19, 1907. Serial No. 30,091. PUBLISHED NOVEMBER 12, 1907.

67,079. COTTON PIECE GOODS. SMITH, HOGG & CO., New York, N. Y.
Filed September 19, 1907. Serial No. 30,092. PUBLISHED NOVEMBER 12, 1907.

67,080. COTTON PIECE GOODS. SMITH, HOGG & CO., New York, N. Y.
Filed September 19, 1907. Serial No. 30,093. PUBLISHED NOVEMBER 12, 1907.

67,081. SILK PIECE GOODS. SUSQUEHANNA SILK MILLS, New York, N. Y.
Filed September 4, 1906. Serial No. 21,904. PUBLISHED NOVEMBER 12, 1907.

67,082. SILK PIECE GOODS AND SILK-MIXED PIECE GOODS. SUSQUEHANNA SILK MILLS, New York, N. Y.
Filed September 25, 1907. Serial No. 30,201. PUBLISHED NOVEMBER 12, 1907.

67,083. WHEAT-FLOUR. TEXAS STAR FLOUR MILLS, Galveston, Tex.
Filed August 28, 1907. Serial No. 29,652. PUBLISHED NOVEMBER 12, 1907.

67,084. COTTON PIECE GOODS. TILTON & KEELER, New York, N. Y.
Filed September 23, 1907. Serial No. 30,156. PUBLISHED NOVEMBER 12, 1907.

67,085. BANK-CHECKS. HUGH ARNOLD, Kansas City, Mo.
Filed July 22, 1907. Serial No. 28,969. PUBLISHED NOVEMBER 12, 1907.

67,086. WHISKY. RALPH W. ASHCROFT, New York, N. Y.
Filed August 9, 1907. Serial No. 29,314. PUBLISHED NOVEMBER 12, 1907.

67,087. WHISKY. RALPH W. ASHCROFT, New York, N. Y.
Filed August 23, 1907. Serial No. 29,533. PUBLISHED NOVEMBER 12, 1907.

67,088. PENCILS, ERASING-RUBBER, AND PENHOLDERS. BLEISTIFTFABRIK VORMALS JOHANN FABER ACTIEN-GESELLSCHAFT, Nuremberg, Germany.
Filed July 6, 1905. Serial No. 9,818. PUBLISHED NOVEMBER 12, 1907.

67,089. PENCILS AND ERASING-RUBBER. BLEISTIFTFABRIK VORMALS JOHANN FABER ACTIEN-GESELLSCHAFT, Nuremberg, Germany.
Filed July 6, 1905. Serial No. 9,819. PUBLISHED NOVEMBER 12, 1907.

67,090. CERTAIN PENCILS. BLEISTIFTFABRIK VORMALS JOHANN FABER ACTIEN-GESELLSCHAFT, Nuremberg, Germany.
Filed July 6, 1905. Serial No. 9,820. PUBLISHED NQVEMBER 12, 1907.

67,091. BRANDY. JACOB CARTUN, Philadelphia, Pa.
Filed June 28, 1905. Serial No. 9,238. PUBLISHED NOVEMBER 12, 1907.

67,092. OUTER SHIRTS MADE OF TEXTILE MATERIAL. THE COMMERCIAL SHIRT CO., New York, N. Y.
Filed September 16, 1907. Serial No. 30,004. PUBLISHED NOVEMBER 12, 1907.

67,093. WHISKY. CORTWRIGHT COMPANY, New York, N. Y.
Filed October 11, 1907. Serial No. 30,542. PUBLISHED NOVEMBER 12, 1907.

67,094. WHISKY. CORTWRIGHT COMPANY, New York, N. Y.
Filed October 11, 1907. Serial No. 30,544. PUBLISHED NQVEMBER 12, 1907.

67,095. WHISKY. R. T. DAWSON & CO., Baltimore, Md.
Filed October 8, 1907. Serial No. 30,498. PUBLISHED NOVEMBER 12, 1907.

67,096. MEDICAL MAGAZINE. FARBENFABRIKEN OF ELBERFELD CO., New York, N. Y.
Filed September 9, 1907. Serial No. 29,833. PUBLISHED NOVEMBER 12, 1907.

67,097. NON-INTOXICATING BEER. THE FARGO BOTTLING WORKS CO., Fargo, N. D.
Filed May 11, 1905. Serial No. 5,208. PUBLISHED NOVEMBER 12, 1907.

67,098. PRINTED BOOKS, PAMPHLETS, AND MAGAZINES. GLEN AGASSIZ BERNARD, New York, N. Y.
Filed June 19, 1906. Serial No. 20,419. PUBLISHED NOVEMBER 12, 1907.

67,099. RUBBER WHEEL-TIRES. MORGAN & WRIGHT, Detroit, Mich.
Filed August 15, 1907. Serial No. 29,397. PUBLISHED NOVEMBER 12, 1907.

67,100. TONIC BEVERAGES AND SYRUP THEREFOR. PHOS-FERRONE MANUFACTURING CO., St. Louis, Mo.
Filed January 11, 1907. Serial No. 24,583. PUBLISHED APRIL 2, 1907.

67,101. CERTAIN CLOTHING. MAX M. SCHWARCZ & CO., New York, N. Y.
Filed September 7, 1907. Serial No. 29,796. PUBLISHED NOVEMBER 12, 1907.

67,102. STORY-PAPERS AND PERIODICAL MAGAZINES. PERRY MASON COMPANY, Boston, Mass.
Filed April 28, 1905. Serial No. 3,462. PUBLISHED NOVEMBER 12, 1907.

67,103. CERTAIN CLOTHING. THE PRINTZ BIEDERMAN CO., Cleveland, Ohio.
Filed August 15, 1907. Serial No. 29,410. PUBLISHED NOVEMBER 12, 1907.

67,104. LIQUEURS OR CORDIALS. STE. DE LA DISTILLERIE DU SUPRÊME FÉCAMP, Fecamp, France.
Filed September 23, 1905. Serial No. 12,932. PUBLISHED NOVEMBER 12, 1907.

67,105. GIN. WEST END WINE & SPIRITS CO., Boston, Mass.
Filed October 2, 1907. Serial No. 30,356. PUBLISHED NOVEMBER 12, 1907.

67,106. MEN'S OUTER SHIRTS. YANKEE SHIRT CO., New York, N. Y.
Filed September 11, 1907. Serial No. 29,870. PUBLISHED NOVEMBER 12, 1907.

67,107. KNITTED UNDERWEAR. A. C. STALEY MFG. CO., South Bend, Ind.
Filed February 7, 1907. Serial No. 25,190. PUBLISHED NOVEMBER 12, 1907.

67,108. GRASS-HOOKS, AXES, HATCHETS, BROADAXES, AND ADZES. THE AMERICAN AXE & TOOL CO. INC., Glassport, Pa.
Filed August 24, 1907. Serial No. 29,564. PUBLISHED NOVEMBER 12, 1907.

67,109. CLOTH APRONS. CHIC APRON CO., Peoria, Ill.
Filed April 18, 1907. Serial No. 26,771. PUBLISHED JUNE 4, 1907.

67,110. CERTAIN CEMENTS AND PASTES. HASKINS-BROWN CO., Brockton, Mass.
Filed September 13, 1907. Serial No. 29,969. PUBLISHED NOVEMBER 12, 1907.

67,111. CERTAIN CEMENTS AND PASTES. HASKINS-BROWN CO., Brockton, Mass.
Filed September 13, 1907. Serial No. 29,980. PUBLISHED NOVEMBER 12, 1907.

67,112. WASHING-MACHINES AND PARTS THEREOF. HIBBARD, SPENCER, BARTLETT & COMPANY, Chicago, Ill.
Filed September 12, 1907. Serial No. 29,930. PUBLISHED NOVEMBER 12, 1907.

67,113. SUITS FOR BOYS AND CHILDREN. IVAN FRANK & Co., New York, N. Y.
Filed February 8, 1907. Serial No. 25,205. PUBLISHED MARCH 12, 1907.

67,114. REEFERS AND OVERCOATS FOR BOYS, GIRLS, AND CHILDREN. IVAN FRANK & COMPANY, New York, N. Y.
Filed March 16, 1907. Serial No. 26,013. PUBLISHED APRIL 23, 1907.

67,115. STEEL AND IRON. JONAS & COLVER, LIMITED, Sheffield, Epgland.
Filed August 20, 1907. Serial No. 29,475. PUBLISHED NOVEMBER 12, 1907.

67,116. CERTAIN BUILDING MATERIALS. MASON CITY BRICK & TILE COMPANY, Mason City, Iowa.
Filed September 4, 1907. Serial No. 29,752. PUBLISHED NOVEMBER 12, 1907.

67,117. CERTAIN KNIT GOODS. P. RAGUET FILS & R. VIGNES, Troyes, France.
Filed June 7, 1906. Serial No. 20,100. PUBLISHED JULY 16, 1907.

67,118. FERTILIZERS. RASIN-MONUMENTAL COMPANY OF ANNE ARUNDEL COUNTY, Baltimore, Md.
Filed March 15, 1906. Serial No. 17,923. PUBLISHED NOVEMBER 5, 1907.

67,119. CERTAIN EDGE-TOOLS. STANLEY RULE & LEVEL COMPANY, New Britain, Conn.
Filed September 4, 1907. Serial No. 29,748. PUBLISHED NOVEMBER 12, 1907.

67,120. FOUNDRY-FACINGS AND GRAPHITE. THE UNITED STATES GRAPHITE COMPANY, Saginaw, Mich.
Filed October 3, 1907. Serial No. 30,406. PUBLISHED NOVEMBER 12, 1907.

67,121. BRASS CASTINGS. GEORGE W. VANDUZEN, Cincinnati, Ohio.
Filed September 16, 1907. Serial No. 30,016. PUBLISHED NOVEMBER 12, 1907.

67,122. BOOTS AND SHOES MADE OF LEATHER. W. D. BRACKETT & Co., Boston, Mass.
Filed October 4, 1907. Serial No. 30,413. PUBLISHED NOVEMBER 12, 1907.

67,123. LEATHER BOOTS, SHOES, AND SLIPPERS. EDWIN C. BURT COMPANY, Brooklyn, N. Y.
Filed September 27, 1907. Serial No. 30,267. PUBLISHED NOVEMBER 12, 1907.

67,124. LEATHER BOOTS, SHOES, AND LEGGINGS. ELLET-KENDALL SHOE COMPANY, Kansas City, Mo.
Filed August 19, 1907. Serial No. 29,472. PUBLISHED NOVEMBER 12, 1907.

67,125. BOOTS, SHOES, SLIPPERS, AND SANDALS MADE OF LEATHER IN WHOLE OR IN PART. FASHION PUBLICITY COMPANY, New York, N. Y.
Filed October 10, 1907. Serial No. 30,533. PUBLISHED NOVEMBER 12, 1907.

67,126. LEATHER BOOTS AND LEATHER SHOES. LORING Q. WHITE COMPANY, Brockton, Mass.
Filed September 12, 1907. Serial No. 29,917. PUBLISHED NOVEMBER 12, 1907.

67,127. LEATHER BOOTS AND SHOES. MEIGS & COMPANY INC., Springfield, Mass., and New Haven and Bridgeport Conn.
Filed September 18, 1907. Serial No. 30,042. PUBLISHED NOVEMBER 12, 1907.

67,128. CERTAIN FOODS. MOOS & CO., New York, N. Y.
Filed June 2, 1905. Serial No. 7,220. PUBLISHED NOVEMBER 12, 1907.

67,129. MEN'S LEATHER SHOES. WAYNE SHOE MANUFACTURING COMPANY, Fort Wayne, Ind.
Filed September 20, 1907. Serial No. 30,112. PUBLISHED NOVEMBER 12, 1907.

67,130. BOYS' LEATHER SHOES. WAYNE SHOE MANUFACTURING COMPANY, Fort Wayne, Ind.
Filed September 20, 1907. Serial No. 30,113. PUBLISHED NOVEMBER 12 1907

LABELS

REGISTERED JANUARY 14, 1908.

13,983.—*Title:* "ELITE." (For Cigarettes.) VICTOR P. POMERANTZ, New York, N. Y. Filed November 27, 1907.

13,984.—*Title:* "FREIHOFER'S VIENNA BREAD CRUMBS." (For Bread-Crumbs.) THE FREIHOFER VIENNA BAKING CO., Philadelphia, Pa. Filed December 11, 1907.

13,985.—*Title:* "FREIHOFER'S VIENNA CRACKER DUST." (For Cracker-Dust.) THE FREIHOFER VIENNA BAKING CO., Philadelphia, Pa. Filed December 11, 1907.

13,986.—*Title:* "ICILINE." (For a Preparation for Cake-Baking.) HANOVER MFG. COMP., New York, N. Y. Filed December 12, 1907.

13,987.—*Title:* "HANOVER TARTAR." (For a Preparation for Cake-Baking.) HANOVER MFG. COMP., New York, N. Y. Filed December 12 1907.

13,988.—*Title:* "MAMMA'S RECIPES FOR KEEPING PAPA HOME OR '23' FOR THE COOK AND 100 FOR THE CHAP AND THE CHAFER." (For Culinary Receipts.) THE COLONIAL COOK-CARD CO., Baltimore, Md. Filed December 14, 1907.

13,989.—*Title:* "FREIHOFER'S MACARONI." (For Macaroni.) THE FREIHOFER VIENNA BAKING CO., Philadelphia, Pa. Filed December 12, 1907.

13,990.—*Title:* "FREIHOFER'S SPAGHETTI." (For Spaghetti.) THE FREIHOFER VIENNA BAKING CO., Philadelphia, Pa. Filed December 13, 1907.

13,991.—*Title:* "PIMIENTOS MORONES." (For Bell-Peppers.) EMILE C. ORTEGA, Los Angeles, Cal. Filed December 13 1907.

13,992.—*Title:* "LA SEÑORITA." (For Pepper-Sauce.) EMILE C. ORTEGA, Los Angeles, Cal. Filed December 13, 1907.

13,993.—*Title:* "FREIHOFER'S SOUP PASTELS." (For Soup-Pastils.) THE FREIHOFER VIENNA BAKING CO., Philadelphia, Pa. Filed December 12, 1907.

13,994.—*Title:* "EXTRA PALE BEER." (For Beer.) THE CONRAD SEIPP BRG. CO., Chicago, Ill. Filed December 12, 1907.

13,995.—*Title:* "CHERRY-PEPSIN." (For a Beverage.) EDWARD COE, New York, N. Y. Filed December 12, 1907.

13,996.—*Title:* "WAGNER'S ARTIFICIAL LITHIA." (For an Artificial Mineral Water.) W. T. WAGNER'S SONS, Cincinnati, Ohio. Filed December 11, 1907.

13,997.—*Title:* "TRIANGULES OF DIAPEPSIN." (For a Medical Preparation.) PAPE, THOMPSON & PAPE, Cincinnati, Ohio. Filed December 11, 1907.

13,998.—*Title:* "YOSEMITE MEDICINAL CRYSTALS." (For Medicine.) YOSEMITE MINERAL WATER COMPANY, Los Angeles, Cal. Filed October 30, 1907.

PRINTS

REGISTERED JANUARY 14, 1908.

2,191.—*Title:* "MISS QUALITY." (For Chocolate Candies.) H. D. FOSS & Co., Boston, Mass. Filed December 11, 1907.

2,192.—*Title:* "67 LENOX PLAYING CARDS QUADRA INDEXES." (For Playing-Cards.) THE UNITED STATES PLAYING CARD COMPANY, Norwood, Ohio. Filed December 14, 1907.

2,193.—*Title:* "MINUET BACK, CONGRESS PLAYING CARDS." (For Playing-Cards.) THE UNITED STATES PLAYING CARD COMPANY, Norwood, Ohio. Filed December 14, 1907.

2,194.—*Title:* "THE ROGALLEY VENTILATING HEALTH GLOVE." (For Gloves.) JOHN ROGALLEY, Gloversville, N. Y. Filed November 25, 1907.

2,195.—*Title:* "LONDON CROSS & CO." (For Hats.) SAMUEL MUNDHEIM Co., Brooklyn, N. Y. Filed November 20, 1907.

2,196.—*Title:* "PHOENIX MUFFLER." (For Mufflers.) PHOENIX KNITTING WORKS, Milwaukee, Wis. Filed December 2, 1907.

2,197.—*Title:* "OUR SUPERINTENDENT." (For Men's and Boys' Coats, Vests, and Trousers.) ED. V. PRICE & Co., Chicago, Ill. Filed December 14, 1907.

2,198.—*Title:* "FASHIONABLE COAT SLEEVES SPRING AND SUMMER 1908." (For Men's and Boys' Coats, Vests, and Trousers.) ED. V. PRICE & Co., Chicago, Ill. Filed December 14, 1907.

2,199.—*Title:* "MEN'S AND BOYS' APPAREL." (For Men's and Boys' Apparel.) H. C. LYTTON, Chicago, Ill. Filed December 12, 1907.

2,200.—*Title:* "THE SINGER SEWING MACHINE OF 1850." (For Sewing-Machines.) SINGER SEWING MACHINE Co., New York, N. Y. Filed November 29, 1907.

2,201.—*Title:* "YOUR NEIGHBORS AND THEIR NEIGHBORS TOWN AND CITY WITHIN YOUR CALL." (For Telephones.) THE COLUMBUS CITIZENS TELEPHONE COMPANY, Columbus, Ohio. Filed December 9, 1907.

REPORT

OF THE

COMMISSIONER OF PATENTS

TO THE

SECRETARY OF THE INTERIOR

FOR THE FISCAL YEAR ENDED JUNE 30, 1907.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 4, 1908.

SIR: I have the honor to submit herewith the following report of the business of the United States Patent Office for the fiscal year ended June 30, 1907:

APPLICATIONS AND CAVEATS RECEIVED DURING THE FISCAL YEAR ENDED JUNE 30, 1907.

Applications for patents for inventions	56,514
Applications for patents for designs	816
Applications for reissues of patents	192
Applications for registration of trade-marks	7,869
Applications for registration of labels	982
Applications for registration of prints	422
Total applications	66,795
Caveats	1,900
Disclaimers	9
Appeals on the merits	1,410
Total applications, caveats, disclaimers, and appeals	70,114

APPLICATIONS AWAITING ACTION.

Applications awaiting action on the part of the Office July 1, 1907	13,634

APPLICATIONS FOR PATENTS, INCLUDING REISSUES, DESIGNS, TRADE-MARKS, LABELS, AND PRINTS.

June 30, 1898	44,216	June 30, 1903	54,256
1899	40,220	1904	55,408
1900	45,270	1905	66,226
1901	46,075	1906	68,881
1902	51,268	1907	66,795

APPLICATIONS AWAITING ACTION ON THE PART OF THE OFFICE.

June 30, 1898	12,187	June 30, 1903	9,842
1899	2,969	1904	13,069
1900	3,564	1905	16,077
1901	7,063	1906	21,955
1902	11,042	1907	13,634

PATENTS WITHHELD AND PATENTS EXPIRED.

Letters patent withheld for non-payment of final fees	4,707
Letters patent expired	25,322
Applications allowed, awaiting payment of final fees	14,565

PATENTS GRANTED, AND TRADE-MARKS, LABELS, AND PRINTS REGISTERED.

Class.	1903.	1904.	1905.	1906.	1907.
Letters patent	29,220	31,257	29,680	31,070	33,644
Design patents	435	613	456	633	520
Reissue patents	126	109	128	134	165
Trade-marks	2,194	2,213	1,426	10,408	8,798
Labels	910	1,044	1,028	741	660
Prints	233	267	345	354	325
Total	33,220	35,493	33,063	43,340	44,131

EXPENDITURES.

Items.	Expended.	Estimated liabilities.	Total.
Salaries	$932,665.50		$932,665.50
Scientific library	1,421.70	$1,060.00	2,481.70
Postage on foreign matter	2,237.00		2,237.00
Stationery	14,140.20		14,140.20
Furniture	5,483.10		5,483.10
Carpets, linoleum, and matting	1,483.60		1,483.60
Ice	506.27		506.27
Telephones	810.18		810.18
Washing towels	108.08		108.08
Sundries	9,797.47		9,797.47
Law library	404.55		404.55
Photolithographing, paid contractor	134,552.44		134,552.44
Photographic printing, paid contractor	5,447.55		5,447.55
Official Gazette and indexes, paid Public Printer	143,847.00	600.00	144,447.00
Printing and binding: Printing specifications	271,174.48	28,581.87	299,756.35
Miscellaneous printing and binding	22,882.44	6,535.90	29,418.34
International Convention for Protection of Industrial Property		780.00	780.00
Total	1,546,961.84	37,527.86	1,584,489.70

RECEIPTS AND EXPENDITURES.

Receipts from all sources	$1,859,592.89
Expenditures (including total in all appropriations)	1,584,489.70
Surplus	275,103.19

COMPARATIVE STATEMENT.

June 30—	Receipts.	Expenditures.
1898	$1,253,948.44	$1,092,442.83
1899	1,209,554.88	1,148,663.48
1900	1,358,226.35	1,247,827.88
1901	1,406,877.67	1,298,970.13
1902	1,491,536.85	1,329,924.63
1903	1,501,251.04	1,423,094.49
1904	1,663,579.90	1,499,124.40
1905	1,737,234.44	1,672,457.51
1906	1,811,297.84	1,536,140.40
1907	1,859,592.89	1,584,489.70

Summarizing these tables, there were received in the last fiscal year 56,514 applications for mechanical patents, 816 applications for designs, 192 applications for reissues, 1,900 caveats, 7,869 applications for trade-marks, 982 applications for labels, and 422 applications for prints. There were 34,338 patents granted, including reissues and designs, and 8,798 trade-marks, 660 labels, and 325 prints were registered.

The number of patents that expired was 25,322. The number of allowed applications which were by operation of law forfeited for nonpayment of the final fees was 4,707. The total receipts of the Office were $1,859,592.89; the total expenditures were $1,584,489.70, and the surplus of receipts over expenditures, being the amount turned into the Treasury, was $275,103.19.

Comparison of business in 1899 and 1907.

Class.	1899.	1907.	Increase.	Percentage of increase.
Receipts	$1,209,554.88	$1,859,592.89	$650,038.01	53.7
Expenditures	$1,148,633.48	$1,584,489.70	$435,826.22	37.9
Applications and caveats filed	41,930	68,695	26,765	63.8
Letters patent, design and reissue patents granted, and trade-marks, labels, and prints registered	25,404	44,121	18,717	73.6
Printed copies of patents furnished	1,363,971	2,117,847	753,876	55.2
Price received	$49,681.37	$86,433.88	$36,752.51	73.9
Words written in copies of records furnished	13,899,700	24,888,200	10,988,500	79.0
Number of employees	624	798	174	27.8

It will be observed from the foregoing data that during the fiscal year ended June 30, 1907, the percentage of increase over the business of the preceding year was very large. The volume of work has increased year by year. The increase in receipts from 1898 to 1907, inclusive, has been regular and steady. The amount of revenue of the Bureau in 1898 was $1,253,948.44 and for 1907 $1,859,592.89, the net surplus of receipts over expenditures showing an increase each succeeding year. The net surplus for the fiscal year ended June 30, 1906, was $273,148.44; for 1907, $275,103.19. The total net surplus of receipts over expenditures covered into the Treasury placed to the credit of the Patent Office on January 1, 1907, was $6,427,021.86.

I have made a thorough investigation of the present condition of the Patent Office looking to improvements therein. I find that material changes are necessary in the interest of the proper administration thereof. I therefore respectfully beg leave to submit the following suggestions and recommendations in the interest of this branch of your Department.

ADDITIONAL ROOM.

The additional room you assigned this Office in June last has resulted in a vast improvement of the Office in that respect. I have been able to utilize this additional space in expanding the various divisions, and thereby relieving the very congested conditions of nearly the whole Bureau. The administrative and judicial tribunals have brought together in one corridor of the same floor, the Commissioner, Assistant Commissioner, Chief Clerk, Examiner of Interferences, and Board of Examiners-in-Chief, all being so located that they are accessible and convenient to all persons having business before them. This has made it possible to dispense with one docket clerk and his force and to establish a docket room common to all appellate tribunals. It has been possible also by this change to furnish two anterooms for the use of attorneys whose causes are on call before the Commissioner, Assistant Commissioner, and the Board of Examiners-in-Chief, and to afford them means to consult clients and examine the records in their cases before hearings. The use of these two ante or waiting rooms for inventors and attorneys also prevents inventors and attorneys from hearing the secret inventions being disclosed by attorneys presenting their particular cases before these tribunals, and thereby guards against the possibility of inventions being imparted to others before patents issue. This change in the manner of hearings has given great satisfaction to all having cases on appeal before the various tribunals of the Office. The additional room furnished, however, will not be sufficient for the needs of the Office for more than a short period. Additional space will be required in the near future, probably in about a year, and I would suggest, therefore, that some action be recommended to Congress during the present session to meet the needs as to more space, not only of the Patent Office, but probably of some other branches of your Department. Permit me to recommend, therefore, that the branch printing office in the basement of the Ninth street wing be moved to the Government Printing Office. That would result in making available a tier of desirable rooms from F to G streets that would furnish a proper housing for about fifty clerks. The basement of the other three sides of the building should be remodeled to harmonize with the Ninth street front. This could be accomplished by lowering the floors of the other three corridors of the building, cutting down the court to the corridor levels, and sinking the outside plots and terraces below the level of the street. This would afford ample light and ventilation to all the basement rooms. By this change the great dampness which is caused by the water in the earth of the court and terraces percolating through the retaining walls would be obviated. Modern granolithic sidewalks should be provided around the entire building, which would furnish storage room beneath for copies of patents for a great many years, and this space beneath the sidewalks would be dry, light, and well ventilated by reason of the sunken plots of ground between the main building and the walks. The question of storage room for copies of patents is a serious one at his time, and as about two hundred linear feet of space is required weekly to house the weekly issue of patents, which consists of one hundred copies each of eight hundred patents, it is imperative that some relief be afforded as soon as practicable. The present third floor and galleries should be relieved of the great weight of copies of patents and other records now placed thereon by changing them to the basement floor or under the suggested new sidewalks. The upper northwest corner wall of the building is already cracked, caused by former excessive weight of material having been placed there. I would suggest, also, that

additional rooms be constructed between the third-story floors, or that known as the model halls, and the ceilings of said halls, as those halls since the removal of the models therefrom no longer need such high ceilings, and a great amount of valuable space is wasted. These changes would furnish excellent light and commodious space without great cost, compared with the expense of erecting a new building. If these changes are not deemed desirable, I would respectfully recommend that a new building be asked of Congress in which the Patent Office may be housed. This new building could be paid for entirely out of the surplus in the Treasury to the credit of the Patent Office, which on January 1, 1908, was $6,706,181.64. This surplus of the net receipts over all expenditures has been derived entirely from the fees paid by the inventors of the country, directly or indirectly.

CONDITION OF THE WORK.

The work has been for years very much in arrears and is in the same condition at this time. This has been found to be caused, first, mainly by the insufficient force of Examiners and clerks to meet the great volume of work coming in, a large increase yearly, which yearly increase is not always capable of being estimated in advance, so that the same arrearage of work has existed each year for many years. The examining corps of the Office has repeatedly worked until five o'clock, even when the official day closed at four o'clock, for many years, and they have been called upon several times to work later than this hour and have frequently forfeited a part or all of their annual leaves for the purpose of bringing up their work in order that a good showing might be made before Congress met. Their efforts under these conditions were at best spasmodic, and simply resulted in thousands of actions being made which were nothing more than frivolous. After one of these annual efforts it was necessary to do a greater portion of that work all over again, and it really had the effect of throwing the business of examination of applications further back than ever. This resulted not only in vexatious delays to the inventors, but it caused hundreds of complaints to be filed, and what was still more embarrassing and serious a great many applications were passed to issue that were not ready for patent, with the result that the inventors and owners of meritorious inventions forfeited valuable rights by these careless, ill-considered, and hasty actions on the part of the Office. The inventors are entitled to be protected as well as the public, and they should also be helped by the Office in all legitimate ways. The inventors pay the Government for the work to be done in the examination and issue of their patents, even though they appeal their cases in regular order to all the tribunals of this Office and finally to the United States Court of Appeals of the District of Columbia, for a fee is charged for each appeal in addition to the Government fee of $35. Complaints against the conduct of affairs in this Office have been numerous, and many have been based upon good and sufficient grounds. The affairs of the Office should be so conducted that very few, if any, just complaints could be lodged. In view, therefore, of the great amount of accumulated work and the great volume of work that is constantly coming in, increasing each year and keeping pace with the growth of the country and the activities of manufactures and commerce, I am most decidedly of the opinion that the present force cannot cope with it. I have, therefore, after a most careful investigation of the Office needs in this respect, asked for a sufficient number of Examiners and clerks to bring the arrearages up to date and to dispose of the great amount of incoming work material. If the force asked for be granted and made immediately available, I believe that the accumulated work can be disposed of, and that it will be possible in the future for the average inventor's application to be acted upon, either rejected or a patent allowed, within thirty days of its receipt. The inventors are entitled to prompt action, and they should be accorded it.

CLASSIFICATION OF PATENTS.

An increase of force is also badly needed for carrying forward the work of classification, which was commenced by the organization of the Classification Division in November, 1898. A force was appropriated for by Congress for this purpose; but the work of the examining divisions increased at such a rate that only a small part of it was ever assigned to the work of classification, and even that was transferred so frequently and lost so soon by resignations that the work has only been carried on slowly and with great difficulty.

The number of United States patents issued to June 30, 1907, is 867,225; reissues of patents, 12,697; design patents, 38,842; trade-marks registered, 65,467; labels registered, 13,809, and prints 2,122. There are also about 3,000,000 foreign patents of all countries, which are obtained by exchange with the countries belonging to the International Union for the Protection of Industrial Property. The number of patents, both domestic and foreign, is now so vast and is growing so rapidly, and the field of search to determine novelty and validity by the examiners, attorneys, and inventors is so extensive, that the classification of this material should be rapidly pushed to completion. A complete classification of these 3,870,000 patents would result in lessening the time of search about 50 per cent., and the future increase in the Office force would be very slight compared with the subsequent volume of work received, owing to this complete classification. The salvation of the search system, which is the distinguishing feature of the United States patent laws, lies in the carrying out of a proper plan of classification. Without it, it has been frequently predicted that the system will soon fall of its own weight. This work should be pushed as rapidly as possible on account of the constant changes in the lines of development and the frequent losses of force, which result in a great waste of time and labor. To illustrate this fact, reference is made to the class of telegraphy, which was taken into the Classification Division for reclassification. The patents in this class are largely diagrammatic, and most of them must be read in order to understand them. A Second Assistant Examiner at $1,600 a year was assigned to this work and spent about one year in reading them and then resigned. He was succeeded by another man of the same grade, who worked about the same length of time and also resigned.

A third man was then set to work, but remained only a month before handing in his resignation, after which the class was returned to the attorneys' room, as there was no one left to attempt it. Here was $3,200 paid for the acquirement of the necessary knowledge of this art, which knowledge was lost to the Office by the resignations of the men, due to insufficient salaries to retain them. This is only one example of what is occurring to a greater or less extent in all the forty-one examining divisions. I purpose assigning a portion of the examining force asked for in the estimates to the work of classification, and also to establish a complete third set of foreign patents for the use of attorneys, inventors, and manufacturers, as well as to perfect the present search classes of patents, both in the attorneys' search room and the examining divisions. By a system of numbering each copy of the patents consecutively the absence of any patent will be at once known and the classes may be kept complete.

ESTIMATES FOR FORCE AND SALARIES.

In the estimates furnished for appropriations for the Patent Office for the fiscal year ending June 30, 1909, and in my letter accompanying the same, I have stated in part that I recommend that the salary of the Commissioner of Patents be raised to $6,000 a year, the salary of the Assistant Commissioner to $4,500 a year, the salary of the Examiners-in-Chief to $4,000 a year each. I desire to say in connection with these positions that the salary of the Commissioner has been changed but once since 1836. The position of Assistant Commissioner of Patents was established in 1870 with a salary of $3,000 a year. This salary has never been raised. This is the poorest paid Assistant Commissioner in the service of the Government. His duties, like those of the Commissioner, are largely judicial. The Board of Examiners-in-Chief was established in 1861, with salaries fixed at $3,000 a year, the same that they are now receiving. These men are required by statute to possess sufficient legal and technical knowledge to perform the duties of the position, which are wholly judicial. They are appointed by the President and confirmed by the Senate. From the decisions of the Commissioner and of the Assistant Commissioner appeal lies to the United States Court of Appeals of the District of Columbia. I may say here, to show in part the importance of these positions, that nearly one-half, or 48 per cent., of the business of that court is now taken up with appeals both *ex parte* and *inter partes* from the Commissioner of Patents.

I have asked for forty-five Principal Examiners (one of whom shall act as Chief Clerk, another as Examiner of Interferences, another as Examiner of Classification, and another as Examiner of Trade-Marks and Designs, and while so acting each shall receive $600 additional compensation) at $3,000 a year each. In my opinion all these positions, including that of Chief Clerk, should be interchangeable in the interests of good administration. The Chief Clerk should be detailed from the Principal Examiners, and he should be a graduate of law, (as nearly all the Principal Examiners are,) for a greater portion of the duties of this position calls for a man of very extended experience in this Office. A great many legal questions arise in the correspondence of the Office which the Chief Clerk is called upon to answer, and almost all of the correspondence can be attended to by him without reference to the examining divisions of the Office, thereby saving a great deal of time, not only for himself, but for the Examiners. This arrangement would banish the friction between the Chief Clerk and the examining corps, which has existed for a long time.

I have asked for two Law Examiners at $3,000 a year each, in place of two law clerks at $2,500 a year each, an increase of $500 a year each. The Law Examiners have been educated in the examining corps, and the present incumbents are, and their successors should be, law graduates both in general and patent law.

I have asked for sixty Examiners at $2,700 a year each, seventy Examiners at $2,400 a year each, eighty Examiners at $2,100 a year each, sixty Examiners at $1,800 a year each, and fifty Examiners at $1,500 a year each, a total increase of forty-nine Examiners, including one Principal Examiner.

I have asked for an increase of three clerks of class four and three clerks of class three.

I have asked for an increase of thirty clerks of class one. These are needed for examining divisions where the duties are of a somewhat technical nature. The incompetency of a portion of the clerks in the examining and other divisions is in a measure responsible for the backward condition of the work. Although this is a small salary for this class of work, yet I think a sufficient number of clerks could be obtained even at this salary to fill these positions.

I have asked for one hundred clerks at $1,000 a year each, in lieu of sixty-two clerks at $1,000 and ten clerks a $800 a year each. This is an increase of twenty-eight clerks at $1,000 a year each. I make this recommendation for the reason that the Office is much hampered in its work by resignations and transfers, owing to the low salaries paid a large part of its clerical force. The clerical work is of much higher order than that of most bureaus under the Government. It takes a clerk a long time to become efficient, as a high order of ability and technical knowledge is required of the clerical force throughout the Office, owing to the peculiar duties to be performed in all branches of the work in the Bureau, which includes, among other things, knowledge of technical terms, knowledge of the law of assignments, as all assignments of patents are recorded in this Office, and so on.

These increases recommended in the salaries are found to be necessary in order to retain the men already in the examining corps and to induce other competent men to enter the service and fill vacancies now existing and that may occur. The Civil Service Commission has been unable to fill the vacancies that have existed from time to time from 1902 down to date, and I quote their letter of September 5, 1907:

> In response to your request of August 31, there is submitted herewith a statement showing the number of eligibles secured annually for the position of Patent Examiner since the year 1902, and years in which all these eligibles were used by your Office.
> By direction of the Commission.
> Very respectfully,
> HENRY F. GREENE,
> *Commissioner.*
>
> Assistant Examiner, Patent Office: Eligibles entered during 1902, on register, 72; 1903, 10; 1904, 34; 1905, 22; 1906, 68; 1907, 24.

These eligibles were all appointed and the registers in every case became exhausted, and the Commissioner

of Patents was called upon to go into the "open market," as it were, and get the best material he could find to fill the vacancies. Several examinations were held during all these years. In 1906 there were six examinations held which did not produce men enough to fill the vacancies, and at this date there are no eligibles on the register of the Civil Service Commission, and I doubt if any could be had if a special examination for Fourth Assistant Examiners should be held. The standard of the examination has been much lowered, as it was thought that possibly they had been too difficult, but this did not improve the situation, and even many of those that passed declined the appointment when they learned the entrance and other salaries were so low. In order to obtain competent men, these examinations must be and are highly technical in character, but not more difficult than is necessary to secure men of ability to perform the technical work connected with the examination of applications which relate to all of the known arts. The subjects covered by the examinations are higher mathematics, physics, technics, chemistry, (organic and inorganic,) reading and describing mechanical drawings, and French and German. The last two subjects are necessary in order to secure men who can read specifications of foreign patents. The Examiners are all graduates of colleges, mostly polytechnic colleges, and ninety per cent. have been graduated in general and patent law, and with office experience are invaluable to the service; but after about three years' service in this Office and when they are fully experienced and valuable in the work thereof they are also fully equipped to go out, and do go out to accept positions that pay all the way from $2,000 a year up. The Office has become merely a post graduate school for the technical and legal education of young college men who enter the service. The General Electric Company has in its patent department twelve or more men who were formerly Examiners in this Office, and other corporations have taken hundreds from this Office, and this company also, like many others, takes men from the graduating classes of polytechnic colleges at higher salaries than are provided on entrance to this Office, so that we are now competing with outside institutions for men to do the technical work of the Office. One hundred and thirty-five Examiners out of a corps of three hundred have resigned in a period of less than five years. The salaries paid Principal Examiners in the Patent Office are the same that were fixed by the act of 1848 and are the same salaries that were provided for United States district judges and members of Congress at that date.

I most strongly urge that all the estimates submitted be allowed. They have been very carefully prepared, and I can say, after an experience of twenty-four years in this Bureau, that all that has been asked is badly needed. I think that with this increase of force of forty-nine Examiners and forty-seven clerks I will be fully able to bring the work up to date and to put this Bureau on a business basis within twelve months, provided the additional force and salaries be made available shortly after the assembling of Congress, for the present condition is such that relief should be furnished before July 1, 1908. The fees of inventors support the Bureau, and out of the receipts every item of expense for its maintenance is paid, including salaries of the force employed.

At the last session of Congress the Committee on Patents of the House of Representatives gave hearings to the Inventors' Congress, the Manufacturers' Association of the United States, and the Patent Bar Association in the interest of bettering the conditions that have existed for years in the Patent Office. As a result of these hearings the Committee on Patents unanimously reported House Bill 22678, with accompanying report and the printed hearings, which provided salaries larger than are recommended in these estimates. This bill did not come up for passage owing to lack of time, occasioned by a short session. I am informed that the committee will press its passage early in the present session of Congress.

EXHAUSTED COPIES OF PATENTS.

A large number of copies of patents has been exhausted for some time, and this condition has been the cause of numerous complaints from inventors, attorneys, the courts, and persons generally having business with this Office. I have had many hundreds reproduced and have given directions that all exhausted copies of patents be reproduced as speedily as possible. This has had the effect of lessening the number of complaints arising from this cause. Some delay has been occasioned by the inability of the present contractor to get out the reproductions of patents as promptly as desired, but this condition will be removed in a short time.

I have caused to be shipped to the office of the Public Printer from the basement storerooms 9,498 sacks of old reports and records of various kinds that have been stored in those rooms for a great many years, and it is my intention to empty the remaining rooms of the material of this kind. The additional space thus gained is being used to house the copies of the current issues as they come out, but all of these rooms will not be suitable for the storage of these copies by reason of the dampness existing there, which, as above indicated in this report, is caused by the damp earth of the court which these rooms abut.

APPEALS.

Accompanying this report I submit for your consideration proposed amendments to the law relating to appeals in this Office. (Appendices A and B.)

Under the present patent law appeal lies in *ex parte* cases from a Primary Examiner to the Board of Examiners-in-Chief, thence to the Commissioner, (or Assistant Commissioner,) and from his decision to the Court of Appeals of the District of Columbia, and in interference cases the course of appeals from decisions of the Examiner of Interferences is the same, there being three appeals in each case.

The purpose of the proposed amendment to the statute is to shorten the course of prosecution by the elimination of one of the appeals within the Office. This is designed to be accomplished by combining the Commissioner, Assistant Commissioner, and Examiners-in-Chief into a single appellate tribunal, any three of whom shall constitute a quorum, to which all appeals shall lie, whether from a Primary Examiner or from the Examiner of Interferences, and from which appeals

would lie to the Court of Appeals of the District of Columbia.

The present course of appeals is not well adapted to the volume of business which the Office is now called upon to handle, for the following reasons:

1. It imposes on applicants an unnecessary amount of delay and expense. The very purpose of the patent system is to place at the service of the public at as early a date as practicable inventions as they are made, and unnecessary delays affect not only applicants but all interested in the industries to which the inventions relate. One appeal within the Office, together with the appeal to the Court of Appeals of the District of Columbia, would seem to be ample, especially in view of the fact that in a suit on a patent a single appeal takes the case from the trial court to the Court of Appeals. The elimination of one appeal would materially shorten the time required for the ultimate disposal of appealed cases and effect a considerable saving of expense to applicants.

2. Section 4910 provides for an appeal to the Commissioner *in person* from the Board of Examiners-in-Chief. The work of the Office and the consequent number of appeals has increased to such an extent that it has become difficult, and will soon be impossible, for the Commissioner to give to each case the amount of personal attention proper to its disposal.

3. The Board of Examiners-in-Chief as at present constituted consists of three members, and no provision is made under the present law to supply a temporary vacancy caused by the sickness or absence from other cause of any of the members. The absence of one member often results in an evenly divided Board, with the consequent necessity for a rehearing, and the absence of two members causes an entire suspension of business. With the proposed membership of five, the presence of a quorum of three would be practically assured at all times, which has not been the case in numerous instances in the past, owing to frequent absences of a member of the Board on account of periods of illness of greater or less duration and also by reason of annual leave and other causes.

I also submit a proposed amendment (Appendix B) to the laws relating to appeals in cases relating to trade-marks.

The existing trade-mark law provides for appeals from the Examiner of Trade-Marks and from the Examiner of Interferences in trade-mark cases directly to the Commissioner, (or Assistant Commissioner.) From these tribunals appeals lie to the Court of Appeals of the District of Columbia, as in patent cases. The amendment submitted merely substitutes the proposed Board of Appeals for the Commissioner as the appellate tribunal of the Office in cases relating to trade-marks, making the course of appeals in this class of cases conform to the course of appeals recommended above in cases involving applications for patents.

These changes in the course of appeals would not only have the effect of expediting the prosecution of applications on appeal, but would be a saving to the inventors of one appeal fee, the attorneys' fees, and other expenses incident thereto. Furthermore, having but one appeal within the Office in lieu of two would result in giving greater stability to the decisions of the Office tribunals, and would also obviate any want of comity that has existed in the past between the decisions of the Commissioner of Patents and the Assistant Commissioner. These proposed changes in the law in no wise affect the present legal status of the Commissioner of Patents, the Assistant Commissioner of Patents, or the Examiners-in-Chief.

THE BUSINESS OF THE PATENT OFFICE FROM 1836 TO 1907, INCLUSIVE.

I submit the accompanying tables (Appendix C) which show a comparative statement of the business of the Patent Office since the enactment of the statute of 1836 down to and including the year 1907. These tables show the number of applications, caveats, reissues, cash receipts and expenditures, and the surplus of each year for said period. It may be interesting to note that during the year of the so-called panic of 1837 and the years following down to 1841 there was in three years of that period no surplus, and in two years of that time the surplus was very slight. During the general business depression of 1856-7 there was no surplus, and during the year 1860, immediately preceding the civil war, the surplus dropped from $35,663.74 of the preceding year to $3,531.79. In the year 1861, from the time of the breaking out of hostilities, the business fell off nearly one-half, and there was no surplus that year. During the year 1862 the business increased quite largely owing to inventions in the various arts which were demanded by the needs of said war. The surplus that year was $32,944.06. At the conclusion of this war in 1865 and 1866 the business of this Office was more than doubled, and the latter year showed a surplus of receipts over expenditures of $133,941.10. Coming down to the business depression of 1873, the business of the Office materially fell off, with the result that the surplus was only $12,000. The year following, 1874, by reason of the recovery somewhat from said depression, the surplus shown is $58,979.76. The surplus during the year of the depression of 1884 was $105,000, while the surplus of the preceding year of 1883 was $471,000. Owing to the unsettled commercial conditions of 1893 there was a surplus during that year of only $101,000, while the preceding year of 1892 shows a surplus of $175,592.

During the year 1906 the number of applications for patent was 55,471, and for 1907, 57,679, showing an increase of 2,208 applications. The number of applications for reissues of patents in 1906 was 205, in 1907, 187, a decrease of 18. The number of applications for patents for designs in 1906 was 806, in 1907, 896, an increase of 90. The total number of applications for patents, reissues, and designs in the year 1906 was 56,482 and for 1907 was 58,762, showing an increase of 2,190. The number of caveats filed in 1906 was 1,885, and in 1907, 1,967, an increase of 82. The number of applications for trade-marks filed in 1906 was 8,493, in 1907, 7,722, a decrease of 771. This decrease is owing to the fact that the new trade-mark law went into force in April, 1905, during which year there were 16,224 marks filed for registration, the registrants taking advantage of the liberal provisions of the new law to reregister a great many of the old marks. Trade-mark applications fell off in 1906 about one-half, for 8,193 were filed in that year. In the year 1907 there was a falling off of about 600 marks, the total being 7,722. Between six and seven thousand marks each year will probably be about the normal number of applications for registration. Applications for registrations of labels in 1906 numbered 844, in 1907, 1,027, an increase of 183. The total number of patents granted in 1906 was 31,965, in 1907, 36,620, being a gain over 1906 of 4,655 patents. This is the largest increase in any one year from 1836 to date.

The cash receipts from all sources in 1906 were $1,790,921.38; cash expended, $1,554,891.20, showing a net surplus of receipts over expenditures of $236,030.18. The cash receipts from all sources in 1907 were $1,910,618.14, derived from the following specified sources:

Applications:	
Cash received	$1,674,237.00
Cash refunded	5,967.00
Net cash	1,668,270.00
Certificates of deposit	47,410.00
Total cash and certificates	1,715,680.00
Copies:	
Cash received	162,178.08
Cash refunded	12,409.57
Net cash	149,768.51
Certificates of deposit	738.10
Total cash and certificates	150,506.61
Recording assignments:	
Cash received	28,147.02
Cash refunded	1,520.28
Net cash	26,626.74
Certificates of deposit	136.00
Total cash and certificates	26,762.74
Subscriptions to Official Gazette:	
Cash received	11,235.36
Cash refunded	136.57
Net cash	11,098.79
Certificates of deposit	30.00
Total cash and certificates	11,128.79
Registration of prints and labels:	
Cash received	8,503.00
Cash refunded	2,041.00
Net cash	6,462.00
Certificates of deposit	78.00
Total cash and certificates	6,540.00
Cash received	1,884,300.46
Cash refunded	22,074.42
Net cash	1,862,226.04
Certificates of deposit	48,392.10
Total cash and certificates	1,910,618.14

The total receipts of cash for 1906 were $1,790,921.38, and the total cash receipts for 1907 were $1,910,618.14. This shows an increase of money receipts over the preceding year of $119,696.76. The total amount of expenditures for all purposes for the calendar year ending December 31, 1907, is $1,631,458.36, which deducted from the total cash receipts of the Office for that period leaves a net surplus of $279,159.78. The increase of the surplus of 1907 over 1906 is $43,129.60. The total amount of surplus or net earnings of the Patent Office over all expenditures for the maintenance of this Bureau and covered into the Treasury of the United States is now $6,706,181.64.

It will be seen, therefore, from the foregoing statement of the money receipts for the year 1907 that the alleged financial depression has had no effect whatever on the business of the Patent Office. In fact, the total volume of business of all descriptions is much larger than that of the preceding year. The business of the Patent Office has always been very sensitive to any disruption or embarrassment in the commercial world, as has always been evidenced by a great falling off of the business of the Office, as above indicated in this report. There is nothing in the past year to indicate so far as the affairs of this Office are concerned that any real depression in business or financial disquietude has existed.

In conclusion permit me to say that the great personal interest you have exhibited in the affairs of this Bureau and the assistance you have rendered me by suggestion and support in my efforts to improve the present conditions of the Office and your approval of my recommendations looking to still further improvements, as soon as needed legislation by Congress can be had, have been highly appreciated by the inventors and others interested in the welfare of this Office, as well as by myself.

Respectfully submitted.

EDWARD B. MOORE,
Commissioner of Patents.

To the Honorable
JAMES RUDOLPH GARFIELD,
Secretary of the Interior.

APPENDIX A.

AN ACT REVISING AND AMENDING THE STATUTES RELATING TO PATENTS.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section four hundred and eighty-two of the Revised Statutes be, and the same hereby is, amended by inserting in line one, after the word "The," the words "Commissioner of Patents, the Assistant Commissioner of Patents, and the," and in line two, after the word "ability," by inserting the words "and they shall constitute a Board of Appeals, any three of whom upon designation by the Commissioner shall constitute a quorum," and in line seven, by striking out the word "they," and inserting after the word "Commissioner," the words "the Board of Appeals," and in the last line, after the word "them," by adding the words "In addition to the restrictions upon officers and employees of the Patent Office, provided in sec. 480, R. S., that they shall not acquire or take, directly or indirectly, any right or interest in any patent issued by the Office, the members of said Board of Appeals shall not be engaged in any other business, avocation, or employment, and may be removed from office at any time by the President for inefficiency, neglect of duty, or malfeasance in office," so that the section shall read as follows:

"SEC. 482. The Commissioner of Patents, the Assistant Commissioner of Patents, and the Examiners-in-Chief shall be persons of competent legal knowledge and scientific ability, and they shall constitute a Board of Appeals, any three of whom, upon designation by the Commissioner, shall constitute a quorum, whose duty it shall be, on the written petition of the appellant, to revise and determine upon the validity of the adverse decisions of Examiners upon applications for patents, and for reissue of patents, and in interference cases; and when required by the Commissioner, the Board of Appeals shall hear and report upon claims for extensions, and perform such other like duties as he may assign them. In addition to the restrictions upon officers and employees of the Patent Office, provided in sec. 480, R. S., that they shall not acquire or take, directly or indirectly, any right or interest in any patent issued by the Office, the members of said Board of Appeals shall not be engaged in any other business, avocation, or employment, and may be removed from office at any time by the President for inefficiency, neglect of duty, or malfeasance in office."

SEC. 2. That section forty-eight hundred and ninety-four of the Revised Statutes be, and the same hereby is, amended by substituting for the words "Commissioner of Patents," in the next to the last line thereof, the words "Board of Appeals," so that the section so amended will read as follows:

"SEC. 4894. All applications for patents shall be completed and prepared for examination within one year after the filing of the application, and in default thereof, or upon failure of the applicant to prosecute the same within one year after any action therein, of which notice shall have been given to the applicant, they shall be regarded as abandoned by the parties thereto, unless it be shown to the satisfaction of the Board of Appeals that such delay was unavoidable."

SEC. 3. That section forty-nine hundred and four of the Revised Statutes be, and the same hereby is, amended by striking out all after the word "Examiner," line ten, and substituting in lieu thereof the words, "within such time, not less than twenty days, as the Commissioner shall prescribe, or from the decision of the Board of Appeals, as the case may be," so that the section so amended will read as follows:

"SEC. 4904. Whenever an application is made for a patent which, in the opinion of the Commissioner, would interfere with any pending application, or with any unexpired patent, he shall give notice thereof to the applicants, or applicant and patentee, as the case may be, and shall direct the Primary Examiner to proceed to determine the question of priority of invention. And the Commissioner may issue a patent to the party who is adjudged the prior inventor, unless the adverse party appeals from the decision of the Primary Examiner within such time, not less than twenty days, as the Commissioner shall prescribe, or from the decision of the Board of Appeals, as the case may be."

SEC. 4. That section forty-nine hundred and nine of the Revised Statutes be, and the same hereby is, amended by erasing therefrom the words "Examiners-in-Chief;" and inserting in lieu thereof the word "Appeals," so that the section so amended will read as follows:

"SEC. 4909. Every applicant for a patent or for the reissue of a patent, any of the claims of which have been twice rejected, and every party to an interference, may appeal from the decision of the Primary Examiner, or of the Examiner in Charge of Interferences in such case, to the Board of Appeals, having once paid the fee for such appeal."

SEC. 5. That section forty-nine hundred and ten of the Revised Statutes be, and the same hereby is, amended by repealing the entire section and substituting therefor the following:

"SEC. 4910. If any such party is dissatisfied with the decision of the Board of Appeals, he may appeal to the Court of Appeals of the District of Columbia, in the manner now provided by law for appeals to said court from the decisions of the Commissioner of Patents.

"(2). Appeals which are now vested in the Court of Appeals of the District of Columbia from the decisions of the Commissioner of Patents will hereafter be taken from the decisions of the Board of Appeals."

SEC. 6. That section forty-nine hundred and fourteen of the Revised Statutes be, and the same hereby is, amended by substituting in line four, the words "Board of Appeals" for the word "Commissioner," so that the section so amended will read as follows:

"SEC. 4914. The court, on petition, shall hear and determine such appeal, and revise the decision appealed from in a summary way, on the evidence produced before the Board of Appeals, at such early and convenient time as the court may appoint; and the revision shall be confined to the points set forth in the reasons of appeal. After hearing the case, the court shall return to the Commissioner a certificate of its proceedings and decision, which shall be entered of record in the Patent Office and shall govern the further proceedings in the case. But no opinion or decision of the court in any such case shall preclude any person interested from the right to contest the validity of such patent in any court wherein the same may be called in question."

SEC. 7. That section forty-nine hundred and fifteen of the Revised Statutes be, and the same hereby is, amended by canceling the words "either by the Commissioner of Patents or by the Supreme Court," in lines two and three, and subetituting in lieu thereof the words "by the court of appeals," and in line four, canceling the word "Commissioner" and subetituting the words "Board of Appeals," so that the section so amended will read as follows:

"SEC. 4915. Whenever a patent on application is refused by the Court of Appeals of the District of Columbia upon appeal from the Board of Appeals, the applicant may have remedy by bill in equity, and the court having cognizance thereof, on notice to adverse parties and other due proceedings had, may adjudge that such applicant is entitled, according to law, to receive a patent for his invention, as specified in his claim, or for any part thereof, as the facts in the case may appear. And such adjudication, if it be in favor of the right of the applicant, shall authorize the Commissioner to issue such patent on the applicant filing in the Patent Office a copy of the adjudication, and otherwise complying with the requirements of law. In all cases, where there is no opposing party, a copy of the bill shall be served on the Commissioner; and all the expenses of the proceeding shall be paid by the applicant, whether the final decision is in his favor or not."

SEC. 8. That section forty-nine hundred and thirty-four of the Revised Statutes be, and the same hereby is, amended by canceling the following paragraphs:

"On an appeal for the first time from the Primary Examiners to the Examiners-in-Chief, ten dollars.

"On every appeal from the Examiners-in-Chief to the Commissioner, twenty dollars."

And substituting in lieu thereof:

"On an appeal for the first time from the Primary Examiners to the Board of Appeals, fifteen dollars," so that the section so amended shall read as follows:

"SEC. 4934. The following shall be the rates for patent fees:

"On filing each original application for a patent, except in design cases, fifteen dollars.

"On issuing each original patent, except in design cases, twenty dollars.

"In design cases: For three years and six months, ten dollars; for seven years, fifteen dollars; for fourteen years, thirty dollars.

"On filing each caveat, ten dollars.

"On every application for the reissue of a patent, thirty dollars.

"On filing each disclaimer, ten dollars.

"On every application for the extension of a patent, fifty dollars.

"On the granting of every extension of a patent, fifty dollars.

"On an appeal for the first time from the Primary Examiners to the Board of Appeals fifteen dollars.

"For certified copies of patents and other papers, including certified printed copies, ten cents per hundred words.

"For recording every assignment, agreement, power of attorney, or other paper, of three hundred words or under, one dollar; of over three hundred and under one thousand words, two dollars; of over one thousand words, three dollars.

"For copies of drawings, the reasonable cost of making them."

SEC. 9. This act shall take effect July 1, 1908, but shall not apply to any case in which the appeal to the Examiners-in-Chief was taken prior to that date. In such case the appeal shall be taken to, and determined by, the Board of Examiners-in-Chief, the Commissioner of Patents, and the Court of Appeals of the District of Columbia, as the case may be, as provided by law prior to July 1, 1908.

APPENDIX B.

AN ACT REVISING AND AMENDING THE STATUTES RELATING TO TRADE-MARKS.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section seven of the Trade-Mark Law be, and the same hereby is, amended by substituting, in paragraph three, line six, the word "the" for the word "his," and after the word "decision" inserting the words "of the Examiner of Trade-Marks and the Examiner of Interferences to the Board of Appeals," so that the section so amended will read as follows:

"SEC. 7. That in all cases where notice of opposition has been filed the Commissioner of Patents shall notify the applicant thereof and the grounds therefor.

"Whenever application is made for the registration of a trade-mark which is substantially identical with a trade-mark appropriated to goods of the same descriptive properties, for which a certificate of registration has been previously issued to another, or for registration of which another has previously made application, or which so nearly resembles such trade-mark, or a known trade-mark owned and used by another, as, in the opinion of the Commissioner, to be likely to be mistaken therefor by the public, he may declare that an interference exists as to such trade-mark, and in every case of interference or opposition to registration he shall direct the Examiner in charge of interferences to determine the question of the right of registration to such trade-mark, and of the sufficiency of objections to registration, in such manner and upon such notice to those interested as the Commissioner may by rules prescribe.

"The Commissioner may refuse to register the mark against the registration of which objection is filed, or may refuse to register both of two interfering marks, or may register the mark, as a trade-mark, for the person first to adopt and use the mark, if otherwise entitled to register the same, unless an appeal is taken, as hereinafter provided for from the decision of the Examiner of Trade-Marks and the Examiner of Interferences to the Board of Appeals, by a party interested in the proceeding, within such time (not less than twenty days) as the Commissioner may prescribe."

SEC. 2. That section eight of the Trade-Mark Law shall be, and the same hereby is, amended by substituting, in next to the last line, for the words "Commissioner in person" the words "Board of Appeals (R. S. U. S., 482)" so that the section so amended will read as follows:

"SEC. 8. That every applicant for the registration of a trade-mark, or for the renewal of the registration of a trade-mark, which application is refused, or a party to an interference against whom a decision has been rendered, or a party who has filed a notice of opposition as to a trade-mark, may appeal from the decision of the Examiner in charge of trade-marks, or the Examiner in charge of interferences, as the case may be, to the Board of Appeals (R. S. U. S. 482), having once paid the fee for such appeal."

SEC. 3. That section nine of the Trade-Mark Law shall be, and the same hereby is, amended by substituting, in line five, for the words "Commissioner of Patents" the words "Board of Appeals" and in line eight, substituting for the word "Commissioner" the words "Board of Appeals," so that the section so amended will read as follows:

"SEC. 9. That if an applicant for registration of a trade-mark, or a party to an interference as to a trade-mark, or a party who has filed opposition to the registration of a trade-mark, or party to an application for the cancellation of the registration of a trade-mark, is dissatisfied with the decision of the Board of Appeals, he may appeal to the Court of Appeals of the District of Columbia, on complying with the conditions required in case of an appeal from the decision of the Board of Appeals by an applicant for patent, or a party to an interference as to an invention, and the same rules of practice and procedure shall govern in every stage of such proceedings, as far as the same may be applicable."

SEC. 4. That section thirteen of the Trade-Mark Law shall be, and the same hereby is, amended by subetituting, in lines eleven and twelve, for the words "Commissioner in person" the words "Board of Appeals," so that the section so amended will read as follows:

"SEC. 13. That whenever any person shall deem himself injured by the registration of a trade-mark in the Patent Office he may at any time apply to the Commissioner of Patents to cancel the registration thereof. The Commissioner shall refer such application to the Examiner of Interferences, who is empowered to hear and determine this question and who shall give notice thereof to the registrant. If it appear after a hearing before the Examiner that the registrant was not entitled to the use of the mark at the date of his application for registration thereof, or that the mark is not used by the registrant, or has been abandoned, and the Examiner shall so decide, the Commissioner shall cancel the registration. Appeal may be taken to the Board of Appeals from the decision of Examiner of Interferences."

SEC. 5. That section fourteen of the Trade-Mark Law shall be, and the same hereby is, amended by erasing in line four thereof the words "at the date of the passage of this act" and substituting in lieu thereof the words "on April first, nineteen hundred and five," and by substituting, in the fourth paragraph, last line, for the words "Commissioner of Patents" the words "Board of Appeals" and in the fifth paragraph, line three, substituting for the words "Commissioner of Patents" the words "Board of Appeals," so that the section so amended will read as follows:

"SEC. 14. That the following shall be the rates for trade-mark fees:

"On filing each original application for registration of a trade-mark, ten dollars: *Provided*, That an application for registration of a trade-mark pending on April first, nineteen hundred and five, and on which certificate of registration shall not have issued at such date, may, at the option of the applicant, be proceeded with and registered under the provisions of this act without the payment of further fee.

"On filing each application for renewal of the registration of a trade-mark, ten dollars.

"On filing notice of opposition to the registration of a trade-mark, ten dollars.

"On an appeal from the Examiner in charge of trade-marks to the Board of Appeals, fifteen dollars.

"On an appeal from the decision of the Examiner in charge of interferences, awarding ownership of a trade-mark or canceling the registration of a trade-mark, to the Board of Appeals, fifteen dollars.

"For certified and uncertified copies of certificates of registration and other papers, and for recording transfers and other papers, the same fees as required by law for such copies of patents and for recording assignments and other papers relating to patents."

SEC. 6. This act shall take effect July 1, 1908, but shall not apply to any case in which the appeal to the Commissioner of Patents was taken prior to that date. In such case the appeal shall be taken to, and determined by, the Commissioner of Patents and the Court of Appeals of the District of Columbia, as the case may be, as provided by law prior to July 1, 1908.

APPENDIX C.

The following tables present a comparative statement of the business of the Patent Office since the enactment of the statute of 1836 and exhibit in detail the business of the Office during the last calendar year:

Comparative statement of the business of the Office from 1837 to 1907, inclusive.

Year.	Applications.	Caveats filed.	Patents and reissues.	Cash received.	Cash expended.	Surplus.
1837	.....	.....	435	$29,289 08	$33,506 98	.....
1838	.....	.....	520	42,123 54	37,338 92	$4,784 62
1839	.....	.....	425	38,019 97	34,543 51	3,476 46
1840	765	228	473	38,056 51	39,020 67	.....
1841	847	312	495	40,413 01	52,666 87	.....
1842	761	291	517	36,505 63	31,241 43	5,264 20
1843	819	315	519	35,315 81	30,776 96	4,538 85
1844	1,045	380	497	42,509 26	36,344 53	6,164 73
1845	1,246	452	503	51,076 14	39,395 65	11,680 49
1846	1,272	448	638	50,264 16	46,158 71	4,105 45
1847	1,531	533	569	63,111 19	41,878 35	21,232 84
1848	1,628	607	653	67,576 69	58,905 84	8,670 85
1849	1,955	595	1,077	80,752 78	77,716 44	3,036 34
1850	2,193	602	993	86,927 05	80,100 95	6,826 10
1851	2,258	760	872	95,738 61	86,916 93	8,821 68
1852	2,630	996	1,019	112,056 34	95,916 91	16,139 43
1853	2,673	901	961	121,527 45	132,980 83	.....
1854	3,324	868	1,844	163,789 84	167,146 32	.....
1855	4,435	906	2,013	216,459 35	179,540 33	36,919 02
1856	4,960	1,024	2,505	192,588 02	199,931 02	.....
1857	4,771	1,010	2,896	196,132 01	211,582 09	.....
1858	5,364	943	3,710	203,716 16	193,193 74	10,522 42
1859	6,225	1,079	4,538	245,942 15	210,278 41	35,663 74
1860	7,653	1,084	4,819	256,352 59	252,820 80	3,531 79
1861	4,643	700	3,340	137,354 44	221,491 91	.....
1862	5,038	824	3,521	215,754 99	182,810 39	32,944 06
1863	6,014	787	4,170	195,593 29	189,414 14	6,179 15
1864	6,972	1,063	5,020	240,919 98	229,868 00	11,051 98
1865	10,654	1,932	6,616	348,791 84	274,199 34	74,592 50
1866	15,269	2,723	9,450	495,665 38	361,724 28	133,941 10
1867	21,276	3,567	13,015	646,581 92	639,263 32	7,318 60
1868	20,445	3,705	12,378	581,565 86	628,679 77	52,886 09
1869	19,271	3,624	13,986	693,145 81	486,430 74	206,715 07
1870	19,171	3,273	13,321	660,456 76	557,147 19	112,309 57
1871	19,472	3,366	13,033	678,716 46	562,091 64	116,624 82
1872	18,246	3,090	13,590	699,720 30	665,595 00	34,131 30
1873	20,414	3,248	12,864	703,191 77	691,178 98	12,012 79
1874	21,602	3,181	13,599	738,278 17	679,288 41	58,959 76
1875	21,638	3,094	14,337	743,453 26	721,657 71	21,795 55
1876	21,425	2,997	15,595	757,987 65	652,542 60	105,445 05
1877	20,308	2,809	14,187	732,342 85	613,152 62	119,190 23
1878	20,280	2,755	13,444	725,375 55	593,082 89	132,292 66
1879	20,059	2,630	13,213	703,931 47	529,638 97	174,292 50
1880	23,012	2,490	12,947	740,685 32	538,865 17	210,820 15
1881	26,059	2,406	16,584	853,065 89	605,173 28	248,492 61
1882	31,522	2,553	19,267	1,009,219 45	683,867 67	325,351 78
1883	34,576	2,741	22,383	1,146,240 00	675,234 86	471,005 14
1884	35,600	2,582	20,413	1,075,798 80	970,579 76	105,219 04
1885	35,717	2,552	24,233	1,188,089 15	1,024,378 85	163,710 30
1886	35,968	2,513	22,508	1,154,551 40	992,503 45	162,047 95
1887	35,613	2,622	21,477	1,144,509 60	994,472 22	150,037 38
1888	35,797	2,251	20,506	1,118,516 10	973,108 78	145,407 32
1889	40,575	2,461	24,158	1,281,728 05	1,052,955 96	228,772 09
1890	41,048	2,311	26,292	1,340,372 66	1,099,297 74	241,074 92
1891	40,552	2,408	22,244	1,271,285 78	1,139,713 35	131,572 43
1892	40,753	2,220	23,559	1,286,231 88	1,110,730 24	175,502 59
1893	38,473	2,247	25,709	1,242,871 64	1,141,038 45	101,833 19
1894	38,439	2,286	20,867	1,187,439 58	1,100,047 12	87,392 46
1895	40,660	2,415	22,057	1,245,246 93	1,106,369 40	138,857 44
1896	43,962	2,271	23,373	1,324,059 53	1,113,413 71	210,645 12
1897	47,905	2,176	23,794	1,375,641 73	1,122,643 13	252,798 59
1898	35,842	1,659	22,267	1,187,734 48	1,128,196 20	1,538 28
1899	41,443	1,716	25,527	1,325,457 03	1,211,783 73	113,673 30
1900	41,980	1,731	26,409	1,350,538 53	1,260,019 62	90,518 91
1901	46,440	1,842	27,373	1,449,286 16	1,297,385 64	152,013 52
1902	49,641	1,851	27,886	1,552,899 09	1,393,345 54	159,613 54
1903	50,213	1,771	31,000	1,642,201 81	1,448,645 81	193,556 00
1904	52,143	1,808	30,934	1,657,326 53	1,476,000 36	181,326 15
1905	54,971	1,893	30,300	1,806,736 14	1,479,633 22	327,134 92
1906	56,452	1,985	21,905	1,790,921 36	1,554,901 20	236,020 16
1907	57,679	1,967	36,620	1,910,618 14	1,631,458 36	279,159 78

Statement showing the number of the first patent, design patent, and reissued patent, and the number of the first certificate of registration of a trade-mark, label, and print issued in each calendar year since July 28, 1836, when the present series of numbers of letters patent commenced, together with the total number of each issued during the year.

[The number of patents granted prior to the commencement of this series of numbering (July 28, 1836) was 9,957.]

Calendar year.	Number of first patent and certificate issued in each calendar year.						Number of patents and certificates of registration issued during each calendar year.							
	Patents.	Designs.	Reissues.	Trade-Marks.	Labels.	Prints.	Patents.	Designs.	Reissues.	Total patents.	Trade-Marks.	Labels.	Prints.	Total certificates.
1836 (July 28)	1						109							
1837	110						436							
1838	546		1				515		6					
1839	1,061		7				404		13					
1840	1,465		20				458		10					
1841	1,938		30				400		6					
1842	2,413		36				488		13					
1843	2,901	1	49				494	14	11	519				
1844	3,395	15	60				478	12	7	497				
1845	3,873	27	67				475	17	11	503				
1846	4,348	44	78				566	59	13	638				
1847	4,914	103	91				495	60	14	569				
1848	5,400	163	105				594	48	28	653				
1849	5,962	209	128				968	49	30	1,047				
1850	6,981	258	158				894	63	26	993				
1851	7,885	341	184				757	90	25	872				
1852	8,922	431	209				890	109	20	1,019				
1853	9,512	540	229				846	86	29	961				
1854	10,358	626	258				1,789	57	28	1,844				
1855	12,117	683	286				1,892	70	51	2,013				
1856	14,009	753	337				2,315	107	83	2,505				
1857	16,324	860	420				2,686	113	97	2,896				
1858	19,010	973	517				3,467	102	126	3,695				
1859	22,477	1,075	643				4,165	108	231	4,504				
1860	26,642	1,183	674				4,363	133	232	4,778				
1861	31,005	1,366	1,105				3,040	142	147	3,329				
1862	34,045	1,508	1,253				3,221	195	116	3,532				
1863	37,266	1,703	1,369				3,781	176	227	4,184				
1864	41,047	1,879	1,596				4,638	139	248	5,025				
1865	45,685	2,018	1,844				6,099	221	296	6,616				
1866	51,784	2,239	2,140				8,874	294	290	9,458				
1867	60,658	2,533	2,490				12,301	325	400	13,026				
1868	72,959	2,856	2,930				12,544	446	420	13,410				
1869	85,503	3,304	3,250				12,957	506	534	13,997				
1870	96,460	3,810	3,784	1			12,157	737	639	13,333	121			121
1871	110,617	4,547	4,223	122			11,687	905	464	13,056	486			486
1872	122,304	5,452	4,687	608			12,200	884	529	13,613	491			491
1873	134,504	6,336	5,216	1,099			11,616	747	501	12,864	492			492
1874	146,120	7,083	5,717	1,501	1		12,230	886	483	13,599	559	232		791
1875	158,350	7,999	6,200	2,150	233		13,291	915	631	14,837	1,138	232		1,370
1876	171,641	8,854	6,531	3,283	465		14,172	802	621	15,595	959	472		1,431
1877	185,813	9,686	7,482	4,247	937		12,920	699	568	14,187	1,216	392		1,608
1878	198,733	10,385	8,020	5,453	1,329		12,345	590	509	13,444	1,455	492		1,947
1879	211,078	10,975	8,529	6,918	1,821		12,133	592	488	13,213	872	355		1,227
1880	225,211	11,587	9,017	7,790	2,176		12,926	515	906	13,947	349	203		552
1881	238,137	12,062	9,523	8,130	2,379		13,548	565	471	14,584	834	202		1,036
1882	251,685	12,647	9,994	8,973	2,581		13,135	661	271	14,267	947	304		1,251
1883	266,820	13,506	10,285	9,920	2,885		21,196	1,020	167	22,383	902	906		1,808
1884	281,016	14,228	10,432	10,822	3,791		19,147	1,180	116	20,443	1,021	513		1,534
1885	310,163	15,678	10,548	11,843	4,304		23,231	773	129	24,233	1,067	391		1,458
1886	333,494	16,451	10,677	12,910	4,695		21,797	595	116	22,508	1,029	378		1,407
1887	355,291	17,046	10,793	13,939	5,073		20,429	949	99	21,477	1,133	380		1,513
1888	375,720	17,995	10,892	15,072	5,453		19,585	835	86	20,506	1,059	327		1,386
1889	395,305	18,830	10,978	16,131	5,780		23,360	723	75	24,158	1,229	319		1,548
1890	418,985	19,553	11,053	17,360	6,099		25,322	886	84	26,292	1,415	304		1,719
1891	443,987	20,439	11,137	18,775	6,403		22,328	836	80	23,244	1,762	137		1,899
1892	466,315	21,275	11,217	20,537	6,540		22,661	817	81	23,559	1,737	a 6		1,743
1893	488,976	22,092	11,298	22,274	None.	1	22,768	902	90	23,760	1,677	None.	2	1,679
1894	511,744	22,904	11,397	23,951	Do.	3	19,875	928	64	20,857	1,806	Do.	4	1,810
1895	531,619	23,922	11,461	25,757	Do.	7	20,863	1,115	59	22,057	1,829	Do.	3	1,832
1896	552,502	25,057	11,520	27,598	6,546	10	21,867	1,445	61	23,373	1,813	1	32	1,846
1897	574,369	26,482	11,581	29,309	6,547	42	22,696	1,631	65	23,794	1,671	14	16	1,701
1898	595,657	28,113	11,646	31,070	6,551	58	20,404	1,960	60	22,267	1,233	200	35	1,473
1899	616,871	29,916	11,706	32,309	6,781	98	23,298	2,139	92	25,527	1,640	511	100	2,260
1900	640,167	32,055	11,798	33,957	7,272	198	24,660	1,788	81	26,499	1,721	737	93	2,551
1901	664,227	33,513	11,879	35,678	8,000	288	25,558	1,734	81	27,373	1,928	878	159	2,965
1902	690,385	35,547	11,980	37,606	8,867	445	27,136	640	110	27,886	2,006	767	158	2,931
1903	717,521	36,187	12,070	39,612	9,654	608	31,048	536	117	31,699	2,186	990	270	3,446
1904	748,557	36,723	12,189	41,796	10,644	873	30,267	557	110	30,934	2,158	1,114	297	3,569
1905	778,884	37,220	12,309	43,956	11,758	1,170	29,784	496	129	30,309	4,490	830	350	5,679
1906	808,618	37,706	12,486	48,445	12,588	1,529	31,181	625	159	31,965	10,568	709	656	11,933
1907	838,799	38,391	12,587	50,014	13,207	1,574	35,880	580	151	36,620	7,878	667	315	8,860
1907 to December 31	875,678	38,979	12,737	66,991	13,963	2,188								

First Print registered Mar. 7, 1893.

a Registration of labels practically suspended May 27, 1891, under decision of the United States Supreme Court in *Higgins et al.* v. *Keuffel et al.*, (55 O. G., 1139,) with the registration of No. 6,545, June 14, 1892. Resumed June 9, 1896, with the registration of No. 6,549.

Applications filed.

	Patents.	Reissues.	Caveats.	Designs.	Trade-marks.	Prints.	Labels.	Total.
1891	39,418	109	2,408	1,025	1,906	.....	698	45,564
1892	39,514	100	2,290	1,130	2,179	.....	7	45,680
1893	37,293	120	2,247	1,060	1,809	.....	401	43,020
1894	36,987	95	2,296	1,357	2,053	.....	371	43,149
1895	39,145	72	2,415	1,463	2,112	13	293	45,513
1897	42,077	77	2,271	1,828	2,005	36	59	48,353
1898	45,661	94	2,176	2,150	1,946	26	66	52,119
1899	33,915	84	1,659	1,643	1,796	50	316	39,663
1900	38,937	106	1,716	2,400	2,059	143	629	45,990
1901	39,673	82	1,731	2,225	2,099	127	943	46,871
1902	43,973	115	1,842	2,361	2,410	253	1,064	51,998
1903	48,320	151	1,851	1,170	2,602	266	1,121	55,481
1904	49,289	154	1,771	770	2,504	380	1,234	56,102
1905	51,168	157	1,808	818	2,524	397	1,335	58,207
1906	54,034	156	1,896	781	16,224	467	1,068	74,626
1907	55,471	205	1,885	806	8,493	419	844	68,123
	57,679	187	1,967	896	7,722	403	1,027	69,881

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

JANSSON *v.* LARSSON.

Decided December 11, 1907.

INTERFERENCE—EVIDENCE—CROSS-EXAMINATION OF PARTY TO PROCEEDING—RANGE ALLOWABLE.

Where a party to an interference, relying upon certain specified installations as a reduction to practice, is asked upon cross-examination whether any other installations had been made, the question should be answered, as a wider range is allowable in the cross-examination of a party to the proceeding; but if such general questions were followed up by further questions clearly showing an intention to elicit information relating to the business of such party irrelevant to the questions at issue the witness might well refuse to answer under the advice of counsel.

Mr. F. T. Brown and *Mr. F. A. Hopkins* for the appellant.

Mr. L. W. Southgate and *Mr. C. V. Edwards* for the appellee.

SHEPARD, *J.*:

This is an interference case involving priority of invention of a mechanism for stopping a hydraulic plunger-elevator at the upper and lower limits of its run independently of the operator.

The following is the issue declared:

1. In combination with an elevator-car and a stop mechanism therefor, of a rope connected to run with the elevator-car and stationary means for causing a deflection of said rope to actuate said stop mechanism.
2. In combination with an elevator-car and a stop mechanism therefor, of a rope connected to run with the elevator-car and stationary means unattached to the rope for causing a gradual deflection of said rope to gradually actuate said stop mechanism.
3. In combination with an elevator-car and a stop mechanism therefor, of means for actuating said stop mechanism, a pair of running ropes for actuating said means, and means for causing a deflection of one or the other of said ropes as the car approaches the end of its run.
4. In combination with an elevator-car and a stop mechanism therefor, of means for actuating said stop mechanism, a pair of ropes connected to run with the elevator-car for actuating said means, and means for causing a deflection of one or the other of said ropes as the car approaches the end of its run.
5. In combination with an elevator-car and a stop mechanism therefor, a pair of ropes connected to travel with the car and means for causing a deflection of each of said ropes to actuate said stop mechanism.

Larsson first filed an application on March 7, 1903, which became abandoned through oversight of his solicitor. He filed the application in interference on July 5, 1904. The drawings and specifications and all of the claims but one were copies of the former application. The change in the single claim was to avoid an objection that had been raised by the Examiner. Jansson's application was filed April 19, 1904, and patent issued to him December 13, 1904. Through inadvertence in the Patent Office the patent issued without regard to Larsson's application then depending. This interference was brought about by Larsson who, for that purpose, inserted certain claims of the patent. The patent having been issued under these circumstances does not add to the burden of proof of the junior applicant.

The three tribunals of the Patent Office concurred in awarding priority to Larsson upon the testimony.

A preliminary question arose over the contention of Jansson that Larsson was estopped to embody the claims of the former's patent, under the principle enounced in *Beehman* v. *Wood*, (89 O. G., 2459; 15 App. D. C., 484.) We agree with the Commissioner that the facts do not bring the case within the principle; but are analogous to those in cases decided since *Beehman* v. *Wood*. (*McBerty* v. *Cook*, 90 O. G., 2295; 16 App. D. C., 133, 138; *Lueger* v. *Browning*, 104 O. G., 1123; 21 App. D. C., 201, 206; *Furman* v. *Dean*, 114 O. G., 1552; 24 App. D. C., 277, 281; *Seeberger* v. *Dodge*, 114 O. G., 2382; 24 App. D. C., 476, 483.)

Another question earnestly pressed on the argument relates to the refusal of Larsson, upon the advice of counsel, to answer certain questions propounded on cross-examination. It is true, these questions related to whether other installments of elevators had been made, than those in Pittsburg and Allegheny buildings, which Larsson relied on for reduction to practice. It is to be remembered that Larsson was a party to the proceeding, wherefore wider range of cross-examination was allowable. We think that the general question should have been answered. Then, if followed up by further questions clearly showing an intention to elicit information relating to the business of Larsson

and his assignee, not relevant to the questions at issue, the witness might well refuse to answer under the advice of counsel. As counsel for the appellant did not undertake to point out the relevancy of these questions by stating what he expected to elicit, and the case was otherwise so plainly made out, we do not think there was error in refusing to suppress or exclude the deposition.

The questions of the dates of conception of the invention by the respective parties, and its actual reduction to practice by Larsson were of fact exclusively. The tribunals of the Patent Office were unanimous in the conclusion, from the evidence, that Larsson conceived the invention as early as February 19, 1903, and reduced it to actual practice as early as November 14, 1903, by introducing it into elevators in several buildings. It is unnecessary to add anything to their satisfactory review of the evidence supporting that finding. We find nothing in it to justify a different conclusion. They also agreed in finding that Jansson conceived the invention as early as January 28, 1903. We agree with them, also, that Jansson lost the benefit of his earlier conception through want of diligence in seeking to perfect his invention. He did practically nothing during the fourteen months that elapsed between his conception and the filing of his application. Meanwhile Larsson had conceived the invention and followed it diligently to actual reduction to practice, in a satisfactory manner, more than four months before Jansson showed any activity.

The decision is right, and will be affirmed; and this decision will be certified to the Commissioner of Patents. It is so ordered. Affirmed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 26, 1907.

Noble and Streeter, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Joseph C. Allen, of Plainfield, N. J., for registration of a trade-mark and a trade-mark registered to Noble and Streeter, of New York, N. Y., and it appearing upon a showing made by the junior party that said Noble and Streeter have not been located, notice is hereby given to the said Noble and Streeter, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 26, 1907.

Irwin & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Walter S. Bare, of 227 North Duke street, Lancaster, Pa., for registration of a trade-mark registered to Irwin & Company, of 165 Milk street, Boston, Mass., and no response to the said declaration mailed by the Patent Office in the usual manner to Irwin & Company having been received, and there being no evidence of its having been received by the said Irwin & Company, it is presumed that the company has not received the same. Therefore notice is hereby given to the said Irwin & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that due notice of the declaration of this interference may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 11, 1907.

The Royal Shoe Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Seiz, Schwab & Company, of Monroe and Market streets, Chicago, Ill., for registration of a trade-mark and a trade-mark registered to The Royal Shoe Company, of 280 Devonshire street, Boston, Mass., and the notice of said declaration mailed by the Patent Office in the usual manner to the said The Royal Shoe Company having been returned undelivered, notice is hereby given to the said The Royal Shoe Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

The notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

[BY AUTHORITY OF CONGRESS.]

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ISSUE OF JANUARY 21, 1908.

Patents	552	No. 876,922 to No. 877,474, inclusive.
Designs	4	No. 39,029 to No. 39,082, inclusive.
Trade-Marks	97	No. 67,131 to No. 67,227, inclusive.
Labels	9	No. 13,999 to No. 14,007, inclusive.
Prints	4	No. 2,202 to No. 2,205, inclusive.
Reissues	1	No. 12,741.
Total	667	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	1	.....	New Hampshire	1	.....
Alaska, District of	.....	.....	New Jersey	23	3
Arizona Territory	3	.....	New Mexico Ter'y	.....	.....
Arkansas	2	.....	New York	61	23
California	21	5	North Carolina	4	.....
Colorado	5	.....	North Dakota	4	.....
Connecticut	13	5	Ohio	57	6
Delaware	.....	.....	Oklahoma	3	1
District of Columbia	5	2	Oregon	2	.....
Florida	.....	3	Panama	.....	.....
Georgia	3	.....	Pennsylvania	42	8
Hawaii Territory	.....	.....	Philippine Islands	.....	.....
Idaho	1	.....	Rhode Island	3	1
Illinois	54	6	South Carolina	2	.....
Indiana	14	.....	South Dakota	3	.....
Iowa	9	.....	Tennessee	2	.....
Kansas	4	.....	Texas	13	.....
Kentucky	7	5	Utah	.....	.....
Louisiana	2	.....	Vermont	2	.....
Maine	2	2	Virginia	4	1
Maryland	2	2	Washington	3	3
Massachusetts	31	11	West Virginia	1	.....
Michigan	12	2	Wisconsin	12	1
Minnesota	19	2	Wyoming	.....	.....
Mississippi	1	.....	U. S. Army	.....	.....
Missouri	21	2	U. S. Navy	.....	.....
Montana	1	.....	Total to citizens of the United States	476	101
Nebraska	7	6			
Nevada	.....	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	5	.....	Netherlands	.....	.....
Belgium	.....	.....	Newfoundland	.....	.....
Brazil	.....	.....	New South Wales	1	.....
British West Indies	.....	.....	New Zealand	.....	.....
Canada	6	.....	Norway	.....	.....
Cape Colony	.....	.....	Persia	.....	.....
Chile	.....	.....	Queensland	.....	.....
China	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	1	.....
Cuba	.....	.....	Scotland	2	.....
Denmark	.....	.....	South Australia	1	.....
Ecuador	.....	.....	Spain	.....	.....
England	18	2	Sweden	3	.....
France	9	6	Switzerland	6	1
Germany	22	.....	Transvaal, South Africa	.....	.....
Haiti	.....	.....	Victoria	1	.....
Ireland	.....	.....	Western Australia	1	.....
Italy	2	.....	Total to citizens of foreign countries	80	9
Japan	1	.....			
Java	.....	.....			
Mexico	1	.....			

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 26, 1907.

Meade-Van Bokkelen Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Barton Vineyard Company, Limited, of Fresno, Cal., for registration of a trade-mark and a trade-mark registered to the Meade-Van Bokkelen Company, of Chicago, Ill., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Meade-Van Bokkelen Company having been returned undelivered, notice is hereby given to the said Meade-Van Bokkelen Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 26, 1907.

Noble and Streeter, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Joseph C. Allen, of Plainfield, N. J., for registration of a trade-mark and a trade-mark registered to Noble and Streeter, of New York, N. Y., and it appearing upon a showing made by the junior party that said Noble and Streeter have not been located, notice is hereby given to the said Noble and Streeter, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business January 14, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
303	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Dec. 31	Dec. 14	196
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Dec. 30	Oct. 9	645
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Dec. 26	Nov. 11	313
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Dec. 17	Dec. 2	206
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Dec. 16	Nov. 13	276
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Dec. 14	Dec. 10	353
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Dec. 14	Nov. 18	223
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Iron Structures; Loading and Unloading; Towers.	Dec. 12	Dec. 9	215
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Dec. 12	Oct. 7	399
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Dec. 10	Oct. 18	364
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships. E.	Dec. 9	Nov. 11	216
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	Dec. 5	Nov. 12	302
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Dec. 4	Nov. 26	254
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Netting and Stapling; Whips and Whip Apparatus.	Dec. 4	Nov. 7	348
197	V. Bookbinding; Harvesters; Jewelry; Music.	Dec. 3	Oct. 21	348
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Dec. 2	Nov. 22	309
232	X. Carriages and Wagons.....	Dec. 2	Oct. 21	402
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas, and Canes.	Nov. 20	Nov. 18	318
309	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Gases; Hydraulic Lifts and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Nov. 27	Nov. 18	533
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	Nov. 27	Nov. 4	357
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	Nov. 25	Nov. 20	448
227	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Nov. 25	Oct. 10	261

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
322	XII. Elevators; Journal-Boxes; Lubrication; Machine Elements; Pulleys and Shafting.	Nov. 23	Oct. 18	608
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Nov. 23	Oct. 5	384
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	Nov. 22	Nov. 1	274
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	Nov. 22	Oct. 16	563
126	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	Nov. 19	Nov. 2	304
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Nov. 16	Nov. 1	330
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Nov. 13	Sept. 14	586
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	Nov. 11	Sept. 3	291
238	XIX. Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel; Stoves and Furnaces.	Nov. 8	Oct. 2	507
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	Nov. 8	Aug. 2	420
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Nov. 6	Oct. 25	441
260	XL. Baggage; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Nov. 4	Sept. 12	755
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	Nov. 4	Sept. 6	676
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Nov. 2	Nov. 12	619
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Nov. 1	Sept. 9	555
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Oct. 21	Sept. 7	602
321	XXXIX. Baths and Closets; Water Distribution.	Oct. 1	July 8	375
109	XVI. Telegraphy; Telephony.....	Sept. 28	July 9	702
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161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS.			
	Trade-Marks.....	Jan. 10	Dec. 10	358
	Designs.....	Jan. 7	Dec. 9	99
	Labels and Prints.....			

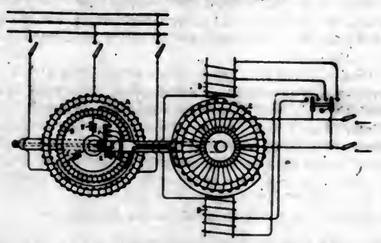
Delivery of Patent.

The patent will be delivered or mailed on the day of its date to the attorney of record, if there be one; if not, to the patentee; or, if the attorney so request, to the patentee or assignee of an interest therein.

PATENTS

GRANTED JANUARY 21, 1908.

876,923. STARTING MOTOR-CONVERTER. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 31, 1907. Serial No. 376,648.



1. In combination with a motor-converter comprising an induction motor and rotary converter mechanically and electrically coupled, means for reducing the effective number of turns of the field winding of the rotary converter at starting.

2. In combination with a motor-converter comprising an induction motor and rotary converter with armatures mechanically coupled and electrically connected in series, a starting resistance in series with said armatures, a short-circuiting switch therefor, and means for reducing the effective number of turns of the field winding of the rotary converter at starting.

3. In combination with a motor-converter comprising an induction motor and rotary converter mechanically and electrically coupled, a switch arranged to cut out a portion of the field winding of the rotary converter at starting.

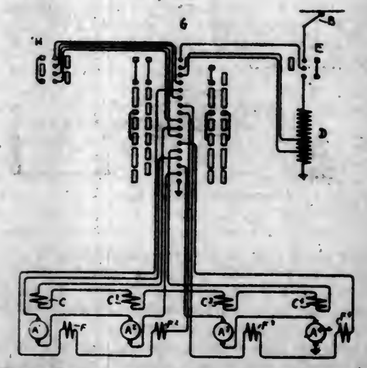
4. In combination with a motor-converter comprising an induction motor and rotary converter with armatures mechanically coupled and electrically connected in series, a starting resistance carried by said armatures and connected in series with the armature winding, a short-circuiting switch therefor, and means for reducing the effective number of turns of the field winding of the rotary converter at starting.

876,924. COMPENSATED MOTOR. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 19, 1906. Serial No. 326,861.

1. In combination, a plurality of motors of the commutator type, each having a compensating winding with a smaller number of turns than the effective turns of the armature, and means for connecting a plurality of motors with their armatures in parallel with each other and their compensating windings in series with each other and with the armatures.

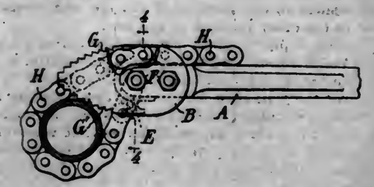
2. A plurality of motors of the commutator type, each having a compensating winding with a smaller number of turns than the effective turns of the armature, said motors being connected with their armatures in parallel with each other and their compensating windings in series with each other and with the armatures.

3. In combination, a plurality of motors of the commutator type, each having a compensating winding with a smaller number of turns than the effective turns of the armature, and a controlling switch for said motors arranged in its full-speed position to connect a plurality of motors with their armatures in parallel with each other and with their compensating windings in series with each other and with the armatures.



4. The method of operating a plurality of motors of the commutator type, each having a compensating winding with a smaller number of turns than the effective turns of the armature, which consists in connecting a plurality of the motors with their armatures in parallel with each other and their compensating windings in series with each other and with the armatures.

876,925. CHAIN PIPE-WRENCH. GEORGE AMBORN, New York, N. Y., assignor to J. H. Williams & Co., Brooklyn, N. Y., a Corporation of New York. Filed Mar. 8, 1907. Serial No. 361,287.



1. In a chain wrench, a jaw, a chain having a succession of engaging faces, and means for locking the free end of said chain adapted to be engaged upon first a rearward movement of one engaging face, and then an inward movement of a second engaging face.

2. In a chain wrench, a jaw, a chain having engaging faces, and a lock adapted to be engaged by such faces, said lock having a rearwardly extending locking recess and a forwardly extending retaining recess in front of the said locking recess, said retaining recess having sufficient depth to engage one of the faces of the chain when an adjacent face is in any position in said locking recess.

3. In a chain wrench, a jaw, a chain having pintles, and means for locking the free end of said chain, such means comprising a lock adapted to be engaged by such pintles upon first a rearward movement of one pintle and then inward movement of a second pintle.

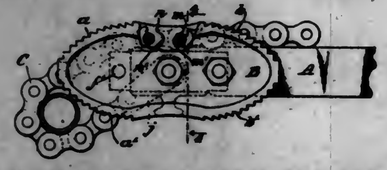
4. In a chain wrench, a jaw, a chain having locking pintles, and a lock adapted to engage such pintles, said lock having a rearwardly extending locking recess and a

forwardly extending retaining recess, said retaining recess having a sufficient depth to engage a pintle of the chain when an adjacent pintle is in any position in such locking recess.

5. In a chain wrench, a jaw, a chain having locking pintles, and a lock adapted to engage such pintles, said lock having a rearwardly extending locking recess adapted to receive a chain pintle, and a forwardly extending retaining recess arranged in front of said locking recess, and adapted to engage an adjacent pintle said retaining recess being of greater depth than said locking recess.

[Claims 6 to 9 not printed in the Gazette.]

876,926. CHAIN PIPE-WRENCH. GEORGE AMBORN, New York, N. Y., assignor to J. H. Williams & Co., Brooklyn, N. Y., a Corporation of New York. Filed May 6, 1907. Serial No. 372,037.



1. In a chain pipe wrench, the combination of a handle, a double ended reversible jaw connected therewith, a chain pivoted centrally of said jaw whereby such chain acts from the same point when the jaw is reversed, and locks formed upon the jaw for engaging such chain.

2. In a chain pipe wrench, the combination of a handle, a double ended reversible jaw connected therewith, a chain pivoted thereto, and a single lock fixed relatively to the jaw for engaging such chain in both positions of said jaw.

3. In a chain pipe wrench, the combination of a handle, a double ended reversible jaw connected therewith, a chain pivoted centrally of said jaw whereby such chain acts from the same point when the jaw is reversed, and a single lock fixed relatively to the jaw for engaging such chain in both positions of said jaw.

4. In a chain pipe wrench, the combination of a handle, a double ended reversible jaw connected therewith, a chain connected with such wrench, and a lock for engaging such chain in both positions of said jaw, said lock having two hook-like members each of which is adapted to act as a locking member in one position of the jaw and a retaining member in the other position of the jaw.

5. In a chain pipe wrench, the combination of a handle, a double ended reversible jaw connected therewith, a chain having pintles, and a lock engaging such pintles in both positions of the jaw, such lock having two hook-like members reversely arranged and two oppositely arranged recesses, such parts being proportioned so that when one of such pintles is in position at the bottom of one recess the next adjacent pintle can pass over the end of the opposite hook-like member.

[Claim 6 not printed in the Gazette.]

876,927. CHAIN PIPE-WRENCH. GEORGE AMBORN, New York, N. Y., assignor to J. H. Williams & Co., Brooklyn, N. Y., a Corporation of New York. Filed May 6, 1907. Serial No. 372,038.



1. In a chain pipe wrench, the combination of a handle, a double-ended reversible jaw connected therewith, a chain pivoted thereto, and two hook-like members reversible with the jaw and adapted to engage the chain in either position of said jaw.

2. In a chain pipe wrench, the combination of a handle, a double-ended reversible jaw connected therewith, a chain pivoted thereto, and two hook-like members arranged to form a recess between them, said members being adapted to engage the chain in either position of said jaw.

3. In a chain pipe wrench, the combination of a handle, a double-ended reversible jaw connected therewith, a chain pivoted thereto, and means for locking said chain in both positions of said jaw, said means comprising two hook-like members facing in opposite directions, and reversible with the jaw.

4. In a chain pipe wrench, the combination of a handle, a double-ended reversible jaw connected therewith, a chain pivoted thereto, and means for locking said chain in both positions of said jaw, said means comprising two hook-like members facing in opposite directions, said members being fixed to the jaw.

5. In a chain pipe wrench, the combination of a handle, a double-ended reversible jaw connected therewith, a chain pivoted thereto, and means for locking said chain in both positions of said jaw, said means comprising two hook-like members extending toward each other, each of which is adapted to act as a locking member in one position of said jaw, and as a retaining member in the other position of said jaw.

[Claims 6 to 8 not printed in the Gazette.]

876,928. HORSESHOE. TORVAL J. ANDERSON and ALBERT L. ANDERSON, Rockdale, Wis. Filed Nov. 2, 1906. Serial No. 341,702.



1. A horseshoe having openings formed in its toe portion and a calk having an attaching portion provided with elongated openings therein, whose lines of greatest width are substantially in alinement, and means adapted to extend through the openings in said attaching portion and the openings in the shoe.

2. A horseshoe having a pair of openings therein, and a calk having an attaching portion provided with elongated perforations, and means adapted to extend through the perforations in said attaching portion and the openings in the shoe.

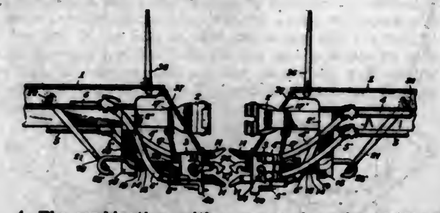
3. A horseshoe having a pair of openings therein, and a calk having an attaching portion provided with elongated perforations whose lines of greatest width are substantially in alinement, and means adapted to extend through the perforations in said attaching portion and the openings in the shoe.

876,929. TRAIN-SERVICE COUPLING. STEPHEN D. BARNETT, Newark, N. J. Filed Mar. 21, 1904. Serial No. 199,079.

1. The combination, with a car coupler, of a train-service coupler having a draft connection with the car independent of the car-coupler and being provided with means for draft coupling with a companion coupler.

2. The combination, with a car-coupler, of a train-service coupler having a draft connection with the car independent of the car-coupler and being provided with means for automatic draft coupling with a companion coupler.

3. The combination, with a car-coupler, of a train-service coupler having a draft connection adjacent to its rear end with the car independent of the car-coupler and a flexible connection adjacent to its forward end with the car-coupler and being provided with means for draft coupling with a companion coupler.

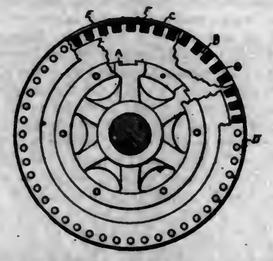


4. The combination, with a car-coupler, of a yieldingly supported train-service coupler having a draft connection with the car independent of the car-coupler and being provided with means for draft coupling with a companion coupler.

5. The combination, with a car-coupler, of a yieldingly supported train-service coupler having a draft connection with the car independent of the car-coupler and being provided with means for draft coupling with a companion coupler, and a bracket supporting the train-service coupler and being connected with the car independent of the car-coupler.

[Claims 6 to 25 not printed in the Gazette.]

876,930. DYNAMO-ELECTRIC MACHINE. SVEN R. BERGMAN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 8, 1907. Serial No. 372,464.



1. In a dynamo-electric machine, a laminated core provided with open slots, a winding carried in said slots, and a continuous wrapping of magnetic material wound around said core and entering and closing said slots.

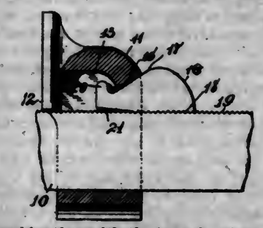
2. In a dynamo-electric machine, a laminated core provided with open slots, a winding carried in said slots, and a cylindrical sheet of magnetic material surrounding said core and having slots adapted to pass over the ends of the teeth on said core.

3. In a dynamo-electric machine, a laminated core provided with open slots, a winding carried in said slots, a cylinder formed of sheet-metal of high permeability surrounding said core and having slots adapted to pass over the ends of the teeth on said core.

4. A rotor for an induction motor comprising a laminated core provided with open slots, a winding carried in said slots, and a squirrel-cage formed of a slotted cylinder of sheet-metal of high permeability carried in the top of, and closing, said slots.

876,931. CLAMP. ALFRED G. BLAZIER, Newark, N. J. Filed Apr. 3, 1907. Serial No. 366,088.

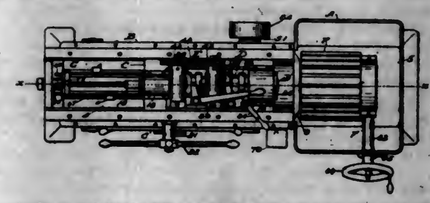
1. The combination with the bar of a clamp, the bar having teeth on one edge, of an adjustable head sliding on the bar and having a recess therein and having an opening passing from the recess with an inclined wall, a wedge having an inclined face to engage the inclined wall of the opening in the head, a projection on the wedge in the recess of the head, the edge of the wedge adjacent to the toothed edge of the bar having teeth arranged on a portion thereof, the remainder of that edge being slightly inclined and provided with a smooth surface.



2. The combination with the bar of a clamp having teeth on one edge, of an adjustable head sliding on the bar, a wedge loosely arranged in the bar and having teeth on one edge to engage the teeth of the bar, and having a portion of the edge engaging the bar slightly inclined and provided with a smooth surface, the wedge having a projecting portion provided for its manual manipulation.

3. The combination with the toothed bar of a clamp, of an adjustable head sliding thereon, a wedge secured to the head and arranged to rock on the bar, a portion of the rocking face to engage the teeth of the bar, the remainder of that edge having a smooth surface and being slightly inclined to the toothed edge of the wedge, the head when slid in one direction tilting the wedge and causing the smooth surface thereof to slide on the teeth of the bar, and when moved in the reverse direction, forcing the teeth of the wedge to engage the teeth of the bar.

876,932. METAL-WORKING MACHINE. LOUIS H. BLOOD, Hartford, Conn., assignor, by direct and mesne assignments, to the Blood Machine Company Incorporated, Winchester, Conn., a Corporation of Connecticut. Filed Apr. 5, 1900. Serial No. 11,741.



1. In a metal-working machine, the combination with a work-spindle supported for rotative and reciprocatory movements and having a point of support shiftable to a position over and in the plane of the turret, of means for actuating said spindle; and a rotative turret supported in advance of and adjacent to the spindle with its axis in parallelism to, and below, the axis of said spindle and held as against straight-line movements and having a plurality of tool-holding faces disposed in planes tangent to a common arc concentric to the axis of said turret.

2. In a metal working machine, the combination with a rotary work-holder and a rotary multiplex tool-holder having substantially parallel axes, and with means for reciprocating one holder relatively to the other, of a multiplex stopping device comprising a plurality of equidistant independently-adjustable stops concentric with the axis of said multiplex holder and rigid means of connection between said stopping device and multiplex holder; means for simultaneously moving the multiplex holder and its stops in concentric arcs; and a stop abutment on the other holder in position to coöperate with said stops.

3. A metal-working machine including two parallel spindles disposed with their axes in a common vertical plane and one of which spindles is fixed longitudinally and the other of which is supported for longitudinal movement; a turret fixed to one spindle and wholly supported below the axis of the other spindle and having a plurality of plane tool-holding faces disposed to be brought successively into tangential relation to an arc concentric to the axis of the

other spindle; means for rotating the turret and fixed spindle; means for actuating the other spindle; and means, including a lock-bolt, and a series of positioning members coöperative with said lock-bolt and adjustable in a common arc concentric to the axis of the fixed spindle, for limiting successive rotative movements of said spindle.

4. In a metal-working machine, the combination with two parallel spindles having their axis in a common vertical plane and one of which spindles is fixed longitudinally and the other of which is supported for longitudinal movement; of a turret fixed to one spindle and wholly supported below the axis of the other spindle adjacent to the work-holding end of the latter and having a plurality of plane tool-holding faces in position to be brought successively into tangential relation to an arc concentric to the axis of the other spindle; means for rotating the turret and fixed spindle; means for actuating the other spindle; a plurality of stops corresponding in number to the number of tool-holding faces carried by and disposed in substantially concentric relation to the turret spindle; and a fixture carried with the other spindle arranged to coöperate with said stops for limiting the longitudinal movements of one spindle with respect to the other.

5. In a metal-working machine, the combination with a rotative work-holder supported for longitudinal movements and a rotative tool-holder, the latter of which has a plurality of working faces and is held as against longitudinal movement, and with means for retracting and advancing the work-holder, of a plurality of independently-adjustable stops disposed equidistantly in a common arc about the axis of the tool-holder; a stop abutment disposed on the work-holder in position to coöperate with said stops successively, whereby to limit the advancing movements of said holder; means for adjusting said stops longitudinally of the axis of the tool-holder; and actuating means in connection with the tool-holder and effective for imparting corresponding rotative movements in concentric arcs to said holder and stops concurrently, whereby to bring said stops successively into coöperative relation with said stop abutment.

[Claims 6 to 28 not printed in the Gazette.]

876,933. BIFOCAL LENS. JOHN L. BORSCH, Jr., Philadelphia, Pa., assignor, by mesne assignments, to Kryptok Company, a Corporation of New York. Filed Jan. 23, 1904. Serial No. 190,257.



1. An optical glass lens consisting of an integral piece of glass ground with even surfaces and having a plurality of independent focal points.

2. A spectacle, eye-glass, or other optical lens consisting of an integral piece of glass, different portions of which have different indices of refraction.

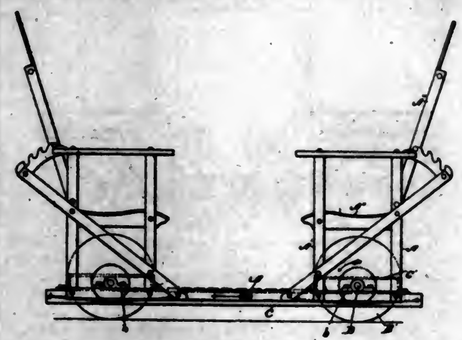
3. A spectacle, eye-glass, or other optical lens consisting of a body portion having a selected index of refraction, and one or more portions of glass embedded in the surface of the said body portion and integral therewith, the said embedded portion or portions having an index or indices of refraction different from that of the main or body portion.

4. An optical glass lens consisting of a main or body portion having a selected index of refraction, a plurality of portions of glass embedded in the surface of the said body portion, the said embedded portions being integral with the body portion, said embedded portions having different indices of refraction, the said indices of refraction being also different from that of the main or body portion.

5. A lens consisting of an integral piece of glass, different parts of which have different indices of refraction, and merge into each other along their adjacent edges only.

[Claims 6 to 8 not printed in the Gazette.]

876,934. SWING. ALLEN P. BOYER, Goshen, Ind. Filed May 21, 1906. Serial No. 317,954.



1. The combination of a seat carrying frame; a pair of axles journaled thereon; eccentric carrying wheels for the seat carrying frame secured to said axles; rollers revolubly mounted on said axles; a foot rest; hangers for said foot rest, adapted to travel on said rollers; wheels secured to said axles; and straps arranged in pairs connected to said foot rest and to said wheels, said straps being passed around said wheels from opposite directions, and from the under sides thereof, whereby said seat carrying frame is caused to travel in a direction opposite to that of said foot rest, for the purpose specified.

2. The combination of a seat carrying frame; a pair of axles journaled thereon; eccentric carrying wheels for the seat carrying frame secured to said axles; rollers revolubly mounted on said axles; a foot rest; hangers for said foot rest, adapted to travel on said rollers; wheels secured to said axles; and straps arranged in pairs connected to said foot rest and to said wheels, for the purpose specified.

3. The combination of a seat carrying frame; a pair of axles journaled thereon; carrying wheels for the seat carrying frame secured to said axles; rollers revolubly mounted on said axles; a foot rest; hangers for said foot rest, adapted to travel on said rollers; wheels secured to said axles; and straps arranged in pairs connected to said foot rest and to said wheels, said straps being passed around said wheels from opposite directions and from the under sides thereof, whereby said seat carrying frame is caused to travel in a direction opposite to that of said foot rest, for the purpose specified.

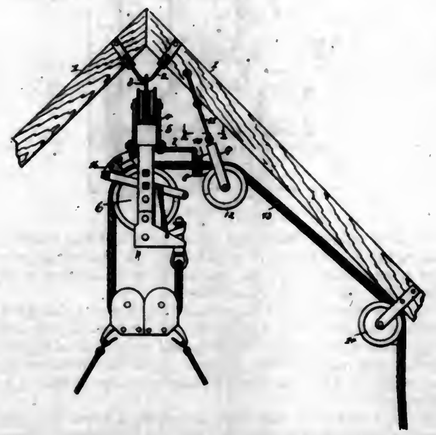
4. The combination of a seat carrying frame; a pair of axles journaled thereon; carrying wheels for the carrying frame secured to said axles; rollers revolubly mounted on said axles; a foot rest; hangers for said foot rest, adapted to travel on said rollers; wheels secured to said axles; and straps arranged in pairs connected to said foot rest and to said wheels, for the purpose specified.

5. The combination of a seat carrying frame; a pair of axles; eccentric carrying wheels for the seat carrying frame secured to said axles; rollers revolubly mounted on said axles; a foot rest carried by said rollers; wheels secured to said axles; and straps arranged in pairs connected to said foot rest and to said wheels, said straps being passed around said wheels from opposite directions and from the under sides thereof, whereby said seat carrying frame is caused to travel in a direction opposite to that of said foot rest, for the purpose specified.

[Claims 6 to 17 not printed in the Gazette.]

876,935. CARRIER. ALLEN P. BOYER, Goshen, Ind. Filed Aug. 14, 1906, Serial No. 330,553. Renewed May 31, 1907. Serial No. 376,502.

1. A combination with a track, of a carriage; a pulley for the hoisting rope arranged transversely of the carriage, a laterally projecting arm on said carriage having rearwardly diverging guide arms thereon and a seat at its outer end having an opening therethrough, through which the hoisting rope is arranged; a pulley block having a projection thereon adapted to rest on said seat on said arm, said projection having an opening therethrough, through which the hoisting rope is arranged; a swinging support for said pulley block secured at a point above and to the rear of the seat on said arm when said carriage is in its hoisting position, whereby the lateral strain on said carriage is counteracted by the strain on said pulley block; and a guide pulley for said hoisting rope, for the purpose specified.



2. A combination with a track, of a carriage; a pulley for the hoisting rope arranged transversely of the carriage, a laterally projecting arm on said carriage having rearwardly diverging guide arms thereon and a seat at its outer end having an opening therethrough, through which the hoisting rope is arranged; a pulley block having a projection thereon adapted to rest on said seat on said arm, said projection having an opening therethrough, through which the hoisting rope is arranged; and a swinging support for said pulley block secured at a point above and to the rear of the seat on said arm when said carriage is in its hoisting position, whereby the lateral strain on said carriage is counteracted by the strain on said pulley block, for the purpose specified.

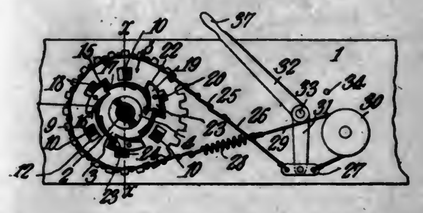
3. A combination with a track, of a carriage; a pulley for the hoisting rope arranged transversely of the carriage, a laterally projecting arm on said carriage having a seat at its outer end having an opening therethrough, through which the hoisting rope is arranged; a pulley block having a projection thereon adapted to rest on said seat on said arm, said projection having an opening therethrough, through which the hoisting rope is arranged; a swinging support for said pulley block secured at a point above and to the rear of the seat on said arm when said carriage is in its hoisting position, whereby the lateral strain on said carriage is counteracted by the strain on said pulley block; and a guide pulley for said hoisting rope, for the purpose specified.

4. A combination with a track, of a carriage; a pulley for the hoisting rope arranged transversely of the carriage, a laterally projecting arm on said carriage having a seat at its outer end having an opening therethrough, through which the hoisting rope is arranged; a pulley block having a projection thereon adapted to rest on said seat, on said arm, said projection having an opening therethrough, through which the hoisting rope is arranged; and a swinging support for said pulley block secured at a point above and to the rear of the seat on said arm when said carriage is in its hoisting position, whereby the lateral strain on said carriage is counteracted by the strain on said pulley block, for the purpose specified.

5. A combination with a track, of a carriage; a pulley for the hoisting rope arranged transversely of the carriage, a laterally projecting arm on said carriage having rearwardly diverging guide arms thereon and a seat at its outer end; a pulley block adapted to rest on said seat on said arm; a swinging support for said pulley block secured at a point above and to the rear of the seat on said arm when said carriage is in its hoisting position, whereby the lateral strain on said carriage is counteracted by the strain on said pulley block; and a guide pulley for said hoisting rope, for the purpose specified.

[Claims 6 to 12 not printed in the Gazette.]

876,936. STARTING-CLUTCH FOR EXPLOSIVE-ENGINES. ROBERT E. BRADWAY, Straughn, Ind. Filed Mar. 20, 1907. Serial No. 363,494.



1. In a clutch, a toothed driven member, a second member, pawls carried by the latter and each having one end arranged for engagement with the toothed member, and a third member carried by the second member and having a limited movement relative thereto and provided with means for engaging the pawls to force them into engagement with the toothed member and other means for engaging the pawls to force them out of engagement with the toothed member, said third member being provided with means for the application of power, and transmitting such power directly to the pawls carried by the second member, and through said pawls to the first or driven member.

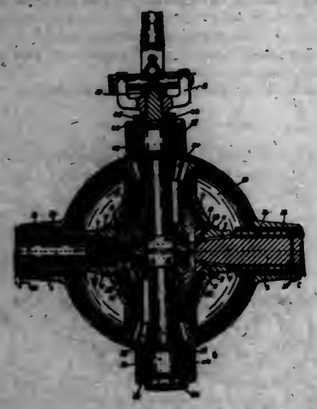
2. In a clutch, a toothed driven member, a drive member, pivoted pawls carried by the drive member and each having one end beveled and the other end notched, and another member carried by the drive member and having a limited movement relative thereto and provided with seats for the pawls arranged to receive the notched ends thereof when moved in one direction and to engage the beveled ends thereof when moved in the other direction.

3. In a clutch, a toothed driven member, a driven member, pivoted pawls carried by the drive member and each having one end notched and the other end beveled and also provided with a projecting lug, and another member carried by the drive member and having a limited movement relative thereto and provided with seats for the pawls adapted to receive the notched ends thereof when moved in one direction and to engage the beveled ends thereof when moved in the other direction and provided with means for engaging the lugs on the pawls to hold the latter out of operative relation with the toothed driven member.

4. In a clutch, a toothed driven member, a drive member, pawls carried by the drive member, a pawl-operating member provided with segmental slots, and headed retaining devices on the drive member and extending through the slots in the pawl-operating member.

5. In a clutch, a toothed driven member, a drive member, pawls pivotally supported on the drive member and having one end notched and the other end beveled and each provided with a projecting lug, a pawl-operating member having seats shaped to receive the pawls and engage their respective ends when moved in one direction or the other and to engage the lugs on the pawls to move the latter out of the path of the driven member and also provided with segmental slots, and headed retaining means carried by the drive member and extending through the segmental slots in the pawl operating member for holding the latter to the drive member and for permitting a limited relative movement between the pawl-operating member and the drive member.

876,937. POWER-TRANSMITTING MECHANISM. ALEXANDER T. BROWN, Syracuse, N. Y., assignor to Brown-Lipe Gear Company, Syracuse, N. Y. Filed Sept. 6, 1904. Serial No. 223,871.



1. In a vehicle, a pair of axle sections, a driving gear secured to each of said sections, a shaft passing across the faces of said gears and inclining with respect to the planes thereof, pinions loosely carried on said shaft, each of said pinions having an extension with a gear, and planet gears carried by said shaft and meshing with the said extension gears, the said pinions being on opposite sides of the axle sections and each meshing with one of the driving gears.

2. In a vehicle, a pair of axle sections, a bevel driving gear secured to each of said sections, a shaft passing across the faces of said gears and inclining with respect to the planes thereof, bevel pinions loosely carried on said shaft, each of said pinions having an extension with a gear, a spider frame mounted on said shaft between the said pinions and turning with the shaft, and equalizing gears carried by said spider frame and meshing with the said gears on the said extensions, the said bevel pinions being on opposite sides of the axle sections, and each meshing with one of the driving gears.

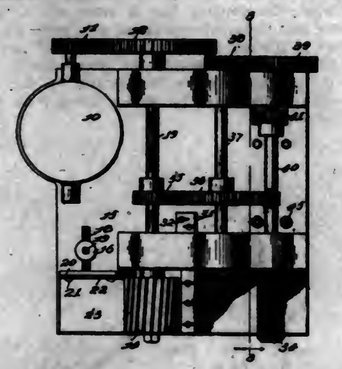
3. In a vehicle, a pair of axle sections, a bevel driving gear secured to each of said sections, said gears being of substantially equal diameters, a shaft passing across the faces of said gears and inclining with respect to the planes thereof, bevel pinions loosely carried on said shaft, each of said pinions having an extension with a gear, a spider frame mounted on said shaft between the said pinions and turning with the shaft, and equalizing gears carried by said spider frame and meshing with the said gears on the said extensions, the said bevel pinions being on opposite sides of the axle sections and each meshing with one of the driving gears.

4. In a vehicle, a pair of axle sections, bevel gears on the adjacent ends of said axle sections, said gears being of substantially equal diameters, a drive shaft section passing across the faces of said gears and inclining with respect to the planes thereof, a second drive shaft section, a universal connection between said drive shaft sections, a pair of bevel pinions carried by the first shaft section and having driving connection therewith, said pinions being on opposite sides of the axle sections, the pinion on one side of said axle sections being in mesh with the gear on one section and the other pinion being in mesh with the gear on the other axle section, and means for driving the said second shaft section.

5. In a vehicle, revoluble driven members arranged end to end, gears associated with the driven members and rotating therewith, a bearing fixed from movement laterally relative to the driven members, and a revoluble driving member journaled in the bearing and connected to said gears and arranged with its axis at an angle, other than a right-angle, to the axes of said driven members, substantially as and for the purpose set forth.

[Claims 6 to 28 not printed in the Gazette.]

876,938. SURFACE-TRIMMING MACHINE. SAMUEL BROWN, St. Louis, Mo. Filed Feb. 25, 1907. Serial No. 359,207.

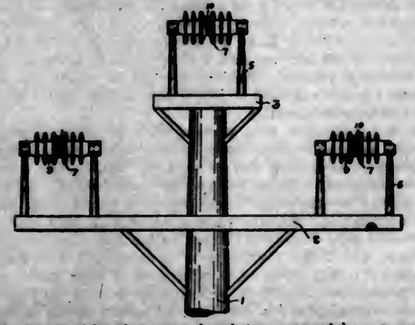


1. In a surface trimming machine, a cutting member, means for drawing the fabric through the cutting member and means for determining the width of the surface to be trimmed, substantially as described.

2. In a device of the class described, a cutting member, friction rolls whereby the fabric is drawn beneath the cutting member, a pressure roll whereby the fabric is thrown against the cutting member, and a guide for determining the width of the surface to be trimmed, substantially as described.

3. In a device of the class described, a train of gears, friction rolls driven by the gears, a cylindrical cutter driven by the gears, means for subjecting the margin of a fabric to the action of the cutter, and means for determining the width of the margin to be trimmed, substantially as described.

876,939. INSULATOR. HAROLD W. BUCK, Niagara Falls, N. Y. Filed July 29, 1902. Serial No. 117,562.



1. In combination, an insulator comprising a solid cylindrical substantially horizontally disposed body formed out of insulating material and encircled by a series of corrugations, means for supporting said body engaging the body only at its ends, and a conductor extending transversely to said body and supported thereby between a pair of adjacent corrugations.

2. An insulator for electric conductors, comprising a cylindrical body encircled by a series of corrugations and having a socket or recess formed in each end, and supports for said body entering said sockets or recesses and extending radially from said body.

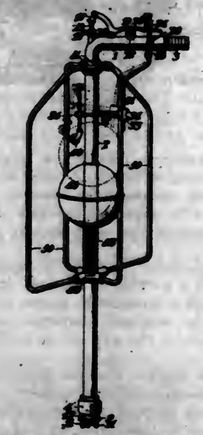
3. An insulator for electrical conductors, comprising a solid cylindrical body made entirely out of insulating material, the said body being horizontally disposed, encircled by a series of corugations and supported at its ends only.

4. An insulator for electrical conductors, comprising a long cylindrical body made entirely out of insulating material, the said body being horizontally disposed and encircled by a series of corrugations, recesses being formed in the ends of said body extending inward from the cylindrical surface of said body, and supports for entering said recesses and sustaining said body.

5. An insulator for electric conductors comprising a cylindrical body of insulating material encircled by a series of corrugations and provided at each end with a support receiving opening or recess, and a pair of supports for the body, one entering the recess or opening at one end of the body and the other entering the opening or recess at the opposite end of the body.

[Claim 6 not printed in the Gazette.]

876,940. CAN-FILLER. JAMES F. BURNS, Philadelphia, Pa. Filed Nov. 28, 1904. Serial No. 234,450.



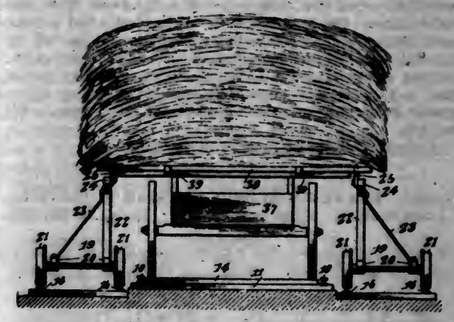
1. In a can filler, the combination with a portable nozzle provided with a valve; of a handle arranged to open and close said valve; a tripping lever fulcrumed intermediate of its length on said nozzle, arranged to detain said handle with the valve open; a bifurcated bracket on said lever, arranged to embrace said nozzle; means to adjust said bracket on said lever; a roller carried by a rod; means to adjust said rod in said bracket; and, a float arranged to operate said lever, substantially as set forth.

2. In a can filler, the combination with a portable nozzle provided with a valve; of a tripping lever arranged to hold said valve open when in one position; a bifurcated bracket separable from said lever, arranged to embrace said nozzle; means on said bracket arranged to adjustably clamp said lever; a roller carried by said bracket; and a float arranged to slide on said nozzle and encounter said roller, substantially as set forth.

3. In a can filler, the combination with a portable nozzle provided with a valve; of a tripping lever arranged to hold said valve open when in one position; a bifurcated bracket separable from said lever, arranged to embrace said nozzle; means on said bracket arranged to adjustably clamp said lever; a roller separable from said bracket; means on said bracket arranged to adjustably clamp said roller; and, a float arranged to slide on said nozzle and encounter said roller, substantially as set forth.

4. In a can filler, the combination with a portable nozzle provided with a valve; of a tripping lever arranged to hold said valve open when in one position; a bracket separable from said lever, bifurcated to embrace said nozzle, having the opposed ends of its bifurcations respectively provided with complementary jaws fitted to said lever; means adjustably connecting said jaws arranged to clamp them on said lever; the opposite end of said bracket being provided with opposed jaws; means adjustably connecting said jaws; a roller carried by said bracket and adjustably secured by the last named jaws; and, a float arranged to slide on said nozzle and encounter said roller, substantially as set forth.

876,941. LOADING AND UNLOADING MECHANISM. ABNER F. CALLISON, Gage, Okla. Filed Oct. 29, 1907. Serial No. 399,635.



1. In loading and unloading mechanism, the combination with a vehicle, of a removable rack mounted thereon and projecting beyond the opposite sides of the vehicle, a trackway for said vehicle, other trackways located on opposite sides of the vehicle trackway, said latter trackways having portions located at different elevations with respect to each other, and separate transfer trucks movable on the latter trackways and having their upper portions located beneath and movable into engagement with the opposite sides of the rack to elevate the same from the vehicle upon the movement of the vehicles and trucks along their respective trackways.

2. In loading and unloading mechanism, the combination with a vehicle, of a removable rack mounted thereon, a trackway for said vehicle, other trackways located on opposite sides of the vehicle trackway, said various trackways having portions located at different elevations with respect to each other, separate transfer trucks movable on the latter trackways and moving into engagement with the opposite portions of the rack to elevate the same from the vehicle upon the movement of said vehicle and trucks along their respective trackways, and devices mounted on the trucks and movable to upstanding positions in the path of movement of the rack.

3. In loading and unloading mechanism, the combination with a vehicle, of a removable rack mounted thereon, a trackway for said vehicle, other trackways located on opposite sides of the vehicle trackway, said various trackways having portions located at different elevations with respect to each other, separate transfer trucks movable on the latter trackways and moving into engagement with the opposite portions of the rack to elevate the same from the vehicle upon the movement of said vehicle and trucks along their respective trackways, and fingers pivotally mounted on the front ends of the trucks and movable to upstanding positions in the path of movement of the rack.

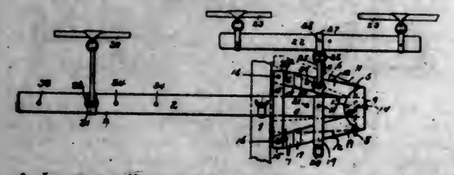
4. In loading and unloading mechanism, the combination with a vehicle, of a removable rack mounted thereon and projecting beyond the opposite sides of the vehicle, a central trackway for said vehicle, and tracks located on opposite sides of the trackway, said tracks having portions located lower, and other portions located higher than the trackway, separate transfer trucks movable on the tracks and having their upper portions located beneath and movable into engagement with the opposite sides of the rack to elevate the same from the vehicle upon the movement of the vehicle and trucks, means mounted on the vehicle and detachably engaging the rack to insure their simultaneous movement, and fingers carried by the trucks and detachably engaged by the rack to effect the movement of said trucks with the rack and vehicle.

5. In loading and unloading mechanism, the combination with a vehicle, of a removable rack mounted thereon and projecting beyond the opposite sides of the vehicle, a trackway for said vehicle, other trackways located on opposite sides of the vehicle trackway, said latter trackways having portions located at different elevations with

respect to each other, separate transfer trucks movable on the latter trackways and having their upper portions located beneath and movable into engagement with the opposite sides of the rack to elevate the same from the vehicle upon the movement of the vehicle and trucks along their respective trackways, and devices carried by the vehicle and detachably engaging the rack to insure its forward movement with a vehicle during the elevation of said rack, said first mentioned trackway having a depressed portion to carry the devices out of coaction with the rack.

[Claims 6 to 11 not printed in the Gazette.]

876,942. DRAFT-EQUALIZER. WILLIAM R. CAMPBELL, Little York, Ill. Filed Jan. 11, 1907. Serial No. 351,758.



1. In an equaliser, a main bar having unequal arms, a compensating set-off arm connected to the outer portion of the shorter arm of the bar forwardly thereof, means for attaching draft animals thereto, a similar arm connected to the same arm of the bar rearwardly thereof, and a clevis pivoted to the main bar and adapted for engagement with a vehicle.

2. In an equalizer, a main bar having unequal arms, a compensating set-off arm connected to the outer portion of the shorter arm of the bar forwardly thereof, means for attaching draft animals thereto, a similar arm connected to the same arm of the bar rearwardly thereof, a strap fixedly connecting the inner ends of the set-off arms, a clevis pivoted to the main bar and extending rearwardly therefrom, a spring yoke to which the ends of the set-off arms and the main bar are secured, the ends thereof extending a distance alongside the outer portions of the arms.

3. In an equaliser, a main bar having unequal arms, a compensating set-off arm connected to the outer portion of the shorter arm of the bar forwardly thereof, means for attaching draft animals thereto, a similar arm connected to the same arm of the bar rearwardly thereof, a clevis pivoted to the main bar and extending in rear of the rear compensating arm, a strap connecting the inner ends of the set-off arms, a doubletree, and means whereby it may be pivotally connected to either the forward set-off arm or to the main bar.

4. In a device of the character described, a single equalising bar comprising longer and shorter members, a swinging clevis pivoted on the last named member, and compensating set-off arms secured to said shorter member and adapted to have vibratory movement transversely thereof.

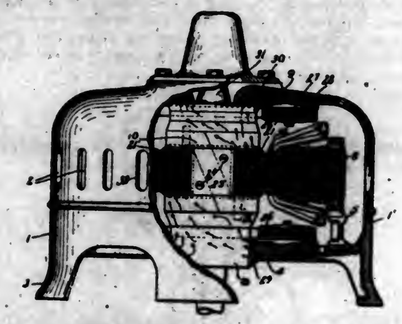
5. In a device of the character described, a single equalising bar comprising longer and shorter members, a swinging clevis pivoted on the last named member, apertures in said bar whereby the clevis may be adjusted longitudinally thereof, and compensating set-off arms secured to said member laterally thereof and adapted to have vibratory movement transversely thereof.

[Claims 6 to 16 not printed in the Gazette.]

876,943. DYNAMO-ELECTRIC MACHINE. CHARLES E. CANFIELD, Norwood, Ohio, assignor to Stanley Electric Manufacturing Company, Pittsfield, Mass., a Corporation of New Jersey. Filed June 3, 1904. Serial No. 211,576.

1. In a dynamo electric machine, a revoluble element comprising a pair of end pieces of magnetic material, a member of non-magnetic material arranged diagonally between said end members, and bolts or keys extending through said non-magnetic material into said end members.

2. In a dynamo-electric machine, a revoluble element comprising a pair of end members formed of magnetic material, and a diagonally-extending member of non-magnetic material between said end members, said non-magnetic material having the same specific gravity as the magnetic material.



3. In a dynamo-electric machine, a balanced revoluble element partly formed of magnetic material and non-magnetic material, said non-magnetic material being unsymmetrically placed with respect to the axis of revolution of the element and having the same specific gravity as the magnetic material.

4. In a dynamo-electric machine, a balanced revoluble element comprising a portion or portions of magnetic material, and a portion of aluminium bronze of the same specinc gravity as the magnetic material unsymmetrically placed with respect to the axis of revolution of the element.

5. In a dynamo electric machine, a revoluble element, symmetrically dimensioned with respect to the axis of revolution and composed partly of magnetic material and partly of non-magnetic material, the non-magnetic being unsymmetrically placed with respect to the axis of revolution and having the same specific gravity as the magnetic material.

[Claims 6 to 18 not printed in the Gazette.]

876,944. RAILWAY-SIGNAL. FRED B. COREY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 6, 1905. Serial No. 281,569.



1. A semaphore signal comprising a casing having a lens, a lamp inclosed in said casing a translucent disk movable between said lamp and said lens, an electromagnet within said casing controlling said disk, a semaphore-arm movable outside but adjacent to said casing, and switch contacts controlling said electromagnet and controlled by the semaphore signal.

2. In combination with a semaphore signal and its operating mechanism, a casing comprising a lens, a lamp inclosed in said casing, a plurality of translucent disks of different colors movable between said lamp and said lens to give different signal indications, a plurality of electromagnets controlling said disks, and switch contacts controlling said electromagnets and controlled by said semaphore signal.

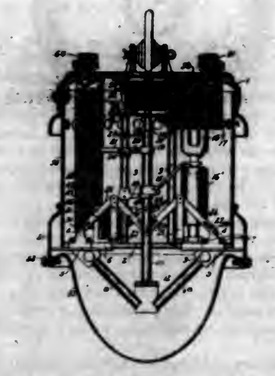
3. In a combination, a semaphore signal adapted to give three different indications, operating mechanism therefor, a casing comprising a lens, a lamp inclosed in said casing, three translucent disks of different colors movable between said lamp and said lens, a plurality of electromagnets controlling said disks, and switch contacts controlling said electromagnets and controlled by said semaphore signal.

4. In combination with a semaphore signal and its operating mechanism, a casing comprising a lens, a lamp inclosed in said casing, a plurality of translucent disks of different colors movable between said lamp and said lens to give different indication, electromagnets within said casing, operative connections between said magnets and said disks so arranged that when said magnets are deënergised the disk for the "danger" indication automatically assumes a position in line with said lamp and said lens and the other disk or disks automatically assume a position out of said line, and switch contacts controlling said magnets and controlled by said semaphore signal.

5. In a railway signal, a lamp, a plurality of disks of different colors independently movable in front of said lamp to give different indications, said disks being arranged to move automatically by gravity when released by the operating means to positions in which the disk for the "danger" signal is in front of said lamp and the other disk or disks are out of line with said lamp, and electromagnetic operating means for moving said disks out of said positions.

[Claim 6 not printed in the Gazette.]

876,945. ARC-LAMP. GEORGE W. CRAVENS, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 16, 1904. Serial No. 224,650.



1. In an arc lamp, a pair of electrodes inclined to the horizontal, means for producing an arc between the ends of said electrodes, means for moving the electrodes horizontally to compensate for the material consumed by the arc, a magnet for deflecting the arc between said electrodes, and means for moving the magnet vertically to compensate for the change in position of the arc as the electrodes are consumed.

2. In an arc lamp, a pair of coöperating electrodes between which an arc is maintained, feeding mechanism for moving the electrodes to compensate for their consumption by the arc, a magnet for normally maintaining the arc deflected, and means for automatically moving the magnet to compensate for the change in position of the arc between the electrodes resulting from the consumption of the electrodes by the arc.

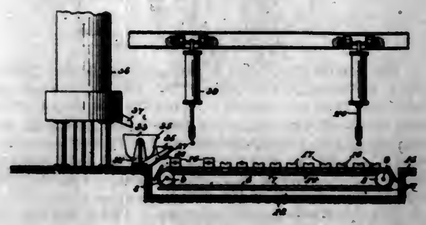
3. In an arc lamp, a pair of electrodes between which an arc is maintained, means for normally maintaining the arc deflected, and means for automatically changing the position of the arc deflecting means to compensate for the change in position of the arc resulting from the consumption of the electrodes.

4. In an arc lamp, a pair of electrodes between which an arc is maintained, a magnet the poles of which are on opposite sides of said arc for normally maintaining the arc deflected, and automatic means for feeding said electrodes to compensate for their consumption and for changing the position of the magnet in response to a change in the position of the arc resulting from the electrode consumption.

5. In an arc lamp, electrodes, feeding mechanism for moving the electrodes to compensate for their consumption, magnetic means for normally maintaining the arc deflected, and a connection between said magnetic means and said feeding mechanism whereby the magnetic means is automatically moved to compensate for the change in position of the arc resulting from the consumption of the electrodes.

[Claim 6 not printed in the Gazette.]

876,946. APPARATUS FOR CASTING METAL PIPES. EDGAR A. CUSTER, Philadelphia, Pa. Filed May 11, 1907. Serial No. 373,144.



1. In an apparatus of the character described, a permanent unyielding mold provided with a cope and a drag, stationary means for permitting of the introduction of molten metal in equal portions simultaneously into the mold, a core, means for permitting of the freeing of gases or volatile matter from the metal in the mold during casting of the structure and means whereby removal of the cast structure from the mold can be had.

2. In an apparatus of the character described, a permanent unyielding metal mold provided with a cope and a drag, stationary means for permitting of the introduction of molten metal in equal portions, in unison and at uniform pressures and velocities into both cope and drag of the mold, an internal perforated core, means for permitting of the freeing of gases or volatile matter during the running of the metal in the casting operation and means whereby removal of the cast structure can be had.

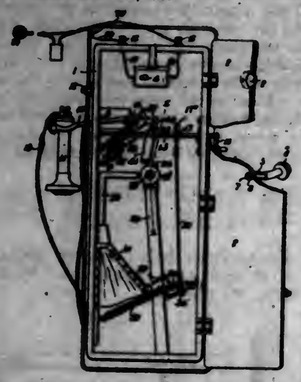
3. In an apparatus of the character described, a permanent mold of unyielding material having a plurality of gates at determinate points thereof, stationary means for introducing molten metal in equal portions, simultaneously in the same horizontal plane through the gates of the mold and with like pressures and velocities, a core, and means to permit of removal of the cast structure from the mold.

4. In an apparatus of the character described, a permanent mold of unyielding material having a plurality of gates at determinate points thereof, stationary means for introducing molten metal in equal portions simultaneously in the same horizontal plane through the gates of the mold and with like pressures and velocities, a perforated unyielding material core whereby volatile matter and gases from the metal during the casting is freed therefrom, and means, to permit of the cast structure being removed.

5. In an apparatus of the character described, the combination with means for receiving and discharging molten metal, an endless conveyer arranged to support a plurality of molds, each consisting of a drag and a cope of permanent unyielding material, said conveyer adapted to conduct a mold to said metal discharging means to receive molten metal therefrom and means for removing the filled mold occupying the casting position and replacing it upon the conveyer, in advance of the metal discharging means.

[Claims 6 to 19 not printed in the Gazette.]

876,947. TRICK-TELEPHONE. EDMOND DE MOULIN and ULYSSES S. DE MOULIN, Greenville, Ill. Filed Jan. 31, 1907. Serial No. 355,168.



1. The combination with a casing; of a holder therein having a discharge opening, spring actuated means for forcing air into said holder to expel the contents thereof, means simulating a part of a telephone for releasing said expelling means, a movable closure for the casing, and a tubular arm carried thereby and simulating a transmitter and its support, said arm being disposed to register with the discharge opening of the holder.

2. The combination with a casing, a holder therein, and a tubular arm opening into the holder and simulating a telephone transmitter and its support; of spring actuated means for forcing air into the holder, a pivoted locking device for holding the forcing means when set, a shaft, an eccentric thereon, and means operated by the rotation of the eccentric for releasing the locking device.

3. The combination with a casing; of a holder therein having a cartridge receiving extension, a tube below the holder and opening into the extension, a spring pressed lever pivoted in the casing and disposed to strike a cartridge in the extension, a spring leaf having a tongue constituting locking means for the lever, a shaft, and means revoluble with the shaft for depressing the tongue to release the lever.

4. The combination with a casing; of a holder therein having a cartridge receiving extension, a tube below the holder and opening into the extension, a spring pressed lever pivoted in the casing and disposed to strike a cartridge in the extension, a spring leaf having a tongue constituting locking means for the lever, an arm opening into the holder and simulating a telephone transmitter and its support, spring actuated means for forcing air into the holder to expel its contents, means for locking the expelling means when set, a revoluble shaft, an eccentric thereon, a finger upon the shaft for depressing the tongue to release the lever, and means operated by the eccentric for releasing the expelling means.

876,948. MEMORANDUM-TABLET. FRANKLIN K. DEXTER, Weld, Me. Filed Sept. 23, 1907. Serial No. 394,201.



1. A device of the character described comprising a memorandum tablet and a supporting and attaching member consisting of end portions to receive a watch between them and an intermediate portion to engage the stem of the watch, said tablet being carried by one of said end portions.

2. A device of the character described comprising a memorandum tablet, a supporting and attaching member made from a single blank of flexible material having end portions united by an intermediate connecting portion, the latter being formed with an aperture to receive the stem of a watch, one of said end portions being formed with a slit opening into said aperture, the memorandum tablet being attached to the other end portion of said member.

3. A device of the character described, comprising a memorandum tablet and a supporting and attaching member composed of soft flexible material, said member having a body portion to which the tablet is secured and which is adapted to engage one face of the watch, said member also having an integral projecting portion formed with an aperture and with a slit opening into said aperture, the opening being adapted to receive the stem of the watch and the slit permitting of the insertion of the head of the stem, substantially as set forth.

876,949. ARMATURE-BANDING. MALCOLM DICKERSON, Newark, N. J., assignor of one-half to Frederick L. Luz, Newark, N. J. Filed Oct. 10, 1905. Serial No. 282,137.



1. An armature-banding for dynamo-electric machines, comprising at least two series of wire-convolutions or windings wound in opposite directions, and an insulating material between the separate series of convolutions or windings, the end-portions of said series being non-insulated and in close connecting contact with each other, substantially as and for the purposes set forth.

2. An armature-banding for dynamo-electric machines, comprising at least two series of wire-convolutions or windings made from a continuous piece of wire, and an insulating material between the said series of convolutions or windings, the beginning and end of said wire being non-insulated arranged in close connecting contact with each other, and soldered, substantially as and for the purposes set forth.

3. An armature-banding for dynamo-electric machines, comprising at least two series of wire-convolutions or windings made from a continuous piece of wire, and an insulating material between the said series of convolutions or windings, the beginning and end of said wire being non-insulated arranged in close connecting contact with each other, a wire-wrap around said contacting ends, and a layer of solder around said joint, substantially as and for the purposes set forth.

4. In an armature for dynamo-electric machines, the combination, with a series of armature-disks and driving horns, said horns being provided with projections forming receiving spaces between them, of a wire-banding in said receiving spaces, each banding comprising at least two series of convolutions or windings wound in opposite directions, and an insulating material between said series of convolutions or windings, the end-portions of said series being non-insulated and in close connecting contact with each other, substantially as and for the purposes set forth.

5. In an armature for dynamo-electric machines, the combination, with a series of armature-disks and driving horns, said horns being provided with projections forming receiving spaces between them, of a wire banding in said receiving spaces, each banding comprising at least two series of convolutions or windings, and an insulating material between said series of convolutions or windings, the beginning and end of said wire being non-insulated arranged in close connecting contact with each other, and soldered, substantially as and for the purposes set forth.

[Claim 6 not printed in the Gazette.]

876,950. TOP-ROLL SADDLE. EZRA DIXON, Bristol, R. I. Filed Feb. 19, 1904. Serial No. 194,337.



1. In a top roll saddle, having a groove and holes connecting the groove with the bearings of the saddle, an oil well intersected by the groove, and an oil wick extending across the top of the oil well, as and for the purpose described.

2. In a top roll saddle, a groove, an oil wick in the groove extending across the top of the oil well, and an oil well intersected by the groove and from which oil is fed to the wick by capillary attraction, as described.

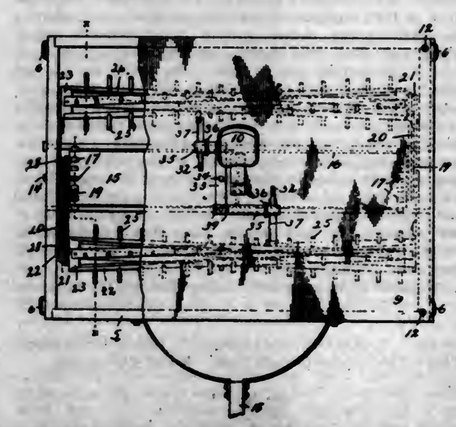
3. A top roll saddle formed with a groove and vertical holes, an oil wick in the groove and holes, the oil wick extending across the top of the oil well, and a recess forming an oil well intersected by the groove and from which oil is fed to the wick by capillary attraction as described.

4. A top roll saddle having bearings, a groove above the bearings, holes connecting the groove with the bearings, an oil wick extending across the top of the oil well in the groove and holes, and a circular recess forming an oil well intersected by the groove, and from which oil is fed to the wick in the groove by capillary attraction, as described.

5. A back top roll saddle, having the bearings b' b', the groove b^3, the holes b^2 b^2, a circular recess forming the oil well d intersected at the top by the groove, and the oil wick e in the groove and holes, as described.

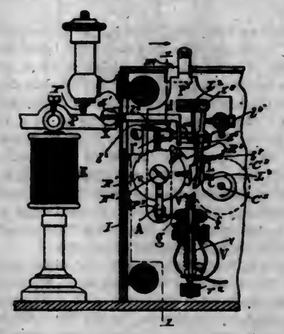
[Claim 6 not printed in the Gazette.]

876,951. COMBINED ROLLER AND HARROW. CORDY C. DOLLISON, Lancaster, Ohio. Filed Mar. 25, 1907. Serial No. 364,315.



In a combined roller and harrow the combination with a supporting frame of a land roller mounted in said frame, a pair of harrows mounted in said frame, controlling levers connected to said harrows, a removable platform mounted upon the supporting frame and slotted to permit the passage of the controlling levers therethrough, a seat mounted upon said removable platform, a centrally pivoted foot lever which lies parallel with said seat, locking arms 35 pivoted to each end of this lever and keepers through which said locking arms move, said locking arms being adapted to be moved across the slots to lock the operating levers against movement.

876,952. RELEASE MECHANISM FOR MORSE TELEGRAPHS. EUGÈNE DUCRETET, Paris, France. Filed June 15, 1905. Serial No. 265,400.



1. A device of the class described, comprising an armature provided with a depending pawl releasing extension, a ratchet wheel composed of two toothed sections, pawls adapted for engagement with said sections and extending above said depending extension, a cam arm connected with one of said pawls, a swinging frame to which said cam arms and wheels are mounted and with which remaining pawl is pivotally secured, a balance for said ratchet wheel, a stop arm for said wheel, a swinging arm adapted to be engaged and released by said stop arm, and a cam engaging and oscillating said cam arm.

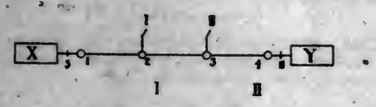
2. A device of the class described, comprising an armature provided with a depending pawl releasing extension, a ratchet wheel composed of two toothed sections, pawls adapted for engagement with said sections and adapted to be engaged by said depending extension, a cam arm connected with one of said pawls, a spring engaging said cam arm, an adjustable stop for said cam arm, a movable frame to which said cam arm and wheels are mounted and with which the remaining pawl is pivotally secured, said pawls having overhanging arms, a cam adapted to be engaged by said arms, a counterweight for said ratchet wheel, a stop arm for said wheel, a swinging arm adapted to be engaged by said stop arm, and a cam engaging and oscillating said cam arm.

3. A device of the class described comprising in combination, an armature, means for operating the same, a ratchet wheel provided with a stop arm and a balance, a pawl for operating said ratchet wheel adapted to be thrown out of operative relation therewith by said armature, and a governor provided with means adapted to be arrested by said stop arm.

4. A device of the class described comprising in combination, a telegraph receiving instrument, a ratchet wheel and escapement, said escapement being operatively associated with the receiving instrument to permit the latter to disconnect the escapement from the ratchet wheel, means acting through the escapement to operate the ratchet wheel, a governor constituting a part of said means, and devices for said governor and wheel adapted to co-act and arrest operation of said governor and therethrough said means.

5. A device of the class described comprising in combination, an operated means, a second operated means, and an interposed device operatively associated with said first mentioned means and said second mentioned means and held by said first means in a position to arrest operation of said second means and adapted to release said interposed device to permit operation of said second means, said second means including devices operatively associated with said interposed device to restore the same to an arresting position.

876,953. RAILWAY SIGNALING SYSTEM. CARL ENDERLEIN, Cassel, Germany. Filed Mar. 22, 1906. Serial No. 307,401.



1. In a railway signaling system, the combination with a plurality of block signals disposed in a section, of a plurality of cam drums each provided with a plurality of cams, means for driving said plurality of cam drums, a plurality of electromagnets controlling said plurality of cam drums, means controlled by the cams of said plurality of cam drums for actuating said plurality of block signals, a plurality of rail contacts adapted to be depressed by the first wheel of the train, and a circuit including said plurality of electromagnets and adapted to be closed by either of said plurality of rail contacts, so that said plurality of cam drums is controlled by the train in the section and is simultaneously turned through an angle.

2. In a railway signaling system, the combination with a plurality of block signals disposed in a section, of a plurality of cam drums each provided with a plurality of cams and with a special cam, means for driving said plurality of cam drums, a plurality of electromagnets controlling said plurality of cam drums, means controlled by the cams of said plurality of cam drums for actuating said plurality of block signals, a plurality of rail contacts adapted to be depressed by the first wheel of the train, a circuit including said plurality of electromagnets and adapted to be closed by either of said plurality of rail contacts, so that said plurality of cam drums is controlled by the train in the section and is simultaneously turned through an angle, two safety rail contacts near to the signal cabins or stations at both ends of the section, two circuits including said two safety rail contacts and shunted to said circuit, and a plurality of switches in said two circuits and so controlled by the special cams of said plurality of cam drums, that they are normally switched off and are only switched on, if the cam drums occupy positions other than their normal positions, so that on either of said two safety rail contacts being depressed by each wheel of the train for closing either of said two circuits, said plurality of cam drums is turned to the normal position if the switches should be switched on.

3. In a railway signaling system, the combination with a plurality of block signals disposed in a section, of a plurality of cam drums each provided with a plurality of cams, means for driving said plurality of cam drums, a plurality of electromagnets controlling said plurality of cam drums, means controlled by the cams of said plurality of cam drums for actuating said plurality of block signals, a plurality of rail contacts each comprising a contact key, a two-armed lever, the shorter arm of which acts upon the contact key and the longer arm of which serves as an armature and is adapted to brush during its one stroke against a contact spring, and electromagnets normally energized by a weak current for attracting the armature when turned by the contact key and for holding it, a circuit including said plurality of electromagnets and the two-armed levers and contact springs of said plurality of rail contacts and adapted to be closed by the contact key of either rail contact, so that said plurality of cam drums is controlled by the first wheel of the train in the section and is simultaneously turned through an angle, two special rail contacts near to both ends of the section, and a second circuit including the electromagnets of said plurality of rail contacts and adapted to be broken by the several wheels of the train with the aid of said two special rail contacts.

4. In a railway signaling system, the combination with a plurality of block signals disposed in a section, of a plurality of cam drums each provided with a plurality of cams and with a special cam, means for driving said plurality of cam drums, a plurality of electromagnets controlling said plurality of cam drums, means controlled by the cams of said plurality of cam drums for actuating said plurality of block signals, a plurality of rail contacts adapted to be locked after the depression by the first wheel of the train, a first circuit including said plurality of electromagnets and adapted to be closed by either of said plurality of rail contacts, so that said plurality of cam drums is controlled by the train in the section and is simultaneously turned through an angle, two special rail contacts near to both ends of the section, a second circuit including said two special rail contacts and adapted to return said plurality of rail contacts to their initial positions on being broken by either special rail contact, two safety rail contacts nearer to both ends of the section, two circuits including said two safety rail contacts and shunted to said first circuit, and a plurality of switches in said two circuits and so controlled by the special cams of said plurality of cam drums, that they are normally switched off and are only switched on, if the cam drums occupy positions other than their normal positions, so that on either of said two safety rail contacts being depressed by each wheel of the train for closing either of said two circuits, said plaurality of cam drums is turned to the normal position if the switches should be switched on.

5. In a railway signaling system, the combination with a plurality of pairs of block signals disposed in a section on both sides of a single track, of a plurality of cam drums each provided with a special cam and with four parallel annular series of cams, of which two alternating series are destined for both block signals in each of said plurality of pairs of block signals for the one direction of the train and the other two series are destined for same block signals for the other direction of the train, means for driving said plurality of cam drums, a plurality of electromagnets controlling said plurality of cam drums, a plurality of shafts parallel to said plurality of cam drums and longitudinally shiftable and each having turnable on it two levers, which can be actuated by two alternating series of cams for operating the two block signals, a plurality of springs pressing said plurality of shafts to the one position, a plurality of eccentrics adapted to push said plurality of shafts to the other position, means for driving said eccentrics, a second plurality of electromagnets controlling said plurality of eccentrics, a plurality of hooks adapted to lock said plurality of shafts in the other position, a third plurality of electromagnets adapted to attract said plurality of hooks for releasing said plurality of shafts, a plurality of rail contacts adapted to be depressed by the first wheel of the train, a circuit, including said plurality of electromagnets and adapted to be closed by either of said plurality of rail contacts, so that said plurality of cam drums is controlled by the train in the section and is simultaneously turned through an angle, two special rail contacts near to both ends of the section, one of them being active for the one direction of the train and the other rail contact being active for the opposite direction, a second circuit including said second plurality of electromagnets and adapted to be closed by one of said two special rail contacts, a third circuit including said third plurality of electromagnets and adapted to be closed by the other of said two special rail contacts, and a plurality of switches in said second and said third circuits and so controlled by the special cams of said plurality of cam drums, that they are normally switched on and are only switched off if the cam drums occupy other positions than the normal ones.

[Claims 6 to 15 not printed in the Gazette.]

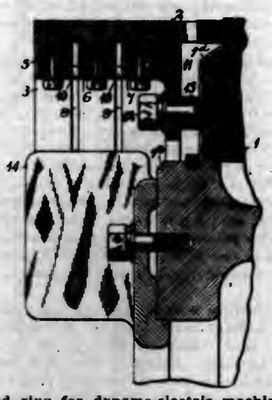
876,954. GARMENT-FASTENER. JAMES P. EVERITT, Sayre, Pa. Filed Dec. 28, 1906. Serial No. 349,902.



1. A fastening device comprising two members adapted to fit one upon the other, one of said members being provided with an elongated loop, and the other of said members comprising a body portion provided with portions permitting its attachment to a garment and with a head of greater diameter than the width of the loop in the first member, positioned below the plane of the body portion and connected thereto by a neck adapted to coöperate with the loop in said first member, the attaching portions of the body extending forwardly at least to a point in line with the extreme forward portion of said head.

2. A fastening device comprising two members adapted when engaged to fit one upon the other, one of said members comprising securing eyes, and a loop positioned therebetween and extending forwardly therefrom, and the other of said members comprising a head having a neck adapted to engage with the loop of the first member extending upwardly therefrom and provided with forwardly bent portions which terminate in securing eyes the centers of which are substantially in line with the center of the head and which overlie the securing eyes of the first members when the members are coupled.

876,955. DYNAMO-ELECTRIC MACHINE. RUSSELL S. FRICHT, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 3, 1905. Serial No. 281,187.



1. An end ring for dynamo-electric machines comprising a plurality of annular portions connected by segmental webs.

2. In a dynamo-electric machine, the combination with a cylindrical core member and a plurality of longitudinally-disposed conducting bars therefor, of a conducting end ring to which said bars are attached, said ring comprising a plurality of portions connected by segmental webs, and one of said portions having an annular flange that extends inwardly and is bolted to the core member.

3. In a dynamo-electric machine, the combination with a rotatable core member, a plurality of conducting bars disposed in a plurality of longitudinal slots near the surface thereof, and a plurality of end rings of conducting material fastened to said conducting bars and separated by circumferential slots, of a set of air-propelling vanes attached to said rotatable member and located inside the inner walls of said ring.

4. In a dynamo-electric machine, a rotatable member comprising a plurality of conducting bars, end-connecting rings of conducting material separated by circumferential slots, and a set of air-propelling vanes attached to said rotatable member inside the inner diameter of said rings.

876,956. GAS-CAP. RICHARD FLEMING, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 4, 1905. Serial No. 258,796.

1. A gas cap for an inclosed arc lamp having a doubly spiral passage therethrough for the arc gases communicating at one end with the arc-inclosure and at the other with the atmosphere.

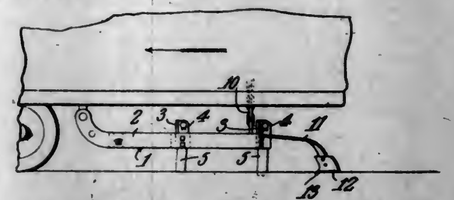
2. A gas cap for an inclosed arc lamp comprising two plates each having a spiral groove therein, and a diaphragm having an opening therethrough separating the two plates, each of said plates having an opening therethrough from the spiral groove to the other side of the plate.



3. A gas cap for an inclosed arc lamp, comprising two plates, each having a spirally extending open channel formed in one of its faces, a diaphragm closing the two channels laterally and connecting them longitudinally so as to form a continuous gas passage, one of said channels having an opening to the atmosphere and the other an opening to the arc inclosure.

4. A gas cap for an inclosed arc lamp having a feed opening for the movable electrode of larger clearance at the top than bottom, and a long tubular duct between the openings communicating with the inner globe.

876,957. GROOVE-RAIL CLEANER. CLAUS H. FRICK, San Antonio, Tex. Filed Aug. 21, 1907. Serial No. 389,526.



1. A cleaner comprising a frame adapted to be pivotally attached to a moving object, said frame having cross bars, bits pivotally mounted upon said cross bars, resilient means for holding the bits in operative position, and scrapers carried by the frame and being located behind the bits.

2. A rail cleaner comprising a frame, bits pivotally, mounted thereon and being subjected to spring tension, resilient arms attached to the frame, and scrapers carried by the arms.

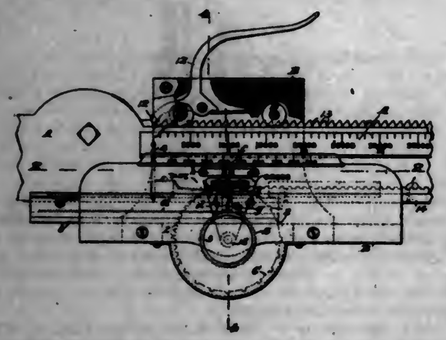
876,958. RECORDING WEIGH-BEAM FOR SCALES. WILLIAM N. GILBERT, Binghamton, N. Y., assignor to Osgood Scale Company, Binghamton, N. Y., a Corporation of New York. Filed May 13, 1907. Serial No. 373,252.

1. In a recording weigh beam, the combination with the main beam and type thereon and the main and auxiliary poises, of a type wheel rotating with the movement of the auxiliary poise, and devices for printing from the type on the main beam and type wheel.

2. In a recording weigh beam, the combination with the main beam having a printing portion with type on its upper side, and the main and auxiliary poises, of a type wheel rotating with the movement of the auxiliary poise, and devices for printing from the main beam and top of the type wheel.

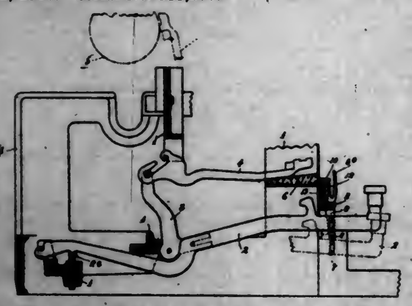
3. In a recording weigh beam, the combination with the main beam having a printing portion with type on its upper side, and the main and auxiliary poises, of a type wheel rotating with the movement of the auxiliary poise, a ticket holder above the type, and devices for pressing the ticket downward on the main beam and top of the type wheel.

4. In a recording weigh beam, the combination with the notched main beam and main poise and its pawl, of a ticket holder movable into position for the indication of gross weight and tare weight, said movement for the indication of tare weight being in a direction to force the pawl into the notches.



5. The combination with the main beam A carrying printing type 1, of the main poise B, auxiliary poise a sliding in the main poise, and type wheel C geared to the auxiliary poise.

876,959. TWO-WAY FULL-STROKE DEVICE FOR KEY-LEVERS. HANS HANSON, Hartford, Conn. Filed Aug. 12, 1907. Serial No. 388,177.

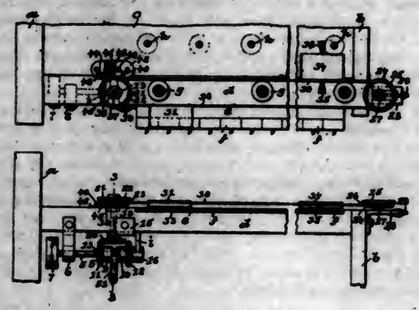


1. The combination with a key lever, of a two-way ratchet and a pivoted pawl coöperating with each other to require the full stroke of the key in each of the two directions of its pivotal movement, one of which parts is manually movable independent of the key lever, for releasing one from the other, whenever so desired, substantially as described.

2. The combination with a suitable frame and a key lever, of a two-way ratchet fixed to said lever, a spring-held pivoted pawl lever supported from said frame engageable with the opposite faces of said ratchet in the opposite direction of the key's movement and shiftable from one face to the other of said ratchet only at the opposite extremes of said key lever's motion, and which pawl lever is provided with a releasing finger for disengaging said parts, whenever so desired, substantially as described.

876,960. SPINNING-MACHINE. TIMOTHY A. HARRINGTON and ALEXANDER BARBIE, Natick, R. I. Filed June 12, 1906. Serial No. 321,871.

1. In a spinning machine, shafts, pulleys thereon, an endless cord passing around each of said pulleys, cleaner blocks carried by the cord, reversible operating mechanism connected to one of said pulleys, means for reversing said mechanism, and horizontally disposed means for operating said reversing mechanism pivoted to one of said pulley shafts and having projecting portions which extend beyond the periphery of the pulley carried by said shaft so as to be successively engaged by said cleaner blocks.



2. In a spinning machine, a single pair of pulleys, a cord passed around each of said pulleys, cleaner blocks on said cord, reversible operating mechanism connected to one of said pulleys, and a horizontally pivoted element having connection beyond its pivotal point with said operating mechanism and having one end extending beyond one side of said cord and its opposite end extending beyond the opposite side of said cord.

3. In a spinning machine, a pair of pulleys, a cord passed therearound, cleaner blocks carried by said cord, reversible operating mechanism for actuating one of said pulleys, a vertically pivoted lever for actuating said reversing mechanism, a horizontal lever pivoted to said pulley to which said operating mechanism is connected, and having a slot in one of its ends, outwardly extending curved arms carried by said horizontal lever to engage said cleaner blocks, a central V-shaped cam lug on the opposite side of said horizontal arm, a flat spring to engage said cam lug, and a vertically pivoted arm having its lower end connected to the upper end of said vertical lever, and having its upper end extending through said slot of the horizontal lever.

4. In combination with a spinning machine, a pair of pulleys, an endless cord passing therearound, cleaner blocks on the cord, means for driving one of said pulleys including a reversible clutch, a lever for actuating the clutch, a pivoted arm movably related at its lower end to said lever, a horizontal arm having a slot therein, the upper end of said pivoted arm extending through said slot, said horizontal arm having portions disposed to extend adjacent the sides of said cord, and a spring for retaining said horizontal arm in predetermined position.

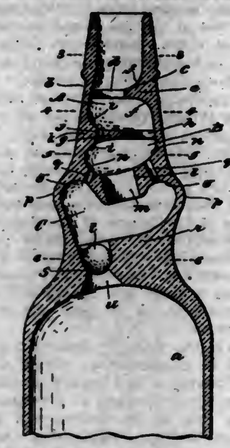
5. In combination with a spinning machine, a pair of shafts, pulleys mounted on the shafts, an endless cord passing around the pulleys, cleaner blocks on the cords, means for driving one of said pulleys including a reversible clutch, and means for operating said clutch including a horizontal arm mounted on one of said pulley shafts and having portions disposed beyond the sides of the endless cord to be engaged by the cleaner blocks.

[Claims 6 to 8 not printed in the Gazette.]

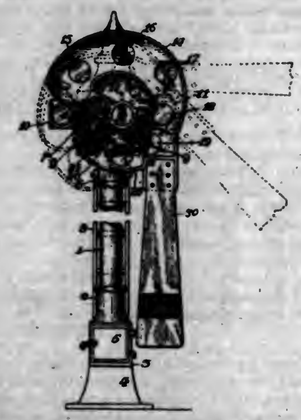
876,961. NON-REFILLABLE BOTTLE. CHARLES H. HAUPTLE and JOSEPH J. SCHEURER, Philadelphia, Pa. Filed Oct. 31, 1907. Serial No. 400,698.

1. A non-refillable bottle, having a port between the body and neck, a movable valve-body adapted to rest within and close said port, and a series of separated partitions arranged within and formed integral with the said bottle neck, the said partitions being arranged above the said port and being provided with apertures of equal size sufficient to admit of the insertion therethrough of the valve body, the said openings being arranged in staggered relation with respect to one another.

2. A non-refillable bottle having a port between the body and neck, a valve-body adapted to rest within and close said port, and a series of separated partitions arranged within and formed integral with the bottle neck, the said partitions being located above the port and provided with apertures of equal size sufficient to admit the insertion therethrough of the valve-body, the said openings being arranged in staggered relation with respect to one another and some of said partitions being equipped with additional drain apertures.



876,962. SEMAPHORE-SIGNAL. REINHOLD HERMAN, Crafton, Pa., assignor to General Electric Company, a Corporation of New York. Filed Nov. 27, 1903. Serial No. 182,862.



1. In a railway signal, a support, a semaphore casting provided thereon, a semaphore arm extending tangentially from said casting, and a plurality of lamps carried by said support, said casting being provided with a plurality of openings adapted to register with each lamp in different positions of the signal.

2. In a railway signal, a support, a semaphore casting pivoted thereon, a semaphore arm extending tangentially from said casting, a plurality of lamps carried by said support, and a plurality of series of colored lenses carried by said casting, each series being arranged to register with one of said lamps in different positions of the signal.

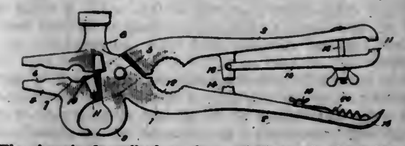
3. In a railway signal, a support, a semaphore casting pivoted thereon, a semaphore arm extending tangentially from said casting, two lamps carried by said support on opposite sides of the axis of said casting, one of said lamps being nearer said axis than the other, and two series of colored lenses carried by said casting each arranged to register with one of said lamps in different positions of the signal.

4. In a railway signal, a support, a semaphore casting pivoted thereon, a semaphore arm extending tangentially from said casting, two series of lenses carried by said casting arranged on two arcs on opposite sides of the axis, the series on the semaphore-arm side of said casting being on an arc of smaller radius than the other series, and two lamps carried by the support arranged to register with the two series of lenses in the different positions of the signal.

5. In a railway signal, a pivoted semaphore casting having two series of openings arranged on arcs of different radii concentric with the axis of the casting, two lamps mounted to coact with said openings, and a blade carried by the casting, the openings in the casting being so disposed as to show two lights in each position of the signal.

[Claims 6 to 17 not printed in the Gazette.]

876,963. COMBINATION-TOOL. HOBART D. HOAK, Grass Valley, Cal. Filed Apr. 30, 1907. Serial No. 371,086.



The herein-described tool consisting of pivotally connected members formed with handles at one side of the pivot, one of said handles being formed with a lug and the other with a complemental lug adapted to form a riveter with the first named lug, and a vise jaw pivotally connected to one of said lugs and adapted to form a vise with one of said handles, whereby one of said lugs will perform the double function of a riveter member and a support for the pivoted vise jaw.

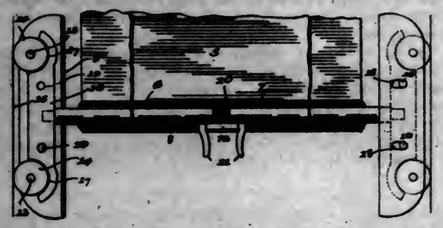
876,964. VALVE-RESEATING DEVICE. JOHN G. HOLMES and GEORGE PUFFER, Waupun, Wis. Filed Nov. 15, 1906. Serial No. 343,630.



In combination, a tool carrying spindle in the form of a long cylindrical bar having an operating head and an annular flange and provided at its lower end with a reduced portion forming an annular shoulder, there being a tool receiving slot extending diametrically of such reduced portion and the side and end of the reduced portion having openings for the passage of tool binding screws, a cylindrical body bored for the passage of the spindle and having externally threaded upper and lower ends, a threaded sleeve fitting the upper threads of the body and having an inturned flange fitting over the flange of the

spindle, and a collar clamped on the spindle above said inturned flange whereby the spindle may be positively fed in both directions.

876,965. CURTAIN-FIXTURE. IRVING L. HOTALING, Riverton, N. J., assignor to The Curtain Supply Company, Newark, N. J., a Corporation of New Jersey. Filed Feb. 10, 1906. Serial No. 300,436.



1. A curtain fixture comprising a curtain stick, a spring-pressed rod carried thereby, a head loosely mounted on said rod independently of the curtain stick, a roller carried by said head, and a brake actuated by said spring-pressed rod, and engaging said roller, substantially as described.

2. A curtain fixture comprising a curtain stick, a spring-pressed rod carried thereby, a head loosely mounted on said rod independently of the curtain stick, a pair of rollers carried by said head, and a brake bar mounted on the end of said rod and frictionally engaging said rollers, substantially as described.

3. A curtain fixture comprising a tubular curtain stick, a spring-pressed rod slidably mounted therein, a head loosely mounted on said rod independently of the curtain-stick, a pair of rollers mounted in said head, and a brake-bar mounted on the end of said rod and frictionally engaging said rollers, substantially as described.

4. A curtain fixture comprising a tubular curtain stick, a spring-pressed rod slidably mounted therein, a head loosely mounted on said rod independently of the curtain stick, a pair of rollers mounted in said head, and a brake-bar mounted on the end of said rod and having recessed portions frictionally engaging the peripheries of said rollers, substantially as described.

5. A curtain fixture comprising a curtain stick, a spring-pressed rod carried thereby, a head loosely mounted on said rod independently of the curtain stick, a pair of rollers mounted in said head, and a brake-bar mounted on the end of said rod and frictionally engaging said rollers, said brake bar having pin and slot connections with the side walls of said head, substantially as described.

876,966. CLAMP FOR MOTION-RODS FOR OIL-WELLS. JOHN T. HOVIS, Clintonville, Pa. Filed Sept. 30, 1907. Serial No. 395,272.



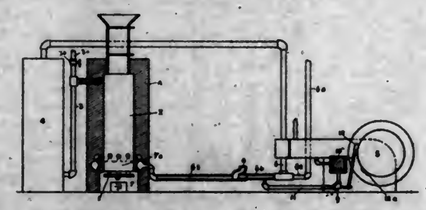
1. In a device for the purpose described, two clamp members, one movable longitudinally with reference to the other, a pivoted yoke engaging the movable member near one end thereof to draw the same toward the relatively fixed member, and means for limiting the movement of that end of the movable member remote from the end engaged by the yoke away from the corresponding end of the relatively fixed member.

2. In a device of the character described, a clamp member having a hook formed on one end and overhanging approaching flanges formed on the other end, said member having a longitudinal rounded groove, another clamp member having a head on one end and wings on the other end arranged to engage under the overhanging portions of the flanges on the first-named clamp member, and a pivoted yoke carried by the first-named clamp member and engaging the head of the second-named clamp member.

3. In a device of the character described, a clamp member composed of an elongated bar having a longitudinal groove and also having a hook formed at one end on the face remote from the groove and at the other end having flanges on each side of the groove, said flanges being formed with overhanging approaching parts, another clamp member having at one end a head formed with a projecting nose and at the other end formed with oppositely projecting wings adapted to engage under the overhanging portions of the flanges of the first-named clamp member, said second clamp member being provided with an elongated V-shaped groove matching the groove in the first-named member, and links pivotally connected to the first-named clamp member and having a connecting pin co-acting with the nose on the head end of the second-named clamp member.

4. In a device of the character described, a clamp member composed of an elongated bar having a longitudinal groove and also having a hook formed at one end on the face remote from the groove and at the other end having flanges on each side of the groove, said flanges being formed with overhanging approaching parts, another clamp member having at one end a head formed with a projecting nose and at the other end formed with oppositely projecting wings adapted to engage under the overhanging portions of the flanges of the first-named clamp member, said second clamp member being provided with an elongated V-shaped groove matching the groove in the first-named member, and links pivotally connected to the first-named clamp member and having a removable connecting pin co-acting with the nose on the head end of the second-named clamp member.

876,967. GAS-PRODUCER. WILLIAM S. HUYETTE, Chicago, Ill., assignor to Wickes Brothers, Saginaw, Mich., a Corporation of Michigan. Filed Apr. 13, 1907. Serial No. 368,053.



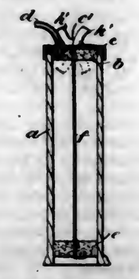
1. The combination with a gas producer, a power element, means for conducting gas from the producer to the power element, and a conduit for conducting the exhaust from the power element to the producer, of means interposed in the conduit for admitting oxygen thereto, means likewise interposed in the conduit for admitting water thereto and mechanical means controlled by the speed of the power element for governing the admission of water to the conduit.

2. The combination with a gas producer, a power element, means for conducting gas from the producer to the power element, and a conduit for conducting the exhaust from the power element to the producer, of mechanical means automatically controlled by the speed of the power element, for supplying water to the conduit in measured quantities that vary proportionately as the speed of the power element varies.

3. The combination with a gas producer, a power element supplied with gas from the producer, and a conduit for conducting the exhaust from the power element to the producer, of a water supply communicating with the conduit, and mechanical means governed by the speed of the power element for automatically varying the quantity of water supplied to the conduit proportionately as the speed of the power element varies.

4. The combination with a gas producer, an engine supplied from the producer, a conduit leading the exhaust under its own pressure from the engine back to the producer and means for admitting air to the conduit, of means for admitting water to the conduit, a valve controlling the admission of water to the conduit, and means connected to the valve and actuated by the engine for automatically operating the valve in synchronism with the speed of the engine to cause the discharge into the conduit of an accurate quantity of water varied in proportion to the quantity of exhaust gases in the conduit.

876,968. RECEPTACLE OR CONTAINER FOR SEMI-FLUID OR OTHER LIKE SUBSTANCES. FREDERICK R. JAMES, London, England. Filed Mar. 20, 1907. Serial No. 363,489.



1. A receptacle for semi-fluid substances comprising a hollow body closed at the upper end, a discharge spout, a piston within said body, a body fitting said receptacle, a flexible body connected to the piston, a rotatable spindle upon which the flexible body may be coiled, a means for rotating the spindle and a resilient device also connected to the flexible body for retracting the piston when the pull on the flexible body is released.

2. A receptacle for semi-fluid substances comprising a hollow body closed at the upper end, a discharge spout, a piston within said body comprising a pair of disks between which is clamped a disk of leather or other suitable substance, a perforation in the center of the piston, a flexible body passing therethrough, a rotatable spindle to which the upper end of said body is attached, means for rotating said spindle, a hollow body within the receptacle a spring within said hollow body to which the end of the flexible body is attached and a knot or enlargement in the flexible body whereby connection is established between the springs and the piston.

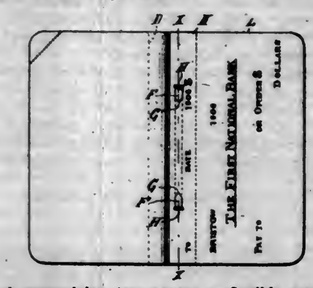
3. A receptacle for semi-fluid substances comprising a hollow body closed at its upper end, a discharge spout, a piston within the receptacle composed of two disks between which is clamped a disk of leather or other suitable substance a rotatable spindle and means for rotating same, a flexible body connected at one end to the spindle and passing through the piston and through a body disposed beneath the said piston, and connected to a spring beneath the said body and a stud or pin projecting through the closure of the receptacle, and adapted to be moved upwards by the piston.

4. A receptacle for semi-fluid substances comprising a hollow body closed at its upper end and provided with a discharge spout, a piston within said body, a flexible body passing through said piston, said body being variously colored, a rotatable spindle to which one end of the flexible body is attached while the other end is secured to a spring located beneath a body disposed beneath the piston means upon the flexible body for establishing the requisite connection between the spring and the piston.

5. In a receptacle for semi-fluid substances the combination with a piston adapted to be operated in said receptacle to extrude the contents of a body disposed beneath said piston and containing a spring connected to the operative means for the piston, said spring being designed to retract the piston when the pull upon the operative means is removed so as to prevent further extrusion of the contents.

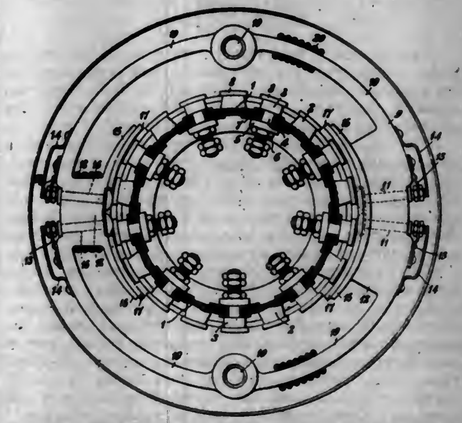
[Claim 6 not printed in the Gazette.]

876,969. DETACHABLE-LEAF CHECK AND PASS BOOK. HENRY F. JOHNSON, Bristow, Okla. Filed July 6, 1907. Serial No. 382,512.



A book comprising two covers, a flexible connection between the covers, a back strip, a seam joining the book to the back strip, a pad on one of the covers, a fastening device securing the pad to the cover and extending in a line parallel to the seam and at a point near but outside the flexible connection.

876,970. ELECTRIC SWITCH. WALTER F. JONES, Eccles, near Manchester, England, assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed July 13, 1907. Serial No. 383,657.



1. A switch for electric circuits comprising a ring or cylinder of conducting material having projecting teeth around its periphery between which are arranged insulated contacts carried by the said ring, the extremities of the said teeth and insulated contacts forming a contact path for relatively movable brushes which serve to make successive connection between the projections of the ring and one or more of the insulated contacts, substantially as described.

2. A controller for electric circuits comprising a ring of conducting magnetic material having projecting teeth around its periphery between which are arranged insulated contacts connected to the elements of the circuit to be controlled, and a relatively movable ring or frame provided with contact brushes and blow-out magnet pole tips adjacent thereto, substantially as described.

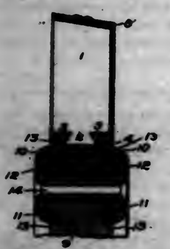
3. In a switch device, the combination of two relatively movable members one of which has contact fingers or brushes and the other of which comprises two sets of alternately disposed contact segments, the segments of one set being all electrically connected together and those of the other set being insulated from the first named set and from each other.

4. The combination of two relatively movable switch members one of which has a plurality of contact fingers or brushes and the other of which comprises a conducting ring having a plurality of uninsulated contact projections and a plurality of contact projections that alternate in position with the uninsulated projections and are clamped to the ring and insulated therefrom.

5. The combination of two relatively rotatable switch members one of which has a plurality of sets of contact fingers or brushes and the other of which comprises a plurality of connecting rings severally provided with a plurality of uninsulated contact projections and a plurality of alternately disposed and individually insulated contact projections.

[Claims 6 and 7 not printed in the Gazette.]

876,971. BUCKET-SECURING MEANS FOR TURBINES. OSCAR JUNGGREN, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 25, 1906. Serial No. 327,597.



1. In an elastic fluid turbine, the combination with a wheel, of base segments fitted thereto, buckets anchored in the segments, shoulders on each side of said wheel and segments, flanged rings engaging with said shoulders, and rivets passing through said rings and wheel.

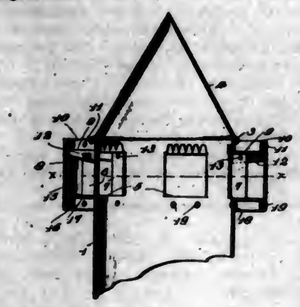
2. In an elastic fluid turbine, the combination with a wheel having a concentric shoulder on each side and transverse passages, of base-segments fitted to the rim of said wheel and provided with shoulders concentric therewith, separately formed buckets secured in said segments, flanged clamping rings engaging with said shoulders, and rivets passing through said rings and the passages in said wheel.

3. In an elastic fluid turbine, the combination with a wheel having a smooth periphery and concentric shoulders on its sides, of base segments fitted to said periphery, provided with longitudinal undercut grooves and having concentric shoulders on each side, separately formed buckets having shanks engaging in said grooves, spacing blocks between them, segmental clamping rings having flanges engaging with said shoulders on the base segments and wheel, and rivets passing through said rings and wheel.

876,972. VENTILATOR. HARRY J. KELLHOVER, Chillicothe, Ohio. Filed Aug. 30, 1907. Serial No. 390,771.

1. A ventilator comprising a cylindrical member having a closed upper end, and having openings arranged around the outer periphery thereof, a band surrounding the cylindrical member opposite the openings and spaced a distance therefrom, and plates connecting the band and the cylindrical member above and below the openings.

2. A ventilator comprising a cylindrical member having a closed upper end and having openings cut therein, and the metal cut to form the openings turned outwardly forming vertical flanges, a band surrounding the cylindrical member opposite said openings and spaced a distance therefrom, and plates secured to the band and extending inwardly over said openings and having downwardly extending side portions riveted to the said vertical flanges.



3. A ventilator comprising a cylindrical member having a closed upper end and having openings cut therein, and the metal cut to form the openings turned outwardly forming vertical flanges, a band surrounding the cylindrical member opposite said openings and spaced a distance therefrom, and horizontal plates having vertically-turned outer ends riveted to the inner periphery of the band, and their inner ends extending through the openings and turned upwardly on the inner periphery of the cylindrical member, and said plates having downwardly-turned side portions extending over the vertical flanges and secured thereto, and plates secured to the inner periphery of the band and the outer periphery of the cylindrical member below the opening, whereby the band is rigidly supported a distance from the cylindrical member.

4. A ventilator comprising a cylindrical member having a closed upper end and having openings cut therein and the metal cut to form the openings turned outwardly forming vertically radially-extending flanges, a band surrounding the cylindrical member opposite said openings and of a width to extend above and below the ends of the openings and spaced a distance from the vertical flanges, horisontal plates having vertically-turned ends riveted to the inner periphery of the band and their inner ends extending through the openings and turned upwardly on the inner periphery of the cylindrical member, said plates having downwardly-turned side portions extending over the vertical flanges and secured thereto by transverse rivets, and plates of a width equal to that of the vertical openings and having a downwardly-turned flange secured to the inner periphery of the band, and a downwardly-turned flange at its inner end secured to the outer periphery of the cylindrical member.

876,973. MOTOR-COOLING DEVICE. ARTHUR F. KNIGHT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 25, 1902. Serial No. 120,872.



1. The combination with an electric motor provided with a belt-pulley, of a fan attached to the end of said pulley and extending outwardly therefrom.

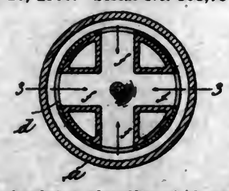
2. The combination with an electric motor provided with a belt-pulley whose inner end overhangs the shaft bearing, of a fan attached to said inner end of said pulley and extending outwardly therefrom.

3. The combination with the belt-pulley of an electric motor, of a ring having a flange adapted to be fastened to one end of said pulley, and fan-blades radiating from said ring.

4. The combination with the belt-pulley of an electric motor, of an inner ring having a flange adapted to be fastened to one end of said pulley, fan-blades radiating from said ring, and an outer guard-ring surrounding said fan-blades.

5. The combination with a solid pulley having a metal ring embedded in one end, of a fan fastened to said ring and extending outwardly therefrom.

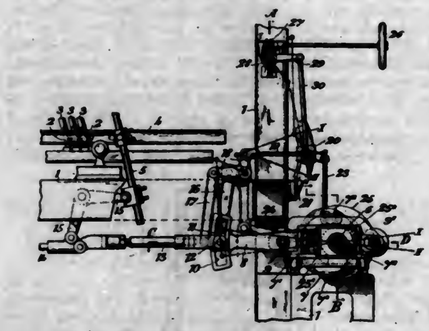
876,974. PISTON. HARRY A. KNOX, Springfield, Mass. Filed Sept. 20, 1907. Serial No. 393,764.



1. A piston having a plurality of channels on the head end thereof and extending inwards from the periphery thereof, the channels being arranged to register with the inlet ports at the end of the piston stroke.

2. A piston having its head end provided with channels one side thereof being open, said channels being radially arranged, a boss or projection on or near the center of the piston, the projection extending toward the head end of the cylinder, whereby the incoming charge from inlet ports in the cylinder to the passage-ways will be directed toward the head end of the cylinder, as described.

876,975. SHUTTLE EMBROIDERING-MACHINE. VICTOR KOBLER, Rorschach, Switzerland, assignor to The Firm of Adolph Saurer, Arbon, Switzerland. Filed July 9, 1906. Serial No. 325,407.



1. In a shuttle embroidering machine, the combination with mechanism for moving the shuttles the same extent at all times; of means adjustably connected thereto to advance and retard the movements of the shuttles at will, to time the drawing of the shuttle threads and thereby vary the stitch from a backstitch to a running stitch.

2. In a shuttle embroidering machine, the combination with the shuttle reciprocating devices; of a drawing rod to actuate the same, means to adjustably connect the rod to the shuttle reciprocating devices to maintain an equal movement of the shuttles at all times, a cam to actuate the drawing rod and mechanism to shift the drawing rod with respect to the cam and to the reciprocating devices to advance or retard the movement of the shuttles and thereby vary the stitch from a running stitch to a backstitch and vice versa, and to any modification between the two stitches.

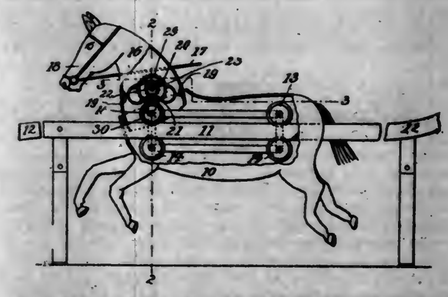
3. In a shuttle embroidering machine, the combination with the shuttle reciprocating devices and a driving shaft; of a cam on the shaft, a drawing rod actuated by the cam and having a link at one end thereof, a block in the link and means to connect the same with the shuttle reciprocating devices, and hand-operated mechanism to move the link and drawing rod to advance or retard the reciprocations of the shuttles.

4. In a shuttle embroidering machine, the combination with the reciprocating devices and a driving shaft; of a cam on said shaft, a drawing rod, oppositely disposed rollers thereon acted upon by the cam, a link at one end of the rod, a block therein connected to the shuttle reciprocating devices, and hand-operated mechanism to raise and lower the link and thereby shift the rollers with respect to the cam.

5. In a shuttle embroidering machine the combination with the shuttle reciprocating means; of a driving shaft, a cam thereon, a driving rod having a link at one end and rollers at the other end acted upon by said cam, means to connect the link and shuttle, and reciprocating means, a swinging segmental guide, a slide on the guide, hand-operated means to position the slide along the guide, and levers connecting the slide and drawing rod, whereby the rod is moved to position the rollers about the cam.

[Claims 6 to 8 not printed in the Gazette.]

876,976. MOUNT FOR AMUSEMENT RACE-TRACKS. GASTON LACOMME, New York, N. Y., assignor of one-half to Edward C. Eustace, New York, N. Y. Filed Nov. 2, 1907. Serial No. 400,344.



1. A device of the character described, comprising an inclined track, an animal figure movable thereon by gravity and having a pivoted neck, a driving axle journaled in the mount, and means for operatively connecting the pivoted neck to said axle, substantially as specified.

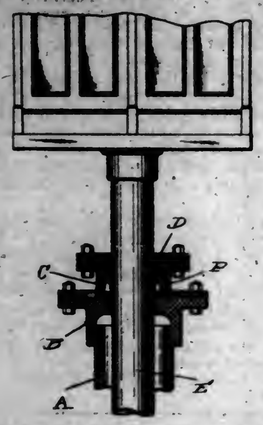
2. In a device of the character described, a track, combined with a body movable thereon, a member pivoted to the body, a double rack within the member, pinions engaged thereby, pawls pivoted to the pinions, ratchet wheels engaged by the pawls, a shaft to which said ratchet wheels are secured, and a driving axle within the body intergeared with said shaft, substantially as specified.

876,977. PLUNGER-PACKING. THURE LARSSON, Worcester, Mass., assignor to himself and Fred A. Jones, Worcester, Mass., and William E. D. Stokes, New York, N. Y. Filed May 31, 1904, Serial No. 210,545. Renewed June 20, 1907. Serial No. 379,925.

1. As an article of manufacture, a piston packing for elevator plungers, comprising two intermeshed packing rings, each of a substantially inverted U-shaped section, and each of which consists of a strip having its ends substantially in contact, the joints of the respective rings being at different points on the circumference of the packing, and the open space of the inside ring extending up into the top ring so that water pressure therein will tend to seat both packings.

2. As an article of manufacture a piston packing for elevator plungers comprising two packing rings substan-

tially U-shape in cross section, one of which is fitted inside the other, and has its opening extending up inside of the top ring, while its lower edge is extended to fill the entire width of the stuffing-box space, each of said rings



consisting of a strip with the ends thereof substantially in contact, and the joints of the respective rings being at different points around the circumference of the packing.

876,978. AUTOMOBILE-AXLE. ALBERT J. LEHMAN, Columbus, Ohio. Filed Sept. 27, 1907. Serial No. 394,788.



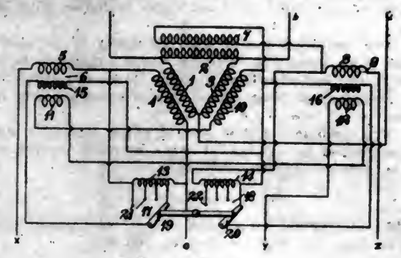
1. In an axle, the combination of the two tubes placed axially in line with each other, said tubes having gears affixed thereto at their inner or adjacent ends and stud shafts secured projectingly in their outer ends for the reception of the vehicle wheels, a bar loosely inclosed within the inner portion of said tubes adapted to hold said tubes in line and brace the axle from flexing at the middle, said bar provided with a spider, a gear on said spider to mesh with the said gears on the tube, and means whereby said spider may be driven.

2. In an axle, the combination of the two tubes placed axially in line with each other, said tubes having gears affixed thereto at their inner or adjacent ends and stud shafts secured projectingly in their outer ends for the reception of the vehicle wheels, a rotary bar inclosed and closely fitting within the inner portions of said tubes adapted to hold said tubes in line and brace the axle from flexing at the middle, said bar provided with a spider, a gear on said spider to mesh with the said gears on the tubes, and means whereby said spider may be driven.

876,979. POTENTIAL-REGULATOR. EDWIN LEHR, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Nov. 13, 1905. Serial No. 287,168.

1. The combination with a three-phase alternating current source of electrical energy and three transformers having their primary windings connected thereto and their secondary windings Y-connected to a supply line, of a pair of series transformers each having a primary winding and two secondary windings arranged and connected to preserve the neutral point of the system and to give simultaneous potential regulation between the several supply lines.

2. The combination with a three-phase alternating current feeder system, of means for regulating the voltage between lines that comprises a pair of series transformers and means for simultaneously regulating the exciting voltages applied thereto.



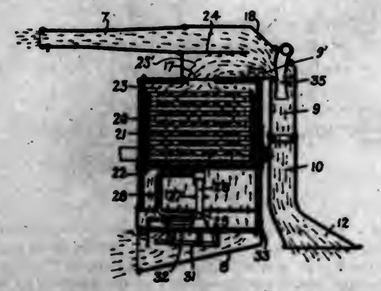
3. The combination with a three-phase alternating current feeder system, of two series transformer and two regulating switches for simultaneously regulating the voltage between the lines.

4. The combination with three power transformer secondary windings, one terminal of each of which is connected to a supply line, two series transformer secondary windings connected to corresponding terminals of two of the power windings, and two secondary windings for said series transformers connected in series with each other to the free terminal of the power transformer, of means for simultaneously varying the exciting voltage applied to said series transformers.

5. The combination with three power transformer secondary windings, one terminal of each of which is connected to a supply line, two series transformer secondary windings connected to corresponding terminals of two of the power windings, and two secondary windings for said series transformers connected in series with each other to the free terminal of the power transformer, of means for simultaneously varying the exciting voltage applied to said series transformers, said means comprising exciting windings therefor, auto-transformers having intermediate taps, and switches for connecting said taps to said exciting windings.

[Claims 6 to 12 not printed in the Gazette.]

876,980. FLUE CONSTRUCTION FOR SELF-PROPELLED VEHICLES. HERMANN LEMP, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 3, 1904. Serial No. 206,208.



1. In a self-propelled vehicle, the combination of an upright boiler provided with a fire chamber, a casing for the boiler having an outlet at the top for the products of combustion, a flue leading from the outlet to a point adjacent the edge of the casing, a substantially horizontal flue above the first flue which leads from the front of the vehicle and has its rear portion on top of the first flue, a third flue at the rear of the boiler and substantially at right angles to the first and second flues with its discharge end directed toward the rear of the vehicle, and a chamber connecting the rear openings of the first and second flues with the inlet of the third flue which permits a free passage of the contents of the first and second flues into the third when the vehicle is moving forward and of the contents of the first flue into the second when the vehicle is standing still or moving backward.

2. In a self-propelled vehicle, the combination of a boiler having a fire chamber, a casing for the boiler provided with an outlet at the top for the gases from the fire chamber, a flue leading from the outlet along the top of the casing to a point adjacent its edge, a second flue above the first which leads from the front of the vehicle with its rear portion on top of the first flue and its rear opening in substantially the same plane as that of the first flue, a third flue extending downward at the rear of the casing, and a chamber connecting the adjacent ends of the flues and provided with an inclined wall which directs air from the second flue across the opening of the first flue into the third when the vehicle is moving forward but permits a free outward passage of gases from the first flue through the second when the vehicle is standing still or moving backward.

3. In a self-propelled vehicle, the combination of an upright boiler provided with a fire chamber having an air inlet directed toward the front of the vehicle, a casing for the boiler having an opening in its top for the outward passage of the products of combustion from the fire chamber, a flue leading from the opening along the top of the casing to a point adjacent its edge, a second flue leading from the front of the vehicle and having its rear portion over the first flue, a third flue extending downward at the rear of the boiler with its inlet opening at substantially right angles to the openings in the rear ends of the first and second flues and its discharge opening directed toward the rear of the vehicle, and a chamber connecting the rear openings of the first and second flues with the inlet of the third which permits the contents of the first and second flues to pass into the third when the vehicle is moving forward and the contents of the first flue to pass through the second when the vehicle is standing still or moving backward.

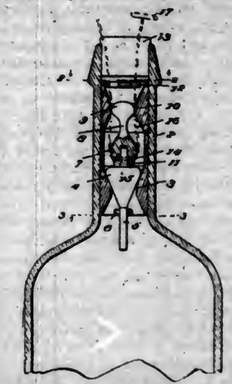
4. In a self-propelled vehicle, the combination of a boiler having a fire chamber, a casing for the boiler having an opening at its top for the products of combustion, a flue leading from the opening along the top of the casing toward the rear of the vehicle, a second flue above and substantially parallel to the first which leads from the front of the vehicle, a third flue extending downward at the rear of the casing, a chamber connecting the adjacent ends of the flues and having an inclined wall opposite said ends which directs air from the second flue across the opening of the first flue when the vehicle is moving forward to create a draft on the fire chamber and discharge the mixture of air and combustion gases into the third flue, and a fourth flue which receives air at its front end and delivers it into the fire chamber at the sides thereof to augment the draft created by the second flue.

876,981. NON-REFILLABLE BOTTLE. JOSEPH H. LEPAGE, Two Harbors, Minn. Filed Aug. 6, 1907. Serial No. 387,856.

1. The combination of a necked receptacle, a valve seat in the neck thereof, the passage through the neck being contracted at a point above the valve seat, a baffle located above the said contracted portion, a valve coöperating with the valve seat, and a guard member loosely mounted over the valve and provided with a head adapted to move freely through the contracted portion of the neck and normally positioned therein to prevent tampering with the valve.

2. The combination of a necked receptacle, a valve seat in the neck thereof, the passage through the neck being contracted at a point above the valve seat, a guide member below the valve seat, a valve coöperating with the valve seat and provided with a downwardly extending stem engaging the guide member, and a guard member mounted over the valve and provided with a head adapted to move freely through the contracted portion of the neck and normally positioned therein to prevent tampering with the valve.

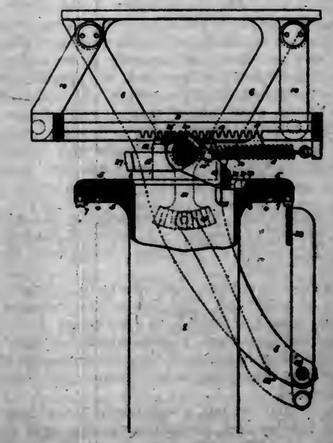
3. The combination of a necked receptacle, a valve seat in the neck thereof, the passage through the neck being contracted at a point above the valve seat, a baffle located above the contracted portion of the neck, a guide member located below the valve seat, a valve coöperating with the valve seat and provided with a stem engaging the guide member, and a guard member loosely mounted over the valve to move independently thereof, the said guard member being provided with a head adapted to move freely through the contracted portion of the neck and normally positioned therein to prevent tampering with the valve.



4. The combination of a necked receptacle, a valve seat in the neck thereof, a valve coöperating with the valve seat and provided with an inwardly projecting stem and an outwardly projecting stem, a guide member engaging the inwardly projecting stem for accurately seating the valve, and a guard member loosely mounted on the outwardly projecting stem.

5. The combination of a necked receptacle, a valve seat in the neck thereof, the passage through the neck being contracted at a point above the valve seat, a valve coöperating with the valve seat and formed with an inwardly projecting stem and an outwardly projecting stem, a guide member engaging the inwardly projecting stem to accurately seat the valve, a guard member formed with a recess loosely receiving the outwardly projecting stem and terminating in a head coöperating with the contracted portion of the neck to prevent tampering with the valve, and a baffle mounted within the neck to limit the outward movement of the guard member.

876,982. BARBER'S CHAIR. ANGELO R. LERRO, Philadelphia, Pa. Filed Feb. 25, 1907. Serial No. 359,114.



1. A barber's chair having a fixed structure, a seat carrying turntable, a pawl thereon for locking the same to the

fixed structure when in its normal position, and a supplementary pawl on the turntable for frictionally engaging the fixed structure and retaining the seat when adjusted to another position and when the first pawl is free from engagement.

2. A barber's chair having a fixed structure, a seat-carrying turntable, a pawl on the turntable for locking the same to the fixed structure when in its normal position, a supplementary pawl on the turntable for frictionally retaining the seat when swung to a position other than normal and when the first pawl is out of engagement, and a lever whereby both of said pawls are actuated.
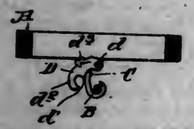
3. A barber's chair having a fixed structure, a forwardly and backwardly adjustable seat mounted upon a turntable and having a rack, a pawl on the turntable for engaging said rack and locking said seat in its different positions of adjustment, another pawl on the turntable for engaging the fixed structure and locking the turntable when the seat faces in one direction, a lever for operating said pawls, and lost motion connections whereby the pawls are actuated in succession by movement of the lever in one direction.

4. A barber's chair having a fixed structure, a forwardly and backwardly adjustable seat mounted upon a turntable and having a rack, a pawl on the turntable for engaging said rack and locking the seat in its different positions of adjustment, a second pawl on the turntable for engaging the fixed structure and locking the turntable when the seat is facing in one direction, a third pawl on the turntable for engaging said fixed structure and retaining the seat when it faces in another direction, a single operating lever, and lost motion connections whereby the three pawls are operated in succession by a single movement of the lever in one direction.

5. A barber's chair having a supplementary foot rest pivotally mounted thereon and movable into or out of operative position, a lever at the side of the chair for operating said foot rest, and connecting devices between the lever and the foot rest mechanism, said devices including a clutch whereby said foot rest mechanism can be connected to or disconnected from the lever.

[Claims 6 to 9 not printed in the Gazette.]

876,983. SAFETY DEVICE FOR JEWELRY. GEORGE LINCKS, Jersey City, N. J. Filed June 28, 1906. Serial No. 323,891.



The combination with an article of jewelry, of a hook secured thereto and having a shank, a keeper pivoted to the shank and corresponding generally to the shape of the hook, spaced abutments formed upon the keeper positioned to define a recess registering substantially with the inner curvature of the hook, and a stop extending rearwardly and laterally from the keeper and positioned to engage the rear side of the hook and the article and to limit the movement of the keeper in both directions.

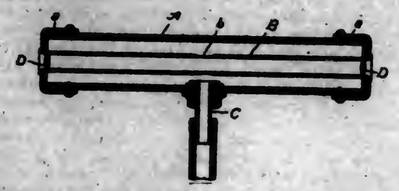
876,984. ELECTRIC FUSE. FREDERICK MACKINTOSH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 29, 1904. Serial No. 226,484.

1. In an electric cut-out, a substantially air-tight chamber, and a fuse forming a portion of the inclosing walls thereof and exposed on its side to atmosphere.

2. In an electric cut-out, a substantially air-tight chamber, a fuse forming a portion of the inclosing walls thereof, and means for connecting said chamber to a source of gaseous pressure.

3. In an electric cut-out, a substantially air-tight chamber, and a tubular fuse extending through said chamber and forming a portion of the inclosing walls thereof, the inner passage of said fuse being open to atmosphere.

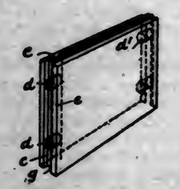
4. In an electric cut-out, a substantially air-tight chamber, a tubular fuse extending through said chamber, and a connection from said chamber to a source of gaseous pressure.



5. In an electric cut-out, a substantially air-tight chamber, a tubular fuse therein having its inner passage connected to atmosphere, and a connection from said chamber to a source of gaseous pressure.

[Claims 6 to 9 not printed in the Gazette.]

876,985. LOCK-JOINT FOR WALL-SLABS, BRICKS, TILES, OR THE LIKE. ROBERT MALANÇON, London, England. Filed Aug. 14, 1906. Serial No. 330,616.

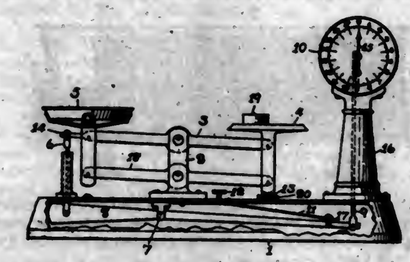


1. A slab, tile or brick element of the type described, comprising engaging means upon its edges whereby it may be fitted flush with juxtaposed elements, said element having holes in corresponding positions at each of two opposite ends thereof, and a passage extending downwards into said element near one end through which grouting may be fed to said holes, to unite said element with the adjacent elements of the same course, said passage stopping short of the base of said element, to prevent contact of said grouting with elements of the underlying course.

2. In a slab, brick or tile for the purposes described, having a plurality of holes at one end of the slab body and correspondingly alined holes at the opposite end thereof, said holes extending inwardly of the slab in the plane thereof, a transverse passage extending from the top towards the bottom of the slab and meeting the inner ends of the holes at one end of the slab, in combination with a bolt designed to couple the ends of adjacent blocks, said bolt being fitted into one end of one block and having a reduced portion adapted to extend into the orifice at the opposite end of the adjacent block, said reduced portion leaving a space for the access of grouting from the transverse passage.

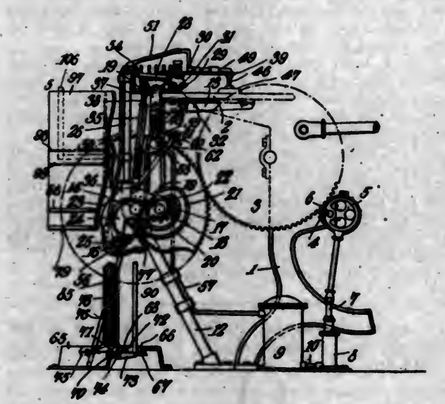
876,986. MONITORY COMBINATION WEIGHING-SCALE. HENRY MARER, Louisville, Ky., assignor to Monitory Scale Company, Inc., Louisville, Ky., a Corporation of Kentucky. Filed Aug. 2, 1907. Serial No. 386,800.

In weighing scales, the combination of a hollow base, a fulcrum-standard, even scales comprising a beam, a weight-pan and a weighing-pan, and an indicating-scale member operatively connected with said even scales comprising a connecting-rod pivoted to the weighing-pan end of the scale beam of said even scales and extending into said base, a beam pivoted in said base, one end of said beam pivoted to said connecting-rod, a hollow standard on one end of said base, a dial provided with an indicator mounted on said hollow standard, and a rod extending through said hollow standard, pivoted to said beam in said base and operatively connected with the indicator of said dial by rack and pinion, all said parts so coöperating that when said even scale is balanced by the initial fractional part of the quantity to be weighed said indicating-scale member



is brought into operation and indicates plainly by mensural parts the quantity added.

876,987. FEED AND DELIVERY ATTACHMENT FOR PRINTING-PRESSES. SALVADOR MOLINAR, Chihuahua, Mexico. Filed Dec. 17, 1906. Serial No. 348,356.



1. An attachment for printing presses comprising a table, a pivoted member, means for actuating said member, a conveyer arm movably mounted above the table, a suction cup carried thereby, and separate means secured to and operated by said pivoted member for actuating the arm and for establishing and interrupting suction through the cup.

2. An attachment for printing presses comprising tables, a pivoted member, means for actuating said member, a conveyer movably mounted above the tables, a suction device carried by the conveyer for contacting with an article upon one of the tables, and separate means secured to and actuated by the pivoted member for operating the conveyer and for establishing and interrupting suction through said device.

3. An attachment for printing presses comprising tables, an oscillatory conveyer arm movable between the tables, a suction device carried thereby, a pivoted member, means for actuating said member, and separate means secured to and operated by the pivoted member for actuating the conveyer arm and for establishing and interrupting suction through said device at predetermined points during the movement of the arm.

4. An attachment for printing presses comprising tables, an oscillatory conveyer arm movable thereabove, a suction device carried by said arm, a pivoted member, means for actuating said member, and separate means secured to and operated by the pivoted member for swinging the arm from one table to the other, for raising and lowering the arm during its swinging movement, and for alternately establishing and interrupting suction through the suction device at predetermined points during the movement of the arm.

5. An attachment for printing presses comprising tables, an oscillatory conveyer arm movably mounted above the tables, a suction device carried by said arm, means for creating a suction through said device, a pivoted member, means for operating the same, and separate means secured to and actuated by the pivoted member for oscillating the arm, for interrupting the suction at predetermined points during the oscillation of the arm, and for raising and lowering the arm during its oscillation.

[Claims 6 to 16 not printed in the Gazette.]

876,988. TRANSFORMER FOR ELECTRIC VEHICLES. WALTER S. MOODY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 10, 1904. Serial No. 220,160.



1. In combination, a transformer core comprising a central leg or branch, a winding placed about said central leg or branch, a return magnetic circuit for said leg or branch comprising a number of legs arranged about the central leg and winding, and covers for the winding secured between adjacent branches of said return circuit.

2. In combination, a transformer core comprising a central leg or branch, a winding placed about said central leg or branch, a return magnetic circuit for said leg or branch comprising a number of legs arranged about the central leg and winding, and covers for the winding secured between adjacent branches of said return circuit, said covers being provided with heat-radiating ribs.

3. In a transformer having a core and a winding, a casing surrounding said winding formed of alternating core portions and cover members.

4. In a transformer having a core and a winding, a casing surrounding said winding formed of alternating core portions and cover members, said cover members being provided with heat-radiating ribs.

5. A transformer core, comprising a central leg or branch about which windings are placed, a return circuit for said leg or branch comprising a number of legs parallel to the first-mentioned leg and arranged about the first-mentioned leg, and cover plates for the windings located between adjacent branches of said return circuit.

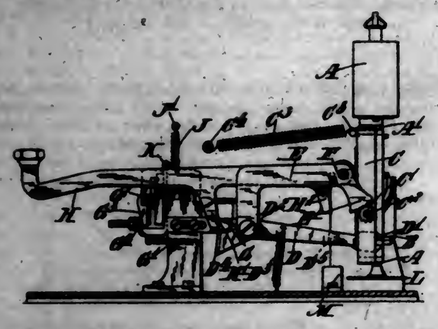
[Claims 6 to 11 not printed in the Gazette.]

876,989. TYPE-WRITER. HIDALGO MOYA, Leicester, England. Filed Feb. 25, 1907. Serial No. 359,180.

1. In a typewriter of the type-cylinder class the combination of a swinging frame supported on trunnions in the typewriter, a type-cylinder rotatably mounted in said swinging frame, a pivoted frame operatively connected with the type-cylinder, means for rotating the type-cylinder as said pivoted frame tilts on its pivot without imparting movement to the swinging frame, and key-levers each having one abutment arranged to engage and tilt said pivoted frame and a second abutment arranged to engage and arrest the tilting of said pivoted frame when the type cylinder is turned to the required extent.

2. In a typewriter of the type-cylinder class the combination of a swinging frame supported on trunnions in the typewriter, a type-cylinder rotatably mounted in said swinging frame, a main frame pivoted in the typewriter, a cylinder-rotating frame operatively connected with the type cylinder and pivoted on said main frame by a pivot

which moves with said main frame, means for rotating the type-cylinder as the cylinder-rotating frame tilts on its pivot without imparting movement to the swinging frame, key-levers each having one abutment arranged to engage and tilt said frame and a second abutment arranged to engage and arrest the tilting of said frame when the type-cylinder is turned to the required extent, and means actuated by the key-levers for shifting the main frame and the swinging frame when the type-cylinder is turned to the required extent.



3. In a typewriter of the type-cylinder class the combination of a swinging frame supported on trunnions in the typewriter, a type-cylinder rotatably mounted in said swinging frame, a main frame pivoted in the typewriter, a cylinder-rotating frame pivoted on said main frame by a pivot which moves with said main frame and operatively connected with the type cylinder, means for rotating the type-cylinder as the cylinder-rotating frame tilts on its pivot without imparting movement to the swinging frame, key-levers each having one abutment arranged to engage and tilt said frame and a second abutment arranged to engage and arrest the tilting of said frame when the type-cylinder is turned to the required extent, means actuated by the key-levers for shifting the main frame and the swinging frame when the type-cylinder is turned to the required extent, and means for locking the main frame until the type-cylinder is turned to the required extent.

4. In a typewriter of the type cylinder class the combination of a swinging frame supported on trunnions in the typewriter, a type-cylinder rotatably mounted in said swinging frame, a main frame pivoted in the typewriter, a cylinder-rotating frame pivoted on said main frame by a pivot which moves with said main frame and operatively connected with the type-cylinder, means for rotating the type-cylinder as the cylinder-rotating frame tilts on its pivot without imparting movement to the swinging frame, key-levers each having one abutment arranged to engage and tilt said frame and a second abutment arranged to engage and arrest the tilting of said frame when the type-cylinder is turned to the required extent, means actuated by the key-levers for shifting the main frame and the swinging frame when the type-cylinder is turned to the required extent, means for locking the main frame until the type-cylinder is turned to the required extent, a notched disk operatively connected to the type-cylinder and on the opposite side of the trunnion therefrom and a fixed projection arranged to engage the notched disk when the swinging frame is shifted to determine with precision the position of the type-cylinder.

5. In a typewriter of the type-cylinder class the combination of a swinging frame carrying the type-cylinder and an actuating cam therefor, a toothed pinion on the swinging frame, a pivoted main frame having a toothed segment engaging said toothed pinion, a cam operating frame pivoted on said main frame by a pivot which moves with said main frame, and key-levers each having one abutment arranged to engage and tilt the pivoted cam-operating frame and a second abutment to engage and arrest the tilting of said cam-operating frame when the cam has been turned to the required extent.

[Claims 6 to 13 not printed in the Gazette.]

876,990. STOCK-CAR. ANDREW MURDOCH, Ottawa, Ontario, Canada. Filed Oct. 30, 1906. Serial No. 341,328.



1. In a stock car the combination with a vertically movable floor of a plurality of outwardly protruding lugs thereon, and clasps secured to the car and adapted to engage said lugs.

2. In a stock car, the combination with a vertically movable floor, of a plurality of outwardly protruding lugs thereon, and clasps secured to the car at the top and midway down adapted to engage said lugs and hold the floor in position.

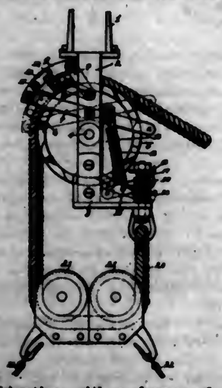
3. In a stock car, the combination with a vertically movable floor, of a plurality of outwardly protruding lugs thereon, clasps secured to the car at the top and midway down adapted to engage said lugs, and a flange extending around the inner wall of the car and adapted to abut the under side of the floor in its lower position.

4. In a stock car, the combination with a vertically movable floor, of a plurality of racks secured to the sides thereof, means for raising and lowering said racks, ratchet teeth on the front and side of each of said racks, and spring held dogs engaging said teeth.

5. In a stock car having a vertically movable floor, an improved hoisting means therefor comprising a number of pairs of racks secured to the sides of the floor, driving gear for the same, connecting gears between the driving gears and the racks, plates secured to the driving gears, and outwardly extending flanges on the peripheries of the plates having hand apertures therein.

[Claim 6 not printed in the Gazette.]

876,991. HOISTING-PULLEY. HUBERT A. MYERS, Goshen, Ind., assignor to Allen P. Boyer, Goshen, Ind. Filed Aug. 14, 1906. Serial No. 330,550.



1. The combination with a frame, of a pulley having teeth thereon; a clutch member; a pawl carried thereby; a lever pivoted to said frame and to said clutch member; a link pivoted to said frame and clutch member, coacting with said lever to support said clutch member; a hoisting rope; a vertically movable member to which said rope is attached; a stop for limiting the downward movement of said member; a spring for holding said member normally upward; a lever actuated by said member on the downward movement thereof, connected to said clutch-carrying lever, whereby the clutch member is shifted to bring the pawl thereon into engaging position with said pulley; a spring for returning said clutch member to its initial position when released; and a trip for said clutch member, for the purpose specified.

2. The combination with a frame, of a pulley having teeth thereon; a clutch member; a pawl carried thereby; a lever pivoted to said frame and to said clutch member; a link pivoted to said frame and clutch member, coacting with said lever to support said clutch member; a hoisting rope; a vertically movable member to which said rope is attached; a stop for limiting the downward movement of said member; a spring for holding said member normally upward; a lever actuated by said member on the downward movement thereof, connected to said clutch-carrying lever, whereby the clutch member is shifted to bring the pawl thereon into engaging position with said pulley; a spring for returning said clutch member to its initial position when released, for the purpose specified.

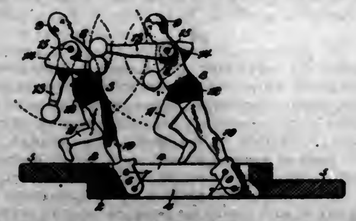
3. The combination with a frame, of a pulley having teeth thereon; a clutch member; a pawl carried thereby; a lever pivoted to said frame and to said clutch member; a link pivoted to said frame and clutch member, coacting with said lever to support said clutch member; a hoisting rope; a vertically movable member to which said rope is attached; a stop for limiting the downward movement of said member; a spring for holding said member normally upward; a lever actuated by said member on the downward movement thereof, connected to said clutch-carrying lever, whereby the clutch member is shifted to bring the pawl thereon into engaging position with said pulley; and a trip for said clutch, for the purpose specified.

4. The combination with a frame, of a pulley having teeth thereon; a clutch member; a pawl carried thereby; a lever pivoted to said frame and to said clutch member; a link pivoted to said frame and clutch member, coacting with said lever to support said clutch member; a hoisting rope; a vertically movable member to which said rope is attached; a stop for limiting the downward movement of said member; a spring for holding said member normally upward; and a lever actuated by said member on the downward movement thereof, connected to said clutch-carrying lever, whereby the clutch member is shifted to bring the pawl thereon into engaging position with said pulley, for the purpose specified.

5. The combination with a frame, of a pulley having teeth thereon; a clutch member; a pawl carried thereby; a lever pivoted to said frame and to said clutch member; a link pivoted to said frame and clutch member, coacting with said lever to support said clutch member; a hoisting rope; a vertically movable member to which said rope is attached; a lever actuated by said member on the downward movement thereof, connected to said clutch-carrying lever, whereby the clutch member is shifted to bring the pawl thereon into engaging position with said pulley; a spring for returning said clutch member to its initial position when released; and a trip for said clutch member, for the purpose specified.

[Claims 6 to 25 not printed in the Gazette.]

876,992. MECHANICAL TOY. JAMES P. MCGILL, Chicago, Ill. Filed Feb. 9, 1907. Serial No. 356,596.



1. In a toy, the combination with two relatively movable members having longitudinal slots, of links mounted in the slots and connecting the two members, and figures mounted on the links and adapted to be given a respective backward and forward movement by the shifting of the members.

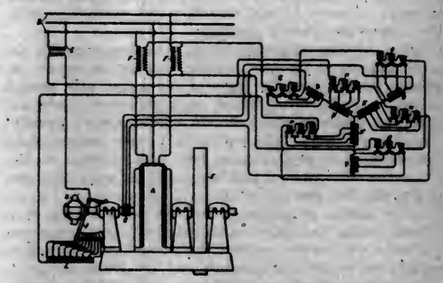
2. In a toy, the combination with two relatively movable superimposed members having longitudinal slots, of links pivotally mounted in the slots and connecting the members, figures mounted on the links, and a hand-grip oppositely located on each member and extending beyond the end of the other member and adapted to impart a simultaneous backward and forward movement to the members and a corresponding movement to the figures.

3. In a toy, the combination with two corresponding superimposed supporting members, of links pivotally connected thereto so as to cause the members to move in unison when shifted, figures each having a rigid leg connected to one of the links, the other leg being pivoted and free, and arms connected to the figures, said arms being pivoted so as to be moved by the movement of the figures.

4. The combination of two corresponding superimposed supporting members, with links pivotally connecting the members so as to cause them to move in unison when shifted, two figures each having one leg rigid with the body and connected to the members, and the other leg pivoted at the hip only and disconnected from the said members, and arms pivoted to the figures, said arms being pivoted so as to be moved solely by the movement of the said figures.

5. In a toy, the combination with two corresponding movable figures, each having one leg rigid with the body and one leg movable and pivoted at the hip and free at the bottom, and two pivoted arms, one bent and one straight, of means connected solely to the rigid legs of each figure to impart thereto a parallel movement back and forth, thereby causing the movement of the free leg and the free arms to partake of the shifting movement of the figures.

876,993. MOTOR CONTROL. KARL A. PAULY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 18, 1907. Serial No. 374,422.



1. In combination with an electric motor, speed-controlling means for the motor controlled by the motor speed, and speed-controlling means for the motor controlled by the motor current.

2. In combination with an electric motor, a fly-wheel driven thereby, speed-controlling means for the motor controlled by the motor speed, and speed-controlling means for the motor controlled by the motor current.

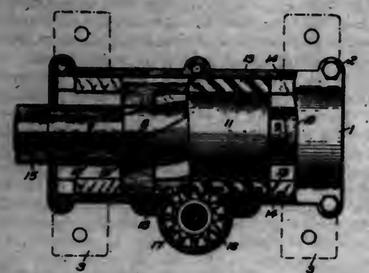
3. In combination with an electric motor, a centrifugal governor driven thereby, a resistance in circuit with the motor controlled by said governor, a device responsive to variations in the motor circuit, and a resistance in circuit with said motor controlled by said device.

4. In combination with an electric motor, a fly-wheel driven thereby, a centrifugal governor driven by the motor, a resistance in circuit with the motor controlled by said governor, a device responsive to variations in the motor current, and a resistance in circuit with the motor controlled by said device.

5. In combination with an induction motor, means controlled by the motor speed for varying the resistance in the secondary circuit of said motor, and means controlled by the motor current for varying the resistance in said circuit.

[Claims 6 to 8 not printed in the Gazette.]

876,994. MOTION-CHECKING DEVICE. OTTO F. PAMSON, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Aug. 24, 1905. Serial No. 275,597.



1. In a motion checking device, the combination of a screw, a circular nut for imparting rotary motion to the screw, which is provided with projections on opposite sides of its axis, a circular frame provided with a plurality of grooves in which the projections are guided, a rack on the nut extending longitudinally thereof, a shaft supported by the frame with its axis perpendicular to the axis of the screw, and a pinion on the shaft engaging the rack to impart longitudinal motion to the nut to rotate the screw.

2. In a motion checking device, the combination of a supporting frame or structure, a coarse pitch screw mounted thereon, a nut engaging the screw to impart rotation thereto, and journal bearings for the screw carried by the frame and over which the nut is adapted to telescope as it moves to and fro.

3. As an article of manufacture, a motion checking device comprising a two-part frame, and journal bearings extending inwardly from the ends of the frame and located in the plane of division thereof, said frame having a guideway or groove formed therein which extends parallel to the axis of the journal bearings.

4. As an article of manufacture, a motion checking device comprising a two-part frame, journal bearings extending inwardly from the ends of the frame and located in the plane of division thereof, said frame also having a guideway or groove formed therein which extends parallel to the axis of the journal bearings, a tubular extension or socket on one part of the frame, and a step-bearing on the other part, said extension and bearing being adapted to receive the steering post or column.

5. In a motion checking device, the combination of a separable casing or frame, two relatively rotatable elements mounted therein, opposed spline and groove connections between one of the elements and the frame for guiding the said element longitudinally and taking strains therefrom, a rack provided on one of the splines, a pinion meshing with the rack, and a device for actuating the pinion to reciprocate the longitudinally movable element.

[Claims 6 to 9 not printed in the Gazette.]

876,995. CARRIAGE-BOW. RUDOLF H. PFAFF, Ashtabula, Ohio. Filed Dec. 16, 1905. Serial No. 291,977.

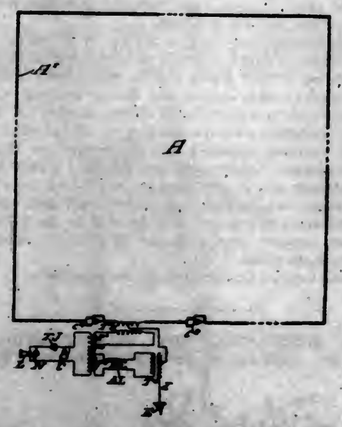
1. In carriage-bows, the combination of an outer metallic tube having an inturned seam; a second shorter tube fitted within said outer tube and secured thereto, said second tube being formed with a slot extending throughout its length and adapted to receive such seam; a slat-iron, the latter and the lower ends of said tubes being united together, a filler contained within said second tube its upper end terminating at a point below the top of the said second tube, said filler engaging with the inturned seam of said outer tube so as to be held thereby, and a short-bow extending within both of said tubes, said shorter tube constituting a ferrule around the lower portion of the short-bow.

2. In carriage-bows, the combination of an outer tube having an inturned seam; a second shorter tube fitted within said outer tube and secured thereto, said second tube being formed with a slot throughout its length, a slat-iron fitted within the lower ends of said tubes and united thereto; a filler wholly contained within said second tube, its upper end terminating at a point below the top of the second tube provided with a longitudinal groove to receive the inturned seam of said outer tube; and a



short-bow extending within the upper end of both of said tubes and having its inner end juxtaposed to the upper end of said filler, said second tube serving as a ferrule for the lower portion of said short-bow, substantially as shown and described.

876,996. INTELLIGENCE INTERCOMMUNICATION BY MAGNETIC-WAVE COMPONENTS. GREENLEAF W. PICKARD, Amesbury, Mass. Filed June 10, 1907. Serial No. 378,057.



1. Means for employing the magnetic components of electromagnetic waves for the reception of telegraphically or telephonically transmitted messages and signals, which comprises a closed electrical circuit inclosing an extremely large area, to include an extremely large number of the magnetic lines of passing waves; said circuit including a condenser to cause a resonant building up of current in the circuit, due to the action thereon of said magnetic lines, the capacity of said condenser being variable to permit the syntonization of the circuit to the frequency of the transmitted passing waves; said circuit including also a current-operated detector; said condenser and detector being in shunt with respect to each other and connected in said circuit at any desired or convenient part thereof; a telephonic indicating device operatively associated with said condenser and detector, and a second condenser connected in shunt to the telephonic indicating device.

2. Means for employing the magnetic components of electromagnetic waves for the reception of telegraphically or telephonically transmitted messages and signals, which comprises a closed electrical circuit inclosing an extremely large area, to include an extremely large number of the magnetic lines of passing waves; said circuit including a condenser to cause a resonant building up of current in the circuit, due to the action thereon of said magnetic lines, the capacity of said condenser being variable to permit the syntonization of the circuit to the frequency of the transmitted passing waves; said circuit including also a current-operated detector; said condenser and detector being in shunt with respect to each other and connected in said circuit at any desired or convenient part thereof; an indicating device operatively associated with said condenser and detector, and a second condenser connected in shunt to the indicating device.

3. Means for employing the magnetic components of electromagnetic waves for the reception of telegraphically or telephonically transmitted messages and signals, which comprises a closed ecitrical circuit inclosing an extremely large area, to include an extremely large number of the magnetic lines of passing waves; said circuit including a condenser to cause a resonant building up of current in the circuit, due to the action thereon of said magnetic lines, the capacity of said condenser being variable to permit the syntonization of the circuit to the frequency of the transmitted passing waves; said circuit including also a current-operated detector; said condenser and detector being in shunt with respect to each other and connected in said circuit at any desired or convenient part thereof; and an indicating device operatively associated with said condenser and detector.

4. Means for employing the magnetic components of electromagnetic waves for the reception of telegraphically or telephonically transmitted messages and signals, which comprises a closed electrical circuit inclosing an extremely large area, to include an extremely large number of the magnetic lines of passing waves; said circuit including a condenser to cause a resonant building up of current in the circuit, due to the action thereon of said magnetic lines, the capacity of said condenser being variable to permit the syntonization of the circuit to the frequency of the transmitted passing waves; said circuit including also a current-operated detector; said condenser and detector being in shunt with respect to each other and connected in said circuit at any desired or convenient part thereof.

5. Means for employing the magnetic components of electromagnetic waves for the reception of telegraphically or telephonically transmitted messages and signals, which comprises a closed electrical circuit inclosing an extremely large area, said circuit including a condenser to cause a resonant building up of current in the circuit, due to the action thereon of said magnetic lines, the capacity of said condenser being variable to permit the syntonization of the circuit to the frequency of transmitted passing waves; said closed circuit being adapted to become increasingly effective as its inclosed area approaches a position effectively normal to the horizontal plane of the magnetic lines of passing waves, to operatively include an extremely large number of said lines.

[Claims 6 to 14 not printed in the Gazette.]

876,997. ELECTRICAL DENTAL AND SURGICAL APPLIANCE. HARRY F. PRESSEY, Bridgeport, Conn., assignor of one-third to Willis F. Chamberlain, Bridgeport, Conn. Filed Apr. 24, 1907. Serial No. 370,082.

1. In a device of the character described, the combination of the hollow, integral, flexible, metallic holder, the insulator plug seated within said holder near its outer end and surrounding a contact pin which projects at both ends beyond said plug, the small lamp in the outer end of said holder and in contact with one end of said pin, the two insulated electrical conductors extending from a source of electricity and having their free ends secured in electrical contact respectively with the other end of said pin and with the inner end of said holder, one of said conductors being connected comparatively near the source of electricity with a lamp of high candle power, an ohmic resistance coil interposed in the circuit in series with the last mentioned lamp and in multiple with the first mentioned lamp, whereby the small lamp is lighted by a residuum current, a metal casing surrounding said resistance coil and in electrical contact with one end of the resistance coil and also with the insulated conductor which is secured in contact with said pin, and the metallic spring clips secured to the outside of said casing, whereby, when the holder is hung between said clips and contact made therewith, the current will make a short circuit and will not pass through the small lamp.



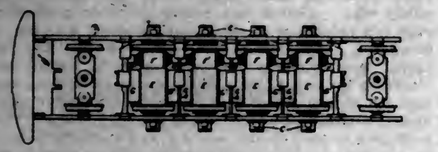
2. In a device of the character described, the combination of the hollow, integral, flexible, metallic holder, the insulator plug seated within said holder near its outer end and surrounding a contact pin which projects at both ends beyond said plug, the small lamp in the outer end of said holder and in contact with one end of said pin, the two insulated electrical conductors extending from a source of electricity and having their free ends secured in electrical contact respectively with the other end of said pin and with the inner end of said holder, and a predetermined resistance interposed in shunt between said source and lamp to establish a short circuit.

3. In a device of the character described, the combination of the hollow, integral, flexible, metallic holder, the insulator plug seated within said holder near its outer end and surrounding a contact pin which projects at both ends beyond said plug, the small lamp in the outer end of said holder and in contact with one end of said pin, the two insulated electrical conductors extending from a source of electricity and having their free ends secured in electrical contact respectively with the other end of said pin and with the inner end of said holder, an ohmic resistance coil having its extremities in connection with said conductors at a point intermediate of said source and lamp whereby a short circuit is formed, and a casing surrounding said coil and in electrical contact with one end of said coils and provided with contact clips whereby contact between said holder and clips will cause said lamp to be extinguished.

876,998. MEANS FOR SUPPORTING BRUSH-HOLDERS. EDWARD D. PARKER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 18, 1905. Serial No. 292,183.

1. In an electric locomotive, a driving axle, a frame yieldingly mounted upon said driving axle, a motor having portions including the current collector supported by said driving axle for movement therewith, brushes, and means

mounted upon said frame for supporting said brushes in operative relation to said current collector.



2. In an electric locomotive, a driving axle, a frame yieldingly mounted upon said driving axle, a motor having its armature and commutator mounted upon and carried by said driving axle, brushes, and supports for said brushes located on said frame.

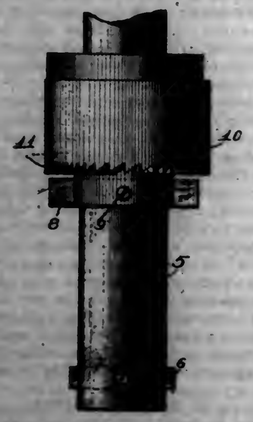
3. In an electric locomotive, a driving axle, a locomotive frame mounted upon said axle, a motor having an armature and a commutator mounted upon said axle independently of the said frame, brush-holders provided with brushes adapted to engage said commutator, and adjustable supports on said frame for said brush-holders arranged to permit the brushes to be moved radially of and tangentially to the commutator.

4. In an electric locomotive, a pair of driving axles, a locomotive frame mounted upon said driving axles, motors having their armatures and commutators mounted upon said driving axles, a transverse frame member located between said axles, brush-holders for said motors including a pair of brush-holders arranged upon opposite sides of said transverse frame member, and a fastening member for securing said pair of brush-holders and said transverse frame member together.

5. In an electric locomotive, a driving axle, a frame supported upon said axle, a motor having its armature and commutator mounted upon said axle, brushes coöperating with said commutator, brush-holders supported on said frame, a wedge between each brush-holder and said frame for adjusting the brush-holder laterally, and means for adjusting each brush-holder longitudinally.

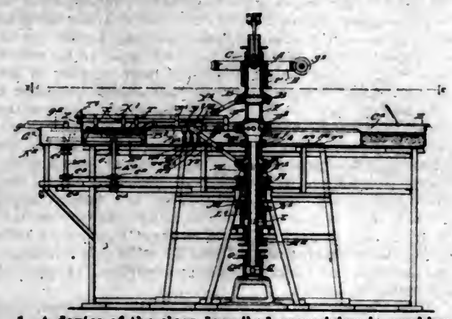
[Claims 6 to 17 not printed in the Gazette.]

876,999. FACING-TOOL. GEORGE T. REISS, Hamilton, Ohio, assignor to Niles-Bement-Pond Company, Jersey City, N. J. Filed Apr. 29, 1907. Serial No. 370,793.



A facing tool comprising a rotatable tool bar provided with a diametrical mortise, a bar-cutter separably secured in said mortise and projecting endwise therefrom, a milling collar firmly secured to the tool-bar above said bar-cutter and having a toothed lower face, and means for securing said bar-cutter in its mortise, said bar-cutter and its securing means being free of said milling-collar, combined substantially as set forth.

877,000. FILTER. GEORGE RIDGWAY, Kalgoorlie, Western Australia, Australia. Filed Mar. 12, 1906. Serial No. 305,689.



1. A device of the class described comprising in combination, a plurality of tanks arranged in a circular order, a filter, a frame therefor provided with a roller, a track surrounding said tanks and provided with raised portions, said track being adapted for engagement by said roller to support said frame and raise and lower said filter out of and into said tanks, and means for moving said filter abreast of said tanks.

2. A device of the class described comprising in combination, a plurality of tanks, a track adjacent said tanks provided with raised portions, a filter, a frame supporting said filter and provided with a roller adapted to ride upon said track whereby the filter is supported and raised out of and lowered into said tanks, and means for moving said filter abreast of said tanks.

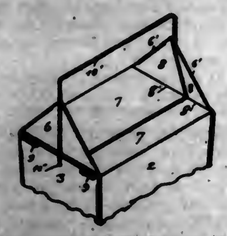
3. A device of the class described comprising in combination, a plurality of tanks, a track adjacent said tanks provided with raised portions, a filter provided with a roller engaging said track whereby said filter is supported in and raised out of and lowered into said tanks, and means for moving said filter abreast of said tanks.

4. A device of the class described comprising in combination, a plurality of tanks, arranged in circular order, a circular track adjacent said tanks provided with raised portions, a filter provided with a roller engaging said track whereby said filter is supported in and raised out of and lowered into said tanks, and means for moving said filter abreast of said tanks.

5. A device of the class described comprising in combination, a plurality of tanks arranged in circular order, a filter, means for moving said filter abreast of said tanks, and automatic means for supporting said filter in said tanks and raising the same out of one tank and lowering it into another tank.

[Claims 6 to 24 not printed in the Gazette.]

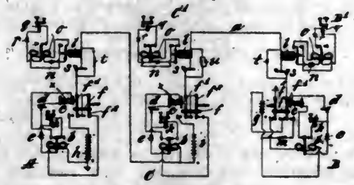
877,001. PAPER VESSEL. BERTON I. BIKE, Dayton, Ohio. Filed Mar. 7, 1906. Serial No. 304,632.



A four-sided paper vessel, the side walls of which consist of a single thickness of the blank and terminate in extensions which form an overlapping cover for the mouth of the vessel, and the end walls of said vessel consisting of two two-ply overlapping folds which fold against a single thickness of the blank and terminate in top extensions

which stand upright and join on their inner sides the overlapping cover extensions, the folds of said top extensions overlapping on their inner sides throughout the lengths of said top extensions and thus forming a complete overlapping closure for the mouth of the vessel from the upper extremity of one of said top extensions to the upper extremity of the other of said top extensions.

877,002. TELEGRAPH SYSTEM. HARRY O. RUGH, Sandwich, Ill. Filed Dec. 26, 1906. Serial No. 349,528.



1. A system of telegraphy including a line, a line relay at each of a plurality of telegraph stations in normally closed circuit therewith, sending keys at said stations for opening the circuit through the line relays, signal-receiving relays at said stations including magnet coils, circuit through which is normally maintained by the armatures of the line relays, and means acting independently of said magnet winding normally maintaining the armatures of the signal-receiving relays in normal positions.

2. A system of telegraphy including a line, a line relay at each of a plurality of telegraph stations in normally closed circuit therewith, sending keys at said stations for opening the circuit through the line relays, signal-receiving relays at said stations including magnet coils, circuit through which is normally maintained by the armatures of the line relays, and means acting independently of said magnet windings for maintaining the armatures of the signal-receiving relays in normal positions, said signal-receiving relays each including another magnet winding adapted to be included in circuit when the armature thereof is released, whereby the armature of said signal-receiving relays may be moved to their alternative positions.

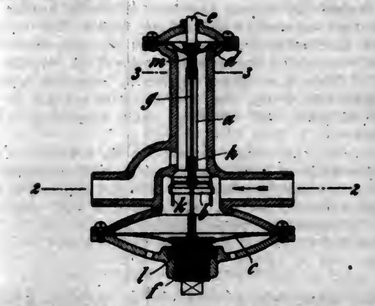
3. A system of telegraphy including a line, a line relay at each of a plurality of telegraph stations in normally closed circuit therewith, sending keys at said stations for opening the circuit through the line relays, polarized signal-receiving relays at said stations including magnet coils, circuit through which is normally maintained by the armatures of the line relays, and means acting independently of said magnet windings for maintaining the armatures of the signal-receiving relays in normal positions.

4. A system of telegraphy including a line, a line relay at each of a plurality of telegraph stations in normally closed circuit therewith, sending keys at said stations for opening the circuit through the line relays, polarized signal-receiving relays at said stations including magnet coils, circuit through which is normally maintained by the armatures of the line relays, and means acting independently of said magnet windings for maintaining the armatures of the signal-receiving relays in normal positions, said signal-receiving relays each including another magnet winding adapted to be included in circuit when the armature thereof is released, whereby the armature of said signal-receiving relays may be moved to their alternative positions.

5. A system of telegraphy including a line uniting a plurality of telegraph stations having signal-sending apparatus, operating batteries at said stations for connection with the line, and means at one sending station, governed at another sending station, for preventing the connection of battery thereat with the line.

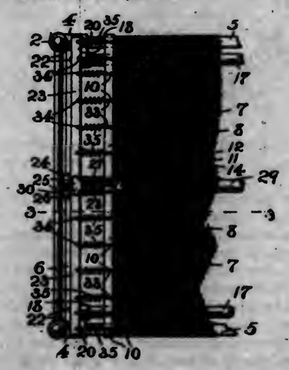
[Claims 6 to 24 not printed in the Gazette.]

877,003. SAFETY-VALVE FOR GAS-CONDUITS. WILHELM SCHULER, Detmoid, Germany. Filed Oct. 7, 1907. Serial No. 396,272.



In a safety valve for gas conduits the combination with a casing of non-magnetic material and provided with conduits for the passage of the gas, of a valve seat arranged between said conduits, a valve of magnetic material fitting on to the seat, a diaphragm arranged below the valve seat and being loosely in contact with the stem of the valve, a magnet arranged above the valve, a diaphragm in the upper part of the casing, a pin contacting with the diaphragm and extending above the casing and a spring being in contact with a rigid part of the casing and the underside of the upper diaphragm.

877,004. BED-SPRING. JACOB SCHWARTZMAN, Newark, N. J., assignor of one-third to Samuel Shifman and one-third to Abraham Shifman, Newark, N. J. Filed Aug. 19, 1907. Serial No. 389,140.



1. A bed-spring comprising a pair of oppositely disposed supporting brackets, each bracket being provided with a receiving socket, a bar or brace having its end-portions arranged and secured within said receiving sockets, a series of foldably arranged supporting members connected with said supporting brackets, and a spring-portion or body connected with said members, substantially as and for the purposes set forth.

2. A bed-spring comprising a pair of oppositely disposed supporting brackets, each bracket being provided with a receiving socket, a bar or brace having its end-portions arranged and secured within said receiving sockets, a series of foldably arranged supporting members connected with said supporting brackets, and a spring-portion or body connected with said members, and oppositely disposed supporting corner-brackets.

3. A bed-spring comprising a pair of oppositely disposed supporting brackets, each bracket being provided with a receiving socket, a bar or brace having its end-portions arranged and secured within said receiving sockets, a series of foldably arranged supporting members connected with

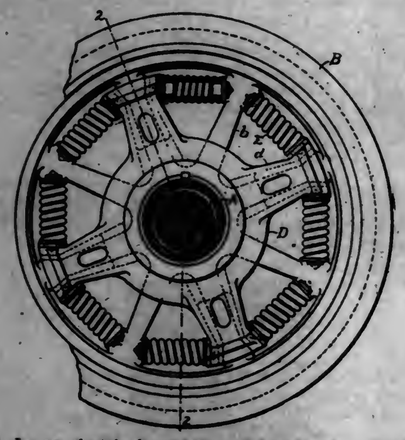
said supporting brackets, and a spring-portion or body connected with said members, and oppositely disposed supporting corner-brackets each corner-bracket being provided with a receiving socket, and bars or braces having their end-portion arranged and secured within said receiving sockets, substantially as and for the purposes set forth.

4. A bed-spring comprising supporting brackets, a series of foldably arranged supporting members connected with said supporting brackets, a spring-portion or body connected with said members, and supporting corner-brackets.

5. A bed-spring comprising supporting brackets, a series of supporting-members, and a hinge-like connection between said supporting brackets and said supporting members, a spring-portion or body connected with said members, and supporting corner brackets.

[Claims 6 to 16 not printed in the Gazette.]

877,005. ELECTRIC LOCOMOTIVE. RICHARD SCHWARB, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 18, 1906. Serial No. 339,497.



1. In an electric locomotive, a driving-axle, a spoked driving-wheel thereon, a motor armature surrounding said axle, a supporting spider for said armature, and compression-springs between the spokes of said wheel and said spider, one set of spokes being hollow and partly surrounding a portion of the spokes of the other set.

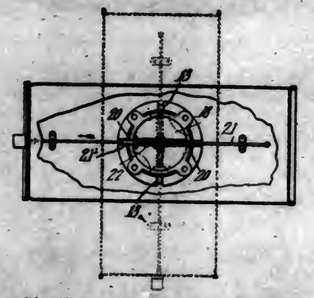
2. In an electric locomotive, a driving-axle, a spoked driving-wheel thereon, a motor armature surrounding said axle, a supporting spider for the armature having hollow spokes, each partly surrounding a spoke of said wheel, and compression-springs between the spokes of the spider and the adjacent wheel-spokes not surrounded thereby.

877,006. MAIL-BOX. JOHN M. SCOBEE, Bagdad, Ky. Filed Apr. 22, 1907. Serial No. 369,688.

1. A pivotally mounted mail box arranged to swing in a horizontal plane to different signaling positions, means for locking the box in any position to which it is adjusted, and a movable door having means which on opening movement of the door engages and moves the locking means to release position.

2. In a device of the class specified, a bracket having an opening and provided with a notched ring, a mail box, a pivot pin secured to the bottom of the box and extending through the opening, a spring actuated locking bolt extending horizontally beneath the box and provided with pendent handles near each end of the box, said bolt being arranged to enter the notches of the ring, and bolt guides secured to the bottom of the box at points adjacent the handles.

3. In a device of the class specified, a pivot bracket having a notched ring, a mail box, a pivot pin secured to the bottom of the box and mounted in the bracket, a spring actuated bolt carried by the box and arranged to enter the notches, and means for automatically moving said bolt to release position when the mail box is opened.



4. In combination, a bracket, a spider and a lug projecting therefrom and provided with vertically alined openings, a ring formed integral with the bracket and provided with a plurality of equi-distantly spaced notches, a mail box, a disk secured to the bottom of the box and provided with a pivot pin arranged to extend through said openings, said disk having a diametrically extending slot, a locking bolt extending through the slot, and provided with a handle at each end, a dog carried by the bolt and arranged to engage the notches, and a spring tending to move the bolt to locking position.

5. A mail box having a hinged door, a support on which the box is pivoted, means for locking the box in adjusted position, and means for transmitting movement from the door to the locking means to effect release of the latter when the door is opened.

[Claims 6 and 7 not printed in the Gazette.]

877,007. RAIL-JOINT. JAMES A. SCOTT, St. Louis, Mo. Filed Dec. 18, 1906. Serial No. 348,441.



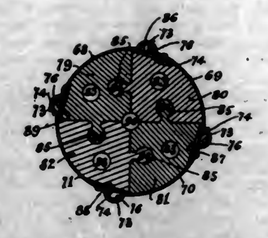


1. A rail joint comprising rail ends provided at their heads and webs with similar vertical recesses and overlapped, one of the rail ends being provided in its bottom flanges with a central longitudinal recess lying below the web portion of such rail end, and the other rail end having its bottom flanges recessed at opposite sides to provide a longitudinal tongue extending laterally from the web of such rail end and fitting in the said longitudinal recess and engaging the lower edge of the web of the other rail end.

2. A rail joint comprising rail ends having their heads and web portions recessed and overlapped, the end edges of the head and web of each rail being arranged in the same vertical plane, one of the rail ends being provided in its bottom with a longitudinal recess extending beneath the web of such rail, and the other rail end being provided with a tongue extending to the end of such rail and fitting in the recess of and extending beneath and engaged by the web of the other rail end, and means for securing the rails together.

3. In a rail joint, the combination of rail ends having their heads and webs recessed and overlapped, one of the rail ends being provided at its bottom flanges with a central longitudinal recess lying below the web portion of such rail end, and the other rail end having its bottom flanges recessed at opposite sides to provide a longitudinal tongue extending laterally from the web of such rail end and fitting in the said longitudinal recess and engaging the lower edge of the web of the other rail end, a bottom plate extending beneath the overlapped portions of the rails, and fastening devices piercing the bottom plate and securing the same to the said tongue.

877,008. SHEET-METAL PILING. FRANK W. SKINNER, New York, N. Y. Filed Aug. 12, 1905. Serial No. 273,910.



1. A unit of piling having a sheet metal shell and a longitudinally perforated rigid removable core within said shell, substantially as described.

2. Piling consisting of a plurality of sections each of which is composed of sheet metal with a removable section of a core, substantially as described.

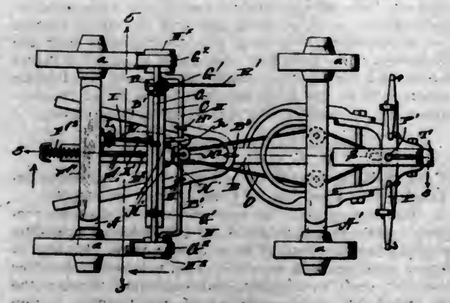
3. The combination of a hollow shell and a rigid non-expansible sectional core therefor adapted to be driven with said shell and removed after the shell is driven, substantially as described.

4. A pile consisting of a shell composed of sections locks to unite said sections, and a rigid non-expansible removable core, substantially as described.

5 The combination in piling of a sheet metal shell and a rigid removable non-collapsible core provided with a filling orifice adapted to fill said shell as the core is removed, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

877,009. WAGON-BRAKE. FRANCIS M. SMITH, Martinsville, Ill. Filed Oct 2, 1907. Serial No. 395,632.



1. An automatic brake apparatus for vehicle wheels comprising, in combination with the two axles of the running gear, wheels journaled upon said axles, a pole connected to the forward axle, an evener mounted upon said pole adapted to have a sliding movement, a rocking beam pivotally mounted upon the rear hound of the running gear, a reel beam journaled upon said rocking beam, friction rollers fixed one to each end of said reel shaft and adapted to contact with the rear wheels of the vehicle, a brake shaft journaled upon the rear hound of the gear, a pulley fixed to the rear bolster, a chain adapted to wind about the reel shaft, passing about said pulley and fastened to the brake shaft and shoes upon the latter, a spring for normally holding said beam at its farthest rearward limit, as set forth.

2. An automatic brake apparatus for vehicle wheels comprising, in combination with the two axles of the running gear, wheels journaled upon said axles, a pole connected to the forward axle, an evener mounted upon said pole adapted to have a sliding movement, a rocking beam pivotally mounted upon the rear hound of the running gear, a reel shaft journaled upon said rocking beam, friction rollers fixed one to each end of said reel shaft and adapted to contact with the rear wheels of the vehicle, a brake shaft journaled upon the rear hound of the gear, a pulley fixed to the rear bolster, a chain adapted to wind about the reel shaft, passing about said pulley and fastened to the brake shaft, shoes upon the latter, a spring for normally holding said beam at its farthest rearward limit, a lever connected to said rocking beam, affording means for rocking the latter, as set forth.

3. An automatic brake apparatus for vehicle wheels comprising, in combination with the two axles of the running gear, wheels journaled upon said axles, a pole connected to the forward axle, an evener mounted upon said pole adapted to have a sliding movement, a spring-actuated rocking beam, eyes upon said beam, pins projecting from the rear hound of the running gear and upon which said eyes are pivotally mounted, a reel shaft journaled upon said rocking beam, frictional rollers fixed to said shaft and adapted to contact with the rear wheels of the vehicle, a brake shaft mounted in suitable bearings upon the rear hound, a link projecting from said brake shaft, a cable fastened to and adapted to wind upon said reel shaft, an anti-friction pulley upon the rear bolster over which said cable passes, the latter fastened to said link, and connections between the rocking beam and said evener, as set forth.

4. An automatic brake apparatus for vehicle wheels comprising, in combination with the two axles of the running gear, wheels journaled upon said axles, a pole connected to the forward axle, an evener mounted upon said pole adapted to have a sliding movement, a spring actuated rocking beam, eyes upon said beam, pins projecting from the rear hound of the running gear and upon which said eyes are pivotally mounted, a reel shaft journaled upon said rocking beam, frictional rollers fixed to said shaft and adapted to contact with the rear wheels of the vehicle, a rock shaft mounted in suitable bearings upon the rear hound, a link projecting from said brake shaft, a cable fastened to and adapted to wind upon said reel shaft, an anti-friction pulley upon the rear bolster over which said cable passes, the latter fastened to said link, a bail-shaped member pivotally connected to said rocking beam, a pulley journaled upon a loop of said member, an endless chain passing about said pulley upon the bail-shaped member, and connected to the evener, as set forth.

5. An automatic brake apparatus for vehicle wheels comprising, in combination with the two axles of the running gear, wheels journaled upon said axles, a pole connected to the forward axle, an evener mounted upon said pole adapted to have a sliding movement, a rocking beam pivotally mounted upon the rear hound of the running gear, a rod connected to said beam passing through the rear bolster, the ends of said rod being bent to form hooks, a coiled spring interposed between the hooked ends of said rod and the rear face of the rear bolster and tending to normally hold the rocking beam at its farthest rearward limit, a reel shaft journaled upon said beam, friction rollers fixed to said shaft and adapted to be held by said spring in contact with the rear vehicle wheels, a brake shaft journaled upon the rear hound, shoes upon said brake shaft, a link connected to the latter, a chain

fastened to and adapted to wind upon the reel shaft, a pulley upon the rear bolster over which said chain passes, said chain fastened to said link, and connections between said rocking beam and the evener, as set forth.

877,010. CUTTING MECHANISM FOR PRINTING-MACHINES. WILLIAM SPALCKHAVER, New York, N. Y., assignor to Robert Hoe, New York, N. Y. Filed May 22, 1907. Serial No. 374,993.



1. In a cutting mechanism for printing machines, the combination with a cutting cylinder having a longitudinal recess therein, of a cutting member, the adjoining faces of the member and groove having entry and holding slots and studs arranged to engage the slots, and means for preventing the member from shifting endwise to disengage the studs from the slots, substantially as described.

2. In a cutting mechanism for printing machines, the combination with a cutting cylinder having a longitudinal recess therein, of a cutting member, the adjoining faces of the member and groove having entry and holding slots and studs arranged to engage the slots, and means, including a screw, abutting against the end of the member for preventing it from shifting endwise to disengage the studs from the slots, substantially as described.

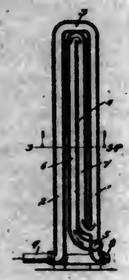
3. In a cutting mechanism for printing machines, the combination with a cutting cylinder having a longitudinal recess therein, the face or faces of the recess being provided with a holding groove and slots leading from the circumference to the cylinder into said grooves, a cutting member, including a knife and a metallic knife holding box, studs on the box arranged to engage the slots and grooves, and means for preventing the box from shifting endwise to disengage the studs from the grooves, substantially as described.

4. In a cutting mechanism for printing machines, the combination with a cutting cylinder having a longitudinal recess therein, the face or faces of the recess being provided with a holding groove and slots leading from the circumference of the cylinder into said grooves, a cutting member, including a knife and a metallic knife holding box, studs on the box arranged to engage the slots and grooves, and means, including a screw, abutting against the end of the cutting member, for preventing the box from shifting endwise to disengage the studs from the grooves, substantially as described.

5. In a cutting mechanism for printing machines, the combination with a cutting cylinder having a longitudinal recess therein, a cutting member located in the recess, the adjoining faces of the member and recess being provided with interlocking studs, slots and grooves, spring controlled locking devices located in the recess and engaging the member, and means engaging the end of the locking member for preventing it from moving endwise, substantially as described.

877,011. RADIATOR. JOHN A. STROM, Pullman, Ill. Filed Aug. 7, 1905. Serial No. 273,014.

1. In a radiating device, a single piece structure comprising a main loop consisting of a receiving portion 1, a discharge portion 2, the communicating conduit 3, of an auxiliary loop consisting of a flow portion 6 and return portion 7, the flow and return portions being in communication at one of their ends, and being offset at their opposite ends, the off set part of the flow portion communicating with the receiving pipe of the main loop, and the off set part of the return portion also communicating with the receiving pipe of the main loop, and a valve 5 in the said receiving pipe adapted and arranged to permit the flow of the heating medium through the main loop only or to direct the flow through the auxiliary loop and then through the main loop.



2. In an apparatus of the character described, the combination of a main loop comprising a receiving pipe a discharge pipe, and a connecting pipe, of an auxiliary loop arranged within the main loop comprising a flow portion and a return portion, a conduit communicating at one end with the receiving pipe of said main loop, and also communicating with the flow portion of the auxiliary loop, the return portion of the auxiliary loop being in communication with the main pipe, and a valve arranged and adapted to permit the flow of the heating medium through the main loop only, or to direct the flow through the auxiliary loop and thence through the main loop.

3. In an apparatus of the character described, oppositely disposed flow and return pipes connected to one another at one of their ends to form an auxiliary loop, the other end of the return pipe being offset and opening directly into the main loop including an elongated pipe extending parallel to the pipe of the auxiliary loop, the said main loop, and the free end of the flow pipe communicating with a transversely arranged conduit in communication with the main loop, and controlling means in the main loop arranged and adapted to permit the heating medium to flow directly through the main loop only, or through said auxiliary loop.

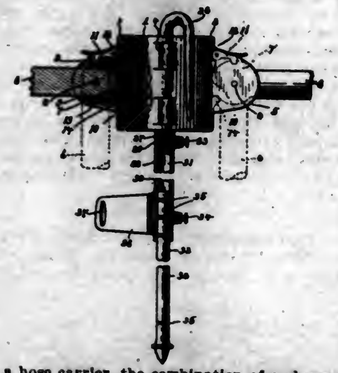
4. In an apparatus of the character described, the combination of an elongated receiving pipe, a plurality of loops each comprising flow and return portions connected at one end, a conduit communicating with the other end of the receiving pipe and extending transversely of the respective loops and having communication with the flow portion of each loop, valves in said conduit, one for each loop, and a communicating passageway between the return portion of one of said loops and the flow portion of the adjacent loop and between the return portion of the loop immediately adjacent the receiving pipe and said receiving pipe.

5. In a radiating device the combination of a main pipe, a plurality of loops each comprising a flow portion and a return portion, a conduit communicating with said main pipe and also communicating with the flow portion of each loop, the return portion of one of said loops being in communication with the main pipe and the return portion of each succeeding loop being in communication with the flow portion of the preceding loop, and a plurality of valves adapted and arranged to permit the flow of the heating medium through the main pipe only or to direct the flow through one or more of said loops in succession at will.

877,012. HOSE-CARRIER. THOMAS J. SULLIVAN, Detroit, Mich. Filed Dec. 7, 1905. Serial No. 290,684.

1. In a hose carrier, the combination with a clamp consisting of two hinged members, of parallel ears extending outward from the outer side of each member, handles, a circular head on each handle having notches, a shoulder formed on each head, pivot pins extending through the ears and heads to pivotally attach the handles, a stop formed on each member between the ears to engage the shoulders on the heads, dogs pivoted between the ears to engage the notches, and springs to hold the dogs in contact with the heads.

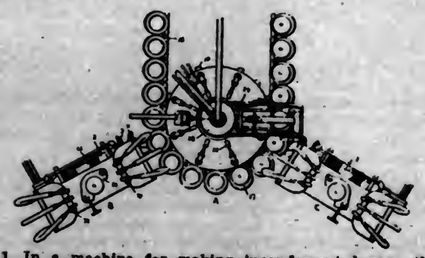
2. In a hose carrier, the combination of a clamp consisting of two semi-cylindrical members formed with hinge members at one edge, locking means to hold the opposite edges of said members together, and a pintle for the hinge members extended at one end and bent to form a hook.



3. In a hose carrier, the combination of a clamp consisting of two semi-cylindrical members hinged together at one edge and one of said members formed with a bevel edge having a notch and with a series of openings near said edge, a latch pivotally attached intermediate its ends to the free edge of the other clamp member and consisting of a curved blade portion and a curved handle portion, a tongue on the free end of said member to which the latch is pivoted to engage the underside of said latch and to project into the notch in the beveled edge of the other member, lugs on the under side of the blade of the latch to engage the openings in the clamp member, a spring interposed between the handle portion of the latch and the clamp member, and a cam-disk pivoted on the said member to turn beneath the said handle and lock the latch.

4. In a hose carrier and support, the combination of a clamp consisting of two semi-cylindrical members formed with hinge members at one edge having eyes, a pintle engaging said eyes having an extended and bent end forming a hook and formed with a projecting screw-threaded opposite end, a sleeve on said screw-threaded end, a tube into one end of which the sleeve projects, means carried by said tube to detachably secure the tube to the sleeve, and a rod adjustable within said tube.

877,013. MACHINE FOR MAKING INCANDESCENT LAMPS. ALFRED SWAN, New York, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 25, 1906. Serial No. 318,686.



1. In a machine for making incandescent lamps, the combination with a blowing-off device, of a plurality of sealing-in devices, and connections for causing said devices to operate in predetermined sequence.

2. In a machine for making incandescent lamps, the combination with a blowing-off device, of a plurality of sealing-in devices, and means for controlling the operation of said devices to bring a sealing-in device into action at the conclusion of each operation of the blowing-off device.

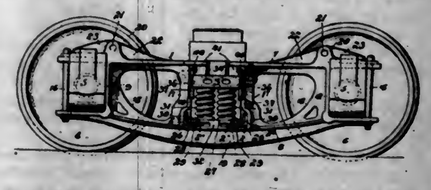
3. A combined blowing-off and sealing-in apparatus for incandescent lamps comprising a blowing-off machine, a plurality of sealing-in machines in coöperative relation to the blowing-off machine, and mechanism for operating the sealing-in machines at a fractional speed of the output of the blowing-off machine whereby the blowing-off machine and sealing-in machines are maintained in continuous service at maximum efficiency.

4. In a machine for making incandescent lamps, the combination with a blowing-off device, of a plurality of sealing-in devices, and connections for causing said devices to operate in predetermined sequence, the several devices being so juxtaposed as to be all within reach of a single operator.

5. In a machine for making incandescent lamps, a sealing-in device having a bulb support, a rod formed at its end to support a stem, heaters for softening the bulb-neck, and means automatically operated for moving said rod axially relative to said bulb-support to expand said stem and assist in effecting the seal.

[Claims 6 to 19 not printed in the Gazette.]

877,014. CAST-STEEL TRUCK. WILSON E. SYMONS, Chicago, Ill. Filed Sept. 20, 1906. Serial No. 335,413.



1. A cast steel truck, including a side member comprising longitudinal upper and lower bars and intermediate vertical struts, arranged to produce substantially longitudinal open jaws at the ends of the side member, and reinforcements extending above the upper side of the upper bar and located at the upper rear corners of the upper jaws.

2. A cast steel truck, including a side member having open jaws at its opposite ends, and safety chain attaching lugs located over the upper inner corners of the jaws and extending above the upper edge of the side member to serve the dual function of chain attaching means and reinforcements.

3. A cast steel truck, including a side member having open jaws at its opposite ends for the reception of the oil boxes and having reinforcing flanges or projections extending above the upper side of the upper bar of the member and extending longitudinally thereof over the upper inner corners of the jaws.

4. A cast steel side member for trucks, including upper and lower bars and vertical struts, said bars and struts being arranged to produce substantially longitudinal open jaws at the opposite ends of the member for the reception of the oil boxes, safety chain attaching lugs formed integral with the upper bar of the side member and extended above the upper face thereof at points opposite the upper inner corners of the jaws, and integral ribs or flanges extending in opposite directions from the lugs and diminishing in height as they recede therefrom.

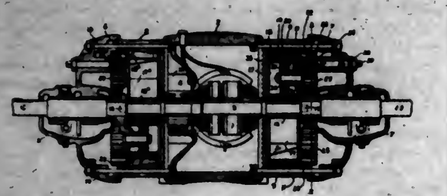
5. A cast steel side member for trucks, including a straight upper bar, a drop-center lower bar, intermediate vertical struts, and reinforcements located on the end portions of the upper bar above certain of the struts and projecting above the upper side of said upper bar.

[Claims 6 to 24 not printed in the Gazette.]

877,015. FRICTION-GEAR. LEONARD A. TERRILL, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Nov. 28, 1904. Serial No. 284,451.

1. In combination, a motor field ring, an end bearing, an intermediate ring arranged between said field ring and said

end bearing, and a friction drive mechanism including a track member supported within said intermediate ring.



2. In combination, a motor field ring, an end bearing, an intermediate ring arranged between said field ring and said end bearing, a friction drive mechanism including an open ended track ring, said intermediate ring and said track ring having complementary inclined engaging faces, and means for adjusting the track ring with relation to the intermediate ring.

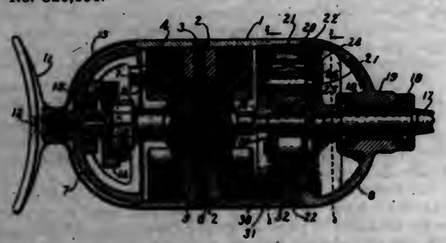
3. In combination, a motor field ring, an end bearing, an intermediate ring arranged between said field ring and said end bearing, and a friction drive mechanism including an open-ended track ring supported within said intermediate ring, said track ring and said intermediate ring having complementary inclined engaging surfaces.

4. In combination, a motor field ring, an end bearing, an intermediate ring arranged between said field ring and said end bearing, a friction drive mechanism including an open-ended track ring supported within said intermediate ring, said intermediate ring being provided with a wedge face, and means for moving said track ring along said wedge face.

5. In combination, a contractile track ring, a supporting ring having a permanent diameter, and means including a ring screw-threaded into said supporting ring for varying the diameter of said track ring.

[Claims 6 to 17 not printed in the Gazette.]

877,016. ELECTRIC MOTOR. LEONARD A. TERRILL, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 7, 1906. Serial No. 320,494.



1. In an electric motor, a field ring having a portion at one end internally threaded, a bonnet or end member threaded exteriorly to engage the threaded portion of the field ring and formed with an interior tapered surface, an armature shaft, a second shaft, a coupling for the shafts including a split ring having an outer tapered surface engaging said inner tapered surface, and means for moving said split ring axially comprising an annular member threaded exteriorly to engage the threaded portion of the field ring.

2. In an electric motor, a field ring having a portion at one end interiorly threaded, a bonnet or end member provided with threads engaging the threaded portion of the field ring and formed with a tapered recess, an armature shaft, a second shaft in alinement therewith, a coupling for the shafts comprising resilient rollers and a split ring surrounding them and having an outer tapered surface entering said recess, and means for moving said split ring axially comprising an annular member having threads formed on its periphery to engage the threaded portion of the field ring.

3. In an electric motor, a field ring having a portion at one end threaded interiorly, a bonnet or end member provided with an exteriorly threaded portion screwed into the threaded portion of the field ring, said bonnet or end member having a tapered recess formed in it, an armature shaft, a second shaft in alinement therewith, and a coupling for the shafts including a split ring having an exterior tapered surface entering said recess, and means for moving said split ring axially in said recess to vary the diameter of the ring, comprising an annular member having a rib threaded exteriorly to engage the threaded portion of the field ring and a second portion engaging the end of the split ring, said second portion having a circumferentially extending series of holes formed in it, and the field ring being provided with a slot or opening to receive a tool entering said holes to adjust said annular member angularly.

877,017. DYNAMO-ELECTRIC MACHINE WITH COMPENSATING WINDINGS. LUDWIG TORDA, Chiswick, England. Filed Mar. 8, 1907. Serial No. 361,315.



1. In a dynamo electric machine of the compensated type, a compensating device, in which the compensating elements serve to carry the compensating current and also the main magnetic lines.

2. In dynamo electric machines, a compensating device for neutralizing the field distorting effect of the armature and assisting the commutation, consisting of bars of iron or other paramagnetic material forming part of the main magnetic circuit, and conductors so connecting the bars that the desired compensating effect is obtained.

3. In a dynamo-electric machine a plurality of polar projections constructed wholly or partly of magnetic material electrically insulated from each other, and from the frame, and copper or other good conductors connecting the said bars suitably to obtain a compensating effect.

4. In a dynamo-electric machine a plurality of polar projections, constructed wholly or partly of magnetic material, a plurality of bolts and nuts to fix the said bars to the frame, the said bolts and nuts being suitably insulated from the frame.

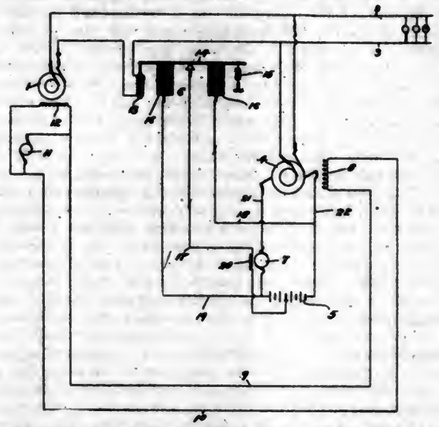
5. In a dynamo-electric machine a plurality of polar projections, constructed wholly or partly of magnetic material, a plurality of bolts and nuts for fixing the said bars to the frame, said nuts being arranged in a plurality of recesses in the yoke, and sheets of metal or other material to cover the said recesses.

[Claim 6 not printed in the Gazette.]

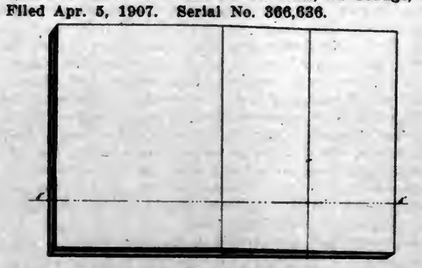
877,018. OPERATION OF STORAGE BATTERIES IN CONNECTION WITH ALTERNATING-CURRENT SYSTEMS. JOSEPH H. TRACY, Philadelphia, Pa. Filed June 21, 1907. Serial No. 380,005.

1. The combination of an alternating current generator and its circuit, a storage battery and its booster and direct current circuit, a rotary converter interposed between the direct current circuit and the alternating current circuit, means responsive to fluctuations in the alternating current circuit and adapted to change the voltage of the booster and a field for the rotary converter the strength of which is independent of the direct current voltage of the rotary, substantially as described.

2. An alternating current generator and its circuit, a storage battery and its complemental booster and circuit, transforming provisions interposed between the alternating current circuit and the battery circuit, means responsive to fluctuations in the alternating current circuit for varying the voltage of the booster, and a field for the transforming provisions the strength of which is independent of the voltage of the booster, substantially as described.



877,019. SHINGLE. JOHN W. TROEGER, La Grange, Ill. Filed Apr. 5, 1907. Serial No. 366,636.



1. The herein described shingle having a porous base or fabric impregnated with waterproofing compound, a layer of weather-proof coating applied to both faces and the upper face reinforced with a second layer for about half its length, substantially as and for the purposes set forth.

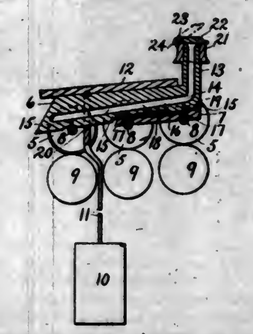
2. The herein described shingle having a porous base or fabric impregnated with a waterproofing compound, a layer of weather-proof coating, of uniform thickness, applied to the under face and a layer of variable thickness applied to the upper face, making the shingle wedge-shaped, substantially as and for the purposes set forth.

3. The herein described shingle having a multiple layer of porous fabric impregnated with a waterproofing compound and cemented together and a coating of weather-proof material, of variable thickness, tapering from one end to the other, applied to the upper and under faces, making the shingle wedge-shaped, substantially as and for the purposes set forth.

877,020. SADDLE FOR SPINNING-FRAMES. JOHN H. TURCOTTE, Indian Orchard, Mass. Filed Aug. 7, 1907. Serial No. 387,439.

1. As an improved article of manufacture, a saddle for spinning frames consisting of an approximately horizontal part having bottom perforations and of an upstanding arm, such part and arm having an inclosed angular oil conduit or passage therein which is closed at its front terminal, extends from a point near the forward end of said approximately horizontal part longitudinally through such part and upward through said arm, and opens through the arm and through said perforations in the bottom of the horizontal part.

2. The combination, in a spinning frame, with a set of upper roll journals, of a saddle comprising a part which is adapted to bear on such journals and an upstanding arm, such saddle having an inclosed angular conduit or passage therein opening at intervals through smaller passages in the bottom thereof, the receiving end of such angular passage being in said arm, and a second saddle adapted to be interposed between the first saddle and certain of said journals and arranged to receive oil from the main passage through certain of the smaller passages in said first mentioned saddle and to deliver it to the journals below.



3. The combination, in a spinning frame, with a set of upper roll journals, of a saddle comprising a part which is adapted to bear on such journals and an upstanding arm, such saddle having an inclosed angular conduit or passage therein opening at intervals through smaller passages in the bottom thereof, the receiving end of such angular passage being in said arm, and a second saddle adapted to be interposed between the first saddle and certain of said journals and arranged to receive oil from the main passage through certain of the smaller passages in said first saddle and to deliver it to the journals below, said second saddle having flanges at the sides only to embrace the first saddle.

4. The combination, in a saddle for spinning frames, with an approximately horizontal part having bottom perforations, and an upstanding arm integral with said approximately part, such part and arm having an inclosed angular oil conduit or passage therein which is closed at its front terminal, extends from a point near the forward end of the approximately horizontal part longitudinally through such part and upward through said arm, and opens through the latter and through said perforations in the bottom of the aforesaid horizontal part, of a self-closing lid on the arm at the entrance to said passage.

5. The combination, in a spinning frame, with a set of upper roll journals, and a weighted blade having an eye therein, of a saddle adapted to bear on or to be supported by said journals and in turn to support such blade, said saddle comprising an approximately horizontal part with an integral upstanding arm at the rear end, the front terminal of said approximately horizontal part being larger than the eye in said blade, but the back portion of the saddle including the arm and the angle or elbow being small, enough to pass through such eye.

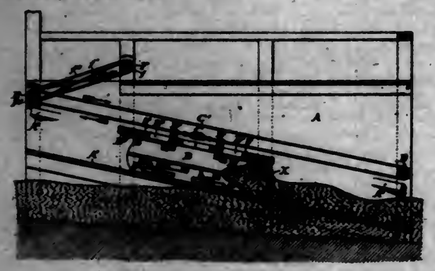
[Claim 6 not printed in the Gazette.]

877,021. WAVE-MOTOR. JOHN TYDINGS, Philadelphia, Pa. Filed Apr. 27, 1906. Serial No. 313,953.

1. In a wave motor, the combination with a stationary track; of a car arranged to traverse said track; a brake lever upon said car; and an inclined abutment in fixed relation with said track, arranged to coöperate with said brake lever to check the traverse of said car, substantially as set forth.

2. In a wave motor, the combination with a stationary track; of a car arranged to traverse said track; a brake mechanism upon said car; and, means in stationary re-

lation with said track, arranged to coöperate with said brake mechanism to check the traverse of said car, substantially as set forth.



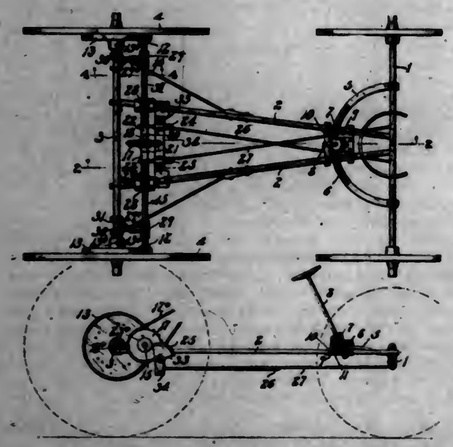
3. In a wave motor, the combination with a stationary track; of a car arranged to traverse said track; a pair of brake levers upon said car; a spring tending to thrust said levers into operative position; and, means in stationary relation with said track, arranged to coöperate with said brake levers to check the traverse of said car, substantially as set forth.

4. In a wave motor, the combination with a stationary track; of a car arranged to traverse said track; a pair of brake levers upon said car; a spring tending to thrust said levers into operative position; and, inclined abutments in stationary relation with said track, arranged to coöperate with said brake levers to check the traverse of said car, substantially as set forth.

5. In a wave motor, the combination with a stationary track; of drums mounted to rotate at the opposite ends of said track; an endless belt connecting said drums; means carried by said belt, arranged to adjustably vary the length of the latter; and, a car attached to said belt and arranged to traverse said track, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

877,022. MOTOR-VEHICLE. JOSEPH W. WALDORF, St. Louis, Mo. Filed Sept. 19, 1907. Serial No. 393,659.



1. A driving gear for vehicles, comprising gears adapted to be connected to the rear wheels of a vehicle, a drive shaft formed in sections, pinions secured to said sections and meshing with said gears, a drive sprocket loosely mounted on said shaft and provided with clutch members, clutch members splined to the sections of the drive shaft and coöperating with those on the drive sprocket for connecting the sections of the drive shaft to said sprocket, and automatic means for disconnecting either section of the drive shaft from said drive sprocket; substantially as described.

2. A driving gear for vehicles, comprising gears adapted to be connected to the rear wheels of a vehicle, a drive shaft comprising independent sections that are provided with pinions which mesh with said gears, a driving sprocket provided with clutch members, coöperating clutch members splined to said shaft sections, yielding means for forcing the clutch members on the shaft sections into engagement with the clutch members on the driving sprocket, and means for actuating the clutch members on the drive shaft to disconnect sections thereof from the driving sprocket; substantially as described.

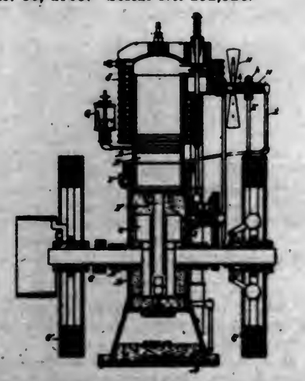
3. In a driving gear for vehicles, gears adapted to be connected to the rear wheels of a vehicle, a drive shaft comprising two sections each of which is provided with a pinion that meshes with one of said gears, a drive sprocket loosely mounted on the inner end portions of the sections of said drive shaft and provided with clutch members, means for preventing said shaft sections from moving longitudinally relatively to said sprocket, clutches splined to the drive shaft sections for connecting said shaft sections to said sprocket, and automatically operated means for actuating said clutches; substantially as described.

4. In a driving gear for vehicles, a drive shaft comprising two independent sections which are provided at their inner ends with disk-shaped heads that butt against each other, a driving sprocket loosely mounted on the end portions of said shaft sections and having a hub which embraces said heads, and clutch members splined to said shaft sections and adapted to coöperate with clutch teeth on the hub of the sprocket; substantially as described.

5. A vehicle comprising front and rear axles provided with wheels, gears connected to the wheels on the rear axle, a drive shaft comprising two sections, each of which is provided with a pinion that meshes with one of said gears, clutch members splined to said shaft sections, a driving sprocket arranged between said clutch members and having teeth which coöperate with teeth on the clutch members, devices for moving said clutch members out of engagement with the driving sprocket, and a connection between said devices and the front axle of the vehicle; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

877,023. ENGINE. CHARLES H. WAY, Lansing, Mich., assignor to "New Way" Motor Company, Lansing, Mich. Filed Mar. 30, 1905. Serial No. 252,926.



1. The combination with a crank shaft casing forming an inclosed chamber and adapted to serve as a lubricant receptacle; a cylinder opening at its inner end into said chamber; a crank shaft having counterweights thereon, said crank shaft and counterweights being adapted to strike into the lubricant as the crank shaft is revolved, whereby the said lubricant is atomised; a piston; a connecting rod; a bearing connected to said crank shaft casing by a suitable conduit, said conduit opening into said casing at a point above the oil therein, said piston being adapted on its in-stroke to compress the air in the crank-shaft casing and force the atomized lubricant through the conduit to the bearing; and a check valve for said conduit.

2. The combination with a crank shaft casing forming an inclosed chamber and adapted to serve as a lubricant receptacle; a cylinder opening at its inner end into said chamber; a crank shaft having counterweights thereon, said crank shaft and counterweights being adapted to strike into the lubricant as the crank shaft is revolved, whereby the said lubricant is atomized; a piston; a connecting rod; a bearing connected to said crank shaft casing by a suitable conduit, said conduit opening into said casing at a point above the oil, said piston being adapted on its in-stroke to compress the air in the crank-shaft casing and force the atomized lubricant through the conduit to the bearing.

3. The combination with a crank shaft casing forming an inclosed chamber and adapted to serve as a lubricant receptacle; a cylinder opening at its inner end into said chamber; a crank shaft adapted to strike into the lubricant as the crank shaft is revolved, whereby the said lubricant is atomized; a piston; a connecting rod; a bearing connected to said crank shaft casing by a suitable conduit, said conduit opening into said casing at a point above the oil therein, whereby, on the in-stroke of the piston, the atomized lubricant will be forced through the conduit to the bearing; and a check valve for said conduit.

4. The combination with a crank shaft casing forming an inclosed chamber and adapted to serve as a lubricant receptacle; a cylinder opening at its inner end into said chamber; a crank shaft adapted to strike into the lubricant as the crank shaft is revolved, whereby the said lubricant is atomized; a piston; a connecting rod; and a bearing connected to said crank shaft casing by a suitable conduit, said conduit opening into said casing at a point above the oil therein, said piston being adapted on its in-stroke to compress the air in the crank-shaft casing and force the atomized lubricant through the conduit to the bearing.

5. The combination with a crank shaft casing forming an inclosed chamber and adapted to serve as a lubricant receptacle; a crank shaft having counterweights thereon, said crank shaft and counterweights being adapted to strike into the lubricant as the crank shaft is revolved, whereby the said lubricant is atomized; a bearing connected to said crank shaft casing by a suitable conduit opening into said casing at a point above the oil, whereby the atomized lubricant is conducted to the bearing; and a check valve for said conduit.

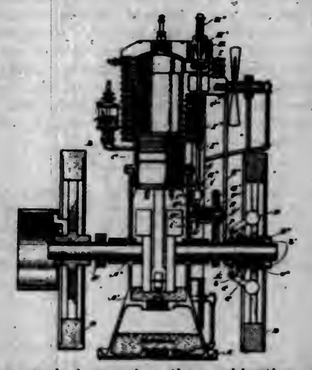
[Claim 6 not printed in the Gazette.]

877,024. GOVERNOR FOR EXPLOSION-ENGINES. CHARLES H. WAY, Lansing, Mich., assignor to "New Way" Motor Company, Lansing, Mich. Filed May 22, 1905. Serial No. 261,570.

1. In an explosion engine, the combination of a governor; an exhaust valve; a stem therefor; an actuating cam for the said exhaust valve; a hollow spindle for said cam; a plunger arranged in said hollow spindle; a finger on said plunger adapted to engage said exhaust valve stem when said plunger is in its outer position, to hold the same open; connections for said governor and plunger; an electrical contact member; and a projection on said exhaust valve stem adapted to engage said contact member as said exhaust valve is operated, for the purpose specified.

2. In an explosion engine, the combination of a governor; an exhaust valve; a stem therefor; an actuating cam for said exhaust valve; a hollow spindle for said cam; a plunger arranged in said hollow spindle; a finger on said plunger adapted to engage said exhaust valve stem when said plunger is in its outer position, to hold the same open; and connections for said governor and plunger, for the purpose specified.

3. In an explosion engine, the combination of a crank shaft; a flywheel, the hub of said flywheel having chambers formed therein; governor weights pivotally mounted on said flywheel; a collar slidingly mounted on said shaft connected to said governor weights; blocks arranged in the said chambers in said flywheel hub to engage said collar; coiled springs arranged in said chambers to engage said blocks; screws for adjustably retaining said springs in said chambers; an exhaust valve; an actuating cam for said exhaust valve; means for holding said exhaust valve in its open position; and a connection from said collar thereto, whereby said means are controlled, for the purpose specified.



4. In an explosion engine, the combination of a crank shaft; a flywheel, the hub of said flywheel having chambers formed therein; governor weights pivotally mounted on said flywheel; a collar slidingly mounted on said shaft connected to said governor weights; blocks arranged in the said chambers in said flywheel hub to engage said collar; coiled springs arranged in said chambers to engage said blocks; an exhaust valve; an actuating cam for said exhaust valve; means for holding said exhaust valve in its open position; and a connection from said collar thereto, whereby said means are controlled, for the purpose specified.

5. In an explosion engine, the combination of a crank shaft; a flywheel, the hub of said flywheel having chambers formed therein; governor weights pivotally mounted on said flywheel; a collar slidingly mounted on said shaft connected to said governor weights; blocks arranged in the said chambers in said flywheel hub to engage said collar; coiled springs arranged in said chambers to engage said blocks; an exhaust valve; and means controlled by the said collar for holding said exhaust valve in its open position when the speed of the engine exceeds a predetermined rate.

877,025. DEVICE FOR HANGING WALL-PAPER. DANIEL WEBSTER, Baton Rouge, La. Filed Mar. 25, 1907. Serial No. 364,397.

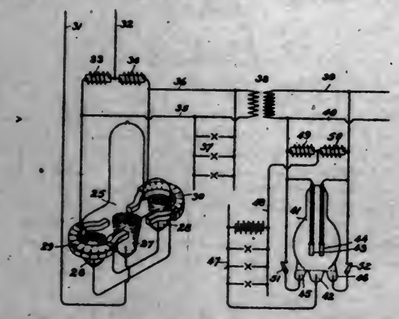


1. A device for hanging wall paper, comprising a handle, a T-head fixed on the upper end of the handle, a paper-

applying body fixed to the ends of the T-head, means connected with said body for yieldingly holding a piece of wall paper to the same, and a guide having a shank connected to the handle and also having a loop disposed in rear of and in about the same horizontal plane as the paper-applying body.

2. A device for hanging wall paper, comprising a handle, a T-head fixed on the upper end of the handle, a paper-applying body fixed to the ends of the T-head and having an upper flat side and a forward flat side disposed at right angles to each other, a bail having a horizontal portion normally resting in rear of the rear side of the body and also having forwardly extending arms and lateral inwardly-extending terminals thereon disposed adjacent to the front side of the body, and springs coiled about said terminals and connected at one end to the body and at their opposite ends to the arms of the bail.

877,026. TRANSFORMING THE ENERGY OF ELECTRIC CURRENTS. EZECHIEL WEINTRAUB, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 23, 1903, Serial No. 166,658. Renewed July 13, 1907. Serial No. 383,621.



1. The combination of a source of direct current, a vapor conductor for converting the direct current into alternating current, means for transforming the alternating current into another alternating current of different voltage, and means for reconverting the last-named alternating current into direct current.

2. The combination of a source of direct current, a vapor conductor for converting the direct current into alternating current, means for transforming the alternating current into another alternating current of different voltage, and a vapor rectifier for reconverting the last-named alternating current into direct current.

3. The combination of a vapor conductor having three electrodes, a direct current circuit having one of its mains or leads connected to one of said electrodes and its other main or lead to the other two electrodes.

4. The combination of a vapor conductor, a plurality of electrodes one of which is a cathode, and magnetic means for shifting the cathode spot.

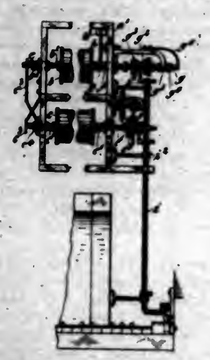
5. The combination of a vapor conductor, a plurality of electrodes one of which is a cathode, and electromagnetic means for shifting the cathode spot.

[Claims 6 to 17 not printed in the Gazette.]

877,027. MECHANICAL MUSICAL INSTRUMENT. JOHN A. WEBER, New York, N. Y. Filed Mar. 15, 1907. Serial No. 362,456.

1. In a tracker box mechanism for automatic pianos, etc., the combination with the music roll and its driving shaft of a driving head having a driving engagement with the roll and with the shaft and movable longitudinally to shift the roll, and means engaging said head to shift the same longitudinally.

2. In a tracker box mechanism for automatic pianos etc., the combination with the music roll and its driving shaft of a driving head having a driving engagement with the roll and with the shaft and movable longitudinally, said head being slotted circumferentially, and a disk engaging the slotted head and movable axially to shift the head and the roll with it.



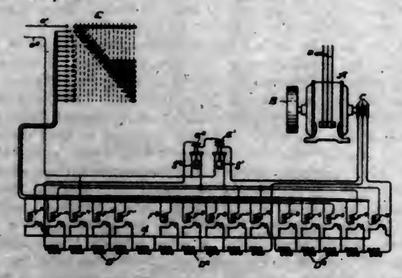
3. In a tracker box mechanism for automatic pianos etc., the combination with the music roll and its driving shaft of a driving head having a driving engagement with the roll and with the shaft and movable longitudinally, said head being slotted circumferentially, and a screw threaded stud mounted adjacent to the driving shaft and carrying a disk engaging the slotted driving head.

4. In a tracker box mechanism for automatic pianos etc., the combination with the music roll and its driving shaft of a sleeve like head having a driving engagement with the roll, slotted longitudinally for engagement with the shaft to rotate therewith and be movable longitudinally with respect thereto and slotted circumferentially, and a screw threaded stud mounted adjacent to the shaft and having a disk engaging the circumferential slot of the head.

5. In a tracker box mechanism for automatic pianos etc., the combination with the music roll and its driving shaft of a driving head having a driving engagement with the roll and with the shaft and movable longitudinally, said head being slotted circumferentially, a screw threaded head mounted adjacent to the driving shaft and carrying a disk engaging the slotted driving head and a brake applied to said disk.

[Claims 6 to 8 not printed in the Gazette.]

877,028. MOTOR CONTROL. HAROLD E. WHITE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 25, 1906. Serial No. 327,683.



1. In combination with an electric motor, a fly-wheel driven thereby, a starting resistance therefor, a manually-controlled switch for cutting said resistance out of circuit, and a plurality of magnetically-actuated switches arranged to cut portions of said resistance into circuit, the actuating magnet windings being connected and arranged to actuate said switches successively when the load on the motor exceeds predetermined amounts.

2. In combination with an electric motor, a fly-wheel driven thereby, a starting resistance therefor, a manually-controlled switch for cutting said resistance out of circuit, and means controlled by the load on said motor for cutting portions of said resistance successively into circuit when the load on the motor exceeds predetermined amounts.

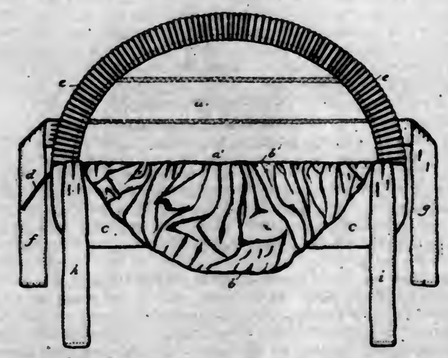
3. In combination with an electric motor, a fly-wheel driven thereby, a starting resistance therefor, a plurality of magnetically-actuated contacts for short-circuiting portions of said resistance, a manually-operated starting switch controlling the actuating magnets for said contacts, and means controlled by the load on the motor controlling a portion of said magnet windings.

4. In combination with an electric motor, a fly-wheel driven thereby, a starting resistance therefor, a plurality of magnetically-actuated contacts for short-circuiting portions of said resistance, a manually-operated starting switch controlling the actuating magnets for said contacts, magnetically-actuated means controlling said magnet windings, and connections for supplying to the actuating winding of said controlling means a current varying with the load on the motor.

5. In combination with an electric motor, a fly-wheel driven thereby, a starting resistance, a plurality of magnetically-actuated contacts for short-circuiting portions of said resistance, a manually-operated starting switch for serially energizing the actuating windings of said contacts, and means for automatically deënergizing a portion of said windings when the load on the motor exceeds a predetermined amount.

[Claims 6 to 11 not printed in the Gazette.]

877,029. SUNBONNET. CHARLES E. YOUNT, Sr., Harrisburg, Pa. Filed Nov. 7, 1907. Serial No. 401,143.

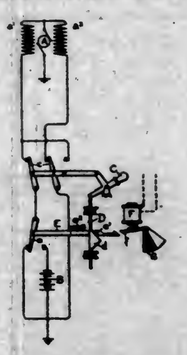


A launderable sunbonnet including a stiff crown portion having a straight rear edge, a relatively soft puff portion having a relatively long convex edge which is shortened by gathers to fit said straight edge and to give the puff the required fullness, and is inseparably attached at all points to said straight edge, said puff portion being further provided with a draw-string pocket substantially in line with said straight edge when said bonnet is flattened and folded, and a draw string within said pocket by tightening which the bonnet is drawn into shape, while by loosening the draw string the bonnet is adapted to be readily laundered or to be flattened and folded within a contracted space for storage and shipment, substantially as hereinbefore specified.

877,030. MOTOR CONTROL. CARL E. ZIX, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed July 25, 1906. Serial No. 327,676.

1. In combination, an electric motor having a divided field winding, a source of current therefor, and controlling means adapted to connect one portion of the field winding in series with the motor armature and the second portion in shunt for one direction of rotation and to connect the second portion in series and the first in shunt for the opposite direction of rotation.

2. In combination, an electric motor having a divided field winding, a source of current therefor, a connection from one armature terminal to the junction of the two field portions, a connection from the other armature terminal to one terminal of the source, and means for connecting the outer terminal of each field portion alternately to the two terminals of the source to reverse the motor.



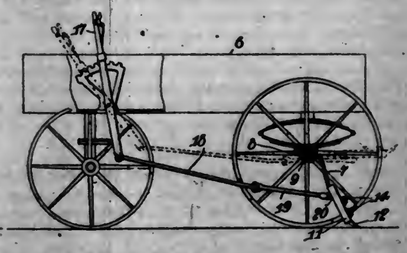
3. In combination, an electric motor having a divided field winding and one armature terminal connected to the junction of the two field portions, a member to be reciprocated by said motor, a source of current at a distant point, a connection from the second armature terminal to one terminal of the source, two leads from the source to the motor, a switch at the source arranged to connect the second terminal of the source alternately to said two leads, and a switch controlled by the movement of the motor arranged to connect the outer terminal of each field portion alternately to one of said leads and to the second armature terminal.

4. In combination, an electric motor having a divided field winding, a member to be reciprocated thereby, a source of current for the motor, a manually-controlled switch, and means controlled by the movement of the motor coöperating with said switch to connect each portion of the field alternately in series and in shunt to the armature for opposite directions of rotation and to break the motor circuit automatically when the reciprocating member has completed its movement in either direction.

5. In combination, an electric motor having a divided field winding, a source of current therefor, controlling means adapted to connect one portion of the field winding in series with the motor armature and the second portion in shunt for one direction of rotation, to connect the second portion in series and the first in shunt for opposite direction of rotation, and to connect the two field portions in parallel when the motor is at rest.

[Claim 6 not printed in the Gazette.]

877,031. VEHICLE-BRAKE. EDWIN S. ACKERMAN, Cleveland, Ohio, assignor of one-half to Wilbur E. Cunningham, Cleveland, Ohio. Filed Apr. 8, 1907. Serial No. 367,039.

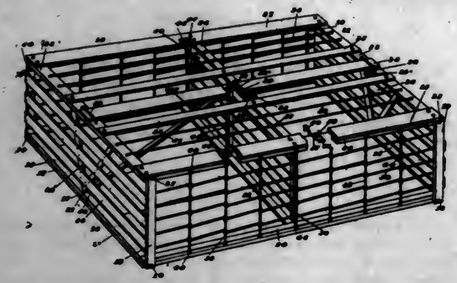


1. A vehicle brake comprising a pair of swinging bars connected to the vehicle and having shoes adapted to en-

gage the ground and crossed extensible braces connecting said bars.

2. A vehicle brake comprising a pair of swinging bars connected to the vehicle and having shoes at their lower ends adapted to engage the ground, adjustable braces between the bars, a lever on the vehicle, and a connecting rod from the lever, having branch links connected to each bar.

877,032. POULTRY-CRATE. RAYMOND ANDLAUER, Kansas City, Kans., assignor of one-third to Joseph H. Fink, Kansas City, Mo., one-third to George A. Patton, Denver, Colo., and one-third to John H. Schmidt, Kansas City, Mo.; Elizabeth H. Patton executrix of said Joseph H. Fink, deceased. Filed Feb. 26, 1907. Serial No. 359,479.



1. In a folding crate the combination with the top and bottom frames and folding standards pivotally connected at their ends with the ends of said frames and longitudinally extended wires forming the sides to said crate pivotally connected at their ends with the standards at the respective ends of said crate and folding therewith, said wires having a series of laterally extended zigzag bearings or shoulders in the direction of their length and twisted wires pivotally connected at their ends with the respective top and bottom frames having loops extending around the respective bearings or shoulders upon the longitudinally extended wires.

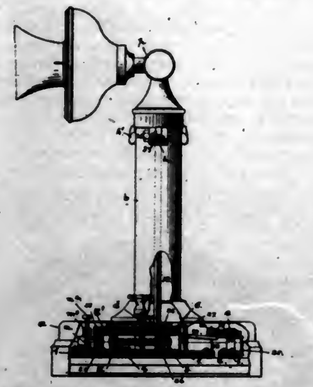
2. In a folding crate comprising a folding top and bottom and standards pivotally connected at their ends with the ends of said top and bottom, said top having an opening a stay bar pivotally connected with one end of said crate locking devices upon the top of said crate for the other end of said bar and a sliding releasable covering bar to the opening in said top adapted to secure the upper end of the stay bar from movement.

3. In a folding crate the combination with the upper and lower frames at the top and bottom of said crate foldable together and standards pivotally connected at their ends with the respective ends of said crate a transverse bar on the upper frame, a hook on said bar, a stay bar pivotally connected with one end of the crate having a perforate end portion engaging with the hook on the said transverse bar.

4. A folding crate composed of separate frames foldable together, standards pivotally connected at their ends with the ends of said frames one of said frames having a fixed transverse bar and a sliding notched bar and staples therefor, a spring upon said transverse bar adapted to bear upon the longitudinal surface of said notched bar, a stay bar pivotally connected at one end with the end of said crate and having a perforate outer end and a hook on the transverse bar on one of said frames beneath the sliding bar with which the perforate end of the stay bar engages and a catch on the other frame for the sliding bar when the crate is in a folded position.

877,033. SWITCHING MECHANISM FOR TELEPHONE-CIRCUITS. ALBERT K. ANDRIANO, San Francisco, Cal., assignor to Direct-Line General Telephone Company, San Francisco, Cal., a Corporation. Filed Mar. 15, 1905. Serial No. 250,155.

1. In a telephone switching-mechanism two circular series of stationary-contacts in parallel planes one over the other and having a common axis, the contacts in the lower series comprising insulated contact-points, and a contact-ring concentric therewith, the contacts in the upper series comprising an inner plate having alternate and concentric salient and reëntering angles and an outer ring having salient and reëntering angles corresponding in order and position to those on the inner-plate, situated in the same plane and insulated therefrom; in combination with a rotatable switch-piece centrally pivoted between the said lower series and upper series of contacts and movable in either direction around the circle, two separate contact-pieces carried thereby and insulated from each other, one of said contact-pieces operating to connect with the continuous contact-ring the selected stationary-contact to which it may be set, and the other contact-piece adapted by its position to rest on one side of the space between the inner plate and the outer ring of the upper contacts when a contact in the lower series is in metallic connection with the contact-ring, or to bridge the said space between the upper contacts when the switch-piece is moved.

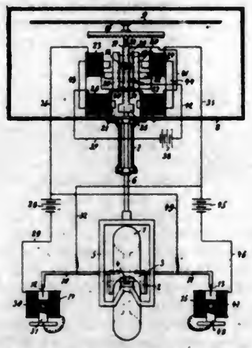


2. In a telephone switching-mechanism, the combination of two circular series of stationary-contacts in parallel planes one over the other, the contacts composing one series constituting separate terminals for individual lines, and a continuous contact-ring common to said contacts, insulated therefrom, the contacts in the other series comprising an inner plate having concentric and alternate salient and reëntering portions, and a surrounding ring having corresponding but relatively larger salient and reentering portions on the inner edge parallel with the corresponding portions on the inner ring, and separated therefrom; a rotatable switch-piece pivotally mounted between said upper series and lower series of contacts, and adapted to move in either direction, and contact-pieces on said movable switch-piece for making and breaking connection between the contacts in one series in alternate order to those in the other series by the same movement of the switch-piece.

877,034. GYROSCOPE. HERMANN ANSCHÜTZ-KÄEMPFE, Kiel, Germany. Filed June 6, 1906. Serial No. 320,398.

1. In a device for maintaining the axis of rotation of a gyroscope at its normal position, the combination with a gyroscope-wheel and means for supporting this upon its axis of rotation and upon two axes transverse thereto and to each other, of means for applying a torque tending to turn the said wheel upon one of the said two axes, and means controlled by said wheel in its turning on said axis for applying a torque tending to turn the wheel on the other of said two axes.

2. In a device for maintaining the axis of rotation of a gyroscope at its normal position, the combination with a gyroscope-wheel and means for supporting this upon its axis of rotation and upon two axes transverse thereto and to each other substantially horizontal and vertical respectively, of means for applying a torque to said wheel upon one of the said two axes, and means controlled by said wheel in its movement about its horizontal axis from its normal plane of rotation for applying a torque tending to turn it upon its vertical axis from its normal plane of rotation for returning it to its normal plane of rotation by turning on its horizontal axis.



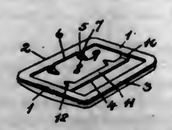
3. In a gyroscope, the combination with a gyroscope-wheel and a spindle therefor, of means for supporting the spindle and permitting said spindle and wheel to turn about a horizontal and about a vertical axis, both of said axes being transverse to the axis of rotation of the wheel on its spindle, means for exerting a torque tending to turn said wheel about its horizontal axis, and means rendered effective by the turning of the wheel upon its horizontal axis for exerting a torque tending to turn the wheel about its vertical axis for turning said wheel about its horizontal axis and returning the same to its normal plane of rotation.

4. In a gyroscope, the combination with a gyroscope-wheel, of means for supporting the same and permitting the wheel to turn about a horizontal and about a vertical axis, each of said axes being transverse to the axis of rotation of the wheel, means for exerting a torque tending to turn said wheel on said horizontal axis, and means rendered effective by the turning of the wheel on its horizontal axis for exerting a torque tending to turn the wheel on its vertical axis for turning said wheel on its horizontal axis and returning the same to its normal plane of rotation and thereby rendering the said vertical turning means ineffective.

5. In a gyroscope, the combination with a gyroscope-wheel and a spindle therefor, of a means for supporting the spindle and permitting said spindle and wheel to turn about a horizontal and about a vertical axis, each of said axes being transverse to the axis of rotation of the wheel on its spindle, adjustable means for exerting a torque tending to turn said wheel about its horizontal axis, electro-magnetic means for exerting a torque tending to turn the wheel about its vertical axis for turning said wheel about its horizontal axis and returning the same to its normal plane of rotation, circuit closers controlled by the wheel in turning on its horizontal axis; and means for maintaining the circuit closed until such return of the wheel to its normal plane of rotation.

[Claims 6 to 12 not printed in the Gazette.]

877,035. BUCKLE. MIECZYSLAW BARABASZ, Baltimore, Md. Filed Dec. 22, 1906. Serial No. 349,034.



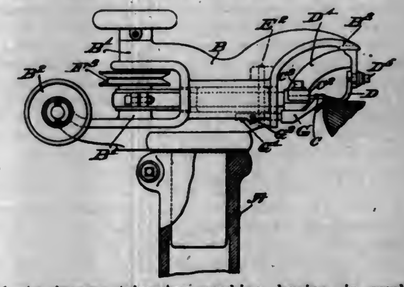
1. A buckle of a single plate comprising two side bars, and end bar connecting the two side bars and said end bar having teeth that are bent inwardly therefrom so as to project beneath the inner surface thereof and said teeth then extending laterally and having pointed ends and another bar connecting the side bars and having position in front of the lateral portions of said teeth and lying in a plane between the plane of the lateral portions of the teeth and the plane of the side bars of the buckle plate.

2. A buckle of a single plate comprising two side bars, an end bar connecting the two side bars, a cross bar having depressed ends and connecting the side bars and having position next to the end bar and lying in a plane within the plane of the side bars; and teeth on the end bar and projecting inwardly and toward said cross bar.

3. A buckle of a single plate comprising two side bars; an end bar connecting the side bars and having teeth that project beyond the inner surface of the side bars, a cross bar next to the end bar with the teeth and also having teeth at the edge adjacent the toothed end bar and the points of said teeth on the cross bar lying within the plane of the side bars and projecting toward the teeth on the end bar.

4. A buckle of a single plate comprising two side bars, two end bars connecting the side bars and a flange projecting from the outer edges of said side bars,—one of the said end bars having teeth that project inwardly and then laterally; a toothed cross bar connecting the side bars and said toothed cross bar being depressed and the depressed portion having position in a plane between the plane of the lateral portion of the teeth on the end bar and the plane of the side bars and the teeth on the depressed cross bar projecting toward the teeth on the end bar.

877,036. INSEAM-TRIMMING MACHINE. ARTHUR BATES, Leicester, England, assignor to United Shoe Machinery Company, Paterson N. J., a Corporation of New Jersey. Filed Nov. 4, 1907. Serial No. 400,524.



1. An inseam trimming machine, having, in combination, a trimming knife, a guide arranged to engage a shoe externally, an internal guide arranged to engage the inner surface of the lip of the insole in line with the external guide transversely to the line of feed, and coöperate with the external guide to position the shoe properly with relation to the trimming knife, and yielding means arranged to hold said guides continuously in engagement with the shoe and permit a relative movement of said guides towards and from each other.

2. An inseam trimming machine, having, in combination, a trimming knife, means for vibrating the trimming knife transversely to the line of feed, a yieldingly mounted guide engaging one side of the materials to be trimmed provided with a knife edge to coöperate with the trimming knife, and a stop to limit the yielding movement of the guide during the cutting stroke of the knife.

3. An inseam trimming machine, having, in combination, a trimming knife, a fixed guide arranged to engage a shoe externally, an internal guide arranged to engage the lip of the insole of the shoe continuously and cooperate with the external guide to position the shoe properly with relation to the trimming knife, and means for yieldingly holding the internal guide continuously in engagement with the lip of the insole.

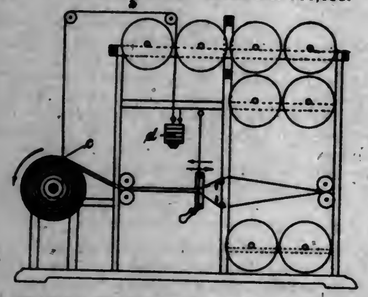
4. An inseam trimming machine, having, in combination, a trimming knife, means for actuating the knife, means coöperating with the knife to feed the shoe, and

guiding means to position the shoe in proper position with relation to the trimming knife.

5. An inseam trimming machine, having, in combination, a trimming knife, a guide arranged to engage the external surface of the material upstanding from the inseam, an internal guide arranged to engage the inner surface of the lip of the insole of the shoe continuously and coöperate with the external guide to position the shoe properly with relation to the trimming knife, and yielding means arranged to hold said guides continuously in engagement with the shoe and permit a relative movement of said guides towards and from each other.

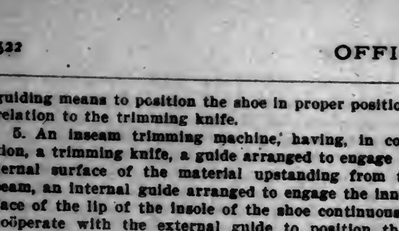
[Claims 6 to 12 not printed in the Gazette.]

877,037. APPARATUS FOR IMPREGNATING FIRE-IGNITERS. LUDWIG BERNARD, Prague, Austria-Hungary. Filed Apr. 2, 1907. Serial No. 366,051.



An apparatus for impregnating fire igniters in an impregnation fluid, comprising in combination, an impregnation basket, into which the various rolls of fire igniters are placed, separation sheaves for separating the said rolls inside the impregnation basket, and a bevel gear actuating the horizontal axis of the said impregnation basket, so that the latter is revolved inside the impregnation fluid, and thereby the rolls are entirely and equally covered with the impregnation fluid, substantially as described and shown and for the purpose set forth.

877,038. BENDING-ROLLS. CHARLES A. BERTSCH, Cambridge City, Ind. Filed June 22, 1907. Serial No. 380,267.



1. Bending rolls comprising housings, a top pinching roll, a bottom pinching roll, a head extension shaft for the top pinching roll, an outboard bearing on the extension shaft, a lever pivoted below the rolls, a link connecting the short arm of the lever with the outboard bearing, a pivoted buckle-bearing for the tail end of the top pinching roll, a toe carried by the buckle-bearing to engage the long arm of said lever, and a spring acting tensionally between the lever and buckle-bearing, combined substantially as set forth.

2. Bending rolls comprising housings, a top pinching roll, a bottom pinching roll, a head extension shaft for the top pinching roll, an outboard bearing on the extension shaft, a lever pivoted below the rolls, a link connecting the short arm of the lever with the outboard bearing, a pivoted buckle-bearing for the tail end of the top pinching roll, a curved series of rollers carried by the buckle-bearing to engage the long arm of said lever, and a spring acting tensionally between the lever and buckle-bearing, combined substantially as set forth.

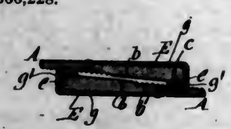
3. Bending rolls comprising housings, a top pinching roll, a bottom pinching roll, a head extension shaft for the top pinching roll, an outboard bearing on the extension shaft, a lever pivoted below the rolls, a link connecting the short arm of the lever with the outboard bearing, a pivoted buckle-bearing for the tail end of the top pinching roll, a toe carried by the buckle-bearing to engage the long arm of said lever, a saddle disposed under the lower pinching roll at substantially its center of length, and connections between said lever and saddle for lowering the saddle when the buckle-bearing is disengaged from the top pinching roll.

4. Bending rolls comprising housings, a top pinching roll, a bottom pinching roll, a head extension shaft for the top pinching roll, an outboard bearing on the extension shaft, a lever pivoted below the rolls, a link connecting the short arm of the lever with the outboard bearing, a pivoted buckle-bearing for the tail end of the top pinching roll, a toe carried by the buckle-bearing to engage the long arm of said lever, a saddle disposed under substantially the mid-length of the lower pinching-roll and provided with rollers engaging that pinching roll, an anti-deflection lever pivoted below the rolls and carrying said saddle at one of its ends, and an adjustable connection between the opposite end of the anti-deflection lever and said first mentioned lever, combined substantially as set forth.

5. Bending roll comprising housings, a top pinching roll, a bottom pinching roll, means whereby power may be applied to one of said rolls, a pinion fast on one of said rolls, a pinion loose on the other roll and engaging the first mentioned pinion, and means for frictionally binding the loose pinion to its roll, combined substantially as set forth.

[Claim 6 not printed in the Gazette.]

877,039. PRINTER'S QUOIN. FREDERICK W. BLACKHALL, Fort Erie, Ontario, Canada, assignor of one-half to George B. Hinkley, Buffalo, N. Y. Filed Apr. 3, 1907. Serial No. 366,228.



1. A wedge-shaped quoin-section, provided on its face side with a toothed longitudinal rib, in its back with a longitudinal groove and in its large end with a groove forming a continuation of said longitudinal groove, and a flat spring secured lengthwise in said longitudinal groove and having its free end portion bent inwardly and arranged in the end groove of the quoin section, said inwardly bent end extending beyond the face of said toothed rib and forming a spring-tooth adapted to interlock with the corresponding rib of an opposing quoin-section, substantially as set forth.

2. A quoin comprising a pair of wedge-shaped sections, each provided on its face side with a longitudinal series of locking teeth, and a spring secured to the back of the section and having its free end bent inwardly around the large end of the section, forming a spring-tooth adapted to interlock with the teeth of the opposing section, substantially as set forth.

877,040. FERTILIZER-SOWER. ROBERT BLAIR, Chicago, Ill. Filed Nov. 25, 1907. Serial No. 403,607.

1. In a device of the class described, a drum rotatably mounted upon a suitable support and comprising a pair of solid end members connected by a plurality of longitudinal members, in combination with a coarse mesh wire screen secured about said drum, a screen of finer mesh detachably secured about said drum and the first said screen and means for rotating said drum, substantially as described.

2. In a device of the class described, a drum rotatably mounted upon a suitable support and comprising a pair of solid end members connected by a plurality of longitudinal members, in combination with a coarse mesh wire screen detachably secured about said drum, a screen of finer mesh detachably secured about said drum and the first said screen and means for rotating said drum, substantially as described.

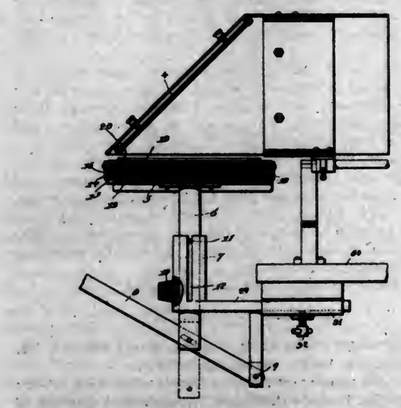


3. In a device of the class described, a drum rotatably mounted upon a suitable support and comprising a pair of solid end members connected by a plurality of longitudinal members and a door arranged between two of said longitudinal members, in combination with a coarse mesh wire screen covering the sides of said drum except said door and a screen of finer mesh entirely covering the sides of said drum, substantially as described.

4. In a device of the class described, a rotary drum comprising a pair of solid end members connected by a plurality of longitudinal members, in combination with a screen adapted to be arranged about said drum, said drum having a plurality of turn-buttons arranged upon one of said longitudinal members and the ends of said screen having a corresponding number of holes to receive said buttons as and for the purpose specified.

5. In a device of the class described, a rotary drum comprising a pair of solid end members connected by a plurality of longitudinal members, one of said longitudinal members being equipped with a plurality of turn-buttons in combination with a screen adapted to be wrapped about said drum and to have its end secured thereto by said buttons and a sheet metal member adapted to be wrapped about said drum and said screen and to be secured thereto by said buttons, substantially as described.

877,041. PROJECTION APPARATUS. ULRICH BLATTER, Boston, Mass., assignor to L. E. Knott Apparatus Company, Boston, Mass., a Corporation of Massachusetts. Filed May 5, 1906. Serial No. 315,302.



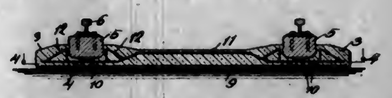
1. In a projection apparatus, the combination with means to project the image of an object, which means includes means to direct light rays on to said object, of an object-supporting table having a stem 6, a tubular holder through which said stem passes, and an operating lever pivotally connected to said stem below the table for raising and lowering the latter.

2. In a projection apparatus, the combination with means to project the image of an object, which means includes means to direct light rays on to said object, of an object-supporting table having a stem 6, a tubular holder through which said stem passes, and an operating lever pivotally connected to said stem below the table for raising and lowering the latter, said tubular holder having means for frictionally holding the table in any adjusted position, and means for preventing said table from turning.

3. In a projection apparatus, the combination with means to project the image of an object, which means includes means to direct light rays on to said object, of a horizontally-adjustable bracket having a tubular holder, a horizontal object-supporting table having a stem extending through said tubular holder, and a lever pivotally connected to the bracket and to the stem for vertically adjusting the table.

4. In a projection apparatus, the combination with means to project the image of an object, which means includes means to direct light rays on to said object, of a horizontally-adjustable bracket having a tubular holder, a horizontal object-supporting table having a stem extending through said tubular holder, a lever pivotally connected to the bracket and to the stem for vertically adjusting the table, and an object holder slidably mounted on the table and having provision for sustaining a plurality of objects.

877,042. RAILROAD-TIE. GAETANO BOSSI, Rome, Italy, assignor to Giovanni Mazzacorati, New York, N. Y. Filed Oct. 29, 1906. Serial No. 341,121.



1. A railroad tie having depressions therein extending transversely of the tie from side to side, the side walls of said depressions being longitudinally convergent, and correspondingly shaped blocks seated in said depressions upon which the rails are adapted to be secured.

2. A railroad tie having depressions therein extending transversely of the tie from side to side, the side walls of said depressions being longitudinally convergent, and correspondingly shaped blocks seated in said depressions to which the rails are secured, said tie being reinforced by rods embedded therein.

3. A railroad tie having depressions therein extending transversely of the tie from side to side, the side walls of said depressions being longitudinally convergent, and correspondingly shaped blocks seated in said depressions to which the rails are secured, said tie being reinforced by rods embedded therein, one series of said rods being bent to form loops which surround said depressions.

4. A rail-road tie having depressions formed therein and blocks seated in said depressions to which the rails are secured, the bottom of said depressions being concave to provide a space below said blocks.

877,043. VALVE OPERATED BY AIR. JAMES BOWERS, Caldwell, N. J. Filed Apr. 12, 1907. Serial No. 367,786.

1. In a dispensing system, a valve having an outlet port and two inlet ports, a valve disk to close one inlet port and open the other and vice versa, the outlet port being continually open, a valve stem supporting the valve disk, a cylinder on the valve, a piston in the cylinder and mounted on the valve stem, the piston being of larger area than the valve disk, a connection for conducting compressed fluid into the cylinder, means for regulating the admission of fluid into the cylinder, means for conducting a liquid under pressure to the valve, the valve being operated in one direction by the liquid under pressure, and adapted to be operated in the other direction by the application of compressed fluid to the cylinder.

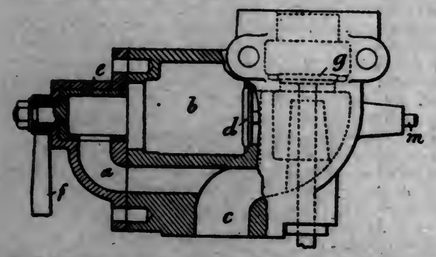
2. A valve comprising a casing having a perforated partition therein, the casing having an inlet at the bottom, an inlet above the partition, and an outlet below the parti-

tion and between it and the inlet at the bottom, a valve stem having a valve thereon to be seated against the inlet at the bottom or against the perforated partition, a cylinder mounted on the valve, a piston in the cylinder or greater area than the valve disk, and means for conducting compressed fluid to the cylinder to move the piston to force the valve to close the inlet at the bottom of the casing.



3. A dispensing system comprising a receptacle, a valve casing thereon having an inlet connected with the receptacle, the casing having an outlet near the bottom thereof and an inlet near its top, a perforated partition in the casing, a valve stem in the casing having a valve to alternately seat itself on the partition and on the inlet from the receptacle, a valved pipe for conducting a cleansing fluid to the inlet in the upper part of the casing, means for conducting compressed fluid to the receptacle, a cylinder on the valve casing, a piston in the cylinder of larger area than the valve, a pipe connecting the cylinder at its top with a supply of compressed fluid, a valve in the pipe for admitting air to the cylinder, the valve when shutting off the supply of compressed fluid venting the cylinder into the atmosphere.

877,044. CONTROLLING MEANS FOR GAS-ENGINES. HENRY W. BRADLEY, Ashton-under-Lyne, England. Filed June 20, 1904. Serial No. 213,364.



1. In combination with an internal combustion engine and a suction gas producer, a gas inlet valve for the engine and a continually open by-pass leading from the producer to the engine past the gas inlet valve, through which by-pass a minimum quantity of gas is drawn to maintain an incandescent zone in the producer.

2. A gas engine working with suction gas plant having a valve controlled gas inlet passage to the working cylinder and a continually open by-pass leading from said passage to said cylinder, substantially as described.

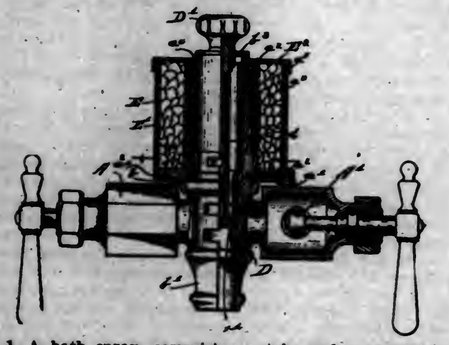
3. A suction gas engine having a valve controlled gas inlet passage to the working cylinder, a valve controlled charge inlet passage into which said gas passage leads, a continually open-by-pass from said gas passage to said charge passage, substantially as described.

4. A suction gas engine having a charge inlet passage to the working cylinder, a gas supply passage leading thereto, a valve controlling the opening of said gas passage to the charge passage, governor control means for said valve, a continually open by-pass from said passage to said charge inlet passage, substantially as described.

5. A suction gas engine having a valve controlled gas inlet passage and a continually open by-pass from said gas inlet to the working cylinder, governing means for controlling the opening of the gas valve, until at higher speeds the opening of said gas valve becomes *nil*, means for controlling the ignition, said means being connected to the governor and coming into operation only at higher speeds than that required to effect the reduction of the gas valve opening to *nil*, substantially as and for the purposes hereinbefore described.

[Claims 6 to 14 not printed in the Gazette.]

877,045. SPRAY. ROBERT A. BROOKS, Chicago, Ill., assignor to William A. Christiansen, Chicago, Ill. Filed Oct. 10, 1906. Serial No. 338,228.



1. A bath spray, comprising a tube and a concentric cylinder having chambers therein adapted to communicate with the tube, said cylinder rotatable to spray a plurality of kinds of medicinal or other sprays.

2. A bath spray comprising a tube adapted to communicate with a bath cock and a cylinder adapted to communicate with the tube and adapted to contain a plurality of kinds of medicinal or other salts, and to afford by rotation thereof a plurality of differently impregnated sprays.

3. A bath spray comprising a perforated receptacle containing chambers each adapted to contain a chemical ingredient and means directing a flow of water through any of said chambers under pressure to spray from the side thereof.

4. A bath spray embracing a source of water supply, a revoluble spray receptacle carried thereon, peripherally arranged chambers therein having apertures through their outer walls, materials for treating the spray therein and a valve for controlling the flow to the spray receptacle.

5. The combination with a cock of a receptacle connected thereon and through which the cock discharges, and having a chamber provided with perforated spraying walls, above the cock, and a valve connected to control the inlet into the receptacle and adapted for adjustment to discharge into the fixture, to discharge through the spraying wall, or to shut off the water.

[Claims 6 to 29 not printed in the Gazette.]

877,046. CHUCK. FRANK R. BROWN, Rural Retreat, Va. Filed Mar. 28, 1907. Serial No. 365,097.

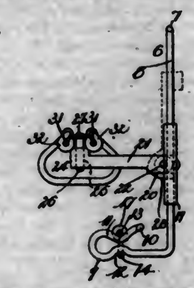
1. In a tool holding chuck, the combination with a body portion having threads thereupon throughout a portion of its length, interrupted by a continuous longitudinal slot, said body portion having continuous threads adjacent said slot, a sleeve engaged with the body portion and having a threaded portion engaged in said slot for sliding movement longitudinally thereof, said sleeve being arranged for rotation on the body portion to engage the threads at the sides of the slot.

2. In a tool holding chuck, the combination with a body portion having threads thereupon throughout a portion of its length, interrupted by a continuous longitudinal slot, said body portion having continuous threads adjacent said slot, a sleeve engaged with the body portion and having a



threaded portion engaged in said slot for sliding movement longitudinally thereof, said sleeve being arranged for rotation on the body portion to engage the threads at the sides of the slot or the threaded portion adjacent said slot.

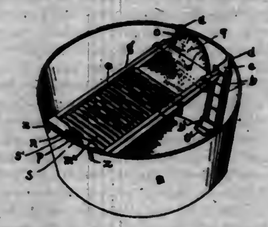
877,047. CLOTHES-HANGER. ALFRED J. BUTLER, Boston, Mass. Filed May 13, 1907. Serial No. 373,201.



1. A clothes hanger comprising a bracket adapted to be fastened to a stationary support and constructed of a piece of wire bent between its end to form an eye, with two side members extending downwardly from said eye, then projecting forwardly from the lower ends of said side members to form two lugs connected together and provided in the top and bottom thereof with depressions, and two wires slidably connected one to the other engaging between their connecting points the depressions in said lugs, said last named wires projecting laterally beyond said lugs upon opposite sides, respectively of said bracket and adapted to support a garment placed thereon.

2. A clothes hanger comprising a bracket adapted to be fastened to a stationary support and constructed of a piece of wire bent between its ends to form an eye, with two side members extending downwardly from said eye, then projecting forwardly from the lower ends of said side members to form two lugs connected together and provided in the top and bottom thereof with depressions, two wires slidably connected one to the other engaging between their connecting points the depressions in said lugs, said last named wires projecting laterally beyond said lugs upon opposite sides, respectively, of said bracket and adapted to support a garment placed thereon, a plate connecting said side members together, an arm pivoted to said plate, and a coat supporter detachably supported on said arm.

877,048. WASHBOARD. EMILY A. CLARK, Alexandria, Nebr. Filed Nov. 3, 1906. Serial No. 341,934.



1. A wash board having a rubbing board provided with a depressible smooth surface extension at its lower end.

2. A wash board having a rubbing board provided with a depressible smooth surface extension at its lower end, and means for returning said extension to normal position when disposed.

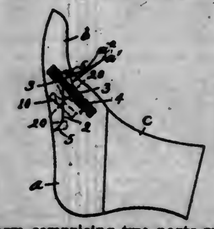
3. A wash board having a rubbing board provided with a depressible hinged smooth surface extension at its lower end, means for returning said extension to position when depressed, and means for securing said extension in reversed position when not in use.

4. A wash board having a rubbing board provided with a depressible extension at its lower end, said extension having a guard device at its lower end.

5. A wash board having a rubbing board provided with a depressible extension at its lower end, said extension having an upward projecting adjustable guard device at its lower end.

[Claims 6 to 9 not printed in the Gazette.]

877,049. SHOE-FORM. GEORGE H. CLARK, Boston, Mass. Filed July 3, 1903. Serial No. 164,105.



1. A shoe-form comprising two parts meeting in a joint extending from a point over the ball to near the middle of the shank, and a spring-connector holding their meeting surfaces together and permitting such surfaces to rock and also slide on each other when the form is bent or crippled.

2. A shoe-form comprising two parts meeting in a joint extending from a point over the ball to near the middle of the shank, and a spring-connector holding their meeting surfaces together and permitting such surfaces to rock and also slide on each other when the form is bent or crippled, the said parts being constructed to support the shank and release the vamp-seam while the form is bent or crippled for the purpose of being withdrawn from a shoe.

3. A shoe-form comprising two parts meeting in a point extending from a point over the ball to near the middle of the shank, the forepart having a hole therein entering from its meeting surface, and the heel-part having a projecting dowel with beveled end which enters the said hole, and a spring-connector holding the meeting surfaces of said parts togetner and permitting such surfaces to rock and also slide on each other when the form is bent or crippled.

4. A shoe-form comprising, essentially, a heel-part, a fore-part, and a spring-connector, and having the meeting portions of the said heel-part and fore-part overlapped horizontally, with the forward portion of the heel-part overlying the rearward portion of the fore-part, and having the two parts fitted together along a compound curve beginning at the top of the form at or about the place of the vamp-seam of a shoe and extending in an oblique direction rearward and downward through the waist-portion and terminating at the under side of the form at or about the middle of the length of the shank.

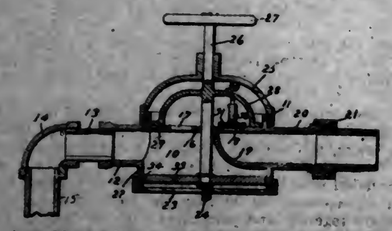
5. A shoe-form comprising, essentially, a heel-part, a fore-part, and a spring-connector, having the meeting portions of said heel-part and fore-part overlapped horizontally and the forward extension of the heel-part overlying the rearward portion of the fore-part, with the said forward extension formed with an outwardly curved engaging face near its extremity and the fore-part recessed upon its upper side at its rear end to receive the said face and also provide a rearward extension which enters and fills a recess formed in said heel-part, and having the two parts fitted together along a line beginning at the top of the form at or about the place of the vamp-seam of a shoe.

877,050. ENVELOP. BENJAMIN A. COLE, Fergus Falls, Minn., assignor of one-half to Frank H. Gray, Fergus Falls, Minn. Filed June 8, 1906. Serial No. 320,772.



A safety envelop comprising an outside and an inside wrapper, the outside wrapper being of usual form, and the inside wrapper consisting of a sheet of paper having upper and lower flaps, the outside surface of the lower flap of the inside wrapper being sealed to the inner surface of the lower flap of the outside wrapper; the upper flap of the inside wrapper being gummed on the outer surface and adapted to be turned down and folded into the inside wrapper and to be sealed on the inner surface of the lower flap thereof; the upper flap of the outside wrapper being adapted to be folded down and sealed on the outside surface of the upper portion of the upper flap of the inside wrapper and like surfaces of the lower and side flaps of the outside wrapper the surfaces of the body portion of each wrapper being free from sealing gum.

877,051. PACKLESS RADIATOR-VALVE. JOHN COLLIS, Des Moines, Iowa, assignor to Wm. P. Collis, New York, N. Y. Filed July 24, 1906. Serial No. 327,583.



1. A packless valve comprising a valve chamber provided with a partition having an opening therein, a valve holder arranged within the casing and in contact with one side of the partition, a valve within the holder capable of covering and uncovering the opening in the partition, and a pressure plate connected with the valve holder and arranged within the casing on the opposite side of the partition.

2. In a packless valve, the combination of a valve casing having an inlet opening and an outlet opening, and also having a partition provided with openings, through which communication may be had to the inlet opening from the outlet opening, a valve holder within the casing on one side of the partition, so shaped as to permit passage from one opening to the other through the partition, at all times, a valve within the holder capable of movement to position covering one of the openings in the partition, and a pressure plate connected with the valve holder, and arranged within the casing on the opposite side of the partition.

3. In a packless valve, a valve casing provided with inlet and outlet openings, a partition within the valve casing having two openings communicating respectively with the inlet and outlet openings, a valve holder within the casing in contact with one side of the partition, a valve within the holder in one position closing one of the openings in the partition and a pressure plate connected with the valve holder and disposed within the casing on the opposite side of the partition and spaced apart from the partition with one side only exposed to the inlet opening.

4. In a packless valve, the combination of a valve casing having inlet and outlet openings, a partition within the casing having two openings therein in communication respectively with the inlet and outlet openings, a valve holder within the casing in contact with one side of the partition and inclosing both of the openings therein, a valve within the holder in one position closing the opening in the position that communicates with the outlet opening of the casing and a stem extending through the partition having the valve holder connected therewith, said stem projected through the partition to a point spaced apart from the opposite side thereof and a pressure plate on said stem so disposed within the casing that only its side adjacent to the partition is exposed to the inlet opening.

5. In a packless valve, the combination of a valve casing having an inlet opening and an outlet opening, a partition within the casing having two openings communicating respectively with the inlet and outlet openings, a hemispherical valve holder mounted within the casing on one side of the partition and inclosing both of the openings therein, a valve within the holder in one position closing the outlet opening, a stem connected with the valve holder extended through the partition and a pressure plate on said stem having its surface nearest the partition exposed to the inlet opening of the casing.

[Claims 6 and 7 not printed in the Gazette.]

877,052. TRIPHENYLMETHANE DYE AND PROCESS OF MAKING SAME. ALFRED CONZETTI, Basel, Switzerland, assignor to Aniline Colour and Extract Works, formerly John R. Geigy, Basel, Switzerland. Filed Aug. 1, 1907. Serial No. 386,623.

1. The process for the production of coloring matters of the triphenylmethane series by condensing the hereinbefore defined orthosulfo-benzaldehydes in presence of sulfuric acid with aromatic orthooxy-carbonic acids and by subsequently oxidizing the thus produced leuco-compounds by means of a solution of sodium nitrite in concentrated sulfuric acid.

2. The process for the production of coloring matters of the triphenylmethane series by condensing the hereinbefore defined orthosulfo-benzaldehydes in presence of concentrated sulfuric acid with orthocresotinic acid and by subsequently oxidizing the thus produced leuco-compounds in the same solution of sulfuric acid by means of nitrosyl sulfuric acid.

3. The process for the production of coloring matters of the triphenylmethane series by condensing the hereinbefore defined orthosulfo-benzaldehydes in presence of concentrated sulfuric acid with ortho-cresotinic acid and by oxidising the thus produced leuco-compounds by means of a solution of a body containing an oxid of nitrogen in sulfuric acid.

4. As new articles of manufacture the coloring matters obtainable as described from the hereinbefore defined orthosulfo-benzaldehydes and aromatic orthooxy-carbonic acids which dyestuffs are in the shape of their free sulfonic acids from bright red to reddish brown powders, soluble in acidulated water with an orange, in diluted caustic soda lye with a violet color dyeing wool from acid bath bright red which shades by aftertreatment with bichromate change into a beautiful blue violet, and yielding the same blue violet shades when printed on cotton with a chrome salt.

5. As new article of manufacture the coloring matter obtainable as described from the orthosulfo-benzaldehyde and ortho-cresotinic acid, which dyestuff is in the shape of its free sulfonic acid a bright red powder soluble in acidulated water with an orange, in diluted caustic soda lye with a violet color, dyeing wool from acid bath bright red which shades by aftertreatment with bichromate change into a beatiful blue-violet, and yielding the same blue-violet shades when printed on cotton with a chrome salt.

877,053. TRIPHENYLMETHANE DYE AND PROCESS OF MAKING SAME. ALFRED CONZETTI, Basel, Switzerland, assignor to Aniline Colour and Extract Works, formerly John R. Geigy, Basel, Switzerland. Filed Aug. 1, 1907. Serial No. 386,624.

1. The process for the production of coloring matters of the triphenylmethane series by condensing the hereinbefore defined orthochloro-benzaldehydes in presence of concentrated sulfuric acid with aromatic orthooxycarbonic acids and by subsequently oxidising the thus produced leuco compounds by means of a solution of sodium nitrite in concentrated sulfuric acid.

2. The process for the production of coloring matters of the triphenylmethane series by condensing the hereinbefore defined orthochloro-benzaldehydes in presence of concentrated sulfuric acid with orthocresotinic acid and by subsequently oxidising the thus produced leuco compounds by means of nitrosylsulfuric acid.

3. The process for the production of coloring matters of the triphenylmethane series by condensing the hereinbefore defined orthochloro-benzaldehydes in presence of concentrated sulfuric acid with orthocresotinic acid and by subsequently oxidising the thus produced leuco compounds by means of a mixture of nitric and sulfuric acid.

4. As new articles of manufacture the coloring matters obtainable as described from the hereinbefore defined orthochloro-benzaldehydes and aromatic orthooxy carbonic acids which dyestuffs are in the shape of their free carbonic acids from orange red to dark bronzelike powder, soluble in diluted caustic soda lye with a violet color, dyeing wool slight yellowish red which shades by aftertreatment with bichromate change into a brilliant blue, and yielding the same blue shades when printed on cotton with a chrome salt.

5. As new article of manufacture the coloring matter obtainable as described from the 5-nitro-orthochloro-benzaldehyde and orthocresotinic acid, which dyestuff is in the shape of its free carbonic acid a red powder, insoluble in water, soluble in diluted caustic soda lye with a bluish violet color, dyeing wool from acid bath slight yellowish red which shades by aftertreatment with bichromate change into a brilliant greenish blue, and yielding the same greenish blue shades when printed on cotton with a chrome salt.

877,054. TRIPHENYLMETHANE DYE AND PROCESS OF MAKING SAME. ALFRED CONZETTI, Basel, Switzerland, assignor to Aniline Colour and Extract Works, formerly John R. Geigy, Basel, Switzerland. Filed Aug. 1, 1907. Serial No. 386,625.

1. The process for the production of coloring matters of the triphenylmethane series by condensing the hereinbefore defined diortho-dichloro-benzaldehydes in presence of concentrated sulfuric acid with aromatic orthooxy-carbonic acids and by subsequently oxidising the thus produced leuco compounds by means of a solution of sodium nitrite in concentrated sulfuric acid.

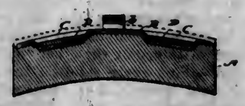
2. The process for the production of coloring matters of the triphenylmethane series by condensing the hereinbefore defined diortho-dichloro-benzaldehydes in presence of concentrated sulfuric acid with ortho-cresotinic acid and by subsequently oxidising the thus produced leuco compounds by means of nitrosylsulfuric acid.

3. The process for the production of coloring matters of the triphenylmethane series by condensing the hereinbefore defined diortho-dichloro-benzaldehydes in presence of concentrated sulfuric acid with orthocresotinic acid and by subsequently oxidising the thus produced leuco compounds by means of a mixture of nitric and sulfuric acid.

4. As new articles of manufacture the coloring matters obtainable as described from the hereinbefore defined diortho-dichloro-benzaldehydes and aromatic orthooxy carbonic acids which dyestuffs are in the shape of their free carbonic acids from fiery red to brownish red powder, soluble in diluted caustic soda lye with a blue color, dyeing wool from acid bath bright red shades which by aftertreatment with bichromate change into a pure blue, and yielding the same pure blue shades when printed on cotton with a chrome salt.

5. As new article of manufacture the coloring matter obtainable as described from the diortho-dichloro-benzaldehyde and orthocresotinic acid which dyestuff is in the shape of its free carbonic acid a fiery red powder, insoluble in water, soluble in diluted caustic soda lye with a blue color, dyeing wool from acid bath bright red shades which by aftertreatment with bichromate change into a pure blue, and yielding the same pure blue shades when printed on cotton with a chrome salt.

877,055. REINFORCED BRAKE-SHOE. JUDSON COOK, Philadelphia, Pa. Filed May 8, 1907. Serial No. 372,511.



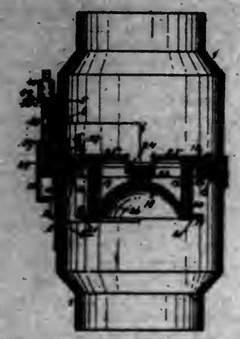
1. A reinforced brake shoe comprising a cast metallic body portion, a forged blank comprising two parallel portions which are connected together by a strap forming a loop, the edges of said parallel portions being in contact with each other and incorporated in said cast body portion, as set forth.

2. A reinforced brake shoe comprising a cast metallic body portion, a forged blank comprising two parallel portions which are connected together by a strap forming a loop, the edges of said parallel portions being in contact with each other and incorporated in said cast body portion, said blank being slitted longitudinally forming straps over which portions of the cast body extend, as set forth.

3. A reinforced brake shoe comprising a cast metallic body portion, a forged blank comprising two parallel portions which are connected together by a strap forming a loop, the edges of said parallel portions being in contact with each other and incorporated in said cast body portion, said blank being slitted longitudinally forming straps over which portions of the cast body extend, a portion of the body extending above the marginal edge of said blank, as set forth.

4. A reinforced brake shoe comprising a cast metallic body portion, a forged steel reinforcing blank comprising two parallel portions connected together by means of a strap, the ends of which fasten to said parallel portions a distance in from the inner edges thereof and designed to form a loop, said blank being slitted longitudinally forming straps which are bent to receive portions of the cast body, whereby the reinforcing plate may be securely anchored thereto, as set forth.

877,056. HEAT REGULATING AND CONTROLLING APPARATUS. PHILLIP W. CORNWELL, Brockton, Mass. Filed Mar. 8, 1906. Serial No. 304,845.



1. In an apparatus of the character described, a flue; a valve or damper consisting of a main portion comprising the ring-shaped portion 12 and guides extending therefrom, said main portion being pivotally supported in the flue and adapted to be rotated into an open or closed position therein, and the dome-shaped portion 18 provided with the flange 19 and ways adapted to slide on said guides; the levers 25, the opposite ends of which are pivotally supported by said main portion; links connecting said levers with the flange of the dome-shaped portion on opposite sides of the dome; and mechanism for swinging said levers simultaneously outward or apart and thereby moving the dome-shaped portion away from the main portion of the valve or damper, substantially as described.

2. In an apparatus of the character described, a flue; a valve or damper comprising a main portion, guides extending therefrom and suitable trunnions whereby said main portion is pivotally supported in the flue and adapted to be rotated into an open or closed position therein, and a dome-shaped portion adapted to slide on said guides; the curved levers 25 pivotally supported at one end by said main portion and sustained at the other end by one of said trunnions; intermeshing gears rigid on the outer parallel pivotal ends of said levers; links connecting the curved levers with said dome-shaped portion on opposite sides of the dome; and a lever 30 rigidly secured to one of the ends of one of the curved levers rigid with one of the gears, said lever 30 being adapted to be connected with automatic mechanism for opening and closing the draft door of the heater, substantially as set forth.

877,057. INSULATED RAIL-JOINT. PHILIP J. DALTON, Joliet, Ill., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed Dec. 7, 1906. Serial No. 346,787.



1. In an insulated rail joint, the rails, side angle bars, a base plate, a filler block interposed between the base plate and the rail bases, and insulating means.

2. In an insulated rail joint, the rails, side angle bars, a flanged base plate, a filler block confined between the flanges of the base plate, and insulating means.

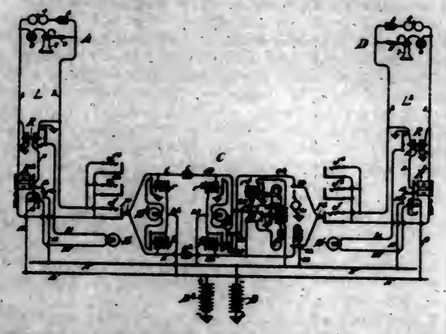
3. In an insulated rail joint, the rails, side angle bars, a base plate, a wooden block interposed between the base plate and the rail bases, and insulating means.

4. In an insulated rail joint, the rails, side angle bars, a flanged base plate, a wooden block confined between the flanges of the base plate and interposed between the latter and the rail bases, and insulating means.

5. In an insulated rail joint, the rails, side angle bars, a flanged base plate interlocked with both angle bars, a wooden block confined between the flanges of the base plate, and insulating means.

[Claims 6 to 20 not printed in the Gazette.]

877,058. TELEPHONE SYSTEM. WILLIAM W. DEAN, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 11, 1903. Serial No. 180,687.



1. In a telephone system, the combination with a plurality of telephone lines, of a pair of sources of current at the central office with one of which said lines are normally connected, a cut-off relay for each line, means for operating said relay in one direction when a connection is established with a calling telephone line to thereby render the line signal inoperative, the connection with said source of current remaining undisturbed at this time, and further means for operating said relay in the reverse direction when a connection is established with a called telephone line to render the line signal inoperative and to disconnect said source of current, substantially as described.

2. In a telephone system, the combination with a plurality of telephone lines, of a pair of sources of current at the central office with one of which said lines are normally connected, a cut-off relay for each line, means for operating said relay in one direction when a connection is established with a calling telephone line to thereby render the line signal inoperative, the connection with said source of current remaining undisturbed at this time, and further means for operating said relay in the reverse direction when a connection is established with a called telephone line to render the said line signal inoperative to disconnect said normal current source and to connect said second source therewith, substantially as described.

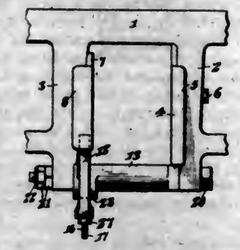
3. In a telephone system, the combination with a plurality of telephone lines, of a pair of sources of current at the central office, one of said sources being normally connected with the lines to permit the subscribers to call the central office, a polarized cut-off relay for each line, and means controlled by said cut-off relays when connections are established with the lines so that the normal connection of the calling subscriber with said current source remains undisturbed but the called subscriber's line is disconnected therefrom, substantially as described.

4. In a telephone system, the combination with a plurality of telephone lines, of a pair of sources of current at the central office, one of said sources being normally connected with the lines to enable the subscribers to call the central office, a polarized cut-off relay for each line, and means controlled by said relay and when connections are established with the lines so that the normal connection of the calling subscriber with said current source remains undisturbed but when connection is established with the called line the said source is disconnected therefrom and the other source is connected therewith, substantially as described.

5. In a telephone system, the combination with a plurality of telephone lines, of a pair of sources of current at the central office with one of which said lines are normally connected, a polarised cut-off relay for each line, a cord circuit to establish connections between the lines for conversation, one end of said cord circuit being connected with one pole of one source and the other end with the other pole of the other source, and means whereby when connection is established by the cord circuit with the lines the cut-off relays of the calling lines permit said first named source to remain in connection with such lines while with the called-for lines the cut-off relays are operated to disconnect said source, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

877,059. ADJUSTING DEVICE FOR LOCOMOTIVE DRIVING-BOXES. WILLIAM C. DICK, Freeport, Ill., assignor of three-fourths to Henry C. Eich, Freeport, Ill. Filed June 5, 1907. Serial No. 377,396.



1. In a device of the class described, the combination of a driving box adjusting wedge, a pedestal brace, a yoke surrounding the pedestal brace and interlocked with the wedge, and an adjusting screw interlocked with the pedestal brace and engaging the yoke for raising and lowering the wedge.

2. In a device of the class described, the combination of a driving box adjusting wedge, a pedestal brace, a yoke surrounding the pedestal brace and having its upper end detachably interlocked with the lower end of the wedge, and a screw for adjusting the yoke.

3. In a device of the class described, the combination with pedestal jaws, of a pedestal brace connecting the jaws, an adjustable wedge, a yoke surrounding the pedestal brace and connected at the top with the wedge, said yoke and wedge having interfitting engaging parts detachable from each other by relative movement longitudinally of the pedestal brace, and means for adjusting the movement.

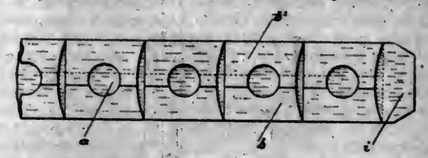
4. In a device of the class described, the combination of a wedge provided with an opening and having a slot communicating therewith, a pedestal brace, a yoke surrounding the pedestal brace and provided at the top with a head detachably fitted in the opening of the wedge and connected with the yoke by a neck portion, which is arranged in the said slot, and adjusting means for the yoke.

5. In a device of the class described, the combination of a wedge provided with an opening, a pedestal brace having a socket at the bottom, a yoke surrounding the pedestal brace and provided at the top with a projecting portion fitting in the opening of the wedge, and an adjusting screw engaging the bottom of the yoke and having a head fitted in the socket of the pedestal brace.

[Claims 6 to 9 not printed in the Gazette.]

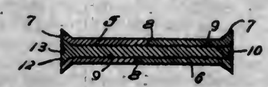
877,060. HOLDER FOR GRAMOPHONE DISK-RECORDS. CHARLES H. DOUGLASS, Philadelphia, Pa. Filed Sept. 24, 1906. Serial No. 336,051.

A holder for gramophone record disks comprising a longitudinal central portion of uniform width and two side portions, each side portion having a series of orifices extending inwardly from its edges, each orifice being of the shape of an incomplete circle and of less depth than the width of such portion, and having also a series of indentations extending inwardly from the edge of such side portion and of a depth substantially equal to the width of such side portion, the indentations and orifices of each side portion being arranged alternately, and the indentations and orifices of opposite side portions being respectively oppositely arranged, said side portions being



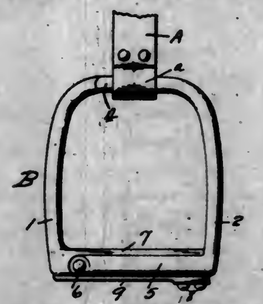
folded over upon the central portion and secured together at their adjacent edges and secured to the central portion along one of the two edges formed by each indentation, substantially as described.

877,061. BOLT. JEFFERSON D. EARNEST, Rutledge, Ga. Filed July 6, 1907. Serial No. 382,497.



A flush bolt comprising a pair of sleeve sections placed end to end and having their meeting ends shouldered to engage each other and form an unbroken shank, heads formed at the opposite ends of the sleeve sections, and a screw threaded through the sleeve sections.

877,062. STIRRUP. JOHN M. EASTERWOOD, Eupora, Miss. Filed Dec. 17, 1906. Serial No. 348,855.

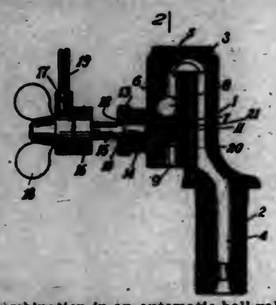


A stirrup of the type described comprising a section having a vertically disposed body portion terminating at its upper end in a bent portion having a horizontally extending tongue, and a section having a vertically disposed body portion and a horizontal extension at the lower end thereof, and terminating at its upper end in a pair of spaced horizontally extending legs between which said tongue is adapted to fit, to form a readily releasable joint centrally of said sections and adapted to be carried within the looped end of a stirrup strap, said lower horizontal extension being pivoted at its end to said first mentioned section, a flat resilient extension carried by said first named section and bearing against the upper surface of said horizontal extension, and a leaf spring carried on the lower surface of said horizontal extension and projecting beneath said first named section beyond the pivot of said extension thereto, substantially as described.

877,063. AUTOMATIC BALL-COCK. WILLIAM F. EDDS, Lynn, and LOUIS P. EDDS, Cambridge, Mass. Filed July 12, 1906. Serial No. 325,754.

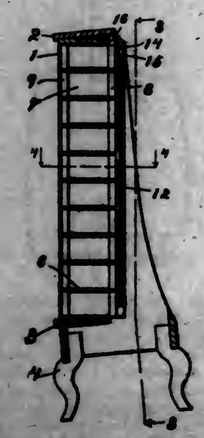
1. An automatic ball-cock having an inlet and outlet passage, the inlet passage leading to the top of a ball-valve; a ball-valve; a valve opening device consisting of a rotatable stem provided with a circular disk mounted

thereon; a concaved recess in said disk, said recess being formed and arranged so that the angle of the ends of said recess with the periphery of the disk will contact with, and quickly raise and lower the ball-valve.



2. The combination in an automatic ball-valve of a body part having an inlet and outlet passage, the inlet passage leading to the top of the ball-valve; a ball-valve; a seat for same; a ball-lifting device comprising a rotatable stem having a circular disk provided with a concaved recess therein, said concaved recess being formed and arranged so that the angle formed by the ends of the recess and periphery of the disk will quickly lift the ball-valve a predetermined distance and as quickly permit the same to close upon rotation of said disk; and an adjustable float on the stem for controlling the flow of water.

877,064. PHONOGRAPH-RECORD CASE. CHARLES W. EDSELL, Otsego, Mich. Filed Aug. 19, 1907. Serial No. 389,274.



1. In a rack or cabinet, the combination of a frame or casing with top, bottom and side walls; a plurality of partition walls arranged in said frame to form compartments; a back for said cabinet having openings therein adapted to be brought into register with said compartments; and vertical ways for said back arranged on the inside of said side walls.

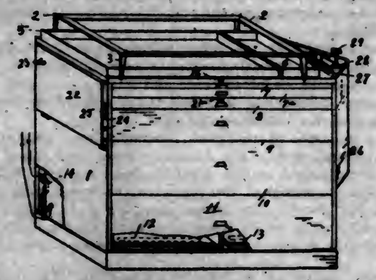
2. A rack or cabinet comprising a casing divided into a plurality of compartments open at both the front and rear; and an adjustable back for said cabinet having rows of openings therein adapted to be brought into register with said compartments, said openings being arranged in a zigzag series.

3. A rack or cabinet comprising a casing divided into a plurality of compartments open at both the front and rear; said an adjustable back for said cabinet having openings therein adapted to be brought into register with said compartments.

4. In a structure of the class described, the combination with a rack or cabinet, comprising a casing divided into a plurality of compartments, open at both the front and rear, of boxes comprising cylindrical bodies and bottoms and tops therefor, said bottoms and tops being adapted to be capped upon the bodies, and the bottoms being secured thereto, said compartments of said racks being adapted to receive said bodies when the same are presented endwise thereto with their covers removed, and the said bottoms being adapted to prevent the withdrawal of said boxes from the front of the rack and their contents made accessible from the front of the rack, said bodies projecting beyond the front edges of the rack compartments to receive the covers; and an adjustable back for said cabinet having openings therein through which said boxes may be inserted or removed when said openings are brought into register with said compartments.

5. In a structure of the class described, the combination with a rack or cabinet, comprising a casing divided into a plurality of compartments, open at both the front and rear, of boxes comprising cylindrical bodies and bottoms and tops therefor, said bottoms and tops being adapted to be capped upon the bodies, and the bottoms being secured thereto, said compartments of said racks being adapted to receive said bodies when the same are presented endwise thereto with their covers removed, and the said bottoms being adapted to prevent the withdrawal of said boxes from the front of the rack and their contents made accessible from the front of the rack, said bodies projecting beyond the front edges of the rack compartments to receive the covers.

877,065. WAITER'S CABINET. BURT. H. FARRELL, Deadwood, S. D. Filed Sept. 24, 1906. Serial No. 336,050.



1. A waiter's cabinet having several drawers, a heater drawer, an electric heater in said heater drawer, and a circuit closer operated by movement of the heater drawer to close the heater circuit.

2. A waiter's cabinet having several drawers, a common locking device therefor, a heater drawer, an electric heater in said heater drawer and a circuit closer operated by movement of the heater drawer to close the heater circuit.

3. A waiter's individual cabinet comprising a body having drawers, an elevated tray support fixed thereon and of convenient height to receive a waiter's tray in service, an uncovered drawer movably supported immediately below said elevated tray support, and a box fixed to the top of the cabinet body and limiting movement of the uncovered drawer, as set forth.

4. The combination of several individual waiter's cabinets, each comprising a body having drawers, and having an end extension open at the top and adapted to support holders and to fit corresponding extensions when grouped, as set forth.

5. The combination of several individual waiter's cabinets each comprising a body having drawers and having an angular end extension adapted to receive and support holders and to fit other corresponding angular end extensions when grouped, whereby it is insured that the grouped cabinets have a fixed relation to each other.

[Claims 6 and 7 not printed in the Gazette.]

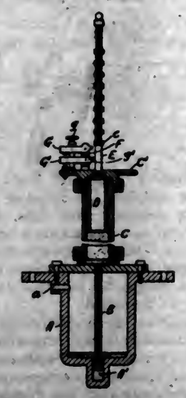
877,066. CREAM AND BUTTER SEPARATOR. ALPHEUS FAY, Louisville, Ky. Filed May 16, 1907. Serial No. 374,011.



1. In a cream or butter separator, the combination of a separating chamber; an operative shaft mounted thereon; a shell loosely mounted on the shaft and carrying within a pair of eccentrically mounted pinions connected together; a driving gear secured to said shaft and meshing with one of the pairs of gears; a second shell loosely mounted on the shaft and carrying within a concentrically mounted gear meshing with the other pinion, said shells being mounted to inclose and protect the gears and pinions; gear teeth on the exterior of the shells; a pair of agitating shafts in the separating chamber and carrying gears meshing with the gear teeth on the shells, and agitators on the shafts, substantially as specified.

2. In a cream or butter separator, the combination of chamber A; shaft D mounted thereon; shells F and J loosely mounted on shaft D; gear E on shaft D; gear H on shell J; pinions G and G' carried by shell F and meshing with gears E and H; gear teeth *f* and *j* on shells F and J; agitator shafts L and M carrying combined agitators and air pumps Q and R and agitators S and T; and gears *l* and *m* meshing with the teeth on shells F and J, substantially as specified.

877,067. AUTOMATIC TRANSMITTER FOR FIRE-ALARM AND SPRINKLER SYSTEMS. JAMES FIDDES and JOHN F. WATT, Aberdeen, Scotland, assignors to The Expansion Sprinkler Syndicate, Limited, Aberdeen, Scotland. Filed Oct. 26, 1906. Serial No. 340,641.

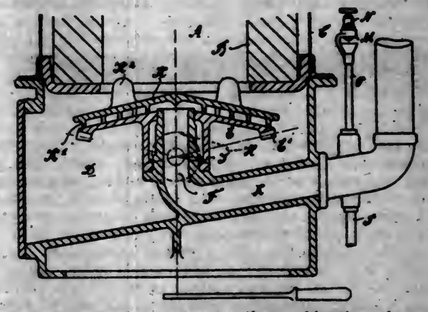


1. In a fire alarm or sprinkler system, a transmitting instrument comprising a vessel, containing liquid, for communication with a pressure duct of an alarm or sprinkler system, a float which rises and falls with said liquid, when the level of such is affected by the pressure in the duct, and a stationary electrical contact lever and a pivotal electrical contact lever and means connected with the float for moving the pivoted electrical contact lever on the descent of said float.

2. In a fire alarm or sprinkler system, a transmitting instrument comprising a vessel, containing liquid of high density, for communication with a duct of an alarm or sprinkler system, a cylinder a tube extending from said cylinder and having one end immersed in the liquid of high density, a float in said cylinder, a spindle secured to said float and fitted with a succession of collars, and electrical contact levers which are normally separated but which are successively brought into contact by the collars on the descending float.

3. In a fire alarm or sprinkler system, a transmitting instrument comprising a chamber which is adapted for communication with a pressure duct of an alarm or sprinkler system, a second chamber, means connecting said chamber and permitting liquid to pass back and forth from one chamber to the other, a float in the said second chamber, normally separated electrical contact levers, and means connected with the float for bringing said levers into contact upon descent of said float.

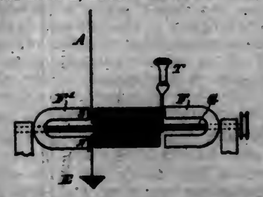
877,068. SUCTION GAS-GENERATOR. JOHN FIELDING, Gloucester, England. Filed July 10, 1906. Serial No. 325,483.



1. In a suction gas generator the combination of an air inlet pipe, a water inlet in the upper wall of said pipe, a water outlet opposite to the water inlet, a hollow fire grate on the mouth of the air inlet pipe, ribs between the plates of the grate, and means for facilitating the discharge of the ash and clinker, as and for the purpose specified.

2. In a suction gas generator the combination of an air inlet pipe, a water inlet in the upper wall of said pipe, a water outlet opposite to the water inlet, a hollow fire grate pivoted upon the mouth of the air inlet pipe, ribs between the plates of the grate, and means for rotating the grate, as and for the purpose specified.

877,069. MAGNETIC DETECTOR. LEE DE FOREST, New York, N. Y., assignor to George K. Woodworth, Boston, Mass. Filed Nov. 2, 1903. Serial No. 179,443.



1. In a magnetic oscillation detector, the combination with magnetizable means consisting of a plurality of magnetizable cores arranged annularly with respect to each other; of a magnet arranged substantially concentric

with respect to said magnetizable means; said magnetizable means being constructed and arranged to be relatively rotatable.

2. In a magnetic oscillation detector, the combination with magnetizable means consisting of a plurality of magnetizable cores arranged annularly with respect to each other; of means operable by received oscillations to vary the induced magnetization of said magnetizable means; and a magnet arranged substantially concentric with respect to said magnetizable means; said magnet and magnetizable means being constructed and arranged to be relatively rotatable.

3. In a magnetic oscillation detector, the combination with a substantially annular magnetizable member, of a magnet arranged concentric therewith, the annular member and magnet being constructed to be relatively rotatable.

4. A magnetic oscillation detector comprising a plurality of cores and coils thereon grouped about a common axis, and a magnet mounted to turn upon a coincident axis.

5. A magnetic oscillation detector comprising a plurality of cores disposed about a common axis, separate coils for said cores connected in series, and a magnet mounted to turn upon a coincident axis.

[Claim 6 not printed in the Gazette.]

877,070. SHADE-ROLLER. AARON T. FOSTER, Chillicothe, Ohio. Filed Apr. 17, 1907. Serial No. 368,637.



1. The combination with a hollow shade roller, of a bearing plug located at one end of said shade roller, a shaft, the end of which is adapted to receive said bearing plug, a spring surrounding said shaft, one end of which is secured thereto, and a collar secured to the opposite end of the shaft which is slotted for the purposes set forth.

2. The combination with a hollow shade roller, of a bearing plug located at one end of said shade roller, a shaft, the end of which is adapted to receive said bearing plug, a spring surrounding said shaft, one end of which is secured thereto, a collar secured to the opposite end of the shaft which is slotted for the purposes set forth, and a plate which closes the end of the roller and has its bearing upon said collar, said plate carrying pawls which are adapted to engage in the slotted portions of said collar.

3. In a device of the character described, the combination with a shade roller having a longitudinal opening formed therein, of a bearing plug carried by said roller at the inner end of said opening, a tubular shaft the inner end of which is adapted to have its bearing upon said bearing plug, a second plug driven into the opposite end of the shaft and having a flattened portion, a slotted collar mounted upon the exterior of said shaft, a plate mounted to turn with the roller, pawls carried by said plate which are adapted to engage the slotted portions of the collar, and a spring one end of which is secured to the shaft and the opposite end of which is secured to the plate.

4. A tubular shaft for shade rollers having a plug driven into one end thereof which is adapted to engage with a shade fixture and a collar surrounding said tubular shaft, said collar being slotted as and for the purposes set forth and pawls carried by the shade roller adapted to engage in the slots of the collar.

877,071. TOBACCO-PIPE. ARTHUR A. FURNESS, Guildford, England. Filed Apr. 18, 1907. Serial No. 368,900.

1. In a tobacco pipe having the shape of a cigar the forwarding mechanism consisting of a piston sliding within a tobacco chamber, a telescopic stem connected with said piston, single and double racks carried by the stem, a pivoted pawl formed with two sets of teeth engaging with the racks, a pivoted lever carrying said pawl, and a pressure piece or button fitted to the mouthpiece of the pipe and acting upon the lever, substantially as described.



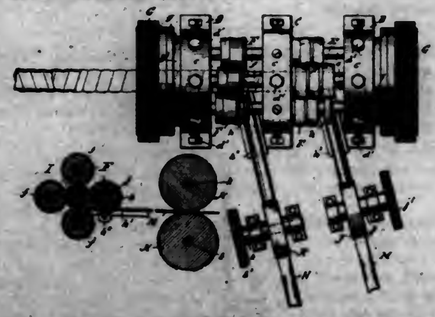
2. In a tobacco pipe having the shape of a cigar, the combination with the mouthpiece of a telescopic stem and an automatic locking device consisting of a latch pivoted to one of the sections of the said stem and operated by a guide carried by the other section of the stem, substantially as described.

877,072. EDGE-BINDING FOR GARMENTS. WILLIAM R. GARTON, Chicago, Ill. Filed Aug. 3, 1906. Serial No. 329,081.



As an article of manufacture, binding material of the character described, comprising a continuous, uniformly flexible body, having permanently fixed thereto, at suitable intervals, segregated, attaching, spring-pressed connectors, each connector comprising a pin and a retaining spring secured to said pin, whereby said material is temporarily secured to the protected fabric.

877,073. MACHINE FOR MAKING METAL TUBING. EDWIN T. GREENFIELD, Kiamesha, N. Y. Filed Nov. 6, 1905. Serial No. 286,059.



1. The combination of a mandrel, a set of forming-rolls disposed about the mandrel for forming a strip spirally thereon, means for rotating said rolls, a second set of forming-rolls for forming a second strip spirally about the first, said set of rolls being so displaced laterally from the first set that the strip formed thereby breaks joints with the first strip, and means for rotating the second set of rolls, substantially as described.

2. The combination of a set of forming-rolls disposed about an axis for forming a strip spirally, means for rotating said rolls, a second set of forming-rolls for forming a second strip spirally about the first, said set of rolls being so displaced laterally from the first set that the strip formed thereby breaks joints with the first strip, and means for rotating the second set of rolls, substantially as described.

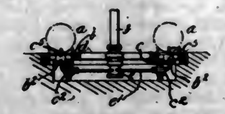
3. The combination of a set of forming-rolls having annular convex surfaces disposed about an axis for forming a strip spirally, means for rotating said rolls, a second set of forming rolls having annular concave surfaces for forming a second strip spirally about the first, said set of rolls being so displaced laterally from the first set that the strip formed thereby breaks joints with the first strip, and means for rotating the second set of rolls, substantially as described.

4. The combination of a mandrel, a set of forming-rolls having annular convex surfaces disposed about the mandrel for forming a strip spirally thereon, means for rotating said rolls, a second set of forming-rolls having annular concave surfaces for forming a second strip spirally about the first, said set of rolls being so displaced laterally from the first set that the strip formed thereby breaks joints with the first strip, and means for rotating the second set of rolls, substantially as described.

5. The combination of a die for bending a strip, a set of forming-rolls disposed about an axis for forming the strip spirally into a tube after it has been acted upon by said die, means for rotating said rolls, a second die for bending a second strip, a second set of forming-rolls for forming said strip spirally about the first and breaking joints therewith after it has been acted upon by said die, and means for rotating said rolls, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

877,074. MEANS FOR CLEANSING CASKS. HENRY S. GREGORY, Tufnell Park, London, England. Filed Mar. 4, 1907. Serial No. 360,533.

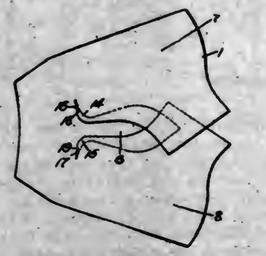


1. In an apparatus of the class described, a table, a rotatable support for the cask, means for injecting a cleansing fluid into said cask, and means actuated by the cleansing fluid to cause the said support to rotate.

2. A cask cleansing apparatus comprising a table, a support for the cask, means for injecting a cleansing fluid into the cask, and a motor for rotating said support, said motor being actuated by the passage of the said cleansing fluid.

3. A cask cleansing apparatus comprising a turntable, a plurality of individual cask supports mounted on the turntable, means for injecting a cleansing fluid into each cask, and a fluid motor for rotating each support operated by the passage of said cleansing fluid.

877,075. SHOE-UPPER. WAYNE M. GRIFFIN, Manchester, N. H. Filed Sept. 25, 1907. Serial No. 394,428.



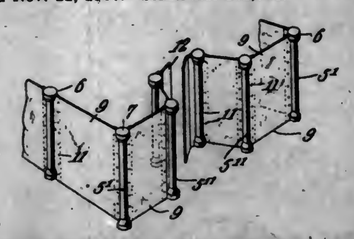
1. A seamless shoe comprising an upper composed of a single piece longitudinally slitted to form the inner or securing edges of the flies and having a tongue formed integral therewith, the upper being cut transversely of its length adjacent the base of the tongue to form lower forward ends only for the said flies, said transverse cut terminating at said lower forward ends of said flies, the said lower ends being positioned to overlie the opposite edge of the transverse cut and secured to the forward or body portion of the upper for a portion only of the extent of the forward ends of such flies, thereby permitting the opening up of the flies.

2. A seamless shoe comprising an upper composed of a single piece longitudinally slitted to form the inner or securing edges of the flies and having a tongue formed integral therewith, the upper being cut transversely of its length adjacent the base of the tongue to form lower forward ends only for said flies, said transverse cut terminating at said lower forward end of said flies, the said upper being crimped upon opposite sides along axial lines forming substantially opposite continuations of said transverse cut, said lower ends of said flies being positioned to overlie the opposite edge of the transverse cut and secured thereto only at and closely adjacent opposite ends of said transverse cut, thereby leaving the inner portions of the lower ends of said flies unattached to said opposite edges of the transverse cut.

3. A seamless shoe comprising an upper composed of a single piece longitudinally slitted to form the inner or securing edges of the flies and having a tongue formed integral therewith, the upper being cut transversely of its length adjacent the base of the tongue to form lower forward ends only for said flies, said transverse cut terminating at said lower forward end of said flies, the said upper being crimped upon opposite sides along axial lines forming substantially opposite continuations of said transverse cut, and also crimped along a line forming an extension of the tongue, said lower ends of said flies being positioned to overlie the opposite edge of the transverse cut and secured thereto only at and closely adjacent opposite ends of said transverse cut, thereby leaving the inner portions of the lower ends of said flies unattached to said opposite edges of the transverse cut.

4. A blank for a shoe upper composed of a single piece longitudinally slitted to form the inner or securing edges of the flies and having a tongue formed integral therewith, said blank being cut transversely of its length adjacent the base of the tongue to form lower ends for the said flies, said transverse cut terminating at said lower forward ends of said flies.

877,076. COLUMN. SIMON S. HAGEMAN, Abilene, Kans. Filed Nov. 11, 1907. Serial No. 401,728.



1. A column including a body portion having its opposite ends provided with terminal caps, and attaching flanges extending longitudinally of the column and formed integral with the body portion and caps, said flanges being extended laterally beyond the exterior walls of the caps and provided with spaced perforations for the reception of fastening devices.

2. In building construction, a plurality of superposed columns each provided with a terminal cap having a flat bearing surface for engagement with the flat bearing surface of an adjacent column, integral flanges extending laterally from each column and connected with the adjacent cap, and coupling members connecting the flanges of said columns for clamping the same in vertical alinement with each other.

877,077. METHOD OF SHAPING METAL BODIES. ROBERT W. HARDIE, New York, N. Y. Filed June 17, 1907. Serial No. 379,527.

1. The method of shaping metal bodies, which consists in fluting the end of a tubular blank to form corrugations in

its inner and outer surface, at the same time stretching the corrugated portion and reducing it in thickness, then pressing out the corrugations to form a flaring flange.



2. The method of shaping metal bodies consisting in fluting the end of a tubular blank to form tapering corrugations, at the same time stretching the corrugated portion and reducing it in thickness, and then pressing out the corrugations to flare the end of the blank.

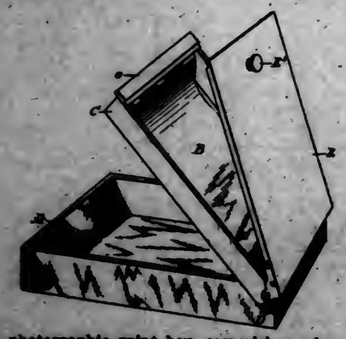
3. The method of shaping metal bodies consisting in corrugating the end of a tubular blank, forming other corrugations in the body of the blank spaced from the end corrugations, at the same time stretching the corrugated portions, then pressing out the corrugated portions to form a flaring end and expanded body with an intervening contracted neck.

4. The method of shaping metal bodies, consisting in corrugating the end of a tubular blank, forming other corrugations in the body of the blank spaced from the end corrugations, at the same time stretching the corrugated portions, then pressing out the corrugations to form a flaring end, an expanded body, and an intermediate contracted neck of greater thickness than the mean thickness of the body.

5. The method of shaping metal bodies consisting in forming tapering, longitudinal corrugations in a tubular blank, beginning at a point removed from the end of the blank, at the same time stretching the corrugated portion, and then pressing out the corrugations to form an expanded body having parts of different diameters and a contracted neck having a greater thickness than the mean thickness of the body.

[Claims 6 to 10 not printed in the Gazette.]

877,078. PHOTOGRAPHIC-PRINT BOX. MARTIAL H. HAVENHILL and EDWIN A. JENKINSON, Jacksonville, Ill. Filed Sept. 7, 1906. Serial No. 333,584.



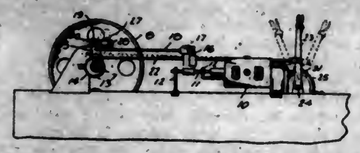
1. A photographic print box, comprising a box body, a frame pivoted at one end to an end of the box body and having at its free end a cross piece to engage the box body, a flexible partition secured at one end to the said box body and at the other end to the frame, and a cover pivoted to the frame and closing the box.

2. A photographic print box, comprising a box body, a flexible partition secured at one end in the said box body, a frame pivoted on the box body, the other end of the said partition being secured to the free end of the said frame, and a pivoted cover adapted to be seated on the said frame.

3. A photographic print box, comprising a box body, a flexible partition secured at one end on the said box body, a frame pivoted on the box body, the other end of the said partition being secured to the free end of the said frame, and a pivoted cover adapted to be seated on said frame, the pivots for the frame and cover being common to both.

4. A photographic print box, comprising a box body a frame hinged to the box body and adapted to fit upon the same, a cover for the frame, and a flexible partition secured at one end to the box body and at the other end to the free end of the frame.

877,079. GEARING FOR STEAM-ENGINES. HENRY M. HENDRICKSON, Granville, N. D. Filed May 28, 1907. Serial No. 376,159.



1. The combination with the power shaft and the valve rod, of a steam engine of an eccentric on said power shaft, an eccentric strap surrounding the same and provided with a vertical arm, a post carried by said valve rod, a link having pivotal connection with said arm and said post, a rock shaft supported in stationary bearings and parallel to said power shaft, a depending arm carried by said rock shaft, a controlling lever, a link having pivotal connection with said depending arm, and said controlling lever, rearwardly projecting arms carried by said rock shaft, a second rock shaft journaled in the ends of said rearwardly projecting arms, a forwardly projecting arm carried by said second rock shaft and having pivotal connection with said eccentric strap arm.

2. The combination with the power shaft and the valve rod, of a steam engine, of an eccentric on said power shaft, an eccentric strap surrounding the same and provided with a vertical arm, a post carried by said valve rod, a link having pivotal connection with said arm and said post, rearwardly projecting arms mounted for pivotal movement, manually operated means for moving said arms pivotally, a rock shaft journaled in the ends of said rearwardly projecting arms, and a forwardly projecting arm carried by said rock shaft and pivoted at its end to said eccentric strap arm.

877,080. MECHANICAL MUSICAL-INSTRUMENT PLAYER. BERNDT A. HOGLUND, New York, N. Y. Filed Nov. 27, 1905. Serial No. 289,185.



1. In a mechanical musical instrument player, the combination of the striking pneumatic, the main valve chest containing a pneumatic for effecting the direct admission of air to the said striking pneumatic, a second and separate valve chest containing a pneumatic for effecting the direct admission of air to the pneumatic in the main valve chest and an adjustable perforated tube for admitting air to the pneumatic in the second valve chest, the two valve chests being located and arranged side by side, substantially as shown and described.

2. In a mechanical musical instrument player, the combination with the main valve chest containing a diaphragm, and a second and separately constructed valve chest also containing a diaphragm, of an adjustable air conducting tube extending below and opening below the diaphragm in the second valve chest, said tube having also a perforation arranged to communicate with the space above said diaphragm, for the purposes explained.

3. In a mechanical musical instrument player, the combination with the main valve chest containing a diaphragm, and a second and separately constructed valve chest also containing a diaphragm, of an adjustable metallic air conducting tube extending below and opening below the diaphragm in the second valve chest, said tube having also a perforation arranged to communicate with the space above the said diaphragm and being seated in a perforation in the wall of the valve chest, substantially in the manner and for the purposes set forth.

877,081. CASTER. EDWIN H. HUMPHREY, Battle Creek, Mich., assignor, by direct and mesne assignments, of three-fourths to Lakewood Caster Co., a Corporation of New York, and one-fourth to Thomas Jennings, Rochester, N. Y. Filed Feb. 25, 1907. Serial No. 359,163.



1. In caster attaching devices for furniture, a pair of members, one provided with a peg having a rounded end, and the other provided with a split socket for the reception of the peg, the peg carrying member having a reinforcing flange snugly embracing the open end of the socket and serving to prevent spreading of the same.

2. In caster attaching devices for furniture, a pair of members, one of said members having a peg, the body of which is cylindrical, the peg terminating in an enlarged spherical head, the other of said members having a split socket arranged to receive both the spherical and cylindrical portions of the peg, the peg carrying member being provided with a flange that surrounds the open end of the socket and serves to reinforce and prevent spreading of said socket.

3. A furniture supporting peg having a cylindrical body portion, and a spherical end, and provided with a disk having a downwardly extending flange spaced from the spherical body of the peg, and a caster having a split socket receiving the peg and fitting partly within said flange, the latter serving to prevent spreading of the socket.

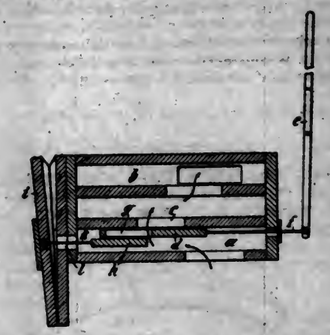
4. A caster attaching device, comprising a disk arranged to receive the weight of the article of furniture and provided at the top with a vertically disposed annular flange of less diameter than the disk, a band of compressible material surrounding the flange, and a peg depending from the flange and provided with an enlarged rounded head for the reception of the socket of the caster member.

5. A caster attaching device comprising a disk arranged to receive the weight of the article of furniture, a peg depending from the disk and provided with an enlarged rounded head, a flange also depending from the lower surface of the disk, the flange being spaced from and concentric with the peg, in combination with a caster having a split socket for the reception of the peg, the flange serving to receive the split end of the socket and reinforce the same.

877,082. REGULATION OF TONE IN MECHANICAL MUSICAL INSTRUMENTS. LUDWIG HUPFELD, Leipzig, Germany. Filed Nov. 1, 1906. Serial No. 341,615.

1. In a mechanically played musical key instrument, the combination with the air trunk and the opening thereto; of a primary or throttle valve, a regulating bellows and a secondary valve, both of said valves controlling the opening.

2. In a mechanically played musical key instrument, the combination with the air trunk and the opening thereto; of a primary or throttle valve, a regulating bellows and a secondary valve operated thereby and sliding on the primary valve both controlling the opening.



3. In a mechanically played musical key instrument, the combination with the air trunk and the opening thereto; of a primary or throttle valve controlling said opening and having an open-ended slot therein, a regulating bellows and a secondary valve operated thereby and sliding on and controlling the primary valve and controlling the open-ended slot.

4. In a mechanically played musical key instrument, the combination with the air trunk and the opening thereto; of a primary or throttle valve controlling said opening, said valve having an orifice and open-ended slot therein, a regulating bellows and a secondary valve operated thereby and controlling the open-ended slot.

5. In a mechanically played musical key instrument, the combination with the air trunk and the opening thereto; of a primary or throttle valve controlling said opening, said valve having an orifice n and an open-ended slot g', a regulating bellows and a secondary valve operated thereby and sliding on the primary valve to control said slot.

877,083. DUST-SHIELD FOR SELF-MOVING ROAD-VEHICLES. JOHN C. B. INGLEBY, Leeds, England. Filed June 10, 1907. Serial No. 378,322.



1. A self-moving road vehicle, provided with a dust-screen consisting of a frame and a covering of fabric which is suspended below the bottom of said vehicle and serves to cut off the air between said screen and the ground from the air between said screen and the bottom of the vehicle body, substantially as and for the purpose set forth.

2. A self moving road vehicle, provided with a dust screen which is suspended below the bottom of said vehicle and serves to cut off the air between said screen and the ground from the air between said screen and the bottom of the vehicle body, the said screen consisting of a frame and flexible fabric supported thereby and provided with means for drawing it taut substantially as set forth.

3. A self moving road vehicle provided with a dust screen which is suspended in horisontal position in the space between the bottom of said vehicle and the ground and extends horisontally out behind the said vehicle, the said screen consisting of a frame and flexible fabric thereon, the same being provided with means for making said fabric taut substantially as set forth.

4. A self moving vehicle provided with a dust guard suspended substantially in horisontal position between the

bottom of said vehicle and the ground and extending beyond the rear of said vehicle.

5. A self-moving road vehicle provided with an expansible and contractible dust screen, below the body of the vehicle, in combination with means for expanding and contracting the same, a rearward extension of said screen beyond the vehicle body, forming a tail dust screen which is expansible and contractible and means for contracting or expanding at will the said tail dust screen, for the purpose set forth.

[Claims 6 to 13 not printed in the Gazette.]

877,084. TRAVELER-RING FOR SPINNING-MACHINES. CHARLES W. JACKSON and WILLIAM A. McVICKER, Reidsville, N. C. Filed Aug. 3, 1905. Serial No. 272,572.



A device of the character described comprising a ring having an annular race, and a traveler loosely mounted in the race and having its terminals laterally overlapped and its inner terminal terminating in a single edge which extends above the surface of the ring.

877,085. SAFETY-PIN. HENRY KASPAR and JOSEPH KRESCI, Tyndall, S. D., assignors to Double Pointed Safety Pin Mfg. Co., Tyndall, S. D. Filed Mar. 6, 1907. Serial No. 360,871.



1. A safety pin including relatively stationary and movable members one of which is provided with a piercing point, and a guard secured to the stationary member and having one end thereof bent laterally and downwardly to form a flat inclined bearing surface terminating in an overhanging hook for the reception of the piercing point.

2. A safety pin including relatively stationary and movable members one of which is provided with a piercing point, a guard secured to the stationary member and having one end thereof bent to produce a flange, a portion of which is bent inwardly and downwardly to form an overhanging hook for the reception of the piercing point, the metal at the juncture of the flange and hook being inclined downwardly to form a guide for said piercing point.

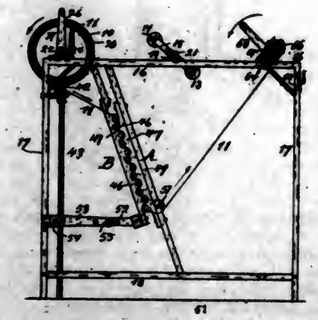
3. A safety pin including relatively stationary and movable members one of which is provided with a piercing point, a guard secured to one of the members and having its opposite end provided with means for engagement with the piercing point, and a spring locking tongue having one end thereof coiled around the stationary member and having its free end normally and yieldably supported in contact with the point engaging means.

4. A safety pin including relatively stationary and movable members one of which is provided with a piercing point, a guard rigidly secured to the stationary member and having its free end provided with an overhanging hook for engagement with the piercing point, a plate interposed between the guard and stationary member and provided with a depending spring tongue adapted to engage the hook, said plate being formed with a curved extension for engagement with the guard.

5. A safety pin including relatively stationary and movable members one of which is provided with a piercing point, a guard having one end thereof bent to form a tubular member for the reception of the stationary member and its opposite end bent to form an over-hanging hook for engagement with the piercing point, a plate having a curved terminal the end of which is interposed between the tubular and stationary members, a tongue depending from the plate and bearing against the hook, and a curved extension formed integral with the plate and locked in position by engagement with the guard.

[Claims 6 to 9 not printed in the Gazette.]

877,086. CLOTH-REFINISHING DEVICE. CHRISTIAN KECK, Crescent Springs, Ky. Filed June 4, 1906. Serial No. 319,996.



1. In a device for refinishing cloth, the combination of two sets of parallel pipes, open at opposite ends, and headers, one at each end of each set to which the pipes are rigidly connected and in a manner to permit heat to circulate through them, the sets being supported in a manner so that cloth may be drawn through between them while in frictional contact with the pipes.

2. In a device for refinishing cloth, the combination of two sets of connected pipes arranged so that steam may circulate through them and a frame on which they are supported in a manner to permit cloth to be drawn through between the sets, one of them being adjustable with reference to the other one.

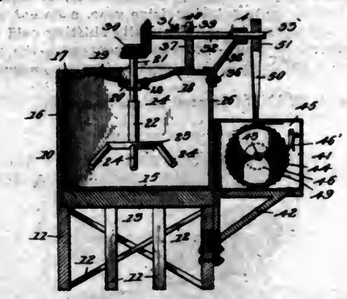
3. In a device for refinishing cloth, the combination of two sets of pipes connected and arranged in each set to permit circulation of steam, a frame on which one set is supported in a fixed position, the other set being supported movable to and from the first set, to permit cloth to be passed in between them, and means to hold the adjustable set in proper operative position with reference to the other set, while the cloth is drawn through.

4. In an apparatus for treating cloth, the combination of a cloth-shrinking drum and oppositely arranged sets of pipes each supported on a frame and each set arranged for circulation of steam so as to permit heating and a mandrel which receives the cloth after the same has been acted upon by the devices mentioned, the same being supported and arranged for rotation so that the cloth may be wound upon it after having been passed through between the heated pipe-sets and unwound from the shrinking drum.

5. In an apparatus for treating cloth, the combination of a shrinking-drum, a frame upon which the same is supported, means for applying heat to it, a mandrel to receive the cloth from the drum, sockets at each end of the mandrel between which this latter is carried, shanks projecting outwardly from each socket, bearings in which these shanks are mounted in a manner to permit rotation of the sockets together and with the mandrel between them, one of these shanks being so mounted as to be also movable in a longitudinal direction to permit adjustment of the socket thereon with reference to the adjacent end of the mandrel

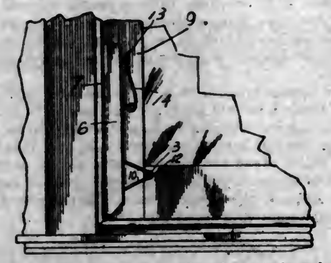
for the purpose of engaging or releasing this latter, a collar adjustably mounted on this particular shank and a spring which by acting against this collar holds this shank with the socket thereon in engagement with the mandrel.

877,087. SPRING WASHING-MACHINE. JAMES W. KENNEDY, Burke, N. Y. Filed Apr. 12, 1907. Serial No. 367,862.



The combination with a washing machine including an agitator shaft and a gear carried by the shaft, of inner and outer brackets supported upon the machine, the inner bracket having ears at its upper end, the outer bracket having a passage and arranged to lie in line with the ears, the ears of the inner bracket having alining passages, a horizontally extending shaft disposed between the ears of the inner bracket and arranged beneath the passages in the ears, the outer end of the shaft being arranged in the passage in the outer bracket, a portion of the horizontal shaft between the inner and outer brackets being hinged, the horizontal shaft having a gear and arranged to mesh with the first mentioned gear, and a removable pin disposed through the passages in the ears and above the horizontal shaft, for holding the shaft with its gear in mesh with the gear carried by the agitator shaft.

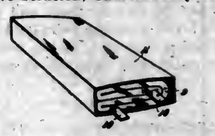
877,088. WINDOW-LOCK. COLUMBUS M. KINSEY, King, Tex. Filed July 23, 1907. Serial No. 385,202.



The combination with the stile of a window frame and the stile of a sash mounted to slide vertically in the frame, of a balance for the sash comprising a friction member, in the form of a strip, a V-shaped wire attaching member secured at the sides of its arms to the strip and bent at its middle to form an eye, a screw engaged through the eye and into the stile of the window frame, a similar member secured at the end of one of its arms to the strip and at the end of its other arm to the window frame whereby the lower portion of the strip will be held in frictional engagement with the sash.

877,089. METHOD OF MAKING ELECTRIC CONDENSERS. FRANK S. KOCH, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 15, 1904. Serial No. 220,712.

1. The process of making a condenser, consisting of suitably assembling the plates and dielectric material, placing said assembled elements in a retaining can or casing, immersing said can and its contents in paraffin or wax at a high temperature to thereby impregnate the dielectric material with the paraffin, and to permit the paraffin to fill all the crevices and corners of the can, whereby the contents of the can when cold is a solid mass, and subjecting the can and its contents to heavy pressure to remove the surplus paraffin and bring the plates into intimate inductive relation, substantially as described.

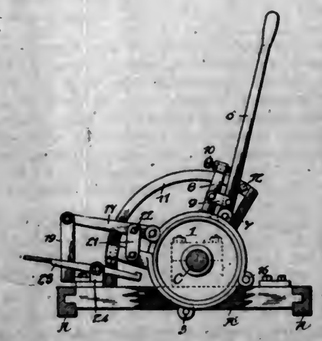


2. The process of making condensers consisting in assembling the conductors and dielectric, placing the same in an inclosing case, submerging the case and parts in a molten dielectric material, and subjecting the case and parts to pressure, substantially as described.

3. The process of making condensers which consists in assembling the conductors and dielectric, forcing the assembled parts into an inclosing case, submerging the case and parts in molten dielectric material, removing the case and contents and subjecting the whole to pressure, substantially as described.

4. The process of making condensers which consists in assembling the conductors and dielectric, forcing the assembled parts into an inclosing case, submerging the case and parts in a molten dielectric, material, removing the case and contents and subjecting the whole to pressure, and allowing the dielectric material to harden under pressure, substantially as described.

877,090. APPLIANCE FOR SAWMILL SET-WORKS. WILLIAM F. KOCH, Newbern, N. C. Filed June 20, 1907. Serial No. 379,862.



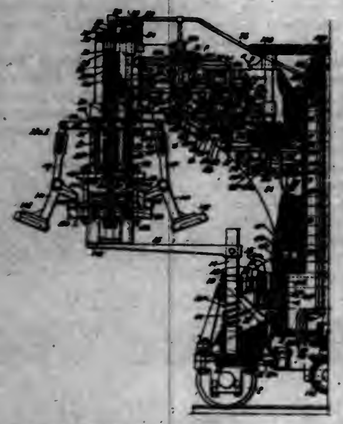
1. In an intermittent gripping device for the purpose described, the combination of a shaft having two frictionally surfaced members mounted thereon, an operating lever fulcrumed outside said shaft, a two part gripping band engaging one of said friction surfaces, said band having its engaging ends hinged to one another, the other end of one of said parts forming the fulcrum of said lever, connections between said lever and the other end of the other of said parts, a second similar band engaging the other of said friction surfaces, and a foot lever and operating levers for controlling said second band, substantially as described.

2. In an intermittent gripping device for the purpose described, the combination of a shaft having two frictionally surfaced members mounted thereon, an operating lever fulcrumed at its end outside said shaft, a two-part gripping band engaging one of said friction surfaces, said band having its engaging ends hinged to one another, the other end of one of said parts forming the fulcrum of said lever, connections between said lever and the other end of

the other of said parts, means for limiting the movement of said lever, a second similarly constructed band engaging the other of said friction surfaces, and a foot lever and operating levers for controlling said second band, substantially as described.

3. In an intermittent gripping device for the purpose described, the combination of a shaft having two frictionally surfaced members mounted thereon, an operating lever fulcrumed outside of said shaft, a gripping band engaging one of said friction surfaces and connected to and operated by said lever, a second gripping band engaging the other of said friction surfaces, and a foot lever and operating levers for controlling said second band, substantially as described.

877,091. MECHANISM FOR PRODUCING HOLLOW GLASSWARE. CHRISTIAN J. KOENIG, Alton, Ill. Filed Jan. 31, 1907. Serial No. 355,102.



1. In a glass gathering machine, a support, a carrier mounted on the support and extended radially therefrom, automatic means for raising and lowering the support at predetermined times, a glass gathering means mounted on the support, including opposing mold heads having a plurality of cores, automatic mechanism for reversibly turning said mold heads 90° at predetermined times, and means on the central support for engaging with and setting the said automatic mechanism in operation when the carrier rotates as set forth.

2. In a machine for the manufacture of hollow glass ware, a central support, a carrier rotatably mounted thereon, a forming head mounted on the carrier having a hold provided with a plurality of cores, means for drawing molten glass into the mold around the cores, means mounted on the carrier for rotating the molds, and devices on the central support adapted to set said means into action as the carrier is rotated.

3. In a machine for the manufacture of hollow glass ware, a central support, a carrier rotatably mounted thereon, a plurality of independent mechanisms or heads of like construction supported on the carrier, each of said mechanisms including a blank mold and a blowing mold, said molds being coöperatively joined and adapted to alternately open or close, means for first causing molten glass to flow into the blank mold when it is closed, and for then blowing the formed blank, a screw feed controlled means for actuating the alternate opening and closing of the molds, and devices on the carrier, and on the support adapted to coact at predetermined times to create a reversal movement of the screw feed for the purposes specified.

4. In a glass shaping machine, in combination with a stationary support, a carrier rotatably mounted on the said support, a plurality of heads mounted on the carrier, mechanism on each head for collecting a glass charge and for shaping the same, and means for intermittently rotating the carrier, of a drive mechanism in gear with all the glass charge collecting and shaping means, and means for intermittently actuating and locking the drive mechanism with the rotary carrier, and disengaging the same therefrom at predetermined times.

5. In a hollow glass ware making machine, a central support, a carrier rotatably mounted on the support, a series of radially projected heads mounted on the carrier, a glass gathering and shaping mechanism mounted on each head, a continuously rotating drive gear, a detent carried thereby, and means for automatically shifting said detent at predetermined times into engagement with the carrier to impart a partial rotation thereto, for the purposes set forth.

[Claims 6 to 32 not printed in the Gazette.]

877,092. CHIMNEY-VENTILATOR. ALBERT KRIC, Chicago, Ill. Filed Feb. 23, 1907. Serial No. 358,866.



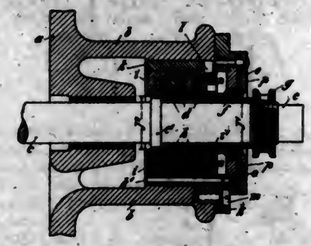
1. The combination with a hood provided with an upwardly extending pipe, of arms secured in said pipe carrying sleeves, cups carrying balls mounted in said sleeves, a sleeve carrying bearing members mounted on said balls, arms carried by said shaft, a pipe carried by said arms, and a funnel-shaped cap mounted on said pipe, carried by said arms.

2. The combination with a hood provided with a pipe, of arms secured in said pipe carrying sleeves, cups mounted in said sleeves carrying balls, a shaft extending through said cups, bearing members mounted on said shaft resting on said balls, a cap secured over the end of said shafts, spaced sleeves mounted on the upper end of said shaft carrying arms, a pipe secured on said arms, and a funnel-shaped cap mounted on said pipe.

877,093. STUFFING-BOX. PAUL KUGEL, Dusseldorf, Germany. Filed Sept. 11, 1905. Serial No. 277,907.

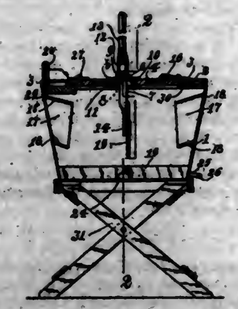
1. In a stuffing box for a rotary shaft, the combination with said shaft, of a fixed collar thereon, a plurality of outwardly flanged inner rings closely encircling said shaft, arranged one behind the other behind said collar, means for pressing said inner rings axially one against the other and against said collar, a plurality of inwardly flanged outer rings coaxial with and embracing said inner rings with their inward flanges engaging between the outward flanges of the inner rings, an axially slidable but not rotatable bushing inclosing said outer rings, and a plate with a cupped packing of pliable material fixed to the stuffing box at one end of said bushing and coöperating therewith to relieve the same of a considerable part of the axial fluid pressure thereon.

2. In a stuffing box for a rotary shaft, the combination with said shaft, of a fixed collar thereon, a plurality of outwardly flanged inner rings encircling said shaft arranged one behind the other behind said collar, means for pressing said inner rings one against the other and against said collar, a plurality of inwardly flanged outer rings coaxial with and embracing said inner rings with their inward flanges engaging between the outward flanges of the inner rings, an axially slidable but not rotatable bushing inclosing said outer rings, with a screw-threaded rear aperture for the introduction of said outer rings, a screw-threaded ring screwed into said aperture to close same, a lining fitting the internal periphery of the stuffing-box closely encircling said bushing, and formed with a duct to admit fluid pressure from the front to the back of said bushing, and a plate with a cupped packing of pliable material fixed to the rear end of the stuffing box.



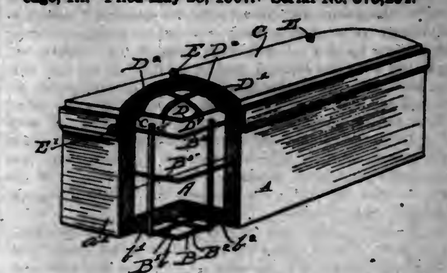
3. In a stuffing box for a rotary shaft, the combination with said shaft, of a plurality of outwardly flanged inner rings integral with said shaft and arranged one behind the other, a plurality of inwardly flanged outer rings coaxial with and embracing said fixed rings with their inward flanges engaging between the outward flanges of the fixed rings, an axially slidable but not rotatable bushing inclosing said outer rings, with a screw-threaded rear aperture for the introduction of said outer rings, a screw-threaded ring screwed into said aperture to close same, a lining fitting the internal periphery of the stuffing box closely encircling said bushing, and formed with a duct to admit fluid pressure from the front to the back of said bushing, and a plate with a cupped packing of pliable material fixed to the rear end of the stuffing box.

877,094. WASHING-MACHINE. ELBERT M. LACEY, Tonawanda, N. Y., assignor of one-half to William Harmon, Tonawanda, N. Y. Filed Apr. 5, 1905. Serial No. 254,042.



In a washing machine the combination with a receptacle, of angular pockets disposed upon the inner side faces thereof and formed of spaced upper and lower strips inclining downwardly and inwardly and connected by converging side strips, reversely disposed angular strips in the bottom of said receptacle forming converging pockets at the center, and a pounder device comprising an arm swinging through the cover of the receptacle and provided with means for supporting portions of the clothes during the washing action.

877,095. BURIAL-VAULT. WILLIAM C. LANCELE, Chicago, Ill. Filed May 23, 1907. Serial No. 375,294.

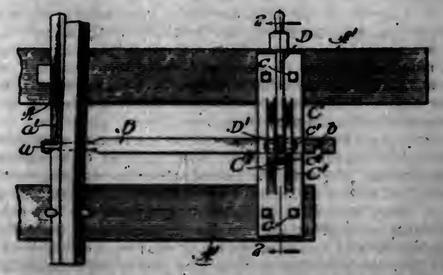


1. A burial case or vault comprising a monolithic concrete box and a concrete cover, the cover having a flat marginal face to rest on the top of the box, an inner shoulder on the cover fitting closely around the inner side of the side and end walls of the box, a reinforcing bar of metal embedded in said shoulder and extending continuously around the sides and the ends of the cover, reinforcing bars or rods extending transversely and longitudinally of the cover, some of which bear against said reinforcing marginal bar in said shoulder and reinforcing bars embedded in the concrete extending longitudinally and transversely of the bottom of the box and their ends extending upwardly in the walls of the box.

2. A burial case or vault comprising a monolithic box and a cover, the cover having a flat marginal face to rest on the top of the box, an inner shoulder on the cover fitting closely around the inner side of the side and end walls of the box, a reinforcing bar of metal embedded in said shoulder and extending continuously around the sides and the ends of the cover, reinforcing bars or rods extending transversely and longitudinally of the cover, some of which bear against said reinforcing marginal bar in said shoulder and the ends of the remaining bars engaging in the walls of the box to lock the cover in place.

3. A burial case or vault comprising a monolithic concrete box having the walls at the top increased in thickness and provided with a groove, a reinforcing bar in the thickened top extending therearound outside of the groove, transverse and longitudinal reinforcing bars in the bottom of the box having the ends directed vertically extending into and reinforcing the walls of the box, a concrete cover and reinforcing bars therein having the extremities extending beyond the margins of the cover into the groove.

877,096. SWITCH-POINT LOCK. JAMES B. LATIMER, Chicago, Ill., assignor to Arthur D. Cloud, Frank M. Patterson, and Fred W. Riser, Chicago, Ill. Filed Oct. 26, 1906. Serial No. 340,683.



1. A switch point lock comprising, in combination with an endwise movable locking rod adapted for connection with switch points and provided at its outer end with longitudinally separated locking devices, a swinging lever, and devices carried by said lever adapted for separate engagement with the locking devices of the rod for the purpose set forth.

2. A switch point lock comprising, in combination with an endwise movable locking rod adapted for connection with switch points and provided at its outer end with longitudinally separated locking devices, a swinging lever, and devices carried by said lever adapted for separate engagement with the locking devices of the rod for the purpose set forth, the locking devices of one of said parts, to-wit, the rod and lever being offset relatively to each other.

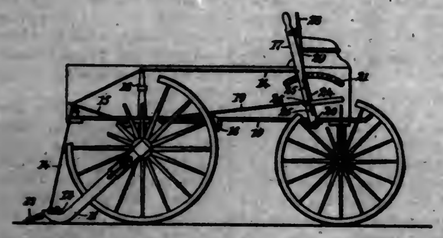
3. A switch point lock comprising, in combination with an endwise movable locking rod adapted for connection with switch points and provided at its outer end with longitudinally separated notches, a swinging lever, and detents carried by said lever adapted for separate engagement with said notches.

4. A switch point lock comprising, in combination with an endwise movable locking rod adapted for connection with switch points and provided at its outer end with longitudinally separated notches, a swinging lever, and detents carried by said lever, one adapted in one limit of the throw of the lever to engage one of said notches and the other adapted in the other limit of the throw of the lever to engage the other notch.

5. A switch point lock comprising, in combination with a locking rod adapted for connection at one end with switch points and provided at its other end with longitudinally separated notches, of a locking device comprising a base having an opening through which said roll slides endwise, a lever pivoted to said base and detents carried by said lever and adapted for separate engagement with said notches.

[Claims 6 and 7 not printed in the Gazette.]

877,097. BRAKE-HANDLE. FREDERICK W. LECHNER, Wenona, Ill. Filed Jan. 16, 1907. Serial No. 352,562.



1. A device of the class described, comprising a pivoted handle bar having a projection or pin extending outwardly therefrom, a longitudinally movable bar having one end normally supported upon said pin and having a notch adapted to engage therewith, said bar being otherwise unattached to said handle, and means carried by the handle for bringing said projection and notch out of operative engagement.

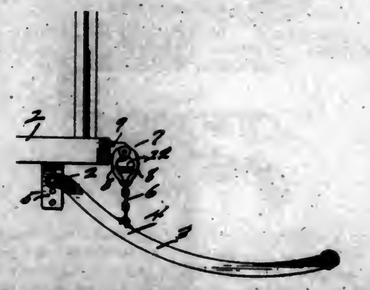
2. A device of the class described, comprising a pivoted handle having a projection extending outwardly therefrom, a bar normally supported upon said projection and having a notch adapted to receive the same, a loop mounted on said handle and inclosing said bar, and means carried by the handle for moving the loop to bring the bar out of engagement with the projection.

3. A device of the class described, comprising a pivoted handle, a pin carried thereby, a bar adapted to be moved longitudinally by said handle and normally engaging with said pin, a loop carried by the handle and inclosing said bar, means carried by the handle for moving the loop longitudinally to bring the bar out of engagement with the projection, and means connected to said handle intermediate its ends and adapted to be operated by the handle independently of the bar.

4. A device of the class described, comprising a pivoted handle, a bar adapted to be moved longitudinally thereby and having one end normally supported by said handle, the handle and bar being provided with a projection and a recess, whereby the bar may be moved longitudinally by the handle, and means carried by said handle for disengaging the bar from the handle and permitting sliding engagement of one in respect to the other.

5. In combination, a vehicle, a road-smoothing device secured thereto, brakes carried thereby, a handle pivotally mounted on said vehicle, means connecting said smoothing device and said handle, whereby the former may be operated, a bar having one end operatively connected to the brakes and the other end in engagement with the handle, means carried by said handle for engaging with said bar to move the same longitudinally, and means carried by the handle for disengaging the bar and permitting sliding engagement of the handle with the bar.

877,098. CAR-FENDER. FRANK J. LEHMAN, Toledo, Ohio. Filed June 7, 1907. Serial No. 377,722.



1. A forwardly curved fender section pivoted to a car, a spring-controlled grip fixed to the car above the fender section, a connection between the fender section and the grip, said grip actuated automatically by excess pressure upon the fender section to disengage the connection, substantially as described.

2. A forwardly curved fender section pivoted to a car, a spring controlled grip fixed to the car above the fender section, a connection between the fender section and the grip, and means actuated by excess pressure upon the fender section to automatically disengage said connection and thereby release the fender section, substantially as described.

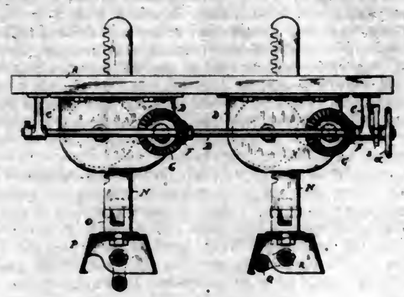
3. A forwardly curved fender section pivoted to a car, a grip fixed to the car and having pivoted spring-actuated jaws, a connection secured at one end to the fender section and at the other end engaging the jaws of the grip, the jaws opening to disengage the connection and release the fender section when excess pressure is directed upon the latter, substantially as described.

4. In a car fender, a forwardly curved fender section pivoted to a car, a grip fixed to the car above the fender section, said grip consisting of a pair of pivoted jaws and having spring means for holding the free lower ends of the jaws normally in contact, a link connection secured at its lower end to the fender section at a point forward of its pivotal connection with the car and at its upper end engaging the jaws immediately above their contacting free ends, the jaws opening by excess pressure upon the fender section and the connection being disengaged therefrom, substantially as described.

877,099. CAR LIFTING AND REPLACING DEVICE. LOUIS LEYBALB, Cleveland, Ohio. Filed Aug. 20, 1906. Serial No. 331,257.

1. A car lifting and replacing device comprising the combination of a driving shaft extending transversely to the car frame, a series of spindles arranged in sets and journaled longitudinally with the car frame, gears and gear connections established with respect to and by said spindles and rack bars with bases each arranged in operative connection with one of the gear spindles substantially in the manner as and for the purpose set forth.

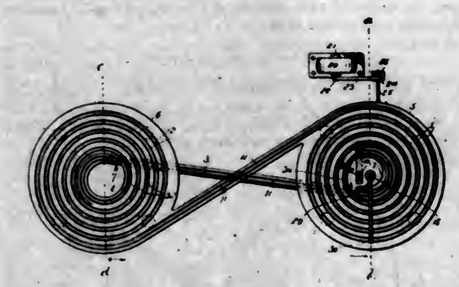
2. A car replacing device comprising the combination with the car frame of a driving shaft, a pair of lifts arranged in gear connection with said shaft and hinged bases with trundles attached to said lifts to enable steering of the suspended car as and for the purpose set forth.



3. The combination with the lifts of a car replacing device of trundles attached to the base of the rack bars thereof the said trundles having hinged connection with the base and the base having pivotal and hinged connection with the rack bar substantially as shown and for the purpose set forth.

4. A lifting device for cars comprising the combination of simultaneously operated rack bars provided with loosely connected bases the said rack bars being in gear connection with a driving shaft having cone pinions which engage cone wheels of spindles which indirectly drive said rack bars substantially in the manner as and for the purpose set forth.

877,100. PLEASURE-RAILWAY. HORACE A. LOCKWOOD, Kansas City, Mo. Filed Jan. 24, 1907. Serial No. 353,798.



1. In a railway, the combination with a track disposed in coils arranged in volute form, of a rotary shaft disposed axially within said coils, and means carried by said shaft for engaging and propelling a car or cars along said track.

2. In a railway, the combination with a track disposed in coils arranged in volute form, the track gradually rising from the inner to the outer coil, of a rotary shaft disposed axially within said coils, and means carried by said shaft for engaging and propelling a car or cars along said track.

3. In a railway, the combination with a track disposed in coils arranged in volute form, of rotating means for engaging and propelling a car or cars along said track.

4. In a railway, the combination with a track disposed in coils arranged in volute form, the track gradually rising from the inner to the outer coil, of rotating means for engaging and propelling a car or cars along said track.

5. In a railway, the combination with a track disposed in spiral coils around a vertical axis, of a vertical shaft disposed axially within said coils, means for rotating said shaft, and means carried by said shaft for engaging and propelling a car or cars upward along said track.

[Claims 6 to 47 not printed in the Gazette.]

877,101. CLIP FOR FIXING CONDUCTING-WIRES TO INSULATORS. JOHANN MACEK, Vienna, Austria-Hungary. Filed Jan. 29, 1907. Serial No. 354,628.

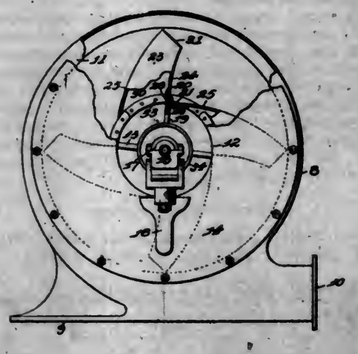


1. In combination with an insulator, a clamp for fastening a line wire to said insulator, and consisting of a ring surrounding the neck of the insulator and having a bent-over portion, a plate fitted upon said ring and resting against said bent-over portion, and a second plate linked to said bent-over portion and located between the first-mentioned plate and the insulator.

2. A clamp for fastening a line wire to an insulator and consisting of a ring for surrounding an insulator neck, said ring being made up of parts freely linked together and one of which has a bent-over portion, a plate fitted upon said ring and resting against said bent-over portion, and a second plate linked to said bent-over portion, for clamping a line-wire between the plates.

3. A clamp for fastening a line wire to an insulator, and consisting of an adjustable ring for surrounding an insulator neck and having a bent-over portion, a screw for drawing the ring to clamp it to an insulator, a plate fitted upon said ring and resting against said bent-over portion, and a second plate linked to said bent-over portion, for clamping a line-wire between the plates.

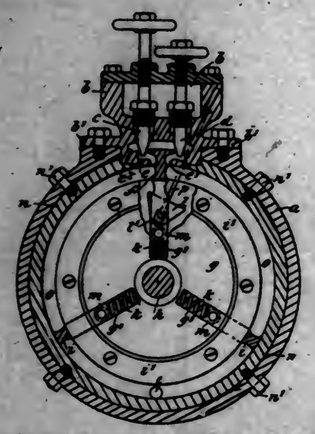
877,102. PRESSURE AND SUCTION BLOWER. WILLIAM J. MAGEE, St. Louis, Mo. Filed Jan. 22, 1907. Serial No. 353,486.



1. A device of the class described, comprising a blower casing, a shaft, a hub mounted upon said shaft within the blower casing, spokes radiating from the hub, flanges formed on the ends of said spokes, hollow sheet metal arms composed of two sections and retained together by lap-joints, said arms secured to the flanges of the spokes, and a pair of rings located on each side of the spokes to which the arms are also attached, substantially as specified.

2. A device of the class described, comprising a revolving member composed of a hub member, a plurality of flanged spokes forming a part of the hub member, a pair of rings formed on the sides of the hub member forming a part thereof, a plurality of hollow sheet metal arms each composed of two sections and retained together by lap-joints, the base of each of said arms attached to the flanged ends of the spokes and the rings in combination with a blower casing in which the revolving member is revolubly mounted, substantially as specified.

877,103. ROTARY ENGINE. JOHN MARSDEN, Greenheys, Manchester, England. Filed July 12, 1907. Serial No. 383,517.

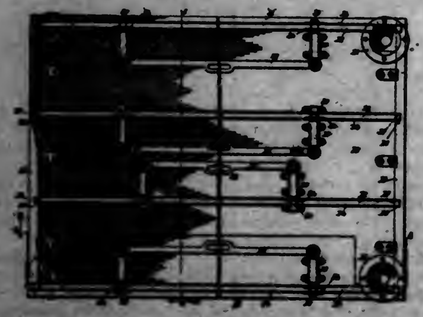


1. A turbo-motor or rotary engine consisting of a circular chamber fitted with a central driving shaft carrying a disk formed with flutes in which are fitted radially sliding lever pistons acted upon by springs for pressing the same into a track or race removably attached to the said chamber and a compound valve box fitted with forward driving and reverse action valves for the admittance of motive fluid to the said race, substantially as described.

2. In rotary engines the track or race consisting of a metal ring fitted to the circular chamber and formed with a conical-shaped recess for receiving the ends of lever pistons traveling therein, and having tapered edges engaging with recesses in the disk carrying the lever pistons, substantially as described.

3. In rotary engines having radially sliding lever pistons the combination with the latter of an adjustable reversing cam formed with reversely inclined surfaces and pivotally carried by the outer case or chamber of the engine and actuated by a lever on its pivotal axis for changing the position of the said cam and locking it in such position and rollers carried by the lever pistons and acted upon by one or other of the inclined surfaces of the cam in the forward or backward driving of the engine, substantially as described.

877,104. TABLE. FREDERICK H. H. MEINE, New York, N. Y. Filed Oct. 31, 1907. Serial No. 400,101.



1. A table having in its top a series of slots and in its frame below said top a corresponding series of grooves, whose upper ends are closed, combined with a series of vertically movable independent guard-boards in said slots and having portions of their ends in said grooves, and independent automatic locking means for securing the respective guard-boards when they are elevated; substantially as set forth.

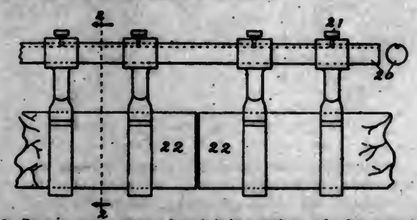
2. A table having in its top a series of slots and in its frame below said top a corresponding series of grooves, whose upper ends are closed, combined with a series of vertically movable independent guard-boards in said slots and having portions of their ends in said grooves, spring-bolts secured to the bottom of the table-top at one side of said slots and keepers for said bolts at the other side of said slots, said guard-boards having apertures in them through which, when said boards are elevated, said bolts pass to enter said keepers and support said boards; substantially as set forth.

3. A table having in its top a series of slots and in its frame below said top a corresponding series of grooves, whose upper ends are closed, combined with a series of vertically movable independent guard-boards in said slots and having portions of their ends in said grooves, and means for independently securing the respective guard-boards in their elevated position; substantially as set forth.

4. A table having in its top a series of slots, combined with a series of vertically movable independent guard-boards adapted to said slots, means concealed below said top for supporting said boards when they are in their lower position and guiding them during their movements, means for limiting the upward movement of said boards, and independent automatic locking means for securing the respective guard-boards when they are elevated; substantially as set forth.

5. A table having in its top a series of slots, combined with a series of vertically movable independent guard-boards adapted to said slots, means concealed below said top for supporting said boards when they are in their lower position and guiding them during their movements, means for limiting the upward movement of said boards, bolts secured to the bottom of the table-top at one side of said slots and keepers for said bolts at the other side of said slots, said guard-boards having apertures in them through which, when said boards are elevated, said bolts may extend into said keepers for supporting said boards; substantially as set forth.

877,105. GLASS-BLOWER'S CLAMP. DANIEL M. MOORE, Newark, N. J., assignor to Moore Electrical Co., New York, N. Y., a Corporation of New York. Filed Feb. 26, 1903. Serial No. 145,183.



1. In an apparatus for joining tubes of glass, a tube supporting frame provided with a clamp, adapted to grasp one arm of a T and a stopper, also supported by said frame and adapted to close the opening in another arm of the T.

2. In an apparatus for joining tubes of glass to form T's or other similar shapes, a tube holding frame having a stopper for an arm of the T combined with an air supply tube running through said stopper and means for clamping said stopper tightly against the end of the tube.

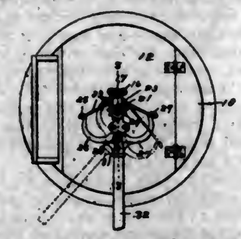
3. In an apparatus adapted to use for joining tubes of glass to form T's or other similar shapes, a tube holding frame in combination with a tube stopper consisting of a plate of some heat nonconductor, and a plate of metal provided with perforations therein, a hollow tube running longitudinally through the tube and plates and a clamp on said hollow rod for tightening said plates against the end of the tube.

4. An apparatus adapted to hold glass T's or other similar shapes comprising clamps adapted to encircle one arm of the T, stoppers for closing the ends of said T, a blow-pipe passing through one of said stoppers and into said T, said blow pipe and clamps being held together by a common union and means for supporting said union.

5. An apparatus adapted to hold glass T's or other similar shapes comprising clamps adapted to encircle one arm of the T, said clamps being made up of a strip of flexible metal covered with some heat nonconductor and terminating in a tightening device whereby the strips are drawn tightly around the tube and threaded rods connecting the said clamps to a common union.

[Claims 6 to 11 not printed in the Gazette.]

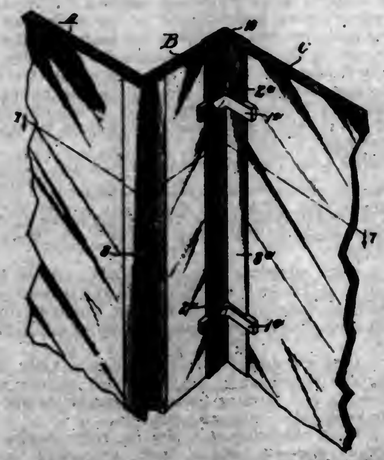
877,106. GEARING FOR WASHING-MACHINES. HUGH H. MUNSON, Truro, Iowa. Filed Sept. 27, 1905. Serial No. 280,348.



1. A gearing for washing machines, comprising a shaft, a substantially elliptical sprocket wheel secured to the shaft, a pivoted sprocket chain holder adjacent to the sprocket chain, a sprocket chain connected with the holder and in engagement with one side of the sprocket wheel, and means connected with the sprocket chain holder for oscillating it.

2. A gearing for washing machines, comprising a shaft, a substantially elliptical sprocket wheel secured to the shaft, a pivoted sprocket chain holder adjacent to the sprocket chain, a sprocket chain connected with the holder and in engagement with one side of the sprocket wheel, and a handle detachably connected with the sprocket chain holder.

877,107. DEVICE FOR CONNECTING GLASS PLATES TOGETHER. DANIEL J. MURNANE, Kirkwood, Mo. Filed Jan. 2, 1907. Serial No. 350,387.



1. Means for connecting together two plates of glass arranged at an angle to each other, comprising an outside corner-piece embracing said plates and extending the entire length thereof, a plurality of outside clamping members conforming in shape to the corner-piece and each being provided with a rigid shank of uniform thickness throughout its entire length that projects inwardly through an opening in the corner-piece, said shanks extending between the meeting edges of the plates, and inside clamps connected to said shanks; substantially as described.

2. In combination, a plurality of plates arranged at an angle to each other, an outside corner-piece embracing said plates, an outside clamping member conforming in shape to the corner-piece and provided with a rigid integral shank of uniform thickness which passes through an opening in the corner-piece and projects between the meeting edges of said plates the inside face of said clamping member being recessed to receive the corner piece, and an inside clamping member detachably connected to the inner end of said shank; substantially as described.

3. Means for connecting together two plates of glass arranged at an angle to each other, comprising an outside corner-piece embracing said plates and extending the entire length thereof, a plurality of outside clamping members which overlap portions of said corner-piece and are provided with rigid shanks of uniform thickness throughout their entire length that project inwardly through openings in the corner-piece and extend between the meeting edges of the plates, and inside clamps detachably connected to the outside clamping members; substantially as described.

4. In combination, a plurality of plates arranged at an angle to each other and provided with square edges, an outside corner-piece embracing said plates, a filler occupying the space between the corner-piece and the edges of said plates, outside clamping members which engage portions of the corner-piece and force it into snug engagement with the plates, said clamping members being provided with shanks that pass through openings in the corner-piece and extend between the meeting edges of the plates, and inside adjustable clamping members provided with hooks which enter openings in the shanks of the outside clamping members; substantially as described.

5. In combination, a plurality of plates arranged at an angle to each other, an outside corner-piece embracing said plates and extending the entire length thereof, a plurality of outside clamping members which overlap said corner-piece and force it into snug engagement with the plates, said clamping members being provided with shanks that pass through openings in the corner-piece and extend between the meeting edges of the plates, and inside clamps detachably connected to the outside clamping members; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

877,108. LOOM-SHUTTLE. HENRY MURPHY, Lowell, Mass., assignor, by direct and mesne assignments, to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Nov. 28, 1906. Serial No. 345,510.



1. The combination of a shuttle-body provided with an opening to admit a feeler and a shield normally closing said opening and adapted to yield when pressed by said feeler against a cop carried by said shuttle, and normally to prevent the actual contact of said feeler with said cop, but permitting such contact when said cop has been exhausted to a predetermined amount.

2. The combination of a shuttle-body provided with a slot or opening to admit a feeler, a shield or plate pivoted near its upper edge and normally closing said slot by its own gravity, normally to prevent the actual contact of said feeler with a cop carried by said shuttle but permitting such contact when said cop has been exhausted to a predetermined amount.

3. The combination of the shuttle-body having an opening to admit a feeler and a filling shield or plate provided with ears, pivots passing through holes in said ears into the shuttle-body, the hole in one of said ears being oblong to allow said shield to yield in the plane of said shield to become disengaged from a cop carried by said shuttle.

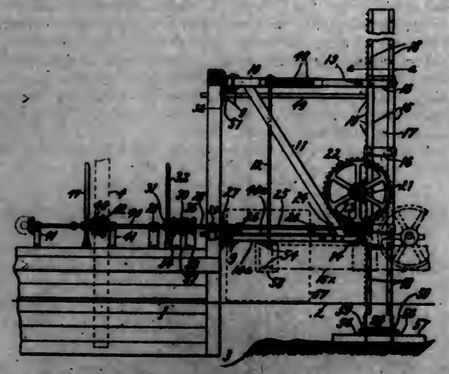
4. The combination of the shuttle-body having an opening to admit a feeler and a filling shield or plate pivoted near its upper edge and normally closing said slot by gravity and adapted to yield when pressed by said feeler against a cop carried by said shuttle, and to prevent the actual contact of said feeler with said cop until said cop has been exhausted to a predetermined extent, said shield having on its outer face near its lower edge a bead curved to be perpendicular with said feeler at the point of contact of said shield and feeler.

877,109. CAN-OPENER. OTIS F. MCCRARY, Hendersonville, N. C. Filed June 5, 1907. Serial No. 377,461.



A device of the class described comprising a shank, a handle arranged at one end of the shank, the other end of the shank being sharpened and bent for engagement in a can top, a sleeve freely slidable upon said shank, a disk formed integral with the sleeve at the middle thereof, said disk being substantially concavo-convexed and having a sharpened peripheral cutting edge, and an annular shoulder formed integral with the sleeve and with the concave face of the disk whereby the depth of cut may be regulated, the shoulder being designed to travel over the upper face of the can top being cut.

877,110. BRACE. NELS H. NELSON, Willmar, Minn. Filed June 5, 1907. Serial No. 377,416.



1. The combination with a machine of the class described, of a bracing device comprising a frame pivoted to swing horisontally at the side of the machine, a post sliding vertically in the frame and having at one side a rack, a foot plate at the lower end of the post, a pinion engaging the rack, a shaft fixed in the pinion and journaled to the frame, a worm-gear fixed on the shaft, a worm-screw mounted on the frame and engaging the worm-gear, a shaft extending from the end of the worm-screw and having operative connection with the engine or other motor carried by the machine, and means for controlling said operative connection to start, stop and reverse the worm screw.

2. The combination with a machine of the class described, of a bracing device comprising a frame pivoted to swing horisontally at the side of the machine, a post sliding vertically in the frame and having at one side a rack, a foot plate at the lower end of the post, a pinion engaging the rack, a shaft fixed in the pinion and journaled to the frame, a worm-gear fixed on the shaft, a worm-screw mounted on the frame and engaging the worm-gear, a shaft extending from the end of the worm-screw and having operative connection with the engine or other motor carried by the machine, and means for controlling said operative connection to start, stop and reverse the worm-screw, said foot plate being pivotally secured to the post and having a vertical play with either or both ends of the pivot.

3. The combination with a machine of the class described, of a bracing device comprising a frame pivoted to swing horisontally at the side of the machine, a post sliding vertically in the frame and having at one side a rack, a foot plate at the lower end of the post, a pinion engaging the rack, a shaft fixed in the pinion and journaled to the frame, a worm-gear fixed on the shaft, a worm-screw mounted on the frame and engaging the worm-gear, a shaft extending from the end of the worm-screw and having operative connection with the engine or other motor carried by the machine, and means for controlling said operative connection to start, stop and reverse the worm-screw, said foot plate being pivotally secured to the post and having a vertical play with either or both ends of the pivot, and the stops 59 to press upon the plate for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

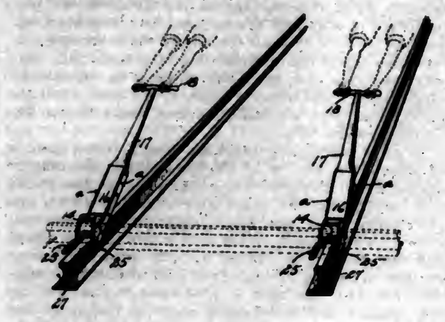
877,111. RAIL-HANDLING TRUCK. ANDREW G. NEWBURGH, Superior, Wis. Filed Aug. 13, 1907. Serial No. 388,337.

1. A truck consisting of a lever bar, a carrying frame secured to said lever bar, a supporting and traveler wheel journaled in said carrying frame, and longitudinally arranged supporting and rest rollers carried by said carrying frame.

2. A truck consisting of a lever bar, a carrying frame having arm extensions, a supporting and traveler wheel journaled in said carrying frame, and supporting and rest rollers journaled on said arm extensions.

3. A truck consisting of a carrying frame having longitudinally disposed arms, a lever bar carried by said frame, and a supporting and rest roller journaled on each of said arms.

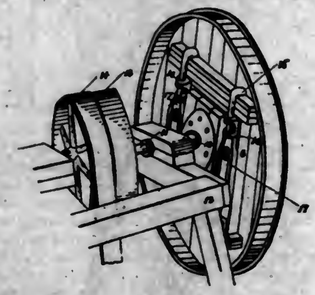
4. A truck consisting of an angularly shaped frame having longitudinally extending arms, a supporting and traveler wheel journaled in said frame, and a supporting and rest roller mounted on each of said longitudinally extending arms.



5. A truck consisting of a carrying frame comprising side members angularly shaped and having a supporting and traveler wheel journaled therein, a longitudinally extending arm carried at one end of each of said side members, supporting and rest rollers journaled on each of said arms, and a lever bar carried by the opposite ends of said side members.

[Claims 6 to 8 not printed in the Gazette.]

877,112. SANDING TABLES. FRED W. NIEMANN, Chicago, Ill. Filed June 11, 1907. Serial No. 378,416.



1. The combination with a shaft, of a clamp fixed on the end thereof, comprising a frame, and two pairs of jaws arranged on the frame in parallel relation on opposite sides respectively of the axis, and in tangential relation thereto.

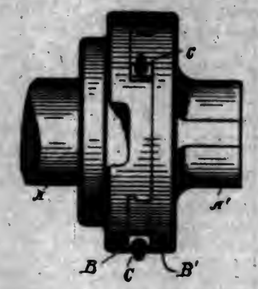
2. The combination with a shaft, of a frame attached to the end thereof, and a pair of clamping jaws mounted on the frame on each side of the center, said pairs being arranged parallel to each other and in tangential relation to the axis.

3. A clamp comprising a frame, and a pair of clamps mounted thereon, each clamp consisting of a pair of screw rods having clamping jaws at their outer ends and a turnbuckle connecting their inner ends and arranged to move the jaws toward or from each other.

4. The combination with a shaft having a threaded end, of a clamp comprising a frame provided with jaws and means to move the same toward or from each other, and a disk fixed to the frame and having a threaded socket which screws on the end of the shaft.

5. The combination with a shaft, of a frame having means to attach the same to the end of the shaft, a pair of clamps mounted on the frame on opposite sides of the axis, and centering guides projecting from the frame on a diametrical line with respect to the axis.

877,113. SHAFT-COUPLING. JOSEPH N. OWENS, Youngstown, Ohio, assignor of one-half to John E. Fowler, Youngstown, Ohio. Filed Mar. 9, 1907. Serial No. 361,600.



A shaft coupling comprising the combination with two shafts the meeting ends of said shafts being of enlarged diameter and the face of one being formed with a plurality of peripherally disposed, radial slots, the other with corresponding lugs adapted to register in said slots, said slots and lugs being provided with complementary tongues and grooves; of a pair of co-acting wedges adapted in their extended position to enter between the opposing smooth sides of each registering slot and lug, the outer ends of said wedges projecting without said slots, one wedge being screw-threaded and slidably engaging the other; a nut on such screw-threaded wedge adapted to draw said wedges together and thereby lock said tongues and grooves against disengagement; and resilient means interposed between said nut and said other wedge.

877,114. METHOD OF OBTAINING OXID FUMES FROM ORES AND FURNACE PRODUCTS. HERMANN PAPE, Hamburg, Germany. Filed Dec. 31, 1906. Serial No. 350,312.

1. A method of obtaining oxid fumes from ores or furnace products, consisting in finely disintegrating said ore or furnace products, in mixing finely disintegrated carboniferous reducing means therewith, in making briquets of the mixture thus obtained, in feeding said briquets continuously into a furnace, in burning the carbon contained in said briquets in said furnace, in continuously supplying a powerful current of air to said burning briquets, whereby the volatile metals contained in said ore or furnace products are first reduced and then burned to oxids in the excess oxygen of the current of air, in continuously withdrawing said oxids with the furnace gases and in continuously removing the non-volatile residue of said briquets in a liquid state from the furnace.

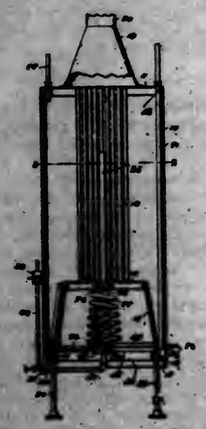
2. A method of obtaining oxid fumes from ores or furnace products, consisting in finely disintegrating said ore or furnace products, in mixing finely disintegrated carbon therewith, in making briquets of the mixture thus obtained, in feeding said briquets continuously into a furnace, in burning the carbon contained in said briquets in said furnace, in continuously supplying a powerful current of air to said burning briquets, whereby the volatile metals contained in said ore or furnace products are first reduced and then burned to oxids in the excess oxygen of the current of air, in continuously withdrawing said oxids with the furnace gases and in continuously removing the non-volatile residue of said briquets in a liquid state from the furnace, the quantity of carbon which is added to said core or furnace products being sufficiently great that in the combustion of the carbon the necessary amount of heat is obtained not only for the reduction and vaporization of the metal in said ore or furnace product, but also for melting the residue of the latter.

3. A method of obtaining oxid fumes from ores or furnace products, consisting in finely disintegrating said ore or furnace products, in mixing finely disintegrated carbon therewith, said disintegration of said ore or furnace products being sufficiently fine and the mixing with the carbon

sufficiently intimate in order to effect with certainty a separation of the separate grains of ore one from another by means of intermediate grains of carbon, in making briquets of the mixture thus obtained, in feeding said briquets continuously into a furnace, in burning the carbon contained in said briquets in said furnace, in continuously supplying a powerful current of air to said burning briquets, whereby the volatile metals contained in said ore or furnace products are first reduced and then burned to oxids in the excess oxygen of the current of air, in continuously withdrawing said oxids with the furnace gases and in continuously removing the non-volatile residue of said briquets in a liquid state from the furnace.

4. A method of obtaining oxid fumes from ores or furnace products, consisting in finely disintegrating said ore or furnace product, in mixing finely disintegrated carboniferous reducing means therewith, in making briquets of the mixture thus obtained, in feeding said briquets continuously into a furnace, in adding carbon to said briquets in said furnace, in burning said carbon and the carbon contained in said briquets in said furnace, in continuously supplying a blast of air to said burning briquets, whereby the volatile metals contained in said ore or furnace product are first reduced and then burned to oxids in the excess oxygen of the current of air, in continuously withdrawing said oxids with the furnace gases and in continuously removing the non-volatile residue of said briquets in a liquid state from the furnace.

877,115. WATER-HEATER. FREDRICK E. PATTERSON, Bucyrus, Ohio. Filed May 8, 1906. Serial No. 315,807.

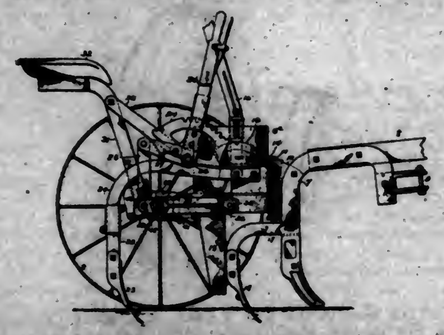


1. A water heating apparatus including an outer shell provided with an interior liquid chamber, a hood secured to the top of the shell, an inner shell extending within the outer shell and having its lower end open, a plurality of flues connecting the inner and outer shells and extending through the liquid chamber and communicating with the interior of the hood, a pipe disposed within the liquid chamber and having its lower end provided with an enlarged head having oppositely disposed coupling members, a pipe secured to one of the coupling members and bent to form a vertically disposed coil the free end of which is extended laterally through one side of the inner shell for communication with the interior of the liquid chamber, a pipe secured to the opposite coupling member and bent to form a second coil surrounding the first coil and having its free end extending laterally through the opposite side of the inner receptacle for communication with the liquid chamber, and a burner arranged beneath the coils.

2. A water heating apparatus including an outer shell having an interior chamber, a hood secured to the top of the casing, an annular frame secured to the bottom of the shell, an inner shell resting on the annular frame and extending within the outer shell, said inner shell having its lower end open and its exterior walls reinforced by a plurality of spaced vertically disposed ribs, flues connecting the inner and outer shells and extended through the liquid chamber for communication with the hood, a pipe disposed within the liquid chamber and having its lower end provided with a T head and having oppositely disposed coupling members, coils disposed one within the other and connected with the coupling members of the head, said coils having their free ends extending laterally in opposite directions through the adjacent walls of the inner shell for communication with the liquid chamber, and a burner disposed beneath the coils.

3. A water heating apparatus including an outer shell, a hood secured to the top of the outer shell, an annular frame secured to the lower end of the shell, an inner shell resting on the annular frame and extending within the liquid chamber, said inner shell having its lower end open and its interior walls provided with a plurality of spaced reinforcing ribs, flues connecting the inner and outer shells and extending through the liquid chamber for communication with the hood, a pipe extending within the liquid chamber and terminating short of the upper end thereof, said pipe being provided at its lower end with an enlarged head having oppositely disposed coupling members, coils disposed one within the other and connected with the coupling members of the head, the free ends of said coils being extended in opposite directions through the adjacent walls of the inner shell for communication with the liquid chamber, a supporting frame engaging the annular frame, standards depending from the supporting frame, and a heater disposed beneath the coils.

877,116. SEEDING-MACHINE OR COTTON-PLANTER. WILLIAM L. PAUL, South Bend, Ind., assignor to Oliver Chilled Plow Works, South Bend, Ind. Filed June 15, 1907. Serial No. 379,183.



1. In a seeding machine, the combination with an axle and carrying wheels, of a frame comprising two members hinged together, one of said members mounted on the axle, planting mechanism mounted on the other member, and means for applying power directly to the member of the frame which is mounted on the axle, for raising and lowering the planting mechanism.

2. In a seeding machine, the combination with an axle and carrying wheels, of a frame mounted on the axle to turn, a seat connected with said frame rearwardly of the axle, planting mechanism, and raising and lowering means mounted on the frame and connected therewith at a point rearwardly of the axle.

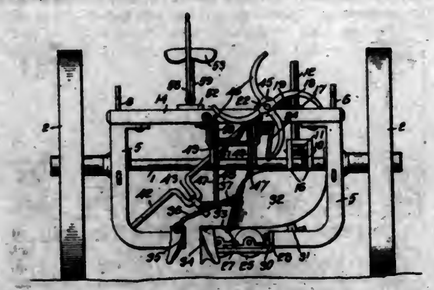
3. In a seeding machine, the combination with an axle and carrying wheels, of a frame comprising two members pivotally connected together, one of said members mounted on the axle planting mechanism carried by the other member, a lever, devices connecting said lever with the rear member of the frame at a point rearwardly of the axle, and means for locking said lever to lock the two members of the frame together during normal operation of the machine.

4. In a seeding machine, the combination with an axle and carrying wheels, of a frame comprising two members pivotally connected together, the rear member of the frame mounted to turn on the axle, planting mechanism mounted on the forward member of the frame, a shaft supported by the forward member of the frame-work, arms projecting from said shaft, connections between said arms and the rear member of the frame at a point rearwardly of the axle, and a lever for turning said shaft for raising and lowering the planting mechanism.

5. In a seeding machine, the combination with an axle and carrying wheels, of a frame comprising two members, the rear member mounted to turn on the axle and pivotally connected with the forward member, planting mechanism supported by the forward member of the frame, lugs projecting rearwardly from the rear member of the frame, a seat-bar pivotally connected with said lugs, bars or straps pivotally connected with the seat bar at one end and with the forward member of the frame at the other end, means normally locking the seat-bar and adapted to release the same to permit the weight of the operator to assist in turning the frame on the axle to raise the planting mechanism.

[Claims 6 to 13 not printed in the Gazette.]

877,117. INSECT-DESTROYING MACHINE. JOSEPH PEIL, Bloomer, Wis. Filed July 17, 1907. Serial No. 384,161.



1. In an insect-destroying machine, in combination a wheeled frame including front and rear pairs of supporting beams; a pair of longitudinally-disposed spaced shoes carried by said supporting beams, between which shoes the plants are adapted to pass; a pair of crushing rolls disposed adjacent one of said shoes and parallel therewith; means carried by the other shoe for deflecting the plants towards said rolls; a series of beaters carried by the frame for agitating the plants; and separate means for operating the beaters and rolls.

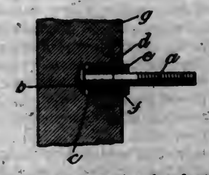
2. In an insect-destroying machine, in combination, a wheeled frame including front and rear pairs of supporting beams; a pair of longitudinally disposed spaced shoes carried by said beams, between which shoes the plants are adapted to pass; a pair of crushing rolls disposed adjacent one of said shoes and parallel therewith; means carried by the other shoe for deflecting the plants towards said rolls; a beater disposed above each crushing roll for agitating the plants; means for vibrating said beaters alternately; and means for driving said rolls.

3. In an insect-destroying machine, in combination, a wheeled frame including front and rear pairs of supporting beams; a pair of longitudinally-disposed spaced shoes carried by said supporting beams, between which shoes the plants are adapted to pass; a pair of crushing rolls disposed adjacent one of said shoes and parallel therewith; means carried by the other shoe for deflecting the plants towards said rolls; a longitudinal trough disposed directly above one of said rolls and provided with a depending lip extending towards the bite of the rolls; a longitudinal guide carried by said trough and disposed in alinement with said deflecting means; a beater disposed above each crushing roll for agitating the plants; means for vibrating said beaters alternately; and means for driving said rolls.

4. An insect-destroying machine, in combination, a wheeled frame including front and rear pairs of supporting beams; a pair of longitudinally disposed spaced shoes carried by said supporting beams, between which shoes the plants are adapted to pass; a pair of crushing rolls disposed adjacent one of said shoes and parallel therewith; means carried by the other shoe for deflecting the plants towards said rolls; a longitudinal trough disposed directly above one of said rolls and provided with a depending lip extending towards the bite of the rolls; a longitudinal guide pivoted at its forward end to said trough; an eccentric carried by said shaft and provided with a strap connected to the opposite end of said guide, for vibrating the same; driving connections between one of said rolls and said shaft; a beater disposed above each roll for agitating the plants, and means carried by said shaft for operating said beaters alternately.

[Claims 6 to 9 not printed in the Gazette.]

877,118. FASTENING DEVICE FOR MASONRY. RALPH S. PEIRCE, Chicago, Ill. Filed Dec. 24, 1906. Serial No. 349,237.



1. The combination, in a device for fastening objects to masonry, of a fastener having a head and shank, with a dished metal washer sleeved on the shank adjacent the head, a hard metal sleeve surrounding the shank and soft metal packing provided between said dished washer and sleeve.

2. In a device for fastening objects to masonry, the combination of a fastener having a head and shank, a dished metal washer sleeved on the shank adjacent the head, a conically-shaped hard metal collar surrounding the shank and a soft metal cylinder provided between said washer and collar.

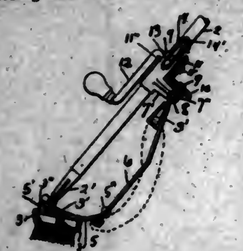
3. The combination, in a device for fastening objects to masonry, of a fastener having a head and shank, the herein described conical collar placed on the said shank and soft metal packing provided around said shank between the head and the conical collar.

4. The combination, in a device for fastening objects to masonry, of a fastener having a head and shank, soft metal packing provided around the shank and a dished metal washer sleeved on the shank between the head and the metal packing.

877,119. COMBINED SCRUBBING-BRUSH, MOP, AND WRINGER. CHARLES J. PERRY, Perth Amboy, N. J. Filed July 26, 1906. Serial No. 327,854.

1. In a combined mop and scrubbing brush, a mop staff, a scrubbing brush holder pivoted to the lower end thereof,

arms projecting rearward from said holder, links pivoted at the ends of said arms, a sliding sleeve on said staff said sleeve having a pivotal connection to the upper ends of the links, and means for attaching the mop cloth to the lower ends of the links and means for attaching the mop cloth to the sliding sleeve.



2. In a combined mop and scrubbing brush, a mop staff, a shank for attachment to the lower end thereof, a scrubbing brush clamp pivoted to said shank having rearwardly extending arms, links having pivotal connection to the ends of said arms, and inwardly extending adjacent portions adapted to engage one end of a mop cloth, a sliding sleeve on the mop staff provided with a yoke having pivotal engagement with the ends of the links, and means on the sleeve for engaging with the upper end of the mop cloth.

3. In a combined mop and scrubbing brush, a mop staff, a brush-holding means adapted to engage with the back of a scrubbing brush and pivoted to said mop staff, a frame having pivotal engagement at its lower end with the said brush-holding means, said frame extending rearward and having sliding engagement at one end with said mop staff, and means connected to said frame for holding the mop between the upper and lower ends of said frame.

4. In a combined mop and scrubbing brush, a mop staff, a brush-holder pivotally connected thereto, arms projecting rearward from the brush-holder having eyes at the extremities, a sleeve movable along the mop staff, and a mop supporting frame of wire having pivotal connection with the said sleeve, said frame consisting of two lateral parallel links, inwardly-turned overlapping loops at the lower ends of the links, and a cross bar above said loops formed in one piece therewith, and in extension thereof, said cross bar passing through the eyes on the ends of the brush holder arms.

5. In a combined mop and scrubbing brush, a mop staff, a bifurcated shank on the end thereof having projecting trunnions, a brush holder comprising a brush clamp element for engaging one edge of a brush back, having eyes surrounding the trunnions, and a brush clamp element for engaging the other edge of said brush back having a screw threaded shank; a perforated bar attached to the element of the brush clamp through which said shank passes, a nut for drawing the said shank through the bar and a mop frame pivotally connected to the first-named element.

[Claims 6 to 9 not printed in the Gazette.]

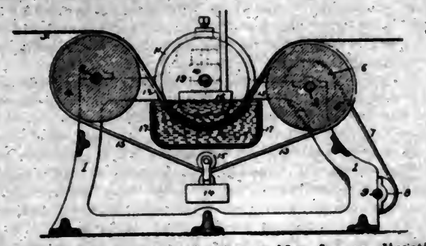
877,120. COATING-MACHINE. GEORGE N. PIPER, Cleveland, Ohio. Filed Aug. 9, 1906, Serial No. 329,899. Renewed May 27, 1907. Serial No. 375,959.

1. A coating machine having a tank for holding a fluid mass of coating material, the sheet to be coated forming an ascending delivery side of said tank in contact with said fluid material.

2. A coating machine having supports for the sheet to be coated, and means for directing the sheet between the said supports to form a tank with movable bottom and ascending delivery side in contact with the fluid mass of coating material.

3. A coating machine having guides for so directing the sheet to be coated as to form a trough with closed ends and ascending side for the reception of the fluid mass of coating material.

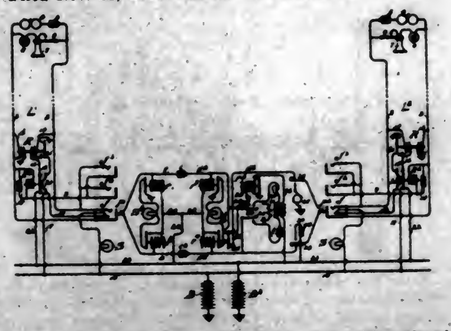
4. A coating machine having guides for so directing the sheet to be coated as to form a trough with closed ends, descending side, movable bottom, and ascending side in contact with the fluid mass of coating material contained in the trough.



5. A coating machine having guides for so directing the sheet to be coated that the same forms a trough for the reception of the coating material, and means for pressing said sheet into contact with said guides.

[Claims 6 to 15 not printed in the Gazette.]

877,121. TELEPHONE SYSTEM. HOWARD M. POST, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 11, 1903. Serial No. 180,684.



1. In a telephone system, the combination with a plurality of telephone lines, of a pair of sources of current at the central office, said lines being normally connected with one of said sources to furnish current thereover when a subscriber is calling the central office, an operator's connective circuit to establish connections with the calling lines and without severing the normal connection of said source therewith, and further means whereby when connection is established with the called lines the said second source is connected therewith to furnish current for conversation, substantially as described.

2. In a telephone system, the combination with a plurality of telephone lines, a pair of sources of current at the central office, the said lines being normally connected with one of said sources which is adapted to furnish current thereover when the subscribers are calling, an operator's cord circuit, means to prevent a sudden or large change of potential upon the calling subscribers' lines when a connection is established by the cord circuit therewith, and means for connecting one of said sources with the calling lines and the other sources with the called lines during connections for conversation, substantially as described.

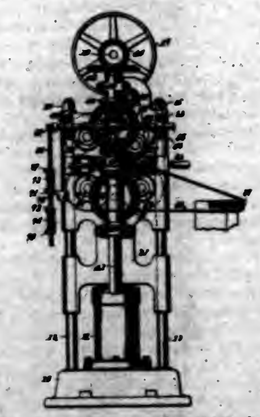
3. In a telephone system, the combination with a plurality of telephone lines, of a pair of sources of electricity at the central office, said lines being normally connected with one of said sources, an operator's cord circuit, means to prevent severing the normal connection with the lines that are calling the central office when the cord circuit is connected therewith, and means to disconnect said source from the lines that are called and to connect the other source with said latter lines when the connections for conversation are completed, substantially as described.

4. In a telephone system, the combination with a plurality of telephone lines, of two sources of current at the central office, said lines being normally connected with one only of said sources to furnish current thereover to enable the subscribers to signal the central office, said source also furnishing current to the calling lines for conversation, an operator's cord circuit to establish connections for conversation between the lines, and means for applying the other source to the called lines when connections are established therewith to furnish current thereover for conversation, substantially as described.

5. In a telephone system, the combination with a plurality of telephone lines each having an answering jack and one or more multiple jacks of a pair of sources of electricity at the central office to furnish current to the lines for conversation and with one of which sources the said lines are normally connected for signaling the central office, a cord circuit to establish connections between the lines for talking, and means whereby when the cord circuit is connected with the answering jacks said normally connected source remains connected with such lines and when the cord circuit is connected with the multiple jacks the other of said sources is connected with the latter lines, substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

877,122. BALE-FORMING APPARATUS. EDGAR REAGAN, San Antonio, Tex., assignor, by mesne assignments, to Reagan Bale Company, San Antonio, Tex. Filed July 7, 1906. Serial No. 325,123.



1. In baling apparatus, a roller press, including upper and lower rolls, one of the upper rolls being arranged to rest by gravity in engagement with the bale, and being movable upward as the bale gradually increases in diameter, the lowermost rolls being movable during further increase in the diameter of the bale, and means for resisting the downward movement of said rolls.

2. In a baling press, a pair of upper rolls, one of which is arranged to rest by gravity on material being baled and to operate in advance of the other during the preliminary bale forming operation, stationary bearings for the other roll, a pair of lower rolls, and means for limiting the upward travel of the movable upper roll when it has reached approximately the horizontal plane of the other upper roll.

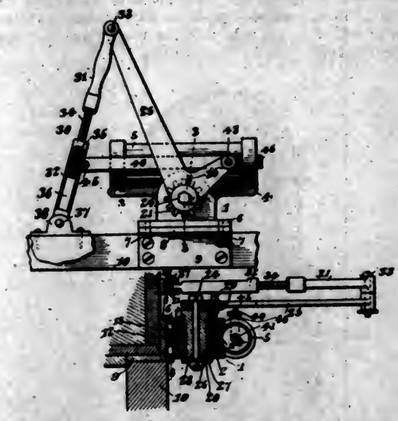
3. In a baling press, the combination with a plurality of rolls arranged in upper and lower pairs, one of the rolls of the upper pair resting by gravity on the bale and being movable upward as the bale gradually increases in diameter, and sectional carrying levers forming a support for said roll.

4. The combination in a baling press, of rolls arranged in upper and lower pairs, one of the rollers of the upper pair resting by gravity on the bale being formed, sectional levers forming a support for the roll, and serving to sustain the roll in its extreme upper and extreme lower positions, and means for guiding the roll as it moves between its two extreme positions.

5. In a baling press, a pair of lower rolls, means for resisting their downward movement during the formation of a bale, a pair of upper rolls, one of which is arranged to rest by gravity on the bale being formed, a pair of guiding links for said movable roll, a rock shaft, and a pair of sectional roll supporting levers extending between the rock shaft and the roll, the sections of each lever being connected by a knuckle or rule joint.

[Claims 6 to 21 not printed in the Gazette.]

877,123. DOOR-CHECK. OLIVER RICE, San Francisco, Cal. Filed Oct. 26, 1905. Serial No. 284,522.



1. In a device of the class described, the combination of a supporting frame having a casing adapted to be secured to one of the parts to which the device is to be applied, a spring mounted within the casing, a bell crank lever fulcrumed at its angle, means for operatively connecting the bell crank lever with the spring, means for connecting one of the arms of the bell crank lever with the other part to which the device is to be applied, a cylinder, a piston operating within the cylinder, and means for connecting the piston with the other arm of the bell crank lever.

2. In a device of the class described, the combination of a supporting frame having a casing adapted to be secured to one of the parts to which the device is to be applied, a spring housed within the casing, a cylinder mounted on the supporting frame, a piston operating within the cylinder, an exteriorly arranged bell crank lever fulcrumed at its angle, means for operatively connecting the lever with the spring, said lever being provided with long and short arms, a rod or bar connecting the short arm with the piston, and means for connecting the long arm of the bell crank lever with the other part to which the device is to be applied.

3. In a device of the class described, the combination of a supporting frame having a casing adapted to be secured to one of the parts to which the device is to be applied, a coiled spring housed within the casing, a shaft or core provided with a ratchet wheel and extending into the casing and connected with the spring, an exteriorly arranged bell crank lever interlocked with the ratchet wheel, a cylinder mounted on the supporting frame, a piston operating in the cylinder, means for connecting the piston with one of the arms of the bell crank lever, and means for connecting the other arm of the bell crank lever to the other part to which the device is to be applied.

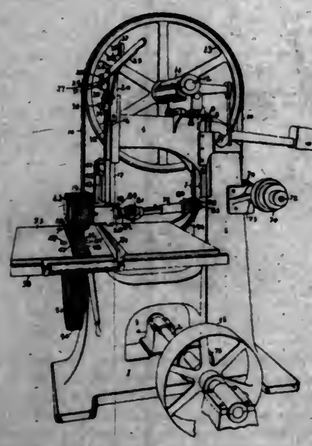
4. In a device of the class described, the combination of a supporting frame having a casing adapted to be secured to one of the parts to which the device is to be applied, a spring housed within the casing, an exteriorly arranged ratchet wheel operatively connected with the spring, a re-

versible exteriorly arranged bell crank lever interlocked with the ratchet wheel and provided with long and short arms, cushioning means connected with one of the arms of the lever, and means for connecting the other arm of the lever with the other part to which the device is to be applied.

5. A device of the class described provided with a coiled spring having its outer end slotted, and a confining strap or band encircling the spring and cut away at opposite sides to form a reduced portion, whereby it is adapted to engage the outer end of the spring.

[Claims 6 to 11 not printed in the Gazette.]

877,124. BOARD-EDGING MACHINE. LA FAYETTE G. ROBINSON, Newport, Ky., and LOUIS J. HANHART, Cincinnati, Ohio, assignors to J. A. Fay & Egan Company, Cincinnati, Ohio, a Corporation of West Virginia. Filed June 15, 1907. Serial No. 379,272.



1. A board edging machine comprising the combination of a saw-blade, a normal table over the surface of which the work may be adjusted transversely of the plane of said saw-blade, said table having a slot parallel to the plane of said saw-blade, an endless supplemental table in said slot, and means for permitting relative up and down adjustment between said supplemental table and said normal table adjacent to the cutting range of said saw-blade.

2. A board edging machine comprising the combination of a normal table having a slot substantially parallel to the sides of the saw-blade in said machine, an endless supplemental supporting table in said slot having a board-supporting surface higher than the upper surface of said normal table for supporting the board longitudinally of said board-supporting surface and in raised relation to said normal table, a gage for the work adjustable across the surface of said normal table laterally of the sides of said saw-blade, and means for permitting relative positioning up and down adjacent the cutting range of said saw-blade between said board-supporting surface and the upper surface of said normal table, and constructed and arranged for permitting employment of said machine for edging and for regular sawing purposes, substantially as described.

3. A board edging machine comprising the combination of a normal table having a slot substantially parallel to the sides of the saw-blade in said machine, an endless supplemental supporting table in said slot having a board-supporting surface higher than the upper surface of said normal table for supporting the board longitudinally of said board-supporting surface and in raised relation to said normal table, a gage for the work adjustable across the surface of said normal table laterally of the sides of said saw-blade, means for permitting relative positioning up and down adjacent the cutting range of said saw-blade between said board-supporting surface and the upper surface of said normal table, and pressure means above said endless supplemental supporting table for pressing the stock upon said endless supplemental supporting table, substantially as described.

4. A board edging machine comprising the combination with a normal table having a slot substantially parallel to the sides of the saw-blade in said machine, of an endless supplemental supporting table in said slot having a board-supporting surface higher than the upper surface of said normal table for supporting the board longitudinally of said board-supporting surface and in raised relation to said normal table, a gage for the work adjustable across the surface of said normal table laterally of the sides of said saw-blade, means for permitting relative positioning up and down adjacent the cutting range of said saw-blade between said board-supporting surface and the upper surface of said normal table, and pressure means above said endless supplemental table constituting feeding means for said board, substantially as described.

5. A board edging machine comprising the combination with a normal table having a slot substantially parallel to the sides of the saw-blade in said machine, of an endless supplemental supporting table in said slot having a board-supporting surface higher than the upper surface of said normal table for supporting the board longitudinally of said board-supporting surface and in raised relation to said normal table, a gage for the work adjustable across the surface of said normal table laterally of the sides of said saw-blade, means for permitting relative positioning up and down adjacent the cutting range of said saw-blade between said board-supporting surface and the upper surface of said normal table, a roll above said endless supplemental table, and driving means for actuating said endless supplemental table and roll while feeding a board therebetween, for the purposes specified.

[Claims 6 to 10 not printed in the Gazette.]

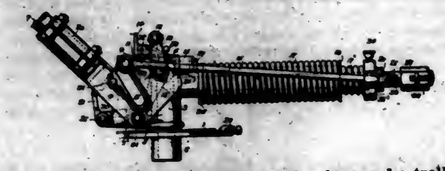
877,125. AUTOMATIC MUSICAL INSTRUMENT. ALFRED A. ROSE, Bellevue, Ky. Filed Feb. 11, 1907. Serial No. 356,754.



1. In an automatic musical instrument, the combination with a vacuum chamber and a pneumatic beater, of a cylindrical valve chamber, a connection on said valve chamber leading vertically downward to said vacuum chamber and forming the only support for said valve chamber, a connection leading horizontally from said valve chamber, a double seated valve in said valve chamber, and a valve stem centrally and frictionally mounted therein, as and for the purposes specified.

2. In an automatic musical instrument, the combination with a vacuum chamber and a pneumatic beater, of a valve chamber, a connection on said valve chamber leading vertically downward therefrom and forming the only support therefor, and a double seated, vertically reciprocable valve removably and adjustably supported in said valve chamber.

877,126. TROLLEY-POLE CONTROLLER. OSCAR A. ROSS, Chicago, Ill. Filed Aug. 6, 1906. Serial No. 329,328.



1. In a device of the kind described, a base and a trolley pole in combination with resilient retaining means, a supporting member provided with two retaining seats therein adapted to support the pole at different angles of inclination, means for changing the retaining means from one seat to the other seat comprising a disengaging member, and a reëngaging member carried by said supporting member, and means for automatically locking said pole in a depressed position.

2. In a device of the kind described and in combination, a pivotally supported trolley pole with an extension on the lower end thereof, said extension provided with a retaining seat therein and a receding clearance between said seat and the trolley pole, a movable resilient connecting member operatively coöperating with said extension at the seat therein, means for forcing said movable member from its seat, means for automatically locking the same in an inoperative position, and means for normally restoring the same to its seat for its operative position.

3. In a device of the kind described and in combination, a base, a trolley pole pivotally supported upon the base and provided with a bell crank extension with a depression in its free end and a receding clearance between said depression and the trolley pole, a resilient means for retaining the pole in a normal operative position provided with a movable member adapted to be positioned in said depression when said pole is in its operative position, and when forced therefrom to move along said clearance, means for forcing said movable member out of the depression when the trolley pole rises above its normal position, and means for locking the said movable member in said clearance.

4. In a device of the kind described and in combination, a stand, a base, a trolley pole pivotally supported upon the base provided with a bell crank extension with a seat in its free end and a receding clearance between said seat and the trolley pole, means for retaining the pole in operative position provided with a movable member adapted to be positioned in said seat when the pole is in its operative position and when forced therefrom to move along said clearance, means for forcing said movable member out of its seat when the pole rises above its operative position, means for locking said movable member in said clearance, and means for returning the movable member to its seat.

5. In a device of the kind described, and in combination, a base, a trolley pole, a supporting member arranged on said trolley pole and provided with two retaining depressions, one arranged above the other, a movable resilient supporting member arranged to coöperate with said depressions, means for automatically forcing the movable member from engagement with the upper retaining depression when the pole rises above its operative position and permitting it to automatically seat in the lower depression, means for automatically locking said movable member in the lower depression, and means for restoring the movable member to engagement with said upper retaining depression.

[Claims 6 to 11 not printed in the Gazette.]

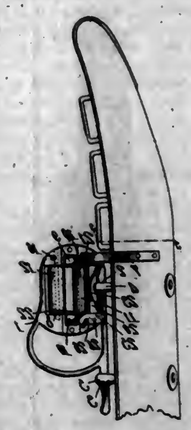
877,127. SCREEN-FASTENER. EMILE SAUVAGEAU, Peabody, Mass. Filed Sept. 4, 1906. Serial No. 333,224.

The combination with a window frame, of a sash slidably mounted therein, a second frame slidable in the window frame, a locking plate applied to the sash, a guide plate carried by the second frame and formed with arms embracing the locking plate, a second plate carried by the second frame and provided with a cam, and a locking bolt slidably mounted in the guide plate and second mentioned plate and designed to engage the locking plate to hold the



sash in an adjusted position, the said locking bolt being formed with a finger-piece adapted to engage the cam to hold the bolt in a retracted position.

877,128. REIN-GUIDE. PAUL SCHALLOW, St. Clair, Minn. Filed July 15, 1907. Serial No. 383,812.



1. A rein guide embodying a frame having a rein receiving opening therein, the opposite walls of the opening being provided with a pair of parallel guiding grooves, one of the said grooves being provided with a lateral turn-out, of a pair of rollers mounted in the rein opening, one of the rollers having a journal projecting into the said grooves and adapted to pass through the turn-out, and a catch for closing the turn-out.

2. In a rein guide, the combination with a suitable support, of a frame pivotally mounted thereon and having a rein receiving opening, and means for yieldingly centering the frame.

3. In a rein guide, the combination with a suitable support, of a frame pivotally mounted thereon and having a rein receiving opening, and a pair of springs engaging at the opposite sides of the frame for yieldingly centering it.

4. A rein guide comprising a frame having a rein receiving opening therein, opposite walls of the opening being provided with a pair of parallel guiding grooves, oppositely disposed guiding rollers journaled within said walls and extending into the opening, a spring pressed yoke slidably mounted within the frame, a roller journaled within the yoke and removably mounted within the opening, and a roller parallel therewith and journaled within opposite walls of the opening, said parallel rollers being disposed at opposite sides of the pass between the first mentioned rollers.

877,129. BALL-GUIDING CASING. STEFAN SCHNEIDER, Charlottenburg, Germany. Filed July 20, 1907. Serial No. 384,830.

The combination of bearing balls with a ball guiding casing comprising a single cage ring and distance pieces

of bulged U-shape riveted at their ends to said ring and adapted to project beyond the balls, the bulged portions



of said distance pieces being curved to overlap and hold the balls laterally.

877,130. IGNITER. GEORGE J. SCHULTZ, New York, N. Y., assignor to Benjamin Briscoe, Tarrytown, N. Y. Filed Jan. 24, 1907. Serial No. 353,770.



1. The combination with a casing in the form of a bushing for entering into an ignition chamber, a sparking point, a body of insulating material carrying said sparking point and of smaller radius than the radius of the inner wall of the casing, a plate of translucent material carried by said insulating material, and means for clamping said plate against the casing for affording a translucent closure for the space between the insulation and the casing.

2. The combination with a casing in the form of a bushing for application to an ignition chamber, a sparking point, an insulator carrying the sparking point and located within the bushing and leaving an annular space between its outer perimeter and the inner perimeter of the casing, and a translucent closure and connection between the insulator and the bushing.

3. The combination with a shaft, of a sparking point carried thereby, disks of mica arranged upon the shaft for insulating the same, and several of these disks at one portion being of larger radius than the normal radius of the disks at the outer portions for forming a translucent plate.

4. The combination of a body of conducting material carrying a sparking point, of an insulator upon said body of conducting material, and a plate of mica carried by said body of conducting material and extending beyond said insulating material for providing securing means for the device and for permitting observation of sparks and explosion flashes.

877,131. SCREW. LUSCOMBE SHARELLS, London, England, assignor to Walter C. Jordan, New York, N. Y. Filed Nov. 20, 1906. Serial No. 344,300.

1. A countersinking screw having a groove cut spirally across the threads, extending the length of the screw up onto the under side of the head and along the lower edge of the head.

2. A countersinking screw having a series of grooves cut parallel with each other spirally across the threads, extending up onto the under side of the head and turned along the edge of the head, each of said grooves being provided with a cutting edge.

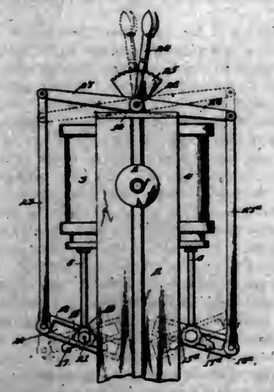


3. A countersinking screw having means for countersinking the head comprising angled grooves parallel with the top surface of the head and adjacent to it and located on the under side of the screw head.

4. A countersinking screw having a groove cut spirally across the threads, extending the length of the screw up onto the under side of the head and along the lower edge of the head and terminating bluntly.

5. A countersinking screw having means for countersinking the head comprising angled grooves parallel with the top surface of the head and adjacent to it, said grooves terminating bluntly.

877,132. OSCILLATING ENGINE. JESSE SMITH, Spokane, Wash. Filed Mar. 22, 1905. Serial No. 251,488.

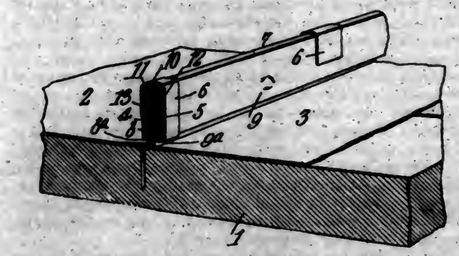


1. In an oscillating engine, the combination with the cylinder, of a steam chest, an exhaust chest, valves for controlling the steam ports of said chests, a valve rod for each chest, a pivoted valve gear for each rod having a sliding connection with its said rod and adapted to be adjusted to different fixed positions, and means for simultaneously adjusting said valve gears.

2. In an oscillating engine, the combination with the cylinder, of a steam chest, an exhaust chest, valves for controlling the steam ports of said chest, a valve rod for each chest, a pivoted valve gear for each rod and having a sliding connection therewith, an adjusting rod for each gear, a rock-shaft having oppositely extending arms each connecting with its respective adjusting rods, and means for operating said rock-shaft.

3. In an oscillating engine, the combination with engine cylinder, its steam inlet chest and exhaust chest, arranged respectively on opposite sides thereof, valves and valve rods for said chest and their controlling gears, of a vertical supporting frame having a valve gear support extending from each of the side frames thereof, on opposite sides of the supporting frame and projecting in opposite directions, substantially as and for the purpose set forth.

877,133. METALLIC-ROOFING CONSTRUCTION. CHARLES SPORNHAUER, Celina, Ohio, assignor of one-half to Frank Spornhauer, Celina, Ohio. Filed Apr. 19, 1907. Serial No. 369,141.

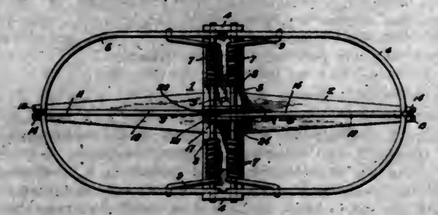


1. A metal roof seam comprising two sheets of metal each having an adjoining standing edge, a cap for covering said upstanding edges having channel ways formed at the bottom of each side, a folded packing strip supported in said channel ways and extending up into the cap, and adapted to separate said upstanding edges and the sides of the cap one from another, and an anchor strip extending from a fastening beneath the metal roofing over said cap.

2. A cap for metal roof seams comprising a folded sheet of metal having its lower edges turned inwardly to form channel ways, and a strip of folded packing within said cap and supported in said channel ways.

3. A packing strip for a metal roof seam to be used with a cap for covering the upturned ends of metal sheets, consisting of a strip of waterproof material doubled upon itself and then each side doubled again to form an M-shaped strip.

877,134. ANIMAL-TRAP. JAMES H. SPRAGUE and EDWARD WARMBRODT, Glenwood Springs, Colo.; said Warmbrodt assignor to said Sprague, Rifle, Colo. Filed Feb. 9, 1907. Serial No. 356,594.



1. A trap of the character described having a pair of spring actuated jaws pivoted to swing toward each other, a pair of triggers to engage said jaws and hold them open, the inner ends of said triggers being connected for simultaneous movement in a vertical plane and one of them having a bait retaining means, and means to engage and guide the inner ends of said triggers and prevent lateral movement of the same whereby said triggers will only release the jaws when their inner ends are moved upwardly.

2. A trap of the character described having a pair of spring actuated jaws pivoted to swing toward each other, a pair of triggers to engage said jaws and hold them open, the inner ends of said triggers being connected for simultaneous movement in a vertical plane and a recessed guide arranged beneath said inner ends of the triggers and adapted to receive them in its recess and prevent them from swinging or springing laterally.

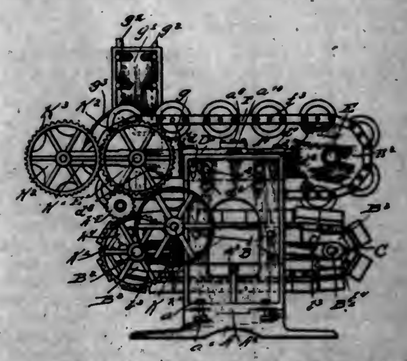
3. A trap of the character described comprising a longitudinally extending base plate having bearings at its ends, a cross piece arranged centrally upon said base plate and having bearings at its ends, transversely extending pivot rods in the bearings on said cross piece, U-shaped jaws having their open inner ends pivoted upon said rods, coil springs upon said rods for actuating said jaws, right angular shaped triggers pivoted in the bearings at the ends of said base plate and formed at their outer ends with hooks to engage the outer ends of said jaws, a slot and pin connection between the inner ends of said triggers, a guide for the inner ends of said triggers and a bait hook carried by the inner end of one of said triggers, substantially as described.

4. A trap of the character described having a pair of spring actuated jaws pivoted to swing toward each other, a pair of triggers to engage said jaws and hold them open, said triggers being of right angular form and pivoted at their angles with their short outer ends arranged upon the exterior of the outer ends of the jaws and formed with shoulders to engage the outer and upper edges of said ends of the jaws, the long inner ends of said triggers being connected for simultaneous movement in a vertical plane and one of them having means for engaging and holding bait, and a guide arranged to engage the inner ends of said triggers and to prevent them from swinging or spring laterally.

5. A trap of the character described comprising longitudinal and transverse intersecting plates, opposing spring actuated jaws upon said transverse plate, a pair of triggers upon said longitudinal plate to engage said jaws and hold them open, the overlapping inner ends of said triggers being connected for simultaneous movement and one of them having a bait retaining means and a guide arranged at the point of intersection of said plates and adapted to engage the inner ends of said triggers to prevent them from swinging or springing laterally.

[Claim 6 not printed in the Gazette.]

877,135. FLANGING-MACHINE. CHARLES STECHER, Chicago, Ill. Filed July 19, 1906. Serial No. 326,865.



1. In a machine of the class described the combination with a base, of adjustable side members engaged thereto a removable die bar engaged to said frame, an adjustable depending die engaged to said die bar, a pressure chain in vertical alinement with said die, and a chuck engaged between the pressure chain and die bar and having a flange thereon engaged between the die bar and said depending die.

2. In a machine of the class described the combination with an adjustable frame, adjustable chuck carrying chains engaged thereto, oppositely disposed chucks movable with

said chains adapted to engage a can body therebetween, a peripheral flange on each chuck, a die bar extending longitudinally of said frame, a pressure chain in vertical alinement therewith adapted together with the die bar to engage the flange on the chuck and rotate the same, a depending die engaged to the die bar and engaging the flange of said chuck between the same and the die bar and means contacting the chucks to force the same oppositely to release the can body.

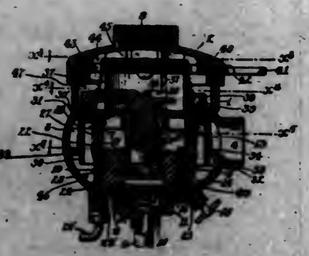
3. In a device of the class described the combination with a frame of horizontal parallel chuck carrying chains engaged thereto, a horizontal die bar having a shoulder adjustably engaged to said frame, a guideway beneath the same in vertical alinement therewith, a pressure chain having a shoulder supported by and movable along the guideway, oppositely disposed chucks movable between the die bar and pressure chain, a flange thereon engaged by the shoulders of the die bar and pressure chain and rolled along the same, said chucks adapted to engage a can body therebetween and a die removably secured to the die bar extending below the flange on said chucks and adapted to flange the end of the can therebetween.

4. In a machine of the class described the combination with a laterally adjustable frame, a die bar extending longitudinally thereof, a guideway in vertical alinement therewith, a pressure chain supported by said guide way, oppositely disposed chuck carrying chains, chucks engaged thereto, a flange on each chuck engaged between the pressure chain and die bar and rotated thereby, a notched wheel adapted to deliver can bodies to successive pairs of chucks, and a die engaging on the inside of said chuck adapted to flange the end of said can therebetween.

5. In a device of the class described the combination with a frame of means adjusting one side of the frame with respect to the opposite side, parallel die bars thereon each having a downwardly, facing shoulder, means for adjusting said bars both laterally and vertically, a die plate on each bar depending below said shoulders, parallel ways beneath said die bars, pressure chains on said ways having shoulders on their upper faces, chuck carrying chains supported on the frame adjacent each die bar, transversely movable chucks journaled thereon, adapted to engage in the ends of can bodies and rotate them against said dies, a peripheral flange on each chuck adapted to be rotatively engaged between the shoulders on said die bars and pressure chains and guides actuating the chucks to release the can bodies therefrom.

[Claims 6 to 21 not printed in the Gazette.]

877,136. CARBURETER. ALFRED C. STEWART, Los Angeles, Cal. Filed Mar. 7, 1906. Serial No. 304,651.



1. A carbureter comprising an inner oil chamber provided with an inlet valve, a casing surrounding the oil chamber, an air inlet to said casing and provided with a valve seat, said oil chamber being provided with an outlet opening, a deflector above said outlet, and a valve surrounding the oil chamber and guided to move vertically in the casing and forming therewith and with the oil chamber an air inlet chamber and a mixing chamber, said valve having a portion coöperating with said valve seat and a deflector portion coöperating with the aforesaid deflector, to vary the size of the air inlet opening into the mixing chamber, and the outlet from the mixing chamber in correspondence.

2. A carbureter comprising an inner oil chamber provided with an inlet valve, a float automatically controlling said inlet valve, a casing surrounding the oil chamber, an air inlet to said casing and provided with a valve seat, said oil chamber being provided with an outlet opening, a deflector above said outlet, and a valve surounding the oil chamber and guided to move vertically in the casing and forming therewith and with the oil chamber an air inlet chamber and a mixing chamber, said valve having a portion coöperating with said valve seat and a deflector portion coöperating with the aforesaid deflector, to vary the size of the air inlet opening into the mixing chamber, and the outlet from the mixing chamber in correspondence.

3. A carbureter comprising an inner oil chamber provided with an inlet valve, a casing surrounding the oil chamber, an air inlet to said casing and provided with a valve seat, said oil chamber being provided with an outlet opening, a deflector above said outlet, and a valve surrounding the oil chamber and guided to move vertically in the casing and forming therewith and with the oil chamber an air inlet chamber and a mixing chamber, said valve having a portion coöperating with said valve seat and a deflector portion coöperating with the aforesaid deflector, to vary the size of the air inlet opening into the mixing chamber, and the outlet from the mixing chamber in correspondence, and a suction chamber above the mixing chamber, the valve member being exposed in said suction chamber to be lifted by the suction therein.

4. A carbureter comprising an inner oil chamber provided with an inlet valve, a float automatically controlling said inlet valve, a casing surrounding the oil chamber, an air inlet to said casing and provided with a valve seat, said oil chamber being provided with an outlet opening, a deflector above said outlet, and a valve surrounding the oil chamber and guided to move vertically in the casing and forming therewith and with the oil chamber an air inlet chamber and a mixing chamber, said valve having a portion coöperating with said valve seat and a deflector portion coöperating with the aforesaid deflector, to vary the size of the air inlet opening into the mixing chamber, and the outlet from the mixing chamber in correspondence, and a suction chamber above the mixing chamber, the valve member being exposed in said suction chamber to be lifted by the suction therein.

5. A carbureter comprising a casing having an annular flange extending up from the bottom thereof, a plug screwed onto said flange to form an oil chamber within the flange, said plug and flange being formed with an annular oil outlet at the top of said flange, and with a duct leading to said outlet from the oil chamber, a valve for said duct, the casing having a circular valve extending inwardly toward the oil chamber, and a valve member sliding in the casing and having a tapering portion inwardly of said lip, and a tapering portion at its upper part, and a tapering deflector member supported in the casing adjacent to the upper tapering portion of the valve member.

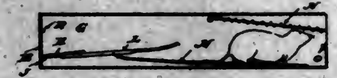
[Claims 6 to 8 not printed in the Gazette.]

877,137. SWEEPING COMPOUND. JOHN STOLTENBERG, Durant, Iowa. Filed July 1, 1907. Serial No. 381,788.

A dustless sweeping compound comprising a mixture of sawdust, petroleum, turpentine, lime water and carbolic acid, the whole being intermixed in about the proportions set forth.

877,138. ANIMAL-TRAP. WILLIAM G. STONE, Knoxville, Ill. Filed Apr. 7, 1906. Serial No. 310,560.

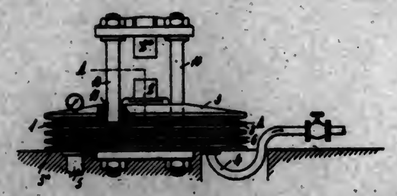
1. A trap comprising a cage, an inclosed passage-way having an exit into the cage, and provided with an entrance, a gravity opened door hinged at said entrance for closing it, a lever having one end positioned beneath the door close to the hinge thereof, its fulcrum being substantially at the free end of the door when the latter is open for the purposes described, a second lever fulcrumed beyond the first and having one end adapted to bear upward beneath and against said first lever, and a normally gravity closed door for closing the exit of the passage and arranged to be raised by the animal.



2. A trap comprising a cage, an inclosed passage-way having an entrance opening in one end, and having a place of exit at its other end opening into the cage, a gravity opened door for closing the entrance opening, a lever having one free end and one end extending beneath the door for raising and closing it when the weight of the animal is imposed upon the opposite free end of said lever, a second lever having one free end and one end extending beneath the said free end of the said first lever and adapted to contact with and raise the same by the weight of the animal upon the opposite free end of said second lever to permit the door to open, and a gravity operated normally closed door for closing the exit opening of the passage and adapted to be raised by the animal to permit its escape into the cage.

3. A trap comprising a cage, an inclosed passage-way having an entrance opening in one end, and having a place of exit at its other end opening into the cage, a gravity closed door for the exit adapted to be raised by the animal within the passage, a door for closing the entrance the same adapted to open by gravity, a lever pivoted within the passage and having one free end and arranged at one end to contact with the under side of the open door to close the same when the weight of the animal is imposed upon its other free end, and a second lever having one free end and having one end beneath said free end of the first lever and adapted to raise the same by the weight of the animal on the end of the said second lever opposite to that which raises the first thereby to depress the door closing end of said first lever and permit said door to open, said second lever adapted to remain depressed until raised by entrance of another animal as described.

877,139. HYDRAULIC PRESS. WLADIMIR TATARINOFF, St. Petersburg, Russia. Filed Nov. 6, 1906. Serial No. 342,258.



1. A press of the character described comprising end members, and rigid plates forming folds between the end members hinged at their inner and outer edges.

2. A press of the character described, comprising end members, a plurality of rigid plates connecting the end members hinged together and connecting members hinged to the rigid plates.

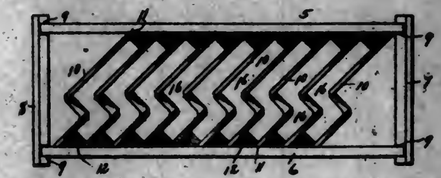
3. A press of the character described, comprising end members, a plurality of rigid plates connecting the end members hinged together at their inner edges and connecting members hinged to the outer edges of said plates.

4. A press of the character described comprising end members, a plurality of rigid plates forming folds between and connecting the end members hinged together at their inner edges, connecting members hinged to the outer edges of said plates, and means for stiffening the connecting members.

5. A press of the character described, comprising a stationary press-plate, a receiver for the working fluid comprising end members, hinged plates forming folds between the end members, rings connecting the fold-forming plates, a press-plate carried by one of the end members, and means for stiffening the connecting rings.

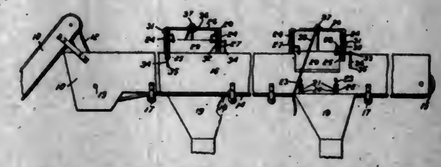
[Claims 6 to 11 not printed in Gazette.]

877,140. GANG-MOLD. AUGUSTUS O. THOMAS, Kearney, Nebr. Filed Mar. 10, 1906. Serial No. 305,281.



A mold comprising separable side and end walls, a plurality of Z-shaped pallets slantingly arranged between the side walls of the mold, a plurality of skeleton spacing members for spacing said pallets apart and having beveled outer walls adapted to lie parallel with the side walls of the mold and having inner walls, forming the ends of the mold, arranged at right angles to said pallet.

877,141. CONVEYER. THEODORE C. THOMPSON, Roberts, Ill. Filed Feb. 18, 1907. Serial No. 358,139.



1. The combination with a trough having openings at one of its sides, and a conveyer arranged to travel in the trough, of spring-actuated means for normally engaging the conveyer and directing material therefrom and through the openings.

2. The combination with a trough having openings at one of its sides, and a conveyer arranged to travel in the trough, of spring-actuated means normally engaging the conveyer for directing material therefrom and through the openings, and means for displacing the last-named means.

3. The combination with a trough having openings at one of its sides, and a conveyer arranged to travel in the trough, of a spring-actuated gate arranged normally for engagement with the conveyer to direct material therefrom and through the openings.

4. The combination with a trough having openings at one of its sides, and a conveyer arranged to travel in the trough, of a spring-actuated gate arranged normally for engagement with the conveyer to direct material therefrom and through the openings, and means for moving the gate out of such engagement.

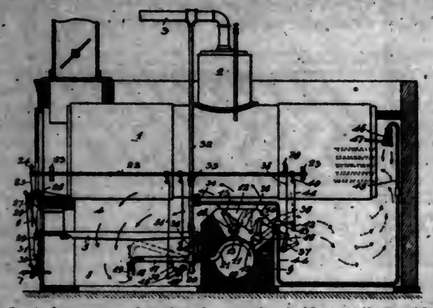
5. The combination with a trough having openings at one of its sides, and a conveyer arranged to travel in the trough, of a vertically movable spring actuated means normally engaging the conveyer to direct the material therefrom and through the openings, and means for raising the material directing means to inoperative position against the tension of the spring.

[Claims 6 and 7 not printed in the Gazette.]

877,142. MEANS FOR INCREASING AND PROMOTING THE COMBUSTION OF FUEL. GEORGE R. TORREY, Washington, D. C. Filed Jan. 19, 1906, Serial No. 296,840. Renewed June 10, 1907. Serial No. 378,288.

1. In an apparatus of the character described, a furnace, a fire-chamber, a bridge-wall, a vortex chamber within the bridge-wall for giving a circular, centrifugal action to steam and air, and means for forcing said steam and air into and through the fire chamber of the furnace.

2. In an apparatus of the character described, a furnace, a fire-chamber, a bridge wall, provided with a circular vortex chamber, means for forcing air and steam into said vortex chamber, and means for circulating said air and steam around the fire chamber to consume the productions of combustion, substantially as described.



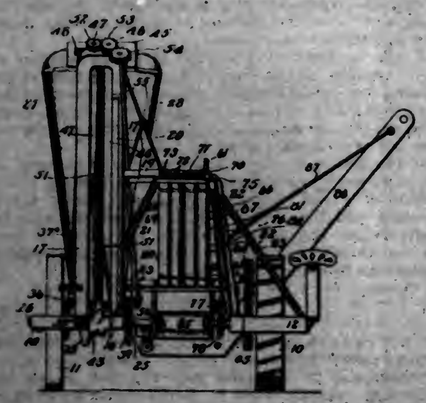
3. A furnace, a fire-chamber, and a bridge wall provided with a vortex chamber, in combination with an injector pipe having a curved inlet end within said vortex chamber, means for forcing combined air and steam into said vortex chamber, and means for discharging said air and steam into and around the fire chamber of the furnace.

4. In an apparatus for increasing combustion and consuming smoke, a furnace, a fire-chamber, a fire-door and ash-pit, the combination of a bridge wall having a circular vortex chamber therein, of an injector pipe extending from the ash pit into said vortex chamber and provided with a curved inlet end, a governor valve connected to the fire door, connections between the steam pipe and injector pipe, and means whereby when the fire door is opened the injector pipe and steam connections are put in full operation, and remain so for a period of time after the fire-door has been closed, substantially as described.

5. In an apparatus for increasing combustion, a furnace, a fire-chamber, a fire-door, a bridge-wall having a vortex chamber therein, a spray pipe having a nozzle provided with a series of jet openings, a valve in said spray pipe, and means for simultaneously operating the fire-door and said valve in the spray pipe, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

877,143. CORN-HUSKER. CHARLES E. TRENT, Redfield, Iowa. Filed June 24, 1905. Serial No. 266,871.



1. In a device of the class described, a pair of snapping rollers designed to coact with each other, a tapered spiral lower end on each snapping roller, a spiral member encircling each of the rollers for advancing the stalks of corn fed between them, means for springingly maintaining one of the rollers in position relative to the other, a pair of guiding shields mounted above and in front of the snapping rollers, a toothed chain in each shield designed to advance the stalks of corn between the guiding shields, traction wheels for rotating said rollers and said toothed chains in opposite directions, an inclined plate at one side of the snapping rollers designed to receive the ears of corn snapped by the rollers and permit them to slide over it to a point of discharge, a conveyer to receive the ears of corn from the inclined plate and designed to deliver the corn thus received at its upper rear end, and a pivoted plate secured to the central portion of the inclined plate and designed to rest upon said conveyer.

2. In a device of the class described, a pair of snapping rollers designed to coact with each other, a tapered spiral lower end on each snapping roller, a spiral member encircling each of the rollers for advancing the stalks of corn fed between them, means for springingly maintaining one of the rollers in position relative to the other, a pair of guiding shields mounted above and in front of the snapping rollers, a toothed chain in each shield designed to advance the stalks of corn between the guiding shields, traction wheels for rotating said rollers and said toothed chains in opposite directions, an inclined plate at one side of the snapping rollers designed to receive the ears of corn snapped by the rollers and permit them to slide over it to a point of discharge, a conveyer to receive the ears of corn from the inclined plate and designed to deliver the corn thus received at its upper rear end, and two pairs of husking rollers mounted partially beneath and behind the delivery end of said conveyer for husking the ears of corn delivered upon it.

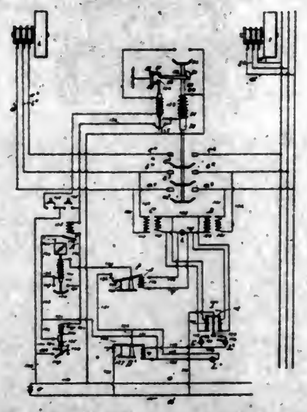
3. In a device of the class described, a pair of snapping rollers designed to coact with each other, a tapered spiral lower end on each snapping roller, a spiral member encircling each of the rollers for advancing the stalks of corn fed between them, means for springingly maintaining one of the rollers in position relative to the other, a pair of guiding shields mounted above and in front of the snapping rollers, a toothed chain in each shield designed to advance the stalks of corn between the guiding shields, traction wheels for rotating said rollers and said toothed chains in opposite directions, an inclined plate at one side of the snapping rollers designed to receive the ears of corn snapped by the rollers and permit them to slide over it to a point of discharge, a conveyer to receive the ears of corn from the inclined plate and designed to deliver the corn thus received at its upper rear end, and a pivoted plate secured to the central portion of the inclined plate and designed to rest upon said conveyer.

4. In a device of the class described, a pair of snapping rollers designed to coact with each other, a tapered spiral lower end on each snapping roller, a spiral member encircling each of the rollers for advancing the stalks of corn fed between them, means for springingly maintaining one of the rollers in position relative to the other, a pair of guiding shields mounted above and in front of the snapping rollers, a toothed chain in each shield designed to advance the stalks of corn between the guiding shields, traction wheels for rotating said rollers and said toothed chains in opposite directions, an inclined plate at one side of the snapping rollers designed to receive the ears of corn snapped by the rollers and permit them to slide over it to a point of discharge, a conveyer to receive the ears of corn from the inclined plate and designed to deliver the corn thus received at its upper rear end, and two pairs of husking rollers mounted partially beneath and behind the delivery end of said conveyer for husking the ears of corn delivered upon it.

5. In a device of the class described, a pair of snapping rollers designed to coact with each other, a tapered spiral lower end on each snapping roller, a spiral member encircling each of the rollers for advancing the stalks of corn fed between them, means for springingly maintaining one of the rollers in position relative to the other, a pair of guiding shields mounted above and in front of the snapping rollers, a toothed chain in each shield designed to advance the stalks of corn between the guiding shields, traction wheels for rotating said rollers and said toothed chains in opposite directions, an inclined plate at one side of the snapping rollers designed to receive the ears of corn snapped by the rollers and permit them to slide over it to a point of discharge, a conveyer to receive the ears of corn from the inclined plate and designed to deliver the corn thus received at its upper rear end, a pivoted plate secured to the central portion of the inclined plate and designed to rest upon said conveyer, and two pairs of husking rollers mounted partially beneath and behind the delivery end of said conveyer for husking the ears of corn delivered upon it.

[Claims 6 and 7 not printed in the Gazette.]

877,144. SYNCHRONIZING APPARATUS FOR ALTERNATORS. MAX VOGELSANG, Frankfort-on-the-Main, Bockenheim, Germany, assignor to The Firm of Voigt & Haeffner, Atkiengesellschaft, Frankfort-on-the-Main, Germany. Filed Feb. 2, 1905. Serial No. 243,897.



1. The combination with an alternating current machine and its distributing conductors, of a second alternating current machine, connections between said conductors and said second alternator provided with switches, a tension relay controlled by the tension in said alternators, a phase indicator, a solenoid with a timing apparatus, a synchronizing circuit containing said solenoid and adapted to be closed by said tension relay on there being the correct tension and by said phase indicator on there being the correct phase, and a switch actuating circuit adapted to be closed by said solenoid on there being the correct frequency and to close the switches in said connections.

2. The combination with the distributing conductors of an alternating current machine, of a second alternating current machine, connections between said conductors and said second alternator provided with switches, a tension relay controlled by the tension in said alternators, a phase indicator, a solenoid with a timing apparatus, a synchronizing circuit containing said solenoid and adapted to be closed by said tension relay on there being the correct tension and by said phase indicator on there being the correct phase, a switch actuating circuit adapted to be closed by said solenoid on there being the correct frequency and adapted to close the switches in said connections, and means for locking the switches and afterwards opening said switch actuating circuit.

3. The combination with current conveying distributing conductors, of an alternating current machine, connections between them provided with switches, a tension relay controlled by the tension in said alternator, a subsidiary relay controlled by said tension relay, a phase indicator, a relay controlled by said phase indicator, a solenoid with a timing apparatus, a synchronizing circuit containing said solenoid and adapted to be closed by said subsidiary relay and said relay, a switch actuating circuit adapted to be closed by said solenoid and to close the switches in said connections, and means for locking these switches and afterwards opening said switch actuating circuit.

4. The combination with main current conveying distributing conductors, of an alternating current machine, connections between them provided with switches, an independent source of electrical current with two distributing conductors, a tension relay controlled by the tension in said alternator, a subsidiary relay controlled by said tension relay, a phase indicator, a relay controlled by said phase indicator, a solenoid with a time apparatus, a synchronising circuit joined to said two distributing conductors and containing said solenoid and adapted to be closed by said subsidiary relay and said relay, a switch actuating circuit joined to said synchronizing circuit and adapted to be closed by said solenoid and to close the switches in said connections, and means for locking these switches and afterwards opening said switch actuating circuit.

877,145. FLOWER-HOLDER. HANSON E. WADDELL, Chicago, Ill. Filed May 13, 1907. Serial No. 373,324.



1. A flower holder comprising a weighted base formed with a thin central stem supporting web, a thin stem stay plate having orifices, and a series of vertical bars secured to the stem stay plate and to the weighted base to hold these parts in spaced relation.

2. A flower holder comprising a weighted base formed with a thin central imperforate stem supporting web, a thin stem stay plate having orifices, and a series of vertical bars secured to the stem stay plate and to the weighted base to hold these parts in spaced relation.

3. A flower holder comprising a weighted base formed with a thin central stem supporting web, thin stem stay plates having registering orifices, and a series of vertical bars secured to the stem stay plates and to the weighted base to hold these parts in spaced relation.

4. A flower holder comprising a weighted base formed with a thin central stem supporting web, a thin stem stay plate having orifices; a series of vertical bars secured to the stem stay plate and to the weighted base to hold these parts in spaced relation, and a handled rod extending through the stem stay plate and secured to the weighted base.

5. A flower holder comprising a weighted base formed with a thin central stem supporting web provided with a screw threaded central orifice, a thin stem stay plate having orifices; a series of vertical bars secured to the stem stay plate and to the weighted base to hold these parts in spaced relation, and a handled rod extending through the stem stay plate and having a screw threaded lower portion detachably secured to the screw threaded central orifice of the supporting web of the weighted base.

877,146. SAW. EDWARD G. WARD, Philadelphia, Pa. Filed May 6, 1907. Serial No. 372,196.

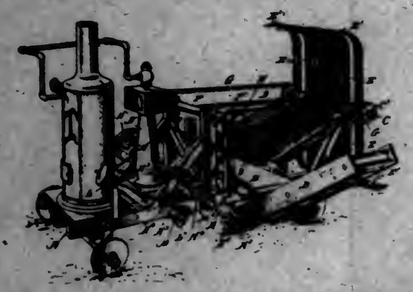


1. A saw blade provided with longitudinally disposed ribs and intermediate grooves.

2. A saw blade provided with longitudinally disposed ribs and intermediate grooves upon diametrically opposite sides of the blade.

3. A saw blade provided with ribs and intermediate grooves disposed in planes parallel to the saw teeth upon opposite sides of the blade.

877,147. COKE-LOADER. WILLIAM H. WATT, Greensburg, Pa., assignor of one-half to C. W. Beerbower and T. L. Gribbie, Greensburg, Pa. Filed Feb. 26, 1907. Serial No. 359,437.



1. A device of the kind described comprising a movable truck, a rotatable shaft carried by the front of the truck, oppositely arranged scoops consisting of bars spaced apart and passing through the shaft, the opposite ends of said bars being oppositely curved to form fingers, means for rotating said shaft, an inclined frame arranged immediately in the rear of said shaft and consisting of a plurality of bars, the bars forming the scoop passing between the bars forming the frame, a traveling belt arranged adjacent the lower end of the frame and receiving coke therefrom, and an elevator arranged at the end of the belt, and receiving coke from the belt.

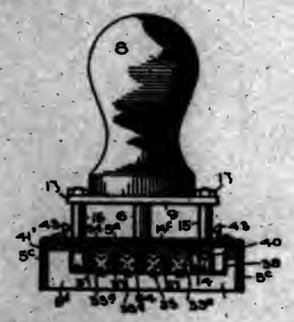
2. A coke loader comprising a truck, a shaft carried at the front end of the truck, a frame downwardly inclined and consisting of a plurality of bars, the upper end of said bars being loosely mounted upon the shaft, scoops formed of a plurality of bars passing through the shaft and alternating with the bars forming the frame, the bars forming the scoop having their end portions curved to form fingers, and traveling belt mounted transversely upon the truck and parallel and adjacent to the lower edge of the frame, and an elevator having its lower end hinged to one side of the truck, said elevator receiving from the belt material discharged thereon from the frame and scoops.

3. A coke loader comprising rotatable scoops, said scoops being formed of parallel bars having curved free end portions, an inclined frame formed of bars spaced apart and between which the bars of the scoops pass, and means for receiving coke from said frame and elevating it over the sides of a car, the scoops being movable horizontally during rotation, as and for the purpose set forth.

877,148. STAMPING INSTRUMENT. JOSEPH V. WECKBAUGH, Denver, Colo. Filed Jan. 23, 1907. Serial No. 353,734.

1. A stamping device comprising in combination, a stationary base, a reciprocating carrier having a plurality of successively arranged, identical groups of type, an inking member upon the base normally in contact with one of the said groups, and automatic means for impressing each group in succession upon the surface beneath the base.

2. A stamping device comprising in combination, a stationary base, a reciprocating carrier having a plurality of successively arranged, identical groups of type, an inking member upon the base in contact with one of the said groups when the carrier is in raised position, means to depress the carrier so as to impress one of the said groups upon the surface beneath the base and to break contact between the type and inking member and automatic means to bring a succeeding group in contact with the inking member during the return stroke of the carrier.



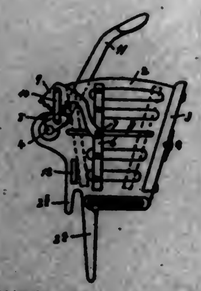
3. A stamping device comprising in combination with a suitable base, a reciprocating carrier, type bars rotatably mounted thereon, each comprising a core and a sectional, prismatic sleeve, the sides of which carry identical groups of type, an inking member upon the base arranged to engage one side of the said sleeves, and means to rotate the said bars a fraction of a revolution during each reciprocating movement of the carrier.

4. A stamping device comprising in combination with a stationary base, a reciprocating carrier, type bars rotatably mounted thereon, each of the said bars having peripheral, equidistantly, identical groups of type, an inking member arranged upon the base and normally engaging one side of the said bars, when the carrier is in raised position, toothed wheels fixed upon the bars, and a sliding member held resiliently upon the base and having projections extending in the path of the said toothed wheels when the carrier is in a lowered position.

5. A stamping device comprising in combination with a suitable base, a reciprocating carrier, type bars rotatably mounted thereon, each of the said bars having peripheral, equidistantly arranged, identical groups of type, an inking member arranged upon the base to engage one side of the said bars, toothed wheels fixed upon the bars, an actuating member slidable upon the base and having projections normally extending alongside the said wheels, a detent on the base to retain the member against displacement, means on the carrier, to release the said detent during downward movement of the carrier and a spring arranged to propel the said member so as to place its projections in the path of the said wheels when the carrier is in a lowered position.

[Claim 6 not printed in the Gazette.]

877,149. MOP-WRINGER. WILLIS H. WETMORE, Oneida, N. Y., assignor to Charles A. Lee, Oneida, N. Y. Filed Jan. 25, 1906. Serial No. 297,772.



The combination in a mop wringer of a frame including ends and a fixed presser board arranged at one side, a rock shaft mounted in bearings in the frame at the opposite side from the presser board, a movable presser provided with pivotal projections at each end engaging and operating along and in slotted horizontal openings in the ends, toothed segments adjacent to each end, eccentrically mounted on and secured to the rock shaft, connecting rods having an eye at one end receiving and mounted on said pivotal projections between the ends of the frame and the ends of the movable presser and having eccentric toothed heads engaging said toothed segments, and means for rocking the rock shaft, substantially as set forth.

877,150. PAPER-WEIGHT. BENJAMIN S. WHITEHEAD, Newark, N. J., assignor to The Whitehead & Hoag Company, Newark, N. J., a Corporation of New Jersey. Filed May 29, 1906. Serial No. 319,256.



1. A paper-weight comprising a metal body having a recess in its top, a sheet metal frame inserted in said recess and having an outwardly flaring marginal edge and a cover for said frame having its marginal edges crimped over upon the outwardly flaring marginal edge of said frame, and means for securing the frame to the body.

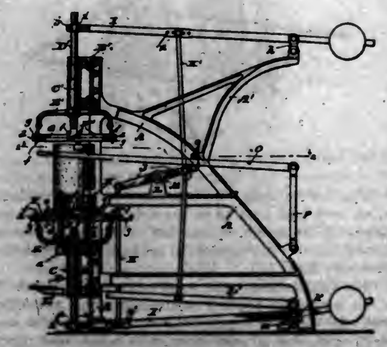
2. A paper-weight comprising a body of suitable material having a recess in its top and an aperture in its bottom communicating with the recess, a sheet metal disk inserted in the recess, fastening means attached to the disk and passed through said aperture, and a cover for said disk adapted to receive printed matter.

3. A paper-weight comprising a body of metal having a recess in its top and an aperture in its bottom communicating with the recess, a metal disk having tongues stamped therefrom and integral therewith projecting through the aperture and a covering for the disk.

4. A paper-weight comprising a metal body having a recess in its top and a marginal ledge surrounding the recess, said body also having an aperture in its bottom, a sheet metal disk resting on said ledge and provided with an out-turned marginal flange and depending tongues —10— projecting through the aperture for fastening the disk to the body and a covering for said disk having its marginal edges crimped around and against the out-turned marginal edges of the disk.

5. A paper-weight comprising a body of suitable material representing a turtle and having a recess in its back, and an aperture in its lower side, a sheet-metal disk inserted in the recess and having a tongue cut therefrom, and inserted through said aperture and clenched upon the lower side of the body, and a covering of celluloid, pyroxylin material, or similar material secured to the disk.

877,151. MACHINE FOR SLITTING PLASTIC TUBES. GEORGE P. WILLETT, Bristol, Wis. Filed June 10, 1907. Serial No. 378,103.



1. A machine for slitting plastic tubes, comprising a work-supporting table, a pair of reciprocative heads in axial alinement with each other above and below the table, and parallel crossed-wires arranged in pairs carried by the heads.

2. A machine for slitting plastic tubes comprising a work-supporting table, a pair of reciprocative heads in axial alinement with each other above and below the table, and parallel crossed-cutters arranged in pairs carried by the head.

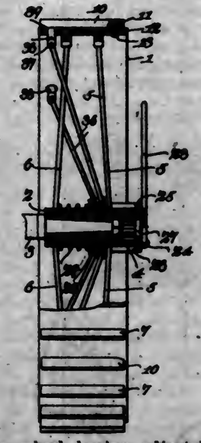
3. In a machine for slitting plastic tubes, a work-supporting table comprising a plurality of plates, gages carried by the plates, a pair of reciprocative heads in alinement with each other above and below the table, and parallel crossed-wires arranged in pairs carried by the heads.

4. In a machine for slitting plastic tubes, a work-supporting table comprising a plurality of adjustable plates, gages carried by the plates, a pair of heads in axial alinement with each other above and below the table, guides for the heads, parallel crossed-wires arranged in pairs carried by said heads, means for adjusting the width between the pairs of crossed-wires, levers in connection with the aforesaid heads, and rods in connection with the levers, whereby the heads are reciprocated.

5. A machine for slitting plastic tubes, comprising a frame, sleeves in axial alinement carried by the frame, stems in the sleeves, heads carried by the stems, parallel crossed-wires arranged in pairs carried by the heads, a work-supporting table in connection with said frame, balanced levers in connection with the stems, a walking-beam mounted in the aforesaid frame, and rods connecting the walking-beam with the balanced levers.

[Claim 6 not printed in the Gazette.]

877,152. TRACTION-WHEEL. MATTHEW WILSON, Garrison, Iowa. Filed June 18, 1906. Serial No. 322,294.



1. A traction wheel having adjustable mud-hooks, a sleeve movable axially on the hub of said wheel, stiff connections between said sleeve and said mud-hooks and means for sliding said sleeve mounted on said wheel.

2. A traction wheel having adjustable mud-hooks, a sleeve movable axially on the hub of said wheel, stiff connections between said sleeve and said mud-hooks, and a lever journaled on said wheel and moving said sleeve.

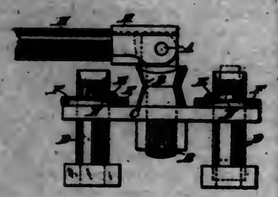
3. In a traction wheel, mud-hooks pivoted at one end to the rim of said wheel, a sleeve slidable axially on the hub thereof, connections between said sleeve and the free ends of said mud-hooks, manual means for moving the sleeve in one direction, and automatic means for sliding it in the opposite direction.

4. In a traction wheel, mud-hooks pivoted at one end to the rim of said wheel, a sleeve slidable axially on the hub thereof, connections between said sleeve and the free ends of said mud-hooks, manual means for moving the sleeve inwardly to protect the mud-hooks, automatic means for

sliding said sleeve outwardly to retract said hooks, and means for locking the sleeve in its inner position.

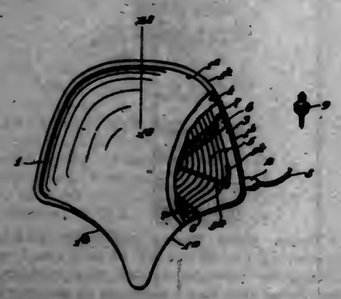
5. A traction wheel having a plurality of mud-hooks pivotally connected therewith, a slidable sleeve on the hub of said wheel, links connecting said sleeve with said mud-hooks, automatic means for moving said sleeve outward, a shaft journaled on said wheel and having V-shaped crank portions, anti-friction rollers carried by said crank portions and bearing against the end of said sleeve, locking means carried by said sleeve for engaging said rollers and holding them in central position, and a controlling lever connected with said shaft.

877,153. TOOL. REUBEN WOLFERT, West Alexandria, Ohio. Filed Aug. 7, 1907. Serial No. 387,564.



A tool for removing and replacing manhole plates in steam boilers, consisting of a metal plate of any convenient size, through each end of which is inserted a movable and adjustable bolt with tee (T) shaped head, by means of which the tool may be clamped to the manhole plate by inserting the tee (T) ends of said bolts into the slot in the manhole plate and giving the bolts a one-quarter turn, and to the center of which plate, on the side opposite the tee (T) ends of said bolts, is hinged a jointed handle for bringing and retaining the manhole plate to any desired position, all substantially as set forth.

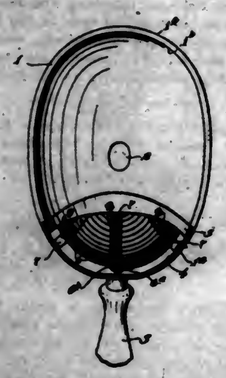
877,154. ELECTRICAL ABDOMINAL HEATER. HIRAM D. WOOD, Jr., Minneapolis, Minn. Filed July 3, 1907. Serial No. 381,993.



1. In an abdominal heater, the combination with a bowl made up of inner and outer shells of non-absorbent material, said shell having a body portion adapted to cover the abdomen and having reverse inwardly curved lower edges adapted to fit the thighs, and electric wiring in the space between the said inner and outer shell insulated therefrom, substantially as described.

2. An abdominal heater comprising a bowl made up of inner and outer metallic shells joined at their marginal portions; said bowl having a body portion adapted to cover the abdomen, and a reverse inwardly curved lower portion, electric wiring within the said bowl approximately following the outline of the margin thereof, and insulated from said inner and outer shells, substantially as described.

877,155. ELECTRICAL FACE-STEAMER. HIRAM D. WOOD, Jr., Minneapolis, Minn. Filed July 3, 1907. Serial No. 381,994.



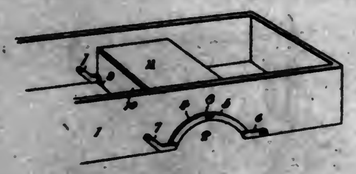
1. In a face steamer, the combination with a bowl made up of inner and outer shells of non-absorbent material, said bowl having an air passage at its intermediate portion, of wiring located around said air passage in the spaces between the said inner and outer shells and insulated therefrom, substantially as described.

2. In a face steamer, the combination with a metal bowl made up of thin inner and outer shells, the said bowl having an intermediately located air passage and a projecting handle, of wiring located around said air passage in the space between said inner and outer shells and insulated therefrom, substantially as described.

3. In a device of the kind described, a metal bowl made up of thin inner and outer shells, of an asbestos sheet seated against the inner surface of said outer shell, a wire having increasing convolutions located between said inner shell and said asbestos sheet and insulated from said inner shell, and radially disposed spacing strips having projections engaging said wire and holding the convolutions thereof spaced apart, substantially as described.

4. In a face steamer, the combination with a metal bowl having an air passage at its central portion and made up of inner and outer shells slightly spaced apart, of a wire having increasing convolutions located between said inner and outer shells and surrounding the air passage of said bowl, and a heat insulating sheet interposed between said outer metal shell and said wiring, substantially as described.

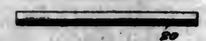
877,156. ARCH-IRON FOR HAY-RACKS. ERWIN A. WRUCK, Norwalk, Wis. Filed Mar. 19, 1907. Serial No. 363,279.



1. In a vehicle body, the combination of a notched side piece, an arch iron applied to the side piece and reinforcing the edges of the notch, extensions at opposite ends of the arch iron, and a stirrup carried by each extension for the purpose specified.

2. In a vehicle body, the combination of a notched side piece, an arch iron applied to the side piece and reinforcing the edges of the notch, extensions at opposite ends of the arch iron, one of said extensions being bent upwardly for the purpose specified, and a stirrup carried by each of the extensions for the purpose specified.

877,157. MANUFACTURE OF WOOD-SCREWS. WILLIAM G. ALLEN, Hartford, Conn., assignor to The Globe Screw Company, Hartford, Conn., a Corporation of Connecticut. Filed Jan. 30, 1906. Serial No. 298,730.



1. In the manufacture of screws and analogous screw-threaded articles, the process of forming the screw-thread consisting in cold-forging the thread on the article, and then bringing said forged thread to the desired dimensions by cutting.

2. In the manufacture of screws and analogous screw-threaded articles, the process of forming the screw-thread consisting in cold-rolling a thread on the article, and then bringing said cold-rolled thread to the desired dimensions by cutting.

3. In the manufacture of screws and analogous screw-threaded articles, the process of forming the screw-thread consisting in cold-rolling a thread on the article, and then bringing said cold-rolled thread to the desired diameter by cutting.

4. In the manufacture of screws and analogous screw-threaded articles, the process of forming the screw-thread consisting in forging on the article a thread of larger diameter than the original diameter of the part of the article on which it is forged, and then bringing the thread to the desired dimensions by cutting.

5. In the manufacture of screws and analogous screw-threaded articles, the process of forming the screw-thread consisting in rolling on the article a thread of larger diameter than the original diameter of the part of the article on which it is rolled, and then bringing the thread to the desired dimensions by cutting.

[Claims 6 to 13 not printed in the Gazette.]

877,158. CENTRIFUGAL CREAM-SEPARATOR. OSCAR ANDERSON, Kearny, N. J. Filed Oct. 18, 1906. Serial No. 339,484.



1. In a centrifugal separator, a liner having corrugations the contiguous sides of which in a transverse plane of the liner extend across radii of the bowl in the same general direction.

2. In a centrifugal separator, a liner having corrugations the contiguous sides of which in a transverse plane of the liner extend across radii of the bowl and are inclined outwardly backward with respect to the direction of rotation.

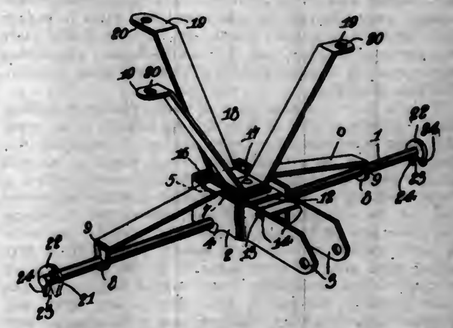
3. In a centrifugal separator, a liner having corrugations the contiguous sides of which in a transverse plane of the liner extend across radii of the bowl and form at their inner surfaces acute angles with said radii on the same sides thereof with respect to the direction of rotation.

4. In a centrifugal separator, a liner providing a circumferential series of adjacent skimming surfaces which in a transverse plane of the liner extend across radii of the liner in the same general direction, the opposite edges of each skimming surface being connected one to the next preceding surface and the other to the next succeeding one.

5. In a centrifugal separator, a liner corrugated approximately parallel to the axis, the sides of said corrugations being nearly parallel and pointing in the same general direction cutting the radii of said liner at similar angles.

[Claims 6 to 13 not printed in the Gazette.]

877,159. FRONT RUNNING-GEAR. GEORGE E. BABCOCK, Fort Plain, N. Y. Filed Sept. 4, 1907. Serial No. 391,364.



1. In a front running gear of the character described, the combination with the front axle, of a substantially U-shaped tongue connection arranged thereon, tongue receiving plates formed on the forward end of said connection, a bolster bar having a centrally disposed downwardly projecting portion adapted to engage the upper edges of the tongue connection, downwardly bent apertured axle engaging lugs formed on the outer end of said bolster bar, means to rigidly connect said lugs with the axle, a fifth wheel plate arranged in the upper edge of said tongue connection, attaching lugs formed on the opposite ends of said fifth wheel plate and adapted to engage apertures or slots formed in the tongue connection, and means to pivotally connect said fifth wheel plate with the body of the wagon, substantially as described.

2. In a front running gear of the character described, the combination with an axle having formed therein vertically disposed parallel notches, a substantially U-shaped tongue connection having formed therein oppositely disposed axle engaging holes through which said axle extends and having in its upper edges oppositely disposed rectangular notches, a bolster comprising a flat metal bar bent midway between its ends to form a depressed portion adapted to be engaged with the rectangular notches in the upper edges of said tongue connection, downwardly projecting apertured lugs formed on the opposite ends of said bolster, said lugs being adapted to engage the parallel notches in the opposite sides of the axle and to be upset or clenched therein, a fifth wheel plate having downwardly bent opposite ends, attaching lugs formed on said ends and adapted to be engaged with said tongue connection, and means to pivotally connect said fifth wheel plate with the body of the wagon, substantially as described.

3. In a front running gear of the character described, the combination with an axle having formed therein vertically disposed parallel notches, a substantially U-shaped tongue connection having formed therein oppositely disposed axle engaging holes through which said axle extends and having in its upper edges oppositely disposed rectangular notches, a bolster comprising a flat metal bar

bent midway between its ends to form a depressed portion adapted to be engaged with the rectangular notches in the upper edges of said tongue connection, downwardly projecting apertured lugs formed on the opposite ends of said bolster, said lugs being adapted to engage the parallel notches in the opposite sides of the axle and to be upset or clenched therein, a fifth wheel plate having downwardly bent opposite ends, attaching lugs formed on said ends and adapted to be secured in said tongue connection, tripod-shaped body connecting bars adapted to be secured to the underside of the wagon body, and a pivot bolt or rivet to pivotally connect the said tripod bars with the fifth wheel plate, substantially as described.

4. In a front running gear of the character described, the combination with the front axle, of a tongue connection arranged thereon, a bolster bar having a depressed central portion to form shoulders to engage said tongue connection, means to rigidly connect the opposite ends of said bolster with the axle, a fifth wheel plate arranged in said tongue connection over the engaging portion of said bolster, attaching lugs on said fifth wheel plate to engage said tongue connection whereby the latter and said plate are fastened together, and tripod-shaped body connecting bars, pivotally secured to said fifth wheel plate, substantially as described.

5. In a front running gear of the character described, the combination with an axle having formed in its opposite sides inner and outer pairs of parallel vertically disposed notches, of a tongue connection arranged on said axle, a bolster bar having a central depressed portion to form shoulders to engage said tongue connection, apertured lugs on the opposite ends of said bolster bar to engage the inner pair of notches in said axle, whereby the latter is held against rotation and lateral movement, a fifth wheel plate adapted to be secured in the upper portion of said tongue connection, tripod-shaped body connecting bars pivotally secured to said fifth wheel plate, and notched wheel-retaining disks adapted to be engaged with the outer pair of parallel notches in the ends of the axle and to be upset therein to prevent their casual removal, substantially as described.

877,160. MOUNTING FOR EYEGLASSES. GEORGE BAUSCH, Syracuse, N. Y. Filed Sept. 12, 1906. Serial No. 334,296.



1. In a mounting for eye-glasses, a pair of posts each having a lens clamp at one end and a box at its opposite end, nose-pieces mounted in the boxes and a bow-spring having its ends secured to the posts between the boxes and lenses for increasing the leverage and resiliency between the arch of the bow and its point of fastening to the lens posts.

2. In a mounting for eye-glasses, a pair of posts each having a lens clamped at one end and a channeled member on the opposite end, nose-pieces secured to said channels and a bow-spring having its ends extended some distance beyond the nose-pieces and attached to said posts between their ends.

3. In a mounting for eye-glasses, a pair of lens posts having boxes on their ends and transverse apertures between boxes and lenses, in combination with a bow-spring having its ends secured in said apertures and nose guards secured in said boxes.

4. In a mounting for eye-glasses, a pair of lens posts having boxes on their ends and transverse apertures between boxes and lens, in combination with a bow-spring having its ends adjustably secured in said apertures and nose guards secured in said boxes.

5. In a mounting for eye glasses, a pair of lens posts attached at their outer ends to their respective lenses, nose guards secured to the inner ends of said lens posts, and a bow spring having its ends secured to the lens posts between the nose guards and points of attachment of the lens posts with the lenses.

877,161. PACKING-RECEPTACLE. GEORGE W. BAYLIS, Brooklyn, N. Y. Filed Mar. 11, 1907. Serial No. 361,651.



1. In a receptacle, a body, a top, a tongue formed by incision in the top, the edges of said tongue bearing against the adjacent edges of the top to close the receptacle said tongue extending to and engaging the side of said body.

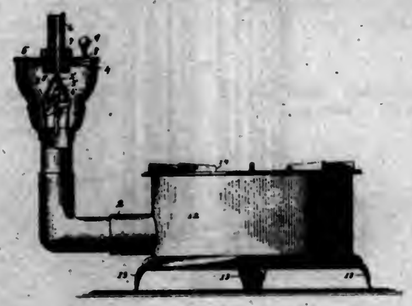
2. In a receptacle, a body, a top, a tongue formed by incisions in the top, the edges of said tongue bearing against the adjacent edges of the top to close the receptacle, and a retaining clip carried by the end of the tongue for engaging the body.

3. In a receptacle, a body, a top, a tongue formed by incision in the top, the edges of said tongue bearing against the adjacent edges of the top to close the receptacle, and a retaining clip carried by the tongue, said clip being at the free end thereof.

4. In a receptacle, a body, a top, a tongue formed by incision in the top, the edges of said tongue bearing against the adjacent edges of the top to close the receptacle, and a retaining clip carried by the tongue, said clip being at the free end thereof and being of inverted U-shaped outline when viewed from the side.

5. In a receptacle, a body, a top having a depressed portion, and crimped edges securing the body against said depressed portion, a tongue formed by two incisions in the depressed portion and extending through said crimped edges.

877,162. APPARATUS FOR CONSUMING GAS. FRANK W. BRADSLEY, New York, N. Y. Filed Nov. 7, 1902. Serial No. 130,380.



1. An apparatus of the class herein described comprising a device at which commingled air and gas may be consumed; a chamber within which the air and gas are commingled, said chamber having a gas-inlet at its top, and being situated above the plane of said device; a perforated, upwardly-tapering deflector, removably disposed within said chamber in alinement with the gas-inlet thereof; and means for conducting the commingled gaseous product from said chamber to said device for consumption, substantially as herein specified.

2. An apparatus of the class herein described comprising a chamber for the reception of air and gas, said chamber having a gas-inlet at its top; a deflector within said chamber, below the gas-inlet thereof, said deflector comprising a perforated, conical body having its tapered end projected towards the gas-inlet of said chamber; and means for varying the volume of air admitted to said chamber, substantially as herein specified.

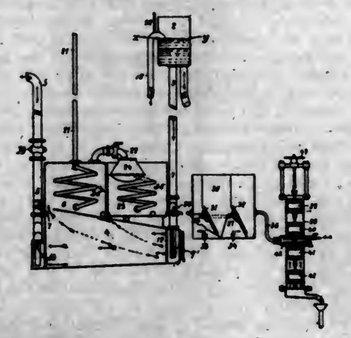
3. An apparatus of the class herein described comprising a chamber for the reception of air and gas; a deflector within said chamber, and below the point of entrance of said gas into said chamber, said deflector comprising a perforated, conical body provided with a plurality of spurs, the latter adapted to be engaged by the gas entering said chamber; and means for varying the volume of air admitted to said chamber, substantially as herein specified.

4. An apparatus of the class herein described comprising a chamber for the reception of air and gas; a deflector within said chamber, and below the point of entrance of said gas into said chamber, said deflector comprising a perforated, conical body provided with a plurality of spurs, one at each of said perforations, and adapted to be engaged by the gas entering said chamber; and means for varying the volume of air admitted to said chamber, substantially as herein specified.

5. An apparatus of the class herein described comprising a device at which commingled air and gas may be consumed; a chamber within which the gas and air are commingled, said chamber having a gas-inlet at its top; a hollow, perforated, conical deflector, having a spur at each of its perforations, removably disposed within said chamber, and whereby due commingling of the air and gas is insured; means for admitting air into said chamber in variable volumes; and means for conducting the commingled gaseous product from said chamber to said device, substantially as herein specified.

[Claims 6 to 8 not printed in the Gazette.]

877,163. MEANS FOR RECOVERING AND REGENERATING LUBRICATING-OILS OF MARINE ENGINES. GIOVANNI B. BIBOLINI and CARLO BAULINO, Taranto, Italy. Filed Nov. 11, 1904. Serial No. 232,279.



1. In an apparatus of the character stated, the combination of a receptacle, a supply therefor, means for retarding the velocity of the oil in its passage through said receptacle, a purifier having compartments with screens of varying mesh, and an accumulator.

2. In an apparatus of the character stated, the combination of a receptacle, a supply therefor, means for retarding the velocity of the oil in its passage through said receptacle, a purifier having compartments with inclined screens of varying mesh, an accumulator and means for heating said accumulator.

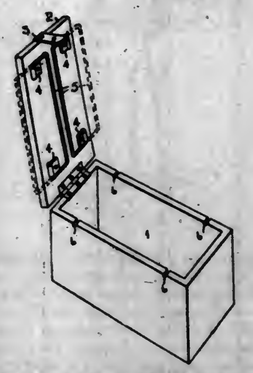
3. In an apparatus of the character stated, the combination of a receptacle, a supply therefor, means for retarding the velocity of the oil in its passage through said receptacle, a purifier having compartments with inclined screens of varying mesh, an accumulator, means for heating said accumulator and a vessel above said receptacle connected with said accumulator.

4. In an apparatus of the character stated, the combination of a receptacle, a supply therefor, means for retarding the velocity of the oil in its passage through said receptacle, a purifier having compartments with inclined screens of varying mesh, an accumulator, means for heating said accumulator and a filter in said vessel.

5. In an apparatus of the character stated, the combination of a receptacle, a supply therefor, means for retarding the velocity of the oil in its passage through said receptacle, a purifier having compartments with inclined screens of varying mesh, an accumulator, means for heating said accumulator, a vessel above said receptacle connected with said accumulator, a filter in said vessel and a heating coil in said vessel.

[Claims 6 and 7 not printed in the Gazette.]

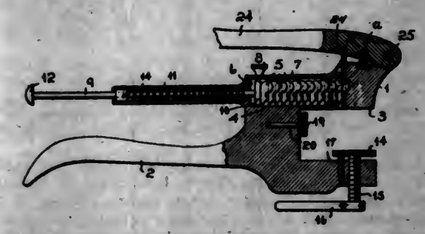
877,164. SHOE-BLACKING BOX. GEORGE L. BLACKMAN, Whitesville, N. Y. Filed Mar. 8, 1907. Serial No. 361,807.



1. A blacking box having a hinged cover and polishing cloth guides having arms disposed transversely with relation to and pivotally mounted on the inner side of said cover and adapting said guides to be folded against one side of said cover or extended outwardly beyond the same, substantially as described.

2. In a blacking box having a hinged cover, clips secured to the inner side of said cover, polishing cloth guides having right angularly bent inwardly-turned ends adapted to pivotally engage said clips, whereby said guides may be swung outwardly to project laterally from the sides of the box in position for use and whereby the same may be folded inwardly and adapted to be inclosed in the box when the cover is shut down, said guides being held in an open position for use by means of notches formed in the upper edges of the sides of the box to receive the angularly bent ends of the guides, substantially as described.

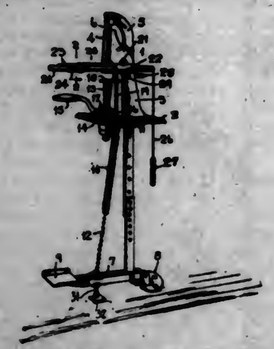
877,165. DEVICE FOR INSERTING DRAWER-STOPS. HERMAN H. BORGERDING, New Albany, Ind. Filed June 11, 1906. Serial No. 321,282.



In a drawer stop inserting device, a frame, the rear end of which forms a handle and the forward end is recessed

to form a jaw and has its upper portion provided with a magazine, ears in front of the magazine, and extended rearwardly to form side pieces, the bottom of the magazine being perforated and said side pieces being grooved vertically above said perforation, a driver in said grooves, a handle pivotally secured between said ears and extended back over the magazine, and provided with a perforation and connected thereby with the driver, and a spring seated in the frame, between the driver and the pivotal point of said handle.

877,166. MACHINE FOR INSERTING DRAWER-STOPS. HERMAN H. BORGERDING, New Albany, Ind. Filed Jan. 29, 1907. Serial No. 354,738.



1. In a machine of the character described, a magazine for holding stops, a support therefor, a plunger, supporting and operating means for the same, said magazine comprising two substantially parallel rods provided with an abutment, notches in the inner sides of said rods and adjacent to said abutment, and means for yieldingly holding the stops against said abutment in position to be driven between said notches by said plunger.

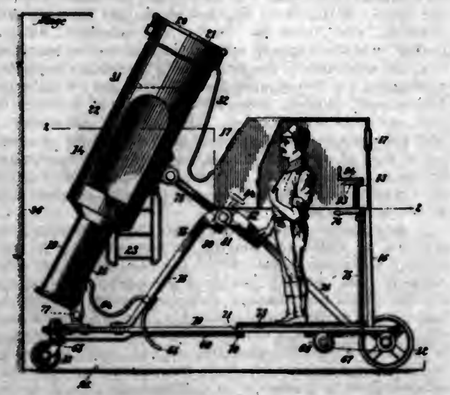
2. In a machine of the character described, a plunger, operating means and a supporting standard for the same, a magazine for holding stops consisting of a pair of substantially parallel rods with their inner ends embedded in said standard, notches in the inner sides of said rods and adjacent to said standard, and means to hold the stops yieldingly against said standard in position to be driven between said notches by said plunger.

3. In a magazine of the character described, a plunger, a magazine for holding stops, a supporting standard for the same, said magazine consisting of a pair of bars having notches between which the stops may be driven by said plunger, and means for feeding said stops along said rods, said means consisting of a finger adapted to pass betwen said rods, and operating mechanism for said feeding finger.

4. In a machine of the character described, a plunger, a magazine for holding stops, a supporting standard for the same, said magazine consisting of a pair of bars having notches between which the stops may be driven by said plunger, a guide parallel to said rods, a collar or head slidable on said guide, a finger fastened to said collar and projecting between said rods, and flexible means attached to said head for causing the same to move to feed the stop along the magazine.

877,167. THEATRICAL APPARATUS. HARRY L. BOWDOIN, New York, N. Y. Filed Apr. 23, 1907. Serial No. 369,774.

1. Theatrical apparatus comprising a tank for water, and an ejector apparatus therein comprising an exterior casing having at its upper end a closure adapted to be opened and closed, at its lower end a cylinder, piston, piston-rod and valve for controlling the admission of the motive fluid to said cylinder and in its side a doorway, and a cylinder within said casing having an open top, a bottom connected with said piston-rod, and an opening in its side in line with said doorway, combined with means operable from said inner cylinder for moving said valve to effect the upward movement of said inner cylinder with its occupant, and means for opening said closure on the ascent of said cylinder for permitting the ejection of said occupant, the upper end of said ejector apparatus normally affording an air reservoir into which an occupant thereof may place his head for breathing purposes; substantially as set forth.



2. Theatrical apparatus comprising a tank for water, and an ejector apparatus therein comprising an exterior casing having at its upper end a closure adapted to be opened and closed, at its lower end a cylinder, piston, piston-rod and valve for controlling the admission of the motive fluid to said cylinder and in its side a doorway, and a cylinder within said casing having an open top, a bottom connected with said piston-rod, and an opening in its side in line with said doorway, combined with means operable from said inner cylinder for moving said valve to effect the upward movement of said inner cylinder with its occupant, and means for opening said closure on the ascent of said cylinder for permitting the ejection of said occupant, the upper end of said ejector apparatus normally affording an air reservoir and being equipped with means for feeding air under pressure thereto; substantially as set forth.

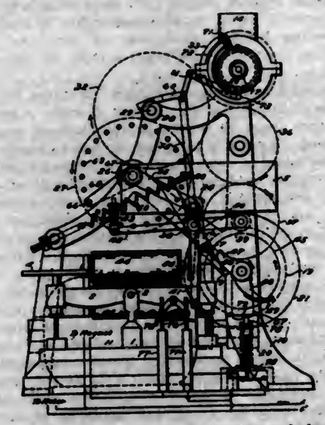
3. Theatrical apparatus comprising a tank for water, and an ejector apparatus therein comprising an exterior casing having at its upper end hinged closure doors, at its lower end a cylinder, piston, piston-rod and valve for controlling the admission of the motive fluid to said cylinder and in its side a doorway, and a cylinder within said casing having an open top, a bottom connected with said piston-rod and an opening in its side in line with said doorway, combined with means connected with said inner cylinder enabling the occupant of the latter to set said valve to effect the ascent of said cylinder and adapted to automatically operate said valve during and by the movement of said cylinder to cushion the ascent and effect the descent of the latter, and means connected with said cylinder adapted to open and close said doors, the upper end of said ejector apparatus normally affording an air reservoir into which an occupant thereof may place his head for breathing purposes; substantially as set forth.

4. Theatrical apparatus comprising a tank for water, and an ejector apparatus therein comprising an exterior casing having at its upper end hinged closure doors, at its lower end a cylinder, piston, piston-rod and valve for controlling the admission of the motive fluid to said cylinder and in its side a doorway, and a cylinder within said casing having an open top, a bottom connected with said piston-rod and an opening in its side in line with said doorway, combined with means connected with said inner cylinder enabling the occupant of the latter to set said valve to effect the ascent of said cylinder and adapted to automatically operate said valve during and by the movement of said cylinder to cushion the ascent and effect the descent of the latter, and means connected with said cylinder adapted to open and close said doors, the upper end of said ejector apparatus normally affording an air reservoir into which an occupant thereof may place his head for breathing purposes; substantially as set forth.

5. Theatrical apparatus comprising an ejector cylinder to receive an actor and having a fixed bottom and an inner movable bottom, springs confined between said bottoms and normally under compression exerting their force against said inner bottom, movable dogs for normally locking said inner bottom down against said springs, a piston-rod connected with said cylinder, a piston thereon, a power cylinder for said piston, and a control valve therefor, combined with a closure for the upper end of said apparatus whereby an air-reservoir is formed therein to receive the head of the occupant, means operable from said ejector cylinder for moving said valve to effect the ascent of said cylinder, means for opening said closure on the ascent of said cylinder, and means for freeing said dogs from said inner bottom on such ascent to enable said springs to expand and drive said bottom upwardly; substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

877,168. AUTOMATIC WEIGHING-MACHINE. ROBERT Y. BRADSHAW, Chicago, Ill. Filed Feb. 15, 1906. Serial No. 301,267.



1. The combination of a scale having a balance beam, a scale-pan mounted thereon, feeding mechanism for supplying material to said scale-pan and comprising a coarse feed and a fine feed, an adjustable timing device independent of the scale beam and adapted to stop the coarse feed after it has operated for a predetermined interval of time, and means for automatically stopping the fine feed when the scale beam is in equilibrium.

2. The combination of a weighing scale, a conveyer adapted to feed material to said scale, means controlled independently of the scale for automatically stopping said conveyer when it has delivered a certain predetermined bulk of material to said scale, a second conveyer adapted to feed material to said scale at a slower rate than that of the first conveyer, and mechanism controlled by the scale for automatically stopping said second conveyer when said scale indicates a certain predetermined weight of material.

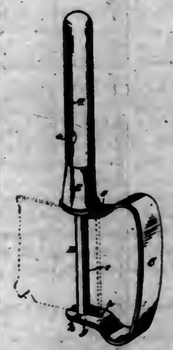
3. In a weighing scale, the combination of a scale-pan mounted to tilt for discharging its contents, mechanism for weighing the contents of said scale-pan, and means controlled by the weighing mechanism for automatically tipping said scale-pan to discharge its contents when a certain predetermined weight is indicated by said weighing mechanism.

4. In a weighing scale, the combination of a balance beam, a scale-pan pivotally mounted on one arm of said beam, a counterbalance on the other arm, and mechanism controlled by the movement of said balance beam and adapted to automatically tip said scale-pan for discharging its contents when the weight of such contents balances the counterweight, said mechanism being adapted to return said scale-pan to its normal upright position after the discharge of its contents.

5. The combination of a pair of spiral conveyers of different sizes each adapted to convey powdered or granular material, a motor provided with independent sets of driving mechanisms for operating said conveyers, a scale adapted to receive the material delivered by said conveyers, timing mechanism independent of said scale and adapted to automatically stop the larger conveyer after it has operated for a certain predetermined interval of time, and mechanism controlled by said scale for automatically stopping said smaller conveyer when a certain predetermined weight of material has been delivered to said scale.

[Claims 6 to 14 not printed in the Gazette.]

877,169. HANDLE FOR CROSSCUT-SAWS. CHESTER BROCKELHURST, Maquon, Ill. Filed Aug. 23, 1907. Serial No. 389,827.



A handle for cross-cut saws comprising a grip constructed of a single piece of spring metal having its ends free to act as clamps and provided with grooved seats for the edge of the saw-blade to prevent said blade from turning laterally when clamped thereby, and a handle having a central bore, a stationary screw-nut, a slotted screw-bolt engaging the nut, and a ferrule upon the end of the handle cup-shaped upon its outer end to form a chamber or space to allow the end of the spring metal grip to yield when the end of the saw blade is being inserted in position, substantially as and for the purpose set forth.

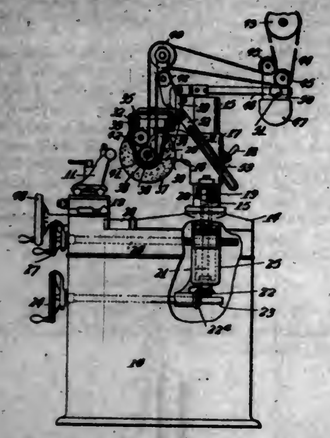
877,170. GRINDING-MACHINE. JOHN F. CARLSON, Worcester, Mass. Filed May 29, 1907. Serial No. 376,392.

1. In a grinding machine, the combination of a frame, a guide mounted thereon, a head movably mounted on the guide, a support carried by said head and adjustable about a horizontal axis, and means on the support for carrying a grinding tool and operating the same independently of the adjustment of the support upon its axis.

2. In a grinding machine, the combination of a main frame, a guide movably mounted thereon, means for adjusting said guide along the frame, a head mounted on said guide, a screw connected with said head for adjusting it vertically on the guide, and means for manipulating said screw in all positions of the guide.

3. The combination of a main frame, a platform reciprocatably mounted thereon, a guide mounted on said platform, a head vertically adjustable on the guide, a screw connected with said head for adjusting its position on the guide, a casing in which said screw is journaled, means for moving the casing and platform laterally on the main frame, a shaft for rotating said screw and having an

elongated keyway, and a gear mounted on the casing and adapted to operate the screw, said gear having a key adapted to slide in said keyway.



4. The combination of a main frame, a guide movably mounted thereon, means for moving said guide along the frame, a head movably mounted on the guide, means for raising and lowering said head on the guide, a support carried by said means for the support for carrying a grinding tool.

5. The combination of a vertically adjustable head, a support pivotally mounted thereon on a horizontal axis, a casing swiveled on the support on a vertical axis, a shaft mounted on said casing, a pulley on said shaft, and a pulley journaled on said support in line with the pulley on the shaft.

[Claims 6 to 20 not printed in the Gazette.]

877,171. METHOD OF MANUFACTURING METALLIZED ELECTRIC-INCANDESCENT-LAMP FILAMENTS. FRANCIS M. F. CAZIN, Hoboken, N. J. Filed Aug. 15, 1904. Serial No. 220,819.

1. The method of producing glowers for electric incandescent lamps which consists in coating or metallising carbon-filaments, when bent into their final longitudinal shape, with a coat, deposit or layer or layers of metal in an electrolytic plating apparatus.

2. The method of producing glowers for electric incandescent lamps which consists in coating or metallising carbon-filaments or graphite-filaments, when bent longitudinally into their final shape and when mounted on a base-part,—with a coat, cover, deposit or layer of metals and their alloys in an electrolytic plating apparatus.

3. The method of manufacturing glowers for electric incandescent lamps, which method consists in coating, covering including its terminals, or metallising a filament, made of carbon or graphite, and when bent into its final longitudinal shape, and when mounted by inleading wires on a base-part, with metal in an electrolytic plating apparatus.

4. The method of manufacturing glowers for electric incandescent lamps, which method consists in coating, including terminals, filaments of carbon, that are bent into their final longitudinal shape and mounted on a base by means of inleading wires, with metal-alloy in an electrolytic plating apparatus.

5. The method of manufacturing glowers for electric incandescent lamps, which method consists in coating carbon filaments, that are longitudinally bent into the shape intended for them in the lamp, and are mounted on a base part by means of inleading wires and terminals,—with metal in an apparatus, which consists of an interconnected series of electrolytic plating or metallising cells.

[Claims 6 to 10 not printed in the Gazette.]

877,172. METHOD OF PRODUCING FILAMENTS FOR ELECTRIC INCANDESCENT LAMPS AND THE PRODUCT OF SUCH METHOD. FRANCIS M. F. CAZIN, Hoboken, N. J. Filed Sept. 21, 1904. Serial No. 225,347.

1. The method of manufacturing filaments for electric incandescent lamps, which consists in using a filament-core, bent in the linear shape, that the finished filament is intended to have, as one of the electrodes in an electrolytic plating apparatus, and coating the said core in the electrolyte-bath of the said apparatus with metal by the application of electric current, passing between electrodes through the electrolyte.

2. The method of manufacturing filaments for electric incandescent lamps, which consists in using a filament-core, bent in the linear shape, that the finished filament is intended to have, as one of the conductive electrodes in an electrolytic plating-apparatus, and coating the said core in electrolyte-baths of different chemical composition, applied successively in such apparatus, with concentrical layers of metal by the application of electric current, passing between electrodes through the different electrolytes, to which the core-electrode is exposed successively.

3. The method of manufacturing luminants for electric incandescent lamps, which consists in using a conductive filament-core, bent in the linear longitudinal shape, that the finished filament is intended mainly to have,—as one of the electrodes in some electrolytic plating apparatus,—and coating the said core in electrolyte-baths of different chemical composition and adequate temperature,—successively applied in such apparatus,—with concentrical layers of metallic alloys, by the application of adequate electric current, passing between electrodes through the different electrolytes successively.

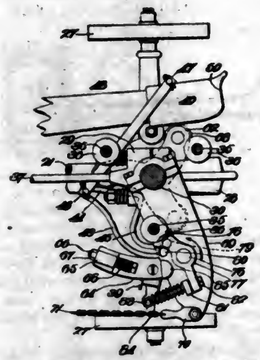
4. The method of manufacturing filaments for electric incandescent lamps, which consists in using a conductive filament-core, bent into the main longitudinal linear shape, that is intended for the finished filament,—as one of the electrodes in some electrolytic plating apparatus,—and coating the said core successively in different electrolyte-baths of adequate chemical composition, with different concentrical metallic layers, and applying to the coated filament electric adequate operative current, allowing such chemical inter-reaction and reaction on the surface-coat, as will take place under such current in eventual completion of the filament for adequate use.

5. A filament in an electric incandescent lamp primarily consisting of a conductive core coated, when longitudinally bent into its final and main filament-shape, with an electrolytic metal-cover.

[Claims 6 to 9 not printed in the Gazette.]

877,173. BALING-PRESS. CHARLES L. COOKSON, Kansas City, Mo., assignor to Panama Hay Press Co., Kansas City, Mo., a Corporation of Missouri. Filed Mar. 18, 1907. Serial No. 362,833.

1. In a baling press, a goose-neck, a U-frame carried by and projecting laterally from the goose-neck, a vertical power-shaft journaled in the goose-neck and provided with a triple-arm trip-lever arranged to operate through the goose-neck and the U-frame, a pitman disposed in the horizontal plane of and adapted to be successively engaged by the arms of the trip-lever and to occupy a position at the opposite side of the latter from the U-frame when ready to make a power stroke, a swing-arm arranged in the horizontal plane of the trip-lever and pivoted at its outer end to and within the U-frame and provided with a tread surface at its free end disposed toward the pitman, a link pivotally connecting the free end of the swing-arm with the pitman to compel the latter to make the preliminary portion of its power stroke when a trip-lever arm is engaged with the tread-surface of the swing-arm, and to swing the swing-arm toward the power-shaft when the recoil of the pitman takes place; said swing-arm having a pocket 45 between its tread-surface and pivoted end to receive each trip-lever arm as the same clears said tread-surface, to prevent said swing-arm in its return movement, from striking said trip-lever arm and also to permit the former to swing in close to the power shaft.



2. The combination in a baling press of a power shaft having a sweep head at its upper end provided with three rollers at equal distances from each other and from the axis of the shaft, a yoke at one side of the power shaft, a shelf carried by said yoke, a swing arm having its axis of movement coincidental with that of the power shaft and resting on said shelf and provided with an apertured lug, a lever or trigger pivoted on said swing arm and provided with a pocket at its inner end in the circular path of travel of said rollers, a bolt carried by the lever or trigger at the opposite side of its pivotal point from the pocket and extending rearwardly through the apertured lug of the swing arm, an expansive spring mounted on said bolt and bearing at its front end against said lug and bearing against said bolt to hold the trigger yieldingly in the path of said rollers, a spring-elevated feeder mounted on the baling case of the machine, a flexible connection suitably guided, between said feeder and the swing arm to insure synchronous movement of said parts, a bolt supported slidingly from said shelf in the path of movement of the swing arm, and a spring pressing said bolt toward the swing arm and adapted to cushion the impact of the swing arm on said bolt.

3. The combination in a baling press of a power shaft having a sweep head at its upper end provided with three rollers at equal distances from each other and from the axis of the shaft, a yoke at one side of the power shaft, a shelf carried by said yoke, a swing arm having its axis of movement coincidental with that of the power shaft and resting on said shelf and provided with an apertured lug and with a slot, a lever or trigger pivoted on said swing arm and provided with a pocket at its inner end in the circular path of travel of said rollers and with a pin depending through said slot, a bolt carried by the lever or trigger at the opposite side of its pivotal point from the pocket and extending rearwardly through the apertured lug of the swing arm, an expansive spring mounted on said bolt and bearing at its front end against said lug and bearing against said bolt to hold the trigger yieldingly in the path of said rollers, a spring elevated feeder mounted on the baling case of the machine, a flexible connection, suitably guided, between said feeder and the swing arm to insure synchronous movement of said parts, a bolt supported slidingly from said table in the path of movement of the swing arm, and a spring pressing said bolt toward the swing arm and adapted to cushion the impact of the swing arm on said bolt.

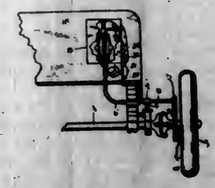
877,174. FASTENER. NEWTON CRANE, Boston, Mass., assignor, by mesne assignments, to Crane Buckle Company, Portland, Me., a Corporation. Filed Mar. 27, 1902. Serial No. 100,197.



1. A fastener of the character described, the same comprising an elongated catch-member, a loop-member to receive the same and interlock with its catches, and a supporting-member for said loop-member consisting of a strip extending therethrough and widened to underlie the side bars of the loop-member and provide a back-rest for the catch-member, said strip being hingedly connected with the loop-member.

2. A fastener of the character described, the same comprising an elongated catch-member, a loop-member to receive the same and interlock with its catches, and a supporting-member for said loop-member consisting of a strip extending therethrough and widened to underlie the side-bars of the loop-member and provide a back-rest for the catch-member, said strip having a hinge-socket for the inner end bar of the loop-member and a spring-tongue engaging the latter.

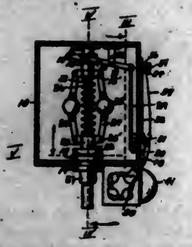
877,175. SPEED-INDICATING APPARATUS. SYLVESTER C. DE FORE, Kansas City, Mo., assignor to Standard Speedometer Company, a Corporation of Missouri. Filed Nov. 30, 1906. Serial No. 345,606.



1. In a speed indicating apparatus, the combination with an indicating device, of a governor mechanism comprising a pair of jointed arms carrying weights, a base connecting the arms of said mechanism at one end, and having a recess in its inner surface, a shaft rigidly mounted at one end and having its loose end seated in said recess, a grooved collar carried by said shaft, and adapted for longitudinal but not for rotary movement, an arm connecting the other ends of said governor arms and adapted for revolution in the groove in said collar, a circuit terminal carried by said collar, a second terminal adjacent to and adapted for contact with said first terminal, and means for revolving said governor mechanism.

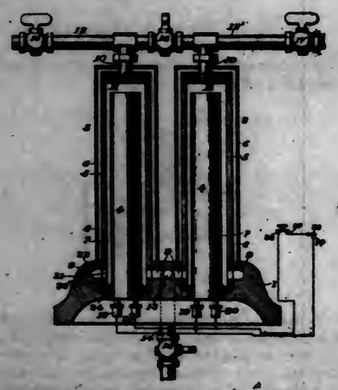
2. In a speed indicating apparatus, the combination with an indicating device, of a governor mechanism comprising a pair of jointed arms carrying weights, a base connecting the arms of said mechanism at one end, and having a recess in its inner surface, a shaft rigidly mounted at one end and having its loose end seated in said recess, a grooved collar carried by said shaft, and adapted for longitudinal but not for rotary movement, an arm connecting the other ends of said governor arms and adapted for revolution in the groove in said collar, a circuit terminal carried by said collar, a second terminal adjacent to and adapted for contact with said first terminal, means for adjusting said stationary terminal, a connection between each of said terminals and the indicating device, and means for revolving said governor mechanism.

877,176. SPEED-INDICATING DEVICE. SYLVESTER C. DU FOUR, Kansas City, Mo., assignor to Standard Speedometer Company, a Corporation of Missouri. Filed May 11, 1907. Serial No. 373,186.



In a speed indicating device, the combination of a suitable casing provided with a scale, a bell, a raised bracket adjacent to said scale, and having a longitudinal slot therein, a contact head, a set screw extending through said slot, and supporting said head between the bracket and casing, a crank shaft, an indicator arm rigid on said shaft and projecting beneath said bracket, and means for completing a circuit through said indicator arm, and head to energize said bell, for the purpose set forth.

877,177. ELECTRIC HEATER. HENRY D'OLIER, Jr., Philadelphia, Pa., assignor of one-half to George W. Elkins, Elkins Park, Pa. Filed Jan. 13, 1906. Serial No. 295,921.



1. In a device of the character described, a plurality of water heating units each having a heat element and connections forming a passage thereabout with means for connecting the water passages of said units in series or in parallel at will and means for causing a flow of electric current through said heat element.

2. In a device of the character described, an electric water heater, having a passage therethrough, a thermostat in fluid connection with said passage and an electric circuit feeding the heating element of said heater and having points of contact within control of said thermostat.

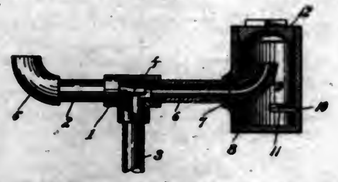
3. In a device of the character described, an electric heater, an electric circuit controlling said heater, a point of interruption in said circuit within temperature control from said heater and a further point of interruption in said circuit within automatic control of the passage or non-passage of water through said heater.

4. In a device of the character described, an electric water heater, an electric circuit controlling the flow of electricity to said heater, a valve controlling the flow of water thereto, contacts in said circuit within control of a standard diaphragm thermostat connected to the water passage of said heater and points of contact in said electric circuit within control of the said water valve.

5. In a device of the character described, a casing, an electric heater within said casing in the form of a shell therein, a baffle plate closing the end of said shell, inlet and outlet water connections for said heater upon opposite sides of said baffle plate and in proximity thereto and means for automatically causing the current to flow through the heating element when water is allowed to pass through the heater.

[Claims 6 to 9 not printed in the Gazette.]

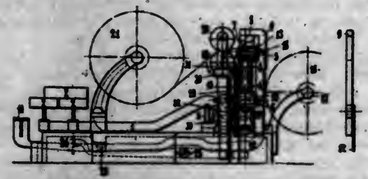
877,178. CRUDE-OIL BURNER. JOHN P. DONOVAN, San Francisco, Cal. Filed June 18, 1907. Serial No. 379,676.



1. In an oil burner, the combination of an oil supply pipe, a steam nozzle adapted to discharge near the oil pipe, a third pipe into which the nozzle discharges, an elbow carried by the latter pipe, a cylindrical member closed at one end completely surrounding the elbow and having a slot near its closed end, and a plug in the open end of the cylindrical member and against which the elbow discharges the oil and steam.

2. In an oil burner, the combination of an oil supply pipe, a pipe carrying a steam nozzle adapted to discharge near the oil supply pipe, a third pipe into which the steam nozzle discharges, an elbow carried by said third pipe, a cylindrical member open at one end completely surrounding the elbow and having a slot near its closed end and a curved lip over the slot, and a plug in the open end of the cylindrical member and against which the steam and oil are discharged by the elbow.

877,179. STENOGRAPHING-MACHINE. ROBERT DUCHESNE, Paris, France, assignor to La Société "La Sténophile Bivort," Paris, France. Filed Mar. 16, 1907. Serial No. 362,740.

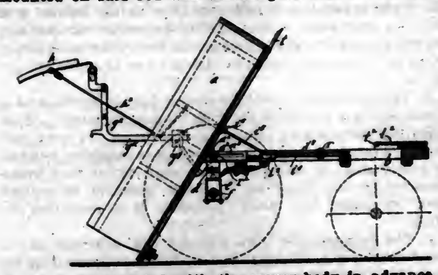


1. In a stenographing machine, the combination, with the key-levers, of vertically-guided strikers abutting against the levers at the lower ends of the former, hammers carried at the upper ends of said strikers, a rocking beam pivoted below said hammers and having a cross-piece overhanging the latter, a type carrying plate mounted on said cross-piece, an inking ribbon, and means whereby said beam may be rocked by a finger-stroke.

2. In a stenographing machine, the combination, with the key-levers, and the printing mechanism, of a universal bar actuated by the key-levers, a feed-roller for the paper, a cup fixed on said feed-roller at one end, a disk within said cup having a slot and ratchet-teeth, a rod actuated by said universal bar and having a stud entering the slot in said disk, and balls in said cup coöperating with said ratchet-teeth to cause the feed of said roller in only one direction.

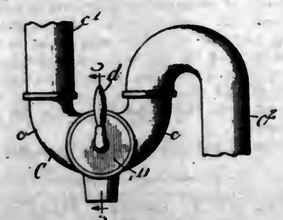
877,180. DUMPING-WAGON. GIOVANNI DURSO, New York, N. Y. Filed Oct. 1, 1907. Serial No. 395,232.

In a dumping-wagon, the combination of a reach provided at the sides with front and rear ways of which the latter are slotted at the sides, of a wagon-body slidable on said ways, a pivot-rod extending transversely of said wagon-body beneath the same and protruding at its ends through the slots in said rear ways, antifriction rollers mounted on said rod and traveling on said rear ways, a



lifting rod connected with the wagon-body in advance of said pivot-rod, a slide-piece guided longitudinally of the reach and to which said rod is connected, and means for actuating said slide-piece.

877,181. VALVE-TRAP. WILLIAM F. DEUR, Chicago, Ill. Filed Aug. 17, 1906. Serial No. 330,963.



1. In a device of the class specified, a trap or water seal provided with a general discharge passage and a drip or drain opening, an off-take or sewer pipe, and a rotary three-way valve controlling said passage and opening, a second pipe leading into the trap said valve rotatable about a horizontal axis, adapted to entirely cut off the off-take or sewer pipe and leave the trap and second pipe free to drain said drip or drain opening adapted to discharge outside of the sewer pipe and directly into the room in which the said device is located.

2. In a device of the class specified, the combination of a trap comprising a U-shaped pipe section adapted to hold a suitable quantity of water for effecting a water seal, said pipe section provided with a general discharge passage and a lower drip or drain opening, an off-take or sewer pipe, a rotatable hollow valve provided with three lateral openings, two of said openings adapted to maintain the open condition of the said general discharge passage at the same time that the third opening is in communication with the said drip or drain opening at the bottom of the U-shaped pipe section, off-take pipe, a second pipe leading to the trap a handle on said valve, and screw-threaded means for drawing and holding the valve in place, said valve rotatable about a horizontal axis, adapted to entirely cut off the off-take or sewer pipe and leave the trap and second pipe free to drain, said drip or drain opening adapted to discharge outside of the sewer pipe and directly into the room in which the said device is located, substantially as and for the purpose set forth.

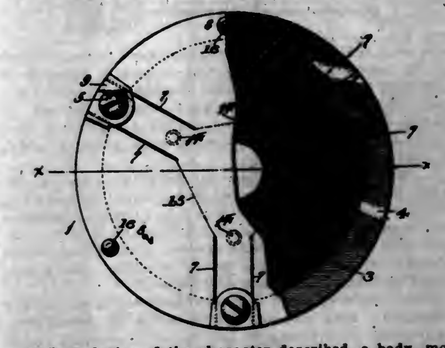
3. In a sink-trap, a sink-pipe, a sewer pipe, a trap or water seal between the two pipes, a drip or drain opening, for draining the sink outside of the sewer pipe, and a single three-way valve adapted to cut the sewer pipe off entirely from the sink and drain opening and leave the sink free to drain.

4. In a sink-trap, the combination of a sink-pipe, a sewer pipe, a trap or water seal between the two pipes, a drip or drain opening, for draining the sink outside of the sewer pipe, and a single rotary hollow valve provided with three lateral openings adapting the valve for adjustment to cut the sewer pipe off entirely from the sink and drain opening and leave the sink free to drain.

5. In a sink-trap, the combination of a sink-pipe, a sewer pipe, a trap or water seal between the two pipes, a drip or drain opening, for draining the sink outside of the sewer pipe, and a single rotary valve adapted to be rotated to connect the sink pipe with the sewer pipe and close the drain opening, adapted by another adjustment to open the drain and maintain communication between the two pipes, by a further rotation to entirely cut off the sewer pipe and leave the sink free to drain, and by another adjustment to entirely cut off the sink and open communication between the drain and the sewer-pipe.

[Claims 6 to 8 not printed in the Gazette.]

877,182. SAND OR STRAINER VALVE FOR FILTERS. JACOB R. ELFRETH and HAROLD D. ELFRETH, Philadelphia, Pa. Filed July 9, 1907. Serial No. 382,876.



1. In a device of the character described, a body, movable valves thereon, spacing devices between the top and bottom of said body and a stop for said valves to limit the movement thereof.

2. In a device of the character described, a body consisting of top and bottom plates, and a side wall, spacing devices between the top and bottom plates, movable valves formed in said top plate, and stops projecting over said valves and limiting the movement thereof.

3. In a device of the character described, a body consisting of top and bottom plates, spacing devices between the top and bottom plates, ports therebetween, a valve controlling said ports, and stops for limiting the movement of said valve.

4. In a device of the character described, a body portion consisting of top and bottom plates, spacing devices between the top and bottom plates and side walls, a portion of said top plate serving as a movable valve, and a stop for said valved portion limiting the movement thereof.

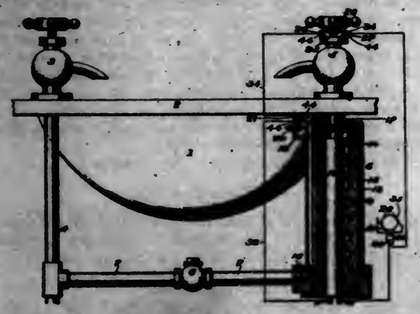
5. In a device of the character described, a body having a top plate, pillars for supporting the same a side wall, a port between said wall and plate, said plate being movable in part as a valve, and a stop for limiting the upward movement of said valve.

[Claims 6 and 7 not printed in the Gazette.]

877,183. ELECTRIC HEATER. GEORGE W. ELKINS, Elkins Park, Pa., assignor of one-half to Henry D'Olier, Jr., Philadelphia, Pa. Filed Jan. 13, 1906. Serial No. 295,922.

1. In a device of the character described, a removable heat element, a casing therefor, contacting spirally therewith throughout its length and affording inlet and outlet passages to the spiral path formed therebetween, a valve and means for causing movement of said valve in one direction to pass a current of electricity through the heat element.

2. In a device of the character described, a casing and coöperating heat element making spiral contact therewith and forming a spiral path therebetween closed to water passage except at the ends thereof, in combination with automatic means for heating the heat element when water is passed through the passage.



3. In a device of the character described, a casing open at the center longitudinally and internally spiraled in proximity to said opening, a heat element insertible therein and closing the central opening thereof throughout its length, a valve and means for causing a current of electricity to pass through said heat element when the valve is turned in one direction.

4. In a device of the character described, a casing centrally longitudinally apertured and internally grooved in proximity to said aperture and in spiral form, a removable heat element fitting the central aperture and in direct contact with the walls of said groove, a valve and means whereby moving the valve in one direction causes electricity to pass through said heat element.

5. In a device of the character described, a casing and coöperating heat element, one of which is circumferentially progressively grooved and the other of which makes contact with the facing nearer wall of the groove to close the same against direct longitudinal movement of water therethrough, in combination with automatic means for heating the heat element when water is passed through the groove.

877,184. SOUND-BOX FOR TALKING-MACHINES. JOHN C. ENGLISH, Camden, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed July 6, 1903. Serial No. 164,276.



1. In a talking machine, the combination with a sound box, a support for said sound box and a stylus, of means for attaching said sound box to its support and for adjusting the stylus in operative position, comprising a bayonet joint, the members thereof being brought into operative engagement by a movement of that part of the sound box carrying the stylus relative to the support in the direction in which pressure is brought upon the stylus when in operative position.

2. In a talking machine, the combination with a sound box, a support for said sound box and a stylus, of means for attaching said sound box to its support and for adjusting and holding the stylus in operative position, comprising a tube upon said sound box, an interior pin or lug mounted on said tube, and a tube upon said support adapted to enter the tube on said sound box, the tube on said support being provided with a slot to receive said pin, said pin being brought into engagement with the end of said slot by a movement of that part of the sound box carrying the stylus, relative to the support, in the direction in which pressure is brought upon the stylus when in operative position.

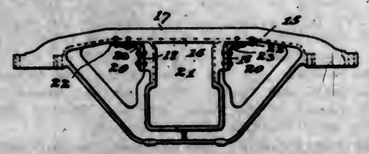
3. The combination with a sound box, a stylus and a sound conveyer by which the sound box is supported, of coöperating interlocking means in the sound box and conveyer operated to secure said parts in interlocked relation by a movement of said sound box relatively to said sound conveyer in the direction in which pressure is exerted upon the sound box, when the latter is in operative position.

4. The combination, with a sound box, a stylus and a sound conveyer, by which the sound box is supported, of coöperating interlocking means in the sound box and conveyer operated to secure said parts in interlocked relation by a movement of said sound box relative to said sound conveyer in the direction in which pressure is exerted upon the sound box, when the latter is in operative position, the said interlocking means being also operative to effect the adjustment of the stylus in its operative position.

5. The combination, with a sound box, a stylus and a sound conveyer, of coöperating interlocking means carried by said sound box and conveyer, the said interlocking means being operated to secure said parts in interlocked relation and to hold the stylus in operative position by a movement of said sound box relative to said conveyer, transversely to and then in the direction in which pressure is exerted upon the sound box, when the latter is in operative position.

[Claims 6 and 7 not printed in the Gazette.]

877,185. CAR-TRUCK. GEORGE G. FLOYD, Granite, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Apr. 11, 1907. Serial No. 367,512.



1. A cast-metal truck side-frame having a top compression member of channel shape in cross-section the flanges of the channel extending upwardly away from the frame, substantially as described.

2. In a railway car truck, the combination of a pair of side-frames each having a top compression member and an integral lateral lug or ear, a brace or gusset plate fastened to the compression member of each of said side-frames, and a transverse bar riveted to said brace plates and lateral lugs or ears, substantially as described.

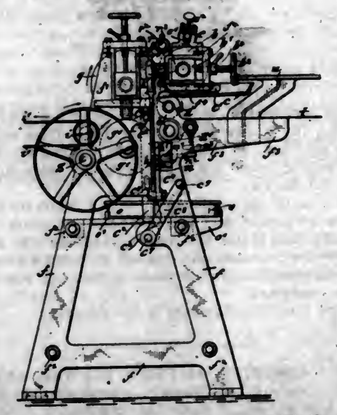
3. In a railway car truck, the combination of a pair of side-frames each having a top compression member of channel shape in cross-section and a lateral lug, a brace plate fastened to the web of each of said top compression members, and a transverse angle bar having its angularly-disposed members riveted respectively to said brace plates and lateral lugs or ears, substantially as described.

4. In a railway car truck, the combination of a pair of side-frames each having a top compression member of channel shape in cross-section with its flanges extended upwardly, and one or more transverse bars connecting said side-frames and riveted to the under surfaces of the webs of said compression members, substantially as described.

5. In a railway car truck, the combination of a pair of side-frames each having a top compression member of channel shape in cross-section with its flanges extended upwardly and also having laterally extended lugs or ears projecting from each side, one or more brace or gusset plates fastened to the under surface of the web of each of said channel compression members adjacent to said lugs or ears, and one or more transverse angle bars connecting said side-frame, each having its angularly-disposed members riveted respectively to said brace plates and lateral lugs, substantially as described.

[Claim 6 not printed in the Gazette.]

877,186. COATING-MACHINE. ALBERT J. FORD, New York, N. Y., assignor to The Fuchs & Lang Mf'g. Co., New York, N. Y., a Corporation of New York. Filed Aug. 27, 1907. Serial No. 390,298.



In a coating-machine, the combination, with the supporting-frame comprising upright side-standards, and the fountain-roll, of upright bracket-arms provided with slots and with laterally-extending upper portions, screws on said side-standards passing through said slots and by which said bracket-arms are guided vertically, a fountain supported on the laterally-extending upper portions of said bracket-arms, a transverse shaft journaled in the supporting-frame below said bracket-arms, cams on said shaft engaging the lower ends of said arms, and means whereby said shaft may be manually operated.

877,187. LOOSE-LEAF BOOK DEVICE. WILLIAM H. GARLAND, Kansas City, Mo., assignor of one-half to Raymond M. Havens, Kansas City, Mo. Filed Aug. 19, 1907. Serial No. 389,322.



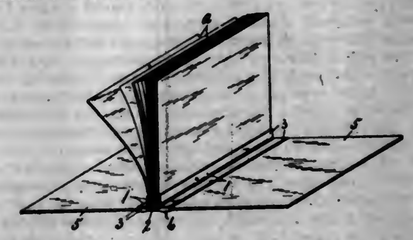
1. A loose leaf book device, comprising a channel plate, bars rockingly mounted at their outer edges on the channel plate and provided with oppositely-disposed upwardly-projecting hooks having their free edges adapted to interlock or to be spaced apart, tongues projecting downwardly and upwardly from the inner edges of the bars and conjointly forming a longitudinal passage between them, and a spring fitting in said passage and pressing outward against said bars.

2. A loose leaf book device, comprising a channel plate, bars rockingly mounted at their outer edges on the channel plate and provided with oppositely-disposed upwardly-projecting hooks having their free edges adapted to interlock or to be spaced apart, tongues projecting downwardly and upwardly from the inner edges of the bars and conjointly forming a longitudinal passage between them, a spring fitting in said passage and pressing outward against said bars, and a top plate secured to and bridging the channel plate and provided with openings through which said hooks extend.

3. A loose leaf book device, comprising a channel plate, bars rockingly mounted at their outer edges on the channel plate and provided with oppositely-disposed upwardly-projecting hooks having their free edges adapted to interlock or to be spaced apart, tongues projecting downwardly and upwardly from the inner edges of the bars and conjointly forming a longitudinal passage between them, a pair of tongues projecting from the inner edge of one of the bars, a tongue projecting from the inner edge of the other bar and fitting snugly between the pair of tongues, and longitudinally alined springs fitting in the passage formed by and between the said upwardly and downwardly projecting tongues and exerting an outward pressure on the hook-carrying bars.

4. A loose leaf book device, comprising a channel plate, bars rockingly mounted at their outer edges on the channel plate and provided with oppositely-disposed upwardly-projecting hooks having their free edges adapted to interlock or to be spaced apart, tongues projecting downwardly and upwardly from the inner edges of the bars and conjointly forming a longitudinal passage between them, a pair of tongues projecting from the inner edge of one of the bars, a tongue projecting from the inner edge of the other bar and fitting snugly between the pair of tongues, longitudinally alined springs fitting in the passage formed by and between the said upwardly and downwardly projecting tongues and exerting an outward pressure on the hook-carrying bars, and a top plate secured to and bridging the said channel plate and provided with openings through which said hooks project.

877,188. BOOKBINDING. WILLIS E. GAYLORD and HENRY J. GAYLORD, Syracuse, N. Y. Filed Jan. 22, 1907. Serial No. 353,559.



A binder for leaves comprising two fabric strips stitched together along their central longitudinal line, folded away from each other and provided with adhesive material on their upper and lower faces, combined with covers, and back strips secured to opposite faces of the covers, the lower face of each of said fabric strips secured to one of said back strips.

877,189. COSTUMER. HENRY J. HABERMAS, Detroit, Mich. Filed Dec. 17, 1906. Serial No. 348,113.

1. In a device of the character described, a base, an upright standard secured thereon, and rack members each consisting of a pair of oppositely extending arms which are secured with their adjacent edges in parallel relation by a circular socket at the upper ends of said edges and a ring at the lower ends of said edges alined with the socket, said rack members being arranged to interlock at right angles when assembled, and being detachably supported on the standard.

2. In a device of the character described, a base, an upright standard secured thereon, and rack members each consisting of a pair of oppositely disposed arms secured together integrally in spaced relation at the upper and lower ends of their adjacent edges, said members being

adapted to interlock with each other in transverse relation and to detachably engage the top of the standard.



3. In a device of the character described, a base, an upright standard secured thereon, and rack members each consisting of a pair of oppositely disposed arms secured together at their adjacent edges in parallel spaced relation by a circular socket integrally uniting their upper ends and a ring alined with the socket integrally uniting their lower ends, one of said members being adapted to interlock centrally with the other member at right angles thereto, and the interlocked rings and sockets of said members constituting a bearing in the assembled parts adapted to engage the upper portion of the standard.

4. In a device of the character described, a base, an upright tubular standard thereon, rack members each consisting of a pair of oppositely extending arms whose inner edges are secured together in parallel spaced relation by a socket integrally formed across their upper ends, and a ring alined with the socket integrally formed across their lower ends, said members being adapted to be detachably secured together by their sockets at right angles to each other, a bolt passing through the bottoms of the superposed sockets and a hat peg engaging the bolt and clamping the members together, said assembled members being rotatably seated on the upper end of the standard.

5. In a device of the character described, a base, an upright tubular standard secured thereon, rack members each consisting of oppositely disposed arms secured together in spaced relation by an inverted socket integrally uniting the upper ends of their adjacent edges and by a ring alined with the socket integrally uniting the lower ends of their adjacent edges, said members being detachably secured together at right angles by lugs in one socket adapted to engage mating apertures in the other socket and said assembled members being seated on the top of the standard.

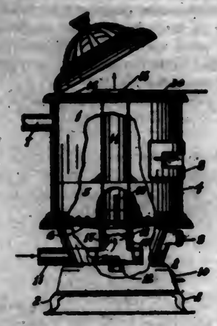
[Claim 6 not printed in the Gazette.]

877,190. STOVE. LEANDER W. HAMMOND, North Plainfield, N. J., assignor of one-half to Louis Moledesky, Plainfield, N. J. Filed Dec. 26, 1906. Serial No. 349,560.

1. In a stove, the combination with a grate, of an air-supply duct beneath said grate, a central flue extending from said duct upward beyond the grate, and means at the upper part of said flue for rotating the same.

2. In a stove, the combination with a grate, of an air-supply duct beneath said grate, a central flue extending from said duct upward beyond the grate and engaging the same to rotate it, and means at the upper part of said flue for turning the same.

3. The combination with a stove having a grate and a closed top 16, of a central flue extending from said grate through said top and being rotatable, and means at the end of said flue above said closed top for oscillating the same.

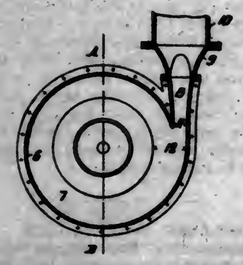


4. The combination with a stove having a grate and a closed top 16, of a central flue extending from said grate through said top and being rotatable, the end of said tube above the said closed top having opposite seats to receive a poker for shaking.

5. In a stove, the combination with a rotatable grate, of a bottom air-supply duct, a central flue extending through said grate, said grate and flue having one fins and the other notches receiving said fins but allowing a measure of independent motion, and means for rotating one of said parts so connected.

[Claims 6 to 10 not printed in the Gazette.]
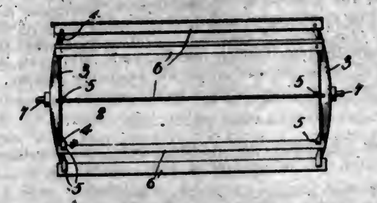
877,191. CENTRIFUGAL PUMP, BLOWER, AND THE LIKE. NILS K. F. HANSON, Svanö, Frändö, Sweden. Filed Oct. 21, 1905. Serial No. 283,776.



1. In a centrifugal pump, or the like, the combination of a case or body provided with inlet and outlet passages, an impeller or runner wheel equi-distant from the sides of the case, a water space concentric with said wheel and inclosing the same, and a spiral water space eccentric to said wheel and to the water space concentric therewith, the outlet passage from the case or body being less in cross sectional area than the cross sectional area of the chamber in which the wheel rotates but equal to the effective cross sectional area of the fluid emerging from the periphery of the wheel, and said case or body being rectangular in cross section in a plane parallel with the axis of the impeller or runner wheel.

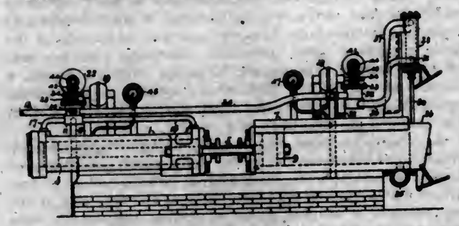
2. In a centrifugal pump, or the like, the combination of a case or body provided with inlet and outlet passages, an impeller or runner wheel equi-distant from the sides of the case, a water space concentric with said wheel and inclosing the same, and a spiral water space eccentric to said wheel and to the water space concentric therewith, the outlet passage from the case or body being less in cross sectional area than the cross sectional area of the chamber in which the wheel rotates but equal to the effective cross sectional area of the fluid emerging from the periphery of the wheel, the said spiral water space being also rectangular in cross section.

877,192. STALK-CUTTER ATTACHMENT FOR CULTIVATORS. HARDY HESTAND and JOHN W. WILLIS, Comanche, Okla. Filed July 11, 1907. Serial No. 383,828.



A stalk cutter attachment, comprising two oppositely disposed concavo-convex end disks, the concaved face being toward each other, a plurality of outwardly extending arms secured to the inner concaved face of said end disks, cut-away portions at the end of each of said arms, said cut away portions forming flat faces radial to the axle line of said disks and shoulders perpendicular to said flat portions and substantially flush with the periphery of said disks, cutting knives connecting said disks and lying against said flat portions and said shoulders, and bearings to said end disks.

877,193. HYDARULIC-ELECTRIC ICE-MACHINE. DANIEL L. HOLDEN, New York, N. Y., assignor to Federal Ice Company, a Corporation of New York. Filed June 28, 1906. Serial No. 323,768.

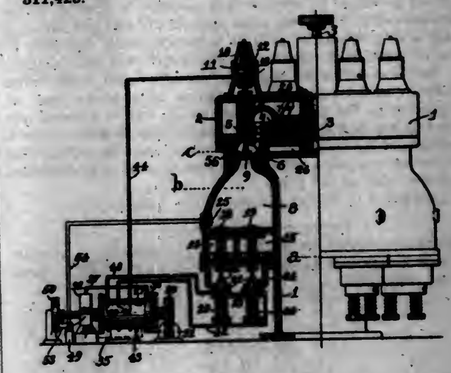


1. In an ice machine, the combination with cylinders and presses having co-acting pistons, of valves and motors for the cylinders; having end gates and cylinders for the presses, valves and motors for the gates, and an electrical contact formed by the ejection of ice blocks from the presses to open a circuit to the press-gate motors to lower the gates, a brake for the motors and an open circuit to the cylinder motors to move the valves to position which will admit pressure to return the pistons to their positions at the opposite ends of the cylinders, and presses.

2. In an ice machine, the combination with hydraulic cylinders their valves, motors and limit switches and pistons controlled thereby; of open ended ice presses having pistons coöperating with the cylinders rams; means to feed ice particles to the presses; gates to open and close the ends of the presses, valves, motors and limit switches for the gates; pressure gages for the cylinders and for the presses; relays, solenoid controlled switches brakes actuated first by circuits formed by the press gages to start the cylinder motors, open the valves, force the rams and thereby the press pistons to press the ice particles until the accumulation of a certain pressure is reached in the cylinders; a circuit closed by the cylinder gages to stop the cylinder motors and the pistons and rams, open a circuit to the press gate motors to lift the gates and stop the gate motors; a circuit then formed to start the cylinder motors and force the pistons to eject the ice block a circuit completed by the dropping of the ice block to start the press motors and close the gates a circuit formed by closing the gates to again start the cylinder motors to return the pistons to the starting point, there to remain passive until there is again an operative accumulation of pressure of ice particles in the presses, all substantially in the manner and form set forth.

3. In an ice machine, the combination with hydraulic pressure cylinders, their valves, motors and limit switches, of ice presses arranged for coöperation with the cylinders, pistons in the cylinders and rams in the presses; gages for the cylinders and for the presses; valves, motors, limit switches, relays, brakes and solenoid controlled switches for the cylinders; end gates, cylinders, valves, motors, limit switches, relays, brakes, and solenoid controlled switches for the presses; and electrical conductors and contacts for the operation of the electrically controlled and operative devices as aforesaid, and whereby the cylinders and presses are alternately operated to press and eject the ice blocks, in the manner and form substantially as fully set forth.

877,194. GAS-TURBINE. HANS HOLZWARTH, Hamilton, Ohio, assignor of one-half to Erhard Junghans, Sr., Schramberg, Germany. Filed Apr. 13, 1906. Serial No. 311,425.



1. A gas turbine comprising a casing, a rotor and stator therein, a combustion chamber having a discharge nozzle arranged to deliver the products of combustion impactively upon the rotor, a combustion valve between the combustion chamber and its discharge nozzle, said valve being adapted to be blown open by the explosion within the combustion chamber, a device for closing the valve toward the combustion chamber, means for injecting air and gas to the combustion chamber under pressure, and means for resisting the action of said valve-closing device and retarding the closing of the combustion valve while the pressure due to explosion is decreasing, combined substantially as set forth.

2. A gas turbine comprising a casing, a rotor and stator therein, an annular series of combustion chambers having discharge nozzles arranged to deliver the products of combustion impactively upon the rotor, a combustion valve between each combustion chamber and its discharge nozzle, said valves being adapted to be blown open by the explosion within the combustion chambers, devices for closing the valves toward the combustion chambers, means for injecting air and gas to the combustion chambers under pressure, means for resisting the action of said valve-closing devices and retarding the closing of the combustion valves while the pressure due to explosion is decreasing, an igniter for each combustion chamber, and a controlling device for operating the injecting devices and igniters of the several combustion chambers in succession, combined substantially as set forth.

3. A gas turbine comprising a casing, a rotor and stator therein, an annular series of combustion chambers having discharge nozzles arranged to deliver the products of combustion impactively upon the rotor, a combustion valve between each combustion chamber and its discharge nozzle, said valves being adapted to be blown open by the explosion within the combustion chambers, devices for closing the valves toward the combustion chambers, means for injecting air and gas to the combustion chambers under pressure, means for resisting the action of said valve-closing

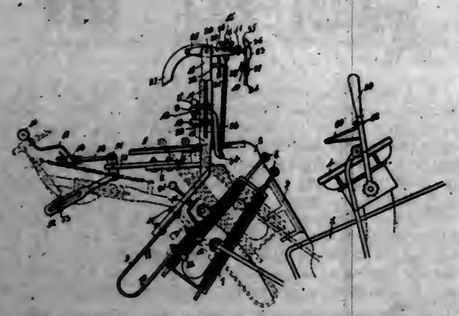
devices and retarding the closing of the combustion valves while the pressure due to explosion is decreasing, an igniter for each combustion chamber, a controlling device for operating the injecting device and igniters of the several combustion chambers in succession, and motor mechanism independent of the rotor for actuating said controlling device, combined substantially as set forth.

4. A gas engine comprising a casing containing an annular air passage, an annular gas passage, a circular series of combustion chambers adjacent said air and gas passages and having discharge nozzles, a turbine rotor arranged to receive directly the impactive discharge from said nozzles, a combustion valve disposed between each combustion chamber and its nozzle and adapted to be blown open by explosion in the combustion chambers, valves between the air and gas passages and the combustion chambers, and means for controlling the opening and closing of the air and gas valves, combined substantially as set forth.

5. A gas engine comprising a casing containing an annular air passage, an annular gas passage, a circular series of combustion chambers adjacent said air and gas passages and having discharge nozzles, a turbine rotor arranged to recive directly the impactive discharge from said nozzles, a combustion valve disposed between each combustion chamber and its nozzle and adapted to be blown open by explosion in the combustion chambers, valves between the air and gas passages and the combustion chambers, and a controller independent of the rotor for controlling the valves of the combustion chambers successively, combined substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

877,195. PRINTING-PRESS ATTACHMENT. ALEXANDER J. HOOD, Muscoda, Wis. Filed May 9, 1907. Serial No. 372,666.



1. In a machine of the character described, the combination with a platen for carrying a sheet into printing position, of a fixed form for printing on said sheet, an inking roller with means for operating the same, and, another form controlled by the inking roller operating means to print on the sheet after it has been removed from the fixed form and while carried by the platen.

2. In a machine of the character described, the combination with a platen arranged to travel in the arc of a circle and carry a sheet forward into printing position, of inking means, means for operating said inking means, and means for again printing on the sheet while carried by the platen and after the platen has moved back from the first printing position to its initial position, said last named means being controlled by the inking operating means.

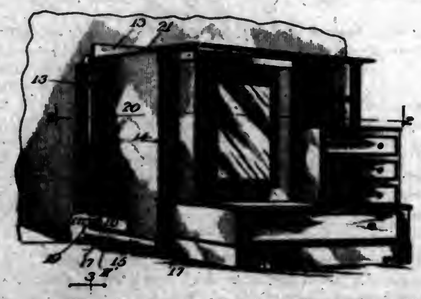
3. The combination with a swinging inking roller-carrying frame of a printing press, a spring-supported member attached to said frame, an arm adjustably sustained by said support, a marking device holder pivotally mounted on said arm and having a rearwardly projecting curved trip portion, a rigid arm projecting from the press and carrying a spring frame, an inking roller sustained in the frame in position to wipe the face of the marking device, a support beneath the spring frame, and a roller on said support for engagement with said trip portion to throw the marking device holder to inking position.

4. The combination with the swinging roller carrying frame of a press, of a spring secured to said frame, an arm attached to said spring and adapted to carry a printing device, and a set-screw for adjusting said arm.

5. The combination with the swinging roller carrying frame of a press, of a spring arm attached to said frame, a longitudinally-extensible section upon said arm, and a marking device clamped upon said extensible section.

[Claims 6 to 8 not printed in the Gazette.]

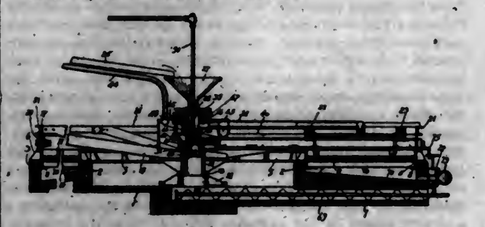
877,196. EXTENSION-ROOM. PHILIP G. HUBERT, Los Angeles, Cal. Filed July 24, 1907. Serial No. 385,283.



1. A wall having a recess therein, a closure for said recess, means to facilitate the movement of said closure to and from said recess, a panel secured to said closure and extending horizontally from the rear and at the top of the same, a vertical panel extending rearwardly from one side of said closure, said panels extending into the recess, a closure secured to the side of the opening of said recess opposite said vertical panel, and means adapted to limit the outward movement of said closure.

2. A room provided with a wall having a recess therein, closure and extension means for said recess comprising an article of furniture, a panel secured to said article of furniture and extending horizontally from the rear and at the top thereof, a vertical panel extending rearwardly from one side of said article of furniture, said panels entering said recess, means to facilitate the movement of said article of furniture to and from said recess, and a closure secured to the side of the opening of said recess opposite said vertical panel.

877,197. CONTINUOUS FILTER FOR CYANIDING AND THE LIKE. BERTRAM HUNT, San Francisco, Cal. Filed Mar. 28, 1907. Serial No. 365,194.



1. A filter comprising a stationary filter bed, a feeder movable over said bed for distributing thereover the material to be filtered, a scraper also movable over said bed for removing the residual material, and means for moving said feeder and scraper over said bed, substantially as described.

2. A filter comprising a stationary annular filter bed, a feeder for feeding on to said bed the material to be filtered, a scraper for scraping the residual material from said bed, and means for revolving said feeder and scraper over the bed, substantially as described.

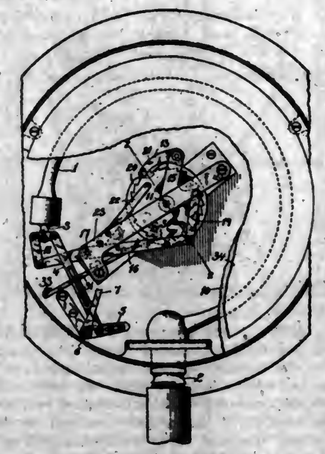
3. A filter, comprising an annular filter bed, a carriage revolving thereover and means supported by said carriage for discharging on said bed the material to be filtered, and for removing from the filter bed the residual material thus filtered, substantially as described.

4. A filter, comprising a stationary annular filter bed, a carriage revolving over said bed, a feeder for feeding on to said bed the material to be filtered, scraper for removing from said bed the residual material, a conveyer to which the material is delivered by the scraper and adapted to convey the material from the bed, said feeder, scraper and conveyer being movable with the carriage, and means for automatically operating said conveyer with the movement of the carriage, substantially as described.

5. A filter comprising a stationary annular filter bed, a carriage revolving over said bed, a feeder for feeding on to said bed the material to be filtered, clean sand distributer arranged to distribute clean sand over the filter bed in the rear of the scraper, a scraper for removing from said bed the residual material, a conveyer to which the material is delivered by the scraper and adapted to convey the material from the bed, said feeder, distributer, scraper and conveyer being movable with the carriage, and means for automatically operating said conveyer with the movement of the carriage, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

877,198. AUTOMATIC RECORDING-GAGE. WILLIAM E. JERAULD, Boston, Mass., assignor to American Steam Gauge & Valve Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed Dec. 31, 1906. Serial No. 350,117.



1. A gage for recording successive pressures, comprising in combination, a curved spring pressure tube, a dial-holding arbor, a ratchet secured to said arbor, a pawl carrier, a pawl mounted thereon, and connections joining the pawl carrier with the pressure tube for oscillating the same and turning this arbor step by step at each return of the tube to normal position; said ratchet, pawl-carrier and connections being approximately in the plane of the tube and within the space inclosed thereby.

2. The combination with the curved tube, dial holding arbor approximately at the center of curvature of the tube, and marking point of a recording pressure gage, of a ratchet secured to said arbor, a pawl-carrier oscillative about said arbor, a pawl pivoted to the carrier to engage the ratchet, and operating connections between the carrier and free end of the tube arranged to advance the ratchet as the tube returns to low pressure position.

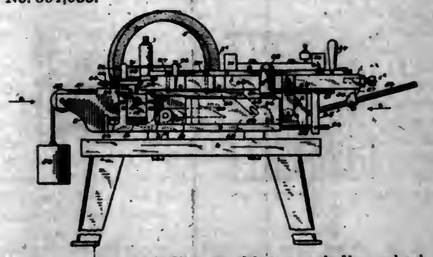
3. The combination with the curved tube, dial holding arbor approximately at the center of curvature of the tube, and marking point of a recording pressure gage, of a ratchet secured to said arbor, a pawl-carrier oscillative about said arbor, a pawl pivoted to the carrier to engage the ratchet, and operating connections consisting of a pivoted lever linked respectively to the carrier and free end of the tube arranged to advance the ratchet as the tube returns to low pressure position.

4. The combination, in a pressure gage, of a Bourdon tube, an arm carrying a marking point and connected with the tube for actuation thereby, a holder carrying a dial adapted to be marked by said point, a ratchet to which said dial holder is connected, a pawl carrier movable in a plane parallel to that of the marking point, a pawl pivoted thereto adapted to drive the ratchet, and connections including a lever and connecting links between said pawl carrier and the free end of the Bourdon tube whereby the latter is caused to oscillate the carrier.

5. In a device of the character described, in combination with the pressure-indicating and recording mechanism, a freely rotatable arbor, a holding screw for detachably clamping a dial thereto, a ratchet secured to said arbor, a pawl for rotating said ratchet and dial, and a lock adapted for detachable engagement with the ratchet to hold it stationary while the dial-clamping screw is being turned.

[Claims 6 and 7 not printed in the Gazette.]

877,199. CUTLERY-GRINDING MACHINE. CHARLES L. JOY, New Haven, Conn. Filed Sept. 23, 1907. Serial No. 394,033.



1. In a cutlery grinding machine, a grinding wheel, a traveling carriage carrying a knife-holder, an adjustably supported driving shaft, a pinion thereon, a rack on the carriage, means on the carriage for automatically actuating the shaft to bring the pinion into engagement with the rack, and means on said carriage for automatically disengaging it therefrom, for the purpose set forth.

2. In a cutlery grinding machine, a grinding wheel, a traveling weight operating carriage carrying a knife-holder, an adjustably supported driving shaft, a rack on the carriage, a pinion on the shaft, means on the carriage for automatically engaging the pinion with the rack, and means for automatically disengaging it therefrom, for the purpose set forth.

3. In a cutlery grinding machine, a grinding wheel, a traveling carriage, a support therefor, a knife-holder, a support therefor, said support mounted on the carriage and laterally movable thereon to and from the grinding wheel, a rack having an independent longitudinal movement on the carriage, means on the rack to effect the lateral movement of the knife-holder support toward the grinding wheel, means carried by the rack to engage the carriage at the expiration of said idle movement to actuate said carriage during the grinding operation, an adjustably supported driving shaft, a pinion thereon, means on the carriage for automatically actuating the driving shaft to bring the pinion into engagement with the rack, means for automatically disengaging the same, and means for locking the carriage at the completion of the grinding, for the purpose set forth.

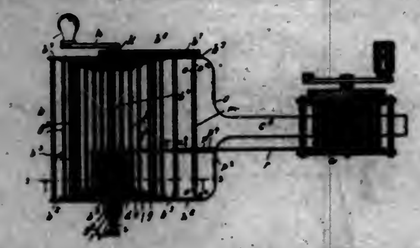
4. In a cutlery grinding machine, a grinding wheel, a traveling weight actuated carriage, a support therefor, a knife-holder, a support therefor, said support adapted to have a lateral movement to and from the grinding wheel, a rack on the carriage adapted to have an idle movement thereon and independent of the movement of the carriage, an adjustably supported driving shaft, a pinion thereon,

means on the carriage for actuating the shaft to engage the pinion with the rack, means for locking the shaft during such engagement, means carried by the rack to engage the carriage to actuate the same at the completion of the idle movement of the rack, means on the rack for actuating the knife-holder support toward the grinding wheel, means for automatically disengaging the pinion from the rack at the completion of the grinding, means for automatically retreating the knife-holder support, and means for locking the carriage, for the purpose set forth.

5. In a cutlery grinding machine, a grinding wheel, a traveling carriage, a support therefor, a weight for actuating the idle travel of the carriage in one direction, an adjustably supported driving shaft, a pinion thereon, a rack on the carriage, means on the carriage to actuate the shaft to bring the pinion into engagement with the rack to effect a return movement of the carriage, means for temporarily retaining said pinion in contact with the rack, means for disengaging said pinion, for the purpose set forth.

[Claims 6 to 8 not printed in the Gazette.]

877,200. DRYING-REEL FOR FISHING-LINES. PATRICK T. KEEFE, New York, N. Y. Filed July 5, 1907. Serial No. 382,187.



1. A drying reel for lines, comprising an openwork frame, a shaft passing therethrough, a plurality of concentrically arranged openwork rotatable members mounted on said shaft, and means whereby the rotation of said shaft will rotate said rotatable members successively beginning with the inner one.

2. A drying reel for lines, comprising an openwork frame, a shaft passing therethrough, a plurality of concentrically arranged openwork rotatable members mounted on said shaft, means whereby the rotation of said shaft will rotate said rotatable members successively beginning with the inner one, and means whereby the line in the operation of winding may be guided from one end of the inner rotatable member to the other and then back while it is being wound on the next successive rotatable member and so on.

3. A drying reel for lines, comprising an openwork frame, a shaft passing therethrough, a plurality of concentrically arranged openwork rotatable members mounted on said shaft, means whereby the rotation of said shaft will rotate said rotatable members successively beginning with the inner one, and means whereby the line in the operation of winding may be guided from one end of the inner rotatable member to the other and then back while it is being wound on the next successive rotatable member and so on, comprising two screw shafts mounted in the frame, and a pivoted arm adapted to engage either of said screws and through which the line is passed.

877,201. CURRENT-DEFLECTOR. ANTON F. KELLNER, Omaha, Nebr. Filed Apr. 4, 1907. Serial No. 366,276.

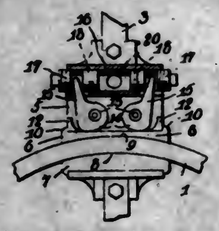
1. A water-current deflector comprising a series of sections of wire mesh substantially of equal lengths secured edge-to-edge as a web, a series of spreading members having their ends secured upon the outer edges of and transversely traversing said web; a series of holders connecting each of said sections of wire mesh of said web with each of said spreading-members; said web being vertically-disposed by means of a series of buoys secured to its upper edge and a series of weights secured upon its lower edge; and a series of anchors having connections with the upper edge of the web to maintain said web in a diagonal position with reference to a water current, substantially as shown and described.



2. A water-current deflector comprising a series of sections of wire mesh substantially of equal lengths secured edge-to-edge as a web; a series of spreading members having their ends secured upon the outer edges of the web; and means to maintain said web in an upright position transversely with reference to a water current.

3. A water-current deflector, comprising a series of sections of wire mesh substantially of equal lengths secured edge-to-edge as a web; a series of spreading members disposed between and having their ends secured upon the outer edges of the web; a series of holders connecting each of said sections of wire mesh of said web with each of said spreading members; and means to maintain said web in an upright position transversely with reference to a water current.

877,202. REVERSING-LEVER AND QUADRANT-BAR. WILLIAM W. KLEESE, Aurora, Mo., assignor of one-half to Daniel B. Loy, Aurora, Mo. Filed May 23, 1907. Serial No. 375,255.



1. In a device of the character described, the combination with a pivotally mounted lever, of a quadrant bar adapted to be engaged by said lever, and fluid operated means carried by the latter to lock the same into engagement with the quadrant bar at any desired position, means under the control of the operator carried by said lever for controlling the fluid operating means to lock and unlock said lever relatively to said quadrant.

2. In a device of the character described, the combination with a pivotally mounted lever, of a quadrant bar having smooth upper and lower edges, a clutch mechanism carried by said lever to engage said bar at any desired point, and fluid operated means to automatically operate said clutch mechanism, and means carried by said lever for controlling said fluid operated means.

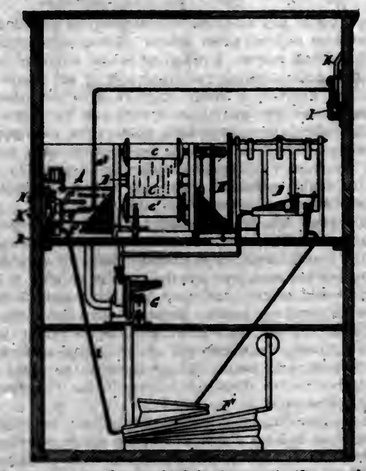
3. In a device of the character described, the combination with a pivotally mounted lever, of a quadrant bar having a smooth upper and lower surface, clutching gibs carried by said lever to engage said quadrant bar, operating cams adapted to be engaged with one of said gibs, and fluid operated means to actuate said cams, and means carried by said lever for controlling said fluid operated means.

4. In a device of the character described, the combination with a pivotally mounted lever, of a quadrant bar having a smooth upper and lower surface, clutching gibs carried by said lever to engage said quadrant bar, operating cams adapted to be engaged with one of said gibs, a piston chamber carried by said lever, pistons mounted in said chamber to engage said cams, inlet and discharge valves arranged in said chamber, and means to control said valves, substantially as described.

5. In a device of the character described, the combination with a pivotally mounted lever, of a quadrant bar having a smooth upper and lower surface, clutching gibs carried by said lever to engage said quadrant bar, operating cams adapted to be engaged with one of said gibs, a piston chamber carried by said lever, cam operating levers adapted to project into said piston chamber, slidably mounted pistons adapted to engage said levers, inlet and discharge valves arranged in the opposite sides of said chamber, operating rods connected to said valves, a handle pivotally mounted on said lever and connected to the upper ends of said operating rods whereby said inlet valve is closed and exhaust valve opened, and a retracting spring to open said inlet valve and close the exhaust valve when said handle is released, substantially as described.

[Claim 6 not printed in the Gazette.]

877,203. PNEUMATIC MUSICAL INSTRUMENT. EUGENE DE KLEIST, North Tonawanda, N. Y. Filed Jan. 13, 1906. Serial No. 295,914.



1. In a pneumatic musical instrument, the combination of a main exhaust bellows, a motor therefor, coin-controlled means for starting and stopping the motor, including a coin-releasing pneumatic, a main wind-chest and coöperating tracker-mechanism, and an auxiliary wind-chest and coöperating tracker-mechanism controlling said coin-releasing pneumatic and controlled by the main tracker-mechanism, substantially as set forth.

2. In a pneumatic musical instrument, the combination of a main exhaust bellows, a motor therefor, coin-controlled means for starting and stopping the motor, including a main and an auxiliary coin-releasing pneumatic, a main wind-chest and coöperating tracker mechanism controlling said main coin-releasing pneumatic, and an auxiliary wind-chest and coöperating tracker-mechanism controlled by the main tracker mechanism and controlling said auxiliary coin-releasing pneumatic, substantially as set forth.

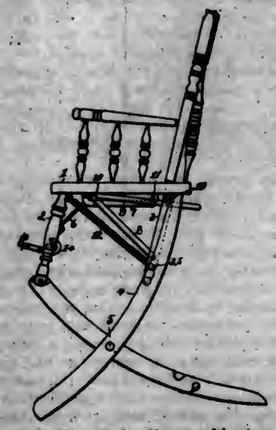
3. In a pneumatic musical instrument, the combination of a main exhaust bellows, a motor therefor, coin-controlled means for starting and stopping the motor, including a coin-releasing pneumatic, a main wind-chest, tracker-mechanism coöperating with said chest and including a take-up roller for the music sheet, said roller being provided with a groove adapted to be covered by the music-sheet, an auxiliary wind-chest connected with said main bellows and said coin-releasing pneumatic, valve mechanism arranged in said auxiliary chest and controlling communication between said main bellows and the coin-releasing pneumatic, an auxiliary tracker device having a duct leading to the last-named wind-chest, a valve controlling said duct, and an opening device for said valve arranged to enter said groove and normally held out of the same by the overlying music sheet, substantially as set forth.

4. In a pneumatic musical instrument, the combination of a main exhaust bellows, a motor therefor, coin-controlled means for starting and stopping the motor, including a coin-releasing pneumatic, a main wind-chest, tracker-mechanism coöperating with said chest and including a take-up roller for the music sheet, said roller being provided with an annular groove adapted to be covered by the music sheet, an auxiliary wind-chest connected with said main bellows and said coin-releasing pneumatic valve mechanism arranged in said auxiliary chest and controlling communication between the said main bellows and the coin-releasing pneumatic, an auxiliary tracker device having a duct leading to the last-named wind-chest, a valve controlling said duct, a pivoted arm acting upon said valve and arranged opposite said groove, and a spring tending to move said arm into said groove, substantially as set forth.

5. In a pneumatic musical instrument, the combination of a main exhaust bellows, a motor therefor, coin-controlled means for starting and stopping the motor, including a coin-releasing pneumatic, a main wind-chest, tracker-mechanism coöperating with said chest and including a take-up roller for the music sheet, said roller being provided with an annular groove adapted to be covered by the music-sheet, an auxiliary wind-chest connected with said main bellows and said coin-releasing pneumatic valve mechanism arranged in said auxiliary chest and controlling communication between the said main bellows and the coin-releasing pneumatic, an auxiliary tracker device having a duct leading to the last-named wind-chest, a valve controlling said duct, and arranged adjacent to the take-up roller, and a pivoted arm arranged opposite said groove and provided with a finger which acts upon said valve and opens it when the arm enters the groove, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

877,204. CONVERTIBLE CHAIR. WARREN W. LEFARD, Otsego, Mich. Filed Sept. 4, 1906. Serial No. 333,222.



1. In a convertible chair, the combination of a seat; rigid front legs therefor; rockers, each formed of two pieces or members arranged side by side and pivotally connected, a member of each rocker being pivoted at its forward end to the lower end of one of the said front legs; rear legs pivotally connected to said seat and to the other rocker members so that the rear ends of the rocker members may be swung up when the chair is adjusted as a high-chair, to form extensions for the said rear legs, the said rear legs being arranged to rest on the rocker members which are pivoted to the front legs when the chair is

adjusted as a rocking-chair; a bail pivotally connected to said rear legs; a bar over which said bail is slidably arranged secured to the under side of said seat; a pivoted latch adapted to engage said bail when said chair is adjusted as a high-chair; a spring for holding the forward end of said latch normally upward; and a coiled spring connected to said rear legs and to said seat, for the purpose specified.

2. In a convertible chair, the combination of a seat; rigid front legs therefor; rockers, each formed of two pieces or members arranged side by side and pivotally connected, a member of each rocker being pivoted at its forward end to the lower end of one of the said front legs; rear legs pivotally connected to said seat and to the other rocker members so that the rear ends of the rocker members may be swung up when the chair is adjusted as a high-chair, to form extensions for the said rear legs, the said rear legs being arranged to rest on the rocker members which are pivoted to the front legs when the chair is adjusted as a rocking-chair; means for locking said chair in position when adjusted as a high-chair; and a coiled spring connected to said rear legs and to said seat, for the purpose specified.

3. In a convertible chair, the combination of a seat; rigid front legs therefor; rockers, each formed of two pieces or members arranged side by side and pivotally connected, a member of each rocker being pivoted at its forward end to the lower end of one of the said front legs; rear legs pivotally connected to said seat and to the other rocker members so that the rear ends of the rocker members may be swung up when the chair is adjusted as a high-chair, to form extensions for the said rear legs, the said rear legs being arranged to rest on the rocker members which are pivoted to the front legs when the chair is adjusted as a rocking-chair; a bail pivotally connected to said rear legs; a bar over which said bail is slidably arranged secured to the under side of said seat; a pivoted latch adapted to engage said bail when said chair is adjusted as a high-chair; and a spring for holding the forward end of said latch normally upward, for the purpose specified.

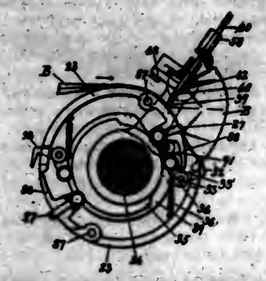
4. In a convertible chair, the combination of a seat; rigid front legs therefor; rockers, each formed of two pieces or members arranged side by side and pivotally connected, a member of each rocker being pivoted at its forward end to the lower end of one of the said front legs; rear legs pivotally connected to said seat and to the other rocker members so that the rear ends of the rocker members may be swung up when the chair is adjusted as a high-chair, the said rocker members then forming extensions for said legs, the said rear legs being arranged to rest on the rocker members which are pivoted to the front legs when the chair is adjusted as a rocking-chair, for the purpose specified.

5. In a convertible chair, the combination of a seat; rigid front legs therefor; rockers, each formed of two pieces or members arranged side by side and pivotally connected, a member of each rocker being pivoted at its forward end to the lower end of one of the said front legs; rear legs pivotally connected to said seat and to the other rocker members so that the rear ends of the rocker members may be swung up when the chair is adjusted as a high-chair, to form extensions for the said rear legs; a bail pivotally connected to said rear legs; a bar over which said bail is slidably arranged secured to the under side of said seat; a pivoted latch adapted to engage said bail when said chair is adjusted as a high-chair; a spring for holding the forward end of said latch normally upward; and a coiled spring connected to said rear legs and to said seat, for the purpose specified.

[Claims 6 to 9 not printed in the Gazette.]

877,206. PAPER-BAG MACHINE. WILLIAM A. LORENZ, Hartford, Conn., assignor to Union Paper Bag Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 26, 1905. Serial No. 242,766.

1. In a paper bag machine, means for forming diamond folds on bellows sided blanks, having in combination a rotating blank carrier, a diamond holder for holding the front end of the blank relative to the carrier, a blank support mounted upon the carrier to move toward and away from the diamond holder, and having means for holding the lower ply of the blank, means for turning back the upper ply of the blank to form the diamond fold, and means for moving the blank support relative to the diamond holder, during the diamond forming operation.



2. In a paper bag machine, mechanism for forming diamond folds on bellows sided blanks, having in combination a rotating blank carrier, a diamond holder mounted on the blank carrier for holding the front end of the blank relative to the carrier, a blank support pivotally mounted upon the carrier for oscillation toward and away from the diamond holder, and having tuck holders for engaging the lower tucks of the blank, means for turning back the upper ply to form the diamond fold, and means for oscillating the blank support relative to the diamond holder during the diamond forming operation.

3. In a paper bag machine, mechanism for forming diamond folds on bellows sided blanks, having in combination a rotating blank carrier, a diamond holder for holding the front end of the diamond relative to the carrier, a blank support pivoted to the carrier on an axle remote from the diamond holder, tuck holders mounted upon the blank support between the said axis and the diamond holder, means for turning back the upper ply of the blank to form the diamond folds, and means for oscillating the blank support relative to the diamond holder during the diamond forming operation.

4. In a paper bag machine, mechanism for forming diamond folds on bellows sided blanks, having in combination a rotating blank carrier, a diamond holder for holding the front end of the diamond relative to the carrier, a blank support pivoted at its rearward end to the blank carrier, with its free swinging end extending forwardly toward the diamond holder, tuck holders mounted on the blank support between the axis thereof and the diamond holder, means for turning back the upper ply of the blank to form the diamond fold, and means for swinging the free end of the blank support away from and toward the diamond holder during the diamond forming operation.

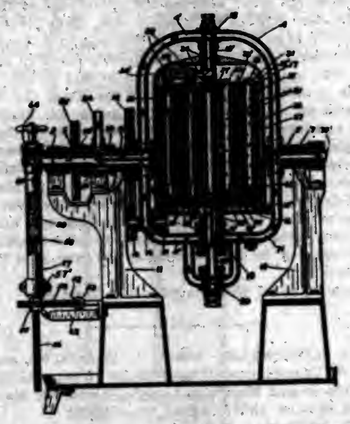
5. In a paper bag machine, mechanism for forming diamond folds on bellows sided blanks, having in combination a rotating blank carrier, a diamond holder for holding the front end of the diamond relative to the carrier, a blank support pivoted at its rearward end to the carrier, with its forward end extending toward the diamond holder, a defining plate mounted for oscillation in a curved path above the rotary path of the bed, provided with means for turning back the upper ply of the blank to form the diamond fold, and means for swinging the forwardly extending free end of the blank support away from and toward the diamond holder during the diamond forming operation.

[Claim 6 not printed in the Gazette.]

877,206. FILTER. WILLIAM LORENZ, Philadelphia, Pa. Filed Apr. 4, 1907. Serial No. 366,417.

1. In a filter, a porous septum, a liquid conduit leading to said septum, a chamber containing a filtering material communicating with said conduit, a piston in said chamber, and means for moving said piston.

2. In a filter, a porous septum, a conduit leading thereto, a chamber containing filtering material communicating with said conduit, a piston movable in said chamber, a threaded rod for moving said piston, a wheel engaging and moving said threaded rod, and a motor connected with and operating said wheel.



3. In a filter, a porous septum, a conduit leading thereto and a conduit leading therefrom, a chamber containing with the conduit leading to said septum, a tank communicating with the conduit leading from said septum, a motor connected with said tank and operated by liquid discharged therefrom, and means operated by said motor for forcing filtering material into the conduit leading to said septum.

4. In a filter, a frame having passages therein and trunnions having passages therein, bearings in which said trunnions are journaled, a casing having hollow trunnions journaled in said frame and communicating with said passages, and one or more porous septa in said casing and disposed between the passages through said hollow trunnions.

5. In a filter, a frame having separate passages, trunnions fixed to said frame and having passages communicating with said frame passages, and a casing having trunnions journaled in said frame with passages communicating with the passages therein.

[Claims 6 and 7 not printed in the Gazette.]

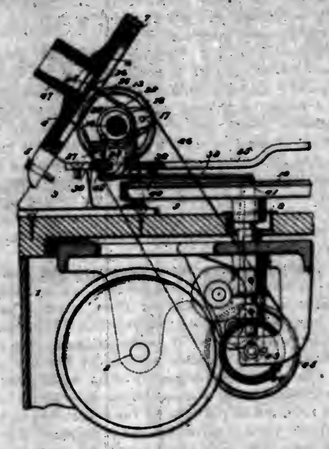
877,207. GRAPHOPHONE. THOMAS H. MACDONALD, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Jan. 16, 1906. Serial No. 296,366.

1. In a sound reproducing machine, the combination of a revolving record, a stationary diaphragm, a stylus mounted to turn on a universal joint independent of said diaphragm, connections between said stylus and diaphragm, a friction device acting on said connections, and means simultaneously actuating said record and friction device.

2. In a sound reproducing machine, the combination of a record, with a diaphragm, a stylus mounted to move freely across said record independent of the diaphragm, connections between said stylus and diaphragm, a friction device acting on said connections, and means simultaneously actuating said record and friction device.

3. In a sound reproducing machine, the combination of a sound record, with a diaphragm, a stylus mounted to move across the face of the record independent of the diaphragm, a friction roll, connections between said stylus and diaphragm, one part of said connections constituting a friction shoe engaging said roll, and means simultaneously actuating said record and roll.

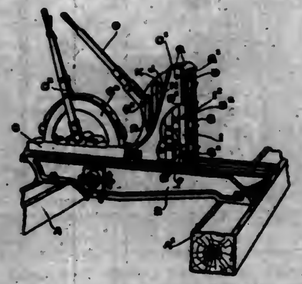
4. In a sound reproducing machine, the combination of a disk-shaped sound record, with a stationary diaphragm, an universally mounted stylus, a friction roll, connections between said stylus and diaphragm and having frictional engagement with said roll, and means simultaneously actuating said record and roll.



5. In a sound reproducing machine, the combination of a disk-shaped sound record, with a stationary diaphragm, a stylus mounted to move parallel with the face of said record and also at right angles thereto, a friction roll, connections between said stylus and diaphragm and having frictional bearing on said roll, and means simultaneously actuating said record and roll.

[Claims 6 to 17 not printed in the Gazette.]

877,208. SINGLE-TOOTH DOG FOR GRIPPING LOGS. THOMAS MANLEY, Prince Albert, Saskatchewan, Canada. Filed Apr. 19, 1907. Serial No. 369,122.



1. In a device of the class described the combination with the knee of a headblock, of a center plate adapted to slide within the knee, slidable dogs carried within guides in the center plate, removable side plates retaining the dogs in the guides, means for holding the center plate within the knee and means for operating the dogs forwardly and backwardly, as and for the purpose specified.

2. In a device of the class described the combination with the hollow knee of a headblock, of a center plate adapted to slide within the headblock, said plate being formed with a facially enlarged front portion having sets of guides cut therein, dogs adapted to slide within the guides, removable side plates retaining the dogs within the guides, means for retaining the center plate within the knee and means for operating the dogs backwardly and forwardly, as and for the purpose specified.

3. In a device of the class described the combination with the hollow knee of a headblock, of a center plate adapted to slide within the knee, the said center plate being formed with a facially enlarged front portion having on its sides, respectively, a series of similar guides, dogs

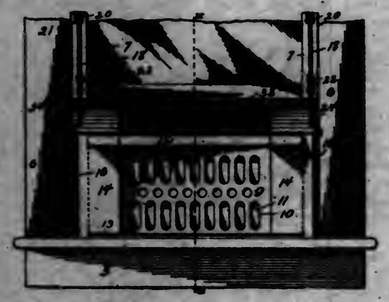
adapted to slide within the guides, side plates retaining the dogs in position and held to the center plate by studs, a vertical arm pivotally connected to each set of dogs, means for throwing the arms backwardly and forwardly, and means for retaining the center plate within the knee, as and for the purpose specified.

4. In a device of the class described the combination with the hollow knee of a headblock, of a center plate formed with a facially enlarged front portion having on one side a series of similar transverse arcuate guides, and on the other a similar set of guides with the arc reversed, sets of dogs adapted to slide within the arcuate guides, removable side plates retaining the dogs within the guides, a removable vertical arm connecting the individual dogs of the respective sets, adjustable means for retaining the center plate within the knee, and means controlled by a lever for throwing the arm forwardly and backwardly, as and for the purpose specified.

5. In a device of the class described the combination with the hollow knee of a headblock, of a center plate formed with a facially enlarged front portion having on one side a series of similar transverse arcuate guides and on the other a similar set of guides with the arc reversed, sets of dogs adapted to slide within the arcuate slots, removable side plates retaining the dogs within the guides, said side plates being connected to the center plate by studs and retained in position by the inner side faces of the knee, vertical arms connecting the individual dogs of the respective sets, the said arms being retained in working position by the inner side faces of the hollow knee, screws adapted to hold the center plate within the knee and means controlled by a lever for throwing the vertical arms inwardly and outwardly, as and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

877,209. COMBINED WINDOW SHIELD AND SCREEN. ALICE R. MARTIN, Columbus, Ohio. Filed Sept. 9, 1907. Serial No. 391,899.



1. In a storm and ventilating shield for windows, the combination with an impervious shield adapted to be set at varying angles with relation to the window frame, of locking means that limits the movement of said shield, and a member with which the locking means engages as long as the shield lies at an angle with relation to the window.

2. In a device of the character described, the combination with an impervious shield, of means for hinging said shield to a window frame at the lower edge of the shield, said shield being adapted to lie at an angle, a screen adapted to close the space between the upper edge of the shield and the lower edge of the window sash, links connected to the shield, and guide members with which said links slidably engage.

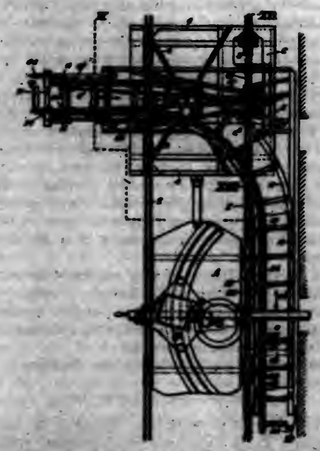
3. In a device of the character described, the combination with an impervious shield, of means for hinging said shield to a window frame at the lower edge of the shield, said shield being adapted to lie at an angle, a screen adapted to close the space between the upper edge of the shield and the lower edge of the window sash, links connected to the shield, and guide members with which said links slidably engage, said guide members being carried by the lower window sash.

4. In a device of the character described, the combination with an impervious shield, of means for hinging said shield to a window frame at the lower edge of the shield, said shield being adapted to lie at an angle, a screen adapted to close the space between the upper edge of the shield and the lower edge of the window sash, links pivotally connected to said shield, vertically disposed guide rods carried by the window sash, and blocks slidably disposed upon said guide rods, said links being hinged to said blocks.

5. In a device of the character described, the combination with an impervious shield, of means for hinging said shield to a window frame at the lower edge of the shield, said shield being adapted to lie at an angle, a screen adapted to close the space between the upper edge of the shield and the lower edge of the window sash, links pivotally connected to said shield, vertically disposed guide rods carried by the window sash, blocks slidably disposed upon said guide rods, said links being hinged to said blocks, and a spring adapted to exert a tension between said link and said block.

[Claims 6 and 7 not printed in the Gazette.]

877,210. CONVEYER. ROBERT L. MARTIN, JR., and WALTER W. MACFARREN, Pittsburg, Pa., assignors of three-fourths to said Martin and one-fourth to said Macfarren. Filed Jan. 14, 1907. Serial No. 352,242.



1. A conveyer consisting of a continuous flexible structure arranged to travel in opposite directions through lower and upper planes respectively and in laterally variable directions, and means for supporting and guiding the conveyer consisting of a receiving section, a delivery section at a lateral angle thereto, and a traveling truck.

2. A conveyer consisting of a continuous flexible structure provided with laterally arranged flights arranged to travel in opposite directions through lower and upper planes respectively and in laterally variable directions, and means for supporting and guiding the conveyer consisting of a receiving section, a delivery section at a lateral angle thereto, and a traveling truck.

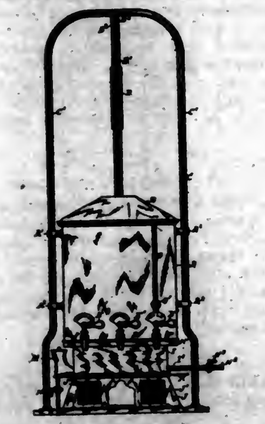
3. A conveyer consisting of a single continuous universally flexible structure provided with laterally arranged flights arranged to travel in opposite directions through lower and upper planes respectively and in laterally variable directions, and means for supporting and guiding the conveyer consisting of a receiving section, a delivery section at a lateral angle thereto, and a traveling truck.

4. A conveyer consisting of a continuous flexible structure provided with laterally arranged flights and guiding devices, arranged to travel in opposite directions through lower and upper planes respectively and in laterally variable directions, and means for supporting and guiding the conveyer consisting of a receiving section provided with terminal carrying wheels, a delivery section at a lateral angle thereto, and a traveling truck.

5. A conveyer consisting of a continuous flexible structure provided with laterally arranged flights and guiding and bearing shoes, arranged to travel in opposite directions through lower and upper planes respectively and in laterally variable directions, and means for supporting and guiding the conveyer provided with trackways for said guiding devices.

[Claims 6 to 40 not printed in the Gazette.]

877,211. URN. ALBERT W. MEYER, Roselle, N. J. Filed Nov. 7, 1905. Serial No. 286,299.



1. In an urn, the combination of a water chamber open at its top and removable receptacles, the bottoms of which rest directly over the top of said water chamber, a movable casing, means for suspending said casing above said receptacles, a cover and means for suspending said cover above said casing when the casing is elevated.

2. In an urn, the combination of a base, a water chamber supported above said base and having a contracted bottom and inclined sides and provided with a laterally extending flange at its upper end, a casing resting on said flange and movable vertically relative to said water chamber, a plurality of receptacles within said casing supported by said flange, elements located between the bottoms of said receptacles and resting on said flange for the purpose of raising said receptacles a predetermined distance above the same, a cover for said casing, a counterweight for said cover a frame comprising three branches, one of which supports the counter weight for said cover and the other two of which are provided with means for supporting said casing in an elevated position.

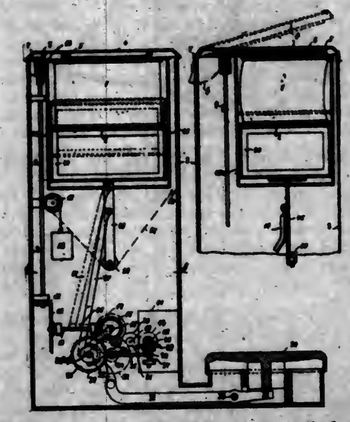
3. The combination in an urn, of a water receptacle having a contracted bottom, removable receptacles located above said water receptacle, means located between the top of the water receptacle and the removable receptacles to raise the bottoms of said removable receptacles above the top of the water receptacle, a frame, a casing adapted to surround said removable receptacles and to be elevated and suspended from said frame, a cover for said casing and means for suspending said cover from said frame independent of said casing.

4. In an urn, a water chamber, a casing, removable receptacles within said casing provided with faucets which project through the same, a base element J and a removable tray K held between said base element and said water chamber.

5. In an urn, a base plate, a frame secured thereto, a burner, a housing therefor secured to said base plate, a water chamber supported by said housing, and provided with a laterally extending flange at its upper end, means for filling and emptying said water chamber, a movable casing, means for supporting said casing from said frame in an elevated position, removable receptacles in said casing supported by said flange, each of which is provided with a faucet which is adapted to extend through said casing, and the bottoms of said receptacles being elevated above the top of the water chamber a sufficient distance to allow the steam to flow freely into said casing and to allow the condensed steam to flow freely to the water chamber as set forth.

[Claims 6 to 12 not printed in the Gazette.]

877,212. COIN-FREED MECHANISM. OSKAR MEYER, Göttingen, Germany. Filed May 29, 1906. Serial No. 319,284.



1. In a mechanism of the character described, the combination of a frame adapted to support a book, with a shaft operatively connected to the frame, a clock-work actuating the shaft, a treadle, and means actuated by the treadle for winding the clock-work, substantially as specified.

2. In a mechanism of the character described, the combination of a frame adapted to support a book, with a lid adapted to be secured to the book-cover, a worm-wheel sector secured to the lid, a worm engaging the worm-wheel sector, a clock-work, and means actuated by the clock-work for raising the frame and rotating the worm, substantially as specified.

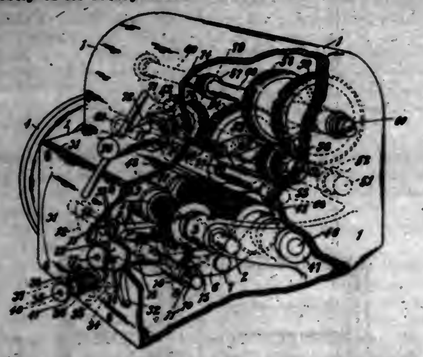
3. In a mechanism of the character described, the combination of a frame adapted to support a book, with a lid adapted to be secured to the book-cover, a worm-wheel sector secured to the lid, a worm engaging the worm-wheel sector, a clock-work, means actuated by the clock-work for raising the frame and rotating the worm, a treadle, and means actuated by the treadle for winding the clock-work, substantially as specified.

877,213. SPEED-CHANGING MECHANISM. ANTON MILL, Cincinnati, Ohio, assignor to The Hilbert Machine Company, Cincinnati, Ohio, a Corporation of Ohio. Filed July 1, 1907. Serial No. 381,699.

1. In a speed changing mechanism, the combination of a rockable frame, a gear slidable laterally on said frame, and a rotatable handle mounted for movement transverse of its rotary axis and having connection with said frame and gear for sliding said gear by the turning of said handle and rocking said frame by said transverse movement of said handle.

2. In speed changing mechanism, the combination of an elongated gear, a rockable frame pivoted about the rotary axis of the latter, a nest of diversely-sized gears, a slidable gear on said rockable frame operative between said elongated gear and nest of gears, and a handle rotatively journaled on said rockable frame and having con-

nection with said slidable gear and arranged for sliding said slidable gear by the turning of said handle and rocking said frame by the movement of said handle transversely of its rotary axis.



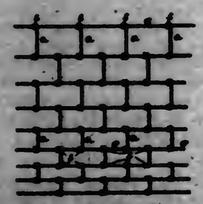
3. In speed changing mechanism, the combination of a train of gearing comprising a plurality of nests of diversely-sized gears, a sidewardly slidable gear and an elongated gear, said sidewardly slidable gear and one of said nests meshing with said elongated gear and means for moving said last-named nest and said slidable gear sidewardly, said means comprising racks and pinions and longitudinally movable handles for the latter, substantially as described.

4. In speed changing mechanism, the combination of a gear-box, a rockable frame therein, a slidable gear on said rockable frame, a handle for sliding said gear and rocking said frame, said rockable frame comprising a locking-piece, and a shifting pin on said box coöperating with said locking-piece for locking said rockable frame in selective position into which the same has been swung by said handle, substantially as described.

5. In speed changing mechanism, the combination of an elongated idler gear and a plurality of gears in mesh therewith and slidable therealong for imparting motion to said elongated gear and receiving motion from said elongated gear, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

877,214. SECTIONAL-STAY WIRE FENCE. GEORGE E. MINFIELD, Joliet, Ill. Filed June 10, 1907. Serial No. 378,162.

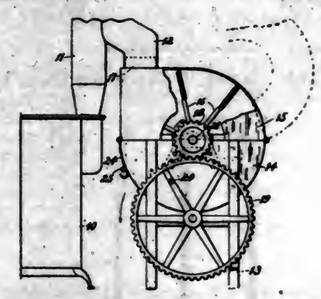


1. A stay section for a wire fence, having the body and both ends thereof covered by a protective material against the effects of moisture and atmospheric changes, substantially as described.

2. A fence, consisting of a plurality of strand wires and connecting stays, each section of the stay having a coating of protective material applied to its body and both ends, for preventing oxidation by moisture and atmospheric changes, substantially as described.

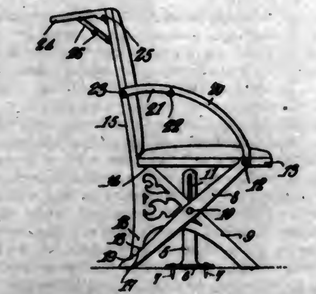
877,215. STOVEPIPE AND CHIMNEY CLEANER. DANIEL J. MONTAMBO, Marinette, Wis. Filed Apr. 12, 1907. Serial No. 367,819.

1. A stove pipe and chimney cleaner, comprising a branch pipe leading to the stove pipe, a frame, a casing mounted thereon, a cover for the casing connected with the branch pipe, a bearing on one side of the casing, a divided bearing on the other side of the casing, a shaft having a reduced end fitting in the first bearing and a reduced portion fitting in the latter bearing, fan blades on the shaft, a pinion on the shaft outside of the casing, a gear wheel mounted on the frame and meshing with the pinion, a handle on the gear wheel, and a valved cap for closing the branch pipe when the casing is disconnected therefrom.



2. A stove pipe and chimney cleaner, comprising a branch pipe leading to the stove pipe, a frame, a casing thereon, a blower fan journaled in the casing, a cover hinged to the casing and adapted to removably connect with the branch pipe, means for securing the cover to the casing, means for turning the blower fan, and a valved cap for closing the branch pipe when the casing is disconnected therefrom.

877,216. CHAIR OR SEAT. HARRY W. MOORE, Atchison, Kans. Filed Jan. 31, 1907. Serial No. 355,124.



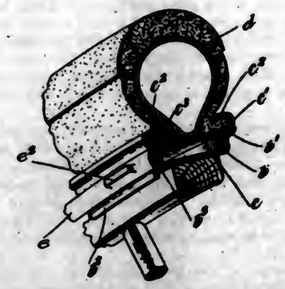
1. A chair including spaced standards, a plurality of sets of pivotally united legs movable vertically of the standards, a back supported by one of the legs of each set, the opposite leg of each set being provided with an intermediate cut away portion defining a horizontal stop shoulder, a seat pivoted to the legs at the front of the chair and resting on said shoulders, and sectional arm members having their adjacent ends pivotally united and their outer ends connected with the seat and back, respectively.

2. A chair including slotted standards, a plurality of sets of intersecting legs bearing against the standards, threaded pivot pins piercing the legs and extending through the slots in the adjacent standards, a back supported by one of the legs of each set, a seat pivoted to the legs at the front of the chair and resting on the opposite legs, sectional arm members having their inner ends pivotally united and their opposite ends pivotally connected with the seat and back, respectively, and clamping nuts engaging the threads on the pivot pins and bearing against the adjacent standards.

3. A chair including slotted standards, a plurality of sets of pivotally united legs movable vertically of the standards, one of the legs of each set being provided with a cut away portion defining a horizontal shoulder and the other with a locking recess, threaded pivot pins piercing the legs and extending through the slots in the standards, a back supported by one of the legs of each set and engaging the adjacent recesses, a seat pivoted to the legs at the front of the chair and resting on the shoulders, and clamping nuts engaging the threads on the pivot pins and bearing against the adjacent standards.

4. A chair including spaced standards provided with vertically disposed slots, a plurality of sets of pivotally united legs movable vertically of the standards, threaded pins extending through the slots and forming a pivotal connection between the legs and standards, a back formed integral with one of the legs of each set and bearing against the adjacent legs, there being a cut away portion formed in one leg of each set at its point of juncture with the back and defining a horizontal stop shoulder, a seat pivoted to the legs at the front of the chair and engaging said shoulders, sectional arm members forming a pivotal connection between the seat and back, and nuts engaging the threads on the pins for clamping the several sets of legs in adjusted position.

877,217. WHEEL-RIM FASTENER. RALPH L. MORGAN, Worcester, Mass. Filed Jan. 12, 1907. Serial No. 351,956.



1. The combination with an inner wheel rim having an elevated bearing surface, of an outer rim bearing near one side on said elevated surface, and a fastening device supporting the other side of the outer rim from the inner rim, said inner rim having means located between the rims and entirely at one side thereof for clamping the fastening device thereto.

2. The combination with a wheel rim having a bearing surface near one side and a flange near the other, of a detachable rim adapted to rest at one edge on said bearing surface, and a wedge-shaped endless fastening rim located between the opposite side of the detachable rim and the flange on the first named rim for supporting the detachable rim and holding the rims together, said first named rim having means adjacent to the flange and between the two rims for holding the fastening ring in place.

3. The combination with a fixed wheel rim of a detachable wheel rim adapted to be supported at one side by the fixed wheel rim, an endless wedge-shaped fastening ring adapted to enter a space between the rims and support one from the other, said fixed rim having a series of wedge-shaped lugs on its outer surface, and said ring having corresponding inwardly extending wedge-shaped lugs adapted to engage the first named lugs to hold the ring in position, whereby the ring will conceal the lugs.

4. In a fastening device for a wheel rim, an endless ring wedge-shaped in cross-section, with the narrow edge of the wedge extending substantially perpendicular to the plane of the wheel, said ring having fastening devices on the inner surface thereof, adapted to be entirely concealed and protected by the ring when in position, and being provided with lugs on the opposite outer surface for receiving blows for forcing the same into fastening position.

877,218. RULE-GAGE. WESLEY E. MORGAN, San Francisco, Cal. Filed Apr. 27, 1907. Serial No. 370,720.



1. In a rule gage, the combination of a gage body, a gage having ears depending below the top of the gage body and pivoted to the body on opposite edges thereof near one end, a latch pivoted to the top of the gage body and adapted to take in a notch in the gage member, and depending lugs adapted to project below the top of the gage body to secure the gage in a given position on the rule, substantially as described.

2. In a rule gage, the combination of a gage body, a gage pivoted thereto near one end thereof, a latch pivoted to the top of the body and adapted to move in a plane parallel to the top of the body and take in a notch in the gage member, and extensions of the gage member adapted to project below the top of the gage body to secure the gage in a given position on the rule, substantially as described.

3. In a rule gage, the combination of a gage body, a gage adapted to fold down on the body and pivoted thereto near one end of the same and on opposite edges thereof, a latch pivoted to the body near the center of the top thereof at one end and of less length than the width of the body said latch adapted to take in a notch in the gage member, and means to secure the gage in a given position on the rule, substantially as described.

4. In a rule gage, the combination of a rectangular gage body having a slot from end to end thereof, a gage pivoted to the body near one end thereof and on opposite edges of the same, a latch pivoted to the body near the end at which the gage is pivoted and adapted to turn in a plane parallel to the top of the body and take in a notch in the gage member, and means carried by the gage member to secure the gage body in a given position on the rule, substantially as described.

5. In a rule gage, the combination of a gage body, a gage member pivoted to the body and near one end thereof, a latch pivoted to the body and shorter than the width of the body, and adapted to secure the gage member upright, and a lug carried by the gage member and adapted to secure the gage in a given position on the rule.

[Claims 6 and 7 not printed in the Gazette.]

877,219. PRINTING-INK. MARION E. MCMASTER, Quincy, Ill. Filed May 10, 1906. Serial No. 316,191.

1. Printing ink having milk combined therewith and having a spissitude approximating that of coagulated blood.

2. Printing ink formed in part of skim milk and having a spissitude approximating that of coagulated blood.

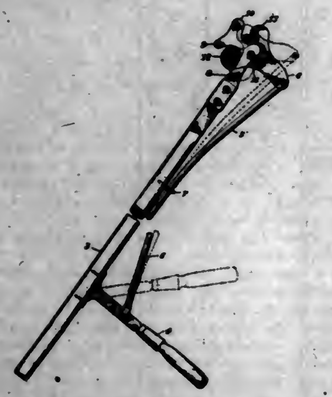
3. Printing ink formed in part of milk with which an antiseptic has been combined, the article having a spissitude approximating that of coagulated blood.

877,220. AVERRUNCATOR. GEORGE F. NILSSON, Pasadena, Cal. Filed Sept. 6, 1907. Serial No. 391,665.

1. An averruncator comprising a handle; a double hook secured to the top and at one side of the upper end thereof, one of the hooks opening upwardly and the other opening downwardly; a knife having two blades and a shank pivotally secured to said hook, one of said blades being adapted to cut a limb in the upper hook and the other blade to cut a limb in the lower hook; a lever pivotally secured to the handle near its lower end; and a rod connecting said lever and knife.

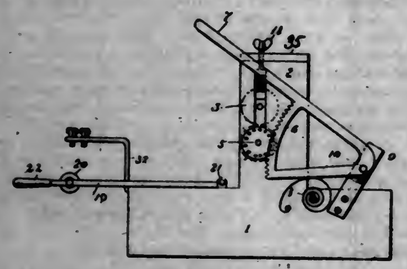
2. An averruncator comprising a handle; a double hook

composed of two separated plates secured to said handle near the top thereof, said hooks being at one side of said handle, and one of them opening upwardly and the other downwardly; a knife having an upper and a lower blade and a shank pivotally secured between the plates of said



hooks, one of said blades being adapted to cut a limb in the upper hook, and the other in the lower hook; a lever pivotally secured in said handle near the lower end thereof; and a rod connecting said lever and the shank of said knife.

877,221. ENVELOP-SEALING MACHINE. FRANK A. NORRIS, Curwensville, Pa. Filed May 20, 1907. Serial No. 374,744.



1. In a sealing machine, pasting and moistening brushes, means for pressing the article against the same, pressing rolls, adjusting means for the same, and a lever for manipulating the rolls.

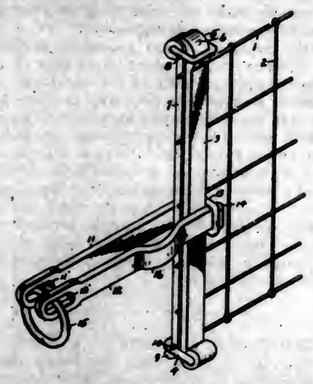
2. A pasting machine, means for applying paste to the article, means for moistening the article, pressing rolls, tensioning means for the rolls, a ratchet connected with one of the rolls, a rack working in said ratchet, and a spring to normally hold the rack retracted.

3. A sealing and pasting machine, brushes to moisten and paste the article, channels formed in the rear of the brushes to receive the fluids, a lever-operated roll adapted to press the article against the brushes, pressing rolls, ways in which the shafts of said rolls play, blocks resting upon the shaft of the upper roll, a bar located in the ways and resting upon the blocks, springs resting upon the bar, and a second bar resting upon the springs and having adjusting means to tension it with relation to the springs.

877,222. CLAMP FOR HOLDING WOVEN-WIRE FENCING WHILE STRETCHING. WILLIAM OSTER, Caldwell county, Mo. Filed May 18, 1907. Serial No. 374,508.

1. In a device of the class described, a clamp bar having a cam head and a link member, and a second bar having a lipped portion and a link adapted to respectively engage the link and cam head on said first bar.

2. In a device of the class described, a pair of clamp bars, each provided with a lipped portion, and a link adapted for engagement with the lipped portion of the opposite bar, the link on one of said bars being rigid and the other movable, substantially as set forth.



3. In a device of the class described, a clamp bar having a cam faced lip at one end and a link rigidly mounted at the opposite end, a second bar adapted for engagement at one end with the link on said first bar and provided with a movable link at its opposite end adapted to fit over and engage the cam face on the lip on said first bar, for the purpose set forth.

4. In a device of the class described, the combination with a clamp bar having a cam head and a link member, of a second bar, having a lipped portion and a link, said lipped portion and link being adapted for respective engagement with the link and cam head on said first bar, and a draft member carried by said bars, whereby said bars are tightened against each other when said member is drawn forward.

5. In a device of the class described, the combination of a pair of clamp bars, each provided with a lipped portion and a link, the link on one of said bars being rigid and the other movable and each adapted for engagement with the lipped portion of the opposite bar, and a draft member, comprising a pair of clamped arms adapted for engagement with said clamp bars, and means for joining said arms whereby they are tightened against said bars when a draft is applied.

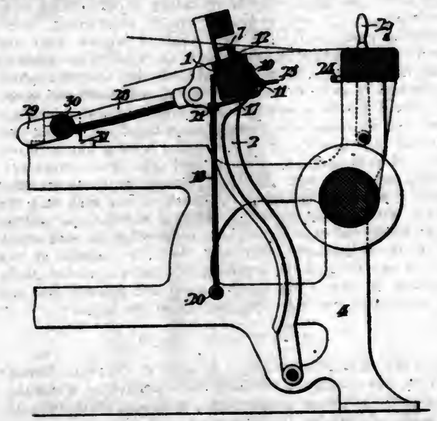
[Claim 6 not printed in the Gazette.]

877,223. SHUTTLE CHECKING AND RELEASING MECHANISM FOR LOOMS. FREDERICK OTT, South Bethlehem, Pa. Filed Apr. 10, 1907. Serial No. 367,389.

1. In a loom, the combination with a lay, shuttle box and binder; of a protection rod on said lay; a spring actuated finger upon said protection rod arranged to press against said binder; an arm on said protection rod; a rod pivoted below said lay and in slidable relation with said arm; and means on said rod for engaging said arm to turn said protection rod to relieve the pressure exerted by said finger upon said binder.

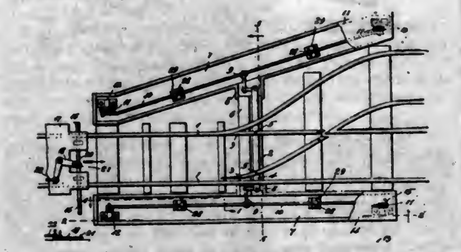
2. In a loom, the combination with a lay, shuttle box and binder; of a protection rod on said lay; a spring actuated finger upon said protection rod to press against said binder; an arm on said protection rod; a pivoted rod in slidable relation with said arm; and a collar on said rod adapted to engage said arm to turn said protection rod to relieve the pressure exerted by said finger upon said binder.

3. In a loom, the combination with a lay, shuttle box and binder; of a protection rod on said lay; a spring actuated finger upon said protection rod arranged to press against said binder; an arm on said protection rod extending under said lay; a rod pivotally supported from the loom frame in slidable relation with said arm; and means mounted upon said rod below said arm adapted to engage



said arm to turn said protection rod to relieve the pressure exerted by said finger upon said binder.

877,224. SWITCH MECHANISM AND TRAIN-CARRIED ACTUATING MEANS THEREFOR. GORDON PARKS, Harrison Valley, Pa. Filed Oct. 28, 1907. Serial No. 399,587.



1. A switch mechanism embracing an endwise movable switch bar connected with the switch tongues, bell cranks pivotally mounted on one of the cross ties and connected at their inner ends with the switch throwing bar, longitudinal-operating levers arranged on opposite sides of the track and connected with the outer ends of the bell cranks, vertically disposed pivoted actuating levers connected with the ends of the operating members and operable for moving the operating members in either direction, locking means for locking the operating members in either of their two positions, said means comprising balls fixed to the operating members, and locking members having curved end portions for engaging said balls.

2. A switch mechanism, embracing an endwise movable switch throwing bar mounted to slide on one of the cross ties, bell cranks connected with the ends of said bar, casings arranged longitudinally of the track and at opposite sides thereof, longitudinally disposed operating members arranged for endwise movement of the casings and connected with the bell cranks, upright actuating levers pivotally mounted in the casings and connected with the ends of the operating members, locking means for locking the operating members in either of their two positions, and switch actuating means comprising a laterally movable operating member adapted for engagement with either of the actuating levers of the switch mechanism operatively sustained by the engine.

3. A switch mechanism embracing longitudinal operating members, arranged at opposite sides of the switch, vertically disposed pivoted actuating levers connected with the ends of the operating members, and operable for moving the same in either direction, locking means for locking the operating members in either of their two positions, said means comprising balls fixed to the latter, and a locking member having curved end portions for engaging said balls, and connection between the operating members and switch.

877,225. PIPE-WRENCH. GEORGE PATERSON, Barre, Vt. Filed Nov. 4, 1907. Serial No. 400,642.



1. In a wrench of the character described, a handle, an operating head on the outer end of said handle, an inner jaw member pivotally mounted on said handle, an outer jaw member pivotally mounted on the inner jaw, a spring adapted to hold said outer jaw member in engagement with the inner jaw, and integrally formed opening and closing lugs on said outer jaw adapted to be engaged by the head on said handle, whereby said jaws are forcibly held in closed position and in engagement with the article to which the wrench is applied, substantially as described.

2. In a wrench of the character described, a handle, an operating head on the outer end of said handle, an inner jaw member comprising a pair of parallel side plates, pivotally connected at their inner ends to the outer end of said handle, an outer jaw member comprising a curved working portion adapted to co-act with the working portion of the inner jaw member, means on said outer jaw adapted to be engaged by the operating head on said handle to open and close said jaws, and a spring to hold said jaws in closed position, substantially as described.

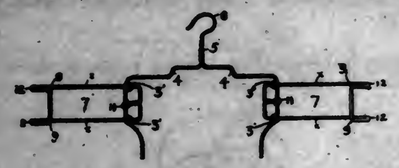
3. In a wrench of the character described, a handle, an operating head formed on the outer end of said handle, an inner jaw member comprising a pair of parallel side plates pivotally connected at their inner ends to the outer ends of said handle, substantially right-angular working projections formed on the outer ends of said plates, a spacing block arranged between said projections to form a working surface with the outer edges thereof, an outer jaw member comprising a curved working portion adapted to co-act with the working projection of said inner jaw member, an integrally formed connecting plate on said outer jaw member adapted to be inserted between the side plates of the inner jaw member and pivotally connected thereto, integrally formed opening and closing lugs on the inner ends of said connecting plate adapted to be engaged by the head on said handle, and a spring arranged between one of said lugs and the working projection of said inner jaw member, substantially as described.

877,226. SHIRT-DRIER. PAUL J. TIMBERLAKE, Jackson, Mich., assignor to J. B. Timberlake & Sons, a Corporation of Michigan. Filed June 7, 1907. Serial No. 377,805.

1. A drying frame for shirts and similar articles of clothing, comprising a body frame and two sleeve frames, the latter being provided with holders at their outer ends to clamp the cuff portions of the garment and to prevent them from shrinking lengthwise.

2. A drying frame for shirts and similar articles of

clothing, comprising a body frame provided with loops 3', 3', and two sleeve frames, the side wires of which pass through said loops and which are provided with the hooks, 11, 11, adapted to engage the wire of the body frame and hold said sleeve frames at their outermost position.

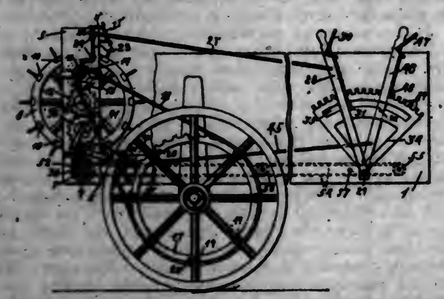


3. A drying frame for shirts and similar articles of clothing comprising a body frame and two sleeve frames secured to the body frame, each sleeve frame being adapted to hold a sleeve of the garment distended in a transverse direction and provided with a holder at its outer end to clamp the cuff portion of the garment and to prevent it from shrinking lengthwise.

4. A drying frame for shirts and similar articles of clothing, comprising a body frame provided with loops 3', 3', and two sleeve frames, the side wires of which pass through said loops substantially as set forth.

5. A drying frame for shirts and similar articles of clothing comprising a body frame and two sleeve frames, the latter being bent back upon themselves at their outer ends in such a manner as to be adapted to frictionally engage with the ends of the sleeves and hold them distended longitudinally, substantially as set forth.

877,227. MANURE-SPREADING ATTACHMENT FOR WAGONS. ALEXANDER TURNER and LEE HOWARD, Stillwell, Ill. Filed Mar. 18, 1907. Serial No. 363,012.

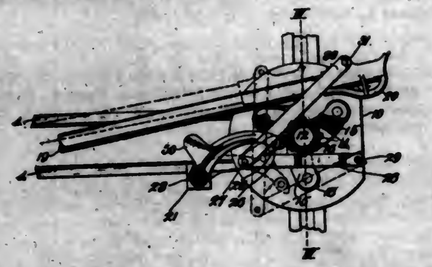


1. In a manure spreader, a frame, a spreading roller journaled therein, means for actuating said roller including a gear wheel, an endless conveyer provided with a ratchet wheel, a slotted bracket, a lever having a slotted segment at one end, a bolt through said slots for adjustably mounting said lever on the bracket, pawls on the lever, a pitman connected with the free end of the lever, and a pinion in engagement with said gear wheel for actuating said pitman.

2. In a manure spreader, a frame, a spreading roller journaled therein, an endless conveyer, means for actuating said roller and conveyer, including a bracket, a shaft journaled in said frame and bracket, a gear at the inner end of said shaft, a sprocket wheel fixed to the outer end thereof and carrying a clutch member at its inner face, a spring-pressed slidable clutch member on said shaft, means connected with said slidable clutch member for throwing it into and out of operation, a gear on the shaft of said roller meshing with the first mentioned gear, a gear mounted on said frame and meshing with the gear on said roller shaft and connected to operate said conveyer, a sprocket rim adapted to be connected with a wheel of the wagon, and a sprocket chain passing over the sprocket wheel fixed to said clutch-carried shaft and over said sprocket rim.

3. In a manure spreader, a frame, a spreading roller journaled therein, an endless conveyer, means for actuating said roller and conveyer including an adjustable lever connected with said conveyer, clutch mechanism, intermeshing gears connected with said adjustable lever and said clutch mechanism, one of said gears being mounted on the roller shaft, brackets on the frame, a crank shaft journaled in said brackets and having the lower end thereof provided with means for controlling said clutch mechanism and the upper end formed into a handle, a slotted segmental rack provided with teeth and with a notch in one wall of said slot adjacent to each end, two levers pivotally connected with said rack, one of which is provided with a pawl for engaging the teeth of the rack and the other with a pawl for engaging said notches for locking it at either end of said slot, rods connecting the said levers with the adjustable lever and with the handle of the clutch operating shaft, respectively, and a sprocket chain operable by one of the wagon wheels and passing over one of said gears for imparting motion to the train.

877,228. BALING-PRESS. JOSIAH S. TUTTLE, Kansas City Mo., assignor to The Ohio Cultivator Company, Bellevue, Ohio, a Corporation of Ohio. Filed June 12, 1906. Serial No. 321,359.



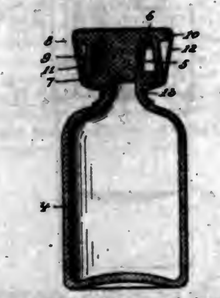
1. In a baling press, a suitable framework, a vertical power shaft journaled therein and provided with a trip-lever, a plunger-beam, links pivotally connected together and to the plunger beam and framework respectively, and a toggle comprising an arm pivoted to the framework, and a link pivoted to said arm at one end and pivotally connected to the first-named links at their pivotal point.

2. In a baling press, the combination of a vertical power shaft provided with a trip-lever having a plurality of trip arms, a plunger beam, a pair of links pivotally connected together and to the plunger beam and framework respectively, a curved toggle arm pivoted on the framework and having its convex side toward the plunger beam and in the plane of the trip lever arms, and a link pivotally connecting said lever with the first-named links at their pivotal point of connection.

3. In a baling press, a suitable framework, a vertical power shaft journaled therein and provided with trip lever arms, a plunger beam, a pair of links pivotally connected together and to said beam and the framework respectively, a curved toggle arm pivoted on the framework and having its convex side toward the plunger beam and adapted to be successively engaged by said arms after the recoil of the plunger beam, a toggle link pivotally connected to the free end of the curved arm and having a notch to receive said end and pivotally connected at its opposite end to the first-named pair of links coincidental with their pivotal point of connection.

4. In a baling press, the combination of a suitable framework, a vertical power shaft journaled therein and provided with trip arms, a plunger beam, a link pivoted at its front end to the framework at one side of the power shaft, a link pivotally connected to said link rearward of the power shaft and pivotally connected at its opposite end to the plunger beam, a toggle link pivotally connected to said first-named links at their pivotal point of connection and a curved toggle arm having its free end pivoted to the opposite end of said toggle link and pivotally connected at its opposite end to the framework at its rear end and having its convex side disposed toward the plunger beam.

877,229. BOTTLE AND STOPPER THEREFOR. DAMASO RIVAS, Philadelphia, Pa. Filed Aug. 5, 1907. Serial No. 387,017.



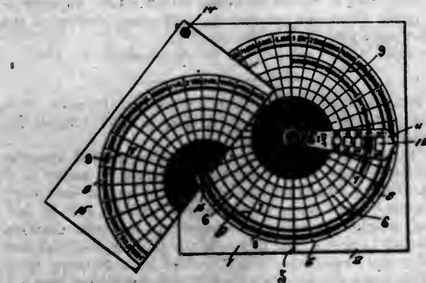
1. A bottle provided with a neck having a projection forming a seat, and a stopper provided with a tapering body fitting the bottle-neck and having a depending wall tapering in an opposite direction to said body adapted to seat with the projection of the bottle-neck, substantially as and for the purposes set forth.

2. A bottle provided with a neck having a projection forming a seat and a stopper having a body fitting the interior of the neck and having a flaring wall adapted to seat with the projection of the bottle-neck, substantially as and for the purposes set forth.

3. A bottle provided with a neck having a projection forming a seat, a stopper fitting the bottle-neck and having a depending tapering wall adapted to seat with the projection of the bottle-neck and a closure or envelop for said stopper adapted to be secured to the bottle-neck, substantially as and for the purposes set forth.

4. A bottle provided with a neck having a projection forming a seat, a stopper fitting the bottle-neck and having a depending wall adapted to seat with the projection of the bottle-neck, a closure or envelop for said stopper and means for securing and sealing the closure or envelop to said bottle, substantially as and for the purposes set forth.

877,230. INTEREST-CALCULATOR. WILLIAM J. ROCHE, New Bethlehem, Pa. Filed Apr. 26, 1907. Serial No. 370,384.



1. An interest calculator consisting of two hinged cards or plates having marked thereon, circular lines divided by radiating lines, providing a plurality of spaces, some of said spaces being marked with days, months and years and the other of said spaces with the interest on a given sum of money at a certain percentage, an indicator pivotally mounted centrally of one of said cards at the hinged edge thereof, said indicator having a plurality of openings formed therein with a percentage marked adjacent to each opening, a card or plate swiveled at the corner of one of said cards or plates and having its edge cut away to clear the pivot point of said indicator, said swiveled card or plate being provided with subdivided spaces similar to the hinged cards or plates.

2. An interest calculator consisting of hinged cards, an extension carried by one of said cards at its hinged edge, the other of said hinged cards being cut away to clear said extension, an indicator pivotally mounted upon said extension and having a plurality of openings formed therein, a card swiveled at one corner of one of said hinged cards and having its edge cut away to clear the pivoted end of said indicator, said cards being provided with circumferentially arranged printed matter, some of which is adapted to be exposed through the openings of said indicator.

3. In an interest calculator consisting of hinged cards, an indicator pivotally mounted centrally of the hinged edge of one of said cards, said indicator having openings formed therein, a card swiveled at one corner of one of said hinged cards, and printed matter arranged upon said cards, a part of which is adapted to be exposed through the openings of said indicator.

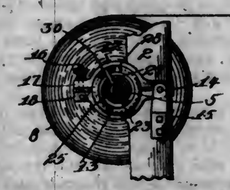
877,231. CRUTCH-TIP. CHAUNCEY P. ROGERS, Jr., Corry, Pa. Filed Apr. 12, 1907. Serial No. 367,870.



1. The combination in a crutch-tip mechanism, of a hollow sleeve forming the lower end of the crutch, a longitudinally divided sleeve telescopically insertible therein, a resilient tip insertible longitudinally in and adjustable in said divided sleeve, and means for preventing the longitudinal movement of the resilient tip in the divided sleeve after the insertion thereof into the sleeve forming the lower end of the crutch, substantially as set forth.

2. The combination in a crutch-tip mechanism, of a hollow sleeve on the lower end of the crutch, a longitudinally divided sleeve of uniform diameter telescopically insertible therein, and a resilient tip of uniform diameter throughout its length insertible in and longitudinally adjustable in said divided sleeve, substantially as set forth.

877,232. WEB-CONTROLLER FOR PRESSES. FREDERICK W. ROLLAND, Jr., Chicago, Ill. Filed Oct. 30, 1907. Serial No. 399,877.



1. A web controller for rolls of paper and the like, involving a shaft for the roll, a brake drum rotatable thereon, and a device constantly connecting said shaft and drum during relative rotation thereof and acting to rewind the roll.

2. A controller of the character described, comprising a shaft for the roll, a tensioning device rotatable relatively thereto, a spring connecting the shaft and tensioning device during relative rotation of the latter and shaft, and positive driving devices for connecting the tensioning device and shaft after the latter has rotated to tension the spring.

3. A controller of the character described embodying a shaft operable during the unwinding of the roll, a tension-

ing device adapted to resist rotation of the shaft, and a compensating medium forming a constant yielding connection between the shaft and the tensioning device.

4. A controller of the character described embodying a shaft rotatable during the unwinding of the roll, a tensioning device adapted to resist rotation of the shaft, and a roll rewinding device yieldingly and constantly connecting the shaft and tensioning device and permitting a limited degree of relative rotation.

5. A controller of the character described embodying a shaft rotatable during the unwinding of the roll, a tensioning device for retarding rotation of the shaft, and a spring connecting the shaft and tensioning device and windable by a relative rotation of the shaft and tensioning device, said spring normally acting to produce a relative rotation of the parts to rewind the roll.

[Claims 6 to 14 not printed in the Gazette.]

877,233. WHEEL FOR MOTOR-VEHICLES. GEORGE D. ROSS, Glasgow, Scotland. Filed Dec. 28, 1906. Serial No. 349,764.



1. A wheel for motor vehicles comprising, in combination, two wheels, one arranged within the other, the inner one being a pneumatic tired wheel while the outer one consists of a wheel or ring having an internal diameter larger than the external diameter of the pneumatic tire of the inner wheel and being free to move relatively with said inner wheel, side plates on the outer wheel and bearings arranged between the inner wheel and said side plates, said bearings being provided with anti-friction metal.

2. A wheel for motor vehicles comprising, in combination, a rotatable wheel, a wheel so fitted outside of the rotatable wheel as to be capable of independent movement thereon, annular and laterally projecting bearings provided with anti-friction packing on the sides of the rim of the inner wheel and side plates attached to the rim of the outer wheel said side plates being adapted to work on said packing.

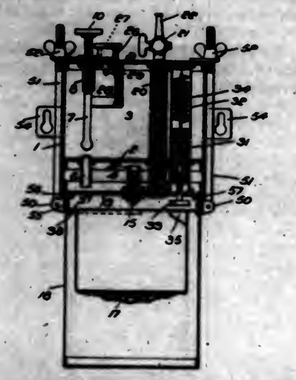
3. A wheel for motor vehicles comprising, in combination, a rotatable wheel, a wheel so fitted outside of the rotatable wheel as to be capable of independent movement thereon, annular side channels on the rim of the inner wheel, antifriction metal in the channels and side plates on the outer wheel.

4. In combination, a wheel with a pneumatic tire thereon, a second wheel outside of the pneumatic tired wheel and having a spokeless rim, flat steel plates removably secured to the rim and annular and laterally projecting bearings provided with anti-friction packing on the sides of the pneumatic tired wheel, said packing bearing against said plates.

5. In combination, a wheel with a pneumatic tire thereon, a second wheel arranged eccentrically outside of the pneumatic tired wheel and having a spokeless rim, side plates secured to the rim and annular anti-friction metal rings on the sides of the pneumatic tired wheel.

[Claims 6 to 8 not printed in the Gazette.]

877,234. ACETYLENE-GENERATOR. SAMUEL W. RUSHMORE, Plainfield, N. J. Filed May 27, 1905. Serial No. 262,583.



1. In an acetylene gas generator, the combination with a main inclosing case, of a calcium carbid basket unstably supported therein, and means arranged in the case to impart a sudden shock to the basket, said means being operated by the shocks or jars sustained by the generator.

2. In an acetylene gas generator, the combination with the main case, of a basket having an openwork bottom for the calcium carbid, means to deliver water onto the carbid, and an oscillating weight arranged to strike the basket.

3. In an acetylene gas generator, the combination with the main case, of a carbid basket having an openwork bottom unstably supported in the lower portion of the case, a water reservoir arranged in the upper portion of the case to drip water onto the carbid, and a weight secured to an elastic carrier and arranged to strike the basket.

4. In an acetylene gas generator for a vehicle, the combination with a main case composed of upper and lower shells, of a carbid basket supported in the lower shell, said basket having an openwork bottom lower at its center, a weight, means in the upper shell for suspending the same and constructed to be vibrated by the movement of the vehicle to strike the basket.

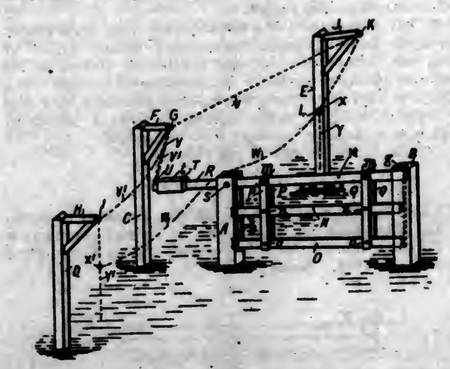
5. In an acetylene gas generator for vehicles, the combination with a main case composed of upper and lower shells, of a shoulder near the top of the lower shell extending around a portion only of the shell, a carbid basket supported on said shoulder by a flange engaging with said shoulder, and a weight arranged on an elastic support in the upper shell and adapted to strike the portion of the basket not supported on the shoulder.

[Claims 6 to 8 not printed in the Gazette.]

877,235. FIELD-GATE. FRANK RUSSELL, Lismore, New South Wales, Australia. Filed July 8, 1907. Serial No. 382,648.

1. In a gate, a support; a top rail supported intermediate its ends by said support and adapted to swing in a vertical plane; slats supported from one end of said rail; a counter-weight upon the other end of said rail of sufficient weight to swing said gate into an open position when free to act; a post adjacent the counter-weighted end of said rail; two other posts located at a distance from and one upon either side of said first mentioned post; a spike carried by each of said second mentioned posts; guides upon each of said three posts; two cords attached to the counter-weighted end of said rail and both extending through the guide of said first mentioned post and one to and through the guide of each of said second mentioned posts; a ring at the free end of each of said cords and adapted to engage said spikes; and a cord connecting the free ends of said first mentioned cords whereby the rings aforesaid may be disengaged from the spikes.

2. In a gate, a support; a top rail supported intermediate its ends by said support and adapted to swing in a vertical plane; slats supported from one end of said rail; a counterweight upon the other end of said rail of sufficient weight to swing said gate into an open position when free to act; a post adjacent the counterweighted end of said rail; two other posts located at a distance from and one upon either side of said first mentioned post; securing means carried by each of said second mentioned posts; guides upon each of said three posts; two cords attached to the counterweighted end of said rail and both extending through the guide of said first mentioned post and one to and through the guide of each of said second mentioned posts; the free ends of which cords are adapted to engage said securing means; and a cord connecting the free ends of said first mentioned cords and adapted to disengage them from said securing means.



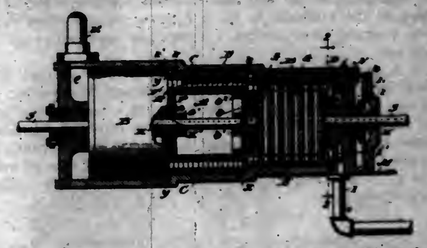
3. In a gate, a support; a top rail supported intermediate its ends by said support and adapted to swing in a vertical plane; slats supported from one end of said rail; a counterweight upon the other end of said rail of sufficient weight to swing said gate into an open position when free to act; two posts located at a distance from and one upon either side of said gate; securing means carried by each of said posts; guides upon each of said posts; two cords attached to the counterweighted end of said rail and one extending to and through each of the guides aforesaid, the free ends of which are adapted to engage said securing means; and a cord connecting the free ends of said first mentioned cords and adapted to disengage them from said securing means.

877,236. BALL-CASTER. MARTIN M. RYAN, Oberlin, Ohio. Filed Aug. 14, 1907. Serial No. 388,525.



A caster comprising a cage consisting of a central body portion having lobes bent downwardly therefrom and provided with radially extending bendable spurs, pins extending through and connecting the edges of the lobes, rollers supported for rotation upon the pins, said rollers having enlarged ends and a reduced central portion, and a ball engaging the rollers and retained between the bendable spurs.

877,237. TURBINE-ENGINE. RICHARD J. SCHLOMING, New York, N. Y. Filed Apr. 29, 1907. Serial No. 370,849.



1. In a reversible turbine, the combination with a shaft and a casing having multiple expansion sections, the shaft and casing each having a long keyway extending through the sections, of a pair of rotatable members on the shaft in each section of the casing, having coöperating opposite blades, and also having notches which may be registered with said keyways, and long keys slidable in the keyways through all the sections and into the respective notches of opposite members of each pair, to couple simultaneously one set of said members to the shaft and the other to the casing a yoke mounted slidably on the shaft and connected with the said keys, and a reversing lever for operating the yoke, as shown and described.

2. In a reversible turbine, in combination, a casing having a keyway therein, a shaft extending through the casing and having a keyway, a pair of cylindrical drums extending around the shaft within the casing, the drums being located one within the other and having heads at respectively opposite ends, the heads having notched cuffs around the shaft and the head of the inner drum having a notched flange projecting around the end of the outer drum, said end having a corresponding notch, and keys slidable in the keyways and engageable in the notches to fix either drum to the casing and the other to the shaft.

3. In a reversible turbine, in combination, a casing and a shaft therethrough, an inlet head to the casing, having an annular inlet recess and a series of openings therefrom into the casing, a rotary disk valve beside said head and having ports which register or not with said openings as the disk is rotated, and means to reverse the direction of rotation of the shaft, said means being operative only when the ports are not registered with the openings.

877,238. GARMENT-SUPPORTER. JOSEPH W. SCHLOSS, New York, N. Y. Filed Feb. 23, 1907. Serial No. 358,769.



1. A garment stiffener comprising a strip of resilient material having an incut portion at each end, said incut portions being directed inward from opposite sides at the respective ends, and each incut portion terminating in an eye, said incut portions having a restricted channel adjacent to the eye.

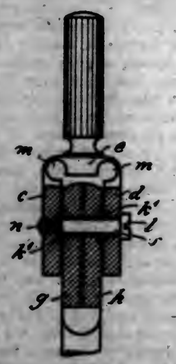
2. A garment stiffener comprising a strip of resilient material having an incut portion at each end terminating in an eye, said incut portions each having a restricted channel adjacent to the eye.

3. A garment stiffener comprising a strip of resilient material having a laterally projecting protuberance at each end joined to the body of the stiffener by a restricted neck, said protuberance projecting in opposite lateral directions at the respective ends.

4. A garment stiffener comprising a strip of resilient material having an incut portion at each end terminating in an eye, said incut portions each having a restricted channel adjacent to the eye and rounding into the adjacent edges of the stiffener so as to form a protuberance, each such protuberance having a restricted neck adjacent to said eye.

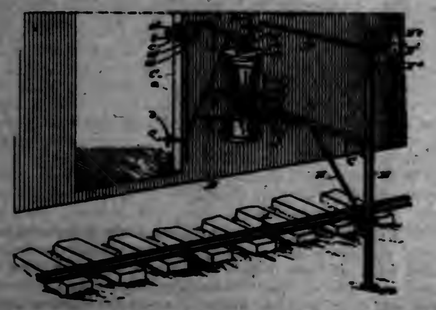
5. A garment stiffener comprising a strip of resilient material having an incut portion at each end terminating in an eye, said incut portions each having a restricted channel adjacent to the eye and rounding into the adjacent edges of the stiffener, whereby a rounded protuberance is formed, the ends of the stiffener being notched toward said eyes to form a restricted neck for each protuberance adjacent to the eyes.

877,239. COMPASS-HEAD. GEORG SCHOENNER, Nuremberg, Germany. Filed Nov. 28, 1906. Serial No. 345,541.



In a compass, a holding yoke having recesses therein where the legs of the yoke join the head thereof so as to give said yoke a spring action, said legs having holes therein and recesses surrounding the holes on the interior face of each leg, legs g, and h of the compass having corresponding recesses therein, disks having holes therein fitting in the orifices formed by the said recesses and a screw holding the parts together.

877,240. MAIL-BAG CATCHER. ORA SHAFFER, Van Wert, Ohio. Filed Nov. 16, 1907. Serial No. 402,369.



1. A mail bag catcher, comprising a bracket, a clamping arm fulcrumed at an intermediate point of its length on said bracket and having a forwardly extending toe, a spring connected to the rear portion of said clamping arm and arranged to move same, and a trigger arm fulcrumed on the bracket in position to be engaged by a bag and having a bifurcated heel to engage the toe of the clamping arm.

2. A mail bag catcher, comprising a bracket, a clamping arm fulcrumed at an intermediate point of its length on said bracket and having a forwardly extending toe, a spring connected to the rear portion of said clamping arm and arranged to move same; a trigger arm fulcrumed on the bracket in position to be engaged by a bag and having a bifurcated heel to engage the toe of the clamping arm, and fixed tangs opposed to the clamping arm.

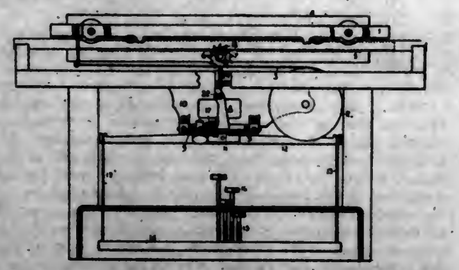
3. A mail bag catcher, comprising supporting means, a bracket thereon, fixed tangs socketed and detachably secured in said supporting means, a clamping arm fulcrumed at an intermediate point of its length on said bracket and having a forwardly extending toe, a spring connected to the rear portion of said clamping arm and arranged to move same, and a trigger arm fulcrumed on the bracket and having a bifurcated heel arranged to engage the toe of the clamping lever.

4. The combination of a suitably supported, horizontally swinging arm, automatic bag-clasping means carried by said arm, a tappet, a car, and a device carried by the car and having a bag-delivering trigger arranged to be operated by contact with the tappet.

5. The combination of a suitably supported, horizontally swinging arm, automatic bag-clasping means carried by said arm, a tappet, a car, and a deliverer pivoted to the car and having a vertically swinging device to hold a bag and also having a trigger arranged to normally hold said vertically swinging device against downward movement and also arranged to contact with the tappet.

[Claim 6 not printed in the Gazette.]

877,241. TYPE-WRITING MACHINE. CHARLES H. SHEPARD, New York, N. Y., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y., a Corporation of New York. Filed Mar. 11, 1901. Serial No. 50,650.



1. In a typewriting machine, the combination of a power driven carriage; an escapement mechanism therefor, said escapement mechanism comprising a rack each tooth of which has a single working face at substantially right angles to the plane of the rack and a second working face oblique to said first mentioned working face, a loose dog and a fixed dog arranged side by side, one of said dogs having a single working face corresponding to and coöperating only with the right-angle face on each tooth of the rack and the other dog having an oblique face matching and coöperating only with the oblique working face on each rack tooth, the loose dog being pivoted to move in the direction of movement of the rack.

2. In a typewriting machine, the combination of a power-driven carriage; an escapement mechanism therefor, said escapement mechanism comprising an escapement wheel each tooth of which has a single working face at substantially right-angles to the plane of the wheel and a second working face oblique to the first mentioned working face, a loose dog and a fixed dog, the loose dog having a single working face corresponding to and coöperating only with the right-angle face on each tooth of the escapement wheel and the fixed dog having an oblique face matching and coöperating only with the oblique working face on each tooth of the escapement wheel, the loose dog being pivoted to move in the direction of movement of the escapement wheel.

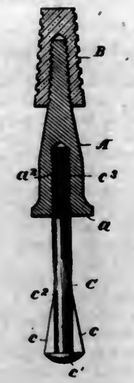
3. In a typewriting machine, the combination with a power-driven carriage, of an escapement rack, each of whose teeth is provided with two working faces 18 and 19 that extend at an angle to each other, and two key-operated transversely moving dogs, one of said dogs normally engaging only said face 19 and being pivoted to vibrate in the same general direction as the escapement rack and the working face of the other dog being substantially parallel to a face 18 of a rack tooth.

4. In a typewriting machine, the combination with a power-driven carriage, of an escapement wheel, a transversely movable dog normally engaging said rack, the working face of said dog being in a plane at right angles to the plane of the escapement wheel, and a detent dog normally disengaged from the rack and having its working face extending obliquely from the working face of said normally engaged dog, the working face of said oblique dog when the parts are in normal position being adjacent to and practically forming a continuation of the right-angle working face of the normally engaged dog.

5. In a typewriting machine, the combination with a power-driven carriage, of an escapement rack, a transversely movable dog normally engaging said rack and movable for a limited distance therewith and having a working face that extends at right-angles to the plane of the said rack, and a detent dog normally disengaged from the rack and having a working face which extends obliquely from the working face of said normally engaged dog and forms a practical continuation thereof.

[Claims 6 to 11 not printed in the Gazette.]

877,242. INSULATOR-PIN. DELOS V. SNAPP, Holdrege, and CHARLES W. FRAHER, Lincoln, Nebr. Filed June 21, 1907. Serial No. 380,165.

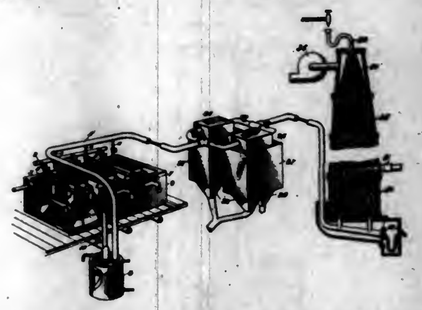


1. An insulator pin comprising a body-portion provided with means for mounting an insulator thereon, said body-portion being formed for engagement of a turning device and provided with a threaded socket in its base, and a bolt formed with projecting means to prevent turning in a cross-arm and threaded to engage said body-portion, substantially as described.

2. An insulator pin comprising a body-portion provided with means for mounting an insulator thereon, said body-portion being formed for engagement of a turning device and provided with a threaded socket in its base, and a bolt threaded to engage said body-portion, formed with wings or ridges tapering from the bolt head and merging into the shank, substantially as described.

3. An insulator pin comprising a body-portion provided with means for mounting an insulator thereon and having a flaring base, said body-portion being formed for engagement of a turning device and provided with a threaded socket in said base, and a bolt formed with projecting means to prevent turning in a cross-arm and threaded to engage said body-portion, substantially as described.

877,243. APPARATUS FOR MAKING STANNIC CHLORID. ELMER A. SPERRY, Brooklyn, N. Y., assignor to Chemical Reduction Company, New York, N. Y., a Corporation of New York. Filed Dec. 7, 1905. Serial No. 290,768.



1. Apparatus for producing stannic chlorid comprising a reaction vessel, means out of contact with the contents of the vessel for controlling the temperature therein, feed and discharge orifices for the contents of the vessel, gas inlet and outlet pipes communicating with the vessel above the normal liquid level therein, and exterior means for heating said pipes.

2. Apparatus for producing stannic chlorid comprising a reaction vessel, means out of contact with the contents of the vessel for controlling the temperature therein, feed and discharge orifices for the contents of the vessel, jacketed gas inlet and outlet pipes communicating with the vessel above the normal liquid level therein, a valve in one of said jacketed pipes, and exterior means for heating said valve.

3. Apparatus for producing stannic chlorid comprising a reaction vessel, means out of contact with the contents of the vessel for controlling the temperature therein, means for imparting motion to the contents of the vessel, feed and discharge orifices for the contents of the vessel, gas inlet and outlet pipes communicating with the vessel above the normal liquid level therein, and exterior means for heating said pipes.

4. Apparatus for producing stannic chlorid comprising a reaction vessel, a plurality of condensers, a conduit between the vessel and condensers, valves for the condensers, and means for heating said valves.

5. Apparatus for producing stannic chlorid comprising a reaction vessel, a scrubber, means for controlling the flow of the gases and vapors passing from the vessel to the scrubber and a device for controlling the temperature of said controlling means.

[Claims 6 to 26 not printed in the Gazette.]

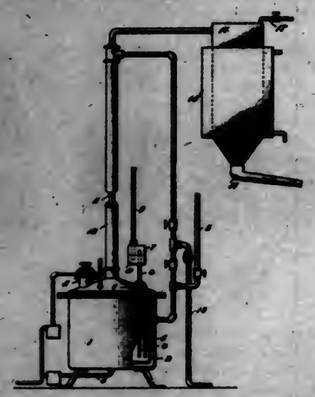
877,244. METHOD OF PURIFYING STANNIC CHLORID. ELMER A. SPERRY, Brooklyn, N. Y., assignor to Chemical Reduction Company, New York, N. Y., a Corporation of New York. Filed Jan. 27, 1906. Serial No. 298,254.

1. In a method of purifying stannic chlorid from chlorin, the improvement which consists in heating the liquid to expel chlorin and stannic chlorid, and cooling the vapors to separate stannic chlorid therefrom.

2. In a method of purifying stannic chlorid from chlorin, the improvement which consists in heating the liquid to expel chlorin and stannic chlorid, cooling the vapors to separate stannic chlorid therefrom, and returning the separated stannic chlorid to the body of the liquid.

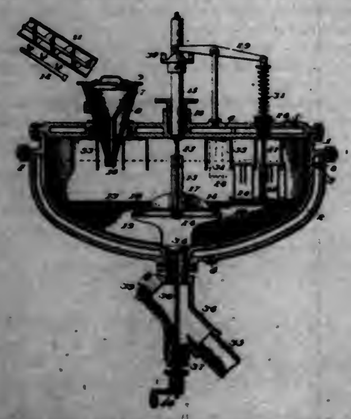
3. In a method of purifying stannic chlorid from chlorin, the improvement which consists in heating the liquid substantially to boiling, thereby expelling chlorin and stannic chlorid, cooling the vapors to separate stannic chlorid, returning the separated stannic chlorid to the body of liquid, and continuing the operation until the chlorin is substantially expelled from the body of stannic chlorid.

4. The method of purifying stannic chlorid which consists in heating the liquid to expel chlorin and stannic chlorid, cooling the vapors to separate stannic chlorid therefrom, then distilling the chlorin-free stannic chlorid, and finally condensing the same.



5. In a method of purifying stannic chlorid from chlorin, the improvement which consists in expelling chlorin from the liquid, separating stannic chlorid from the gaseous chlorin, returning the separated stannic chlorid to the body of the liquid, and continuing the operation until the chlorin is substantially expelled from the body of stannic chlorid.

877,245. APPARATUS FOR EFFECTING REACTIONS. ELMER A. SPERRY, Brooklyn, N. Y., assignor to Chemical Reduction Company, New York, N. Y., a Corporation of New York. Filed Mar. 5, 1906. Serial No. 304,416.



1. Apparatus for effecting reactions comprising a relatively shallow closed vessel, means for circulating a liquid therein, a non-vertical septum for directing the circulation, a gas chamber above said septum, and means for introducing gas into said chamber.

2. Apparatus for effecting reactions comprising a relatively shallow vessel, a horizontal septum therein, a gas chamber above said septum, and means for circulating a liquid around said septum.

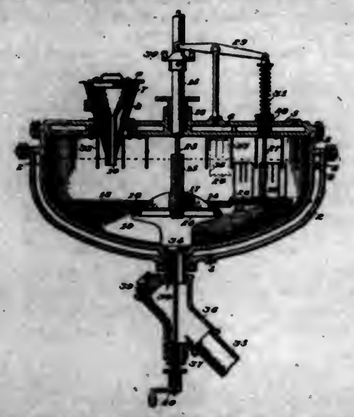
3. Apparatus for effecting reactions comprising a relatively shallow vessel, a horizontal septum therein, a gas chamber above said septum, and combined lifting and circulating means arranged below said septum.

4. Apparatus for effecting reactions comprising a relatively shallow vessel, means for circulating a liquid therein, a gas chamber in the upper portion of the chamber, and means for directing gas therethrough in a restricted path above the liquid level.

5. Apparatus for effecting reactions comprising a relatively shallow vessel, means for agitating a liquid therein, a gas chamber in the upper portion of the vessel, means for passing gas therethrough above the liquid level, and means for exposing an extended liquid surface to the gas.

[Claims 6 to 24 not printed in the Gazette.]

877,246. METHOD OF EFFECTING REACTIONS BETWEEN SOLIDS AND GASES. ELMER A. SPERRY, Brooklyn, N. Y., assignor to Chemical Reduction Company, New York, N. Y., a Corporation of New York. Filed Mar. 5, 1906. Serial No. 304,417.



1. The method of effecting reactions between solids and gases which consists in agitating a body of liquid capable of dissolving the gas, maintaining the solid in suspension therein, and exposing portions of said liquid to the gas, said portions exposed to the gas being at a lower temperature whereby solution of the gas is promoted.

2. The method of effecting reactions between solids and gases which consists in circulating a body of liquid capable of dissolving the gas, maintaining the solid in suspenion in one portion of the circulating liquid, and exposing another portion thereof to the action of the gas, said portion exposed to the gas being at a lower temperature whereby solution of the gas is promoted.

3. The method of effecting reactions between solids and gases which consists in circulating a body of liquid capable of dissolving the gas, maintaining the solid in suspension in one portion of the circulating liquid, and exposing another portion thereof to the action of the gas, said portion containing the solid in suspension being maintained at a suitable temperature whereby the reaction between the gas and the solid is accelerated.

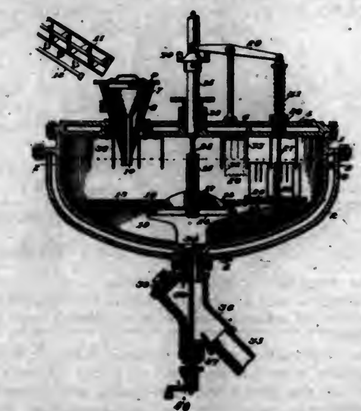
4. The method of effecting reactions between solids and gases which consists in agitating a liquid capable of dissolving the gas, introducing the solid in a heated condition into said liquid, and exposing portions of said liquid to the gas.

877,247. METHOD OF MAKING STANNIC CHLORID. ELMER A. SPERRY, Brooklyn, N. Y., assignor to Chemical Reduction Company, New York, N. Y., a Corporation of New York. Filed Mar. 5, 1906. Serial No. 304,828.

1. The method of making stannic chlorid which consists in maintaining a tin-bearing material in suspension in liquid stannic chlorid, and bringing chlorin into contact with said liquid.

2. The method of making stannic chlorid which consists in maintaining a tin-bearing material in suspension in liquid stannic chlorid, and passing chlorin in an elongated path over the surface of the liquid.

3. The method of making stannic chlorid which consists in maintaining a tin-bearing material in suspension in liquid stannic chlorid, agitating said liquid and bringing chlorin into contact therewith.

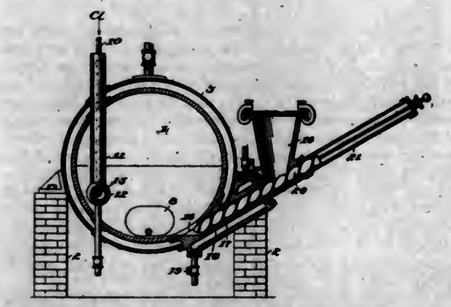


4. The method of making stannic chlorid which consists in maintaining a tin-bearing material in suspension in liquid stannic chlorid, agitating said liquid, and passing chlorin in an elongated path over the surface of the liquid.

5. The method of making stannic chlorid which consists in circulating a body of liquid stannic chlorid, maintaining a tin-bearing material in suspension in one portion thereof, and bringing chlorin into contact with another portion of said body.

[Claims 6 to 31 not printed in the Gazette.

877,248. METHOD OF MAKING STANNIC CHLORID. ELMER A. SPERRY, Brooklyn, N. Y. Filed Feb. 20, 1907. Serial No. 358,490.



1. The method of making stannic chlorid which consists in reacting with chlorin on a tin-bearing material in presence of liquid anhydrous stannic chlorid, introducing the reacting bodies as required, and preventing obstruction of the inlet or inlets.

2. The method of making stannic chlorid which consists in reacting with chlorin on a tin-bearing material in presence of liquid stannic chlorid, introducing chlorin beneath the surface of the liquid, and preventing obstruction of the chlorin inlet.

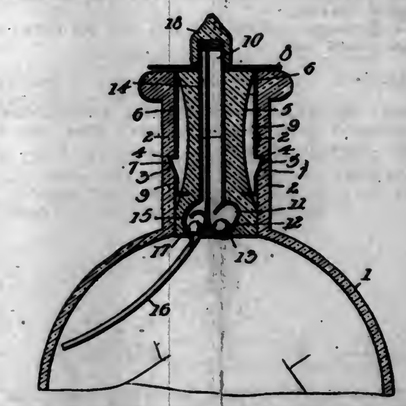
3. The method of making stannic chlorid which consists in reacting with chlorin on a tin-bearing material in presence of liquid stannic chlorid, introducing moist chlorin beneath the surface of the liquid, and heating the chlorin inlet.

4. The method of making stannic chlorid which consists in reacting with chlorin on a tin-bearing material in presence of liquid stannic chlorid, introducing chlorin beneath the surface of the liquid, heating the chlorin inlet, and effecting a circulation of the liquid by means of the chlorin and associated gases.

5. The method of making stannic chlorid which consists in submerging a tin-bearing material in liquid stannic chlorid, introducing moist chlorin beneath the surface of the liquid, and heating the chlorin inlet.

[Claims 6 to 8 not printed in the Gazette.]

877,249. NON-REFILLABLE BOTTLE. STEPHEN M. SPRYSZYNSKI, Buffalo, N. Y. Filed Aug. 5, 1907. Serial No. 387,097.



1. In combination with a bottle having shoulders on the inner face of its neck, a stopper having longitudinal recesses adapted to fit in said neck, springs attached to the stopper in position to fit in its recesses, said springs being bent intermediately of their ends to form shoulders adapted to engage under the shoulders of the bottle neck, and a plate attached to the free ends of said springs.

2. In combination with a bottle, a stopper adapted to close the mouth thereof, means for fastening the stopper in position, a tube extending through the stopper, said tube having a curved enlargement near its lower end, and a valve seat below the enlargement, a ball arranged in the enlarged portion of said tube and normally bearing on said valve seat, with means for closing the upper end of said tube.

3. In combination with a bottle, a stopper for closing the mouth thereof, means for fastening the stopper in position, a tube extending longitudinally through the stopper, said tube having an enlargement near its lower end to form a cup, a ball arranged in the cup for normally closing the lower end of said tube, an air tube extending through the stopper, and means for closing the upper end of said air tube and said first-mentioned tube.

4. The combination with a bottle having its neck recessed at diametrically opposite points to provide inner shoulders, a stopper having longitudinal recesses adapted to register with said shoulders, springs attached to the stopper in position to fit in the recesses therein, said springs having shoulders intermediately of their ends adapted to engage under the shoulders of said neck, and a plate attached to the upper ends of the springs.

877,250. FLY-ESCAPE. GEORGE W. STEIN, Washington, D. C. Filed Apr. 1, 1907 Serial No. 365,669.



1. A fly escape of the character described comprising a window sash bolt, a bore or passage in said bolt and a transverse passage in the window sash communicating with the said bore or passage in said bolt.

2. A fly escape of the character described comprising a barrel portion arranged longitudinally in a window sash, a transverse passage or opening in the sash communicating with a barrel portion and a tube within said barrel portion for cutting off communication between said barrel portion and said transverse passage or opening.

3. A fly escape of the character described comprising a stationary portion arranged to be inserted in a window sash, a bore or passage in said portion, an opening in said portion arranged to communicate with an opening or passage in the sash.

4. A fly escape comprising a sash bolt and a bore or passage in said bolt.

877,251. ELECTRICAL MEASURING INSTRUMENT. WILLIAM J. STILL, Ealing, England. Filed June 23, 1905. Serial No. 266,619.



1. An electrical measuring instrument comprising a movable armature and two stationary opposing coils arranged to be traversed in common by the current to be measured and arranged in axial alinement with like poles in close proximity to each other so that a portion of the armature while normally wholly influenced by one coil is only partially influenced by the other whereby the resistance to its movement within the last named coil gradually increases with such movement.

2. An electrical measuring instrument comprising an armature, two coils adapted when traversed by a current to act in opposition to each other upon said armature in varying ratio according to the position thereof and so to raise said armature into a position which is indicative of the value of said current and in which the difference between the forces of the two coils will just support said armature, and a body formed with a groove in which said armature is adapted to slide under the action of said coils.

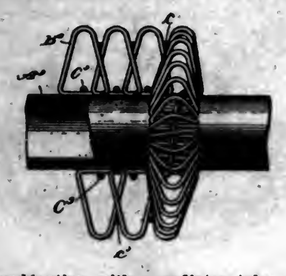
3. An electrical measuring instrument comprising an armature, two coils adapted when traversed by a current to act in opposition to each other upon said armature in varying ratio according to the position thereof and so to raise said armature into a position which is indicative of the value of said current and in which the difference between the forces of the two coils will just support said armature, and a body around which said coils are placed and which is formed with a groove in which said armature is adapted to slide under the action of said coils.

4. An electrical measuring instrument comprising an armature and two coils adapted when traversed by a current to act in opposition to each other upon said armature in varying ratio according to the position thereof and so to raise said armature into a position which is indicative of the value of said current and in which the difference between the forces of the two coils will just support said armature, said armature being composed partly of magnetic metal movable within said coils and partly of non-magnetic material.

5. An electrical measuring instrument comprising an armature and two coils adapted when traversed by a current to act in opposition to each other upon said armature in varying ratio according to the position thereof and so to raise said armature into a position which is indicative of the value of said current and in which the difference between the forces of the two coils will just support said armature, said armature being gradually reduced in effective cross sectional area towards the upper end thereof.

[Claims 6 to 10 not printed in the Gazette.]

877,252. RADIATOR-TUBING. FRANK H. STOLP, Chicago, Ill. Filed Sept. 29, 1904. Serial No. 226,485.

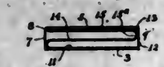


1. The combination with a radiator tube, of a coiled wire spirally wound around and secured to the tube, the convolutions of adjacent turns of the coiled wire being over-lapped.

2. The combination with a radiator tube, of a coiled wire spirally wound around the tube, the adjacent convolutions of the wire being over-lapped, and a retaining wire within the convolutions of the coiled wire for securing the same to the tube.

3. The combination with a radiator tube, of a coiled wire spirally wound around the tube, the convolutions of adjacent turns of the coiled wire being over-lapped, means for securing the coiled wire to the tube, and a tie wire surrounding the coiled wire between the convolutions of the adjacent turns thereof.

877,253. TICKET-HOLDER. IRA E. STUMP, Cleveland, Ohio, assignor to A. W. Margileth, Cleveland, Ohio. Filed July 26, 1907. Serial No. 385,699.

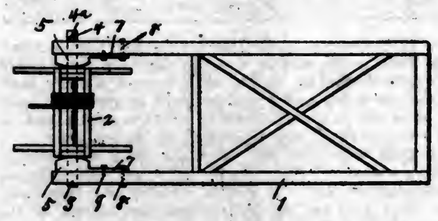


1. A ticket-holder, comprising a holder-casing made up of a single blank of sheet metal forming a bottom provided with side-walls having their upper edges bent upon themselves forming reinforced ticket-retaining-strips leaving an intermediate thumb-slot and an end wall having side-wings bent over the ends of said side-walls, said end-wall being of less depth than said side-walls and affording a ticket-delivery slot-opening intermediate its upper edge and the ends of said ticket-retaining-strips, and a ticket-supply-holding and feeding-spring removably-mounted in said holder-casing and comprising a single strip of sheet metal forming a bottom portion provided with an end-wall terminating in a ticket-holding-flange and reversely-folded spring-members one of which has its rear or folded portion taking under said ticket-holding-flange.

2. A ticket-holder, comprising a casing having a bottom provided with side-walls terminating in inwardly-extending reinforced ticket-retaining-strips leaving an intermediate thumb-slot extending throughout the entire length of said casing and an end-wall affording a ticket-delivery slot-opening at the ends of said ticket-retaining-strips, and a ticket-supply-holding and feeding-spring removably-mounted in said casing and comprising a bottom portion provided with an end wall forming the rear wall of said casing and terminating in a ticket-holding-flange, and reversely-folded spring-members one of which has its marginal sides and rear or folded portion taking under said ticket-retaining strips and said ticket-holding-flange.

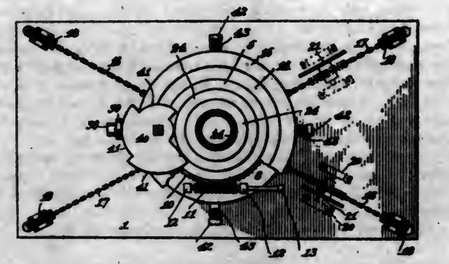
3. A ticket-holder, comprising a holder-casing provided with an end-wall affording a ticket-delivery-opening and a thumb-slot extending from said ticket-delivery-opening and terminating at its rear in a ticket-supply receiving-end opposite said end wall, and a ticket-supply-holding and feeding-spring adapted to be mounted in said holder-casing supply receiving-end and provided with a rear wall normally closing said supply-receiving-end and terminating in a ticket-holding-flange, and reversely-folded spring-members extending forwardly and integral with said rear wall, one of said members having its rear portion adapted to take under said ticket-holding-flange with its free end terminating near said ticket-delivery-opening.

877,254. WIRE-FENCE-LAYING MACHINE. MARION W. SWANSON, Albia, Iowa. Filed Oct. 25, 1906. Serial No. 340,481.



A device of the class described, comprising a frame, an axle, a reel mounted on said axle, washers engaging each end of said reel, said washers being pivotally mounted, and having lugs for holding them out of engagement with the reel, when desired.

877,255.. EXTENSIBLE WATER-TOWER OR STAND-PIPE. CHARLES B. TARBELL, Tombstone, Ariz. Filed July 27, 1906. Serial No. 328,084.



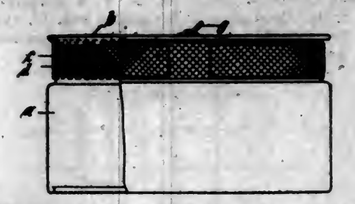
1. In an extensible water tower or stand pipe, the combination with a series of telescopic sections adapted to be projected by the pressure of the water admitted thereto, of a cam plate, and means for adjusting said cam plate in the path of projection of all or a portion of said sections.

2. In an extensible water tower or stand pipe, the combination with a base section, and a series of telescopic sections mounted in said base section and adapted to be projected therefrom by the pressure of the water admitted thereto, of a cam plate rotatably mounted on said base section, and means for rotating said cam plate to lie in the path of projection of all or a portion of said sections.

3. In an extensible water tower or stand pipe, the combination with a base section, and a series of telescopic sections mounted in said base section and adapted to be projected therefrom by the pressure of the water admitted thereto, of a cam plate rotatably mounted on said base section, means for rotating said cam plate to lie in the path of projection of all or a portion of said sections, and means for retaining said cam plate in any adjusted position.

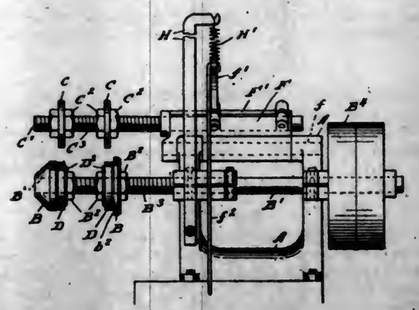
877,256. FLY-CATCHER. RUDOLPH TEUTSCH, Berlin, Germany. Filed Dec. 27, 1906. Serial No. 349,595.

A fly-catcher consisting in combination of a cover for dishes and plates made from suitable material said cover having, an upper narrower part provided with apertures, a catching strip of soft material covered with a coating of adhesive substance adapted to retain the flies placed around the upper narrow part of the cover covering the



apertures of the same, substantially as described and shown and for the purpose set forth.

877,257. CAN-BODY-FLANGING MACHINE. SWAN TEVANDER, Maywood, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 23, 1906. Serial No. 344,697.



1. In a flanging machine, the combination with a flanging head, of a flanging tool or roller movable to and from the flanging head and a movable cushion chuck ring on the flanging head fitting inside the body of the vessel to be flanged to support the vessel in true shape during the flanging operation against the thrust of the flanging tool or roller, a flanging head shaft and a supporting device for the outer end of the can on the outer end of said flanging head shaft, substantially as specified.

2. In a flanging machine, the combination with a rotary flanging head, and a rotatable flanging tool or roller movable to and from the flanging head, and an opposing spring supported or cushioned supporting ring or chuck for the can body mounted movably on the flanging head and adapted to fit inside the mouth of the vessel to be flanged and oppose the thrust of the flanging tool or roller, a flanging head shaft and a supporting device for the outer end of the can on the outer end of said flanging head shaft, substantially as specified.

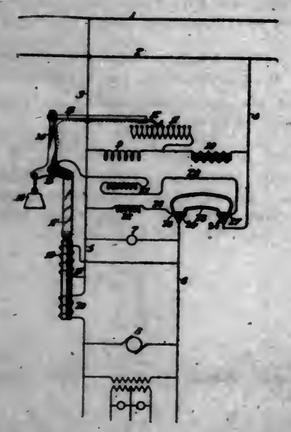
3. The combination with a flanging tool or roller, of a flanging head and a movable supporting ring on the flanging head and fitting inside the mouth of the vessel to be flanged to support the same in true shape, a flanging head shaft and a supporting device for the outer end of the can on the outer end of said flanging head shaft, substantially as specified.

4. In a flanging machine, the combination with a flanging tool or roller, of a flanging head, a movable supporting ring, and a guide for said ring on the flanging head, a flanging head shaft and a supporting device for the outer end of the can on the outer end of said flanging head shaft, substantially as specified.

5. In a flanging machine, the combination with a flanging tool or roller, of a flanging head, a movable supporting ring, a guide for said ring on the flanging head and a spring inside said ring, a flanging head shaft and a supporting device for the outer end of the can on the outer end of said flanging head shaft, substantially as specified.

[Claims 6 to 15 not printed in the Gazette.]

877,258. AUTOMATIC REGULATING DEVICE. PERCY H. THOMAS, Montclair, N. J., assignor to Cooper Hewitt Electric Company, New York, N. Y., a Corporation of New York. Original application filed Feb. 17, 1903, Serial No. 143,760. Divided and this application filed June 16, 1905. Serial No. 265,501.



1. In a system of electrical distribution in which a receiving circuit is fed from an alternating supply the combination of a vapor electric device requiring a reinforced potential to start the current flow, means for applying such reinforced potential to said device, with means for varying the time of application of said reinforced potential, together with means responsive to the delivered energy for controlling said varying means.

2. In a system of electrical distribution in which a receiving circuit is fed from an alternating supply the combination of a vapor electric device requiring a reinforced potential, and a starting band for applying said reinforced potential to said device, with means for varying the time of application of said reinforced potential, together with means responsive to the delivered energy for controlling said varying means.

3. In a system of electrical distribution in which a receiving circuit is fed from an intermittent supply the combination of a gas or vapor electric device requiring the application of starting means after any cessation of current and suitable starting means therefor, with means for varying the time of application of said starting means, together with means responsive to the delivered energy for controlling said varying means.

4. In a system of electrical distribution in which a receiving circuit is fed from an alternating current supply, the combination of a vapor electric device requiring a reinforced potential to start current flow and means for applying such reinforced potential to said device, with means for advancing and retarding the application of said reinforced potential, together with means for controlling the last named means in response to appropriate change in the circuit requirements.

5. In a system of electrical distribution in which a receiving circuit is fed from an alternating current supply the combination of a vapor electric device requiring a reinforced potential to start current flow and means for applying such reinforced potential to said device, with means for advancing and retarding the application of said reinforced potential, together with means for controlling the last named means in response to appropriate change in the circuit requirements, said means including at least one electro-magnet.

[Claims 6 to 16 not printed in the Gazette.]

877,259. MUSIC-INDICATOR. WILLIAM B. THRASH, Kansas City, Mo., assignor to The International Conservatory of Music, Dallas, Tex., a Corporation of Texas. Filed Dec. 6, 1905. Serial No. 290,632.



1. In a music indicator, the combination with a signature finder scale adapted to be placed upon a key board having key-engaging means, of a support slidably associated therewith, and a carrier plate 30 reversibly journaled on the support and having indicating characters on its different sides, and means for rotating the plate.

2. In a music indicator, the combination with a plate having a signature-finder scale thereon and depending key embracing keepers, of a support slidably associated with the plate and key indicating characters carried by the support.

3. In a music indicator, the combination with a plate having a signature-finder scale thereon and depending key embracing keepers, of a support slidably associated with the plate and a reversible plate journaled on the support and having indicating characters thereon, and means for rotating the plate.

4. In a music indicator, the combination with a support adapted to be placed upon a key-board, of a chart movably mounted on the support and having sets of standard musical note characters thereon, a reversible carrier journaled on the support and having indicating characters on different sides, said indicating characters directly pointing out the note characters of the chart and the corresponding keys of the key-board, said sets of standard note characters being successively movable to associated relation with the exposed indicating characters of the carrier.

5. In a music indicator, the combination with a support adapted to be placed upon a key board, of key engaging means slidably associated with the support for positioning the same upon the key board, and a chart movably mounted on the support and having musical note indicators that are associated with the different keys of the key board.

[Claims 6 to 23 not printed in the Gazette.]

877,260. PNEUMATIC TIRE. THOMAS B. TIEFENBACHER, New York, N. Y. Filed Mar. 16, 1907. Serial No. 362,679.

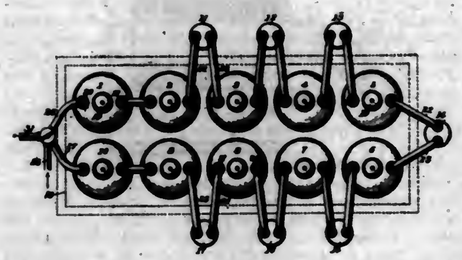


1. A pneumatic tire for automobiles and other vehicles, consisting of an air-tube, a covering sheath surrounding the same, a layer of felt interposed between the air-tube and the sheath, a covering layer of elastic material, and a tread of felt secured permanently to the outer circumference of said layer.

2. A pneumatic tire for automobiles and other vehicles, consisting of an interior air-tube, a covering sheath surrounding said air-tube, a layer of felt interposed between the air-tube and sheath, said layer being attached to the inner ends of the sheath and provided with an extension

fitting between the air-tube and rim so as to inclose the air-tube, an outer elastic covering layer, and a tread of felt on the outer circumference of said layer.

877,261. METHOD OF PRODUCING STANNIC CHLORID. CLINTON P. TOWNSEND, Washington, D. C., assignor, by mesne assignments, to American Can Company, a Corporation of New Jersey. Filed Dec. 6, 1904. Serial No. 235,765.



1. The method of producing stannic chlorid, which consists in subjecting a tin-bearing material to the action of chlorin and vaporizing stannic chlorid, condensing stannic chlorid from the vapor, and bringing the uncondensed vapor into presence of tin-bearing material, substantially as described.

2. The method of producing stannic chlorid, which consists in subjecting a tin-bearing material to the action of an excess of chlorin and vaporizing stannic chlorid, condensing stannic chlorid from the vapor, and bringing the uncondensed vapor into presence of tin-bearing material, substantially as described.

3. The method of producing stannic chlorid, which consists in subjecting a tin bearing material to the action of chlorin and vaporizing stannic chlorid, condensing stannic chlorid from the vapor, and bringing the uncondensed vapor into presence of tin-bearing material at a temperature sufficient to vaporize stannic chlorid, substantially as described.

4. The method of producing stannic chlorid, which consists in subjecting a tin-bearing material to the action of an excess of chlorin and vaporizing stannic chlorid, condensing stannic chlorid from the vapor, and bringing the uncondensed vapor into presence of tin-bearing material at a temperature sufficient to vaporize stannic chlorid, substantially as described.

5. The method of producing stannic chlorid, which consists in subjecting a tin-bearing material to the action of an excess of chlorin and vaporizing stannic chlorid, condensing stannic chlorid from the vapor, bringing the uncondensed vapor into presence of tin-bearing material at a temperature sufficient to vaporize stannic chlorid, and repeating the process until the excess of chlorin is absorbed, substantially as described.

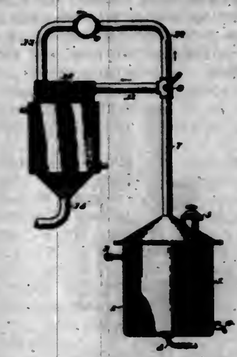
[Claims 6 to 12 not printed in the Gazette.]

877,262. METHOD OF PRODUCING STANNIC CHLORID. CLINTON P. TOWNSEND, Washington, D. C., assignor to Chemical Reduction Company, New York, N. Y., a Corporation of New York. Filed Jan. 27, 1906. Serial No. 298,253.

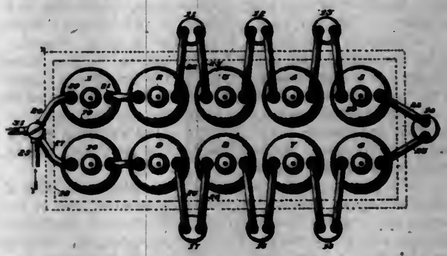
1. The method of purifying stannic chlorid from chlorin, which consists in combining a portion of the chlorin with tin and and expelling the uncombined portion.

2. The method of purifying stannic chlorid from chlorin, which consists in first combining a portion of the chlorin with tin and then expelling the uncombined portion.

3. The method of treating stannic chlorid containing chlorin, which consists in purifying the stannic chlorid by combining a portion of the chlorin with tin and expelling the uncombined portion, and bringing the separated chlorin into contact with a tin-bearing material.



877,263. APPARATUS FOR PRODUCING STANNIC CHLORID. CLINTON P. TOWNSEND, Washington D. C., assignor to Chemical Reduction Company, New York, N. Y., a Corporation of New York. Filed Feb. 21, 1906. Serial No. 302,218.



1. In apparatus for producing stannic chlorid, a plurality of normally communicating retorts, means for supplying chlorin thereto, and means for shifting the point of supply of chlorin.

2. In apparatus for producing stannic chlorid, a plurality of retorts arranged in series, condensing means interposed between said retorts, means for supplying chlorin to said retorts, and means for shifting the point of supply of chlorin.

3. In apparatus for producing stannic chlorid, in combination means for dehydrating chlorin, a plurality of retorts arranged in series, condensing means interposed between said retorts, and means for conveying chlorin successively through said dehydrating means and retorts.

4. In apparatus for producing stannic chlorid, in combination means for dehydrating chlorin, a plurality of communicating retorts, means for conveying chlorin through said dehydrating means and retorts, and means for shifting the point of supply of chlorin to said retorts.

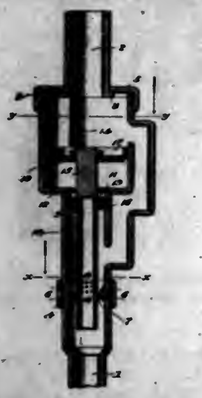
5. In apparatus for producing stannic chlorid, in combination means for dehydrating chlorin, a plurality of retorts arranged in series and connected with said dehydrating means, means for supplying chlorin thereto and means for shifting the point of supply of chlorin to said retorts.

[Claim 6 not printed in the Gazette.]

877,264. VALVE. GEORGE H. TRAXEL, Maysville, Ky. Filed Mar. 30, 1907. Serial No. 365,446.

1. In a pressure operated valve, the combination with a casing comprising an upper cylinder, a lower, comparatively small cylinder, a by-pass conduit connecting the

cylinders, and a gasket secured in the lower cylinder; of a stem movable through the gasket and closed at its upper end and open at its lower end and apertured at an intermediate point of its length, a piston fixed in the stem and snugly fitting in the upper cylinder, and a comparatively small piston fixed on the stem and snugly fitting in the lower cylinder.



2. In a pressure operated valve, the combination with a casing comprising an upper cylinder, a lower, comparatively small cylinder, a by-pass conduit connecting the cylinders, a deflector wall arranged in the upper cylinder at the opposite side of the outlet thereof, with reference to the by-pass conduit, and a gasket secured in the lower cylinder; of a stem movable through the gasket and closed at its upper end and open at its lower end and apertured at an intermediate point of its length, a piston fixed on the stem and snugly fitting in the upper cylinder, and a comparatively small piston fixed on the stem and snugly fitting in the lower cylinder.

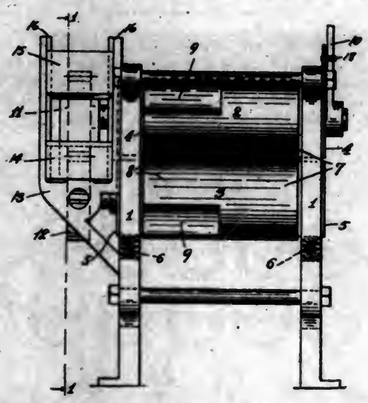
3. In a pressure operated valve, the combination with a casing having an interior, annular abutment tapered at its upper side, a pipe having an interior, annular abutment tapering at its underside, a union connecting the casing and pipe, and a gasket interposed and held between the abutments of the casing and pipe; of a piston stem movable in the casing and through the said gasket.

877,265. EXPANSION-DRILL. JAMES B. TYGART, Whitwell, Tenn. Filed Sept. 11, 1907. Serial No. 392,400.



In an expansion bit for drills, the combination of a drill having a flattened tang, a head provided with front and rear recesses, both extending transversely thereof, the rear recess receiving the tang, means for securing the tang in position, a pivot bolt carried by the head and projecting through the front recess therein, and a pair of relatively divergent expansion blades having outer cutting ends, said blades being provided at their inner ends with integral shanks arranged obliquely thereto, the shanks being pivoted in overlapping relation within the recess for lateral swinging movement solely upon the aforesaid bolt and having plane side edges, the construction being such that when the blades are extended the outer plane side edges of the shanks will engage the side walls of the recess, while when the blades are retracted the shanks will lie in lapping relation in the line of the axis of the tool.

877,266. ROTARY TUBE-CLOSING MACHINE. JAMES A. ULLMAN and GEORGE R. HOWELL, New York, N. Y., assignors to Sigmund Ullman Company, a Corporation of New York. Filed May 4, 1907. Serial No. 371,894.

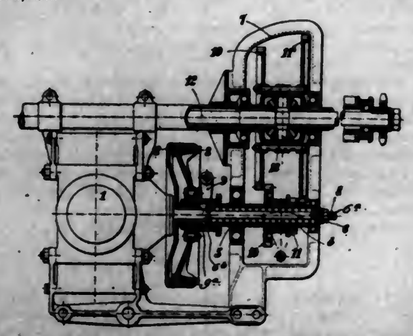


1. In a tube closing machine, a pair of rolls, one portion of which presents convergingly curvilinear surfaces for flattening the end of a tube and for acting upon the body portion thereof to press the contents of the tube inwardly away from the end thereof, and another portion of which presents convergingly curvilinear surfaces, partly cut away, for acting upon the flattened portion of the tube only without acting upon the body portion thereof, and means for rotating said rolls.

2. In a tube closing machine, a pair of rotatable rolls, a rectilinearly moving hook-forming member, and means for operating said rolls and hook forming member in unison.

3. In a tube closing machine, a pair of rolls presenting convergingly curvilinear surfaces, partly cut away, for acting upon the flattened portion of a tube only without acting upon the body portion thereof, and means for rotating said rolls.

877,267. GEARING. ROBERT DE VALBREUZE, Levallois-Perret, France, assignor to Société de Constructions de Véhicules Automobiles, Levallois-Perret, France, a Corporation of France. Filed May 31, 1907. Serial No. 376,584.



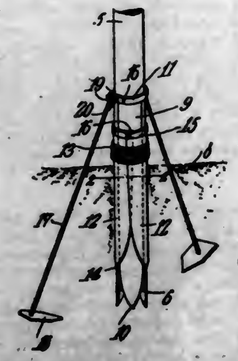
1. A transmission gear for motor vehicles comprising a casing, a shaft extending therethrough, a square shaft surrounding the driving shaft, a clutch member rotating with the driving shaft, a slidable clutch member mounted upon said square shaft and adapted to frictionally engage the other clutch member, a spring interposed between the shafts and bearing against said slidable clutching member, a counter-shaft formed of two sections journaled in and extending through said casing, a differential gear mounted in the casing and connecting the sections of the counter-shaft together, a pair of gear wheels arranged within the casing and connected with the counter-shaft, and a plurality of slidable pinions carried by the square shaft and adapted to engage with said gear wheels.

2. A transmission gear for motor vehicles comprising a casing, a shaft extending therethrough, a square shaft surrounding the driving shaft, a clutch member rotating with the driving shaft, a slidable clutch member mounted upon said square shaft and adapted to frictionally engage the other clutch member, a spring interposed between the shafts and bearing against said slidable clutch member, a counter-shaft formed of two sections journaled in and extending through said casing, a differential gear mounted in the casing and connecting the sections of the counter-shaft together, a pair of gear wheels arranged within the casing and connected with the counter-shaft, a plurality of slidable pinions carried by the square shaft and adapted to engage with said gear wheels, and means arranged exteriorly of the casing and engaging the driving shaft for adjusting the tension of said spring.

3. A transmission gear for motor vehicles comprising a driving shaft, a transmission shaft surrounding the driving shaft, a casing through which extend the transmission and the driving shaft, a clutch arranged exteriorly of the casing and in close proximity thereto, said clutch constituting means for connecting the transmission shaft to the driving shaft, a sectional counter-shaft extending through the casing, a differential gearing for connecting the sections of the shaft together, and a speed change gear arranged within the casing and having certain of its elements carried by the counter-shaft and the other of its elements carried by the transmission shaft.

4. A transmission gear for motor vehicles comprising a driving shaft, a transmission shaft surrounding the driving shaft, a casing through which extend the transmission and the driving shaft, a clutch arranged exteriorly of the casing and in close proximity thereto, said clutch constituting means for connecting the transmission shaft to the driving shaft, a sectional counter-shaft extending through the casing, a differential gearing for connecting the sections of the counter-shaft together, a speed change gear arranged within the casing and having certain of its elements carried by the counter-shaft and other of its elements carried by the transmission shaft, a clutch spring interposed between the transmission and driving shafts, said spring bearing against one of the elements of the clutch, and means upon the driving shaft for adjusting the tension of said spring, said means arranged exteriorly of the casing.

877,268. POLE-BRACE. DENNIS C. VAN BUREN, Grangeville, Idaho. Filed Oct. 3, 1907. Serial No. 395,702.



1. The combination with a pole, of an inner casing surrounding the pole, and having one end thereof provided with a driving head and its opposite end formed with a driving point and an outer casing engaging the inner casing and provided with a corresponding driving head and driving point, the driving head of the inner casing being extended above the driving head of the outer casing.

2. The combination with a pole, of a casing secured to the pole and formed of independent sections each having one end thereof provided with a driving point and its opposite end bent upon itself to form a flange constituting a driving head, lugs extending from the flange, and braces secured to the lugs and provided with anchoring members.

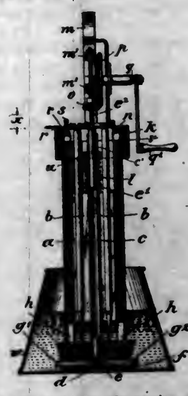
3. The combination with a pole, of main and auxiliary casings formed of superposed plates disposed in staggered relation.

4. The combination with a pole, of main and auxiliary casings secured to the pole and formed of superposed plates, disposed in staggered relation and a binding element surrounding the auxiliary casing for locking both casings in position on the pole.

5. The combination with a pole, of an inner casing secured to the pole and formed of a plurality of independent sections, an outer casing formed of longitudinal plates overlapping the longitudinal edges of the plates forming the inner casing, and means for securing said casings in position on the poles..

[Claim 6 not printed in the Gazette.]

877,269. APPARATUS FOR WASHING BRUSHES. WALTHER VON VIGIER, Subingen, Switzerland. Filed Jan. 15, 1907. Serial No. 352,894.



1. In an apparatus of the character described, the combination of a container for brushes to be cleaned, a cleaning member and means to impart a relative rotation of the container and cleaning member to revolve the brushes over the cleaning member.

2. In an apparatus of the character described, the combination of a brush container, a cleaning brush mounted near one end of the same, and means to inject the brushes in the container into the cleaning brush.

3. An artist's brush washer comprising a partitioned rotary container, a stationary brush at the bottom thereof, a stationary cover for the container, hand-operated rotating mechanism mounted on the cover, means to yieldingly hold the cover in its uppermost position and means to limit the downward movement of the cover, whereby the brushes to be cleaned will be depressed into the stationary brush while being revolved with the container.

4. In an apparatus of the character described, the combination of a brush container, a cleaning brush having its bristles directed towards the container, means to depress the brushes below the ends of the bristles, and means to rotate the container.

5. In an apparatus of the character described, the combination of a brush container open at one end, a cleaning brush having its bristles directed towards said end, a spindle resiliently mounted in and connected to said container, a cover for the latter mounted on the spindle, and mechanism to rotate the spindle.

[Claim 6 not printed in the Gazette.]

877,270. GRIPPER-NEEDLE FOR LOOMS. OTTO WAHLE, Deutsch-Brod, Austria-Hungary, assignor to Heinrich Schuck, Vienna, Austria-Hungary. Filed May 15, 1907. Serial No. 373,813.



1. A gripper needle for weaving looms adapted to withdraw a single hair or the like, said needle being formed with two relatively movable pincers-like jaws having a recess between them for engaging the hair, said jaws being formed with diverging faces in front of said recess.

2. A gripper needle for weaving looms adapted to withdraw a single hair or the like, said needle being formed with two pincers-like jaws having a recess between them, adapted to engage a hair, said jaws being formed with diverging faces in front of said recess, and a spring for normally holding such jaws in their closed position.

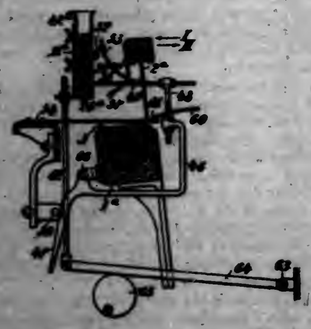
3. A gripper needle for weaving looms, adapted to withdraw a single hair or the like, said needle having two relatively movable jaws having a recess formed between them adapted to engage a hair, said jaws having pointed diverging ends in front of said recess adapted to enter into a bundle of hairs.

4. A gripper needle for weaving looms adapted to withdraw a single hair or the like, said needle having two jaws having a recess formed between them adapted to engage a hair, one of said jaws having a curved face in front of said recess which diverges from the other of said jaws.

5. A gripper needle for weaving looms adapted to withdraw a single hair of the like, said needle having two jaws having a recess formed between them adapted to engage a hair, one of said jaws having a curved face in front of said recess and extends materially beyond the other.

[Claim 6 not printed in the Gazette.]

877,271. MECHANISM FOR INSERTING SEPARATE WEFT-THREADS, SUCH AS HORSEHAIR AND THE LIKE, IN THE SHED. OTTO WAHLE, Deutsch-Brod, Austria-Hungary, assignor to Heinrich Schuck, Vienna, Austria-Hungary. Filed May 15, 1907. Serial No. 373,814.



1. A means for inserting separate weft threads into a shed, including in combination a magazine, and means for withdrawing threads therefrom, said magazine and withdrawing means being arranged with the shuttle race between them, and said withdrawing means being adapted to draw the thread from front to back across the shuttle race.

2. A means for inserting into a shed separate weft threads of hair, including in combination a hair magazine, a slay, means for withdrawing the end of a hair from said magazine, the normal positions of said withdrawing means and magazine being one at the front and the other at the rear of said slay, so that when the end of a hair is withdrawn it lies transversely over the slay from front to back.

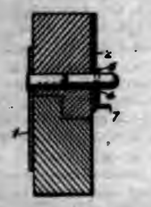
3. A means for inserting into a shed separate weft threads of hair, including in combination a slay 1^a, a magazine 42^a forward of the slay, and a device for withdrawing the end of a thread from said magazine having its normal position at the rear of the slay, and means actuated on the forward movement of the slay for introducing said withdrawing device into the magazine to take hold of the end of a hair and for returning said withdrawing device to the rear of the slay upon its rearward movement, so as to draw the thread over the slay from front to back, so that its intermediate part lies across the shuttle race.

4. In a mechanism for inserting weft threads into a shed, a picking device adapted to pick a thread and withdraw it from a bundle, additional clamping means moving with said picking device and adapted to clamp and hold said thread, and means independent of the picking device for actuating said clamping means.

5. In a mechanism for inserting weft threads into a shed, a withdrawing device including pincers-like arms 20^a and 22^a, a member 50 provided with a notch 51 on its front side, a spring 53, a fork 52 carried by said spring, means for moving the aforesaid parts forward, and a stop 56 adapted to engage said spring 53 on said forward movement and to lift said spring and said fork.

[Claims 6 to 9 not printed in the Gazette.]

877,272. BURGLAR-PROOF BLIND-LOCK. JAMES E. WARLICK, Lagrange, Ga. Filed May 6, 1907. Serial No. 372,051.

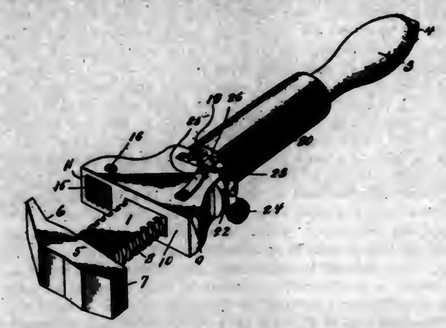


1. As an article of manufacture, a shutter fastener comprising a plate secured to the shutter and having an integral stud, the side of which stud is notched, and a catch pivoted to swing in a plane parallel with said plate and at right angles to the stud whereby to enter the notch in the stud and lock the latter.

2. The combination with two shutters one having a hole therethrough, of plates secured thereto, one plate having an integral stud, a side of which is notched, and the other having an orifice adapted to be superposed over the hole in the shutter, and a catch pivoted flat to said latter plate and having an edge curved approximately in the arc of a circle whose center is the pivot whereby the curved edge is adapted to take in the notch of the stud when the shutters are closed and the notch is in its path.

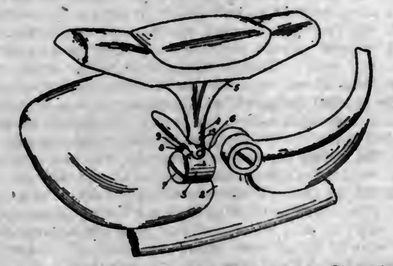
877,273. WRENCH. BENJAMIN F. WEBB, Sistersville, W. Va. Filed May 8, 1907. Serial No. 371,585.

In a wrench, a shank substantially rectangular in cross section having its narrow oppositely disposed faces provided with threads, a fixed jaw on the outer end of said shank, a movable jaw slidably mounted on the shank and provided at its inner end with an annular recess of a diameter greater than the greatest diameter of the opening through the jaw to receive the shank, a sleeve mounted on the shank and having threads disposed on opposite faces on the interior to engage the threads on said shank, a ratchet wheel carried by the outer end of said sleeve to engage in the circular recess in the inner end of said movable jaw, and projecting beyond the opposite side faces of said movable jaw, a spring lever secured to the movable jaw having a thumb piece on one end and its other end disposed to overlie the ratchet wheel and en-



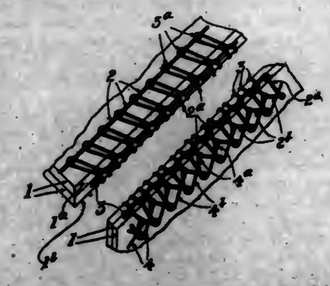
gage with the teeth thereof, and a spring secured to the movable jaw and said spring lever for normally holding the latter in locking engagement with the ratchet wheel.

877,274. ARM-PIT. HENRY E. WEBBER, Canton, Ohio. Filed Dec. 17, 1906. Serial No. 348,149.



A chair frame having a pivot thereon, an adjacent armrest having a shank with a sleeve thereon adapted to fit and to rotate on the pivot, a longitudinal slit in the adjoining parts of the shank and the sleeve, a transverse aperture at the junction of the shank and sleeve having an angular median portion, a bolt in the aperture having a corresponding angular part, and a head on one end and a hand-hub on the other end of the bolt, whereby the sleeve can be clamped around the pivot by a closure of the slit.

877,275. SEAM FOR SEWED ARTICLES. JOHN P. WEIS, Brooklyn, N. Y., assignor, by mesne assignments, to Metropolitan Sewing Machine Company, a Corporation of New York. Filed Mar. 16, 1903. Serial No. 147,947.



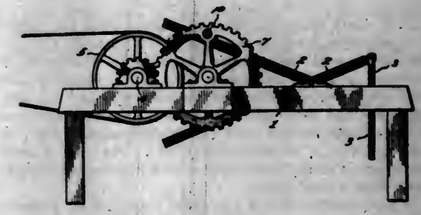
1. A seam for sewed articles comprising the fabric and a plurality of threads, one of the latter being passed down through the fabric in loop form, then given a half-turn or twist and carried across one face of the fabric and connected with a succeeding loop of the same thread; and another of said threads, in the form of a half-turned or twisted loop, being engaged with a strand of said first loop of the first thread and passing between the fabric and said succeeding loop of the first thread.

2. A seam for sewed articles comprising the fabric and a plurality of threads, one of the latter being passed down through the fabric in loop form, then given a half-turn or twist and carried across one face of the fabric and connected with a succeeding loop of the same thread by a loop of a second thread; and a third thread, in the form of a half-turned or twisted loop, being engaged with a strand of the said first loop of the first thread and passing between the fabric and said succeeding loop of the first thread.

3. A seam for sewed articles comprising the fabric and a plurality of threads, said seam being characterised by having a line of straight stitching on one face of the fabric concatenated with half-turned or twisted loops extending from the other face of the fabric and more or less across the edge thereof, and a locking-thread surrounding and connecting respectively one strand of each of said loops.

4. A seam for sewed articles comprising the fabric and a plurality of threads, said seam being characterised by having a straight line of stitching on one face of the fabric and two series of concatenated half-turned or twisted loops on the other face of the fabric, certain of said loops being carried more or less across the edge of the work and connected with the straight line of stitches.

877,276. PUMP DRIVING MECHANISM. JOHN C. WHITMER, Lordsburg, Cal. Filed May 1, 1907. Serial No. 371,328.



In a driving mechanism, a frame, two levers pivotally mounted thereon, said levers being of I-form in cross section, reciprocating rods operated by the short arms of the levers, the long arms of said levers having their lateral flanges extending continuously to the free ends thereof, operating gears carrying oppositely arranged crank pins, means for actuating said gears, and blocks carried by said pins, and sliding upon the upper flanges of the levers, said blocks being provided with integral tongues projecting inwardly beneath said upper flanges and forming guide grooves receiving the same, said blocks being adapted when released from the wrist pins to be slid longitudinally on and off said flanges at the free ends of the levers.

877,277. WHISK AND BROOM HOLDER. JOHN F. WYHER, Pittsburg, Pa. Filed Apr. 5, 1907. Serial No. 366,622.

1. A device of the class described formed from a single piece of wire comprising a stock threaded at one end with an elongated loop at the other end with a hook depending from the stock adjacent to the loop and pointing toward the open portion of the loop, and a guard connected to the outer member of the loop and extending above the same, and operating to conceal the portion of the article supported in the loop and which extends above the same.

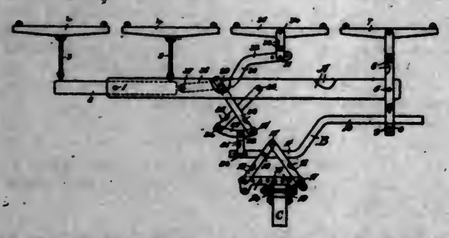
2. A device of the class described formed from a single piece of wire comprising a stock threaded at one end with an elongated loop at the other end, and with a guard plate

connected to the outer member of the loop and extending above the same and operating to conceal the portion of the



article supported in the loop and which extends above the same.

877,278. FOUR-HORSE EQUALIZER. OSWALD ZOELLER and FREDERICK ZOELLER, Hancock, Iowa. Filed June 6, 1905. Serial No. 263,959.



1. In a draft equalizer, in combination with the maintree, a bent draft lever on one side of the maintree pivoted at one end to said maintree and carrying a whiffletree at its free end, a curved equalizing lever on the opposite side of said maintree, a connection between one end of said curved lever and said maintree, a connection between the other end of said curved lever and an intermediate part of said draft lever, a whiffletree pivoted to one end of said maintree, and a connection between said last named whiffletree and said curved lever.

2. In combination with a maintree, a draft lever pivoted thereto and carrying a whiffletree extending on one side of said maintree, a curved lever on the opposite side of said maintree, a connection between one end of said curved lever and said maintree, a connection between the opposite end of said curved lever and an intermediate part of said draft lever, a pivotally supported bent lever connected to said curved lever, a second whiffletree, and a connection between said last named whiffletree and said bent lever.

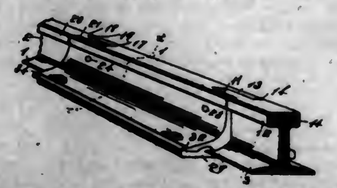
3. In a draft equalizer, the combination with the maintrees or evener bars having a draft lever pivoted there between and near one end thereof, said lever extending approximately parallel with aforesaid maintrees or evener bars and having one end thereof offset and located in advance of the maintrees or evener bars and a whiffletree connected to the offset end of said draft bar; connecting straps extending rearward from said draft lever and maintrees or evener bars and crossing one another and being pivotally secured at their opposite end to a curved equalizing lever, and connecting straps extending rearward from near one end of said curved equalizing lever and pivotally secured at their opposite ends to one end of the pivotally supported bent lever which lies approximately parallel in the rear of aforesaid maintrees and one end thereof passing between a pair of straps which are pivotally secured near the outer end of the maintrees, whiffletrees secured to one end of said straps, and double-tree secured to the opposite end of said maintrees, and whiffletrees secured to each end of said double-tree.

4. In a four-horse equaliser, the combination with a maintree, of a double tree pivoted to said maintree at one end, whiffletrees connected to the ends of said doubletree, a bent draft lever pivoted to said maintree and adjacent the inner end of aforesaid double tree, a whiffletree connected to the opposite end of said bent draft lever, a curved equalising lever, connecting straps pivoted to the ends of said curved equalising lever and crossing each other and pivotally secured at their other ends to said maintree and to said draft lever respectively, straps pivotally secured to one end of said curved equalising lever, a pivotally supported bent lever, the other ends of said last named connecting straps being secured to one end of said bent lever which lies to the rear and parallel of said maintree, a pair of straps pivoted to the opposite end of said whiffletree pivoted to one end of said straps, a roller pivotally held between and at the opposite end of said straps, between which straps pass one end of the said pivotally supported bent lever, which is adapted to work back and forth on the periphery of aforesaid roller.

5. In a four horse equalizer, the combination with a maintree, of a doubletree pivoted to said maintree at one end, whiffletrees connected to the ends of said doubletree, a bent draft lever pivoted to said maintree and adjacent the inner end of said doubletree, a whiffletree connected to the opposite end of said bent draft lever, a curved equalising lever, connecting straps pivoted to the ends of said equalizing lever and crossing each other and pivotally secured at their other ends to said maintree and to said draft lever respectively; straps pivotally secured to one end of said curved equalizing lever, a pivotally supported bent lever, one of the ends of said last named connecting straps being secured to one end of said bent lever which lies to the rear and parallel to said maintree, elongated straps pivoted to said maintree, a whiffletree pivoted to one end of said elongated straps, a roller pivotally held between and at the opposite end of said elongated straps, between which elongated straps passes one end of said pivotally supported bent lever, which is adapted to work back and forth on the periphery of said roller, a pair of connecting straps pivotally secured near one end of aforesaid pivotally supported bent lever, a second pair of connecting straps connected to the forward ends of said first named pair straps, both pairs of straps extending rearward at an angle to said bent lever and pivotally secured to a clevis secured to the plow beam.

[Claims 6 and 7 not printed in the Gazette.]

877,279. RAIL-JOINT. POWELL O. ADAMS, Cameron, Tex. Filed Jan. 9, 1907. Serial No. 351,414.



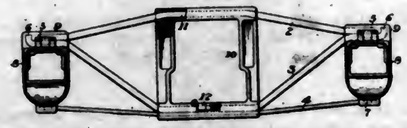
1. In a rail joint for railway rails comprising the ends of two abutting rails and a block of metal having recesses in each end thereof and a groove in the under side, each of said rails having a portion of its ball cut away and portions of the flanges of its ball cut away whereby the reduced portions of said balls are received in the recesses in said block of metal.

2. A rail joint for railway rails comprising the ends of two abutting rails and a block of metal having generally the shape of railway rails with recesses in the balls of each end thereof, each abutting rail having a portion of its ball cut away and the flanges of a further portion of its ball cut away to form a juncture with said block of metal, said block of metal having a groove in the underside to receive the ends of the abutting webs of said rails.

3. A rail joint for railway rails comprising the ends of two abutting rails and a block of metal having generally the shape of railway rails with recesses in the balls of each end thereof, each abutting rail having a portion of its ball cut away and the flanges of a further portion of its ball cut away to form a juncture with said block of metal, the juncture of the flanges of said block at each end with flanges at one side of said rails being off-set relative to the juncture of the flanges on the opposite side of said rails, said block of metal having a groove in the underside to receive the abutting webs of said rails.

4. A rail joint for railway rails comprising the ends of two abutting rails, a block of metal having recesses in each end thereof and a groove in the underside, each of said rails having a portion of its ball cut away and portions of the flanges of its ball cut away whereby the reduced portions of said balls are received in the recesses in said block of metal, and a brace having a seat therein for clamping said block of metal and the ends of the rails together.

877,280. TRUCK SIDE FRAME. HENRY AIKEN, Pittsburg, Pa. Filed Oct. 24, 1907. Serial No. 398,874.



1. A truck frame having side frame members secured at their outer ends by a casting formed of fluid metal cast about the parts, substantially as described.

2. A truck side frame having a central or intermediate casting secured to the frame parts by flowing the metal about them, substantially as described.

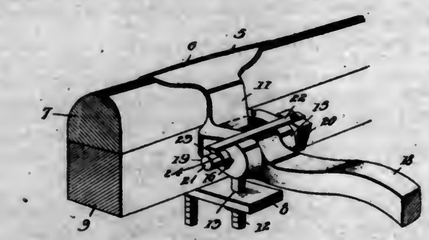
3. A riveteless and boltless side frame having its parts secured by castings formed in place about them substantially as described.

4. A truck side frame having journal boxes cast in place with a part of the casting surrounding the side frame members, substantially as described.

5. An arch bar side frame having the arch bars secured at their outer ends by a casting formed about them, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

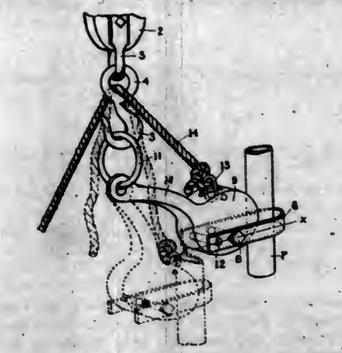
877,281. THILL-COUPLING. DAVID W. ALLEN, Osakis, Minn. Filed June 6, 1907. Serial No. 377,527.



1. In a coupling of the class described, the combination with separate portions having alining openings therein, of a bolt engaged in said openings and having a head at one end, and a strap spring secured to said head and extending longitudinally of the bolt beyond said separate portions, said spring having an end portion turned laterally and toward the head, said bolt being notched to receive the last named portion of the spring.

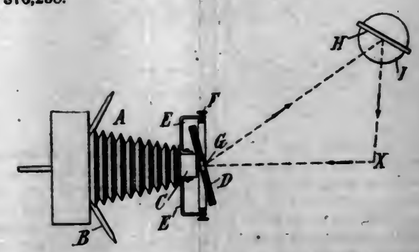
2. A coupling bolt comprising a stem having a head at one end and having a notch therein adjacent to its other end, said notch being cut at an angle toward the head, and a spring removably secured at one end to a face of the head and extending longitudinally of the stem and having its outer end turned laterally and toward the head and engaged in the notch in the stem.

877,282. PIPE-LIFTER. EMIL J. ANDERSON and SIVERT HANSON, Houston, Minn. Filed June 4, 1906. Serial No. 320,086.



In a pipe lifter, the combination, with hoisting tackle having a suspended portion adapted to support a cable, of a U-shaped pipe-embracing strap, a clamping head eccentrically pivoted within the arms of the strap, means for connecting the rear end of the clamping head with the hoisting tackle, and a trip-cable connected with the forward part of the clamping head and passing over said suspended portion of the hoisting tackle, the strap being formed with a plurality of pivot holes whereby the position of the pivot in the head may be adjusted and the amount of clearance of the pipe regulated, and the clamping head having its center of gravity forward of its point of pivotal connection with the strap.

877,283. CAMERA ATTACHMENT. EDWARD BARRATH, New York, N. Y., assignor of one-third to Otto Newman, New York, N. Y. Filed May 29, 1907. Serial No. 376,238.



1. The combination with a photographic camera, of an apertured mirror mounted with its aperture in line with the lens of the camera and adapted to reflect the likeness of the person whose photograph is to be taken, so that said reflection can be observed by such person.

2. The combination with a photographic camera, of a mirror having an aperture, said mirror being arranged with such aperture in front of the lens of said camera, whereby the person whose photograph is to be taken can observe his reflection in said mirror.

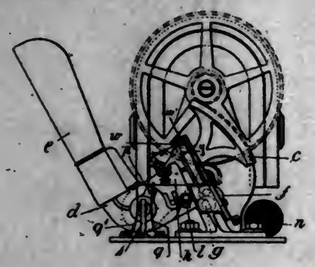
3. The combination with a photographic camera, of a mirror having an aperture, said mirror being arranged with such aperture in front of the lens of said camera, and means for adjusting such mirror to various angles with relation to such camera.

4. The combination with a photographic camera, of a mirror connected with the lens frame of such camera, and adjustable therewith.

5. The combination with a photographic camera, of a mirror connected with the lens frame of such camera, and adjustable therewith, and means for adjusting such mirror to various angles with relation to such lens.

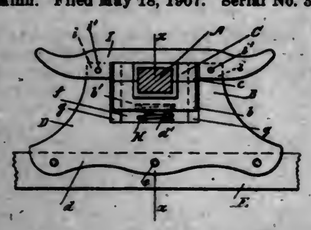
[Claims 6 to 8 not printed in the Gazette.]

877,284. ELECTRIC APPARATUS FOR THE IGNITION OF MINES. OTTO R. P. BERGLUND, WALTER A. W. E. HJORTH, and CARL E. LJUNGMAN, Stockholm, Sweden. Filed Oct. 25, 1905. Serial No. 284,407.



In an electric mine igniting apparatus, the combination with a magneto and a mine exploding circuit, a transformer having primary and secondary coils, a pair of spring contacts connected one with the primary coil of the transformer, and the other with the mine circuit, a contact post located between said spring contacts and connected with the secondary coil of the transformer, said spring contacts tending normally to bear on said contact post and a switch lever electrically connected with the magneto and adapted to contact with one or the other of said springs and on said contact to move it out of contact with the post, and means whereby the lever is operated by the magneto.

877,285. SLEIGH-KNEE. JOHN A. BERGREN, Lake Park, Minn., assignor of one-half to Harold E. Bergerson, Lake Park, Minn. Filed May 18, 1907. Serial No. 374,385.

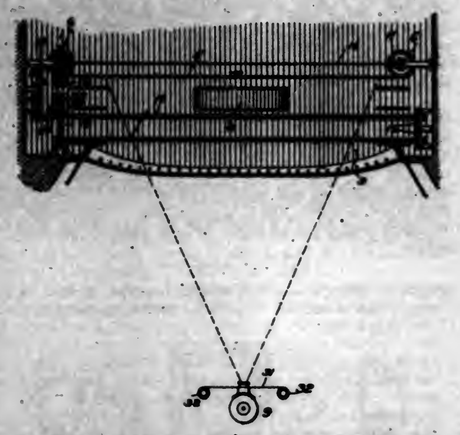


1. In a sleigh knee, the combination, with a knee bracket provided with a gap having vertical guides at its sides, of a channel-shaped support and a channel-shaped cover for engaging with the sleigh beam, said support and cover having grooves in their sides which slide over the said guides, a spring interposed between the bottom of the said gap and the said support, and a keep-bar secured to the top of the said knee bracket and closing its said gap.

2. In a sleigh-knee, the combination, with a knee bracket provided with a gap having vertical guides at its sides, of a support and a cover for engaging with the sleigh beam each provided with grooves which slide over the said guides, a spring interposed between the bottom of the said gap and the said support, a keep-bar provided with sockets at its ends which fit over the upper projecting ends of the said knee bracket and brace them together, and pins which pass laterally through the said sockets and secure the said keep-bar to the said knee bracket.

877,286. THEATRICAL APPLIANCE. SAMUEL BIERNBAUM, Boston, Mass. Filed Feb. 2, 1907. Serial No. 355,351.

1. In a stage appliance, the combination with an endless path, of a curtain having a plurality of separated scenic sections representing different scenes of a complete panoramic view, and also having plain sections, means to bring the scenic sections successively into juxtaposition to the endless path, and a moving picture machine to exhibit on the plain sections the scenes of the panorama which are not exhibited on the scenic sections.



2. In a device of the class described, the combination with an endless path, of a curtain behind the path comprising scenic sections separated by plain sections, means to move said curtain longitudinally, and a moving picture lantern to project moving pictures on to the plain sections.

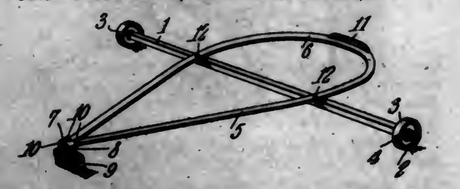
3. In an apparatus of the class described, the combination with an endless path of a curtain extending longitudinally thereof, and comprising separate scenic sections, means to move the curtain longitudinally, a moving picture lantern to project moving pictures toward the curtain, and means to move scenic objects longitudinally of the endless path and on the opposite side thereof from the curtain.

4. The combination with an endless path, of a curtain having scenic sections separated by intervening blank sections, means to move the curtain to bring any desired section into juxtaposition with the endless path, and means to exhibit upon the blank sections scenes which are related to those exhibited on the scenic sections.

5. In a stage appliance, the combination with an endless path, of means presenting a plurality of scenic sections each showing different scenes of a panorama illustrating a certain event, means to bring the scenic sections successively into juxtaposition to the endless path, and a moving picture machine to exhibit the scenes of the panorama not exhibited on the scenic sections.

[Claim 6 not printed in the Gazette.]

877,287. BARREL-TRUCK. MENNO BIXEL, Pandora, Ohio. Filed June 24, 1907. Serial No. 380,527.

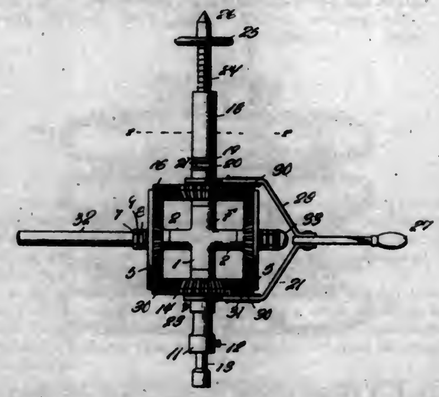


1. A barrel truck comprising a frame provided at one end with a flange arranged to engage the interior of the chimes of a barrel, and provided at the end remote from the flange with studs arranged to engage inside the chimes of the barrel at a point diametrically opposite from that engaged by the flange, and supporting wheels for the frame removed from each other to an extent greater than one-half the diameter of the barrel-head but less than the length of the frame.

2. A barrel truck comprising a frame of approximately the same length as, but of less width than, the diameter of a barrel-head, a caster supporting one end of the frame, and an axle and truck wheels extending laterally across the frame at a distance removed from the caster greater than one-half the diameter of the barrel, said axle being longer than the distance across the barrel at the point traversed by the said axle to receive the chimes of the barrel.

3. A barrel truck comprising a frame having at one end an upwardly extending flange and at the other upwardly extending spaced lugs, said flange and lugs being separated by a distance approximately the same as the diametric distance between the chimes of the barrel to be carried by the truck, a caster connected to and supporting the end of the frame carried by the lugs, an axle fast on the frame and extending across the same at right angles to the length of the frame at a point between the lugs and flange but removed from said lugs by a distance greater than one-half the diameter of the barrel, said axle being longer than the diameter of the barrel at a point traversed by the axle, and truck wheels carried at the ends of said axle.

877,288. RATCHET-DRILL. JOHN B. BLACKWELL, Darlington, S. C. Filed July 6, 1906. Serial No. 324,929.



In a device as specified, the combination of a cruciform frame consisting of integral lateral and vertically extending arms and provided with a vertically disposed bore, of a bit shaft journaled therein, a gear having ratchet teeth loosely mounted upon the upper portion of said shaft, another gear fixed to the lower portion of said shaft and also provided with ratchet teeth disposed opposite to the ratchet teeth of the upper gear, a horizontally operating forked lever provided with oppositely operating spring actuated pawls to co-act with the ratchet teeth, a gear journaled upon one of the lateral arms and a handle extending from the other laterally disposed arm as specified.

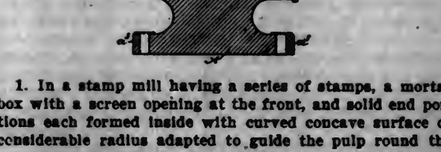
877,289. PROCESS FOR SOLIDIFYING FATS, OILS, TAR, RESIN, &c. GUSTAV BLASS, Caternberg, Germany. Filed Feb. 27, 1906. Serial No. 303,297.

The herein described process for solidifying fluid fats and increasing the consistency of solid fats, which consists in incorporating anthracene with the fat.

877,290. COMMODITY-CABINET. JAMES H. BOYE, Chicago, Ill., assignor to The Boye Needle Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 9, 1907. Serial No. 367,138.

1. The combination of a commodity-holder, a movable top surmounting the same having an opening, a closure movably connected with said top, and a closure-actuated lock serving to lock the top when the closure is thrown to the open position.

2. The combination of a commodity-holder, a central fixed dial located thereabove, a revoluble top for the commodity-holder, a closure movably connected with said top, and a closure-actuated lock connected with said revoluble top and co-acting with said fixed dial, for the purpose set forth.

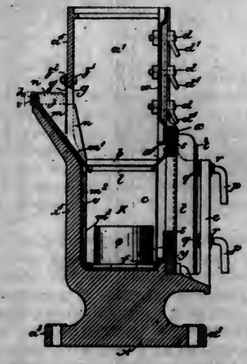


3. The combination of a commodity-holder, a revoluble top surmounting the same and having an opening, a fixed central dial, a closure movably connected with said top, and a closure-actuated spring-retracted locking device serving to secure the top against rotation when the closure is thrown to the open position.

4. The combination of a commodity-holder comprising a cylinder provided with a bottom and divided into compartments, a central post rising from said bottom, a revoluble top supported on said post and provided with an opening, a closure pivoted to swing about said post, a dial fixedly secured to the upper end of said post, and an index-pointer carried by said top and playing over said dial.

5. The combination of a commodity-holder divided into compartments and equipped with a central post and a top turning about said post as an axis, a fixed dial surmounting said post and equipped circumferentially with lock-engaging means, a closure movably connected with said top, and a closure-actuated lock, for the purpose set forth.

877,291. MORTAR-BOX FOR STAMP-MILLS. DAVID A. BREMNER, London, England. Filed July 31, 1905. Serial No. 272,083.



1. In a stamp mill having a series of stamps, a mortar box with a screen opening at the front, and solid end portions each formed inside with curved concave surface of considerable radius adapted to guide the pulp round the end stamps towards the front of the box, as set forth.

2. In a stamp mill having a series of stamps, a mortar box with a screen opening at the front and solid ends comprising front portions the internal surfaces of which are perpendicular to the back wall and intermediate portions having concave internal surfaces curved to a radius approximately equal to the distance between the center of the adjacent end stamp and the back wall of the box, said curved and perpendicular surfaces being adapted to guide the pulp round the end stamps and towards the front of the box, as set forth.

3. In a mortar box having a screen opening in its front wall, a back wall which is practically vertical to a height corresponding to the top of the screen opening, a feed opening in said back wall and a feed mouth with a sloping bottom, linings extending over said bottom, through

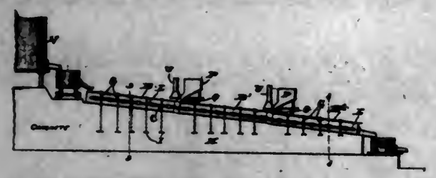
the feed opening and over the corresponding length of the said back wall of the box below the tops of the dies, said linings being adapted to be withdrawn from and inserted into position through the feed mouth opening, as set forth.

4. In a mortar box having a screen opening in its front wall, a back wall which is practically vertical to a height corresponding to the top of the screen opening, a feed opening in said back wall and a feed mouth with a sloping bottom, linings extending over said bottom, through the feed opening and over the corresponding length of the said back wall of the box below the tops of the dies, said linings being adapted to be withdrawn from and inserted into position through the feed mouth opening, end liners for the end walls of the box and a bar extending along the back of the box and engaging with the lower parts of the back and end liners, as set forth.

5. A mortar box having a feed opening in the back wall thereof and a feed mouth with sloping bottom wherein said bottom and the corresponding length of the back wall are lined with an apron plate and renewable faces detachably secured thereto, said apron with attached faces being adapted to be withdrawn from and inserted into position through the feed mouth, as set forth.

[Claims 6 to 13 not printed in the Gazette.]

877,292. BESSEMERIZING OR CONVERSION OF COPPER MATTES INTO BLISTER COPPER. JOHN D. BURGESS, Tucson, Ariz., assignor of two-thirds to Augustus Taylor and William H. Taylor, Jr., San Francisco, Cal. Filed Apr. 25, 1906. Serial No. 313,581.



1. The combination with an apparatus for bessemerizing or conversion of copper mattes comprising a suitably constructed box, of fire-brick lining in the box, the fire-brick lining being arranged so as to leave a longitudinal opening through the box, and the bricks being laid in broken joint arrangement, and means for feeding compressed air into the box, said means pointing downward and towards the discharge end of the box, substantially as described.

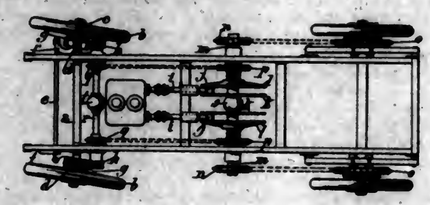
2. In an apparatus for bessemerizing or conversion of copper mattes, comprising a box having receiving and discharge ends, twyers adapted for the admission of air therethrough, the twyers projecting downwardly into the box and at an angle toward the discharge end of the box.

3. In an apparatus for bessemerizing or conversion of copper mattes, a series of communicating boxes, arranged end to end providing a continuous passage way through the series of boxes, hollow castings arranged between the adjacent ends of the several boxes in the series thereof, means adapting the boxes and castings to be secured together, and means adapted for feeding finely comminuted silica and lime stone into the hollow castings, whereby to readily and quickly compel and assist the chemical changes desired.

4. In an apparatus for bessemerizing or conversion of copper mattes, comprising a box having receive and discharging ends, inclined twyers adapted for the admission of air into the box, the twyers being arranged to direct streams toward the discharge end of the box thereby assisting flowing action of material through the box.

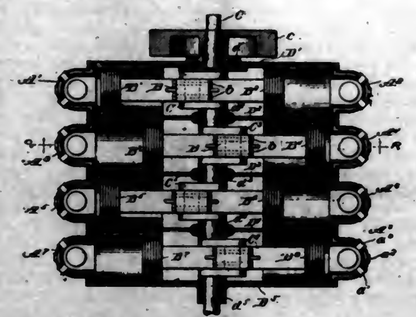
5. In an apparatus for bessemerizing or conversion of copper mattes, having open end boxes arranged end to end in alinement, and provided with suitable openings, an incline base providing support for the said boxes, anchoring means, means for the admission of air into the boxes under pressure, and means adapted for the supply of fluxes into the boxes, substantially as described.

877,293. GEARING. LUCIEN CATEL, Lyon, France. Filed Mar. 29, 1907. Serial No. 365,275.



The combination of a stationary shaft, an oscillatory shaft connected to each end thereof and forming a continuation of the shaft, an arm connected to each oscillatory shaft, a rod connecting the arms together, a globular toothed wheel on each oscillatory shaft, and a pinion on a fixed axis meshing with each wheel.

877,294. MULTIPLE-CYLINDER ENGINE. FRANK L. CHASE and BERTRAND M. YOUNG, Jamestown, N. Y.; said Young assignor to said Chase. Filed May 28, 1904. Serial No. 210,160½.



1. In a multiple cylinder explosive engine, the combination with a crank shaft, of a plurality of pairs of alined cylinders, the cylinders in each pair located on opposite sides of the crank shaft, reciprocating pistons located within said cylinders and operatively connected to the crank shaft, intake valves controlling the admission of motive fluid to the cylinders, exhaust valves unseating inwardly, stems on the exhaust valves projecting to the exterior of the valve casings, a cam shaft journaled adjacent the stems of the exhaust valves, cams on the cam shaft adapted to successively actuate the valve stems and unseat the exhaust valves, a longitudinal shaft extending at right angles to the cam shafts, beveled gears connecting the corresponding ends of the cam shafts to the ends of the longitudinal shaft, meshed spiral gears on said longitudinal shaft and the crank shaft, and means for adjusting said spiral gears to properly operate the cam shafts when the engine is reversed.

2. In a multiple cylinder explosive engine, the combination with a crank shaft, of a plurality of pairs of alined cylinders, the cylinders in each pair located on opposite sides of the crank shaft, reciprocating pistons located within said cylinders and operatively connected to the crank shaft, intake valves controlling the admission of motive fluid to the cylinders, exhaust valves unseating inwardly, stems on the exhaust valves projecting to the exterior of the valve casings, a cam shaft journaled adjacent the stems of the exhaust valves, cams on the cam shaft adapted to successively actuate the valve stems and unseat the exhaust valves, a longitudinal shaft extending at right angles to the cam shaft, beveled gears connecting the corresponding ends of the cam shafts to the ends of the longitudinal shaft, meshed spiral gears on said longitudinal shaft and the crank shaft, means for adjusting said spiral gears to properly operate the cam shafts when the engine is reversed, bell crank levers fulcrumed upon the cylinder casing above the exhaust valves, one arm of each lever adapted to engage the stem of the corresponding exhaust valve and the other arm of the bell crank lever adapted to be engaged and the bell crank lever oscillated by a cam on the cam shaft.

877,295. UNDERTAKER'S CRAPE-HOLDER. JAMES E. CHURCHMAN, Orange, and JOHN F. OCHARD, East Orange, N. J. Filed Dec. 6, 1906. Serial No. 346,526.



1. In an undertaker's crape-holder, a back-plate provided with attaching means, a crape-holding arm adjustably mounted on said back-plate and also having attaching means, and a front plate mounted on the back-plate at a distance from said arm.

2. In undertaker's crape-holder, a back plate provided with attaching means, a crape-holding arm mounted on said back-plate, and a front plate mounted on said back-plate at a distance therefrom and adapted to hold the crape thereagainst.

3. In an undertaker's crape-holder, a back-plate provided with attaching means; crape-supporting means on said back plate, and a front plate movably mounted upon the back-plate to hold the crape therewith.

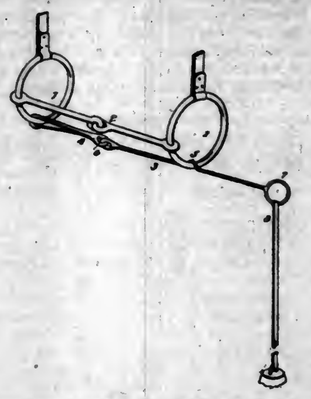
4. In an undertaker's crape-holder, a back plate provided with attaching means, crape-supporting means on said back-plate, and a front plate bent backwardly at its side edges and connected to said back plate at the margins of said edges, whereby a space to inclose the crape is provided between the said front and back plates.

5. In an undertaker's crape-holder, a back-plate provided with attaching means, crape supporting means on said back plate, and a card-holding plate bent backward at its side edges and connected to said back-plate at the margins of said edges, whereby a space is provided between the said plates to receive the crape.

[Claims 6 to 9 not printed in the Gazette.]

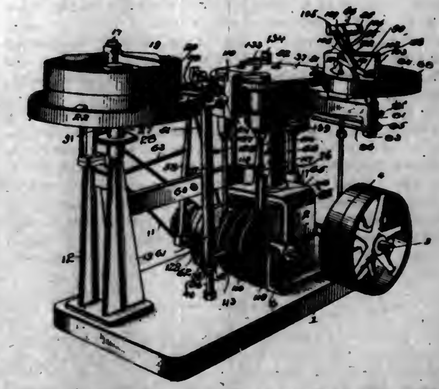
877,296. BRIDLE-BIT. WILLIAM H. COLLINS, Indianapolis, Ind., assignor of one-half to Jesse L. Holmes, Indianapolis, Ind. Filed Oct. 9, 1906. Serial No. 338,186.

The herein-described curb attachment for snaffle bits consisting of a snap hook adapted to be secured to one of the rein rings of the bit and of a length substantially equal to one of the mouth bars of the bit, said snap being formed at one end with an eye, and a lever formed at one end with an eye looped into the eye of the snap hook and provided in its length at a point distant from its eye equal to the length of the other mouth bar with a crimp adapted to rest in the other rein ring and constitute a fulcrum for said lever which prevents, in normal operation, any relative longitudinal movement of said lever, the said lever projecting out beyond the crimp a distance substantially equal to the portion of the lever between the crimp and the eye, whereby the lever will be substantially balanced in the



rein ring, the outer extremity of said lever being provided with a loop designed for the attachment of a hitching strap.

877,297. COLLARING-MACHINE. ELMER E. COOK, Richmond, Va., assignor to The Randolph Paper Box Company, Richmond, Va., a Corporation of Virginia. Filed Feb. 9, 1904. Serial No. 192,830.



1. In a mechanism of the class described, the combination with a box element assembling means, of a container for supplying box elements to said assembling means, a passage extending from said container to said assembling means, of means for directing box elements along said passage, and a follower movable longitudinally of the passage and designed to engage the box elements delivered to said assembling means.

2. In a mechanism of the class described, the combination with box element assembling means, of a container for supplying box elements to said assembling means, a passage leading from said container to said assembling means, means for directing box elements longitudinally of said passage, a follower movably mounted in said passage, and means for moving said follower into and out of the path of movement of such box element.

3. In a mechanism of the class described, the combination with a box element carrier, of pivotally mounted fingers, means for moving said fingers into the box elements carried by said carrier, means for swinging said fingers upon their pivots within the box elements, and means for supplying an adhesive to said fingers.

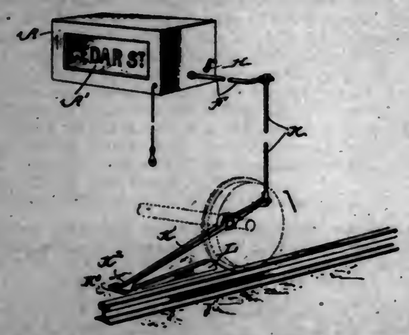
4. In a mechanism of the class described, the combination of a semi-circular wall, means for directing a box collar

laterally into contact with said wall, and means for directing said collar into the cap of a box.

5. In a mechanism of the class described, the combination of a semi-circular abutting wall, means for directing a collar laterally against the same, a block for pressing said collar laterally against said wall into its final shape, and means for directing said collar into a box cap.

[Claims 6 to 52 not printed in the Gazette.]

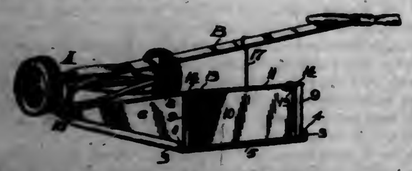
877,298. INDICATOR. JOHN CUNNIFF, Wylam, Ala. Filed Apr. 17, 1906. Serial No. 312,201.



1. A device of the kind described comprising drums, a flexible sheet winding thereon, a rotatable rod angled adjacent one end, means carried by the rod for controlling a step by step movement of the drums, a lever pivotally mounted upon an axle of a car, a rod pivotally connecting the upper end of the said lever with an angled end of the rod, and a wedge shaped tripping blade adapted to be engaged by the lower end of said lever.

2. A device of the kind described comprising two drums, a flexible sheet winding and unwinding upon said drums, means for rotating the drums, a disk carried by one drum, said disk being cut away upon opposite sides to form shoulders and having V-shaped notches between the shoulders, a spring pressed pawl having an end portion to engage the shoulders and an end portion to engage the notches, a tripping mechanism to actuate the pawl and means arranged adjacent the car track to actuate the tripping mechanism, as and for the purpose set forth.

877,299. GRASS-CATCHER FOR LAWN-MOWERS. MICHAEL T. CURRAN, St. Louis, Mo. Filed July, 26, 1907. Serial No. 385,605.



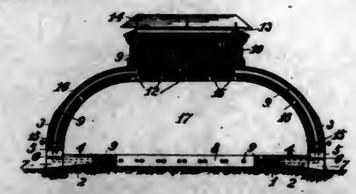
1. A metallic grass catcher comprising a bottom, side walls hinged to said bottom, a rear wall hinged to said bottom, a stiffener wire mounted in said rear wall and provided with eyes, and catch arms pivotally mounted in said side walls and adapted to engage said eyes when the walls are in upright positions, substantially as described.

2. A metallic grass catcher comprising a bottom, side walls hinged to said bottom and provided at their upper edges with beads, a rear wall hinged to said bottom and provided at its upper edge with a bead, a stiffener wire in the bead of said rear wall terminating at its ends in eyes, and stiffener wires loosely mounted in the beads of said side walls and provided with hook arms adapted to engage the eyes of the stiffener wire in the rear wall when the walls are in upright positions, substantially as described.

3. A metallic grass catcher comprising a bottom having upturned side and rear flanges provided with curled hinge members, and inwardly folding side and rear walls provided with curled hinge members engaging the hinge members of said bottom, substantially as described.

4. A metallic grass catcher comprising a bottom, an inwardly folding rear wall hinged to said bottom, inwardly folding side walls hinged to said bottom and provided at their rear ends with inturned flanges adapted to receive said rear wall when the walls are in upright positions, and means for connecting the said walls when they are in upright positions, substantially as described.

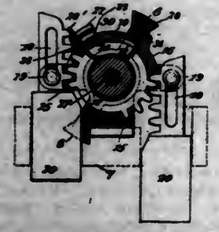
877,300. KILN FOR BURNING BRICK, LIME, AND SIMILAR MATERIAL. PAUL CZIGLER, Székes-Fejérvár, Austria-Hungary. Filed Dec. 29, 1906. Serial No. 349,969.



1. A kiln for burning bricks and the like comprising a bottom having a trough 8 therein and channels 9 leading from said trough to the sides of the bottom, an inclosing wall having channels therein forming continuations of the channels 9, a roof having a chamber therein into which the channels of the walls lead, said roof having channels 12 therein leading from the chamber into the kiln, and a movable roof for closing or opening said chamber to the atmosphere, substantially as described.

2. A kiln for burning bricks and the like comprising a bottom having a trough 8 therein and channels 9 leading from said trough to the sides of the bottom, an inclosing wall having channels therein forming continuations of the channels 9, a roof having a chamber therein into which the channels of the walls lead, said roof having channels 12 therein leading from the chamber into the kiln, a movable roof for closing or opening said chamber to the atmosphere, and doors 15 for controlling the channels 9 and 12, substantially as described.

877,301. WALL-SWITCH. JOHN H. DALE, New York, N. Y. Filed May 18, 1906. Serial No. 317,447.



1. In an electric switch, a gear having teeth at diametrically opposite points separated by plain or untoothed portions, means for angularly moving the same, a switch blade, means carrying said blade and having a detent in the path of said teeth, fixed means normally engaging said detent, and spring connections between said gear and switch blade.

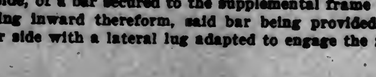
2. In an electric switch, a pair of buttons having racks attached thereto, a mutilated gear in engagement with said racks, a switch blade co-axial with said gear, means for impelling said switch blade to have an abrupt movement, and means acted upon by the teeth of said gear for releasing said switch blade after a predetermined angular movement of the gear.

3. In an electric switch, a switch element having an arm movable therewith, a detent having ears to engage said arm and slidable radially thereon, said detent having inclined or cam surfaces, a gear having an arm, spring connections between said arms, said gear being arranged to impinge against said inclined surfaces and release the detent.

4. In an electric switch, a frame having a plate extension projecting therefrom, said plate extension having a pair of notches therein, a spindle carried by and rotatable within said plate extension, switch blades carried by said spindle, means for impelling said spindle rotatably, and means normally resting in the notches of said plate extension arranged to resist movement of the spindle.

5. In an electric switch, a frame having a plate extension rigidly projecting therefrom, said plate extension having a pair of notches therein, a spindle carried by and rotatable within said plate extension, a spring for impelling said spindle in direction of rotation, means normally resting in said notches for restraining movement of the spindle, and a part movable to release the spindle after a predetermined movement of said part.

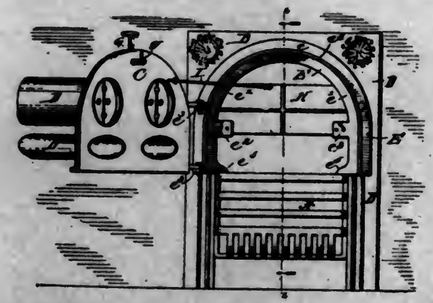
877,302. COLLAR. CHARLES W. T. DAVIES, London, England. Filed May 25, 1906. Serial No. 318,704.



1. A collar or analogous article having means for connection with the front fastening of a shirtband whose attachment to and contact with the collar ceases at points on the inner faces of its lower forecorners, these being free from each other for any desirable manipulation.

2. A collar or analogous article having its lower forecorners undercut to more effectively hold a necktie and provided with means for connection with the band of a shirt whose attachment to and contact with the collar ceases at points on the inner faces of its lower forecorners, these being free from each other for any desirable manipulation.

877,303. HEATING ATTACHMENT FOR GRATES AND FIREPLACES. FRANK A. DELPH, New Orleans, La., assignor of one-half to Brooks A. Colomb, Colomb, La. Filed June 25, 1907. Serial No. 380,736.



1. The combination, with the fireplace frame and a supplemental frame applied to the upper front portion of the same, of an anchoring device consisting of a bar secured at its front end to the supplemental frame and extended rearward therefrom substantially as described.

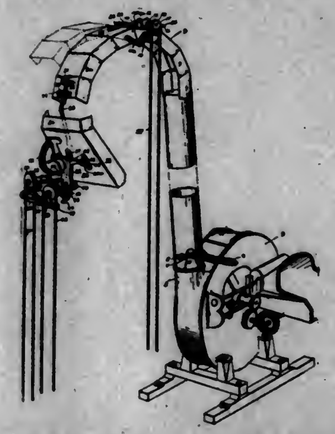
2. The combination, with the fireplace frame and the supplemental frame applied to its upper portion on the outer side, of a bar secured to the supplemental frame and extending inward thereform, said bar being provided on its rear side with a lateral lug adapted to engage the fireplace frame and thus hold the supplemental frame in place, substantially as described.

3. The combination, with a fireplace frame and a supplemental frame secured thereto and having inwardly extended bars and a baffle plate adapted to rest on such bars, substantially as described.

4. The combination, with the fireplace frame and a supplemental frame applied thereto, of rearwardly extended bars secured to said supplemental frame, a baffle plate resting normally on these bars, a front plate hinged on the supplemental frame and means for loosely connecting it with the baffle plate whereby when the front plate is swung out laterally the baffle plate is raised as shown and described.

5. The combination, with a fireplace frame and a supplemental frame attached to the upper portion thereof, a front plate hinged on the supplemental frame and adapted to swing laterally, bars attached to the sides of the supplemental frame and extending inward therefrom, the same having side flanges f^9, a baffle plate adapted to rest on said bars and to close within the said flanges and means for connecting the baffle plate with the front swinging plate, substantially as described.

877,304. SILAGE-DISTRIBUTER. JOSEPH DICK, Canton, Ohio. Filed June 24, 1907. Serial No. 380,410.



1. In a pneumatic blower, a discharge tube having an annular flange adjacent to its end, an elevator pipe adapted to telescope over the tube and to rest on the flange, loops on the sides of the pipe adapted to engage the hooks of a bifurcated wrench, whereby the pipe can be rotated on the tube.

2. In a hinged deflector for a pneumatic-blower elevator pipe, an adjusting mechanism on one deflector-section comprising a journaled bevel-cog-wheel, a guide, an endwise-movable threaded-rod in the guide and connected with the other deflector-section, a rotatable bevel-cog-wheel having a threaded-axial-aperture on the rod meshing with the other cog-wheel and abutting the guide, there being hubs on the cog-wheels with the end of the threaded-hub abutting the end of the journaled-hub, and means for operating the gearing.

3. In a hinged-deflector for a pneumatic-blower elevator-pipe, an adjusting-mechanism on one deflector-section comprising a transversely-journaled shaft, a bevel-cog-wheel and a pulley fixed on the shaft, a longitudinal-guide, an endwise-movable threaded-rod in the guide and having a transverse pivot on one end and a stop on the other end, a rotatable bevel-cog-wheel having a threaded-axial-aperture on the rod meshing with the other bevel-cog-wheel and abutting the guide, and a bearing on the other deflector section for the transverse pivot on the rod.

4. In a hinged-deflector for a pneumatic-blower elevator-

pipe, an adjusting-mechanism on one deflector-section comprising a rotatable shaft, a cog-wheel and a pulley fixed on the shaft, a guide, an endwise-movable threaded-rod in the guide, a rotatable cog-wheel having a threaded-axial-aperture on the rod meshing with the other cog-wheel and abutting the guide, the rod being connected with the other deflector-section at one end and having a stop on the other end.

5. In a hinged-deflector for a pneumatic-blower-pipe, an adjusting-mechanism on one deflector-section comprising a guide, an endwise-movable threaded-rod in the guide, a rotatable-wheel having a threaded-axial-aperture on the rod and abutting the guide, the rod being connected with the other deflector-section at one end and having a stop on the other end, and means for rotating the wheel.

[Claims 6 to 19 not printed in the Gazette.]

877,305. SAFETY-STOP FOR TRAINS. LEWIS T. DIEBOLT, Logansport, Ind., assignor of one-half to Frank L. Hartwick, Logansport, Ind. Filed May 25, 1907. Serial No. 375,670.



1. The combination of a locomotive, a train pipe, a valve casing supported on the locomotive and connected with the train pipe, a valve in the casing mounted to rock, means for setting the valve from the cab of the locomotive, a head on the valve, and an arm extending from the head, with a trip device adapted to be located in the path of the said arm and adapted to yield downwardly in either direction, means for throwing the said device to and from an erect position, and yielding means for cushioning the movement of the device in both directions.

2. In an apparatus of the class described, the combination of a track, a trip device adjacent the track and mounted to rock in either direction, a longitudinally-movable member mounted adjacent the device, power transmitting means between the member and device, an operating lever, and a connection between the lever and device, said connection including oppositely-disposed springs arranged to permit the member to move in either direction when the trip device is depressed by a train passing in either direction.

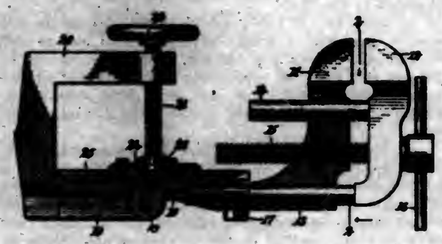
3. In an apparatus of the class described, the combination of a track, an oscillatory trip device, an actuating element composed of a plurality of sections, means for actuating the element in either direction, and cushioning devices between the adjacent sections of the element, each cushioning device comprising a pair of springs for permitting the trip device to yield in either direction.

4. In an apparatus of the class described, the combination of a track, a tripping device adjacent the track mounted to swing to and from a vertical position in either direction, an actuating member extending parallel with the track, a rack and gear mechanism between the member and tripping device, a cushioning means connected with the member and including oppositely-disposed yielding devices acting on the member, and an operating mechanism for the member.

5. In an apparatus of the class described, the combination of a track, a signal device, a tripping mechanism adjacent the track adapted to bring a train to rest, and a common actuating mechanism for the signal and tripping mechanism and including slidably connected members and separately acting compressible devices between the members for yieldingly holding the tripping mechanism in operative position.

[Claims 6 to 14 not printed in the Gazette.]

877,306. REPAIR-TOOL. WINFIELD L. DINSMOOR, Long-beach, Cal. Filed Aug. 7, 1907. Serial No. 387,447.



1. In a tool of the character described, a clamping member having a vise jaw rigidly connected therewith, a second clamping member operable to clamp an object to either the bottom or the top face of the first, and a second vise jaw movable to and from the first-named vise jaw.

2. In a tool of the character described, in combination, a clamp comprising a fixed clamping member and a movable clamping member adapted to clamp an object to either the bottom or top face of the fixed clamping member, and a vise carried by the fixed clamping member.

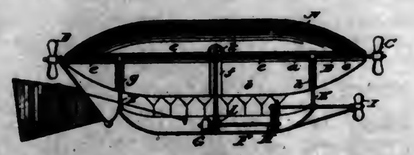
3. In a tool of the character described, a clamping member having a vise jaw rigidly connected therewith, a yoke connected with the clamping member and overhanging the same, a second clamping member, means carried by the yoke for moving the second clamping member to and from the first-named member, and a second vise jaw movable to and from the first-named vise jaw.

4. In a tool of the character described, a clamp comprising a fixed clamping plate having feet projecting from the under face thereof, a yoke pivotally connected to the under face of said clamping plate, a second clamping plate carried by said yoke movable to and from the fixed clamping plate, and a vise rigidly connected with the fixed plate.

5. In a tool of the character described, a fixed clamping plate having an upwardly-projecting vise jaw rigidly connected at one side thereof, a second vise jaw movable to and from the first, a yoke pivotally connected to the under face of said plate, a screw threaded through said yoke, and a second clamping plate carried by said screw movable to and from said fixed clamping plate.

[Claim 6 not printed in the Gazette.]

877,307. AIR-SHIP. WILLIAM C. DUNN, Kansas City, Mo. Filed Nov. 12, 1906. Serial No. 342,990.



1. An air ship comprising a gas bag provided with a central longitudinal passage and an opening extending radially from said passage to the periphery of said gas bag running from end to end thereof, a propeller shaft mounted in said passage, and means for uniting the contiguous walls of said opening.

2. An air ship comprising a gas bag provided with a central longitudinal passage and an opening extending radially from said passage to the periphery of said gas bag running from end to end thereof, bearings located in said passage, a propeller shaft mounted in said bearings and extending through said passage, and means for uniting the contiguous walls of said opening.

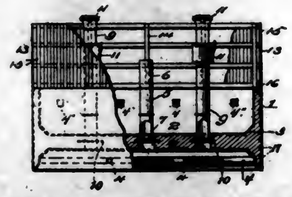
3. An air ship comprising a gas bag provided with a central longitudinal passage and an opening extending radially from said passage to the periphery of said gas bag running from end to end thereof, a propeller shaft extending through said passage, a car suspended from said shaft, and means for uniting the contiguous walls of said opening.

4. An air ship comprising a gas bag provided with a central longitudinal passage and an opening extending radially from said passage to the periphery of said gas bag running from end to end thereof, securing devices attached to the contiguous walls of said opening by means of which said walls may be united, and a propeller shaft mounted in said passage.

5. An air ship comprising a gas bag provided with a central longitudinal passage and an opening extending radially from said passage to the periphery of said gas bag running from end to end thereof, lacing studs secured to the contiguous walls of said opening, laces uniting said studs, and a propeller shaft mounted in said passage.

[Claims 6 to 11 not printed in the Gazette.]

877,308. PNEUMATIC CAISSON. OLIVER C. EDWARDS, Jr., Rensselaer, N. Y. Filed Nov. 11, 1905. Serial No. 286,924.



1. In a caisson, the combination with an inclosing concrete casing, a roof formed integral with and connecting the walls of said casing, and bracing means formed integral with said walls and lying parallel to one of the faces of said roof.

2. In a caisson, the combination of a vertical concrete casing, an integral horizontal roof of the same material, and a bracing strut formed integral with and connecting opposite sides of the wall of said casing and formed of the same material as said casing, said strut being arranged beneath said roof.

3. In a caisson, the combination of a concrete casing, a horizontal roof of the same material, formed integral with the walls of said casing, and spaced above the lower end of the casing a distance sufficient for producing the working chamber, and bracing struts formed integral with the wall of said casing and extending across said working chamber.

4. In a caisson, the combination of a concrete casing, a roof formed integral with said casing and spaced above the lower end thereof a distance sufficient for producing a working chamber, and horizontal braces formed integral with and connecting the walls of said casing within said chamber for preventing inward giving of said walls.

5. In a caisson, the combination with a concrete casing, a concrete roof spaced above the lower end of the said casing, and knee-braces connecting the walls of the caisson with the roof, said knee-braces being formed integral with such walls and roof.

[Claims 6 to 20 not printed in the Gazette.]

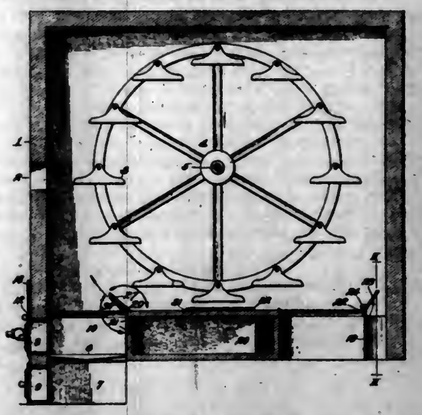
877,309. DEODORIZER-RECEPTACLE. ROBERT B. EMERSON, Jackson, Mich. Filed Sept. 22, 1906. Serial No. 335,805.



1. In a device of the class described, a base shell having a flaring lower portion and a threaded upper portion, the flaring portion adapted to be attached to a permanent support, an upper shell having a perforated upper portion and an internally and externally threaded lower portion and adapted to be detachably engaged by the base shell, and a perforated disk disposed at the juncture of the two shells, and means whereby said disk is adapted to support the material within the upper shell and to compress the material therein.

2. A device of the class described comprising a base shell having a flaring lower portion and adapted to be secured to a permanent support and with the upper portion threaded, an upper perforate shell with an open lower end externally and internally threaded and detachably engaging said base shell by its externally threaded portion, and a perforated disk adjustably engaging the inner threaded portion of said outer shell.

877,310. BAKE-OVEN. WILLIAM ERNST, San Francisco, Cal. Filed Dec. 26, 1905. Serial No. 293,163.



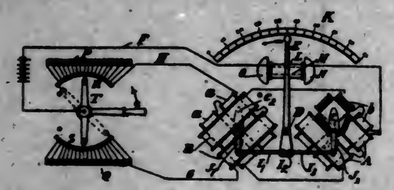
1. In a bake oven, a furnace having a central flue terminating short of the rear wall of the oven and having a rear end closed by a wall provided with one or more openings near its upper edge, and auxiliary flues leading from the side of the central flue near the rear end of the same toward the front wall of the oven and having their front ends closed by walls provided by one or more openings near their upper edges, the said walls in the ends of the flues permitting a retarded flow of the heat currents to the baking chamber, and deflectors at the ends of the flues above the openings in the end walls thereof arranged to have their lower faces interposed in the paths of the heat currents whereby the said currents may be cut off or thrown toward the front and rear walls of the bake oven.

2. In a bake oven, a furnace comprising a flue and a pair of auxiliary flues at opposite sides of and communicating at their rear ends with the first-named flue and having in their front ends one or more openings, swinging plates secured to the front ends of the auxiliary flues above said openings and projecting upwardly and forwardly toward the front wall of the oven, and a rigid plate upon the main flue in alinement with the plates of the auxiliary flues and extending upwardly and forwardly toward the front wall of the oven.

877,311. ELECTRIC SIGNALING APPARATUS. SYDNEY EVERSHED, London, England, assignor to himself and Evershed and Vignoles Limited, London, England, a Corporation. Filed Dec. 23, 1905. Serial No. 293,121.

1. In combination, a resistance transmitter, two combined current ratio indicators, one circuit from the transmitter passing in series round the two coils which are both relatively to the needles in the same plane, the other circuit from the transmitter passing in series round the

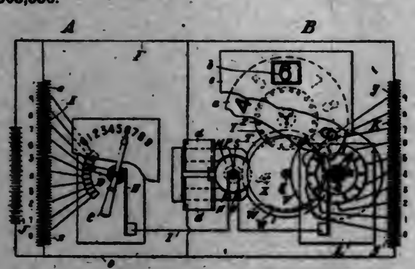
other two coils which are at right angles to the two former ones as regards the two needles, the said two needles being made as ellipsoids of revolution, and the said coils being brought as close as possible to the said needles.



2. In combination, a resistance transmitter, two combined current ratio indicators with two coils of the indicator connected in series to one transmitter circuit, the other passing round the other two coils of the indicators, the two needles being made as ellipsoids of revolution and a magnet the coil of which is in the common return wire of the two indicator circuits the said magnet being situated above the said indicators, and under the pointer, having a pole at either end the distance from each pole to the nearest indicator coil being the same.

3. In combination, a transmitter, a current ratio indicator, two double coils each double coil having its separate or component coils at an angle of 90° to one another, two ellipsoid needles one of which is snugly inclosed in each of the said double coils, an arm fixed to each of the said needles, a crank fixed at the end of each arm, connecting links pivoted on the said cranks, and connected to the rear end of a pivoted indicating pointer.

877,312. ELECTRICAL TRANSMISSION APPARATUS. SIDNEY EVERSHED, Chiswick, England, assignor to himself, and Evershed and Vignoles Limited, London, England, a Corporation. Filed Feb. 28, 1906. Serial No. 303,556.



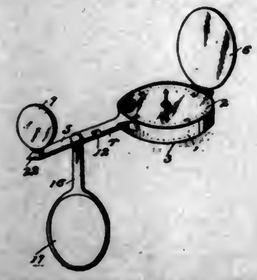
1. In receiving apparatus for repeating the movements of a transmitter, the combination of a bridge motor in a balancing circuit, a repeating device, a subdivided resistance, a multiple point switch connected to said resistance, gear connecting the repeating device and the switch to the bridge motor and means for securing exact correspondence of the receiver with the transmitter, substantially as described.

2. In receiving apparatus for repeating the movements of a transmitter the combination of a bridge motor in a balancing circuit, a repeating device, a subdivided resistance, a multiple point switch adapted to make contact with any subdivision of the said resistance, gear connecting the repeating device and the switch to the bridge motor, and auxiliary resistance adapted to secure exact correspondence of the receiver with the transmitter substantially as described.

3. In receiving apparatus for repeating the movements of a transmitter the combination of a bridge motor, a repeating device, a subdivided resistance, a multiple point switch adapted to make contact with any subdivision of the said resistance, gear connecting the repeating device and the switch to the bridge motor, and auxiliary resistances adapted to secure exact correspondence of the receiver with the transmitter, substantially as described.

4. In receiving apparatus for repeating the movements of a transmitter the combination of a bridge motor, a repeating device, a subdivided resistance having intermediate potential points between the principal points, a multiple point switch adapted to make contact with any one of the principal or intermediate potential points, gear connecting the repeating device and the switch to the bridge motor, and auxiliary resistance between the intermediate potential points and the switch adapted to secure exact correspondence of the receiver with the transmitter, substantially as described.

877,313. TOURIST'S GLASS. JOHN M. FABERMANN, Houston, Tex. Filed Sept. 6, 1907. Serial No. 391,735.



1. An instrument of the character described, comprising a body portion having a compass in one side thereof, a lens attached directly to one edge of the body portion and adapted to be folded inward over the compass or extended at right angles thereto, an arm rigidly secured to the body portion and extending from the opposite side thereof and a lens-carrying member longitudinally adjustable upon the arm, a lens carried by said member and adapted to be folded inward and to be extended at right angles to said member.

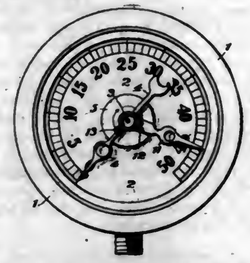
2. An instrument of the character described comprising a body portion having a compass in one side thereof, a lens attached to one edge of the body portion and adapted to be folded over the compass or extended at right angles thereto, an arm extending from the opposite edge of the body portion and carrying an inwardly-folding coöperating lens, and a folding handle connected with the said arm at a point opposite the last mentioned lens.

3. An instrument of the character described, comprising a body portion having in one side a compass, an inwardly-folding lens attached to one edge of the body portion, an arm extending from the opposite edge of the body portion, an inwardly-folding coöperating lens carried by the said arm, a folding handle projecting from the opposite end of the arm and carrying a lens a distance from its hinge substantially equal to the length of the said arm, whereby the lens will fold against the opposite side of the body portion when the handle is folded.

4. An instrument of the character described, comprising a body portion having in one side a compass and in its opposite side a mirror, an inwardly-folding lens hinged to the edge of the body portion, an arm projecting from the opposite edge of the body portion and carrying an inwardly-folding coöperating lens, an inwardly-folding handle carried by the arm and located opposite the last-mentioned lens, the handle being of a length substantially equal to the length of the arm, the handle having projecting therefrom a lens, whereby when the handle is folded the lens will cover the mirror to form a magnifying mirror.

877,314. REGISTERING ATTACHMENT FOR PRESSURE-GAGES. PHILIP FEE, Providence, R. I. Filed Apr. 20, 1906. Serial No. 312,850.

1. In a pressure gage, the combination with the dial plate, and the indicating hand, of a registering hand associated with the indicating hand but independent thereof, said registering hand adapted to be moved by the indicating hand, a stud carried by the registering hand, a contact carried by the indicating hand and projecting at the inner side thereof for engaging said stud on the forward movement of the indicating hand to move the registering hand to the point of maximum pressure reached, said registering hand remaining at the point to which it is moved by the indicating hand, and a retaining plate connected to the registering hand at the rear of the dial plate and overlapping the contiguous portions of the dial plate to hold the registering hand upon the dial plate independently of the indicating hand.

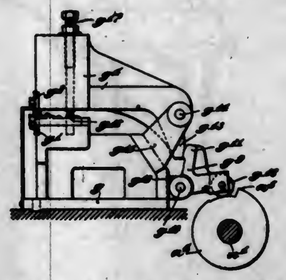


2. In a pressure gage, the combination with the dial plate, and the indicating hand, said dial plate being provided with a centrally-arranged opening, of a disk provided with a hub seated in said opening of the dial plate, a registering hand carried by said disk and adapted to be moved by the indicating hand, a stud carried by said disk, a contact carried by the indicating hand and projecting at the inner side thereof for engaging said stud on the forward movement of the indicating hand to move the registering hand to the point of maximum pressure reached, said registering hand remaining at the point to which it is moved by the indicating hand, and a retaining plate connected to said hub at the rear of the dial plate and overlapping the contiguous portions of the dial plate to hold the registering hand upon the dial plate independently of the indicating hand.

3. As an improved article of manufacture, a register for pressure gages comprising a disk provided with a hub adapted to fit an opening formed in the dial plate of a gage, the hub of said disk being of a thickness whereby its inner face will lie substantially flush with the inner face of the dial plate, a retaining plate associated with said hub and adapted to overlap the portions of the dial plate contiguous to the opening in which said hub is placed for holding the disk upon the dial plate, means for securing said retaining plate to said hub, a hand carried by said disk and coöperating with the graduations of the dial plate to indicate the point of maximum pressure reached, and means whereby the disk is operated by the forward movement of the indicating hand of the gage.

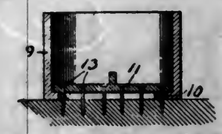
877,315. METAL-SWAGING MACHINE. WILLIAM FEHR, Philadelphia, Pa., assignor to Steel Heddle Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Original application filed Dec. 22, 1905, Serial No. 292,946. Divided and this application filed Nov. 26, 1906, Serial No. 345,020. Renewed Oct. 21, 1907. Serial No. 398,504.

1. In a machine of the character described, a support having a tool forming an anvil, a second support having a tool forming a hammer at one side and a depending projection at the other side and pivotally supported at a point between the hammer and projection and in proximity to the pivot by said first support, a bell crank lever pivotally connected with said first support and contacting with said projection, a cam having an inclined throw portion and a depression, means carried by said lever and contacting with said cam, said cam and means coöperating to impart to said lever and by the same to said second support and its tool a gradual upward movement and to permit of a quick descent by gravity when said means descend into the depression of said cam to form in a metal strip passing between the tools, depressions from opposite sides thereof.



2. In a machine of the character described, a support having a tool forming an anvil, a second support having a tool forming a hammer pivotally supported by said first support, and a depending portion on the side of the pivot opposite the hammer, a bell crank lever pivotally connected with said first support and contacting with said projection, a cam having a gradually inclined throw portion and a depression, and a roller carried by said lever and contacting with said cam, said cam and roller coöperating to impart to said lever and by the same to said second support and its tool a gradual upward movement and to permit of a quick descent by gravity when the roller descends into the depression of said cam to swage the slotted end portions of a metal strip passing between the tools from opposite sides thereof.

877,316. FERTILIZER-DISTRIBUTER. EDWARD F. FISHER, Atkinson, Nebr. Filed Feb. 9, 1907. Serial No. 358,257.



1. A fertilizer distributer comprising a fertilizer receiving reservoir formed with an opening in the bottom, means for loosening the earth below the opening, and means for forcing the fertilizer from said openings into the earth.

2. A fertilizer distributer comprising a fertilizer receiving reservoir, the bottom of said reservoir being formed with an opening, means for forming a well in the earth below the reservoir and within the plane of the opening, said means operating to force a portion of the fertilizing material from the reservoir into the well.

3. A fertilizer distributer comprising a reservoir formed with an opening in the bottom, and a scraping board for use within the reservoir and having teeth, said board being capable of independent movement relative to the reservoir.

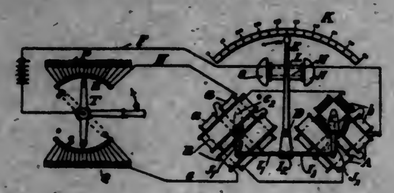
4. A fertilizer distributer comprising a reservoir formed with an opening in the bottom, a scraping board for use within the reservoir and having teeth, said board being capable of independent movement relative to the reservoir and formed with an opening, and a well former designed to be forced through the opening in the board and form a well in the ground beneath the reservoir.

877,317. AURIPHONE. DANIEL O. FOSGATE, Chicago, Ill. Filed Apr. 18, 1907. Serial No. 369,033.

1. In an instrument of the class described, the combination of a mouthpiece, a single sound conducting tube, and a multiple connection between the mouthpiece and tube.

2. In an instrument of the class described, the combination of a mouthpiece, a single sound conducting tube, and

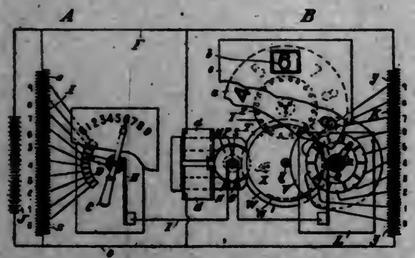
other two coils which are at right angles to the two former ones as regards the two needles, the said two needles being made as ellipsoids of revolution, and the said coils being brought as close as possible to the said needles.



2. In combination, a resistance transmitter, two combined current ratio indicators with two coils of the indicator connected in series to one transmitter circuit, the other passing round the other two coils of the indicators, the two needles being made as ellipsoids of revolution and a magnet the coil of which is in the common return wire of the two indicator circuits the said magnet being situated above the said indicators, and under the pointer, having a pole at either end the distance from each pole to the nearest indicator coil being the same.

3. In combination, a transmitter, a current ratio indicator, two double coils each double coil having its separate or component coils at an angle of 90° to one another, two ellipsoid needles one of which is snugly inclosed in each of the said double coils, an arm fixed to each of the said needles, a crank fixed at the end of each arm, connecting links pivoted on the said cranks, and connected to the rear end of a pivoted indicating pointer.

877,312. ELECTRICAL TRANSMISSION APPARATUS. SYDNEY EVERSHED, Chiswick, England, assignor to himself, and Evershed and Vignoles Limited, London, England, a Corporation. Filed Feb. 28, 1906. Serial No. 303,556.



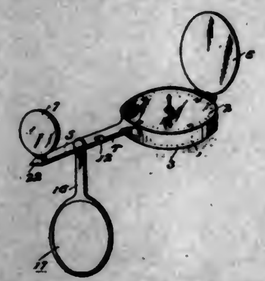
1. In receiving apparatus for repeating the movements of a transmitter, the combination of a bridge motor in a balancing circuit, a repeating device, a subdivided resistance, a multiple point switch connected to said resistance, gear connecting the repeating device and the switch to the bridge motor and means for securing exact correspondence of the receiver with the transmitter, substantially as described.

2. In receiving apparatus for repeating the movements of a transmitter the combination of a bridge motor in a balancing circuit, a repeating device, a subdivided resistance, a multiple point switch adapted to make contact with any subdivision of the said resistance, gear connecting the repeating device and the switch to the bridge motor, and auxiliary resistance adapted to secure exact correspondence of the receiver with the transmitter substantially as described.

3. In receiving apparatus for repeating the movements of a transmitter the combination of a bridge motor, a repeating device, a subdivided resistance, a multiple point switch adapted to make contact with any subdivision of the said resistance, gear connecting the repeating device and the switch to the bridge motor, and auxiliary resistances adapted to secure exact correspondence of the receiver with the transmitter, substantially as described.

4. In receiving apparatus for repeating the movements of a transmitter the combination of a bridge motor, a repeating device, a subdivided resistance having intermediate potential points between the principal points, a multiple point switch adapted to make contact with any one of the principal or intermediate potential points, gear connecting the repeating device and the switch to the bridge motor, and auxiliary resistance between the intermediate potential points and the switch adapted to secure exact correspondence of the receiver with the transmitter, substantially as described.

877,313. TOURIST'S GLASS. JOHN M. FABRMANN, Houston, Tex. Filed Sept. 6, 1907. Serial No. 391,785.



1. An instrument of the character described, comprising a body portion having a compass in one side thereof, a lens attached directly to one edge of the body portion and adapted to be folded inward over the compass or extended at right angles thereto, an arm rigidly secured to the body portion and extending from the opposite side thereof and a lens-carrying member longitudinally adjustable upon the arm, a lens carried by said member and adapted to be folded inward and to be extended at right angles to said member.

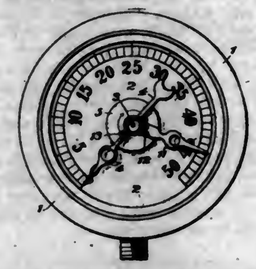
2. An instrument of the character described comprising a body portion having a compass in one side thereof, a lens attached to one edge of the body portion and adapted to be folded over the compass or extended at right angles thereto, an arm extending from the opposite edge of the body portion and carrying an inwardly-folding coöperating lens, and a folding handle connected with the said arm at a point opposite the last mentioned lens.

3. An instrument of the character described, comprising a body portion having in one side a compass, an inwardly-folding lens attached to one edge of the body portion, an arm extending from the opposite edge of the body portion, an inwardly-folding coöperating lens carried by the said arm, a folding handle projecting from the opposite end of the arm and carrying a lens a distance from its hinge substantially equal to the length of the said arm, whereby the lens will fold against the opposite side of the body portion when the handle is folded.

4. An instrument of the character described, comprising a body portion having in one side a compass and in its opposite side a mirror, an inwardly-folding lens hinged to the edge of the body portion, an arm projecting from the opposite edge of the body portion and carrying an inwardly-folding coöperating lens, an inwardly-folding handle carried by the arm and located opposite the last-mentioned lens, the handle being of a length substantially equal to the length of the arm, the handle having projecting therefrom a lens, whereby when the handle is folded the lens will cover the mirror to form a magnifying mirror.

877,314. REGISTERING ATTACHMENT FOR PRESSURE-GAGES. PHILIP FEE, Providence, R. I. Filed Apr. 20, 1906. Serial No. 312,859.

1. In a pressure gage, the combination with the dial plate, and the indicating hand, of a registering hand associated with the indicating hand but independent thereof, said registering hand adapted to be moved by the indicating hand, a stud carried by the registering hand, a contact carried by the indicating hand and projecting at the inner side thereof for engaging said stud on the forward movement of the indicating hand to move the registering hand to the point of maximum pressure reached, said registering hand remaining at the point to which it is moved by the indicating hand, and a retaining plate connected to the registering hand at the rear of the dial plate and overlapping the contiguous portions of the dial plate to hold the registering hand upon the dial plate independently of the indicating hand.

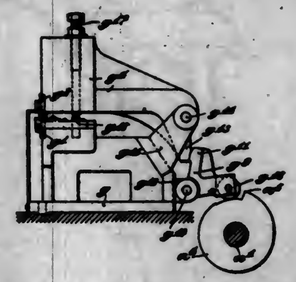


2. In a pressure gage, the combination with the dial plate, and the indicating hand, said dial plate being provided with a centrally-arranged opening, of a disk provided with a hub seated in said opening of the dial plate, a registering hand carried by said disk and adapted to be moved by the indicating hand, a stud carried by said disk, a contact carried by the indicating hand and projecting at the inner side thereof for engaging said stud on the forward movement of the indicating hand to move the registering hand to the point of maximum pressure reached, said registering hand remaining at the point to which it is moved by the indicating hand, and a retaining plate connected to said hub at the rear of the dial plate and overlapping the contiguous portions of the dial plate to hold the registering hand upon the dial plate independently of the indicating hand.

3. As an improved article of manufacture, a register for pressure gages comprising a disk provided with a hub adapted to fit an opening formed in the dial plate of a gage, the hub of said disk being of a thickness whereby its inner face will lie substantially flush with the inner face of the dial plate, a retaining plate associated with said hub and adapted to overlap the portions of the dial plate contiguous to the opening in which said hub is placed for holding the disk upon the dial plate, means for securing said retaining plate to said hub, a hand carried by said disk and coöperating with the graduations of the dial plate to indicate the point of maximum pressure reached, and means whereby the disk is operated by the forward movement of the indicating hand of the gage.

877,315. METAL-SWAGING MACHINE. WILLIAM FEHR, Philadelphia, Pa., assignor to Steel Heddle Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Original application filed Dec. 22, 1905, Serial No. 292,946. Divided and this application filed Nov. 26, 1906, Serial No. 345,020. Renewed Oct. 21, 1907. Serial No. 398,504.

1. In a machine of the character described, a support having a tool forming an anvil, a second support having a tool forming a hammer at one side and a depending projection at the other side and pivotally supported at a point between the hammer and projection and in proximity to the pivot by said first support, a bell crank lever pivotally connected with said first support and contacting with said projection, a cam having an inclined throw portion and a depression, means carried by said lever and contacting with said cam, said cam and means coöperating to impart to said lever and by the same to said second support and its tool a gradual upward movement and to permit of a quick descent by gravity when said means descend into the depression of said cam to form in a metal strip passing between the tools, depressions from opposite sides thereof.



2. In a machine of the character described, a support having a tool forming an anvil, a second support having a tool forming a hammer pivotally supported by said first support, and a depending portion on the side of the pivot opposite the hammer, a bell crank lever pivotally connected with said first support and contacting with said projection, a cam having a gradually inclined throw portion and a depression, and a roller carried by said lever and contacting with said cam, said cam and roller coöperating to impart to said lever and by the same to said second support and its tool a gradual upward movement and to permit of a quick descent by gravity when the roller descends into the depression of said cam to swage the slotted end portions of a metal strip passing between the tools from opposite sides thereof.

877,316. FERTILIZER-DISTRIBUTER. EDWARD F. FISHER, Atkinson, Nebr. Filed Feb. 9, 1907. Serial No. 358,257.



1. A fertilizer distributer comprising a fertilizer receiving reservoir formed with an opening in the bottom, means for loosening the earth below the opening, and means for forcing the fertilizer from said openings into the earth.

2. A fertilizer distributer comprising a fertilizer receiving reservoir, the bottom of said reservoir being formed with an opening, means for forming a well in the earth below the reservoir and within the plane of the opening, said means operating to force a portion of the fertilising material from the reservoir into the well.

3. A fertilizer distributer comprising a reservoir formed with an opening in the bottom, and a scraping board for use within the reservoir and having teeth, said board being capable of independent movement relative to the reservoir.

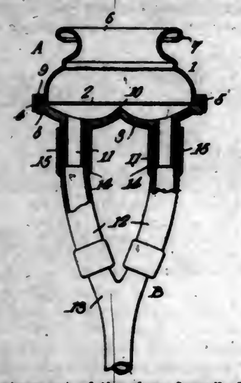
4. A fertilizer distributer comprising a reservoir formed with an opening in the bottom, a scraping board for use within the reservoir and having teeth, said board being capable of independent movement relative to the reservoir and formed with an opening, and a well former designed to be forced through the opening in the board and form a well in the ground beneath the reservoir.

877,317. AURIPHONE. DANIEL O. FOSGATE, Chicago, Ill. Filed Apr. 18, 1907. Serial No. 369,033.

1. In an instrument of the class described, the combination of a mouthpiece, a single sound conducting tube, and a multiple connection between the mouthpiece and tube.

2. In an instrument of the class described, the combination of a mouthpiece, a single sound conducting tube, and

a plurality of branches connecting the mouthpiece with the tube.



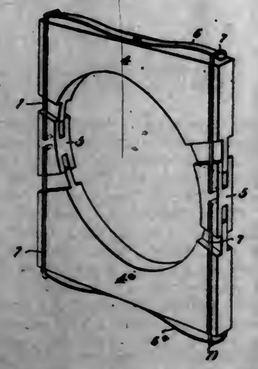
8. In an instrument of the class described, the combination of a mouthpiece having a plurality of nipples, with a single sound conducting tube having branches connected with the nipples.

4. In an instrument of the class described, the combination of a mouthpiece, with a single sound conducting tube having a plurality of connections with the mouthpiece.

5. In an instrument of the class described, the combination of a mouthpiece, a plurality of nipples thereon, a single sound conducting tube, a pair of flexible tubes connected with the nipples, and a Y-coupling between the flexible tubes and sound conducting tube.

[Claims 6 to 11 not printed in the Gazette.]

877,318. DUST-GUARD FOR CAR-AXLE JOURNAL-BOXES. ROBERT E. FRAME, St. Louis, Mo., assignor of one-half to Herbert W. Wolff, St. Louis, Mo. Filed Mar. 9, 1907. Serial No. 361,461.



1. In a dust guard, a plurality of segmental sections comprehending the major part of the circumference of the axle and arranged above and below the axle, a plurality of leaf-springs extending approximately parallel to said sections and exerting pressure upon them to force them toward the axle, other sections comprehending a minor part of the circumference of the axle, the sections first referred to being adapted to move relatively to said minor sections, and links secured at their inner ends to said minor sections and passing around the free ends of said springs; substantially as described.

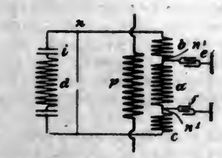
2. In a dust guard, the combination with top and bottom sections comprehending the major part of the circumference of the axle, of middle side sections arranged between the top and bottom sections, the top and bottom sections being adapted to move relatively to the middle sections, leaf springs secured to the top and bottom sections, and a pair of links secured to each of said middle side sections and passing around the end portions of said leaf springs; substantially as described.

3. In a dust guard, the combination with top and bottom sections, middle side sections having tongue and groove connection with said top and bottom sections, the top and bottom sections being adapted to move relatively to said middle sections, a leaf spring mounted on each of said top and bottom sections, and wire loops engaging the free ends of said leaf springs, said wire loops being connected to said middle side sections; substantially as described.

4. In a dust guard, the combination with top and bottom sections, leaf springs connected to each of said sections, middle side sections, wire loops mounted on said middle side sections and engaging the free ends of said leaf springs, said top and bottom sections being grooved to receive said wire loops; substantially as described.

5. In a dust guard, top and bottom sections, and middle side sections, said sections having tongue and groove connection with each other, the edges of the tongue and the shoulders on the section carrying said tongue being cut at angles to each other, said shoulders being disposed radially, and the bottoms of the grooves and the outer edges of the side walls of the grooves being also cut at angles to each other; substantially as described.

877,319. TRANSFORMER EMPLOYED IN HIGH-FREQUENCY-CURRENT CIRCUITS. GEORGES E. GAIFFE, Paris, France. Filed Nov. 8, 1904. Serial No. 231,892.



1. The combination of an oscillation circuit, a secondary winding for energizing the same, and means for protecting said secondary winding from potential strains accumulating within said oscillation circuit.

2. The combination of an oscillation circuit, a secondary winding for energizing the same, and resistances inserted intermediate of said oscillation circuit and said secondary winding for protecting the latter from potential strains of said oscillation circuit.

3. The combination of an oscillation circuit, a secondary winding for energizing the same, resistances inserted intermediate of said oscillation circuit and said secondary winding and preventing disruptive discharges from taking place from said oscillation circuit to said secondary winding, and condensers for deadening the electric oscillations tending to take place in the secondary winding and capable of producing said disruptive discharges.

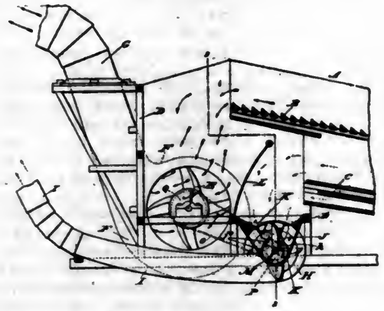
4. The combination of an oscillation circuit, a secondary winding disposed in conductive relation thereto and resistances connected at the ends of said secondary winding, and high potential insulation for preventing the escape of current from said resistances.

5. A safety device for protecting high potential transformers against oscillation of high frequency, comprising a secondary winding, resistances connected with the ends thereof, electric capacities joined intermediate said resistances and said secondary winding.

[Claim 6 not printed in the Gazette.]

877,320. CHAFF-BLOWER. DAVID R. GARDINER, Neepawa, Manitoba, Canada, assignor to Neepawa Manufacturing Company, Neepawa, Canada, a Corporation. Filed Aug. 25, 1906. Serial No. 332,005.

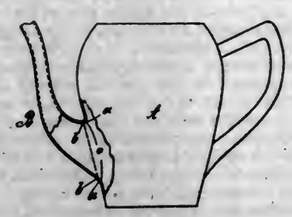
1. A chaff-blower comprising a casing having inlet openings at opposite sides and having a tangentially-disposed outlet, and a rotary fan therein, having its blades arranged to force the air through said outlet and having central disks at its opposite sides, the said disks confronting the said openings in the sides of the casing but located at a distance therefrom sufficient to allow the passage of air through said openings over said disks and in front of the outer lengths of the blades of the fan.



2. A chaff-blower comprising a rotary fan having trough-shaped blades facing in the direction of rotation of the fan and having central disks at its opposite sides of less diameter than the fan as a whole, and a casing inclosing the fan having opposite inlet openings coaxial with said disks and having a tangentially-disposed outlet, the sides of the casing having said openings being spaced at a substantial distance from the respective disks, the said disks being of such size as to cause the air to be drawn through the peripheral portions of said openings and in front of the outer lengths of the blades of said fan.

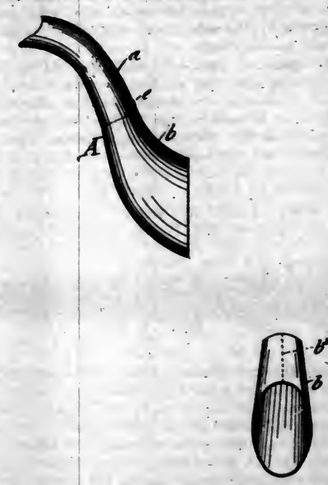
3. In combination with a straw-conveyer for conveying off straw from a separator, the said conveyer having a blower located at the rear or discharge end of the separator, a chaff-blower comprising a casing located between said first-mentioned blower and the rear end of the separator, said casing having opposite inlet openings and a tangentially-disposed outlet chute, a rotary fan therein, a transversely arranged trough located to receive chaff from the separator and adapted for directing chaff into said opposite inlet openings, and a shield behind said trough for preventing the chaff from passing to the straw-conveyer.

877,321. PROCESS OF MANUFACTURING SHEET-IRON VESSELS. JOHANN H. W. GEBLER, Pirna, Germany. Filed Dec. 20, 1905. Serial No. 292,609.



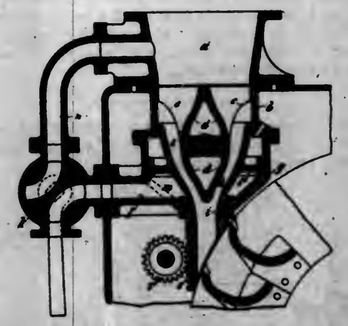
The process of manufacturing sheet-iron vessels, which consists in bending up the edge of the opening in the body of the vessel to which the spout is to be applied, placing the edge of the spout against the edge of said opening and in direct alinement therewith, uniting the parts by subjecting them to the action of an oxyhydrogen flame, and then enameling the vessel.

877,322. SEAMLESS SHEET-METAL SPOUT FOR VESSELS. JOHANN H. W. GEBLER, Pirna, Germany. Filed Dec. 20, 1905. Serial No. 292,610.



A spout for sheet-metal vessels made from two blanks, each of which is bent up and has its side-edges united by a weld joint disposed longitudinally of the spout, the abutting edges of the spout-portions formed by said blanks being united by a transverse weld joint.

877,323. REGULATING-NOZZLE FOR TURBINES. VICTOR GELPKE, Lucerne, Switzerland, and PAUL KUGEL, Dusseldorf, Germany. Filed Oct. 18, 1905. Serial No. 282,664.



1. In regulating nozzle for turbines the combination with the casing and the stationary nozzle core carried by said casing, of the nozzle movable within said casing and surrounding said nozzle core and means for moving said nozzle, substantially as described.

2. In a regulating nozzle for turbines the combination with the casing and the stationary nozzle core carried thereby, of a nozzle surrounding said core and adapted to be forced away from the same by the pressure of the fluid and means for counteracting said pressure, substantially as described.

3. In a regulating nozzle for turbines the combination with the casing and the stationary nozzle core carried thereby of a nozzle surrounding said core and adapted to be forced away therefrom by the pressure of the working stream, a piston connected to said nozzle and means for admitting fluid beneath said piston, substantially as described.

4. In a regulating nozzle for turbines the combination

with the cylinder and the stationary nozzle core carried thereby, of a nozzle surrounding said core sliding in said cylinder, a second cylinder, a piston flange encircling said nozzle and sliding in said second cylinder and means for admitting fluid to said second cylinder beneath said piston, substantially as described.

5. In a regulating nozzle for turbines, the combination with the casing and the stationary nozzle core carried thereby, of a nozzle surrounding said nozzle core, and adapted to slide in said casing, a piston surrounding said nozzle and means for admitting fluid to one side of said piston, substantially as described.

877,324. PIPE-CLEANER. EDGAR T. GILBERT, Rochester, N. Y. Filed Oct. 15, 1906. Serial No. 338,885.



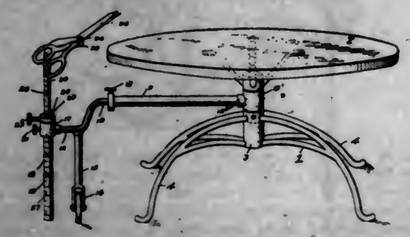
1. A pipe cleaner or analogous device embodying a stiff central core provided with fibers extending radially therefrom, throughout its length to form a complete covering for said core, the lengths of said fibers being increased at intervals to form a succession of tufts or brushes.

2. A pipe cleaner or analogous device embodying a stiff central core provided with groups of fibers of graded lengths extending radially therefrom at intervals and forming a succession of conical tufts or brushes the portions of the core between the tufts being completely covered by similarly arranged fibers of shorter length.

3. A pipe cleaner or analogous device embodying a stiff central core provided with groups of fibers of graded lengths extending radially therefrom at intervals and forming a succession of conical tufts or brushes varying in maximum diameter the portions of the core between the tufts being completely covered by similarly arranged fibers of shorter length.

4. A pipe cleaner or analogous device embodying a stiff central core provided with a series of tufts of fibrous material arranged at intervals throughout the length of the core and intermediate portions of smaller diameter and having absorbent properties.

877,325. GARMENT GAGE AND CUTTER. EDWARD F. GOGGIN, Schenectady, N. Y. Filed Apr. 18, 1907. Serial No. 368,929.



1. In a device of the character described, a platform or stand, a tubular arm pivoted at its inner end to said stand, a rod to slide in said tubular arm, means for securing said rod in an adjusted position in said arm, a stationary sleeve disposed vertically on the outer end of said rod, a tool carrying upright arranged in said sleeve, and means for securing said upright in an adjusted vertical position for horizontal swinging movement, substantially as described.

2. In a device of the character described, a platform or stand, a tubular arm pivoted at its inner end to said stand, a rod to slide in said tubular arm, means for securing said rod in an adjusted position in said arm, a stationary sleeve disposed vertically on the outer end of said rod, a hanger depending from said rod, a roller journaled in said hanger, an upright rod arranged in said sleeve and having an angular upper end, means for securing said upright rod in an adjusted position for free rotary movement, and a pair of scissors carried by the upper angular end of said upright rod, substantially as described.

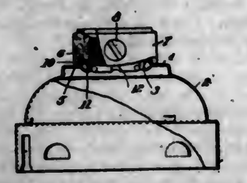
3. In a device of the character described a platform or stand, a swinging arm pivotally mounted upon the same, an upright having an angular upper end, a pair of scissors carried by said upper end of the upright, and means for securing said upright in an adjusted vertical position upon said arm for free rotary movement, substantially as described.

4. In a device of the character described, a platform or stand, an extensible arm pivoted at its inner end upon said stand, a vertical guide upon the outer end of said arm, a tube slidable in said guide, means for securing said tube in said guide, a rod rotatable and slidable in said tube, an adjustable collar upon said rod and a tool carried by the upper portion of said rod.

5. In a device of the character described, a platform or stand, an extensible arm pivoted at its inner end upon said stand, a vertical guide sleeve upon the outer end of said rod, a graduated tube slidable in said sleeve, a set screw for clamping said tube in said sleeve, a graduated rod rotatable and slidable in said tube, a loose collar on said rod, a set screw for clamping said collar on said rod and a tool carried by the upper portion of said rod.

[Claim 6 not printed in the Gazette.]

877,326. ELECTRIC-LIGHT-SOCKET CAP. JOHN H. GOSS, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed May 29, 1907. Serial No. 376,402.



1. An electric light socket cap, having an opening surrounded by a double flange, and a hub arranged in said opening and embracing the double flange on the outside of the opening and on the inside of said opening as well.

2. An electric light socket cap, having a double flange, and a hub grooved in one end and having said groove flanked on the outside and on the inside by walls between which the double flange of the cap is secured.

3. An electric light socket cap, having a double flange, and a hub grooved in one end and having said groove flanked on the outside by a relatively short wall and on the inside by a longer wall, the double flange of the cap being clamped within the groove and between the walls, to effect a rigid union of cap and hub.

4. An electric light socket cap, having a double flange, and a hub grooved in one end and having said groove flanked on the outside by a relatively short wall and on the inside by a longer wall, the groove receiving the double flange of the cap between its own walls and the longer wall expanded within the cap and about said double flange and toward the short wall, to effect a rigid union of the cap and hub and reinforce and strengthen the cap.

5. An electric light socket cap, having an opening therein, a horizontal seat surrounding said opening, a vertical flange rising from the edge of the opening and a horizontal flange at the top of the vertical flange, and a hub having a groove in its lower edge to receive the vertical and horizontal flanges of the cap and flanked by an outside wall resting upon the seat and an inside longer wall extending into the opening in the cap and expanded about the flanges and against the seat, to prevent turning and tearing out of the hub.

877,327. SOUND-PRODUCING MECHANISM. CHARLES F. GRAHAM, near Sellersburg, Ind. Filed Sept. 25, 1905. Serial No. 279,954.



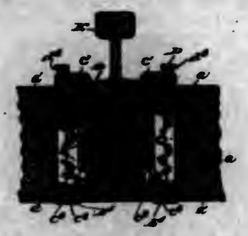
1. In sound-producing mechanism, a diaphragm comprising a gelatiniform plate, and a centrally disposed gelatiniform projection having a surface engagement with one face of the plate, and secured thereto by the adhesive properties of the material comprising the plate and projection.

2. In sound-producing mechanism, a diaphragm comprising a disk composed of gelatin, a centrally disposed triangular projection carried by one face of the disk, and a reproducing device having a connection with the other face of the disk.

3. In sound-producing mechanism, a diaphragm comprising a gelatiniform plate, and a reproducing device having a surface connected with the diaphragm by the adhesive properties of the same.

4. In sound-producing mechanism, a diaphragm comprising a disk composed of gelatin, a centrally disposed triangular projection carried by one face of the disk, and a reproducing device including a post having a surface connection with the diaphragm by the adhesive properties of the gelatin composing the same.

877,328. CROSS-TIE. JOHN F. GRANDY and CHARLES F. GRANDY, Greenville, S. C. Filed May 16, 1907. Serial No. 373,928.



1. A tie comprising a concrete body having reinforcing channel plates on its upper and lower surfaces, the flanges of the plates engaging the sides of the tie, tubular casings arranged within the body, said casings being arranged in pairs near each end of the tie, the members of each pair being spaced apart and offset laterally from each other, said reinforcing plates being provided with openings registering with the ends of the tubular casings, the ends of opposite side walls of the casings being extended through the openings and flanged for engaging the outer faces of said plates, each of said casings having pockets in the inner wall thereof, the pockets being spaced apart from each other and having the wall remote from the adjacent face of the tie inclined toward the interior of the casing, a wedge-shaped spike provided at its thin end with a lip for engaging the rail base, and at its thick end with a lug for entering the pocket remote from the surface of the tie upon which rests the rail, the upper face of the lug being inclined for coöperating with the inclined wall of the pocket, and a wedge-shaped locking pin arranged between the spike and the outer wall of the casing, said pin being provided with a head on its free end.

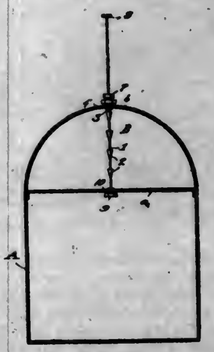
2. A tie having a body portion composed of plastic material, and provided with tubes arranged transversely thereof in pairs near each end of the tie, the members of each pair being spaced apart and offset laterally from each other, each of said tubes being provided with pockets in its inner wall, the pockets being spaced apart from each other and having the wall remote from the adjacent face of the tie inclined toward the interior of the casing, a wedge-shaped spike provided at its thin end with a lip for engaging the rail base and at its thick end with a lug for entering the pocket remote from the surface of the tie upon which rests the rail, the upper face of the lug being inclined for coöperating with the inclined wall of the pocket, and a wedge-shaped locking pin between the spike and the outer wall of the tube.

3. A tie having a body portion composed of plastic material, and provided with tubes arranged transversely thereof in pairs near each end of the tie, the members of each pair being spaced apart and offset laterally from each other, a wedge-shaped spike provided at its thin end with a lip for engaging the rail base and at its thick end with a lug for entering the pocket remote from the surface of the tie upon which rests the rail, the upper face of the lug being inclined for coöperating with the inclined wall of the pocket, and means engaging the spike and the wall of the tube for locking said spike in position.

4. A tie having a body portion composed of plastic material, and provided with tubes arranged transversely thereof in pairs near each end of the tie, the members of each pair being spaced apart and offset laterally from each other, each of said tubes having pockets in its inner wall, the pockets being spaced apart from each other and having the wall remote from the adjacent face of the tie inclined toward the interior of the casing, a spike provided at one end with a lip for engaging the rail base, and at the other with a lug for entering the pocket remote from the surface of the tie upon which rests the rail, and means for locking the spike within the tube.

5. A tie of the class described, having vertical tubular openings therethrough, said openings being arranged in pairs at each end of the tie, and each provided in its inner wall with pockets, a spike within each opening, said spikes being provided with a lip for engaging the rail base, and with a lug for entering the pocket remote from the face of the tie upon which the rail rests, and means for locking the spikes in place.

877,329. FUSIBLE PLUG. LOUIS P. HACKER, Beaumont, Tex. Filed Oct. 28, 1907. Serial No. 398,836.



1. The combination of a boiler including a shell and crown piece, with a fusible plug replenishing device consisting of a holder extending from the crown sheet to the shell and through the latter and mounted for longitudinal movement, and a plurality of fusible plugs rigidly secured thereto and arranged one above another.

2. The combination of a boiler with a fusible plug replenishing device comprising a holder mounted in the boiler and extending therefrom, and a plurality of plugs carried by the holder for use in successive order.

3. The combination of a boiler including a crown sheet and shell, a stuffing box on the shell, and a fusible plug replenishing device comprising a member extending through the stuffing box to the plug holder and movable longi-

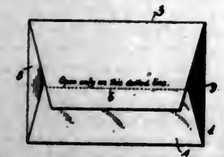
tudinally through the stuffing box, and a plurality of plugs arranged on the holder.

4. The combination of a boiler including two spaced walls inclosing a steam space, a fusible plug holder on one of the walls, and a sealing device in the other wall, in combination with a plug replenishing device comprising a longitudinally movable member of a length substantially equal to twice the distance between the walls and extending through the sealing device, and a plurality of fuse plugs fixed on a portion of the holder in the steam space of the boiler.

5. The combination of a fusible plug holder open from one side to the other, a plug-carrying member adapted to be moved through the opening of the holder, and a plurality of plugs permanently attached to the member in spaced relation.

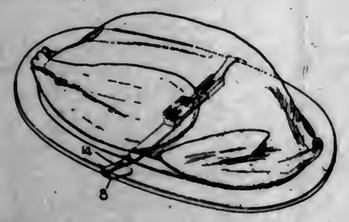
[Claims 6 and 7 not printed in the Gazette.]

877,330. ENVELOP. GEORGE W. HARVEY, Adin, Cal. Filed Apr. 30, 1906. Serial No. 314,512.



A reversible envelop comprising a body section having closing flaps of approximately the same width on its sides, separable locking flaps on its ends, gummed sealing surfaces arranged on the outer edges of one side of one closing flap, and on the other side of the other closing flap to adapt them for use respectively in the reversed position of the envelop, the gummed surface being so located that when said closing flaps are overlapped the sealing surface of one will extend entirely beyond the sealing surface of the other.

877,331. FOWL OR MEAT HOLDER. GEORGE W. HAVERSTICK, St. Louis, Mo. Filed Feb. 18, 1907. Serial No. 358,044.



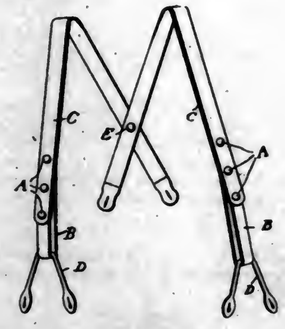
1. A device of the character described, comprising two members in sliding engagement with each other and having their inner ends overlapped, the upper one of said members being provided with a slot and the under member having a portion which extends through said slot, the inner end portion of said under member resting on the top face of the slotted member, a prong at the inner end of each member projecting toward the outer end of the member, and devices at the outer ends of said members for engaging the edge portion of a platter; substantially as described.

2. A device of the character described, comprising a member provided with an elongated slot, a member having a portion lying above and a portion lying below the member first referred to, said portions being connected by a web that is arranged in said slot, coöperating prongs at the inner ends of said members, and means for securing said members to a plate or similar article; substantially as described.

3. A device of the character described, comprising a member provided with an elongated slot, a member having a web arranged in said slot and comprising portions which engage the upper and underneath faces of the member first referred to, means at the inner ends of said members for engaging the object to be carved, and means for securing said members to a plate or similar article; substantially as described.

4. A device of the character described, comprising two members in sliding engagement with each other and provided at their inner ends with prongs which project toward each other, one of said members being provided with flanges, a piece arranged between said flanges and having a hooked portion for engaging the edge of a dish, and a yielding tongue on said piece for engaging an opening in the member on which it is mounted; substantially as described.

877,332. ADJUSTABLE SUSPENDERS. EDWIN J. HAYDEN, Minneapolis, Minn. Filed Sept. 24, 1906. Serial No. 335,882.



1. A pair of suspenders comprising two crossed shoulder straps, a fastening for detachably connecting the straps at the point of crossing and composed of a member fixed on one strap and a second member fixed on the other; flexible looped elements detachably and adjustably connected with the front ends of the straps, both ends of each element being independently connected with its respective strap, and button engaging members doubled and extending through the elements.

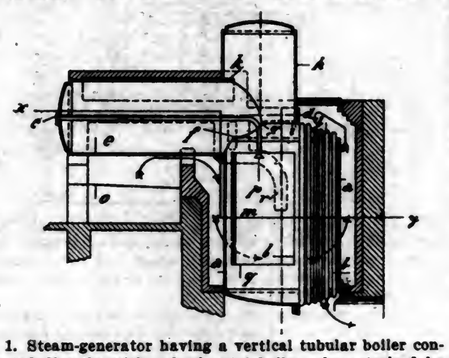
2. A pair of suspenders comprising two crossed shoulder straps detachably connected at the point of crossing, flexible elements detachably and adjustably secured to the front ends of the straps to form loops; a plurality of fastening devices composed of separate parts secured in spaced relation on the straps at the front ends and on the elements at the ends and intermediate points whereby any of the parts on the elements can be connected with any of the parts of the straps, flexible members passing through the looped elements, and button engaging means on the ends of said members.

877,333. COMPOUND IMPLEMENT. JAMES H. HAYNES, De Leon, Tex. Filed Apr. 26, 1907. Serial No. 370,435.



In a wire stretcher, a lever provided with transverse holes near the lower end thereof, and having eye-bolts carrying wire stretching hooks removably inserted in said holes and a hook connected to the upper end of said lever and serving as a catch or holding hook and also as a hanging hook, said lever being tubular and cut obliquely at its lower end and adapted to be used as a handle for a post-hole digger, with one of the scoops of which it may be removably connected, substantially as set forth.

877,334. STEAM-GENERATOR. FRANZ HECHT, Tegel, Germany. Filed Mar. 18, 1907. Serial No. 362,906.



1. Steam-generator having a vertical tubular boiler connected directly with a horizontal boiler, characterized by the wall of the tubular boiler being connected with the wall of the horizontal boiler below the lowest water-level in said horizontal boiler in combination with the provision of a steam-dome common to the horizontal boiler and to the tubular boiler and in combination with a U-shaped circulation-wall (such as *l*) being vertically fitted inside the tubular boiler, said circulation-wall inclosing by means of its sides a space (such as *m*) at the end of the horizontal boiler, into which space the feed-water is delivered, the tubes of said tubular boiler being located in the space outside of said wall.

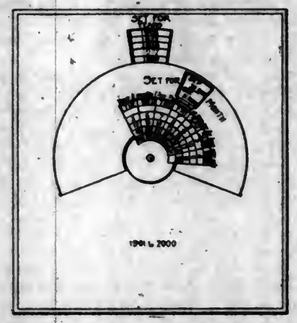
2. In a steam generator, the combination with a horizontal cylindrical boiler, of a fire grate located beneath said horizontal boiler, a vertical tubular boiler arranged adjacent to the end of said horizontal boiler, and having its tubes arranged at its side farthest from said horizontal boiler, and having an open space extending from end to end in communication with the interior of the horizontal boiler, means for supplying feed water to said open space, a steam dome connecting with said boilers at their adjacent portions, and means for conveying the furnace gases from the grate down one side of said tubular boiler and up the other side for passage downwardly through the tubes of said boiler.

3. In a steam generator, the combination with a horizontal boiler, of a fire grate located beneath said horizontal boiler, a vertical boiler arranged adjacent to and in communication with the said horizontal boiler, and having a top plate below the normal water level in the horizontal boiler, tubes arranged in one portion of said vertical boiler and opening through said plate, a circulation plate extending from the said top plate nearly to the bottom of said vertical boiler and between said tubes and said horizontal boiler, means for supplying feed water to said vertical boiler on the side of said circulation plate open to the horizontal boiler, an open space extending from end to end in communication with the interior of the horizontal boiler, and means for conveying the furnace gases from the grate down one side of said tubular boiler and up the other side for passage downwardly through the tubes of said boiler.

877,335. MECHANICAL PERPETUAL CALENDAR. JAMES S. HEITHERSAY, Adelaide, South Australia, Australia. Filed Dec. 29, 1906. Serial No. 349,928.

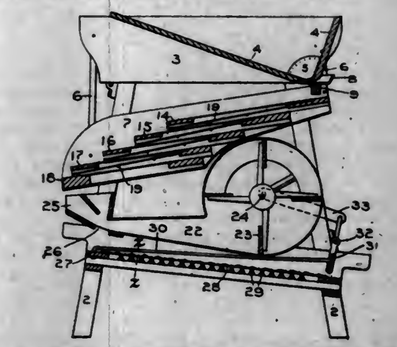
1. In a perpetual calendar, a plate having an opening and below said opening, an arc-shaped opening having downwardly and outwardly projecting extensions at its ends and forming a central upwardly projecting tongue, and a disk having an opening, an arc-shaped opening below the first-named opening, and a second arc-shaped opening forming a downwardly projecting central tongue, the lower portion of the disk extending through the arc-shaped opening of the plate and having its tongue projecting over the tongue of the said plate and pivoted thereto.

2. A perpetual calendar, comprising a plate having the names of the months with the numbers of days in each month produced thereon and provided with an opening and below said opening an arc-shaped opening, said arc-shaped opening having downwardly and outwardly projecting extensions at its ends and forming a central upwardly projecting tongue, a disk having numerals 1 to 31 produced thereon and provided with an opening, an arc-shaped opening below the first named opening, and a second arc-shaped opening forming a downwardly projecting central tongue,



the lower portion of the disk extending through the arc-shaped opening of the plate and having its tongue projecting over the tongue of the said plate, an imperforate disk at the back of the plate and having the number of the years for which the calendar is used and the names of the days of the week repeated three times, produced thereon, and a pivot passing through the said disk and the tongues of the plate and the first named disk.

877,336. FANNING-MILL. THOMAS O. HELGERSON, Minneapolis, Minn., assignor of one-half to Fosston Manufacturing Co., St. Paul, Minn., a Corporation of Minnesota. Filed Aug. 31, 1905. Serial No. 276,500.



1. A fanning mill comprising in combination a hopper, a shoe having swing support below the same, a screen frame supported in said shoe, upper and lower screens carried by said frame, the upper screen being supported at both ends in the screen frame, and the lower screen being supported at its rear end in the frame with its forward end loosely supported and directed away from the upper screen.

2. A fanning mill comprising a hopper, a shoe having swing support below the same, a plurality of screen frames supported in said shoe, and upper and lower screens carried by each of said frames, the upper screen being supported at both ends in said frames, and the lower screens being supported at their rear ends, in said frames, the forward ends of said screens being loosely supported and directed downward away from the upper screen.

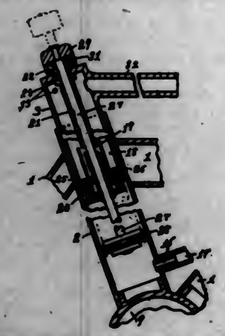
3. A fanning mill comprising in combination a hopper, a shoe having swing support below the same, a screen frame supported in said shoe, a feed-pan pivotally supported by

said shoe below the outlet end of said hopper, said feed-pan having upwardly extending walls at both ends and along the rear side of said hopper and a flexible lining connected at one end with the rear wall of the hopper and extending to a point forward of the lower end of the front wall of the hopper.

4. A fanning mill comprising in combination a hopper, a shoe having swing support below the same, a plurality of screen frames supported in said shoe, a feed-pan carried by said shoe in connection with the outlet end of said hopper and a flexible valve arranged in the outlet end of the hopper preventing the contents of the hopper passing rearwardly or from the opposite ends.

5. A fanning mill comprising in combination a hopper, a shoe having swing support below the same, a plurality of screen frames supported in said shoe, upper and lower screens carried by each of said frames, the lower screens being directed away from the upper screens at their forward ends, a feed-pan carried by said shoe in connection with the outlet end of said hopper, and a flexible lining connected at its upper end to the rear wall of the hopper and extending to a point forward of the lower end of the front wall of the hopper.

877,337. BICYCLE. JOHN C. HEAR, Middletown, Ohio. Filed Mar. 4, 1907. Serial No. 360,363.



1. The combination of a tubular seat post provided with an air passage, an expander therefor, a hollow bolt adjustably threaded therein, a plunger rod movable longitudinally through the bolt and provided with a valved piston and with an operating handle on its respective ends, said handle and bolt having separable interengaging parts whereby the bolt may be turned to move the expander.

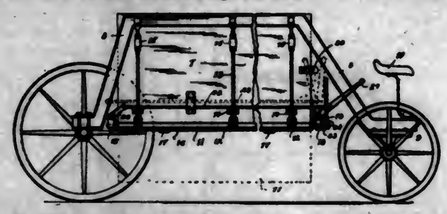
2. The combination of a tubular seat post provided with an air passage, a tapered expander therefor and provided also with an air passage, a hollow bolt for actuating the expander, a plunger rod movably extended through the bolt and provided on one end with a piston valve, and a handle secured on the other end of the rod, said handle being provided with means for turning the bolt to move the expander.

3. The combination of a seat post, a hollow bolt provided with an expander therefor, operable by turning the bolt, a plunger rod provided with a piston and movable through the bolt, a handle secured on the rod and a socket wrench thereon for turning the bolt.

4. The combination of an expansible tube, an expander therefor provided with an air passage, a hollow bolt swiveled in the axial line of the tube and adjustably threaded in the expander, a plunger rod inserted therethrough, a handle for reciprocating the rod, said handle being provided with means for turning the bolt to move the expander longitudinally within the tube.

877,338. DUMP-WAGON. WILLIAM H. HULL and HERBERT B. WRIGHT, Chicago, Ill. Filed Oct. 3, 1905. Serial No. 281,146.

1. The combination of a wagon box, a bottom door for said box, hinge members on said door, vertically adjustable rods on said box adapted to engage with said hinge members, and means for adjusting said rods.



2. The combination of a wagon box, doors for the bottom of said box, loops on said doors, and adjustable rods along the sides of said box with which said loops engage, the arrangement being such that the doors can be raised up alongside said box.

3. The combination with a wagon box, of adjustable rods on the side of said box, and a bottom door having bearings engaging with said rods.

4. In a device of the character set forth the combination with a wagon box of a swinging door hinged to the said box with slidable hinges and a bent shaft arranged lengthwise of said door, said shaft having bearings on the wagon box and also bearings on said door, the arrangement being such that the door may be operated by means of said shaft, said slidable hinge providing for a lateral movement of the door.

5. A wagon box provided with a bottom door, a bent shaft arranged longitudinally of said box, bearings on said box for engagement with the ends of said shaft, bearing on said door for engagement with the offset portion of said shaft, and means for swinging said shaft for operating said door.

[Claims 6 to 8 not printed in the Gazette.]

877,339. MUSIC-INDICATOR. FREDERICK E. HOBART, Dallas, Tex., assignor to International Conservatory of Music. Filed Sept. 19, 1905. Serial No. 279,138.



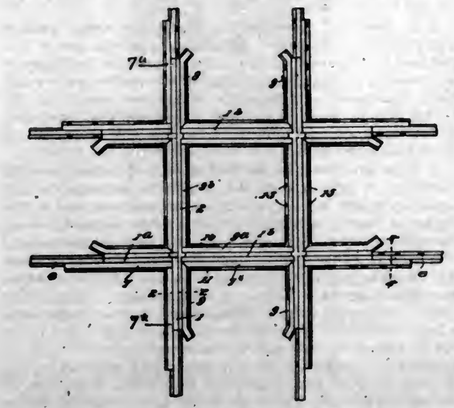
1. In a device of the character described, the combination with a support having a key signature finder scale, and a scale indicative of the major keys and their relative minor keys, of an adjustable carrier movably mounted on the support and having a key table composed of indicators that register with the keys of a key-board, said carrier also having indicating means associated with the key signature finder and with the relative major and minor scales and simultaneously registering with the corresponding relative indicators thereof.

2. In a device of the character described, the combination with a support adapted to be placed upon a key-board and having a key signature finder scale comprising sections one of which comprises major key signatures, the other comprising minor key signatures, said support also having a scale of the major key signatures and their relative minor key signatures disposed in coöperative relation, and a carrier movably associated with the support and having indicating means associated with both sections of the key signature finder scale and with the major and corresponding minor key signature scale.

3. In a device of the character described, the combination with a support having a key signature finder scale, and a scale indicative of major keys and their relative minor keys, said scales being located on the outer face of the support, of an adjustable carrier plate movably mounted on the support and having a key table comprising symbols adapted to register with the keys of a key-board, said carrier covering the scales of the support and having openings simultaneously exposing a signature on the key signature finder scale and the corresponding major and minor signatures in the other scale.

4. In a device of the character described, the combination with a support arranged to be placed upon a key-board and having a key signature finder scale comprising sections, one of which consists of major key signatures, the other comprising minor key signatures, said support also having a scale of major key signatures and their relative minor key signatures disposed in coöperative relation, and a carrier slidably mounted on the support and movable over the scales, said carrier having openings, one of which is movable over the key signature finder scale to expose the signatures thereof, the other being correspondingly movable over the other scale.

877,340. RAILWAY-CROSSING. ARTHUR HOSMER, Fort Worth, Tex. Filed Oct. 17, 1907. Serial No. 397,983.



1. A crossing rail provided with a longitudinal rib for engaging the web portion of a reinforcing rail and also formed with a basal flange adapted to extend under the reinforcing rail to support the same.

2. A crossing rail provided upon its opposite sides with longitudinal ribs for engaging the web portion of reinforcing and guard rails, and also provided with oppositely extending basal flanges for supporting the said rails.

3. A railway crossing comprising a through crossing rail provided upon its oposite sides with longitudinal ribs, intersecting crossing rail sections having the ends thereof notched to receive the ribs of the through rail, and means for locking the rail sections together.

4. A railway crossing comprising a through crossing rail, an intersecting crossing rail, reinforcing rails applied to the crossing rails, the said crossing rails embodying means for supporting the reinforcing rails and producing an interlocking connection therewith, and means for locking the rails together.

5. A railway crossing comprising a through crossing rail provided upon its opposite sides with longitudinal ribs and also with oppositely extending basal flanges, intersecting crossing rail sections abutting against the through crossing rail, the ends of the intersecting crossing rails being notched to receive the ribs of the through rail and cut away to receive the basal flanges of the through rail, and means for locking the rails together.

[Claims 6 to 10 not printed in the Gazette.]

877,341. PROCESS OF TANNING HIDES AND SKINS. JIHACHI INOUYE, Minamiku, and TSURUMATSU DOGURA, Kawakami, Japan. Filed July 16, 1907. Serial No. 384,075.

The method of tanning hides or skins after they have been subjected to a suitable preparatory treatment, which consists in treating them with a solution formed from water, ferrous sulfate, potassium nitrate, and potassium bichromate in the proportion substantially as above set forth.

877,342. REVERSIBLE MAGAZINE FOR STOVES. WILLIAM S. JACKSON, Detroit, Mich. Filed May 7, 1907. Serial No. 372,403.



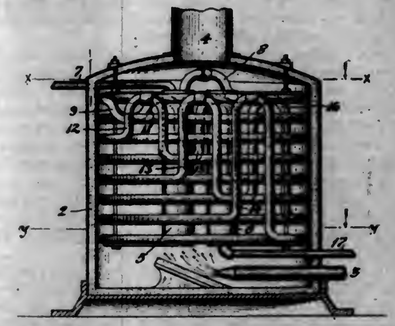
1. The combination with a stove, of a magazine therefor comprising a tapering shell, and means for attaching said shell in reversed positions.

2. The combination with a stove casing, having an apertured top, of a magazine comprising a tapering shell, and means for attaching either end of said magazine with said casing so as to register with the aperture in the top thereof.

3. The combination with a stove casing, of a magazine comprising a tapering shell, an apertured bearing on said casing for engaging the large end of said shell, and a reduced ring or annular plate for fitting said apertured bearing to the small end of the shell.

4. The combination with a stove casing, of a magazine comprising a tapering shell, lugs or bearings on each end of said shell, coöperating bearings on said casing for the large end of said shell, and a reducing ring forming the coöperative bearings for the small end of the shell.

877,343. STEAM-GENERATOR. WILLIAM L. JONES, San Francisco, Cal., assignor of one-half to Samuel M. Snyder, San Francisco, Cal. Filed Oct. 15, 1906. Serial No. 339,040.



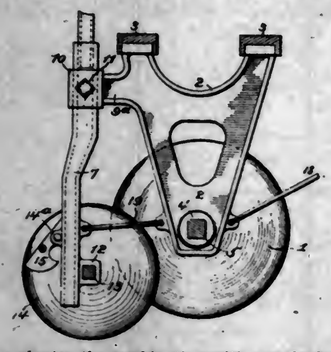
1. In a steam generator, a casing tubular coils arranged in a horizontal progressively descending series, a water reservoir inclosed by said coils and connected directly to the upper coil of the series, a water supply pipe entering said reservoir, a curved pipe extending from each coil to the coil immediately beneath it, all of such pipes having their highest points at substantially the level of the upper coil, and means for heating said coils and said reservoir.

2. In a steam generator, a casing, tubular coils arranged in a substantially horizontal progressively descending series, a water reservoir inclosed by said coils and connected to the upper member of the series, a water supply pipe entering said reservoir, a curved pipe extending from each coil to the coil immediately beneath it all of such pipes having the highest points at substantially the level of the upper coil, a reserve steam reservoir also inclosed by said coils and entered by the lower member of the series, a steam outlet pipe leading from said steam reservoir, and means for heating said coils and said reservoirs.

3. In a steam generator, a casing, heating means, a series of connected tubular coils arranged in substantially horizontal planes and extending progressively downwardly,

traps connecting the members of the series whereby the water in passing from one member to the next is compelled to rise substantially to the level of the upper member of the series, a water reservoir and a steam reservoir both inclosed by said coils, a water supply pipe entering the top of the water reservoir and extending toward the bottom of the same, a pipe leading from the top of the water reservoir and connected to the upper member of the coils, and a steam outlet pipe leading from the steam reservoir; the lower member of the coil entering said steam reservoir.

877,344. CORN AND POTATO PLANTER. IRA J. KAAR, Harelock, Nebr. Filed May 4, 1907. Serial No. 371,898.



1. In a planter the combination with a main frame and a depending frame, the latter provided with a rearwardly projecting arm having a socketed portion at its free end, of a seed tube vertically adjustable through said socketed portion, a brace connecting said seed tube with the lower portion of the depending frame, and disks mounted at the lower portion of said depending frame.

2. In a planter, the combination with a main frame and a frame depending therefrom, of an axle carried by the depending frame, disks on said axle at respective sides of the depending frame, a seed tube connected with the upper portion of the depending frame, a connection between the lower portion of said seed tube and the lower portion of the depending frame, and means carried by the lower portion of the seed tube for cutting the furrow.

3. In a planter, the combination of a pair of main disks, a pair of auxiliary disks in rear of the main disks, a seed tube discharging in a plane between the auxiliary disks and yielding scrapers carried by the seed tube.

4. In a planter, the combination with a depending frame, of two main disks supported at the lower portion of said depending frame, a seed tube in rear of the main disks, connections between the upper and lower portions of the depending frame and the seed tube, and auxiliary disks mounted on the seed tube and following in the furrow of the main disks.

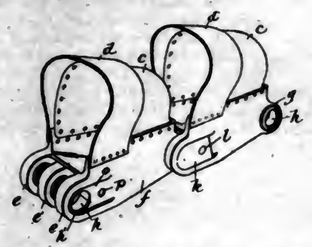
5. In a planter, the combination of two main disks, a seed tube in rear of the main disks, auxiliary disks mounted on the seed tube and following in the furrow of the main disks, and yielding scrapers also carried by said tube and bearing against the adjacent faces of the auxiliary disks.

[Claim 6 not printed in the Gazette.]

877,345. DREDGE-BUCKET. SAMUEL L. G. KNOX, Milwaukee, Wis., assignor to The Bucyrus Company, South Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 21, 1906. Serial No. 302,199.

1. A bucket for elevator dredges and the like, provided with lugs or eyes at each end, bushings of wear resisting material in said eyes, and a loose pin adapted to be secured against endwise movement in the eye at one end.

2. A bucket for elevator dredges and the like, provided with lugs or eyes at each end, segmental bushings in said eyes interposed at the points of greatest strain on the bucket, and a loose pin adapted to be secured against endwise movement in the eye at one end.



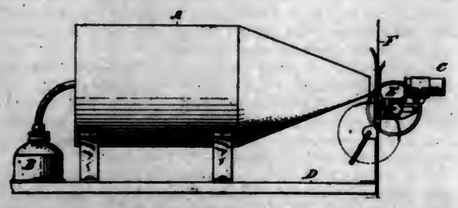
3. A series of connected buckets for elevator dredges and the like, each bucket comprising a double eye at one end and a triple eye at the other, segmental bushings of wear resisting material mounted in the respective eye sections interposed at the points of greatest strain on the bucket, and a loose pin secured against endwise movement in the triple eye and adapted to engage the double eye in the adjacent bucket.

4. A bucket for elevator dredges and the like, provided with lugs or eyes at each end, segmental bushings in said eyes interposed at the points of greatest strain on the bucket, a loose pin adapted to be secured against endwise movement in the eye at one end, and cover plates removably secured to the sides of the bucket and adapted to overlie the eye openings to retain the pin against endwise movement therein.

5. A bucket for elevator dredges and the like, comprising a base casting having a double eye at one end and a triple eye at the other, semi-annular bushings located in the respective eye sections to receive the strains imposed on the buckets, a loose pin adapted to secure the triple eye of the bucket and the double eye of the next bucket in series, and means for locking said pin against endwise movement.

[Claims 6 and 7 not printed in the Gazette.]

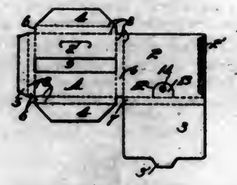
877,346. MOVING-PICTURE MACHINE. JOHN E. LAGERGREN, New York, N. Y., assignor, by mesne assignments, to The Ikonograph Company of America, New York, N. Y., a Corporation of New York. Filed Nov. 9, 1906. Serial No. 344,170.



1. A moving picture machine, having a holder and guide for the strip of pictures, the said strip, provided with feeding apertures, and mechanism for intermittently feeding said strip, said mechanism comprising a rotating camshaft, an eccentric thereon, a feeding finger to engage the feeding apertures in the strip of pictures, said finger having a yoke which embraces the eccentric, a laterally vibratable guide provided with a keeper guideway for the finger, and means on the cam-shaft for engaging and vibrating said guide, the eccentric serving to protrude and withdraw the feeding finger, and the vibrating guide serving to impart the to and fro feeding movement thereto.

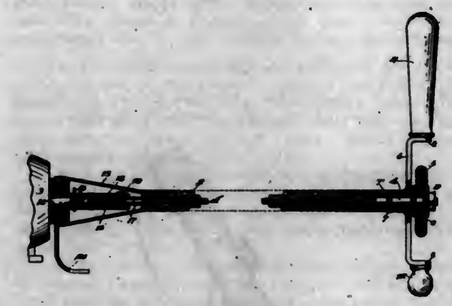
2. A moving picture machine, having a holder and guide for a strip of pictures, the said strip having in it feeding apertures, and mechanism for feeding the strip of pictures in an intermittent manner, said mechanism comprising a rotating cam-shaft, an eccentric thereon, a feeding finger having a yoke which embraces said eccentric, a vibratable guide 16, having a keeper-guideway in which plays the stem of said finger, and a cam on said shaft which engages parts of the guide 16 on opposite sides and imparts an irregular movement to said guide.

877,347. TOILET-PAPER HOLDER. WILLIAM LAZAR, San Francisco, Cal., assignor of one-half to Herman I. Nager, Oakland, Cal., and one-half to Solomon Lazar, San Francisco, Cal. Filed June 20, 1906. Serial No. 322,561.



A blank for a paper-holder said blank consisting of a sheet fashioned to provide a front portion and a back portion with an intermediate panel corresponding to the depth of the box, and a cover portion, said front having corresponding panels on its remaining three sides, and having a longitudinal central slot, said cover portion being foldably connected to the back portion on a line which is at right-angles to the length of the panel between the front and back portions, and said back portion and one of the side panels of the front portion adapted to be connected.

877,348. ERASING-MACHINE. FRANK W. LIERMAN, San Francisco, Cal. Filed Aug. 21, 1907. Serial No. 389,474.



1. In an erasing machine, a rotary eraser, a frame in which the eraser is mounted for rotation, said frame having a hand hold and a guiding device for contact with the surface to be cleaned, said hand-hold and guiding device being disposed at opposite sides of the axis of the eraser, and means for rotating the eraser.

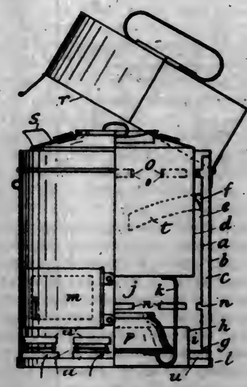
2. In an erasing machine, a rotary eraser, a frame in which the eraser is mounted for rotation, said frame open at one side, a handle at one end of the frame, a guiding device on the other end of the frame for contact with the paper to be cleaned, and means for rotating the eraser.

3. In an erasing machine, the combination of a flexible shaft, a flexible casing therefor, a cross-head to which one end of the flexible casing is secured, and an erasing device having an arbor portion journaled in said cross-head and connecting with the flexible shaft, said cross head having a handle at one end and a guiding device at the opposite end.

4. In an erasing machine, the combination of a flexible shaft, a flexible casing therefor, a cross-head to which one end of the flexible casing is secured, an erasing device having an arbor portion journaled in said cross-head and connecting with the flexible shaft, said cross-head having a handle at one side of the axis of the erasing device and having a guiding device at the other side of said axis, and a drive-shaft with which the opposite end of the flexible shaft is connected, said last-named connections comprising a sleeve secured to the drive-shaft, a rod section fixed to the flexible shaft and fitting the sleeve, said rod section having a lengthwise extending groove, and a screw carried by the sleeve and fitting said groove.

5. In an erasing machine, the combination of a flexible shaft, a flexible casing therefor, a cross-head to which one end of the flexible casing is secured, an erasing device having an arbor portion journaled in said cross-head and connecting with the flexible shaft, said cross-head having laterally extending end flanges, a handle secured to one of the flanges, and a guiding device connected with the other flange.

877,349. CULINARY-VESSEL HEAT-ECONOMIZING AND FLAME-PROTECTING CASING. WILLIAM LITTLE, Ballarat, Victoria, Australia. Filed Dec. 4, 1905, Serial No. 290,293. Renewed Sept. 6, 1907. Serial No. 391,697.



1. A protective casing for removable vessels to be heated, having air inlets through its lower part to a source of heat space, an outer wall, and connected thereto an inner wall provided with upper and lower air apertures, said inner and outer walls arranged to form guides or inward projections, and a narrow air space therebetween for providing a heat non-conductor.

2. A protective casing for removable vessels to be heated, having air inlets through its lower part to a source of heat space, an outer wall, and connected thereto an inner wall provided with upper and lower air apertures, and with obliquely set inwardly projecting heat deflectors, a narrow air space being formed between the said walls.

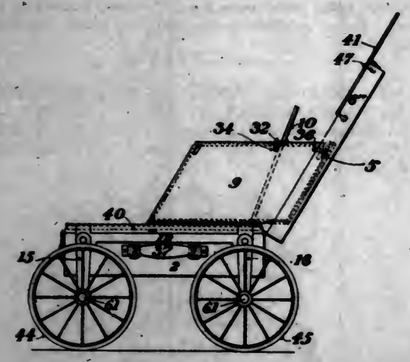
3. The combination with a protective casing, for removable vessels to be heated, having air inlets at its lower part to a source of heat space, and having a double wall with an intermediate air space, the inner wall having upper and lower apertures, and suitable guides, of a collar at the casing base to direct the draft and flame.

877,350. PERAMBULATOR. ALBERT E. LONG, Brooklyn, N. Y. Filed Oct. 19, 1907. Serial No. 398,242.

1. In a perambulator the combination of a vehicle body composed of four sides and a bottom, all of which are fixedly connected together, a conveyer pivotally connected with said vehicle body at or near the rim or top of said vehicle body, said vehicle body being in its horizontal operative position, said conveyer being adapted to fold into said vehicle body and also to fold out of said vehicle body to its operative position, a support movably connected with

said conveyer, and said support having a wheel pivotally connected therewith, substantially as described.

2. In a perambulator the combination of a vehicle body composed of four sides and a bottom, all of which are fixedly connected together, a conveyer pivotally connected with said vehicle body at or near the rim or top of said vehicle body, said vehicle body being in its horisontal operative position, said conveyer being adapted to fold into said vehicle body and also to fold out of and down and against the outside of that side of said vehicle body with which said conveyer is pivotally connected, a support movably connected with said conveyer, and said support having a wheel pivotally connected therewith, substantially as described.



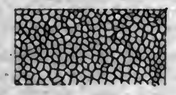
3. In a perambulator the combination of a vehicle body composed of four sides and a bottom, all of which are fixedly connected together, a conveyer pivotally connected with said vehicle body at or near the rim or top thereof, said vehicle body being in its horisontal operative position, said conveyer being adapted to fold into said vehicle body and also to fold out of said vehicle body to its operative position, a support movably connected with said conveyer, said support having a wheel pivotally connected therewith, means for limiting the amount of movement of said support in relation with said conveyer, and means whereby said support may be retained in its operative position, substantially as described.

4. In a perambulator the combination of a non-folding rectangular vehicle body composed of four sides and a bottom, all of which are fixedly connected together, a conveyer pivotally connected with said vehicle body at or near the rim or top thereof, said vehicle body being in its horisontal operative position, said conveyer being adapted to fold into said vehicle body and also to fold out of said vehicle body to its operative position, a support pivotally connected at its upper end with said conveyer, said support having at its lower end an axle, means for limiting the amount of rotary movement of said support in relation with said conveyer, means whereby said support may be retained in its operative position, and a wheel, said wheel mounted upon said axle, substantially as described.

5. In a folding perambulator the combination of a non-folding rectangular vehicle body composed of four sides and a bottom, all of which are fixedly connected together, a conveyer pivotally connected with said vehicle body at or near the rim or top thereof, said vehicle body being in its horisontal operative position, said conveyer being adapted to fold into said vehicle body and also to fold out of said vehicle body to its operative position, an arm pivotally connected at its upper end with said conveyer, said arm having at its lower end an axle, means for limiting the amount of rotary movement of said arm in relation with said conveyer, means whereby said arm may be retained in its operative position, and a wheel mounted upon said axle, substantially as described.

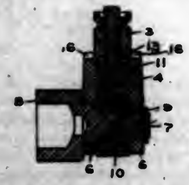
[Claims 6 to 21 not printed in the Gazette.]

877,351. SENSITIVE PLATE FOR COLOR PHOTOGRAPHY. AUGUSTE LUMIERE and LOUIS LUMIERE, Lyon, France. Filed May 9, 1906. Serial No. 316,011.



A sensitive plate for color photography comprising a sensitive coating and a layer of crushed colored particles interposed between the senstive coating and the support.

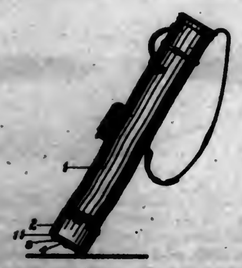
877,352. CYLINDER-WRENCH. HENRY LUND, Grafton, N. D., assignor, by direct and mesne assignments, to Fosston Manufacturing Company, St. Paul, Minn., a Corporation of Minnesota. Filed May 31, 1905. Serial No. 263,018.



1. In a wrench, the combination with a wrench-head, of a nut-socket rotatably mounted in said wrench-head and provided with a ratchet, a spring pressed reversible dog engaging with said ratchet, said dog being rotatable within said wrench-head and provided with a spindle extending longitudinally through said head.

2. In a wrench, the combination with a bar, of a wrench-head pivoted thereto, a nut-socket rotatably mounted in said wrench-head and provided with a ratchet, a reversible spring pressed dog rotatable within said wrench-head and engaging with said ratchet, and a spring pressed detent supported in said bar in position to engage with interspaced notches in the adjacent edge of said wrench-head.

877,353. GOLF-BAG. STEPHEN A. MARKER, Newark, N. J. Filed Jan. 14, 1907. Serial No. 352,088.



1. A golf bag comprising a body portion and an end closure therefor comprising a reinforcing sleeve telescopically receiving the end of said body portion and connected thereto by its sides, and a bottom secured to said reinforcing sleeve independent of the said body portion of the golf bag.

2. A golf bag comprising a body portion, and an end closure therefor comprising a reinforcing sleeve telescopically receiving the end of said body portion and connected thereto at its side walls, the lower end of said reinforcing sleeve being turned in and forming a flange, and a bottom secured to said flange independent of the said body portion of the golf bag.

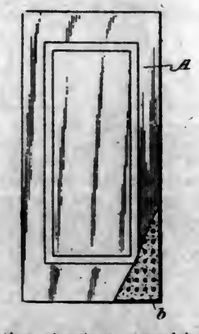
3. A golf bag comprising a body portion, and an end closure therefor comprising a reinforcing sleeve connected to the lower end of said body portion, the lower end of said reinforcing sleeve turned in, and a bottom comprising disks above and below said turned in edge; and through fastenings connecting said disks and turned in edge.

4. A golf bag comprising a body portion, and an end closure therefor comprising a reinforcing sleeve connected to the lower end of said body portion, the lower end of said reinforcing sleeve turned in, and a bottom comprising disks above and below said turned in edge, and through fastenings connecting said disks and turned in edge, the lower disk of materially smaller diameter than the diameter of said sleeve.

5. A golf bag comprising a body portion, and an end closure therefor comprising a reinforcing sleeve telescopically receiving the end of said body portion and connected thereto at its side walls, one end of said sleeve projecting beyond the end of the body portion and being turned radially inward forming a flange, and a disk-like bottom of smaller diameter than said reinforcing sleeve secured to said flange independent of the body portion of the golf bag.

[Claim 6 not printed in the Gazette.]

877,354. FIRE-RESISTING STRUCTURE. DAVID C. MEEHAN, Columbus, Ohio. Filed Sept. 25, 1907. Serial No. 394,499.



1. A fire-resisting structure comprising a core or interior section, a face-veneer, a non-combustible fibrous sheet underlying the veneer, and an adhesive between the veneer and sheet and between said sheet and core, said sheet being punctured to form "burs" which interlock with indented portions in the core.

2. In a fire-resisting structure the combination with a core, of a sheet of non-combustible, fibrous material, applied thereto and having portions upset and forced into the adjacent surface of the core, and a face-veneer fixed to the outer side of said sheet.

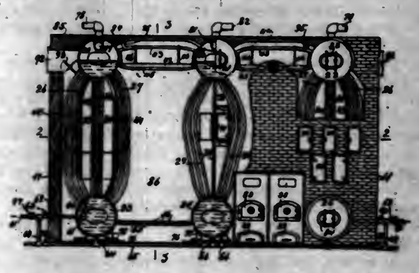
3. A fire-resisting structure comprising a core, a sheet of asbestos placed thereover and punctured and having the upset portions surrounding the punctures forced into the adjacent surface of the core, a face-veneer overlying the outer side of the asbestos sheet, and an adhesive between the sheet and the veneer and core and entering the punctured portions of said sheet.

4. A fire-resisting element composed of inner and outer members, and an intermediate non-combustible member glued thereto and having portions upset and interengaged with said inner member, and means for securing the outer member to said intermediate member.

877,355. STEAM-GENERATING APPARATUS. JOHN MILNE, Brooklyn, N. Y. Filed Jan. 25, 1907. Serial No. 354,042.

1. In a steam generating apparatus the combination of a plurality of upper and lower drums, tubes connecting the upper and lower drums, other tubes connecting the upper drums some above and some below the water line in the upper drums, means coacting with the tubes connecting the upper drums by which the area of the passages between said latter tubes may be varied.

2. The combination in a steam generating apparatus of a plurality of upper and lower drums, tubes connecting the drums, horizontal tubes connecting the upper drums both above and below the water line, a cover over the horizontal tubes that are below the water line, and means to move said cover to different positions.



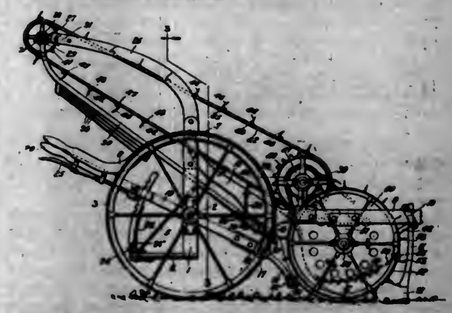
3. The combination in a steam generating apparatus of an upper drum and a lower drum, outer nests of tubes connecting the drums, and a nest of tubes connecting the drums between said outer nests, the tubes in each nest forming parallel rows oblique to the longitudinal axes of the drums and at the same time forming rows parallel to said axes, the tubes of each latter row being staggered with its parallel row next adjacent, and partitions between some of the tubes of the said rows, that are parallel to the axes of the drums.

4. The combination in a steam generating apparatus of two pairs of drums each comprising an upper and a lower drum, nests of tubes connecting each pair of upper and lower drums, a row of tubes connecting the upper drums, a second and lower row of tubes connecting the said upper drums, a cover having openings over said lower row of tubes, and means to move said cover to different positions.

5. The combination in steam generating apparatus of an upper and lower drum, water tubes connecting the drums, an isolated chamber in the upper part of the upper drum having a steam outlet, a row of tubes connecting the interior of the isolated chamber with the interior of the upper drum, a cover having openings suspended from the latter tubes, means to move the cover to different positions.

[Claims 6 to 15 not printed in the Gazette.]

877,356. POTATO-DIGGER. JOSEPH MOREAU, St. Germain de Grantham, Quebec, Canada. Filed Mar. 28, 1907. Serial No. 364,083.



1. In a potato digger, the combination comprising a wheeled supporting frame, a digging member pivotally connected with the frame, a pair of levers pivotally connected with the frame, a rectangular frame secured to the levers, supporting wheels carried by the rectangular frame, conveying mechanism, means for actuating the conveying mechanism from one of the supporting wheels, and separating mechanism disposed below the conveying mechanism.

2. In a potato digger, the combination comprising a

wheeled supporting frame, a digging member pivotally connected with the frame, means for raising and lowering the digging member, means for locking the raising and lowering means, a pair of levers pivotally connected with the frame, a rectangular frame secured to the levers, supporting wheels carried by the rectangular frame, conveying mechanism, means for actuating the conveying mechanism from one of the supporting wheels, and separating mechanism disposed below the conveying mechanism.

3. In a potato digger, the combination comprising a wheeled supporting frame, a digging member pivotally connected with the frame, a pair of levers pivotally connected with the frame, a rectangular frame secured to the levers, downwardly extending projections on said levers, a shaft carried by the projections, a sleeve rockably disposed on the shaft and provided with a projection connected with the digging member, a lever carried by the sleeve, means for locking the lever, supporting wheels carried by the rectangular frame, conveying mechanism, means for actuating the conveying mechanism from one of the supporting wheels, and separating mechanism disposed below the conveying mechanism.

4. In a potato digger, the combination comprising a wheeled supporting frame, a digging member pivotally connected with the frame, a pair of levers pivotally connected with the frame, a rectangular frame secured to the levers, downwardly extending projections, on said levers, a shaft carried by the projections, a sleeve rockably disposed on the shaft and provided with a projection connected with the digging member, a lever carried by the sleeve, and provided with a bifurcated rear end, a rack disposed adjacent the lever, pawls carried by the bifurcated rear end of the lever adapted to mesh with the rack, supporting wheels carried by the rectangular frame, conveying mechanism, means for actuating the conveying mechanism from one of the supporting wheels, and separating mechanism disposed below the conveying mechanism.

5. In a potato digger, the combination comprising a U-shaped member, pintles on the U-shaped member, supporting wheels on the pintles, a platform on the U-shaped member, a rack on the platform, a rectangular frame pivotally connected with the U-shaped member, wheels carried by the rectangular frame, a digging member pivotally connected to the U-shaped member, a lever pivoted to the rectangular frame, pawls on the lever adapted to mesh with the rack, and conveying and separating mechanism carried above the lever.

[Claims 6 and 7 not printed in the Gazette.]

877,357. PENCIL-SHARPENER. ALFRED M. MOSLEY, Guelph, Ontario, Canada. Filed Mar. 28, 1907. Serial No. 365,189.



1. A pencil sharpening device comprising a bowed resilient member, inwardly projecting blades fixed on the arms of the resilient member, and longitudinally reciprocable means for guiding a pencil between the blades.

2. A pencil sharpening device comprising a bowed resilient member, inwardly projecting blades fixed on the arms of the resilient member, and rotatably and longitudinally reciprocable means for guiding a pencil between the blades.

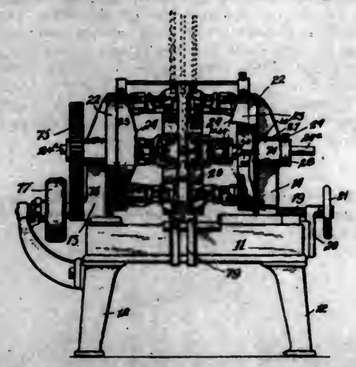
3. A pencil sharpening device comprising a bowed resilient member, inwardly projecting blades fixed on the arms of the resilient member, and means for guiding a pencil between the blades and simultaneously actuating the blades away from each other.

4. A pencil sharpening device comprising a bowed resilient member, inwardly projecting blades fixed on the arms of the resilient member, means for guiding a pencil between the blades, means for actuating the blades away from each other, and means for limiting the movement of the blades away from each other.

5. A pencil sharpening device comprising a bowed resilient member, inwardly projecting blades fixed on the arms of the resilient member, means for guiding a pencil between the blades and for simultaneously forcing the blades away from each other, and a link disposed through the arms of the resilient member adjacent the blades.

[Claims 6 to 17 not printed in the Gazette.]

877,358. CAN-HEADING MACHINE. CHARLES D. McDONALD, Chicago, Ill., assignor to McDonald Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 9, 1907. Serial No. 361,518.



1. In a machine of the class described, the combination of a fixed socket portion adapted to receive the body and head of a can, a movable clamping portion having a straight line forward and back movement in a line substantially parallel with the axis of a can and having a straight line clamping movement at substantially right angles to the axis of a can and adapted to coöperate with the fixed socket portion to surround and clamp the body and head of a can, and means for driving the can head into place after the clamping operation, substantially as described.

2. In a machine of the class described, the combination of a fixed socket portion adapted to receive the body and head of a can, a movable clamping portion having a straight line forward and back movement in a line substantially parallel with the axis of a can and having a straight line clamping movement at substantially right angles to the axis of a can and adapted to coöperate with the fixed socket portion to surround and clamp the body and head of a can, and a plunger adapted to drive the head of the can into place after the clamping operation, substantially as described.

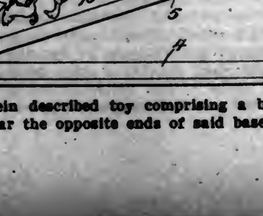
3. In a machine of the class described, the combination of a fixed socket portion adapted to receive the body and head of a can, a movable clamping portion having a straight line forward and back movement in a line substantially parallel with the axis of a can and having a straight line clamping movement at substantially right angles to the axis of a can and adapted to coöperate with the fixed socket portion to surround and clamp the body and head of a can, a plunger adapted to drive the head of the can into place after the clamping operation, a cam for actuating the movable clamping mechanism, and a cam for thereafter actuating the plunger, substantially as described.

4. In a machine of the class described, the combination of a fixed socket portion adapted to receive the body and head of a can, a movable clamping portion having a straight line forward and back movement in a line substantially parallel with the axis of a can and having a straight line clamping movement at substantially right angles to the axis of a can, and adapted to coöperate with a fixed socket portion to surround and clamp the body and head of a can, a plunger adapted to drive the head of the can into place after the clamping operation, a rotatable carrier upon which the clamping mechanism is mounted, a fixed cam adapted to actuate the clamping mechanism during the rotation thereof, and a fixed cam adapted to similarly actuate the plunger after the clamping operation, substantially as described.

5. In a machine of the class described, the combination of two carrier plates, companion clamping mechanism on each of the carrier plates adapted to apply heads on opposite ends of the same can body, each clamping mechanism comprising a fixed socket portion adapted to have one end of the can body and head dropped thereinto, a clamping portion having a straight line back and forth movement in a line substantially parallel with the axis of a can, and adapted to be initially retracted to permit the insertion of the can body and head into the socket portion, said clamping portion also having an independent straight line clamping movement at substantially right angles to the axis of a can, a fixed cam adapted to move the clamping portion forward and thereafter impart a clamping movement to such portion, and means for thereafter driving the can head into place, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

877,359. PLOW-POINT. CHARLES W. McWANE, Lynchburg, Va., assignor to Lynchburg Foundry Company, Lynchburg, Va. Filed Nov. 7, 1906. Serial No. 342,413.



1. A plow share, including a blade, and a nose projecting beyond the front end of the blade and raised above the same, said nose being longitudinally concaved on its under side to produce a downwardly inclined front end.

2. A plow share, including a blade, and a nose projecting beyond the front end of the blade and raised above the same, said nose being convexed on its upper side from its front end to its rear portion and being concaved on its under side from its front to its rear end to produce a downwardly inclined front end.

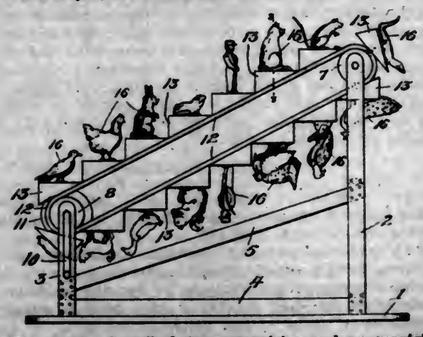
3. A plow share, including a share blade having a cutting edge, said blade being concaved on its under side.

4. A plow share, including a share blade having a cutting edge, said blade being concaved on its under side, and said concavity extending from end to end of said blade.

5. A plow share, including a share blade having a cutting edge, said blade being concaved on its under side, and said concavity increasing in depth toward the front end of the blade.

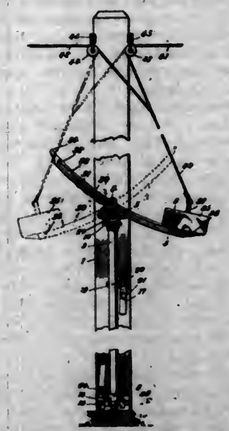
[Claims 6 and 7 not printed in the Gazette.]

877,360. TOY. EDWARD D. NEAGLE, Cleveland, Ohio. Filed May 3, 1907. Serial No. 371,687.



The herein described toy comprising a base, uprights secured near the opposite ends of said base, one pair of said uprights being longer than the other pair, rollers mounted in the uprights, means for operating one of said rollers, an endless belt passing around said rollers, a series of steps secured to said belt by fasteners extending through the belt and centrally into said steps, and the latter provided with sockets in their upper surfaces, and a series of figures each provided with a pin on its under surface for removable connection with the socket.

877,361. GATE. FREDERICK E. NELSON and GEORGE W. TRIBBEY, Marshfield, Oreg. Filed Sept. 30, 1907. Serial No. 395,059.



1. The combination with the gate post, of a bearing secured thereto near the lower end thereof, a second bearing above the first-named bearing, a rod journaled in the bearings and provided at its upper end with a bevel gear, said upper bearing being provided with a horizontal cylindrical projection, an arc shaped bar having a segmental gear at the center thereof, said segmental gear being journaled on the cylindrical projection, and engaging the bevel gear on the rod, said bar being provided with grooves on each side thereof, having notches at their ends and connected by transverse grooves with the edge of the bar, a weight having a groove for receiving the edge of the bar, and provided with downwardly projecting spaced ears, said ears being provided with lugs for engaging the grooves, means connected with the weight for swinging the bar, a bracket secured to the lower end of the rod and projecting horizontally therefrom, a gate having its lower corner hinged to the end of the bracket, a hinge connecting the upper corner of the gate with the post, and a stop for limiting the swinging movement of said lower hinge with respect to said first-named bracket.

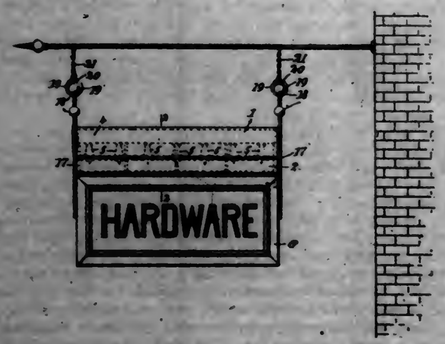
2. The combination with the gate posts, of the rod journaled longitudinally of one of the posts, and provided at its lower end with a radial arm, a gate hinged by one of its lower corners to the arm and by its corresponding upper corner to the post, the free end of the gate resting against the other post when the gate is closed, means in connection with the rod for partially rotating the same to open and close the gate, said means comprising an arc shaped bar having at its center a segmental gear upon whose center the bar oscillates, a connection between the bar and the rod, whereby the rocking of the bar will partially rotate the rod, said bar being provided with grooves on each side thereof having notches at their ends, and connected by transverse grooves with the edge of the bar, a weight having a groove for receiving the edge of the bar and provided with downwardly projecting spaced ears, said ears being provided with lugs for engaging the grooves, means connected with the weight for swinging the bar, and a stop for engaging the arm after the gate is closed, said stop being arranged to permit the arm to swing beyond the line between the posts for the purpose set forth.

3. The combination with the gate posts, of the rod journaled longitudinally of one of the posts, and provided at its lower end with a radial arm, a gate hinged by one of its lower corners to the arm and by its corresponding upper corner to the post, the free end of the gate resting against the other post when the gate is closed, means in connection with the rod for partially rotating the same to open and close the gate, said means comprising an arc shaped bar having at its center a segmental gear upon whose center the bar oscillates, a connection between the bar and the rod, whereby the rocking of the bar will partially rotate the rod, said bar being provided with grooves on each side thereof, a weight provided with downwardly projecting spaced ears, said ears being provided with lugs for engaging the grooves, means connected with the weight for swinging the bar, and a stop for engaging the arm after the gate is closed, said stop being arranged to permit the arm to swing beyond the line between the posts, for the purpose set forth.

4. The combination with the gate posts, of the rod journaled longitudinally of one of the posts, and provided at its lower end with a radial arm, a gate hinged by one of its lower corners to the arm and by its corresponding upper corner to the post, the free end of the gate resting against the other post when the gate is closed, means in connection with the rod for partially rotating the same to open and close the gate, said means comprising an arc shaped bar having at its center a segmental gear upon whose center the bar oscillates, a connection between the bar and the rod, whereby the rocking of the bar will partially rotate the rod, said bar being provided with grooves on each side thereof, a weight provided with downwardly projecting spaced ears, said ears being provided with lugs for engaging the grooves, means in connection with the grooves for permitting the removal of the weight, means connected with the weight for swinging the bar.

5. The combination with the gate posts, of a rod journaled longitudinally of one of the posts and provided at its lower end with a radial arm, a gate hinged by one of its lower corners to the arm, and by its corresponding upper corner to the post, the free end of the gate resting against the other post when the gate is closed, means in connection with the rod for partially rotating the same to open and close the gate, and a stop for engaging the arm after the gate is closed, said stop being arranged to permit the arm to swing beyond the line between the posts, for the purpose set forth.

877,362. SIGN-ILLUMINATING DEVICE. WILLIAM H. NICOLAY, New York, N. Y. Filed May 6, 1907. Serial No. 372,256.



1. The combination with a hood having reflectors, of a series of lamps extending centrally of the hood, and a sign arranged below and in line with said lamps.

2. The combination with a hood having top and side reflectors, of a series of lamps extending centrally of the hood, and a sign arranged below said lamps and in line therewith.

3. The combination of a hood having inclined top plates and side plates connected therewith, and provided on their inner sides with reflectors, a series of lamps extending centrally of the hood, and a sign arranged below said lamps in line therewith.

4. The combination with a hood having inclined top reflectors, of side reflectors adapted to be adjusted in respect to their vertical inclination, a series of lamps extending centrally of the hood, and a sign arranged below and in line with said lamps.

5. The combination with a hood having top reflectors, of side reflectors mounted on frames adjustable in respect to their vertical inclination on said hood, means for securing said frames in their adjusted position, a series of lamps extending centrally of the hood, and the sign arranged below said lamps and in line therewith.

[Claims 6 to 8 not printed in the Gazette.]

877,363. FIRE-ESCAPE. IVER NIELSEN, New Rochelle, N. Y. Filed Apr. 1, 1907. Serial No. 365,879.



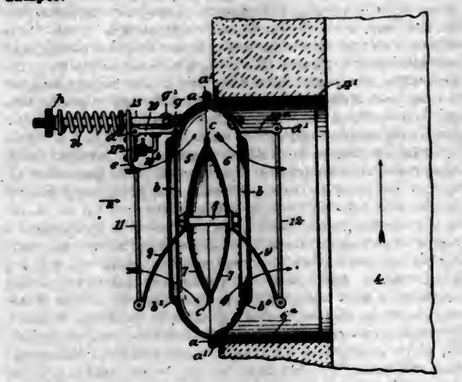
1. In a fire escape, the combination with a platform, of a flap door hinged to said platform and adapted to close the exit opening therein, a folding ladder pivotally suspended from said platform, guide ways secured to the bottom surface of the platform, auxiliary links hinged to each other and pivoted to those of the folding ladder to form lazy tongs, the upper auxiliary links being guided in the said guide ways and connected with the flap door so as to stretch and fold the ladder by the opening and closing of the flap door, substantially as and for the purpose specified.

2. In a fire escape, the combination with a platform, of a flap door hinged to the latter and adapted to normally close the exit opening therein, of a folding ladder pivotally suspended from the said platform, guide bars arranged at the lower surface of the platform and having guide ways, auxiliary links hinged to each other and connected with the said folding ladder to form lazy tongs, the upper auxiliary links being guided in the said guide ways, and connected with the flap door, a railing composed of individual members attached to the steps of the ladder and linked to each other, the said railing being also adapted to stretch and fold simultaneously with the ladder, substantially as and for the purpose specified.

877,364. DRAFT-REGULATOR AND VENTILATOR. JONATHAN W. NOXON, Valley City, N. D. Filed May 24, 1907. Serial No. 375,438.

1. A draft regulator and ventilator, embodying a shell or casing having opposite openings therein, a damper for closing either opening, and means for hanging the damper centrally in the shell so that it may move in parallel planes.

2. A draft regulator and ventilator, embodying a shell having opposite lateral openings therein, a mating damper for closing either opening, links and parallel bars for hanging the damper so that it may move toward either opening, and means for controlling the travel of the damper.



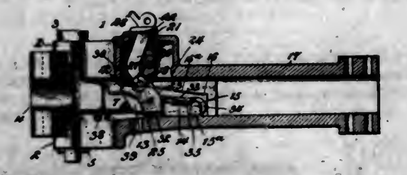
3. A draft regulator and ventilator, embodying a shell having opposite lateral openings therein, said openings having damper seats around their edges, a damper adapted to fit tight on either seat, and spring-controlled means for hanging the damper in the shell so that it may move toward either seat by force of air draft currents.

4. A draft regulator and ventilator, embodying a shell having bulged sides, and central openings in said sides, a damper mating said openings and adapted to close either one, means for hanging the damper in the shell so that it may move in planes parallel with the edges of the openings, and means for controlling said movement.

5. A draft regulator and ventilator embodying a shell having bulged sides and circular openings centrally in said sides, a damper having convex sides and a peripheral flange thereon, means for hanging the damper in the shell so that it may move toward the defining edge of either opening, and a lateral hollow flanged extension on one side of the shell.

[Claims 6 to 8 not printed in the Gazette.]

877,365. AUTOMATIC CAR-COUPLING. WILLIAM A. PALMER, St. Louis, Mo. Filed Feb. 28, 1907. Serial No. 359,807.



1. The combination with a draw head provided with longitudinal ways having top and bottom walls, and a knuckle, of a locking block having pivots or trunnions slidable in the ways to permit the locking block to slide backward and forward and to swing upward and downward, and a pivoted knuckle opening lever carried by the locking block and arranged to engage the knuckle for opening the same.

2. The combination with a draw head provided with longitudinal ways having top and bottom walls, of a pivoted knuckle provided at its arm with an extension having an arcuate recess, said recess being provided with an inclined top wall, a locking block having pivots or trunnions slidable in the said ways to permit the locking block to be moved backward and to swing upward and downward, and a knuckle opening lever pivotally mounted on and carried by the locking block and projecting from the same to engage the recess of the knuckle.

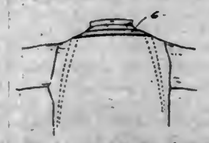
3. The combination with a draw head, and a pivoted knuckle, of a locking block movable longitudinally of the draw head, and a knuckle opening lever carried by and extending longitudinally of the locking block and pivoted to the same at its rear portion, said locking block and lever having coöperating means for supporting the latter rigid with the former when the same is in engagement with the knuckle.

4. The combination with a draw head, and a pivoted knuckle, of a locking block provided with a laterally projecting flange, and a pivoted knuckle opening lever mounted on the locking block and having a flange arranged to rest upon that of the locking block.

5. The combination with a draw head provided with ways, and a pivoted knuckle, of a locking block having pivots or trunnions slidable in the ways, and a knuckle opening lever pivoted to the locking block by one of the said pivots or trunnions and having means for engaging the knuckle to open the same.

[Claims 6 and 7 not printed in the Gazette.]

877,366. SHIRT ATTACHMENT. JOSEPH PLAUT, Cincinnati, Ohio. Filed Dec. 15, 1906. Serial No. 347,997.



A new article of wearing apparel comprising a shirt with a suspender constructed to provide a straight horizontal portion having straight depending vertical portions at its opposite ends which are provided on their terminals with integral single tabs, said horizontal portions serving to be stitched its entire length across the back of the shirt immediately below and parallel with the neckband thereof, the vertical portions serving to be stitched across the shoulders of the shirt and also to the front opposite sides of the same, the tabs being unattached to permit of being secured to buttons of the trousers, substantially as specified.

877,367. SEPARABLE BUTTON. JOSEPH PLAUT, Cincinnati, Ohio. Filed Mar. 12, 1907. Serial No. 362,024.



1. In a separable button a button member having a shank provided with a longitudinal recess or pocket and having recesses adjacent to the sides thereof, the walls of the longitudinal recess being inclined, and a fastening member comprising a V-shaped shank, said shank being formed at the ends thereof, enlarged disks, said disks being disposed approximately at the right angles of the side members of the V-shaped shank and tongues struck from the disks to engage the inclined recesses of the shank.

2. In a separable button a button member having a shank provided with a central longitudinal recess or pocket and auxiliary recesses adjacent to the sides thereof, in combination with a fastening member comprising a V shaped resilient shank having laterally extending terminal disks, and provided with resilient tongues for engagement with the auxiliary recesses.

3. In a separable button a button member having a shank provided with a longitudinal recess or pocket and auxiliary obliquely disposed recesses, in combination with

a fastening member comprising a V shaped resilient shank having laterally extending terminal disks, and tongues struck out from said disk in the direction of the side members of the V shaped shank.

877,368. PIPE-COUPLING. HERBERT S. PUTNEY, Sandusky, Mich. Filed Mar. 20, 1906. Serial No. 307,128.



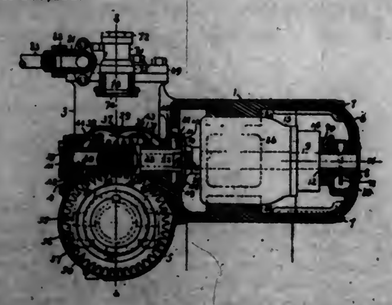
1. A pipe coupling comprising fluted blocks adapted to be arranged under and over the ends of the pipe sections a ring arranged over said sections, and means for clamping said blocks together for the purpose described.

2. A pipe coupling comprising a fluted block adapted to be arranged under the end of the pipe sections, a ring arranged over said ends, a concaved block arranged over said ring and means for clamping said blocks together, for the purpose set forth.

3. In a pipe coupling, the combination with notched pipe sections, of a fluted block arranged under the meeting ends of said sections, a ring arranged over said ends, and a concaved block arranged over said ring connected to the fluted block, for the purpose described.

4. A coupling for corrugated pipe comprising a transverse fluted apertured block adapted to be arranged under the notched ends of the corrugated pipe sections in the grooves and ribs of the same, a transverse concaved apertured block adapted to be arranged on said notched ends of the pipe sections over the ribs of the same, and a bolt adapted to pass through said block and notched ends and lock the blocks together for the purpose described.

877,369. ELECTROPNEUMATIC MACHINE. WILLIAM K. RANKIN, Philadelphia, Pa., assignor to John E. Reyburn, Philadelphia, Pa. Filed Feb. 15, 1906. Serial No. 301,151.



1. In an electro-pneumatic machine, an integral case comprising a motor compartment, vertical pump cylinders and a worm wheel and crank shaft compartment under the pump cylinders, a central support attached to the front of the motor compartment, doors hinged at the front of the motor compartment and fastened to the central support, a cover secured under the worm wheel and crank compartment, removable heads for the pump cylinders, valves in the heads, a motor within its compartment, pistons within the pump cylinders, a worm and a worm wheel driven by the motor, and connections therefrom for the reciprocation of the pump pistons.

2. In an electro-pneumatic machine, an integral case, one part of which incloses a motor, its front being inclosed in part by a removably secured central support, and by hinged doors; another part of the case inclosing a worm, a worm wheel and a crank shaft, with a bottom cover removably secured; and another part of the case comprising pump barrels vertically disposed; a motor within its part of the case, a worm, a worm wheel, and a crank shaft within their part of the case, heads for the pumps and valves therefor, pistons in the pumps, connections from the pistons to the crank shaft, a bearing in the central support for one end of the motor shaft, and a hollow shaft for the worm into which the motor shaft is inserted to form a bearing at its opposite end.

3. In an electro-pneumatic machine, an integral case, comprising a compartment for a motor with an outer attached end cover in three parts, the side parts being hinged doors, the central part forming a bearing for a motor shaft, an oil chamber and a seat for a brush holder and a motor with removable fields in the compartment, the shaft for the motor having its outer end seated in the bearing aforesaid; a worm and worm wheel compartment, being an integral part with the motor compartment, of the whole case, a worm therein, a shaft for the worm which is annular at its inner end and into which the inner end of the motor shaft is inserted, an interlocking clutch for the motor and worm shafts; bearings for the worm shaft, a cover for the bearings and the worm, oil passages therein leading to the bearings, and a ball bearing thrust for the outer end of the worm shaft, and pump cylinders integral with the motor and worm wheel compartment, and vertically located above the worm wheel compartment, and valves and pistons therefor.

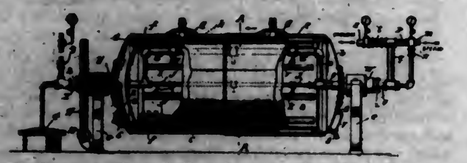
877,370. LEAD-PENCIL. SAMUEL J. RECKENDORFER, New York, N. Y. Filed Mar. 28, 1907. Serial No. 364,959.



1. A pencil stub having an elongating paper tube adhesively affixed thereto for contact with the hand of the user, substantially as described.

2. A pencil stub supplied with a tenon and an elongating paper tube adhesively affixed thereto for contact with the hand of the user, substantially as described.

877,371. REDUCING-TANK. ROBERT S. REDFIELD, East Orange, N. J., assignor to Robert S. Redfield & Company, a Corporation of New York. Filed Feb. 8, 1907. Serial No. 356,409.



1. In apparatus of the character described, the combination of a tank; a main steam-pipe; an exhaust pipe; a pipe which is provided with outlets for steam and which extends axially through said tank and is connected with said main steam-pipe; a pipe which extends through said tank near the wall thereof and is connected with said exhaust pipe and main steam pipe; and valves which control the flow of the vapor through said pipes.

2. In an apparatus of the character described, the combination of a tank; a main steam pipe; an exhaust pipe; a pipe which extends through said tank near the wall thereof; a connecting pipe by which said last-named pipe is connected with said main steam pipe and said exhaust pipe; a steam pipe which extends through said connecting pipe and axially through said tank; and valves which control the flow of vapor through said pipes.

3. In an apparatus of the character described, the combination of a rotary tank provided with a hollow trunnion; a pipe which passes through said trunnion into said tank; a steam-pipe which passes through said pipe and extends axially of said tank; a pipe which is connected with the first-named pipe and extends near the wall of said tank and inside thereof; a main steam pipe; an exhaust pipe; and valves controlling the flow of vapor through said pipes; said first-named pipe being connected with said main steam pipe and exhaust pipe.

4. In an apparatus of the character described, the combination of a tank rotatable about a horizontal axis and having one of its end walls formed with holes through which the juices are strained, said holes lying in substantially a vertical plane; a cover detachably secured to said end wall over said holes and provided with a shaft-controlled outlet for the juices; and pipes for the introduction of steam into said tank to extract the juices from the material to be digested.

877,372. DIPPER. WILLIAM H. REXER, Degraff, Ohio. Filed May 25, 1906. Serial No. 318,722.



A dipper comprising a bowl having a flat bottom and inclined side walls, a handle secured to one side of said wall adjacent its upper edge and a curved tapering mass of metal having a flat bottom arranged upon the interior of the bottom of the bowl, against the wall opposite the handle, said mass of metal having a weight greater than the weight of the handle whereby the handle will be maintained in an upwardly extending position.

877,373. ADJUSTABLE AND EXTENSIBLE BRACKET. LYMAN J. RHOADES, Fond du Lac, Wis. Filed Sept. 12, 1907. Serial No. 392,546.



1. In a bracket, the combination, of two parallel bars, a brace bar pivoted to the lower bar, a sliding clip on the upper bar, a lever eccentrically pivoted to said brace bar, and having a cam at its pivoted end eccentrically pivoted to said clip, lazy-tongs hinged to adjacent ends of said parallel bars and arranged horisontally, and a horisontal supporting member hinged to the free end of said lazy-tongs, substantially as described.

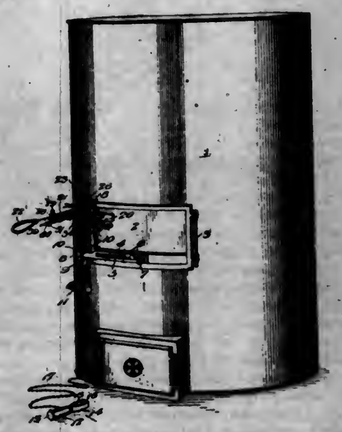
2. In a bracket, the combination, of two parallel bars, a brace bar pivoted to the lower bar, a sliding clip on the upper bar, a lever eccentrically pivoted to said brace bar and having a cam at its pivoted end eccentrically pivoted to said clip, and lazy-tongs hinged to adjacent ends of said parallel bars and arranged horisontally.

3. In a bracket, the combination, of a supporting plate, two parallel bars hinged to said plate and adapted to swing in a horizontal plane, a diagonal brace bar pivoted to the lower parallel bar, a sliding clip on said upper parallel bar, a lever eccentrically pivoted to said brace bar and having a cam at its pivoted end eccentrically pivoted to said sliding clip.

4. In a bracket, the combination, of a supporting plate, two parallel bars hinged to said plate and adapted to swing in a horizontal plane, a diagonal brace bar pivoted to the lower parallel bar, a sliding clip on said upper parallel bar, a lever eccentrically pivoted to said brace bar and having a cam at its pivoted end eccentrically pivoted to said sliding clip, lazy-tongs hinged to the free ends of said parallel bars and a horisontal support hinged to the outer end of said lazy-tongs.

5. In a bracket, the combination, of two parallel bars, a diagonal brace bar pivoted to the lower parallel bar, a clip on said upper parallel bar, and a cam lever eccentrically pivoted to said clip and brace bar and adapted to co-act therewith in locking said parallel bars in an adjusted position.

877,374. DOOR-CONTROLLING MEANS. JOHN RICKLI, Carrollton, Ohio. Filed Mar. 29, 1907. Serial No. 365,399.



1. In combination with a stove or furnace and its check-draft door, a fusible lock for holding the door closed, a supporting bar, and a door-engaging and opening device slidably mounted on the bar and operative to open the door upon the fusion of the lock.

2. In combination with a stove or furnace and its check-draft door, a fusible locking device for holding the door closed, an arm upon the door projecting beyond the free end thereof, a swinging bar, a door opening device slidably mounted on said bar and adapted to engage the arm, and a spring for operating said opening device.

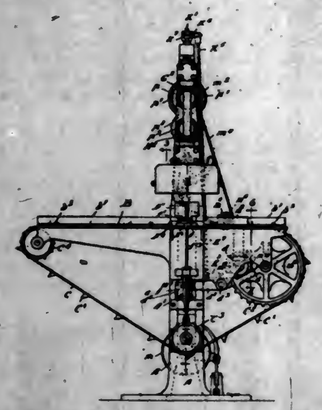
3. In combination with a stove or furnace and its check-draft door, a fusible lock for holding the door closed, a supporting bar, a bracket adjustably mounted on the bar, and a sliding door-engaging and opening device carried by the bracket and operative upon the fusion of the lock to throw the door open.

4. In combination with a stove or furnace and its check-draft door, a fusible lock for holding the door closed, an arm upon the door, a pivotally mounted bar, a sliding door opening operating device on the bar adapted to engage the arm, a spring for operating said device, and means for regulating the power of the spring.

5. In combination with a stove or furnace and its check-draft door, a fusible lock for holding the door closed, a supporting bar, a spring-operated sliding door-engaging and opening member supported by the bar operative upon the fusion of the lock to throw the door open, and means for regulating the action of the spring.

[Claims 6 and 7 not printed in the Gazette.]

877,375. STATIONARY-CAN DOUBLE-SEAMING MACHINE. FRANK RUDOLPHI, Chicago, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 30, 1905. Serial No. 284,927.



1. In a stationary can double seaming machine, the combination with a can feed table, of an intermittently movable can feeder, an intermittently reciprocating chuck upon which the cans are delivered one by one by the feeder, a pair of horisontally reciprocating can clamping jaws for clamping and centering the cans in position, an upper non-rotary can chuck, a continuously rotating seaming head carrying a plurality of seaming rollers, seaming roller operating levers hinged to the seaming head and upon which the seaming rollers are journaled, and a continuously rotating cam wheel furnished with cams for operating the seaming roller levers and rotating at a speed varying from that of the seaming head to cause the seaming rollers to open and close against the can at intervals, substantially as specified.

2. In a stationary can double seaming machine, the combination with a can feed table, of an intermittently movable can feeder, an intermittently reciprocating chuck upon which the cans are delivered one by one by the feeder, a pair of horisontally reciprocating can clamping jaws for clamping and centering the cans in position, an upper non-rotary can chuck, a continuously rotating seaming head carrying a plurality of seaming rollers, seaming roller operating levers hinged to the seaming head and upon which the seaming rollers are journaled, and a continuously rotating cam wheel furnished with cams for operating the seaming roller levers and rotating at a speed varying from that of the seaming head to cause the seaming rollers to open and close against the can at intervals, substantially as specified.

3. In a stationary can double seaming machine, the combination with a can feed table, of an intermittently movable can feeder, an intermittently reciprocating chuck upon which the cans are delivered one by one by the feeder, a pair of horisontally reciprocating can clamping jaws for clamping and centering the cans in position, an upper can chuck, a continuously rotating seaming head carrying a plurality of seaming rollers, seaming roller operating levers hinged to the seaming head and upon which the seaming rollers are journaled, and a continuously rotating cam wheel furnished with cams for operating the seaming roller levers and rotating at a speed varying from that of the seaming head to cause the seaming rollers to open and close against the can at intervals, substantially as specified.

4. In a stationary can double seaming machine, the combination with a pair of non-rotatable chucks for clamping and holding the can and its cover, of a continuously rotating seaming head furnished with seaming rollers and seaming roller levers extending lengthwise of said seaming head and hinged thereto, a continuously rotating cam wheel having an axis concentric with that of the seaming head and rotating at a different speed from the seaming head to cause the cams on the cam wheel to operate the seaming roller levers at intervals, as required, substantially as specified.

5. In a stationary can double seaming machine, the combination with a pair of non-rotatable chucks for clamping and holding the can and its cover, of a continuously rotating seaming head furnished with seaming rollers and seaming roller levers extending lengthwise of said seaming head and hinged thereto, a continuously rotating cam-wheel having an axis concentric with that of the seaming head and rotating at a different speed from the seaming head to cause the cams on the cam-wheel to operate the seaming roller lever at intervals, as required, and a reciprocating can ejector disk in the upper can chuck, substantially as specified.

[Claims 6 to 18 not printed in the Gazette.]

877,376. METHOD OF MAKING ALKALI HYDROXIDS. PHILIP B. SADTLER and SAMUEL P. SADTLER, Philadelphia, Pa. Filed Sept. 25, 1907. Serial No. 394,503.

1. In the production of alkali hydroxid, the method which consists in intimately mixing an alkali sulfate with not less than about an equal amount of alumina and heating the mixture to not lower than an orange heat.

2. In the production of alkali hydroxid, the method which consists in intimately mixing finely divided alkali sulfate and alumina in such proportions and heating the mixture, in the absence of reducing agents, to such temperature as to produce directly thereby an alkali aluminate.

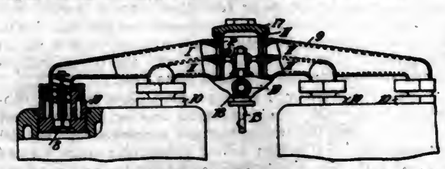
3. In the method of making alkali hydroxids, the method described of producing alkali aluminate, which consists in heating to at least an incipient yellow heat a mixture consisting of finely divided alkali sulfate and a larger amount of finely divided alumina.

4. The method of making alkali hydroxid which consists in intimately mixing finely divided alkali sulfate with at least an equal amount of alumina, heating the same to at least an incipient yellow heat until an alkali aluminate is formed therefrom, decomposing the alkali aluminate, and producing alkali hydroxid therefrom.

5. The method of making alkali hydroxid which consists in intimately mixing finely divided alkali sulfate with at least an equal amount of alumina, heating the same to at least an incipient yellow heat until an alkali aluminate is formed therefrom, decomposing the alkali aluminate by agitation to separate a portion of the combined alumina, and precipitating the remainder by the addition of milk of lime.

877,377. STARTING DEVICE FOR EXPLOSION-ENGINES WITH FOUR CYLINDERS. HIPPOLYT SAURER, Arbon, Switzerland. Original application filed Oct. 6, 1906, Serial No. 337,707. Divided and this application filed Sept. 14, 1907. Serial No. 392,918.

1. In a four stroke cycle explosion-engine with four cylinders, the combination with four spring-pressed inlet-valves in the four cylinders, of a connection on the four cylinders above said four spring-pressed inlet-valves and comprising a cylindrical bore in its middle with four openings and four separate channels leading therefrom to the spring-pressed inlet-valves, and a rotary tubular distributing valve mounted to turn in the cylindrical bore of said connection and provided with two apertures and so driven as to make one revolution on every two revolutions of the crank-shaft, said connection being provided with two passages for each connecting two of the four channels.



2. In a four stroke cycle explosion-engine with four juxtaposed cylinders, the combination with four spring-pressed inlet-valves in the four cylinders, of a connection fastened on the four cylinders above said four spring-pressed inlet-valves and comprising a cylindrical bore in its middle with two opposite pairs of superposed openings and four separate channels leading therefrom to the four spring-pressed inlet-valves, and a rotary tubular distributing valve mounted to turn in the cylindrical bore of said connection and provided with two apertures in two parallel planes at right angles to its axis and so driven as to make one revolution on every two revolutions of the crank-shaft, said connection being provided with two passages for each connecting two of the four channels.

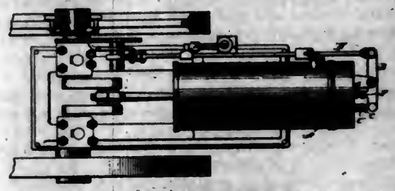
3. In a four stroke cycle explosion-engine with four cylinders, the combination with four spring-pressed inlet-valves in the four cylinders and adapted to severally open into the latter under the pressure of compressed air or gas, of a connection on the four cylinders above said four spring-pressed inlet-valves and comprising a cylindrical bore in its middle with a joint for the supply of compressed air or gas, also with four openings and four separate channels leading therefrom to the spring-pressed inlet-valves, and a rotary tubular distributing valve mounted to turn in the cylindrical bore of said connection and provided with two apertures which are so disposed as to severally and each supply compressed air or gas to two cylinders at a time, said connection being provided with two passages for each connecting two of the four channels.

4. In a four stroke cycle explosion-engine with four juxtaposed cylinders, the combination with four spring-pressed inlet-valves in the four cylinders and adapted to severally open into the latter under the pressure of compressed air or gas, of a connection on the four cylinders above said four spring-pressed inlet-valves and comprising a cylindrical bore in its middle with a joint for the supply of compressed air or gas, also with two opposite pairs of superposed openings and four separate channels leading therefrom to the four spring-pressed inlet-valves, a rotary tubular distributing valve mounted to turn in the cylindrical bore of said connection and provided with two apertures in two parallel planes at right angles to its axis, which apertures are so disposed as to severally and each supply compressed air or gas to two cylinders at a time, said connection being provided with two passages for each connecting two of the four channels, and means for so driving said rotary distributing valve that it makes one revolution on every two revolutions of the crank-shaft.

877,378. INTERNAL-COMBUSTION ENGINE. PAUL F. SCHEYER and DANIEL C. STOVER, Freeport, Ill., assignor, by direct and mesne assignments, to Stover Engine Works, Freeport, Ill., a Corporation of Illinois. Filed Aug. 30, 1905. Serial No. 276,416.

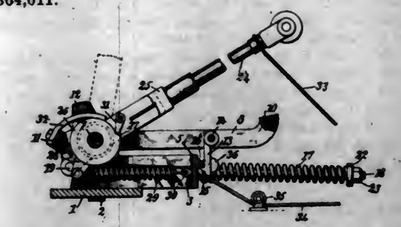
1. The combination with an engine cylinder having spring actuated inlet and exhaust valves, of a centrally pivoted lever arranged to swing toward and from the exhaust valve, to positively open it and then release it, a spring-actuated latch rigidly locking the inlet valve when the latter closes, and a device borne by said lever and adapted to force said latch out of locking position when the lever moves from the exhaust valve.

2. The combination with an engine cylinder, of a spring closed exhaust valve, a spring closed inlet valve having a catch upon its stem, a spring-actuated latch for engaging said catch and locking the inlet valve in closed position, and an engine-actuated lever arranged to swing toward the exhaust valve to open it and to push said latch out of locking position during its return movement.



3. The combination with an engine cylinder having in its end a spring-closed exhaust valve and a spring-closed inlet valve provided with a lateral catch on its stem, of a spring-actuated latch pivoted upon the cylinder to swing transversely into engagement with said catch, and an engine-actuated lever pivoted between its ends to the engine cylinder, swinging against the exhaust valve stem to open the valve, and provided with a projection in position to force said latch out of engagement as the lever moves away from the exhaust valve stem.

877,379. TROLLEY-REPLACER. GEORGE Q. SEAMAN, New York, N. Y. Filed Mar. 23, 1907. Serial No. 364,011.



1. In a device of the class described, in combination, a base, a trolley pole pivotally mounted thereupon, means tending to force said trolley pole toward the trolley wire, automatic means for depressing said pole when displaced from the wire, and a cradle adapted to receive said trolley pole when depressed, and affording means for raising the same to its normal position.

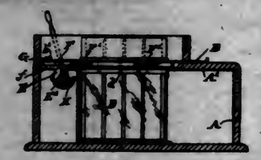
2. In a device of the class described, in combination, a frame, a trolley pole pivotally mounted thereupon, a cradle pivotally mounted on said frame, means tending to raise said cradle, means for latching said cradle normally in a depressed position, means for automatically depressing said trolley pole when displaced from the trolley wire whereby it may descend upon said cradle, and means for releasing said cradle to enable the same to raise said pole.

3. In a device of the class described, in combination, a base, a trolley pole pivotally mounted thereupon, a cradle pivotally mounted on said base and adapted to receive said trolley pole in a depressed position, a trip plate mounted on said base, a member connecting said pole and said trip plate and affording means for supporting said pole upon said trip plate, means engaging said trip plate and affording means for holding said trolley pole in an elevated position, a dog lying adjacent to said first member and adapted to disengage the same when said trolley pole becomes displaced from the trolley wire, means tending to raise said cradle, and means for latching said cradle in a depressed position.

4. In a device of the class described, in combination, a base, a trolley pole pivotally mounted thereupon, a trip plate pivotally mounted on said base and having a shoulder, a pawl carried by said trolley pole and engaging said shoulder to enable said trip plate to support said trolley pole, a spring attached to said trip plate and affording means for normally holding said trolley pole in an elevated

position, a cradle pivotally mounted on said base and having a dog adapted to engage said pawl when said trolley pole becomes detached from the trolley wire, said cradle being adapted to receive said trolley pole as it becomes depressed when said pawl is released, springs tending to move said cradle toward an elevated position, a latch for normally holding said cradle in a depressed position, a cord connecting with said trolley pole, and means for operating said latch.

877,380. VOTING-MACHINE. BYRON T. SHELYE, Bloomington, Ill. Filed Feb. 16, 1906. Serial No. 301,460.

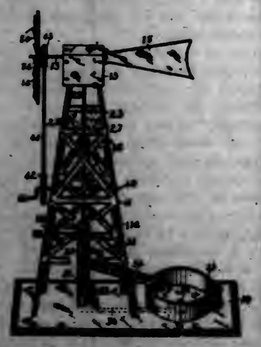


1. In a voting machine, the combination of a cabinet, a rotatable shaft mounted in said cabinet, segment-wheels mounted and adapted to turn on said shaft means for securing said segment wheels on said shaft, a slotted adjusting plate secured to said shaft, a connecting device fitting in the slot of said plate and connecting the segment-wheel with the adjusting plate, means for adjusting said connecting device, rack bars operative by said segment wheels, a cross bar connecting said rack bars, perforated dropping slides operative by said cross bar, and ball receptacles adapted to receive balls deposited through the perforations in said dropping slides, as set forth.

2. In a voting machine of the class employing slidable dropping slides, the combination of a rotatable shaft, a toothed segment-wheel mounted on said shaft, rack bars operative by said segment-wheel, a cross bar connecting said rack bars and adapted to operate said dropping slides, and means for adjusting the throw of said segment-wheel, as set forth.

877,381. [WITHDRAWN.]

877,382. TOY WINDMILL. REY H. SUNDERLIN and CHARLES A. BLILEY, Cripple Creek, Colo. Filed Mar. 1, 1907. Serial No. 360,015.



1. A toy wind mill, including a base plate, a tower composed of a single piece of metal having apertures therein to form lattice work, a casing supporting plate formed integral with said tower, a casing composed of two rectangular plates, one of said plates having marginal slots and the other plate provided with integral ears engaging said marginal slots, means for joining said tower to the base plate, said means consisting of ears formed integral with the tower and engaging slots cut in the said base plate.

2. A toy wind mill, including a base plate, a tower composed of a single piece of metal having apertures therein to form lattice work, a casing supporting plate formed integral with said tower, a casing formed of two rectangular plates, one of said plates having a series of integral ears adapted to engage slots in the other plate, a swivel connection between the casing and said supporting plate, means for joining said tower to the base plate, said means consisting of ears formed integral with the tower and engaging slots cut in the said base plate.

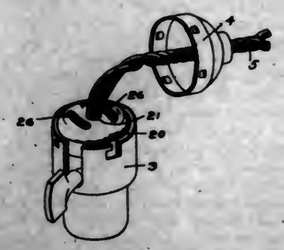
3. In a toy wind mill having a base plate, a tower consisting of a single piece of metal having apertures cut therein to form longitudinal strips connected by parallel and diagonal members, a casing supporting plate formed integral with two of said longitudinal strips and provided with slots, a casing formed of oblong plates, one of said plates provided with marginal slots and the other plate having integral ears adapted to engage the marginal slots, and a series of ears formed integral with said longitudinal strips and adapted to engage said slots in the supporting casing plate and the said base plate.

4. In a toy wind mill having a base plate, a tower consisting of a single piece of metal having apertures therein to form lattice work, a casing supporting plate formed integral with the tower and provided with a central aperture, a casing carried on said supporting plate, said casing consisting of two plates, means for joining said plates, said means consisting of ears formed integral with one plate and adapted to engage slots cut in the other plate, the first named plate having an opening registering with said aperture, a swivel connection between the casing and the supporting plate, said connection consisting of a recurved flange surrounding the said opening and engaging the margins of said aperture and means for securing said tower to the base.

5. In a toy wind mill having a base plate, a tower consisting of a single piece of metal having apertures cut therein to form longitudinal strips connected by parallel and diagonal members, and a casing plate formed integral with two of said longitudinal strips and provided with slots, and a series of ears formed integral with said longitudinal strips and adapted to engage said slots in the casing plate and the said base plate.

[Claim 6 not printed in the Gazette.]

877,383. MEANS FOR SECURING CORDS TO LAMP-SOCKETS. FREDERICK A. SWAN, Cliftondale, Mass. Filed Mar. 15, 1907. Serial No. 362,582.



1. The combination with a lamp socket of conductor cords leading thereinto, and strain receiving means within the socket.

2. The combination with a lamp socket of conductor cords leading thereinto, of means within the socket to frictionally hold said cords thereby to relieve the terminals from any strain.

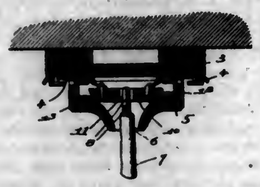
3. The combination with a lamp socket of conductor cords leading thereinto, a combined strain-receiving and lamp-positioning means within the socket.

4. The combination with a lamp socket having a cap of conductor cords leading thereinto, and a strain-receiving device within the cap, said strain-receiving device engaging both the cap of the lamp and the terminal-carrying member of the lamp thereby serving to hold the latter firmly in position.

5. The combination with a lamp socket including a shell and a cap, of conductor cords leading thereto, and strain-receiving means within said socket and having frictional engagement with the cords.

[Claims 6 and 7 not printed in the Gazette.]

877,384. ELECTRICAL FITTING. FREDERICK A. SWAN, Cliftondale, Mass. Filed Apr. 22, 1907. Serial No. 369,494.



1. The combination with an electrical fitting having a terminal, of conducting wire connected to said terminal and a one-piece strain-receiving means separate from the fitting and located therewithin and having frictional engagement with the wire thereby to relieve the terminal from any strain.

2. The combination with an electrical fitting having terminals, of conducting wires connected thereto, and a strain-receiving device separate from and located within the fitting, said device having a central aperture through which both wires are passed, and a separate pair of apertures through which each wire is subsequently passed, whereby said device takes any strain to which the wires are subjected and relieves the terminals therefrom.

3. The combination with an electrical fitting having terminals of conducting wires connected thereto and a strain-receiving device separate from the fitting and located therewithin, said device having a plurality of wire-receiving openings or passageways through which the wires are passed in a circuitous manner to provide frictional engagement between the wires and the device sufficient to relieve the terminals from strain.

4. The combination with an electrical fitting having terminals and an aperture to receive conducting wires, of conducting wires extending through the apertures and connected to said terminals, and a one-piece device separate from but situated within the fitting and having two pairs of apertures through which the wires are threaded whereby said device relieves the terminals from strain to which the wires are subjected.

5. In an electrical fitting, the combination with terminals, of conducting wires connected thereto, and strain-receiving means separate from but situated within the fitting, said strain-receiving means having a central aperture through which the wires are threaded, and two pairs of apertures through each pair of which one of the wires is threaded.

877,385. RAILWAY-SIGNAL. WALTER N. THOMPSON, Tucson, Ariz. Filed Oct. 15, 1906. Serial No. 338,918.



1. A railway signal, comprising a case adapted to be pivotally mounted upon a locomotive and having a lateral opening and a guideway projecting laterally therefrom, a standard mounted in said case and having a signal disk, said disk being adapted to move in said guideway when displaced from the case.

2. A railway signal comprising a case mounted upon a locomotive and having a lateral opening and a plurality of guides projecting laterally therefrom a plurality of signal disks differing one from the other in form and color pivotally mounted in said case, said disks being adapted to be laterally displaced through said opening and being adapted to move in said guides, means for holding said disks in said case, and means for holding said disks in a set position.

3. A railway signal, comprising a case adapted to be mounted upon a locomotive and having a lateral opening and a guide member projecting laterally therefrom, said member having a plurality of guide grooves, a plurality of standards having signal disks pivotally mounted in said case and adapted to be laterally displaced therefrom, each of said disks being adapted to move in one of said grooves, and means for engaging said standards in fixed position.

4. A railway signal, comprising a case having a lateral opening and a guideway projecting laterally therefrom, a standard having a signal disk provided with a notch in one edge thereof, said disk being pivotally mounted in said case, a catch upon said case adapted to engage with said notch to hold said standard within said case, and a catch upon said guideway adapted to engage with said notch to hold said standard in set position.

877,386. LIFTING-JACK. EDWARD W. TOPPING and THOMAS V. PLICE, Ashland, Ohio, assignors to Safety Door Hanger Co., Ashland, Ohio. Filed May 6, 1907. Serial No. 372,263.



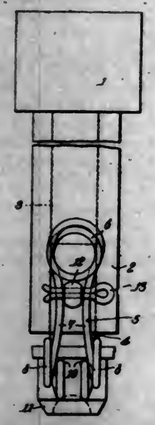
1. In a lifting jack, the combination of a nut having a ratchet thereon, a lifting-bar having a threaded connection with said nut but non-rotatably confined therein, a double pawl carrying dogs adapted to have an engagement with said ratchet, a handle secured to said pawl for rotating said nut, and a guide for determining the engagement of one of the dogs of the double pawl with the ratchet as the handle is swung into operative position, substantially as described.

2. In a lifting jack, the combination of a standard, a nut rotatably confined within said standard and having a ratchet thereon, a lifting-bar having a threaded connection with said nut but non-rotatably confined therein, a collar rotatably mounted on said standard, a double pawl pivotally mounted on said collar and carrying dogs adapted to have an engagement with said ratchet, a handle secured to said pawl for rotating said nut, and means on said collar and handle for determining the engagement of one of the dogs of the double pawl with the ratchet as the handle is swung into operative position, substantially as described.

3. In a lifting jack, the combination of a standard, a nut rotatably confined within said standard and having a ratchet thereon, a lifting-bar having a threaded connection with said nut but non-rotatably confined therein, a

collar rotatably mounted on said standard, a double pawl pivotally mounted on said collar and carrying dogs adapted to have an engagement with said ratchet, a handle secured to said pawl for rotating said nut, and a guide for determining the engagement of one of the dogs of the double pawl with the ratchet as the handle is swung into operative position, substantially as described.

877,387. SAFETY-SPRING FOR STEAM AND COMPRESSED-AIR HAMMERS. WILLIS F. WALKER, York, Pa. Filed Dec. 18, 1906. Serial No. 348,460.



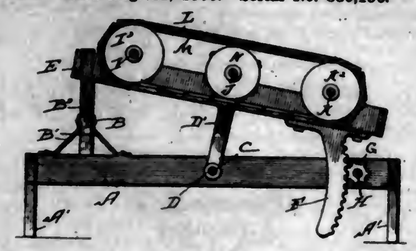
1. In a device of the class specified, a pneumatic tool including a cylinder, a piston therein, a tool member, and a yieldable retaining device comprising a body portion arranged to be secured to and extending parallel with the side of the cylinder, and an integral arm projecting across the plane of movement of the tool and engaging therewith, the arm being bendable outward as the tool is moved under the piston blow and serving to restore the tool to initial position as the piston is retracted.

2. In a device of the class described, the combination of a hammer comprising a cylinder and operating piston therein, with a tool removably mounted in the cylinder in coöperative relation with the piston, and a yielding retaining device for holding the tool in the hammer, said device comprising a single length of wire bent into a body portion secured to the hammer and provided with a laterally extending member adapted to engage the tool and connected with the body portion by a coil.

3. In a device of the class described, the combination of a hammer comprising a cylinder and operating piston therein, with a tool removably mounted in the cylinder in coöperative relation with the piston, a yielding retaining device for holding the tool in the hammer, said device having a body portion composed of connected and spaced members, a stud connected with and extending laterally from the cylinder for engaging between the spaced members of the device, and a cotter pin for holding the device on the stud.

4. In a device of the class described, the combination of a hammer comprising a cylinder and piston therein, a stud secured to the cylinder, and a removable retaining means on the stud, with a tool in the cylinder provided with a transverse aperture, and a device for yieldingly holding the tool in the hammer, said device comprising a single length of wire having two parallel body portions engaging on opposite sides of the stud and behind the retaining means on the latter, a coil connecting the said parallel portions and bearing against the stud, an arm connected by a coil to one of the said body portions and extending at right angles to the latter, and a hook formed on the other body portion engaging under the said arm.

877,388. TREAD-POWER. OVID P. WELDING, Sioux City, Iowa. Filed Aug. 11, 1906. Serial No. 330,156.



1. In a device of the kind described, the combination with a main frame provided with pivoted arms, of a supplementary frame secured between said arms provided with an endless platform and means for raising and lowering one end of said frame carrying the platform, for the purpose described.

2. In a device of the kind described, the combination with a main frame, of arms mounted on said frame a supplementary frame provided with an endless platform carried by said arms and adjusting means connected to one end of said frame, for the purpose described.

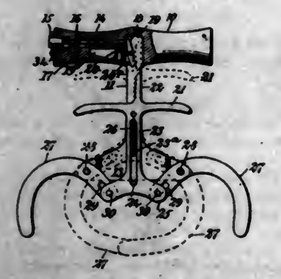
3. In a device of the kind described, the combination with a main frame provided with standards connected by cross-bars, of arms pivoted to said frame, a supplementary frame provided with an endless platform carried by said arms, segmental gears secured to one end of said frame and a shaft provided with gear-wheels adapted to mesh with said segmental gears, for the purpose described.

4. In a device of the kind described, the combination with a main frame provided with a shaft, of arms loosely mounted on said shaft, a supplementary frame secured to said arms, shafts mounted on the supplementary frame provided with wheels, an endless platform mounted on said wheels and means for tilting said supplementary frame, for the purpose described.

5. The combination with a main frame provided with a shaft carrying a gear wheel, of arms loosely mounted on said shaft, a supplementary frame secured on said arms provided with a shaft carrying a gear wheel meshing with the gear on the shaft on the main frame, an endless platform mounted on the supplementary frame carrying sprocket-chains, and sprocket-wheels fixed to the shaft carried by the supplementary frame meshing with said chains and means for tilting the supplementary frame, for the purpose described.

[Claims 6 to 8 not printed in the Gazette.]

877,389. TONGS. WILLIAM E. WEBB, Deer Lodge, Mont. Filed Mar. 12, 1907. Serial No. 361,931.



1. Tongs comprising a grip provided with downwardly extending spaced parallel members having lateral enlargements at their free ends, gripping members pivoted to the enlargements and provided at their inner ends with slots, a member slidable between the spaced parallel members, said slidable members having lateral projections provided with pins, the pins engaging the slots of the fingers, said slidable member having a toothed upward extension, and a finger grip adjacent to the extension, a spring pressed pawl pivoted in the grip for engaging the teeth of the extension, a plunger slidable in the grip and engaging the pawl, for releasing said pawl, said plunger having a head projecting beyond the grip, and a latch on the grip for engaging the head to retain the plunger in its inward position.

2. Tongs consisting of a body section comprising a hand grip and spaced members extending therefrom, a plunger located in the hand grip, a spring-controlled pawl operated upon by said plunger, a finger grip having slidable movement in the spaces between the downwardly extending members of the hand grip, a rack carried by said finger grip adapted for engagement by the said pawl, tensional means for drawing the finger grip outwardly when released from the said pawl, and gripping members pivotally connected with the hand grip section of the device and likewise pivotally connected with the finger grip section of the device.

3. In tongs the combination with a body section comprising a hand grip and spaced members extending therefrom having enlargements at their lower ends, a plunger located in the hand grip extending out beyond one end thereof, and spring-controlled, a pawl also located in the hand grip adapted to be operated by the said plunger, of a finger grip section mounted for movement between the spaced members of the body section and comprising finger pieces, a rack extending therefrom for engagement with the pawl, a spring adapted to carry the said finger grip section outward when released from the said pawl, and gripping members having slots at their inner ends and pivot pins carried by the said finger grip sections extending through the said slots, the said gripping members being pivotally connected with the enlarged portions of the body section of the device.

877,390. BOLT. HENRY V. WILLE, Philadelphia, Pa. Filed Mar. 12, 1907. Serial No. 361,936.



1. As a new article of manufacture, a bolt having a soft metal end and a stem of metal of high tensile strength.

2. As a new article of manufacture, a bolt having a soft metal end and a flexible stem of metal of high tensile strength.

3. A bolt having an exteriorly threaded soft metal end and a stem of metal of high tensile strength.

4. A bolt having an exteriorly threaded soft metal end and a flexible stem of metal of high tensile strength.

5. A bolt having an exteriorly threaded soft metal end and a flexible stem of tempered or treated steel of high tensile strength.

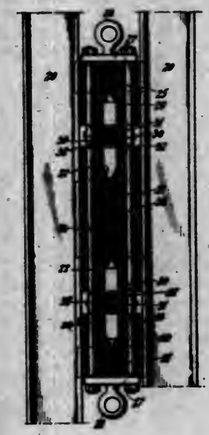
[Claims 6 to 10 not printed in the Gazette.]

877,391. SHOCK-ABSORBER. GEORGE M. WILSON, Los Angeles, Cal. Filed May 20, 1907. Serial No. 374,794.

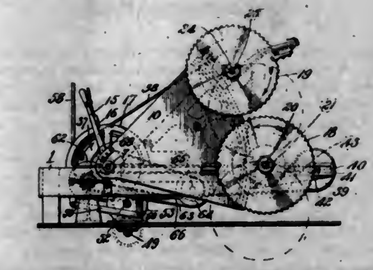
1. In a shock absorber, a cross head, a terminal block slidable with relation to the cross head, means for limiting the relative movement between the cross head and the terminal block, the cross head having a conical seat and the terminal block having a conical seat, and a pressure cone comprising two members in said seats with a compression spring between said members.

2. A shock absorber comprising a cross head, a connecting rod connected with a universal joint to the cross head, a terminal block, bolts passing loosely through the terminal block and passing loosely through the cross head, cross bars connected to both ends of said bolts, eyes on the cross bars for the attachment of cables, the terminal block and the cross head having conical seats, a divided pressure cone in said seats, and a compression spring between the two members of the pressure cones.

3. A shock absorber comprising a cross head, a connecting rod connected with a universal joint to the cross head, terminal blocks above and below the cross head, bolts extending loosely through the cross head and passing through the terminal blocks, cross bars connected to both ends of said bolts, an eye on each cross bar for the attachment of a cable, terminal blocks and the cross head having conical seats, divided pressure cones in said seats, and a compression spring between the two members of each pressure cone, the members of each pressure cone having grooves which slide over the respective bolts.



877,392. DOUBLE-CUTTING ROTARY SAWMILL. CHRISTIAN J. ZEITINGER, St. Louis, Mo. Filed Dec. 4, 1905. Serial No. 290,072.



1. In a sawmill, the combination with a log carriage and means for reciprocating said carriage, of a husk frame, a swinging frame having a guide flange, stationary means supported by said husk frame and to which said swinging frame is fitted, a guide member supported by said husk frame and having a track portion for directing the movement of said swinging frame by the engagement of the guide flange of the swinging frame therewith, a pair of circular saws supported by said swinging frame and arranged in the same vertical plane and in alinement with said carriage, and means for rotating said saws, substantially as set forth.

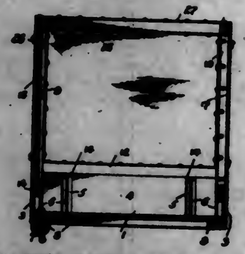
2. In a sawmill, the combination with a log carriage and means for reciprocating said carriage, of a husk frame, a swinging frame having a curved guide flange, stationary means supported by said husk frame and to which said swinging frame is fitted, a guide member supported by said husk frame and having a curved track portion for directing the movement of said swinging frame by the engagement of the curved flange of the swinging frame therewith, a pair of circular saws supported by said swinging frame and arranged in the same vertical plane and in

alinement with said carriage, and means for rotating said saws; said saw rotating means being arranged to drive said saws in opposite directions of rotation relative to each other, substantially as set forth.

3. In a sawmill, the combination with a log carriage, and means for reciprocating said carriage, of a husk frame, a swinging frame having a curved guide flange, stationary means supported by said husk frame and to which said swinging frame is fitted, a guide member supported by said husk frame and having a curved track portion for directing the movement of said swinging frame by the engagement of the curved flange of the swinging frame therewith, a pair of circular saws supported by said swinging frame and arranged in the same vertical plane and in alinement with said carriage, and means for rotating said saws, said saw rotating means being arranged to drive said saws in opposite directions of rotation relative to each other; said guide flange being grooved and the guide portion of said guide member being provided with a curved rib loosely fitted in said groove, substantially as set forth.

4. In a sawmill, the combination of a swinging frame, a pair of mandrels supported by said frame, a circular saw carried by each of said mandrels, means for adjusting the position of one of said mandrels relative to the other mandrel, and means for driving said mandrels to impart rotation to said saws, substantially as set forth.

877,393. POULTRY CRATE OR COOP. THOMAS BALL, New Castle, Pa. Filed July 9, 1906. Serial No. 325,827.



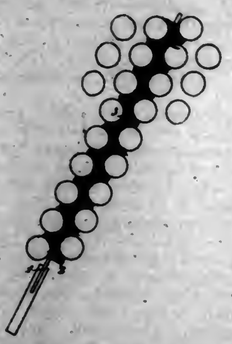
A knock-down crate or coop comprising a bottom plate, auxiliary front rear and side walls mounted upon said plate, said auxiliary front wall having an opening, each of said walls having upon the inner face thereof a plurality of vertically-extending grooves, side front and rear frames mounted upon each of said walls, means extending through the grooves and bottom plate and connected to said frame for hinging the latter to the walls and for connecting the walls to the plate, a strip of fabric of a width equal to the width of and connected at its ends to the front and rear frames, said strip of fabric constituting the top for the crate when the front and rear frames are in an upright position, a fabric attached to certain of said frames, vertically-extending rods carried by the other of said frames, certain of said rods being vertically adjustable to form an entrance opening for the crate, means for maintaining said frames in an upright position, means for securing the frames together when in a knock-down position, and a gate hinged to the front wall for closing said opening.

877,394. SINTERING BLUE-BILLY. JOHN G. BERGQUIST, Chicago, Ill., assignor to American Sintering Company, a Corporation of Illinois. Filed Feb. 12, 1906. Serial No. 300,759.

1. An improved process of converting pulverulent blue billy and pulverulent flue dust into sintered nodules which consists in intimately mixing said ingredients in their loose disintegrated condition in proportions to effect the lowering of the fluxing temperature of the mixture to a point below ordinary furnace temperature and then agglomerating the mixture into lumps by tumbling the loose material progressively and gradually through a moving furnace and in the presence of a fusing heat.

2. An improved process of converting blue billy into sintered lumps suitable for blast furnace reduction, which consists in mixing therewith comminuted iron ore and comminuted slag-forming material, in proportions to effect the lowering of the fluxing temperature of the mass to a point below that at which fire brick fuses, and effecting the agglomeration of the mixture by tumbling the material progressively and gradually through a suitable receptacle in the presence of a fusing heat.

877,395. BOILER-FLUE CLEANER. SVEN G. BLADH, Carlskrona, Sweden. Filed June 5, 1906. Serial No. 320,282.



1. In a boiler tube scraper, the combination of a pair of strips of sheet metal of substantially equal width, the edges being disposed in parallel relation, and one edge of each strip extending beyond the adjacent edge of the other strip, and elastic threads between said strips and extending beyond the edges of the same, the extending edge of each strip being bent over the adjacent edge of the other strip at each of a number of places, the said elastic threads at said places being bent out of their normal plane.

2. In a boiler tube scraper, the combination with a pair of strips of sheet metal of equal width, the edges being substantially parallel and one edge of each strip extending beyond the adjacent edge of the other strip, and elastic threads between said strips and extending beyond the edges of the same, a row of rivets along each edge and passing through said strips, for holding these together upon said threads, said rivets being arranged so that longitudinally of the strip a rivet of one row will be disposed midway between two rivets of the other row, each of the said extending strip edges being bent over the adjacent edge of the other strip at positions between the rivets along such edge and thereby bending the said elastic threads out of their normal plane.

877,396. WATER-BOTTLE. ROBERT S. BLAIR, New Rochelle, N. Y. Filed July 13, 1907. Serial No. 383,691.



1. In a device of the class described, in combination, a water bag comprising a body portion with funnel formed thereon, said body portion and funnel converging to a common mouth, means adapted to seal said mouth with said funnel in operative condition, and means secured to said bag and separating a portion of the passage through said mouth from the remaining portion thereof.

2. In a device of the class described, in combination, a receptacle provided with a mouth and otherwise imperforate, means dividing the mouth into a plurality of passages leading separately to the outer air whereby a fluid may enter said receptacle through one of said passages and another fluid simultaneously pass out through another passage and entirely isolated from said first fluid throughout its entire course and common means adapted to seal said several passages.

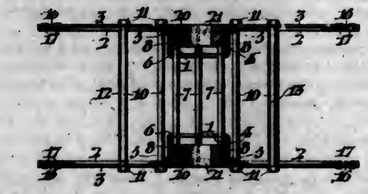
3. In a device of the class described, in combination, a receptacle provided with a mouth and having a funnel leading to said mouth, means adapted to seal said entire mouth with said funnel in operative relation to the body of the receptacle, and means providing a separate passage from the interior of said receptacle into said funnel whereby water may pass into said receptacle and another fluid simultaneously pass out from the same and isolated from said incoming water throughout its entire course.

4. In a device of the class described, in combination, a water bag provided with a mouth, means adapted to seal said mouth, a funnel leading to said mouth, and a tube extending from the interior of said bag above the lower portion of said funnel whereby water may enter said bag and another fluid be simultaneously discharged above the lower portion of said funnel.

5. In a device of the class described, in combination, a water bag provided with a mouth, means adapted to seal said mouth, a funnel formed on the body of said bag and leading to said mouth, a tube extending from the interior of said bag above the lower portion of said funnel, whereby water may enter said bag and another fluid be simultaneously discharged above the lower portion of said funnel and means adapted to seal said mouth with said funnel in operative relation to the body of the bag.

[Claims 6 to 21 not printed in the Gazette.]

877,397. REEL. CHARLES A. BRINLEY, Philadelphia, Pa., assignor to The American Pulley Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 15, 1907. Serial No. 383,792.



1. In a reel, the combination of two heads, each comprising a pair of half-spiders, said half-spiders each consisting of a semi-annular band having radial arms arranged in a plane at right angles to the peripheral surface of the band; means for securing the half-spiders of each head together; separating means interposed between said heads; and a plurality of tie-rods connecting opposite pairs of arms on the respective heads.

2. In a reel, the combination of two heads, each comprising a pair of half-spiders, said half-spiders each consisting of a semi-annular band having radial arms arranged in a plane at right angles to the peripheral surface of the band; means for securing the half-spiders of each head together; a pair of hub pieces secured within the bands of the respective heads; separating means interposed between said heads; and a plurality of tie-rods connecting opposite pairs of arms on the respective heads.

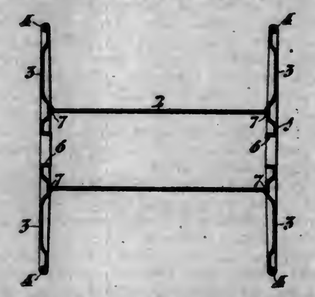
3. In a reel, the combination of two heads, each comprising a pair of half-spiders, said half-spiders each consisting of a semi-annular band having radial arms arranged in a plane at right angles to the peripheral surface of the band; means for securing the half-spiders of each head together; separating means interposed between said heads; a plurality of tie-rods connecting opposite pairs of arms on the respective heads; and a drum inclosing said tie-rods.

4. In a reel, the combination of two heads, each comprising a pair of half-spiders, said half-spiders each consisting of a semi-annular band having radial arms arranged in a plane at right angles to the peripheral surface of the band; means for securing the half-spiders of each head together; separating means interposed between said heads; a plurality of tie-rods connecting opposite pairs of arms on the respective heads; a drum inclosing said tie-rods; and facing plates secured to the faces of the arms.

5. In a reel, the combination of two heads, each comprising a pair of half-spiders, said half-spiders each consisting of a semi-annular band having radial arms arranged in a plane at right angles to the peripheral surface of the band; means for securing the half-spiders of each head together; separating means interposed between said heads; a plurality of tie-rods connecting opposite pairs of arms on the respective heads; a drum inclosing said tie-rods; facing plates secured to the faces of the arms; and an outwardly flanged rim upon the outer periphery of said facing plates, overlapping the ends of said arms.

[Claim 6 not printed in the Gazette.]

877,398. SHEET-METAL SPOOL. CHARLES A. BRINLEY, Philadelphia, Pa., assignor to The American Pulley Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 15, 1907. Serial No. 383,793.



1. In a spool, the combination of an axial drum of sheet metal, and end disks of sheet metal, each disk having a central opening, and integrally welded to said drum at a plurality of limited regions symmetrically disposed with relation to the center of the disks, substantially as set forth.

2. A sheet metal spool comprising an axial drum; end disks with concentric circular openings; and inwardly extending annular bands surrounding said openings respectively; said drum being integrally welded at each end to one of the disks at a plurality of limited regions.

3. In a spool, the combination of an axial drum of sheet metal, and end disks of sheet metal, integrally welded to said drum at a plurality of limited regions symmetrically disposed with relation to the center of the disks, substantially as set forth.

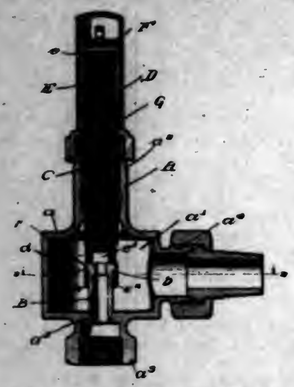
877,399. RELIEF-VALVE FOR RADIATORS. WALTER W. BRISSENDEN, Chicago, Ill., assignor to National Steam Specialty Company, Chicago, Ill., a Corporation. Filed Mar. 4, 1904. Serial No. 196,526.

1. In a valve of the character described, the combination of a valve-casing, an expansible valve-plug and a tubular valve-seat slidably connected and organized into a unitary structure, which is readily removable from the casing.

2. In a valve of the character described, the combination of a valve-casing, an expansible valve-plug and a tubular valve-seat suitably connected and organized into a unitary structure which is readily removable from the valve casing.

3. In a valve of the character described, the combination of a valve-casing having a chamber apertured at its bottom, a tubular valve-seat having its lower end removably seated in said aperture, and an expansible valve-plug removably mounted in the casing and having its lower end

arranged in position to engage the top of said valve-seat, said valve-plug being frictionally held at its middle portion, and thereby adapted to have unlimited end-wise movement should it continue to expand after engaging said valve-seat.

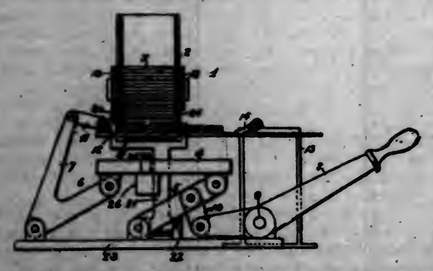


4. In a valve of the character described, the combination of a valve-casing provided with a chamber apertured at its bottom, a tubular valve-seat having its lower end removably seated in said aperture, a metal tube extending upwardly and having its lower end telescopically connected with the upper end-portion of said valve-seat, and a body of expansible material inclosed by said tube and adapted to expand and engage the top of said valve-seat when subjected to heat, the whole forming a unitary structure readily removable from the casing.

5. In a valve of the character described, the combination of a valve-casing, a valve-seat, and a body of expansible material mounted in said casing and having a yielding frictional connection therewith, whereby said body of expansible material may have unlimited end-wise movement and thereby adjust itself relatively to the casing should the expansion continue after it engages the said valve-seat, said valve-seat being adapted to act as a stop to limit the expansion in one direction only.

[Claims 6 to 9 not printed in the Gazette.]

877,400. ADDRESSING-MACHINE. JOSEPH P. BRYAN, Baltimore, Md., assignor, by mesne assignments, to Dwight M. Ludington and A. S. Goldsborough, trustees. Filed Dec. 14, 1905, Serial No. 291,710. Renewed Apr. 9, 1907. Serial No. 367,220.



1. In a machine of the character described, the combination of a name-plate magazine, a platen movably secured under said magazine, an ejector associated with said platen and moved therewith and arranged to eject said name-plates in said magazine successively, a receiving magazine constructed to receive the name-plates ejected from said first mentioned magazine, a backing or mounting slide arranged to enter behind the name-plate from which an impression is immediately to be made, the movement of said backing or mounting slide being coincident with the movement of said platen, and a color vehicle between said name-plate and said platen, substantially as described.

2. In a machine of the character described, the combination of a magazine arranged to carry a series of name-plates, a platen associated with said magazine, an ejector associated with said magazine and arranged to eject the name-plates from said magazine, a backing or mounting slide associated with said magazine for backing or mounting said name-plates, and a color vehicle arranged between the platen and the name-plates, substantially as described.

3. In a machine of the character described, the combination of a magazine constructed to carry a series of name-plates, a platen associated with said magazine and arranged to be moved against one of said name-plates, means for ejecting a name-plate from said magazine when said platen is being moved away from a name-plate, and means for backing or mounting one of said name-plates when said platen is being moved toward said name-plate, substantially as described.

4. In a machine of the character described, the combination of a magazine arranged to carry a series of name-plates, a movable platen associated with said magazine, an ejector operated by the movement of said platen for ejecting a name-plate from said magazine, and a backing or mounting element operated by the movement of said platen for backing or mounting a name-plate, substantially as described.

5. In a device of the character described, the combination of a magazine arranged to carry a series of name-plates, a reciprocating platen associated with said magazine, and means to hold one of said name-plates while an impression is being made therefrom and to eject said name-plate from said magazine, substantially as described.

[Claims 6 to 22 not printed in the Gazette.]

877,401. DEODORIZING COMPOUND. SUSAN M. BUCHANAN, Hubbard, Oreg. Filed July 31, 1907. Serial No. 386,417.

1. A deodorizing composition consisting of a mixture of a decoction of the dried flowers of *Anaphalis margaritacea* of viscous consistency and wheat flour, substantially as described.

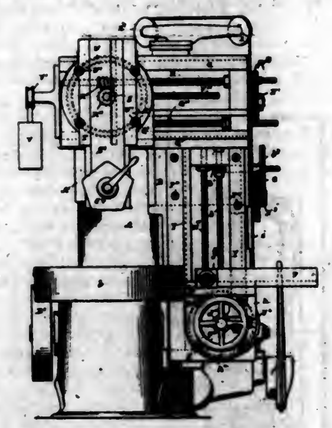
2. A deodorizing composition consisting of a mixture of about 8 to 12 parts of a decoction of the dried flowers of *Anaphalis margaritacea* and one half part of wheat flour, substantially as described.

877,402. VERTICAL TURRET-LATHE. EDWARD P. BULLARD, Jr., Bridgeport, Conn., assignor to The Bullard Machine Tool Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Apr. 23, 1904. Serial No. 204,593.

1. The combination, with frame-work, of a work-supporting table; means for rotating said table; a horizontal guide-way; a vertical guide-way beneath and in substantially the same plane with the horizontal guide-way; a saddle adjustable upon each of said guide-ways; a tool-slide carried by each saddle, each slide being arranged to project over and clear the guide-ways on which the saddle supporting the other slide is adjustable; a tool holder on one of said slides; and a tool-holder on the other of said slides.

2. The combination, with a frame-work supporting a rotary work-holder and a transverse guide-way, of a lateral guide-way at a right angle to the transverse guideway; a saddle adjustable upon the lateral guide-way; a swivel-plate carried by the saddle; and a tool-slide mounted at the side of the axis of said swivel-plate adjacent to the transverse guideway, whereby the tool-slide may be run up close to the transverse rail and its tool may travel over the entire space intermediate the transverse rail and the work-support.

3. The combination, with frame-work supporting a rotary table and a transverse guide-way, of a lateral guide-way offset from, and in substantially the same plane as, the transverse guide-way; a saddle adjustable upon the lateral guide-way; a swivel-plate, having a lateral extension on the side adjacent the transverse guideway provided with a way, carried by the saddle; and a tool-slide movable on the way and arranged as the saddle is moved close to the transverse rail to project over the face of said transverse rail.



4. The combination, with frame-work supporting a rotary work-holder and a transverse guide-way, of a lateral guide-way; a saddle adjustable on each of said guide-ways; means for actuating the saddles separately or simultaneously along their respective guide-ways; a swivel-plate, having a slide-way, mounted on one of said saddles; a swivel-plate, having a side extension adjacent the other guideway and provided with a slide-way, mounted on the other of said saddles; a tool-slide movable in the slide-way of each of said swivel-plates; and means for actuating said tool-slides separately or simultaneously.

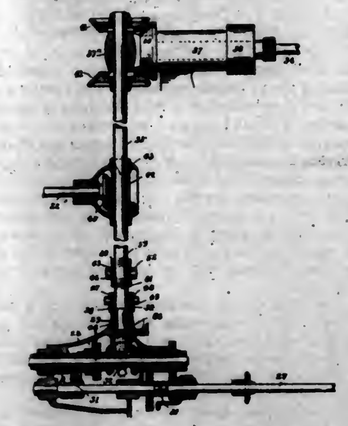
5. The combination, with frame-work supporting a rotary table and a transverse guide-way, of a lateral guide-way offset from and in substantially the same plane as, the transverse guide-way; a saddle on each guide-way; means for actuating the saddles, independently or simultaneously, along their respective guide-ways; a swivel-plate, having a slide-way, carried by one of said saddles; a swivel-plate, having a lateral extension on the side adjacent the other guideway and provided with a slide-way, carried by the other of said saddles; a tool slide mounted in the slide-way of each plate, the tool-slide on the lateral extension being arranged to project over and clear the guide-way which supports the saddle of the other tool-slide; and means for actuating the tool-slides separately or simultaneously.

[Claims 6 to 11 not printed in the Gazette.]

877,403. RAPID-TRAVERSE DEVICE FOR BORING-MILLS. EDWARD P. BULLARD and EMANUEL HENRIKSON, Bridgeport, Conn., assignors to The Bullard Machine Tool Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Mar. 16, 1906. Serial No. 306,404.

1. A rapid power traverse for boring mill tools, comprising driving mechanism, a movable feed rod operatively related to said driving mechanism, a tool bar having operative connections with the feed rod, an independent high speed shaft, gears connecting the latter and the feed rod for engaging the feed rod with the high speed shaft at predetermined points in the range of movement of the feed rod, mechanism for engaging the feed rod with the driving mechanism when the feed rod is in a position intermediate of its range of movement, and for disengaging the driving mechanism when the rod is engaged with the high speed shaft, and means for operating the feed rod to render operative the connections between the same and the high speed shaft when the rod is shifted from said intermediate position.

2. A rapid power traverse for boring mill tools, comprising driving mechanism, a movable feed rod operatively related to said driving mechanism, a tool bar having operative connections with the feed rod, an independent high speed shaft, gear connections between the latter and the feed rod for engaging the feed rod with the high speed shaft at predetermined points in the range of movement of the feed rod, a clutch intermediate the feed rod and driving mechanism, adapted to be engaged with said driving mechanism when the rod is in such intermediate position, means for moving the clutch and for shifting the feed rod to operatively connect the same or disconnect it from the high speed shaft.



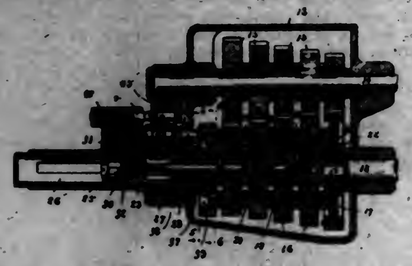
3. A rapid power traverse for boring mill tools, comprising driving mechanism, a movable feed rod operatively related to said driving mechanism, a tool bar having operative connections with the feed rod, an independent high speed shaft, gear connections between the latter and the feed rod for engaging the feed rod with the high speed shaft, a clutch intermediate the driving mechanism and feed rod, a means for shifting and holding the feed rod in engagement with the high speed shaft and also to move the clutch to disengage it from the driving mechanism.

4. A rapid power traverse for boring mill tools, comprising driving mechanism for feeding the tool, a longitudinal movable feed rod connected with said driving mechanism and having friction gears, a tool bar operatively connected with said feed rod, a high speed shaft bearing a friction gear, mechanism upon the feed rod for shifting the same to engage either of its friction gears with that of the high speed shaft to operate the feed rod in either a forward or backward direction, and means for simultaneously disconnecting said rod from the driving mechanism when the rod is shifted to engage either of said friction gears.

5. In a rapid power traverse device for boring mill heads, the combination with driving mechanism for feeding said head, of an intermediate feed shaft operatively connected to said head, a clutch carried on the shaft for engagement with the driving mechanism, a high speed shaft bearing a friction gear, a friction gear upon the feed shaft above and below the gear of the high speed shaft, a lever connection for raising and lowering the feed rod and its friction gears for engagement with the gear of the high speed shaft, and mechanism connected with said lever for simultaneously disengaging the clutch of the shaft from the driving mechanism, when the lever is operated to engage the friction gears before mentioned.

[Claims 6 to 8 not printed in the Gazette.]

877,404.- COMBINED CHANGEABLE-SPEED AND BRAKE MECHANISM. EDWARD P. BULLARD, Jr., Bridgeport, Conn., assignor to The Bullard Machine Tool Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Apr. 12, 1906. Serial No. 311,285.



1. The combination of a changeable speed driving mechanism, a brake clutch connected therewith, a casing in which they are mounted, a bracket pivoted in the casing connected with and adapted to operate the brake, and means carried within the bracket to operate the changeable speed driving mechanism.

2. The combination of a shaft, changeable speed driving connections mounted thereon, a brake clutch also connected therewith, a casing in which they are mounted, a bracket movably mounted in the casing, connections therewith for operating the brake, a lever pivoted in the bracket for operating the same and for engaging the several driving connections.

3. In a driving device, the combination with a shaft, of one or more clutch connections for operating the same, a brake device upon the shaft, a hubbed bracket journaled to operate the brake device, a single lever pivoted in the bracket and connected with both the clutch mechanisms and brake device for operating both.

4. In a changeable speed device, the combination of a series of driven gears, a series of loose gears to engage the driven gears, clutches in each of said loose gears, a plunger to operate said clutches to engage the loose gears, a hinged lever connected to operate the plunger, an arm attached to the lever and a graduated plate with which the arm registers.

5. In a changeable speed driving device, the combination with a shaft, a series of changeable speed driving connections, of a friction disk attached to the shaft, a clutch device to engage the disk, a rocker bracket adapted to operate the clutch, a lever to manipulate the bracket and also adapted to operate the several clutches of the driving connections.

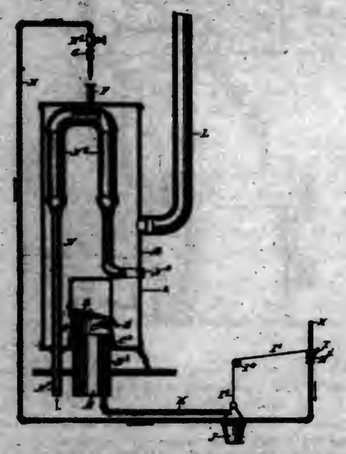
[Claims 6 to 13 not printed in the Gazette.]

877,405. FRICTION-CLUTCH. JULES CAILLET, Paris, France, assignor to Société Anonyme des Automobiles Peugeot, Paris, France. Filed Sept. 10, 1907. Serial No. 392,127.



A friction clutch member comprising a clutch cone *a*, semi-circular grooves *b* provided on said cone and lying along elements of the cone surface, hollow india-rubber rods *c* located in said grooves *b* and slightly protruding beyond the circumferential surface of the cone, a leather envelop *g* extended upon the cone surface and upon the protruding portions of the hollow india-rubber rods, and small plates *p* fixed to the cone opposite said rods to prevent same from slipping out their housings, substantially as described and for the purpose set forth.

877,406. HEATER. WILLIS H. CALLIHAN, Beaumont, Tex. Filed Feb. 11, 1907. Serial No. 356,759.



A liquid fuel burner, comprising a casing having an air supply pipe in the bottom thereof, a hollow base encircling the pipe, an inclined spreader supported by the base, a perforate apron on the lower end of the spreader, said hollow base having an opening in the side thereof adjacent to the apron, a drop feed delivering on to the spreader, a supply pipe for the drop feed, and a cut off for the supply pipe controlled by the excess of fuel delivered to the spreader.

877,407. CUTTER-HEAD FOR PLANING-MACHINES. ERNST CARSTENS, Nuremberg, Germany. Filed Dec. 28, 1905. Serial No. 293,661.



1. A cutter head for planing machines and the like, comprising a central body of polygonal cross-section, a plurality of outwardly rounded clamping and filling strips or plates inclosing said central portion and forming a cutter head of circular cross-section, and blades interposed between the clamping strips and the central portion, the cutting margins of the blades projecting beyond the periphery of the cutter, the filling strips engaging the blades on sides opposite to the points of engagement by said clamping strips and near the cutting margins of said blades, said filling strips being recessed adjacent the engagement thereof with said blades.

2. A cutter head for planing machines and the like, comprising a central body of polygonal cross-section, a plurality of outwardly rounded clamping and filling strips or plates inclosing said central portion and forming a cutter head of circular cross-section, and blades interposed between the clamping strips and the central portion, the cutting margins of the blades projecting beyond the periphery of the cutter, the filling strips engaging the blades on sides opposite to the points of engagement by said clamping strips and near the cutting margins of said blades, said clamping strips extending beyond the central body portion and engaging the filling strips at points opposite the knives.

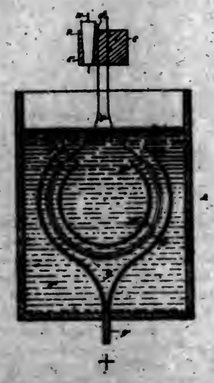
3. A cutter head for planing machines and the like, comprising a central body of polygonal cross-section, a plurality of outwardly rounded clamping and filling strips or plates inclosing said central portion and forming a cutter head of circular cross-section, and blades interposed between the clamping strips and the central portion, the cutting margins of the blades projecting beyond the periphery of the cutter, the filling strips engaging the blades on sides opposite to the points of engagement by said clamping strips and near the cutting margins of said blades, said filling strips being recessed adjacent the engagement thereof with said blades, said clamping strips extending beyond the central body portion and engaging the filling strips at points opposite the knives.

4. A cutter head for planing machines and the like, comprising a central body of polygonal cross section, a plurality of outwardly rounded clamping and filling strips or plates secured to said central body and forming a cutter head of circular cross section, and blades interposed between the clamping strips and the central body, the cutting margins of the blades projecting beyond the periphery of the cutter, the filling strips engaging the blades on sides opposite to the points of engagement by said clamping strips and near the cutting margins of said blades.

5. A cutter head for planing machines and the like, comprising in combination a solid supporting body provided with four parallel and continuously flat faces, clamping strips disposed on opposite parallel faces of said body and having their lateral margins overhanging the corners of the same, a cutting blade interposed between said strips and body at diagonally opposite corners of the latter and projecting beyond the margins of said strips and overhanging adjacent corners of said body, and filling strips engaging the remaining faces of said body portion, each of said filling strips engaging with one of its margins the adjacent overhanging margins of the clamping strips and with its other margins the overhanging portions of said cutting blades.

[Claims 6 to 8 not printed in the Gazette.]

877,408. MANUFACTURE OF ELECTRIC INCANDESCENT LAMPS. FRANCIS M. F. CAZIN, Hoboken, N. J. Filed Mar. 17, 1904. Serial No. 198,564.



1. A luminant for electric incandescent lamps, consisting of a carbon fillet, a surrounding layer of a mixture of carbon and metals, and a layer of the ruthenium-osmium metals surrounding the same.

2. A filament or luminant for electric incandescent lamps, composed primarily of a core of carbon, surrounded by an electrolytic coating of metal, the several materials of which the filament is composed, being so proportioned, that after the filament has been subjected to heat it will consist partly of carbon, partly of the product of the reaction between carbon and metal and partly of metal.

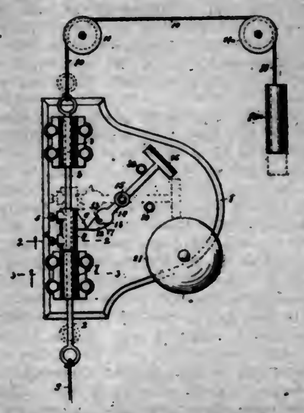
3. A filament or luminant for electric incandescent lamps, composed primarily of a carbon-core, a thereon electrolytically plated coat of metals, of which the surface concentrical layer is oxidised on its surface—the several materials being so proportioned that after the luminant has been subjected to heat, it will consist of a central fillet of carbon, a concentrical layer of a mixture of carbon and metal, an adjoining layer of metal of the ruthenium-osmium-group—a layer of rare-metal oxidised on its surface.

4. The method of manufacturing luminants or filaments for electric incandescent lamps, which consists in plating electrolytically a carbon-fillet-electrode, including its terminals or joints to the current-leading wires, with metal.

5. The method of manufacturing luminants or filaments for electric incandescent lamps, which consists in electrolytically plating a carbon-fillet-electrode, including its terminals or joints to the current-leading wires, with metal of the ruthenium-osmium group of metals and oxidising the same on their exposed surface.

[Claims 6 and 7 not printed in the Gazette.]

877,409. GRAVITY SIGNAL-BELL. JAMES M. CHAMBERS, Boulder, Colo., assignor of one-half to Moses Meyer, Boulder, Colo. Filed Aug. 9, 1906. Serial No. 329,864.

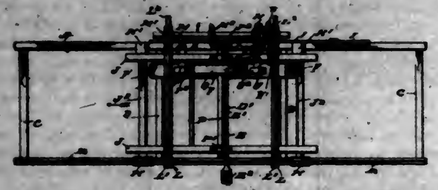


1. A signal bell, comprising a support, vertically alined bearings on the support, a rod slidable in each bearing, said rods being polygonal in cross section, and fitting corresponding openings in the bearings, a sleeve releasably connected with the adjacent ends of the rods, a counterbalance connected with the free end of the upper rod, a pull rope connected with the free end of the lower rod, a gong on the support above the gong, a normally horizontal arm pivoted to the support and provided with a hammer for cooperating therewith, a resilient support for engaging the arm adjacent to the hammer whereby to normally retain the hammer out of engagement with the gong, a pawl hinged to the opposite end of the arm from the hammer, said arm end and pawl being provided with coöperating shoulders on the lower side of their pivotal connection for limiting their relative movement in a downward direction, said sleeve being provided with a tappet for engaging the pawl whereby to swing the hammer arm, and a resilient cushion for limiting the upward swing of the arm.

2. A signal bell comprising a support, vertically alined bearings on the support, a rod slidable in each bearing, said rods being polygonal in cross section and fitting corresponding openings in the bearings, a sleeve provided with a tappet releasably connected with the adjacent ends of the rods, a counterbalance connected with the free end of the upper rod, a pull rope connected with the free end of the lower rod, a gong on the support, a normally horizon-

tal arm pivoted to the support above the gong and provided with a hammer for coöperating therewith, a resilient support for engaging the arm adjacent to the hammer whereby to normally retain the hammer out of engagement with the support, means whereby the tappet will swing the arm on the down stroke of the sleeve, and a resilient cushion for limiting the upward swing of the arm.

877,410. SAWING-MACHINE. LUCIAN R. COLBERT, Massaponax, Va. Filed Nov. 9, 1906. Serial No. 342,700.



1. In a sawing machine the combination with a carriage and its knees, of a shaft mounted on the carriage and operating said knees, a lever, pawl and ratchet mechanism for operating said shaft, a friction wheel mounted on the shaft and geared to the shaft, a vertically movable track below the friction wheel and adapted to be brought in engagement therewith, an intermediately pivoted lever connected to the carriage, rollers carried by the ends of said lever and adapted to be engaged by the vertically movable track, an arm pivoted to the carriage and connected to the pawl operating mechanism, and a link connection between the outer end of said arm and one end of the intermediate pivoted lever.

2. In a sawing machine the combination with a carriage and its knees, of a shaft mounted on the carriage and operating the said knees, a lever, pawl and ratchet mechanism for operating said shaft, a friction wheel mounted on the carriage and geared to the shaft, a vertically movable track below the friction wheel, and adapted to be brought in engagement therewith, a lever intermediately pivoted to the carriage rollers carried by the ends of said lever and adapted to be engaged by the vertically movable track, a lever pivoted to the carriage and operatively connected to the pawl operating mechaaism, a link connected to the outer end of said lever and to one end of the intermediately pivoted lever, and a weighted pawl pivoted to the said arm and normally in engagement with the ratchet wheel.

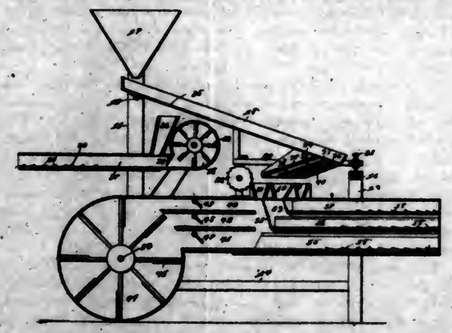
3. In a sawing machine the combination with a carriage and its knees, of a shaft mounted on the carriage and operating said knees, a lever, pawl and ratchet mechanism for operating said shaft, a friction wheel mounted on the carriage and geared to the shaft, a vertically movable track below the friction wheel and adapted to be brought in engagement therewith, a lever intermediately pivoted to the carriage, transverse axles carried by the end of said levers, rollers carried by the inner ends of said axles and a link connected between the outer end of one of the axles and the pawl operating means.

4. In a sawing machine the combination with a carriage and its knees of a shaft mounted on the carriage and operating said knees, a lever, pawl and ratchet mechanism for operating said shaft, a friction wheel mounted on the carriage and geared to the shaft, a vertically movable track below the friction wheel, a pivoted plate parallel with the vertically movable track a pivoted foot lever connected to said track and the pivoted plate for simultaneously moving the plate and the track upwardly, a lever intermediately pivoted to the track, axles, carried by the outer end of said lever, rollers carried by the inner end of said axles, a roller carried by the outer end of one of said axles, a pivoted arm above the axle and connected to the pawl operating mechanism and a link connection between said arm and the axle.

5. In a sawing machine the combination with a carriage and its knees of a shaft mounted on the carriage and operating said knees, a lever, pawl and ratchet mechanism for operating said shaft, a friction wheel mounted on the carriage and geared to the shaft, a vertically movable track below the friction wheel, a pivoted plate parallel to the vertically movable track, an intermediately pivoted lever, rollers carried by the outer end of said lever and a plane above the lower edge of the friction wheel and adapted to be engaged by the vertically movable track and plate respectively, and means connecting said lever and the pawl operating mechanism and means for operating the track and the plate.

[Claim 6 not printed in the Gazette.]

877,411. ORE-SEPARATOR. AARON CUSTER, Monroe, Iowa; John Custer administrator of said Aaron Custer, deceased. Filed Mar. 29, 1907. Serial No. 365,884.



1. In an ore separator, a suitable frame, a plurality of flumes horisontally mounted on said frame, screens extending down in the upper flumes, blast mechanism communicating with said flumes, feeding mechanism communicating with said flumes, and jigging mechanism acting on said feeding mechanism.

2. An ore separator, comprising a suitable frame, flumes mounted on said frame to extend horizontally over each other, removable riffles in the flumes, blast mechanism communicating with said flumes, dampers in said flumes, a trough for aggregate material mounted on said frame, a feeding device leading from said trough and communicating with said flumes, and jigging mechanism acting on said feeding device.

3. An ore separator, comprising a suitable frame, flumes mounted on said frame, blast mechanism communicating with said flumes, riffles removably mounted in said flumes, dampers in said flumes, a trough for aggregate material mounted on said frame, a feeding device leading from said trough and communicating with said flumes, and jigging mechanism acting on said feeding device.

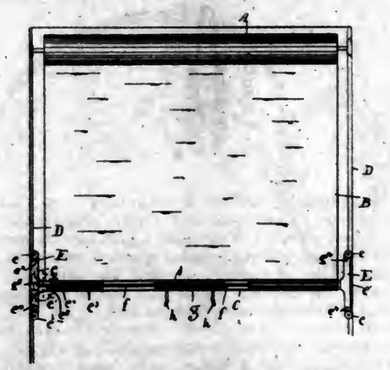
4. An ore separator, comprising a suitable frame, flumes mounted on said frame, blast mechanism communicating with said flumes, hoppers communicating with said flumes, a container for aggregate material mounted on said frame, a trough mounted for oscillation and leading from said container, and screens carried by said trough and communicating with said hoppers.

5. An ore separator, comprising a suitable frame, flumes mounted on said frame, blast mechanism communicating with said flumes, hoppers communicating with said flumes, a container for aggregate material mounted on said frame, a trough mounted for oscillation on said frame and communicating with said container, a screen in said trough communicating with one of said hoppers, and screens mounted in inclined planes beneath said trough and communicating with the remaining hoppers.

[Claims 6 and 7 not printed in the Gazette.]

877,412. FRICTIONAL CURTAIN-HOLDING DEVICE. GEORGE H. DAVIS, Portland, Me., assignor to Curtain Supply Company, Newark, N. J., a Corporation of New Jersey. Filed June 8, 1901. Serial No. 63,734.

1. In a friction curtain holding device, the combination with the spring roller, curtain and curtain stick, of a vertically elongated friction head on the end of the curtain stick, anti-friction rolls on the ends of said head adapted to run normally in contact with the window casing, a pair of friction blocks pivoted at opposite ends of the said head and having their free ends adjacent and means for forcing the free ends of said blocks outward against the casing.



2. In a friction holding curtain device, the combination with the spring roller, curtain and curtain stick, of a vertically elongated friction head on the end of the curtain stick, anti-friction rolls on the ends of said head adapted to run normally in contact with the window casing, a pair of friction blocks pivoted at opposite ends of said head and having their free ends overlapping each other and a spring pressed rod for forcing the free ends of the blocks outward against the casing.

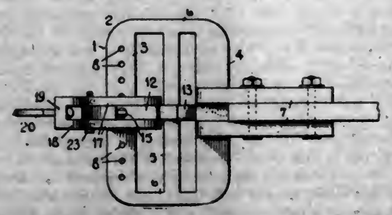
3. In a friction curtain holding device, the combination with the spring roller and curtain, of a hollow curtain stick, a vertically elongated friction head having a shank fitting said hollow curtain stick, anti-friction rolls on the ends of said head, a friction block pivoted by one end to said head, a spring pressed rod acting independently of said head for pressing the free end of the block outward and a spring for pressing said head outward.

4. In a holding device for a spring actuated shade, the combination with a stick, of a head on the stick, two shoes pivotally secured in the head and a spring for forcing the free ends of both the shoes outward.

5. In a friction curtain holding device, the combination with the spring roller, curtain, and curtain stick, of a vertically elongated friction head on the end of the curtain stick, anti-friction rollers on the ends of said head adapted to run normally in contact with the window casing, means for retaining the rollers in contact with the window casing, a friction block pivoted at one end to said head, a spring adapted to thrust said block against the casing, and means for retracting the spring whereby to release the block from frictional contact.

[Claims 6 to 12 not printed in the Gazette.]

877,413. PLOW-CLEVIS. MARTIN L. DIGBY, Rising Star, Tex. Filed Aug. 19, 1907. Serial No. 389,211.



1. A clevis comprising a frame, a sleeve slidably mounted on said frame, draft rings on said sleeve and means to adjustably connect the latter on said frame, whereby the action of the plow may be varied, substantially as described.

2. A clevis comprising a substantially rectangular frame, means to attach the same to the end of a plow beam, a sleeve slidably mounted on said frame, an adjusting bar connected to said sleeve and adapted to slidably engage one of the bars of said frame, means to lock said plate and sleeve in their adjusted positions, clamping rings loosely mounted to turn on said sleeve, means to lock said rings in their adjusted position, and a draft hook connected to said rings, substantially as described.

3. A clevis comprising a rectangular frame consisting of an apertured front bar, a rear bar, an intermediate bar and end bars adapted to connect said front, rear and intermediate bars, rearwardly projecting attaching plates formed on said rear bar and adapted to be secured to a plow beam, a sleeve slidably mounted on said front apertured bar of the frame, an adjusting plate mounted on said sleeve, an apertured lug projecting from said plate and adapted to slidably engage the intermediate bar of said frame, means to lock said sleeve and plate in their adjusted position on the bars of said frame, draft rings loosely mounted to turn on said sleeve, means to lock said rings in adjusted position on said sleeve, and a draft hook connected to said rings, substantially as described.

4. A plow clevis comprising a rectangular frame consisting of an apertured front bar, a rear bar, an intermediate bar and end bars connecting said front, rear and intermediate bars, means to attach said frame with the plow beam, an apertured sleeve slidably mounted on said sleeve, said plate having formed therein an annular series of transversely disposed holes, a rearwardly projecting apertured lug on said plate adapted to engage the intermediate bar of said frame, radially projecting annular flanges formed on the outer ends of said sleeve, draft rings loosely mounted on the sleeve to turn between said flanges and said adjusting plate, said rings having formed therein alined apertures adapted to be brought into alinement with the apertures in said plate, a locking pin adapted to be inserted through a vertical aperture formed in said adjusting plate and through one of the series of apertures formed in the front bar of the frame, whereby said adjusting plate and draft rings are held in their lateral adjusted positions, and a locking pin adapted to be inserted through the alined openings in said draft rings and adjusting plate to lock said rings in their adjusted positions, substantially as described.

877,414. WASTE-SULFITE-LIQUOR DISINFECTANT. CARLETON ELLIS, Larchmont, N. Y., assignor to Ellis-Foster Company, a Corporation of New Jersey. Filed Sept. 9, 1907. Serial No. 391,887.

1. A composition of matter consisting of two parts concentrated waste sulfite cellulose liquor and one part creosote.

2. A composition of matter consisting of concentrated waste sulfite cellulose liquor and coal tar creosote; the liquor being present in substantially greater proportion than the creosote.

3. A disinfecting composition comprising concentrated waste sulfite cellulose liquor and creosote.

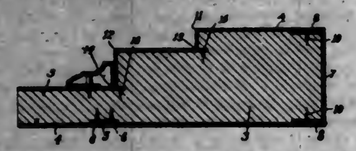
4. A disinfecting composition comprising waste sulfite cellulose liquor and creosote; the former present in excess.

5. A disinfecting composition comprising waste sulfite cellulose liquor of about 1.3 specific gravity and creosote of about 1.1 specific gravity, the former present in excess.

877,415. METAL-COVERED DOOR. WALTER S. ELY, New York, N. Y., assignor to Van Kannel Revolving Door Company, New York, N. Y., a Corporation of West Virginia. Filed May 19, 1905. Serial No. 261,129.

1. A metal surfaced structure of the class described, having a wooden core 3, a series of surface recesses upon the core with sheet-metal sections secured in the same flush with the surface of the core, and a series of plane

surfaced sheet-metal sections applied to the surface of the core and having their joints overlying the said recessed sections and soldered thereto.



2. A metal surfaced structure of the class described, having a wooden core 3, a series of surface recesses upon the core with sheet-metal sections secured in the same flush with the surface of the core, and a series of plane surfaced sheet-metal sections entirely covering the surface of the core and having their joints overlying the recessed sections and soldered thereto, forming a hermetically sealed inclosure for the core.

3. A metal surfaced structure of the class described, having a wooden core 3, a covering formed of a series of plane surfaced sheet-metal sections with their edges abutted, the core having recesses beneath the abutting edges of the surface sections with a plate 5 fitted in each of such recesses flusn with the surface of the core and secured therein by suitable fastenings, and the adjacent edges of the sections being soldered to one another and to the surface of the plate 5, whereby the plate 5 forms the means of securing the joint to the core, the whole forming a hermetically sealed covering for the core.

4. A metal surfaced structure of the class described, having a wooden core 3, with exterior angles at the corners of its edge, recesses upon the sides of such corners, a covering section 7 applied to the core at the edge of the same and provided with the flanges or side members 8 bent at right angles to the section 7 and fitted to the recesses flush with the sides of the core, and secured therein as by screws 10, and the plane surfaced sheet-metal sections 4 applied to such sides and overlapping the members 8 and soldered thereto, thus forming hermetically sealed joints at the edges of the door.

5. A sheet-metal covered structure of the class described, having an inner angle of the covering formed with a core having a channel extended inward from one side of the angle, with one covering-section extended to such side of the angle and into such channel, and another covering-section fitted to the other side of such angle and soldered to the first section, the tongue within the channel holding both sections to the inner angle of the core, substantially as herein set forth.

877,416. UNDERSHIRT. THEODORE FANTA, Chicago, Ill. Filed Sept. 24, 1907. Serial No. 394,286.



1. As a new article of manufacture, a shirt comprising a back or body and two flaps, the inner flap being provided at its free end with a reinforcing tape having free ends adapted to be passed through holes in the body of the shirt and means for securing the free edge of the outer flap to the body.

2. As a new article of manufacture, a shirt comprising a back or body and two flaps, the inner flap being provided at its free edge with a reinforcing tape having free ends adapted to be passed through holes in the shirt, and the outer flap provided at its free edge with a reinforcing tape having free ends adapted to be secured to the free ends of a reinforcing tape secured to the body of the shirt.

877,417. GAS CUT-OFF. JOHN W. FIELDS, Bridgeport, Conn., assignor of one-eighth to John N. Standish and one-eighth to Harry Pearsall, Bridgeport, Conn., and one-fourth to Frank R. White, Waterbury, Conn. Filed Sept. 26, 1907. Serial No. 394,667.



1. An automatic gas cut-off comprising a base having a gas passage therethrough and a valve seat in said passage, a shell attached to the base, a tube slidably mounted within the shell, a valve movably mounted within the tube bearing a cone to engage and close the valve seat and port when the device is closed and means for operating the tube to raise the valve from its seat.

2. An automatic gas cut-off comprising a base having a gas passage leading therethrough, a tube slidably connected with the base, a sliding valve mounted within the tube adapted to close the gas passage when in a lowered position, a shell to inclose said tube and engage the base, and a spring intermediate the shell and tube to normally hold the latter and its valve closed.

3. An automatic gas cut-off comprising a base having a gas passage therethrough, a tube slidably mounted upon the base having an extension to form a finger piece and an internal annular shoulder, a valve mounted within the tube adapted to be engaged by the said shoulder and bearing a cone shaped plug to engage and close the gas passage when the gas pressure is cut off, a shell to inclose the tube and a spring intermediate the shell and tube to normally hold the same in a lowered or closed position.

4. In an automatic gas cut-off of the class described the combination with a base having a port therethrough, of a tube slidably mounted upon said base, a sliding valve within the tube adapted to be normally held raised by gas pressure but to drop and close the gas passage to form a seal when the gas supply is cut off and grooves in said valve to permit of the passage of gas therepast when in said raised position.

5. The combination with a gas inlet, of a sliding valve to engage and close said inlet and having grooves in its sides to permit of a flow of gas therepast, a tube to inclose and cover the said gas inlet and having an extension to form a finger piece to operate the valve, and means within the tube to engage the valve to raise and open the same.

[Claims 6 and 7 not printed in the Gazette.]

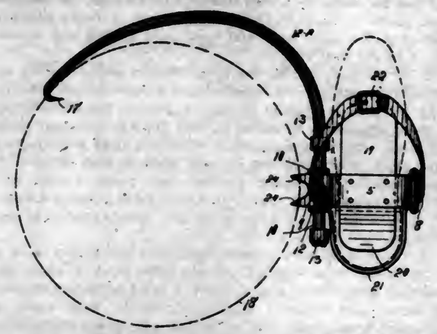
877,418. POLE-CLIMBER. HANS FOLDVIK, Denver, Colo., assignor of one-fourth to Thomas Rendahl, Georgetown, Colo., and one-fourth to Charles Hultberg, Denver, Colo. Filed Jan. 15, 1907. Serial No. 352,424.

1. A pole climber comprising a body part adapted to be secured to the foot, the inner extremity of the body part having a prong, and a clamping hook journaled in the body part and coöperating with the prong of the latter, the journaled part of the hook having a cam member and a spring catch acting on said cam member, substantially as described.

2. A pole climber comprising a body part, a spring catch retained clamping hook journaled in the body part, the journaled part of the hook having a cam member with which the spring catch operates for the purpose set forth.

3. A pole climber comprising a body part, a clamping hook journaled in the body part, the journal part of the hook having a cam member, and a spring catch acting on said cam member, substantially as described.

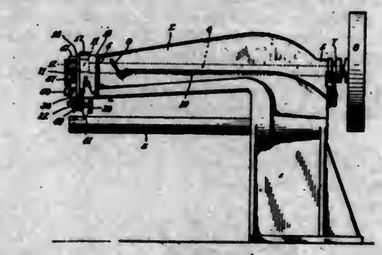
4. A pole climber comprising a body part adapted to extend transversely underneath the foot, means for securing the device in place upon the foot, the inner extremity of the body part being provided with prongs, and a coöperating clamping hook journaled in the body part, the journaled part of the hook having a cam member and a spring catch acting on said cam member, substantially as described.



5. A pole climber comprising a body part adapted to be secured to the foot, a clamping hook journaled in the body part, the said journal being adjustable longitudinally in the body part, substantially as described.

[Claim 6 not printed in the Gazette.]

877,419. PUNCHING AND RIVETING MACHINE. JOHN R. FRENCH, Los Angeles, Cal., assignor to Lacy Manufacturing Company, Los Angeles, Cal., a Corporation of California. Filed Nov. 14, 1906. Serial No. 343,448.



1. A carrier having a concave recess, a turret fitted in said recess, the recess embracing more than half the circumference of the turret and the lower part of the turret projecting below the carrier, and a pin projecting from the carrier into the center of the turret.

2. A carrier having a segmental concave recess with a concentric segmental groove, a turret fitted in said recess, and having a segmental flange engaging in the groove, said flange embracing an arc less than the arc of the groove for holding the turret in the recess and for permitting the withdrawal of the turret when it is turned in the recess a certain degree.

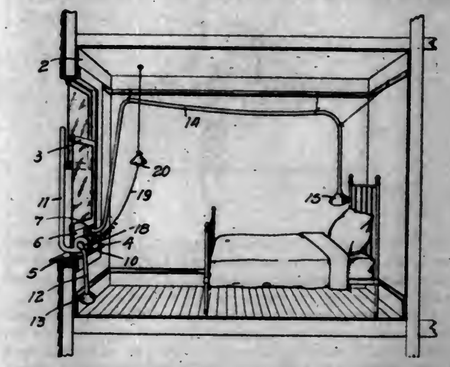
3. A carrier, a turret mounted thereon, thrust tools carried by the turret and located in positions having different planes of revoluble movement, supporting means for the work, and devices for coacting with the tools mounted in the supporting means under their respective thrust tools and on a longitudinal line parallel with the axis of the turret.

4. A head, a carrier slidable in the head, a tool holder mounted on the carrier, a rock lever pivoted to the head, a stripper bar connected to the rock lever, and a pin carried by the carrier and coacting with the rock lever for operating the stripper.

5. A head, a carrier slidable in the head, a tool holder mounted on the carrier, a rock lever pivoted to the head, a stripper bar connected to the rock lever, a pin carried by the carrier and coacting with the rock lever for operating the stripper in one direction, and a spring for moving the stripper in the other direction.

[Claims 6 to 17 not printed in the Gazette.]

877,420. VENTILATING DEVICE. LESLIE S. HACKNEY, St. Paul, Minn. Filed Aug. 9, 1907. Serial No. 387,772.



1. A ventilating apparatus comprising a board adapted to be fitted into a window between the lower sash and sill, a suction fan having a pipe extending through said board to the open air, said fan being attached to said board and movable therewith from place to place, an electric motor also attached to said board and connected with said fan, a flexible tube connected with said fan and having a funnel at its free end adapted to be inserted in or under a bed, and a second flexible tube extending through said board to the open air and having a discharge funnel at its free end, substantially as described.

2. The combination, with a board, having an adjustable extension to adapt it for windows of different width, and capable of fitting between the lower sash of the window and the sill, a suction fan having a pipe extending through said board to the open air, a flexible tube connected with said suction fan, a funnel attached to the free end of said tube, an electric motor connected with said fan for operating the same and also attached to said board and movable therewith from place to place, and a fresh air tube connected with an opening in said board and having a funnel at its free end and through which fresh air is delivered into the room, substantially as described.

3. The combination, with a board composed of adjustable sections and adapted to be fitted to windows of different width between the lower sash and the sill, an impure air pipe extending through said board and upwardly to a point near the top of the sash, a flexible tube connected with said pipe, and a second flexible tube extending into an opening in said board and communicating therethrough with the outside air, substantially as described.

4. A ventilating apparatus comprising pipes arranged to extend through an outer wall and having open outer ends communicating with the atmosphere and tubes adapted to be fitted on the inner ends of said pipes and having funnels, one of said tubes serving as a fresh air inlet and the other tube as an exhaust for the foul air, substantially as described.

5. A ventilating apparatus comprising pipes arranged to extend through an outer wall and having open outer ends communicating with the atmosphere and tubes adapted to be connected to the inner ends of said pipes, one of said tubes serving as a fresh air inlet and the other tube as an exhaust for the foul air, both of said tubes having their inner ends exposed to the atmosphere and capable of being moved from place to place, whereby the ventilation of the space may be regulated, substantially as described.

877,421. TIME-GLASS. IPHUS H. HALL, Jr., Lyndon, Vt., assignor to Telephone Toilmeter Company, St. Johnsbury, Vt., a Corporation of Vermont. Filed Apr. 12, 1906. Serial No. 311,265.



1. The combination with a support, of a holder presenting a foot revolubly sustained by said support and resilient arms extending laterally from the foot, and a time glass sustained at its central portion by said arms.

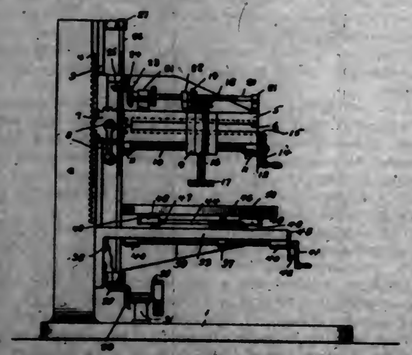
2. The combination with a support, of a holder presenting a foot revolubly sustained by the support and resilient arms extending laterally therefrom, said arms each having intermediate of its ends a glass-receiving recess, and a time-glass sustained centrally by said arms and occupying the recess therein.

3. The combination with a support, of a holder having a foot revolubly sustained thereby, said holder also having two laterally-extending arms, of a time glass sustained by said arms intermediate of its ends, the extremities of the arms constituting a handle by means of which the holder and time glass may be turned.

4. The combination with a support having a struck-up annular portion C', of a holder presenting a circular foot received in said annular portion C' and two resilient arms extending from the foot, each having a glass-receiving recess and a time glass centrally sustained by said arms.

5. The combination with a support having a struck-up annular portion C', of a holder presenting a circular foot received in said annular portion C' and two resilient arms extending from the foot, each having a glass-receiving recess and a time glass centrally sustained by said arms, and frictional material between the foot and the struck-up portion that frictionally holds the holder in position.

877,422. MACHINE FOR CUTTING OVALS. WILLIAM E. HERMAN, Allegheny Pa., assignor of one-half to Roland MacGregor, Knoxville borough, Pa. Filed July 5, 1907. Serial No. 382,300.



1. In an oval cutting machine, the combination of an adjustable slotted arm an adjustable housing carried by said arm, a shaft journaled in said housing, a cutter head carried thereby, a support located beneath said arm, said support having a groove and slot formed therein, a block adjustably mounted in the groove of said support, a slotted plate mounted upon said support, a revoluble band surrounding said plate, guides secured to said band, a post carried by said block and extending through the slot of said plate, a head carried by said post, a table slidably mounted upon said head and upon said guides, and means for rotating said shaft.

2. In an oval cutting machine, the combination with an adjustable rotary cutter head, of a support located beneath said head, said support having a groove formed therein, a block adjustably mounted in said groove, a slotted plate mounted upon said support, a revoluble band surrounding said plate, guides carried by said band, a post carried by said block and extending through said plate, a head revolubly mounted upon said post, and a table slidably mounted upon said head and said guides, substantially as described.

3. In an oval cutting machine, the combination with a cutter head, of a support beneath said head, a block adjustably mounted in said support, a band revolubly mounted upon said support, guides carried by said band, a revoluble head supported by said block, and a table slidably mounted upon said guides and said head.

4. In an oval cutting machine, the combination with a cutter head, of a support, a revoluble ring concentrically mounted upon said support, a revoluble head adjustably supported from said support, guides carried by said band, and a table slidably mounted upon said head and said guides.

5. A table for cutting machines, embodying a stationary support provided with a slot and having a recess in its upper face, a block movably mounted in said recess and having a stem projecting through said slot, a screw carried by the support and engaging said stem for adjusting said block, a slotted plate mounted on said block and support, a post carried by said block and projecting through the slot in said plate, a head carried by said post, a table mounted on said head and having a groove to receive the latter, and means for rotating said plate and thereby imparting rotary movement to the table.

[Claim 6 not printed in the Gazette.]

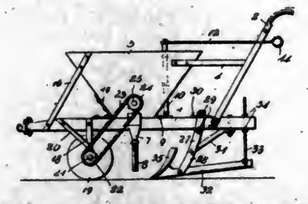
877,423. FURNITURE. EMIL G. HESS, Buffalo, N. Y. Filed Dec. 14, 1906. Serial No. 347,808.



1. An article of furniture having a leg comprising a body, a foot projecting laterally from the lower end of the body, a head projecting upwardly from the upper end of the body, and a brace projecting laterally from the body, said body being constructed of three wires twisted together, said foot being constructed of an outer loop formed integrally with two of said body wires at the lower end thereof and an inner loop formed integrally with the third wire of the body at the lower end thereof, said head being constructed of two wires which form integral upward extensions of the two body wires of which said outer loop forms a part, and said brace being constructed of a single wire which forms an integral and lateral extension of the body wire of which said inner loop is formed, substantially as set forth.

2. An article of furniture comprising a top plate, a plurality of legs each having a body composed of three wires twisted together, two of said wires projecting upwardly from said body divergently and adapted to be connected to said top plate at their upper ends and the third wire projecting laterally and inwardly from said body, and means for connecting the inner ends of the laterally projecting wires of the several legs, substantially as set forth.

877,424. COMBINED PLOW AND FERTILIZER-DISTRIBUTER. JOHN B. HICKS, Wolf Pit township, Richmond county, N. C. Filed Sept. 9, 1907. Serial No. 392,017.



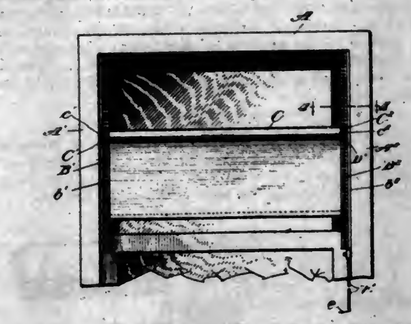
1. A combination fertilizer distributer and plow comprising a beam, a fertilizer hopper having discharge passages formed therein on each side of said beam, a valve plate slidably mounted beneath said hopper to regulate the size of said feed passages, an operating lever connected to said valve plate, an operating rod connected to said lever, an agitator shaft revolubly mounted in the hopper, agitator fingers arranged on said shaft to feed the fertilizer through the passages in said hopper, a supporting wheel revolubly mounted in suitable bearings on the forward end of said beam, a sprocket wheel and chain connection between the shaft of said supporting wheel and said agitator shaft, whereby the latter is driven by said supporting wheel, a plow standard arranged on the beam in rear of the fertilizer hopper, a plow shoe or runner pivotally mounted in the lower ends of said standard, a plow blade or shovel secured to the forward end of said runner, and a vertically disposed adjusting rod connected to the rear end of the runner, whereby the same is raised or lowered to regulate the position of the plow blade or shovel, substantially as described.

2. A combined fertilizer distributer and plow, comprising a beam, a fertilizer hopper arranged on the latter, said hopper having discharge passages on each side of the beam, a plow standard secured to said beam in rear of the hopper, a plow shovel on the lower end of said beam, flexible feed tubes connected with the discharge passages in said hopper and adapted to discharge fertilizer in front of and to each side of the plow shovel whereby the latter will open the furrow between the line of fertilizer deposited by the tubes, a valve plate slidably mounted beneath said hopper to regulate the size of the discharge passages therein, a pivoted operating lever connected to said valve, an operating rod connected to said lever and extending back to within reach of the driver, an agitator shaft in said hopper, and radially disposed agitator fingers or blades, detachably connected to said shaft, substantially as described.

877,425. WINDOW-SHADE FIXTURE. ALEXANDER HOLMES, Eureka, Cal. Filed Feb. 20, 1907. Serial No. 358,473.

1. The combination with a window shade roller, of a rod around which said roller is rotatably supported, a spring surrounding said rod within said roller and connected at its opposite ends to said rod and to said roller respectively, gravity pawls carried by said roller, gears fixed upon the ends of said rod, racks fixed to the window casing, and engaged by said gears, a block loosely surrounding said rod and having a notch in the top thereof with which said pawls coöperate, and means for exerting an upward or dorwward pull upon said block whereby said rod is rotated through the engagement of said gears with said racks, and the shade roller thereby raised or lowered.

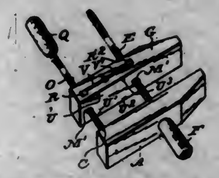
2. The combination with a window shade roller, of a rod around which said roller is rotatably supported, a spring surrounding said rod within said roller and connected at its opposite ends to said rod and to said roller respectively, gravity pawls carried by said roller, gears fixed upon the ends of said rods, racks fixed to the window casing, and engaged by said gears, a block loosely surrounding said rod and having a notch in the top thereof with which said pawls coöperate, and a raising and lowering rod depending from and fixed to said block, by means of which the height of the shade is varied.



3. The combination with a window shade roller, of a rod around which said roller is rotatably supported, a spring surrounding said rod within said roller and connected at its opposite ends to said rod and to said roller respectively, gravity pawls carried by said roller, gears fixed upon the ends of said rods, racks fixed to the window casing, and engaged by said gears, a block loosely surrounding said rod and having a notch in the top thereof with which said pawls coöperate, a raising and lowering rod depending from and fixed to said block, and an adjustable clamp engaging said raising and lowering rod to retain the shade roller at the desired height.

4. The combination with a window shade roller, of a rod around which said roller is rotatably supported, a spring surrounding said rod within said roller and connected at its opposite ends to said rod and to said roller respectively, gravity pawls carried by said roller, gears fixed upon the ends of said rods, racks fixed to the window casing, and engaged by said gears, a block loosely surrounding said rod and having a notch in the top thereof with which said pawls coöperate, a raising and lowering rod depending from and secured to said block, an adjustable clamp engaging said raising and lowering rod, said clamp comprising a spring and a set screw between which said rod is frictionally locked.

877,426. JOINER'S HAND-CLAMP. HENRY F. HOLTMANN, Indianapolis, Ind. Filed Dec. 29, 1906. Serial No. 349,951.



1. A joiner's clamp comprising a shoulder jaw, a screw jaw having a guide opening through the rear end thereof to receive a screw and having also a guideway therethrough at a right angle to the guide opening, two opposite sides of the jaw having each a recess therein and having also a groove therein extending from the recess to the guideway, a rear screw in the guide opening to engage the shoulder jaw, a pair of half-nuts in the guideway normally engaging the screw at opposite sides thereof, a pair of le-

vers pivoted in the grooves in engagement with the half-nuts and extending into the recesses, a spring between the free ends of the levers, and means connecting the fore ends of the jaws adjustably together.

2. A joiner's clamp comprising a shoulder jaw, a screw jaw having two guide openings therethrough to receive screws and having also two guideways therethrough each at a right angle to a guide opening, two opposite sides of the screw jaw having each a recess therein midway between the two guideways and having also two grooves therein extending from the recess to the guideways, screws in the openings and connected with the shoulder jaw, half-nuts in the guideways normally engaging the screws, levers pivoted in the grooves in engagement with the half-nuts and having finger-pieces on ends thereof movable in the recesses, and springs for holding the half-nuts to the screws.

877,427. CIRCUIT-CONTROLLER. LEMUEL F. HOWARD, Edgewood Park, Pa., assignor to The Union Switch and Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Aug. 3, 1906. Serial No. 328,998.



1. In a circuit controller, the combination with a plurality of contact springs, a movable contact piece adapted to be engaged and disengaged with said contact springs, a two-toothed pinion connected with said contact piece, and a reversely reciprocating part adapted to alternately engage said teeth at the extremes of its movement and to hold said pinion in a neutral position when not in an extreme position.

2. In a circuit controller, the combination with a plurality of oppositely arranged contact springs, a movable contact piece adapted to be alternately engaged with and disengaged from said contact springs, a toothed pinion connected with said movable contact, and a reversely reciprocating part for operating said toothed pinion, said reciprocating part only operating the toothed pinion at the beginning and extremes of its movements and holding the toothed pinion against movements at any point intermediate the extremes of the movements of the reciprocating part.

3. In a circuit controller, the combination with several pairs of contact springs oppositely arranged, a contact piece for each pair of springs, a two-toothed pinion connected with said contact pieces, and a reversely reciprocating part for operating said toothed pinion at the extremes of its movement to have the contact pieces engage alternately the pairs of contact springs, and to hold the contact pieces disengaged when in any position other than an extreme position.

877,428. CORD-FASTENER. CHARLES V. HUGO, St. Louis, Mo. Filed Jan. 26, 1907. Serial No. 354,331.



1. An envelop fastener made from a single length of spring wire and comprising parallel members bent at their ends to form a loop, oppositely disposed coils connected by a cross bar passing between said members, and said members adapted to be secured upon opposite sides of an envelop flap by a wire staple passing through said loop and flap, and a cord connected to said loop and staple to be connected to said coils, substantially as described.

2. A fastener of the character described composed of a single length of spring wire provided with parallel members, oppositely disposed coils connected by a cross bar extending between said members, and each end of the wire being bent into a loop, and a cord or tape connected to said loop and adapted to be connected to said coils, substantially as described.

877,429. CUFF-HOLDER. JAMES H. HUMPHERY, Boston, Mass. Filed Nov. 21, 1903. Serial No. 182,056.



1. A cuff holder presenting a divided shank the two parts of which are provided with parallel corrugations and form between them a shirt-stud-receiving passage which is open at one end.

2. In a cuff holder, a shank formed of two resilient corrugated members between which the shirt-stud may enter, said members being disconnected at one end, and one of said members having means at the opposite end to guide the other during any relative movement between said members.

3. In a cuff holder, a cuff-stud, a shank portion secured to said stud, said shank portion comprising two members having parallel corrugations, each member having at its end means to guide the other member during the relative movement of the members.

4. In a cuff holder, a cuff-stud, a shank portion secured to said stud and formed of two resilient wires having parallel corrugations, one wire having a coil at its end and the other wire having a lateral projection entering the coil.

5. In a cuff holder, a cuff-stud, a shank portion secured to said stud and formed of two resilient wires having parallel corrugations, one wire having an inclined coil at its end and the other wire having a lateral projection entering the coil.

[Claims 6 to 9 not printed in the Gazette.]

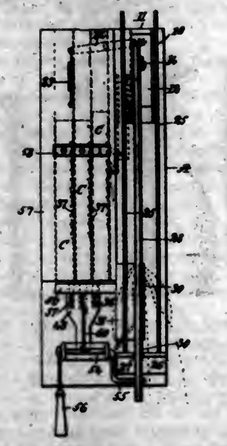
877,430. REGISTERING DEVICE. ROSS HUNTER, Atlanta, Ga. Filed Mar. 14, 1907. Serial No. 362,312.

1. In a registering device for laundry or similar articles, a supporting body, a retaining means for the articles and between which and the said body the articles are passed, the said retaining means being movable toward and from the body, and a registering device operated by the passage of the articles between the registering means and the supporting body.

2. In a registering device for laundry or similar articles, a retaining means for the articles and a registering device operated by the passage of the articles to the retaining means, and a releasing device for the retaining means and the registering device.

3. In a machine for registering and holding laundry and similar articles, a body section, a retaining bar, a guide bar between which the retaining bar operates, registering bars having sliding movement on the body, and means for operating the registering bars by the passage of articles between the retaining bar and the said guides.

4. In a machine for registering and holding laundry and similar articles, a body section, a retaining bar, a guide bar between which the retaining bar operates, registering bars having sliding movement on the body, means for operating the registering bars by the passage of articles between the retaining bar and the said guides, and means for simultaneously lifting the retaining bar to free the articles held thereby and bring the registering bars into initial position.



5. In a laundry registering device, a body section, guide bars carried thereby, a retaining bar located between the guide bars capable of being carried to and from the body section, a lever located between the guide bars adjacent to the upper or receiving portion of the retaining bar, registering bars having numerals produced thereon, and means connected with the said lever whereby to remove the registering bars step by step to expose one number after the other, the registering bars being arranged in the order of units, tens, hundreds, one registering bar having means for operating the adjoining registering bar.

[Claims 6 to 9 not printed in the Gazette.]

877,431. EXHAUST-CONDENSER. LOUIS A. JONES, Cambridge, Mass. Filed Mar. 20, 1907. Serial No. 363,501.



1. An exhaust condenser provided with an air passage having an inlet and an outlet orifice, and provided with a helical gas passage repeatedly surrounding said air passage, said gas passage having an inlet and an outlet orifice.

2. An exhaust condenser provided with an air passage having an inlet and an outlet orifice, and provided with a helical gas passage repeatedly surrounding said air passage, said gas passage increasing in cross-sectional area from its inlet orifice to its outlet orifice.

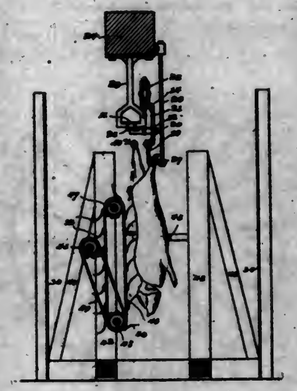
3. An exhaust condenser provided with an air passage having an inlet and an outlet orifice, and provided with a helical gas passage repeatedly surrounding said air passage, said gas passage increasing in cross-sectional area according to a fixed ratio from its inlet orifice to its outlet orifice.

4. An exhaust condenser provided with an air passage having an inlet and an outlet orifice, and provided with a gas passage surrounding said air passage, said gas passage having an inlet and an outlet orifice, the wall separating said air passage from said gas passage being provided with projections extending into said air passage.

5. An exhaust muffler provided with an air passage having an inlet and an outlet orifice, and provided with a gas passage surrounding said air passage, said gas passage having an inlet and an outlet orifice, the wall surrounding said gas passage being provided with exterior projections.

[Claims 6 to 15 not printed in the Gazette.]

877,432. HOG-SCRAPER. MARIUS C. JORGENSEN, Chicago, Ill. Filed Apr. 28, 1906. Serial No. 314,158.



1. A hog scraper comprising a plurality of scraping devices adapted to remove bristles from different portions of the hog's body, the field of operation of each of said devices being fixed at substantially the same angle to the horisontal as the general angle to the horisontal of that part of the carcass' surface operated upon, substantially as described.

2. A hog scraper comprising a plurality of scraping devices adapted to remove the bristles from different portions of the hog's body, the field of operation of each of said devices being fixed at substantially the same angle to the horisontal as the general angle to the horizontal of that part of the carcass' surface operated upon, and means for conveying the carcass through the fields of operation of said scraping devices, substantially as described.

3. A hog scraper comprising a plurality of scraping devices adapted to remove bristles from different portions of the hog's body, the field of operation of each of said devices being fixed at substantially the same angle to the horisontal as the general angle to the horizontal of that part of the carcass' surface operated upon, and means for conveying the carcass successively through the fields of operation of said scraping devices, substantially as described.

4. A hog scraper comprising a plurality of scraping devices adapted to remove bristles from different portions of the hog's body by scraping it longitudinally, the field of operation of each of said devices being fixed at substantially the same angle to the horisontal as the general angle to the horizontal of that part of the carcass' surface operated upon, and means for conveying the carcass or body through the fields of operation of said scraping devices, substantially as described.

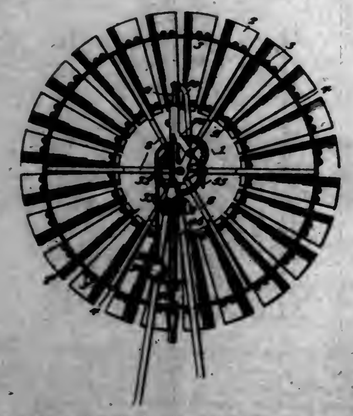
5. A hog scraper comprising a plurality of scraping devices adapted to remove bristles from different portions of the hog's body by scraping it downwardly, the field of operation of each of said devices being fixed at substantially the same angle to the horisontal as the general angle to the horizontal of that part of the carcass' surface operated upon, and means for conveying the body or carcass through the fields of operation of said scraping devices, the body or carcass depending from said conveying means, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

877,433. LITHOGRAPHIC PRINTING. MARCEL A. JULLIEN and EMILE L. DESSOLLE, Levallois-Perret, France. Filed Nov. 15, 1905. Serial No. 287,549.

A method of producing a lithographic printing plate which consists in subjecting a metal plate having an electrolytically deposited surface of precious metal of granulated structure to a cleaning agent such as alcohol, applying a transfer to the cleaned surface, washing said surface with a mineral acid containing a solid adapted to combine therewith with the evolution of carbon dioxid gas, and finally preparing said surface for printing in the manner practiced in the case of a lithographic stone, substantially as described.

877,434. WINDMILL. JOHN H. KAPPELMANN, Washington, Kans. Filed Oct. 6, 1906. Serial No. 337,708.



1. In a governing device for windmills, the combination of weighted governor members pivotally connected to the outer surface of a wind wheel, a pivoted tail or vane, means intermediate the governing members and the tail for swinging the latter out of the wind when a predetermined speed has been attained by the wheel, and a frictional brake comprising a ring, a brake strap encircling said ring, and an upwardly curved pivoted lever connected to said strap and operated by the movement of the vane.

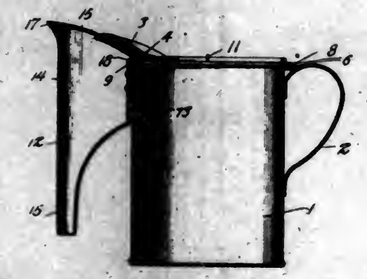
2. In a device of the character described, a centrifugal governor, a sliding rack bar actuated by said governor, a pivoted tail, a shaft to which the tail is connected, a sector secured to said shaft and actuated by said rack bar, a pivoted lever, a sector thereon engaging said rack bar, an adjustable weight on said lever, a friction brake, and a curved lever connected thereto, said lever extending into the path of the tail shaft to be actuated by the movement of the tail.

3. In a speed regulating device for windmills, a centrifugal governor, a sliding rack bar connected thereto and actuated thereby, a pivoted tail, a shaft to which said tail is connected, a sector carried by said shaft, and engaging said rack bar, a friction brake comprising a ring carried by the wind wheel, a brake strap encircling said ring, a pivoted lever connected to one end of said strap, said lever having a curved free end engaged by the shaft of the tail to actuate said brake, substantially as described.

4. In a governing device for windmills, a governor, a pivoted tail, a shaft to which the tail is connected, means connected to the governor for moving said tail laterally, a friction brake comprising a ring and an encircling brake strap, and an upwardly curved lever connected to said strap and extending into the path of said tail shaft to be actuated by said tail for applying said brake.

5. In a regulating device for windmills, a governor, a tail, means actuated by said governor for controlling the movement of said tail, adjustable means whereby a determined speed of the wind wheel will actuate the tail shifting device, and a friction brake comprising a ring, a brake strap encircling said ring, and an upwardly curved pivoted lever having its end actuated by the movement of the tail.

877,435. DETACHABLE SPOUT. CHARLES R. KEERAN, Champaign, Ill. Filed Dec. 22, 1906. Serial No. 349,133.



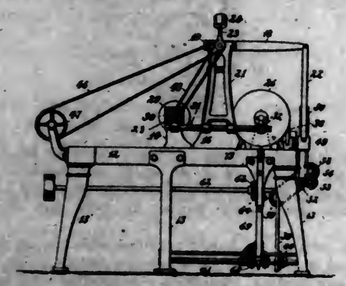
1. In a device of the class described, a vessel, an adjustable retaining band applied thereto, supporting members attached to the band and formed for engagement with the vessel to hold the band in place, and a funnel pivotally suspended on the band.

2. A vessel having an annular groove adjacent to its upper edge, an adjustable band engaging said groove and having an offset portion spaced from the body of the vessel, and a crescent shaped funnel having hooks pivotally engaging the offset portion of the band.

3. A vessel having a forwardly projecting lip at its upper edge and an annular groove adjacent to its upper edge, a split band engaging said groove and having adjustable connected ends, said band being provided intermediate its ends with an offset portion constituting a hanger positioned adjacent to the lip of the vessel, and a funnel pivotally supported upon said hanger.

4. The combination with a measuring vessel having an annular groove of a split band having interengaging teeth at the ends thereof, a sleeve adjustable upon the ends of said band to hold the teeth in engagement, and a funnel pivotally supported upon the band.

877,436. MACHINE FOR ENGRAVING OR SINKING DIES. JOSEPH F. KELLER, New York, N. Y. Filed Oct. 1, 1907. Serial No. 395,374.



1. In a machine for the reproduction of a die from a pattern, the combination with an oscillating arm pivotally supported at one end, of die blank and pattern holders for supporting the die blank and pattern respectively and both located upon the same side of said oscillating arm, means for simultaneously moving said holders, and a cutting tool and tracer carried by said oscillating arm and engaging with said die blank and pattern respectively and located at points equidistant from the pivotal support of said oscillating arm, substantially as described.

2. In a machine for reproducing a die from a pattern, the combination with die blank and pattern holders for supporting the die blank and pattern respectively, and means for simultaneously moving said holders, a single arm adapted to oscillate with relation to said holders and pivoted at a point equidistant from the centers of said holders, a cutting tool and tracer mounted on said oscillating arm and engaging with said die blank and pattern respectively, and means for feeding said cutting tool and tracer across the surfaces of said die blank and pattern, substantially as described.

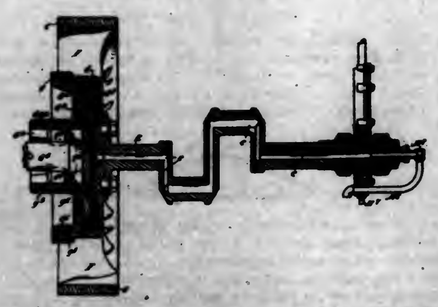
3. In a machine for reproducing a die from a pattern, the combination with two parallel spindles one carrying the pattern and the other the die blank, of means for imparting motion thereto, an arm adapted to oscillate with relation to said die blank and pattern and pivoted at a point equidistant from the centers of said die blank and pattern, and a tracer and cutting tool secured to said oscillating arm and engaging with the pattern and die blank respectively, substantially as described.

4. In a machine for reproducing a die from a pattern, the combination with two parallel spindles one carrying the die blank and the other the pattern, of means for imparting motion thereto, an oscillating arm pivoted to the machine at a point equidistant from the centers of said die blank and pattern, a tracer and cutting tool carried by said arm and engaging with the pattern and die blank respectively, and means for moving said oscillating arm in a plane parallel with the faces of said die blank and pattern, whereby said cutting tool and tracer are gradually fed across the surfaces of said die blank and pattern, substantially as described.

5. In a machine of the character described, the combination with two parallel spindles, one carrying the pattern and the other the die blank and tripping means for automatically changing the direction of the movement thereof, of an oscillating arm pivoted to the machine at a point equidistant from the centers of said pattern and die blank, a bar carried by said arm, a tracer and revolving cutting tool carried by said bar and engaging with the pattern and die blank respectively, and means for swinging said oscillating arm parallel to the plane of the faces of said pattern and die blank whereby the tracer and cutting tool will be moved across said faces, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

877,437. CLUTCH. CHARLES B. KING, Detroit, Mich., assignor to Northern Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 3, 1905. Serial No. 253,586.



1. In a clutch mechanism, the combination of a cylinder having one end closed, a flange fixed to the edge of said cylinder around its open end and extending part way to the center, a disk in said cylinder between said flange and the end of said cylinder, means for connecting said disk toward its center with the transmission mechanism, and means for supplying fluid under pressure to said cylinder back of said disk to press it against said flange to bind said disk and flange together for the purpose described.

2. In a clutch mechanism, the combination of a cylinder having one end closed, a flange fixed to said cylinder at the edge surrounding its open end and extending partway to the center, the said flange being provided with an annular coaxial outwardly extending sleeve, a disk in said cylinder between said flange and the end of the cylinder, said disk being provided with a central projection extending beyond said flange in said sleeve, and means for supplying fluid under pressure to said cylinder back of said disk to press it against said flange for the purpose described.

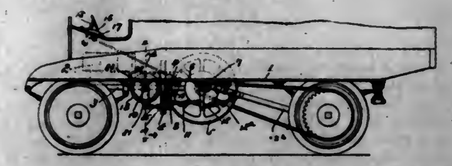
3. In a clutch mechanism, the combination of a cylinder having one end closed, a flange fixed to said cylinder, a disk in said cylinder between said flange and the end of said cylinder, said disk being provided with a central projection extending beyond said flange, said projection being provided with a central longitudinal aperture, and a longitudinal slot in its wall, a shaft projecting into said central aperture provided with a lug extending into said slot, and means for supplying fluid under pressure to said cylinder back of said disk to press it against said flange for the purpose described.

4. In a clutch mechanism, the combination of a cylinder having one end closed, a flange fixed to said cylinder provided with an annular coaxial outwardly extending sleeve, a disk in said cylinder between said flange and the end of the cylinder, said disk being provided with a central projection extending beyond said flange in said sleeve, said projection being provided with a central aperture and a longitudinal slot in its wall, a shaft extending into said aperture and provided with a lug extending into said slot, and means for supplying fluid under pressure to said cylinder back of said disk to press it against said flange for the purpose described.

5. In a clutch mechanism, the combination of a cylinder having one end closed, a flange fixed to said cylinder, a disk in said cylinder between said flange and the end of said cylinder, means for supplying fluid under pressure to said cylinder back of said disk to press it against said flange, and a shaft, said disk being connected to said shaft so as to restrain relative rotary motion between said disk and shaft and to permit a motion of said disk in the direction of the length of said shaft.

[Claim 6 not printed in the Gazette.]

877,438. FRICTION-DRIVING MECHANISM FOR AUTOMOBILES. JOHN W. LAMBERT, Anderson, Ind. Filed Dec. 13, 1906, Serial No. 347,601. Renewed Sept. 6, 1907. Serial No. 391,702.



1. A friction driving mechanism comprising a friction disk, a driven friction disk, a rock-shaft, means for moving said shaft, means connected to said shaft for bringing the driven disk into engagement with the friction disk, a pair of thrust wheels, means connecting said wheels to the rock-shaft whereby said thrust wheels will be brought into engagement with the friction disk on the opposite side thereof from the driven disk, and a stop device to limit the pressure of the thrust wheels on the friction disk without limiting the pressure of the driven disk on said friction disk.

2. A friction driving mechanism comprising a friction disk, a driven disk adapted to be brought into engagement with the friction disk, a thrust device normally out of engagement with the friction disk, and means for bringing said thrust device into engagement with the friction disk on the opposite side from the driven disk, a stop other than the friction disk to prevent further bodily movement of the thrust device after its contact with the friction disk.

3. A friction driving mechanism comprising a friction disk, a driven friction disk, a rock-shaft, means connecting said rock-shaft to the driven disk whereby said disk may be brought into engagement with the friction disk, a thrust

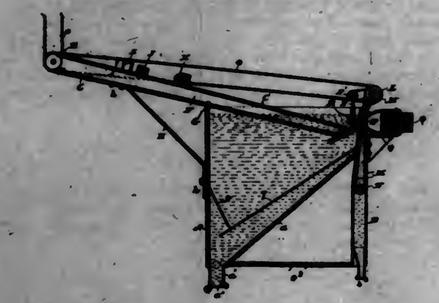
wheel, means connecting said thrust wheel to the rock-shaft whereby said wheel may be brought into engagement with the friction disk, means for rotating said rock-shaft, a yielding device to permit the thrust wheels to be brought against the friction disk after the driven disk is in engagement therewith, means for limiting the pressure of the thrust wheels on the friction disk without limiting the pressure of the driven disk against the friction disk.

4. A friction driving mechanism comprising a friction disk, a driven disk, a pair of thrust wheels, provided with a non-metallic frictional surface adapted to be brought into engagement with the friction disk, the thrust wheels and the driven disk being on opposite sides of the friction disk, and means for bringing the driven disk and the thrust wheels into engagement with the friction disk, and a stop device other than the friction disk to limit the pressure of the thrust wheels on the friction disk.

5. A friction driving mechanism comprising a friction disk, a driven disk, a rock shaft, means for moving said shaft, means connected to said shaft for bringing the driven disk into engagement with the friction disk, a pair of thrust wheels, means connecting said thrust wheels to the rock shaft whereby said thrust wheels will be brought into engagement with the friction disk on the opposite side thereof from the driven disk.

[Claims 6 to 11 not printed in the Gazette.]

877,439. APPARATUS FOR MAGNETICALLY CONCENTRATING ORES. HENRY LEIGHTON, Seattle, Wash. Filed Sept. 19, 1906. Serial No. 335,323.



1. In a magnetic separator for treating materials in a wet state, a receptacle adapted to contain water, a magnet, means for feeding the material into the water into the magnetic field, and means interposed between the end of the feeder and the magnet in the direct path of the material for agitating the water between the discharge end of the feed and the magnet.

2. In a magnetic separator for treating materials in a wet state, the combination of a magnet, a water receptacle, means for feeding the material into the water towards the magnet, and means interposed between the end of said feeding means and the magnet in the direct path of the material for acting upon the material intermediate the discharge end of the feed and the magnet at an angle for disentangling the magnetic and nonmagnetic materials which may have become entangled, and by force of the magnetic flow towards the same.

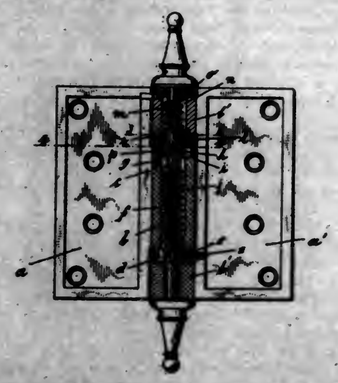
3. In a magnetic separator for treating materials in a wet state, the combination of a magnet, a water receptacle, means for feeding the material into the water towards the magnet, and an agitator within the water interposed between the end of said feeding means and the magnet in the direct path of the material adapted to act upon the materials as they flow by the force of the magnet towards the same.

4. In a magnetic separator for treating material in a wet state, the combination of a magnet, a water receptacle, means for feeding the material into the water towards the magnet, and a reciprocating separator interposed between the discharge end of the feed and the magnet, and in the direct path of the material.

5. In a magnetic separator for treating materials in a wet state, the combination of a magnet, a water receptacle, means for feeding the material into the water toward the magnet, and means interposed between the discharge end of the feed and the magnet and in the direct path of the material whereby the magnetic and nonmagnetic materials which may have been entangled are disentangled, the said means including a series of separated inclined surfaces over which the material may pass.

[Claims 6 to 14 not printed in the Gazette.]

877,440. AUTOMATIC DOOR CHECK AND CLOSER. MORIS LEVIN, New York, N. Y., assignor of three-fourths to Louis Drosin, New York, N. Y. Filed May 16, 1907. Serial No. 374,103.



In a check and closer for doors, windows, etc., the combination with a hinge, of two springs arranged in the alternate knuckles thereof, one of said springs acting against the movable leaf and the other being adjustably connected with the stationary leaf of the hinge, hooks formed at the adjacent ends of said springs and adapted to engage one another before the completion of the return movement of the movable leaf, and means for adjusting said counteracting spring to regulate the force thereof, substantially as and for the purpose specified.

877,441. EYEGLASS-CASE. ABBOTT L. MARINER, Medford, Mass., assignor of one-fourth to Samuel W. Marvin and one-fourth to Harry C. Whittemore, Cambridge, Mass., and one-fourth to Charles G. Wells, Jamaica Plain, Mass. Filed Feb. 18, 1905. Serial No. 246,295.



1. In an eye-glass case or holder, in combination, a body portion, a cover therefor, a wire pintle pivotally connecting said cover to said body portion, a cam attached to said cover and engaging said pintle intermediate its ends, and a fixed projection on the body portion coöperating with said cam to force the intermediate portion of said pintle out of axial alinement with the ends when said cover is in its open position, for the purpose specified.

2. In an eye-glass case or holder, in combination, a body portion, a cover therefor, a cam on one of said parts, and a fixed projection on the other of said parts coöperating with said cam, a spring pintle pivotally connecting said cover to said body portion and having a portion of it intermediate its ends forced out of axial alinement by the coöperate action of said cam and projection when said cover is in its open position, for the purpose specified.

3. In an eye-glass case or holder, in combination, a body portion, a cover therefor, a cam on one of said parts, and a fixed projection on the other of said parts coöperating with said cam, and a spring to keep said cam in operative engagement with said projection said cam being shaped to relieve the said spring from pressure when the said cover is substantially in its closed position, substantially as described.

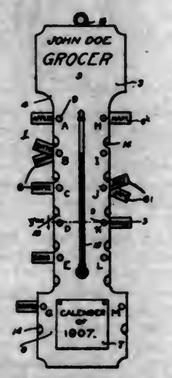
4. In an eye-glass case or holder, in combination, a body portion, a cover therefor, a spring-wire hinge-pintle connecting said parts and lying in the axial line of the hinge when the cover is closed and exerting a minimum pressure on said parts, and means coöperating with said spring wire to force a portion of it intermediate its ends out of said axial line when the cover is being opened, said means being substantially inoperative upon the spring wire in the closed position of the cover.

877,442. LIGHTNING-ROD. LAVAKE L. MAST, West Milton, Ohio. Filed July 27, 1906. Serial No. 328,045.



A lightning rod trough-shaped in cross section, the edges of which are bent outwardly, downwardly and inwardly across the flat bottom of said trough-shaped portion, and abutting to form three thicknesses at the base.

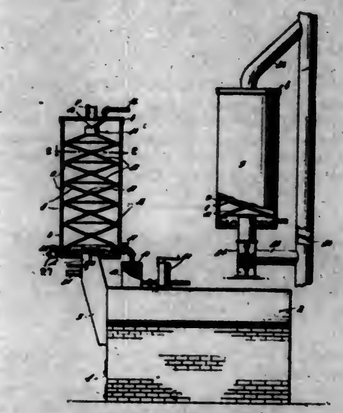
877,443. DEVICE FOR EXHIBITING MEMORANDA. SCHUYLER MAXFIELD, Gloversville, N. Y., assignor of one-half to Joseph Neahr, Gloversville, N. Y. Filed Dec. 13, 1906. Serial No. 347,660.



A memoranda exhibiting device comprising inner and outer supporting cards or plates, a series of memoranda tabs pivotally-mounted between said plates and adapted to be swung into operative and inoperative positions, and a resilient stop strip arranged between said plates to limit the inward movement of said tabs when swung to an inoperative position, and to hold said tabs in an operative position, substantially as described.

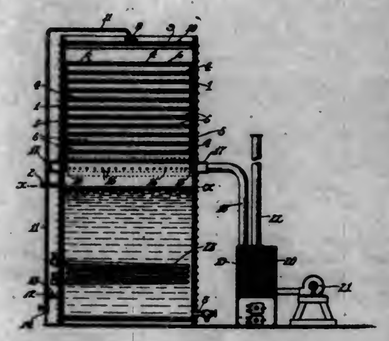
877,444. AUXILIARY WATER-HEATER AND SMOKE-CONSUMER. JOSEPH F. MILES, Paris, Tex. Filed Sept. 27, 1906. Serial No. 336,472.

An auxiliary water heater and smoke consumer comprising a receptacle adapted to be arranged on the upper end of the smoke stack of a furnace, a series of apertured partitions arranged one above the other in said receptacle, a series of disks arranged to alternate with said partitions a water supply pipe extending into the top of said receptacle, and an overflow vessel arranged in the upper end of the heater to receive the incoming water from said supply pipe and provided with notches in the



edge thereof to cause the even distribution of the water overflowing therefrom.

877,445. OXIDIZING MEANS FOR SOLUTIONS. WILLIAM B. MCPHERSON, Los Angeles, Cal., assignor to Non Acid Copper Extracting Company, Los Angeles, Cal., a Corporation of California. Filed Feb. 7, 1907. Serial No. 356,291.



1. An apparatus for oxidizing solutions, comprising a tank, a plurality of intercepter partitions extending across the tank, said partitions having perforations which are offset in successive partitions, means for supplying solution above the uppermost partition and passing air into the tank below the partitions, and means for withdrawing the solution to maintain the level of the solution at a point below the lowermost partition and below the air supply whereby the air is caused to pass upwardly through the partitions, in contact with the solution thereon.

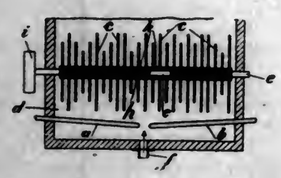
2. An apparatus for oxidising solutions, comprising a tank, a plurality of perforated partitions extending across the tank, a distributer at the top of the tank, over the uppermost partition, means for furnishing liquid from the bottom part of the tank to said distributer, and means for forcing air into the tank below the said partitions, whereby the air is caused to pass upwardly through the partitions, in contact with the solution therein.

3. An apparatus for oxidising solutions, comprising a tank, a plurality of perforated partitions extending across

the tank, a distributer at the top of the tank, over the uppermost partition, means for furnishing liquid from the bottom part of the tank to said distributer, and means for forcing heated air into the tank below the said partitions, whereby the air is caused to pass upwardly through the partitions, in contact with the solution therein.

4. An apparatus for oxidizing solutions, comprising a tank, a plurality of perforated partitions extending across the tank, a distributer at the top of the tank, over the uppermost partition, means for furnishing liquid from the bottom part of the tank to said distributer, means for forcing heated air into the tank below the said partitions, whereby the air is caused to pass upwardly through the partitions, in contact with the solution therein, and means for heating the solution in the tank.

877,446. APPARATUS FOR MANUFACTURING NITRIC ACID OR OXID FROM AIR. HARRY PAULING, Gelsenkirchen, Germany, assignor to The Firm of Salpetersäure-Industrie-Gesellschaft, Ges. M. B. H., Gelsenkirchen, Germany. Filed Dec. 18, 1905. Serial No. 292,296.



1. In an apparatus for manufacturing nitric acid or oxid from air, in combination, electrodes, arranged in a plane, for producing electric discharges, a number of plates so disposed at one side of such electrodes as to cut the plane of the latter at right angles and form interspaces lying crosswise of the electrodes, means arranged at the opposite side thereof for blowing a current of gas through the space between the electrodes, and means for insulating the said plates from each other, substantially as described.

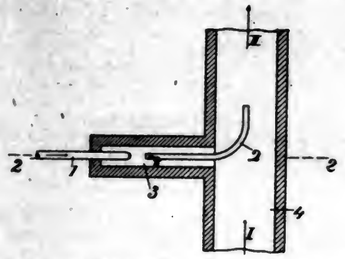
2. In an apparatus for manufacturing nitric acid or oxid from air, in combination, electrodes, arranged in a plane, for producing electric discharges, a number of plates so disposed at one side of such electrodes as to cut the plane of the latter at right angles and form interspaces lying crosswise of the electrodes, means arranged at the opposite side thereof for blowing a current of gas through the space between the electrodes, means for insulating the said plates from each other, and means for rotating them, substantially as described.

877,447. PROCESS FOR THE PRODUCTION OF PURE NITRIC ACID. HARRY PAULING, Gelsenkirchen, Germany, assignor to The Firm of Salpetersäure-Industrie-Gesellschaft, G. M. B. H., Gelsenkirchen, Germany. Filed Apr. 6, 1906. Serial No. 310,299.

1. The herein described process, consisting in subjecting atmospheric air to the action of electrical discharges, mixing the nitrogenous gases, thus formed, with water or aqueous vapor while the said gases have a minimum temperature of 200° C., and cooling down the mixture, as set forth.

2. The herein described process, consisting in subjecting atmospheric air to the action of electrical discharges, mixing the nitrogenous gases, thus formed, with water or aqueous vapor while the said gases have a minimum temperature of 200° C., the quantity of water or aqueous vapor being so proportioned that the nitric acid formed remains in its gaseous condition; and in passing the gases of nitric acid into suitable metallic cooling apparatus and from thence into suitable clay apparatus for condensation, as set forth.

877,448. PROCESS FOR THE PRODUCTION OF VOLTAIC STRONG-CURRENT ARCS. HARRY PAULING, Gelsenkirchen, Germany, assignor to The Firm of Salpetersäure-Industrie-Gesellschaft, G. M. B. H., Gelsenkirchen, Germany. Filed June 30, 1906. Serial No. 324,278.



The herein described process, consisting in passing a gas to be acted upon by electrical discharges, in two currents between a pair of electrodes, the latter diverging in two different directions, one of the said currents passing in one of these directions, the second current in the other direction, substantially as set forth.

877,449. VEHICLE-THILL SUPPORT. BRADIE M. PERDUE, Franklin, Ky. Filed Apr. 24, 1907. Serial No. 370,097.



1. A thill support comprising a threaded yoke, a supporting block provided with a threaded aperture for said yoke, spaced arms pivotally connected to said yoke, an anti-rattler roller mounted on the pivotal bolt, a spring connected to said spaced arm and to said yoke and one end of said spring being connected to a clip on the cross bar between the thills.

2. A thill support comprising a spiral spring, a lever and a yoke pivotally connected together, and an anti-rattler roller on the pivotal bolt.

3. A thill support comprising a supporting block, provided with a threaded aperture therein, a yoke having a threaded shank fitted to said block, spaced arms pivotally connected to said yoke by a bolt, a rubber roller mounted on said bolt, a spring connected to said yoke by a stirrup, the opposite end of said spring being connected to said arms, and means for connecting said spring to the cross bar between the thills and means for connecting the supporting block to the axle.

4. A thill support comprising a spring, a yoke, spaced arms, a pivotal bolt for connecting said arms and yoke, an anti-rattler on said bolt, a supporting block for said yoke, means for connecting said supporting block to an axle, and means for connecting said spring at one end to said arms and at the other end to said yoke.

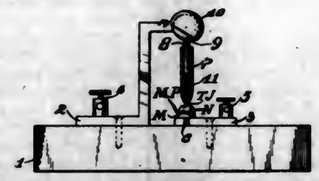
877,450. CUSHION-HEEL. REUBEN W. PERRY, Stoneham, Mass., assignor of one-half to George H. Stevens, Melrose, Mass. Filed May 22, 1907. Serial No. 375,033.

1. As a new article of manufacture, a cushion heel having a top lift whose rear and side portions are of leather and whose middle portion is of rubber, and a bottom lift whose rear portion is rubber and whose forward portion is leather, the forward end of the upper rubber portion and the rear end of the lower rubber portion of the two lifts overlapping each other and being vulcanized together, the rubber portion of the top lift extending further forward than the rubber portion of the bottom lift, and the rubber portion of the bottom lift extending further rearward than the rubber portion of the top lift.



2. As a new article of manufacture, a cushion heel having a top lift whose rear and side portions are of leather of horse-shoe shape, and whose middle portion is of rubber, and a bottom lift whose rear portion is rubber and whose forward portion is of leather, the forward end of the rubber portion of the bottom lift and the rear end of the rubber portion of the top lift overlapping each other and being vulcanized together, the rubber portion of the top lift extending further forward than the rubber portion of the bottom lift and the rubber portion of the bottom lift extending further rearward than the rubber portion of the top lift.

877,451. MEANS FOR RECEIVING INTELLIGENCE COMMUNICATED BY ELECTRIC WAVES. GREENLEAF W. PICKARD, Amesbury, Mass. Original application filed Aug. 30, 1906, Serial No. 332,697. Divided and application filed Nov. 8, 1906, Serial No. 342,465. Again divided and this application filed Nov. 12, 1907. Serial No. 401,856.



1. Means for receiving intelligence communicated by electromagnetic waves, which comprises two substantially massive individual electrical conductors operatively in substantially perfect contact with each other, said conductors having different degrees of resistivity, and cooperatively having high resistivity, at least one of said conductors having high resistivity; in combination with a mass of fusible metal supporting said high resistance conductor, and a supporting receptacle for said fusible metal.

2. Means for receiving intelligence communicated by electromagnetic waves, which comprises two substantially massive individual electrical conductors of different degrees of resistivity, and coöperatively having high resistivity, at least one of which conductors possesses high resistivity; in combination with a spring which operatively holds the said conductors in substantially perfect small-areaed electrical contact with each other; and a freely movable, non-threaded support for said spring to permit a variation of contact pressure within wide limits of substantially perfect contact pressure, and thereby slightly vary the area of the minute electrical contact.

3. Means for receiving intelligence communicated by electromagnetic waves, which comprises two substantially massive individual conductors operatively in small-areaed substantially perfect contact with each other, and having different degrees of resistivity and coöperatively having high resistivity, at least one of said conductors having high resistivity; in combination with a mass of good conducting material having a broad surface of intimate contact, relative to said small-areaed contact, with said high resistance conductor.

4. Means for receiving intelligence communicated by electromagnetic waves, which comprises a substantially massive conducting solid having low resistivity, and a substantially massive non-metallic solid having high resistivity and also thermoelectromotive power; said conductors being individually separate, but operatively connected together in substantially perfect electrical contact.

5. Means for receiving intelligence communicated by electromagnetic waves, which comprises two substantially massive individual conducting solids, one of which has low resistivity, and the other of which has high resistivity and also thermoelectromotive power; said conductors being operatively connected together in substantially perfect electrical contact.

[Claims 6 to 16 not printed in the Gazette.]

877,452. HARROW. WILLIAM A. PRESTON, Roe, Ark. Filed June 27, 1907. Serial No. 381,099.



1. In a harrow, the combination with a member including slidably connected bars, of teeth engaged transversely through the bars, springs engaged between the teeth and means for holding the bars against movement with respect to each other.

2. In a harrow, the combination with spaced members, each including bars arranged for sliding movement with respect to each other, of cross members bridging the space between the first named members, and means for holding the cross members to the first named members, said means being also arranged to hold the bars of said members against movement with respect to each other.

3. In a harrow, the combination with spaced members each including two slidably connected bars, of plates disposed upon the members, yokes engaged around the members and having their legs engaged through the plates and fastening devices engaged with the legs for operation to clamp the bars between the yokes and plates, to hold the bars against movement.

4. In a harrow, the combination with bars arranged for sliding movement with respect to each other, said bars having tongues stamped therefrom to form openings, teeth engaged in the openings, said tongues being bent to receive the teeth thereagainst beyond the openings, and means for holding the bars against movement with respect to each other.

877,453. DEVICE FOR SUPPORTING UMBRELLAS, CANES, AND THE LIKE. MARY V. QUINN, Seattle, Wash. Filed Mar. 13, 1907. Serial No. 362,233.



1. A device of the type set forth comprising a body having an angularly disposed tongue at one end, a second tongue projecting outwardly from the opposite end of said body, and flexible means secured to said body and being adapted to be engaged with said last named tongue, for the purpose specified.

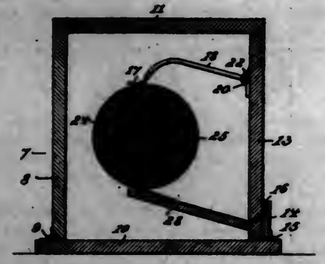
2. A device of the type set forth comprising a body formed with a key hole slot, a tongue projecting outwardly from one side face of said body, and a cord secured to said body intermediate its ends and provided in one end with a tack, for the purpose specified.

3. A device of the type set forth comprising a body offset intermediate its ends and formed with an opening in

said offset portion, a cord projecting through said opening of the offset portion of said body, said body on one side of said offset portion being formed with a key hole slot and on the other side thereof being provided with a tongue for engagement with said cord, and a tack carried by said cord for the purpose specified.

4. A device of the type set forth comprising a body formed with a key hole slot, a tack projecting therethrough, a tongue projecting from one side face of said body, and a cord carrying said tack secured to said body and adapted to have its free portion secured to said tongue.

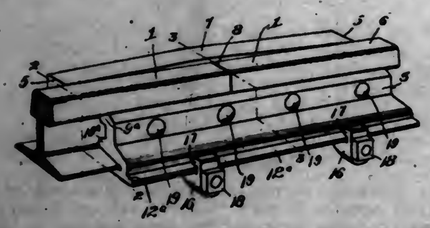
877,454. SENSITIZED-PAPER HOLDER. GILBERT A. RANDALL, Philadelphia, Pa. Filed July 19, 1907. Serial No. 384,569.



1. A holder of the character described, comprising an oblong hinged receptacle arranged to be parted, a rod removably mounted in the receptacle for containing a roll of paper, means for holding the roll of paper under spring tension, said receptacle provided with a transverse slot in one wall near the bottom and a hinged flap for closing the opening of the holder and protecting an end of paper of the roll exposed beyond the receptacle from the effect of light upon the same.

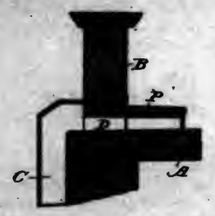
2. A holder of the character described, comprising an oblong hinged receptacle arranged to be parted, a rod arranged for carrying a roll of paper and supported under spring tension therein, an inclined table located below the roll and an opening extending transversely of one wall of the receptacle and a hinged knife edged flap for closing the opening and protecting an exposed end of paper of the roll beyond the receptacle from the effect of light upon the same.

877,455. RAIL-JOINT. CHARLES H. RAY, Fayetteville, Ark. Filed Apr. 6, 1907. Serial No. 366,770.



A rail joint comprising a splice bar having a curved upper surface to carry the rolling stock over the rail joint, inwardly extending beads to bear against the web of the rails, an outwardly extending flange, and an inwardly extending base flange, an oppositely disposed splice member, bolts extending through both members and through the web of the rails, hooks formed on bolts, and hook members adapted to slide on said bolts for uniting the two members of the splice, substantially as described.

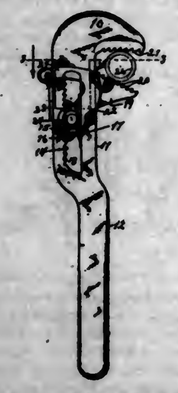
877,456. LEADER-PIPE PROTECTOR FOR BUILDINGS. FREDERICK W. SANDER, New York, N. Y., assignor of one-half to James C. Bushby, New York, N. Y. Filed June 5, 1907. Serial No. 377,432.



1. A drain protector comprising spaced supports, a sheet of heat-conserving and non-conducting material secured thereto, said sheet being removable with the supports, and means for detachably securing the protector in place.

2. A protecting device for a coping drain, comprising a sheet of felt or similar material, a foraminous sheet supporting the same and means for supporting said foraminous sheet.

877,457. WRENCH. CHARLES W. SIEVERT, Los Angeles, Cal. Filed July 9, 1907. Serial No. 382,823.



1. A pipe wrench comprising a fixed jaw, having a slotted shank provided with teeth on the side of the slot furthest from the fixed jaw and a handle secured to said shank, said shank and handle extending rearwardly and at right angles to the face of the fixed jaw; a sliding jaw longitudinally movable along the shank of the fixed jaw between the handle and the fixed jaw, said sliding jaw having rear arms straddling the shank of the fixed jaw and terminating at the slot thereof, and front arms straddling said shank and extending beyond the same; a dog having teeth pivotally connected to the rear arms of the sliding jaw, and longitudinally movable in the slotted shank of the fixed jaw; and a connection between the front arms of the sliding jaw exterior the shank of the fixed jaw.

2. A wrench comprising a fixed jaw having a slotted shank with a handle secured thereto, said shank being provided with teeth on the side furthest from the fixed jaw and extending at right angles from the face of the jaw; a dog having teeth within said slot, and a sliding jaw longitudinally movable along the shank of the fixed jaw between the face thereof and the handle, and having a pivotal connection to said dog, the teeth of said dog and shank being adapted to secure the dog against movement toward the handle when the wrench is being operated.

3. A pipe wrench comprising a fixed jaw having a slotted shank provided with teeth on the outer surface of the slot, said shank extending at right angles rearwardly to the face of the fixed jaw; a handle secured to said shank;

a sliding jaw longitudinally movable along the shank of the fixed jaw between said jaw and the handle, said sliding jaw having rear arms straddling the shank of the fixed jaw and terminating adjacent the slot thereof, and front arms straddling said shank and extending beyond the same; a cam lever mounted in the ends of said front arms; a toothed dog pivotally connected to the rear arms of the sliding jaw and longitudinally movable in the slotted shank of the fixed jaw; and a spring secured to said dog and bearing against the shank within the slot.

877,458. ELECTRIC TRACK-SWITCH. ROLLIN A. BALDWIN, New Haven, Conn., assignor to Baldwin & Rowland Switch & Signal Co., a Corporation of Connecticut. Filed Dec. 5, 1906. Serial No. 346,361.



1. In an electrical track switch, a box or casing having a cover by which it is hermetically closed, one end of said box or casing being depressed to form a ledge or shelf, a shaft having a bearing in the bottom of the box and projecting upwardly through said ledge or shelf and having a stuffing box engagement therewith, a pair of cranks on said shaft one exterior and one interior of the box, and means inclosed within the box and acting on the latter crank, and a link connection from the exterior crank to the switch point to move the switch point.

2. In an electrical track switch, a box or casing having a depressed front portion, a crank projecting upwardly through said portion and having a short crank arm outside the casing, connections from said crank arm to the switch point, a long crank arm on said shaft within the casing, a bearing on the bottom of the casing for said shaft, a pair of solenoids within the casing, a single water-tight compartment therefor, and a pitman connection having a core extending into said solenoids but exterior to said water-tight compartment and pivoted to the long crank arm.

3. In an electrical track switch, a box or casing having a cover by which it is hermetically closed, a stuffing box in said casing, a shaft projecting through said stuffing box, a pair of solenoids within the casing, a guide within said solenoids, a cylinder surrounding the solenoids and forming in conjunction with said guide a water-tight compartment therefor, a core or plunger within said guide and connected to move said shaft, and insulating oil within said compartment whereby the windings of the solenoids are wholly inclosed and immersed in insulating oil.

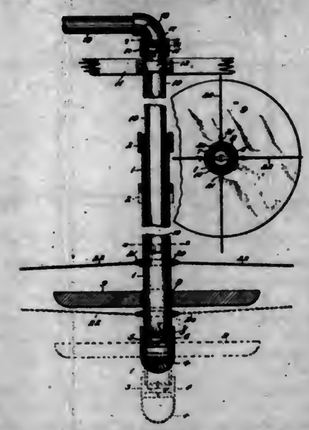
877,459. WAVE-MOTOR. DAVID BINNS, Camp Chase, Ohio, assignor of one-half to Delbert B. Ong, Columbus, Ohio. Filed Apr. 26, 1907. Serial No. 370,413.

1. In a wave motor, the combination with a float and a fixed support above the float, of a barrel carrying the float and having its inlet end below the surface of the float, and a hollow piston adapted to convey water fitting in the barrel above the float and held against longitudinal movement by the fixed support.

2. In a wave motor, a float, a barrel attached to the float, a valve arranged in the barrel, a hollow piston fitting loosely in the barrel above the float and adapted to convey water, said piston being held against longitudinal movement, and a valve carried by said piston.

3. In a wave motor, a float, a barrel attached to the float, a valve arranged in the barrel, a hollow piston fitting loosely in the barrel above the float and adapted to convey water, said piston being held against longitudinal movement, a valve carried by said piston, and non-flexible means connected directly to the piston for conveying the water conveyed thereby.

4. In a wave motor, a float, an elongated barrel attached to float and having the inlet end below the surface of the float, an elongated hollow piston fitting loosely in the barrel having its lower end terminating above the float, a valve working above the inlet end of the piston, and a fixed support having connection with the piston arranged to hold the latter against longitudinal movement.



5. In a wave motor, a fixed hollow piston, a barrel receiving said piston and working thereon, a float attached to the barrel, and guiding means for the float radiating from the barrel a short distance above the float.

[Claims 6 and 7 not printed in the Gazette.]

877,460. APPARATUS FOR SEPARATING LIQUIDS FROM GASES OR VAPORS. KARL BRUNNER and OTTO BÜHRING, Mannheim, Germany. Filed Mar. 29, 1907. Serial No. 365,436.



1. An apparatus for separating liquids from gases and vapors by means of tubes built into the apparatus transversely to the direction of flow and perforated on the sides turned towards the direction of flow, characterised by the fact that the tubes are displaced in relation to each other transversely to the direction of flow and that there is arranged within each tube a partition which runs parallel to the direction of flow and which projects beyond the tube and between the two tubes immediately in front of it.

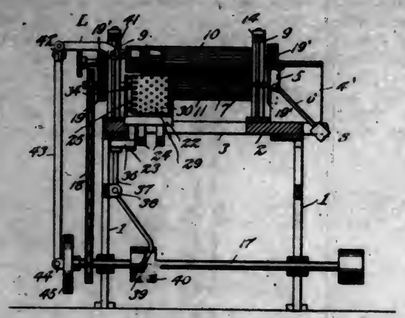
2. An apparatus for separating liquid from gases and vapors by means of tubes arranged transversely to the direction of flow of the gases and perforated on the sides turned towards the direction of flow characterised in that the sides of the tubes which are turned away from the direction of flow are provided with a few apertures.

3. An apparatus for separating liquid from gases and vapors by means of tubes arranged transversely to the direction of flow of the gases and perforated on the sides turned towards the direction of flow characterized by the fact that the tubes are formed by means of two metal sheets that are connected with each other, are arranged in the direction of flow, and are provided with projections displaced in relation to each other.

877,461. CORN-HUSKING DEVICE. ALMON E. HALL, Williamstown, Mass. Filed Mar. 8, 1907. Serial No. 361,322.

1. In a corn husking machine, a pair of husking rolls, a slide supported for reciprocation, an endless belt carried

by the slide and traveling around one of the husking rolls, means for operating the slide, and a presser member pivoted adjacent to the slide carrying the endless belt.



2. In a corn husking machine, a pair of husking rolls, a slide supported for reciprocation, an endless belt movably supported upon the slide and having teeth or prongs, means for operating the slide, and a presser member pivoted adjacent to the slide; one of the husking rolls being extended between the leads of the endless belt supportd upon the slide.

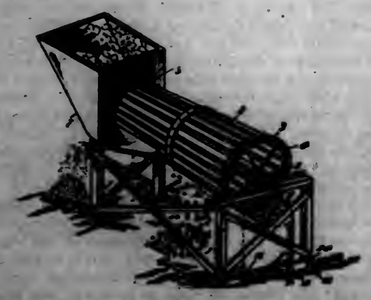
3. In a corn husking machine, a pair of husking rolls, a slide supported for reciprocation, a driven shaft supported in stationary bearings adjacent to the slide, a bent engaging member upon said shaft, means for operating the slide, and a presser member pivoted adjacent to the slide.

4. In a corn husking machine, pairs of husking rolls, a pair of slides supported for reciprocation adjacent to the husking rolls and transversely thereof, endless belts carried by the slides, means for operating said belts in the direction of the lower husking rolls, and a presser member pivoted adjacent to and intermediate of the slides.

5. In a corn husking machine pairs of husking rolls, slides supported for reciprocation in opposite directions between and transversely of the husking rolls, endless toothed belts carried by the slides, means for operating the belts in the same direction as the lower husking rolls, and a presser member pivoted adjacent to and intermediate of the slides.

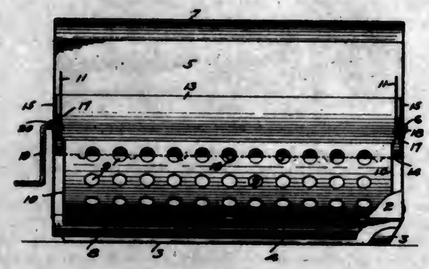
[Claims 6 to 15 not printed in the Gazette.]

877,462. POTATO SORTER AND CLEANER. JOHN E. HOWELL, Spearfish, S. D. Filed June 29, 1906. Serial No. 324,057.



In a potato sorter and cleaner, the combination of a frame-work comprising supporting legs, a hopper carried by one end of the frame-work and provided upon its inner face with an annular discharge spout, an inclined shaft passing through the discharge end of the hopper and having its opposite ends journaled respectively upon the frame-work and the outer side of the hopper, one end of the shaft being provided with a beveled pinion, a revoluble casing carried by the shaft and rotatable therewith, the said casing comprising a series of spaced slats and being in the form of a truncated cone, a discharge spout mounted upon the frame-work below the smaller end of the casing and receiving the sprouts and refuse passing therethrough, a second discharge spout mounted upon the opposite end of the frame-work and receiving the potatoes passing through the larger end of the casing, an operating shaft mounted upon the frame-work and carrying a bevel pinion meshing with the bevel pinion upon the first mentioned inclined shaft, and a cross bar connecting the lower extremities of one pair of the supporting legs and having a pin and slot connection therewith whereby one end of the frame can be adjusted to regulate the inclination of the casing.

877,463. MEAT-ROASTER. JOSEPH D. LEWIS, St. Paul, Minn. Filed Jan. 22, 1906. Serial No. 297,091.



1. A meat roaster comprising a suitable casing, a perforated pan therein adapted to contain meat to be cooked, means supporting the ends of said pan, an unobstructed space being formed between the bottom of said pan and the side walls and bottom of said casing, a revolving frame inclosing said pan and having side scoops extending lengthwise thereof and said scoops passing through the space between said pan and the side walls and bottom of said casing and making a complete revolution around said pan and being adapted to gather up the juices and grease from the bottom of said casing and deposit them upon the top of the meat.

2. A meat roaster comprising a suitable casing having a curved bottom, a perforated pan suspended within said casing and also curved to correspond with the curve in the bottom of the casing and spaced therefrom and adapted to contain the meat to be cooked, the curved portion of the casing beneath said pan forming a receptacle for the juices and grease, and revolving scoops operating in said space to gather up the juices and grease, and said space being only of sufficient depth to allow the passage of said scoops whereby the bottoms of the casing and of the pan will serve as barriers to the flow of the juices past said scoops during the gathering operation, substantially as described.

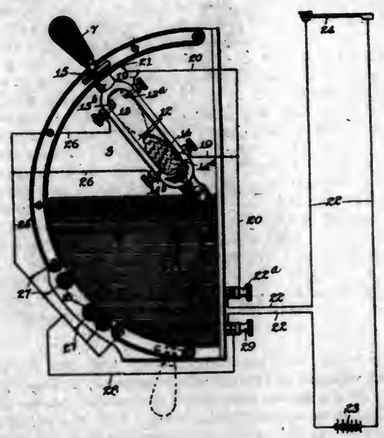
3. A meat roaster, comprising a base or lower portion, gatherers or scoops having flanged longitudinal edges bars connecting the ends of said scoops, gudgeons mounted in said bars and having bearings on said base said gudgeons projecting into the space between said bars, and a false bottom having bearings on the inner ends of said gudgeons and adapted to support the roast and spaced from the bottom of said base, substantially as described.

4. A meat roaster comprising a suitable casing, a perforated meat pan pivoted therein and spaced from the bottom of said casing, skewers adapted to be thrust through the perforations in said pan into the meat to secure it in the pan, and revolving basting devices arranged to sweep through the space between said pan and casing, the scoop portions of said basting devices engaging said skewers whereby the said pan and its contents and said basting devices will be revolved simultaneously.

5. A meat roaster comprising a casing, a meat pan pivotally supported therein and spaced from the bottom of the casing, revolving scoops operating between said pan and the bottom of said casing to gather up the juices and deposit them upon the meat, means for securing the meat in said pan and said means projecting into the path of said scoops whereby said pan and the meat will be revolved simultaneously with said scoops.

[Claim 6 not printed in the Gazette.]

877,464. RAILWAY-SIGNAL. JOHN C. LINK, Highbridge, Wis. Filed Mar. 25, 1907. Serial No. 364,484.

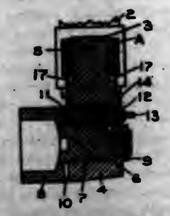


1. In a device of the character discribed, the combination with a main line circuit, of a swinging signal arm arranged in circuit therewith, means for maintaining a complete circuit through said arm when the same is stationary, a rolling contact carried by said swinging arm, and a plurality of set contact pieces arranged in the path of travel of said rolling contact for the purpose described.

2. In a signal board arranged in circuit with the main line, a swinging signal mounted on said board and wired to maintain a complete circuit through said board when said arm is stationary, a rolling contact carried by said swinging arm, and a plurality of spaced set contact pieces arranged in the path of travel of and adapted to contact with said rolling contact for the purpose described.

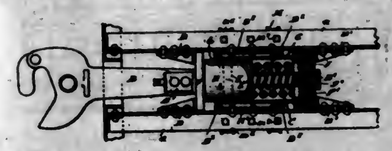
3. In a signal board arranged in circuit with a main line, a swinging signal arm, a mercury cup carried thereon, contacts arranged within said cup and connected to said main line and adapted to maintain a complete circuit through said mercury when said arm is stationary, a contact wheel carried by said swinging arm, and a plurality of spaced set contact pieces insulated from one another and arranged on said board in the path of travel of and adapted to contact said contact wheel when said swinging arm is moved.

877,465. CYLINDER-WRENCH. HENRY LUND, Grafton, N. D., assignor, by direct and mesne assignments, to Fosston Manufacturing Company, St. Paul, Minn., a Corporation of Minnesota. Filed May 31, 1905. Serial No. 263,019.



In a wrench, the combination with a bar, of a wrench-head pivoted to and projecting laterally therefrom, a nut socket rotatively supported in said wrench-head, rearwardly extending teeth circumferentially arranged upon the inner face of said socket, a reversible dog engaging with said teeth and provided with a spindle extending through said wrench-head parallel with said nut socket with its outer end projecting beyond the adjacent face of the wrench head, and a surrounding pressure spring for said dog, said spring being arranged within the wrench-head.

877,466. FRICTION SPRING DRAFT-RIGGING FOR RAILWAY-CARS. WILLIAM H. MINER and JOHN F. O'CONNOR, Chicago, Ill., assignors to W. H. Miner Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 17, 1907. Serial No. 368,623.



1. In a friction draft rigging, the combination with the draw bar, spring and followers, of front, rear and intermediate stops, a friction shell, friction blocks within the shell having inclined meeting faces, and an anti-friction roller between said friction blocks, substantially as specified.

2. In a friction draft rigging, the combination with the draw bar, stops and spring and front and rear followers, of a longitudinally movable cylindric friction shell having an inside friction face, a pair of coöperating friction blocks having cylindric friction faces and inclined meeting faces, an anti-friction roller interposed between said wedging meeting faces and having a rolling action on both said blocks, said rear follower having a central boss fitting within the rear end of said friction shell, substantially as specified.

3. In a friction draft rigging, the combination with a draw bar, stops and spring and front and rear followers, of a longitudinally movable cylindric friction shell having an inside friction face, a pair of coöperating friction blocks having cylindric friction faces and inclined meeting faces, an anti-friction roller interposed between said wedging meeting faces and having a rolling action on both said blocks, said rear follower having a central boss fitting within the rear end of said friction shell, and a pin extending through said friction shell and the boss of said follower to secure said parts together, substantially as specified.

4. In a draft rigging, a tie or guide plate M having shouldered wings or flanges furnished with seats to engage the bottom flanges of the center sills and provided with a longitudinal guide channel for the lower member of the draw bar yoke, and with curved guide faces for the friction shell, substantially as specified.

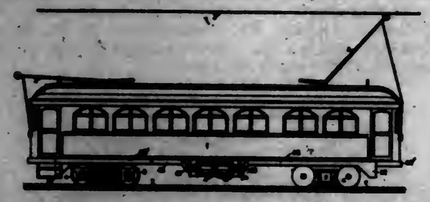
5. In a friction draft rigging, the combination with a friction shell, of a spring therein, friction blocks within the shell, one of said friction blocks being furnished with a longitudinal guide groove open at the front end thereof, a guide or stop secured to the friction shell and fitting in said guide groove to hold the friction blocks and springs within the shell in assembled position, and a follower secured to the rear end of said friction shell, substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

877,467. COOLING SYSTEM FOR ELECTRIC-RAILWAY APPARATUS. WALTER S. MOODY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Original application filed Aug. 10, 1904, Serial No. 220,160. Divided and this application filed June 16, 1906. Serial No. 322,016.

1. In combination, an electric railway car equipped with an air-brake system supplied with air from an intermit-

tently operating air-compressor apparatus arranged to maintain a substantially constant air-pressure in the air-brake reservoir, an electric device inclosing a casing, means for cooling said device consisting of a conduit attached to the casing of said device, and open and exposed to the air-pressure generated by the car through its motion, for causing the movement of the car to force air through said device, and a connection from the intake pipe of the air compressor to the casing of said device for causing the air-compressor to pass a current of air through said device.



2. In combination, an electric railway car equipped with an air-brake system supplied with air from an intermittently operating air-compressor apparatus arranged to maintain a substantially constant air-pressure in the air-brake reservoir, an electric transformer inclosed in a casing, means for cooling said device consisting of a conduit connected to said casing, for causing the movement of the car to force air through said transformer, and a connection between the air compressor apparatus and the transformer casing for causing said apparatus to pass a current of air through the transformer.

3. In combination, an electric railway car equipped with an air-brake system supplied with air from an air-compressor normally performing its maximum duty when the brakes are applied most frequently, an electric device mounted on said car, and two means for cooling said device, one of said means producing its greatest effect when the car is running at high speed, and the other of said means ordinarily producing its greatest effect when the car is running at comparatively low speeds.

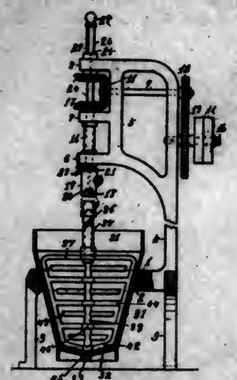
4. In an electric railway car arranged to operate from a high potential alternating-current with a transformer for supplying current to the motors at a low voltage, and a motor-operated air-compressor apparatus supplying air to the air-brake system, the combination of means for cooling said transformer, one of said means producing its greatest effect when the car is running at high speeds and another of said means ordinarily producing its greatest effect when the car is running at comparatively low speeds.

5. In an electric railway car arranged to operate from a high potential alternating-current with a transformer inclosed in a casing for supplying current to the motors at low voltage and equipped with an air-brake system supplied with air from an air-compressor normally performing its maximum duty when the brakes are applied most frequently, means for cooling said transformer consisting of a conduit attached to the transformer casing for causing the movement of the car to force air through said transformer, and a connection from the air-intake pipe of the air compressor to the casing of the transformer for causing the air-compressor to force air through said transformer.

877,468. EGG AND SPONGE BEATER. CHARLES H. OVERKAMP, Cincinnati, Ohio, assignor to The Triumph Manufacturing Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Feb. 11, 1907. Serial No. 356,729.

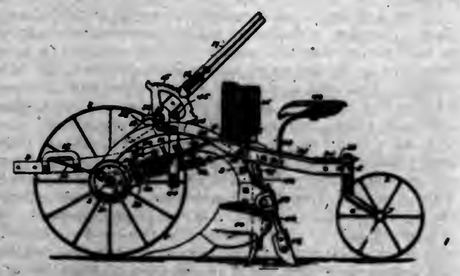
1. The combination of a tube provided with a gear and journaled in a vertical bearing, a similar gear provided with a key seat and journaled in a bearing thereover and in alinement therewith, a spindle provided with a spline adapted to detachably engage with the key seat, said spindle being movable longitudinally within the tube, for removing the spline from the key seat, and means for rotating said gears simultaneously in respective opposite directions.

2. In an egg and sponge beater, the combination of a driven tube journaled in a vertical bearing, a dasher tube adapted to register therewith and encircled by a clutch bearing at an intermediate point, a clamping sleeve splined on the former tube below the bearing and adapted to movably encircle the end portion of the latter tube, said sleeve



being provided with an annular flange and with a clutch member adapted to detachably engage with the clutch member on the dasher tube, and a spring latch on the bearing adapted to automatically engage with the flange for maintaining the sleeve out of engagement with the dasher tube.

877,469. SEEDING-MACHINE. WILLIAM L. PAUL, South Bend, Ind., assignor to Oliver Chilled Plow Works, South Bend, Ind. Original application filed May 28, 1907, Serial No. 376,096. Divided and this application filed Aug. 27, 1907. Serial No. 390,316.



1. In a seeding machine, the combination with an axle, framework and a seed receptacle provided with feeding means, of a gear wheel centered on the axle, a shaft for operating the feed mechanism, a pinion on said shaft meshing with said gear wheel, and automatically means to force the pinion to follow the gear wheel against the tendency of natural thrust to move said pinion and gear wheel apart.

2. In a seeding machine, the combination with an axle, a gear wheel centered thereon, feeding mechanism, and a shaft for driving the latter, of a pinion on said shaft meshing with said gear wheel, a member centered on the axle, a journal box for the pinion, said journal box hinged to the member on the axle, and means for forcing said member toward the gear wheel to maintain the pinion in mesh with the latter.

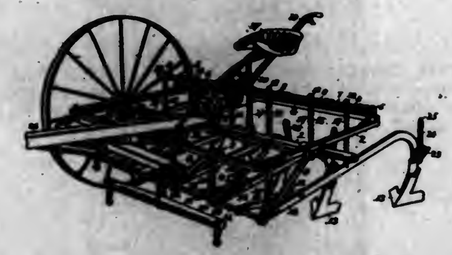
3. In a seeding machine, the combination with an axle, wheels thereon, framework, and a seed receptacle provided with feeding mechanism, of a gear wheel centered on the axle and driven by a carrying wheel, a journal box, a member to which said journal box is hinged, a pinion mounted in said journal box and meshing with said gear wheel, means tending to force the member to which the journal box is hinged, in a direction toward the gear wheel, and a shaft for transmitting motion from said pinion to the feeding mechanism.

4. In a seeding machine, the combination with an axle, wheels thereon, frame-work, and a seed receptacle provided with feeding means, of a gear wheel mounted on the axle and connected with the hub of one of the carrying wheels, a journal box, a member to which said journal box is hinged, means tending to force said member outwardly toward the gear wheel, a shaft connected with said pinion for transmitting motion to the feeding means, and a clutch for operatively connecting said shaft with said pinion.

5. In a seeding machine, the combination with an axle, carrying wheels thereon, a frame and a seed receptacle provided with feeding mechanism, of a gear wheel mounted on the axle and connected with the hub of one of the carrying wheels, a member centered on the axle, a spring tending to force said member toward the gear wheel, a journal box pivotally attached to said member, a pinion mounted in said journal box, a shaft entering the hub of the pinion and connected with the feeding mechanism, a clutch for operatively connecting said shaft with the pinion, a spring for maintaining the clutch in normal locked relation with the pinion, and a pivoted shifter-lever for releasing the clutch against the resistance of said spring.

[Claims 6 and 7 not printed in the Gazette.]

877,470. COTTON CHOPPER OR CULTIVATOR. CHARLES L. FRARIOTT, Temple, Tex., assignor to Temple Cotton Chopping Machine Company. Filed July 8, 1907. Serial No. 382,700.



1. In a wheeled cultivator, the combination of a supporting frame, a rock shaft mounted thereon and having laterally extending spaced arms, means for locking said rock shaft in adjusted position, hangers carried by said frame, a rod mounted in said hangers, a plurality of plow beams pivotally mounted at one end on said rod and severally adjustable upon its length and having shovels on the other ends thereof, and yielding means connecting said beams with the arms of said rock shaft.

2. In a wheeled cultivator, the combination of a supporting frame, a rock shaft mounted thereon and having laterally extending spaced arms, means for locking said rock-shaft in adjusted position, hangers carried by said frame at the front end thereof, a rod mounted in said hangers, a plurality of plow beams pivotally mounted at one end on said rod, and laterally adjustable thereon and having shovels on the other ends thereof, rods projecting upwardly from said beams and slidably connected with the arms of said rock-shaft and coiled springs arranged on said rods between said beams and arms.

3. In a wheeled cultivator, the combination of a supporting frame, a rock-shaft mounted thereon and having laterally-extending spaced arms, means for locking said rock-shaft in adjusted position, a rod supported in a plane below said frame at the front of the cultivator, plow beams pivotally mounted on said rod, extending rearwardly and upwardly therefrom and having upwardly-extending studs on their rear ends, coiled springs disposed on said studs and yielding means connecting said beams with the arms of said rock-shaft.

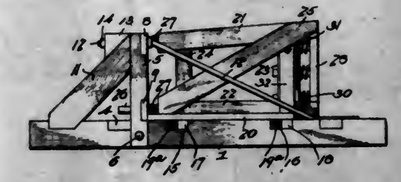
4. In a wheeled cultivator, the combination of an approximately rectangular supporting frame, a rock-shaft mounted transversely thereof, at the rear end of said frame and having laterally-extending spaced arms, a transversely arranged rod supported at the front of said cultivator in a plane below said frame, plow beams adjustably mounted at one end on said rod, yielding means connecting the free ends of said beams with the arms of said rock-shaft, a lever connected with said rock-shaft for simultaneously raising and lowering the plow beams, and bars bracing said beams upon said rod.

877,471. ELASTIC TIRE. MATHIEU BRUN, Lyon, France. Filed Sept. 27, 1906. Serial No. 336,430.



In a tire an elastic member comprising an outer part of elastic material externally smooth and having interior corrugations, an intermediate corrugated metallic resilient part whose corrugations engage those in the outer part, and an inner part of elastic material internally smooth and having exterior corrugations engaging those of the metallic part substantially as described.

877,472. BUMPING-POST. HENRY GRAY, Dickson, Tenn., assignor of one-third to M. M. Buttrey, Dickson, Tenn., one-third to Joe Tucker, Brentwood, Tenn., and one-sixth to John H. Callender, Nashville, Tenn. Filed Aug. 8, 1907. Serial No. 387,719.



1. A bumping post embodying sill beams having recesses in their upper faces, cross bars mounted in the recesses, springs interposed between the cross bars and the forward walls of the recesses, and a bumper carried by the cross bars.

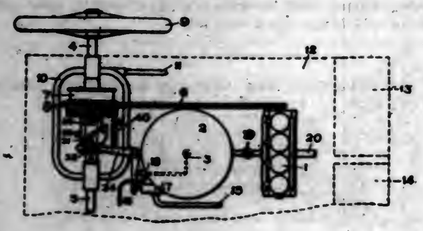
2. A bumping post comprising braced sill beams provided in their upper faces with recesses, cross bars arranged within the recesses, bumper springs interposed between the cross bars and the rear walls of the recesses, guards carried by the sill beams to retain the cross bars in position, a bumper frame mounted upon the cross bars, a spring-pressed buffer plate connected with the forward portion of the frame, slide rods carried by the rear portion of the frame, cross plates through which the slide rods project, and springs interposed between the cross plates and the frame.

877,473. TORQUE-REGULATING MECHANISM. ELIHU THOMSON, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 17, 1901. Serial No. 78,963.

1. In combination, an energy-producing device, a prime mover receiving energy therefrom, a shaft, a driving connection between the prime mover and the shaft which in-

cludes a lost-motion device, and a means for regulating the production of energy by the device which changes its position in accordance with changes in position of the lost-motion device.

2. In combination, a vapor generator, a fire chamber, an engine, and a means controlling the production of vapor by the generator which means is regulated in its action by the torque developed by the engine.



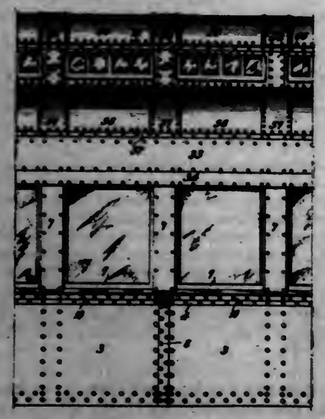
3. In combination, a vapor generator, a fire chamber, an engine, a means controlling the admission of liquid to the generator, a means controlling the admission of fuel to the fire chamber, and mechanism which is dependent in its action upon the torque developed by the engine for actuating both of said means.

4. In combination, a source of energy, a motor, a driven element, a driving connection between the motor and the element, a spring, which is included in the connection, and a device which is under the control of the spring and is responsive to variations in the torque of the motor for regulating the source of energy.

5. In combination, a steam generator, an engine, a driven wheel, a driving connection between the engine and the wheel, a spring which forms a part of the driving connection, and means under the control of the spring for varying the energy produced by the generator.

[Claims 6 to 21 not printed in the Gazette.]

877,474. PASSENGER-CAR. ALLEN E. OSTRANDER, Paterson, N. J., assignor to American Car & Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Dec. 12, 1906. Serial No. 347,474.



1. In a passenger car construction, a plurality of plates provided on their edges with inwardly extending flanges which stiffen said plates, said flanges being spaced away from each other, and inside and outside finishing battens secured to said plates and covering the space between the flanges thereof; substantially as described.

2. In a passenger car construction, a plurality of plates provided on their edges with flanges which stiffen said plates, said plates being so arranged that there are spaces between the flanges thereof, and finishing battens secured to said plates and covering the openings between the flanges of the plates; substantially as described.

3. In a passenger car construction, a plurality of plates provided on their edges with inwardly extending L-shaped flanges which stiffen said plates, said plates being so arranged that there are spaces between the flanges thereof, outside finishing battens secured to said plates, and inside finishing battens secured to the inner legs of the flanges of the plates; substantially as described.

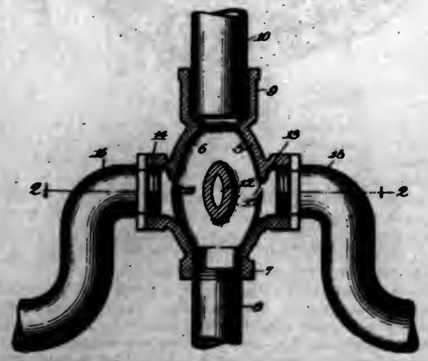
4. A passenger car comprising side walls and a roof in which the upper and lower decks consist of plates provided at their edges with inwardly extending stiffening flanges, cover plates located at the points where said plates join, and side deck posts connected to the flanges of the upper and lower deck plates; substantially as described.

5. A passenger car having a roof in which the upper and lower decks consist of plates provided at their edges with inwardly extending stiffening flanges, cover plates located at the points where said plates join, side deck posts connected to the flanges of the upper and lower deck plates, finishing battens connected to said side deck posts, and ventilator frames secured to said posts; substantially as described.

[Claims 6 to 35 not printed in the Gazette.]

REISSUES.

12,741. DRAINAGE-FITTING. FRED B. MORTON, Pasadena, Cal. Filed Oct. 14, 1907, Serial No. 397,462. Original No. 848,259, dated Mar. 26, 1907. Serial No. 330,307.



1. A fitting comprising two pipes having circular passages therethrough and having a common top and bottom and provided with inlets on opposite sides thereof.

2. A fitting comprising two oppositely curved pipes having circular passages therethrough and having a common top and bottom and provided with inlets on opposite sides thereof.

3. A fitting comprising a casing provided with two circular passages, said passages having a common top and bottom and two opposed inlets on said passages, one on each passage at points where said passages are separated.

4. A fitting comprising two oppositely-curved pipes having circular passages therethrough, said pipes being united at the top and bottom and provided with inlets on the opposite sides thereof, the whole being cast in one piece.

DESIGNS.

39,029. FONT OF TYPE. THOMAS C. ROBINSON, Appleton, Wis., assignor to Barnhart Brothers & Spindler, Chicago, Ill., a Corporation of Illinois. Filed Nov. 24, 1906. Serial No. 344,985. Term of patent 7 years.



The ornamental design for a font of type, as shown.

39,030. FRAME FOR MOVING PICTURES. ANNA E. MARSHALL, New York, N. Y. Filed Oct. 12, 1907. Serial No. 397,223. Term of patent 3½ years.



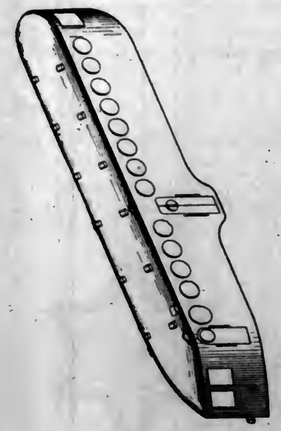
The ornamental design for a frame for moving pictures, as shown.

39,031. WALL-RADIATOR SECTION. JOHN A. HOLFELDER, Uniontown, Pa., assignor to McCrum-Howell Company, Norwich, Conn., a Corporation of Connecticut. Filed Nov. 2, 1907. Serial No. 400,419. Term of patent 14 years.



The ornamental design for a wall radiator section, as shown.

39,032. CAR-BODY. WILLIAM R. MCKEEN, Jr., Omaha, Nebr., assignor to Edward H. Harriman, Arden, N. Y. Filed Jan. 17, 1907. Serial No. 352,838. Term of patent 14 years.



The ornamental design for a car body as shown.

TRADE-MARKS

PUBLISHED JANUARY 21, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 20,071. (CLASS 35. BELTING, HOSE, MACHINERY-PACKING, AND NON-METALLIC TIRES.) THE MAY CO., Cleveland, Ohio. Filed June 5, 1906.



Particular description of goods.—Rubber Tires.

Ser. No. 23,716. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) BERWIND WHITE COAL MINING COMPANY, Philadelphia, Pa. Filed Dec. 3, 1906.



Particular description of goods.—Coal.

Ser. No. 23,854. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) COLD SPRING MINERAL WATER CO., Cold Spring, Minn. Filed Dec. 7, 1906.



Particular description of goods.—Mineral Water.

Ser. No. 26,011. (CLASS 38. PUBLICATIONS.) WILLIAM T. DOREMUS, Flanders, N. J. Filed Mar. 16, 1907.



Particular description of goods.—Calendars.

Ser. No. 26,378. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) EVAN J. FRASER-CAMPBELL, New York, N. Y. Filed Apr. 1, 1907.



Particular description of goods.—Bleached and Unbleached Cotton Piece Goods.

Ser. No. 26,969. (CLASS 30. CROCKERY, EARTHENWARE, AND PORCELAIN.) PORZELLANFABRIK PH. ROSENTHAL & CO. AKTIENGESELLSCHAFT, Selb, Bavaria, Germany. Filed Apr. 27, 1907.

Rosen Thal

Particular description of goods.—Porcelain Dishes and Utensils for Household Use.

Ser. No. 29,708. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) COOK & COKEFAIR, New York, N. Y. Filed Aug. 31, 1907.

VULCAN

Particular description of goods.—Lubricating-Oils and Lubricating-Greases.

Ser. No. 30,441. (CLASS 39. CLOTHING.) JOHN F. QUINN, Cohoes, N. Y. Filed Oct. 5, 1907.

PEARL Q

Particular description of goods.—Knitted Waists.

Ser. No. 30,787. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WALTER K. PEEK, New York, N. Y. Filed Oct. 25, 1907.

Particular description of goods.—Foot-Powder for Perspiring, Swollen, and Aching Feet and Remedies for Corns.

Ser. No. 31,043. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) CARMEL WINE COMPANY, New York, N. Y. Filed Nov. 7, 1907.

RAMAH

Particular description of goods.—Cognac and Cordials.

Ser. No. 31,049. (CLASS 47. WINES, EXCEPT MEDICATED.) CARMEL WINE COMPANY, New York, N. Y. Filed Nov. 7, 1907.

AKRON

Particular description of goods.—Wines.

Ser. No. 31,050. (CLASS 47. WINES, EXCEPT MEDICATED.) CARMEL WINE COMPANY, New York, N. Y. Filed Nov. 7, 1907.

PINAH

Particular description of goods.—Wines.

Ser. No. 31,052. (CLASS 47. WINES, EXCEPT MEDICATED.) CARMEL WINE COMPANY, New York, N. Y. Filed Nov. 7, 1907.

TIKWAH

Particular description of goods.—Wines.

Ser. No. 31,098. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) THE BIRMINGHAM SMALL ARMS CO., LIMITED, Small Heath, near Birmingham, England. Filed Nov. 9, 1907.

B.S.A.

Particular description of goods.—Rifles, Air-Rifles, Shotguns, Revolvers, Automatic and other Pistols, and Spare and Repair Parts for the Same, Shotgun and Rifle Barrels, Sights for Firearms, Cleaning-Rods, Pull-Throughs, and Pellet-Loaders for Air-Rifles.

Ser. No. 31,167. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PIEDMONT MFG. CO., Piedmont, S. C. Filed Nov. 14, 1907.



Particular description of goods.—Sheetings and Drillings.

Ser. No. 31,186. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PICKENS MILL, Pickens, S. C. Filed Nov. 15, 1907.



Particular description of goods.—Sheetings and Drillings.

Ser. No. 31,225. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALOIS VON ISAKOVICS, Monticello, N. Y. Filed Nov. 18, 1907.



Particular description of goods.—Chemicals Used for Imparting Odor or Color to Perfumes or Perfumed Preparations or for Flavoring Foods.

Ser. No. 31,226. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALOIS VON ISAKOVICS, Monticello, N. Y. Filed Nov. 18, 1907.

Synfleur

Particular description of goods.—Chemicals Used for Imparting Odor or Color to Perfumes or Perfumed Preparations or for Flavoring Foods.

Ser. No. 31,304. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE COOK & BERNHEIMER CO., New York, N. Y. Filed Nov. 22, 1907. Used ten years.

Mount Vernon

The initial-letters being printed in red.
Particular description of goods.—Whisky.

Ser. No. 31,313. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JAMES BUCHANAN & COMPANY LIMITED, London, England. Filed Nov. 23, 1907.

BLACK & WHITE

Particular description of goods.—Whisky.

Ser. No. 31,372. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) CORN PRODUCTS REFINING COMPANY, Jersey City, N. J., and New York, N. Y. Filed Nov. 26, 1907.

Paragol

Particular description of goods.—Rubber Substitute.

Ser. No. 31,374. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) G. S. FEENY CO., Wheeling, W. Va. Filed Nov. 26, 1907.

White Rose

Particular description of goods.—Candy.

Ser. No. 31,378. (CLASS 45. BEVERAGES, NON-ALCOHOLIC. PAW PAW GRAPE JUICE CO. LTD., Paw Paw, Mich. Filed Nov. 26, 1907.

PURITAN

Particular description of goods.—Grape-Juice.

Ser. No. 31,385. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) UNITED INCUBATOR AND POULTRY SUPPLY MANUFACTURING COMPANY, New York, N. Y., and Boundbrook, N. J. Filed Nov. 26, 1907.

United

Particular description of goods.—Incubators and Brooders.

Ser. No. 31,397. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FLORIDA-GEORGIA SYRUP CO., Jacksonville, Fla. Filed Nov. 27, 1907.

FLORIDA KRACKER

Particular description of goods.—Sugar-Cane Syrup and Molasses.

Ser. No. 31,398. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) CARMEL WINE COMPANY, New York, N. Y. Filed Nov. 27, 1907.



Particular description of goods.—Cognac and Cordials.

Ser. No. 31,416. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GRINNELL WILLIS & CO., New York, N. Y. Filed Nov. 29, 1907.



Particular description of goods.—Cotton Piece Goods.

Ser. No. 31,417. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GRINNELL WILLIS & CO., New York, N. Y. Filed Nov. 29, 1907.



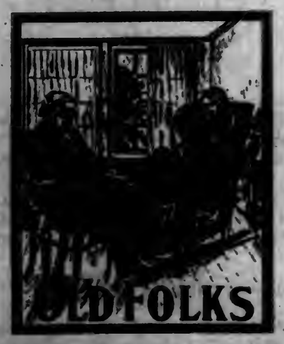
Particular description of goods.—Cotton Piece Goods.

Ser. No. 31,418. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GRINNELL WILLIS & CO., New York, N. Y. Filed Nov. 29, 1907.



Particular description of goods.—Cotton Piece Goods.

Ser. No. 31,420. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GRINNELL WILLIS & CO., New York, N. Y. Filed Nov. 29, 1907.



Particular description of goods.—Cotton Piece Goods.

Ser. No. 31,440. (CLASS 39. CLOTHING.) MONROE BROS. & CO., Philadelphia, Pa. Filed Nov. 29, 1907.

PENN-PRIDE.

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 31,444. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) CUGLEY & MULLEN, Philadelphia, Pa. Filed Nov. 29, 1907.

GOLDEN OPERA SINGER

Particular description of goods.—Canary Birds.

Ser. No. 31,455. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SCHWEIZERISCHE SEIDENGAZE-FABRIK A. G., Zürich, Switzerland. Filed Nov. 29, 1907.



Particular description of goods.—Silk Bolting-Cloth.

Ser. No. 31,486. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FLORIDA-GEORGIA SYRUP CO., Jacksonville, Fla. Filed Nov. 30, 1907.

GEORGIA KRACKER

Particular description of goods.—A Blended Pure Corn and Cane Syrup and Molasses.

Ser. No. 31,491. (CLASS 46. (FOODS AND INGREDIENTS OF FOODS.) CHASSAING & CIE., Paris, France. Filed Nov. 30, 1907.

OSPHATINE

Particular description of goods.—An Alimentary Preparation for Infants and Invalids.

Ser. No. 31,517. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) GIUSEPPE FINORA, San Francisco, Cal. Filed Dec. 3, 1907.



Particular description of goods.—Fruit-Syrups.

Ser. No. 31,521. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) INTERNATIONAL CHEMICAL CO., Los Angeles, Cal. Filed Dec. 3, 1907.

JUBA

Particular description of goods.—Soap.

Ser. No. 31,569. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) STRAWBRIDGE & CLOTHIER, Philadelphia, Pa. Filed Dec. 4, 1907.

BLUEBELL

Particular description of goods.—Lawns.

Ser. No. 31,621. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS AND PARTS THEREOF.) UNDERWOOD TYPEWRITER COMPANY, New York, N. Y. Filed Dec. 9, 1907.



Particular description of goods.—Type-Writing Machines and Type-Writing Machine Parts.

Ser. No. 31,644. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MILLER BROS., New York, N. Y. Filed Dec. 10, 1907.

JUNO WATER

Particular description of goods.—Artificial Saline Laxative.

TRADE-MARKS

REGISTERED JANUARY 21, 1908.

67,131. TOILET BALM. ALICE S. BLACK, Montclair, N. J.
Filed October 2, 1907. Serial No. 30,351. PUBLISHED NOVEMBER 19, 1907.

67,132. CIGARETTE-PAPER. BRAUNSTEIN & CIE., Paris, France.
Filed September 21, 1907. Serial No. 30,143. PUBLISHED NOVEMBER 19, 1907.

67,133. CIGARETTE-PAPER. BRAUNSTEIN & CIE., Paris, France.
Filed September 21, 1907. Serial No. 30,144. PUBLISHED NOVEMBER 19, 1907.

67,134. CIGARETTE-PAPER. BRAUNSTEIN & CIE., Paris, France.
Filed September 21, 1907. Serial No. 30,145. PUBLISHED NOVEMBER 19, 1907.

67,135. CIGARETTE-PAPER. BRAUNSTEIN & CIE., Paris, France.
Filed September 21, 1907. Serial No. 30,146. PUBLISHED NOVEMBER 19, 1907.

67,136. CERTAIN MEDICINES. THE DERMATONE COMPANY, Chicago, Ill.
Filed September 20, 1907. Serial No. 30,105. PUBLISHED NOVEMBER 19, 1907.

67,137. CERTAIN PHOTOGRAPHIC APPARATUS, APPLIANCES, AND INSTRUMENTS. EASTMAN KODAK CO., Rochester, N. Y.
Filed June 3, 1907. Serial No. 27,850. PUBLISHED NOVEMBER 19, 1907.

67,138. TONICS. CHARLES P. GIERALTOWSKI, Chicago, Ill.
Filed September 12, 1907. Serial No. 29,913. PUBLISHED NOVEMBER 19, 1907.

67,139. CERTAIN MEDICINE. JOHN HOUSTON, Wellston, Ohio.
Filed September 7, 1907. Serial No. 29,792. PUBLISHED NOVEMBER 19, 1907.

67,140. CERTAIN PHOTOGRAPHIC PLATES, PAPER, AND FILMS. THE IMPERIAL DRY PLATE COMPANY, LIMITED, London, England.
Filed March 9, 1907. Serial No. 25,877. PUBLISHED NOVEMBER 19, 1907.

67,141. CERTAIN MEDICINE. OLD KENTUCKY MFG. CO., Paducah, Ky.
Filed September 18, 1907. Serial No. 30,038. PUBLISHED NOVEMBER 19, 1907.

67,142. MEDICINAL TONIC. THE PEOPLES CHEMICAL CO. INC., Providence, R. I.
Filed October 11, 1907. Serial No. 30,546. PUBLISHED NOVEMBER 19, 1907.

67,143. REMEDY FOR SKIN DISEASES. JAMES E. RIGGS, Lincoln, Nebr.
Filed February 21, 1906. Serial No. 17,225. PUBLISHED NOVEMBER 19, 1907.

67,144. INCLINED-SLIDE AMUSEMENT DEVICES. JULIUS P. STADERMAN, Buffalo, N. Y.
Filed October 3, 1907. Serial No. 30,387. PUBLISHED NOVEMBER 19, 1907.

67,145. OINTMENTS. HENRY MERRILL THESTON, Chicago, Ill.
Filed August 28, 1907. Serial No. 29,630. PUBLISHED NOVEMBER 19, 1907.

67,146. MEDICATED WINES. HENRY SOLOMON WELLCOME, London, England.
Filed October 9, 1907. Serial No. 30,518. PUBLISHED NOVEMBER 19, 1907.

67,147. PREPARATION OF CASTOR-OIL. ROBERT J. WISEMAN, Lewiston, Me.
Filed August 21, 1907. Serial No. 29,510. PUBLISHED NOVEMBER 19, 1907.

67,148. PLUM PUDDING. ATMORE & SON, Philadelphia, Pa.
Filed November 20, 1905. Serial No. 14,812. PUBLISHED NOVEMBER 19, 1907.

67,149. CERTAIN RUBBER GOODS. THE B. F. GOODRICH COMPANY, Akron, Ohio.
Filed April 6, 1905. Serial No. 628. PUBLISHED NOVEMBER 19, 1907.

67,150. STOVES AND RANGES. BELKNAP HARDWARE & MFG. CO., Louisville, Ky.
Filed October 7, 1907. Serial No. 30,479. PUBLISHED NOVEMBER 19, 1907.

67,151. OIL-BURNING LAMPS. C. T. HAM MANUFACTURING COMPANY, Rochester, N. Y.
Filed April 30, 1907. Serial No. 27,010. PUBLISHED JUNE 18, 1907.

67,152. OIL-BURNING LAMPS. C. T. HAM MANUFACTURING COMPANY, Rochester, N. Y.
Filed April 30, 1907. Serial No. 27,011. PUBLISHED MAY 28, 1907.

67,153. OIL-BURNING LAMPS. C. T. HAM MANUFACTURING COMPANY, Rochester, N. Y.
Filed April 30, 1907. Serial No. 27,012. PUBLISHED MAY 28, 1907.

67,154. OIL-BURNING LAMPS. C. T. HAM MANUFACTURING COMPANY, Rochester, N. Y.
Filed April 30, 1907. Serial No. 27,013. PUBLISHED JUNE 25, 1907.

67,155. OIL-BURNING LAMPS. C. T. HAM MANUFACTURING COMPANY, Rochester, N. Y.
Filed April 30, 1907. Serial No. 27,014. PUBLISHED JUNE 18, 1907.

67,156. NEWSPAPER PUBLISHED EVERY DAY IN THE WEEK EXCEPT SUNDAY. CHICAGO HERALD COMPANY, Chicago, Ill.
Filed October 10, 1907. Serial No. 30,522. PUBLISHED NOVEMBER 19 1907.

67,157. CANNED FRUITS, CANNED BERRIES, AND CANNED VEGETABLES. E. T. SMITH COMPANY, Worcester, Mass.
Filed October 7, 1907. Serial No. 30,460. PUBLISHED NOVEMBER 19, 1907.

67,158. SUBSTITUTE FOR LARD. HIGH GRADE LARD COMPANY, Baltimore, Md.
Filed December 22, 1906. Serial No. 24,214. PUBLISHED NOVEMBER 19, 1907.

67,159. TOOTH-BRUSH STERILIZER. DAVID MARSHALL HITCH, Philadelphia, Pa.
Filed September 27, 1907. Serial No. 30,286. PUBLISHED NOVEMBER 19, 1907.

67,160. RUBBER FOOTWEAR AND RUBBER TIRES FOR MOTOR-VEHICLES. HOOD RUBBER CO., Boston, Mass.
Filed August 28, 1907. Serial No. 29,536. PUBLISHED NOVEMBER 19, 1907.

67,161. FRESH MEATS. JACOB DOLD PACKING COMPANY, Buffalo, N. Y.
Filed October 7, 1907. Serial No. 30,473. PUBLISHED NOVEMBER 19, 1907.

67,162. RUBBER BOOTS AND SHOES. L. CANDEE & CO., New Haven, Conn.
Filed October 2, 1907. Serial No. 30,363. PUBLISHED NOVEMBER 19, 1907.

67,163. SUBMARINE COMPOSITION PAINT. "LE RIPOLIN," (SOCIÉTÉ ANONYME FRANÇAISE DE PEINTURES LAQUÉES ET D'ENDUITS SOUS-MARINS, PROCÉDÉS LEFRANC & BERGOLES RÉUNIS,) Paris France.
Filed August 29, 1905. Serial No. 12,079. PUBLISHED NOVEMBER 19, 1907.

67,164. COFFEE WITH MILK. NESTLÉ & ANGLO-SWISS CONDENSED MILK CO., Cham, Switzerland.
Filed January 22, 1907. Serial No. 24,840. PUBLISHED NOVEMBER 19, 1907.

67,165. MILK AND CREAM. SHEFFIELD FARMS-SLAWSON-DECKER CO., New York, N. Y.
Filed October 15, 1907. Serial No. 30,608. PUBLISHED NOVEMBER 19, 1907.

67,166. MIXED PAINTS, PIGMENTS USED FOR PAINTS, STAINS, AND PAINT-OILS. THE SHERWIN-WILLIAMS CO., Cleveland, Ohio.
Filed October 9, 1907. Serial No. 30,517. PUBLISHED NOVEMBER 19, 1907.

67,167. CERTAIN SEA FOODS. EDWIN SHIVELL, Boston, Mass., assignor to Delong, Seaman & Company, Boston, Mass., a Firm.
Filed October 10, 1907. Serial No. 30,531. PUBLISHED NOVEMBER 19, 1907.

67,168. CERTAIN SEA FOODS. STROHMEYER & ARPE COMPANY, New York, N. Y.
Filed October 2, 1907. Serial No. 30,333. PUBLISHED NOVEMBER 19, 1907.

67,169. CERTAIN SEA FOODS. STROHMEYER & ARPE COMPANY, New York, N. Y.
Filed October 2, 1907. Serial No. 30,330. PUBLISHED NOVEMBER 19, 1907.

67,170. SPICES. WOOLSON SPICE COMPANY, Toledo, Ohio.
Filed October 10, 1907. Serial No. 30,536. PUBLISHED NOVEMBER 19, 1907.

67,171. BUTTER. THE BENNETT COMPANY, Omaha, Nebr.
Filed September 24, 1907. Serial No. 30,177. PUBLISHED NOVEMBER 19, 1907.

67,172. MAPLE-SYRUP. THE BENNETT COMPANY, Omaha, Nebr.
Filed September 24, 1907. Serial No. 30,178. PUBLISHED NOVEMBER 19, 1907.

67,173. BLEACHED AND UNBLEACHED COTTON PIECE GOODS. BOOTT MILLS, Lowell, Mass.
Filed September 7, 1906. Serial No. 21,956. PUBLISHED NOVEMBER 19, 1907.

67,174. COTTON PIECE-GOODS. BOOTT MILLS, Lowell, Mass.
Filed September 7, 1906. Serial No. 21,959. PUBLISHED NOVEMBER 19, 1907.

67,175. COTTON PIECE GOODS. BOOTT MILLS, Lowell, Mass.
Filed September 7, 1906. Serial No. 21,967. PUBLISHED NOVEMBER 19, 1907.

67,176. CERTAIN PUBLICATIONS. HARRY B. DARLING, Washington, D. C.
Filed October 4, 1907. Serial No. 30,415. PUBLISHED NOVEMBER 19, 1907.

67,177. LEATHER BELTING. DETROIT OAK BELTING CO., Detroit, Mich.
Filed October 8, 1907. Serial No. 30,484. PUBLISHED NOVEMBER 19, 1907.

67,178. PICKLES, CATSUP, AND VINEGAR. THE DONALDSON-SIVELTS CO., Baltimore, Md.
Filed September 12, 1907. Serial No. 29,981. PUBLISHED NOVEMBER 19, 1907.

67,179. CHEESE. WILLIS J. ELDRIDGE, Aurora, Ohio.
Filed July 13, 1907. Serial No. 28,779. PUBLISHED NOVEMBER 19, 1907.

67,180. CHEESE. WILLIS J. ELDRIDGE, Aurora, Ohio.
Filed July 13, 1907. Serial No. 28,782. PUBLISHED NOVEMBER 19, 1907.

67,181. CERTAIN SACCHARINE FOODS. FISCHER BROS.' Seattle, Wash.
Filed June 11, 1907. Serial No. 28,034. PUBLISHED NOVEMBER 19, 1907.

67,182. CERTAIN FOODS. FISCHER BROS., Seattle, Wash.
Filed June 11, 1907. Serial No. 28,036. PUBLISHED NOVEMBER 19, 1907.

67,183. COATS, VESTS, TROUSERS, AND OVERCOATS. FRIEND & MARKS, Milwaukee, Wis.
Filed September 28, 1907. Serial No. 30,270. PUBLISHED NOVEMBER 19, 1907.

67,184. LARD. INTERSTATE PACKING CO., Winona, Minn.
Filed October 10, 1907. Serial No. 30,527. PUBLISHED NOVEMBER 19, 1907.

67,185. COFFEE AND TEA. J. H. ALLEN & COMPANY, St. Paul, Minn.
Filed June 27, 1907. Serial No. 28,422. PUBLISHED NOVEMBER 19, 1907.

67,186. OLIVE-OIL. NATHANIEL JOHNSTON & SONS, Bordeaux, France.
Filed October 5, 1907. Serial No. 30,438. PUBLISHED NOVEMBER 19, 1907.

67,187. BROOMS. LEE BROOM & DUSTER COMPANY, Lincoln, Nebr.
Filed October 5, 1907. Serial No. 30,429. PUBLISHED NOVEMBER 19, 1907.

67,188. BELTS, GIRDLES, AND SASHES. ADOLPH NAHASS, Boston, Mass.
Filed September 21, 1907. Serial No. 30,120. PUBLISHED NOVEMBER 19, 1907.

67,189. CORSETS. I. NEWMAN & SONS, New Haven, Conn.
Filed September 30, 1907. Serial No. 30,293. PUBLISHED NOVEMBER 19, 1907,

67,190. CORSETS. I. NEWMAN & SONS, New Haven, Conn.
Filed September 30, 1907. Serial No. 30,299. PUBLISHED NOVEMBER 19, 1907.

67,191. BEER. THE NEW SOUTH BREWERY & ICE CO., Middlesboro, Ky.
Filed September 18, 1907. Serial No. 30,050. PUBLISHED NOVEMBER 19, 1907.

67,192. MEDICINAL MALT EXTRACTS. THE NEW SOUTH BREWERY & ICE CO., Middlesboro, Ky.
Filed September 18, 1907. Serial No. 30,051. PUBLISHED NOVEMBER 19, 1907.

67,193. MUSTARD. THE R. T. FRENCH COMPANY, Rochester, N. Y.
Filed January 2, 1907. Serial No. 24,382. PUBLISHED NOVEMBER 19, 1907.

67,194. CANNED FRUITS AND VEGETABLES. RIDENOUR BAKER GROCERY CO., Kansas City, Mo.
Filed October 7, 1907. Serial No. 30,454. PUBLISHED NOVEMBER 19, 1907.

67,195. DRIED, PICKLED, OR OTHERWISE PRESERVED FISH. ROSENSTEIN BROTHERS INC., New York, N. Y.
Filed October 27, 1906. Serial No. 22,960. PUBLISHED NOVEMBER 19, 1907.

67,196. MONTHLY PUBLICATION. S. S. MCCLURE COMPANY, New York, N. Y.
Filed September 28, 1907. Serial No. 30,169. PUBLISHED NOVEMBER 19, 1907.

67,197. CERTAIN CLOTHING. SCANDINAVIAN FUR & LEATHER CO., New York, N. Y.
Filed July 11, 1907. Serial No. 28,727. PUBLISHED NOVEMBER 19, 1907.

67,198. CERTAIN FOODS. SIMON LEVI COMPANY, Los Angeles, Cal.
Filed September 3, 1907. Serial No. 29,734. PUBLISHED NOVEMBER 19, 1907.

67,199. RIBBONS. JACOB SULZBACH, New York, N. Y.
Filed September 17, 1907. Serial No. 30,031. PUBLISHED NOVEMBER 19, 1907.

67,200. MALT EXTRACT. THE VA. BREWING CO., Roanoke, Va.
Filed October 7, 1907. Serial No. 30,456. PUBLISHED NOVEMBER 19, 1907.

67,201. CANNED CLAMS. JASPER WYMAN & SON, Millbridge, Me.
Filed August 26, 1907. Serial No. 29,583. PUBLISHED NOVEMBER 19, 1907.

67,202. ANTISEPTIC FOOT-POWDER. BELL-WART MANUFACTURING COMPANY, New York, N. Y.
Filed September 27, 1907. Serial No. 30,253. PUBLISHED NOVEMBER 19, 1907.

67,203. WHISKY. THE COOK & BERNHEIMER CO., New York, N. Y.
Filed June 27, 1905. Serial No. 9,264. PUBLISHED NOVEMBER 19, 1907.

67,204. WHISKY. THE COOK & BERNHEIMER CO., New York, N. Y.
Filed June 27, 1905. Serial No. 9,265. PUBLISHED NOVEMBER 19, 1907

67,205. WHISKY. THE COOK & BERNHEIMER CO., New York, N. Y.
Filed June 26, 1905. Serial No. 9,305. PUBLISHED NOVEMBER 19, 1907.

67,206. WHISKY. P. DEMPSEY & CO., Boston, Mass.
Filed September 15, 1905. Serial No. 12,676. PUBLISHED FEBRUARY 27, 1906.

67,207. WHISKY. E. MARTIN & CO., San Francisco, Cal.
Filed May 4, 1907. Serial No. 27,125. PUBLISHED NOVEMBER 19, 1907.

67,208. WHISKY. F. KORBEL & BROS., San Francisco, Cal.
Filed October 2, 1907. Serial No. 30,353. PUBLISHED NOVEMBER 19, 1907.

67,209. LYE, SODIUM CHLORID, AND GLOSS-STARCH. FISCHER BROS., Seattle, Wash.
Filed June 11, 1907. Serial No. 28,033. PUBLISHED NOVEMBER 19, 1907.

67,210. COMPOUNDS FOR THE EXTERMINATION OF VERMIN. CHARLES M. HART, Brooklyn, N. Y.
Filed October 12, 1907. Serial No. 30,566. PUBLISHED NOVEMBER 19, 1907.

67,211. CERTAIN TOOLS. FAYETTE R. PLUMB, INCORPORATED, Philadelphia, Pa.
Filed May 6, 1907. Serial No. 27,165. PUBLISHED NOVEMBER 19, 1907.

67,212. BROOMS, WHISKS, BRUSHES, AND DUSTERS. LEE BROOM & DUSTER COMPANY, Lincoln, Nebr.
Filed October 5, 1907. Serial No. 30,426. PUBLISHED NOVEMBER 19, 1907.

67,213. BROOMS. LEE BROOM & DUSTER COMPANY, Lincoln, Nebr.
Filed October 5, 1907. Serial No. 30,428. PUBLISHED NOVEMBER 19, 1907.

67,214. CERTAIN MACHINERY PACKING. NEW YORK BELTING AND PACKING COMPANY, LTD., New York, N. Y., and Passaic, N. J.
Filed June 17, 1907. Serial No. 28,172. PUBLISHED NOVEMBER 19, 1907.

67,215. CERTAIN FOUNDRY-FACINGS AND GRAPHITE. THE UNITED STATES GRAPHITE CO., Saginaw, Mich.
Filed September 30, 1907. Serial No. 30,295. PUBLISHED NOVEMBER 19, 1907.

67,216. CERTAIN NAMED POISONS AND DISINFECTANTS. EPHRAIM S. WELLS, Jersey City, N. J.
Filed August 23, 1907. Serial No. 29,550. PUBLISHED NOVEMBER 19, 1907.

67,217. WHISKY. WRIGHT & TAYLOR, Louisville, Ky.
Filed May 13, 1905. Serial No. 5,542. PUBLISHED NOVEMBER 19, 1907.

67,218. POTATO-DIGGERS. A. B. FARQUHAR COMPANY, LIMITED, York, Pa.
Filed September 28, 1907. Serial No. 30,273. PUBLISHED NOVEMBER 19, 1907.

67,219. LEATHER BOOTS AND SHOES. A. J. BATES CO., Webster, Mass.
Filed September 16, 1907. Serial No. 29,989. PUBLISHED NOVEMBER 19, 1907.

67,220. WOODEN HAMES. THE BEAGLE HAME WORKS, Freeland, Pa.
Filed September 27, 1907. Serial No. 30,252. PUBLISHED NOVEMBER 19, 1907.

67,221. LEATHER SHOES. BIELEFELD & SPAHN, New York, N. Y.
Filed September 26, 1907. Serial No. 30,227. PUBLISHED NOVEMBER 19, 1907.

67,222. GINGER-ALE. BLANKE-BAER CHEMICAL CO., St. Louis, Mo.
Filed September 3, 1907. Serial No. 29,742. PUBLISHED NOVEMBER 19, 1907.

67,223. OPEN-SIDE PLANERS. THE DETRICK & HARVEY MACHINE CO. OF BALTIMORE CITY, Baltimore, Md.
Filed December 26, 1906. Serial No. 24,275. PUBLISHED NOVEMBER 19, 1907.

67,224. HOSE-NOZZLES. THE EATON, COLE & BURNHAM CO., Bridgeport, Conn.
Filed September 18, 1907. Serial No. 30,041. PUBLISHED NOVEMBER 19, 1907.

67,225. TIN AND TERNE PLATES. FOLLANSBEE BROTHERS COMPANY, Pittsburg, Pa.
Filed February 8, 1907. Serial No. 25,204. PUBLISHED NOVEMBER 19, 1907.

67,226. IRON TOOL-HANDLES. STANLEY RULE & LEVEL COMPANY, New Britain, Conn.
Filed September 4, 1907. Serial No. 29,746. PUBLISHED NOVEMBER 19, 1907.

67,227. FLAVORING-SYRUPS FOR BEVERAGES. WILLIAM F. WYLDE, Ponca, Okla.
Filed October 1, 1907. Serial No. 30,326. PUBLISHED NOVEMBER 19, 1907.

LABELS

REGISTERED JANUARY 21, 1908.

13,999.—*Title:* "BIG DICK." (For Cigars.) ROBERT KLEIN, Danville, Ill. Filed December 11, 1907.

14,000.—*Title:* "ALI PASHA." (For Cigarettes.) THEMELIS BROS., Tampa, Fla. Filed December 2, 1907.

14,001.—*Title:* "SULTANA." (For Cigarettes.) THEMELIS BROS., Tampa, Fla. Filed December 2, 1907.

14,002.—*Title:* "ATLAS." (For Cigarettes.) THEMELIS BROS., Tampa, Fla. Filed December 2, 1907.

14,003.—*Title:* "FREIHOFER'S VERMICELLI." (For Vermicelli.) THE FREIHOFER VIENNA BAKING CO., Philadelphia, Pa. Filed December 16, 1907.

14,004.—*Title:* "FREIHOFER'S NOODLES." (For Noodles.) THE FREIHOFER VIENNA BAKING CO., Philadelphia, Pa. Filed December 16, 1907.

14,005.—*Title:* "HARBAN'S HERB TABLETS." (For a Medicinal Compound.) JAMES H. HARBAN, Washington, D. C. Filed December 17, 1907.

14,006.—*Title:* "EGGALENE." (For Toilet Preparations.) ERNEST NARJOT, Los Angeles, Cal. Filed December 3, 1907.

14,007.—*Title:* "PACCORAT." (For Furniture.) PACIFIC COAST RATTAN CO. INC., San Francisco, Cal Filed December 20, 1907.

PRINTS

REGISTERED JANUARY 21, 1908.

2,202.—*Title:* "NO 323 BLUE RIBBON." (For Playing-Cards. WILLIS W. RUSSELL CARD CO., Milltown, N. J. Filed December 19, 1907.

2,203.—*Title:* "ARTGUM THE DRY CLEANER AND MASSAGER." (For a Cleaning Composition.) ADOLPH SOMMER, Cambridge, Mass. Filed December 20, 1907.

2,204.—*Title:* "SAWYER'S CRYSTAL BLUE." (For Washing-Blue.) THE SAWYER CRYSTAL BLUE CO., Boston, Mass. Filed December 20, 1907.

2,205.—*Title:* "MEN'S AND BOYS' APPAREL." (For Men's and Boys' Apparel.) H. C. LYTTON, Chicago, Ill. Filed December 16, 1907.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

PHILLIPS v. SENSENICH.

PATENT INTERFERENCE.

Decided June 11, 1907.

1. INTERFERENCE—PROOFS RESTRICTED BY ALLEGATIONS OF PRELIMINARY STATEMENT.

Where the preliminary statement of a party alleges reduction to practice in January, 1905, evidence showing the construction of an alleged model in 1895 cannot be accepted as proving an earlier date of reduction to practice.

2. SAME—ISSUE—CONSTRUCTION.

The terms of an interference issue will not be given a strained or unnatural meaning or be construed to refer to something not disclosed by either party in order to include within the issue an early device made by one of the parties.

3. SAME—SUPPLEMENTAL OATH NECESSARY—EX PARTE MATTER.

The question whether or not a supplemental oath should be required has been uniformly held by the Office to be an *ex parte* matter upon which the proper determination of priority is not dependent, and the absence of such an oath furnishes no ground for holding that the issue is not patentable to the party in whose case the same is required.

4. CLAIMS—ALTERNATIVE EXPRESSIONS.

Alternative expressions in claims are not generally permitted; but where two terms are employed to designate a particular element, both of which terms describe the element correctly, the claim is not objectionable, as the alternativeness is of language rather than of structure. (*Ex parte Holder*, C. D., 1903, 442; 107 O. G., 833.)

APPEAL from Examiners-in-Chief.

SELF-OILING CAR-WHEEL.

Messrs. Connolly Brothers for Phillips.

Mr. J. M. Nesbit and *Mr. H. E. Peck* for Sensenich.

MOORE, *Assistant Commissioner, now Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief affirming the decision of the Examiner of Interferences and awarding priority of invention to Sensenich upon the following issue:

1. A self-oiling wheel provided with an oil-chamber having a filling-opening, a valve-cage extending into the chamber from the filling-opening, the cage being open at its inner end and having slitted or prong-like sides, an inwardly-opening valve operative within the cage for normally closing the filling-opening, and a valve-holding spring.

2. A self-oiling wheel provided with an oil-chamber having a filling-opening in one side thereof, a valve-cage within the oil-chamber and extending from the filling-opening toward but stopping short of the opposite wall of the chamber, the cage being open laterally and at its inner end, an inwardly-opening valve within the cage, and a coiled spring extending through the inner open end of the cage and engaging said opposite wall of the chamber and the valve for holding the latter normally in closed position.

3. A self-oiling wheel having an oil-chamber formed with an opening, a valve-cage extending into the chamber and having a tubular end portion fitting the chamber-opening, the cage being open at its inner end and having its sides slotted from said end toward the tubular end, the interior of the cage tapering toward said tubular end, a valve, and a spring within the cage for holding the valve normally seated and closing said tubular cage end.

4. A self-oiling car-wheel having a chambered hub with an oil-inlet through one wall, a valve-seat consisting of a pronged guiding-seat cast in said wall adjacent to said inlet, a valve, and a spring bearing against said valve and seating against the opposite side of the cavity.

The invention in issue relates to improvements in self-oiling wheels for mine-cars in which the inlet to an oil-chamber contained within the wheel is normally closed by a spring-pressed valve. The subject-matter in issue involves only the specific construction of the valve-cage and the arrangement of the spring which holds the valve in its seat. In the devices disclosed by both parties the valve-cage has slitted or prong-like walls extending part way across the chamber and a coiled spring seated upon the wall of the chamber opposite to the oil-inlet for supporting the valve within the cage.

The testimony clearly shows, and it is not disputed, that Sensenich conceived the invention in May, 1903, and reduced the same to practice by manufacturing and selling wheels embodying the invention in issue in June or July, 1903.

Phillips alleges in his preliminary statement that he conceived the invention in issue and disclosed it to others in the year 1893—

that on or about the first day of February, 1895, he first made a model showing said invention; that he first embodied his invention in a full-sized car-wheel which was completed on or about the first day of January, 1905—

and that said car-wheel was successfully operated on the 24th day of January, 1905.

Phillips has offered in evidence a valve-cage, Phillips's "Exhibit 1," which he says he made prior to the year 1895, (Qs. 9–10,) and J. M. Phillips, a brother of the appellant, testifies that he first saw this device early in 1895. It is contended by Phillips that this device constitutes a reduction to practice of the invention, as stated in count 1 of the issue. Phillips admittedly had no conception of the specific construction set forth in counts 2, 3, and 4 until November, 1904, which is subsequent to Sensenich's established date of reduction to practice.

It is well settled that a party to an interference is bound by the allegations of his preliminary statement. (*Lowrie* v. *Taylor and Taylor*, 123 O. G., 1665; *Fowler* v. *Boyce*, 122 O. G., 1726; *Hammond* v. *Basch*, C. D., 1905, 615; 115 O. G., 804; *Cross* v. *Phillips*, C. D., 1889, 342; 87 O. G., 1399.) If, therefore, it could be conceded that Phillips's Exhibit 1 embodied the invention set forth

in count 1, it is proof only of conception of that invention in 1895, and he is entitled to no earlier date of reduction to practice than that alleged in his preliminary statement—January, 1905—which is subsequent to Sensenich's filing date. There is no showing of diligence coupling this alleged conception with a subsequent reduction to practice, and Phillips cannot therefore in any event prevail as to priority of invention.

The lower tribunals have held that Phillips's Exhibit 1 does not embody the invention in issue. The cage of this exhibit comprises a cylindrical barrel having four elliptical openings through which the oil may pass to the oil-chamber of the wheel. The form of valve-cage specified in count 1 is limited to one "having slitted or prong-like sides." Phillips contends that the terms "slitted" and "prong-like" are alternative and that the former is broad enough to—

Include a cage having closed slits as distinguished from any limited definition sought to be placed on the term "slitted" used in count 1 to indicate that the openings are necessarily extended through the end of the cage.

It is a well-settled practice of the Office not to permit an applicant to make alternative claims. Where, however, an applicant employs two terms to designate a particular element, both of which terms describe the element correctly, the claim has been held to be unobjectionable, since the applicant's alternativeness is of language rather than of structure. (*Ex parte Holder*, C. D., 1903, 442; 107 O. G., 833.) The terms "slitted" or "prong-like" as read in the light of the disclosures of the interfering applications define the same thing and refer to openings in the walls of the cage which extend through the end of the cage, and neither term is therefore applicable to the construction of Exhibit 1. In view of these facts it is held that Exhibit 1 does not constitute evidence of conception of the invention in issue. No other testimony is presented to show that Phillips was in possession of the invention stated in any of the counts of the issue prior to Sensenich's date of reduction to practice. Phillips cannot therefore prevail, even if the testimony concerning Exhibit 1 should be accepted.

It is urged in behalf of Phillips that the original claims of Sensenich's application were generic and covered a structure not limited to the specific features in controversy, that the specific invention in issue was not covered by the original oath, and that in the absence of a supplemental oath the claims in issue were not admissible at the time they were presented and are not now patentable to Sensenich. This contention is without force. The subject-matter in issue was clearly disclosed in Sensenich's original application. The question whether or not a supplemental oath should be required has been uniformly held by this Office to be an *ex parte* matter upon which the proper determination of priority is not dependent. (*Auerbach and Gubing* v. *Wiswall*, C. D., 1904, 7; 108 O. G., 289; *Silverman* v. *Hendrickson*, C. D., 1902, 123 99 O. G., 445; *Kane* v. *Brill and Adams*, C. D., 1898, 146; 84 O. G., 1142; *Rennyson* v. *Merritt*, C. D., 1892, 54; 58 O. G., 1415.)

Phillips also urged at the hearing that the claims in issue are not patentable in view of certain references. The record shows that these references were considered by the Primary Examiner upon a motion for dissolution brought by Phillips upon this ground.

The Examiners-in-Chief in their decision upon the question of priority denied Phillips request to make a recommendation that the claims in issue are not patentable. I do not find in the arguments advanced by Phillips any reason which would warrant the exercise of the supervisory authority of the Commissioner in the further consideration of this question.

The decision of the Examiners-in-Chief is affirmed.

MATTICE *v.* LANGWORTHY.

PATENT INTERFERENCE.

Decided December 20, 1907.

1. INTERFERENCE—MOTIONS UNDER RULE 109—PRACTICE.
   Where a motion to amend under Rule 109 by the addition of two claims was transmitted, the Primary Examiner properly refused to consider two other claims presented for the first time at the hearing of the motion.
2. SAME—SAME—DELAY IN BRINGING.
   A motion to amend under Rule 109 brought after the thirty days allowed by the rules and accompanied by no excuse for the delay is entitled to no consideration and should not be transmitted.

ON PETITION.

MANGLE.

Messrs. Ward & Cameron and *Messrs. Meyers, Cushman & Rea* for Mattice.

Messrs. Arthur C. Fraser & Usina for Langworthy.

MOORE, *Commissioner:*

This case is before me on a petition by Langworthy that the Primary Examiner be directed to enter and consider certain claims which were presented in connection with his brief at the hearing of a motion to amend under Rule 109 and also upon an appeal by Langworthy from the decision of the Examiner of Interferences refusing to transmit a second motion to amend under Rule 109.

The record shows that the preliminary statements were approved July 6, 1907; that on August 7 Langworthy presented a motion to transmit a motion to amend his application by the insertion of two claims, numbered 6 and 7. On August 14 the motion was transmitted to the Primary Examiner. At the hearing upon this motion, which was had September 26, Langworthy presented two additional claims, numbered 8 and 9, which the Examiner refused to consider. Langworthy contends that these claims should be entered and considered in order that he may present before the Office the broadest claims which may be had to cover the invention common to the interfering applications.

It appears from the brief filed in connection with claims 8 and 9 that the reason for the presentation of these claims was that—

If the Examiner is of the opinion that claims 6 and 7 do not distinguish the invention with sufficient clearness he is asked to admit claims 8 and 9. If the Examiner, however, agrees with us that claims 6 and 7 abundantly avoid the prior art he is asked to admit all of the four claims.

Present Rule 109 was promulgated in view of the decisions of the Court of Appeals of the District of Columbia in *Blackford* v. *Wilder* (127 O. G., 1255) and *Herins* v. *Wende*, (129 O. G., 2858,) in which the court refused to consider a second interference for the purpose of permitting applicants to present claims covering all the patentable subject-matter common to the interfering applications. It is not intended by this practice to permit a party to present claims and if they are not acceptable to amend them, and thus enter upon a regular prosecution of his case before the Examiner, nor is it intended to permit an applicant to present his proposed claims in a piecemeal manner.

The thirty days allowed by Rule 109 for applicants to make motions is ordinarily ample time for applicants to present claims which satisfactorily cover the interfering subject-matter, and claims presented after the expiration of this time without excuse for the delay are entitled to no consideration. The decision of the Examiner refusing to consider these claims was right, and the petition is denied.

Langworthy's motion to transmit his second motion to amend was filed November 27, 1907, and was denied by the Examiner of Interferences upon the ground that no sufficient excuse for the delay was presented. I agree with the Examiner of Interferences that no sufficient reasons have been given to excuse the delay in presenting this motion of over five months from the date upon which the preliminary statements were approved.

The decision of the Examiner of Interferences is affirmed.

EX PARTE E. WERTHEIMER & CIE.

APPLICATION FOR REGISTRATION OF TRADE-MARK.

Decided January 10, 1908.

TRADE-MARKS—APPOINTMENT OF REPRESENTATIVE IN UNITED STATES.
The appointment of a representative in the United States required by section 3 of the Trade-Mark Act of 1905 must be made by the applicant for registration. Authority to appoint such representative may not be delegated to an attorney.

ON PETITION.

TRADE-MARK FOR PERFUMERY, COMPLEXION POWDER AND TINTS.

Mr. Henry P. Blair for the applicant.

MOORE, *Commissioner:*

This is a petition from the action of the Examiner of Trade-Marks requiring that an appointment of a representative, as required by section 3 of the Trade-Mark Act of 1905, be made of record in this case.

It appears that the papers as originally filed included a paper purporting to be an appointment of a representative; but the paper was in blank, the name of the representative not having been filled in. On October 4, 1907, an amendment was presented directing that the name of William S. Hodges, 902 F street northwest, Washington, D. C., be inserted in the blank space in this paper. The Examiner refused to enter the amendment on the ground that section 3 required that the representative be appointed by the applicant and not by the attorney.

This refusal is believed to have been proper. Section 3 of the Trade-Mark Act requires that the applicant designate the representative. The formal power of attorney gives the attorney no right to designate such a representative. Nor can the appointment in blank which was filed with the papers be considered as delegating the right to select a representative for the applicant to the attorney.

The petition is denied.

BROWN *v.* GAMMETER.

PATENT INTERFERENCE.

Decided January 13, 1908.

INTERFERENCE—APPEAL ON PRIORITY—SUPERVISORY AUTHORITY OF COMMISSIONER.
A petition to dismiss an appeal from a decision of the Examiner of Interferences on priority rendered on the record will not be considered by the Commissioner in the exercise of his supervisory authority since petitioner has adequate remedies provided by the rules.

ON PETITION.

PRINTING-MACHINE.

Mr. William H. Babcock for Brown.

Messrs. Bates, Fouts & Hull for Gammeter.

MOORE, *Commissioner:*

This is a petition that the Examiners-in-Chief be instructed to dismiss the appeal of Brown from the record judgment of the Examiner of Interferences, holding that since the allegation of conception in Brown's preliminary statement failed to overcome the filing date of Gammeter's application Gammeter was the prior inventor of the subject-matter in issue.

It is urged on behalf of this petition that inasmuch as there can be no dispute as to the date of Gammeter's application and the date of conception alleged in Brown's preliminary statement no grounds exist for such appeal; that Brown is not entitled to urge that Gammeter has no right to make the claims in issue or that the issue is unpatentable, which are the grounds set forth in his reasons for appeal to the Examiners-in-Chief.

The present appeal purports to be taken under section 4909 of the Revised Statutes from the final decision of the Examiner of Interferences upon the question of priority of invention. Whether the reasons assigned in behalf of this appeal are sufficient to confer jurisdiction upon the Examiners-in-Chief is a question which should be presented before that tribunal in the first instance.

It is well settled that the supervisory authority of the Commissioner will be exercised only to correct a manifest error upon the part of a lower tribunal or in cases where there is no adequate remedy provided by the rules. Inasmuch as the applicant has presented no motion before the Examiners-in-Chief to dismiss the appeal pending before them, and since appeal lies to the Commissioner from the decision of the Examiners-in-Chief if the case is decided by them, there is clearly no reason for invoking the supervisory authority of the Commissioner at this time.

The petition is dismissed.

LARKIN COMPANY *v.* PACIFIC COAST BORAX COMPANY.

TRADE-MARK INTERFERENCE.

Decided July 23, 1907.

1. TRADE-MARKS—INTERFERENCE IN FACT.
   An interference in fact exists between the words "Boraxine" and "Boraxid," since they look alike and sound alike.

2. SAME—MOTION TO DISSOLVE—PRACTICE.

Questions cannot be urged on appeal which have not been raised in the motion and passed on below except under circumstances which would warrant supervisory action being taken.

APPEAL on motion.

TRADE-MARK FOR SOAP POWDER.

Messrs. Mason, Fenwick & Lawrence for Larkin Company.

Mr. E. G. Siggers for Pacific Coast Borax Company.

BILLINGS, *Assistant Commissioner:*

This is an appeal by the Pacific Coast Borax Company from the decision of the Examiner of Trade-Marks refusing to dissolve the above-entitled interference. The motion for dissolution alleged that no interference in fact exists.

The issue of the interference is as follows:

The word "Boraxine" or the word "Boraxaid" for soap powder.

There can be no question but that the goods to which the marks are applied are substantially of the same descriptive properties. The interference was declared under the provisions of section 7 of the act of February 20, 1905, which provides that whenever an application is made for the registration of a trade-mark which so nearly resembles a trade-mark used and owned by another as to be likely to be mistaken therefor by the public the Commissioner may declare an interference as to such trade-marks. On consideration of the two words it is held that the Examiner was right in holding that there was a clear interference in fact, for the reason that the words look alike and sound alike. His ruling is in accordance with that of the Commissioner in *ex parte The Dr. Parker Medicine Company*, (C. D., 1903, 378.) Appellant contends, further, that the word "Boraxine" is descriptive. It is noted, however, that this question was not raised upon the motion. The practice is clear as to this point. Questions cannot be urged on appeal which have not been raised in the motion and passed on below. This practice is well settled in regard to patent interferences, and Trade-Mark Rule 46 states that the practice in trade-mark interferences will follow as nearly as practicable the practice in interferences between applications for patents. The word "Boraxine" is not so descriptive as to warrant supervisory action being taken.

The decision of the Examiner of Trade-Marks is affirmed.

RHODES *v.* RHODES.

PATENT INTERFERENCE.

Decided December 16, 1907.

INTERFERENCE—TESTIMONY—SUPPRESSION.

Testimony should not be suppressed on account of the failure of a witness to read his deposition before signing the same where it does not appear that such notice was given to the opposite party, as is required by Rule 159.

APPEAL on motion.

PISTON-ROD PACKING.

Mr. John M. Spellman and *Messrs. Bacon & Milans* for H. P. Rhodes.

Mr. Fred G. Deiterich for J. M. Rhodes.

BILLINGS, *Assistant Commissioner:*

This is an appeal by John M. Rhodes from the decision of the Examiner of Interferences granting the motion of Hampton P. Rhodes to strike out the deposition of W. D. Jewell offered on behalf of John M. Rhodes. The ground on which this motion was brought was that the requirements of section 3 of Rule 154 were not complied with when Jewell's deposition was taken, the specific requirement to which reference was made being as follows:

The officer shall annex to the deposition his certificate showing * * * (5) the reading by, or to, each witness of his deposition before he signs the same.

The notary's certificate contained the following statement:

That the witness, after consultation with J. M. Rhodes' counsel, waived the reading of his deposition before signing the same.

Affidavits were filed in support of the motion, and affidavits were also filed on behalf of J. M. Rhodes. These affidavits set forth affiants' versions as to what occurred at the time of closing Jewell's deposition and whether or not counsel for H. P. Rhodes consented to Jewell's waiving the reading of his deposition.

The Examiner of Interferences held that these affidavits were so contradictory that it could not be presumed from them that there was a verbal agreement that the reading of the deposition be waived, no stipulation to this effect being on record. He therefore granted the motion, because the certificate of the notary showed that the requirements of the rules had not been complied with, citing *Rolfe* v. *Taylor*, (111 O. G., 1938.)

It appears from the affidavits filed that counsel for Hampton P. Rhodes was present when Jewell's deposition was closed and when it was signed; but the record does not show that notice was given that he objected to Jewell's not reading his deposition and that a motion would be made to suppress the testimony on that ground. The motion to strike out was not brought until a month after the testimony was filed in the Office. Rule 159 provides that notice will not be taken of merely formal or technical objections which do not appear to have wrought a substantial injury to the party raising them, and, further, that in case of such injury it must be made to appear that as soon as the party became aware of the ground of objection he gave notice thereof to the Office and also to the opposing party, informing him that unless it be removed he would urge the objection at the hearing.

As stated above, no notice whatever appears to have been given either to the Office or to the opposing party. For this reason it is believed that the deposition should not have been suppressed.

The decision of the Examiner of Interferences is reversed.

GREENE, TWEED & CO. *v.* MANUFACTURERS' BELT HOOK CO.

OPPOSITION.

Decided December 24, 1907.

TRADE-MARK—INTERFERENCE—MOTION TO SUPPRESS EVIDENCE—APPEAL NOT ENTERTAINED BEFORE FINAL HEARING.

Where upon motion to suppress evidence on the ground that it is irrelevant the Examiner of Interferences postpones consideration of the question until final hearing, his decision will not be reviewed and reversed upon appeal prior to final hearing except in a clear case of abuse of discretion. (*Royce* v. *Kempshall*, 119 O. G., 338.)

APPEAL from Examiner of Interferences.

TRADE-MARK FOR BELT-FASTENERS.

Mr. Arthur E. Parsons and *Mr. John M. Coit* for Greene, Tweed & Co.

Messrs. Dyrenforth, Lee, Chritton & Wiles and *Messrs. Dudley, Browne & Phelps* for Manufacturers' Belt Hook Co.

BILLINGS, *Assistant Commissioner:*

This is an appeal by Greene, Tweed & Company from the decision of the Examiner of Interferences denying their motion to expunge from the record certain exhibits filed by the Manufacturers' Belt Hook Company.

A previous motion to expunge these exhibits was dismissed by the Examiner of Interferences on July 20, 1907, on the ground that the question raised could best be considered and disposed of in the consideration of the case upon final hearing.

It subsequently developed, however, at the final hearing that the said exhibits had not been filed, and a motion by the Manufacturers' Belt Hook Company for leave to file them and for a postponement of the final hearing was granted upon appeal upon said company's furnishing proof that it had paid to Greene, Tweed & Company their reasonable costs occasioned by the delay of the Manufacturers' Belt & Hook Company to file its testimony within the time set.

Upon admission of said exhibits as stated above Greene, Tweed & Company renewed their motion to expunge them from the record. In denying this motion it appears that the relevancy of these exhibits was not determined by the Examiner of Interferences, for he says that whether they are entitled to any weight "will be determined at the final hearing," and concludes his decision with the statement: "Without in any manner approving the evidence objected to it is decided that the same shall not be struck out at this time."

The appeal therefore appears to properly raise merely the question of whether the Examiner of Interferences was justified in holding that the evidence objected to should not be struck out at the present time and in postponing consideration of the question of the relevancy of the evidence until final hearing. In *Royce* v. *Kempshall* (119 O. G., 338) it was held that this matter will not be reviewed and reversed upon appeal prior to final hearing except in a clear case of abuse of discretion. I find no such clear abuse of discretion on the part of the Examiner of Interferences in this case.

In his decision on the present motion the Examiner of Interferences set no limit of appeal. In the case of *Deutsch Brothers* v. *Loonen* (131 O. G., 2146) it was stated:

It is believed that it will be in the interest of good practice and will work no hardship to the parties if hereafter no appeal be allowed from a decision of the Examiner of Interferences denying a motion to suppress testimony or a motion to require the other party to print exhibits prior to the appeal from his decision on priority rendered after final hearing. The question of the correctness of his decision on the motion can of course be raised on such appeal.

Although this appeal was taken prior to the date of said decision, the reasons which prompted the practice set forth therein are applicable to the present case and afford an additional ground why the decision of the Examiner of Interferences should not be disturbed.

The decision of the Examiner of Interferences is affirmed.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

UNITED STATES PLAYING CARD CO. *v.* C. M. CLARK PUBLISHING CO.

Decided December 11, 1907.

1. TRADE-MARKS—TRADE-MARK USE—EVIDENCE.

That a particular brand of cards was known to the trade as "Stage" cards does not prove use of the name "Stage" as a trade-mark to indicate origin and ownership.

2. SAME—ADDITIONAL MARK USED AS A TRADE-MARK.

Evidence considered and held to show that the ace of spades bearing a conventional figure of Columbia was adopted, used, and advertised as a trade-mark for playing-cards and that the word "Stage" was used in addition thereto merely for the purpose of indicating style, class, and grade. (*Manufacturing Co.* v. *Trainer*, 101 U. S., 51, 54: *Columbia Mill Co.* v. *Alcorn*, 150 U. S., 460, 463; *Burton* v. *Stratton*, 12 Fed. Rep., 676, 700.)

Mr. Fritz v. Briesen for the appellant.

Mr. F. A. Spencer for the appellee.

SHEPARD, *J.:*

This is an interference proceeding involving rival claims to the registration of the word "Stage" as a trade-mark for playing-cards.

November 29, 1904, C. M. Clark Publishing Co. registered the word, associated with the representation of a proscenium-arch with footlights in the foreground and scenery in back-ground, as used on cards of its manufacture. These cards are in packs like the common playing-cards, but contain no representations or devices on their face enabling them to be used in the ordinary games with such cards. They are intended for use in playing a novel game called "Stage," and have nothing on their face but pictures of actors, singers, and theater buildings.

April 15, 1905, the United States Playing Card Co. filed an application for the registration of the word "Stage" as a trade-mark appropriated to playing-cards of its manufacture, alleging that it had been used as such since August 1, 1896. On this the interference was declared with the C. M. Clark Co.

Evidence was introduced on behalf of the United States Co., consisting of two witnesses and certain exhibits of cards and printed matter. The C. M. Clark Co. took no testimony, and relied on its registered date. The Examiner of Interferences decided in favor of the United States Company, but on appeal to the Commissioner his decision was reversed. Appeal has been prosecuted from the Commissioner's decision.

The discussion has taken a wider range than we think is warranted by the issue and the evidence relating thereto. The validity of the word "Stage" as a trade-mark appropriated to playing-cards, has been settled, for all of the purposes of the interference proceeding, by the action of the Patent Office in registering it on the prior application of the appellee, and declaring the interference upon that of the appellant. Nor is the right of the appellant to have one general

trade-mark for all cards of its manufacture, and a special one for each class or style thereof, one that need be considered. The single question is, whether the appellant has shown by its testimony such earlier use of the word "Stage" as a trade-mark for cards, as to entitle it to an award of priority over the registered claimant.

The printed exhibits of the appellant consist of circulars or trade-lists issued at regular periods from and after January 1, 1897. These contain lists of about one hundred different styles of playing-cards, under distinct names or brands with wholesale prices set opposite, and arranged in classes designated as A. B. C. D.

The first entry in class D reads as follows:

65x. The Stage Playing Cards, gold edges..... 72.00
Professional Stars, Actors and Actresses of the Stage. The most attractive edition of playing-cards ever issued. Beautiful Court card designs, showing portraits of world-renowned celebrities of the stage. Handsome backs in gold and colors; finest linen stock; doubled enameled and highly finished, and put up in handsome, gold-stamped cases.

On the title page of each circular or list appears a conspicuous mark consisting of the ace of spades bearing a conventional figure of Columbia, together with the printed words "Trade-mark" thereunder. There is nothing whatever to indicate the use of "Stage" as an additional trade-mark. On the same page is printed the statement that "'Bicycle' and other brands of U. S. and 'National' playing-cards (nearly one thousand different kinds) received the highest awards at the World's Fair Chicago." An exhibit pack of the "Stage" playing-cards is contained in a removable paper box, which has printed on one side, in large gilt letters, the following:

No. 65x. The Stage Playing Cards. Gold edges. Copyrighted 1896 by the U. S. Playing Card Co.—Cincinnati, U. S. A.

The pack is inclosed in a pasted paper wrapper with the same in print, and on the reverse side is a label showing the trade-mark ace before described. The face-cards of the pack show pictures of different actors and actresses with their respective names.

The superintendent of the American News Co., a large purchaser of cards, testified that he had ordered these "Stage" cards for eight years or more, from the price-lists, and that they were known to the trade as "Stage" playing-cards. The appellant alone manufactured them at the time. That this particular brand of cards was known as "Stage" cards, does not prove use of the name as a trade-mark to indicate origin and ownership. The same thing would be equally true of all the other brands described in the trade-lists, among which those designated as "Circus," "Vanity Fair," "Hustling Joe," etc., contain representative pictures on their faces. The testimony of the secretary of appellant contains the broad statement that the word "Stage" was adopted and used as a trade-mark; but this amounts to nothing more than a conclusion founded on what is disclosed in the trade-lists, and the testimony of the former witness. All that the testimony actually shows is that the real trade-mark, adopted, used and advertised as such is the ace of spades as before described, which appeared on every circular and trade-list, and on every pack of cards of whatever style. This trade-mark is a symbol that by long, exclusive use, and probable registration, indicated the origin and ownership of every style and grade of appellant's cards.

We think with the Commissioner, that the descriptive words, including "Stage," which appear on the particular packs of cards showing the pictures of actors and other performers on the stage, were for the purpose of indicating style, class and grade. Words so used do not constitute a trade-mark. (*Mfg. Co.* v. *Trainer*, 101 U. S., 51, 54; *Columbia Mill Co.* v. *Alcorn*, 150 U. S., 460, 463; *Burton* v. *Stratton*, 12 Fed. Rep., 696, 700.)

Having begun the manufacture of this novel style of card, the appellant affixed to it its long-established trade-mark, and undertook to secure additional protection, not by adopting a new and special trade-mark, but by securing a copyright for the cards as prints or pictorial illustrations. This copyright, as we have seen, is advertised upon each pack of the cards containing the actors' pictures in large gilt letters.

We are of the opinion that the Commissioner was right and his decision is affirmed.

The clerk will certify this decision to the Commissioner of Patents as directed by the law. Affirmed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 26, 1907.

Irwin & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Walter S. Bare, of 227 North Duke street, Lancaster, Pa., for registration of a trade-mark registered to Irwin & Company, of 185 Milk street, Boston, Mass., and no response to the said declaration mailed by the Patent Office in the usual manner to Irwin & Company having been received, and there being no evidence of its having been received by the said Irwin & Company, it is presumed that the company has not received the same. Therefore notice is hereby given to the said Irwin & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that due notice of the declaration of this interference may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 11, 1907.

The Royal Shoe Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Seis, Schwab & Company, of Monroe and Market streets, Chicago, Ill., for registration of a trade-mark and a trade-mark registered to The Royal Shoe Company, of 200 Devonshire street, Boston, Mass., and the notice of said declaration mailed by the Patent Office in the usual manner to the said The Royal Shoe Company having been returned undelivered, notice is hereby given to the said The Royal Shoe Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

The notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

Changes in Classification.

(ORDER No. 1,780.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 16, 1908.

The transfer of classes 238, RAILWAY-TIES AND FASTENERS, and 239, RAILWAY-RAILS AND JOINTS, from Division XLI to Division XXII is hereby directed, to take effect immediately.

EDWARD B. MOORE,
Commissioner.

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

[BY AUTHORITY OF CONGRESS.]

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ISSUE OF JANUARY 28, 1908.

Patents	422	No. 877,475 to No. 877,896, inclusive.
Designs	15	No. 30,033 to No. 30,047, inclusive.
Trade-Marks	162	No. 67,228 to No. 67,389, inclusive.
Labels	12	No. 14,008 to No. 14,019, inclusive.
Prints	2	No. 2,206 to No. 2,207, inclusive.
Reissues	4	No. 12,742 to No. 12,745, inclusive.
Total	617	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	2	.....	New Hampshire	2	.....
Alaska, District of	.....	.....	New Jersey	10	3
Arizona Territory	1	.....	New Mexico Ter'ty	.....	.....
Arkansas	1	1	New York	68	51
California	14	9	North Carolina	2	2
Colorado	4	.....	North Dakota	2	.....
Connecticut	9	5	Ohio	31	7
Delaware	1	.....	Oklahoma	4	.....
District of Columbia	4	.....	Oregon	4	2
Florida	4	.....	Panama	.....	.....
Georgia	1	.....	Pennsylvania	38	8
Hawaii Territory	.....	.....	Philippine Islands	.....	.....
Idaho	1	.....	Rhode Island	2	.....
Illinois	43	22	South Carolina	1	.....
Indiana	15	.....	South Dakota	2	.....
Iowa	12	2	Tennessee	2	1
Kansas	10	1	Texas	5	.....
Kentucky	6	.....	Utah	1	.....
Louisiana	1	1	Vermont	1	.....
Maine	1	1	Virginia	4	1
Maryland	5	5	Washington	4	1
Massachusetts	18	10	West Virginia	2	1
Michigan	11	9	Wisconsin	7	4
Minnesota	10	3	Wyoming	.....	.....
Mississippi	2	.....	U. S. Army	.....	.....
Missouri	14	10	U. S. Navy	.....	.....
Montana	.....	1	Total to citizens of the United States	385	165
Nebraska	3	4			
Nevada	.....	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	2	.....	Netherlands	.....	.....
Belgium	.....	.....	Newfoundland	.....	.....
Brazil	.....	.....	New South Wales	1	.....
British West Indies	.....	.....	New Zealand	.....	.....
Canada	8	.....	Norway	.....	.....
Cape Colony	.....	.....	Persia	.....	.....
Chile	.....	.....	Queensland	.....	.....
China	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	.....	.....
Cuba	.....	.....	Scotland	2	.....
Denmark	2	.....	South Australia	.....	.....
Ecuador	.....	.....	Spain	.....	.....
England	13	5	Sweden	2	1
France	6	2	Switzerland	.....	1
Germany	15	2	Transvaal, South Africa	.....	.....
Haiti	.....	.....	Victoria	1	.....
Ireland	.....	.....	Western Australia	.....	.....
Italy	.....	.....			
Japan	.....	.....			
Java	.....	.....			
Mexico	.....	.....	Total to citizens of foreign countries	52	11

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 22, 1908.

Joseph H. Brown, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of Kingan & Company, Limited, of Indianapolis, Ind., for registration of a trade-mark and a trade-mark registered to Joseph H. Brown, of Fort Worth, Tex., and a letter has been filed in the case by the attorney of record for said Brown stating that he is unable to locate his client.

Notice is therefore hereby given to said Joseph H. Brown, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 18, 1908.

The heirs, executor, or administrator of Siman Miyata, take notice:

An interference has been declared by this Office between an application of the Standard Import Company, Limited, of New Orleans, La., and an application of Siman Miyata, of West Orange, N. J., both for registration of a trade-mark, and a letter has been filed in the case from the attorney of record for said Miyata stating that Miyata has died.

Notice is therefore hereby given to the heirs, executor, or administrator of the said Siman Miyata that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business January 21, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
308	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Jan. 7	Dec. 28	135
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Jan. 6	Oct. 24	647
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Jan. 3	Nov. 22	340
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Dec. 26	Nov. 13	197
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Dec. 23	Nov. 16	275
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Dec. 21	Dec. 19	208
223	IV. Bridges; Conveyors; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Iron Structures; Loading and Unloading; Towers.	Dec. 20	Dec. 19	219
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Dec. 20	Dec. 16	327
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Dec. 19	Oct. 29	363
138	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Dec. 18	Oct. 15	360
167	V. Bookbinding; Harvesters; Jewelry; Music.	Dec. 17	Oct. 4	370
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	Dec. 13	Dec. 4	308
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	Dec. 9	Dec. 4	449
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Dec. 9	Nov. 11	358
313	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	Dec. 7	Dec. 11	344
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas, and Canes.	Dec. 7	Dec. 2	325
305	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Dec. 6	Nov. 26	562
232	X. Carriages and Wagons.....	Dec. 5	Oct. 26	457
18	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Dec. 4	Dec. 7	241
169	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Dec. 3	Dec. 9	300
376	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Dec. 3	Dec. 2	346
262	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	Nov. 30	Oct. 26	552

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Nov. 29	Oct. 14	373
227	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Nov. 26	Oct. 25	256
322	XII. Elevators; Journal-Boxes; Lubrication; Machine Elements; Pulleys and Shafting.	Nov. 23	Oct. 24	604
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	Nov. 22	Nov. 5	262
236	XIX. Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel; Stoves and Furnaces.	Nov. 20	Nov. 15	474
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	Nov. 19	Nov. 4	323
320	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Nov. 18	Nov. 19	596
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Nov. 18	Sept. 21	564
280	XL. Baggage; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Nov. 1	Sept. 23	730
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	Nov. 13	Aug. 17	409
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	Nov. 12	Sept. 10	315
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Nov. 11	Oct. 28	420
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Nov. 7	Sept. 9	558
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	Nov. 5	Sept. 6	658
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Oct. 26	Sept. 16	602
321	XXXIX. Baths and Closets; Water Distribution.	Oct. 10	July 8	387
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	Oct. 7	Sept. 17	597
109	XVI. Telegraphy; Telephony	Oct. 7	July 9	682
382	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	Sept. 21	Aug. 26	904

Total number of applications awaiting action 17,976

161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.			
	Trade-Marks.....	Jan. 17	Dec. 12	371
	Designs.....	Jan. 15	Dec. 14	45
	Labels and Prints.....	.....	.....	....

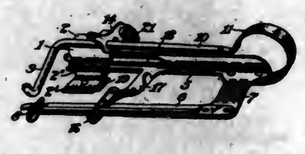
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PATENTS

GRANTED JANUARY 28, 1908.

877,475. TUCK-MARKING ATTACHMENT FOR SEWING-MACHINES. WILLIAM M. AMMERMAN, New Haven, Conn., assignor to Edwin J. Toof, New Haven, Conn. Filed Feb. 24, 1903. Serial No. 144,773.



1. In a sewing machine tuck-marker, a supporting plate having an angular form in cross section and also having a spring clamping arm connected at one end therewith and arranged in a position opposite its said angular portion, a creasing frame and an edge-guide each having an arm shaped in cross section to substantially conform to the said angular portion of the supporting plate and being interposed between the same and the connected clamping-arm, for longitudinal adjustment relatively to each other and to the supporting plate, means engaging the free end of said clamping-arm for causing it to coöperate with the supporting plate and secure the interposed arms in adjusted position, and creasing devices carried by said creasing frame.

2. In a sewing machine tuck marker, a supporting plate having an angular part, a clamping arm secured at one end to said plate and provided with a free yielding part extending to the rear of the plate into a position opposite the said angular part of the supporting plate, a creasing frame provided with an arm shaped to substantially conform to the angular part of the supporting plate said part being interposed between the latter part of the supporting plate and the free portion of the clamping arm, and a clamping screw carried by the supporting plate and finding a bearing on the rear side of the clamping arm at the free end of the same for forcing said arm against the arm of the creasing frame to clamp the latter in position.

3. In a sewing machine tuck-marker, a supporting plate having an arcuate-angular portion and also having a connected clamping-arm arranged in a position opposite said arcuate-angular portion, a creasing frame and an edge-guide each having an arm shaped to substantially conform to the said arcuate-angular portion of the supporting plate and being interposed between the same and the connected clamping-arm, means for causing said clamping-arm to coöperate with the supporting plate and secure the interposed arms in adjusted position, and creasing devices carried by said creasing frame.

4. In a sewing machine tuck-marker, a supporting plate having the form of a presser-foot and being provided with an arcuate-angular portion in its shank and also with a connected spring clamping arm arranged in a position opposite its said arcuate-angular portion, a creasing frame and an edge-guide each having an arm shaped to substantially conform to the said angular portion of the supporting plate and interposed between the same and the connected clamping-arm, a clamping-screw for causing said clamping arm to coöperate with the supporting plate to secure the interposed arms in adjusted position, and creasing devices carried by said creasing frame.
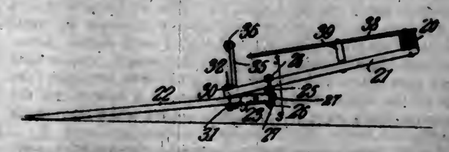
877,476. NEEDLE. ROBERT B. BACH, New York, N. Y. Filed Apr. 16, 1904. Serial No. 203,412.



1. A needle, comprising a body portion having a cavity in its butt end, said cavity being threaded and having a conical portion, and a thread holding member having a longitudinal bore and a reduced and threaded portion, the threaded portion being slitted and terminating in the plain conical portion.

2. A needle comprising a body portion having a longitudinal cavity in its butt end, the outer portion of the cavity being screw-threaded and having a plain conical portion below the threaded portion, and a thread holding member having a longitudinal bore and a threaded and resilient inner end terminating in a conical portion.

877,477. FORK FOR LOADING APPARATUS. WILFRED BAKER, Aberdeen, S. D., assignor of two-fifths to James McCabe, Minneapolis, Minn., and two-fifths to Frank Crane, Cummings, N. D. Filed July 26, 1907. Serial No. 385,706.



1. In loading apparatus, a fork including a pair of sets of upper and lower clamping bars, socket members clamped between said bars, and independently detachable tines carried by said socket members.

2. In loading apparatus, a fork including a main pivot bar, a plurality of supporting bars extending therefrom, a pair of sets of clamping bars between which the supporting bars are held, socket members also secured between said clamping bars, and fork tines mounted in said sockets.

2. In loading apparatus, a pivotally mounted fork, a spring arm carried thereby, and a fixed stop with which said arm engages to limit movement of the fork.

4. In a loading apparatus, a pivotally mounted fork, a pair of spring arms carried thereby, supports for the end and intermediate portions of said arms, and a fixed stop with which said arms engage to limit movement of the fork.

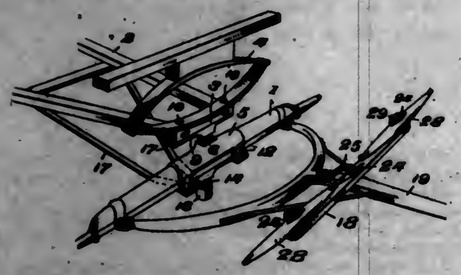
877,478. TEMPORARY BINDER. WILLIAM N. BARNARD, Ithaca, N. Y. Filed Jan. 9, 1907. Serial No. 351,500.



1. The combination with a cord having a stop at one end, a crossbar adapted to pass needle-like through a perforation in papers to be bound having a central eye to receive said cord and having its end portions bent laterally in the same direction, substantially as set forth.

2. The combination with a binding cord, of two crossbars having a central eye, threaded loosely upon the cord and each having its end portions bent laterally from the companion crossbar.

877,479. VEHICLE-GEAR. JOHN C. BASHFORD, Yonkers, N. Y. Filed Apr. 13, 1907. Serial No. 367,968.



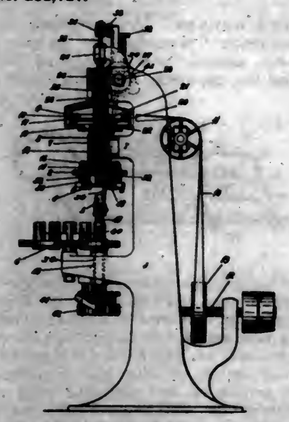
1. The herein described attachment for vehicles comprising a pair of shafts, threads extending from end to end of said shafts, means to secure said shafts to parts of the vehicle and threaded sockets for said shafts, means to secure said sockets to parts of the vehicle, the threads on said shafts being so arranged that when the part of the vehicle carrying the shafts is rotated one of the shafts will enter its respective socket while the opposite shaft will leave its respective socket.

2. The herein described attachment for vehicles comprising the combination with the swinging axle of a vehicle; of a pair of shafts one of which extends above and the other below the said axle, means to secure said shafts to the axle, said shafts being similarly threaded throughout their lengths, threaded sockets for said shafts, means to secure said sockets to parts of the vehicle, the threads upon said shafts and in said sockets being so arranged that one of the shafts will enter its respective socket and the opposite shaft leave its respective socket when the axle is swung.

3. The herein described attachment for vehicles comprising the combination with a swinging portion of the vehicle; of a pair of oppositely disposed shafts, means to secure the shafts to the swinging portion of the vehicle, said shafts being similarly threaded and a socket for each of said shafts having threads therein to engage the threads on the shafts whereby when the parts of the vehicle are swung they will be raised or lowered.

4. The herein described attachment for vehicles comprising the combination with a swinging axle; of a clip adapted to extend over said axle, an auxiliary plate below said axle, means to secure the clip to said auxiliary plate, an upwardly extending shaft on said clip, a depending shaft on said plate, said shafts being similarly threaded throughout their length, a plate having a bore therein adapted to receive the upwardly extending shaft, a socket for the depending shaft and means to secure said plate and socket to the parts of the vehicle.

877,480. SEAMING-MACHINE. OTTO S. BEYER, East Rutherford, N. J., assignor to E. W. Bliss Company, a Corporation of West Virginia. Filed Mar. 24, 1905. Serial No. 251,727.



1. In a seaming machine, the combination of a driving means, an upper and a lower hollow shaft moving with the same, an inner shaft located within the lower hollow shaft, differential transmission mechanism for driving the inner shaft from the driving means on the outer shaft, a shaft at right angles to the upper hollow shaft, and means for driving the said shaft at right angles to the upper hollow shaft from the latter.

2. In a seaming machine, the combination with a seamer head and a chuck, one of which has a rotary motion with relation to the other, and seaming members mounted on the seamer head, of a hollow shaft having means for causing the seaming members to move toward and away from the work, means for driving said shaft, a shaft located within the first shaft for effecting the relative motion between the seamer head and chuck, and differential transmission mechanism between the two shafts.

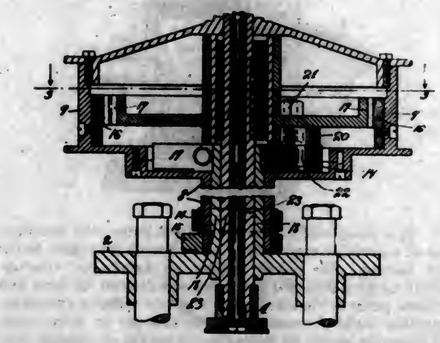
3. In a seaming machine, the combination with a rotating seamer head, a stationary chuck, and seaming members mounted on the seamer head, of a hollow shaft having means for causing the seaming members to move toward and away from the work, means for driving said shaft, a second shaft located within the first shaft for driving the seamer head, and differential transmission mechanism between the two shafts.

4. In a seaming machine, the combination with a seamer head and a chuck, one of which has a rotary motion with relation to the other, and seaming members mounted on the seamer head, of a hollow shaft having means for causing the seaming members to move toward and away from the work, means for driving said shaft, an internal gear moving with said shaft, a second shaft located within the first shaft to effect the relative motion between the seamer head and the chuck, an eccentrically disposed external gear meshing with the internal gear, a concentric member on the inner shaft, and means for driving the said concentric member from the eccentrically disposed gear.

5. In a seaming machine, the combination with a rotating seamer head, a stationary chuck, and seaming members mounted on the seamer head, of a hollow shaft having means for causing the seaming members to move toward and away from the work, means for driving said shaft, an internal gear moving with said shaft, an eccentrically disposed external gear meshing with said internal gear, a second shaft located within the first shaft for imparting motion to the seamer head, a concentric member on the inner shaft, and means for driving the concentric member from the eccentrically disposed gear.

[Claims 6 to 29 not printed in the Gazette.]

877,481. TRANSMISSION MECHANISM. OTTO S. BEYER, East Rutherford, N. J., assignor to E. W. Bliss Company, a Corporation of West Virginia. Filed June 5, 1906. Serial No. 320,262.



1. The combination of two shafts arranged concentrically one within the other, driving means on the outer shaft an internal gear moving with the said outer shaft, an eccentrically mounted external gear meshing with the internal gear, a concentric member on the inner shaft, and means for driving the said concentric member from the said eccentric gear.

2. The combination of two shafts arranged concentrically one within the other, driving means on the outer shaft, an internal gear moving with the said outer shaft, an eccentrically mounted external gear meshing with the internal gear, a concentric member on the inner shaft, and a loose connection between the eccentrically disposed gear and the said concentric member.

877,482. VARNISH AND PROCESS FOR PRODUCING SAME. AUGUST P. BJERREGAARD, Mineola, N. Y., assignor to Charles Calman and Henry L. Calman, partners doing business under the firm-name of Emil Calman & Company, New York, N. Y. Filed Jan. 14, 1907. Serial No. 352,104.

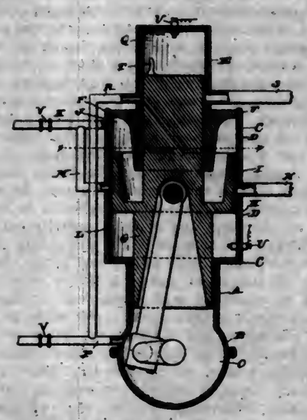
1. A varnish composed of so-called "black damar" gum dissolved in a suitable volatile liquid hydrocarbon, from which varnish the impurities have been removed.

2. A varnish composed of so-called "black damar" gum dissolved in a suitable volatile liquid hydrocarbon, from which varnish the impurities have been removed, and a suitable quantity of oil.

3. The process of manufacturing varnish comprising dissolving a black damar gum in a suitable volatile hydrocarbon solvent at atmospheric pressure and temperature, the quantity of the latter being in excess of that desired in the finished product, then refining to remove insoluble impurities, and then removing the excess of the solvent.

4. The process of manufacturing varnish comprising dissolving a black damar gum in a suitable volatile hydrocarbon solvent at substantially normal pressure and temperature, the quantity of solvent being in excess of that desired in the finished product, then refining to remove insoluble impurities, and finally distilling to remove the excess of solvent.

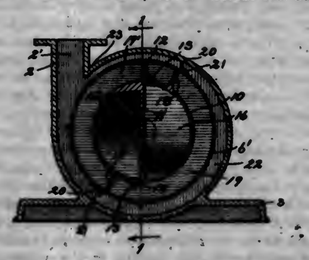
877,483. EXPLOSIVE-ENGINE. WILLIAM L. BOYER, Kansas City, Kans. Filed Jan. 13, 1907. Serial No. 355,103.



1. In an explosive engine, a cylinder having an enlarged offset intermediate of its ends a piston fitting the smaller bore of the cylinder, an annular offset or flange on the piston to fit the offset in the cylinder, an explosion chamber at one end of said enlarged offset and a compression chamber at the other end thereof and connected with the explosion chamber aforesaid, and an explosion chamber at one end of the smaller portion of the cylinder and a compression chamber at the other end, the last named explosion and compression chambers being connected, substantially as shown and described.

2. In an explosive engine, a cylinder having an enlarged offset intermediate of its ends, a piston fitting the smaller bore of the cylinder, an annular offset or flange intermediate of the ends of the piston, an upwardly extending portion on said offset or flange fitting the bore of the offset to the cylinder, a pipe for delivering an explosive mixture to the chamber formed in one end of the offset to the cylinder by the offset on the piston, a pipe connecting said chamber with the chamber in the other end of the offset, a pipe for delivering an explosive mixture to the chamber in the cylinder at one end of the piston, and a pipe connecting the chambers at the two ends of the cylinder, substantially as shown and described.

877,484. CENTRIFUGAL PUMP. EVERETT W. BROOKS, Chicago, Ill. Filed June 14, 1906. Serial No. 321,604.



1. In a compound-piston centrifugal pump, the combination of a suitable main casing and a compound piston journaled to rotate therein, said piston being internally subdivided to form alternate chamber-passages the flow-direction through each of which is substantially non-radial, and port passages the flow-direction through which is radial, said port passages being arranged to afford communication between successive chamber passages and between the latter and the discharge space outside the piston and within the casing, one or more radially extending impelling walls

in the primary chamber or chambers and suitable radially extending impelling walls in one or more of the succeeding chambers.

2. In a compound-piston centrifugal pump, the combination of a suitable main casing and a compound piston journaled to rotate therein, said piston consisting of a hollow shell-like member internally sub-divided to form alternate chamber passages the flow-direction through each of which is substantially non-radial and port passages the flow-direction through which is radial, said port passages being of restricted size and arranged to afford communication between the discharge and receiving ends of successive chamber passages and between the latter and the discharge space outside the piston and within the casing, one or more radially extending impelling walls in the primary chamber or chambers and suitable radially extending impelling walls in one or more of the succeeding chambers.

3. In a compound-piston centrifugal pump, the combination of a suitable main casing, a hollow shell-like piston journaled to rotate in said casing, one or more annular partition members arranged concentric with the axis of rotation of the piston and dividing the latter into a central primary chamber space and one or more annular radially outer chamber spaces, one or more impelling blades within said primary chamber, one or more radially extending impelling walls subdividing one or more of said annular chambers, and means for rotating said piston, said piston being provided with an axially disposed or approximately axially disposed inlet, with one or more restricted ports leading from the primary chamber space to the circumferential chamber space, and with one or more restricted ports leading from the outer chamber space or spaces through the shell of the piston to the discharge space within the main casing, said latter discharge ports being circumferentially offset relatively to the ports affording communication between said chambers, whereby the liquid is compelled to traverse in a non-radial direction a substantial portion of the circumferential length of the outer chamber space before escaping from the latter.

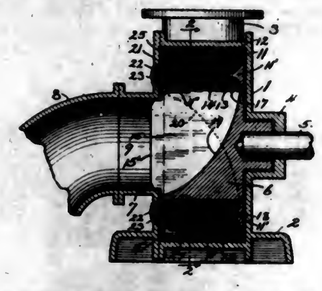
4. In a compound-piston centrifugal pump, the combination of a suitable main casing having a main chamber approximately circular interiorly, a main shaft journaled to extend axially into said casing, a compound piston mounted upon said main shaft within said casing, said piston consisting of a hollow shell-like structure sub-divided by radial and circumferentially extending partitions into a plurality of axially disposed primary ore receiving chambers, and a plurality of radially outer concentrically disposed annular or parti-annular chambers, said primary chambers being each provided with one or more restricted peripheral ports leading into the corresponding radially outer chamber, and said latter chambers in turn provided with one or more restricted peripherally disposed discharge ports, located circumferentially-remote from the ports through which the liquid enters them.

5. In a compound piston centrifugal pump, the combination of a suitable main casing having a main chamber provided with a peripheral discharge outlet and an axially disposed inlet, a main shaft journaled to extend into said casing in alinement with said inlet, a compound piston mounted upon said main shaft within said casing, said piston consisting of a generally cylindric hollow shell-like structure interiorly subdivided by one or more partitions concentric with the axis thereof, and by one or more radially extending partitions, into a plurality of axially disposed primary or receiving chambers and a plurality of radially outer concentrically disposed chambers, said primary chambers being each provided with an axially elongated slot-like peripheral port leading into a corresponding radially outer chamber, and said outer chambers being each in turn provided with a restricted peripherally disposed discharge port.

[Claims 6 to 8 not printed in the Gazette.]

877,485. COMPOUND-PISTON CENTRIFUGAL PUMP. EVERETT W. BROOKS, Chicago, Ill. Filed July 2, 1906. Serial No. 324,322.

1. In a compound-piston centrifugal pump, the combination of a suitable main casing and a piston journaled to rotate therein, said piston having an axially or approximately axially disposed inlet and sub-divided to form one or more primary chambers with suitable radially extending impelling walls pertaining thereto; and one or more internal tortuous impelling passages, consisting of passage portions deflected alternately in opposite directions parallel or approximately parallel with the axis of the piston and suitable radially extending impelling walls pertaining thereto and one or more port passage portions connecting radially contiguous parallel portions at the return-bend-points.



2. In a compound-piston centrifugal pump, the combination of a suitable main casing and a piston journaled to rotate therein, said piston having an axially or approximately axially disposed inlet and sub-divided to form one or more primary chambers with suitable radially extending impelling walls pertaining thereto and one or more internal tortuous impelling passages, consisting of passage portions deflected alternately in opposite directions parallel or approximately parallel with the axis of the piston and suitable radially extending impelling walls pertaining thereto, and one or more port passage portions connecting radially contiguous parallel portions at the return-bend-points, said port passage or passages being of restricted capacity, as compared with the parallel passage portions which they connect.

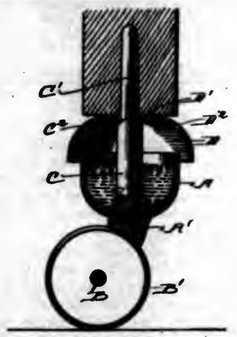
3. In a compound-piston centrifugal pump, the combination of a suitable main casing and a compound-piston journaled to rotate therein, said piston being internally partitioned to form a central, or approximately central, receiving chamber and diametrically impeller partition therein, a series of chamber passages arranged in succession radially outside of the central passage and the flow-direction through each of which is substantially parallel with the axis of rotation of the pump, radially extending impeller walls pertaining to one or more of said radially outer chamber passages, and port passages leading from the central chamber to the radially adjoining chamber passage or passages, other port passages affording communication between the successive chamber passages and other port passages leading from the outermost chamber passages to the discharge space within the casing.

4. In a compound piston centrifugal pump, the combination of a suitable main casing, and a piston journaled to rotate therein, said piston comprising a hollow shell-like structure provided with a plurality of internal concentrically arranged cylindrical partition walls dividing the interior of the piston into a central receiving space or chamber and a plurality of annular passage-chambers, restricted ports formed through the innermost of said cylindric partition walls, restricted ports formed through the periphery of the piston, and an annular restricted passage affording communication between radially contiguous ones of said passage chambers between the edge of the partition which separates said contiguous chambers and the opposed end wall of the piston.

5. In a compound piston centrifugal pump, the combination of a suitable main casing, and a piston journaled to rotate therein, said piston comprising a hollow shell-like structure provided with a plurality of internal concentrically arranged cylindric partition walls dividing the interior of the piston into a central receiving space or chamber and a plurality of annular passage chambers, restricted ports formed through the innermost of said cylindric partition walls, restricted ports formed through the periphery of the piston, and an annular restricted passage affording communication between radially contiguous ones of said passage chambers between the edge of the partition which separates said contiguous chambers and the opposed end wall of the piston, and one or more radially extending impelling vanes within said central receiving chamber.

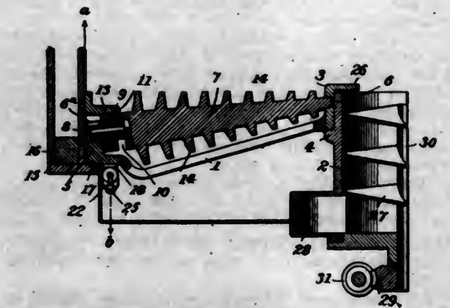
[Claims 6 and 7 not printed in the Gazette.]

877,486. CASTER. JAMES R. BROWN, Moultrie, Ga. Filed Mar. 30, 1906. Serial No. 308,927.



A caster of the kind described, comprising an open-top receptacle having integral legs, an axle mounted in apertures in the legs and carrying a wheel, a spindle integral with and projecting upward centrally from the receptacle, said spindle having a reduced portion forming a shoulder, and a centrally-apertured cup-shaped cap having a filling opening arranged on the spindle, said cap being of a diameter greater than that of the receptacle and extending down over the receptacle.

877,487. REVOLVING GRATE. FRANZ BURGER, Fort Wayne, Ind., assignor of three-fourths to Henry M. Williams, Fort Wayne, Ind. Filed Feb. 15, 1905. Serial No. 245,772.



1. The combination with a central fuel feeding tube, of a revolving grate, grate bars mounted radially thereon and arranged to positively feed the fuel toward the outer portion of the grate, substantially as described.

2. The combination with a central fuel feeding tube, of a circular revolving grate, rotating grate-bars mounted radially thereon, and means for simultaneously and intermittently revolving the grate and rotating the grate-bars step by step, substantially as described.

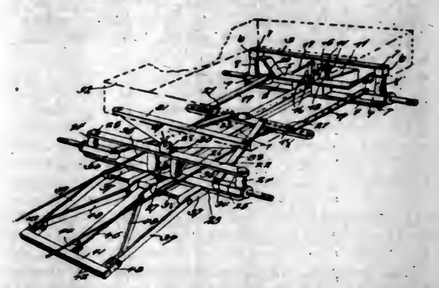
3. The combination with a central fuel feeding tube, of a revolving grate, rotating grate-bars mounted radially thereon, and a motor connected to simultaneously and intermittently revolve the grate and rotate the grate bars step by step, substantially as described.

4. The combination with a grate, of rotating grate-bars mounted radially thereon and having conical shaped body portions, said grate-bars being provided with teeth spirally arranged on said body portions, substantially as described.

5. The combination with a suitable support, of a revolving grate, rotating conical grate-bars mounted in bearings on the grate and having teeth spirally arranged on their surfaces, and means for rotating the grate-bars, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

877,488. RUNNING-GEAR. ARTHUR F. CLARK, Cashion, Okla. Filed Nov. 9, 1907. Serial No. 401,377.



1. In a device as set forth, a reach having fixed to the rear end thereof an axle having pivoted stub axles, said reach having pivoted to its forward end a forward axle comprising an upper and lower member spaced apart, stub axles pivoted between said members, tubular elements for holding the members spaced apart, said forward axle having pivoted thereto a flexible frame, and means coöperating between the stub axles for regulating and equalising the oscillatory movements of said stub axles.

2. In a device as set forth, a reach having fixed to the rear end thereof an axle having pivoted stub axles, said reach having pivoted to its forward end a forward axle comprising an upper and lower member spaced apart, stub axles pivoted between said members, tubular elements for holding the members spaced apart, said forward axle having pivoted thereto a flexible frame, and means coöperating between the stub axles for regulating and equalising the oscillatory movements of said stub axles.

3. In a device as set forth, a reach having fixed to the rear end thereof an axle having pivoted stub axles, said reach having a forward axle comprising an upper and lower member spaced apart, said lower member being pivoted to the said reach, stub axles pivoted between said members, tubular elements for holding the members spaced apart, said forward axle having pivoted thereto a flexible frame, and means coöperating between the stub axles for regulating and equalizing the oscillatory movements of said stub axles.

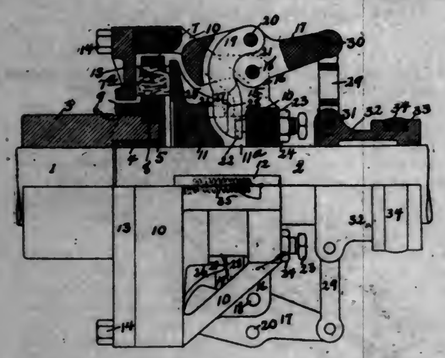
4. In a device as set forth, a reach having fixed to the rear end thereof an axle having pivoted stub axles, said reach having a forward axle comprising an upper and lower member spaced apart, said lower member being pivoted to the said reach, stub axles pivoted between said members, tubular elements for holding the members spaced apart, said forward axle having pivoted thereto a flexible frame, and adjustable means coöperating between said stub axles for regulating and equalising the oscillatory movements of said stub axles.

5. In a device as set forth, a reach having fixed to the rear end thereof an axle having pivoted stub axles, said reach having a forward axle comprising an upper and lower member spaced apart, said lower member being pivoted to the said reach, said upper member having a pivoted bolster so as to oscillate vertically and parallel with the forward axle, stub axles pivoted between said members,

tubular elements for holding the members spaced apart, said forward axle having pivoted thereto a flexible frame, and means coöperating between the stub axles for regulating and equalising the oscillatory movements of said stub axles.

[Claims 6 and 7 not printed in the Gazette.]

877,489. FRICTION-CLUTCH. WILLIAM H. CORBETT, Portland, Oreg. Filed Mar. 9, 1907. Serial No. 361,498.



1. In a friction clutch the combination with a friction flange 7; and a web 10 extending around the periphery of the flange 7, and having the internal hub 11 projecting toward the flange 7 within the web; the friction plate 13 secured to said web; and engaging the surface of the flange 7 the more remote from the hub 11; the friction plate 25 slidingly mounted on the internal hub 11 and engaging the surface of the flange 7 adjacent to the hub 11; and means for actuating the friction plate 25.

2. In a friction clutch the combination with a friction flange 7; of a web 10 extending around the periphery of the flange 7, and having the internal hub 11 projecting toward the flange 7 within the web; the friction plate 13 secured to said web, and engaging the surface of the flange 7; the friction plate 25 slidingly mounted on the internal hub 11 and engaging the surface of the flange 7 adjacent to the hub 11; the lever 19 fulcrumed against the hub 11 and operating against the sliding plate 25; and means for actuating the lever 19.

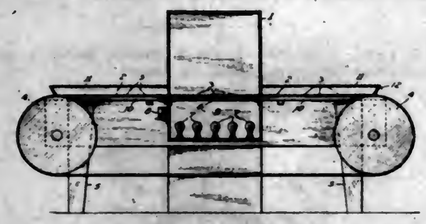
3. In a friction clutch the combination with a friction flange 7; of a web extending around the periphery of the flange 7 and having the internal hub 11 projecting toward the flange 7 within the web; the friction plate 13 secured to said web, and engaging the surface of the flange 7 the more remote from the hub 11; the friction plate 25 slidingly mounted on the internal hub 11 and engaging the surface of the flange 7 adjacent to the hub 11; the secondary lever 19 fulcrumed against the hub 11 and operating against the sliding plate 25; the primary lever on which the lever 19 is pivoted, journaled on the web 10 and acting on the lever 19; and means for actuating the primary lever 17.

4. In a friction clutch the combination with a friction flange 7; of a web 10 having the internal hub 11; the friction plate 13 secured to said web; the friction plate 25 slidingly mounted on the internal hub 11; the secondary lever 19 fulcrumed against the hub 11 and operating against the sliding plate 25; the primary lever 17 on which the lever 19 is pivoted journaled on the web 10 and acting on the lever 19; and the toggle lever mechanism comprising the link 29 and sliding sleeve 32 for actuating the primary lever.

5. In a friction clutch the combination with a friction flange 7; of a web 10 having the internal hub 11; the friction plate 13 secured to said web; the friction plate 25 slidingly mounted on the internal hub 11; the lever 19 fulcrumed against the hub 11 and operating against the sliding plate 25; means for actuating the lever 19; and the adjusting screw 23 on the hub 11 forming a means of adjustment for the fulcrum of the lever 19.

[Claims 6 to 9 not printed in the Gazette.]

877,490. EGG-CANDLING MACHINE. SAMUEL E. DAVIS, Elgin, Ill. Filed Nov. 8, 1907. Serial No. 401,278.



1. An egg candling machine, comprising a transparent screen, means for directing a strong light through said screen, means for rolling an egg along said screen and comprising a sheet of opaque material fitting around the egg and extending away from it on all sides for obscuring the light around the egg.

2. An egg candling machine, comprising a transparent screen, means for directing a strong light through said screen, means for conveying an egg along said screen with its axis parallel therewith and adapted to cause said egg to roll through contact with said screen, said conveying means comprising means for obscuring the light around the sides of the egg.

3. An egg candling machine, comprising a horizontally disposed conveyer having therein an aperture adapted to serve as a seat for an egg, means on one side of said conveyer for directing a light through said aperture, and means separate from said conveyer for rotating the egg through the movement of the conveyer.

4. An egg candling machine, comprising a horizontally disposed conveyer having therein a series of apertures each adapted to serve as a seat for supporting an egg on said conveyer, means for directing a light upwardly through the apertures in said conveyer at a certain part of the path thereof, said conveyer being of opaque material and adapted to obscure the light except at said apertures, and a supporting surface below said belt adapted to lift the eggs in their seats and cause them to roll in passing said lighting means.

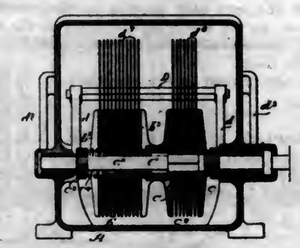
5. An egg candling machine, comprising a conveyer having therein a series of apertures each adapted to serve as a seat for supporting an egg on said conveyer, means for directing a light through said apertures at a certain part of the path of the conveyer, and a surface extending along said certain part of said path and adapted through frictional contact with the eggs to cause them to rotate while opposed to said lighting means.

[Claims 6 to 12 not printed in the Gazette.]

877,491. VARIABLE-SPEED MECHANISM. THOMAS C. DILL, Philadelphia, Pa. Filed Jan. 28, 1907. Serial No. 354,518.

1. Variable speed mechanism including two shafts, one shaft having supporting means whereby it is free to be adjusted toward and from the other shaft, a series of disks carried on each shaft so as to be compelled to turn therewith, the disks of one series each having their faces parallel and those of the other series each increasing in thickness from the periphery toward the center, the shafts being placed to permit of the disks of one series engaging those of the other, and fitted to the disks so as to at all times maintain them parallel to each other, and a spring tending to force together the disks of one of said series, substantially as described.

2. The combination of three shafts, means for supporting one of said shafts so that it is movable toward and from another of said shafts, having each a series of disks placed to respectively engage each other, each series of disks being mounted on its supporting shaft so as to be compelled to turn therewith, means for yieldingly pressing together the disks of one series, and means independent of said two series of disks for transmitting power from the movable shaft to the third shaft, substantially as described.



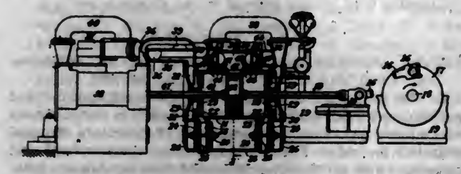
3. The combination of three shafts, supporting means for said shafts including a device on which one of the shafts is mounted so as to be adjustable toward and from the other shafts, two of the shafts being each provided with a series of disks mounted so as to be compelled to turn with it, and the adjustable shaft having two series of disks mounted to transmit power from one series to the other, one series being capable of engaging the disks of one shaft, and the other being capable of engaging the disks of the other shaft, with means for yieldingly pressing together the respective series of disks on the two fixed shafts, substantially as described.

4. The combination of two shafts, each having a series of disks mounted so as to revolve with it but free to move longitudinally thereon, a third shaft, adjustable supporting means for said third shaft whereby it may be moved toward and from one of the shafts, two series of disks carried on the adjustable shaft so as to be driven one from the other but free to move toward and from each other, said adjustable shaft having its disks respectively engaged by the disks of the other two shafts, with means for yieldingly pressing together the disks of each series on said latter shafts, substantially as described.

5. The combination of three shafts, fixed bearings for two of the shafts, a series of tapering disks on each of said latter shafts, means for supporting the third shaft so that it is free to move toward and from the other shafts, two series of plane disks mounted on the third shaft, and arranged so that one series is driven by the other, one series of disks of the third shaft engaging the disks of one of the other shafts, and the second series of disks on said third shaft engaging the disks of the remaining shaft, and springs for pressing together the disks of the two fixed shafts, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

877,492. PUMP. LOUIS K. DOELLING, New Rochelle, N. Y., assignor to De La Vergne Machine Company, a Corporation of New York. Filed Apr. 17, 1907. Serial No. 368,614.



1. A pump comprising a cylinder, a piston therein, the cylinder having a regulating-port located in the path of the delivery end of the piston so as to be closed by the advancing piston at an intermediate point of piston travel, and a regulating valve in control of the regulating-port, whereby the effective portion of the travel of the piston may be varied to vary the delivery of the pump.

2. A pump comprising a cylinder, a piston therein, the cylinder having a plurality of regulating-ports located at successively different points in the path of the delivery end of the piston so as to be successively closed by the advancing piston, and regulating means in control of the regulating-ports and arranged to successively open the regulating-ports in the order of the direction of the delivery movement of the piston and to successively close the regulating-ports in the reverse order, whereby the delivery of the pump may be varied by successive degrees between minimum and maximum.

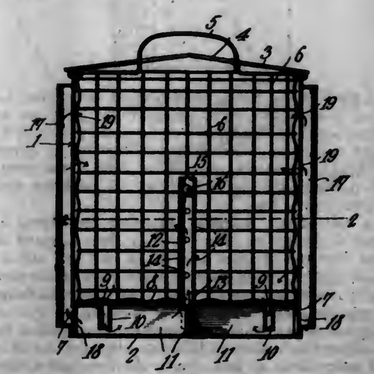
3. A pump comprising a cylinder, a piston therein, the cylinder having a regulating-port located in the path of the delivery end of the piston so as to be closed by the advancing piston at any intermediate point of piston travel, a regulating-valve in control of the regulating-port, and an automatic governor in control of the regulating-valve.

4. A pump comprising a cylinder, a piston therein, the cylinder having a plurality of regulating-ports located at successively different points in the path of the piston so as to be successively closed by the advancing piston, regulating means in control of the regulating-ports and actuatable to successively open the regulating-ports in the order of the delivery movement of the piston and to close the regulation-ports in the reverse order, and an automatic governor in control of the regulating means.

5. A pump comprising a cylinder, a piston therein, the cylinder having a plurality of regulating-ports located at successively different points in the path of the piston and arranged to be successively closed by the advancing piston, and regulating means in control of the regulating-ports and actuatable to open the regulating-ports successively in the order of the direction of the delivery movement of the piston and to close the regulating ports successively in the reverse order, whereby the delivery of the pump may be varied by successive degrees between minimum and maximum, the cylinder also having an unloading-port arranged so as to be closed by the piston in advance of the regulating-port, whereby the maximum delivery of the pump represents but a portion of the total travel of the piston.

[Claims 6 to 35 not printed in the Gazette.]

877,493. COMBINED COOKER AND WASHER. JAMES W. DUNFEE, Fremont, Ohio. Filed Apr. 24, 1907. Serial No. 370,088.



1. In a utensil of the character described, the combination with a suitable vessel having series of discharge openings in its walls, and flues communicating with said openings and leading from the lower portion of the vessel to the upper portion of a false bottom arranged transversely of the vessel, means for dividing the space below the false bottom into a series of separate compartments communicating with the respective flues, and a receptacle above the said bottom for the articles to be steamed or boiled.

2. In a utensil of the character described, the combination with a suitable vessel having vertically arranged flues communicating with the lower portion thereof and provided with discharge openings leading from said flues into the upper portion of the vessel, of means for dividing the upper and lower portions of the vessel, partitions dividing the lower portion thereof into separate compartments communicating independently with the respective flues, and a perforated receptacle adapted to fit into the upper portion of the vessel.

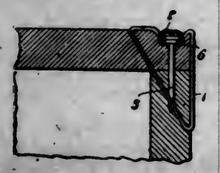
3. In a utensil of the character described, the combination with a suitable vessel having vertically extending flues leading from the lower portion thereof, and discharge openings in the upper walls of the vessel communicating with the said flues, of a false bottom supported in the vessel above the bottom thereof and having depending tubes arranged on its under side forming passages for conducting the water from the upper to the lower side of the false bottom, and partitions forming an individual compartment for each flue.

4. In a utensil of the character described, the combination with a suitable vessel having a series of vertically extending flues communicating with the upper and lower portions of the vessel, of means for separating the upper and lower portions of the vessel and having means for permitting a flow of water from the upper to the lower portion, and a partition dividing the lower portion of the vessel into a series of compartments one communicating independently with each flue.

5. In a utensil of the character described, the combination with a suitable vessel having a series of vertically extending flues communicating with the upper and lower portions of the vessel, of a false bottom extending transversely of the vessel and having openings for permitting flow of water from the upper to the lower portion of the vessel, and a series of partitions extending between the openings in said bottom and forming individual compartments for the said flues.

[Claims 6 to 12 not printed in the Gazette.]

877,494. BOX-SEAL. GEORGE F. EDGINGTON, Jeffersonville, Ind. Filed Mar. 28, 1907. Serial No. 365,125.



1. A seal of the character described embodying a strip adapted to coöperate with adjacent box sections, and a head composed of relatively soft material provided with a top and a parallel flange below it forming a circumferential groove adapted to receive the ends of the strip, and a part permanently associated with the head for securing it to a box or the like.

2. A seal of the character described embodying a nail adapted to be driven into a box, a strip adapted to cooperate with the adjacent sections of said box, and a sealing head embodying a reduced neck portion surrounding the nail, and a top and an axially compressible flange for receiving and incasing the ends of the strip.

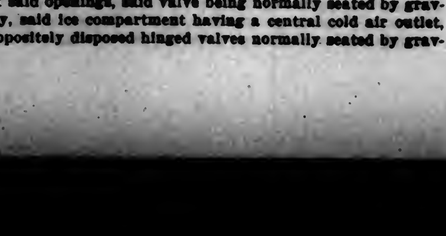
3. A seal of the character described embodying a flexible strip adapted to coöperate with adjacent sections of a box, a nail adapted to be driven into the box, and a head on the nail composed of relatively soft material comprising a flange, a top portion adapted to receive an impression, and a reduced neck portion connecting the flange and top portion and adapted to receive the ends of the said strip.

4. A seal of the character described embodying a nail having a relatively soft head thereon provided with a neck portion, and axially compressible portions united at the ends thereof, and a flexible strip adapted to coöperate with adjacent sections of the box and adapted to have its ends wrapped about the neck portion and between the compressible portions of the head.

5. A seal of the character described embodying a nail having a relatively soft head on its upper end, the latter being provided with a relatively large top and a circumferential flange spaced below it, and a narrow neck portion connecting the flange and top portion of the head, and a wire extending through a diagonal opening in the adjacent sections of a box corner, the ends of the wire being coiled about the said neck portion to form convolutions lying between the top and flange portions of the head, the latter being compressed to confine the convolutions of the wire between them.

[Claim 6 not printed in the Gazette.]

877,495. SPRING-PLANK SEAT FOR CAR-TRUCKS. GEORGE G. FLOYD, Granite, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Nov. 22, 1906. Serial No. 344,621.



1. In a railway car truck, the combination of a truck side frame, a spring plank, and a spring plank seat coöperating with said side frame, adapted to be fastened to said spring plank, and composed of two or more parts upon which said spring plank rests, substantially as described.

2. In a railway car truck, the combination of a truck side frame, a spring plank, and a spring plank seat adapted to be fastened to said spring plank and composed of two or more parts upon which said spring plank rests, said spring plank seat having one or more ribs co-acting with said side frame to prevent displacement of said seat, substantially as described.

3. In a railway car truck, the combination of a truck side frame, a spring plank, and a spring plank seat upon which said spring plank rests, said seat having one or more ribs co-acting with said side frame to prevent displacement of said seat, and also having one or more upstanding ribs or flanges, said spring plank being fastened to said seat and to said ribs or flanges, substantially as described.

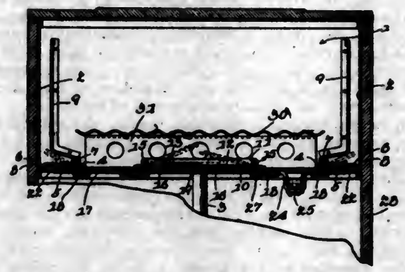
4. In a railway car truck, the combination of a truck side frame, a channel spring plank, and a spring plank seat upon which the web of said channel spring plank rests, said seat having one or more ribs co-acting with said side frame to prevent displacement of said seat, and also having a pair of upstanding ribs or flanges, the flanges of said channel spring plank being riveted to the upstanding ribs or flanges of said seat, substantially as described.

5. A spring plank seat for use in a car truck composed of a plurality of parts each of which has a portion adapted to overlap a part of the other, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

877,496. REFRIGERATOR. GUSTAV FRANK, Jefferson, Tex. Filed May 31, 1906. Serial No. 319,631.

1. The combination with the wall of a refrigerator and a door, said refrigerator having an upper ice compartment and a lower provision compartment; of deflectors disposed adjacent the sides of and within the ice compartment and forming warm air flues, each of said flues having an opening at the lower end thereof, a valve disposed to close each of said openings, said valve being normally seated by gravity, said ice compartment having a central cold air outlet, oppositely disposed hinged valves normally seated by gravity above the outlet to close the same, one of said valves being disposed to normally lap the other valve, a rock shaft journaled below the valves, arms at the ends thereof disposed to bear upon and open the valves in the warm air flues, a crank formed with the rock shaft and disposed to contact with the central valves to raise them, means detached from and operated by the closing of the door for actuating the shaft to open the valves, and means for preventing the flow of liquid from the bottom of the ice compartment into the openings.



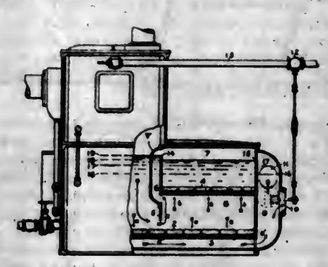
2. The combination with the walls of a refrigerator and a door; of an ice pan having a valve opening adjacent each end and an opening adjacent the center thereof, means upon the pan for preventing the flow of water through the openings from the pan, hinged valves detachably connected to the pan and normally closing the end openings, oppositely disposed hinged valves detachably connected to the pan and normally overlapping and closing the central opening, a rock shaft having integral means for simultaneously contacting with and raising the valves, a link connected to the rock shaft and adapted to be actuated by the closing of the door to open the valves, a guide for said link, and deflectors disposed within the pan and adjacent the ends thereof, said deflectors forming flues above the end openings.

3. The combination with the walls of a refrigerator and a door; of an ice pan, end deflectors therein forming end flues, said pan having end openings in the bottoms of the end flues, an opening adjacent the center of the pan and between the flues, means for preventing the flow of water from the pan and into the openings, hinged valves adapted to be seated by gravity upon the pan to close the end openings, oppositely disposed hinged valves normally overlapping and seated by gravity upon the pan to close the central opening, a rock shaft extending under and journaled upon the pan, cranks extending from the ends of the shaft and adapted to contact with and raise the end valves, a crank intermediate the ends of the shaft and adapted to contact with and raise the central valves, the corners of said crank being adapted to contact with the respective central valves at different distances from their hinges, a crank depending from the shaft, and a link pivotally connected thereto and adapted to be actuated by the closing of the door to rock the shaft and raise the valves.

877,497. APPARATUS FOR FEEDING, PURIFYING, AND REGULATING FEED-WATER. JOSEPH W. GAMBLE, Philadelphia, Pa., assignor to Joseph S. Lovering Wharton, William S. Hallowell, and John C. Jones, doing business under the firm-name of Harrison Safety Boiler Works, Philadelphia, Pa. Filed Oct. 3, 1906. Serial No. 337,224.

1. The combination of a heater; an outlet chamber; means in said outlet chamber for controlling the feed supply; a plurality of filters and a by-pass intermediate the heater and the outlet chamber, and means for bringing them successively into operation dependent upon the quantity of water in the outlet chamber, substantially as described.

2. The combination of a heater; a filter-bed; an outlet chamber beyond the filter-bed containing means for regulating feed supply dependent upon the water level; a supplementary filter-screen; a passage beyond the same communicating with the outlet chamber, the opening of which is above the normal water line in the outlet chamber, substantially as described.



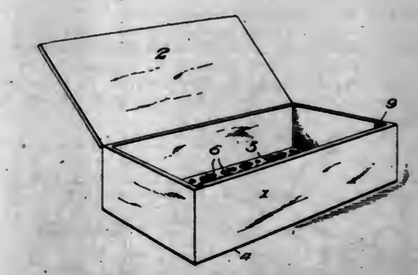
3. The combination of a heater; a filter-bed; an outlet chamber beyond the filter-bed; a supplementary filter-screen; a passage beyond the same communicating with the outlet chamber, the opening of which is above the normal water line in the outlet chamber; and a by-pass intermediate the heater and the outlet chamber, substantially as described.

4. The combination of a heater; a filter-bed; an outlet chamber beyond the filter-bed; a supplementary filter screen; a passage beyond the same communicating with the outlet chamber, the opening of which is above the normal water line in the outlet chamber, and a by-pass about the filter-bed and filter-screen opening above the opening of the passage beyond the filter-screen, substantially as described.

5. The combination of a heater a filter-bed and an outlet chamber; a passage in the latter opening beneath the filter-bed; a filter-screen above the filter-bed and a passage opening into the outlet chamber above the filter-screen, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

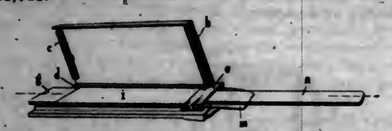
877,498. MOISTENER. JOSEPH P. GILMAN, Riceville, Iowa. Filed Aug. 24, 1907. Serial No. 389,965.



1. A device as described embracing a casing having a hinged cover, and an inner receptacle or tank containing an absorbent and provided with an upwardly extending filling tube with its upper end arranged at the upper edge of said casing, said tank having a foraminous top provided with upstanding studs or projections adapted to form a supporting surface for the objects to be moistened.

2. A device as described containing a casing having lateral wooden portions and a closure therefor, and an inner tank or receptacle having a foraminous upper surface, and an absorbent placed in said tank for delivering moisture through apertures formed by said foraminous top or upper surface of said tank, said tank also having an upwardly extending filling tube with its upper edge about flush with the corresponding edge of said casing.

877,499. DEVICE FOR SUCCESSIVELY EXPOSING SENSITIVE SHEETS. CARL P. GOERZ, Grunewald, near Berlin, Germany. Filed Nov. 3, 1905. Serial No. 285,748.



1. A device for successively exposing sensitive sheets comprising an exposing chamber having an open mouth and a package comprising sensitive sheets and an inclosing light-tight envelop, said envelop being adapted to be shifted with relation to the sensitive sheets contained therein in such a manner that one element of the package passes through the open mouth of the exposing chamber.

2. A device for successively exposing sensitive sheets comprising an exposing chamber having an open mouth and a package of sensitive sheets contained in a light-tight envelop, said package to be connected with the exposing chamber, the sensitive sheets being provided at opposite ends outside the envelop with unsensitive extensions and the elements of the package being adapted to be shifted with relation to each other in such a manner, that one element passes through the open mouth of the exposing chamber.

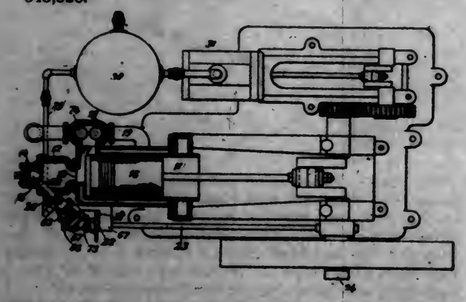
3. A device for successively exposing sensitive sheets comprising an exposing chamber having an open mouth and a package comprising sensitive sheets and an inclosing tight-light envelop forming one single compartment, each sensitive sheet being provided at least at one end with an extension extending outside the envelop, said envelop being adapted to be shifted with relation to the sensitive sheets contained therein in such a manner that one element of the package passes through the open mouth of the exposing chamber.

4. As a new article of manufacture, a package comprising one or more sensitive elements having tabs, and a light-tight envelop slidably mounted thereon.

5. As a new article of manufacture, a package comprising one or more sensitive elements each having a long tab on one end and a short tab on the other end, and a light-tight envelop normally surrounding the sensitive elements and adapted to be moved on to the long tab.

[Claims 6 to 12 not printed in the Gazette.]

877,500. INTERNAL-COMBUSTION ENGINE. ARTHUR H. GOLDINGHAM, New York, N. Y., assignor to De La Vergne Machine Company, New York, N. Y., a Corporation of New York. Filed Nov. 14, 1906. Serial No. 343,328.



1. In an internal combustion engine, the combination of a working cylinder, a piston therein, an air-inlet for the cylinder, a vaporiser communicating directly with the cylinder by a contracted passage always open, means for introducing fuel into the vaporiser during the first part of the suction stroke of the piston, and means for introducing air into the vaporiser substantially throughout the suction stroke of the piston.

2. In an internal combustion engine, the combination of a working cylinder, a piston therein, an air-inlet for the cylinder, a vaporiser communicating directly with the cylinder by a contracted passage always open, and means for introducing a mixture of fuel and air into the vaporizer during the first part of the suction stroke of the piston and for continuing the introduction of air substantially throughout the suction stroke.

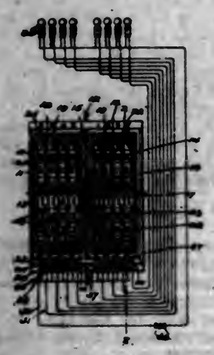
3. In an internal combustion engine, the combination of a working cylinder, a piston in the cylinder, an air inlet valve for the cylinder, means operated by a moving part of the engine for holding the valve open during the suction stroke of the piston, a vaporizer communicating directly with the cylinder, a combined fuel and air inlet valve for the vaporizer, and means operated by a moving part of the engine for holding the last named valve open during substantially the whole suction stroke of the piston.

4. In an internal combustion engine, the combination of a working cylinder, a piston in the cylinder, an air-inlet valve for the cylinder, means operated by a moving part of the engine for holding the valve open during the suction stroke of the piston, a vaporizer communicating directly with the cylinder by a contracted passage always open, a spraying nozzle opening into the vaporizer, means for supplying fuel to the nozzle, means for supplying air under pressure to the nozzle, a valve controlling the nozzle, and means operated by a moving part of the engine for holding the last named valve open during the suction stroke of the piston.

5. In an internal combustion engine, the combination of a working cylinder, a piston in the cylinder, an air-inlet valve for the cylinder, means operated by a moving part of the engine for holding the valve open during the suction stroke of the piston, a vaporizer communicating directly with the cylinder by a contracted passage always open, a spraying nozzle opening into the vaporizer, means for supplying fuel to the nozzle during a portion of the suction stroke of the piston, means for supplying air under continuous pressure to the nozzle, a valve controlling the nozzle, and means operated by a moving part o fthe engine for holding the last named valve open during the suction stroke of the piston.

[Claims 6 to 8 not printed in the Gazette.]

877,501. ELECTRIC ALARM ATTACHMENT FOR CLOCKS. CHARLES GOLDSMITH, Denver, Colo., assignor of one-fifth to Cesare Pinelli, Denver Colo. Filed Jan. 15, 1907. Serial No. 352,472.



1. In a device of the class described, a rotating cylinder, electrical contacts adjacent the cylinder, a pointer mounted and movable circumferentially upon the periphery of the cylinder, and capable of engaging the contacts, and a signal in electrical connection with the contacts.

2. In a device of the class described, a rotatable cylinder, spaced electric contacts adjacent the periphery of the cylinder, diametrically disposed connected pointers carried by and circumferentially movable in unison upon the cylinder, and capable of forming connection between the contacts, and a signal in electrical connection with the contacts.

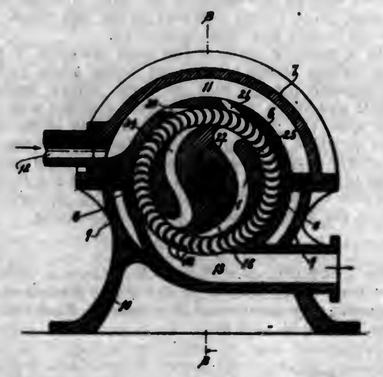
3. In a device of the class described, a rotatable cylinder, electrical contacts adjacent the cylinder, means carried by and movable circumferentially upon the periphery of the cylinder and capable of connecting the contacts, a signal for electrical connection with the contacts, and means to manually connect the contacts.

4. In a device of the class described, a rotatable cylinder, spaced contacts disposed adjacent the cylinder, a pointer carried and movable circumferentially upon the periphery of the cylinder and capable of forming connection between the contacts, a signal in electrical connection with the contacts, and means to manually move one contact out of the path of engagement with the pointer.

5. In a device of the class described, a rotatable cylinder, spaced electrical contacts disposed adjacent the periphery of the cylinder, a pointer carried by and circumferentially adjustable upon the periphery of the cylinder, and capable of forming connection between the contacts, a signal in electrical connection with the contacts, means to make manual connection between the contacts, and means manually operated to move one of the contacts out of the path of engagement with the connecting means.

[Claims 6 to 13 not printed in the Gazette.]

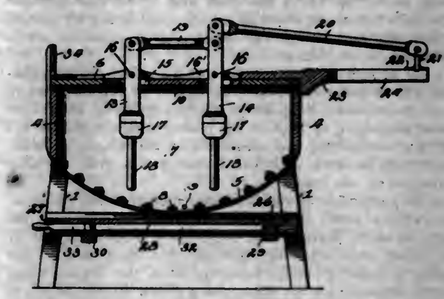
877,502. TURBINE-ENGINE. LOUIS HACHENBERG, New York, N. Y. Filed June 8, 1906. Serial No. 320,871.



1. A turbine engine comprising a rotary piston having an annular series of vanes, a motive fluid supply chamber having one or more nozzles arranged to supply the motive fluid from the chamber to the outer sides of the piston vanes at one portion of the piston, a motive fluid exhaust chamber in communication with the outer sides of the vanes at another portion of the piston, a stationary section filling the space inclosed by the said vanes and having one or more passages therethrough leading from the inner sides of the vanes at that portion adjacent to the motive fluid supply chamber, to the inner sides of the vanes at that portion adjacent to the exhaust chamber whereby the motive fluid is caused to impinge upon the vanes twice during one revolution of the piston.

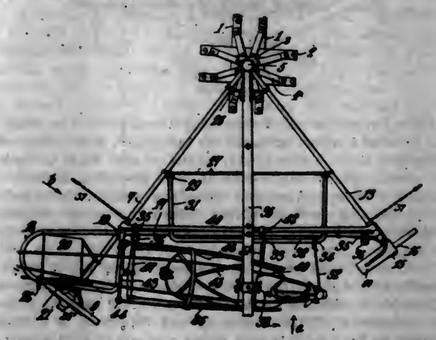
2. A turbine engine comprising a rotary piston having annular series of vanes upon its opposite sides, a motive fluid supply chamber having nozzles arranged to supply the motive fluid from the motive fluid chamber to the outer sides of the vanes at one portion of the piston, a motive fluid exhaust chamber communicating with the outer sides of the vanes at another portion of the piston, stationary sections filling the spaces inclosed by said annular series of vanes and having passages therethrough leading from the inner sides of the annular series of vanes at that portion adjacent to the motive fluid supply chamber to the inner sides of the piston at that portion adjacent to the exhaust chamber, whereby the motive fluid is caused to impinge upon the vanes twice during one revolution of the piston.

877,503. WASHING-MACHINE. JOHN M. HATFIELD and OMER BASS, Yarrow, Mo., assignors of one-third to said Hatfield, one-third to Charles Elsea, Connelsville, Mo., and one-third to James D. Hatfield, Yarrow, Mo. Filed June 23, 1906. Serial No. 323,103.



A washing machine comprising a supporting frame with a washing chamber mounted thereon provided with a curved bottom, ribs on said bottom, an opening in the top of said chamber having a cover for closing the same which is provided with spaced apart cleats on its upper surface, levers mounted in openings of the cover and arranged at suitable distances apart and pivoted to said cleats and projecting above the cover and into the chamber, said levers being provided on their lower ends with transverse heads having a plurality of fingers depending therefrom, a link pivoted to the upper ends of the levers, a rod pivoted to the upper end of one of said levers and extending rearwardly beyond the chamber, a right angular arm secured to one end of the chamber and to the top of the same and having a bifurcated end, a crank shaft pivoted to bearings on said bifurcated end, said crank arm being pivoted to the outer end of said rod and said rod serving to operate between the bifurcated end of the arm to permit of a swinging movement of said levers, substantially as specified.

877,504. APPARATUS FOR BREAKING OR TRAINING ANIMALS. LOREN HOOVER, Narka, Kans. Filed Apr. 26, 1907. Serial No. 370,427.



1. In apparatus of the character described the combination with a post; of a frame disposed to move in a circle therearound, supporting wheels carried by the frame, a sweep above and movable with the frame, separate means for connecting an animal to the frame and sweep, independently movable shafts connected to the frame, and separate means upon the frame and sweep for supporting the shaft out of operative positions.

2. In apparatus of the character described the combina-

tion with a post; of a frame connected thereto and mounted to move therearound in a circle, supporting wheels carried by the frame, a yoke movably connected to the frame, a sweep, and separate means for connecting an animal to the yoke and sweep.

3. In apparatus of the character described the combination with a post; of a frame connected thereto and disposed to travel therearound, supporting wheels carried by the frame, a yoke movably connected to the frame, a sweep extending above the yoke and frame and movable with said frame, separate means for connecting an animal to the yoke and sweep, and independently movable shafts connected to the frame.

4. In apparatus of the character described the combination with a post; of a frame connected to and disposed to move therearound, supporting wheels carried by the frame, a seat supported in rear of the frame, means adjacent the seat for controlling the movement of the frame, a sweep above and movable with the frame, and a yoke movably connected to the frame.

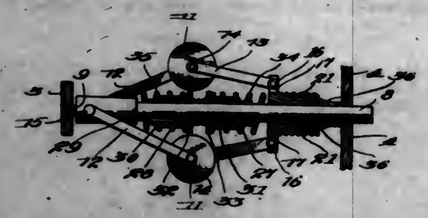
5. In apparatus of the character described the combination with a post; of a frame connected thereto and disposed to move therearound, supporting wheels carried by the frame, rope-receiving eyes movably connected to the frame, a yoke movably mounted upon the frame, rings loosely mounted on the yoke, and a sweep supported above the yoke and movable with the frame.

877,505. SOLDERING COMPOUND. ORVAL C. HOOVER, Johnstown, Ohio. Filed Apr. 18, 1907. Serial No. 368,965.

1. A soldering compound of borax, rosin, zinc, muriatic acid, alcohol and glycerin.

2. A soldering compound consisting of a solution of zinc in muriatic acid, neutralized by the addition of borax, rosin, and sal ammoniac and containing also cochineal, alcohol, and glycerin.

877,506. SPEED-METER. RAGNAR JOHNSON, Worcester, Mass., assignor to Miller Speed Meter Company, New York, N. Y., a Corporation of New York. Filed Dec. 22, 1906. Serial No. 349,153.

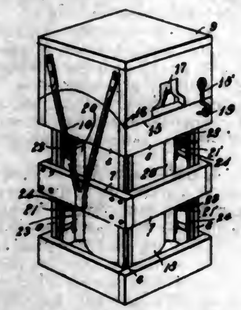


1. In an apparatus of the character described, a shaft, a collar and a sleeve movable on said shaft, a plurality of adjustable nuts on said sleeve, means on said shaft to limit the movement of the sleeve in one direction, a spring adapted to bear against said collar and one of said adjustable nuts and another spring adapted to bear against another of said adjustable nuts and the limiting means on the shaft.

2. In an apparatus of the character described, a shaft, a collar and a sleeve movable on said shaft, a plurality of adjustable nuts on said sleeve, means on said shaft to limit the movement of the sleeve in one direction, a spring adapted to bear against said collar and one of said adjustable nuts and another spring of lesser power than the former adapted to bear against another of said adjustable nuts and the limiting means on the shaft.

3. In an apparatus of the character described, a shaft, a collar and an exteriorly screw threaded sleeve movable on said shaft, nuts on said sleeve adjustable towards and away from each other, means on said shaft to limit the movement of the sleeve in one direction, a spring adapted to bear against said collar and one of said adjustable nuts and another spring of lesser power than the former adapted to bear against the other of said adjustable nuts and the limiting means on the shaft.

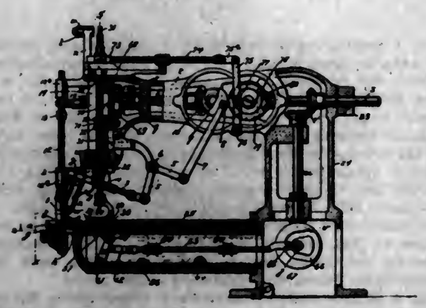
877,507. JAR-SUPPORT. ARTHUR M. KATZENBACH, Greenup, Ill. Filed Mar. 15, 1906. Serial No. 306,280.



1. A shipping crate comprising a body portion and a cover, the latter being provided with a flat top, carrying arms connected to the cover at one end, and pivoted at the opposite end to the body of the crate, the top of the body portion, and the lower face of the cover being arranged on curved lines struck from the axis of the pivot to permit opening movement of the cover in either direction, said cover having openings in its side walls, and means for locking said cover in position.

2. In a shipping crate of the class described, a body portion having vertically arranged corner posts, packing strips disposed parallel with the posts, alining plates on the posts and strips, said plates being provided with projecting eyes, and the sides of the posts and strips being further provided with eyes, and cushioning springs, the ends of which are passed through the eyes, said springs serving to support the packing strips above the level of the bottom of the crate and tending, also, to force the strips in the direction of the center of the crate.

877,508. SEWING-MACHINE. HERMANN A. KLEMM, New York, N. Y., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Dec. 30, 1904. Serial No. 338,886.



1. In a sewing machine, the combination with the frame comprising a work-supporting horn, an overhanging bracket-arm and a work-supporting member in advance of said work-supporting horn having an unobstructed vertical work-receiving opening in line with the central portion and throughout the depth of said work-supporting horn, of work-advancing mechanism carried by said work-supporting member and adapted for the suspension and propulsion of the work through said opening toward said horn, feeding mechanism carried by said horn and adapted to propel the work upon and longitudinally of said horn, and two sets of stitch-forming mechanism acting in conjunction respectively with said work-advancing and feeding mechanism.

2. In a sewing machine, the combination with independent stitch-forming mechanism adapted respectively for uniting and covering the overlapped margins of layers of fabric, of means for supporting and advancing to said uniting stitch-forming mechanism said layers of fabric with both the margins and body portions of the latter in face-to-face contact relation, and including initially acting opposed propelling means moving in unison and engaging the opposite faces of the work so disposed adjacent the initial stitching line, and means intermediate the stitch-forming and work-advancing mechanisms for turning outwardly upon opposite sides of and above the line of stitching the marginal portions of the fabrics so as to overlap the adjacent body portions thereof.

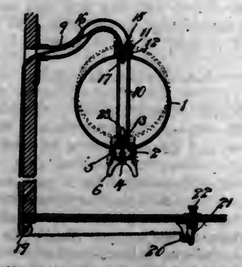
3. In a sewing machine, the combination with independent stitch-forming mechanisms, comprising reciprocating thread-carrying needles having working positions in relative angular disposition and adapted respectively for uniting and covering the overlapped margins of layers of fabric, of means engaging and traveling with both faces of those portions of the fabric adjacent and at one side of the stitch-line and adapted to support and advance to said uniting stitch-forming mechanism said layers of fabric face to face with the margins including the stitch-line wholly exposed for passage of the needle, and means acting upon the opposite faces of the fabric intermediate the stitch-forming and work-advancing mechanisms for opening out the margins and body of the fabric adjacent the uniting seam preparatory to the action of the covering stitch-forming mechanism.

4. In a sewing machine, the combination with two spaced feeding devices, having work-engaging faces in relative angular disposition and a common direction of feed, and independent operating means for said feeding devices, with means for adjusting their relative feeding action, of independent stitch-forming mechanisms comprising reciprocating thread-carrying needles having angularly disposed working positions and adapted for producing seams of different character, the one overlying the other and arranged to operate each in conjunction with a different one of said feeding devices.

5. In a sewing machine, the combination with a frame comprising a work-supporting member and an overhanging bracket-arm, and independent stitch-forming mechanisms mounted in said frame and adapted respectively for uniting and covering the overlapping margins of layers of fabric, of two spaced feeding devices arranged in alinement and having a common direction of feed and each being adapted to coöperate with one of said stitch-forming mechanisms, the forward feeding device being sustained by the bracket-arm and the other feeding device by the work-supporting member of the frame, and means for actuating said feeding devices.

[Claims 6 to 12 not printed in the Gazette.]

877,509. LIQUID-DISPENSING VESSEL. LEWIS G. LANGSTAFF, New York, N. Y. Filed Dec. 7, 1906. Serial No. 346 709.



1. A vertically movable liquid containing vessel having a dispensing chamber and discharge port therefor, a stationary piston and a discharge port valve carried by the piston, said valve being arranged to support the weight of the vessel.

2. A vertically movable liquid containing vessel having a dispensing chamber and discharge port therefor, a stationary piston and a discharge port valve carried by the piston movable laterally with respect to the piston, said valve being arranged to support the weight of the vessel.

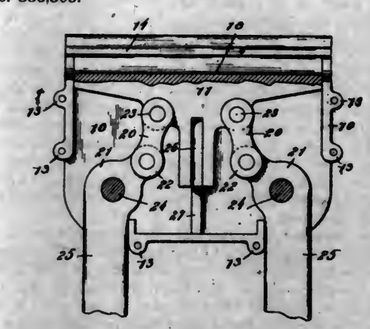
3. A vertically movable liquid containing vessel having a dispensing chamber and discharge port therefor, a stationary piston having a head arranged to enter said dispensing chamber, said head being movable laterally with respect to the piston and a discharge port valve carried by the piston.

4. A vertically movable liquid containing vessel having a dispensing chamber and discharge port therefor, a rigidly fixed piston having a laterally movable head arranged to enter said dispensing chamber, and a discharge port valve carried by the piston, said valve being arranged to support the weight of the vessel.

5. A vertically movable liquid containing vessel having a dispensing chamber and discharge port therefor, a stationary piston having a head arranged to enter said dispensing chamber and a discharge port valve carried by the piston, said head and valve being movable laterally with respect to the piston.

[Claims 6 and 7 not printed in the Gazette.]

877,510. TROLLEY-EAR CLENCHER. ERNEST O. MARSH, Seattle, Wash. Filed Sept. 27, 1906. Serial No. 336,505.



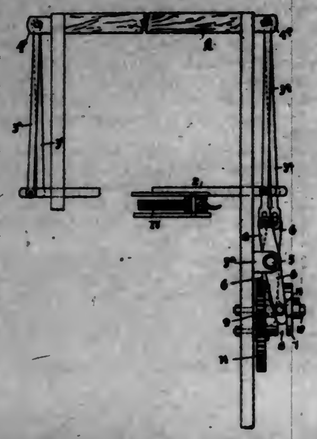
1. A trolley-ear clencher comprising a casing open at the top and the sides of its upper edges formed as clamps to engage the sides of the ear astride of the wire and hold the same rigidly, a movable clencher supported and guided by the casing and having a concave upper edge, and means connected with the casing for moving the clencher upward against the edges of the ear held by the clamp and close or crimp the same closely around the wire.

2. A trolley-ear clencher comprising a casing open at the top and the sides of its upper edges formed as clamps to engage the sides of the ear astride of the wire and hold the same rigidly, a movable clencher supported and guided by the casing and having a concave upper edge, and toggle-levers pivoted on the casing and clencher and means for operating the said toggle-levers, for moving the clencher upward against the edges of the ear held by the clamp and close or crimp the same closely around the wire.

877,511. NARROW-WARE LOOM. CHARLES H. MAXSTED, Oakland, Windermere, England. Filed Aug. 28, 1906. Serial No. 332,554.

1. In looms for weaving tapes, ribbons and other small wares having vertically actuated shuttles, the improved beat up mechanism consisting of a fixed breast beam for the loom, a bar mounted on such breast beam, means for

reciprocating such bar laterally across the breast beam, spindles carried on the bar, an open comb, carriers for such combs mounted on the spindles, a slotted foot formed on the comb carrier, a spindle on the fixed breast beam of the loom engaging with the slotted foot substantially as described.



2. In combination in looms of the indicated nature, a driving shaft, a rock shaft and means for rocking such shaft from the driving shaft, a fixed breast beam, a bar mounted on such breast beam, a connecting rod attached to the bar, and to a lever on the rock shaft to reciprocate the bar laterally across the fixed breast beam, means for guiding the bar, vertical spindles attached to the bar, an open comb, carriers for such combs mounted on the vertical spindles, a slotted foot formed on the comb carrier, a spindle on the fixed breast beam entering the slot in the foot, a bar o disposed beneath the comb carriers and means for raising and lowering such bar to impart a vertical reciprocatory motion to the comb carriers substantially as described.

3. The means for slackening or putting under tension the metallic tapes of the harness consisting of a slidable frame to which the ends of the tapes are secured, a cross head adjustably carried by the frame and a cam lever pivoted to each cross head adapted to set upon a fixed rail of the harness frame providing a bearing for the slidable frame, substantially as described.

4. In combination the harness 17, frames for such harness, links connected to the ends of the harness frames and to the upper sides of the loom, pivoted levers connected to such links, a grooved cam engaging with such pivoted levers, means for slackening or putting under tension the metallic tapes of the harness consisting of a slidable frame to which the ends of the tapes are secured, a cross head adjustably carried by the frame and a cam lever pivoted to such cross head adapted to set upon a fixed rail of the harness frame providing a bearing for the slidable frame, substantially as described.

5. In combination in looms of the indicated nature, a driving shaft, a rock shaft and means for rocking such shaft from the driving shaft, a fixed breast beam, a bar mounted on such breast beam, a connecting rod attached to the bar and to a lever on the rock shaft to reciprocate the bar laterally across the fixed breast beam, means for guiding the bar, vertical spindles attached to the bar, an open comb, carriers for such combs mounted on the vertical spindles, a slotted foot formed on the comb carrier, a spindle on the fixed breast beam entering the slot in the foot, a bar o disposed beneath the comb carriers and means for raising and lowering such bar to impart a vertical reciprocatory motion to the comb carriers, the harness 17, frames for such harness, means for suspending such harness frames, pivoted levers connected to the harness frames, means for oscillating such levers and connected harness frames, from the driving shaft and means for slackening or putting under tension the metallic tapes of the harness substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

877,512. ANTISLIPPING DEVICE FOR TIRES. WILLIAM T. MAXWELL, Pittsburg, Pa., assignor of one-half to George W. Eberhardt, Pittsburg, Pa. Filed June 25, 1906. Serial No. 323,264.



1. An anti-slipping device for tires comprising in combination, a series of securing means on the rim arranged alternately on opposite sides and in staggered relation, a chain member connected to each of said securing means and extending outwardly beyond the rim and ending in a hook, and a continuous chain extending in zigzag manner over the tire face and having links thereof engaging said several hooks.

2. An anti-slipping device for tires comprising in combination, a series of securing means on the rim arranged alternately and in staggered relation on opposite sides thereof, a chain member connected to each of said securing means and extending outwardly beyond the rim and ending in a hook, the hook on one of said chain members being double, and a continuous chain extending in zigzag manner over the tire face and having its ends attached to the two members of the double hook and other links attached to the hooks of the other chain members.

3. An anti-slipping device for tires comprising in combination, a series of securing means on the rim arranged alternately on opposite sides thereof and in staggered relation, a chain member connected to each of said securing means and extending outwardly beyond the rim and ending in a hook, and a heavier continuous chain extending in zigzag manner over the tire face and having links thereof engaging said several hooks.

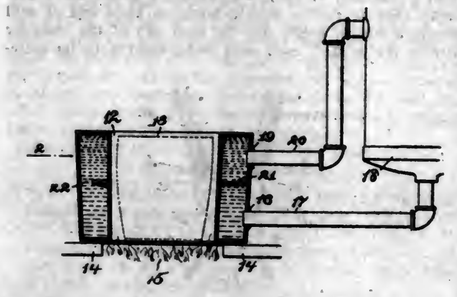
4. An anti-slipping device for tires comprising in combination, a series of securing means on the rim arranged alternately on opposite sides and in staggered relation, a chain member connected to each of said means and extending outwardly beyond the rim, and a continuous chain extending in a zigzag course over the tire face and secured to said chain members alternately on opposite sides of the tread.

5. An anti-slipping device for tires comprising in combination, a series of bolts passing through the felly, a chain member connected to each of said bolts but located alternately on opposite sides of the rim and extending outwardly beyond the rim, and a continuous chain extending in a zigzag course over the tire face and secured to said chain members alternately on opposite sides of the tread.

[Claim 6 not printed in the Gazette.]

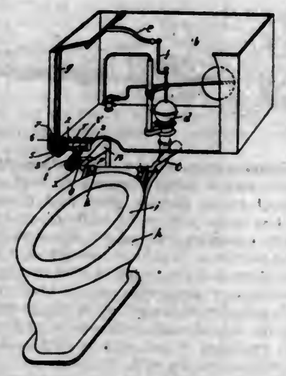
877,513. DEVICE FOR HEATING CRUCIBLES AND HOT WATER. EDGAR C. METZ, Newark, N. J., assignor to John Kehoe and Edgar C. Metz, Newark, N. J. Filed May 11, 1907. Serial No. 373,159.

A holder for crucibles comprising a body-portion adapted to receive a crucible and being of approximately similar shape on the inside, the crucible holder being hollow to form a water chamber, an annular diaphragm in the holder with an opening therein, in combination with a boiler and a pair of pipes leading therefrom to the holder, the pipes leading into the holder on opposite sides of the diaphragm and on the side of the chamber opposite the opening in the diaphragm, whereby the water is caused to pass



around on both sides of the hollow portion of the holder on its way to the opening, and also on its return.

877,514. WATER-CLOSET. JOHN A. MCAVITY, St. John, New Brunswick, Canada. Filed Jan. 31, 1905. Serial No. 243,576.



1. The combination with a water closet comprising a bowl, a seat, a tank for containing water with which to flush the closet, a flush pipe leading from the tank to the bowl and valvular mechanism for controlling such pipe of a hinge-lever pivotally connected to the top of the bowl and having one end rigidly secured to the seat and its opposite end weighted and provided with a laterally projecting member, means operatively connected to the valvular mechanism and constructed and arranged to have a portion thereof intersect the path of the said member.

2. The combination with a water closet comprising a bowl, a seat, a low tank adjacent to the seat, a flush pipe leading from the tank to the bowl and valvular mechanism for controlling such pipe, of a hinge-lever pivotally connected to the top of the bowl, and having one end rigidly secured to the seat and its opposite end weighted and provided with a laterally projecting member, means operatively connected to the valvular mechanism and constructed and arranged to have a portion thereof intersect the path of the said member.

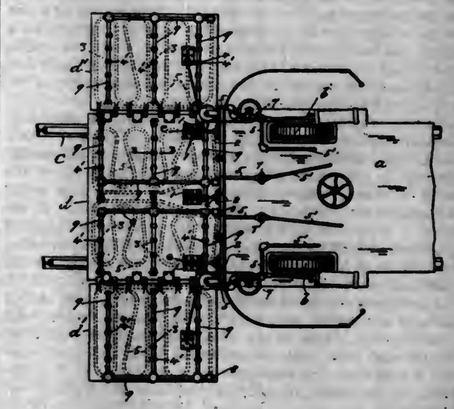
3. The combination with a water-closet seat, means whereby the same in automatically raised and flushing mechanism of a pair of lever arms having a common pivot point, means operatively connecting such lever arms together to move in unison, a device carried by one of the said lever arms and adapted to effect a connection between the seat and the last mentioned lever arms upon the movement of the seat in one direction only, and means operatively connecting the other arm to the flushing mechanism.

4. The combination with the seat of a water-closet and flushing mechanism including valvular mechanism, of a weighted hinge lever pivotally connected to the bowl and adapted to automatically raise the seat and yieldingly retain the same in its raised position, a pair of lever arms having a common pivot point upon a stationary part of the water closet, means operatively connecting the lever arms together to move in unison one of such arms being adjustable towards and from the other, a pawl carried by one of such arms in position to intersect the path of the hinge lever, such pawl being constructed to yield in one direction, and means preventing the yielding of such pawl in the opposite direction, and means operatively connecting the other arm to the valvular mechanism.

5. The combination with a water-closet comprising a bowl, a seat, a tank, a flush pipe leading from the tank to the bowl and valvular mechanism for controlling such pipe, of a weighted hinge lever pivotally connected to the bowl and adapted to automatically raise the seat and yieldingly retain the same in its raised position, a pair of lever arms having a common pivot point upon a stationary part of the water closet, means operatively connecting such lever arms together to move in unison, a pawl carried by one of such arms in position to intersect the path of the hinge lever, such pawl being constructed to yield in one direction and means preventing the yielding of such pawl in the opposite direction, and means operatively connecting the other arm to the valvular mechanism.

[Claims 6 to 9 not printed in the Gazette.]

877,515. VEGETATION-DESTROYER. WILLIAM R. MCKEEN, Jr., Omaha, Nebr., and FRANK S. BARKS, St. Louis, Mo., assignors to Railroad Weed Burner Company, St. Louis, Mo., a Corporation of Delaware. Filed Nov. 18, 1907. Serial No. 402,755.



1. In a vegetation-destroyer of the character described, the combination with a frame or vehicle adapted to travel along a railroad track, of a casing or deflector adjustably secured to the frame over, and between the rails of the track, a receptacle within the casing adapted to contain liquid fuel, means for supplying the receptacle with the said fuel from a suitable reservoir carried by the frame, a burner tube projecting through the top wall of, and into the casing adjacent to the receptacle, and having its inlet and outlet on the outside and inside respectively, of the casing, a pipe on the outside of the casing adjacent to the said inlet and communicable with the receptacle, and a nipple on the pipe opening therefrom into the said tube, substantially as described and for the purpose set forth.

2. In a vegetation destroyer of the character described, the combination with a frame or vehicle adapted to travel

along a railroad track, of a casing or deflector adjustably secured to the frame over, and between the rails of the track, a receptacle within the casing adapted to contain liquid fuel, means for supplying the receptacle with the said fuel from a suitable reservoir carried by the frame, a burner tube projecting through the top wall of, and into the casing adjacent to the receptacle, and having its inlet and outlet on the outside and inside respectively, of the casing, a pipe on the outside of the casing adjacent to the said inlet and communicable with the receptacle, a nipple on the pipe opening therefrom into the said tube, and a packing of permeable material between the said reservoir and the outlet of the nipple, substantially as described and for the purpose set forth.

3. In a vegetation-destroyer of the character described, the combination with a frame or vehicle adapted to travel along a railroad track, of a casing or deflector adjustably secured to the frame over, and between the rails of the track, and open at the bottom opposite to the ground between the said rails, a receptacle within the casing adapted to contain liquid fuel, means fo supplying the receptacle with the said fuel from a suitable reservoir carried by the frame, a burner tube projecting through the top of, and into the casing adjacent to the receptacle, and having its inlet and outlet on the outside and inside respectively, of the casing, a pipe on the outside of the casing adjacent to the said inlet and communicable with the receptacle, and a nipple on the pipe opening therefrom into the said tube, substantially as described and for the purpose set forth.

4. In a vegetation-destroyer of the character described, the combination with a frame or vehicle adapted to travel along a railroad track, of a casing or deflector adjustably secured to the frame over, and between the rails of the track, and open at the bottom opposite to the ground between the said rails, a receptacle within the casing adapted to contain liquid fuel, means for supplying the receptacle with the said fuel from a suitable reservoir carried by the frame, a burner tube projecting through the top wall of, and into the casing adjacent to the receptacle, and having its inlet and outlet on the outside and inside respectively, of the casing, a pipe on the outside of the casing adjacent to the said inlet and communicable with the receptacle, a nipple on the pipe opening therefrom into the said tube, and a packing of permeable material between the said reservoir and the outlet of the nipple, substantially as described and for the purpose set forth.

5. In a vegetation-destroyer of the character described, the combination with a frame or vehicle adapted to travel along a railroad track, of a casing or deflector adjustably secured to the frame over, and between the rails of the track, a casing hinged to and radially adjustable about the first-named casing over the ground at the side of the track, a receptacle within each of the said casings adapted to contain liquid fuel, means for supplying the receptacles with the said fuel from a suitable reservoir carried by the frame, a burner tube projecting through the top wall of, and into each casing adjacent to the receptacle, and having its inlet and outlet on the outside and inside respectively, of the casing, a pipe on the outside of the casing adjacent to the said inlet and communicable with the receptacle, and a nipple on the pipe opening therefrom into the said tube, substantially as described and for the purpose set forth.

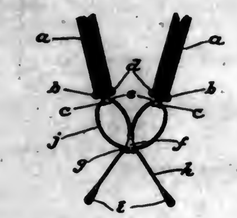
[Claims 6 to 9 not printed in the Gazette.]

877,516. SUSPENDERS. WILLIAM R. OPPENHEIMER, Philadelphia, Pa. Filed Apr. 11, 1907. Serial No. 367,497.

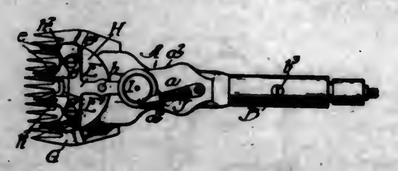
1. In suspenders in combination, shoulder straps, orificed projections therefrom, a holder for a garment securing device, a cord, the ends of which are secured to said holder between the orificed projections, said cord passing through the orifices in the shoulder strap projections.

2. In suspenders, in combination, shoulder straps, orificed projections hinged thereto, a holder for a garment securing device, a cord, the ends of which are secured to said holder, contiguous to each other, said cord passing through the orifices in the shoulder strap projections and a metallic looped garment securing device secured to said holder.

3. In suspenders, in combination, shoulder straps, orificed projections at each end thereof, a holder for a garment securing device corresponding to each end of said shoulder straps, cords, one for each end of the shoulder straps, the ends of each cord being secured to its corresponding holder intermediate of the corresponding orificed projections, and each cord passing through the orifices in the corresponding shoulder strap projections.



877,517. SHEARING-MACHINE. CHESTER M. PALMER, Aurora, Ill. Filed Sept. 4, 1906. Serial No. 333,120.



1. In a shearing machine, the combination with a casing, a guard-plate and a cutter movable on said guard-plate, of a vibratory cutter lever, a pivot post having rotative bearing in the upper and lower walls of said casing and non-rotatively engaging between its ends said lever, means for applying tension to said lever through said post, means whereby the lever and the cutter carried thereby may have a slight rocking movement with respect to the post to permit uniform pressure of the cutter on the guard-plate, and means whereby a fixed angle between the post and lever is maintained, including a flat bearing surface on the post which has sliding bearing with the lever.

2. In a shearing machine, the combination with a casing, a guard-plate and a cutter movable on the guard-plate, of a vibratory lever for operating the cutter, a post extending through an aperture in said lever and having rotative bearing in the upper and lower walls of the casing, means for vibrating said lever, a tension device acting through the post on the vibratory lever for pressing the cutter against the guard-plate, means for effecting even pressure of the cutter on the guard-plate, and means for maintaining the post at a fixed angle to said lever, including a flat surface on the post engaging a complemental surface on the lever.

3. In a shearing machine, the combination with a casing, a guard-plate and a cutter movable on the guard-plate, of a vibratory cutter lever, a pivot post having rotative bearing at its ends in the casing and engaging between its ends said lever, and means for applying tension to said lever through said post, said post having an oscillating and sliding engagement with the lever at vertically separated points, for the purpose set forth.

4. In a shearing machine, the combination with a casing, a guard-plate, and a cutter movable on the guard-plate, of a vibratory lever carrying at its front end said cutter and free from bearing contact at its rear end with the casing, a pivot post having bearing in the upper and lower walls of the casing and engaging between its ends said lever, means for applying tension to the lever through said post, and means whereby a fixed angle between the post and the lever is maintained including a flat surface on the post engaging a complemental surface on the lever.

5. In a shearing machine, the combination with a casing, a guard-plate, and a cutter movable on the guard-plate, of a vibratory lever operating said cutter, a post extending through an aperture intermediate the ends of the lever, and having bearing in the upper and lower walls of the casing, and a tension device acting through said post to press the cutter on said guard-plate, said post being provided with two vertically separated bearing surfaces or shoulders, one made flat and facing forwardly, and the other spherical and facing downwardly adapted to engage complemental bearing surfaces on said lever.

[Claims 6 to 12 not printed in the Gazette.]

877,518. PROCESS OF PRODUCING ALLOYS OR MIXTURES OF METALS WITH PURIFYING OR SEASONING ELEMENTS. AUGUSTE J. ROSSI, New York, N. Y., assignor to Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Mar. 22, 1907. Serial No. 363,958.

1. The process of producing alloys, or mixtures of titanium with other metal having higher specific gravity and lower melting point, which consists in superimposing, and maintaining during fusion on the surface of the bath of said titanium and other metal a non-metallic molten covering having lower specific gravity and heat conductivity than said titanium.

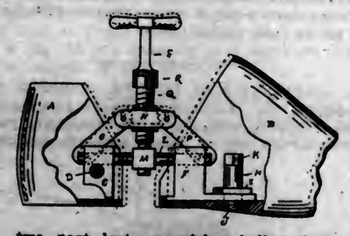
2. The process of producing alloys, or mixtures of titanium with other metal having higher specific gravity and lower melting point, which consists in superimposing, and maintaining during fusion on the surface of the bath of said titanium and other metal a covering of molten slag.

3. The process of producing alloys, or mixtures of titanium with other metal having higher specific gravity and lower melting point, which consists in superimposing, and maintaining during fusion on the surface of the bath of said titanium and other metal a covering of molten slag comprising an oxid of titanium.

4. The process of producing alloys, or mixtures of titanium with other metal having higher specific gravity and lower melting point, which consists in superimposing, and maintaining during fusion on the surface of the bath of said titanium and other metal a covering of blast furnace slag.

5. The process of producing alloys, or mixtures of titanium with other metal having higher specific gravity and lower melting point, which consists in superimposing, and maintaining during fusion on the surface of the bath of said titanium and other metal a covering of blast furnace slag to which has been added oxid of titanium.

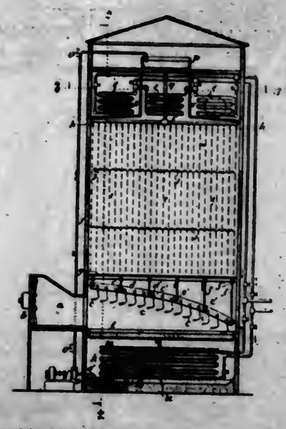
877,519. REPAIR-LAST. DANIEL ROUNDS and CLARENCE E. COOK, Portland, Me. Filed Apr. 15, 1907. Serial No. 368,281.



1. A two part last comprising hollow heel part, a block pivotally mounted entirely within said hollow part, a hollow toe part having a bearing block rigidly mounted entirely within said hollow part, parallel rods slidably mounted in said bearing blocks, a toggle connecting said bearing blocks and means for operating said toggle.

2. A two part last comprising a hollow heel part having a bearing block pivotally mounted entirely within said hollow heel part, a hollow toe part provided with a bearing block rigidly mounted entirely within said hollow toe part, parallel rods slidably mounted in said bearing blocks above the bottom of said last parts, a strap connecting said parallel rods, a toggle connecting said bearing blocks and a toggle operating bolt mounted in said toggle and said strap.

877,520. FLUID-COOLING APPARATUS. PAUL SCHMALTZ, New York, N. Y., assignor to The De La Vergne Machine Company, New York, N. Y., a Corporation of New York. Filed Nov. 18, 1905. Serial No. 287,949.



1. The combination of a single air chamber containing parallel cooling screens, an air inlet therefor, means for causing air to flow into the chamber through such inlet at an angle to the desired direction of movement of the air through the chamber, a deflector arranged obliquely relatively to the direction of movement of the inflowing air and the desired direction of movement of the air through the chamber comprising a plurality of deflector-plates arranged to divide the inflowing air into layers entering between them and to deflect the air to the direction of the desired movement of the air in the chamber, and means for adjusting the position of the deflector.

2. The combination of an air chamber, an air inlet therefor, means for causing air to flow into the chamber through such inlet at an angle to the desired direction of movement of the air through the chamber, a deflector comprising a plurality of deflector-plates carried by a flexible frame having a plurality of supporting points, and means for adjustably supporting such frame.

3. The combination of a single air chamber containing parallel cooling screens, an air inlet therefor, means for causing air to flow into the chamber through such inlet at an angle to the desired direction of movement of the air through the chamber, a deflector arranged obliquely relatively to the direction of movement of the inflowing air and the desired direction of movement of the air through the chamber and comprising a plurality of deflector-plates arranged to divide the inflowing air into layers entering between them and curved to deflect the air to the direction of the desired movement of the air in the chamber, and means for adjusting the position of the deflector.

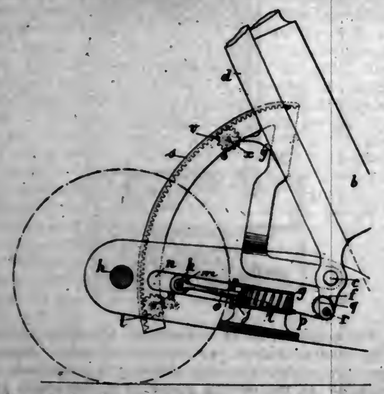
4. The combination of an air chamber, an air inlet therefor, means for causing air to flow into the chamber through such inlet at an angle to the desired direction of movement of the air through the chamber, a deflector comprising a plurality of curved deflector-plates carried by a flexible frame having a plurality of supporting points, and means for adjustably supporting such frame.

5. The combination of an air chamber containing parallel cooling screens, an air inlet therefor, means for causing air to flow into the chamber through such inlet at an angle to the desired direction of movement of the air through the chamber, and a deflector interposed in the path of the inflowing air and comprising a plurality of deflector-plates arranged to divide the inflowing air into

layers entering between them and curved to deflect the air to the direction of the desired movement of the air in the chamber, the deflector-plates having air receiving portions extending substantially in the general direction of the movement of the inflowing air and the deflector-plates terminating in portions extending substantially in the general direction of the desired movement of the air in the chamber.

[Claims 6 to 24 not printed in the Gazette.]

877,521. GUN-CARRIAGE FOR RECOILING GUNS. CHARLES P. E. SCHNEIDER, Le Creusot, and EMILE RIMAILHO, Neuilly-sur-Seine, France. Filed Aug. 24, 1906. Serial No. 331,845.

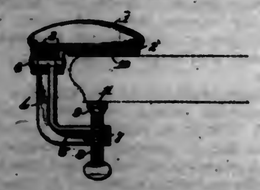


1. In combination, a gun-carriage, a slideway mounted thereon and having a gun sliding therein said slideway being mounted to rock about an axis substantially beyond the center of gravity of said slideway system, a cam and means for applying power through said cam to said slideway to counterbalance the weight of the slideway system in its different angular positions.

2. In combination, a gun carriage, a slideway mounted thereon and having a gun sliding therein, said slideway being mounted to rock about an axis beyond the center of gravity of said slideway system, a piston-carrying cylinder mounted on said carriage, a cam on said slideway having a flexible connection with said piston, said piston acting through said connection on said cam to counterbalance the weight of the slideway system in its different angular positions.

877,522. WORK-HOLDER. MARTIN P. H. SCHROEDER, Chicago, Ill. Filed June 20, 1907. Serial No. 379,859.

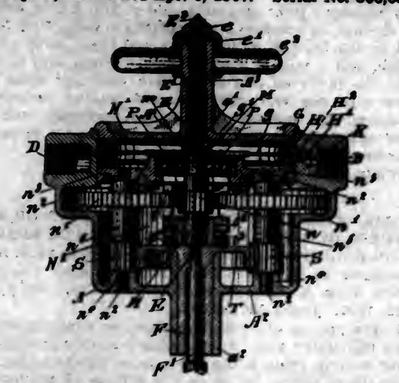
1. In a device of the class described a foldable clamp in combination with a cushion to which work may be pinned attached to one part of said clamp and pads on the jaws of said clamp, substantially as described.



2. In a device of the class described, a bracket comprising the arms, 2 and 4 hingedly connected and the screw 8 in combination with the cushion, 1 upon the arm, 2 to which work may be pinned, substantially as described.

3. In a device of the class described, a two part clamp hingedly connected in combination with a cushion fixed to one of said parts and a clamp screw upon the other as and for the purpose specified.

877,523. PNEUMATIC DRILL. JOHN W. SMITH, Philadelphia, Pa. Filed Apr. 6, 1907. Serial No. 366,651.



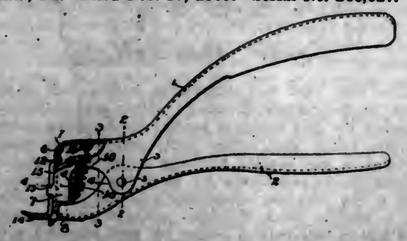
1. A pneumatic drill comprising a drill-spindle, a turbine wheel with buckets, a power-shaft secured to the turbine-wheel, a drill extractor passing through the power-shaft for extracting the drills, and transmission means between the drill-spindle and the power-shaft.

2. In a pneumatic drill having a drill-spindle, a casing having two compartments, a turbine-wheel compartment and an oil-tight compartment containing a lubricant, a turbine-wheel having buckets in the turbine-wheel compartment, a power-shaft secured to said turbine-wheel, and bearings for the power-shaft, all the bearings of the power-shaft in the oil-tight compartment, being all the bearings of the turbine, being in communication with the lubricant therein.

3. In a pneumatic drill having a drill-spindle, a casing having two compartments, a turbine-wheel compartment and an oil-tight compartment containing a lubricant, a turbine-wheel having buckets in the turbine-wheel compartment, transmission mechanism between the turbine-wheel and drill-spindle, and bearings for the turbine-wheel and the transmission mechanism, all of said bearings being in communication with the lubricant in the oil-tight compartment.

4. In a pneumatic drill having a drill-spindle, a casing having two non-communicating compartments, a turbine-wheel compartment and an oil-tight compartment containing a lubricant, one separated from the other, a turbine-wheel having buckets in the turbine-wheel compartment, transmission mechanism and gears between the turbine-wheel and drill-spindle, and bearings for the turbine-wheel and for the transmission mechanism and gears, all of said bearings and gears being in communication with the lubricant in the oil-tight compartment.

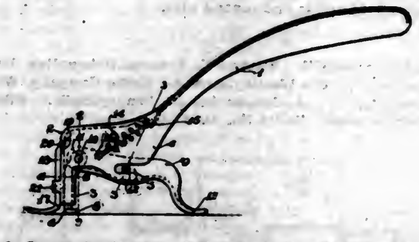
877,524. TACK AND NAIL PULLER. ROBERT R. SMITH, Philadelphia, Pa., assignor, by mesne assignments, to General Specialty Manufacturing Company, Philadelphia, Pa. Filed Feb. 17, 1905. Serial No. 246,027.



In an implement of the class described, a lever having a head bent at an angle thereto, said lever having flanges thereon, and a claw having a shank extending along and

engaged to said head, said head and claw having engaging means permitting the claw to be lifted out of engagement with said head.

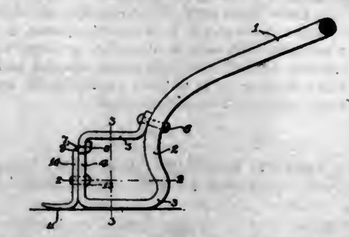
877,525. TACK AND NAIL LIFTER. ROBERT R. SMITH, Philadelphia, Pa., assignor, by mesne assignments, to General Specialty Manufacturing Company, Philadelphia, Pa. Filed Feb. 17, 1905. Serial No. 246,028.



1. In an implement of the class described, a pair of struts pivotally connected together, and a lever fulcrumed at an intermediate point of one of said struts and having flanges which engage one or more of said struts.

2. In an implement of the class described, a lever having a head disposed transversely to the length thereof, said head having an opening therein and lugs thereon, in combination with a claw having a shank engaged in said opening and between said lugs, and mechanism on which said lever is fulcrumed.

877,526. TACK AND NAIL LIFTER. ROBERT R. SMITH, Philadelphia, Pa., assignor, by mesne assignments, to General Specialty Manufacturing Company, Philadelphia, Pa. Filed Feb. 17, 1905. Serial No. 246,029.



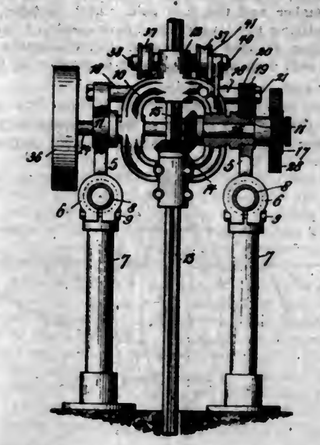
An implement of the class described comprising a lever having an end thereof bent in the form of a closed loop providing a foot and a head, the head having an aperture and a stud, in combination with a claw having a shank with a leg thereon engaging said aperture and a hole therein engaged by said stud.

877,527. MATCH-SAFE. WILLIAM F. SMITH, Coshocton, Ohio. Filed June 18, 1906. Serial No. 322,274.



A match safe comprising a back, a semi-cylindrical bottom, a front projecting downwardly from the upper edge of the bottom below the same, ends projecting below the bottom and provided with sockets at their upper edges, tongues projecting from the back and entering said sockets and tongues formed on the ends and engaging the back substantially as described.

877,528. CORE-DRILLING APPARATUS. COLEMAN A. THERY, New York, N. Y. Filed May 29, 1907. Serial No. 376,299.



1. In core drilling apparatus the combination with two parallel side frames having clamps by which they may be secured to a support, of a swinging yoke frame having trunnions pivoted in said side frames and clamp bolts arranged at a distance from the axis of said trunnions, said side frames having concentric slots for receiving said clamp bolts, a drill rod mounted in and carried by said yoke frame, said drill rod arranged in the plane of, but at right angles to the axis of said yoke frame, a shaft mounted in one of the trunnions of said yoke frame concentric with the axis thereof, and gearing between said shaft and said drill rod.

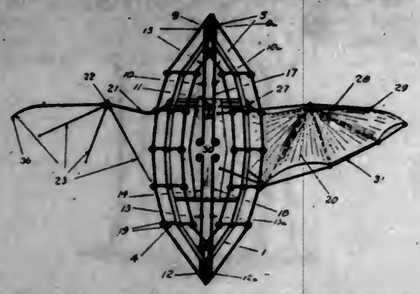
2. In core drilling apparatus the combination with a support having vertical and horizontal members, of a framework comprising parallel side frames having clamps by which they may be secured either way up to either of said members, a swinging yoke frame having trunnions pivoted in said side frames whereby said yoke frame may swing through an arc of ninety degrees with respect to said side frames, means for clamping said yoke frame in its adjusted position with respect to said side frames, a drill rod mounted in and carried by said yoke frame, said drill arranged in the plane of, but at right angles to the axis of said yoke frame, a shaft mounted in one of the trunnions of said yoke frame concentric with the axis thereof, and gearing between said shaft and said drill rod.

3. In core drilling apparatus the combination with side frames, a swinging yoke frame pivoted thereto, and a drill operating shaft mounted in said yoke frame, concentric with the pivotal axis thereof, the said frame provided with rearwardly arranged bearings parallel with said shaft, of a drive shaft located in said bearings, a sleeve rotatably mounted in one of said bearings, and freely surrounding the said drive shaft, a gear wheel carried by said sleeve on one side of said bearing, a clutch member carried by said sleeve at the other side of said bearing, a complementary clutch rotatably mounted upon said shaft, controlling means for operatively connecting and disconnecting the said clutch members, and a gear upon said drill operating shaft in mesh with the gear aforesaid.

4. In core drilling apparatus the combination with side frames, a swinging yoke frame pivoted thereto, and a drill operating shaft mounted in said yoke frame, concentric with the pivotal axis thereof, the said frame provided with rearwardly arranged bearings parallel with said shaft, of a drive shaft located in said bearings, a sleeve rotatably mounted in one of said bearings, and freely surrounding the said drive shaft, a gear wheel carried by said sleeve on one side of said bearing, a clutch member carried by said sleeve at the other side of said bearing, a complementary clutch rotatably mounted upon said shaft, a stationary co-

ternally threaded sleeve projecting from the other said bearing, an operating member mounted thereon, the said complementary clutch member located between said operating member and the first said clutch member, means for transmitting the longitudinal movements of said operating member to said first named clutch member, and a gear upon said drill operating shaft in mesh with the gear aforesaid.

877,529. AIR-SHIP. PETER T. TKATSCHENKO, Schenectady, N. Y. Filed Jan. 7, 1907. Serial No. 351,265.



1. An airship, comprising a balloon, a frame connected to said balloon, a number of adjustable sails secured in said frame, and two adjustable wings below the sails adapted to be folded and unfolded.

2. An airship comprising a balloon, a frame secured thereto, a multiple of sails secured in said frame, a system of rope loops passing through the sails so arranged that by loosening one set of same and tightening the other, all the sails may be adjusted uniformly and parallel to each other towards the wind.

3. An airship, comprising a balloon, a frame in connection with the balloon, sails secured within said frame, a system of rope loops passing through the sails adapted to adjust the same in any desired direction toward the wind, and two adjustable wings below the frame and secured thereto adapted to be folded and unfolded.

4. An air ship, comprising a balloon, a frame, in connection with said balloon, sails secured within the frame, a system of rope-loops passing through the sails adapted to be actuated so that the sails are set in any desired position toward the wind, a motor mounted in the frame, a shaft, and a pair of adjustable wings connected with said shaft secured to the lower part of the frame and adapted to be folded and unfolded.

5. In an airship of the type described, a frame, sails secured therein, a system of parallel rope loops passing through said sails and turning inwardly so arranged that by loosening one set of loops and tightening the other the sails may be adjusted in any desired position.

[Claim 6 not printed in the Gazette.]

877,530. AIR-BRAKE. WALTER V. TURNER, Wilmerding, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Apr. 9, 1906. Serial No. 310,807.

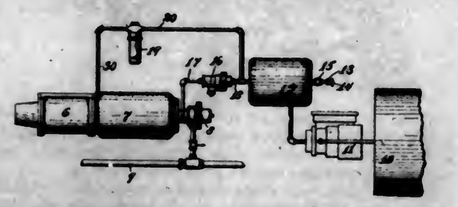


1. An air brake apparatus comprising in combination a train-pipe, a cylinder, an auxiliary reservoir, a triple valve, a control pipe, and means whereby to establish communication from the control pipe to the cylinder through the triple valve, for augmenting the cylinder pressure from the control pipe in applications of the brake.

2. An air brake mechanism comprising in combination a brake cylinder, a train-pipe, an auxiliary reservoir, a control pipe, and a triple valve constructed to simultaneously admit pressure to the brake cylinder from the auxiliary reservoir and from the control pipe.

3. A brake mechanism comprising in combination a train-pipe, a cylinder, an auxiliary reservoir, a control pipe, and a triple valve constructed to simultaneously admit pressure to the brake cylinder from the train-pipe, auxiliary reservoir and control pipe.

877,531. BRAKE. WALTER V. TURNER, Wilmerding, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Apr. 9, 1906. Serial No. 310,808.

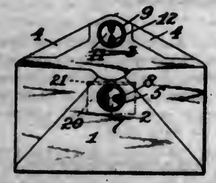


1. An air brake apparatus comprising in combination, a brake cylinder, a cylinder reducing valve, a compressor, and a connection from said cylinder reducing valve to the inlet or suction pipe to supply the compressor with pressure, substantially as described.

2. An air brake apparatus comprising in combination a brake cylinder, mechanism for venting pressure from said cylinder, a compressor, and a connection from said venting mechanism to said compressor for utilising the air vented from the cylinder, supplying pressure above the atmospheric pressure to the said compressor.

3. An air brake apparatus comprising in combination, a cylinder, means for venting pressure therefrom, a triple valve, an exhaust from said triple valve, a device for collecting pressure vented from said triple exhaust and from said cylinder venting valve and for supplying the same to a compressor, substantially as described.

877,532. SAFETY-ENVELOP. ROBERT W. VAIL, New York, N. Y. Filed June 14, 1906. Serial No. 321,781.



1. An improved safety envelop of the class described, having the paper or material constituting its meeting portions formed into corresponding outwardly-projecting ridges integral with the body of said meeting portions and arranged to relatively register and overlap one upon the other when the envelop is closed, said overlying outwardly-projecting integral ridge of the paper or material constituting the meeting portion of the envelop being adapted to be engaged by the mass of a plastic sealing material.

2. An improved safety envelop of the class described, having the paper or material constituting its meeting portions formed into corresponding outwardly-projecting ridges provided with corrugations or ribs to strengthen and retain the contour, the ridges being integral with the body of said meeting portions and arranged to relatively register and overlap one upon the other when the envelop is closed, said overlying outwardly-projecting integral ridge of the paper or material constituting the meeting portion

of the envelop being adapted to be engaged by the mass of a plastic sealing material.

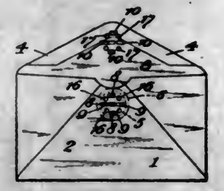
3. An improved safety envelop of the class described, having the paper or material constituting its meeting portions formed into corresponding outwardly-projecting ridges which are convex in cross-section and integral with the body of said meeting portions and arranged to relatively register and overlap one upon the other when the envelop is closed, said overlying outwardly-projecting integral ridge of the paper or material constituting the meeting portion of the envelop being adapted to be engaged by the mass of a plastic sealing material.

4. An improved safety envelop of the class described, having the paper or material constituting its meeting portions formed into corresponding outwardly-projecting ridges which are convex in cross-section and provided with corrugations or ribs to strengthen and retain the contour, the ridges being integral with the body of said meeting portions and arranged to relatively register and overlap one upon the other when the envelop is closed, said overlying outwardly-projecting integral ridge of the paper or material constituting the meeting portion of the envelop being adapted to be engaged by the mass of a plastic sealing material.

5. An improved safety envelop of the class described, having the paper or material constituting its meeting portions formed into corresponding outwardly-projecting ridges constituting an exterior cup for retaining the mass of a plastic sealing material and integral with the body of said meeting portions and arranged to relatively register and overlap one upon the other when the envelop is closed.

[Claims 6 to 31 not printed in the Gazette.]

877,533. SAFETY-ENVELOP. ROBERT W. VAIL, New York, N. Y. Filed June 21, 1906. Serial No. 322,712.



1. An improved safety envelop of the class described, having its back-sheet and sealing-flap provided with a series of openings adapted to relatively register, and provided with a plate or strip carried at the inner side of the back-sheet and having a series of projections extending through said respective openings, the registering openings being somewhat larger than the respective projections passing through them, whereby the mass of a plastic sealing material inclosing the set of projections will enter each opening around the respective projections and engage the back-sheet and sealing-flap at various points of their parts which extend over the surface of the plate and engage also the bottom surface of the plate at various points adjacent to the respective openings, the plate being provided with openings, and separate means underlying the openings in the plate and the body of the plate and secured to the inner face of the back-sheet to retain the plate in position, substantially as and for the purpose set forth.

2. An improved safety envelop of the class described, provided with a plate or strip carried by the envelop and having openings and projections, the envelop having openings through which said projections extend beyond the exterior surface and are adapted to be inclosed within the mass of a plastic sealing material, and having a separate absorbent strip underlying said plate and the openings therein and adapted to be absorbently engaged by said plastic material, substantially as and for the purpose set forth.

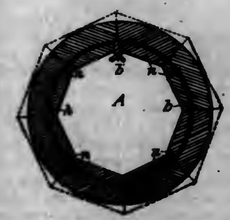
3. An improved safety envelop of the class described, provided with a plate or strip carried by the envelop and having openings and projections, the envelop having openings through which said projections extend beyond the exterior surface and are adapted to be inclosed within the mass of a plastic sealing material, and having a separate absorbent strip underlying said plate and the openings therein and adapted to be absorbently engaged by said plastic material, said absorbent strip being secured to the envelop to retain the perforated plate in position, substantially as and for the purpose set forth.

4. An improved safety envelop of the class described, provided with a plate or strip carried by the envelop and having openings and projections, the envelop having openings through which said projections extend beyond the exterior surface and are adapted to be inclosed within the mass of a plastic sealing material, and having a separate strip or flap underlying the plate and the openings therein and secured to the envelop and securing the plate in connection with the envelop and adapted to be engaged by said plastic material, substantially as and for the purpose set forth.

5. An improved safety envelop of the class described, provided with a plate or strip carried by the back-sheet and having openings and projections, and provided with openings in the sealing-flap through which said projections extend and are adapted to be inclosed within the mass of a plastic sealing material, and having a separate absorbent strip secured to the back-sheet and underlying said plate and its openings and adapted to be absorbently engaged by said plastic material, substantially as and for the purpose set forth.

[Claims 6 to 11 not printed in the Gazette.]

877,534. STAVED WOODEN STRUCTURE AND THE METHOD OF CONSTRUCTING IT. DAVID E. VANVACTOR, Plymouth, Ind. Filed May 20, 1907. Serial No. 374,735.



1. The method of forming structures of the class described, which consists in forming registering holes through the bodies of the staves to be joined, passing bands through said holes, clamping said staves together except the meeting edges of those from which the bands protrude, separating the latter edges temporarily, bending the ends of the bands out of the plane of the staves from which they protrude, closing the space between the staves so separated, clamping all the staves together to close the joints and finally twisting said bands to take up the slack.

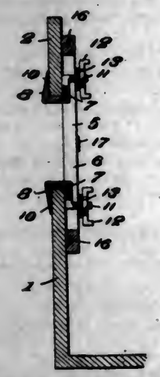
2. The method of forming structures of the class described, which consists in forming holes through the bodies of the staves to be joined, passing bands through said holes to connect the staves, inserting a positive spacing element between the first and the last stave of the series, clamping said staves together with said spacing element intervening, bending the ends of the bands from the plane of the staves from which they protrude, removing said spacing element, clamping said staves together to close the joints and permanently connecting the meeting ends of said bands while the staves are so clamped.

3. The method of forming structures of the class described, which consists in forming staves having mitered joints adapted to conform to a predetermined circle, forming holes in the bodies of said staves from edge to edge, each hole representing an arc of a circle, passing metallic bands through said holes, clamping said staves together upon a positive spacing element between the first and last stave, connecting said bands, removing said spacing element, clamping all of said staves together in their final positions, permanently connecting said bands, and finally shaping the exterior of said structure.

4. A structure of the class described, comprising a series of jointed staves connected by means of metallic bands projected through curved holes formed in said staves, the curve of the hole in each stave forming an arc of a circle.

5. A structure of the class described, comprising a series of jointed staves connected by means of metallic bands projected through curved holes formed in said staves, the curve of the hole in each stave forming an arc of a circle, the ends of each band being twisted upon each other approximately at right angles to the body of the band at the point of fastening.

877,535. ATTACHMENT FOR WAGON-BEDS. SOLOMON B. WENGER, Goshen, Ind. Filed May 16, 1907. Serial No. 373,895.



1. The combination with a bed of the class described, and side boards therefor; of means to hold said side boards above the bed, comprising standards having a slot therein, supporting clips at each end of said standard adapted to engage respectively the walls of the bed and side boards, and means to direct said clips into positive engagement with the bed and side boards, respectively.

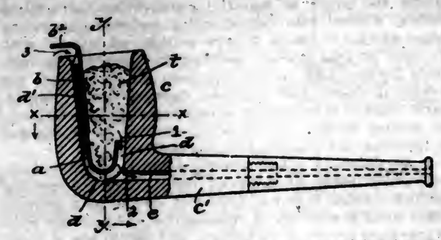
2. The herein described means for supporting side boards a distance above the wagon bed, comprising a standard, having a slot extending longitudinally therein, a supporting clip at each end of said standard, said supporting clips comprising a base, a wing at one edge of said base, and a shank at the opposite end thereof, a shaft at the free end of said shank, said shank and shaft extending into said slot, and means to engage said shaft to bind the wing into engagement with the object encountered by the clip.

3. The herein described means for supporting side boards, comprising standards, having slots longitudinally therein, supporting clips for said standards, consisting of base portions, a shank at one edge of said base portion, and a wing at the opposite edge thereof, a shaft at the upper end of said shank and at right angles thereto, said shank and shaft extending into said slot, a washer having serrations on one face thereof adapted to extend over said shaft, and a wing nut for said shaft, whereby, when the nut is turned onto said shaft, the wing on the supporting clip will impinge the object engaged thereby.

4. The herein described supporting device comprising a standard having a longitudinal slot therein, a supporting clip for each end of said slot, one edge of said clip being adapted to bear against one face of the standard and means to clamp said clips against an object, whereby the object will be impinged between the clip and standard.

877,536. TOBACCO-PIPE. SANFORD E. WEST, Pawtucket, R. I., assignor of one-half to George F. Tyler, East Greenwich, R. I.—Filed May 10, 1907. Serial No. 373,012.

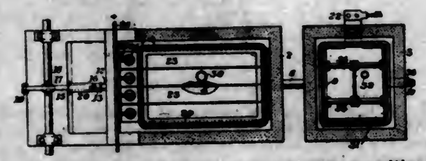
1. In a tobacco-pipe, an attachment adapted to be secured within the pipe-bowl and having a curved extension to fit the bottom of the latter and said attachment provided respectively with a cold air and a hot air passage to communicate with the orifice in the stem of the pipe.



2. The herein described attachment, comprising two metallic members, one of which has a straight body portion that terminates with an upwardly curved extension and said member having its side portions bent to form rear projecting flanges, and the other member having a straight body portion whose side edges are bent to hold by friction member, and said second member terminating with a lateral rear extending tongue located above the body portion of first mentioned member.

3. In combination with a tobacco-pipe, of a device comprising two members, one of which members has an upwardly bent extension provided with outer projecting flanges so as to form a hot air passage entering the pipe-bowl and communicating with the orifice of the pipe-stem, and the other member slidably mounted on first mentioned member and constructed so as to provide a cold air passage from the top of the pipe-bowl and communicating with the hot air passage of first mentioned member, substantially as shown and for the purpose specified.

877,537. METHOD OF ELECTROLYZING SALTS. JASPER WHITING, Niagara Falls, N. Y. Filed Apr. 24, 1906, Serial No. 313,517. Renewed June 21, 1907. Serial No. 380,147.



1. The method of effecting electrolytic decomposition of salts, consisting in passing an electric current through the electrolyte to a mass of liquid metal, and maintaining substantially the same mass of liquid metal as a cathode for a period of time, then, while maintaining a body of electrolyte in the decomposing chamber, withdrawing the mass of liquid metal, and replacing it with a fresh mass of liquid metal, the same angular relation between the adjacent surfaces of the electrodes being maintained throughout the cycle of operations; substantially as described.

2. The method of effecting electrolytic decomposition of salts, consisting in passing an electric current through the electrolyte to a mass of liquid metal beneath it, and maintaining substantially the same mass of liquid metal as a cathode for a period of time, then, while maintaining a body of electrolyte in the decomposing chamber, withdrawing the mass of liquid metal, and replacing it with a fresh mass of liquid metal, the same angular relation between the adjacent surfaces of the electrodes being maintained throughout the cycle of operations; substantially as described.

3. The method of effecting electrolytic decomposition of salts, consisting in passing an electric current through the electrolyte to a mass of liquid metal, and maintaining substantially the same mass of liquid metal as a cathode for a period of time, then while maintaining a body of electrolyte in the decompos-

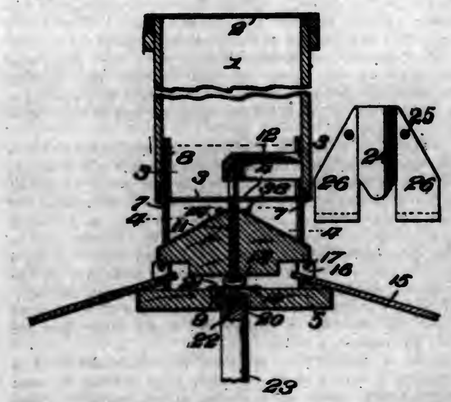
ing chamber, withdrawing the mass of liquid metal, and replacing it with a fresh mass of liquid metal, the same angular relation between the adjacent surfaces of the electrodes being maintained throughout the cycle of operations; substantially as described.

4. The method of effecting electrolytic decomposition of salts consisting in passing an electric current through the electrolyte to a mass of liquid metal beneath it, maintaining substantially the same mass of liquid metal at a practically constant level as a cathode for a period of time, then withdrawing the mass of liquid metal from this position, and replacing it with a fresh mass of liquid metal, the same angular relation between the adjacent surfaces of the electrodes being maintained throughout the cycle of operations; substantially as described.

5. The method of effecting electrolytic decomposition of salts, consisting in passing an electric current through an electrolyte containing the same to a body of liquid metal, maintaining substantially the same mass of liquid metal as a cathode through a period of time, then withdrawing this mass of liquid metal to a point where it is freed from the material received during said period, and returning said purified metal to the decomposing chamber, the same angular relation between the adjacent surfaces of the electrodes being maintained throughout the cycle of operations; substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

877,538. AUTOMATIC FEEDER. CHARLES B. WILLIAMS, Ontario, Cal. Filed Mar. 8, 1907. Serial No. 361,275.



1. In a feeder of the class described, the combination with a body, a platform below said body and means to connect said platform with the body; of a head rotatably mounted between said platform and body, means to convey food at a distance from said feeder, a support for said body and platform and a perch adjacent the lower end of said support upon which a fowl may alight whereby said head may be rotated.

2. In a feeder of the class described the combination with a body, a platform below said body and standards securing said platform to the body; of a conical head between said platform and body, a shaft for said head, means to adjustably mount said head upon the shaft, bearings at opposite ends of said shaft, a supporting shaft below said platform, means to secure said supporting shaft to the first mentioned shaft and a pivotal support for the lower end of said supporting shaft.

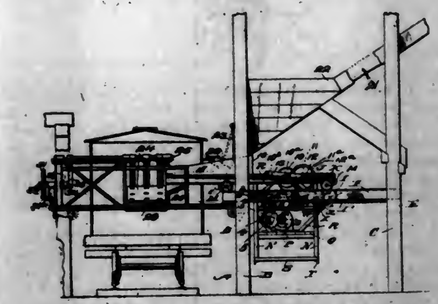
3. In a feeder of the class described the combination with a body having an opening in the bottom portion thereof, a beam in the body, a platform below said body and means to secure said platform to the body; of a conical head between said platform and body, a shaft for said head, means to adjust said head upon the shaft, arms pivotally secured above said platform and adapted to rest thereon, a supporting standard for said body and platform, means to fix said standard to said shaft, a pedestal below said shaft and means to rotatably mount said shaft upon the pedestal.

4. In a feeder of the class described the combination with a body and a platform secured thereto; of a distributing head, means to rotatably mount said head between said platform and body, a pedestal below said body, a supporting shaft rotatably mounted on said pedestal and a perch at the lower end of said shaft.

5. In a feeder of the class described the combination with a body and a platform secured to said body; of a head between said platform and body, means to support said head, a shaft secured to said supporting means, a socket at the lower end of said shaft, a perch secured to said socket, a pedestal below said shaft and a pivot pin on said pedestal forming a bearing for the lower end of said shaft whereby the supporting shaft and head may be rotated.

[Claims 6 to 8 not printed in the Gazette.]

877,539. CAR-LOADING APPARATUS. FREEMAN R. WILLSON, Jr., Worthington, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Aug. 21, 1902, Serial No. 120,534. Renewed June 20, 1907. Serial No. 379,970.



1. In an apparatus for loading cars and similar vehicles, the combination, with means for positively advancing the coal or like material longitudinally of the car, of feeding mechanism for introducing into the car in planes transverse thereof approximately measured predetermined charges, and means adapted to receive charges of material which are not uniform in quantity or frequency, and delivering the same to the said feeding and receiving mechanism, substantially as set forth.

2. In an apparatus for loading cars and similar vehicles, the combination, with means for positively advancing the coal or like material longitudinally of the car, of feeding mechanism for introducing into the car on planes transverse thereof approximately measured charges, and means adapted to receive charges of material which are not uniform in quantity or frequency and temporarily check said charges and deliver the same to the said feeding and measuring mechanism, substantially as set forth.

3. In an apparatus for loading cars and similar vehicles, the combination, with means for positively advancing and distributing the coal or like material longitudinally of the car, of an initial chute-way down which the material moves by gravity in masses which are not uniform in quantity or frequency, means for temporarily checking and holding the said masses, and an intermediate feeding mechanism receiving the material from the checking and holding devices and advancing it in separate charges to the interior of the car and to the distributing mechanism, substantially as set forth.

4. In an apparatus for loading cars and similar vehicles, the combination, with the initial chute-way down which the material moves by gravity, of a feeding mechanism intermediate of said chute and the car, and adapted to reciprocate relative to the said chute-way and to the car in

order to deliver separate charges of material from the former to the latter, substantially as set forth.

5. In an apparatus for loading cars and similar vehicles, the combination, with an initial chute-way down which the material moves by gravity in masses which are not uniform in quantity or frequency, of means for temporarily checking and holding the said masses, and a feeding mechanism intermediate of the said chute-way and the car, said feeding mechanism having a bodily adjustable frame movable toward and from the car, a power mechanism supported upon said frame, and a reciprocating, horizontally arranged support for the material movable independently of said adjustable frame and adapted to deliver charges of material into the car while the said frame is in a fixed position, substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

877,540. FAUCET. EDWARD L. WOOD, New York, N. Y. Filed June 6, 1907. Serial No. 377,483.



1. In a faucet of the puppet class, the combination, with a body having a valve seat, a valve, and means for raising the valve and releasing and allowing it to sink, of a chamber above the valve, and a loosely mounted member arranged to move up and down in said chamber, said loosely mounted member being arranged to guide the valve, to limit the extent of its opening movement and to act upon it gravitationally to aid in closing it.

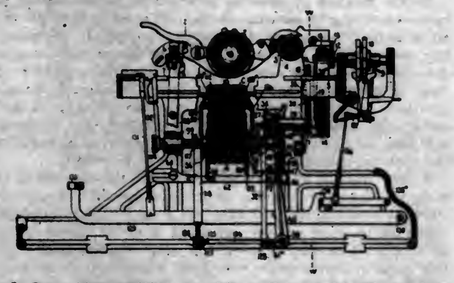
2. In a faucet of the puppet class, the combination, with a body having a valve seat, and fluid passages connected therewith, a valve, and means for raising the valve and releasing it and allowing it to sink, of a chamber above the valve, and a loosely mounted member arranged to move easily in said chamber to guide the valve, to limit the extent of its opening, to act upon it gravitationally to aid in closing it and to moderate the velocity of the closing movement.

3. The combination, with a valve body having a puppet-valve seat, a cylindrical chamber in line with and above the seat, and a screw-threaded extension in line below the seat, of a partly rotatable delivery nozzle mounted on the threaded extension, means for turning said delivery nozzle, a valve, a valve-stem arranged to be engaged by the delivery nozzle to lift the valve, a receptacle carried by the stem, and a spherical member mounted loosely in said receptacle and arranged to move in said chamber.

4. The combination, with a valve body having a puppet-valve seat, a cylindrical chamber in line with and above the seat, and a screw-threaded extension in line below the seat, of a partly rotatable delivery nozzle mounted on the threaded extension, means for turning said delivery nozzle, a valve, a valve-stem arranged to be engaged by the delivery nozzle to lift the valve and having an adjustable shoe at its bottom, a receptacle carried by the stem, and a spherical member mounted loosely in said receptacle and arranged to move in said chamber.

877,541. TYPE-WRITING MACHINE. OSCAR WOODWARD, New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Sept. 3, 1904. Serial No. 223,172.

1. In a typewriting machine, the combination of a carriage, a carrier that is reciprocated transversely of the machine during the feed movement of the carriage, ribbon feed dogs actuated by said carrier, ribbon spools that are rotated by said dogs and means separate from the ribbon and operated by the power employed to move the carriage for automatically throwing one of said dogs into operation and the other out of operation when an end of the ribbon is approached.



2. In a typewriting machine, the combination of a carrier that extends from side to side of the machine and is reciprocated transversely thereof, ribbon feed dogs carried by said carrier, ribbon spools that are rotated by said dogs and receive axial movements, and means that are operated by the axial movements of the spools for automatically throwing one of said dogs into operation and the other out of operation when an end of the ribbon is approached.

3. In a typewriting machine, the combination of a carriage, ribbon spool shafts, ratchet wheels rigidly connected to said shafts, a carrier that is reciprocated by the power applied to move the carriage, ribbon feed pawls carried by said carrier and adapted to coöperate with said ratchet wheels, and means separate from the ribbon and controlled by the power employed to move the carriage for automatically throwing one of said dogs into operation and the other out of operation when an end of the ribbon is approached.

4. In a typewriting machine, the combination of a carriage, ribbon spool shafts, axially movable ribbon spools carried thereby, means controlled by the power employed to move the carriage for effecting the axial movements of said ribbon spools, a ratchet wheel fixed to each ribbon spool shaft, a transversely reciprocating carrier, ribbon feed dogs carried by said carrier and one coöperating with each of said ratchet wheels, and means controlled by the axial movements of the ribbon spools for automatically effecting a disengagement of one feed dog with its ratchet wheel and effecting an engagement of the other feed dog with its ratchet wheel.

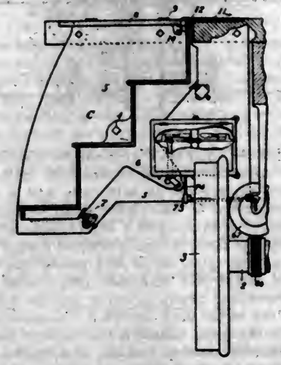
5. In a typewriting machine, the combination of a carriage, a spring drum therefor, cams rotated by said spring drum, ribbon spool shafts, axially movable ribbon spools carried thereby, means controlled by one of said cams for effecting an axial movement of said ribbon spools, a ratchet wheel fixed to each ribbon spool shaft, a reciprocating carrier actuated by the other of said cams, ribbon feed dogs carried by said carrier and one coöperating with each of said ratchet wheels, and means controlled by the axial movements of the ribbon spools for automatically effecting a disengagement of one feed dog with its ratchet wheel and effecting an engagement of the other feed dog with its ratchet wheel.

[Claims 6 to 53 not printed in the Gazette.]

877,542. REGISTERING APPARATUS. NICHOLAS J. BARND, Chokio, Minn. Filed Nov. 17, 1906. Serial No. 343,825.

1. In combination a flight of movably supported car steps, a slide, recording mechanism supported by said slide, adjacent tape feeding means, means actuated from said steps for reciprocating said slide, means actuated from said slide when moved in either direction for actuating said tape feeding means, and means actuated from said slide upon being moved in both directions to independently actuate said tape feeding means.

2. In combination a flight of pivotally supported car steps, tape feeding means, recording mechanism actuated by the tilting of said steps to make contact with a tape carried by said feeding means, means for actuating the tape feeding means between the impressions of said recording mechanism, a main driving shaft, and means operated by said driving shaft for actuating said tape feeding means upon predetermined rotations of said driving shaft.



3. In combination a flight of pivotally supported steps, tape feeding mechanism, recording mechanism arranged in connection therewith and independently actuated by the opposite tilting movements of said steps, means actuating the tape feeding mechanism upon the independent tilting movements of said steps, and means independently actuating said tape feeding mechanism after said steps have been tilted in both directions.

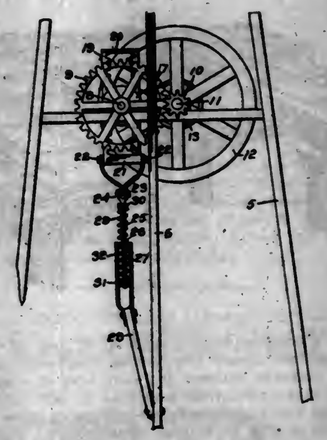
4. In combination a flight of pivotally supported steps, a slide, recording mechanism arranged in connection with said slide, adjacent tape feeding mechanism, means for actuating said recording mechanism on opposite movements of said slide, means for independently actuating said tape feeding mechanism after said slide has been moved in both directions, and an operative connection between said slide and steps.

5. In combination a flight of pivotally supported steps, a slide, recording mechanism, tape feeding mechanism, means for actuating said tape feeding and recording mechanism in each movement of said slide, means for independently actuating said tape feeding means after said slide has been moved in both directions, and an operative connection between said slide and steps.

[Claims 6 and 7 not printed in the Gazette.]

877,543. DEVICE FOR CONVERTING WINDMILL-POWER. WILLIAM R. BEERS, Judd, Iowa. Filed Apr. 19, 1907. Serial No. 369,107.

The combination with a reciprocatory rod, of a shaft, a shaft mounted parallel to the first named shaft, gear connections between the two shafts, a drive pulley carried by the second named shaft, pinions loosely mounted upon the first shaft, clutch devices for clutching the pinions with the shaft in such a manner that when one of the pinions is clutched with the shaft the other will run loose, a rack element comprising a frame made up of a pair of offset rack bars, a strip having its ends bent at right angles in opposite directions and bolted to the rack bars at their lower ends whereby the bars will be held in offset relation, a yoke depending from the lower end of the rack element, a bar connected to the reciprocatory rod and extending upwardly at an angle therefrom, a yoke carried at the upper end of the bar and provided through its connecting portion with an opening, a rod slidably engaged through the opening and connected with the lower end of the yoke carried at the lower end of the rack member, the said rod being threaded, nuts engaged upon the rod adjacent each of its ends and adjustable longitudinally thereof, and springs engaged upon the rod one above and the other below the connecting portion of the yoke carried at the upper end of the bar the upper spring having its upper end bearing against the upper nut upon the rod and its lower end against the connecting portion of the yoke and the



lower spring having its upper end bearing against the connection portion of the yoke and its lower end against the other nut upon the rod, substantially as described.

877,544. APPARATUS FOR RENDERING BEESWAX. FREDERICK R. BEUHNE, Tooborac, Victoria, Australia. Filed July 10, 1907. Serial No. 383,112.



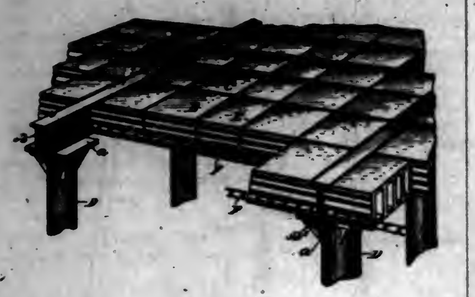
1. In an apparatus for rendering bees wax and the cappings of honey comb, the outer metal casing A, in combination with inner casing B, forming the jacketed spaces C, with the transverse tubes E with longitudinal ribs or vanes E^1, substantially as herein described and illustrated by the drawings.

2. In an apparatus for rendering bees wax and the cappings of honey combs, the outer metal casing A, in combination with inner casing B, and receiving tray D together with the outlet for honey D^1 and the outlet for wax D^2, substantially as herein described and illustrated by the drawings.

3. An apparatus for rendering bees wax comprising an outer casing, an inner casing, a vertical vessel communicating with the space between the two receptacles and having an open top, an overflow pipe near the top of said receptacle and an emptying tap at the bottom thereof.

4. An apparatus for rendering bees wax comprising an outer casing, and an inner casing forming a water chamber, tubes connecting one side of the chamber to the other near the top thereof, said tubes being in the inner casing and means for heating the water in the chamber.

877,545. REINFORCED TERRA-COTTA ARCH. PHILIP H. BEVIER, New York, N. Y. Filed Jan. 5, 1904. Serial No. 187,795.



1. In a fireproof arch, a plurality of rows of tiles, the individual tiles of each row forming compression members, binding material between the said rows of tiles, and a metallic foraminous truss embedded in said binding material and confined between the contiguous faces of adjacent rows of tiles, each truss consisting of a plurality of cables spaced apart, the said cables having connecting members whereby openings are provided transversely of the length of the truss, the said binding material extending through said openings, thereby locking the truss to the binding material and also to the row of tiles on either side thereof.

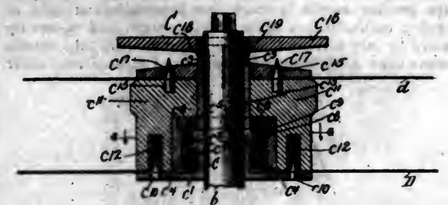
2. In a fireproof arch, a plurality of rows of tiles, the individual tiles of each row forming compression members, binding material between said rows of tiles, and metallic foraminous trusses each embedded in said binding material and confined between the contiguous faces of adjacent rows of tiles, each truss consisting of a plurality of longitudinal members and of transverse members connecting said longitudinal members, said longitudinal and transverse members providing openings transversely of the length of said truss, the said binding material extending through said openings, thereby locking the truss to the binding material and also to the row of tiles on either side thereof.

3. In a fireproof arch, a plurality of rows of tiles, the individual tiles of each row forming compression members, binding material between said rows of tiles, and metallic trusses each provided with transverse openings, each truss being embedded in the binding material and said binding material extending through the openings of each truss for locking the truss to the binding material and also locking the truss to the row of tiles on either side thereof, said truss being located substantially below the neutral axis of the arch.

4. In a fireproof arch, a plurality of rows of tiles, the individual tiles of each row forming compression members, binding material between said rows of tiles, and a plurality of disconnected foraminous trusses embedded in said binding material and confined between the contiguous faces of adjacent rows of tiles, the end portions of said foraminous trusses being separated from each other and embedded at different points lengthwise of the arch, said binding material extending through the openings of said trusses and locking the trusses to the said binding material and to the row of tiles on either side thereof.

5. In a fireproof arch, a plurality of rows of tiles, the individual tiles of each row forming compression members, binding material between said rows of tiles, and a plurality of independent foraminous trusses embedded in the binding material and confined between the contiguous faces of adjacent rows of tiles, said trusses being arranged side by side and lying below the neutral axis of the arch, the end portions of the trusses being separated from one another and embedded at different points.

877,546. PORTABLE WATCHMAN'S CLOCK. ALOIS BEYER, Chicago, Ill. Filed Apr. 2, 1906. Serial No. 309,369.



1. In a clock of the kind described, the combination with a main inclosing case having an aperture in the side, of a clock mechanism secured in said case, and a dial holder revolubly supported on the central shaft of said mechanism, said holder consisting of a central sleeve, a ring revolubly supported thereon and having a spring connection therewith, a ring attached to said sleeve and a cap connecting said sleeve and ring, said dial holder having rotatably independent means at either end for holding dials.

2. In a clock of the kind described, the combination with a main inclosing case, having a key hole in the side, and a clock mechanism secured therein, of a double dial holder supported on the shaft of said mechanism, said dial holder consisting of a sleeve, a ring supported on said sleeve and having a spring connection therewith, and an outer ring and cap, said holder having rotatably independent means at either end for holding dials.

3. In a clock of the kind described, the combination with an inclosing case and clock mechanism therein, of a double dial holder consisting of a sleeve, an inner ring revoluble on said sleeve, an outer ring and a cap supported on said sleeve, said holder having rotatably independent means at either end for holding dials.

4. In a clock of the kind described, the combination with an inclosable case and clock mechanism therein, of a double dial holder supported on the shaft of said mechanism, said holder consisting of a member adapted to fit on said shaft and be revolved with it, a second member rotatably secured on the first member and having a spring connection therewith, a third member rotatably attached to the first member and revoluble with it, and a fourth member attached to the first and third members and revoluble with them said holder having rotatably independent means at either end for the support of dials.

5. In a clock of the kind described, the combination with a clock mechanism in an inclosable case, and a double dial holder supported and rotated by said clock mechanism, said holder having rotatably independent means at either end for holding dials revoluble with it, of a recording mechanism supported in said case adapted to allow said dials to pass through and be marked therein, said mechanism consisting of a frame, a spring pressed needle therein adapted to puncture one of said dials, mechanism adapted to be moved by a key and to raise and lower said needle in said frame, and a key insertible in said case and frame adapted to actuate said needle and thereby puncture one of said dials, and an impression mechanism in said key adapted to be actuated by pressure applied thereto in the insertion of said key in said frame and to engage and impress the other dial.

[Claims 6 to 10 not printed in the Gazette.]

877,547. SEED-FEED DEVICE. WILLIAM G. BOLUS, Peoria, Ill., assignor, by direct and mesne assignments, to Hearst Foundry & Manufacturing Company, a Corporation of Maine. Filed May 29, 1906. Serial No. 319,240.

1. A force-feeding device comprising two rotating members, each having acting faces in parallel spaced relation and arranged obliquely to their axis.

2. A force-feeding device comprising two rotating members, each having acting faces in parallel spaced relation and arranged obliquely to their axis, and agitating lugs arranged on said oblique faces.



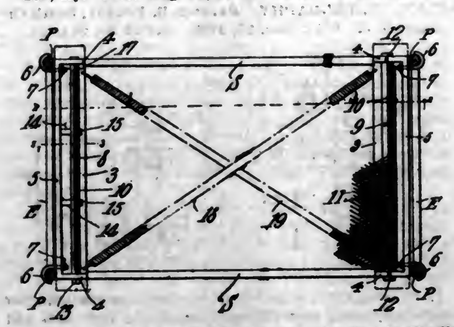
3. A force-feeding device comprising two rotating members having smooth peripheral faces, and provided with acting faces in parallel spaced relation and arranged obliquely to their axis.

4. A force-feeding device comprising two rotating members having smooth peripheral faces, provided with acting faces in parallel spaced relation and arranged obliquely to their axis, and agitating lugs arranged on said oblique faces.

5. A force-feeding device comprising two rotating members adapted to be adjusted toward and from each other, each having acting faces in parallel spaced relation and arranged obliquely to their axis.

[Claims 6 to 16 not printed in the Gazette.]

877,548. SPRING-MATTRESS. HIRAM M. BROCK, London, Ky. Filed Aug. 12, 1907. Serial No. 388,193.



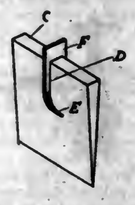
1. A mattress comprising two supports, a longitudinally-slotted non-rotatable shaft carried by one of the supports, a longitudinally-slotted rotatable shaft carried by the other support and provided with a circumferential seat, a mattress having its terminals held in the slots of the shafts, and a key inserted in the seat and bearing against the bottom wall of the support to hold the last named shaft against rotation.

2. A mattress comprising two supports, a longitudinally-slotted non-rotatable shaft carried by one of the supports, a longitudinally-slotted rotatable shaft carried by the other support and provided with a circumferential seat, guards carried by the latter support and disposed in front of the last named shaft, a mattress having its terminals held in the slots of the shafts, and a key inserted in the seat and bearing against the bottom wall of the support to hold the rotatable shaft against rotation.

877,549. AX-HEAD-LOCKING DEVICE. FRED BUCK, Saginaw, Mich., assignor to Marshall-Wells Hardware Company, Duluth, Minn., a Corporation of New Jersey. Filed May 13, 1907. Serial No. 373,313.

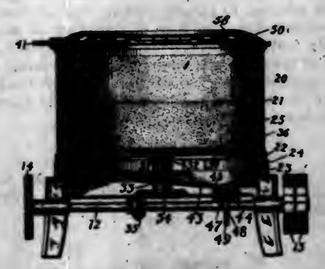
1. In a device of the kind described, the combination with a wedge slotted lengthwise, the slot being open at the wedge top and extending entirely through the wedge transversely, and a locking key wider than the wedge adapted to be driven into the slot and helve.

2. In a device of the kind described, the combination with a wedge slotted lengthwise, the slot being open at the wedge top extending entirely through the wedge transversely and curved at its lower end, and a locking key wider than the wedge adapted to be driven within the entire slot and into the helve adjoining the wedge.



3. In a device of the kind described, the combination with a wedge slotted lengthwise, the slot being open at the wedge top, and extending entirely through the wedge transversely, and a flat solid locking key of greater width than the wedge adapted to be driven into the slot and the portions of the helve adjoining the wedge.

877,550. POTATO-PEELER. CHARLES H. CLARK, New York, N. Y., assignor to William H. Laird, New York, N. Y. Filed Mar. 13, 1907. Serial No. 362,126.



1. The combination, with a vertical casing, of a sheet metal member carried therein, and provided upon its inner face with coarse abrasive material at one end and fine abrasive at the other end, a rotary bottom plate for the receptacle, and a sheet metal plate carried by said bottom plate and having abrasive material upon its respective faces corresponding to that on the respective ends of said removable wall.

2. The combination with a receptacle having abrasive material upon its inner walls, of a bottom plate of less radius than said walls and rotatable therein, a guard resting upon the casing and projecting inwardly from the same, a water pipe carried by said guard, a bottom member for said casing having one portion lower than the other portions, a flanged opening at such lower portion provided with one member of a bayonet joint, a closure cap for said flange having the other member of said bayonet joint, a standpipe carried by said closure, a bearing carried by said bottom member, a shaft in said bearing member, said plate having a hub for resting upon said bearing and said plate having an angular opening for receiving the end of the shaft.

3. In a peeling machine, the combination with a casing having an abrasive lining and having an opening in its side, of a pair of doors pivoted to such casing and adapted to overlap and close said opening, plates carried by the bottom of each of said doors and adapted to pass through the opening when the doors are closed and to constitute with the doors when opened a chute, and a plate carried by one of the doors for directing material to said chute.

4. In a peeling machine, the combination with a casing having an abrasive lining and having an opening in its side, a rotary abrasive plate forming the bottom of said casing, doors pivoted to said casing adjacent to the opening and each adapted to form a closure therefor, and plates carried by the bottoms of said doors and adapted to pass through said opening and below said rotary abrasive plate when the doors are closed.

877,551. AUTOMATIC SPRINKLER-HEAD. EMANUEL M. COOK, Indianapolis, Ind. Filed Apr. 9, 1907. Serial No. 367,280.



1. A holding member for valves of automatic sprinkler heads, comprising a pair of L-shaped levers pivoted at their heels and having engaging portions at the ends of their long arms, a perforated downturned lip on the long arm of one of said levers, an independent member having a portion adapted to enter the perforation in said downturned lip and another portion lying alongside the long arm of the other of said levers, and an easily fusible solder cementing the adjacent engaging portions of the arms and the independent member together.

2. The combination, with a sprinkler head and its valve, of a pair of L-shaped levers having a toggle interengagement at their heels and having engaging portions at the ends of their long arms, a downturned lip on the long arm of one of said levers, an independent member having a portion adapted to engage said lip and another portion lying alongside the long arm of the other of said levers, and easily fusible solder cementing the adjacent engaging portions of the arms and the independent member together, and an abutment carried by the sprinkler head for engagement by the short arm of one lever, the short arm of the other lever engaging the valve.

877,552. DRY-PIPE VALVE. EMANUEL M. COOK, Indianapolis, Ind. Filed June 24, 1907. Serial No. 380,503.



In a structure of the class described, the combination with the main casing comprising a chamber having an open passage communicating with the pipe system, and a passage communicating with the water supply, with a valve seat at its inner end, a valve arranged within said chamber and adapted to seat on said seat, a locking lever arranged within the chamber and adapted to engage the valve to prevent movement from its seat, a restraining plunger projected into the chamber in the path of movement of the locking lever, a diaphragm carrying said plunger, and a connection between one side of said diaphragm and the chamber, for the purpose set forth.

877,553. BOOK HAVING A POCKET. RAYMOND A. CURRY, Indianapolis, Ind. Filed Oct. 22, 1907. Serial No. 398,682.



1. A magazine or book having leaves with slotted portions adjacent to the hinges of the leaves to form a pocket or a receptacle, and additional unslotted leaves on each side of the slotted leaves to close the pocket.

2. A magazine or book having leaves with slotted portions adjacent to the hinges of the leaves to form a pocket or receptacle, additional unslotted leaves on each side of the slotted leaves to close the pocket, and a container removably placed within the pocket.

877,554. BLACKBOARD COMPOSITION. GEORGE F. DALTON, Jr., Cleveland, Ohio. Filed Apr. 22, 1907. Serial No. 369,569.

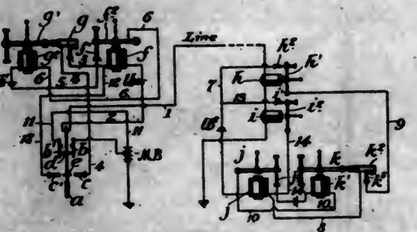
1. The herein described composition of matter of hydraulic cement, marble dust and coloring matter.

2. The herein described composition of matter of hydraulic cement in proportion of from substantially 3/15 to 3/16 of the entire mass, marble dust correspondingly in proportion from 9/15 to 6/15, and coloring matter substantially 3/15 of the mass.

3. The herein described composition of matter of hydraulic cement, marble dust, iron ore and coloring matter.

4. The herein described composition of matter of hydraulic cement in proportion of from substantially 3/15 to 6/15 of the entire mass, marble dust correspondingly in proportion of substantially 3/15 to 3/15, iron ore substantially 1/15, and coloring matter substantially 3/15 of the mass.

877,555. TELEGRAPHY. PATRICK B. DELANY, South Orange, N. J. Filed Mar. 25, 1905. Serial No. 251,951.



1. In telegraphy, a method of transmission consisting in locally producing at a transmitting station code dots and dashes, simultaneously transmitting to a receiving station signals of a different kind, and locally converting at the receiver said transmitted signals into dot and dash signals corresponding with those locally produced at the transmitting station.

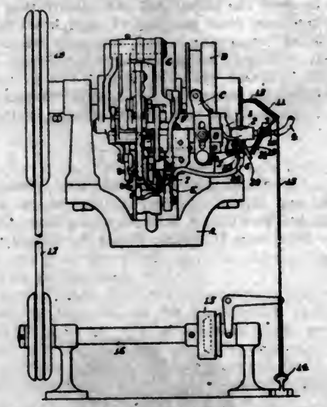
2. In telegraphy, a method of transmission consisting in locally producing at a transmitting station short code dot signals, simultaneously transmitting to a receiving station a long signal whose length is determined by the number of said dots and locally converting at the receiver said long signal into the same number of dots locally produced at the transmitting station.

3. In telegraphy, a method of transmission, consisting in transmitting a signal of one kind, locally at the transmitter simultaneously producing a group of signals of another kind, and at the receiver locally converting the transmitted signal into a group of signals corresponding with those produced at the receiver.

877,556. SHOE-SEWING MACHINE. CLARENCE L. EATON, Worcester, Mass. Filed June 9, 1905. Serial No. 264,476.

1. In a machine of the character described, the combination with stitch-forming mechanism, stock feeding mechanism, and mechanism for starting and stopping the machine, of a stock-wetting device, a main valve for controlling the supply of liquid to said stock wetting device, connections between the main valve and the starting and stopping mechanism, a feed valve, and means whereby said feed valve is operated by the movement of said stock feeding mechanism.

2. In a sewing machine, the combination with sewing mechanism including a stock penetrating member and a starting and stopping device for said sewing mechanism, of a channel wetting device, a main valve controlling the supply of water to the channel wetting device, connections between the main valve and the starting and stopping mechanism, a feed valve, and means whereby the feed valve is operated by the movement of said stock penetrating member, substantially as described.



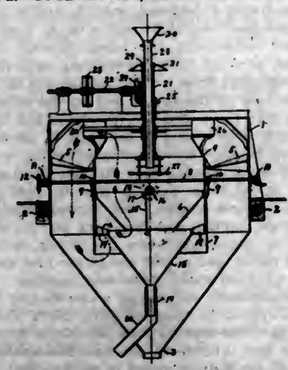
3. In a shoe sewing machine, the combination with a stock penetrating member, of a channel wetting mechanism for wetting the channel of the sole during the sewing operation, a starting and stopping mechanism for the machine, means controlled by the starting and stopping mechanism for controlling the supply of water to the wetting mechanism, and means operated by said stock penetrating member for further controlling the supply of water to said wetting mechanism.

4. In a sewing machine, the combination with an awl, and means for operating the same, of a stock wetting device, means for supplying liquid to said wetting device, a feed valve, and operative connections between said valve and said awl-operating means for actuating the former from the latter.

5. In a sewing machine, the combination with an awl, a laterally moving slide by which said awl is carried, and means for reciprocating said slide, of a stock wetting device, a feed valve, and operative connections between said valve and said slide for actuating the former from the latter.

[Claim 6 not printed in the Gazette.]

877,557. AIR-SEPARATOR. GEORGE S. EMBRICK, Nazareth, Pa. Filed June 11, 1907. Serial No. 378,344.



1. In combination, an outer casing with tapered outlet, an inner cylindrical casing arranged within said outer casing and provided with the truncated cone shaped deflector 6, an adjustable sleeve fitting said inner cylindrical casing, means for raising and lowering said sleeve, a funnel adjustably suspended beneath the deflector 6, and means for raising and lowering said funnel, substantially as described.

2. In combination, an outer casing with tapering base, an inner cylindrical casing of less diameter than said outer casing and mounted therein, a truncated cone shaped deflector secured within said inner cylindrical casing, an adjustable sleeve inclosing the lower portion of said inner cylindrical casing, means for raising and lowering said sleeve, a funnel adjustably suspended beneath said deflector, means for raising and lowering said funnel, a rotary hollow shaft, a fan and a discharge plate secured thereto and actuated thereby, a feed pipe, and means for actusting said rotary hollow shaft, substantially as described.

877,558. SELF-LUBRICATING TROLLEY-WHEEL. HIRAM G. FARR, Melrose Highlands, Mass. Filed Dec. 24, 1906. Serial No. 349,250.



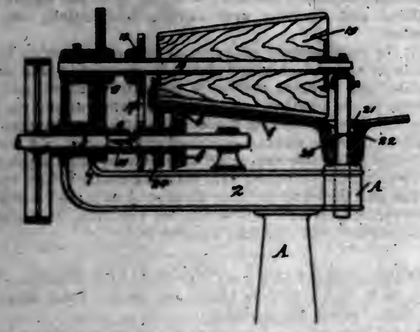
1. In a self-oiling bearing for trolley wheels, the combination of a chambered wheel; an absorbent packing in said chamber; a bushing for said wheel provided with openings therethrough and depressions in the outer and inner faces thereof adjoining said openings; and an absorbent member extending through said openings and resting in said depressions.

2. In a self-lubricating bearing for trolley wheels, the combination of a trolley wheel having a central bore extending therethrough and provided with a lubricating chamber communicating with said bore; a bushing adapted to be driven into and fitting said bore and provided with radial openings therethrough connecting with a circumferential depression in its periphery; and percolating members in said openings and depression adapted to contact with the supporting pin.

3. In a self-lubricating bearing for trolley wheels, the combination of a trolley wheel provided with a lubricating chamber communicating with its bore; a bushing fitting said bore and provided with radial openings therethrough connecting with a depression in its inner wall; and absorbent members in said openings and depression adapted to contact with the supporting pin.

4. In a self-lubricating bearing for trolley wheels, the combination of a trolley wheel having a central bore therethrough and provided with an annular chamber communicating therewith; a bushing fitting said bore and wholly confined therein provided with radial openings extending therethrough and a peripheral depression communicating with and connecting two of said openings; a felt pad in said annular groove extending to the walls of said central bore; and a strip of percolating material extending through each of said openings and resting in said depressions with its outer face corresponding to the periphery of said bushing.

877,559. BUTTER-KNEADING MACHINE. ALBERT FISCHER, Augsburg, Germany. Filed Oct. 25, 1906. Serial No. 340,533.



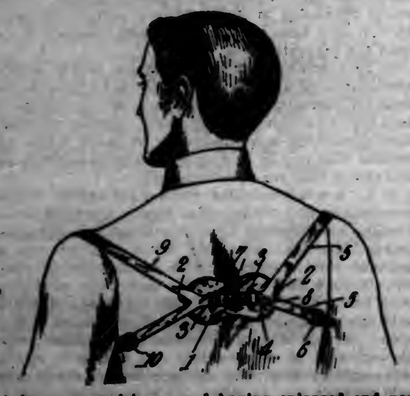
1. In a butter-kneading machine the combination of an inverted conical kneading pan, a revoluble kneading roller mounted thereover, means for revolving said pan and roller and means for causing the directions of revolution of said roller and pan to be alternatively similar or contrary to one another for the purpose set forth.

2. In a butter-kneading machine the combination of an inverted conical kneading pan, a truncated conical kneading roller mounted radially to said pan so that its larger diameter is above the smaller diameter of the pan, and its smaller diameter is above the larger diameter of the pan, and means for revolving the pan and roller in similar and contrary directions alternatively for the purpose set forth.

3. In a butter-kneading machine the combination of revoluble kneading pan, means for revolving the same in one direction, a truncated conical revoluble kneading roller mounted thereover and having its major diameter towards the center of the pan means for revolving the pan and roller and means operated by the pan in its revolution for automatically reversing the direction of revolution of said roller without reversing that of the pan for the purpose set forth.

4. In a butter-kneading machine the combination of an inverted conical pan, means for rotating said pan in one direction, a truncated conical kneading roller mounted over said pan, with its major diameter towards the center of the pan, means for driving said roller in opposite directions, and means operated in conjunction with the rotation of the pan for periodically changing the direction of revolution of the roller without changing that of the pan.

877,560. SHOULDER-BRACE. GEORGE T. FOLTZ, Wytheville, Va. Filed Mar. 5, 1907. Serial No. 360,631.



1. A brace comprising a pad having enlarged end portions, straps connected to each end portion of the pad and disposed at an acute angle to each other, said straps being adjustably connected, the end portions of the pad extending under and beyond the angles produced by the straps.

2. A brace comprising a pad, loops mounted upon the end portions thereof, and an adjustable connection between the loops.

3. A brace comprising a pad, an adjustable loop extending from each end portion thereof, and an adjustable connection between the loops, said pad constituting means to prevent the loops from pinching at their inner portions.

4. A brace comprising a pad, retaining straps thereon, oppositely extending loops, a tongue upon each loop and detachably retained upon the pad by one of the straps, and an adjustable connection between the tongues, said pad constituting means for preventing pinching by the loops.

877,561. CATCHER'S MITT OR GLOVE. EDGAR J. GOLDSMITH and HUGO GOLDSMITH, Cincinnati, Ohio, assignors to The Firm of P. Goldsmith's Sons, Cincinnati, Ohio. Filed Apr. 28, 1904. Serial No. 205,347.

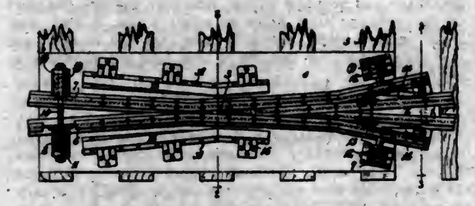


1. In a catcher's mitt, the combination with the palm and thumb formed by the substantially parallel front and back portions with interposed padding and a band D extending at substantially right angles to the front and back portions and connecting the edges thereof, of a reinforcing band parallel to and overlying said first named band and extending from a point at the top of the thumb down to the base of the thumb and up the adjoining part of the palm to a point opposite the top of the thumb, said band having its edges sewn to the band D, eyelets passing through both bands, and a lacing extending through the eyelets.

2. In a catcher's mitt, the combination with the palm and thumb formed by the substantially parallel front and back portions with interposed padding and a band D extending at substantially right angles to the front and back portions and connecting the edges thereof, of a reinforcing band parallel to and overlying said first named band and extending from a point at the top of the thumb down to the base of the thumb and up the adjoining part of the palm to a point opposite the top of the thumb, said band having its edges sewn to the band D, eyelets passing through both bands, and a lacing extending through the eyelets, said lacing passing first through the first and second eyelets in the finger portion, then through the second eyelet in the thumb portion, then through the third eyelet in the finger portion and then back and forth until the bottom eyelet is reached when the lacing is carried up through the thumb and passed out of the first eyelet therein and the two ends thereof fastened together.

3. A catcher's mitt comprising a thumb and finger portion having eyelets in their opposing faces and a lacing starting at the first eyelet at the top of the finger portion and passing back and forth through the eyelets in both portions until the bottom eyelet is reached and then passing said lacing through the thumb portion and out of the top eyelet in the thumb portion and fastening the two ends together.

877,562. DOUBLE-SPRING FROG. JOHN E. GRAHAM, Salem, Va., assignor to American Flange Frog and Railway Improvement Company, Gainesville, Fla., a Corporation of Florida. Filed June 17, 1907. Serial No. 379,440.



1. A railway track structure comprising a frog point, a pair of spring rails, and members arranged outside of the spring rails and having guiding portions located in a higher horizontal plane than the treads of the spring rails to engage the outer edge of the tread rim of the wheel to guide the flange of the wheel past the point of the frog; substantially as described.

2. A railway track structure comprising a frog point, a pair of spring rails, means for forcing said spring rails toward the frog point, and members arranged outside of the spring rails and adjacent the frog point and having guiding portions which lie in a higher horizontal plane than the treads of the spring rails; substantially as described.

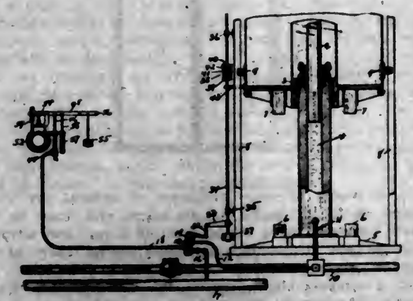
3. A railway track structure comprising a frog point, a pair of movable rails, yielding means for holding said movable rails normally against the opposite sides of the frog point, and members arranged outside of the spring rails and having guiding portions which diverge from the spring rails for engaging the edge of the tread rim of the wheel to shift laterally past the point of the frog; substantially as described.

4. A railway track structure comprising a rigid frog point, a pair of spring rails embracing said frog point, and rigid members arranged outside of the spring rails and having guiding portions which lie in a higher horizontal plane than the treads of the spring rails to engage the outer edge of the wheel rim to guide it past the point of the frog; substantially as described.

5. A railway track structure comprising a rigid frog point, a pair of spring rails normally engaging the opposite sides of said frog point, and rigid members arranged outside of the spring rails and having guiding portions which lie in a higher horizontal plane than the tread faces of the spring rails and are disposed obliquely to said treads; substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

877,563. HYDRAULIC-PUMP REGULATOR. ELY GRISWOLD, Erie, Pa. Filed Dec. 12, 1906. Serial No. 347,411.



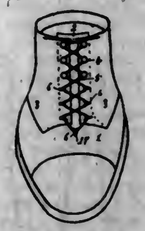
1. In a hydraulic pump regulator the combination with the pump valve; of an accumulator having its liquid controlled by said pump valve; a fluid actuated pressure device controlling said pump valve; a connection for conveying pumped fluid controlled by the pump valve to actuate said pressure device and means actuated by the movement of the accumulator for controlling the fluid actuating said device.

2. In a hydraulic pump regulator the combination with the pump valve; of an accumulator having its liquid controlled by said pump valve; a fluid actuated pressure device controlling said pump valve; a connection for conveying pumped fluid controlled by the pump valve to actuate said pressure device and means actuated by the movement of the accumulator for controlling the pumped fluid actuating said device, said device being arranged to open the pump valve as the fluid under pressure is admitted in the pressure device and to close the valve as the pressure in the pressure device is released.

3. In a hydraulic pump regulator the combination with the pump valve; of the accumulator having its liquid controlled by said pump valve; a fluid actuated pressure device controlling said pump valve; a controlling valve controlling the fluid acting on the pressure device having a chamber connected with the high pressure line, with said pressure device and with an exhaust; valve mechanism arranged in the chamber for connecting the high pressure line with the pressure device with one movement, closing said connection and opening a connection between the pressure device and exhaust with another movement; and connections between said valve mechanism and the accumulator for actuating said valve mechanism with the movement of the accumulator.

4. In a hydraulic pump regulator the combination with the pump valve; of the accumulator having its liquid controlled by said pump valve; a fluid actuated pressure device controlling said pump valve; a controlling valve controlling the fluid acting on the pressure device having a chamber connected with the high pressure line, with said pressure device and with an exhaust; valve mechanism arranged in the chamber for connecting the high pressure line with the pressure device with one movement, closing, said connection and opening a connection between the pressure device and exhaust with another movement; and connections between said valve mechanism and the accumulator for actuating said valve mechanism with the movement of the accumulator, said pressure device being arranged to open the pump valve when actuating fluid is turned into the pressure device by the controlling valve and to permit the closing of the pump valve when the actuating fluid is exhausted from the pressure device.

877,564. LACING-LOOP. CHARLES A. HEIM, Brownsville, Ind. Filed Mar. 21, 1907. Serial No. 363,730.



1. As a new article of manufacture, a lacing loop consisting of a triangular shaped piece of sheet metal formed with a longitudinal curve and with similar pointed clenching tangs projecting respectively from its apex and from said base portion in a direction parallel with each other.

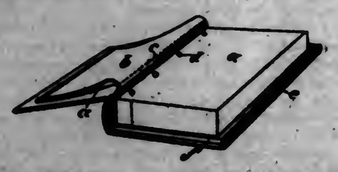
2. As a new article of manufacture, a lacing loop consisting of a triangular shaped piece of sheet metal formed at its corners with sharp clenching prongs, and having its body portion formed with a longitudinal bend, and also with a lateral bend to form an interiorly convex wall, said prongs being extended in the same direction parallel with each other.

3. As a new article of manufacture, an open loop con-

sisting of a triangular shaped piece of sheet metal terminating at its corners in clenching prongs and having its base portion curved laterally and its bridge portion curved longitudinally said clenching prongs being extended in the same direction parallel with each other.

4. As a new article of manufacture, a lacing loop consisting of a triangular shaped piece of metal formed with a longitudinal bend and with an interiorly convex wall by a lateral bend of its base portion, and provided with clenching prongs projecting in the same direction perpendicular to a common plane.

877,565. LETTER-PRESS COPYING-BLOCK. WILHELM HILSINGER, Stuttgart, Germany. Filed Nov. 12, 1903. Serial No. 180,971.



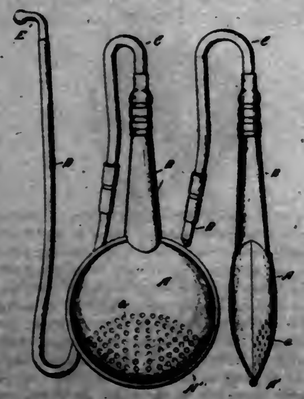
1. A letter-press copying block comprising a series of sheets arranged in pairs, each pair consisting of a tissue sheet and an absorbent sheet secured together along the edge and otherwise separated.

2. A letter-press copying block comprising a series of sheets arranged in pairs, each pair consisting of a tissue sheet and an absorbent sheet secured together along one edge, the absorbent sheet having a line of perforations near the junction of the two sheets.

3. A letter-press copying block comprising a series of sheets arranged in pairs, each pair consisting of a tissue sheet and an absorbent sheet secured together along one edge, the absorbent sheet having a line of perforations near the junction of the two sheets, and binding holes through the absorbent sheet outside the line of perforations.

4. A letter-press copying block comprising a series of sheets arranged in pairs, each pair consisting of a tissue sheet and an absorbent sheet secured together along one edge, one of the sheets having a line of perforations near the junction of the two sheets, the series of sheets secured together to form a block, a stiff back secured to the block, and a cover having inturned edges to receive the edges of the back of the block and form a book.

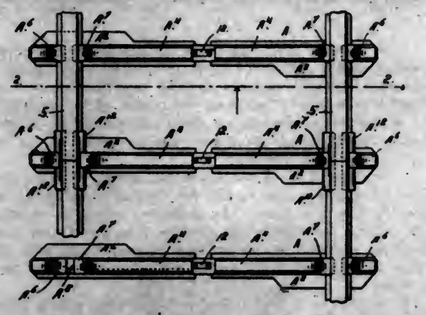
877,566. EAR-TRUMPET. CHARLES L. HOLLAND, Minneapolis, Minn. Filed Apr. 30, 1907. Serial No. 371,203.



1. An ear trumpet approximately of disk form and perforated on one side for the admission of sound, said trumpet being provided with an outlet from its periphery and having its interior unobstructed substantially as set forth.

2. In combination with an approximately disk form trumpet having a tapering outlet tube at one point of its periphery and provided in one side near the opposite part of its periphery with holes to admit sound, a bent neck fitted on said outlet, a flexible tube attached to said neck and an ear piece on the end of said tube substantially as set forth.

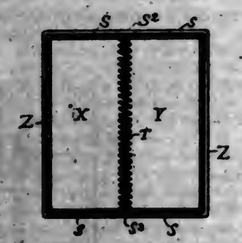
877,567. METAL RAILWAY-TIE. JONATHAN M. HUNNEL, Colorado Springs, Colo. Filed Dec. 3, 1906. Serial No. 346,185.



1. A railway tie member, provided with a bed plate extending a portion of its length, an upwardly projecting bar portion extending its entire length, the said member being provided at each extremity with a rail-engaging lug, the said member having also a recess formed near one extremity, and a counter-part projection formed at the other extremity, the bar of the said member being provided with a centrally-located offset and an overlapping cap.

2. A tie of the class described composed of two interlocking members, the extremities of the members being provided with lugs adapted to embrace the rails of the track on opposite sides when the members are in the assembled relation, and suitable means for securing the tie members in the assembled relation comprising recesses formed near their opposite extremities, counterpart projections formed at the extremities opposite the recesses, and centrally located offsets and overlapping caps for the purpose set forth.

877,568. MATTRESS. HARRY C. INNES, Hartwell, Ohio, assignor of one-half to The Franklin Cotton Mill Company, Cincinnati, Ohio, a Corporation of Ohio. Filed June 17, 1907. Serial No. 379,482.



1. A woven mattress composed of several ply thicknesses of fabric, bound at the edges, and made in two parts connected by a whipped stitch hinge, and adapted, the one part to fold upon the other, substantially as and for the purpose specified.

2. A compact elastic mattress, consisting of a textile fabric, of several plies, the warp consisting of two threads, and the woof threads wound in and back, the several plies held together by the tying cords or threads passing each other in opposite directions between each line of woof, and holding the entire fabric in a compact elastic condition, substantially as and for the purposes specified.

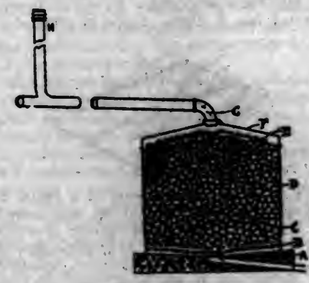
3. A compact elastic mattress, consisting of a textile fabric of several plies, the warp consisting of two compressible cotton threads, and the woof threads wound in and back, the several plies held together by the tying cords or threads passing each other in opposite directions between each line of woof, and holding the entire fabric in a compact elastic condition, substantially as and for the purposes specified.

4. A compact elastic mattress, consisting of a textile fabric, of several plies, the warp consisting of two compressible cotton threads, and the linen woof threads wound in and back, the several plies held together by the tying cords or threads passing each other in opposite directions between each line of woof, and holding the entire fabric in a compact elastic condition, substantially as and for the purposes specified.

5. A compact elastic mattress, consisting of a textile fabric of several plies, the warp consisting of two threads, and the woof threads wound in and back, the several plies held together by the tying cords or threads passing each other in opposite directions between each line of woof, and holding the entire fabric in a compact elastic condition, this mattress composed of two parts bound at the outer edges, woven not to unravel at their adjacent edges, and connected by a flexible cord connection, substantially as and for the purposes specified.

[Claim 6 not printed in the Gazette.]

877,569. APPARATUS FOR TREATING SEWAGE. ARTHUR I. JOSEPH, Sydney, New South Wales, Australia. Filed Dec. 29, 1906. Serial No. 349,994.

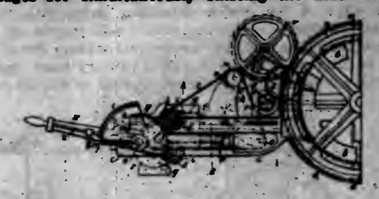


1. An apparatus for the treating of sewage comprising a cage, a concrete base therefor, an aerating bed in said cage, means for forming air passages between the bed and base and a ventilating hood covering the bed, substantially as described.

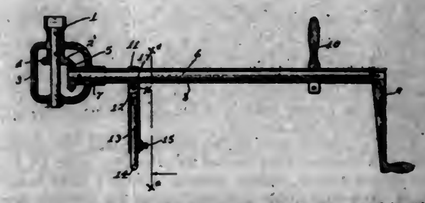
2. An apparatus for treating sewage comprising a base, a cage thereon, an aerating bed in said cage, means for forming air passages between the base and the bed, a distributer located above the bed, said distributer being of cone shape and having concentric corrugated grooves having slots therein, and a ventilating hood covering the bed and distributer, substantially as described.

877,570. MACHINE FOR PRINTING TAPESTRY. CHRISTIAN F. M. KROSNERT, Altona, Germany. Filed July 30, 1907. Serial No. 386,201.

A device of the character described, comprising a first carriage, a pattern roller journaled therein, a second carriage, a color cloth carried thereby and engaging the pattern roller, a lever, and gears intermediate said lever and carriages for simultaneously shifting the first and second carriages at the ratio of one to two, substantially as specified.



877,571. WRENCH. THOMAS LARSON, Bricelyn, Minn. Filed June 14, 1907. Serial No. 378,941.



1. In a wrench of the kind described, the combination with a gear supporting head having a long extended bearing, of a long driving shaft journaled in said extended bearing and provided at its outer end with means for rotating it, a relatively short shaft journaled in said head extending at an angle to the said driving shaft and provided at one end with a wrench socket or head, gears connecting the said two shafts, and a supporting leg applied to the intermediate portion of said extended shaft, substantially as described.

2. In a wrench of the kind described, the combination with a gear supporting head, a long sleeve extension provided at its extended end with a hand piece, a long driving shaft journaled in said sleeve and provided at its outer end with an operating crank, a relatively short shaft journaled in said head extending approximately at a right angle to said driving shaft and provided at one end with a wrench socket, bevel gears connecting said two shafts, and a supporting leg applied to the intermediate portion of said sleeve, substantially as described.

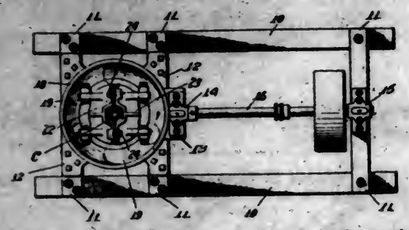
3. In a wrench of the kind described, the combination with a gear supporting head having a long sleeve provided at its extended end with a hand piece, a driving shaft journaled in said sleeve and provided at its extended end with an operating crank, a relatively short shaft journaled in said supporting head and provided at one end with a wrench socket, gears connecting said two shafts, and an extensible supporting leg applied to the intermediate portion of said sleeve, substantially as described.

4. In a wrench of the kind described, the combination with a gear supporting head having a long extended sleeve, a driving shaft journaled in said sleeve and provided at its outer end with an operating crank, a relatively short shaft journaled in said supporting head and provided at one end with a wrench socket, gears connecting said two shafts, and a longitudinal telescopical extensible supporting leg pivotally connected to the intermediate portion of said sleeve, substantially as described.

877,572. DRILLING-MACHINE. THURE LARSSON, Worcester, Mass., assignor to himself, W. E. D. Stokes, New York, N. Y., and Fred A. Jones, Worcester, Mass. Filed May 22, 1903, Serial No. 158,316. Renewed June 20, 1907. Serial No. 379,926.

1. In an apparatus of the class described, the combination of a plate or part having an oil pocket with a return oil channel leading thereto, a rotary head, bearings sup-

porting the rotary-head, and a driving pinion meshing into gear-teeth extending down from the rotary head, the lower edge of the pinion extending down into the oil pocket, whereby the driving pinion will convey oil from the oil pocket to said gear-teeth from whence the oil will drip to lubricate the bearings of the rotary head, and will then be returned through the oil-channel to the oil-pocket.

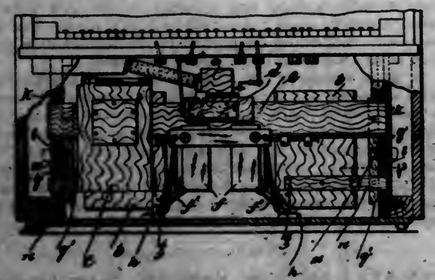


2. In an apparatus of the class described, the combination of a rotary head having a cylindrical body portion with an annular groove therein, a plurality of supporting rollers fitting into said groove and forming the bearings upon which the rotary head turns, and driving gearing for turning the rotary head and for automatically supplying oil to the bearings thereof.

3. In a construction of the class described, the combination of a plate or part having an oil-pocket with an annular return groove leading thereto, a rotary head comprising a cylindrical body portion having an annular groove therein, a plurality of rollers journaled on upright studs and extending into the annular groove to form the bearings on which the rotary head turns, and a driving pinion meshing into teeth extending down from the cover of the rotary head, the lower part of the pinion running in the oil pocket, whereby oil will be conveyed to the gear-teeth from whence it will drip down onto the bearing rolls and be returned through the oil groove.

4. In a drilling machine, the combination of the rotary-head, the driving connections therefor, and two movable sections or cover-plates carried by the rotary-head, said cover plates coöperating to form a non-circular socket when in closed position to receive and turn a drive-pipe section, and also having abutments coöperating to form a wrench socket for receiving a drive-pipe coupling, whereby a single set of cover-plates are used for turning the drive-pipe during the drilling, and for coupling and uncoupling additional lengths of drive pipe.

877,573. AUTOMATIC PIANO. SAMUEL J. LAUGHLIN, Rochester, N. Y., assignor to The Autopiano Company, a Corporation of New York. Filed July 7, 1906. Serial No. 325,061.



1. The combination with a piano casing having a pair of rearwardly and upwardly inclined pieces located along its opposite ends, and extending substantially from the bottom to the key-bed, with a structure comprising a bellows, and pedals connected therewith, said structure being bodily removable from the casing, and having means for engaging the inclined pieces, whereby the structure will rest against the inclined pieces when located in the casing.

2. In an automatic piano, the combination of a casing having upwardly extending pieces near its ends, a structure comprising a main wind chest adapted to extend across the piano from one of said pieces to the other and to overlap them, a pair of pumps mounted on the wind chest, a pair of strips, one mounted on each pump, said strips projecting over said end pieces of the casing, and means for operating the pumps.

3. The combination with a piano casing having a pair of end pieces at its opposite ends, with a structure comprising bellows for automatic operation, and pedals supported thereby, said structure being bodily removable from the casing, and having elements engaging one side of each of said end pieces to limit the inward movement of the structure, and means on said end pieces for engaging the structure and securing it positively in position.

4. The combination with a piano casing having a pair of rearwardly and upwardly inclined pieces along its opposite ends with a structure comprising the bellows for automatic operation, and pedals connected therewith, said structure being bodily removable from the casing, and means for engaging said inclined pieces and guiding said structure into proper position within the casing.

5. The combination with a piano casing having a pair of rearwardly and upwardly inclined pieces at its opposite ends with a structure comprising the bellows for automatic operation, and pedals connected therewith, said structure being bodily removable from the casing, and means for engaging said inclined pieces and guiding said structure into proper position within the casing, the structure having elements engaging one side of each of said inclined pieces to limit the inward movement of the structure, and means on said inclined pieces for engaging the structure and securing it positively in position.

[Claims 6 to 13 not printed in the Gazette.]

877,574. MINER'S SHOVEL. DAVID B. LEWIS, Bisbee, Ariz. Filed Jan. 2, 1907. Serial No. 350,424.



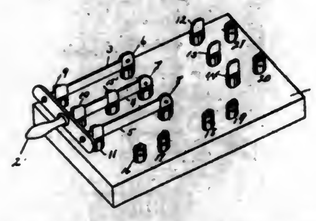
A square shovel blade composed of a single thin sheet of metal having its front portion flat and straight across its entire width with the sides thereof curved upwardly at the rear end of the blade and bent outwardly and downwardly toward the front, merging into said flat front portion near the middle of the blade and with their inner faces lying in approximately a horizontal plane, said sheet having its rear end bent upwardly from a point beyond the middle, whereby a central depression is formed to receive the material to be lifted.

877,575. RADIATOR. JOHAN A. LIDVALL, Gefle, Sweden. Filed Jan. 27, 1904. Serial No. 190,791.



In a radiator, the combination of side-walls formed of sections of a great height in comparison with the length thereof, said sections being connected together in such a manner as to form a passage of a tortuous horizontal section, and cover- and bottom-pieces of a shape corresponding to the horizontal section of the radiator, said pieces being secured to the side-walls, substantially as and for the purpose set forth.

877,576. SERIES-PARALLEL POLARITY-CHANGING SWITCH. EDWIN S. LINCOLN, Brookline, Mass. Filed Feb. 11, 1907. Serial No. 356,853.

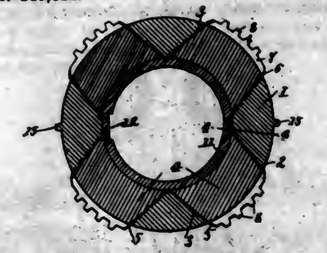


1. In combination with a plurality of sources of electric energy, an electric switch adapted to electrically connect said sources of electric energy to an electric circuit, said switch having triple conductors adapted to occupy selective operative positions, a set of inner contact blocks at which said conductors are hinged, a set of outer contact blocks with which said conductors electrically engage in one operative position of the switch, a second set of outer contact blocks with which said conductors electrically engage in the second operative position of the switch, a supplementary contact block with which one of said conductors also engages in said second position of the switch, and electric connections between said sources of energy, inner contact blocks, outer contact blocks, supplementary contact block, and the circuit terminals, substantially as described, whereby in one position of the switch the said sources of energy are connected to said circuit in series, and in the second position the said sources of energy are connected thereto in parallel.

2. In combination with a plurality of sources of electric energy, an electric switch adapted to electrically connect said sources of electric energy to an electric circuit, said switch having movable conductors adapted to occupy selective operative positions, a set of inner contact blocks with which said conductors electrically engage in either operative position of said conductors, a set of outer contact blocks with which said conductors electrically engage in one position of the switch, a second set of outer contacts with which said conductors engage in the second position of the switch, a supplementary contact block with which one of said conductors engages in the second position of said switch, and electric connections between said sources of energy, inner, outer, and supplementary contact blocks, and the circuit terminals, substantially as described, whereby in one position of the switch the said sources of energy are connected to said circuit in series, and in the second position of the switch the said sources of energy are connected thereto in parallel.

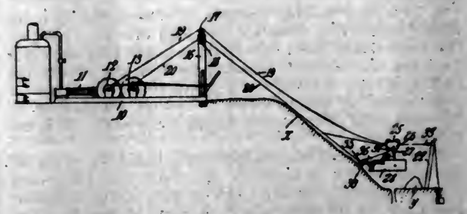
3. In combination with a plurality of sources of electric energy, an electric switch adapted to electrically connect said sources of energy to an electric circuit, said switch having movable conductors adapted to occupy selective operative positions, each of said conductors engaging in either position of the switch with an inner and an outer contact block, the inner contact blocks engaged by any conductor in one position of the switch being electrically identical with the inner contact engaged by said conductor in the other position of the switch, one of said conductors furthermore engaging in one position of the switch with a supplementary contact block, and electric connections between said sources of energy, inner, outer, and supplementary contact blocks, whereby in one position of the switch the said sources of energy are connected to said circuit in series, and in the second position of the switch the said sources of energy are connected thereto in parallel.

877,577. HORSESHOE-CREASER. JOSEPH C. LOCKE, Westmount, Quebec, Canada. Filed Dec. 28, 1906. Serial No. 349,814.



In a device of the character described, the combination of an annular member, outwardly-converging slots extending across the side face of said member, each of said slots being formed with under-cut walls, removable elements formed with a taper corresponding to the convergence of said slots and provided with inclined side walls for interlocking with the under-cut walls of said slots, dies on the outer ends of said elements, an annular flange extending from the inner periphery of said annular member, and a locking ring seated on said annular flange in engagement with the inner ends of said removable elements, substantially as described.

877,578. EXCAVATING-MACHINE. MILTON S. LONGNAKER, Pleasant Hill, Ohio. Filed Apr. 5, 1907. Serial No. 366,615.



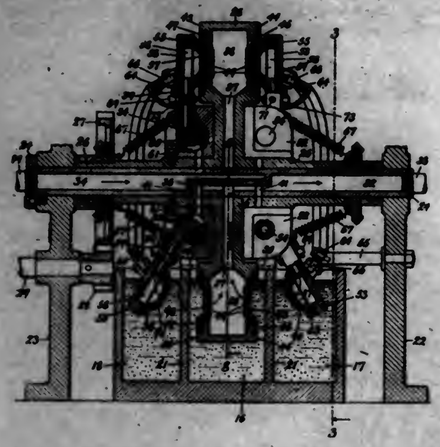
1. In apparatus of the class described, an inclined cable or support, means for slackening and drawing the cable taut to alter its degree of inclination, a movable carriage arranged to travel on the inclined cable and movable thereon in one direction by gravity, and an operating cable connected to said load carrier and arranged to haul the same in the opposite direction.

2. In an excavating machine, an inclined cable, a wheeled frame arranged to travel on said cable by gravity from excavating to dumping position, an operating cable connected to the scoop and tending to move the same from dumping to excavating position, and a loop extending from the cable over a portion of the frame to said scoop, and being adjustably connected to the latter, the loop tending to maintain the scoop in digging and dirt conveying position when the operating cable is taut.

3. In an excavating machine, an inclined cable, a wheeled frame free to travel thereon and provided with an auxiliary guiding sheave below the cable, a pivotally mounted digging scoop hung from the frame and tending to move to dumping position by gravity, an operating cable connected to the forward end of the scoop, and an auxiliary loop extending from the cable over the auxiliary sheave and connected to the forward end of the scoop to maintain the latter in digging and conveying position while the operating cable is taut.

4. In an excavating machine, an inclined supporting cable, a wheeled frame mounted thereon, a digging scoop hung from the frame, an operating cable for the scoop, and means for adjusting the inclination of the supporting cable to vary the digging point of said scoop.

877,579. APPARATUS FOR MOLDING PULP ARTICLES. WILLIAM A. LORENZ, Hartford, Conn., assignor of one-half to Joseph Merritt, Hartford, Conn. Filed Mar. 20, 1907. Serial No. 363,431.



1. In a pulp molding machine in combination, a mold face, a coöperating mold face, means to deposit pulp upon each mold face, means for pressing the two faces together to form a single article, and means to remove one mold face therefrom, leaving said two-layer article on said other face.

2. In a pulp molding machine, in combination, a mold-face, a coöperating mold-face, two pulp vats, each containing pulp, means to deposit pulp upon the first mold-face from one vat, means to deposit pulp upon the coöperating mold-face from the other vat, means to nest the layer of pulp carried by one mold-face in the layer supported by the other mold-face, and to combine the layers to form the article.

3. In a pulp molding machine, in combination, a traveling mold-face, a coöperating mold-face, two pulp vats, each containing a different grade of pulp, means to deposit pulp upon the traveling mold-face from one vat, means to deposit pulp upon the coöperating mold-face from the other vat, means to nest the layer of pulp carried by one mold-face in the layer supported by the other mold-face, and to combine the layers to form the article.

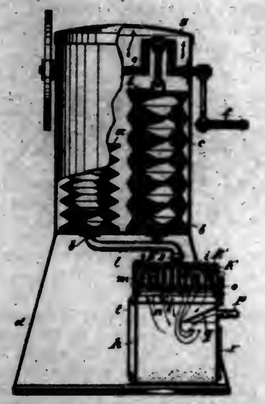
4. In a pulp molding machine, in combination, a traveling mold-face, a coöperating mold-face, two pulp vats, each containing a different grade of pulp, means to deposit pulp upon the traveling mold-face from one vat, means to deposit pulp upon the coöperating mold-face from the other vat, means to nest the layer of pulp carried by one mold-face in the layer supported by the other mold-face, and to combine and compress the layers to form the article.

5. In a pulp molding machine, in combination, a traveling mold-face, a coöperating mold-face, two pulp vats, each containing a different grade of pulp, means to deposit pulp upon the traveling mold-face from one vat, means to deposit pulp upon the coöperating mold-face from the other vat, means to nest the layer of pulp carried by one mold-face in the layer supported by the other mold-face, and to combine the layers to form the article, and means to subsequently discharge the formed article from the mold-face to which it was transferred.

[Claims 6 to 75 not printed in the Gazette.]

877,580. FILTER FOR DUST-SUCTION APPARATUS. ARTHUR MERRITT, Raudnitz-on-the-Elbe, Austria-Hungary. Filed Feb. 19, 1906. Serial No. 301,960.

1. A filter for dust suction apparatus, comprising an assemblage of parallel frames open above and below alternately and having filter-sheets stretched across them; a receptacle, at the top of which the frames are located, and having an air-inlet below and an air-outlet above the frames; a plurality of brushes located below those frames which are open at the bottom; and means for introducing the brushes into the same and withdrawing them therefrom; substantially as described.



2. A filter for dust suction apparatus, comprising an assemblage of parallel frames open above and below alternately and having filter-sheets stretched across them, a receptacle, at the top of which the frames are located and having an air-inlet below and an air-outlet above the frames; a rotary bar extending across the receptacle below the frames and operable from without; and brushes carried by the bar below those frames which are open at the bottom and adapted to enter the same; substantially as described.

3. In combination, a dust suction apparatus, having a hollow base; and a filter comprising an assemblage of parallel frames open above and below alternately and having filter-sheets stretched across them; a receptacle, located in the said base, at the top of which the frames are located, and having an air-inlet below and an air-outlet above the frames; and a clamp-rod hinged to the said base and taking over the top of the receptacle, whereby the receptacle is firmly but detachably held in the base; substantially as described.

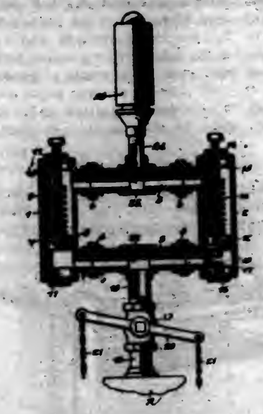
4. A filter for dust suction apparatus, comprising an assemblage of parallel frames open above and below alternately and having filter-sheets stretched across them; a receptacle, at the top of which the frames are located, and having an air-inlet below and a tubular air-outlet above the frames; a bifurcated pipe each portion constituting a suction member and means for creating suction therein alternately; and a screw-nut uniting the same with the receptacle outlet; substantially as described.

877,581. AUTOMATIC HIGH AND LOW BOILER-PRESSURE ALARM. CLARENCE S. MOORE, Lexington, Ky. Filed May 7, 1907. Serial No. 372,440.

1. In a device of the character described, the combination of the high and low pressure valve chambers arranged in spaced relation, and having a common connection with the boiler at their lower ends and a similar connection with the alarm at their upper ends, of the high and low pressure valves oppositely seated within their respective chambers, and means for regulating said valves, substantially as described.

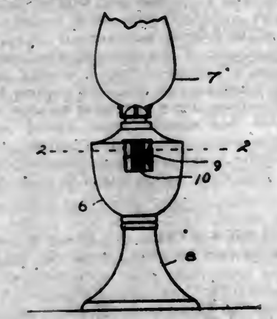
2. In a device of the character described, the combination of the high and low pressure valve chambers arranged in spaced parallel relation, and having a common connection with an alarm at their upper ends, a valved pipe adapted for connection with the boiler at one end and having a common connection with the lower portions of said

chambers at its upper end, high and low pressure valves oppositely seated in their respective chambers between



said upper and lower connections, and means for regulating said valves, substantially as described.

877,582. COMBINED LAMP-FONT AND MATCH-HOLDING DEVICE. JENNIE MYERS, Fitzlen, Okla. Filed Mar. 7, 1907. Serial No. 361,141.



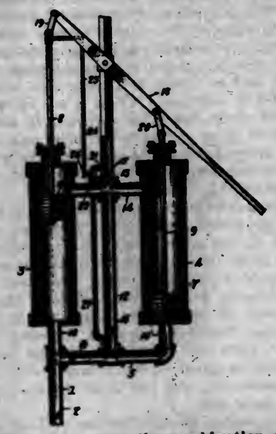
A lamp font having a match-holder molded integrally therewith on its outer side said match-holder having a flat outer face and undergrooved ribs on the sides of said face for the reception of a piece of roughened material suitable for igniting a match.

877,583. BALANCED PUMP. DANIEL M. MCLAUGHLIN, Louisville, Ky. Filed Oct. 4, 1907. Serial No. 395,857.

1. In a balanced pump, the combination of two cylinders, oppositely moving pistons in said cylinders, a stand pipe connected with said cylinders below the pistons, a connection between the stand pipe and said cylinders above the pistons, a check valve in said stand pipe above the upper connection thereof with the cylinders, and means operated by the movement of one piston for intermittently admitting pressure from the upper part of said stand pipe to the cylinders behind the pistons.

2. In a balanced pump, the combination with two cylinders, oppositely moving pistons in said cylinders, a common intake for said cylinders, a common stand pipe connected to said cylinders below the pistons, a connection between said stand pipe and the cylinders above the pistons, a check valve in said stand pipe above said connection, a by-pass connecting the stand pipe above the check valve with the stand pipe below the same, a valve controlling said by-pass, and means operated by the pump brake for alternately opening and closing said valve.

3. In a balanced pump, the combination of an intake cylinder, a discharge cylinder communicating therewith, oppositely moving pistons in said cylinders, a stand pipe communicating with the discharge cylinder below the piston, check valves in the connection between the cylinders and in the stand pipe respectively, and a by-pass around the check valve in the stand pipe.



4. In a balanced pump, the combination of an intake cylinder, a discharge cylinder communicating therewith, oppositely moving pistons in said cylinders, a stand pipe communicating with the discharge cylinder below the piston, connections between the stand pipe and the cylinders above the pistons, check valves in the connection between the cylinders and in the stand pipe respectively, and a by-pass around the check valve in the stand pipe.

5. In a balanced pump, the combination of an intake cylinder, a discharge cylinder communicating therewith, oppositely moving pistons in said cylinders, a stand pipe communicating with the discharge cylinder below the piston, check valves in the connection between the cylinders and in the stand pipe respectively, a by-pass around the check valve in the stand pipe, a valve in said by-pass, and means to operate said valve, whereby the same is open during the down stroke of the discharge piston and closed during the down stroke of the intake piston.

[Claim 6 not printed in the Gazette.]

877,584. BOTTLE-VALVE. VINCEN P. MCVOY, Pensacola, Fla., assignor of one-half to Roswell B. King, Pensacola, Fla. Filed Apr. 26, 1907. Serial No. 370,522.



1. The combination with a bottle, of two disks fitted in the neck thereof, the inner one having an air-port and an

outlet port, and a valve for the latter, the outer disk also having an air-port for coinciding with the air-port of the inner disk, air under pressure being designed to be supplied through said air ports, said outer disk being capable of being turned to move said air-ports out of register, the air-port of the outer disk being designed to also coincide with the outlet port of the inner disk.

2. The combination with a bottle, of two disks fitted in the neck thereof, the inner one having an air-port and an outlet port, a valve for the latter, the outer disk also having an air-port for coinciding with the air-port of the inner disk, air under pressure being designed to be supplied through said air ports, said outer disk being capable of being turned to move said air-ports out of register, the air-port of the outer disk being designed to also coincide with the outlet port of the inner disk and means for limiting the movements of the outer disk to prevent the air-ports again coinciding once they are out of register by the movement of the outer disk.

3. The combination with a bottle having a seat in its neck, of an inner disk held against said seat as against rotation, and having an air-port and an outlet port, a valve for the latter, an outer disk also having an air-port for coinciding with the air-port of the inner disk, air under pressure being designed to be supplied through said air ports, means for locking the outer disk in the bottle neck, said outer disk being capable of being turned to move said air ports out of register, the air port of the outer disk being designed to also coincide with the outlet port of the inner disk, and means for limiting the movements of the outer disk.

4. In a bottle valve, the combination with an inner disk having an air-port, an outlet port and a valve for the latter, of an outer disk having an air-port designed to coincide with the former air-port and also having a segmental recess in its inner face, a spring-pressed lug carried by the inner disk for extending into said recess, and means whereby the outer disk may be turned.

5. In a bottle valve, the combination with an inner disk having an air-port, a centrally-arranged outlet port, and a lateral branch leading from the latter, and a valve for said outlet port, of an outer disk having an air-port designed to coincide with the former air-port and also having a segmental recess, in its inner face, a spring pressed lug carried by the inner disk for extending into said recess, and means whereby the outer disk may be turned.

[Claims 6 to 9 not printed in the Gazette.]

877,585. RUBBING APPARATUS FOR THE GUMS. LUDWIG J. F. NICOLAI, Dresden, Germany, assignor to "Phateco" Gesellschaft mit beschränkter Haftung, Dresden, Germany. Filed May 25, 1907. Serial No. 375,700.



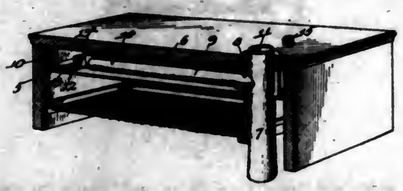
1. A friction instrument comprising a handle, a projection on the end of the handle, an apertured cover adapted to fit over said projection and means for securing the cover to the handle substantially as set forth.

2. A friction instrument comprising a handle, a projection on the end of the handle, an apertured cover adapted to fit over said projection and a hinged connection between the cover and the handle substantially as set forth.

3. A friction instrument comprising a handle, a curved projection on the end thereof, a cover plate with an opening adapted to fit over the projection and an extension fitting over the handle substantially as set forth.

4. A friction instrument comprising a handle, a curved projection on the end thereof, a cover plate with an opening adapted to fit over the projection and extensions fitting over both sides of the handle substantially as set forth.

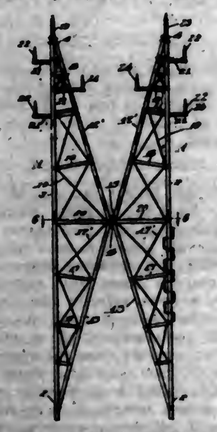
877,586. HEATING APPARATUS FOR INCUBATORS. JAMES L. NIX, Homer City, Pa. Filed Nov. 23, 1905. Serial No. 288,766.



1. In a device of the class described, a heating-receptacle having a metallic bottom, a metallic sheet mounted above and parallel with said bottom in such a manner as to leave a thin air-space between the same and said bottom, a heating-flue horizontally disposed upon said metallic sheet, and a housing disposed around said flue said housing being open at its top and bottom, said metallic sheet having an opening therein which registers with the open bottom of the housing substantially as described.

2. In an incubator, a heating-receptacle comprising a bottom and top, a horizontal flue, a housing having vertical walls surrounding said flue, said housing being open at its top and bottom, a metallic sheet whereon said housing is mounted said metallic sheet having an opening therein which registers with the open bottom of the housing, and a metallic receptacle bottom mounted beneath and parallel with said sheet, substantially as described.

877,587. SKELETON TOWER. LA VERNE W. NOYES, Chicago, Ill. Filed July 20, 1906. Serial No. 327,056.



1. A tower having a pair of upright end frames of triangular form and a pair of bracing frames pyramidal in form.

2. A tower composed of two sections, each having an upright end frame of triangular form and a bracing frame pyramidal in form, said sections being connected at the apices of said pyramidal bracing frames.

3. A tower having a pair of triangular upright end frames of structural iron, comprising converging posts suitably braced, and bracing frames comprising posts fastened to each end of the triangular frames and converging at one point.

4. A tower having a pair of upwardly extending three post supporting arms and four downwardly extending three post legs.

5. A tower having a pair of upwardly extending three post supporting arms and four downwardly extending laterally diverging legs.

[Claims 6 to 27 not printed in the Gazette.]

877,588. INTERLOCKING SHEET-PILING. GEORGE E. NYE, Chicago, Ill., assignor to National Interlocking Steel Sheeting Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 16, 1907. Serial No. 402,460.



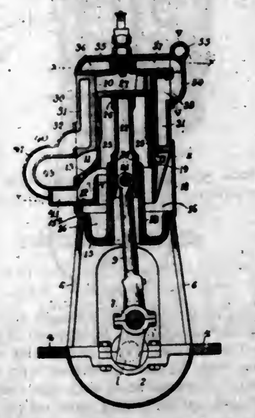
1. Sheet piling comprising units each having a web and edge flanges, and adapted to be driven edge to edge to form a continuous wall, adjacent units being equipped on opposing edge portions and respectively opposite ends with interlocking devices, said interlocking devices engaging the web of the unit carrying the same and projections thereon engaging the edge flanges of the carrying and opposing unit, said last named projections of each interlocking device being disposed in the path of the projections of the other.

2. Sheet piling comprising units each having a web and edge flanges, and adapted to be driven edge to edge to form a continuous wall, adjacent units being equipped on opposing edge portions and respectively opposite ends with interlocking devices, said interlocking devices engaging the web of the unit carrying the same and projections thereon engaging the edge flanges of the carrying and opposing unit, the engagement of said projections with the edge flanges of the carrying unit holding said interlocking device against lateral movement in one direction, and the engagement thereof with the edge flanges of opposing units holding said interlocking device against lateral movement in the other direction, said interlocking devices holding adjacent units against relative lateral movement and said projections of opposing interlocking devices being disposed in each other's paths.

877,589. TWO-CYCLE HYDROCARBON-ENGINE. DANIEL L. OULTON, Everett, Mass., assignor to The Duo Motor Company, Boston, Mass., a Corporation of Massachusetts. Filed Mar. 17, 1906. Serial No. 306,526.

1. An internal combustion engine comprising a main cylinder, an inner cylinder at the lower part of the main cylinder and in axial alinement therewith, a wall or jacket connecting the main and inner cylinders at the lower end forming an initial compression chamber, a bucket plunger or piston fitted to the main cylinder and having a piston rod fitting the inner cylinder, a crank shaft and a pitman connecting the same to the piston rod, said main cylinder having inlet and exhaust ports to the combustion space designed to be uncovered by the piston when at or near the limit of its downward or outward stroke, said inlet port communicating with the initial compression space, and said main cylinder having also a fuel inlet port leading to the initial compression chamber arranged to be uncovered by the piston when at or near the limit of its upward or compression stroke, substantially as described.

2. In an internal combustion engine, a main cylinder, an inner cylinder in the lower end thereof comprising an annular initial compression space, a wall closing the lower end of said space, inlet and exhaust ports to the combustion space of the main cylinder, and an inlet port to the initial compression chamber or space, a bucket plunger or piston fitted to the main cylinder and adapted to open and close the ports leading to the combustion chamber, a member carried by the piston and sliding within said inner cylinder and suitably packed to form a tight joint, a crank shaft, a piston connecting said member with the crank shaft, and a removable head for the main cylinder, substantially as described.



3. In an internal combustion engine, the combination with a main cylinder and inner cylinder, of the bucket plunger having a central tubular boss, a tubular piston rod fixed in said boss, a pitman pivoted in said piston rod, a crank shaft having its crank pin engaged by said pitman, and a removable head for said main cylinder; said pitman being made separable to permit said plunger and tubular piston rod to be withdrawn from said cylinder.

4. In a two-cycle internal combustion engine, the main cylinder having its exhaust port and by-pass in substantially the same plane, and an intake close below said exhaust, in combination with a piston reciprocating therein, said cylinder being formed with an integral groove immediately below said exhaust port and by-pass and above said intake.

5. The combination with a water-jacketed internal combustion engine having a plane surface through which are the intake and exhaust ports and the inlet to the water-jacket, of a member removably secured to said surface and formed with separate passages communicating with said intake, exhaust and inlet respectively, and suitable piping to said passages; whereby said cylinder can be freed from said piping by simply disconnecting said member from the cylinder.

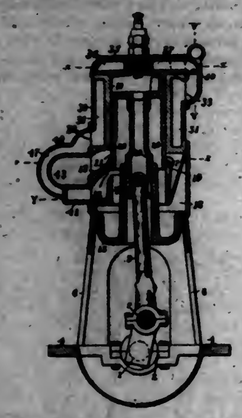
[Claims 6 to 10 not printed in the Gazette.]

877,590. TWO-CYCLE HYDROCARBON-ENGINE. DANIEL L. OULTON, Boston, Mass., assignor to The Duo Motor Company, Boston, Mass., a Corporation of Massachusetts. Filed May 17, 1907. Serial No. 374,171.

1. The combination of a water jacketed internal combustion engine cylinder and head having each a peripheral surface, one a continuation of the other, of a member removably secured to said surfaces and formed with a plurality of chambers one of which communicates with the water space about the cylinder and also with the water space in the head, and another of which chambers communicates with the water space in said head and with any suitable water drain.

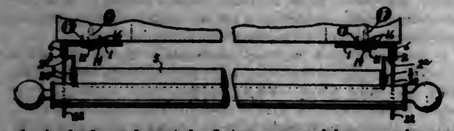
2. The combination with a water jacketed internal combustion engine cylinder having means for supplying water

to one part thereof and formed with a flat surface at an elevated part of its periphery through which is an opening, a removable head for said cylinder having an annular water space, a radial partition and a flat surface in the same plane with the first named flat surface, there being two openings through the last named flat surface, one at each side of said partition, of a member re-



movably secured to said two flat surfaces and formed with two chambers, one of which is in communication with the opening from the cylinder water jacket and also with the opening at one side of said partition, and the other of which chambers communicates with the opening at the other side of said partition and with one or more water drain pipes.

877,591. SHADE AND CURTAIN FIXTURE. EDWARD E. PALMER, Wooster, Ohio. Filed Mar. 16, 1907. Serial No. 362,669.



1. A shade and curtain fixture, comprising a main supporting-plate provided with a longitudinal slot, an outwardly-extending L-shaped shank formed integral therewith and terminating in a bracket-head, an attaching plate provided with headed tangs and ways or recesses taking over the edges of said slot, laterally-extending guide-wings formed integral with said shank, and a curtain-pole bracket mounted in said guide-wings.

2. In a shade-fixture, the combination with a shade-roll bracket provided with a supporting-plate having a longitudinal slot therein; of an attaching-plate provided with ways taking over the edges of said supporting-plate along said slot and tangs terminating in heads at the rear of said ways.

3. In a shade-fixture, the combination with a shade-roll bracket provided with a shank having an opening and guide-recesses at its rear, and a supporting-plate having a longitudinal slot terminating in said opening and recesses; of an attaching-plate provided with recess-ways for the edges of said supporting-plate along said slot and tangs terminating in heads at the rear of said recess-ways, and an attaching and clamping-screw mounted in an opening in said attaching-plate and extending through said slot.

4. In a shade and curtain fixture, the combination with a shade-roll bracket having an L-shaped shank provided with inwardly extending guide-wings at its upper and lower edges; of a curtain-pole bracket having guide-shanks at its lower end mounted in said guide-wings.

5. In a shade and curtain fixture, the combination with a shade-roll bracket having a shank provided with laterally-extending T-shaped wings forming guide-recesses at its upper and lower edges; of a curtain-pole bracket having its lower end mounted in said guide-recesses.

[Claims 6 and 7 not printed in the Gazette.]

877,592. HEAD FOR BORING-BITS. WILLIAM G. PARRY and PATRICK J. CREMDON, Peterborough, Ontario, Canada. Filed Sept. 9, 1907. Serial No. 392,072.

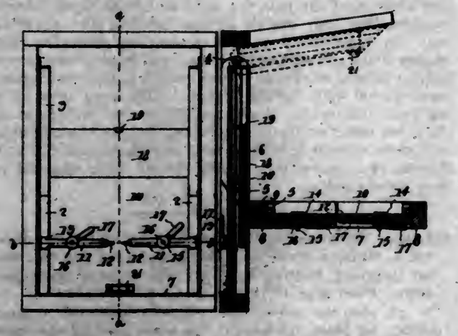


1. An improved boring bit comprising a solid shank, a hollow tubular shell having an upper portion reduced in diameter and secured to the shank, having two projections at the bottom bent inwardly and formed with substantially horizontal cutting edges, and also having openings in the sides through which the cutting may pass, and transversely inclined grooves formed on the inside of the tubular shell adapted to guide the cuttings through the openings.

2. An improved boring bit, comprising a solid shank a hollow tubular shell having an upper portion reduced in diameter and secured to the shank, having two projections at the bottom bent inwardly and formed with substantially horizontal cutting edges and also having openings in the sides through which the cuttings may pass, and vertically extending cutting spurs formed on the sides of the tubular head.

3. An improved boring bit comprising a solid shank having a spiral screw formed on the extremity thereof, a hollow tubular shell through which the shank extends, having an upper portion reduced in diameter and secured to the shank, and having openings in the said shell through which the cuttings may pass, and also having two projections bent inwardly at the bottom and formed with substantially horizontal cutting edges.

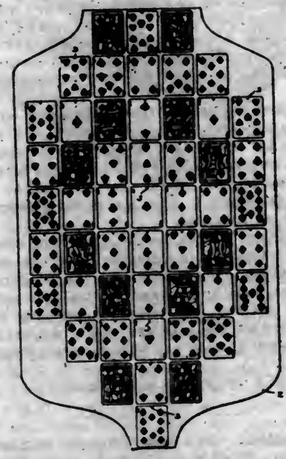
877,593. GRAIN-CAR DOOR. ANDREW PEIRANO and WILLIAM GREENWOOD, Wilson, Kans. Filed Apr. 9, 1906, Serial No. 310,823. Renewed July 18, 1907. Serial No. 384,416.



1. The combination, in a structure of the class described, of locking and guide rails having guide grooves in their opposing sides and exterior friction faces, a door guided in said grooves, shoe bars on the outer side of said door, pivotally connected thereto at their inner ends and having their outer ends extended over and opposed to the friction faces of the guide rails, screws secured to and projecting outwardly from the door and extending through said shoe bars, springs to move said shoe bars outwardly, and nuts on the screws to force the shoe bars against the friction faces of the guide rails.

2. In a structure of the class described, the combination with locking and guide rails each having a fixed lower member and an upper member pivoted at its upper end, said members having outer and inner guide grooves in their opposite sides, and said inner guide grooves of the lower members terminating at a point between the lower and upper ends thereof, and inner and outer door sections guided respectively in the said inner and outer grooves, said outer door section having means to engage said lower guide rail members and lock said section thereto, and said inner door section when lowered being supported by the lower ends of the inner grooves, at a distance above the bottom of the structure and across the joints between the meeting ends of the upper and lower members of the guide rails.

877,594. GAME-BOARD. FERDINAND PETERS, Cold Springs, Minn. Filed Mar. 26, 1906. Serial No. 308,008.



1. The herein described game-board, having a series of representations of playing-cards upon its face and a pin projecting from the face of the board for each of said representations.

2. A game-board comprising a suitable board or plate having upon its face, a series of representations of playing-cards, with a pin projecting from the face of the board in the space occupied by each of said cards.

3. The herein described game-board comprising a suitable plate or board, having upon its face the representations of the fifty-two cards comprised in a deck of ordinary playing-cards and a pin projecting from the face of the board in the space occupied by each of the said card representations.

4. The herein described game-board comprising a suitable plate or board, having upon its face the representations of the fifty-two cards comprised in a deck of ordinary playing-cards, irregularly arranged, and a pin projecting from the face of the board in the space occupied by each of the said card representations.

877,595. PAIL-SUPPORTING DEVICE. ALBERT R. PRITCHARD, Rochester, N. Y. Filed Sept. 14, 1905. Serial No. 278,893.

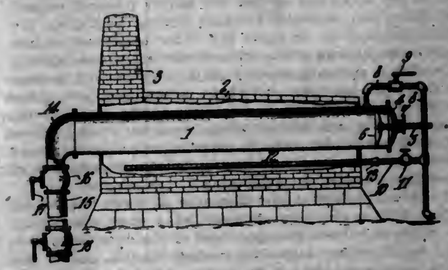
1. In a supporting device for pails, the combination of a plate having outwardly-projecting horizontally perforated ears, means for fastening the said plate upon the outside of a pail, a knee support having horizontal ends adapted to project through the perforations in said ears, and one of said ends having an upwardly turned termination for resting against a stationary abutment on the pail to hold said knee support in a substantially horizontal position.

2. In a supporting device for pails, the combination of a plate having outwardly-projecting horizontally perforated ears, means for fastening said plate on the outside of the pail, a knee support having horizontal ends turned and projecting in the same direction whereby the ends may be inserted in said perforations from the same side of both ears, and one of said ends having an upwardly turned ter-



mination for resting against a stationary abutment of the pail to hold said knee support in a substantially horizontal position.

877,596. APPARATUS FOR PRODUCING CARBON-BLACK. ALBERT D. PURTLE and IRVEN E. ROWLAND, Salem, W. Va. Original application filed Dec. 11, 1906, Serial No. 347,313. Divided and this application filed Apr. 22, 1907. Serial No. 369,598.

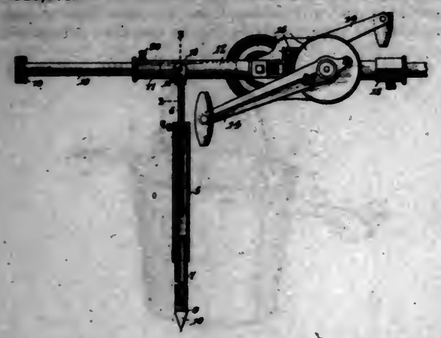


1. An apparatus for the production of carbon black, comprising a closed retort of approximately the same diameter throughout, means for introducing hydrocarbon gas therein under pressure, means within the retort for removing the carbon deposited on the interior walls thereof and conveying it to one end of the retort, a valve at the discharge end of the retort, and a conduit and valve connected to the first-named valve for permitting the escape of deposited carbon without admitting air to the retort.

2. An apparatus for the production of carbon black from a hydrocarbon gas, comprising a tubular retort, a gas feeding pipe connected thereto near one end thereof, a hood covering the other end of the retort, a valve connected to said hood, a conduit leading from said valve, a valve interposed in said conduit, and a scraper of a diameter approximately the same as the interior diameter of the retort and movable longitudinally in said retort from a point on the side of the feed pipe remote from the discharge end of the retort to said discharge end.

3. An apparatus for the production of carbon black comprising a tubular retort, a furnace inclosing the same, except at the ends, a gas burner within the furnace and in operative relation to the walls of the retort, a scraper within the retort and movable longitudinally with reference to the same, a gas supply pipe connected to one end of the retort exterior to the furnace and also connected to the burner, and a hood connected to the other end of the retort exterior to the furnace and provided with a downwardly-directed delivery end and a valved conduit leading from said delivery end of the hood.

877,597. COAL-DRILLING MACHINE. JASPER N. RICKLES, Altoona, Ala. Filed Aug. 3, 1906. Serial No. 329,076.



1. In mechanism of the character set forth, the combination with a supporting standard, of drilling mechanism mounted on the upper portion of the standard, a foot bar having an intermediate portion secured to the standard and constituting a support on which the standard swings, and depending spurs carried by the foot bar and located on opposite sides of the standard.

2. In mechanism of the character set forth, the combination with a supporting standard comprising slidably telescoped sections, of means for holding the sections against relative movement, a cross bar carried by the lower end of the lowermost section and having terminal depending spurs, and manually actuated drilling mechanism pivotally mounted on the upper end of the uppermost section.

3. In mechanism of the character set forth, the combination with a swinging support, of a stock pivoted between its ends upon the upper end of the swinging support, a tool holder rotatably mounted on one end of the stock, driving means for the tool holder journaled on the stock between the said tool holder and the support, and a presser head mounted on the stock and located on the opposite side of the support to the tool holder and driving means.

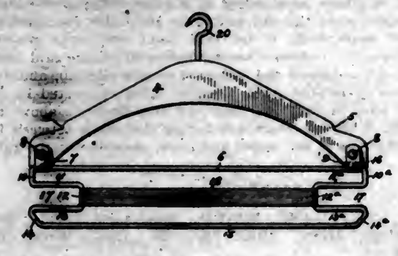
4. In mechanism of the character set forth, the combination with a swinging standard, of a stock pivoted between its ends upon the upper end of the swinging standard, a tool holder rotatably mounted on one end of the stock, driving means for the tool holder journaled on the stock between the said tool holder and the support, and a presser head mounted on the stock and located on the opposite side of the support to the tool holder and driving means, said presser head being adjustable toward and from the standard and driving means.

5. In mechanism of the character set forth, the combination with a supporting standard comprising slidably telescoped sections, of a cross bar carried by the lower end of the lower section and having spaced depending spurs, the upper end of the upper section having a yoke, means for holding the sections against relative movement, a stock pivoted in the yoke, a tool holder carried by one end of the stock, gearing journaled on the stock for operating the tool holder, and a presser head slidably connected to the stock and disposed on the opposite side of the same to the gearing.

877,598. GARMENT-HANGER. HENRY W. ROUNTREE, Richmond, Va. Filed July 19, 1906. Serial No. 326,951.

1. In a garment hanger, the combination with a coat form of a supporting frame all of the parts of which are restrained from relative movement, said frame secured to and below the coat form and having a straight top bar, a straight bottom bar and short connected substantially parallel bars between them forming reëntrant portions extending toward each other between the top and bottom bars.

2. In a garment hanger the combination with a coat form of an I-shaped supporting frame secured to and below said form and a yielding fabric extending across said frame, substantially as described.



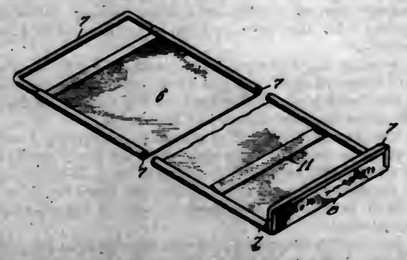
3. In a garment hanger the combination with a coat form of an I-shaped wire supporting frame below said form, comprising a top and a bottom bar, reëntrant side portions between the bars, and a fabric secured around and between the reëntrant portions, substantially as described.

4. In a garment hanger the combination with a coat form having shoulders thereon to maintain a skirt band and an I-shaped wire frame secured thereto comprising a top and a bottom bar and reëntrant portions betwpen them and a webbing secured around and between the reëntrant portions all assembled to form a thin flat garment hanger, substantially as described.

5. In a garment hanger, a skirt supporting member comprising an I-frame having a top bar, a bottom bar and reëntrant portions, extending toward each other with a space between them and betwen the top and bottom bars, the distance between the reëntrant portions being substantially one-half the smallest waist measure, and the distance between the top and bottom bars being less than their length.

[Claims 6 to 8 not printed in the Gazette.]

877,599. SAMPLE-HOLDER. JOSEPH F. SADLER, Los Angeles, Cal. Filed Nov. 19, 1906. Serial No. 344,052.



1. A sample holder, comprising a wire frame; a metallic body clamped upon the wire frame and having one end thereof terminating just before meeting one end of the wire frame, the other end thereof overlapping the wire frame.

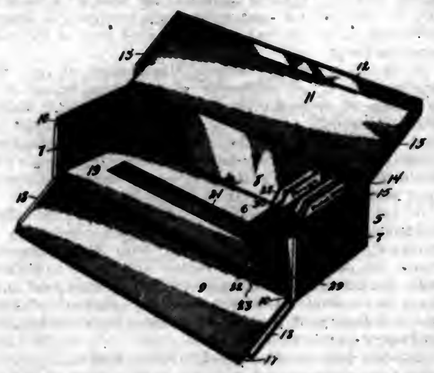
2. A sample holder, comprising a wire frame; a metallic body clamped upon the wire frame and having the front end thereof projecting over the wire frame and bent downwardly and having the edges of the downwardly bent portion bent to form means to receive a card, said body portion terminating at the rear a little short of the end of the wire frame.

3. A sample holder adapted to be inserted in a bolt of goods, comprising a rectangular wire frame bent downwardly at one end; and a metallic body clamped upon said frame, said body terminating shortly before the unbent end of the frame and being bent over the bent portion of the frame.

4. A sample holder adapted to be inserted in a bolt of goods, comprising a rectangular wire frame bent downwardly on one end; a sheet metal body resiliently secured

over the down turned end and adapted to hold the sample strip against the down turned end; and a tension device situated on the body near the down turned end.

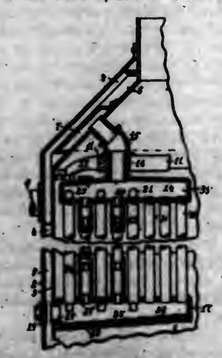
877,600. FILE-CASE. CARL W. SAWYER, Marion, Ohio. Filed Apr. 25, 1907. Serial No. 370,164.



1. In a device of the character described, the combination with a receptacle having a solid bottom, of a false bottom for said receptacle having a longitudinal slot formed therein, a follower block mounted to travel over the upper face of said false bottom, a plate secured to said follower block having its edges inturned, a spring plate adapted to be engaged by the inturned edges of the first named plate, and a rivet which passes through both of said plates and is carried by the follower block.

2. In a device of the character described, the combination with a receptacle having a solid bottom, of a false bottom for said receptacle, a follower block mounted to slide over said false bottom, said false bottom having a slot formed therein, a follower block mounted to travel over the upper face of said false bottom, a plate secured to said follower block and having its edges inturned, a spring plate adapted to be engaged by the inturned edges of said first named plate, and a member which passes through both of said plates and is carried by the follower block.

877,601. STEAM-BOILER. WILLIAM H. SHAFER, Cincinnati, Ohio. Filed June 1, 1906. Serial No. 319,712.



1. In combination, a radial header provided with transverse manifolds which are positioned alternately in different horizontal planes, a header registering therewith and provided with similar manifolds, and tubes communicating with the headers through corresponding manifolds.

2. In combination, a radial top header provided with transverse manifolds and with a discharge pipe, a radial bottom header provided with manifolds positioned alternately in different horizontal planes and communicating directly with the water leg of a steam boiler, and tubes connecting corresponding manifolds of the respective headers together.

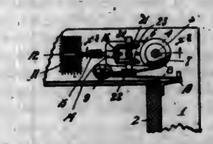
3. In combination, top and bottom radial headers each provided with manifolds alternately positioned in different horizontal planes, and tubes connecting corresponding manifolds of the respective headers together.

4. In combination, top and bottom headers each provided with transverse manifolds positioned in different horizontal planes, and vertical tubes connecting corresponding manifolds of respective headers together.

5. In a steam boiler, a separate and distinct unit of generation, consisting of top and bottom radial headers each provided with transverse manifolds alternating in different horizontal planes, and straight tubes connecting corresponding manifolds of the respective headers together.

[Claims 6 to 10 not printed in the Gazette.]

877,602. DEVICE FOR PREVENTING FLIES FROM ENTERING OPEN DOORWAYS. JOSEPH W. SHUMATE, Minneapolis, Minn., assignor of one-half to Glenn W. White, Minneapolis, Minn., and one-half to Vernie Lockwood, Motley, Minn. Filed Mar. 12, 1906. Serial No. 305,719.



1. The combination with a door, of a yielding door closing device, a rotary agitator mounted in the vicinity of the door opening, and a connection between said agitator and said door closing device, including alternately acting driving gears operating under different movements of said connection and of said door, to rotate said agitator in a constant direction, substantially as described.

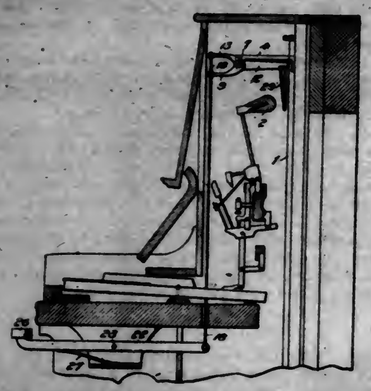
2. The combination with a door, of a rotary agitator, the shaft of which is journaled in bearings in the vicinity of the door opening, and is provided with a friction pinion, an oscillatory bearing head mounted in the vicinity of said pinion, a shaft journaled in said bearing head and provided with friction wheels alternately engageable with opposite sides of said pinion, a sheave on said countershaft, a spring actuated drum, and a flexible connection attached to said drum and to the door, for closing the latter, and which connection is passed around the sheave of said countershaft and imparts oscillatory and reverse rotary movements thereto, whereby the agitator will be rotated in the same direction under both opening and closing movements of the door, substantially as described.

877,603. PIANISSIMO DEVICE FOR MUSICAL INSTRUMENTS. IRVING B. SMITH, Philadelphia, Pa., assignor to The Stokes & Smith Company, Philadelphia, Pa., a Corporation of New Jersey. Filed July 30, 1904. Serial No. 218,781.

1. A piano having tone muffling means interposed between the hammers and the strings, said means consisting of a plurality of members each comprising sections of material which differ from one another in their energy-transmitting properties, and mechanism connected to the said members for moving them independently of each other to cause either section to assume various positions oblique to the line of hammers.

2. A piano having tone muffling means interposed between the hammers and the strings, said means consisting of a plurality of aprons each comprising sections of material which differ from one another in their energy-transmitting properties, and mechanism connected to said aprons for moving them independently of one another to

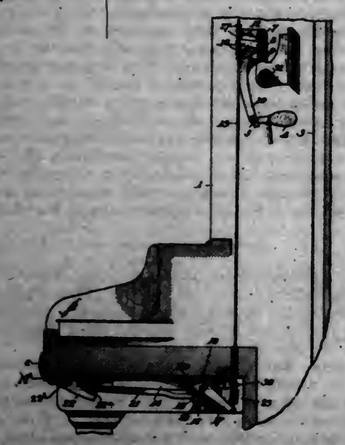
cause either apron to assume a position oblique to the line of hammers.



3. A piano having tone muffling means interposed between the hammers and the strings, said means consisting of an apron comprising sections of material which differ from one another in their energy transmitting properties, and mechanism connected to said apron for flexing it intermediate its ends to cause different portions thereof to assume positions oblique to the line of hammers.

4. A piano having tone-muffling means interposed between the hammers and the strings, said means consisting of a plurality of members, each comprising sections of material which differ from one another in their energy transmitting properties, and mechanism connected to the said members to cause them to assume positions oblique to the line of hammers.

877,604. PIANISSIMO DEVICE OR EXPRESSION-GOVERNOR. IRVING B. SMITH, Philadelphia, Pa., assignor to Electrelle Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 1, 1906. Serial No. 332,967.



1. An expression-governor for automatic musical instrument players comprising a plurality of independent sections, and a plurality of operatively independent adjusting means connected with the ends of said sections, whereby said sections may be moved in unison or separately, or either end of either section may be moved.

2. An expression-governor for automatic musical-instrument players comprising a plurality of independent sections, and a plurality of operatively independent adjusting means connected with the ends of said sections comprising finger keys arranged closely adjacent to one another, whereby said sections may be moved in unison or separately, or either end of either section may be moved.

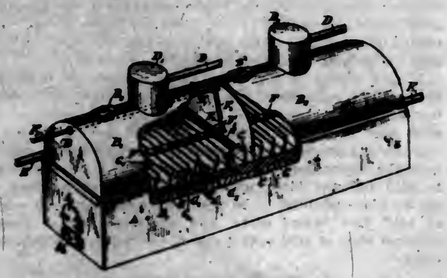
3. In an automatic musical-instrument player, the combination of an expression-governor consisting of a plurality of independent sections, independent shafts from which said sections are operated, one connected to each end of each section, and operatively independent means connected to the several shafts for operation of the governor sections.

4. In an automatic musical-instrument player, the combination of an expression governor consisting of a plurality of independent sections, independent shafts from which said sections are operated one connected to each end of each section, and operatively independent means comprising finger-keys connected to the several shafts for operation of the governor sections, said finger keys being arranged closely adjacent one another.

5. An automatic musical-instrument player, including mechanism for governing the expression comprising a governor coöperatively associated with the hammers, means for operating said governor, and means combined with the governor-operating means for shifting said governor to a normal operative position for automatic playing and withdrawing it from active position to permit manual playing of the instrument.

[Claims 6 to 15 not printed in the Gazette.]

877,605. STILL. LOUIS V. SONE, White Plains, N. Y.; Isabel K. Sone executrix of said Louis V. Sone, deceased. Filed Feb. 28, 1902. Serial No. 96,079.



1. In a still, a series of inclosed compartments provided with vapor drums and vapor pipes, means to heat said compartments, a series of partitions formed on the floor of said compartments extending nearly across the same to form a staggered conduit for material, said partitions being spaced apart at varying distances to form a conduit of varying width in the various parts of the same, said partitions being provided with weirs and gates to secure the uniform distribution of material in the conduit, a current producer mounted to reciprocate upon said partitions, means to reciprocate said current producer, a series of paddles pivotally mounted on said current producer, operating pins and stop pins to control the movement of said paddles to cause alternate paddles to operate upon the material in said conduit at each reciprocation of said current producer.

2. In a still, a series of inclosed compartments, partitions in said compartments to form a staggered conduit therethrough, a current producer mounted adjacent said conduit and provided with movable paddles to operate upon the material therein.

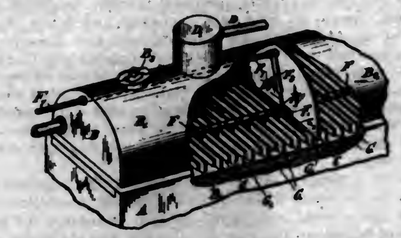
3. In a still, a closed still chamber provided with partitions to form a staggered conduit, a current producer movably mounted adjacent said conduit and provided with means to produce a current of material along said conduit.

4. In a still, a closed still chamber provided with partitions to form a staggered conduit and a reciprocating current producer to cause a current of material along said conduit.

5. In a still, a staggered conduit, and a reciprocating current producer having movable paddles mounted thereon, said paddles entering said conduit and producing a current of material therein.

[Claims 6 to 17 not printed in the Gazette.]

877,606. STILL. LOUIS V. SONE, New York, N. Y.; Isabel K. Sone executrix of said Louis V. Sone, deceased. Filed Jan. 17, 1903. Serial No. 139,383.



1. In a still, a series of chambers, means to heat said chambers, division plates in said chambers to divide them into compartments, means to conduct the vapor from said compartments, a series of parallel partitions extending across said compartments along the floor of the same, said partitions being spaced apart at varying distances in the various compartments, gates formed at the ends of said partitions near the lower portion of the same to form an elongated staggered conduit through said compartments, valved oil pipes connecting said chambers in series, valved traps connected to said oil pipes, rotary current producers in said compartments extending along either side of the same and provided with paddles entering the alternate channels of said conduit to cause a continuous circulation of material throughout the length of said conduit and valved regulator pipes connecting the vapor spaces of said compartments in series.

2. In a still, a series of compartments, parallel partitions extending across said compartments and provided with gates in the ends of the same to form an elongated staggered conduit through said compartments, valved traps between said compartments and a movable current producer to cause a circulation of material throughout said conduit.

3. In a still, a series of connected compartments, means to heat said compartments, parallel partitions on the floor of said compartments provided with openings to form a staggered conduit throughout said compartments along which material flows and valved traps between said compartments to separate the heavier products from the material flowing through said conduit.

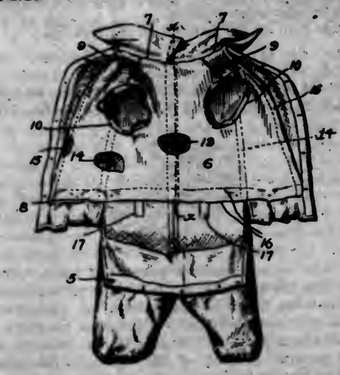
4. In a still, a series of compartments, means to heat said compartments, partitions in said compartments to form a staggered conduit therein, valved oil pipes connecting the several compartments in series and valved traps connected to said oil pipes.

5. In a still, a series of compartments, means to heat said compartments, parallel partitions extending across the floor of said compartments and provided with gates at the lower portions of the ends of the same to form a staggered conduit through said compartments, a current producer to cause a circulation of fluid throughout said conduit, means to remove the vapor from said compartments, and a valved regulator pipe connecting the vapor spaces of said compartments.

[Claims 6 to 10 not printed in the Gazette.]

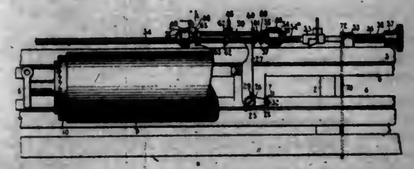
877,607. CHILD'S GARMENT. FREDERICK H. SPRAGUE, Orange, Mass. Filed Nov. 20, 1906. Serial No. 344,818.

1. A garment comprising a connected waist portion and trousers portion, the waist portion opening in the back, a lining connected to the waist portion at the neck thereof and at the waist band, said lining being shorter than the material of the waist, whereby a blouse effect is produced, and reinforcing bands stitched to the lining, one band extending from the neck thereof to the waist band in front and others extending from the arm scye to the waist band at each side.



2. A garment comprising a connected waist portion and a trousers portion, the waist portion opening in the back, a lining connected to the waist portion both at the neck thereof and at the waist-band and along the shoulder seams, said lining being shorter than the material of the waist, whereby a blouse effect is produced, said lining being reinforced at the front of the garment, from each arm-scye to the waist-band and at each edge thereof at the back, and tabs 17 secured to the waist-band inside of the trousers for the attachment of hose supporters.

877,608. TYPE-WRITING MACHINE. HERBERT H. STEELE, Syracuse, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Mar. 8, 1906. Serial No. 304,947.



1. In a typewriting machine, the combination of a traveling carriage, a rotary platen thereon, changeable stop devices independent of the platen and coöperative to arrest said carriage, and means operating automatically to change said stop devices to cause the arrest of the carriage at different points in its travel.

2. In a typewriting machine, the combination of a traveling carriage, a plurality of stop devices coöperative to arrest said carriage at a plurality of different positions, and means operating automatically to throw one of said stop devices out of action and another one into operative position so that on a succeeding movement of the carriage the carriage will be arrested at a different point in its travel.

3. In a typewriting machine, the combination of a traveling carriage, a plurality of stops, and a coöperative stop, the plurality of stops being movable by the coöperative stop to different positions to arrest the carriage at different points in different lines of writing.

4. In a typewriting machine, the combination of a rotary platen; a traveling carriage; a stop thereon independent of the platen; and a stop on the frame of the machine having a plurality of engaging surfaces, one of said stops being movable by the other stop to different positions to cause said two stops to co-act directly to arrest the carriage at different points in its travel.

5. In a typewriting machine, the combination of a rotary platen; a traveling carriage; a stop thereon independent of the platen; and a stop on the frame of the ma-

chine, one of said stops being provided with a plurality of contacting surfaces and means coöperative with the other stop to position the first stop to bring different contacting surfaces to operative position.

[Claims 6 to 39 not printed in the Gazette.]

877,609. RADIATOR FOR AUTOMOBILES. MAX STEINER, Newark, N. J. Filed July 9, 1907. Serial No. 382,929.



1. A radiator composed of a series of tubes for the passage of air, the contact of the tubes on the ends being sealed, and the tubes having a series of transverse channels arranged to connect to form passages for the water.

2. A radiator composed of a series of tubes for the passage of air, the contact of the tubes on the ends being sealed, the tubes having a series of transverse channels to provide for the horizontal and the vertical passage of water between the tubes.

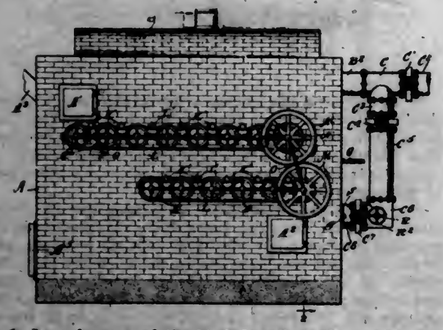
3. A radiator comprising a series of tubes having their contacting ends sealed, the tubes having transverse channels arranged between the ends, a portion of each tube being flat from end to end to partly obstruct the flow at that point.

4. A radiator comprising a series of tubes, the contacting ends of the tubes being sealed, the tubes being square in cross-section, and having a series of transverse channels for the passage of water, the channels being adapted to come in register.

5. A radiator comprising a series of square tubes, each tube having transverse channels on the top and bottom, and on one of the vertical sides.

[Claim 6 not printed in the Gazette.]

877,610. FURNACE FOR THE PRODUCTION OF GAS. GEORGE STEINL, Chicago, Ill. Filed Apr. 15, 1907. Serial No. 368,403.



1. In a furnace of the kind described, the combination with the inclosing walls; of a boiler supported therein; a pipe through said boiler; the connections and valves adapted to direct the fluids passing through said pipe; means in said connections adapted to force said fluids from said pipe into the lower part of said furnace; the chute in the rear wall of said furnace; the double series of rolls arranged in two parallel horizontal lines adapted to be rotated and to carry fuel from said chute the length of said furnace and back to the ash pit in the rear; means for supporting and rotating said rolls; means adapted to cause a flow of water through each of said rolls; means for injecting steam and oil into said furnace beneath said rolls.

2. In a furnace of the kind described, the combination with the inclosing walls, the boiler supported therein, the pipe through said boiler and its connections and valves; of the double series of hollow parallel rolls adapted to support and carry fuel from the rear to the front of said furnace and back to the ash pit in the rear of the interior of said furnace; means for supporting and rotating said rolls; means for causing a flow of water through said rolls.

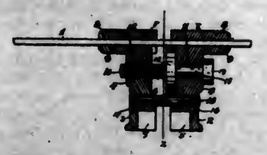
3. In a furnace of the kind described, the combination with the inclosing walls, the chute therein, the boiler supported therein, the pipe, pipe connection and valves adapted for the passage of fluid from and into said furnace; of an upper and lower line of hollow corrugated rolls, each of said rolls being supported on hollow shafts extending through the side walls of said furnace; the hollow shafts supporting said rolls; the bearings in said walls supporting said shafts; means for causing water to flow through said shafts and rolls; and means for rotating said shafts and rolls.

4. In a furnace of the kind described, the combination with the inclosing walls, the chute therein, the boiler, the pipe, connections, and valves adapted to control the passage of fluid from and into said furnace, and the upper and lower line of hollow corrugated rolls in said furnace; of the hollow shafts extending through said walls, said shafts being adapted to be inserted into the ends of said rolls and to thereby support said rolls; the bearings in said walls adapted to support said shafts; means adapted to rotate said shafts; and means for causing a flow of water through said shafts and rolls.

5. In a furnace of the kind described, the upper and lower line of hollow corrugated rolls, the hollow supporting shafts and bearings whereby said shafts and rolls are adjustably supported in said furnace; the gear wheels by which the upper and lower end shafts and rolls are connected, the sprocket wheels on said shafts and the sprocket chains by which said shafts and rolls are rotated; and means whereby water is caused to flow through said shafts and rolls.

[Claims 6 and 7 not printed in the Gazette.]

877,611. BUGGY-WRENCH. THOMAS M. STEVIC, West Toledo, Ohio. Filed Nov. 9, 1906. Serial No. 342,760.



In a buggy wrench, the combination of a spring body bar, complementary jaws mounted by slotted base portions, one fixedly and the other movably, centrally on the body bar, and provided at their free end portions with complementary angled recesses adapted to receive opposite angled portions of an axle nut, and with complementary alined bolt orifices, between the recesses and the body bar, the orifice of the movable jaw being interiorly threaded, an adjusting bolt connecting the jaws, having a portion rotatably journaled in the bolt orifices of the fixed jaw, and shouldered against longitudinal movement therein, and having a threaded end portion, adapted to run into the complementary alined and interiorly threaded bolt orifice of the movable jaw, a wheel mounted on the bolt to rotate the bolt in the fixed jaw and adjust the movable jaw, a pin fixedly mounted in the fixed jaw parallel with the adjusting bolt, and between the bolt and the angled recesses, and extending through an alined orifice of the movable jaw, and spoke hooks mounted reversely on the end portions of the spring body bar, substantially as set forth.

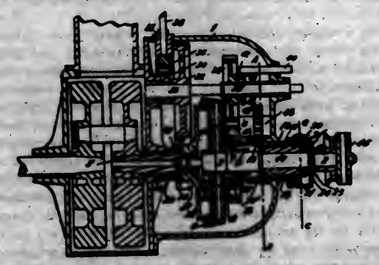
877,612. SHIPPING-CRATE. WELLS R. STOKELY, St. Augustine, Fla. Filed Mar. 5, 1907. Serial No. 360,754.

1. The combination in means for shipping fruit or vegetables, of a casing open at one end, removable means for closing said end of the casing, and a fruit or vegetable holder removably arranged in the casing and comprising lower and upper heads, horizontal courses of cells arranged one above the other between the heads; the outer cells of each course being open at their outer sides, horizontal disks interposed between the courses of cells and having circumferential flanges, of a less height than the cells, each surrounding the adjacent course of cells, and opposite cables attached to one head and extending therefrom, in the direction of the height of the holder at points outside and past the courses of cells and disks and the other head, and having their end portions connected together at the outer side of said other head.



2. The combination in means for shipping fruit or vegetables, of a casing open at one end, removable means for closing said end of the casing, and a fruit or vegetable holder removably arranged in the casing and comprising lower and upper heads, horizontal courses of cells arranged one above the other between the heads; the outer cells of each course being open at their outer sides, horizontal disks interposed between the courses of cells and having circumferential flanges, of a less height than the cells, each surrounding the adjacent course of cells, opposite cables attached to one head and extending therefrom, in the direction of the height of the holder at points outside and past the courses of cells and disks and the other head, and having their end portions connected together at the outer side of said other head, and a sack of net-work material receiving the heads and the cells and separating disks and having a mouth secured at the outer side of said other head.

877,613. DRIVING-GEAR FOR MOTOR ROAD-VEHICLES. PERCY G. TACCHI, Acton, London, England. Filed Nov. 18, 1905. Serial No. 287,956.



1. The combination with a casing, of an internally threaded sleeve carried by said casing, a driven shaft passing through said sleeve, an externally threaded sleeve mounted on said shaft with its threads in engagement with said internally threaded sleeve, a rack and pinion adapted to rotate said internally threaded sleeve on its shaft to move the same longitudinally, a clutch cone adapted to rotate the said internally threaded sleeve, means for preventing longitudinal movement of said clutch cone or said last mentioned sleeve and a driving shaft provided with a second clutch cone with which said first mentioned clutch cone may be engaged by the longitudinal movement of the sleeve.

2. The combination with a casing, of an internally threaded sleeve carried by said casing, a driven shaft passing through said sleeve, an externally threaded sleeve mounted on said shaft with its threads in engagement with said internally threaded sleeve, a rack and pinion adapted to rotate said internally threaded sleeve on its shaft to move the same longitudinally, a clutch cone adapted to rotate the said externally threaded sleeve, ball bearings for preventing longitudinal movement of said clutch cone or said last mentioned sleeve and a driving shaft provided with a second clutch cone with which said first mentioned clutch cone may be engaged by the longitudinal movement of the sleeve.

3. In a driving gear for a motor road vehicle the combination with two driven shafts mounted in axial alinement of each other, of a pair of clutch cones mounted upon the adjacent ends of said shafts and means for moving one of the said shafts longitudinally to cause the engagement and disengagement of its clutch cones, said means comprising an externally screw threaded sleeve secured to said shaft so as to be capable of independent rotary motion, a second sleeve internally screw threaded and adapted to engage the threads of the internally threaded sleeve, a pinion upon the first sleeve and a rack engaging said pinion whereby the rotation of said pinion will rotate the first sleeve and through the screw threaded connection move the same and the shaft longitudinally.

877,614. COMBINED SHOVEL AND BRUSH. TILFORD J. THOMPSON, Vang, N. D. Filed Apr. 5, 1907. Serial No. 366,131.



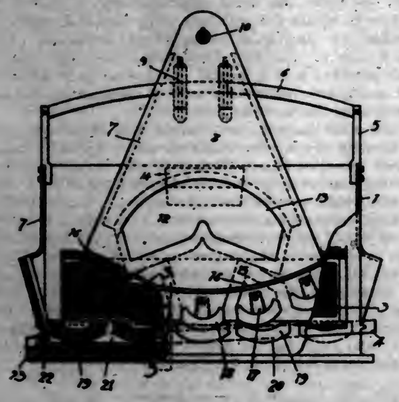
1. An implement substantially as described, comprising a shovel blade with upturned rear and side edges, a handle pivoted with its front end near the middle of the upper side of the blade and having two cavities in it, a slidable collar on the handle, a spring-pressed finger-catch carried by the collar and adapted to engage alternately in the two cavities and a pair of braces pivotally secured near the rear corners of the blade and having their rear ends fixed to the slidable collar.

2. An implement substantially as described, comprising a shovel blade with upturned rear and side edges, a handle pivoted with its front end near the middle of the upper side of the blade and having two cavities in it, a slidable collar on the handle, a spring-pressed finger-catch carried by the collar and adapted to engage alternately in the two cavities, and a pair of braces pivotally secured near the rear corners of the blade and having their rear ends fixed to the slidable collar, and a brush detachably secured to the rear end of the blade.

877,615. STAMPING AND GRINDING MILL. THOMAS M. TOFF, Richmond, Cal. Filed May 28, 1907. Serial No. 376,080.

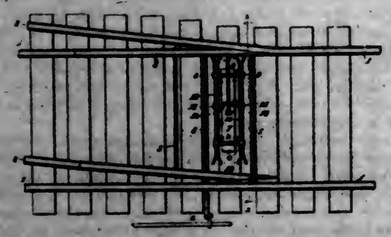
1. A stamping and grinding mill comprising a mortar, a row of concave dies therein, a pestle having a corresponding row of convex shoes at its lower end, and means for imparting a rocking motion to said pestle in the plane of said row, the mortar and pestle being provided with devices arranged to engage each other to maintain the pestle in an upright position while so rocking, one of said devices being capable of rotary motion, for the purpose of reducing friction, substantially as described.

2. A stamping and grinding mill comprising a mortar, a row of concave dies therein, a pestle having a corresponding row of convex shoes at its lower end, and means for imparting to said pestle a rocking motion in the plane of said row, said pestle being formed with a chamber for variably weighting the pestle, and with an ore distributing cavity below said chamber, said cavity having a supply opening at the side of said pestle, and said pestle having channels radiating from said distributing cavity to conduct the ore between the shoes, substantially as described.



3. A stamping and grinding mill comprising a mortar, a row of concave dies therein, a pestle having a corresponding row of convex shoes at its lower end, and means for imparting a rocking motion to said pestle in the plane of said row, the bottom of the mortar below the dies being formed with a central longitudinal channel, substantially as described.

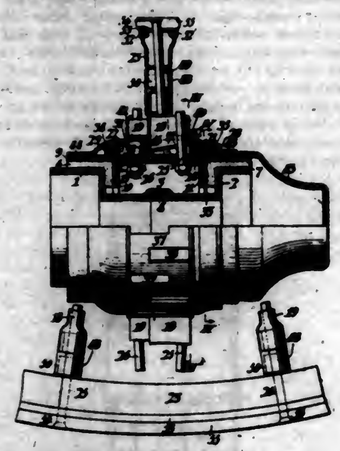
877,616. SWITCH-LOCK. JOHN T. TULLOCK, Houston, Tex., assignor of one-half to Robert E. Lee Jenkins, Houston, Tex. Filed Aug. 17, 1907. Serial No. 388,976.



1. In a device of the class described, main rails, siding and switch rails, in combination with means for operating said switch rails and a switch locking device arranged between the points of said switch rails, said locking device comprising a rod, mounted for longitudinal movement, transversely of the track, to impinge against said switch rail and means for operating said rod, substantially as described.

2. In a device of the class described, main rails, siding and switch rails, in combination with means for operating said switch rails and a switch locking device arranged between the points of said switch rails, said locking device comprising a metal plate secured to the tie between the points of said rails, suitable bearings carried by said plate, a pair of rods mounted in said bearings for longitudinal movement transversely of the track, a lever mounted on said block and suitable connections between said rod and said lever, substantially as described.

877,617. WHEEL. CHARLES B. VAN HORN, Philadelphia, Pa. Filed Sept. 27, 1906. Serial No. 336,450.



1. A wheel comprising a hub and felly, and means connecting said hub and felly under compression and under tension, comprising hollow spokes; rods extending through the respective spokes; means within said hub arranged to compress said spokes radially outward, and means arranged to tensely strain said rods, substantially as set forth.

2. A wheel comprising a hub and felly, and means connecting said hub and felly under compression and under tension, comprising hollow spokes; means carried by the hub arranged to compress said spokes radially outward; rods extending through the respective spokes; and means arranged to tensely strain said rods, substantially as set forth.

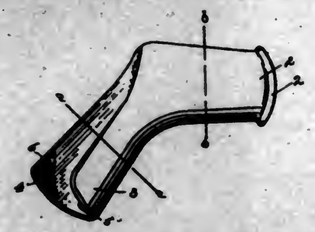
3. A wheel comprising a hub and felly, having a hollow metal spoke connecting said hub and felly; a block of resilient material interposed between said spoke and felly; a rod extending through said spoke in connection with said felly and said hub; and, means arranged to tensely strain said rod, substantially as set forth.

4. A wheel comprising a hub and felly, having a hollow sheet metal spoke connecting said hub and felly; a block of resilient material interposed between said spoke and felly; a rod extending through said spoke in connection with said felly and said hub; and, means within said hub, arranged to tensely strain said rod, substantially as set forth.

5. In a wheel, comprising a hub, a felly, and spokes connecting them, the combination with an axle box comprising axially alined sections having flanges in screw threaded engagement; of rings of resilient material respectively encircling said axle box sections; a sleeve supported by said resilient rings; shoulders on said sleeve; annular plates supported by said shoulders, forming abutments for said resilient rings; two circumferential series of spoke abutments on the exterior of said sleeve; a spoke socket ring supported by said spoke abutments, and comprising two circumferential series of recesses disposed in staggered relation in its respectively opposite edges; two series of wedges supported by said sleeve, engaging the inner ends of the spokes, between said sleeve and spoke socket ring; wedge adjusting rings in screw threaded engagement with said sleeve and respectively in operative relation with said two series of wedges; two casing rings respectively covering said wedge adjusting rings and engaged therewith; and, locking rings in screw threaded engagement with said sleeve and respectively in operative relation with said casing rings, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

877,618. DOUCHE-PROTECTOR. AMY A. VAN ORDEN, Galilee, Pa. Filed Aug. 22, 1907. Serial No. 389,630.



A douche protector comprising a flexible tubular member, open at both ends, an apron member integral therewith, both of said members being hollow and a layer of flexible material disposed in the space within said hollow members.

877,619. COMBINATION HAY-BALE HOOK AND WIRE CUTTER. JOHN VASEY, Emeryville, Cal. Filed Oct. 4, 1907. Serial No. 395,836.



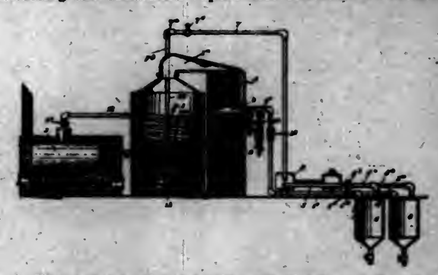
1. A bale hook comprising a stem formed into a hook at one end and provided with a handle at the other end, and a cutter formed thereon consisting of two members extending from said stem outwards or in the direction away from said handle, and formed with opposing sides having sharp edges, substantially as described.

2. A bale hook having a stem and a handle transverse to said stem, and a cutter formed on said hook comprising two members extending from said stem outwards or in the direction away from said handle, and formed with flat inner sides and sharpened edges, substantially as described.

3. A bale hook having a stem and a handle transverse to said stem, and a cutter formed on said hook comprising two members extending from said stem outwards or in the direction away from said handle, and formed with flat inner sides and sharpened edges, and diverging at their outer ends to form a flaring mouth, substantially as described.

877,620. PROCESS OF REFINING, FRACTIONATING, AND REDUCING OILS. WILLET C. WELLS and FRANK E. WELLS, Columbus, Ohio. Filed Jan. 30, 1903. Serial No. 141,109.

1. The process of fractionating petroleum by gradually raising the temperature of the petroleum, but not to its boiling point, passing therethrough a permanent gas, of substantially the temperature of the petroleum, thereby extracting in vapors the lightest and most volatile portions of the petroleum in their consecutive order, by the joint use of the heat applied to the petroleum and the absorptive properties of the permanent gas, and condensing and collecting the condensed vapors into consecutive fractions.



2. The process of converting petroleum, at one operation, into fractionated commercial products, each fraction thereof retaining its full natural value, by progressively increasing its volatility by raising the temperature of the petroleum, but not to its boiling point, and passing therethrough a gaseous absorbent of a temperature practically equal to the temperature of the petroleum, and by the joint use of the heat applied to the petroleum and the absorptive properties of the gaseous absorbent extract in their consecutive order the most volatile portions as vapor, and condensing the vapors of petroleum from the absorbent.

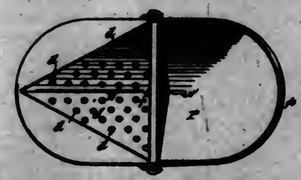
3. The process of fractionating petroleum by progressively increasing its volatility by raising the temperature of the petroleum, but not to its boiling point, and passing therethrough a gaseous absorbent of a temperature practically equal to the temperature of the petroleum, thus consecutively extracting therefrom its most volatile portions in vapors, said vapors being diffused with said absorbent are thereby separated from undiffused matter and conveyed from the refining vessel to a condenser wherein the vapors of the petroleum are condensed from the absorbent and returning the absorbent in continuous cycle, said condensate being refined products.

4. The process of fractionating petroleum by progressively increasing its volatility by raising the temperature of the petroleum, but not to its boiling point, and passing therethrough a gaseous absorbent of a temperature practically equal to the temperature of the petroleum, thus consecutively extracting the most volatile portions of the petroleum in vapors, from within the body of the petroleum, condensing the vapors from said absorbent and returning the absorbent in continuous cycle.

5. The process of fractionating petroleum by progressively increasing its volatility by raising the temperature of the petroleum, but not to its boiling point, and passing therethrough a gaseous absorbent of a temperature practically equal to the temperature of the petroleum, thus extracting vapors of petroleum, in their ordinary volatility, at temperatures insufficient to injure the petroleum and condensing the absorbed vapors from the gaseous absorbent, and returning the absorbent in continuous cycle.

[Claims 6 and 7 not printed in the Gazette.]

877,621. MOP-WRINGER. DAVID WHITEHURST, New York, N. Y., assignor of one-half to Albert J. Ban, New York, N. Y. Filed Mar. 4, 1907. Serial No. 360,857.



1. A mop wringer of the character designated, consisting of a receptacle which is triangular in horizontal cross section, two sides of which are formed with drain openings,

and the other side of which is formed with internal ribs, in combination with a drainage receiving vessel, for the purpose described.

2. As an improved article of manufacture, a drainage receiving vessel and a mop wringer rigidly attached thereto, said mop wringer consisting of a receptacle, triangular in horizontal cross section, the three side walls of which are also triangular in shape and converge downward to a common apex, said mop receptacle being formed with drain openings for the purpose described.

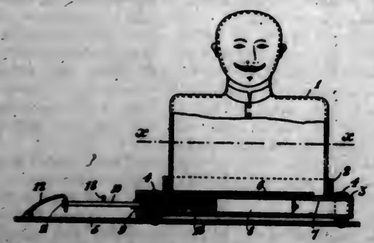
3. In combination with a drainage receiving vessel, a mop wringer consisting of a receptacle, triangular in horizontal cross section, the three side walls of which are also triangular in shape and converge downward to a common apex, the medial axis of said mop receptacle being inclined with relation to the perpendicular axis of the drainage receiving vessel, and said mop receptacle being formed with drain openings, for the purpose described.

4. In combination with a drainage receiving vessel, a mop wringer consisting of a receptacle, triangular in horizontal cross section, the three side walls of which are also triangular in shape and converge downward to a common apex, the medial axis of said mop receptacle being inclined with relation to the vertical axis of the drainage receiving vessel, the two lower side walls of said mop receptacle being formed with drain openings and the other side wall thereof being formed with ribs, for the purpose described.

5. As an improved article of manufacture a drainage receiving vessel and a mop wringer rigidly attached thereto, said mop wringer consisting of a receptacle triangular in horizontal cross section, the three side walls of which are also triangular in shape and converge downward to a common apex, the medial axis of said mop receptacle being inclined with relation to the perpendicular axis of the drainage receiving vessel, said mop receptacle being also formed with drain openings, for the purpose described.

[Claims 6 and 7 not printed in the Gazette.]

877,622. DROP-TARGET. JOHAN A. WIBORGH, Stockholm, Sweden. Filed Jan. 25, 1907. Serial No. 353,986.



1. In a drop target, the combination of a hollow, airtight, penetrable figure representation, in the interior of which, normally, a pressure is prevailing differing from that of the atmosphere, a detent adapted to engage the figure representation to normally prevent it from dropping, and means, controlled by variation of pressure within the figure representation, for releasing the detent, when the figure representation is penetrated by a hit, substantially as and for the purpose set forth.

2. In a drop target, the combination of a hollow, airtight, penetrable figure representation in the interior of which, normally, a pressure is prevailing differing from that of the atmosphere, a cylinder communicating with the interior of the said figure representation, a spring-actuated member mounted within the said cylinder in such a manner as to move, when the pressure within the figure representation is changed by a shot penetrating the same, a detent adapted to engage the figure representation and, thereby, keep the latter in its normal position of rest, and connections between the piston and the detent for releasing the figure representation, when the piston is moved, substantially as and for the purpose set forth.

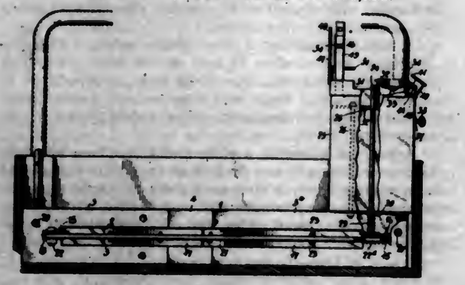
3. In a drop target, the combination of a cylinder forming an extended tube, bearings for the said cylinder, a hollow, air-tight, penetrable figure representation attached to the said cylinder and communicating with the interior thereof, means for creating within the hollow figure representation and the cylinder a pressure differing from that of the atmosphere, a member mounted within the cylinder in such a manner as to move, when the pressure within the figure representation and the part of the cylinder communicating therewith is changed, a detent adapted to engage the figure representation and, thereby, normally prevent the latter from dropping, and connections between the piston and the detent for releasing the figure representation, when the latter is penetrated by a hit, substantially as and for the purpose set forth.

4. In a drop target, the combination of a cylinder forming an extended tube, bearings for the same, a frame projecting from the wall of the cylinder, a hollow, air-tight, penetrable figure representation inserted into the said frame and communicating with the interior of the cylinder, means for creating within the hollow figure representation and the cylinder a pressure differing from that of the atmosphere, a member mounted within the cylinder in such a manner as to move, when the pressure within the figure representation and the part of the cylinder communicating therewith is changed, a detent adapted to engage the figure representation and, thereby, normally prevent the latter from dropping, and connections between the piston and the detent for releasing the figure representation, when the latter is penetrated by a hit, substantially as and for the purpose set forth.

5. In a drop target, the combination of a cylinder forming an extended tube, bearings for the same, a frame projecting from the wall of the cylinder, a hollow, air-tight, penetrable figure representation inserted into the said frame and fastened thereto by a suitable adhesive, said figure representation communicating through openings with the interior of the cylinder, means for creating within the hollow figure representation and the cylinder a pressure differing from that of the atmosphere, a member mounted within the cylinder in such a manner as to move, when the pressure within the figure representation and the part of the cylinder communicating therewith is changed, a detent adapted to engage the figure representation and, thereby, normally prevent the latter from dropping, and connections between the piston and the detent for releasing the figure representation, when the latter is penetrated by a hit, substantially as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

877,623. COMBINED WHIP, REIN, AND LAP ROBE LOCK FOR VEHICLES. OTTO W. WILDE, Wichita, Kans. Filed Dec. 3, 1906. Serial No. 346,128.



1. In a device of the class described, a casing having a hinged lid provided on its underside with a pin to enter openings in reins, when the lid is closed, the said casing serving to support said reins and coact with said lid and pin to lock them.

2. In a device of the class described, the combination of a base, a movable lap robe-locking bar to coact therewith to secure a robe between them, a bolt to lock said bar, a spring to resist the closing movement of said bar and cause the same to engage said bolt and hold the latter in locking position, and a spring to move said bolt to unlocking position when said bolt is relieved of the pressure of said bar caused by the first-mentioned spring.

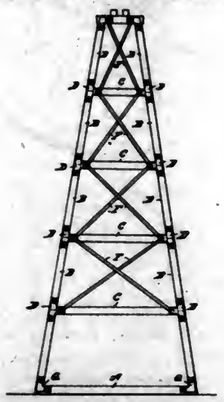
3. In a device of the class described, in combination with a lap robe lock having a movable element, and a whip lock having a movable element, a locking bolt for the movable element of the lap robe lock, actuated by the movable element of the whip lock.

4. A lap robe locking device having a longitudinally adjustable base bar, for the purpose set forth.

5. A lap robe locking device having a longitudinally adjustable base bar comprising telescoping sections.

[Claims 6 to 9 not printed in the Gazette.]

877,624. DERRICK. PATRICK YORKE, Washington, Pa. Filed Sept. 16, 1907. Serial No. 392,957.



The combination with the corner uprights, girths and braces, of male and female T-irons and angle-irons, provided with a series of holes in the stem and slots in the ends of the bar for receiving bolts for clamping the sections, girths and braces in a rigid position, all substantially as and for the purposes shown and described.

877,625. NOSE-GUARD FOR EYEGLASSES. LEO F. ADT, Troy, N. Y. Filed Mar. 6, 1905. Serial No. 248,427.



1. In eyeglasses, the combination with the lenses, the bridge connecting them and the attaching devices for the bridge and guards, of nose guards each embodying an intermediate attaching portion, a nose-engaging portion extending downwardly from the lower end of the attaching portion and arranged obliquely rearwardly in relation to the plane of the lenses, and a shank doubled upon itself and extending rearwardly from the upper end of the attaching portion and provided with a supplemental nose-engaging portion.

2. In eyeglasses, the combination with the lenses, the bridge connecting them and the attaching devices for the bridge and guards, of nose guards each embodying a vertically-extending attaching portion, a downwardly-extending arm arranged in rear and obliquely to the plane of the lenses and adapted to engage the wearer's nose, and a shank extending from the upper end of the vertically-arranged attaching portion having an upwardly opening loop and a supplemental nose-engaging portion on the shank beyond the loop and offset from the said arm.

3. In eyeglasses, the combination with the lenses, the bridge connecting them, and the attaching devices for the bridge and guards, of nose guards each embodying an intermediate vertically-extending attaching portion, a downwardly-extending arm forming a continuation of the attaching portion adapted to engage the wearer's nose, and a rearwardly-extending shank attached to the upper portion of the attaching portion having an inwardly doubled arm thereon forming a supplemental nose pad.

4. In eyeglasses, the combination with the lenses, the bridge connecting them, and the attaching devices for the bridge and guards, of nose guards each embodying a vertically-extending attaching portion secured in the attaching device and having a rearwardly and downwardly extending shank attached to its upper end, and a nose-engaging portion connected to the free end of the shank by a bend in the material substantially in a direction parallel to the plane of the lenses.

5. In eyeglasses, the combination with the lenses, the bridge connecting them, and attaching devices for the spring and guards, of nose guards each embodying a vertically-extending attaching portion secured by the attaching device, a rearwardly and downwardly-extending shank attached to the upper end of the attaching portion having its free end doubled in a direction substantially parallel to the plane of the lenses to form a nose-engaging portion.

[Claims 6 to 15 not printed in the Gazette.]

877,626. MOUNTING. LEO F. ADT, Albany, N. Y. Filed May 3, 1907. Serial No. 371,748.



1. In an eyeglass mounting, the combination of a bridge formed from flat stock and having at each end an outwardly extending horizontal portion with the flat faces of the stock horizontal, nose guards each having a portion formed from flat stock, extending outwardly with the flat faces of the stock horizontal and in the plane of the faces of one of the said horizontal portions of the bridge bends connecting the outwardly extending portions of the bridge and the guards, and lens-attaching members connected to the outer ends of said outwardly extending portions.

2. An eyeglass mounting formed from a single flat strip and comprising a bridge, two nose guards and horizontal loops, each of said loops connecting one of the nose guards and the bridge and extending outwardly both from the said nose guard and from the bridge, the portions of the strip forming the loop having their flat faces in the same plane.

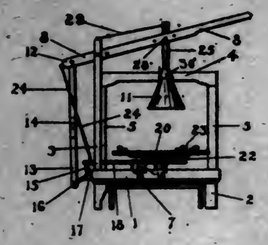
3. An eyeglass mounting formed of a flat strip and comprising a bridge, nose guards and outwardly extending portions embodying edgewise bends connecting the guards to the bridge and arranged with the flat faces of the strip horizontal.

4. An eyeglass mounting formed from a single flat strip and comprising a bridge having horizontal portions extending outwardly therefrom, and guards provided with outwardly extending portions, each connected at its outer end by a bend to the outer end of one of the outwardly extending portions of the bridge, those portions of the strip forming the outwardly extending portions on the guards and on the bridge having their flat faces in the same plane.

5. In eyeglasses, the combination of lens-attaching members each having a horizontal pocket, a bridge, nose guards, and horizontal loops connecting the guards and the bridge and each projecting into the pocket in one of the lens-attaching members.

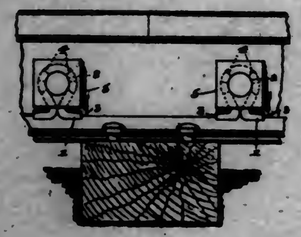
[Claim 6 not printed in the Gazette.]

877,627. WASHING-MACHINE. JOHN F. BENNINGTON, JACOB S. BENNINGTON, Jr., and ASA L. BENNINGTON, La Harpe, Ill. Filed July 26, 1906. Serial No. 327,840.



In a washing machine, a frame, a table rotatably mounted thereon provided with a ratchet wheel, a reciprocatory bar for actuating the wheel in one direction only, a spring catch for holding the wheel when the bar is moving in the other direction, handles pivotally mounted on one side of the frame at the top, one of which extends beyond the pivotal point, an adjustable pitman connected with said extension and with an angle lever, said lever being connected with said bar, and pounders connected with said handles.

877,628. NUT-LOCK. SIVERT BENSON, Spring Valley, Minn., assignor of one-third to William B. Hutton and one-third to Ralph J. Parker, Spring Valley, Minn. Filed June 23, 1906. Serial No. 323,095.



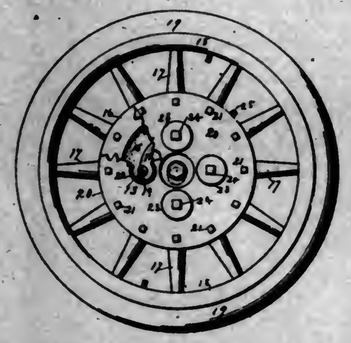
A nut lock comprising a spring steel member having a substantially circular and nonvolute middle portion with extended ends, said middle portion having spurs located upon its nut engaging edge, said spring member being curved along its longitudinal axis, the extending ends being curved transversely of the member and lying in the arc of the same circle.

877,629. PNEUMATIC WHEEL AND HUB. HAMILTON A. BROWN, Lehigh, Iowa. Filed Nov. 1, 1906. Serial No. 342,150.

1. In an elastic wheel, a solid hub having a continuous concave groove in its periphery and anti-friction rollers on its side faces, a solid circular frame having a continuous concave groove in its inner face, a pneumatic tube between the hub and the circular frame and the hub and the frame connected by circular plates fixed to the side faces of the circular frame and provided with openings for the purpose stated.

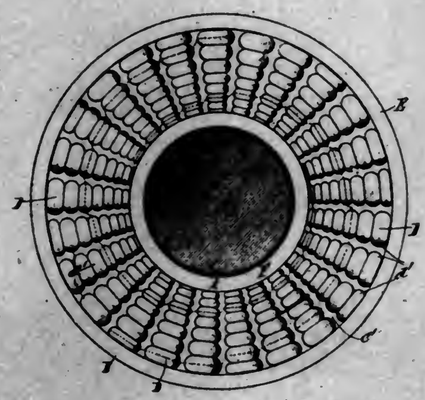
2. In an elastic wheel, a solid hub having anti-friction rollers on its side faces, a circular frame, a pneumatic tube between the hub and the frame, circular plates fixed to the side faces of the frame, circular flanged openings in the plates and caps detachably fixed on the flanges, to operate as set forth.

3. In an elastic wheel, a hub composed of an inner part having a continuous concave groove in its periphery, a plurality of anti-friction rollers at its side faces, a concentric outer part of a hub having a continuous concentric groove in its inner circumference, a pneumatic tube between the parts of the hub, circular plates fixed to the side faces of the outer part of the hub, circular openings in said plates, flanges projecting outward from said openings and caps fitted to the flanges as set forth.



4. A pneumatic wheel comprising an inner part of a hub and an outer part of a hub, a pneumatic tube between the two parts, plates fixed to the sides of the outer part of the hub to extend over the sides of the inner part of the hub, spokes extending from the outer part of the hub, a rim on the ends of the spokes, circular openings in the plates provided with flanges, caps on the flanges and anti-friction rollers on the side faces of the inner part of the hub to engage said flanges, arranged and combined to operate as set forth.

877,630. ROLLER-BEARING. PAUL F. BUSSMAN, Buffalo, N. Y. Filed Nov. 28, 1906. Serial No. 345,429.

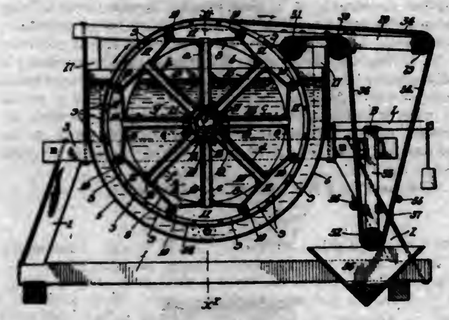


1. In a roller bearing, the combination of a race, and rollers arranged therein and provided with lubricant-deflecting portions arranged side by side, the deflecting portions of adjacent rollers being offset on spiral lines, substantially as set forth.

2. In a roller bearing, the combination of a race, and taper rollers arranged therein and provided with annular ribs or projections, the ribs of adjacent rollers being offset on spiral lines, substantially as set forth.

3. In a roller bearing, the combination of a race, and taper rollers arranged therein and provided with convex annular ribs arranged side by side, the ribs of adjacent rollers being offset progressively from the periphery toward the center of the bearing, substantially as set forth.

877,631. SLIMES-FILTER APPARATUS. EDWIN M. CLARK, Los Angeles, Cal., assignor to Edwin M. Clark Slime Filter Company, Los Angeles, Cal., a Corporation of South Dakota. Filed May 6, 1907. Serial No. 372,280.



1. In a slimes filter apparatus, a wheel having a perforated rim with grooves near each edge of the rim, a pervious belt traveling over said wheel, a belt having welts in each edge which closely fit the said grooves and prevent leakage between the edge of the belt and wheel, the rim of the wheel being formed in hollow sections, a tank containing the liquid to be filtered in which the wheel is immersed, means for applying suction to hollow sections of the rim to draw the liquids through the pervious belt into the hollow sections and cause the solids to adhere to the belt, and means for limiting the suction to sections which are fully immersed in the liquid or covered by the belt.

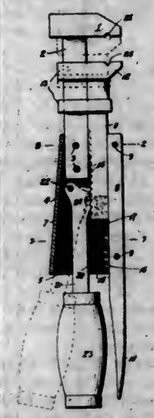
2. In a slimes filter apparatus, a wheel the rim of which comprises segmental hollow sections bolted together, each section having a perforated face, a hollow hub, hollow spokes connecting the respective rim sections with the hollow hub, a stationary hollow shaft on which the wheel revolves, a hollow shaft having ports, means for applying suction to the hollow shaft, a bushing between the hollow shaft and hollow hub, said bushing having ports thus forming a valve adapted to shut off suction from hollow spokes and rim sections when in certain positions in their cycle of movement, a pervious belt traveling over the wheel, and a tank containing the liquid to be filtered in which the wheel is immersed.

3. In a slimes filter apparatus, a wheel, the rim of which comprises segmental hollow sections bolted together, each section having a perforated face, a hollow hub, hollow spokes connecting the respective rim sections with the hollow hub, a stationary hollow shaft on which the wheel revolves, a hollow shaft having ports, means for applying suction to the hollow shaft, a bushing between the hollow shaft and hollow hub, said bushing having ports thus forming a valve adapted to shut off suction from hollow spokes and rim sections when in certain positions in their cycle of movement, a pervious belt traveling over the wheel, a tank containing the liquid to be filtered in which the wheel is immersed, idle rollers for guiding that part of the belt away from the wheel, a wash pipe for removing solids from the belt after it has left the wheel, and a launder for receiving the washed off material.

4. In a slimes filter apparatus, a wheel having a perforated rim with grooves near each edge of the rim, a pervious belt traveling over said wheel, the belt having recesses in each edge, ropes extending loosely through the recesses and drawing the edges of the belt into tight engagement in the grooves of the wheel, strips of packing material in the bottom of the grooves against which the belt is pressed by the ropes for preventing leakage, the rim of the wheel being formed in hollow sections, a tank containing the liquid to be filtered in which the wheel is immersed, means for applying suction to the hollow sections of the rim to draw the liquids through the pervious belt into the hollow sections and cause the solids to adhere to the belt, and means for limiting the suction to sections which are fully immersed in the liquid or covered by the belt.

5. In a slimes filter apparatus, a wheel having a hollow hub, a perforated rim formed of hollow sections, hollow spokes connecting the respective sections with the hollow hub, a pervious belt traveling over the wheel, the wheel being immersed in the liquid to be filtered, means for applying suction to the hollow hub, spokes and sections, valve means for limiting the suction only to such hollow sections as are fully immersed in the liquid or are covered by the belt, idle rollers for guiding that portion of the belt not on the wheel, a pair of slidable bars supporting one of said rollers, a cross bar connecting the upper ends of the slidable bar, and a weighted lever bearing against said cross bar for depressing the slidable bars to cause the roller carried by the slidable bars to hold the belt taut.

877,632. WRENCH. JAMES E. CLAUNCH, Collins, Miss. Filed June 17, 1907. Serial No. 379,459.



1. A wrench comprising a body or casing, a handle projecting from one end of the same, a stationary jaw having a shank fixed in the opposite end of said casing, a movable jaw to slide upon said shank and provided with a shank to enter said casing and formed upon its inner face with a rack, a spring for projecting the sliding jaw to its closed position and a lever arranged in longitudinal alinement with the shank of the stationary jaw and pivoted for swinging movement in said casing, said lever being provided upon one side with teeth to engage said rack, substantially as described.

2. A wrench comprising a casing having united side plates, a bar arranged between said plates and having one end projecting to form a handle, a stationary jaw having a shank projecting into and secured in the other end of said casing and spaced from said bar, a movable jaw to slide upon said shank and having a shank to slide in said casing and formed upon its inner face with a rack, a coil spring arranged in the casing and engaged with the inner end of the shank of the sliding jaw to project the latter to its closed position and a lever arranged in longitudinal alinement with the shank of the stationary jaw and pivoted for swinging movement in said casing, said lever having at its outer end a handle and at its inner and upper end teeth to engage said rack, substantially as described.

877,633. PIG-FORCEPS. ABRAM G. COLSON, Des Moines, Iowa. Filed Aug. 12, 1907. Serial No. 388,098.

1. In pig forceps the combination of a guide portion comprising a stiff wire bent so as to provide a handle at one of its extremities; a central guide loop; a double guide loop at one extremity of said wire; a gripping portion comprising a flexible wire provided with an elongated

loop at its forward extremity, the sides forming said loop passing through their respective portion of the double guide loop and each passing through the central loop; a pair of handles at the rear extremity of said flexible guide wire and a guide loop formed by extending the wire of which said pair of handles are formed receiving the body of the stiff wire forming the main guide portion, substantially as shown and described.



2. Forceps composed of a guide portion formed of a piece of wire bent to form a handle at one end thereof, said wire intermediate its ends being bent to form a central guide loop and at its end being bent to form two guide loops, a gripping member consisting of a flexible piece of wire having an elongated loop at its forward end and having the sides forming said loop extending through their respective loop of said two guide loops, and each being also passed through said central loop, the inner end of said flexible piece of wire being bent to form two handles which extend on opposite sides of said guide portion and being further bent to form a guide loop which receives said guide portion.

3. Forceps composed of a guide member having a central guide loop and a pair of guide loops at one end, a gripping member consisting of a flexible piece of wire having a handle and a guide loop receiving said guide member formed adjacent one end and having its remainder formed into an elongated loop which has each of its sides passing through said central loop of the guide member and through the respective loop of said pair of loops of the guide member whereby said gripping member is slidably supported at three points along the length of said guide.

877,634. BULL-RING. ALEXANDER C. DECKER, Keokuk, Iowa. Filed Feb. 13, 1907. Serial No. 357,213.



1. A ring comprising two sections pivoted together, one of said sections having a socket or recess formed in its free end, said end being of approximately the same cross-sectional area as the body thereof, and the other section being provided with a conical piercing-point or end adapted to pass into the correspondingly formed socket or recess in the other section; and means located at a point remote from the piercing-point and socket for securing the sections together in their closed position.

2. A ring comprising two sections pivoted together, one of said sections being longer than the other, one section having a socket or recess formed in its free end, said end being of approximately the same cross-sectional area as the body thereof, and the other section provided with a piercing-point adapted to pass into the correspondingly-shaped socket or recess formed in the opposite section.

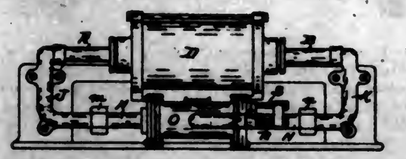
3. A ring composed of two sections hinged together, each section comprising an arm substantially semicircular in contour and a loop formed integral therewith; and means for securing the parts together.

4. A ring comprising two sections pivoted together, each section consisting of a hook-shaped member and a loop formed therewith; means for pivoting the loops together; and means for securing the parts in their closed position.

5. A ring composed of two sections, each comprising a hook-shaped member and a loop, one of said members being pointed while the other is provided with a socket or recess to receive said points when the parts are brought together; means for pivoting the loops together; and means for securing the parts when they are brought to their closed position.

[Claims 6 to 9 not printed in the Gazette.]

877,635. WATER-MOTOR. JOHN DIETZ, Cincinnati, Ohio. Filed Apr. 17, 1907. Serial No. 363,615.



1. In a water motor, the combination of open pipes connected with opposite sides of a piston head, a cylinder mounted to reciprocate on said pipes and piston head, permanent open communication between said pipes and the opposite sides of said cylinder, a supply and exhaust, a valve adapted to alternately connect the cylinder pipes with the supply and exhaust, and automatic means for shifting said valve, substantially as set forth.

2. In a water motor, the combination of open pipes connected with opposite sides of a piston head, a cylinder mounted to reciprocate on said pipes and piston head, permanent open communication between said pipes and the opposite sides of said cylinder, a supply and exhaust, a valve adapted to alternately connect the cylinder pipes with the supply and exhaust, and automatic means carried by the cylinder for shifting said valve, substantially as set forth.

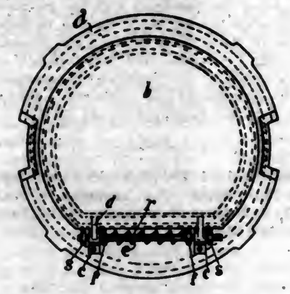
3. In a water motor, the combination of open pipes connected with opposite sides of a piston head, a cylinder mounted to reciprocate on said pipes and piston head, permanent open communication between said pipes and the opposite sides of said cylinder, a valve chamber outside of the cylinder fixed independent of the movement of said cylinder, a supply and exhaust for the valve chamber, a valve in the valve chamber adapted to alternately connect the cylinder pipes with the supply and exhaust, and automatic means for shifting the valve, substantially as set forth.

4. In a water motor, the combination of open pipes connected with opposite sides of a piston head, a cylinder mounted to reciprocate on said pipes and piston head, permanent open communication between said pipes and the opposite sides of said cylinder, a valve chamber outside of the cylinder fixed independent of the movement of said cylinder, a supply and exhaust for the valve chamber, a valve in the valve chamber adapted to alternately connect the cylinder pipes with the supply and exhaust, and automatic means carried by the cylinder for shifting the valve, substantially as set forth.

5. In a water motor, the combination of pipes A and B secured to piston head C, cylinder D mounted to reciprocate on pipes A and B and piston head C, openings o permanently communicating with pipes A and B, rack bar F carried by cylinder D and meshing with gear G on shaft H, valve chamber O provided with supply and exhaust pipes P and Q, chambers o' and o^2 in valve chamber O and connected with pipes A and B, valves p' and q' in chamber O and automatic means for operating valves p' and q', substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

877,636. COVER FOR KEGS. HANS DITTMANN, Lübeck, Germany. Filed Nov. 13, 1906. Serial No. 343,215.



1. In combination with a cover for butter-kegs, a frame *a* having a groove at its lower side adapted to admit and catch the rim of the keg and having an opening in the middle, a rim round the opening in the middle of the said frame projecting upwards, loops *h* having holes *i* at the side and projecting downwards from the said frame, a cover *b* having a groove adapted to admit and catch the rim in the said frame and laid on the opening thereof, two tappets *d* projecting from the said cover and having holes at their side adapted to admit a rod, bearings *e* fastened on the said frame and projecting upwards adapted to rest against the outer sides of the said tappets, a rod *r* having a square head at one end inserted through the holes of the said tappets and bearings and fixed in the tappets adapted to hold the cover on the frame turnably, two rings *f* loosely arranged besides the said tappets, a spiral spring *e* surrounding the said rod and inserted between the said tappets, the V-shaped springs *c* fastened on the frame under the said tappets adapted to hold the cover in which ever position it is left opened during its use and also for tightly shutting the cover on the rim of the frame, means for opening the tightly shut cover, and means by which the frame is fixed on the rim of a keg, substantially as described.

2. In combination with a cover for butter-kegs, a frame *a* having a groove at its lower side adapted to admit and catch the rim of the keg and having an opening in the middle, a rim round the opening in the middle of the said frame projecting upwards, loops *h* having holes *i* at the sides and projecting downwards from the said frame, a cover *b* having a groove adapted to admit and catch the rim of the said frame, two tappets *d* projecting from the said cover and having holes at their side adapted to admit a rod, bearings *e* fastened on the said frame and projecting upwards adapted to rest against the outer sides of the said tappets, a rod *r* having a square head at one end inserted through the holes of the said tappets and bearings and fixed in the tappets adapted to hold the cover on the frame turnably, two rings *f* loosely arranged besides the said tappets, a spiral spring *e* surrounding the said rod and inserted between the said tappets, the V-shaped springs *c* fastened on the frame under the said tappets adapted to hold the cover in which ever position it is left opened during its use and also for tightly shutting the cover on the rim of the frame, a key *t* for putting on the square head of the said rod and turning the cover open, and means by which the frame is fixed on the rim of a keg, consisting of a plurality of casings *k* having bottoms with holes in the middle, hooks inserted through the holes in the bottoms respectively, disks inside the said casing fastened to the ends of the hooks, rods fixed horizontally near the top ends of the casings, hooks turnably attached to the said rods and projecting outside, and the spiral springs situated between the disks and the bottoms of the said casings respectively adapted to keep the frame tightly fastened on the rim of a butter-keg when the hooks are hooked between the holes in the loops and the band of the keg, substantially as described.

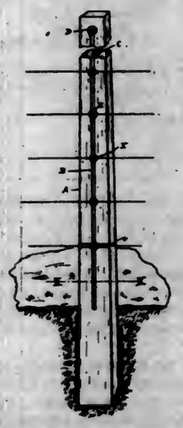
877,637. HOLDER FOR HOOKS AND EYES. FRANK M. DOLBEAL, Chicago, Ill. Filed July 9, 1907. Serial No. 382,907.



1. In a hook-and-eye holder made of a single piece of wire, side members with bent ends to receive small articles, said ends being overlapped and in contact with each other to retain the articles, and a hook for attachment to the edge of a card, said hook being situated in approximately the same plane as said side members and between them whereby it can be easily manipulated to be closely fitted to a card on both faces thereof.

2. In a hook-and-eye holder made of a single piece of wire, side members with bent ends to receive small articles, said ends being overlapped and in contact with each other to retain the articles, and a hook for attachment to the edge of a card, said hook being situated in approximately the same plane as said side members and between them whereby it can be easily manipulated to be closely fitted to a card and on both faces thereof, in combination with a card.

877,638. FENCE-POST. CHARLES S. DOUGHERTY, Milwaukee, Wis. Filed June 20, 1907. Serial No. 379,861.



1. A post comprising a concrete body provided with an interior longitudinally extending channel and having a slot leading outwardly from said channel through one wall of the post, with the channel extending laterally in the body of the post on both sides of the slot, a slotted metallic lining for said channel, wholly inclosed by the concrete body, bolts provided with heads engaged in said channel, said bolts extending outwardly therefrom through the slot, and a wire clamping device at the outer ends of said bolts, said slot and channel being adapted to receive ordinary bolts and bolt heads respectively.

2. A post comprising a concrete body provided with an interior longitudinally extending channel and having a slot leading outwardly from said channel through one wall of the post and intermediate of the ends of the post, said channel being of greater diameter than said slot, and said post having an aperture of substantially the same diameter as the channel leading therefrom through the concrete wall of the post, a slotted metallic lining for said channel,

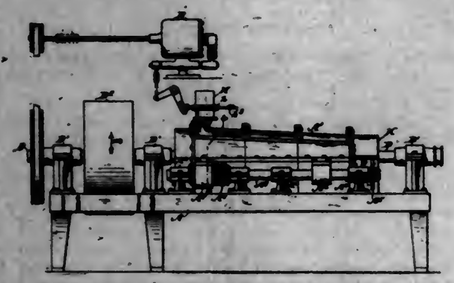
wholly inclosed by the concrete body, bolts extending through said slot with heads engaging in said channel, and wire clamping devices on the outer ends of said bolts.

877,639. SHEET-METAL ROOFING. JOHN F. GALBRAITH, Shelbyville, Tenn. Filed Sept. 13, 1906. Serial No. 334,509.



A roofing plate or shingle having symmetrically formed opposite edges, each formed with a border *h* adapted to serve as a tongue or "nailing edge" as the case may be, a cap member *i*, *j*, of substantially inverted V form in cross section and a bead *a* between the border and the cap member, as and for the purposes hereinbefore set forth.

877,640. APPARATUS FOR THE DEGERMINATION OF INDIAN CORN. JOSEPH F. GENT, Terre Haute, Ind., assignor of two-thirds to Thomas T. Gaff, Barnstable, Mass. Filed June 17, 1907. Serial No. 379,377.



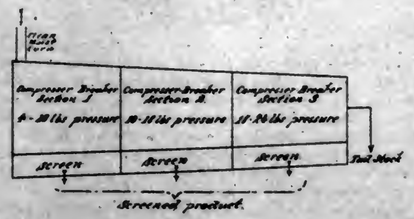
1. In apparatus for degerming maize, and in combination with a stationary "concave" decreasing in diameter as it approaches the tail of the machine, a rotary power-driven "cylinder" composed of a body of substantially the same diameter throughout, armed with external spiral threads of uniform pitch but decreasing in thickness and also in height as they approach the tail of the machine, substantially as and for the purposes hereinbefore set forth.

2. In apparatus for degerming maize, a stationary tapering "concave", and screen surfaces therein through which properly reduced fragments of grain, as they form, may pass off, in combination with a rotary power-driven "cylinder" composed of a body of substantially the same diameter throughout, armed with spiral threads of uniform pitch which decrease in thickness and in height as they approach the tail of the machine so as to impart to the "cylinder" as a whole a taper substantially conforming to that of the "concave", substantially as and for the purposes hereinbefore set forth.

3. The combination with the rotary power-driven cylinder composed of a body of substantially the same diameter throughout, armed with spiral threads of uniform pitch, but decreasing in thickness and in height as they approach the tail of the machine, of a stationary "concave" which correspondingly decreases in diameter towards the tail of the machine, openings or perforations therein for the escape of properly reduced fragments of grain, and low pyramidal projections arranged in spiral lines upon the interior of the "concave," substantially as and for the purposes hereinbefore set forth.

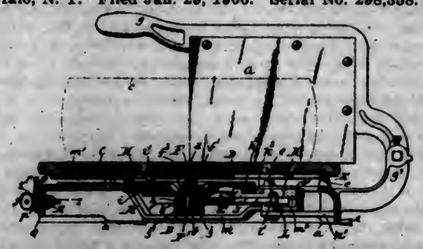
4. The combination with the rotary power-driven "cylinder" composed of a body of substantially the same diameter throughout, armed with spiral threads of uniform pitch but decreasing in thickness and height as they approach the tail of the machine, and low pyramidal projections located upon the periphery of the threads, and also on the bottom of the grooves between the threads, of a stationary tapering "concave" and projections of corresponding shape to those on the "cylinder" arranged in spiral lines upon the interior of the "concave", substantially as and for the purposes hereinbefore set forth.

877,641. DEGERMING MAIZE OR INDIAN CORN. JOSEPH F. GENT, Terre Haute, Ind., assignor of two-thirds to Thomas T. Gaff, Barnstable, Mass. Filed June 17, 1907. Serial No. 379,378.



The improvement in the process of degerming maize or Indian corn, which consists in subjecting the previously moistened grain, while moving in continuous flow, to a breaking operation under compression, and consequent concentration, which gradually increases with the progress of the grain, whereby during the travel of the charge the weakest grains will be broken first, the next weakest next, and so on; and, during the course of this operation separating out and carrying off, as they form, from the still unreduced portion of the charge such fragments of grain as may be reduced to proper size along with correspondingly sized bits of germs and other bodies, substantially as hereinbefore set forth.

877,642. CHEESE-CUTTER. ADAM A. GULDENARM, Buffalo, N. Y. Filed Jan. 29, 1906. Serial No. 298,358.



1. A cheese cutter comprising a frame, a cheeseboard, means for rotating said board having a clutch wheel, and means for coupling said wheel and board consisting of a grid or plate secured to said board and having a notch or recess outside of its pivot and a pin arranged on said wheel and engaging with said notch or recess, substantially as set forth.

2. A cheese cutter comprising a frame, consisting of a ring, a transverse bar extending diametrically across said ring and a boss rising from the center of said bar, a cheese board pivoted on said boss, means for rotating said board having a clutch wheel pivoted on said boss, a grid or plate secured to said board and having a recess on one side of its pivot, and a pin arranged on said clutch wheel and engaging with said recess, substantially as set forth.

3. A cheese cutter comprising a frame, consisting of a ring, a transverse bar extending diametrically across said ring and a boss rising from the center of said bar, a cheese board arranged above the frame, a grid or plate secured to the under side of the board, a bolt secured vertically in said boss and provided at its upper end with a pivot spindle which enters an opening formed centrally in said grid or plate and board, and means for rotating the board having a clutch wheel pivoted on said boss, and a pin arranged on said wheel and entering a recess in said grid, substantially as set forth.

4. A cheese cutter comprising a frame, consisting of a ring, a transverse bar extending diametrically across said ring and a boss rising from the center of said bar, a cheese board arranged above the frame, a grid secured to the underside of the board, a bolt arranged vertically in the boss and provided at its lower end with a head bearing against the underside of said boss, at its upper end with a pivot spindle entering an opening in the center of said grid and board and between its ends with a nut which bears against the upper end of said boss, and means for rotating said board comprising a clutch wheel pivoted on the upper reduced end of said boss between a shoulder thereon and said nut, a pin arranged on said wheel and entering a recess in said grid, a rock arm pivoted on the lower enlarged part of said boss, and a clutch pawl operating to couple and uncouple said rock arm and clutch wheel, substantially as set forth.

5. A cheese cutter comprising a frame, a cheese board pivoted on the frame, and means for rotating the board comprising a clutch wheel operatively connected with said board and having a rim, a rock arm pivoted concentrically with said wheel, a front abutment arranged on the rock arm on the inner side of said rim, a rear abutment arranged on said arm on the outer side of said rim, a clutch pawl supported on said arm between said abutments and having two jaws adapted to engage with opposite sides of said rim, and a hand lever operatively connected with said pawl, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

877,643. AZO DYE. OSCAR GÜNTHER and LEOPOLD HESSE, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Nov. 19, 1907. Serial No. 402,813.

1. The herein-described new azo-dyestuffs obtainable by combining the diazo compounds of 1.8-aminonaphthol sulfonic acids with suitable amins, then diazotizing these intermediate compounds and combining the thus produced diazoazo compounds with derivatives of 2-amino-5-naphthol-7-sulfonic acid, which dyestuffs are, after being dried and pulverized, in the shape of their alkaline salts dark powders soluble in water, yielding upon reduction with stannous chlorid and hydrochloric acid 1.8-aminonaphthol sulfonic acid, a diamin and a derivative of 2.6-diamino-5-naphthol-7-sulfonic acid, and dyeing cotton from bluish-red to violet to blue shades, substantially as hereinbefore described.

2. The herein-described new azo-dyestuff, which can be obtained by combining the diazo compound of 1.8-aminonaphthol-3.6-disulfonic acid with alpha-naphthylamin, diazotizing the intermediate product thus produced and combining the diazoazo compound with 2-phenylamin-5-naphthol-7-sulfonic acid, which dyestuff is, after being dried and pulverized, in the shape of its sodium salt a dark powder soluble in water with a blue color and soluble in concentrated sulfuric acid with a grayish-blue color; yielding upon reduction with stannous chlorid and hydrochloric acid 1.8-aminonaphthol-3.6-disulfonic acid, 1.4-diaminonaphthalene and 2-phenylamin-5-naphthol-6-amino-7-sulfonic acid; and dyeing cotton blue shades, substantially as hereinbefore described.

877,644. AZO DYE. OSCAR GÜNTHER and LEOPOLD HESSE, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Nov. 19, 1907. Serial No. 402,814.

1. The herein-described new azo-dyestuffs obtainable by combining the diazo compounds of 1.8-aminonaphthol sulfonic acids with suitable amins, then diazotizing these intermediate compounds and combining the thus produced diazoazo compounds with 2-amino-5-naphthol-7-sulfonic acid, which dyestuffs are, after being dried and pulverized, in the shape of their alkaline salts, dark powders easily soluble in water; yielding upon reduction with stannous chlorid and hydrochloric acid 1.8-aminonaphthol sulfonic acid, a diamin and 2.6-diamino-5-naphthol-7-sulfonic acid, dyeing cotton from bluish-red to violet to blue shades, substantially as hereinbefore described.

2. The herein-described new azo-dyestuff, which can be obtained by combining the diazo compound of 1.8-aminonaphthol-3.6-disulfonic acid with para-xylidin, diazotising the intermediate compound thus produced and combining the diazoazo compound with 2-amino-5-naphthol-7-sulfonic acid, which dyestuff is, after being dried and pulverised, in the shape of its sodium salt a dark powder soluble in water with a violet color and soluble in concentrated sulfuric acid with a greenish-blue color; yielding upon reduction with stannous chlorid and hydrochloric acid 1.8-aminonaphthol-3.6-disulfonic acid, 2.5-diamino-1.4-dimethylbensene and 2.6-diamino-5-naphthol-7-sulfonic acid; and dyeing cotton violet-red shades, substantially as hereinbefore described.

877,645. KALEIDOSCOPE. JOHN R. HARE, Baltimore, Md. Filed Feb. 15, 1907. Serial No. 357,485.



1. In a kaleidoscope, the combination of the mirror-holder, an object box having electric lights swung therein, and means for conducting the current to said electric lights.

2. In a kaleidoscope, the combination of the mirror-holder, a plurality of object boxes having electric lights swung therein, means for conducting the current to said lights, and means for automatically revolving the said object boxes.

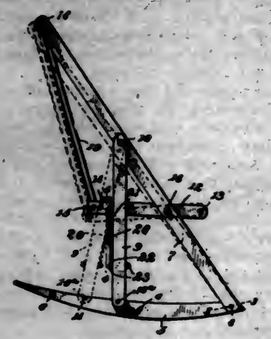
3. In a kaleidoscope, the combination of the mirrors arranged to produce kaleidoscopic effects, object boxes at the end of said mirrors adapted to be revolved in opposite directions, electric lights within said boxes adapted to be brought into view at intervals, means for conducting the current to said lights, and means for automatically revolving said boxes.

877,646. FOLDING AND ADJUSTABLE CHAIR. JESSE HOLLOWAY, Doe Run, Mo. Filed Feb. 6, 1907. Serial No. 356,054.

1. In a chair of the character set forth, the combination with relatively adjustable leg members, of a pivotal connection between the members, a seat pivoted to one leg member at one side of and separate from the pivotal connection between the leg members, and a detachable and adjustable connection between the seat and the other leg member.

2. In a chair of the character set forth, the combination with rockers, of rearwardly inclined leg members pivoted at their lower ends to the front ends of the rockers, rear legs pivoted to the inclined legs and having

adjustable engagements with the rockers, a seat pivoted to the rearwardly inclined legs, and hooks carried by the seat and adjustably connected to the rear legs.



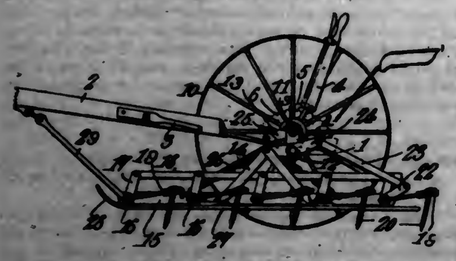
3. In a chair of the character set forth, the combination with rockers, of rearwardly inclined leg members pivoted at their lower ends to the front ends of the rockers, rear legs pivoted to the inclined legs and having adjustable engagements with the rockers, a seat pivoted to the rearwardly inclined legs, and adjustable and detachable connections between the seat and the rear legs.

4. In a chair of the character set forth, the combination with leg members, of a seat frame comprising side bars pivoted to the leg members, a front round connecting the front ends of the side bars and two spaced rear rounds connecting the rear ends thereof, a seat bottom surrounding the front round and one of the rear rounds, and a flexible back having its lower end surrounding the other of the rear rounds, said seat and back passing between said rear rounds.

5. In a chair of the character set forth, the combination with spaced rockers, of rearwardly inclined leg members pivoted at their lower ends to the front ends of said rockers, rear leg members pivoted at their upper ends to the inclined leg members and having their lower ends adjustably associated with the rockers, a seat frame pivoted between its ends upon the inclined leg members, a seat bottom connected to the seat frame on opposite sides of its pivot axis, a flexible back connected to the upper ends of the inclined leg members and having its lower end connected to the rear end of the seat frame, and hooks carried by the rear end of the seat frame and detachably and adjustably engaged with the rear leg.

[Claim 6 not printed in the Gazette.]

877,647. HARROW. FRANK HOSFORD, Sterrett, Tex. Filed Feb. 26, 1907. Serial No. 359,351.



1. In a riding harrow the combination with a rock shaft, supporting wheels mounted thereon and means for actuating the shaft; of a harrow frame, runners disposed thereunder, and means operated by the movement of the shaft for shifting the runners vertically.

2. The combination with a rock shaft and wheels carrying the shaft; of a harrow frame, teeth movably connected to the frame, and means operated by the rocking of the shaft in one direction for simultaneously swinging the teeth and raising the frame toward the shaft.

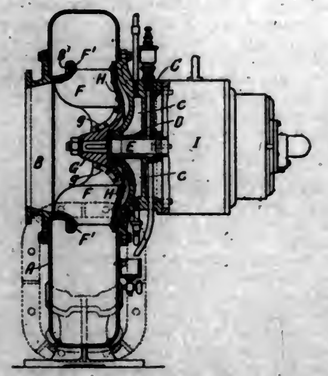
3. The combination with a rock shaft, and means for actuating said shaft; of a harrow frame supported below the shaft, runners extending thereunder, and means operated by the movement of the shaft for simultaneously moving the frame and runners in opposite directions toward or from the shaft.

4. The combination with a rock shaft, and supporting wheels carrying said shaft; of a harrow frame supported below the shaft, teeth movably connected to and disposed to swing below the frame, and means operated by the rocking of the shaft in one direction for simultaneously lifting the frame toward the shaft and swinging the teeth.

5. The combination with supporting wheels, and a rock shaft journaled therein; of a frame supported below the shaft, runners extending longitudinally under the frame, teeth movably connected to the frame and extending between the runners, and means operated by the shaft for simultaneously swinging the teeth and moving the frame and runners in opposite directions toward or from the shaft.

[Claims 6 to 9 not printed in the Gazette.]

877,648. CENTRIFUGAL FAN. JAMES KEITH, London, England. Filed May 18, 1907. Serial No. 374,408.

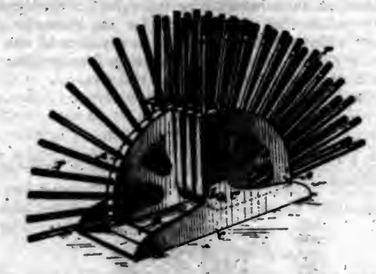


The herein described centrifugal fan, comprising, in combination a fan casing made in one piece and having a single central intake eye and a tangential outlet and formed with an inturned annular guard cheek around said eye, a recess being left between said cheek and the inner wall of the casing, a central casting secured on the sides of the casing opposite said eye, a blade wheel comprising a curved central boss having ribs thereon, a guard ring closely fitting said cheek, blades secured to said boss on one side and secured to said ring, and screws securing four of said blades to said ribs, a spindle carrying said wheel journal bearings for said spindle, said bearings supported by said casting, a motor having its rotary member secured to said spindle and its stator secured to said casting, and a water jacketing device formed in the casting and interposed between the fan casing and the motor.

877,649. ASSORTMENT-BOX OR DISPLAY-RACK FOR LEAD-PENCILS, PENHOLDERS, OR THE LIKE. JOHN S. KENNY, New York, N. Y., assignor to Eagle Pencil Company, New York, N. Y. Filed June 22, 1907. Serial No. 380,310.

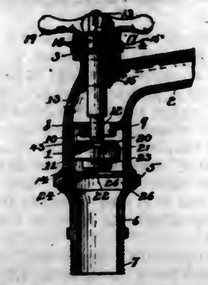
An assortment box or display rack for lead pencils and the like, consisting of a plurality of corresponding sector-shaped rack sections, mounted side by side in a suitable supporting stand upon a common axis on which each is free to move independently of the others, each rack section having on its periphery a row of holes for the reception

of individual pencils, and at or near its center, a hub or rest to receive the converging inner ends of the pencils,



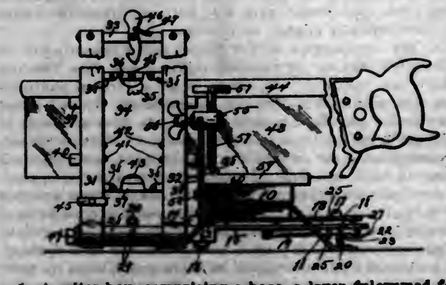
substantially as and for the purposes hereinbefore set forth.

877,650. FAUCET. JOHN M. KNIGHT, Baltimore, Md. Filed May 22, 1903. Serial No. 158,268.



A reciprocating valve faucet comprising a faucet casing having a smooth cylindrical opening at the upper portion thereof to receive and center a valve stem, a diaphragm forming a part of said casing and provided with a depending annular valve seat, a valve stem supported by the casing and held against vertical movement, said valve stem being screw-threaded at and near its lower end, a valve having a screw-threaded connection with the threaded lower end of the valve stem and provided with lateral projections and a reduced depending portion, an elastic washer carried by said valve and surrounding the threaded portion of said valve stem, and a chambered attachment removably secured to the faucet casing and terminating at its upper end with an inwardly extended flange forming an opening to receive and guide said depending portion of the valve, the said inwardly extended flange forming a seat for the enlarged lower surface of said valve.

877,651. MITER-BOX. JENS KNUDSON, Des Moines, Iowa. Filed May 13, 1907. Serial No. 373,320.



1. A miter box, comprising a base, a lever fulcrumed for oscillation on said base, means for latching said lever to said base, a guide frame mounted for rotary adjustment on said lever and located wholly at the rear of said base, a saw-carrier slidingly mounted in said guide frame, and means for locking said saw-carrier in said guide frame.

2. A miter box, comprising a base, a lever fulcrumed for oscillation on said base, means for latching said lever to said base, a guide frame mounted for rotary adjustment on said lever and located wholly at the rear of said base, a saw-carrier slidingly mounted on said guide frame, means for locking said saw-carrier in said guide frame, and horizontal saw-guides in said saw-carrier.

3. A miter box, comprising a base, legs carrying said base, a lever fulcrumed for oscillation on said base, a semicircular plate projecting forward from said base, a latch connecting said lever and plate, a sleeve mounted for rotary adjustment on the rear end of said lever, yokes fixed to and rising from said sleeve, plates mounted for vertical adjustment in said yokes and located wholly at the rear of said base, means for locking said plates in said yokes, and saw-guides between said plates.

4. A miter box, comprising a base, legs carrying said base, screws seated in and projecting rearward from said base, back plates formed with marginal notches embracing said screws, said back plates each formed with a square end and a beveled end adapted to be removed and reversed and replaced relative to said screws, a lever fulcrumed for oscillation on said base, a guide frame mounted for rotary adjustment on the rear end of said lever and wholly at the rear of said base, a saw-carrier slidingly mounted on said guide frame, means for locking said saw-carrier in said guide frame, and horizontal saw guides in said saw-carrier.

5. A miter box, comprising a base, legs supporting the base, a semi-circular plate mounted beneath said base and apertured in its forward curved margin, a lever fulcrumed on said plate, a latch on said lever, a pin on said latch engaging in one or another of the apertures in said plate, said latch spring-held in one direction and adapted for manual actuation in the opposite direction, a sleeve mounted for rotary adjustment on the rear end of said lever, yokes fixed to and rising from said sleeve, plates mounted slidingly between said yokes, means for latching said plates in their uppermost position, and horizontal saw guides between and carried by said plates.

[Claims 6 to 13 not printed in the Gazette.]

877,652. ATTACHMENT FOR MOWING-MACHINES. FRANK S. LAFLIN, Sears, Ill. Filed Mar. 26, 1907. Serial No. 364,710.



1. The combination with a mower having a reciprocating cutter bar, an upright housing opening in front and having a forward extension forming a dividing board, a revolving sickle with blades on its circumference, said blades extending through the open front of the housing, fingers extending from the housing, the said blades coöperating with the fingers and means for revolving the sickle simultaneously with the reciprocation of the cutter bar.

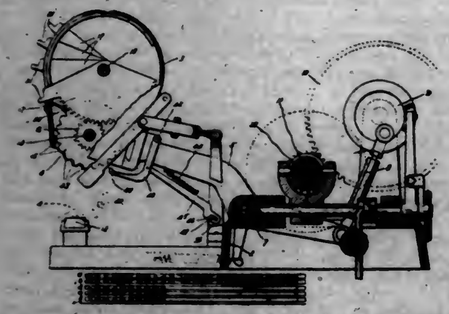
2. In a mowing machine, the combination with a reciprocating cutter bar, an upright housing open in front and having a forward extension forming a dividing board, a revolving sickle with cutting blades on its circumference mounted in the housing, said blades extending through the open front of the housing, stationary fingers extending from the housing with which the revolving sickle blades coöperate, and means for simultaneously reciprocating the cutter bar and revolving the sickle.

3. In a mowing machine, the combination with a reciprocating cutter bar, a housing open in front and having a forward extension forming a dividing board at the outer

end of said cutter bar, fingers extending forward of the housing, a revolving sickle having blades mounted within the housing, the blades extending through the open front of the housing and coöperating with the fingers to form a shearing action, and a chain and gear connection within the housing for revolving the sickle.

4. In a mowing machine, the combination with a reciprocating cutter bar, an upright housing open in front and having a forward extension to form a dividing board at the outer end of the cutter bar, a shaft mounted in the housing, a revolving sickle loosely mounted on the shaft and having cutting blades extending through the open end of the housing, a pawl on the sickle, a ratchet wheel and sprocket wheel on the shaft, said ratchet wheel engaging the pawl, a power shaft, a sprocket wheel on the power shaft, and a sprocket chain passing around the sprocket wheels.

877,653. NUMBERING OR MARKING MACHINE. GEORGE H. LANG, Boston, Mass. Filed May 14, 1907. Serial No. 373,579.



1. In a numbering or marking machine, the combination with a numbering head having type-disks and means to adjust said type-disks, of a vibrating arm on which said numbering head is mounted, a platen toward and from which the numbering head moves as the arm vibrates, a movably mounted type-disk aliner, and means to cause said aliner to move toward the type-disks while the numbering head is moving toward the platen and to be held out of engagement with the type disk when the numbering head is in its elevated position.

2. In a numbering or marking machine, the combination with a numbering head having a plurality of type-disks, of a platen, a vibrating arm on which said numbering head is mounted, means to vibrate said arm thereby moving the numbering head toward and from the platen, a type-disk aliner carried by the arm, and means to hold said aliner out of engagement with the type-disks when the numbering head is entirely withdrawn from the platen and to move said aliner toward and into engagement with the type-disks when the numbering head moves toward the platen.

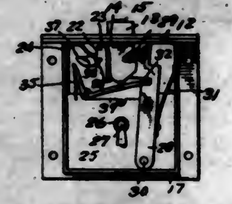
3. In a numbering or marking machine, the combination with a numbering head having a plurality of type-disks, of a platen, a pivoted arm on which said numbering head is mounted, means to turn said arm about its pivot thereby moving the numbering head toward and from the platen, a type disk aliner pivoted to the arm, a fixed support, and a link pivotally connecting said aliner to said support whereby when the numbering head is withdrawn from the platen, the aliner is held out of engagement with the type disks, while when said numbering head moves toward the platen the aliner is moved into engagement with the type disks.

4. In a numbering or marking machine, the combination with a vibrating arm, of a numbering head having type-disks carried by said arm, a type-disk aliner pivoted to the arm, a link pivotally connected to said aliner and having a sliding pivotal connection with a fixed support, and a spring connecting said link with said arm.

5. In a numbering or marking machine, the combination with a plurality of type disks each having type thereon, of a gear rigid with each type disk, a segmental gear meshing with each of the first named gears, the teeth on said gears having such relation to the type on the type disk that the advancing of each gear for the distance of one tooth will advance the type disk the distance of one type, and a friction device for each type disk engaging the teeth of one of the gears for operating said disk.

[Claim 6 not printed in the Gazette.]

877,654. LOCK. THOMAS M. LANSDEN, Bethany, Ill. Filed Apr. 27, 1907. Serial No. 370,715.



1. The combination, with a keeper and a keeper-plate, of a lock-box provided with an opening in its upper face through which said keeper is adapted to project; a spring-pressed bolt pivoted within said lock-box; a spring-pressed lever adapted to engage said bolt to hold the same in inoperative position; a spring-pressed shutter pivoted within said lock-box and adapted to normally close said opening; and means carried by said shutter and adapted to engage with and operate said lever when said keeper passes through said opening to release the lever from engagement with said bolt and permit the latter to automatically engage said keeper.

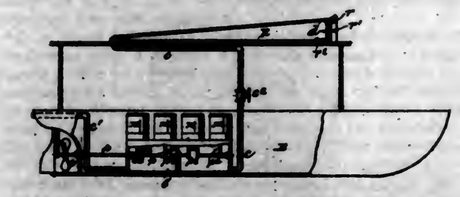
2. The combination, with a keeper and a keeper-plate, of a lock-box provided with an opening in its upper face through which said keeper is adapted to project; a spring-pressed bolt pivoted within said lock-box; a spring-pressed angle-lever having one arm adapted to engage said bolt to hold the same in inoperative position; a spring-pressed shutter pivoted within said lock-box and adapted to normally close said opening; and means carried by said shutter and adapted to engage the opposite arm of said angle-lever when said keeper passes through said opening, to rock said angle-lever upon its pivot and release its first-mentioned arm from engagement with said bolt, to permit the latter to automatically engage said keeper.

3. The combination, with a keeper and a keeper plate, of a lock-box provided with an opening in its upper face through which said keeper is adapted to project; a spring-pressed bolt pivoted within said lock-box; a spring-pressed angle-lever having one arm adapted to engage said bolt, to hold the same in inoperative position; a spring-pressed shutter pivoted within said lock-box and adapted to normally close said opening; and a dog pivoted to said shutter and adapted to engage the opposite arm of said angle-lever, when said keeper passes through said opening, to rock said angle-lever upon its pivot and release its first-mentioned arm from engagement with said bolt to permit the latter to automatically engage said keeper.

4. The combination with a keeper and a keeper-plate, of a lock-box having an opening in its upper face through which said keeper is adapted to pass; a vertical partition disposed within said lock-box intermediate its front and rear walls; a spring-pressed bolt movable upon each side of said partition, said bolts having a common pivot; a spring-pressed angle-lever having one arm adapted to engage said bolts to hold the same in inoperative position, a spring-pressed shutter pivoted within said lock-box and adapted to normally close said opening; and means carried by said shutter and adapted to engage the opposite arm of said angle-lever when said keeper passes through said opening, to rock said angle-lever upon its pivot and release its first-mentioned arm from engagement with said bolts, to permit the latter to automatically engage said keeper.

5. The combination with a keeper and a keeper-plate, of a lock-box having an opening in its upper face through which said keeper is adapted to pass; a vertical partition disposed within said lock-box intermediate the front and rear walls thereof; a spring-pressed bolt movable upon each side of said partition, said bolts having a common pivot; and a spring-pressed angle-lever having one arm adapted to engage said bolts to hold the same in inoperative position; a spring-pressed shutter pivoted within said lock box adapted to normally close said opening; and a dog carried by said shutter and adapted to engage the opposite arm of said angle-lever when said keeper passes through said opening, to rock said angle-lever upon its pivot and release its first-mentioned arm from engagement with said bolts, to permit the latter to automatically engage said keeper.

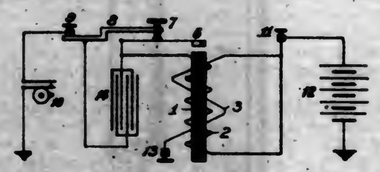
877,655. VENTILATOR FOR MOTOR-BOATS. ABBOT A. LOW, Horseshoe, N. Y. Original application filed Nov. 5, 1906, Serial No. 342,002. Divided and this application filed May 4, 1907. Serial No. 371,782.



1. In a motor boat, the combination of an over-head awning or roof consisting of a compartment formed with a forward air receiving aperture, a flap arranged in conjunction with said air receiving aperture, a conduit connecting said air compartment with the crank shaft chamber of one or more hydro-carbon motors, said motor or motors, and a discharge conduit connected with said crank shaft chamber, for the purpose described.

2. In a motor boat, the combination of an over-head awning or roof consisting of a compartment formed with a forward air receiving aperture, a flap arranged in conjunction with said air receiving aperture, a draining gutter under said flap, a conduit connecting said air compartment with the crank shaft chamber of one or more hydro-carbon motors, said motor or motors, and a discharge conduit connected with said crank shaft chamber, for the purpose described.

877,656. SPARK-COIL. AUGUST R. LUSCHKA, Chicago, Ill., assignor to Motor Specialty Manufacturing Company, Chicago, Ill., a Corporation of South Dakota. Filed Oct. 29, 1906, Serial No. 341,005. Renewed June 22, 1907. Serial No. 380,241.



1. In a spark coil of the type described, the combination of a secondary coil or winding, and a condenser arranged at the low tension or grounded end of said secondary coil.

2. In a spark coil of the type described, the combination of a secondary coil formed with high and low tension sections, and a condenser arranged adjacent to the low tension section of said secondary coil.

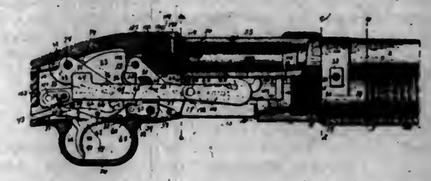
3. In a spark coil of the type described, the combination of a secondary coil or winding having a low tension end formed by a ground connection through the battery, and a condenser arranged at said low tension end.

4 In a spark coil of the type described, the combination of a secondary coil or winding, and a condenser of an annular shape encircling said coil and arranged at the low tension end thereof.

5. In a spark coil of the type described, the combination of a secondary coil formed with high and low tension sections, and a condenser of an annular shape encircling the low tension section of the secondary coil.

[Claims 6 and 7 not printed in the Gazette.]

877,657. GAS-OPERATED GUN. WILLIAM MASON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Nov. 6, 1905. Serial No. 286,108.



1. In a gas operated gun, the combination with a movable barrel, of a stationary tubular magazine, means for utilizing a portion of the gases of explosion for moving the barrel forward by pressure exerted against the front of the magazine, and action mechanism connected with the movable barrel for operation thereby whereby the spent shells are ejected, the loaded cartridges are fed and the hammer is cocked.

2. In a gas-operated gun, the combination with a movable barrel having a gas-port, of a stationary tubular magazine, a magazine-tip formed at its forward end with a gas-chamber, a bracket depending from the barrel, and a piston carried by the bracket and entering the said gas-chamber, the said bracket and piston having passages leading from the said gas-port into the bottom of the gas-chamber.

3. In a gas-operated gun, the combination with a movable barrel having a gas-port, a stationary tubular magazine, of a bracket depending from the said barrel and having a gas-passage, a piston formed independent of and applied to the said bracket and having a gas-passage, a magazine-tip mounted upon the forward end of the magazine and having a gas-chamber receiving the said piston, whereby a portion of the gases of explosion are conveyed from the barrel to the said chamber in which they expand for moving the barrel forward.

4. In a gas-operated gun, the combination with a movable barrel, of a stationary tubular magazine, means interposed between the barrel and the magazine for utilizing a portion of the gases of explosion for moving the barrel forward, a bearing sleeve depending from the barrel and encircling the forward end of the magazine upon which it rides back and forth, and a guard or jacket inclosing the forward end of the barrel and the said bearing-sleeve.

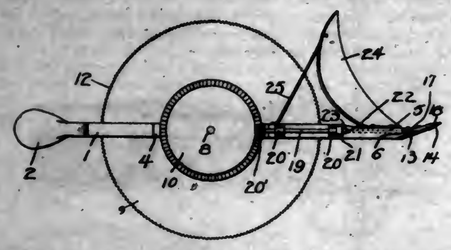
5. In a gas-operated gun, the combination with a movable barrel, of a stationary tubular magazine, a magazine-tip having a gas-chamber, a piston carried by the barrel and entering the said gas-chamber, provision being made for leading a portion of the gases of explosion from the barrel into the said gas-chamber, a bearing-sleeve carried by the barrel and riding back and forth over the forward end of the magazine, a barrel operating-spring encircling the rear portion of the magazine, an operating-spring abutment mounted upon the magazine, and a jacket respectively supported at its rear and forward ends by the sleeve and tip and inclosing the forward end of the barrel and the said bearing-sleeve.

[Claims 6 to 24 not printed in the Gazette.]

877,658. CLIPPER. BENJAMIN MATTRESS, Yager, Cal. Filed May 6, 1907. Serial No. 372,210.

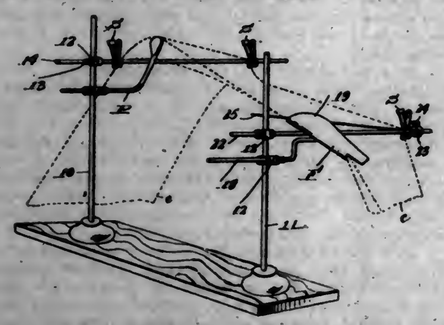
A device of the type set forth comprising a frame having a body portion, a handle rearwardly thereof, and a

platform forwardly thereof, said body portion being formed with a longitudinal slot, a shaft journaled in the walls of said slot and having an end projected thereboyond, a drive wheel having a serrated periphery fixed to said shaft within said slot, a wheel fixed to the projecting portion of said shaft and having crown teeth, a plate fixed on said platform having stationary cutting knives, a second plate supported for lateral sliding movement, a lever pivoted between its ends and at its front



end pivoted to said sliding plate, said sliding plate having cutting teeth disposed above said crown teeth, a shaft supported from said frame longitudinally thereof, a pinion fixed on the longitudinal shaft and meshing with said crown teeth, a wheel carried at the front end of the longitudinal shaft and having a wrist pin, and a pitman interposed between said wrist pin and the rear end of said lever.

877,659. DEVICE FOR TURNING THE PRIMARY FOLDS FOR HEMS. DANIEL MAUS, Worcester, Mass. Filed Oct. 4, 1906. Serial No. 337,393.



1. In a device for folding hems, the combination of a support comprising a vertical rod, two brackets thereon, a horisontal rod, a folder, and a tension device carried by said brackets.

2. In a device for folding hems, the combination of two vertical supports, a horisontal rod, and a creaser carried by one of said supports, and a folder, horisontal rod, and spring tension device carried by the other.

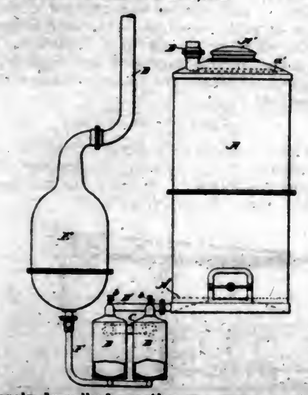
3. In a device for folding hems, the combination of two vertical supporting rods, a horisontal rod and a creaser carried by one of said supporting rods, and a folder carried by the other.

4. In a device for folding hems, the combination of a support comprising a vertical rod, two brackets thereon, a horisontal rod for supporting cloth to be folded carried by one of said brackets, and a creaser carried by the other.

5. In a device for folding hems, the combination of a support comprising a vertical rod, two brackets thereon, a horisontal rod for supporting cloth to be folded carried by one of said brackets, and a creaser carried by the other, said creaser comprising a rod adapted to be mounted on one of said brackets in substantially a horizontal position, and to be turned on its axis, said rod having an offset provided with a flat disk-shaped end having a curved edge, said disk-shaped end being located substantially in a vertical position.

[Claims 6 to 11 not printed in the Gazette.]

877,660. PROCESS FOR MAKING VEGETABLE EXTRACTS. JAMES MEIKLE, Glasgow, Scotland. Filed Dec. 11, 1906. Serial No. 347,311.



The herein-described continuous process of obtaining soluble extracts from vegetable matters, consisting in evaporating a solution of extract in a vacuum, drawing under a vacuum the vapors from the solution through said matters so as to cause the vapors to condense thereon, drawing off by suction a fraction of the condensed vapors containing fresh extract in solution, and forcing the condensate to flow under the action of air pressure to rejoin the first-mentioned solution.

877,661. PUMP. ORIS M. PATTERSON, Canton, Ohio. Filed Sept. 17, 1907. Serial No. 393,364.



1. A pump comprising a cylinder and piston therein, a combined delivery and supply pipe from said pump provided with a valve having an open discharge port into a receptacle within which the pump is disposed, a pipe communicating with the intake of said pump and provided with a valve having an open inlet thereto from said receptacle, a conducting pipe independent of said pump and communicating with the discharge and inlet pipes.

2. A pump comprising a cylinder and piston therein, a combined delivery and supply pipe from said pump provided with a valve having an open discharge port into a receptacle within which the pump is disposed, a pipe communicating with the intake of said pump and provided with a valve having an open inlet thereto from said receptacle, a conducting pipe independent of said pump and communicating with the discharge and inlet pipes, and means for simultaneously shifting said valves.

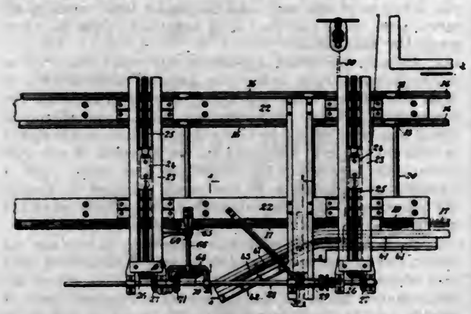
3. A pump comprising a cylinder and piston therein, a combined delivery and supply pipe from said pump provided with an open ported casing into a receptacle within which the pump is disposed, a valve therein, an intake pipe for said pump provided with an open ported casing and valve therein adapted to intake from said receptacle, and a conducting pipe independent of said pump and communicating with said delivery and intake pipes.

4. A pump comprising a cylinder and piston therein, a conducting pipe, a valved connection between said pipe and the intake of said pump having an open ported casing adapted to intake from a receptacle within which said pump is disposed, and a valved delivery and supply connection having an open ported valve casing between the discharge of said pump and said conducting pipe and discharging into said receptacle.

5. A pump comprising a cylinder and piston therein, a conducting pipe, a delivery and supply connection communicating with the conducting pipe and provided with an oscillating two way valve having an open ported casing adapted to discharge into a receptacle within which said pump is disposed, and a connection between the conducting pipe and the intake of said pump provided with an oscillating two way valve having an open ported casing to intake from said receptacle.

[Claims 6 and 7 not printed in the Gazette.]

877,662. SAWMILL SET-WORKS. NORMAN E. RICE, Zenia, Cal. Filed Feb. 10, 1905. Serial No. 245,045.



1. The combination of a saw mill carriage and a knee adjustable thereon, of means on the carriage for adjusting the knee, a guide mounted independently of the carriage and disposed diagonally to the line of movement thereof, and a setting rack carried by the guide and adjustable along the same, said setting rack serving to actuate the said means for adjusting the knee.

2. The combination with a saw mill carriage and a knee adjustable thereon, of means on the carriage for adjusting the knee, a guide having a turn therein, the guide being mounted independently of the carriage, and a setting rack comprising a number of articulated sections in slidable engagement with the guide and adapted to actuate said means for adjusting the knee.

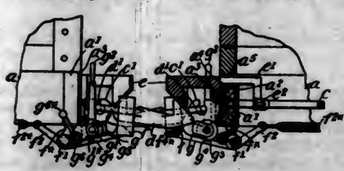
3. The combination with a saw mill carriage and a knee adjustable thereon, of means on the carriage for adjusting the knee, a guide having a turn therein, the guide being mounted independently of the carriage, a setting rack comprising a number of articulated sections in slidable engagement with the guide and adapted to actuate the said means for adjusting the knee, and a gear for actuating the said setting rack, the sections of such setting rack having teeth thereon engaged by the teeth of the gear.

4. The combination with a saw mill carriage and a knee adjustable thereon, of a part in connection with the knee to move the same, a guide mounted independently of the carriage and having a turn therein, and a setting rack composed of a number of articulated sections in slidable engagement with the guide, said setting rack being adapted to be engaged by said part having connection with the knee, for the purpose specified.

5. The combination with a saw mill carriage and a knee adjustable thereon, of a part in connection with the knee to move the same, a guide mounted independently of the carriage and having a turn therein, and a setting rack composed of a number of articulated sections in sliding engagement with the guide, said setting rack being adapted to be engaged by said part having connection with the knee, for the purpose specified, the sections of said setting rack having gear teeth thereon, and an operating gear meshed with the teeth to permit the adjustment of the said setting rack.

[Claims 6 to 9 not printed in the Gazette.]

877,663. AUTOMATIC COUPLING. JAMES RILEY, Southampton, and FREDERICK A. SPIERS, London, England. Filed May 3, 1907. Serial No. 371,734.



1. In an automatic coupling a broad hook connected with the drawbar of the carriage and having a beveled edge, a pivotally mounted broad and beveled edged jaw arranged beneath the broad hook means for holding the jaw up to the broad hook, a pointed or beveled hook linked to the drawbar of the carriage and arranged toward one side of and supported by the movable jaw in such manner that a similar pointed hook on another carriage can be received between the broad hook and the jaw at the side of the first pointed hook and means for depressing the movable jaw at the times desired substantially as herein shown and described and for the purpose stated.

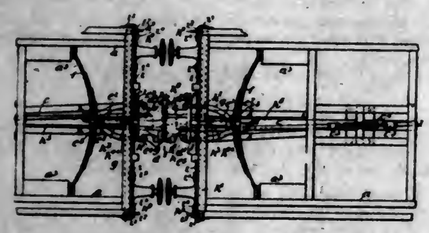
2. In an automatic coupling a broad hook connected with the drawbar of the carriage and having a beveled edge, a pivotally mounted broad and beveled edged jaw arranged beneath the broad hook, means for holding the jaw up to the broad hook, a pointed or beveled hook linked to the drawbar of the carriage and arranged toward one side of and supported by the movable jaw in such manner that a similar pointed hook on another carriage can be received between the broad hook and the jaw at the side of the first pointed hook, guide notches in the movable jaw for the pointed hooks and means for depressing the movable jaw at the times desired substantially as herein shown and described and for the purpose stated.

3. In an automatic coupling a broad beveled edged hook mounted upon the end of a carriage with capability of sliding longitudinally of the carriage, a connection between the broad hook and the drawbar, a broad and beveled edged jaw arranged beneath the broad hook and mounted upon an axis of motion, an offset from the broad jaw, a spring acting upon said offset to hold the jaw up to the broad hook, a pointed or beveled hook linked to the drawbar of the carriage and arranged to one side of and supported by the movable jaw in such manner that a similar pointed hook on another carriage can be received between the broad hook and the jaw at the side of the first pointed hook, a cross shaft extending to the sides of the carriage and there provided with levers or handles, a cam upon the cross shaft adapted to act upon the movable jaw and depress it and a device operative from both sides of the carriage for locking said jaw in its depressed position substantially as herein shown and described and for the purpose stated.

4. In an automatic coupling of the character referred to means for locking the movable jaw in its depressed posi-

tion consisting of a cross shaft extending to the sides of the carriage and there provided with handles, a cam upon the cross shaft adapted to act upon the movable jaw, a separate cross shaft a pawl fixed with the latter shaft and a coacting toothed or notched wheel fixed with the cross shaft of the cam substantially as herein shown and described and for the purpose stated.

877,664. AUTOMATIC COUPLING. JAMES RILEY, Southampton, and FREDERICK A. SPIERS, Hampstead, England. Filed July 25, 1907. Serial No. 385,541.



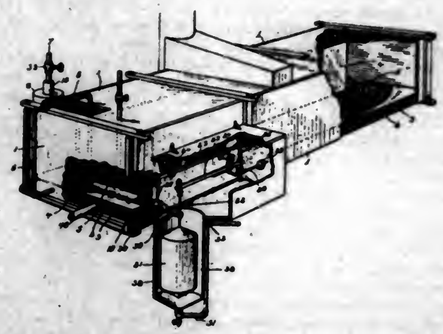
1. In an automatic coupling a broad hook mounted centrally upon each carriage with capability of movement longitudinally of the carriage, springs acting to support the same against inward pressure so that they will act as buffers, coupling hooks adapted to engage the broad hooks, shoulders upon the drawbar, connections from the broad hooks to the drawbars adapted to act upon said shoulders in the drawing direction and means for bringing the coupling hooks into and taking them out of engagement with the broad hooks substantially as herein shown and described and for the purpose stated.

2. In an automatic coupling a broad hook mounted centrally upon each carriage, a pivotally mounted broad jaw beneath each broad hook, a pivotally mounted coupling hook supported by each jaw and adapted to engage the opposite broad hook, flexible connections between the broad jaws and the coupling hooks, means for holding the broad jaws in their raised positions and means for depressing the same from either side of the carriage substantially as herein shown and described and for the purpose stated.

3. In an automatic coupling a broad hook mounted centrally upon each carriage, a broad jaw loosely mounted upon a cross shaft beneath each broad hook, a pivotally mounted coupling hook supported by each jaw and adapted to engage the opposite broad hook, flexible connections between the broad jaws and the coupling hooks, a cross shaft loosely carrying each broad jaw and extending to the sides of the carriage, a downwardly cranked loop from the broad jaw, a spring constantly pressing on said loop in one direction to raise the jaw, an offset from the cross shaft engaging the other side of said loop and adapted to move it in the other direction to depress the jaw, a hand lever fixed on each end of the cross shaft at each side of the carriage and means for locking the hand levers in the position to which they have been turned substantially as herein shown and described and for the purpose stated.

4. In an automatic coupling a broad hook mounted centrally upon each carriage, a road jaw loosely mounted on a cross shaft beneath each broad hook, a pivotally mounted coupling hook supported by each jaw and adapted to engage the opposite broad hook, flexible connections between the broad jaws and the coupling hooks, a cross shaft loosely carrying each broad jaw and extending to the sides of the carriage, a downwardly cranked loop from the broad jaw, a spring constantly pressing on said loop in one direction to raise the jaw, an offset from the cross shaft engaging the other side of said loop and adapted to move it in the other direction to depress the jaw, a curved hand lever fixed on each end of the cross shaft notches in the curved part of each lever, a second cross shaft extending to the sides of the carriage and having counterweighted arms fixed upon the ends thereof each provided with a tooth adapted to engage the notches of the hand levers substantially as herein shown and described and for the purpose stated.

877,665. EVAPORATOR. FLOYD SAWYER, Brighton, Mich. Filed July 1, 1907. Serial No. 381,627.



1. In an evaporating apparatus having an evaporating tank and an outlet valve means adapted to automatically close the outlet valve when the specific gravity of the liquid falls below a predetermined point, comprising a regulating tank into which the outlet valve discharges, a cylindrical specific gravity float suspended by an axial stem in the contents of the tank and compound lever connections between the valve and float stem adapted to close the valve when the float falls.

2. In an evaporating apparatus, an outlet valve, from the evaporating tank and means adapted to automatically close the outlet valve when the specific gravity of the liquid falls below a predetermined point, consisting of a regulating tank into which the outlet valve discharges a specific gravity float immersed in the contents of the tank operatively connected by levers to the valve, and a counterpoise adjustable on the lever, adapted to change the buoyancy of the float whereby the float falls when the specific gravity falls below the predetermined point.

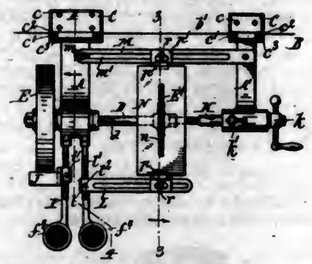
3. In a continuous process evaporating apparatus, an outlet valve from the evaporating tank, a regulating tank into which the outlet valve discharges and in which the concentrated liquid is maintained at a constant level, a specific gravity float immersed in the liquid in said regulating tank, operatively connected to the outlet valve, and adapted to close said valve when the specific gravity of the liquid falls below a predetermined point.

4. In an evaporating apparatus, a regulator tank, an outlet valve from the evaporating tank discharging into the regulator tank, means for maintaining a constant level of concentrated liquid in the regulator tank, a specific gravity float immersed in the contents of the regulator tank, a compound lever fulcrumed on the evaporator tank operatively connected to the outlet valve and a stem secured to the float pivoted on the power arm of the lever, said float and lever connections being adapted to close the valve when the float settles.

5. In an evaporating apparatus an upright cylindrcial regulator tank, an outlet valve from the evaporating tank discharging into the regulator tank, an upright cylindrical gravity float immersed in the contents of the regulator tank, a compound lever fulcrumed on knife-edge scale bearings on the evaporator tank and operatively connected to the outlet valve, and an axial stem secured on the float pivoted on the power arm of the lever, said float and lever connections being adapted to close the valve when the float settles.

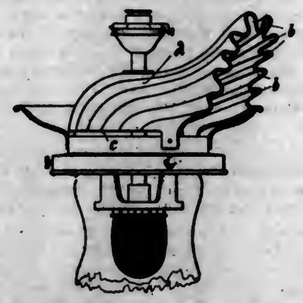
[Claims 6 to 12 not printed in the Gazette.]

877,666. GRINDING, SAWING, AND TURNING MACHINE. HERBERT E. O. SCHMIDT, Buffalo, N. Y. Filed Apr. 6, 1905. Serial No. 254,282.



A machine of the character described comprising a head stock, a tail stock, a live spindle journaled in said head stock, a dead center mounted on the tail stock and engaging with the live spindle, a saw mounted on the live spindle, a rear bar connecting said stocks and having a longitudinal slot, a front bar connected with the head stock and having a longitudinal slot, a table having a slot which receives said saw and provided at its ends with depending flanges each of which has a vertical slot, and means for adjustably connecting each end of the table with the adjacent bar consisting of an angular coupling piece having a vertical flange which is slotted lengthwise and a horisontal flange, a bolt connecting the vertical flange of each coupling piece and one of the depending flanges of the table and passing through the slots thereof, and a bolt connecting the horisontal flange of the coupling piece and the adjacent bar and passing through the slot of the latter, substantially as set forth.

877,667. INCANDESCENT GAS-BURNER. WILHELM SCHMITZ, Hamburg, Germany. Filed Feb. 5, 1907. Serial No. 355,795.

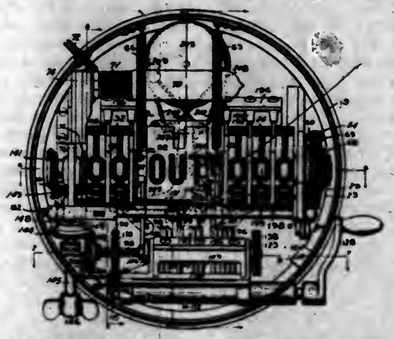


In an incandescent gas burner, a flue having curved folds slanting sidewise and partially projecting from the burner so as to be adapted to cool the rising hot gases in the folds thereof, and the said flue having longitudinal openings at the sides horisontally for letting the outer air go into the inner folds of the flue cool and withdraw the rising hot gases, substantially as described.

877,668. REGISTERING MECHANISM. JACOB SCHINNELLER, Pittsburg, Pa. Filed Nov. 15, 1906. Serial No. 343,579.

1. In registering mechanism, the combination of a primary register, a special indicator actuated from the primary register actuating means and arranged to be displayed at intervals only with reference to the operation of the primary register, and means for recording the number of operations of the primary register and of the special indicator.

2. In registering mechanism, the combination of a primary register, a special indicator actuated from the primary register actuating means and arranged to be displayed at intervals only with reference to the operation of the primary register, a recorder arranged to be operated whenever the special indicator is displayed, and means for taking a record from said recorder.



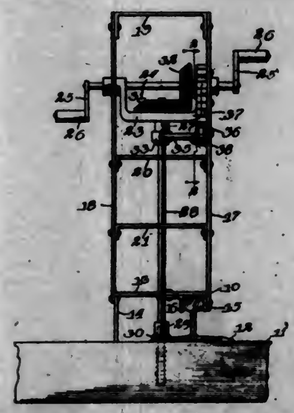
3. In registering mechanism, the combination of a primary register, a special indicator actuated from the primary register actuating means and arranged to be displayed at intervals only with reference to the operation of the primary register, a supplemental register, and means for recording the number of operations of the primary register, the supplemental register and the special indicator.

4. In registering mechanism, the combinaiton of a primary register, a special indicator actuated from the primary register actuating means and arranged to be displayed at intervals only with reference to the operation of the primary register, printing mechanism actuated from the primary register, and other printing mechanism actuated from the special indicator, for recording the number of operations of each.

5. In registering mechanism, the combination of a primary register, a supplemental register, a special indicator actuated from the primary register actuating means and arranged to be displayed at intervals only with reference to the operation of the primary register, and printing mechanism operated from each of said registers and indicator.

[Claims 6 to 42 not printed in the Gazette.]

877,669. MACHINE FOR DRIVING RAILWAY SCREW-SPIKES. DANIEL P. SHEEHAN, Chicago, Ill., assignor to North American Railway Construction Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 13, 1907. Serial No. 357,182.

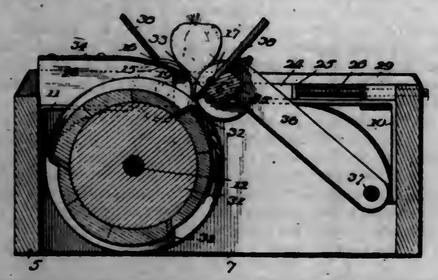


1. In a machine for driving railway screw-spikes, the combination of a frame, the base-plate of which has on its

under face at one side two depending flanges adapted to engage one of the rails of a railway track and at its other side a depending flange adapted to rest upon the ties of the track and to maintain the base-plate in a substantially horizontal position, a rotatable driving rod movable up and down in said frame and adapted to engage and turn the head of a screw-spike that is in position to be turned into place in a tie, and means for rotating said driving rod.

2. In a machine for driving railway screw-spikes, the combination of a base-plate which is adapted to be moved along one of the rails of a railway track, a side-plate rising from each side of said base-plate, each of said side-plates having a vertical slot in its upper end, a yoke whose out-turned ends project through said slots, said out-turned ends forming bearings for a shaft journaled therein, cranks on the outer ends of said shaft, a sleeve depending from said yoke and communicating with an opening through the yoke, a rod rotatably mounted in said sleeve and opening, a bevel gear on said rod, a bevel gear on said shaft meshing with said first-mentioned gear, a rack-bar mounted on one of said side-plates, a split sleeve adjustable up and down on the sleeve that forms the bearing for the rotatable rod, an arm carried by said split sleeve, a spring-actuated pawl pivoted on the end of said arm and adapted normally to engage the teeth of said rack-bar and thus prevent the upward movement of the rotatable rod, and a socket on the lower end of said rod adapted to engage and turn the head of a screw-spike that is in position to be turned into place in a tie.

877,670. VEGETABLE-TOPPING MACHINE. WILLIAM R. SHUFELT, Niverville, N. Y. Filed Apr. 12, 1907. Serial No. 367,785.



In a vegetable topping machine, a cutting mechanism comprising a revoluble cylinder armed with spiral knives, the periphery of the cylinder being cam-shaped, its radius being smallest back of the knives, and a stationary cutting blade in contact with the knives.

877,671. PAPER-SACK HOLDER. IRA J. SIMMONS, Clairton, Pa. Filed Feb. 18, 1907. Serial No. 357,938.



In a holder for paper sacks, the combination of a box-like frame open at the top and open at the front intermediate the top and bottom planes of the frame, the opening being of a width to permit the passage of the bags therethrough, a retaining-strap hinged at one end of one of the side walls of the frame, said frame forming the upper wall of the said opening, means for securing the other end of said strap to the opposite side wall, an integral upwardly projecting extension carried by the rear wall of said frame, and a spring arm secured at its upper end to the inner face to said integral extension with its free end projecting into the frame and provided on said free end with a cross-head bearing against the paper sacks in the frame and holding said sacks against the hinged strap.

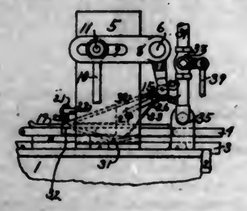
877,672. PETTICOAT. LENA SITTIG, New York, N. Y. Filed July 6, 1907. Serial No. 382,422.



1. A petticoat having a continuous exterior pocket along its lower portion for the reception of a skirt and means engaging the upper edge of the pocket for supporting the same from the waistband of the petticoat or the skirt as may be required.

2. A petticoat having a continuous exterior pocket along its lower portion for the reception of a skirt, the outer wall of the pocket projecting upwardly at the sides and downwardly in curved form at the front and back, and means for engaging the upwardly projecting portions at the sides for supporting the same from the waistband of the petticoat or the skirt, as may be required.

877,673. SOLDER-FEEDING DEVICE FOR CAN-MAKING MACHINES. CHARLES W. SLEEPER, Lancaster, N. H. Filed Jan. 16, 1907. Serial No. 352,563.



1. In a solder feeding device, a hopper for containing granulated solder; a chain for feeding cans to be soldered beneath said hopper; a second chain adapted to rest upon the tops of the cans and to move with them; openings in the links of said second chain; a passage leading from said hopper and adapted to discharge solder through said openings and into the interior of the cans; and means for controlling the flow of solder through said passage.

2. In a solder feeding device, a hopper for containing granulated solder; a chain for feeding cans to be soldered beneath said hopper; a second chain adapted to rest upon the tops of the cans and to move with them; a shoe adapted to rest upon said second chain; an opening through said shoe; openings in the links of said second chain; a passage leading from said hopper and adapted to discharge solder through the opening in said shoe and the openings in the links of said second chain and into the interior of the cans; and means for controlling the flow of solder through said passage.

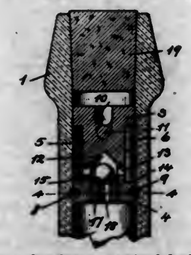
3. In a solder feeding device, a hopper for containing granulated solder; means for feeding cans to be soldered beneath said hopper; a passage leading from said hopper and adapted to discharge solder into the interior of the cans; a reciprocating slide for controlling the flow of solder through said passage; an oscillating shaft carried in bearings upon said hopper; an arm upon said shaft adapted to operate said slide; a second arm upon said shaft; and a pitman adapted to be operated from a moving part of the machine and connected with said second arm.

4. In a solder feeding device, a hopper for containing solder; means for feeding cans to be soldered beneath said hopper; a passage leading from said hopper and adapted to discharge solder; means for controlling the flow of solder through said passage; means adapted to engage said controlling means and to move with it throughout its range of movement; and means for disengaging said operating and controlling means when there is no can beneath the hopper.

5. In a solder feeding device, a hopper for containing solder; means for feeding cans to be soldered beneath said hopper; a passage leading from said hopper and adapted to discharge solder; means for controlling the flow of solder through said passage; means adapted to engage said controlling means and to move with it throughout its range of movement; and means dependent for its operation upon the absence of a can beneath the hopper for disengaging said operating and controlling means.

[Claims 6 to 18 not printed in the Gazette.]

877,674. NON-REFILLABLE BOTTLE. JOHN R. SMITH, Towson, Md. Filed Apr. 3, 1907. Serial No. 366,114.



A bottle closure having a central body portion with an enlarged head at each end thereof,—the head at the upper end having a central vertical opening and branch passages extending laterally in diametrically-opposite directions from the central passage and said branch passages extending through and opening at the side of the upper body portion, and the body of said closure being rigid with the heads and having a central valve chamber with laterally-extending passages in diametrically-opposite sides of the body which communicate with the chamber, and the head at the lower end of the closure having a central rigid bushing with a vertical passage therein and the upper end of said bushing around the vertical passage having a concave seat which is permanently fixed in a horizontal plane below the lateral passages in the body, and a ball in the valve chamber and normally seated on the concave seat of the rigid bushing.

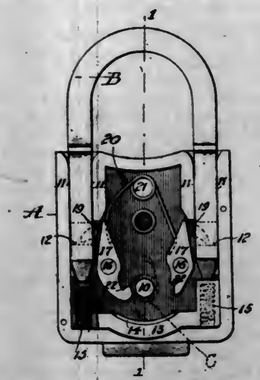
877,675. DOUGH-RAISER. ELIZABETH A. SMOTHERS, Mills, Nebr. Filed May 13, 1907. Serial No. 373,398.

A dough raiser comprising a water containing bowl, a dough containing bowl received within the water containing bowl and contacting at its upper edge with the corresponding portion of the water receiving bowl whereby the dough receiving bowl will be held in spaced relation with respect to the water receiving bowl, and a lid for the dough raiser, said lid being double, the upper edge portion of the water receiving bowl being outwardly bulged, a depending bulged flange formed at the outer edge of the upper lid member, a depending flange formed at the outer



edge of the under lid member, said flange being bent outwardly at an acute angle to form a flange which fits snugly against the inner upper edges of the dough receiving bowl, the two last mentioned flanges forming substantially a trough.

877,676. PADLOCK. FRANK G. SNOOK, Sacramento, Cal. Filed July 1, 1907. Serial No. 381,641.



1. In a lock, the combination of the case, a shackle slidably-mounted therein, spring-pressed dogs within the case having means for engaging and interlocking with the arms of the shackle, said dogs adapted to be actuated by a key to release the shackle, and a spring-pressed yoke slidably-mounted within the lock case and adapted to be depressed by the shackle and to remain in normal engagement with said shackle, said yoke adapted to start the shackle out of the case when the locking dogs are released from engagement with the shackle, and said yoke having a member which is advanced towards the key and engages and traps said key coördinately with the release of the shackle, said trapping-means holding the key trapped until the shackle is returned to normal position.

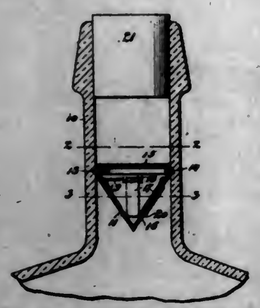
2. The combination of a lock-case having parallel guides, a shackle having parallel arms slidably fitting said guides, and provided with slots or recesses, a yoke slidably mounted in the case and adapted to be engaged by the ends of the shackle-arms and to be held depressed and under tension when the shackle is in locked position, spring-pressed dogs pivotally-mounted in said case and having hook-shaped ends to engage the slots or recesses in the shackle-arms, said dogs adapted to be actuated by a key to withdraw their hook-shaped ends out of engagement with the shackle, said yoke then operating to slightly advance the shackle and thereby carry the slots out of register with said hook-shaped ends, and said yoke having, also, means for trapping the key coördinately with the unlocking of

the shackle and holding said key trapped until the shackle is again restored to normal position.

3. The combination of a lock-case having a substantially U-shaped yoke slidably-mounted in one end thereof, springs or cushions between said yoke and the lock case, pivotally-mounted locking-dogs within the lock-case having hook-shaped ends, said dogs being spring-pressed, a shackle having parallel arms slidably fitting the lock-case, the inner ends of said arms adapted to engage the arms of the yoke to depress said yoke against the action of said springs, said shackle having recesses adapted to be engaged by the dogs when brought into register therewith and said dogs adapted to be retracted by a key to remove their hook-shaped ends out of engagement with the shackle, said yoke having a curved flange adapted to be moved into the range of action of the bits of the key to trap said key coördinately with the release of the shackle and to hold the key trapped until the shackle is again restored to normal position.

4. The combination with a shackle having parallel arms and locking recesses, of a lock-case having guides for said arms, and having locking means for engaging the recesses of the arms, said case having a spring-pressed yoke which is normally depressed by the shackle and which is advanced coördinately with the release of the shackle and has means for trapping the actuating key and holding said key trapped during the entire period the shackle is released, said shackle adapted to engage and restore the yoke to normal position and simultaneously release the key.

877,677. NON-REFILLABLE BOTTLE. JOHN A. SOUTHWELL, Wyoming, Pa. Filed Oct. 22, 1907. Serial No. 398,623.



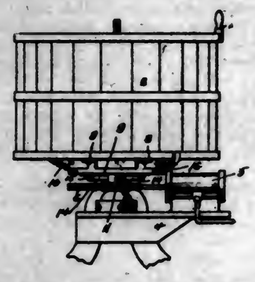
1. The combination with a bottle, of a valve-casing in the neck thereof having the shape of an inverted cone with openings in the side wall thereof, flap-valves controlling said openings, and a perforated plate in the casing above said openings.

2. The combination with a bottle, of a valve-casing in the neck thereof having the shape of an inverted cone with openings in the side wall thereof, flap-valves for controlling said openings, a guard above said openings, and spring catches engageable by the valves for holding the same open.

877,678. GEARING. JOSEPH STUART, Allegheny, Pa. Filed Apr. 13, 1907. Serial No. 367,927.

1. In a device of the class described, a frame adapted to be connected to a receptacle and formed with a segmental gear rack and a segmental slot spaced apart and concentric to the oscillating point of the receptacle, a stub shaft extending through said slot, a sector carried by said shaft and provided with a gear segment engaging the segmental gear rack of said frame, a gear wheel carried by said shaft, a reciprocating gear rack engaging said gear wheel, and means for operating said reciprocating gear rack.

2. In a device of the class described, a supporting base having a central pivot, a frame adapted to be connected to a receptacle and provided with a segmental gear rack and a segmental slot spaced apart and concentric to said pivot, a stub shaft carried by said base and extending through said slot, a sector carried by said shaft and having a gear segment engaging said segmental frame rack, a gear wheel carried by said shaft, a reciprocating rack engaging said gear wheel, and means for actuating said reciprocating rack.



3. A device for operating washing machines, consisting of a frame adapted to be connected to a machine, a segment-shaped rack carried by one edge of said frame, the opposite edge of said frame having a segment-shaped slot formed therein, a pinion mounted for oscillation adjacent to said frame, a toothed sector carried by said pinion and meshing with said rack, and means carried by said pinion and associated with said slot for guiding the movement of said frame.

877,679. INK-FOUNTAIN. CASPER R. TAYLOR, Washington, D. C., assignor of one-sixth to Oscar J. Ricketts, one-sixth to Edward Eynon, Jr., and one-third to William F. Mahony, Washington, D. C. Filed Apr. 16, 1907. Serial No. 368,465.



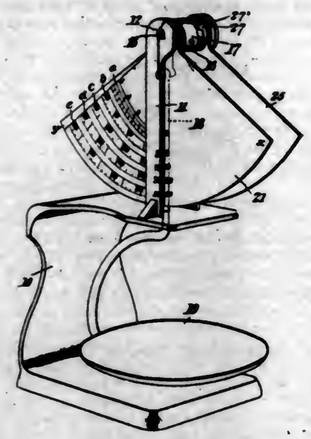
1. In an ink fountain, a frame, a roller journaled therein, a doctor in operative relation with said roller, means for adjusting said doctor locally at any point throughout its length, and means for bodily moving said doctor without interfering with such local adjustment.

2. In an ink fountain, a frame, an ink roller journaled therein, a doctor frame also journaled therein, means for swinging said doctor frame, a flexible doctor secured thereto, and in operative relation with said roller, and local adjusting means for flexing said doctor, carried by said doctor frame.

3. In an ink fountain, a frame, a roller journaled therein, a doctor frame also journaled therein, a resilient doctor secured to said doctor frame and in operative relation with said roller, means for locally adjusting said doctor by flexing the same, said means comprising set screws carried by said doctor frame and bearing against said doctor, and means for bodily swinging said doctor frame on its journals.

4. In an ink fountain, a main frame, provided with slots, a roller journaled therein, a doctor frame also journaled therein, a doctor carried by said doctor frame in operative relation with said roller, adjusting screws carried by said doctor frame and bearing against said doctor at intervals throughout its length, said screws having their shanks projecting through the slots in said main frame, whereby ready access may be had to said screws, and means for swinging said doctor frame to and from said roller.

877,680. SCALE. WILLIAM G. TEMPLETON, Colorado Springs, Colo. Filed Sept. 20, 1906. Serial No. 335,458.



1. A weighing scale comprising a supporting frame, and a pair of standards having knife edge bearings, a drum having knife edge fulcrums mounted on said bearings, one edge of one of the standards being disposed in the vertical plane of the fulcrum and forming the reading edge of the scale, said standard being further provided with symbols representing rates, a flexible member having one end secured to the drum, a load receiver hung from the opposite end of said flexible member, a pair of segments, one of which is rigidly secured to the drum, and is provided with graduations representing weights and values, the other segment being disconnected from the drum, and means for connecting the second segment to the drum in order to double the weighing capacity of the scale.

2. A weighing scale including a frame and a pair of standards, a drum having knife edge fulcrums supported by the standards, one edge of one of the standards being disposed in the vertical plane of the fulcrum and forming the reading edge of the scale, a flexible member having one end supported by the drum, a load receiver hung from the opposite end of said flexible member, and a segment carried by the drum and provided with indicating graduations.

3. In a weighing scale, a frame including a pair of standards, a drum supported by the standards, a flexible member having one end connected to the drum, a load receiver hung from the opposite end of said flexible member, a segment carried by the drum, and forming a counterpoise of the load receiver, an auxiliary segment, and means for connecting the auxiliary segment to the drum in order to double the weighing capacity of the scale.

4. In a weighing scale, a frame including a pair of standards, a drum revolubly mounted between said standards, a flexible member having one end connected to the drum, a load receiver hung from the opposite end of said flexible member, a segmental counter-poise carried by the drum and bearing indicating graduations, the center of gravity of said segment being normally in the vertical plane of the fulcrum, an auxiliary segment, and means for connecting the auxiliary segment to the drum.

5. In a weighing scale, a frame including a pair of standards, a drum revolubly mounted between the standards, a flexible member having one end connected to the drum, a load receiver connected to the opposite end of said flexible member, a segmental counter-poise carried by the drum and provided with indicating graduations, a second segment loosely supported in alinement with the first, and clutch teeth between the drum and such second segment to permit the coupling on of the latter when the weighing capacity of the scale is to be increased.

[Claims 6 to 8 not printed in the Gazette.]

877,681. VEHICLE. CHARLES E. THORP, Cleveland, Ohio. Filed Sept. 19, 1906. Serial No. 335,208.



1. In a vehicle, a pair of axles, connections between said axles, said connections comprising diagonal steering members and a yielding reach and turn buckles in said members for placing said connections under stress and for adjusting the tension thereof for the purpose specified.

2. In a vehicle, a pair of axles, connections between said axles, said connections comprising diagonal steering cables and a yielding reach, and means for placing said connections under stress whereby the reach is bowed and all looseness or lost motion between the axles is prevented.

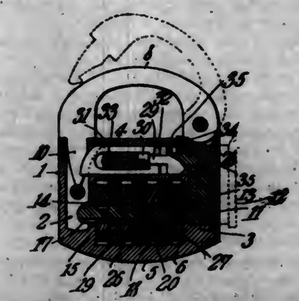
3. In a vehicle, a pair of axles, a reach connecting said axles, said reach being composed of two members that are provided with corrugations or serrations on their adjacent faces, means for holding said members in their engaging position, diagonal steering means connecting said axles, means whereby said cables may be adjusted to conform to the length of the reach, and means connected with said cables for tightening the latter whereby the connections between the axles are put under a yielding stress, for the purpose specified.

4. In a vehicle, a pair of axles, a yielding reach connecting said axles, said reach being composed of two members that are provided with corrugations or serrations on their adjacent faces, means for holding said members in their engaging position, diagonal steering cables connecting said axles, means whereby said cables may be adjusted to conform to the length of the reach, and means for tightening said cables whereby the reach is put under compression and all looseness or lost motion between the axles is prevented.

5. In a vehicle, a pair of axles, a reach connecting said axles, hounds on said axles and engaging said reach, diagonal steering means also connecting said axles, said means being connected to the axles at points near the ends thereof, a tongue or draft attached to one of the axles at points substantially opposite the points of attachment of the steering means whereby the draft will be transmitted directly through the said steering means to the rear axle and means for tightening said cables whereby the hounds will lift the reach at its center and cause the reach to be placed under a yielding stress.

[Claims 6 to 11 not printed in the Gazette.]

877,682. PERMUTATION-LOCK. WILLIAM B. TUBMAN, Waldron, Ark. Filed Aug. 5, 1907. Serial No. 387,155.



1. A permutation lock comprising a lock casing, a series of permutation tumblers movable to predetermined relative positions, a sliding block having a normal seat in the lock

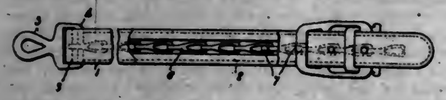
casing, a spindle formed on said block and directly carrying said permutation tumblers, said block having an extension parallel with the spindle, a spring actuated latch bolt carried by said block extension, and a shackle pivotally connected to the casing and having its free end movable into the path of, to be engaged by the latch bolt.

2. In a permutation lock, a permutation tumbler comprising a disk having peripheral indicating characters and a central perforation, an annular series of tapped perforations between the central perforation and the periphery of the disk, and another disk having a pin projecting from one face thereof in position to engage any one of the perforations of the annular series of the first-named disk and also having a perforation for the passage of a screw so located that the screw may enter any one of the tapped perforations of the first-named disk, said second-named disk also having a tongue or key projecting radially inwardly into its central perforation.

3. A permutation lock comprising a suitable casing, a pivoted shackle, a block normally seated in said casing and having two parallel extensions one of which is provided with spaced annular grooves and a longitudinal key-way, a spring controlled latch bolt carried by the other extension of the block, and permutation tumblers directly carried by the block extension having the key-way, said tumblers each consisting of a pair of disks one of which is provided with a key arranged to enter the key-way in the block extension and with a pin projecting from one face, and the other of which is provided with peripheral indicating characters, and an annular series of perforations for the reception of the pin on the other disk.

4. A permutation lock comprising a lock casing, a series of permutation tumblers movable to predetermined relative positions a shackle pivoted at one end to one end of the casing and at the other end arranged to enter said casing, a sliding block having a normal seat in the casing and entering the same from the end to which the shackle is pivoted, a spindle formed on said block and carrying said permutation tumblers, said block also having an extension parallel with the spindle, and a spring-actuated latch-bolt carried by said block extension into the path of the free end of the shackle.

877,683. HARNESS-TRACE. CHARLES VAN DENBARK, Lincoln, Nebr. Filed Dec. 27, 1906. Serial No. 349,672.



1. A device of the character described comprising a leather portion having a longitudinal pocket therein, and a chain disposed longitudinally within the pocket and secured at its ends thereto, said chain comprising a plurality of links each consisting of a looped apertured member, the loop of each member extending through the aperture of an adjoining member, said leather portion having openings registering with certain of the loop receiving apertures for the reception of a buckle tongue.

2. A device of the character described comprising a leather portion having a longitudinal pocket and provided with looped ends, a clip within one of the loops and having spaced ends, and a chain disposed longitudinally within the pocket and extending between and secured in said ends, said chain consisting of links each comprising a loop having registering apertures, the aperture of each link being designed to receive the loop of an adjoining link, the leather portion of said device having openings registering with certain of the loop receiving apertures of the chain.

877,684. ELECTRIC-INSTALLATION OUTLET-BOX. WHEELER H. VIBBER, New London, Conn., assignor to The Gillette-Vibber Co., New London, Conn., a Corporation. Filed June 11, 1907. Serial No. 378,848.

In an electric installation outlet-box, the combination with the body thereof, of a cover adapted to have a lamp-fixture secured directly to it and formed in its edge with an open radial slot and provided with two depending lugs located at the outer end of the said slot on the opposite sides thereof respectively, and a screw entering the edge of the box in position to be received by the said slot and to



have its head engaged by the said lugs for the suspension of the cover in a vertical position to give access to the interior of the box during wiring, the said screw being also employed to secure the cover to the box so as to close in the wiring.

877,685. DISK HARROW. DANIEL W. WARNER, Edmonton, Alberta, Canada. Filed Apr. 18, 1907. Serial No. 369,039.



1. In a disk harrow, the combination of a sectional rim adapted to be detachably fastened to the periphery of the disk said sections being V-shaped in cross section, substantially as and for the purpose specified.

2. The combination with a concavo-convex harrow disk, of a subsoil packing disk secured on the periphery of the harrow disk.

3. The combination with a concavo-convex harrow disk, of a concaved subsoil packing disk hooked upon the periphery of the harrow disk, and means for detachably securing the subsoil packing disk thereon.

4. In a disk harrow, the combination of a rim adapted to be detachably fastened to the periphery of the disk, said rim being V-shaped in cross section, substantially as and for the purpose specified.

5. In a disk harrow, the combination of a rim adapted to be detachably fastened to the periphery of the disk, said rim formed in two semi-circular sections, fastening lugs formed on the adjoining ends of each section, openings formed through said lugs, fastening bolts and nuts adapted to engage in said openings, said rim being V-shaped in cross section, substantially as and for the purpose specified.

877,686. GARMENT. GEORGE WEST, Syracuse, N. Y. Filed Feb. 20, 1904. Serial No. 194,501.



1. A garment comprising two parts, one part having a leg-member for the right leg and a body-member for a side of the body other than the right side, and the other part having a leg-member for the left leg and a body-member for the side of the body other than the left side, substantially as and for the purpose described.

2. A garment comprising two parts, one having a leg-member for the right leg and a body-member for the left side of the body, and the other part having a leg-member for the left leg and a body-member for the right side of the body, substantially as and for the purpose specified.

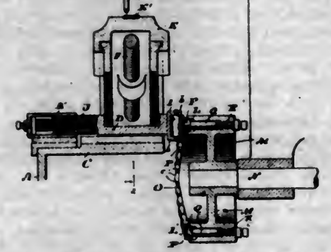
3. A garment comprising two parts, one having a leg-member for the right leg and a body-member for the left side of the body, and the other part having a leg-member for the left leg and a body-member for the right side of the body, corresponding edges of the body-members being arranged at an angle to each other, substantially as and for the purpose set forth.

4. A garment comprising two parts, one having a leg-member for the right leg, an opening for the left leg and a body-member for the left side of the body, and the other part having a leg-member for the left leg, an opening for the right leg and a body-member for the right side of the body, substantially as and for the purpose described.

5. A garment comprising two parts, one having a leg-member for the right leg, an opening for the left leg and a body-member for the left side of the body, and the other part having a leg-member for the left leg, an opening for the right leg and a body-member for the right side of the body, said openings for the legs extending from the point of divergence of the leg-members to practically the waist-line, substantially as and for the purpose specified.

[Claims 6 to 9 not printed in the Gazette.]

877,687. CAM. FREDRICK C. WESTFAHL, Milwaukee, Wis. Filed May 18, 1906. Serial No. 317,555.



1. A cam comprising a waved-edge wheel having a series of circumferentially disposed detachable plugs fitted in the waved edge to form a continuous surface approximately parallel with said waved edge of the wheel.

2. A cam comprising a wheel having a peripheral waved edge provided with a series of openings therein parallel with the wheel-axis, plugs fitted in the openings and projecting beyond said waved edge to form a continuous corrugated surface approximately parallel with the aforesaid waved edge, and adjusting screws for the plugs carried by the wheel.

3. A cam comprising a wheel having a peripheral waved-edge provided with a series of counterbored openings therein, a series of shouldered plugs fitted in the openings, and provided with heads having flattened sides contacting with each other to form continuous gradually increasing and decreasing cam-faces approximately parallel with the waved edge of the wheel, and adjusting screws for the plugs.

4. A cam comprising a waved edge wheel provided with a series of counterbored transverse openings through the waved edge of the wheel, adjusting screws in threaded-connection with the bored openings, a series of shouldered plugs fitted in the openings provided with circular heads, the inner ends of the plugs being abutted against the adjusting-screws, the heads being flattened at their sides to form a continuous gradually increasing and decreasing cam-face approximately parallel with the waved edge of the wheel, and a spring-controlled member in opposition to the faces of the plugs.

877,688. HAY-ELEVATING DEVICE. HENRY C. WHITE, Canton, Ohio. Filed Nov. 1, 1907. Serial No. 400,210.

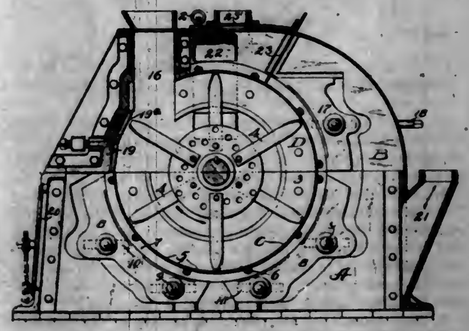


1. In a sling of the class described, rope members each provided with partible sling members, dogs adapted to engage said partible sling members and the partible sling members provided with heads, substantially as and for the purpose specified.

2. In a sling of the character described, a trip-head provided with an elevating head connecting plate, a pulley carried by said plate, a sling provided with partible head connecting members, said members adapted to be connected to the trip block, substantially as and for the purpose specified.

3. In a sling of the character described, a sling, partible members connected to said sling, one of said members provided with dowel pins and the other provided with apertures, said dowel pins adapted for engagement with the apertures, said sling members provided with heads, a trip-head provided with a dog adapted to engage the heads of the partible sling members, and means carried by the trip-head to release the partible sling members, substantially as and for the purpose specified.

877,689. SHREDDING-MACHINE. MILTON F. WILLIAMS, St. Louis, Mo., assignor to Williams Patent Crusher & Pulverizer Company, St. Louis, Mo., a Corporation of Missouri. Filed May 26, 1906. Serial No. 318,935.



1. In a machine of the class described, a casing having a rotary beater mounted therein, a grinding surface surrounding a portion of the beater, a partition extending from the casing to the grinding surface, a wall extending from the casing to the grinding surface and coöperating with the partition to form a chamber outside of the grinding surface, a valve for admitting air to said chamber, and

means for conveying the material which collects in said chamber back into the interior of the grinding surface; substantially as described.

2. A grinding machine comprising a casing having a rotary beater mounted therein and provided with a feed opening, a grinding surface inside of the casing, a closed chamber arranged adjacent the feed opening, and a conduit leading from said chamber to the interior of the grinding surface; substantially as described.

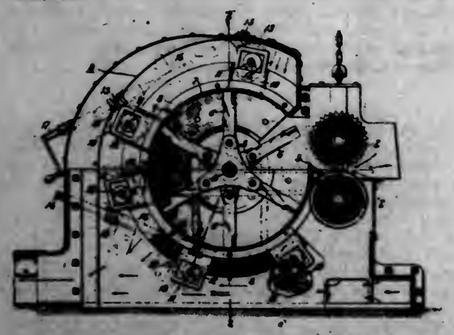
3. A grinding surface comprising a casing having a feed opening, a rotary beater and a grinding surface arranged inside of said casing, one end of said grinding surface terminating at the rear side of the feed opening, a closed chamber located at the rear side of the feed opening and having its bottom formed by a portion of the grinding surface, and a conduit leading from said chamber to a point adjacent the eye of the machine; substantially as described.

4. In a machine of the class described, a casing, a grinding surface, stationary abutments carried by the side walls of the casing with which said grinding surface contacts, and adjustable clamps for holding said grinding surface in intimate engagement with said abutments; substantially as described.

5. In a machine of the class described, a circular grinding surface formed of perforated sheet metal, curved abutments connected to the side walls of the casing of the machine and bearing against the inner face of the end portions of said grinding surface, a plurality of clamps conforming to the contour of the grinding surface and adapted to engage the outer face thereof, and means for actuating said clamps simultaneously; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

877,690. SHREDDING-MACHINE. MILTON F. WILLIAMS, St. Louis, Mo., assignor to Williams Patent Crusher & Pulverizer Company, St. Louis, Mo., a Corporation of Missouri. Filed Mar. 18, 1907. Serial No. 363,138.



1. In a machine of the character described, the combination with a removable grinding surface formed in sections, blocks for supporting one section of said grinding surface in position, and means common to all of said blocks for operating them simultaneously; substantially as described.

2. In a machine of the character described, the combination with a removable grinding surface formed in sections, of a plurality of supports for holding one section of said grinding surface in position, and means for simultaneously moving said supports in divergent directions to release said grinding surface; substantially as described.

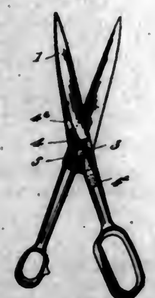
3. In a machine of the character described, the combination with side frame plates, of a removable grinding surface arranged between said side frame plates and provided with openings through which the material passes, said side frame plates flaring outwardly so as to provide an enlarged space around said grinding surface, and means for supporting said removable grinding surface in position, said supporting means being located in said enlarged space so as not to obstruct the openings in the grinding surface; substantially as described.

4. In a machine of the character described, the combination with a removable member forming a portion of a grinding surface, of a plurality of supporting blocks arranged at angles to each other and coöperating with said grinding surface member, a cam coöperating with each of said blocks, and means for simultaneously rotating said cams; substantially as described.

5. In a machine of the character described, the combination with a concentrically-arranged removable grinding surface divided into sections, of radially disposed supporting blocks therefor, a rotatable shaft, and means operated by said shaft and coöperating with devices connected to said blocks whereby two or more of said supporting blocks are moved in a radial direction when said shaft is rotated; substantially as described.

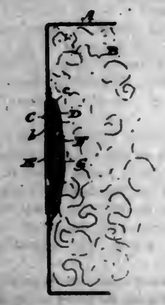
[Claim 6 not printed in the Gazette.]

877,691. SHEARS. OTTO WITT, Macon, Mo. Filed Dec. 21, 1905. Serial No. 292,842.



A pair of shears consisting of cutting-blades pivotally secured together by a threaded pivot pin or pintle, a thin bow shaped elastic lever provided with an approximately centrally disposed perforation, a portion of said pivot pin or pintle passing through and loosely engaged for relatively rocking movement within said perforation, and a nut engaging upon the end of said threaded pivot pin to hold the same and said lever in adjustable operative engagement, one end of said lever bearing upon one of the cutting blades and the other end thereof being in engagement with an adjusting thumb screw tapped through the shank of said blade from the opposite side of said pivot pin, whereby said blades may be pressed together to any desired degree uniformly throughout their cutting sections.

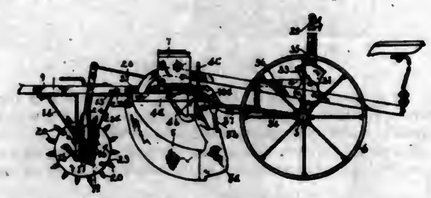
877,692. MATTRESS. WILLIAM F. WYMAN, Oshkosh, Wis. Filed May 11, 1907. Serial No. 373,126.



1. An upholstered mattress or analogous device provided with a ventilator comprising a pair of sheet-metal disks opposing opposite sides of its cover one disk having a flange adjacent to a central opening therein extended through said cover and a corresponding opening in the other disk on which it is turned, and a piece of suitable foraminous material held in place by a rim-flange of the inner disk turned thereon.

2. An upholstered mattress or analogous device provided with a ventilator, and an absorbent-pad fastened to the mattress-cover back of the ventilator through which it is accessible.

877,693. CORN-PLANTER. CHRISTOPHER ANDERSON, Rock Island, Ill. Filed Mar. 8, 1907. Serial No. 361,303.



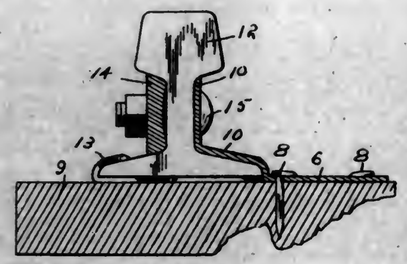
1. In a seed planting machine comprising a tongue, supporting frames and seed-holding and planting devices, including a rocking-bar, a lever pivoted on the tongue, means operatively connecting the lever with the rocking-bar, a traction wheel suspended from said tongue and means on said wheel adapted to trip said lever upon the rotation of the wheel.

2. In a seed planting machine comprising a tongue, supporting frames, and seed holding and planting devices, including a rocking-bar, a lever pivoted on the tongue, a rod connecting the lever with the bar, a traction wheel suspended from said tongue, means on said wheel adapted to trip said lever upon the rotation of the wheel, and means on said wheel for indicating on the soil the operations of said tripping device.

3. In a seed planting machine comprising seed-holding and planting means, a traction wheel, a marking device attached to said wheel a wiper for cleaning said marking device, a tripping device secured to said wheel, a lever adapted to be operated by said tripping device, and means connecting said lever with said seed holding and planting means.

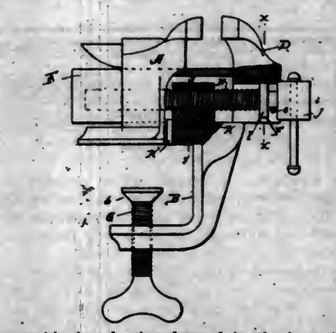
4. In a seed planting machine, a traction wheel comprising an adjustable tripping device, a marking device, and means for preventing clogging of said marking device.

877,694. RAILWAY-JOINT. BRATHER U. ANNAS, Sawmill, N. C. Filed July 11, 1907. Serial No. 383,208.



A device of the type set forth, comprising the combination with rail sections and a tie, of a member including a base or body portion formed with parallel slits, the said member being secured to the tie, the material between said slits being bent upwardly to afford a resilient integral fish plate, and the material on each side of said slits being extended and affording base pieces having their extremities inturned as lips and for the purpose set forth.

877,695. BENCH-VISE. JOSEPH G. BAKER, Philadelphia, Pa. Filed Feb. 25, 1907. Serial No. 359,297.

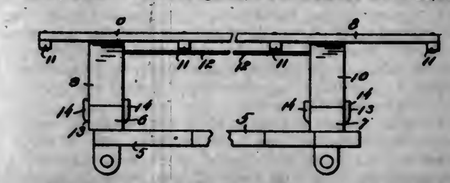


1. A movable jaw having formed in the base thereof a channel, an operating screw which is adapted to fit within said channel a collar and a head integral with said screw said channel provided with grooves for the reception of said collar and head, a pin located in said jaw and extending transversely of the channel beneath the screw and upon which the screw is adapted to rest as specified.

2. In combination a stationary jaw, a nut secured therein, a tail block adapted to slide over said nut and provided with a jaw, the base of said jaw having a channel therein and countersunk grooves on the sides of said channel, a screw adapted to thread into the nut, a shank provided with an integral collar formed with said screw and adapted to engage with said countersunk grooves in the base of the jaw, a head formed with the outer end of the screw and adapted to bear against the base, and a removable pin located in the base of the jaw and transversely of the channel beneath the shank of the screw and between the collar and head thereof.

3. In a vise of the character described, a clamp screw provided with a tapered end and a swiveled clamp thereon said clamp consisting of a frusto-conical split annulus of sheet metal.

877,696. HAY-RACK. SAMUEL A. BAUGHMAN, Marysville, Kans. Filed Aug. 13, 1907. Serial No. 388,361.

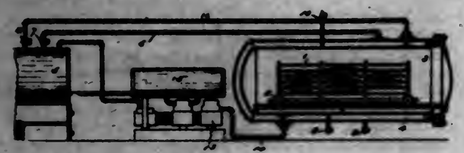


A hay rack comprising, in combination, a pair of longitudinal sills; a pair of transversely disposed metal arches connecting said sills and secured to the under faces thereof, said arches being located directly above the bolsters of a truck; an inwardly-directed longitudinally-disposed strengthening flange formed on the inner face of each arch; cross-beams connecting said sills and disposed at opposite ends thereof and between said arches; a seat secured to each foot of said arches adapted to fit over said bolsters to retain the rack in place, each seat comprising a pair of spaced vertical plates adapted to fit against the opposite side faces of the bolsters, and a connecting plate adapted to rest upon the upper face thereof; and a tie-rod connecting said arches and secured at opposite ends to the flanges thereof.

877,697. TREATMENT OF TOBACCO. ALFRED C. BEDORTHA and GEORGE Q. BEDORTHA, Windsor, Conn. Filed Aug. 18, 1906. Serial No. 331,151.

1. The treatment of tobacco which consists in subjecting the leaves to a current of warm, dry air until all free moisture is removed, and then subjecting the leaves

to the action of steam at a temperature above 212° Fahrenheit until the leaves are sterilized.

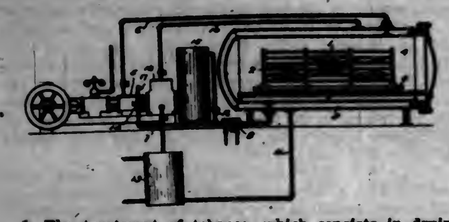


2. The treatment of tobacco which consists in drying the leaves and then sterilizing the leaves by subjecting them to the action of steam at a temperature above 212° Fahrenheit, and subsequently subjecting them to a partial vacuum and again to the action of steam.

3. The treatment of tobacco which consists in thoroughly drying the leaves, then sterilizing the same by subjecting them to the action of steam at a temperature above 212° Fahrenheit, and applying to the sterilized leaves cultures of selected bacteria.

4. The treatment of tobacco which consists in thoroughly drying it, submitting it to a partial vacuum and then to the action of steam at a temperature above 212° Fahrenheit.

877,698. TREATMENT OF TOBACCO. ALFRED C. BEDORTHA and GEORGE Q. BEDORTHA, Windsor, Conn. Filed Aug. 18, 1906. Serial No. 331,152.



1. The treatment of tobacco, which consists in drying the leaves for separating them and expelling free moisture and then sterilizing the same by subjecting the dried and opened leaves to the action of formaldehyde under pressure higher than atmospheric pressure.

2. The treatment of tobacco which consists in drying the leaves for separating them and expelling free moisture, then sterilizing the same by subjecting the dried and opened leaves to the action of formaldehyde, and subjecting the sterilized leaves to current of heated air for driving off the sterilizing medium.

3. The treatment of tobacco which consists in drying the leaves for separating them and expelling free moisture, subjecting the dried and opened leaves to the action of formaldehyde, subjecting the sterilized leaves to current of heated air for driving off the sterilizing medium, and supplying the leaves with cultures of selected bacteria.

4. The treatment of tobacco which consists in drying the leaves for separating them and expelling free moisture, exhausting air from the dried and opened leaves and subjecting the leaves in the partial vacuum to the action of formaldehyde.

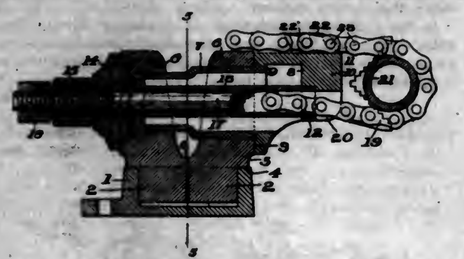
5. The treatment of tobacco which consists in drying the leaves for separating them and expelling free moisture, exhausting air from the dried and opened leaves, subjecting the leaves in the partial vacuum to the action of formaldehyde and adding air to the formaldehyde and at the same time circulating the air and the formaldehyde about the leaves.

[Claim 6 not printed in the Gazette.]

877,699. VISE. GEORGE P. BLACKISTON, Pittsburg, Pa. Filed July 23, 1907. Serial No. 385,218.

1. In a vise, the combination of locking swivel parts, a jaw, and means for locking an article in the jaw independently of the swivel parts.

2. In a vise, the combination of swivel parts, a jaw means for locking the swivel parts against rotation, and separate mechanism for locking an article in the jaw.



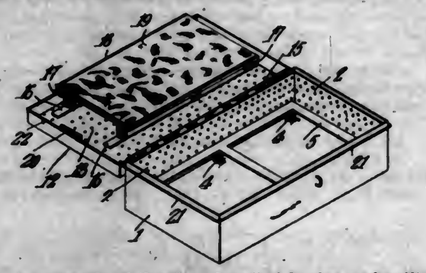
3. In a vise, a suitable support, a base formed in two separate sections rotatably seated on said support, a jaw rotatable in the upper portions of said sections, mechanism for clamping said jaw, and means for operating the clamping mechanism independently of the rotatable parts of the vise.

4. A vise support having an annular seat, a base with a hub resting in said seat, said hub split centrally in two parts and having substantially flat meeting surfaces, in combination with a jaw having a tubular body rotatably supported in the upper portion of said base, mechanism for clamping an article in said jaw, and means for operating said clamping mechanism independently of the hub and body portions.

5. In a vise, the combination of swivel parts each at right angle to the other, a jaw, means for locking the swivel parts against rotation, and mechanism for locking an article in the jaw.

[Claims 6 to 8 not printed in the Gazette.]

877,700. RECEPTACLE FOR TOBACCO WRAPPERS. EMIL C. BROCKMANN, Davenport, Iowa, assignor of one-half to Martin Silberstein, Davenport, Iowa. Filed May 4, 1907. Serial No. 371,870.



1. A receptacle of the class described having a plurality of nesting devices, and means for yieldingly pressing said devices to compress material within them.

2. A device of the character described comprising a receptacle, a plurality of nested devices therein, and yieldable means for forcing each of said devices into an adjoining device to compress material contained thereby.

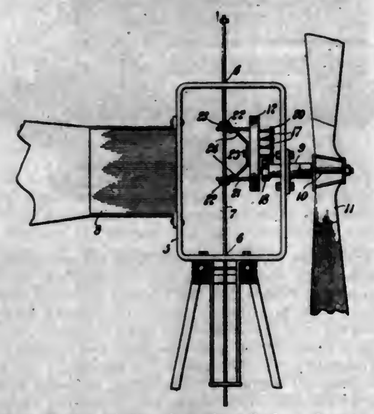
3. In a device of the character described the combination with a receptacle and means therein for holding moisture; of spring pressed devices within the receptacle for holding and compressing material therein and out of contact with the receptacle.

4. In a device of the character described the combination with a receptacle and means therein for holding moisture; of a plurality of nesting trays within the receptacle, and yieldable means for holding the trays out of contact with opposite portions of the receptacle, said means being disposed to actuate the trays to compress material contained therein.

5. A receptacle of the class described, adapted to contain water, and having its sides and ends lined with water absorbent material, a spring supported frame within said receptacle, a plurality of nested trays supported on said spring frame, and a cover for said box to which is attached a spring supported pressing board.

[Claims 6 to 8 not printed in the Gazette.]

877,701. GEARING FOR WINDMILLS. HERBERT E. BROWN, Goldthwaite, Tex. Filed May 13, 1907. Serial No. 373,386.



1. In a device of the class described, a frame, a rod mounted for vertical movement on the frame, a substantially elliptical plate disposed within the frame and provided with an enlargement, a marginal guide flange, secured to the plate and spaced from the enlargement to form a guide way, arms extending laterally from the rear of said plate for attachment to the rod, a rack carried by the enlargement, a wheel shaft journaled in the frame, a pinion secured to the wheel shaft and meshing with the rack, and an anti-friction roller journaled on the end of said shaft and engaging the guide-way.

2. A device of the class described including a frame, a rod slidably mounted for vertical movement within the frame and provided with spaced collars, a plate secured to the pump rod and provided with laterally extending arms for engagement with said rod, braces connecting the arms and the inner face of the plate, a marginal guide flange extending laterally from the front of the plate, there being an enlargement formed integral with the plate and spaced from the flange to form a guide-way, a rack secured to the enlargement, a wheel shaft journaled in the frame and provided with a terminal pinion adapted to engage the rack for reciprocating the pump rod, and an anti-friction roller carried by the wheel shaft and engaging the guide way.

3. A device of the class described including a frame, a rod slidably mounted for vertical movement on the frame, and an oscillating plate pivotally secured to and mounted for vertical movement with the rod, said plate being spaced laterally from and disposed parallel with the rod, a marginal guide flange extending laterally from one side of the plate, there being an enlargement formed integral with the plate and spaced from the flange to form a guide-way, a rack secured to the enlargement, a shaft journaled in the frame, a pinion carried by the shaft and engaging the rack for imparting reciprocating motion to the pump rod, and an anti-friction roller carried by the shaft and seated in the guide way.

877,702. PROCESS OF MAKING ARYLTHIOGLYCOLLIC-ORTHOCARBOXYLIC ACIDS. ERNST BEYE, Höchst-on-the-Main, Germany, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Apr. 2, 1907. Serial No. 365,956. (Specimens.)

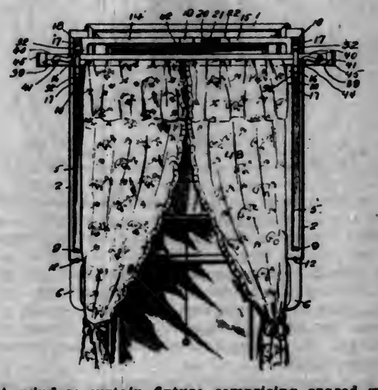
The process herein described of making arylthioglycollic-ortho-carboxylic acids, which consists in treating diazotised neutralised ortho-amidobensoic acids with alkali-sulfids and in then heating with chloracetates in alkaline solution.

877,703. PROCESS OF STERILIZING FOODS OR ORGANIC COMPOUNDS. CARL C. L. G. BUDDE, Copenhagen, Denmark. Filed June 22, 1906. Serial No. 322,864.

1. The process of sterilizing organic substances, by first mixing the substance with a nitrogen compound having the chemical properties of hydroxylamin, and then adding hydric peroxid.

2. The process of sterilizing organic substances, by first mixing the substance with hydraxin and then adding peroxid.

877,704. CURTAIN AND SHADE FIXTURE. ALEXANDER J. CANNON, Wilkinsburg, Pa. Filed July 18, 1906, Serial No. 326,709. Renewed Nov. 12, 1907. Serial No. 401,871.



1. A window curtain fixture comprising spaced guides adapted to be secured to the opposite sides of a window frame, slides movable within said guides and having each a depending handle, means for detachably supporting the slides in the guides, shade roller supports on said guides, and means comprising keepers extending through the slides for detachably securing the curtain pole brackets to the slides.

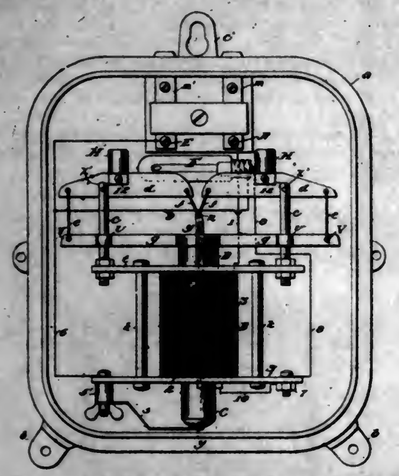
2. A window curtain fixture comprising guides spaced apart and provided with perforated laterally extending lugs and open at their front sides, slides adapted to be vertically adjusted within said guides, spring supported catches for detachably securing the slides to the guides, shade roller supports adjustably connected to said slides and projecting through the open sides of the same, curtain pole brackets secured to said slides, a curtain pole supported by said brackets, and slides on said pole and operating to detachably secure it to said brackets.

3. A curtain fixture comprising spaced guides each formed from a single sheet of metal having a central longitudinal opening and with the edges turned parallel to the body of the plate to form spaced parallel guides extending longitudinally of the opening in the plate, said plate having laterally extending spaced ears perforated to receive fastening means, slides movably disposed in said guide ways and provided with a stop adapted to engage beneath one end of said guides, a spring operated catch carried by said slide and adapted to yieldably engage said guide and hold the slide in one position, and curtain pole brackets carried by said slide.

877,705. ELECTRIC-CURRENT CONTROLLER. ALBERT E. DION and CHARLES W. BALL, Ottawa, Ontario, Canada. Filed Nov. 19, 1906. Serial No. 344,097.

1. In an electric controller, a main circuit, lights in the said circuit, a shunt circuit, a resistance in the said shunt circuit, an automatic cut out in said circuit, said cut out

consisting of a solenoid, a hollow armature for said solenoid, a contact rod movably mounted inside of said hollow armature and means connecting said armature and contact rod, to break the contact when a current above a predetermined strength is passing through the solenoid.



2. In a controller for electric circuits, a main circuit, a shunt circuit, a solenoid in the main circuit, a hollow armature for said solenoid, a pair of beams, a plunger contact rod passing through said hollow armature, connections between said beams and said armature, and connections between said beams and said contact rod, the said beams being so balanced that when an excess of current operates the solenoid armature the main circuit will be broken and the current diverted through the resistance in the shunt circuit.

3. In a controller for electric circuits, a circuit conducting the current unobstructed, when the load is normal, an automatic resistance shunting device in said circuit consisting in solenoid, a hollow armature for said solenoid, a pair of beams connected to the said armature, a plunger contact rod mounted to move inside of said hollow armature, and connecting links between said armature and beams, and between said beams and said contact rod, so balanced that the said rod will be raised out of contact when an increased current causes the said armature to plunge further into said solenoid.

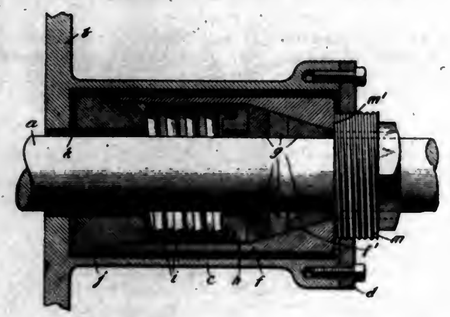
4. In a controller for electric circuits a solenoid through which the whole current passes, a hollow solenoid armature, a contact rod movably mounted through said hollow armature, and means connecting said armature and said contact rod to raise said contact rod out of contact, when the said armature is pulled further into said solenoid by an increased current.

877,706. PISTON-ROD PACKING. FRANCIS DUFFY, Chicago, Ill. Filed Sept. 11, 1907. Serial No. 392,897.

1. In a device of the class described, the combination of a longitudinally reciprocating rod, a stationary casing and a self contained floating inner casing containing packing and adapted to vibrate in unison with said rod.

2. In a device of the class described, the combination of a longitudinally reciprocating rod, a stationary casing, a self contained inner casing containing packing and being transversely movable within said outer casing, and means at the end of said outer casing adapted to contact the inner casing upon a surface transverse to said rod for preventing leakage and permitting transverse movements of said inner casing.

3. In a device of the class described, the combination of a longitudinally reciprocating rod, a stationary casing, a self contained inner casing containing packing and being transversely movable within said outer casing, and means for closing said outer casing, said means including a nut which is adjustable relatively to said outer casing and is adapted to contact the inner casing upon a surface transverse to said rod.

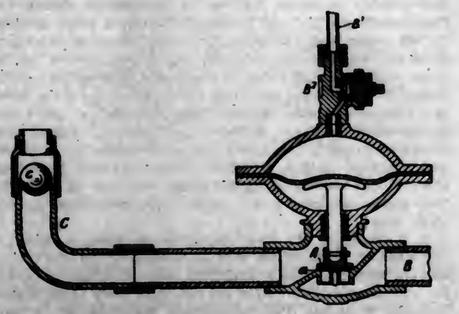


4. In a device of the class described, the combination of a longitudinally reciprocating rod, a stationary casing, an independent self-contained inner casing inclosing said rod, packing within said inner casing, and yielding means interposed between the ends of the inner and outer casings.

5. In a device of the class described, the combination of a longitudinally reciprocating rod, a stationary casing, an independent self contained inner casing inclosing said rod, means within said inner casing for preventing the escape of fluid past inner casing, and a nut and spring washer for yieldingly holding said inner casing in frictional contact with said outer casing.

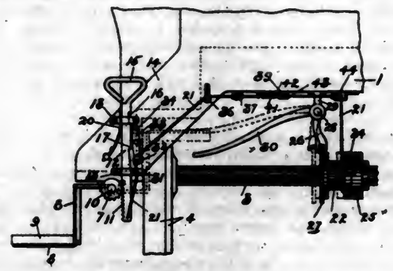
[Claims 6 to 12 not printed in the Gazette.]

877,707. AUTOMATIC SPRINKLER SYSTEM. JAMES FIDDES and JOHN F. WATT, Aberdeen, Scotland, assignors to The Expansion Sprinkler Syndicate Limited, Aberdeen, Scotland. Filed Feb. 26, 1907. Serial No. 359,456.



The hereindescribed automatic sprinkler system comprising, in combination, piping B connected to a source of water supply but containing compressed air for normally excluding water from said piping, a branch pipe C connected to said piping and having a large outlet, a diaphragm valve A normally preventing passage of compressed air from said piping B to said branch pipe C, tubing B^1 normally containing compressed air but arranged to release such compressed air on outbreak of fire, a valved connection between said tubing B^1 and said diaphragm valve A, whereby said diaphragm valve is normally subjected to the action of air pressure on both sides but is relieved on one side on escape of air from said tubing B^1 so as to be lifted by the air in the piping B and a valve o permitting passage of air from said piping B through said outlet C but adapted to prevent the passage of water through said outlet.

877,708. FOLDING STEP FOR RAILWAY-CARS. ANDERSON FULLER, Amsterdam, N. Y. Filed Apr. 19, 1907. Serial No. 369,071.



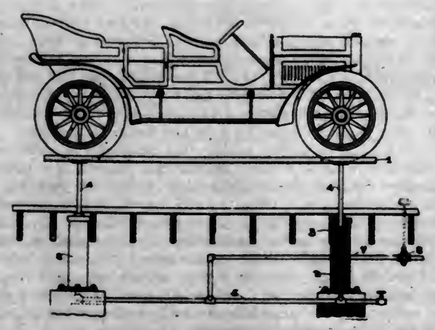
1. In a car, the combination with a permanent step, a folding step and means for extending the folding step, of the car-axle, connections between the folding step and car-axle whereby the folding step is automatically folded by movement of the car and step-actuated mechanism for interrupting the connection between the folding step and car-axle when said step reaches folded position.

2. In a car, the combination with a permanent step, a folding step and means for extending the folding step, of the car-axle, connections between the folding step and car-axle whereby the folding step is automatically folded by movement of the car, and means for automatically disconnecting the step-operating mechanism from the axle when said step reaches folded position.

3. In a car, the combination with a permanent step, a folding step and means for extending the folding step, of the car-axle, a drum and clutch member together loosely mounted on said axle and capable of slide movements longitudinally thereon, a clutch member fixed to said axle in the path of said other clutch member, a cord connecting the folding-step-operating mechanism with said drum, guides for said cord, and clutch-shifting mechanism having a member projecting into the path of the operating step and adapted to be operated thereby.

4. In a car, the combination with a permanent step, a folding step and means for extending the folding step, of the car-axle, a drum loosely mounted on the car-axle, means whereby the drum is at certain times connected with, and at certain other times disconnected from, the axle, a cord connecting the folding step-operating mechanism with said drum, guides for said cord, and a yielding take-up for said cord.

877,709. AUTOMOBILE-LIFT. CHARLES W. GEARING and WILLIAM J. MCGEE, Franklin, Pa. Filed Aug. 29, 1907. Serial No. 390,595.



1. In an automobile lift, the combination with the floor of a garage, of channels let into said floor and adapted to receive the wheels of an automobile, and means for raising said channels.

2. In an automobile lift, channels adapted to receive the wheels of an automobile, cylinders positioned beneath said channels, a piston in each of said cylinders, there being a rod attached to each of said pistons and extending through, the head of its respective cylinder, the upper end of said rod being attached to the channels which is positioned above the same, and means for admitting an actuating fluid to said cylinders beneath said pistons, for the purpose set forth.

877,710. ELLIPSOGRAPH. FRANK R. GOODALE, Exeter, N. H. Filed Apr. 13, 1907. Serial No. 368,016.



1. A drawing instrument of the class described comprising a shaft; a curvilinear dial carried thereby and provided with a vertical peripheral shoulder; an arm provided with a transverse groove adapted to receive said shoulder, said arm including a depending, pencil-carrying section; and means for rotating said arm around said dial, to cause the pencil carried by said arm-section to describe a curvilinear figure.

2. A drawing instrument of the class described comprising a shaft; a curvilinear dial carried thereby and provided with a vertical peripheral shoulder; a sleeve carried by said shaft and provided with a laterally-projecting tongue; an arm provided with a socket and groove adapted to receive said tongue and shoulder, respectively; a pencil carried by said arm; and means for rotating said sleeve.

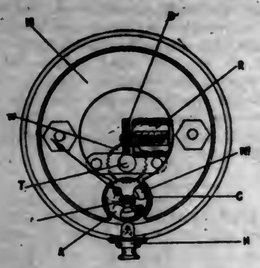
3. A drawing instrument of the class described comprising a shaft; a curvilinear dial carried thereby and provided with a vertical peripheral shoulder; a sleeve carried by said shaft and provided with a laterally-projecting tongue; an arm provided with a socket and T-shaped groove adapted to receive said tongue and shoulder respectively; a pencil carried by said arm; and means for rotating said sleeve.

4. An ellipsograph comprising a shaft; an elliptical dial carried thereby and provided with a vertical T-shaped peripheral shoulder; a sleeve carried by said shaft and provided with a laterally-projecting tongue; an arm disposed upon the upper face of said dial, said arm having a T-shaped groove adapted to receive said shoulder, and a socketed inner end adapted to receive said tongue; a depending arm hinged to the outer end of said first-mentioned arm and provided with a pencil; and means for rotating said sleeve upon said shaft to effect a simultaneous rotation of said first-mentioned arm around said dial, and a movement backwards and forwards thereacross upon said tongue, to cause said pencil to describe an ellipse.

877,711. INSTRUMENT FOR INDICATING SPEEDS, DISTANCES COVERED, AND THE LIKE. EUGENE V. GRATER, Leytonstone, England. Filed Oct. 16, 1906. Serial No. 339,221.

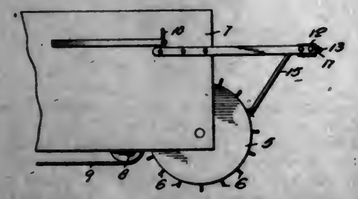
1. In combination, a substantially annular stationary magnet, a revolving core positioned between the poles of the magnet, a metallic casing adapted to embrace the core and extending beyond both sides thereof, spring means for controlling the rotation of the casing, indicating means operated by the casing, and means for rotating the core.

2. In combination, a stationary magnet substantially annular having concaved terminals positioned between the



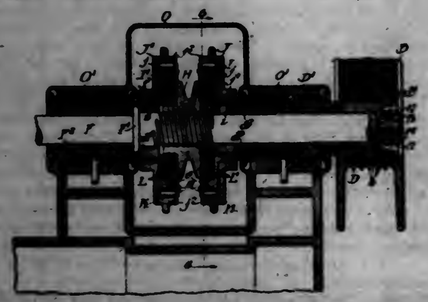
terminals of the magnet, a metallic casing embracing the core, and indicating means operated by the casing.

877,712. FERTILIZER-DISTRIBUTER. RUDOLPH P. HASSLER, Luverne, Minn. Filed Jan. 29, 1907. Serial No. 354,698.



A fertilizer distributing mechanism comprising a driven drum having teeth thereon, said teeth being arranged in a plurality of continuous series extending around the drum, a crank shaft arranged above the drum and forwardly of the vertical plane occupied by the axis thereof, rake teeth fixed upon the crank shaft, the said shaft being designed to be rocked to oscillate the teeth above the upper and forward portion of the drum, a comb head supported rearwardly beyond the drum and in a plane above the same, and teeth carried by the head and projecting downwardly and forwardly with their free ends resting against the cylinder and between the series of teeth thereon.

877,713. POWER-DRIVEN ELEVATOR-ENGINE. THADDEUS W. HEERMANS, Evanston, Ill. Filed July 16, 1906. Serial No. 326,480.



1. The combination with a motor or driving shaft and a pinion mounted on one end of said shaft and capable of relative rotation thereon and designed for operative connection with a part to be driven, of means separately mounted on said shaft and operatively connected with said pinion and arranged to be acted upon by the momentum or load of said part acting through said pinion in either direction to arrest the driven part and lock it in an arrested position.

2. The combination with a motor or driving shaft, and a pinion mounted on one end of said shaft and capable of relative rotation thereon and designed for operative connection with a part to be driven, of a nut having screw-threaded engagement with said shaft and operatively connected with said pinion, and means coöperating with said nut and acted upon by the momentum or load of the driven part acting through said pinion in either direction to arrest the said driven part and lock it in an arrested position.

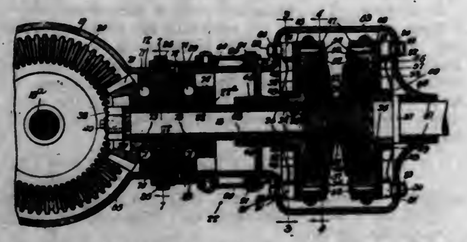
3. The combination with a motor or driving shaft, and a pinion having an elongated sleeve mounted on the shaft and designed for operative connection with a part to be driven, of means operatively connected with the end of said sleeve and acted upon by the momentum or load of the driven part acting through the pinion in either direction to arrest said driven part.

4. The combination with a motor or driving shaft and a pinion having an elongated sleeve mounted on the shaft and designed for operative connection with a part to be driven, of a nut having a screw-threaded engagement with the shaft and having interlocking engagement with the end of said sleeve and braking and locking mechanism cooperating with said nut and controlled by the momentum or load of the driven part acting through said pinion in either direction.

5. The combination with a motor or driving shaft and a pinion having an elongated sleeve mounted on the shaft and designed for operative connection with a part to be driven, of a nut having screw-threaded engagement with the shaft and having interlocking engagement with the end of said sleeve, and braking and locking mechanism cooperating with said nut and controlled by the momentum or load of the driven part acting through said pinion in either direction, embracing friction rings interposed between each side of said nut and abutments on the shaft.

[Claims 6 to 17 not printed in the Gazette.]

877,714. COMBINED POWER-TRANSMISSION AND AUTOMATIC BRAKING MECHANISM FOR MOTOR-DRIVEN VEHICLES. THADDEUS W. HEERMANS, Evanston, Ill. Filed Jan. 22, 1907. Serial No. 353,519.



1. In a motor driven vehicle, the combination with the motor driven shaft, the driven axle and power transmission connections between said motor shaft and driven axle, of an automatic brake mechanism coöperating with said power transmission connections, means whereby the brake mechanism is automatically operated to arrest the vehicle upon tendency of the load to drive the vehicle, and means for disconnecting the driven axle from said brake mechanism at a point between the axle and brake mechanism.

2. In a motor driven vehicle, the combination with the motor driven shaft and the driven axle thereof, of a sleeve mounted on said shaft and capable of rotation thereon, a pinion non-rotatively fixed to the sleeve and operatively connected with the driven axle, means operatively connected with the end of said sleeve and designed to constitute part of the power transmitting connection when the vehicle is driven by the motor, and an automatic brake mechanism coöperating with said connecting means for arresting the vehicle when the load, acting through said sleeve, tends to drive the vehicle.

3. In a motor driven vehicle, the combination with the motor driven shaft and the driven axle thereof, of a sleeve mounted on said shaft and capable of rotation thereon, a pinion non-rotatively fixed to the sleeve and operatively connected with the driven axle, a nut having screw-threaded engagement with the shaft and interlocked with said sleeve and constituting part of the power transmission mechanism when the vehicle is driven by the motor, and an automatic brake mechanism comprising stationary braking devices and braking devices movable with said nut, and means coöperating with said braking devices, upon tendency of the load to drive said vehicle, to arrest said vehicle.

4. In a motor driven vehicle, the combination with the motor driven shaft and the driven axle thereof, of a sleeve mounted on said shaft and capable of rotation thereon, a pinion meshing with a gear carried by the driven axle, said pinion being non-rotatively fixed to said sleeve and designed to slide endwise thereon, means operatively connected with said sleeve and designed to constitute part of the power transmission connection when the vehicle is driven by the motor, an automatic brake mechanism cooperating with said connecting means for arresting the vehicle, when the load, acting through said sleeve, tends to drive the vehicle, and means for shifting said pinion endwise of the sleeve into and out of engagement with the gear on the driven axle.

5. In a motor driven vehicle, the combination with the motor driven shaft and the driven axle geared to said shaft, of an automatic braking mechanism, means operating said braking mechanism, when the load tends to drive the vehicle in either direction, to automatically bring the vehicle to a stop, and means for operatively disconnecting the driven axle from the brake mechanism.

[Claim 6 not printed in the Gazette.]

877,715. FISH-HORN. DAVID HEYMAN, New York, N. Y., assignor of one-half to Julius Chein, New York, N. Y. Filed June 29, 1907. Serial No. 381,513.

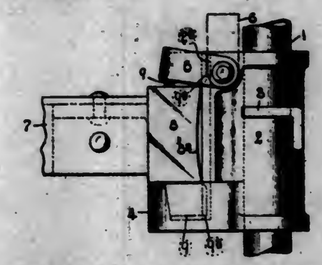


A fish-horn the body of which is cut off obliquely to its axis at its sounding-end and provided with a tongue made integral with said body.

877,716. CORNER-FASTENING FOR BEDS. BENJAMIN H. JONES, St. Louis, Mo. Filed Sept. 3, 1907. Serial No. 391,180.

1. In a corner fastening for beds, the combination with a side rail having two like attaching members, a rigid support for coöperating with one of said members, and a device pivotally connected to said support and adapted to engage the other attaching member to hold the side rail in position; substantially as described.

2. In a corner fastening for beds, the combination with a side rail having two like fastening members extending in opposite directions, a post provided with means for supporting one of said members, and a bail pivotally mounted on said post and adapted to engage the other attaching member on the side rail to retain said side rail in position; substantially as described.



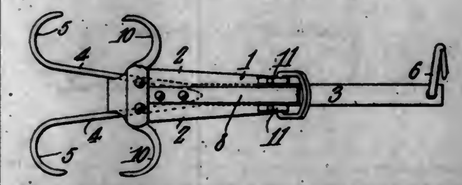
3. In a corner fastening for beds, the combination with a reversible side rail having a casting secured to its end, said casting having oppositely extending securing members, a post, a casting on said post, said casting having rigid means for receiving one of said securing members, and a pivoted bail mounted on said casting for coöperating with the other of said securing members; substantially as described.

4. In a corner fastening for beds, the combination with a reversible side rail, a casting secured to the end of said side rail, said casting having oppositely extending securing members with flat outer faces and curved inner faces, a bed post, a casting on said bed post having a socketed extension for receiving one of the securing members on said side rail casting, and a bail pivoted to the casting on said post for coöperating with the other securing member of said side rail casting; substantially as described.

5. The herein described member for corner bed fastenings comprising a casting provided with means for the attachment of a side rail, said casting having oppositely extending securing members provided with flat front faces from which projections extend, the rear faces of said securing members being curved and the portion of the front face of said casting which lies between said securing members being recessed or cut out; substantially as described.

[Claim 6 not printed in the Gazette.]

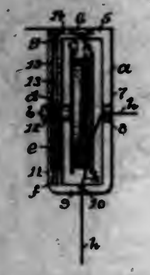
877,717. ANIMAL-SHACKLE. JESSE JONES, Ottumwa, Iowa. Filed Apr. 8, 1907. Serial No. 367,100.



1. A shackle comprising a hollow casing having a forwardly curved hook on each side near one end, a bar having teeth on one side and a V-shaped forked end slidably mounted in said casing, the forked ends of said bar terminating in rearwardly curved hooks, said bar and hooks being integral, and a latch for engaging said teeth.

2. A shackle comprising a hollow casing, a plate secured to one face of the casing near one end having forwardly projecting hooks extending beyond the sides of the casing, a bar having teeth on one side and a spreading forked end terminating in rearwardly curved hooks slidably mounted in said casing, said hooks being in line with the hooks on the casing and adapted to form with them two closed rings when drawn toward each other by the relative movement of the parts carrying them, suspending means on the other end of said bar, a spring latch fastened to the casing and engaging said teeth, and a cam on said casing for lifting said latch when turned to disconnect the latch from the teeth and hold it out of engagement therewith.

877,718. TWINE-TAKE-UP MOTION. CHARLES E. KELLY, Providence, R. I. Filed Nov. 18, 1907. Serial No. 402,584.



1. In a twine take-up motion, a frame, a shaft rotatably supported in bearings on the frame, a drum having an open end and a grooved face secured to the shaft, a weight rack reciprocally supported in the frame, a pinion on the shaft meshing with the teeth on the rack, and means for threading twine through the frame and the drum, whereby an excess of twine is automatically wound on the drum by a downward movement of the weight rack.

2. In an automatic twine take-up motion, the combination of the following instrumentalities; a frame *a*, a shaft *b* rotatably supported in bearings in the frame *a*, a drum *c* secured to the inner end of the shaft *b*, a pinion *d* secured to the shaft *b*, a weight rack *e* reciprocally supported in the frame *a* and meshing with the pinion *d*, a buffer *f* in the frame *a* under the lower end of the rack *e*, a buffer *g* in the frame *a* over the upper end of the rack *e*, and means for threading twine through the side of the frame *a*, the face of the drum *c* and the bottom of the frame *a*, as described.

877,719. ATTACHMENT FOR TYPE-WRITERS. HENRY A. KIRBY, Cleveland, Ohio, assignor to N. O. Gray, Indianapolis, Ind. Filed May 31, 1907. Serial No. 376,610.



1. In a typewriter, the combination of a series of depressible type-bar actuating levers, each of said levers being provided with a slot on its under side; a bar mounted beneath said levers, said bar being movable transversely of such slots and vertically adjustable; and means normally retaining said bar in line with the slots in said levers, the engagement of the slot of any one lever with said bar serving to move the latter out of line with respect to the slots of the remaining levers.

2. In a typewriter, the combination of the typewriter frame; a series of parallel, depressible, type-bar actuating levers mounted therein, each of said levers being provided on its lower edge with a lug formed with an inclined slot; brackets mounted in the portions of said frame laterally adjacent to said series of levers and vertically adjustable therein; a U-shaped frame having its ends pivoted in said brackets respectively; a spring normally retaining said frame to position the cross-bar thereof in line with the slots in such lugs, in which position said levers are respectively free to be depressed, the engagement with said bar of the slot of any one lever, however, serving to oscillate said frame to move said bar out of line with respect to the slots of the remaining levers.

877,720. PIPE-COUPLING AND VALVE. FRANK B. KIRCHHOFF, Detroit, Mich. Filed Sept. 23, 1907. Serial No. 394,103.



A combined pipe coupling and valve comprising a cylindrical casing, a pair of segmental helical flanges near one end thereof, a washer seated in an axial counterbored recess at the flanged end of the casing, an elastic packing ring on the washer having an outer peripheral groove between its ends, a washer resting on the outer end of the ring, a check-nut in the casing limiting the outward movement of the outer washer, a tubular spindle reciprocable through the check-nut having arms adapted to detachably interlock with the flange and a reduced extension extending through the nuts and ring, an apertured valve bridge removably secured in the other end of the casing, an apertured valve seat between the bridge and casing in axial alinement therewith, a valve closure having a stem reciprocable in the bridge, and an annular perforated flange extending through the seat and abutting the spindle extension, and a spring encircling the stem in compression between the bridge and closure, said spindle being adapted to longitudinally compress the ring and to force the valve closure from the seat when its arms are interlocked with the casing flanges, and said ring being adapted to buckle inwardly and forcibly grip the spindle with its middle body portion when compressed.

877,721. MECHANICALLY-OPERATED MUSICAL INSTRUMENT. EMILE H. KLABER, London, England, assignor to Augustus David Klaber, London, England. Filed Aug. 14, 1906. Serial No. 330,544.



1. The combination of a keyboard musical instrument, a frame pivotally mounted on the casing thereof below the keyboard, means on said frame for supporting a roll for a music-sheet, said frame being adapted to be swung about its pivots to carry said roll from a position below the keyboard to an operative position above the same, a tracker mounted on said casing below the keyboard independently of said frame, and a second roll for the music-sheet mounted on the side of said tracker opposite that of said first-named roll when the latter is in the operative position, substantially as described.

2. The combination of a keyboard musical instrument, a frame pivotally mounted on the casing thereof below the keyboard, means on said frame for supporting a roll for

a music-sheet, said frame being adapted to be swung about its pivots to carry said roll from a position below the keyboard to an operative position above the same, a tracker mounted to slide upon said casing below the keyboard independently of said frame and a second roll for the music-sheet mounted on the side of said tracker opposite that of said first-named roll when the latter is in operative position, substantially as described.

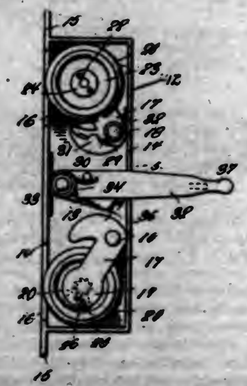
3. The combination of a keyboard musical instrument, a frame pivotally mounted on the casing thereof below the keyboard, means on said frame for supporting a roll for a music-sheet, said frame being adapted to be swung about its pivots to carry said roll from a position below the keyboard to an operative position above the same, a tracker mounted on said casing below the keyboard independently of said frame, and a second roll for the music-sheet mounted below the keyboard of the instrument, substantially as described.

4. The combination of a keyboard musical instrument, a frame pivotally mounted on the casing thereof below the keyboard, means on said frame for supporting a roll for a music-sheet, said frame being adapted to be swung about its pivots to carry said roll from a position below the keyboard to an operative position above the same, a tracker mounted to slide upon the casing below the keyboard so that its edge projects beyond the keyboard and a second roll for the music-sheet mounted below the keyboard, substantially as described.

5. The combination of a keyboard musical instrument, two frames independently pivoted on the casing thereof below the keyboard, means on each of said frames for supporting a roll for a music-sheet and a tracker to coact with the music-sheet on said rolls, substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

877,722. SASH-FASTENER. WILLIAM W. KLIMA, Hutchinson, Minn. Filed June 18, 1906. Serial No. 322,261.



In a device of the class described, the combination with a window frame and a sash slidably mounted therein, of rollers carried by the sash and being arranged for rotation in opposite directions, spring-actuated arms on which said rollers are mounted for holding them normally in engagement with said frame, and a lever for acting upon said arms to move them whereby one or the other of said rollers may be moved out of said engagement.

877,723. CURTAIN-STRETCHER. JOHN KOLLANDER, Chicago, Ill. Filed Oct. 25, 1907. Serial No. 399,089.

1. In a curtain stretcher a longitudinal member and a transverse member each provided with a plurality of pins in combination with a separable two part clamp connecting said members, one part of said clamp being slidably mounted upon the transverse member and the other upon the longitudinal member and means for clamping them upon their respective members, the parts of said clamp being readily detachable without removing them from their respective members, substantially as described.

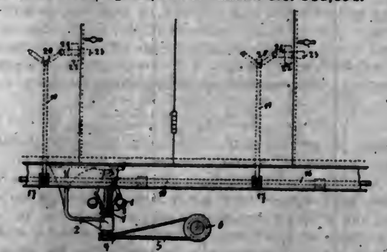


2. In a curtain stretcher a transverse member and a longitudinal member, each provided with a plurality of pins, a two-part clamp connecting said members, one part thereof being slidably mounted upon said transverse member and having depending arms, and the other part being slidably mounted on the longitudinal member and coacting means upon said arms and the last said part for detachably connecting the parts of the clamp, substantially as described.

3. In a curtain stretcher a transverse member and a longitudinal member, each provided wit ha plurality of pins, a two part clamp connecting said members, one part thereof being slidably mounted upon said transverse member and having depending arms terminating in hooks at their lower ends and the other part being slidably mounted upon the longitudinal member and having gudgeons adapted to engage said hooks, substantially as described.

4. In a curtain stretcher a longitudinal member and a transverse member each provided with a plurality of pins, in combination with a two part clamp connecting said members, one part thereof being slidably mounted upon said transverse member and comprising a plate portion adapted to rest upon the top of said member and having a depending flange, said member being grooved to receive said flange and a pair of arms depending from said plate and terminating in hooks at their lower ends, the other part of said clamp being slidably mounted upon said longitudinal member and comprising a bottom plate portion having side flanges adapted to fit snugly against the sides of said member and gudgeons on said flanges adapted to be engaged by said hooks and a clamping screw arranged in said bottom plate, substantially as described.

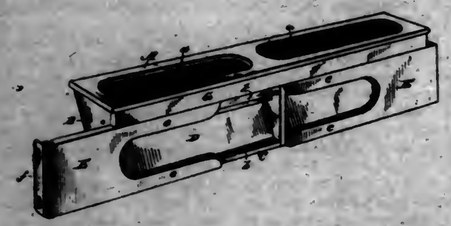
877,724. DEVICE FOR AUTOMATICALLY LOCKING DOORS OF RAILWAY-CARS WHILE THE TRAIN TRAVELS. WILHELM MITTMANN, Essen-West, Germany. Filed Aug. 14, 1907. Serial No. 388,494.



A device for automatically locking the doors of railway cars while the train travels, comprising in combination with the car having a double wall, its doors having a hole, its wheel axles, and its framing having H-beams with cut-out parts; a governor arranged below the bottom of said car and having the usual sleeve arranged on its axle, a bracket to hold said governor on the bottom of said car, a grooved roller provided on the lower end of said governor axle, another grooved roller keyed on one of said wheel axles, a wire rope to connect said grooved rollers, a movable ring of two parts mounted on the sleeve of said governor independently from the rotary movement of the

latter, double-armed levers having elongated slots and pivoted with one arm to said ring, brackets arranged below the bottom of the car to hold said double-armed levers by means of the elongated slots in the latter, links pivoted to the other arm of said double-armed levers, common shafts movably mounted in said H-beams, angle levers keyed on said common shafts and arranged so as to be pivoted with one arm to said links and to project with the other arm through the cut-out parts in said H-beams, rods pivoted with one end to these other arms of said angle-levers and disposed in the double wall of said car, locking bars adapted to enter the holes in said door, brackets to hold said locking bars, pivotal members connected to the free ends of said rods and on the one hand centered in the wall of said car and on the other hand pivoted to said locking bars, for the purpose set forth.

877,725. VENTILATOR. ALLEN H. MIX, Burlington, Vt., assignor to Porter Screen Manufacturing Company, Burlington, Vt. Filed Oct. 18, 1907. Serial No. 398,040.



1. The window-ventilator box having an open back or outer face, and provided with extension panels which are slidably mounted upon the open back of the box, are provided with openings through which air may enter the box, and are movable endwise to and from one another, so as to constitute at once a movable partial cover for the back of the box and extension panels for adjusting the width of the ventilator to that of the window to which it may and forked inner portions *e e*, substantially as hereinbefore set forth.

2. The ventilator box having an open back, in combination with end panels E slidably mounted on the open back of the box so as to be capable of endwise movement to and from each other, and formed with solid outer portions, and forked inner portions *e e*, substantially as hereinbefore set forth.

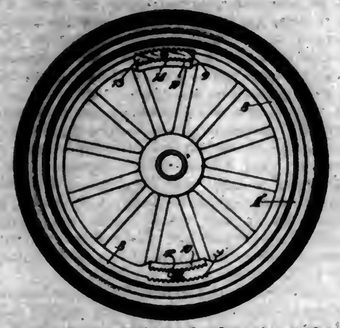
3. The ventilator box provided with bottom board B having groove *b* in its upper face, and top back board G having groove *g* in its under edge, in combination with the extension panels E fitting against the outer edge of the bottom board B and the under edge of the back board G and provided with runners *h*, *i* to enter said grooves *g b* respectively, substantially as hereinbefore set forth.

877,726. VEHICLE-RIM. WALTER J. NORDLUND, Oakland, Cal. Filed Mar. 4, 1907. Serial No. 360,440.

1. A wheel rim comprising a fixed section and a movable section, said sections having opposed interlocking cam surfaces, and a rotatable member operable between the fixed and movable sections and engaging both sections whereby one section may be moved axially relative to the other section.

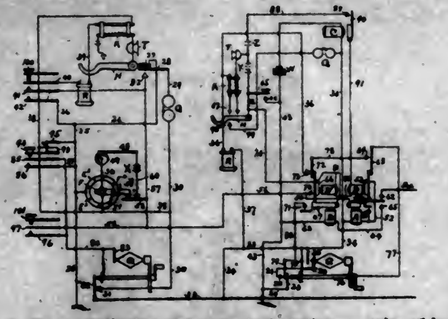
2. A wheel-rim comprising a fixed section and a movable section, said sections having opposed interlocking cam surfaces, a rack carried by the movable section, an opposed corresponding rack carried by a fixed part of the wheel-rim, and a key engaging said racks to rotate the movable section.

3. A wheel-rim comprising a fixed section and a movable section, said sections having opposed interlocking cam surfaces, a rack carried by the movable section, an opposed corresponding rack carried by a fixed part of the wheel-rim, a key engaging said racks to rotate the movable section, and a serrated-dowel-plate engageable with said racks to lock the sections against relative movement.



4. A wheel-rim comprising a fixed section and a movable section, said sections having corresponding opposed cam surfaces whereby on the rotation of one section relative to the other, the sections are drawn toward each other to clamp the tire, and means including a serrated-dowel-plate engageable with corresponding serrated parts located respectively on the movable section and on a fixed part of the wheel-rim to lock the two sections against relative movement.

877,727. TELEPHONE-EXCHANGE. NILS E. NORSTROM, Chicago, Ill., assignor, by direct and mesne assignments, of one-third to John Anderson, Salina, Kans., one-third to M. E. Richardson, Sterling, Kans., and one-third to John H. Martin and H. Keating. Filed Oct. 4, 1901. Serial No. 77,526.



1. The combination with a central station, a series of local stations, and a discontinuous line consisting of sections of wire extending from station to station, of devices located at each local station for electrically connecting the ends of sections terminating thereat, other devices at the same stations for connecting them telephonically to the united line, and a selecting device located at the central station and arranged to be set so that upon being operated said selecting device will automatically cause one or both of the devices at successive local stations to be operated.

2. The combination with a central station and a series of local stations, of a continuous party line wire provided with branches extending to the different local stations, a discontinuous line made up of sections extending from station to station, a telephone set located at each local station, means for connecting said sections into a continuous line additional means for connecting the telephone sets of selected stations to the two continuous lines, and a selecting device located at the central station and arranged to be set so that upon its operation it will cause a desired combination of operations at the different local stations.

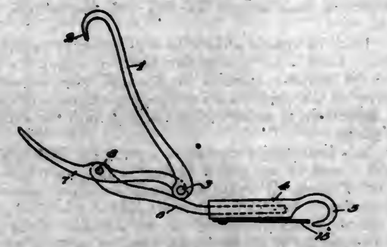
3. The combination with a movable contact maker, and a power mechanism for causing a forward movement thereof, of a rotating device connected to said contact maker, a ratchet mechanism in the connection between said contact maker and said rotating device, a stopping device normally engaging said rotating device to prevent a forward movement of said contact maker, and means by which, upon a backward movement of said contact maker, said stopping device will be freed from said rotating device to permit a subsequent forward movement of said contact maker.

4. The combination with a movable contact maker, and a power device for giving it a forward movement, of an adjustable locking device adapted to stop the forward movement of said contact maker at any desired point, and means by which, upon a backward movement of said contact maker, said locking device will be released so as to permit a subsequent forward movement thereof.

5. The combination with a contact maker adapted to be moved forward and backward, a governor, connections between said governor and said contact maker so arranged that said governor will be operated by a forward movement of said contact maker but will be unaffected by its backward movement, a locking device normally engaging said governor so as to prevent a forward movement of said contact maker, and means by which said locking device will be released from said governor when said contact maker is given a backward movement.

[Claims 6 to 22 not printed in the Gazette.]

877,728. HAME-STRAP. MATHEW O'BRIEN, Port Leyden, N. Y. Filed Nov. 21, 1906. Serial No. 344,398.



1. In a device of the character described, hame engaging means, means therebetween for adjustably connecting the same comprising a toothed member adapted to engage at one end teeth in one of the hame connecting means and at the other end being swingably mounted to be swung into locked position, the said hame connecting means having teeth and consisting of two parts, hinged at one end to allow opening the parts and at the other end each hooked to engage the hame ring, substantially as described.

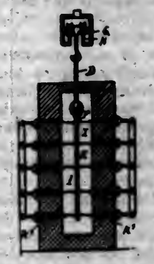
2. In a device of the character described, hooked members and lever members for connecting the same, one of said hooked members being composed of two hooked portions adapted when closed to engage in the hame ring but to be separated to admit insertion of one of the lever members, one of said lever members and one of said hooked members being provided with interengaging teeth to hold them in adjustable connection.

3. A hame fastening comprising hame hooking members, one of them having a lock lever carrying a toothed member pivoted thereon, the other member being composed of parts adapted to receive the toothed member in adjustable position and to be held closed thereon by the engagement of the parts of said member with the hame.

877,729. PROCESS OF MAKING SHEET-GLASS. MICHAEL J. OWENS, Toledo, Ohio, assignor to The Toledo Glass Company, Toledo, Ohio, a Corporation of Ohio. Filed Jan. 26, 1907. Serial No. 354,260.

1. The process of making glass sheets, consisting in first pressing a glass sheet, with an attached carrying means at the edge thereof, and then in fire-polishing the surface of said sheet while suspended by said supporting means in a vertical position.

2. The process of making glass sheets, consisting in pressing the molten glass into sheet form, and then in fire-polishing one side thereof while cooling the opposite side by air, next in fire-polishing the opposite side and applying the cooling means to the side already fire-polished.

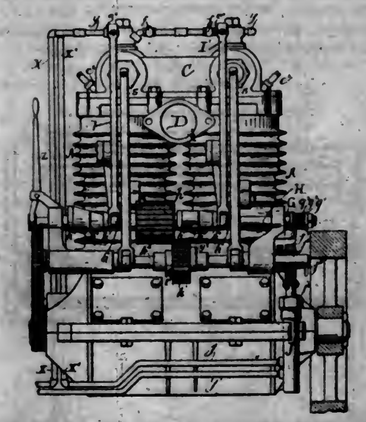


3. The process of making glass sheets, consisting in first pressing the molten glass into sheet form, with an attached supporting means, next fire-polishing one side and applying cooling air jets to the opposite side, and finally fire-polishing the opposite side and applying cooling air jets to the fire-polished side, the fire-polishing operations being carried on while the glass is suspended in a vertical position by said supporting means.

4. The process of making glass sheets, consisting first in pressing the molten glass into sheet form, next in fire-polishing the surface thereof with the smoky flame, and next in fire-polishing the surface thereof with a clear or non-smoky flame.

5. The process of making glass sheets, consisting in pressing the molten glass to sheet form, next in suspending the glass in a vertical position, next in fire-polishing the glass with a smoky flame, and then fire-polishing the said sheet with a clear or non-smoky flame while thus suspended.

877,730. EXPLOSIVE-ENGINE. HERBERT R. PALMER, Cleveland, Ohio, assignor to The Palmer Oil Engine Company, East Cleveland, Ohio, a Corporation of Michigan. Filed Aug. 28, 1903. Serial No. 171,041.



1. In an explosion engine, in combination, a cylinder and piston, an explosion chamber upon said cylinder, a valve in said explosion chamber, means for conveying motor fluid adjacent to said valve, an injector-plunger adapted to cross and thereby block the outlet for said motor fluid and at the same time inject an explosive charge of such fluid into said explosion chamber through said valve, and a variable cam for controlling said injector.

2. In an explosion engine, in combination, a cylinder and piston, a valve controlled casing communicating with

said cylinder, conduits communicating with said valve casing for the passage of the motor fluid through said valve casing without entering said cylinder, means for supplying a constant circulation of motor fluid to said conduit, and means for injecting a portion of the fluid therefrom through said valve and into the explosion chamber.

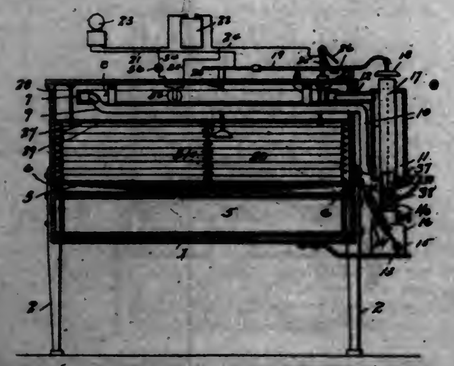
3. In an explosion engine, in combination, a cylinder and piston, a valve in said cylinder for controlling the admission of the charge thereto, a conduit through which motor fluid may pass, an injector plunger arranged in said conduit and adapted to inject a portion of the fluid into the cylinder through said valve, a variable cam, mechanism connecting said cam with said injector plunger, and means for shifting said cam relatively to said mechanism to vary the injection.

4. In an explosive engine, in combination, a cylinder and piston, a combustion chamber for said cylinder, a valve casing secured to said chamber, a valve in said casing for controlling the admission of the charge to the cylinder, means for maintaining said valve in a closed position, a pump cylinder secured to said valve casing, said pump cylinder and said valve casing being provided with ports whereby there may be a continuous circulation through the cylinder of said pump through said casing, means for supplying motor fluid to bring about such a circulation, and a piston in said pump cylinder and adapted to close the egress port therein and inject a portion of the motor fluid into the cylinder.

5. In an explosive engine, in combination, a cylinder and piston, a combustion chamber for said cylinder, a valve casing secured to said chamber, a valve in said casing for controlling the admission of the charge to the cylinder, means for maintaining said valve in a closed position, a pump cylinder secured to said valve casing, said pump cylinder and said valve casing being provided with ports whereby there may be a continuous circulation through the cylinder of said pump through said casing, means for supplying motor fluid to bring about such a circulation, a piston in said pump cylinder and adapted to close the egress port therein and inject a portion of the motor fluid into the cylinder, and means for blocking the backward flow of the fluid.

[Claims 6 to 12 not printed in the Gazette.]

877,731. INCUBATOR. FAY T. PORTER, Morristown, Ind. Filed Sept. 19, 1906. Serial No. 335,818.



1. In an incubator, a receptacle, an apertured plate supported transversely thereof and dividing said receptacle into a heating chamber and an egg chamber, and a heating agent located in said heating chamber, said plate having its apertures severally and gradually decreasing in diameter as they approach a determinate one of said apertures as and for the purpose set forth.

2. In an incubator, a receptacle, an apertured plate supported transversely thereof and dividing said receptacle into a heating chamber and an egg chamber, and a heating agent in said heating chamber, said plate having its apertures severally and gradually decreasing in diameter in successive order to a point central thereof.

3. In an incubator, a receptacle having a heating chamber and an egg chamber, means for effecting an even distribution of heat to said egg chamber, said receptacle having an opening in its walls, and means for effecting a circulation of air within said receptacle comprising conductors arranged in parallelism to one another and closely associated with the side walls of said receptacle in parallel relation thereto as a series, said conductors severally communicating at one end exteriorly of said receptacle and at their other end interiorly thereof and being adapted to discharge the currents of air circulated therethrough in initial parallelism to the adjacent side walls of said receptacle.

877,732. LINER-PLATE. BERNHARD A. O. PROLLIUS, Copenhagen, Denmark. Filed July 29, 1904. Serial No. 218,693.



1. A conical liner plate for centrifugal apparatus having in its upper rim a plurality of radially directed depressions forming channels of decreasing depth open at both ends and having their bottom merging into the surface of the plate.

2. In a centrifugal apparatus a plurality of conical liner plates; each of the plates having in its upper rim a plurality of radially directed depressions open towards the interior of the apparatus and forming channels of decreasing depth having their bottom merging into the surface of the plate.

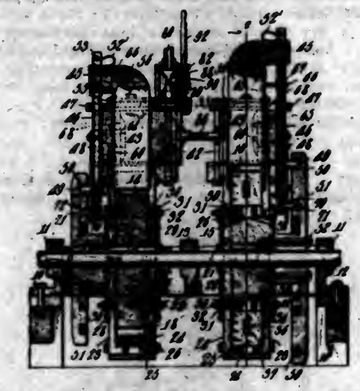
3. In a centrifugal apparatus a plurality of conical liner plates; each of the plates having in its upper rim a plurality of inwardly extending channel-shaped depressions open towards the interior of the apparatus and adapted to be seated in the depression of the adjacent lower plate; the depressions of all the plates being of uniform size so as to provide for the same amount of space between the adjacent plates and having tapering sides and a bottom merging into the surface of the plate.

4. In a centrifugal apparatus a plurality of conical liner plates; each of the plates having in its upper rim a plurality of channel-shaped depressions of decreasing depth open towards the interior of the apparatus and with their bottom merging into the surface of the plate and adapted to be seated in the depressions of the adjacent lower plate thereby forming passages between the bottoms of adjacent depressions through which the liquid to be separated is distributed over the liner plates.

877,733. ROTARY ENGINE. CHARLES R. REID, Heidelberg, Miss. Filed Oct. 22, 1907. Serial No. 398,627.

1. In a rotary engine, a cylinder, a piston arranged therein and provided with a projecting wing, a shaft carrying said piston, a double groove cam disk carried by the shaft, an abutment, a double steam chest, means for controlling the supply of steam to said chest, ports leading from the chests to the cylinder and opening respectively on opposite sides of the abutment, a pair of valves controlling the ports, valve rods, a block connecting said valve rods and provided with a projection entering one of the cam grooves, and an abutment actuating rod having a member entering the other cam groove.

2. In a rotary engine, a cylinder having enlarged openings in its opposite heads, a piston arranged within the cylinder and provided with circular hub extensions, projecting through and beyond said openings, a yieldable packing ring disposed in the annular space formed between each hub extension and the adjacent wall of the opening, a gland ring bearing on the packing ring and having an annular flange at a point outside the cylinder, and securing bolts extending through such flange for adjusting the degree of pressure on the packing ring.



3. In a rotary engine, a frame, a pair of cylinders, lugs extending from the cylinders and resting on the frame, straps extending across said lugs and confining the cylinders in place, a shaft extending through the cylinders, a pair of pistons mounted on the shafts and provided with wings, the wings of one piston being disposed at a right angle to those of the other piston, a pair of steam chests for each cylinder, ports leading from the chests to the cylinders, a main supply chest having a ported communication with the cylinder chest, a pair of valves arranged in the supply chest and controlling the flow of steam therefrom, valves controlling the flow of steam from the cylinder chests to the cylinders, means for actuating said valves, and cam actuated abutments working in each of the cylinders.

4. In a rotary engine, a cylinder, a piston, a shaft carrying the piston, a cam disk on the shaft, a movable abutment extending outside the cylinder and provided with a laterally projected arm, an abutment operating rod having at one end a projection engaging the cam disk, and bifurcated at its opposite end to receive the abutment arm, a bolt extending across the bifurcated portion of the rod above the arm, and a spring interposed between the bolt and the outer side of the arm to hold the abutment yieldably against the piston.

5. In a rotary engine, a cylinder, a piston arranged therein and provided with a projecting wing, the wing being radially slotted and provided with a cross bar extending across the slot, the cross bar having a transversely extending opening, a pair of overlapping blades arranged in the slot and having their inner edges recessed to receive the bar, a spring extending through the opening and tending to force the blades laterally against the heads of the cylinder, and springs seated in the bottom of the slot and tending to thrust the plates outward into engagement with the circular inner wall of the cylinder.

877,734. REINFORCED CONCRETE CONSTRUCTION. RICHARD G. REUTHER, Detroit, Mich. Filed July 16, 1906. Serial No. 326,304.



1. In a reinforced concrete structure, the combination of a cementitious body, a longitudinal strengthening bar therefor of relatively large diameter, a single metal strand of relatively small diameter wound spirally around said bar to extend from end to end thereof, portions of said strand intermediate its ends being drawn outwardly at intervals into pairs of loops, each pair of loops being formed into minor stress members by twisting said looped portions of the strand and the loops of each pair being rigidly secured to the bar by having their base portions wound directly therearound, said minor stress members projecting from the main member at an angle and all of said members being embedded in the cementitious body.

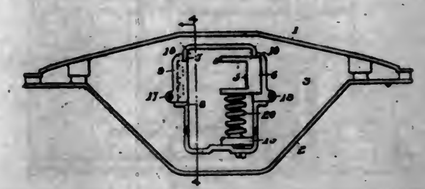
2. In a reinforced concrete structure, the combination with a cementitious body, of a longitudinally extending strengthening bar of relatively large diameter, a metal strand wrapped spirally around said bar and extending from end to end thereof, said strand intermediate its ends being drawn outwardly into loops and twisted to form projecting minor stress members, and said strand having its ends passed through the ends of the strengthening bar to rigidly secure the ends of the strand to the bar.

3. In a reinforced concrete structure, the combination with a cementitious body, of a round strengthening bar of relatively large diameter extending longitudinally thereof, a metal strand wrapped spirally around said bar, said strand intermediate its ends being drawn outwardly into loops and twisted to form diverging minor stress members, the ends of said strand being passed through the ends of said bar to rigidly secure the ends of the strand thereto, the ends of the strand being formed into bearing members to prevent the bar turning when placed in position, and all of said parts being embedded in the cementitious body.

4. In a reinforced concrete structure, the combination with a cementitious body, of a rigid longitudinal strengthening bar of relatively large diameter, a plurality of minor strengthening members consisting of diverging twisted strands formed of a single strand wound around the bar from end to end, said twisted strands being connected in pairs along the bar and each pair being rigidly connected to the bar to prevent independent movement of said parts and extending obliquely from said bar, said minor members having loops in the outer ends thereof, an auxiliary longitudinal strengthening bar passed through each of the loops in said minor members and all of said parts being embedded in said cementitious body.

5. A reinforcing member for concrete construction, comprising a longitudinally extending strengthening bar of relatively large diameter, a metal strand wrapped spirally around said bar and extending from end to end thereof, said strand intermediate its ends being drawn outwardly into loops and said loops being twisted to form diverging minor stress members, the base of said loops being wrapped directly around the strengthening bar and the ends of said strand being passed through the ends of the bar to prevent independent movement of said parts.

877,735. SIDE-FRAME CONSTRUCTION. WILBUR P. RICHARDSON, Beaver, Pa., assignor to Pittsburgh Equipment Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Mar. 27, 1907. Serial No. 364,843.



1. In a truck side-frame construction, the combination with a bolster having column-guides, of a side-frame proper formed with a bolster-receiving opening having an intermediate-portion at least as wide as the bolster measured over its column-guides and top and bottom portions of less width than the bolster measured over its column-guides, and removable bolster-guides located in the enlarged intermediate portion of the bolster-receiving opening.

2. In a truck side-frame construction, the combination with a bolster having column-guides, of a side-frame

proper formed with a bolster-receiving opening having an intermediate portion at least as wide as the bolster measured over its column-guides, an upper portion of less width than the bolster measured over its column-guides, fixed bolster-guides adjacent to the sides of the contracted upper portion, a lower portion of the bolster-receiving opening of less width than the bolster measured over its column-guides, fixed bolster-guides adjacent to the sides of the contracted lower portion, and removable bolster-guides located in the enlarged intermediate portion of the bolster-receiving opening.

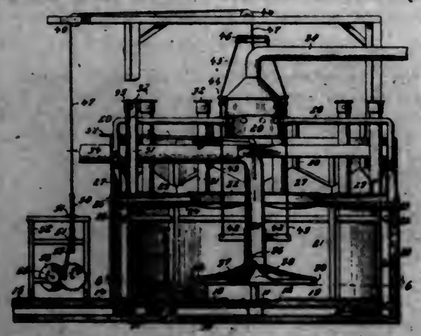
3. In a truck side-frame construction, the combination with a bolster provided with column-guides, a side-frame proper provided with a bolster-receiving opening having an intermediate portion at least as wide as the bolster measured over its column-guides and top and bottom portions of less width than the bolster measured over its column-guides, a removable bolster-guide, said side-frame formed with an opening communicating with the enlarged portion of the bolster-receiving opening to permit the removable bolster-guide to be vertically placed in said enlarged portion.

4. In a truck side-frame construction, the combination with a bolster provided with column-guides, a side-frame proper provided with a bolster-receiving opening having an intermediate portion at least as wide as the bolster measured over its column-guides, and upper and lower portions of less width than the bolster measured over its column-guides, a flange formed on the side frame, and a removable bolster-guide adapted to be placed in the intermediate portion of the opening and provided with an engaging-member adapted to make engagement with the flange.

5. In a truck side-frame construction, the combination with a bolster provided with column-guides, a side-frame proper provided with a bolster-receiving opening having a portion at least as wide as the bolster measured over its column-guides, engaging means formed on the side-frame adjacent to the widest portion of the bolster-receiving opening, and a removable bolster-guide formed to embrace a portion of the web of the side-frame and having separated engaging-members adapted to make engagement with said engaging means.

[Claims 6 and 7 not printed in the Gazette.]

877,736. DRY-KILN. JAMES R. RIPLEY, Memphis, Tenn. Filed Aug. 29, 1907. Serial No. 390,651.



1. In a dry kiln, a casing, an air conducting pipe extended therein, and a distributing device carried by said pipe and movable vertically therein to traverse the material to be dried.

2. In a dry kiln, a casing, an air conducting pipe extended therein, a distributing head, and means for vertically reciprocating said head.

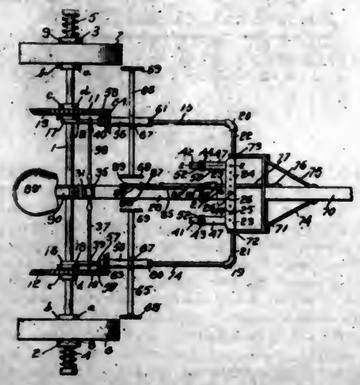
3. In a dry kiln, a casing, a heat conducting pipe therein, a distributing head slidingly mounted upon said pipe, and means for reciprocating said head.

4. In a dry kiln, a casing, a heat conducted pipe therein, a distributing head slidingly mounted upon said pipe; arms extending from said head, operating rods extending through the top of the kiln from said arms, and means connected with said rods for continuously reciprocating the head.

5. In a dry kiln, a casing, a heat conducting pipe therein, a horizontally disposed distributing head having a discharge at its periphery, and a collar telescoping upon said pipe, and a deflecting cone within the head disposed beneath the discharge from said pipe.

[Claims 6 to 19 not printed in the Gazette.]

877,737. BEET-CHOPPER. THORNTON A. ROBERTS, Sutherland, Nebr. Filed Apr. 26, 1907. Serial No 370,452.



A machine of the type set forth comprising an axle having ground wheels at its ends, a sectional frame connected with the axle and including side portions adapted for relative adjustment towards and away from one another, chopper elements mounted for rotation upon said respective side portions, gearing for rotating said elements, a central stationary beam having a slot and a pin transversely of said slot, a lever projected through said slot and formed with notches to engage said pin, and adjusting arms having connection with the lower end of said lever and with said side portions, whereby the latter will be moved toward or away from one another upon downward or upward movement of said lever.

877,738. PRODUCTION OF ARTIFICIAL FUEL AND COKE. HUGH S. ROBERTSON and JOHN R. GRAHAM, Walthamstow, England, assignors to Robgrey & Company Limited, London, England. Filed June 18, 1907. Serial No. 379,628.

1. The hereindescribed process for producing artificial fuel which consists in mixing tarry matter with hydrocarbon oil, separating the solid residuum precipitated and mixing it with combustible material.

2. The hereindescribed process for producing artificial fuel which consists in mixing tarry matter with hydrocarbon oil in substantially equal proportions, agitating the mixture, separating the solid residuum precipitated and mixing it with combustible material.

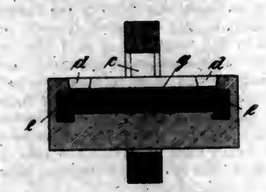
3. The hereindescribed process for producing artificial fuel which consists in mixing tarry matter with hydrocarbon oil in substantially equal proportions, agitating the mixture, warming the mixture, separating the solid residuum precipitated and mixing it with combustible material.

4. The hereindescribed process for producing artificial fuel which consists in mixing tarry matter with hydrocarbon oil agitating the mixture, allowing it to settle, separating the solid residuum precipitated, drying the residuum to form a powder and mixing the residuum with combustible material.

5. The hereindescribed process for producing artificial fuel which consists in mixing tarry matter with hydrocarbon oil, separating the solid residuum precipitated, dissolving resinous matter in the thin fluid residue to form a binding agent and mixing the binding agent with combustible material.

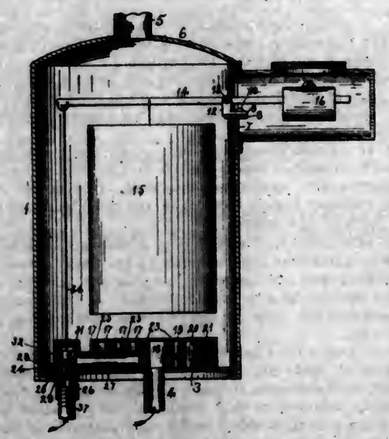
[Claims 6 to 16 not printed in the Gazette.]

877,739. MEANS FOR OBTAINING THIN LIQUID DROSS IN ELECTRIC FURNACES FOR METALLURGICAL PURPOSES. HERMANN RÖCHLING and WILHELM RODENHAUSER. Völklingen-on-the-Saar, Germany. Filed Sept. 7, 1906. Serial No. 333,688.



In an electric furnace of the type described, a smelting hearth, damlike ridges *g*, *h* arranged within the smelting hearth and smelting channels *d* projecting upwards to such a height above the bottom, that the top edges of the ridges may be flush with the surface of the metal bath, when melted in the furnace whereby the electric current heating the metal bath is forced to pass at these places through the layer of dross floating above the metal bath.

877,740. MIXER FOR GAS-MACHINES. CHARLES E. SAYER, Rockford, Ill. Filed Jan. 26, 1906. Serial No. 298,056.



1. The combination of a gas holder, a mixing chamber located within the holder and comprising a series of concentrically located chambers, the walls of the chambers formed with openings, and gas and air inlets communicating with the center chamber.

2. The combination of a gas holder, a mixing chamber located within the holder and comprising a series of concentrically located chambers, the walls of the chambers formed with screened openings, and gas and air inlets communicating with the center chamber.

3. The combination of a gas holder, a mixing chamber located within the holder and comprising a series of concentrically located chambers, the walls of the chambers formed with openings, the openings being located out of register with one another, and gas and air inlets communicating with the center chamber.

877,741. WRENCH. ANDREW SCHALLER, Perrysburg, Ohio. Filed July 19, 1906. Serial No. 326,919.



1. A wrench of the class described comprising a fixed jaw, spaced cheek pieces formed integral with the jaw, the said jaw being provided with a slot, a movable jaw having a stem of rack formation engaged through the slot, a handle pivoted at one of its ends between the cheek pieces and provided with teeth for engagement with the rack upon the stem portion of the movable jaw, a threaded bolt engaged through the cheek pieces at their ends opposite to the ends at which the fixed jaw is located, and a thumb nut engaged upon the threaded bolt.

2. A wrench of the class described comprising a fixed jaw, spaced cheek pieces formed integral with the jaw and extending forwardly therefrom in parallel relation, the said jaw being provided with a slot the side walls of which are coincident with the inner walls of the cheek pieces, a movable jaw having a stem of rack formation engaged through the slot, the side faces of the stem and the portion of the jaw being confined between the cheek pieces, a handle pivoted at one of its ends between the cheek pieces, said handle being provided with teeth at its said end for engagement with the rack upon the stem portion of the movable jaw, the cheek pieces being extended considerably beyond the said end of the handle, a threaded bolt engaged through the portions of the cheek pieces which extend beyond the said end of the handle, a thumb nut engaged upon the bolt, the bolt being provided at one of its ends with a head which bears against the outer faces of one of the cheek pieces and the thumb nut being adapted to bear against the outer face of the other cheek piece to cause the cheek pieces to frictionally engage the stem portion of the movable jaw and that portion of the jaw itself which lies between the cheek pieces.

877,742. LETTER-BOX. PETER J. SCHIFFER, Detroit, Mich. Filed June 3, 1907. Serial No. 376,978.



1. A letter box having a slot and a door, and an indicating slide movable across the slot to open or close the

same and having a catch engageable with the door when it is closed, to hold the slide in open position with respect to the slot, the catch being released when the door is opened, and means to move and normally hold the slide in closed position.

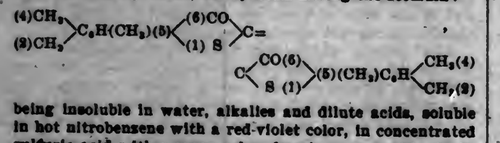
2. A letter box having a slot, a door, and a window in the side thereof, an exteriorly-operated slide movable up and down behind the slot and window and arranged to open and close the latter and having a sign visible through the window when slid down, and also having a catch engageable with the door when it is closed, to hold the slide in lower position, and means to raise the slide, to close the slot, when the door is opened and the catch disengaged.

3. A letter box having a slot and a window in the side thereof, and a door, and an exteriorly-operated slide movable behind the slot, to open and close the same and having a sign visible through the window when the slot is open, means to normally move the slide to close the slot, and door-released means to hold the slide in open position.

877,743. VIOLET DYE AND PROCESS OF MAKING SAME. ALBRECHT SCHMIDT and ERNST BAYK, Höchst-on-the-Main, Germany, assignors to Farbwerke vorm. Meister, Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Feb. 27, 1907. Serial No. 359,642.

1. The process herein described of making violet vat dyestuffs, which consists in allowing strong sulfuric acid to act on phenylthioglycolic acids methyl-substituted in para-position and not substituted in one ortho-position.

2. As a new product, the dyestuff having the formula:



being insoluble in water, alkalies and dilute acids, soluble in hot nitrobenzene with a red-violet color, in concentrated sulfuric acid with a green color, forming a vat with alkalihydrates from which cotton and wool are dyed in blue-violet tints.

877,744. MACHINE FOR PASTING AND FOLDING CARTONS. JEROME J. SCHOTTEN, St. Louis, Mo. Filed May 31, 1907. Serial No. 376,614.



1. In a machine for pasting and folding the end flaps of a carton, a conveyer for holding the carton, a stationary member for folding in some of the flaps of the carton as it is introduced into the machine, means for applying an adhesive substance to other flaps of the carton, and means for folding said flaps over the flaps which were folded inwardly when the carton was introduced into the machine; substantially as described.

2. In a machine for pasting and folding the end flaps of a carton, a conveyer for holding the carton, means for bending some of the flaps of the carton into an approximately vertical position so that they extend at right angles to the body of the carton, means for applying an adhesive to the inside faces of said flaps, and means for thereafter bending said flaps into their final position; substantially as described.

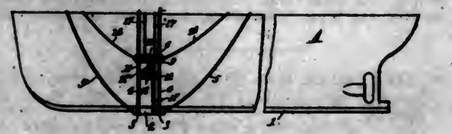
3. In a machine for pasting and folding the end flaps of a carton, a movable conveyer on which the carton is placed, a folding apparatus comprising stationary plates for folding inwardly some of the side flaps of the carton, said plates also bending the top and bottom flaps into an approximately vertical position, means for applying an adhesive to the bottom flaps, stationary means for thereafter folding said bottom flaps inwardly and pressing them upon the side flaps, means for applying an adhesive to the top flaps, and means for thereafter bending said top flaps into final position; substantially as described.

4. In a machine for pasting and folding the end flaps of a carton, a conveyer on which the carton is placed, and a folding box through which said conveyer travels, said folding box being provided with stationary plates which bend some of the side flaps inwardly and the top and bottom flaps into an approximately vertical position to receive an adhesive as the carton is inserted in the machine, plates which bend the bottom flaps upwardly over the side flaps, and plates which thereafter bend the top flaps downwardly into final position; substantially as described.

5. In a machine for pasting and folding the end flaps of a carton, a conveyer for folding the carton, a folding box through which said conveyer travels, wedge-shaped folding plates at the front end of said box for folding inwardly some of the side flaps of the carton and also bending the top and bottom flaps into approximately vertical position, a guide plate for retaining said flaps in a vertical position, and plates provided with outwardly flared portions having inclined edges for progressively bending the top and bottom flaps of the carton into final position as the conveyer moves it through the box; substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

877,745. VESSEL-HULL SCRAPER. WILLIAM E. SCOTT, Montreal, Quebec, Canada. Filed Mar. 29, 1907. Serial No. 365,320.



1. In combination with a ship, a vertically and longitudinally adjustable block carried by the ship, bearings on the block, a rod rockably disposed in the bearings, a spring coiled on the rod and having one end secured to one of the bearings and having its opposite end secured to the rod, an arm secured to the rod, and scraping fingers supported by the arm.

2. In combination with a ship, a vertically and longitudinally adjustable block carried by the ship, a resiliently supported arm, carried on the block, a cross bar on the arm, resilient fingers secured on the cross bar, and scraping teeth on the fingers.

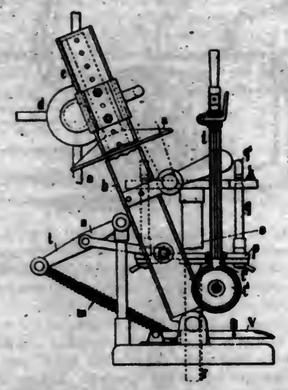
3. In combination with a ship, a vertically and longitudinally adjustable block carried by the ship, a resiliently supported arm on the block, a cross bar secured to the lower end of the arm, and a plurality of resilient fingers disposed on the cross bar and provided with integral scraping teeth.

4. A device for cleaning the hulls of ships, comprising a bifurcated guide plate adapted to embrace the keel of a vessel, cables passing through said guide plate, a block adjustably mounted on said cables, a rod journaled in said block, an arm mounted on said rod, a plurality of cleaning devices on said arm and a coil spring surrounding the aforesaid rod and acting upon the same to hold the arm attached thereto and the cleaning devices connected with the arm, yieldingly, against the surface of the hull of the vessel.

877,746. SAND-MOLDING MACHINE. ARTHUR P. SMITH, Coventry, England. Filed July 2, 1907. Serial No. 381,875.

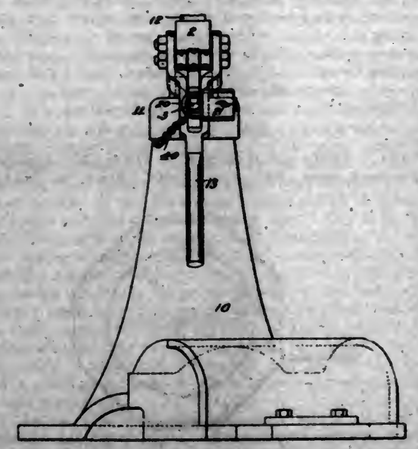
1. In sand molding machines, the combination comprising a work table, a ramming head, supports having the said head mounted thereon, a rack and pinion in conjunction with the ramming head, a work lifting platen adapted to slide beneath the work table, and a rack and pinion in conjunction with said platen, substantially as set forth.

2. In sand molding machines, the combination comprising a work table, a ramming head, supports having the said head mounted thereon, a rack and pinion and operating handle in conjunction with the head, a work lifting platen adapted to slide beneath the work table, a rack and pinion in conjunction with the lifting platen, a platen operating handle, a ratchet and pawl between the said handle and the platen pinion, a ratchet and pawl adapted to sustain the lifting platen in an elevated position, and a pedal arranged to operate the last named pawl, substantially as set forth.



3. In sand molding machines, the combination comprising a work table, supporting columns for said table, a ramming head, a pivotal supporting frame having the said head mounted thereon, a rack and pinion and operating handle in conjunction with the ramming head, an epicyclic train of gear wheels between the operating handle and the rack and pinion, a spring device adapted to counter-balance the weight of the supporting frame when in an inclined position, a work lifting platen mounted on the columns of the work table, lifting struts secured to the platen and passing through the work table, a rack and pinion and operating handle, adapted to actuate the platen, a ratchet and pawl in conjunction with the said platen actuating handle, a ratchet and pawl for sustaining the platen in an elevated position, and a pedal lever connected with the last named pawl, substantially as set forth.

877,747. SWITCH-STAND. FRANK G. SNOOK, Sacramento, Cal. Filed July 1, 1907. Serial No. 381,642.



1. The combination with the switch-stand, the signal-shaft, and a switch-lever connected to said shaft, of means for locking the lever to the stand, said means comprising a lock-case and a shackle to slidably engage the same, one of said parts being secured to the switch-lever and the other to the switch-stand, said lock-case having locking dogs adapted to interlock with the shackle, a key engaging the dogs to release the shackle, and a yoke slidably-mounted in the lock-case adapted to be engaged and depressed by the shackle when the two parts of the locks are in normal position, said yoke adapted to be advanced coördinately with the release of the shackle and having means for trapping the key and holding said key trapped during the time the shackle is removed from the lock case.

2. The combination with the switch-stand, the signal-shaft, and a switch-lever, of means for locking the lever to the stand, said means comprising a lock-case and a shackle to slidably engage the same, one of said parts being secured to the switch-lever and the other to the switch-stand, said lock-case having means for engaging and locking the shackle in the lock-case, and said lock-case having means for trapping the key substantially coördinately with the release of the shackle, said trapping means being actuated by the restoring of the shackle to its normal position, to release said key and allow it to be removed from the lock-case.

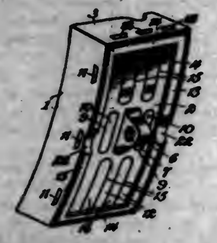
3. The combination with the switch-stand, the signal-shaft, and the switch-lever, of means for locking the lever to the stand, said means comprising a lock-case and a shackle adapted to slidably engage the same, spring-pressed dogs within the lock-case adapted to be engaged by and to interlock with the shackle to hold the parts in locked position, a spring pressed yoke within the lock-case engaged by the inner ends of the shackle and normally depressed thereby, and a key operable in the lock-case adapted to release the dogs from their engagement with the shackle, said yoke adapted to start the shackle out of the lock case when said shackle is released by the dogs, and said yoke having means for trapping the key coördinately with the unlocking of the shackle, said shackle operating to depress the yoke and release the key when the shackle is returned to normal position in the lock-case.

4. The combination with the switch-stand, the signal-shaft, and an operating switch-lever, of a lock-case secured to the switch-lever and comprising pivotally-mounted spring-pressed dogs having hooked-shaped ends, and a spring-pressed yoke in said case; a shackle, permanently attached to the switch-stand and having arms to slidably engage the lock-case, said arms adapted to engage and depress the dogs when the shackle is inserted into said case, the arms of the shackle having slots or recesses into engagement with which the hook-shaped ends of the dogs are pressed when the parts are in register, and said arms extending beyond the dogs and into engagement with the spring-pressed yoke whereby the latter is depressed and held under tension when the parts of the lock are engaged; and a key for operating the dogs to release the shackle, said yoke serving to start the released shackle out of the lock-case to carry its slots or recesses out of register with the dogs and said yoke having a flange or projection adapted to move into the range of action of the key to thereby trap the key coördinately with the release of the shackle, and said shackle serving to depress the yoke and release the key coördinately with the engagement of the dogs with the shackle.

5. The combination of a switch-stand; the signal-shaft; a switch lever; a lock case having a transverse flange by which it is secured to said lever; pivotally-mounted spring-pressed locking-dogs in said case; guides formed in opposite sides of the case; a shackle having arms to slidably engage said guides, said arms being provided with slots or recesses into which the dogs spring when they are in register therewith; a flexible connection for permanently attaching the shackle to a stationary part of the switch-stand, said shackle having means to prevent its detachment from said connection; a substantially U-shaped shackle-operated yoke slidably-mounted in the lock-case and having its arms arranged in line with said guides, said arms adapted to be engaged by the arms of the shackle when the shackle is inserted into the case, to depress said yoke; springs or cushions acting upon the yoke in opposi-

tion to the pressure exerted thereon by the shackle; and a key operating upon the dogs to retract them and release the shackle; said yoke advancing coördinately with the release of the shackle and adapted to move the shackle out of locked engagement with said dogs, and said yoke having means for trapping the key and holding said key trapped until the shackle is returned to normal locked position in the case.

877,748. BRAKE-SHOE FOR LOCOMOTIVES. HENRY H. URQUHART, Paducah, Ky., assignor to Urquhart Brake Shoe & Brake Head Company, Paducah, Ky., a Corporation of Kentucky. Filed Sept. 9, 1907. Serial No. 391,968.



1. A brake shoe consisting of a body provided at the back with a depression or recess, and a reinforcing frame embedded in the body at the back thereof and having side and end arms extending through the walls of the depression or recess.

2. A brake shoe consisting of a body provided at the back with a depression or recess having a surrounding marginal wall at the ends and sides, and a reinforcing frame embedded in the body at the back thereof and having arms or portions extending through the marginal wall to the exterior thereof.

3. A brake shoe consisting of a body having a depression or recess, and a reinforcing frame embedded in the body at the recess and provided with side and end arms beveled at the edges and extending through the side and end walls of the recess or depression, said frame being also provided with central and end longitudinal slots or openings, which receive portions of metal of the body.

4. A brake shoe consisting of a body having a depression or recess, and a reinforcing frame embedded in the body at the recess and provided with side and end arms extending through the side and end walls of the recess or depression, said frame being also provided with slots or openings, which receive portions of metal of the body, and a lug projecting from the frame for securing the brake shoe to a brake head.

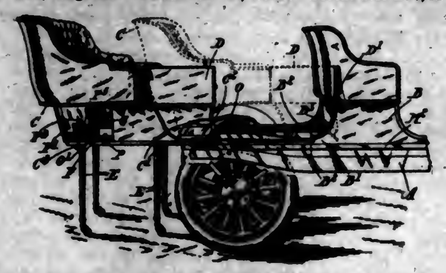
877,749. DRILLING-MACHINE. ALEXANDER WALKER, What Cheer, Iowa, assignor to What Cheer Tool Co., What Cheer, Iowa, a Corporation of Iowa. Filed May 2, 1907. Serial No. 371,430.



1. A drilling machine comprising a frame having side bars, each side bar having flanges along the front and rear thereof facing respectively toward each other to provide channels, and trunnion-supporting plates fitted between the respective flanges, the inner faces of the front flanges being substantially flush with the inner faces of the bodies of the respective plates.

2. A drilling machine comprising a frame having side bars, each side bar having flanges along the front and rear thereof facing respectively toward each other to provide channels, and trunnion-supporting plates fitted between the respective flanges, the inner faces of the front flanges being substantially flush with the bodies of the inner faces of the respective plates, and said plates having serpentine ribs beveled on their inner surfaces and the beveled surfaces merging in the surfaces of said front flanges.

877,750. MOTOR-VEHICLE. WALTER G. WINDHAM, London, England. Filed Jan. 23, 1906. Serial No. 297,427.



1. In a motor vehicle the combination of a chassis, a front seat secured thereto and suitably disposed for the driver, longitudinal runners on the chassis, and a rear half-body detachable from the chassis by sliding rearwardly upon the runners, substantially as set forth.

2. In a motor vehicle the combination of a chassis, a front seat secured thereto, longitudinal runners on the chassis, a rear half-body detachable from the chassis by sliding rearwardly upon the runners, legs to support the half-body when projecting beyond or entirely removed from the chassis, substantially as set forth.

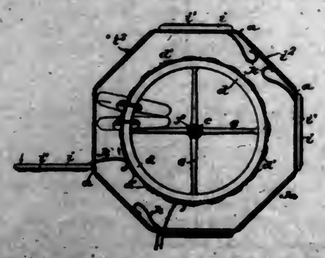
3. In a motor vehicle the combination of a chassis, a front seat secured thereto, longitudinal runners on the chassis, a rear half-body detachable from the chassis by sliding rearwardly on the runners, legs to support the half-body when projecting beyond or entirely removed from the chassis, and means for dismounting the legs from their pendent position upon the body when the latter is home upon the chassis, substantially as set forth.

4. In a motor vehicle the combination of a chassis, a front seat secured thereto, longitudinal runners on the chassis, a rear half-body detachable from the chassis by sliding rearwardly upon the runners, and detachable legs to support the half-body when projecting beyond or entirely removed from the chassis, substantially as set forth.

5. In a motor vehicle the combination of longitudinal wood runners, flanges M^1 secured to the outer side of the wood runners and projecting in a vertical plane therefrom, a chassis or relatively stationary element, a rear half-body or relatively movable element detachable from the chassis by sliding readwardly upon the runners, means for securing the runners with their flanges M^1 to one of these elements so that the flanges enter recesses in the corresponding element and lie flush therewith, and a front seat secured to the chassis, substantially as set forth.

[Claims 6 to 19 not printed in the Gazette]

877,751. DISPLAY-CABINET. JAMES M. ACHESON, Portland, Oreg. Filed July 8, 1907. Serial No. 382,669.

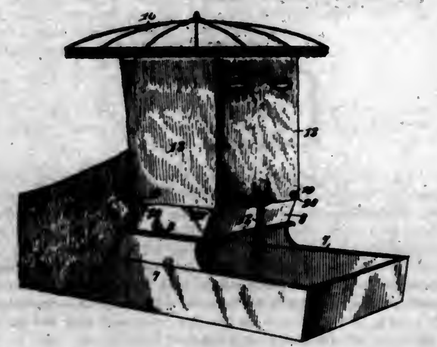


1. In combination with a cabinet having one or more hinged doors, and a clothes rack rotatably mounted in the cabinet, means for engaging with the rack to hold it from freely rotating, said means being automatically set in operation when any of the doors of the cabinet are swung open.

2. In combination with a cabinet having one or more hinged doors, a circular rack rotatably mounted in the cabinet, said rack having its peripheral face provided with undulations, and a flexible member on each of the doors adapted to engage with the undulated surface of the rack when any of the doors are opened.

3. The combination with a cabinet having one or more outwardly swung doors, a circular rack suspended from the top of the cabinet and rotatable on its support, said rack including an annular rim and a resilient member secured thereto having radial beveled projections and a flexible member on each door, each having a rounded end for engaging the beveled projections on the rack rim for the purposes specified.

877,752. STORM-HOOD. JOHN ARCHDEACON, Carlisle, Ky. Filed Nov. 7, 1906. Serial No. 342,394.



1. A storm closure of the character described, comprising a curtain, a plurality of flexible tabs of different lengths projecting from the upper edge of and secured to the curtain, and snap hooks secured to the tabs and arranged to hook over the ribs of an umbrella top at any point and slide along the same, said snap hooks thus constituting means for supporting the curtain from the ribs.

2. A storm closure of the character described, comprising a curtain, a plurality of flexible tabs of different lengths projecting from the upper edge of and secured to the curtain, said tabs being located at different distances apart, and snap hooks secured to the free ends of the tabs and located at different distances from the curtain, said hooks snapping over the ribs of the umbrella top at any point and being freely slidable thereon, thus constituting means for supporting the curtain from the umbrella top.

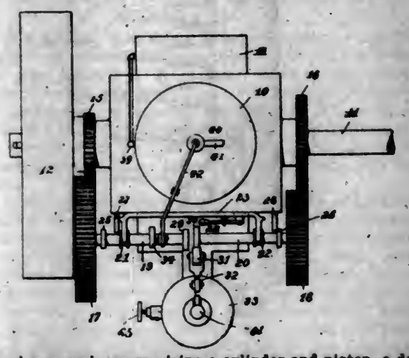
3. In combination with an umbrella top and seat, said umbrella top having ribs, of a storm closure comprising a curtain passing around three sides of the seat, means for detachably connecting the lower portion of the curtain to the seat, and spaced rib-engaging hooks carried by the upper portion of the curtain and arranged to detachably hook over the ribs of the umbrella top at any point and slide freely thereon to support said curtain from the ribs.

4. As an article of manufacture, a storm closure for umbrella topped vehicles, comprising a curtain, rib-engaging means carried by the upper portion of the curtain for directly and detachably engaging the ribs of an umbrella top and supporting said curtain therefrom, spaced elements whereby the lower portion of the curtain can be detachably secured to the front and rear corners of a seat, and a yielding take up device interposed between certain of said elements.

5. As an article of manufacture, a storm closure for umbrella topped vehicles, comprising a curtain, spaced rib engaging hooks carried by the upper portion of the curtain and arranged to directly and detachably engage with the ribs of an umbrella top to support said curtain therefrom, button receiving eyelets in the lower portion of the curtain, said eyelets being arranged to receive buttons secured to the front and rear corners of a seat, and a yielding take up device secured to the lower portion of the curtain and interposed between the intermediate eyelets.

[Claim 6 not printed in the Gazette.]

877,753. GAS-ENGINE. WILLIAM H. ASH, Bay Shore, N. Y. Filed Apr. 5, 1906. Serial No. 310,155.



1. A gas engine comprising a cylinder and piston, a driving shaft, an exhaust port opened by the piston at the end of the explosion stroke in combination with a carbureter for supplying gas to the cylinder, a sparking circuit to explode the gas in the cylinder, and means for operating said carbureter and sparking circuit either at every or every other revolution of the crank shaft for the piston.

2. A gas engine comprising a cylinder and piston, an exhaust port opened by the piston at the end of the explosion stroke, in combination with a carbureter and sparking circuit, two shafts driven from the engine, one at half the speed of the other, and means for operating the carbureter and sparking circuit from either of said shafts, whereby the engine may be run at two cycle or four cycle.

3. A gas engine comprising a cylinder and piston, an exhaust port opened by the piston at the end of the explosion stroke, in combination with a carbureter and sparking circuit and two shafts driven from the engine, each shaft having a cam to operate the carbureter and a circuit closer to operate the sparking circuit, whereby the engine may be run at two cycle or four cycle.

4. A gas engine comprising a cylinder and piston, an exhaust port opened by the piston at the end of the explosion stroke, a driving shaft, gears on said shaft, a carbureter for supplying gas to the engine and a sparking circuit to explode the same, in combination with means operatively connected with said gears for operating said carbureter and sparking circuit either at every or every other revolution of the crank shaft for the piston.

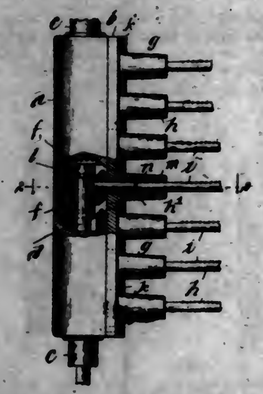
5. A gas engine comprising a cylinder and piston, an exhaust opened by the piston at the end of the explosion stroke, a driving shaft, gears on said shaft, and a carbureter for supplying gas to the engine in combination with means comprising two independent shafts, gears thereon meshing with said first gears, and cams, means adapted to be engaged by the cams for operating the carbureter valve, and means for shifting the shafts for running the engine two cycle or four cycle.

[Claims 6 to 11 not printed in the Gazette.]

877,754. COTTON-PICKING MACHINE. HENRY B. BULLOCK, Chicago, Ill. Filed Feb. 21, 1907. Serial No. 358,554.

1. A cotton picking machine including picker columns each adapted to act as a main fluid reservoir, picking fingers, each provided with a displaceable enlargement in the form of a sleeve having portions between which a fluid-

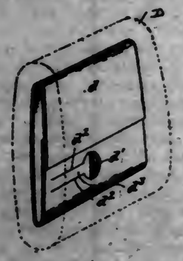
receiving groove or space intervenes, and bearings engaging the enlargements of the picking fingers and located upon the exterior of the picker columns and carried thereby, each having a fluid-containing space in fluid conductive connection with the picking finger it supports, there being a duct in the bearing intervening between this space and the main oil reservoir afforded by the associate picker column.



2. A cotton picking machine including picker columns each adapted to act as a main fluid reservoir, picking fingers each provided with a displaceable enlargement in the form of a sleeve, and bearings engaging the enlargements of the picking fingers and located upon the exterior of the picker columns and carried thereby, each having a fluid-containing space in fluid conductive connection with the picking finger it supports, there being a duct in the bearing intervening between this space and the main oil reservoir afforded by the associate picker column.

3. A cotton picking machine including picker columns each adapted to act as a main fluid reservoir, picking fingers, and picking finger bearings upon the exterior of the picker columns and carried thereby, each having a fluid-containing space in fluid conductive connection with the picking finger it supports, there being ducts in the bearings intervening between these spaces and the main oil reservoir afforded by the associate picker column.

877,755. ROLL OF PAPER. MELVILLE CHURCH, Washington, D. C. Filed Aug. 2, 1907. Serial No. 386,794.



1. A roll of paper provided with a core of pasteboard or other similar material, said core having a tearing opening formed in it at some point removed from its ends, whereby, upon the removal of the last convolution of paper from the core, the tearing opening will be exposed and rendered available for rupturing the core; substantially as described.

2. A roll of paper having a core of pasteboard or other similar material, said core being provided with a tearing opening at a point removed from its ends, and a slit extending into said tearing opening; substantially as described.

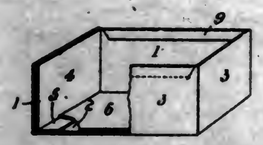
3. A roll of paper provided with a core of pasteboard or other similar material, said core having a tearing opening removed from its ends, and slits extending to said opening to form a tearing tongue, substantially as described.

4. A roll of paper provided with a core consisting of a strip of pasteboard or other similar material having its ends overlapped and secured together, said core being provided in its outer overlapped portion with a tearing opening; substantially as described.

5. A roll of paper provided with a core consisting of a strip of pasteboard or other similar material having its ends overlapped and secured together, said core being provided in its outer overlapped portion with a tearing opening and with a tongue extending from said opening; substantially as described.

877,756. WITHDRAWN.

877,757. PAPER OR CARDBOARD BOX. WILLIAM R. COMINGS, Wimbledon, England. Filed Nov. 13, 1905. Serial No. 287,136.



1. A box comprising a box body and a covering blank adapted to fold over and envelop the box body, with a locking piece adapted to fit snugly in the bottom of the box body and lock the parts together, substantially as described.

2. A box comprising a box body and a covering blank creased along its folding edges and adapted to fold over and envelop the box body, with a locking piece adapted to fit snugly in the bottom of the box body and lock the parts together, substantially as described.

3. A box comprising a box body, and a covering blank adapted to fold over and envelop the box body and a locking piece attached to the covering blank adapted to fit snugly in the bottom of the box body and lock the parts together, substantially as described.

4. A box comprising a box body and a covering blank adapted to fold over and envelop the box body and a locking piece attached to the covering blank by a double fold for facilitating the fitting of such locking piece into the bottom of the box body where it will lock the parts together, substantially as described.

5. A box comprising a box body and a covering blank creased along its folding edges and adapted to fold over and envelop the box body and a locking piece attached to the covering blank adapted to fit snugly in the bottom of the box body and lock the parts together, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

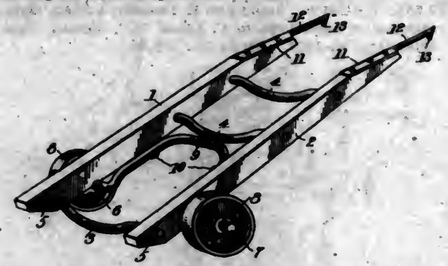
877,758. SKID AND TRUCK. GEORGE G. CONNOR, South Bend, Ind. Filed Jan. 5, 1907. Serial No. 350,934.

1. In a device of the class described, an article holding and arresting means adapted to be swung into and out of operative position, and wheels upon said arresting means.

2. A device of the character described comprising connected sills, an axle rotatably carried by the sills, wheels upon the axle, the axle having a loop portion arranged between the sills adapted to be projected above the same, and stops to engage the axle to limit the rotation of the axle and its loop portion.

3. A device of the character described comprising connected sills, an axle rotatably carried by the sills, wheels upon the axle, the axle having a loop portion arranged between the sills, stops carried by the sills to limit the rotation of the axle and its loop portion, and a hook secured to the inner end of each sill.

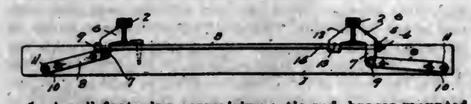
4. A device of the class described, comprising connected sills, an axle carried by the sills, wheels upon the axles, the axle having a looped portion arranged between the sills and adapted to be swung into a position to form an article holding and arresting means.



5. A device of the class described comprising sills, an axle rotatably carried by the sills, wheels upon the axle, the axle having a looped portion arranged between the sills, stops carried by the sills for engagement with the axle to limit the rotation of the axle.

[Claims 6 to 8 not printed in the Gazette.]

877,759. RAILROAD-TRACK BRACE. AMOS J. COOVER, Medway, Ohio. Filed Apr. 24, 1907. Serial No. 370,056.



1. A rail fastening comprising a tie rod, braces mounted thereon having angular extensions, means for clamping the braces against the rails, and means for anchoring the extensions on the braces to cause said braces to exert leverage against the rails.

2. A rail brace and fastening comprising a tie rod, braces confined thereon in close engagement with the rails, said braces having depending leverage extensions, and links securing the leverage ends of the braces to cause said braces to exert leverage against said rails.

3. A rail fastening comprising a tie rod, clamps arranged thereon, means to secure the clamps in close engagement with the rails, one or more of the clamps having leverage extensions, and means for anchoring the leverage extension of the clamp or clamps.

4. A rail fastening comprising a tie rod, braces arranged thereon, means for adjustably clamping the braces against the rails, one or more of the braces having depending leverage extensions, and means for anchoring the said leverage extensions.

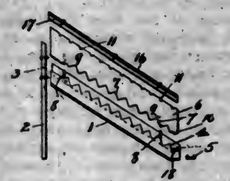
5. A rail fastening comprising a tie rod, clamps arranged thereon, means to secure the clamps in close engagement with the rails, the clamps having depending extensions, and means for anchoring the depending extensions of the clamps.

[Claims 6 and 7 not printed in the Gazette.]

877,760. DISPLAY-RACK. CURTIS S. COPP and LOUIS FRANK, Jacksonville, Ill. Filed Nov. 7, 1907. Serial No. 401,046.

1. In a display rack, plates having rectangular notches in their upper edges, shelves supported in said notches, and other plates provided with notches complementary to the notches in the first-mentioned plates and removably secured thereto to hold the shelves in position, substantially as shown and described.

2. In a display rack, plates having rectangular notches in their upper edges, shelves supported in said notches, other plates having notches in their lower edges complementary to the notches in the first mentioned plates and removably secured thereto to hold the shelves in position, the upper edges of the last described plates provided with notches, and rods secured in said notches, substantially as shown and described.



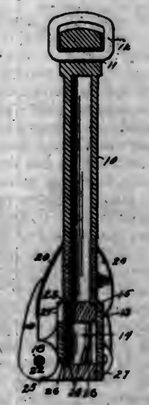
3. In a display rack, plates having rectangular notches, in their upper edges, shelves supported in said notches, dowel pins secured to said plates, other plates having sockets to receive said dowel pins, their lower edges formed with rectangular notches complementary to the rectangular notches in the first-mentioned plates and their upper edges formed with other notches, and rods resting in the last mentioned notches, substantially as shown and described.

4. A display rack comprising plates having rectangular notches in their upper edges, grooved shelves supported in said notches, dowel pins secured to said plates, other plates having sockets to receive said dowel pins, their lower edges formed with rectangular notches complementary to the rectangular notches in the first mentioned plates to hold the shelves in position, and their upper edges formed with other notches, rods resting in the last mentioned notches, division rods slidably mounted on the first mentioned rods and having loops to engage the upper and lowermost rods, and posts for supporting one end of said plates, substantially as shown and described.

5. In a display rack, plates having rectangular notches in their upper edges, a plurality of shelves supported on said notches, and means to simultaneously clamp the shelves to each of said plates, substantially as shown and described.

[Claim 6 not printed in the Gazette.]

877,761. ANCHOR. GEORGE H. CUMMINGS, Waterbury, Conn. Filed Sept. 3, 1907. Serial No. 391,228.



1. In an anchor of the class described, a shank, ears carried by the shank at the lower end thereof, arms pivoted between the ears, flukes carried by the arms, the inner ends of the arms being enlarged, the enlargement of each arm having a notch therein, and springs carried by the shank and having portions arranged for engagement at times with the notches.

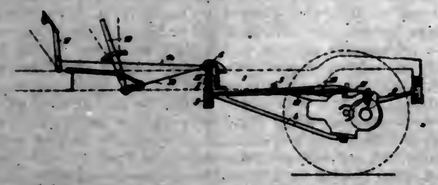
2. In an anchor of the class described, a shank, the lower end of the shank having a hollow enlargement, ears carried by the enlargement, portions of the enlargement having slots arranged in communication with the ears, the arms having enlargements at their inner ends, the en-

largements having notches, and springs arranged within the hollow enlargement for engagement at times with the notches.

3. In an anchor of the class described, a shank, the shank having a plurality of fluke arms at its lower end arranged for pivotal movement, the arms having circular enlargements at their inner ends, the enlargements having notches, and springs carried by the shank and having portions arranged for engagement at times in the notches.

4. In an anchor of the class described, a shank, the lower end of the shank having a hollow enlargement, ears carried by the enlargement, arms pivoted between the ears, the arms having enlargements at their inner ends, the enlargements having notches, flukes carried by the arms and at the outer end thereof, a plug arranged within the hollow enlargement, springs carried by the plug and having their lower ends bent to engage the notches in the enlargements, and a clevis for the shank.

877,762. OPERATING DEVICE FOR MOTOR-VEHICLES. PIERRE A. DARRACQ, Suresnes, France, assignor to Société A. Darracq & Cie. (1905) Ltd., Suresnes, France. Filed Mar. 29, 1907. Serial No. 365,323.



1. In a device for controlling change speed, reversing and brake parts for motor vehicles the combination of a frame, springs on said frame, a driving axle secured to said springs, a change speed a reversing and a braking device upon said axle, a pivoted balance beam on said frame, a fork connecting said balance beam and said axle, means upon said beam for pivotally supporting a plurality of levers, means connecting said levers to the devices upon said axle and means to enable the driver to operate said levers.

2. In a device for controlling change speed, reversing and brake parts for motor vehicles the combination of a frame, springs on said frame, a driving axle secured to said springs, a change speed reversing and a braking device upon said axle a balance beam pivoted on said frame, a triangular part secured to said axle and said balance beam, a spindle on said beam, levers pivoted on said spindle and means for controlling said change speed reversing and braking devices attached to the ends of said levers.

3. In a device for controlling change speed, reversing and brake parts for motor vehicles the combination of a frame, springs on said frame, a driving axle secured to said springs, a change speed a reversing and a braking device upon said axle, a balance beam pivoted on said frame, a triangular part secured to said axle and said balance beam, a spindle on said beam, levers pivoted intermediate their ends on said spindle, rods attached to said levers for controlling said change speed, reversing and braking devices, the connecting point of said rods corresponding to the connecting point of said triangular part and balance beam and controlling rods attached to the other end of said levers having connecting points corresponding to the pivoting point of said balance beam.

4. In a device for controlling change speed, reversing and brake parts for motor vehicles the combination of a frame, springs on said frame, a driving axle secured to said springs, a change speed, a reversing and a braking device upon said axle, a pivoted balance beam on said frame, a fork connecting said balance beam and said axle, means upon said beam for pivotally supporting a plurality of levers, rods connecting said levers to the devices upon said axle the axes of connection of said rods with their levers corresponding to the axis of the pivoting point of said balance beam, and rods connecting said levers to controlling devices, the axes of connection of said last mentioned rods with their levers corresponding to the axis of the connection of said fork and balance beam.

877,763. WRENCH. ADOLPHUS E. DEASON, Poteau, Okla., assignor of one-fourth to C. Dixon Hill, Poteau, Okla. Filed Oct. 23, 1907. Serial No. 398,807.



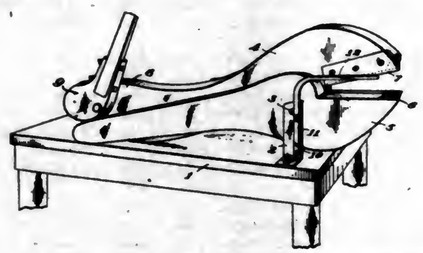
1. A wrench consisting of a stationary jaw having a main shank provided with teeth upon one of its faces, a slidable jaw provided with a slotted shank, mounted upon said main shank, a lever provided with an engaging tooth and upwardly inclined bifurcated arms, the extremities of the arms being secured to the movable jaw through the medium of a tooth or rivet engaging within the slot of the shank, the tooth or rivet being adapted to engage with one of the faces of the main shank, while the engaging tooth of the lever engages the teeth upon the opposite side of the shank at a plane below that of the detent.

2. A wrench consisting of a stationary jaw having a main shank provided with teeth upon one of its faces, a slidable jaw provided with a slotted shank mounted upon said main shank, a lever provided with an engaging tooth and upwardly inclined bifurcated arms, the extremities of the arms being secured to the movable jaw through the medium of a tooth or rivet engaging within the slot of the shank, the tooth or rivet being adapted to engage one of the faces of the main shank, while the engaging tooth of the lever engages with teeth upon the opposite side of the shank at a plane below that of the detent, and means for retaining the lever in locked position.

3. A wrench consisting of a stationary jaw having a main shank provided with teeth upon one of its faces, a slidable jaw having a slotted shank mounted upon the main shank, a bifurcated lever having a tooth or rivet at its ends and an engaging tooth at the joining of the lever and the arms, the rivet being revolubly and slidably mounted within the slotted shank of the movable jaw and being adapted to bite one face of the main shank when the lever is swung closed, the engaging tooth being positioned at an angle in relation to the plane of the rivet whereby the tooth acts as a fulcrum by engaging one of the teeth upon the shank of the wrench when the lever is swung closed, thereby forcing the movable jaw tightly upon the object it engages and the tooth being adapted to bite against the toothed face of the shank when in closed position, and means consisting of a spring whereby the lever is pressed outwardly so as to disengage the rivet and the retaining tooth from contact with the shank of the wrench.

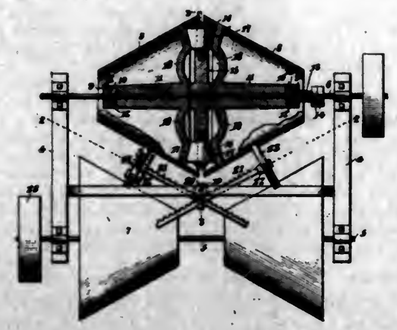
877,764. SHEARS FOR CUTTING IRON. WILLIAM A. GAHLER, Janesville, Minn. Filed Oct. 31, 1907. Serial No. 400,021.

1. The hereindescribed shears for cutting metal, comprising a base plate, two standards secured thereto, a bolt secured between the standards, two bars fulcrumed near one end on said bolt and adapted to have their other ends rest on the base plate, the contiguous faces of said bars being rabbeted near their front ends, cutting blades secured in the rabbeted portions, the rear end of one of said bars being vertically extended, and a cam lever pivoted to the extended portion with the cam impinging against the rear end of the other bar as and for the purpose set forth.



2. The herein-described shears comprising a base plate, two standards secured thereto, two bars fulcrumed near one end between said standards and adapted to have their other ends rest on the base plate, cutting blades secured to the contiguous faces of said bars near the front ends thereof, the rear end of one of said bars being upwardly extended, and a cam lever pivoted to the extended portion with the cam impinging against the rear end of the other bar as and for the purpose set forth.

877,765. VARIABLE-SPEED GEARING. FREDERICK D. GREEN, Florence, Ala. Filed July 31, 1906. Serial No. 328,603.



1. In gearing of the character described, the combination with a single driven shaft, of opposite cone elements loosely journaled thereon, a planetary gear fixed to the shaft and interposed between the cone elements, said gear being engaged therewith, means for yieldingly urging one of the cone elements toward the other to insure such engagement, and means operating against the cone elements for rotating them at different rates of speed.

2. In gearing of the character described, the combination with relatively rotatable cone elements, of planetary gearing associated with both elements, oppositely rotating gears engaging and adjustable along the cone surfaces of the elements to effect their relative rotation at different speeds.

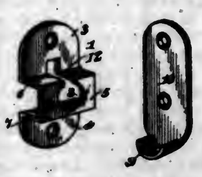
3. In gearing of the character described, the combination with relatively rotatable cone elements, of planetary gearing associated with both elements, friction gears adjustable along the cone surfaces of the elements to effect their relative rotation at different speeds, and means for rotating the gears and thereby the elements in opposite directions.

4. In gearing of the character described, the combination with rotatable oppositely disposed cone elements arranged end to end, of a revoluble planetary gear located between and having a rotatable engagement with the adjacent ends of the elements, and friction gears adjustable in opposite directions along the cone surfaces of the elements to effect their relative rotation.

5. In gearing of the character described, the combination with a driven shaft, of a carrier fixed to the shaft, oppositely disposed cone elements loosely journaled on the shaft on opposite sides of the carrier, a planetary gear journaled on the carrier and engaging the adjacent ends of the cone elements, friction gears engaging the cone surfaces of the elements, and adjustable longitudinally along the same, and means for effecting the adjustment of the friction gears.

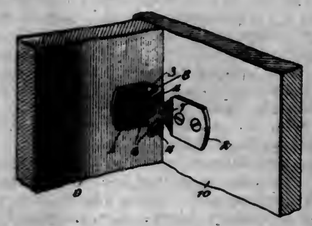
[Claims 6 to 11 not printed in the Gazette.]

877,766. HINGE FOR MORRIS CHAIRS, &c. CLARENCE L. GREILICK, Traverse City, Mich., assignor to The Traverse City Chair Co., Traverse City, Mich., a Copartnership. Filed Aug. 16, 1907. Serial No. 388,856.



A separable hinge of the class described comprising a supporting member or bracket having upper and lower attaching portions or ears provided with an intermediate projecting off-set bearing portion consisting of a vertical wall having a circular bearing opening, and upper and lower horizontal connecting walls, the upper connecting wall and the upper ataching portion being provided with a narrow entrance slot extending to and in communication with the bearing opening, and a pivot plate or member provided with a projecting substantially semi-cylindrical flange forming a pivot and presenting a lower convexed bearing face, said flange being adapted to be passed edgewise through the entrance slot, the bearing opening being above the lower connecting wall so as to space the pivot out of contact with said wall.

877,767. CORNER-FASTENING FOR CUPBOARDS, &c. CLARENCE L. GREILICK, Traverse City, Mich., assignor to J. E. Greilick Company, Traverse City, Mich., a Corporation of Michigan. Filed Aug. 16, 1907. Serial No. 388,905.



A corner fastening comprising a plate or member having an outwardly bent portion and provided thereat with spaced projecting lugs coöperating with the outwardly bent portion to form a crotch and arranged at an acute angle to the said plate or member, the inner edges of the lugs being converged inwardly to form a tapering recess, and a second plate or member provided with a substantially T-shaped head disposed at an obtuse angle to the latter plate or member and consisting of an inwardly tapered neck to engage the tapered recess of the first mentioned plate or member, and laterally extending arms to fit in the said crotch.

877,768. FORM FOR STACK CONSTRUCTION. FRANCIS HEAD, Philadelphia, Pa. Filed Mar. 29, 1907. Serial No. 365,411.



1. The combination of two forms mounted end to end, each consisting of a plurality of circumferentially adjustable plates arranged to inclose substantially cylindrical spaces, pin and recess connections between the respective plates of the two forms, and a templet at one end of one of the forms having means whereby it is attached to the plates thereof, so as to positively hold the same in any of a number of adjusted positions, substantially as described.

2. A form consisting of a number of sections together defining a substantially cylindrical structure and capable of being moved relatively to each other to vary the diameter of said structure, a templet for spacing the said sections, with means for rigidly connecting the templet to the upper portions of the sections so as to positively hold them in any one of a number of adjusted positions, substantially as described.

3. The combination of a series of sections constructed to serve as a form for a substantially cylindrical structure, and adjustable relatively to each other to vary the diameter of said structure, in combination with a second form, means for connecting the two forms to hold the lower portions of the sections of the first form in definite positions, and a templet for holding the upper ends of said connections in place, substantially as described.

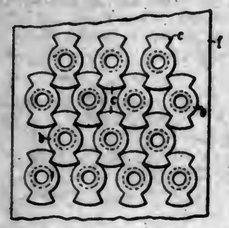
4. A form consisting of a number of sections capable of adjustment to form a substantially cylindrical structure, means for maintaining the lower ends of said structures in predetermined positions, a templet for similarly holding the upper ends of said sections, and means for connecting the templet to each of the sections, said means including a pin on one of the members, and a series of recesses placed in the other member at different distances from the center of the cylindrical structure, substantially as described.

5. A form consisting of a number of overlapping plates arranged to provide a substantially cylindrical casing, independent devices for rigidly holding the tops and bottoms of said plates in any of a number of adjusted positions, with means independent of said devices consisting of a flexible band or bands having means for adjusting its length, for maintaining said plates in the form of a casing, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

877,769. PROTECTOR AGAINST SKIDDING. CARL HEUER, Witten, Germany. Filed Aug. 15, 1907. Serial No. 388,694.

1. In means for preventing tires skidding, the combination of a casing, a plurality of nuts having threads inserted into the latter from the underside, and a plurality of exchangeable heads screwed from the outside of said casing into the nuts, said nuts having projections or shoulders which reciprocally lock one another and prevent the nuts rotating, as set forth.



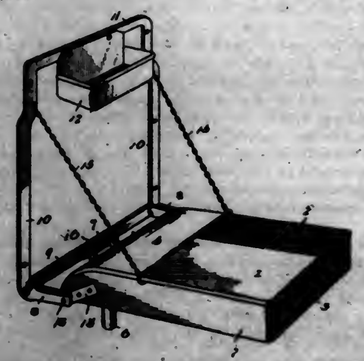
2. In means for preventing tires skidding, the combination of a casing, a plurality of nuts having female threads inserted into the latter from the underside, and a plurality of exchangeable heads screwed from the outside of said casing into the nuts, said nuts having dovetail-shaped projections or shoulders which reciprocally lock one another and prevent the nuts rotating, as set forth.

3. In means for preventing tires skidding, the combination of a casing, a plurality of nuts having female threads inserted into the latter from the underside, and a plurality of exchangeable heads screwed from the outside of said casing into the nuts, with locking-pieces arranged between said heads, said nuts having projections or shoulders which reciprocally lock one another and prevent the nuts rotating, as set forth.

4. In means for preventing tires skidding, the combination of a casing, a plurality of nuts having threads inserted into the latter from the inside, and a plurality of exchangeable heads screwed from the outside of said casing into the nuts, with locking-pieces arranged between said heads, said nuts having dovetail-shaped projections or shoulders which reciprocally lock one another and prevent the nuts rotating, as set forth.

5. In means for preventing tires skidding, the combination of a casing, a plurality of nuts having female threads inserted into the latter from the underside, and a plurality of exchangeable heads screwed from the outside of said casing into the nuts, with bent locking-pieces arranged, substantially as shown, between said heads for exerting resilient pressure against the latter and preventing the same worming out of said nuts, said nuts having projections or shoulders which reciprocally lock one another and prevent the nuts rotating, as set forth.

877,770. FOLDING SINK OR TUB. ALBERT HINES and CHARLES CHAMPENY, Lyons, and JOSEPH L. CRISLER, Wellington, Kans. Filed Apr. 23, 1906. Serial No. 313,309.



1. The combination of a wall bracket in the form of an open rectangular frame the lower opposite angles or corners of which are bent and extended outward forming

bracket arms, a folding water receptacle pivotally mounted between and supported by said arms on an axis in line with the lower inner angle thereof when in position of use and provided with an outlet opening in the bottom end thereof when folded, and a drain pipe attached to the wall bracket and having an enlarged upper end which underlies said outlet opening when the receptacle is folded, substantially as described.

2. The combination with a support, of a folding water receptacle pivotally connected therewith and provided with an outlet opening, a valve for closing said opening, a drain located in position to receive the contents of the receptacle, and means on the valve adapted to come in contact with the drain to unseat the valve upon folding the receptacle substantially as described.

877,771. CLIP OR ELASTIC-BAND ATTACHMENT FOR BOOKS. MICHAEL A. HIRSCH, Franklin, Pa. Filed Mar. 6, 1905. Serial No. 248,624.



1. The combination with an article such as specified, of a metallic device or clip consisting of a retaining or anchoring stem having a hook at one end thereof, said hook forming an eye at the outer surface of the article and at its bend extending through an opening in the article to the stem which engages an inner surface of the article.

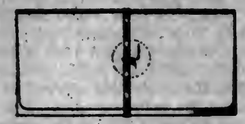
2. The combination with a book, of a metallic device or clip consisting of a retaining or anchoring stem having a hook at one end thereof, said hook forming an eye at the outer surface of the book and at its bend extending through an opening in the book at the line of fold thereof to the stem which latter extends along and makes engagement with an inner surface of the book at approximately the line of fold thereof.

3. The combination with an article such as specified, of a metallic device or clip consisting of a retaining or anchoring stem pointed at one end and having a hook at its other end, said hook forming an eye at the outer surface of the article and at its bend extending through an opening in the article to the stem which engages an inner surface of the article, and an elastic band, cord or the like passing through said eye of the metallic device or clip.

5. The combination with an article such as specified, of a metallic device or clip consisting of a retaining or anchoring stem having a hook at one end thereof, said hook extending through an opening in the article with said stem engaging an inner surface of the article, and a part of the hook at the outer surface of the article bowing or arching outward away from said surface between the extremity of the hook—which latter bears against or towards said surface—and the part of the hook which passes into the opening in the article.

877,772. FASTENER. MICHAEL A. HIRSCH, Franklin, Pa. Filed May 6, 1905. Serial No. 259,208.

1. The combination with an article such as specified, of a metallic device or clip consisting of a retaining or anchoring stem having a hook at one end thereof, said hook forming an eye at the outer surface of the article and at its bend extending through an opening in the article to the stem which latter engages an inner surface of the article, said stem, between the hook at one end and its outer end, being bent in a plane approximately parallel to said inner surface of the article.



2. The combination with an article such as specified, of a metallic device or clip consisting of a retaining or anchoring stem having a hook at one end thereof, said hook forming an eye at the outer surface of the article and at its bend extending through an opening in the article to the stem which latter engages an inner surface of the article, said stem, between the hook at one end and its other end, being bent to approximately a right-angle in a plane approximately parallel to said inner surface of the article.

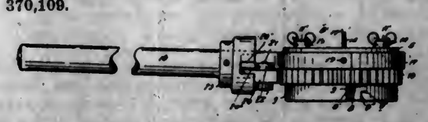
3. The combination with an article such as specified, of a metallic device or clip consisting of a retaining or anchoring stem pointed at one end and having a hook at its other end, said hook forming an eye at the outer surface of the article and at its bend extending through an opening in the article to the stem which latter engages an inner surface of the article, said stem, between its pointed end and the hook at its other end, being bent in a plane approximately parallel to said inner surface of the article.

4. The combination with an article such as specified, of a metallic device or clip consisting of a retaining or anchoring stem having a hook at one end thereof, said hook forming an eye at the outer surface of the article and at its bend extending through an opening in the article to the stem which latter engages an inner surface of the article, said stem, between the hook at one end and its other end, being bent in a plane approximately parallel to said inner surface of the article, and an elastic band, cord or the like passing through said eye of the metallic device or clip.

5. As an article of manufacture, a metallic device or clip for attaching an elastic band to a book, or for analogous use, said device complete and ready for application to the article consisting of a stem having a hook at one end thereof, said stem, between said hook at one end and its other end, being bent in a plane approximately at right-angles to the plane of the hook, as and for the purposes set forth.

[Claims 6 and 7 not printed in the Gazette.]

877,773. WRENCH. JENS C. HOLM, Cape Scott, British Columbia, Canada. Filed Apr. 24, 1907. Serial No. 370,109.



1. A wrench consisting of a handle, a cylindrical head rotatably mounted in said handle and provided with peripherally disposed ratchet teeth, pawls carried by the handle and adapted to engage said teeth for rotating the head in either direction, the head being provided with slots arranged in rectangular relation and with grooves having one of their respective edges formed with a dovetail slot, jaws reciprocally seated within said grooves, studs secured to said jaws and projecting through said slots of the head, a slotted disk rotatably mounted within the head and engaging said studs within the respective grooves, and means to secure the disk in various rotary positions for clamping the jaws in adjusted condition.

2. A wrench consisting of an annular shaped head provided with a slotted partition and formed with recesses in its under side, a disk rotatably seated upon said partition and provided with spirally disposed slots arranged to intersect the respective slots of the partition, jaws slidably

seated in said recesses and having one edge of each engage with a dovetail connection with the side walls of the respective recesses, studs and bolts connected with said jaws and extending through the slots of said partition and disk, nuts engaging said bolts for clamping the disk in various rotary positions, a handle provided with an annular extension which embraces said head, spring pressed pawls pivotally connected to the handle and adapted to engage with teeth provided upon the periphery of the head, and means for controlling the action of said pawls whereby either of them may be predeterminately retained in inoperative position.

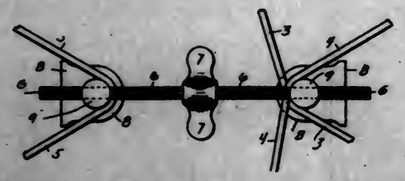
3. A wrench embodying a handle, a cylindrical integral head secured thereto, said head having a central interior partition therein formed with radially disposed slots, a member rotatably mounted on said partition and formed with slots which traverse said slots of the partition, jaws on the opposite side of said partition slidably connected to said head, and studs on said jaws extending through said slots of the partition and member.

4. A wrench embodying a handle, a head having annular side walls secured thereto, a partition in said head having slots therein, a disk rotatably mounted on said partition having slots which traverse said slots of the partition, jaws slidably connected to the head on the inner faces of the side walls thereof, bolts secured at one end to the said jaws extending through the said slots of the partition and disk and nuts on some of said bolts to exert pressure on said disk to hold said parts stationary.

5. A wrench embodying a handle, a head secured thereto, a slotted partition in said head midway of its depth, said head beyond one face of said partition having recesses formed in its sides, jaws seating in said recesses and engaging said face of the partition, a disk on the opposite face of said partition having slots which traverse said slots of the partition, studs secured to said jaws and projecting through said slots of the disk and partition, and means on some of the studs to engage said disk and retain the parts in stationary relation.

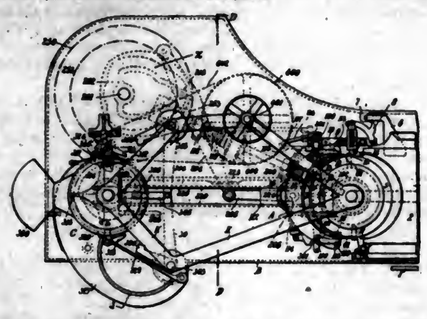
[Claims 6 and 7 not printed in the Gazette.]

877,774. BED-TIGHTENER. MACK HOLTS, Peoria, Ill. Filed Mar. 20, 1907. Serial No. 363,411.



A bed brace and tightener, comprising a right and left hand tightening screw, two wire-engaging lugs having screw-threaded apertures to receive said screw, a guard rigidly connected to the upper end of each of said wire-engaging lugs and lying parallel with the screw and providing a space inclosed on one side by each of the said guards and on the other side by the screw, two brace wires attached at one end each to a corner of the bedstead and extending around one of the wire-engaging lugs and lying within the space inclosed by the screw and the guard on said lug, said brace wires extending in opposite directions after engaging said wire-engaging lug and having their ends attached to the side rails of the bed-stead, and a single brace wire attached to the other two corners of the bed-stead and passing around the other wire-engaging lug within the space inclosed by the screw and by the guard on said wire-engaging lug, the screw, and the guard so united to the wire-engaging lugs coöperating to maintain the brace wires in position upon said wire-engaging lugs, and means for turning the screw to tighten said brace wires through the instrumentality of the wire-engaging lugs.

877,775. APPARATUS FOR FINISHING STEREOTYPE-PLATES. CHARLES E. HOPKINS, Worcester, Mass. Filed Oct. 28, 1907. Serial No. 399,465.



1. In an apparatus for finishing stereotype plates, the combination of means for holding a plate, a finishing cylinder having means for shaving the inside of said plate, means for revolving said cylinder, devices for finishing the ends of said plate, and means whereby said cylinder after shaving the inside of said plate carries along with it the plate to be trimmed by the finishing devices, substantially as described.

2. In an apparatus for finishing stereotype plates, the combination of a cylinder carrying a shaving knife, means for revolving said cylinder, devices for holding a plate so that said shaving knife will operate upon its interior, means for releasing said plate when the shaving operation is completed, means for trimming the ends of said plate, and means carried by said cylinder for removing said plate along with said cylinder to subject said plate to the action of the trimming devices after the shaving operation has been completed, substantially as described.

3. In an apparatus for finishing stereotype plates, the combination of a cylinder provided with a shaving knife, means for revolving said cylinder, means for holding a plate against said shaving knife, means for trimming the ends of said plate, gripping means carried by said cylinder for engaging said plate after the shaving operation has been completed, and means carried by said cylinder for releasing the plate from the holding means and causing it to be engaged by the gripping means as soon as the shaving operation is completed, substantially as described.

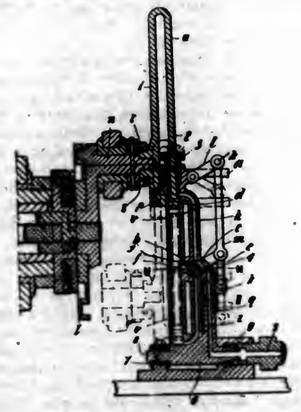
4. In an apparatus for finishing stereotype plates, the combination of a cylinder provided with a shaving knife, means for revolving said cylinder, means for holding a stereotype plate in contact with said knife, gripping means carried by said cylinder for engaging said plate when the shaving operation is finished, means for trimming the ends of said plate, devices operated by the revolution of said cylinder for disengaging said holding means from said plate and for bringing said gripping means into engagement with said plate when the shaving operation is finished, and means for disengaging the finished plate from said cylinder, substantially as described.

5. In an apparatus for finishing stereotype plates, the combination of a cylinder provided with a shaving knife, means for holding said plate against said cylinder, means for trimming the ends of said plate, including devices for cutting off the riser at the upper end of said plate, and means for ejecting the cut off portion from the machine, including a plate, a spring actuated rod carrying said plate, and a cam attached to the cylinder and engaging said rod and controlling its action, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

877,776. AUXILIARY ENGINE. JOHN HUTCHINGS, London, England. Filed Mar. 18, 1907. Serial No. 362,063.

1. An attachment for assisting crank pins over their dead centers comprising a cylinder, a motive fluid actuated piston arranged within the cylinder, a U-shaped piston rod having one leg attached to the piston and its other leg arranged exteriorly of the cylinder and attached to the cylinder pin to be assisted, means for alternately supplying and exhausting a motive fluid to each end of the cylinder, causing thereby the reciprocation of the piston, and means to permit of the oscillation of the cylinder during the reciprocation of the piston.



2. An attachment for assisting crank pins over their dead centers comprising an oscillatory cylinder, a piston operating therein, a U-shaped rod having one leg attached to the piston and its other leg arranged exteriorly of the cylinder, sliding thereon and attached to the crank pin to be assisted, combined supply and discharge channels communicating with the opposite ends of the cylinder and with a motive fluid supply, a valve for alternately establishing communication between said channels and the atmosphere and with a motive fluid supply, a link and lever mechanism for shifting said valve, and means carried by one of the legs of the piston rod and adapted to actuate said mechanism alternately in opposite directions during the reciprocation of the piston.

877,777. TOBACCO-PIPE. MAURICE JEANTET, St. Claude, France. Filed Mar. 29, 1907. Serial No. 365,269.



1. A tobacco pipe comprising an ordinary pipe and a lining within the bowl of the pipe formed of a porous substance previously impregnated with a catalytic agent and subjected to a reducing flame, substantially as described and for the purpose set forth.

2. A tobacco pipe comprising an ordinary pipe and an internal lining within the bowl formed of retort charcoal previously immersed in a solution of chlorid of platinum and subjected to a reducing flame, substantially as described and for the purpose set forth.

877,778. GUN-CLEANER. ELMO W. O. KAUFFMAN, Keyser, W. Va. Filed Aug. 30, 1907. Serial No. 390,787.



1. A gun cleaner comprising a rod or handle, a section secured to said rod or handle and provided with a recess at its outer end, a section provided with a reduced portion seated in said recess, and a rod carrying a head and mounted to rotate freely in and connecting said sections.

2. A gun cleaner comprising a rod or handle having a reduced threaded end, a section detachably connected to said threaded portion, said section having a flaring socket, a section provided with a tapering portion fitted in said socket, a swiveled rod connected to said section, and a head provided with a slotted portion, substantially as described.

877,779. METHOD OF TUNNELING IN ROCK. JOSEPH P. KEANE, Wallace, Idaho. Filed Apr. 29, 1907. Serial No. 370,885.



1. The method of tunneling which comprehends the shooting of the cut substantially simultaneously partially with tape and partially with electric fuse.

2. The method of tunneling which comprehends running a heading along the bottom or track level and along one permanent side of the tunnel, building a staging with sufficient clearance underneath for the passage of the ore-cars, provided this staging with suitable openings over the line of travel of the ore-cars and then casting down the material on to the staging to the roof-line.

3. The method of tunneling which comprehends running a heading along the bottom of the track level and along one permanent side of the tunnel building a staging with sufficient clearance underneath for the passage of the ore-cars providing this staging with suitable openings over the line of travel of the ore-cars and then casting down the material on to the staging to the roof-line and to the width of the tunnel and subsequently blasting out the remaining rock at the side and bottom of the tunnel.

4. The method of tunneling which comprehends running a heading on the bottom of the tunnel, erecting a staging in the heading and providing this staging with suitable hopper openings through which the material cast down from above may be fed into the ore-cars beneath, and which staging is arranged to support the material cast down from above and then casting down the overhead material to the roof line upon said staging.

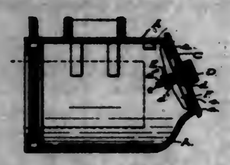
5. The method of tunneling which comprehends running a heading on the bottom of the tunnel, erecting a staging in the heading and providing this staging with suitable hopper openings through which the material cast down from above may be fed into the ore-cars beneath, and which staging is arranged to support the material cast down from above and then casting down the overhead rock to the roof line upon said staging, said overhead material being blasted out by drilling holes into the face of the cut at suitable inclinations from the horizontal, filling the hole with a suitable blasting medium and then discharging the blast in rapid succession beginning with the central hole, substantially as described.

877,780. JOURNAL-BOX FOR RAILWAY-CARS. HERMAN J. KLINSMAN, Rochester, Minn. Filed Feb. 28, 1907. Serial No. 359,003.

1. A journal box comprising a casing having a pair of semi-circular bevels formed therein, spaced apart so as to leave radial openings a hinged cover secured to the outer end of the casing, a bolt passing through the cover and revolubly mounted therein, and a cross bar rigidly secured to the bolt, and adapted to pass through the radial openings and engage the semi-circular bevels.

2. A journal box comprising a casing having an open-

ing in its outer end and a pair of semi-circular bevels formed upon the inner side of the casing adjacent to the opening, and spaced apart so as to leave radial openings a cover hinged adjacent thereto, a bolt revolubly mounted in the center of the cover, and a cross bar rigidly secured to the inner end of the bolt and adapted to pass through the radial openings and engage the semi-circular bevels.



3. A journal box comprising a casing having a circular opening in its outer end extended on two opposite sides so as to provide radial openings and bevels formed upon the casing adjacent to the opening, a cover hinged to the casing adjacent to the opening, a bolt formed with a weighted handle and revolubly mounted in the cover and a cross bar rigidly secured to the bolt and adapted to engage the bevels.

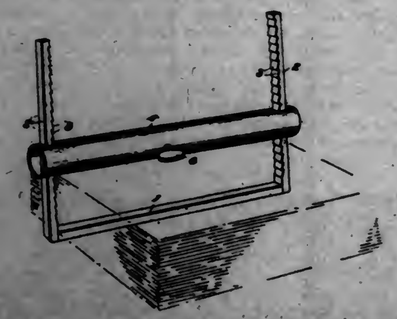
877,781. HAME-HOLDER. PAUL F. KREIMER, Norwood, Ohio. Filed Jan. 21, 1907. Serial No. 353,180.



1. In a hame holder, a collar provided with incisions, a brace, a bifurcated base member on said base adapted to extend through said incisions, and means for securing said bifurcated base member to said collar from the interior concave surface of the roll rim of said collar, substantially as and for the purpose specified.

2. In a hame holder, a collar provided with an incision, a brace, a base member on said brace adapted to extend through said incision, and means for securing said base member to said collar from the interior concave surface of the roll rim of said collar, substantially as and for the purpose set forth.

877,782. LETTER-CLASP. ALFRED J. KRIETE, Asheville, Kans. Filed Sept. 13, 1907. Serial No. 392,720.



1. In a clamp of the character described, the combination of a frame comprising standards, a clamping bar slidably mounted upon the standards, spring actuated catches carried by the clamping bar for engaging the standards, a drum mounted upon the clamping bar, and flexible members connected to the catches and also to the drum.

2. In a clamp of the character described, the combination of a frame comprising standards, a tubular clamping member slidably mounted upon the standards, catches loosely mounted within the ends of the tubular clamping bar for engaging the standards, a transverse shaft journaled within the tubular clamping bar, a drum upon the said shaft, and flexible members connecting the drum to the before mentioned catches.

3. In a clamp of the character described, the combination of a frame comprising toothed standards, a clamping bar slidably mounted upon the said standards, catches slidably mounted upon the clamping bar, each of the catches comprising a nose for engaging the toothed portion of the standards and a shank, springs mounted upon the shanks and normally holding the noses in an operative position, a drum mounted upon the clamping bar, and flexible members connecting the drum and the shanks of the catches.

4. In a clamp of the character described, the combination of a frame comprising toothed standards, a tubular clamping bar slidably mounted upon the toothed standards, transverse partitions in the end portions of the tubular clamping bar, a catch slidably mounted within each end of the clamping bar and comprising a nose for engaging the toothed portion of the respective standard and a shank passing loosely through one of the transverse partitions, a spring mounted upon the shank of each of the catches and interposed between the nose thereof and the transverse partition, a drum mounted within the tubular clamping bar, and flexible members connecting the drum and the inner ends of the shank of the catches.

877,783. MOLDING-MACHINE. CHARLES E. LAMBERTSON, St. Louis, Mo., assignor to St. Louis Malleable Casting Company, St. Louis, Mo., a Corporation. Filed Mar. 31, 1906. Serial No. 309,110.

1. In a molding machine, having a flask supporting table and a pattern associated therewith, a rockable recessing bar adapted to enter said pattern and provided with upper and lower trip fingers, a lever pivoted to the table and operatable between said trip fingers whereby said bar may be inserted into and withdrawn from the pattern and means whereby it may be retained in either of said positions.

2. In a molding machine, having a flask supporting table, and patterns associated therewith, a pair of rockable recessing bars arranged to enter said patterns and having upper and lower trip fingers over-reaching each other, and a lever pivoted to the table and adapted to operate said over-reaching fingers.

3. In a molding machine, the combination of a flask supporting table, a movable platform, a pattern carried by said movable platform, a vertical rod slidably fitted in said pattern, a sprue pattern fitted to said rod, and means for actuating said rod, substantially as set forth.

4. In a molding machine, the combination of a flask supporting table, a movable platform, a pattern carried by said platform, a vertical rod slidably fitted in said pattern, a sprue pattern fitted to said rod, and means for actuating said rod arranged in engagement with said platform, substantially as set forth.

5. In a molding machine, the combination of a flask supporting table, a movable platform, a pattern carried by said platform, a vertical rod fitted in said pattern, a sprue pattern carried by said rod, and a lever connected to said rod and extending in engagement with said platform whereby said rod is elevated during the downward movement of said platform, substantially as set forth.

[Claim 6 not printed in the Gazette.]

877,784. SHADE FOR INCANDESCENT LAMPS. EDWARD B. LEWIS, Pacific Grove, Cal. Filed Aug. 27, 1906. Serial No. 332,254.



1. In a shade-holder, the combination with a shell having a plurality of flat divergent laterally extending shade attaching parts each formed as one piece and rigidly attached thereto whose planes lie in general transverse relation to the longitudinal axis of the shell, of a shade rigidly connected directly to the said shade attaching parts.

2. The combination with a shade-holder having a shell provided with a plurality of shade attaching members constituting extensions of one of the edges or margins of said shell and extending in a general transverse relation to the longitudinal axis of said shell, of a plurality of independent shade sections rigidly attached to the respective members aforesaid.

3. The combination with a shade-holder having a shell provided with a plurality of shade attaching members constituting extensions of one of the edges or margins of said shell and collectively flared outwardly from said shade-holder in general transverse relation to the longitudinal axis of said shell, of a plurality of independent shade sections rigidly attached directly to the respective members aforesaid.

877,785. FENDER FOR LAWN-SPRINKLERS. WILLIAM LINHOFF, Pasadena, Cal., assignor of one-half to Dorothy M. Stout, Bloomfield, N. J. Filed Jan. 31, 1907. Serial No. 355,164.



1. The combination with a sprinkler, of a fender provided with a pair of independently adjustable sides or wings located beyond the discharge orifice of the sprinkler and spaced apart to permit the water to be discharged between them and movable toward and from each other to arrange them in parallelism or at an acute or obtuse angle to each other.

2. The combination with a sprinkler provided at the top with a discharge opening, of a fender having a pair of independently adjustable hinged blades or wings located above the sprinkler and arranged to swing upwardly and downwardly and movable toward and from each other to arrange them in parallelism or at an acute or obtuse angle.

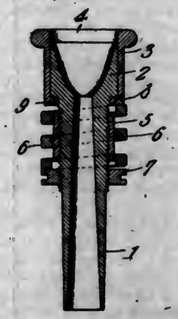
3. A fender for sprinklers comprising supporting means having spaced pintle portions, a pair of blades or wings hinged to the pintle portions and capable of independent adjustment, and means carried by the blades or wings for automatically engaging the support to hold the blades or wings in their adjusted position.

4. A fender for sprinklers comprising supporting means having spaced pintle portions, a pair of blades or wings hinged to the pintle portions and capable of independent adjustment, and springs mounted on the blades or wings and engaging the supports for holding the wings in their adjustment.

5. A fender for sprinklers comprising a support having opposite pintles, and independently adjustable blades or wings provided with hinge elements mounted on the pintles of the support and provided with resilient portions forming springs and engaging the pintles for holding the blades or wings in their adjustment.

[Claims 6 to 18 not printed in the Gazette.]

877,786. MOUTHPIECE FOR WIND INSTRUMENTS. THEODORE MARTENS, Davenport, Iowa. Filed Oct. 21, 1907. Serial No. 398,480.



1. A mouth piece for wind instruments comprising a shank carrying a cup, a cap movable on the cup, a spring bearing against the cap, a collar threaded on the shank to limit the movement of the cap relatively to the cup and means for adjusting the tension of the spring.

2. A mouth piece for wind instruments comprising a shank carrying a cup, a cap movable on the cup, a collar threaded on the shank for limiting the movements of the cap, a spring bearing against the cap, and means for adjusting the tension of the spring.

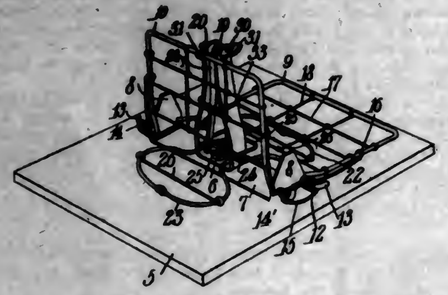
3. A mouth piece for wind instruments comprising a shank, a cup carried thereby and forming in conjunction therewith a shoulder, a cap having a flange to engage the shoulder to limit its outward movement relative to the cup, a collar threaded on the shank to limit the inward movement of the cap, a tension nut also threaded on the shank, and a coiled spring inclosing the collar and bearing at one end against the flange of the cap and at its other end against the tension nut.

877,787. TRAP. HENRY H. MAY, New Albin, Iowa. Filed Aug. 15, 1907. Serial No. 388,689.

1. A trap including a base, a spring actuated impaling jaw pivotally mounted on the base, a bait holder, spaced arms extending vertically from the base and constituting a trigger support, a trigger pivotally mounted between said arms and having one end thereof provided with a hooked terminal adapted to engage the free end of the jaw, the opposite end of said trigger being provided with a terminal recess for the reception of the bait holder, and a loop connecting the arms of the trigger support for limiting the lateral movement of said trigger.

2. A trap including a base, a spring actuated jaw pivotally mounted on the base, a trigger support including spaced arms, a pin extending transversely through said

arms, a bait holder pivotally mounted on the pin and provided with a yoke, a trigger pivotally mounted between the arms and having one end thereof provided with a hooked terminal adapted to engage the impaling jaw, the opposite end of the trigger being provided with a recess for the reception of the yoke of the bait support, and a loop connecting the arms of the trigger support for limiting the lateral movement of said trigger.



3. A trap including a base, a spring actuated impaling jaw pivotally mounted on the base, a trigger support, a pin extending transversely through the trigger support, a bait holder having oppositely disposed eyes for the reception of the pin, said eyes being connected by a transverse yoke, a trigger pivotally mounted on the support and having one end thereof provided with a hooked terminal for engagement with the impaling jaw, the opposite end of the trigger being formed with a recess for the reception of the yoke of the bait holder, and means carried by the trigger support for limiting the lateral movement of said trigger.

4. A trap including a base, a plate secured to the base and having its opposite ends bent upwardly to form vertically disposed ears, spring jaws pivotally mounted in said ears and provided with laterally extending arms, spring coils carried by said arms and bearing against said jaws, a trigger support secured to the plate, bait holders pivotally mounted on the support and provided with transverse yokes, and triggers pivotally mounted on said support and each having one end thereof provided with a terminal hook for engagement with the adjacent jaw and its opposite end formed with a recess for the reception of a yoke of the adjacent bait holder

5. A trap including a base, a plate secured to the base and provided with oppositely disposed ears, spring actuated impaling jaws pivotally mounted on the ears and provided with laterally extending arms, coiled springs carried by the arms of the impaling jaws, a trigger support secured to the plate and having vertically disposed arms, a transverse pin piercing the arms, a bait holder for one of the jaws pivotally mounted on the transverse pin at the outer faces of the vertical arms and provided with a transverse yoke, a bait holder for the other jaw pivotally mounted on the transverse pin at the inner faces of said arms and provided with a similar yoke, a pin connecting the upper ends of the vertical arms, and trigger pivotally mounted on the pin at the upper ends of said arms and each having its pivoted end provided with a hook adapted to engage the adjacent jaw, the opposite end of each trigger being formed with a recess adapted to receive the yoke of the adjacent bait holder.

877,788. RAILWAY-SWITCH. JOHN B. MAYS, Chicago, Ill. Filed Aug. 3, 1907. Serial No. 386,881.

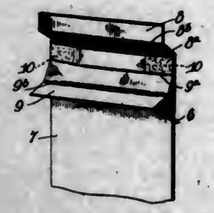
1. In a device of the class described, the main rails, sliding and switch rails in combination with means for normally holding said switch rails in closed position, a switch rod and lever for opening said switch and a segment having limiting notches arranged above said lever, said lever being adapted to engage said notches when raised and be disengaged therefrom when lowered, substantially as and for the purpose specified.

2. In a device of the class described, the main rails, sliding and switch rails, in combination with the switch rods connecting said switch rails and having collars arranged thereon, a yoke secured to the rail, and springs arranged upon said switch rods between said yoke and said collars for normally maintaining said switch in closed position and a switch lever connected to one of said switch rods for opening said switch, substantially as described.



3. In a device of the class described, the main rails, sliding and switch rails, in combination with the switch rod connecting said switch rails, springs arranged upon said switch rods for normally maintaining said switch in closed position, a switch lever connected to one of said switch rods for operating said switch, a plate hingedly arranged between the rails and adapted in one position to rest against the main rails and the point of the switch when the switch is open, a lever pivoted to one of the ties between the rails and having one end secured to one of the switch rods and the other connected by a link to said plate, as and for the purpose specified.

877,789. CLOSURE FOR ENVELOPS OR BAGS. JOHN B. MERKELS, Chicago, Ill. Filed June 14, 1906. Serial No. 321,724.



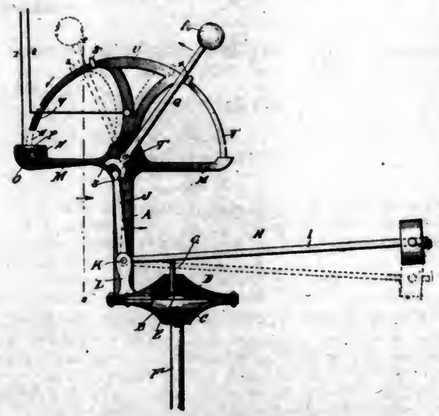
1. A closure for a paper receptacle, comprising a strip attached at its ends to one side of the receptacle and having an intermediate unattached part, part of the receptacle, at the mouth thereof, being folded down upon and within said strip when closed, and a clip embracing the fold and extending under the strip, at said unattached part.

2. A closure for a paper receptacle, comprising a strip secured at its upper corners to one side of the receptacle below the mouth thereof, the strip having an unattached part between and below said corners, part of the receptacle at the mouth thereof being folded down upon and in together with the lower part of said strip, and a clip embracing said fold and extending under between the strip and the receptacle, at said unattached part.

3. A closure for an envelop or bag, comprising a flap at the mouth thereof, a strip secured at its ends to one side of the receptacle, below the mouth thereof and unattached between said ends, the flap being folded within and together with the strip, and a spring clip engaging and embracing the fold at the inner edge thereof and extending under the strip, between the ends thereof.

4. A closure for a paper receptacle, comprising a strip secured at its upper corners to the side of the receptacle below the mouth thereof and unattached between said corners and having a lower unattached portion, the top of the receptacle being folded down upon said strip, and the latter being folded up around said part and over the mouth of the receptacle, forming a closed fold at the upper edge thereof, and a spring clip having branches between which the fold is embraced, said clip being applied to the lower edge of said fold, with one of its branches extending under the same, between the strip and the body of the receptacle.

877,790. AUTOMATIC ELECTRIC SWITCH. MIKE MINTZ, Rock Island, Ill. Filed May 15, 1906. Serial No. 316,925.



The combination in a circuit closer, of a stationary body-portion, a mercury contact and a spacedly located stopping device on the body-portion, an oscillatory conductive member, said conductive member having pivotal support on the body-portion, spacedly located shoulders on said oscillatory member, an upwardly projecting arm with pivotal support on the body-portion, said arm being constructed at its upper end and made forked at its lower end, and being also arranged, adapted to contact one, or the other shoulders, on said oscillatory member, thereby adjusting it by gravitating movement of the weighted end of said pivoted arm, the oscillatory arm and the weighted lever being concentrically pivoted, and means adapted in operation, to engage the forked end of said pivoted arm, swinging it beyond a vertical position, thereby effecting relatively quickened movement of said conductive oscillatory member, by gravitating impact engagement therewith, of the weighted end of said pivoted arm.

877,791. POLLEN-COLLECTING DEVICE. EUGENE MOULIÉ, Jacksonville, Fla. Filed May 13, 1907. Serial No. 373,326.



1. A device of the class described, comprising a vessel having adjustable means for holding a plurality of twigs and the like in an inclined position with the stems immersed in a liquid in said vessel and with the ends projecting over the edges of said vessel.

2. A device of the class described, comprising a vessel adapted to contain a liquid, and having adjustable means for holding a plurality of twigs and the like near the edges of said vessel in an inclined position with the stems immersed in a liquid, and a top having an opening whereby the vessel may be filled with liquid.

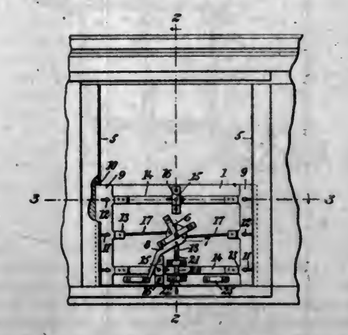
3. A device of the class described, comprising a vessel adapted to contain a liquid, a top on said vessel, said top and said vessel presenting openings therebetween adapted to allow the insertion of twigs and the like, and adjusting means removably located in said openings.

4. A device of the class described, comprising a vessel adapted to contain a liquid, a top extending toward the sides of said vessel and having cross bars adapted to engage with the edges of said vessel to hold said top in place, said top and said vessel presenting openings therebetween, and removable adjusting means carried by said bars and arranged in said openings.

5. A device of the class described, comprising a vessel adapted to contain a liquid, cross bars secured to the edges of said vessel and extending across the same, a top mounted on said cross bars, said top and said vessel presenting openings therebetween, and adjusting members in said openings, said adjusting members having lateral flanges near the upper edges and presenting toes adapted to engage the sides of said vessel.

[Claims 6 and 7 not printed in the Gazette.]

877,792. CAR-DOOR. AARON J. MUNSON, Garretson, S. D. Filed May 22, 1906. Serial No. 318,156.



1. The combination of a car door, vertical plates at opposite edges of the door, slots in the door jambs with which the plates are adapted to engage, metal strips extending from the plates and overlapping each other at their ends, keepers for guiding the overlapped ends of the strips and means pivotally mounted on the door for simultaneously withdrawing and projecting said plates.

2. A car-door having locking-plates slidably connected thereto at opposite sides thereof, strips connecting said plates together having overlapping slotted ends, a keeper confining the overlapping ends of the strips, a device passing through the slots of said overlapping ends of the strips and connected with the door and keeper, and means for simultaneously advancing and retracting the locking-plates.

877,793. FISH-HOOK ATTACHMENT. CLYDE MURPHY, Kingman, Kans. Filed Apr. 24, 1907. Serial No. 370,104.



1. A fish hook having a resilient bait retaining member adapted to extend over a portion of the bait and having one of its ends formed with a laterally or transversely disposed hook shaped portion to engage the fish hook, substantially as described.

2. A fish hook having a bait retaining member slidably engaged at one end with the line engaging portion of the

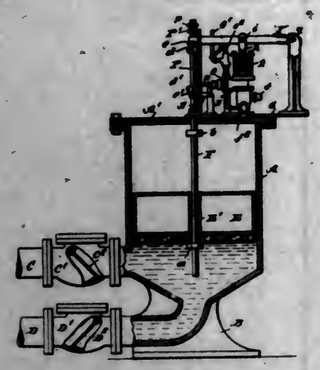
hook and having at its other end a hook shaped portion to engage the body of the hook.

4. The combination with a fish hook having a snood, of a bait retaining member having one end connected to the snood and its other end formed with a transverse or laterally projecting hook shaped portion to engage the body of the hook.

4. The combination with a fish hook having a snood, of a bait retaining member having one end slidably engaged with the snood and its other end adapted for engagement with the body of the hook.

5. The combination with a fish hook having a snood, of a bait retaining member having one of its ends bent around the snood and its other end bent to provide a hook shaped portion to engage the body of the hook.

877,794. SEWAGE-EJECTOR. WILLIAM MCCLINTOCK, New York, N. Y. Filed Sept. 19, 1907. Serial No. 393,633.



1. In a sewage ejector, the combination with the valve operating lever and the lock operating lever, of the movable rod having tappets for engaging said levers, the ends of the levers being forked to receive the rod substantially as shown and for the purposes set forth.

2. In a sewage ejector, the combination of a tank, a float, a movable rod, a valve for governing admission of steam or compressed air to the tank, a lever for operating said valve, a relief valve, said relief valve having a projecting stem arranged in the path of said lever and adapted to be moved by contact with said lever to open the relief valve, substantially as and for the purposes set forth.

3. In a sewage ejector, the combination with the tank, of a valve for governing admission of steam or compressed air to eject the material, and a lock for said valve, the valve being arranged to be opened against the pressure of the ejecting fluid, and means for releasing the locked valve, substantially as explained.

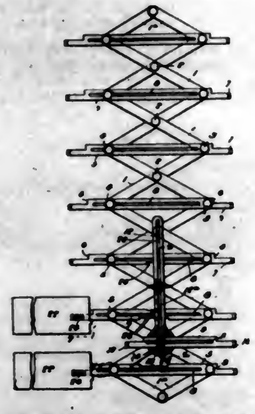
4. In a sewage ejector, the combination with a valve for governing admission of steam or compressed air, of a lock for said valve, said lock comprising a movable bolt, a spring for returning said bolt to its locking position, and means for automatically withdrawing it from its locked position, substantially as set forth.

5. In a sewage ejector the combination with the valve for governing admission of steam or compressed air to eject the material, of a projecting stem having a circumferential groove, and a locking bolt arranged to engage said groove and hold the valve open, means for automatically opening the valve and withdrawing the locking bolt from engagement with the groove, substantially as set forth.

[Claim 6 not printed in the Gazette.]

877,795. SPACING-TOOL. CHARLES MCKENZIE, Port Huron, Mich. Filed Feb. 16, 1907. Serial No. 357,638.

1. In a tool of the character described, the combination of a series of marker bars, means for holding said marker bars at different distances apart, and marker plates detachably connected to the marker bars.



2. In a tool of the character described, the combination of a series of marker bars, means for holding said marker bars at different distances apart, the said marker bars having upturned ends, marker plates provided with openings receiving the upturned ends, and catches carried by the plates and engaging the said upturned ends.

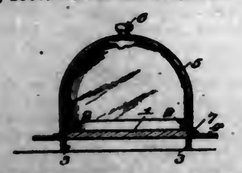
3. In a tool of the character described, the combination of a series of marker bars, means loosely connecting the marker bars and admitting the same to be set at different spaces apart, and an auxiliary marker bar interposed between a pair of the main marker bars in cooperative relation thereto.

4. A spacing tool of the character described, comprising a series of foundation bars connected in a lazy tong construction, a series of main marker bars extending transversely of the foundation bars at the jointed ends thereof and pivotally and slidably connected to said ends, an auxiliary marker bar mounted between two of said main marker bars, a gage bar on which said auxiliary marker bar is mounted so as to be laterally adjustable, and means for rigidly connecting said gage bar to the foundation bars.

5. A spacing tool of the character described, consisting of a series of foundation bars connected together in a lazy tong construction, a series of transversely extending marker bars pivotally and slidingly connected to the jointed ends of the foundation bars, an auxiliary marker bar, a gage bar extending longitudinally of the series of foundation bars and provided with transversely spaced ribs receiving the auxiliary marker bar between them, means for adjustably connecting said auxiliary marker bar to the gage bar, and means for rigidly connecting the gage bar to the foundation bars.

[Claims 6 and 7 not printed in the Gazette.]

877,796. CAKE-HIVE. EMMA C. OLSON, Chicago, Ill. Filed Mar. 5, 1907. Serial No. 360,685.



In a cake hive, the combination of a base comprising a central portion provided towards its outer edge with an integral pendent annular support, an exteriorly threaded vertical rim projecting upwardly from the base and integral therewith, and an integral laterally extending ledge surrounding the base and being of less thickness than the central portion thereof, the said vertical rim being set in from the pendent annular support so that the outer face of the former is approximately in alinement with the inner face of the latter, a dome shaped cover interiorly threaded at its lower end to match the screw threads of the before mentioned vertical rim, and a packing gasket surrounding the rim and interposed between the edge of the cover and the projecting ledge of the base.

877,797. CABLE OR TELEGRAPH CODE. FREDERICK PAIN, Allston, Mass. Filed Oct. 8, 1907. Serial No. 396,514.

CASSO	Unless you can
DACCE	Do as requested
OUZOC	Do nothing about it yet
AGEDA	Answer by cable at my expense

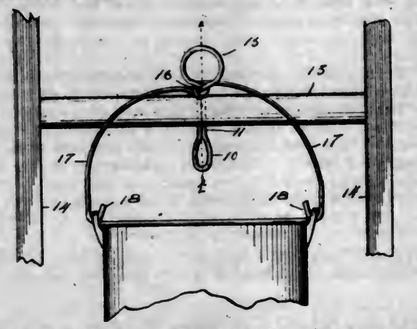
1. A cable or telegraph code, employing separate words of five letters, which are pronounceable and are used, either as a prefix or a terminal, to constitute a ten letter pronounceable word.

2. A cable or telegraph code, comprising a series of five lettered pronounceable words, which can either be combined as prefixes or terminals, to form a ten lettered pronounceable word.

3. A cable or telegraph code, employing the vowels, a, e, i, o, u, combined with any combination of the consonants, b, c, d, f, g, k, l, m, n, p, r, s, t, v, x, to produce a five lettered pronounceable word, which is adapted to be used either as a prefix or a terminal of a ten lettered pronounceable word.

4. A cable or telegraph code in which a pronounceable word of five letters is used either as a prefix or a suffix to produce a pronounceable word of ten letters.

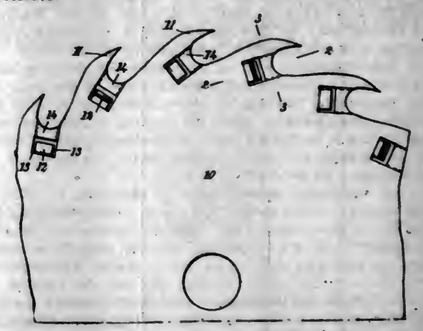
877,798. DEVICE FOR SUPPORTING PAINT-PAILS. PAUL RICHARDSON, Bryan, Ohio. Filed Dec. 17, 1906. Serial No. 348,215.



As an article of manufacture a paint-pail support composed of a length of wire bent upon itself at its center to form a hook, a portion of which is bent laterally to constitute a shank to the hook, a handle formed from the portions of the wire immediately above the hook, a portion of the wire next to the handle being bent around the shank of the hook, and a bail formed from the end portions of the wire, the terminals of which are bent into the form of hooks to engage the sides of a paint-pail.

877,799. PLANING-SAW. CHARLES E. RIDER, Myrtle Point, Oreg. Filed Oct. 3, 1907. Serial No. 395,665.

1. A circular saw having ripping-teeth planing-blades at the root of the teeth in substantial alinement with the gaps between adjacent teeth, said teeth being spaced from the saw at opposite sides by slots, and alternately bent to opposite faces of the saw, and a removable block inserted at the front of each blade, separating said blade from the gap between the adjacent teeth for the purpose described.

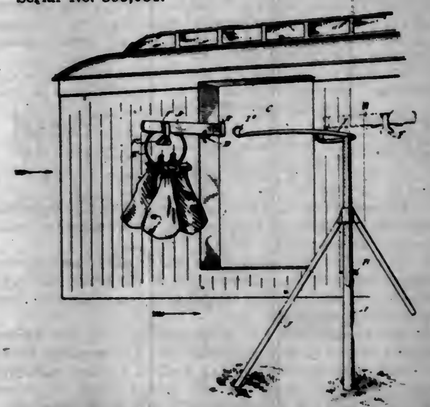


2. A saw having teeth, and planing blades carried by the body of the saw at the root of the teeth and bent to the opposite sides of the saw, said blades having cutting edges facing the gaps between adjacent saw teeth, and separated from said gaps by intervening parts.

3. A saw having teeth, planing-blades stamped from the body of the saw at the root of the teeth and alternately bent to the opposite sides of the saw, said blades having cutting edges arranged at substantially forty-five degrees to a radial line of the saw, and blocks at the front of the blades, separating them from the gap between the adjacent saw teeth.

4. A saw having teeth, planing blades at the root of the teeth in substantial alinement with the gap between the teeth, and a removable block slidably inserted at the front of each tooth, separating it from the gap.

877,800. MAIL-BAG CATCHER AND DELIVERER. EDWARD ROBERTS, Ishpeming, Mich. Filed Oct. 25, 1907. Serial No. 399,084.



1. The combination in an apparatus for handling mail bags, of a crane pivoted at one end to the car, a latch for securing the crane in position for use, a ring supporting pin at the rear side of the crane, pins on the crane to overlie a ring held on the supporting pin, a swinging retaining plate for securing the ring on the supporting pin the said plate being provided at its upper end with a forwardly projecting arm or portion, a latch pivoted between its ends to the crane and having at its upper end a rearwardly projecting arm engaging with that of the retaining plate and provided at its lower end with a head or abutment portion for engagement by a catcher device whereby said device may operate to free the latch from the retaining plate, and a bag catcher comprising a double

armed yoke having its arms provided with upturned hooks and provided at its middle with a depending shaft and an upright in which said shaft is mounted to turn whereby the catcher may be adjusted to receive bags from trains moving in either direction, substantially as set forth.

2. The combination in an apparatus for handling mail-bags, of a car crane having a ring support, a retaining device for holding the ring of said support and a latch for securing the retaining device in position to hold the ring and having a projecting head or abutment portion below for engagement by a bag catching device, substantially as substantially as set forth.

3. In apparatus substantially as described a crane, a ring support on one side of the crane, a ring retaining device on the other side of the crane for holding the ring on its support, and a latch on the opposite side of the crane from the retaining device and having means interengaging with the said device for holding the same in position to secure a ring upon its support, said latch having a portion for engagment by a bag catching device, substantially as set forth.

4. The combination with a car of a swinging crane pivoted thereto and having a ring supporting pin, a retaining plate pivoted to the crane and movable to position to secure a ring upon said pin, and a latch pivoted to the crane and interengaging with the retaining plate whereby it may secure the latter in position to hold the ring on the pin and to free said plate to release the ring, substantially as set forth.

5. The combination with a crane, of a pin or projection thereon for supporting a ring, and projections on opposite sides of said supporting pin to overlie a ring held thereon whereby to prevent any displacement of the ring, a retaining device for holding the ring on its supporting pin, and a latch for securing and releasing said retaining device, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

877,801. CONVEYING APPARATUS FOR DRYING-MACHINES. WALTER M. SCHWARTZ and WILLIAM D. PALEN, Philadelphia, Pa., assignors to The Philadelphia Textile Machinery Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 19, 1907. Serial No. 393,591.



1. An endless chain conveyer consisting of side members connected together at intervals by truss members, substantially as described.

2. In a conveying apparatus, the combination of two endless conveyers, one mounted above the other and each consisting of side members and trussed cross members, substantially as described.

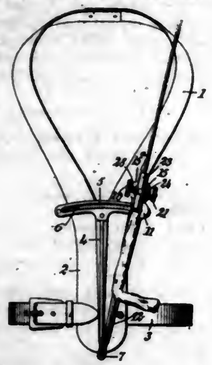
3. The combination in conveying apparatus for drying machine, of two endless belt conveyers, one mounted above the other, each conveyer having a chain at each side connected by trussed cross members spaced apart, the cross members of one chain being directly above the cross members of the other chain on the carrying run, substantially as described.

4. The combination in a conveyer, of two longitudinal chains, transverse members connecting the chains together at intervals, with braces at the back of each transverse member extending from one side of the conveyer to the other, substantially as described.

5. The combination in a conveying apparatus for drying machines, of two or more endless belt conveyers, one mounted above another, each conveyer having side chains and trussed cross members, the trusses being so arranged as to resist the outward pressure of the material carried between the belts, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

877,802. DEVICE FOR SUPPORTING UMBRELLAS AND THE LIKE. ANSON E. SHUSTER, North Bend, Oreg. Filed Mar. 7, 1907. Serial No. 361,108.



1. In a device of the character described, in combination, a yoke, an arm pivotally connected to the yoke, means for securing said arm in adjusted position, a universal joint fixed to said arm, and a clamp fixed to one member of said joint.

2. In a device of the character described, in combination, a yoke having a downwardly-extending tongue, a belt secured to said tongue, an arm pivoted to said tongue, means for holding said arm in varying angular positions, a universal joint fixed to said arm, and a clamp carried by one member of said joint.

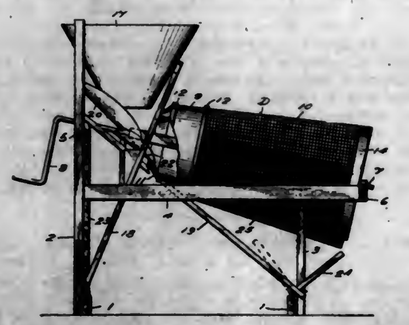
3. In a device of the character described, in combination, a universal joint, a clamp fixed to one member of said joint, an arm by which said clamp is carried, and means for supporting said arm from the body.

4. In a device of the character described, in combination, a support adapted to be fixed to the body of a man, an arm pivoted to said support, means for holding said arm in varying angular positions, a universal joint carried by said arm, and a clamp carried by one member of said joint.

5. In a device of the character described, in combination, a yoke having a tongue, a belt secured to said tongue, a T-shaped member secured to said tongue having a slot in the head thereof, an arm pivoted to said member, a screw working in said slot adapted to secure said arm in varying angular positions, a universal joint carried by the arm, and a clamp carried by one member of said joint.

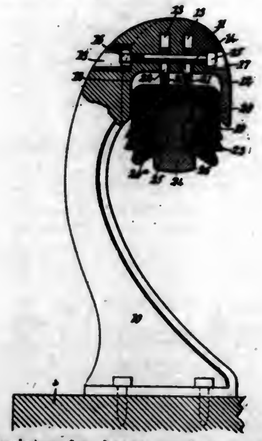
[Claims 6 to 10 not printed in the Gazette.]

877,803. ROTARY SCREEN. GEORGE F. SMAILES, Newark, Ohio. Filed Feb. 28, 1907. Serial No. 359,761.



A rotary screen comprising a frame, a drum with a shaft rotatably mounted on the frame, said drum having longitudinal radial arms therein, a hopper on the frame, a slotted chute communicating with the hopper, an auxiliary chute communicating with the slotted chute, and with the inner open end or mouth of the drum, an adjustable grading apron for the drum, and means for guiding the material and preventing the scattering of the same, substantially as specified.

877,804. INSULATOR FOR HEAVY CONDUCTORS. LOUIS STEINBERGER, New York, N. Y. Filed Apr. 17, 1907. Serial No. 368,744.



1. An insulator for heavy conductors, comprising a substantially saddle-shaped body portion, provided with an opening for receiving a rail, and further provided with flanges projecting therefrom and having slots, a bracket provided with a head having slots into which said flanges project loosely, and bolts threaded through said slots of said flanges and engaging said head so as to support said body portion.

2. The combination of a bracket provided with a head having an opening and also having slots merged into said opening, an insulator mounted loosely within said opening and provided with flanges extending loosely into said slots, said flanges being provided with slots, and bolts mounted upon said head and extending through said slots of said flanges so as to support said insulator loosely from said bracket.

3. An insulator for heavy conductors, comprising a body of insulating material, provided with an opening for receiving a rail, and a metallic strengthening member following generally the contour of said body of insulating material and embedded centrally therein for the purpose of strengthening the same.

4. An insulator for heavy conductors, comprising insulating body portion for supporting a rail, and a substantially saddle-shaped metallic member embedded centrally within said body portion and having a flange projecting from said body portion for the purpose of supporting the same.

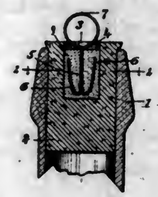
5. An insulator for heavy conductors, comprising an insulating member for holding a conductor, said insulating member being provided with a plurality of flanges of metal projecting therefrom and disposed parallel with each other along the general length of the conductor, for the purpose of supporting said insulating member and said conductor.

[Claims 6 to 8 not printed in the Gazette.]

877,805. CLOSURE. CLAUDE B. STILLWELL, Jacksonville, Fla., assignor to himself and John C. Little, Jacksonville, Fla. Filed July 29, 1907. Serial No. 386,075.

1. A closure, comprising a stopper, an extractor, and plastic means adapted to harden and serving to secure said extractor to said stopper.

2. A closure, comprising a stopper, said stopper having an opening adapted to receive an extractor, and plastic means for rigidly mounting said extractor in said opening, said plastic means hardening on exposure.



3. A closure, comprising a stopper, an extractor, said stopper having a suitable opening to hold said extractor projecting from said opening, and plastic means for securing said extractor in position, said plastic means being adapted to harden after said extractor is in position.

4. A closure, comprising a stopper, an extractor carried by said stopper having a grip at one end thereof, an anchor at the other end of said extractor, and plastic means adapted to harden and serving to secure said anchor in position at said stopper.

5. A closure, comprising a stopper presenting an opening, an extractor provided with an anchor adapted to be mounted within said opening, plastic and means for holding said anchor within said opening and out of engagement with said stopper.

[Claims 6 to 9 not printed in the Gazette.]

877,806. FLAVORING COMPOUND. JOHN M. STUKES, Austin, Tex., assignor to Texas Pure Food Company, a Corporation of Texas. Filed Apr. 1, 1907. Serial No. 365,701.

1. A flavoring compound consisting of pepper, cuminum spice, origanum spice, salt, and garlic flavored suet formed into a compressed mass, in substantially the proportions herein described.

2. A flavoring stick or tablet consisting of pepper, cuminum spice, origanum spice, salt, and garlic flavored suet, in substantially the proportions specified compressed and wrapped in a moisture-excluding covering.

877,807. BOTTLE-HOLDER. SVEN SVENSON, La Crosse, Wis. Filed May 8, 1907. Serial No. 372,595.



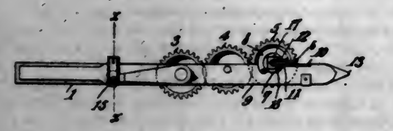
1. A device of the class set forth, comprising, in combination a support, and a holder formed by a single piece of wire, one end of which is substantially straight and adapted to be held in adjusted position by said support, and its opposite end looped to form a pair of jaws, and coiled to form a spring tending to draw said jaws together.

2. A device of the class set forth, comprising, in combination with an adjustable support, a holder comprising a single piece of wire substantially straight on one end, looped on its opposite end to form jaws and coiled between said jaws to form a spring which tends to draw said jaws together, and a jacket over said jaws, for the purposes specified.

3. A device of the class set forth, comprising, in combination, a holder formed by a single piece of wire, one

end of which is substantially straight and its opposite end bent with forwardly directed loops forming a pair of jaws and coiled to form a contraction spring between said jaws, a pair of grippers adapted to engage the straight portion of said holder, a suitable frame in which said grippers are held, a screw by which said grippers are set in engagement with said holder, and a ball support socketed in said frame against which said grippers impinge when said screw is set for fixing said support.

877,808. MACHINE FOR CONNECTING WIRE ENDS. JAMES W. TOWER, Crooked Lake, Mich. Filed Sept. 30, 1907. Serial No. 395,275.



1. The combination with a supporting structure and wire engaging devices carried thereby; of a revoluble radially-slotted wire-engaging element disposed between said devices, means for rotating said element, and an angular wire gripping device insertible longitudinally into said element and having a wire receiving slot registering with the slot in said element.

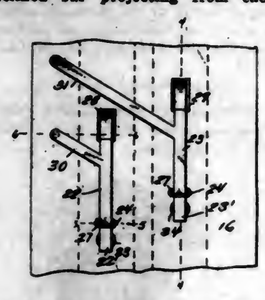
2. The combination with a supporting structure having a pointed end; of a radially-slotted revoluble member, a hub extending beyond the sides thereof and bearing upon the supporting structure, said hub having an angular passage extending longitudinally therethrough, retaining devices pivotally connected to the supporting structure and embracing the hub, a longitudinally movable wire gripping device angular in cross section and insertible into said passage, said device having a wire receiving slot alining with the slot in the revoluble element, means for rotating said element, and wire engaging devices carried by the structure at opposite sides of the revoluble element.

3. The combination with a supporting structure having a pointed end, a cross strip secured upon said structure and having parallel arms at the ends thereof, and wire engaging clips upon the arms; of a revoluble radially-slotted wire-engaging element, a hub extending from the faces thereof and bearing upon the supporting structure, said hub having an angular passage therethrough, a wire gripping device insertible longitudinally into said passage and having a wire-receiving groove registering with the radial groove in the wire-engaging element and with the clips, movable retaining devices connected to the supporting structure and embracing the hub, and revoluble means upon the supporting structure for actuating the wire-engaging device.

4. The combination with a supporting structure, a revoluble radially slotted wire engaging element carried thereby, and means for rotating said element; of a wire engaging device extending at opposite sides of the revoluble element, and wire engaging clips carried by said device and disposed to aline with the slot in the revoluble member, said clips being spaced from said member.

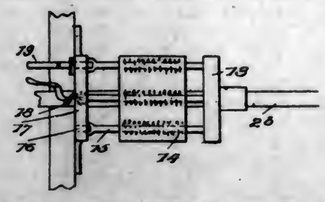
877,809. SASH-FASTENER. BEVERLY B. TURNER, Berthoud, Colo. Filed Feb. 4, 1907. Serial No. 355,761.

The combination with a window casing, including the jamb, inner apertured side-stops, and the vertically movable sashes, of rack-bars secured to the outer edges of the sashes, vertically disposed spring-actuated fingers, one for each sash, pivoted on the inner side of the jamb and provided at their upper ends with upwardly inclined dogs to engage the rack-bars, the jamb having holes through which the dogs are adapted to operate, and a laterally inclined bar projecting from each arm, and



provided with a stud projecting inward through the apertured side-stop.

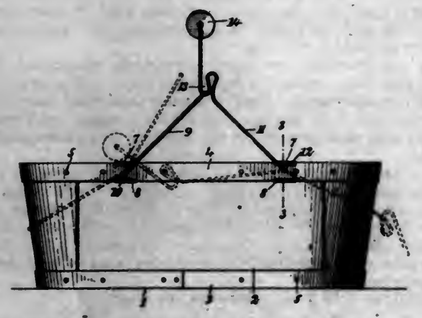
877,810. CORN-PLANTER. WILLIAM A. TUTTLE, Graymont, Ill. Filed Sept. 23, 1907. Serial No. 394,180.



1. In a corn planter of the edge drop type, the combination with the feed hoppers, and feed plates, of actuating mechanism for the feed plates, and means for adjusting said actuating mechanism so as to vary the extent of movement of said plates at each actuation.

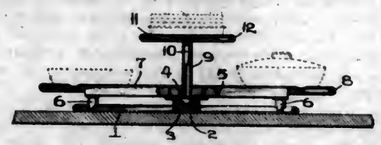
2. In a corn planter, the combination of feed plates, an actuating shaft arranged to turn said plates, a clutch member mounted on said shaft, a disk also mounted on said shaft in proximity to said clutch member, a series of spring pressed pins carried by said disk and arranged for engagement by said clutch member, a plate provided with doors designed when open to permit sundry of said pins to move by spring action out of the way of said clutch member, and means for closing said doors.

877,811. RECEPTACLE. CHARLES UHDEN, Spokane, Wash. Filed July 8, 1907. Serial No. 382,504.



A receptacle having a bail pivotally connected with the sides thereof near each end, one of said bails being of lesser width than the other bail, and being provided with loops on the side members thereof, for engagement by the other bail, the portion of said bail above the loops being bent at an angle to the remaining portion of the bail, and provided with a handle for the purpose set forth.

877,812. SERVING-TABLE. HENRY VOGLER, St. Louis, Mo., assignor of one-half to John Henry Wolf, St. Louis, Mo. Filed Feb. 26, 1907. Serial No. 359,487.



A serving table, comprising a base plate, a block fixed to the center thereof in the top of which is formed a semi-circular recess, a cross frame arranged above the base, a semi-circular block fixed to the center thereof and operating in the recess in the block on the base plate, rollers fixed to the ends of the cross frame and operating on the base plate, a circular platform carried by the cross frame, a tubular standard fixed to the center of the cross frame, a stem arranged for operation in the upper end of the tubular standard, and a disk fixed to the upper end of the stem.

877,813. CUTTING-TOOL. JOSEPH B. WALLER, Kansas City, Mo. Filed Oct. 11, 1907. Serial No. 396,935.



1. A device of the class described, comprising blades having cutting edges, means for removably connecting said blades one to the other, and means for adjusting said blades with respect to one another, said second means serving to clamp said blades together.

2. A device of the class described, comprising blades having cutting edges, connecting means for pivotally securing said blades one to the other, and means for adjusting said blades transversely of their lengths and clamping the same together, one of said blades being removably secured to said connecting means.

3. A device of the class described, comprising blades having cutting edges, members pivotally connecting said blades, one of said blades being removably mounted upon one of said members, and means for adjusting said members to alter the distance between said blades, said means serving to clamp said blades together.

4. A device of the class described, comprising blades having cutting edges, and common means for adjusting the distance between said blades and rigidly securing said blades one to the other, said means, when released, permitting the pivotal movement of one of said blades with respect to the other transversely of their lengths.

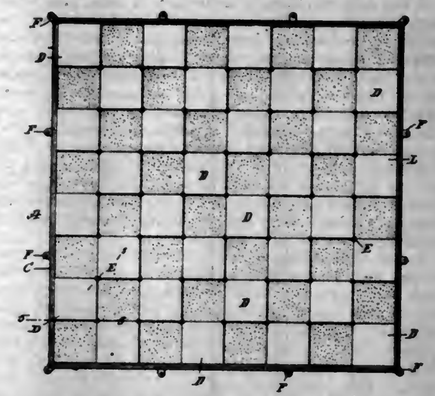
5. A device of the class described, comprising blades having cutting edges, each of said blades being provided with a threaded opening, a thumb-screw arranged in said opening of each blade and adapted to abut against the other blade, and means for clamping said blades against said thumb-screws.

[Claims 6 to 8 not printed in the Gazette.]

877,814. GAME APPARATUS. FELIX WALLSTEIN, New York, N. Y. Filed Apr. 26, 1907. Serial No. 370,482.

1. A game apparatus comprising a board adapted to be stretched on the ground and formed of rows of alternately arranged squares, spaced apart to leave openings of a size corresponding approximately to the squares, the squares and the ground appearing through the openings being in contrast to form a board with alternating light and dark squares.

2. A game apparatus comprising a board adapted to be stretched on the ground and formed of a fabric border and squares made of fabric material and arranged alternately to form files, lines and diagonals, the squares being of a light color and spaced apart to form openings through which appears the ground, the latter thus representing dark squares.

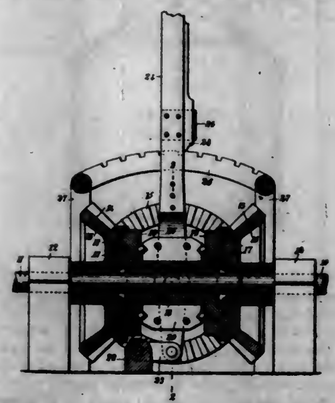


3. A game apparatus comprising a board made of a fabric material and comprising a border, and squares arranged alternately in files and lines, connected with each other at the corners to form openings of approximately the size of the squares.

4. A game apparatus comprising a board made of a fabric material and comprising a border and squares arranged alternately in files and lines, and connected with each other at the corners to form openings of approximately the size of the squares, the outer rows of the squares being attached to the said border.

5. A game apparatus comprising a board made of a fabric material and comprising a border and squares arranged alternately in files and lines, and connected with each other at the corners to form openings of approximately the size of the squares, the other rows of the squares being attached to the said border and the latter being provided with loops for the reception of stakes to hold the board in place when stretched on the ground.

877,815. GEARING. THOMAS J. WESTERMAN, Olalla, Wash. Filed Apr. 26, 1907. Serial No. 370,483.



1. The combination of two bevel wheels, means for connecting said bevel wheels whereby they rotate simultaneously in opposite directions, a driven shaft concentric with said wheels, a collar non-rotatably mounted upon said shaft and longitudinally movable in respect thereto to engage with either of said wheels to cause the rotation of said driven shaft in either direction, the engaging surfaces of said wheels and said collar being provided with concen-

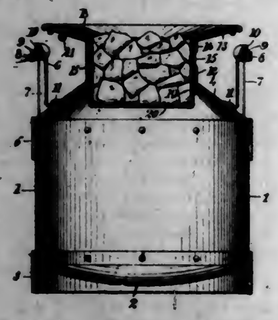
tric corrugations, a sleeve surrounding said collar and ball bearings spacing said collar and sleeve.

2. The combination of a drive shaft, a bevel gear wheel secured thereto, a driven shaft in alinement with the drive shaft and terminating closely adjacent thereto, a second bevel gear wheel rotatably mounted upon the driven shaft, each of said bevel gear wheels having the adjacent faces thereof provided with concentric corrugations, a collar keyed to said driven shaft intermediate said bevel gear wheels and having flanges provided with concentric corrugations adapted to engage with the corrugations of either of said wheels, a non-rotatable sleeve surrounding said collar, end thrust ball bearings intermediate the ends of the sleeve and said collar, a lever for moving said sleeve longitudinally, and a bevel gear wheel meshing with both of the first mentioned bevel gear wheels.

3. The combination of two gear wheels, means for connecting said gear wheels whereby they rotate simultaneously in opposite directions, a driven shaft concentric with both of said wheels, a collar non-rotatably mounted upon said shaft and longitudinally movable in respect thereto to engage with either of said wheels to cause the rotation of said driven shaft in either direction, the engaging surfaces of said wheels and said collar being provided with concentric corrugations, a sleeve surrounding said collar and spaced therefrom and ball bearings at each end of the sleeve and intermediate the sleeve and collar to resist end thrust.

4. The combination of two wheels, means in operative engagement with said wheels whereby they rotate simultaneously in opposite directions, a driven shaft concentric with said wheels, a collar non-rotatably mounted upon said shaft and longitudinally movable in respect thereto, said collar having annular flanges surrounding each end thereof and adapted to engage with the surfaces of said wheels to cause the rotation of said driven shaft in either direction, a sleeve surrounding said collar, and bearings interposed between the ends of said sleeve and the flanges of said collar.

877,816. SHIPPING-CAN. JOSEPH B. WHITEHEAD, Salt Lake City, Utah, assignor to himself, and Timothy M. Farrell, Pocatello, Idaho. Filed Sept. 18, 1906. Serial No. 335,056.



1. A shipping can, comprising a body having a contracted neck portion at the top, a cover, a ventilating passage communicating with the interior of said body, and means carried by said body for supporting a similar superimposed can above said body so as to leave an open space around the neck of the lower can, the said ventilating passage communicating with said open space, whereby the interior of the lower can is at all times in communication with the atmosphere.

2. A shipping can, comprising a body, and means carried by said body for supporting a similar superimposed can out of engagement with said body, said first-mentioned can having a ventilating opening in the upper portion thereof communicating with the outside atmosphere through the space between the body of the first-mentioned can and the superimposed can, said supporting means also serving as handles to facilitate the movement of the can carrying the same.

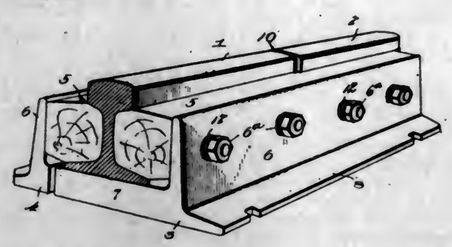
3. A shipping can, comprising a body portion, a downwardly-extending flange surrounding the lower end thereof, and handles rigidly secured to the said can adjacent the upper end thereof, the said handles being provided with shoulders adjacent their upper ends adapted to receive the downwardly-extending flange of another similar can when the latter is placed thereon.

4. A shipping can, comprising a body portion, a downwardly-extending flange surrounding the lower end thereof, and handles rigidly supported adjacent the upper end thereof, said handles having outer vertical surfaces in alinement with the outer surface of said flange, and having shoulders adapted to receive and support the downwardly-extending flange of another similar can when the latter is placed thereon.

5. A shipping can, comprising a body portion, a downwardly-extending flange surrounding the lower end thereof, and handles supported adjacent the upper end thereof, said handles comprising two upright standards and a connecting hand-hold bar, the outer surface of said bar lying in alinement with the outer surface of the downwardly-extending flange and a portion of said bar being cut away to form a shoulder and a vertical surface in alinement with the inner surface of the downwardly-extending flange, the said shoulder adapted to receive and support the flange of another similar can when the latter is placed thereon.

[Claims 6 and 7 not printed in the Gazette.]

877,817. INSULATED COMPROMISE RAIL-JOINT. BENJAMIN WOLHAUPTER, New York, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed Mar. 22, 1907. Serial No. 363,919.



1. In an insulated compromise rail joint, the service rails, opposite shoes, each provided with a short-length base section affording a support for one rail end, said separate base sections being disconnected and having a stepped relation, and means for insulating one rail from the other.

2. In an insulated compromise rail joint, the service rails, opposite shoes, each provided with a short-length base section for one rail end and affording such rail end a support on both sides of the meeting point of the rail ends, said separate base sections having a stepped relation, and means for insulating one rail from the other.

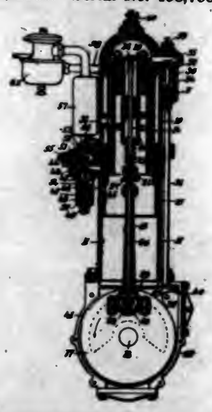
3. In an insulated compromise rail joint, the service rails, opposite shoes, each provided with a short-length integral base plate affording a support for one rail end, said base sections projecting respectively from diagonally opposite portions of the opposite shoes and bearing a stepped relation to each other, and means for insulating one rail from the other.

4. An insulated compromise rail joint having separate disconnected base sections respectively for the dissimilar rails, said base sections having a stepped relation and each affording one rail end a support on both sides of the meeting point of the rail ends, and means for insulating one rail from the other.

5. In an insulated compromise rail joint, the service rails, opposite shoes, each provided along one end portion thereof with a short-length base section affording a support for one rail end, said separate base sections having their rest faces respectively at different elevations for stepping the dissimilar rails, and means for insulating one rail from the other.

[Claims 6 to 10 not printed in the Gazette.]

877,818. INTERNAL-COMBUSTION ENGINE. HARRY W. ADAMS, Fargo, N. D., assignor of one-half to Philip W. Farnham, Fargo, N. D. Original application filed July 11, 1905, Serial No. 269,154. Divided and this application filed Nov. 21, 1906, Serial No. 344,393. Renewed Dec. 31, 1907. Serial No. 408,795.



1. An internal combustion engine having a working cylinder provided with an exhaust port, a closed crank chamber, means movable in relation thereto and forming with said crank chamber a suction exerting means, and a valve controlling the passage of fluid between the crank chamber and the working cylinder of the engine.

2. A two-cycle internal combustion engine having a working cylinder provided with an exhaust port, a closed crank chamber, means movable in relation thereto with said crank chamber and forming a suction exerting means, means forming a passage from said crank chamber to the working cylinder of the engine, and a valve for controlling the flow of fluid through said passage.

3. An internal combustion engine having a working cylinder provided with an exhaust port, a closed crank chamber, means movable in relation thereto and forming with said crank chamber a suction exerting means, and a working piston having a valve-controlled passage leading from the working cylinder to the crank chamber.

4. An internal combustion engine having a closed crank chamber, a working cylinder provided with an exhaust port, a working piston having a port therein and forming with the crank chamber a suction exerting means, and a valve commanding said port.

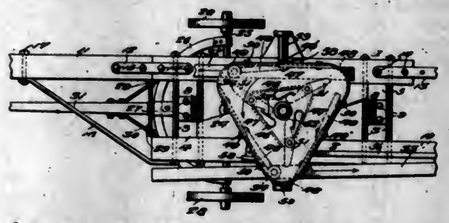
5. An internal combustion engine having a closed crank chamber, a working cylinder provided with an exhaust port, a working piston having a port therein and forming with the crank chamber a suction exerting means, a valve commanding the port, and means for periodically operating the valve.

[Claims 6 to 19 not printed in the Gazette.]

877,819. BALING-PRESS. LEWIS P. AGNEW, Wapanucka, Okla. Filed May 18, 1907. Serial No. 374,337.

1. In baling apparatus, the combination of a main frame, a supporting bar extending rearwardly from one side of the main frame, a second supporting bar applicable at the front or rear of the other side of the main frame, baling boxes carried by said bars, plungers operating in said boxes, and means carried by the main frame for operating said plungers.

2. In a baling apparatus, the combination of a main frame, a supporting bar extending rearwardly from one side of the main frame, a second supporting bar, means for securing the same at either the front or rear end of the other side of the main frame, means for bracing said bar in its forward position, baling boxes carried by the respective bars, plungers operating in said boxes, and means mounted on the main frame for operating said plungers.

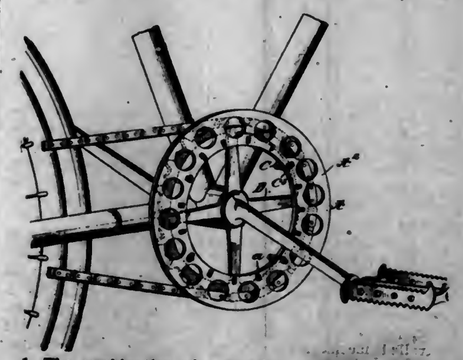


3. In a baling apparatus, the combination of a frame carrying press boxes, plungers operating therein, an arched support carried by the frame, a vertical shaft journaled at its lower end in the frame and at its upper end in said support, an eccentric journaled upon the upper portion of said shaft and operating to alternately engage and release the pitmen to force them on their working stroke and free them for their return stroke, pitmen connected with the plungers and operated on their working stroke by the eccentric, levers connected with the pitmen, and a cam mounted on the shaft below the eccentric and arranged to engage the levers upon the release of the same by the eccentric for moving the plungers on their return stroke.

4. In a baling press, the combination of a frame carrying press boxes, plungers operating therein, pitmen connected with the plungers, an eccentric having an angular trackway in which portions of the pitmen travel, engaging members at the corners of the trackway, spring-controlled dogs or latches guarding the spaces between the portions of the trackway, whereby the pitmen are adapted to be impelled on their working stroke, and means for retracting the plungers.

5. In a baling press, the combination of a frame carrying press boxes, plungers operating therein, pitmen connected with the plungers, a vertical shaft upon the frame, an eccentric carried by said shaft and operating to alternately engage and release the pitmen to force them on their working stroke and free them for their return stroke, retracting levers connected with the pitmen, and a cam carried by the shaft and acting on said levers upon the release of the same by the eccentric to draw upon the pitmen and retract the plungers.

877,820. BICYCLE ATTACHMENT. BENJAMIN M. BADGER, Dillon, S. C. Filed Mar. 19, 1907. Serial No. 363,260.



1. The combination of a sprocket wheel, a guard plate alongside the same and provided with radially elongated

slots and clips having head-like portions provided with notches receiving the sprocket wheel and also having outwardly projecting bolt-like shanks extending through the radial slots in the guard plate, and nuts on said shanks for securing the same in connection with the guard plate, substantially as set forth.

2. A pantaloon guard for bicycle sprocket wheels, comprising an open ring and clips movable radially in connection therewith for securing the same to a sprocket wheel the clips having means turning into and out of engagement with the sprocket wheel, substantially as set forth.

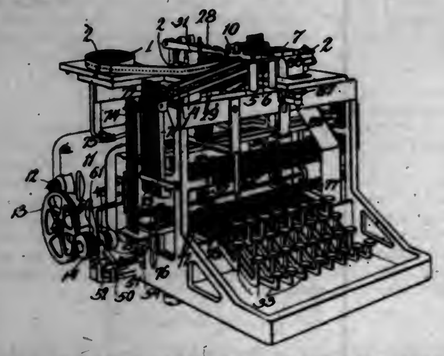
3. A trousers guard for bicycle sprocket wheels, comprising an open ring, and fastenings connected with said ring and capable of adjustment radially of said ring and projecting laterally from the ring for connection with a sprocket wheel, substantially as set forth.

4. A pantaloon guard for bicycle sprocket wheels, comprising an open ring provided with radial slots, and fastenings for securing the same to the sprocket wheel and having shanks adjustable radially in said slots, said fastenings having means for engagement with the sprocket wheel substantially as set forth.

5. A pantaloon guard comprising a guard plate having openings for fastening devices and fastening devices for securing the plate to a sprocket wheel and having means for engagement with the sprocket wheel and also having shanks adapted to turn in the openings of the guard plate and be adjusted radially therein, substantially as set forth.

[Claim 6 not printed in the Gazette.]

877,821. PERFORATING-MACHINE. JOHN C. BARCLAY, New York, N. Y. Filed May 2, 1906. Serial No. 314,764.



1. A machine of the class described, comprising in combination a plurality of character members, feed mechanism comprising a movable carrier provided with stops, a power member, mechanical stop-setting means arranged to be engaged and operated by said power-member, and selecting means operated by said character members and arranged to select a particular stop-setting means and engage same with said power member.

2. A machine of the class described comprising in combination a plurality of character members, feed mechanism comprising a movable carrier provided with stops, a power member, mechanical stop setting means, and selecting means operated by said character members and controlling the operation of said stop-setting means, the latter deriving power from said power member.

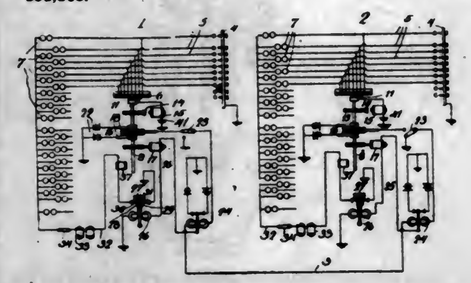
3. A machine of the class described comprising in combination a plurality of character members, feed mechanism comprising a movable carrier provided with stops, selecting means operated by said character members, a power member, and power-operated stop-setting means deriving power for operation from said power member but controlled mechanically in operation by said selecting means.

4. A machine of the class described comprising in combination a plurality of character members, feed mechanism comprising a movable carrier provided with stops, a power member, a plurality of setting devices for said stops, provided with means for engaging said power member, and selecting means operated by said character members and controlling such engaging means of the stop-setting devices.

5. A machine of the class described comprising in combination a plurality of character members, feed mechanism comprising a movable carrier provided with stops, a reciprocating power member, a plurality of setting devices for said stops, provided with means for engaging said reciprocating member at will, and selecting means operated by said character member and controlling such engaging means.

[Claims 6 to 26 not printed in the Gazette.]

877,822. PRINTING-TELEGRAPH. JOHN C. BARCLAY, New York, N. Y. Filed Jan. 11, 1907. Serial No. 351,863.



1. A printing telegraph comprising in combination transmitting means including pulsatory-current producing means arranged to produce periodic current pulses in a line and means for prolonging at will any one of such pulses; a line circuit; and receiving means including a plurality of character-magnets corresponding each to a different character, and corresponding in number to the characters to be printed, one or another of said magnets adapted singly to cause the printing of any one of such characters, a sunflower selector comprising contacts for the different character magnets, and a separator relay controlled by the line circuit and controlling the circuits through said sunflower to the several character magnets and arranged when operated by a prolonged pulse to cause the character magnet in circuit at that instant through the sunflower to operate.

2. A printing telegraph comprising in combination transmitting means including pulsatory-current producing means arranged to produce periodic current pulses in a line, and a key board and means operated thereby for prolonging at will any one of said pulses; a line circuit; and receiving means including a plurality of character magnets corresponding each to a different character, and corresponding in number to the characters to be printed, one or another of said magnets adapted singly to cause the printing of any one of such characters, a sunflower selector comprising contacts for the different character magnets, and a separator relay controlled by the line circuit and controlling the circuits through said sunflower to the several character magnets and arranged when operated by a prolonged pulse to cause the character magnet in circuit at that instant through the sunflower to operate.

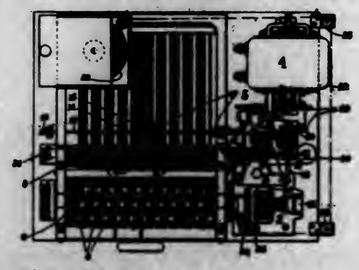
3. A printing telegraph comprising in combination transmitting means comprising a pole changer and controlling means arranged at will to arrest said pole changer; a line circuit to which said pole changer is connected; and receiving means including a plurality of character magnets corresponding each to a different character, and corresponding in number to the characters to be printed, one or another of said magnets adapted singly to cause the printing of any one of such characters, a sunflower selector comprising contacts for the different character magnets, and a separator relay controlled by the line circuit controlling the circuits through said sunflower to the several character magnets and arranged when operated by a prolonged pulse to cause the character magnet in circuit at that instant through the sunflower to operate.

4. A printing telegraph comprising in combination transmiting means including a pole changer, a key board and means operated thereby for arresting said pole changer at will, and prolonging the current pulse produced thereby at the instant of such arrest; a line circuit; and receiving means including a plurality of character magnets corresponding each to a different character, and corresponding in number to the characters to be printed, one or another of said magnets adapted singly to cause the printing of any one of such characters, a sunflower selector comprising contacts for the different character magnets, and a separator relay controlled by the line circuit and controlling the circuits through said sunflower to the several character magnets and arranged when operated by a prolonged pulse to cause the character magnet in circuit at that instant through the sunflower to operate.

5. A printing telegraph comprising in combination transmitting means including a sunflower and controlling devices corresponding to different characters to be printed and connected to different contacts of said sunflower, means operated in synchronism with the operation of said sunflower arranged to produce periodic current pulses in a line circuit, and means causing the operation of any one of said controlling devices to effect prolongation of the corresponding current pulse; a line circuit; and receiving means including character-magnets corresponding each to a different character and corresponding in number to the characters to be printed, a sunflower selector operated in synchronism with said transmitter sunflower and comprising contacts for the different character magnets, and a separator relay controlled by the line circuit and controlling the circuits through said receiving sunflower and character magnets and arranged when operated by a prolonged pulse to cause the character magnet selected at that instant by said receiving sunflower to operate.

[Claims 6 to 14 not printed in the Gazette.]

877,823. PERFORATOR. JOHN C. BARCLAY, New York, N. Y. Filed July 22, 1907. Serial No. 385,000.



1. A machine of the class described comprising in combination punching and paper feed mechanism, character members and selecting means operated thereby controlling the same, a power member, a clutch, and releasing means therefor comprising a stop for the clutch, means for operating the same to release the clutch and positive returning means for said stop operated by said power member to move said stop back to arresting position.

2. A machine of the class described comprising in combination punching and paper feed mechanism, character members and selecting means operated thereby controlling the same, a power member, a clutch, and releasing means therefor comprising a stop for the clutch, means for operating the same to release the clutch and a cam arranged to positively return said stop to arresting position.

3. A machine of the class described comprising in combination punching and paper feed mechanism, character members and selecting means operated thereby, controlling the same, a power member, a clutch comprising a sliding member, clutch releasing means comprising a stop normally engaging said sliding member and holding the clutch open, means for operating the stop to permit the clutch to close, and a cam arranged to move said stop into arresting position, said cam normally out of engagement with said stop.

4. A machine of the class described comprising in combination punching and paper feed mechanism, character members and selecting means operated thereby controlling the same, a power member, a clutch comprising a sliding member, clutch releasing means comprising a stop normally engaging said sliding member and holding the clutch open, means for operating the stop to permit the clutch to close, said stop having a bell crank extension and a cam mounted to rotate with said clutch and adapted to engage said bell crank extension to positively restore the stop to arresting position, said cam having a flattened side normally opposite said extension.

5. A machine of the class described comprising in combination punching and paper feed mechanism, character members and selecting means operated thereby controlling the same, a power member, a clutch, a stop normally holding said clutch open and tripping means for said stop comprising a universal member arranged to be operated by the finger keys, a hook operated thereby and a trip normally engaged by said hook and normally engaging said stop, the stop arranged when operated to disengage said hook from said trip.

[Claims 6 and 7 not printed in the Gazette.]

877,824. DAMPENING ATTACHMENT FOR DRY-ROOM CONVEYERS. WILLIAM BARTHOLOMEW, Chicago, Ill., assignor to Troy Laundry Machinery Company, Limited, Troy, N. Y., a Corporation of New York. Filed Apr. 17, 1907. Serial No. 368,715.



1. In a device of the class described, the combination with a carrier mechanism, of a depending dampening casing supported in the path of travel thereof and provided with a longitudinal opening in its upper portion through which a portion of the carrier may pass.

2. In a device of the class described, a track, a traversing carrier mounted thereon, a casing suspended from said track and provided with an opening through which a portion of said carrier may pass, a moistening device disposed within said casing at opposite sides of a central passage therethrough, an inclined bottom to said casing, and a discharge connection therefrom.

3. In a device of the class described, a support, a traversing carrier mounted thereon, and a casing provided at its opposite ends with yokes suspended from said support and at its upper portion with a slot extending longitudinally of the support.

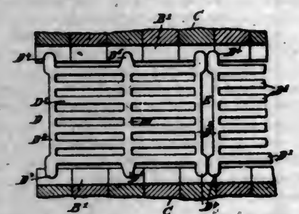
4. In a device of the class described, a support, a traversing carrier mounted thereon, a casing provided at the opposite ends with yokes suspended from said support and at its upper portion with a slot extending longitudinally of the support, and moisten devices supported within the casing at opposite sides of said slot.

5. In a device of the class described, a support, a traversing carrier mounted thereon, a casing provided at its opposite ends with yokes suspended from said support and at its upper portion with a slot extending longitudinally of the support, longitudinally extending moistening

pipes within said casing on opposite sides of said slot, and a plurality of atomising nozzles carried by said pipes and discharging toward each other.

[Claims 6 to 12 not printed in the Gazette.]

877,825. GRATE FOR BRICK-KILNS. PETER E. BENNETT, Roseton, N. Y. Filed June 25, 1907. Serial No. 380,804.



A grate section for a brick kiln, comprising longitudinally extending spaced grate bars, and cross bars connecting the said grate bars, lugs at the corners of the grate section, the lugs extending sidewise beyond the sides of the outermost of the said cross bars and adapted to engage a supporting means for supporting the section, said lugs also extending endwise beyond the cross bars whereby to properly space the adjacent grate, an intermediate cross bar integrally connecting the grate bars with each other, and intermediate lugs projecting integrally outward from the side grate bars opposite the ends of the said intermediate cross bar, and adapted to engage a supporting means, the said corner lugs and the said intermediate lugs being rounded off at the bottom.

877,826. SUPPORT FOR USE IN FINISHING LASTS. CARL BENSCHEIDT, Alfeld, Germany. Filed June 6, 1907. Serial No. 377,664.

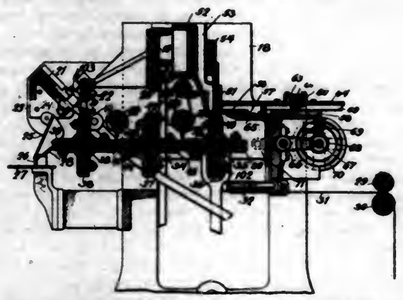


1. In a support for a last, the combination, with a base plate provided with a stationary block 2 having a recess at one end, of a vertically adjustable block 4 provided with a concave face and secured in the said recess, a curved block 8 pivoted at one end to the said base plate and provided with a clamping device, and an adjustable wedge-support for the heel of the last slidable on the said base plate.

2. In a support for a last, the combination, with a base plate provided with a stationary block 2 having a recess at one end, of a vertically adjustable block 4 provided with a concave face and secured in the said recess, the end portions of the said blocks 2 and 4 and the base plate being provided with curved guide surfaces 21, a curved block 8 pivoted at one end to the said base plate and provided with a clamping device, and an adjustable wedge-shaped support for the heel of the last slidable on the said base plate.

877,827. CIGARETTE-MACHINE. HUGO BILGRAM, Philadelphia, Pa., assignor to Comas Cigarette Machine Company, Baltimore, Md., a Corporation of Virginia. Filed Jan. 14, 1907. Serial No. 352,073.

1. In cigarette machines, a support, a plurality of tobacco feeding and cigarette forming devices mounted thereon, each of said devices comprising a plurality of intermittently rotating mold wheels and means to force tobacco into said mold wheels, a primary paper feed to uniformly and positively feed a paper strip, an angularly disposed turning stud for said strip, intermittently acting loosely gripping rolls to feed said strip, a knife to sever the same into individual wrappers and an intermittently reciprocating feeder to engage and feed said severed wrappers into coöperation with said mold wheels.



2. In cigarette machines, a frame and a plurality of tobacco feeding and cigarette forming devices mounted on said frame, each of said devices comprising a plurality of mold wheels and primary paper feed rolls having substantially parallel axes, a turning stud to engage a paper strip from said rolls, an intermittently rotating lightly gripping supply roll to feed said paper strip, a table and plate to receive between them the end of said paper strip from said supply roll, means to sever a wrapper from the end of said strip and a reciprocating feeder above said plate formed with depending fingers on either side of said plate to engage and feed forward said wrapper into coöperation with said mold wheel.

3. In cigarette machines, tobacco feeding and cigarette forming devices, a sprocket shaft provided with a mutilated gear and with a gear to operate a drum shaft, a slide having inclined rack teeth, a mutilated pinion engaging said mutilated gear and connected to said slide, transversely arranged paper feeders provided with coöperating inclined teeth to be intermittently reciprocated by said slide, a supply shaft intermittently operated from said drum shaft, a plurality of lightly gripping supply rolls to feed paper strips operated by gearing from said supply shaft, said gearing comprising disengageable clutches, and means to manually operate one of said supply rolls.

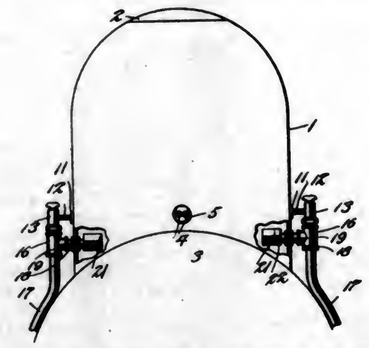
4. In cigarette machines, tobacco feeding and cigarette forming devices, a sprocket shaft provided with a mutilated gear and with a gear to operate a drum shaft, a mutilated pinion engaging said mutilated gear, a slide provided with inclined rack teeth, a crank and link connected to said slide and operated by said mutilated pinion, transversely arranged paper feeders provided with coöperating inclined teeth to be intermittently reciprocated by said slide, a supply shaft intermittently operated from said drum shaft, a plurality of lightly gripping supply rolls to feed paper strips and operated by gearing from said supply shaft, said gearing comprising a gear disengageably clutched to said supply shaft and a clutch wheel secured to said gear to manually and independently rotate each of said supply rolls.

5. In cigarette machines, a plurality of tobacco feeding and cigarette forming devices, paper feeding means for each of said cigarette forming devices comprising gripping paper feeders and gearing for said feeders comprising a clutch member for each and a common supply shaft on which said clutch members are mounted, a coöperating spring clutch member loose on said shaft and connected to each of said feeders, said clutch members having points of engagement spaced around said shaft in correspondence with the amount of movement of said shaft in feeding a single wrapper and means to manually operate each of said feeders when the corresponding clutch is disengaged.

[Claims 6 to 10 not printed in the Gazette.]

877,828. TRACK-SANDING DEVICE. JOHN W. BRADY, Neodesha, Kans., assignor of one-half to Elis N. Walker, Neodesha, Kans. Filed May 25, 1907. Serial No. 375,671.

1. A sanding device comprising a casing or dome, air pipes leading into the casing or dome and out through the sides thereof, nozzles fitted to said air pipes, said nozzles being fitted in couplings connected to the sand pipes, and hoods connected to the sand pipes inside the casing or dome.



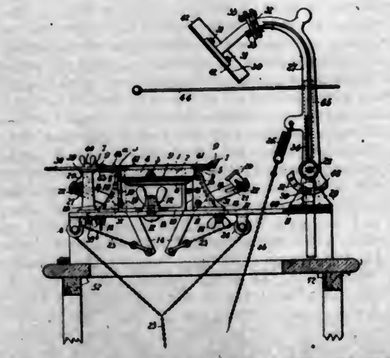
2. In a sanding device, the combination of air pipes, a casing, said air pipes extending transversely across and through the walls of the casing, air nozzles fitted to said pipes and extending into couplings to which the sand pipes are connected, and removable plugs fitted in the upper ends of the nozzles.

3. In a sanding device, the combination of a casing, air pipes leading from the cab into the casing, said air pipes being curved and branched, pipes connected to each branch and having curved divergent portions leading out through the sides of the casing, nozzles fitted to said pipes outside the casing, said nozzles being fitted to couplings communicating with the interior of the casing, and deflectors or hoods secured to said sand pipes inside the casing.

4. In a sanding device, the combination of a casing, air pipes leading out through the sides of said casing and provided with nozzles, removable plugs in said nozzles, sand pipes leading into the casing and provided with deflectors, the outlets of said nozzles being disposed at right angles to said sand pipes.

5. In a sanding device, the combination of a casing, air pipe connections between said casing and the air brake system of the locomotive, nozzles on the ends of said air pipes, said nozzles having restricted outlets, sand pipes leading into the casing and deflectors secured to the inner ends of said sand pipes, said deflectors having oppositely inclined upper walls and an open bottom and end.

877,829. BOX MAKING AND COVERING MACHINE. WILLIAM R. COMINGS, Wimbledon, England. Filed Dec. 10, 1907. Serial No. 405,940.



1. In a box making and covering machine, the combination of a supporting frame, an arm pivotally supported at one end of said frame, said arm being provided with box holding means at the other end, a die upon which a box blank may be held by said means, a spring normally holding said plate out of contact with said die, adjustable means limiting the return movement of said arm under the influence of said spring, resilient pulling devices for swinging the box holding means into contact with said die, and means for holding the box blank subsequently to and independently of the movement of said box holding means to clamp the blank, substantially as described.

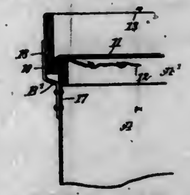
2. In a box making and covering machine and in combination a hinged arm, a rigid die having folding wings upon which a box blank is held by said arm to be folded, an adjustable framework for rigidly supporting said die, means for adjusting said framework, adjustably mounted pivotal levers for folding the die wings and blank on two sides thereof, adjustable supports for said levers, means for adjusting said supports and means for operating said levers subsequently to the operation of and independently of said arm.

3. In a box making and covering machine and in combination a hinged arm, a rigid die having folding wings upon which a box blank is held by said arm to be folded, an adjustable framework for rigidly supporting said die, means for adjusting said framework, adjustably mounted pivotal levers for folding the die wings and blank on two sides thereof, adjustable presser heads carried by said levers, means for adjusting said presser heads, adjustable supports for said levers, means for adjusting said supports, and means for operating said levers subsequently to the operation of and independently of said arm.

4. In a box making and covering machine and in combination a hinged arm, means for actuating said arm, a rigid die having folding wings upon which a box blank is held by said arm to be folded, an adjustable framework upon which said die is rigidly supported, means for adjusting said framework, pivotally mounted closure levers for folding the die wings and blank on two sides thereof, adjustable supports for said levers, means for adjusting said supports, and means for operating said levers subsequently to the operation of and independently of said arm.

5. In a box making and covering machine and in combination, a hinged arm, a removable plate carried thereby, a ball joint in said arm for adjusting said plate, a pulling member for actuating said arm, a rigid removable die having folding wings upon which a blank is held by said arm to be folded, means carried by said die for tucking in the corners of said blank, pivotally mounted levers for folding said die wings and said blank, and means for actuating said levers subsequently to the operation of and independently of said arm.

877,830. DRUM. ATHERTON D. CONVERSE, Winchendon, Mass. Filed Apr. 23, 1907. Serial No. 369,847.



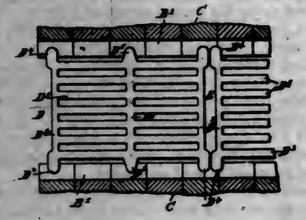
1. In a drum, the combination with the body, the flesh or tuck hoop surrounding the body at the end, the head carried by the tuck hoop and resting on the edge of the body, and the rim, of a plurality of fixed stays spaced apart and engaging with the flesh or tuck hoop and the rim, the said stays preventing the rim from shifting, and maintaining it in position relatively to the said head.

2. In a drum, the combination with the body, the flesh or tuck hoops encircling the body at the ends, the heads carried by the tuck hoops and the rims in alinement with the tuck hoops, of a plurality of stays located at each end of the drum and each comprising a metal strip engaging

pipes within said casing on opposite sides of said slot, and a plurality of atomizing nozzles carried by said pipes and discharging toward each other.

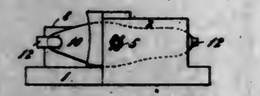
[Claims 6 to 12 not printed in the Gazette.]

877,825. GRATE FOR BRICK-KILNS. PETER E. BENNETT, Roseton, N. Y. Filed June 25, 1907. Serial No. 380,804.



A grate section for a brick kiln, comprising longitudinally extending spaced grate bars, and cross bars connecting the said grate bars, lugs at the corners of the grate section, the lugs extending sidewise beyond the sides of the outermost of the said cross bars and adapted to engage a supporting means for supporting the section, said lugs also extending endwise beyond the cross bars whereby to properly space the adjacent grate, an intermediate cross bar integrally connecting the grate bars with each other, and intermediate lugs projecting integrally outward from the side grate bars opposite the ends of the said intermediate cross bar, and adapted to engage a supporting means, the said corner lugs and the said intermediate lugs being rounded off at the bottom.

877,826. SUPPORT FOR USE IN FINISHING LASTS. CARL BENSCHEIDT, Alfeld, Germany. Filed June 6, 1907. Serial No. 377,664.

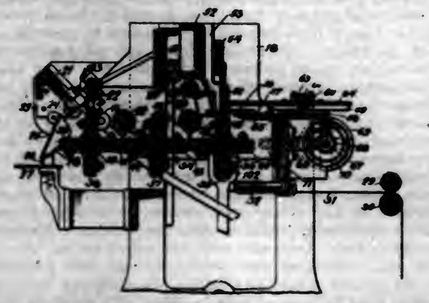


1. In a support for a last, the combination, with a base plate provided with a stationary block 2 having a recess at one end, of a vertically adjustable block 4 provided with a concave face and secured in the said recess, a curved block 8 pivoted at one end to the said base plate and provided with a clamping device, and an adjustable wedge-support for the heel of the last slidable on the said base plate.

2. In a support for a last, the combination, with a base plate provided with a stationary block 2 having a recess at one end, of a vertically adjustable block 4 provided with a concave face and secured in the said recess, the end portions of the said blocks 2 and 4 and the base plate being provided with curved guide surfaces 21, a curved block 8 pivoted at one end to the said base plate and provided with a clamping device, and an adjustable wedge-shaped support for the heel of the last slidable on the said base plate.

877,827. CIGARETTE-MACHINE. HUGO BILGRAM, Philadelphia, Pa., assignor to Comas Cigarette Machine Company, Baltimore, Md., a Corporation of Virginia. Filed Jan. 14, 1907. Serial No. 352,073.

1. In cigarette machines, a support, a plurality of tobacco feeding and cigarette forming devices mounted thereon, each of said devices comprising a plurality of intermittently rotating mold wheels and means to force tobacco into said mold wheels, a primary paper feed to uniformly and positively feed a paper strip, an angularly disposed turning stud for said strip, intermittently acting loosely gripping rolls to feed said strip, a knife to sever the same into individual wrappers and an intermittently reciprocating feeder to engage and feed said severed wrappers into coöperation with said mold wheels.



2. In cigarette machines, a frame and a plurality of tobacco feeding and cigarette forming devices mounted on said frame, each of said devices comprising a plurality of mold wheels and primary paper feed rolls having substantially parallel axes, a turning stud to engage a paper strip from said rolls, an intermittently rotating lightly gripping supply roll to feed said paper strip, a table and plate to receive between them the end of said paper strip from said supply roll, means to sever a wrapper from the end of said strip and a reciprocating feeder above said plate formed with depending fingers on either side of said plate to engage and feed forward said wrapper into coöperation with said mold wheel.

3. In cigarette machines, tobacco feeding and cigarette forming devices, a sprocket shaft provided with a mutilated gear and with a gear to operate a drum shaft, a slide having inclined rack teeth, a mutilated pinion engaging said mutilated gear and connected to said slide, transversely arranged paper feeders provided with coöperating inclined teeth to be intermittently reciprocated by said slide, a supply shaft intermittently operated from said drum shaft, a plurality of lightly gripping supply rolls to feed paper strips operated by gearing from said supply shaft, said gearing comprising disengageable clutches, and means to manually operate one of said supply rolls.

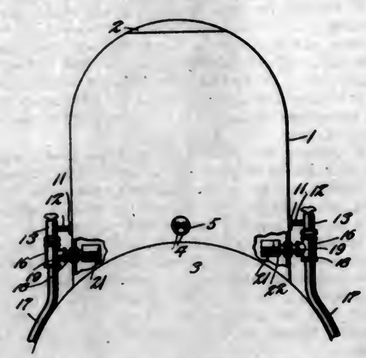
4. In cigarette machines, tobacco feeding and cigarette forming devices, a sprocket shaft provided with a mutilated gear and with a gear to operate a drum shaft, a mutilated pinion engaging said mutilated gear, a slide provided with inclined rack teeth, a crank and link connected to said slide and operated by said mutilated pinion, transversely arranged paper feeders provided with coöperating inclined teeth to be intermittently reciprocated by said slide, a supply shaft intermittently operated from said drum shaft, a plurality of lightly gripping supply rolls to feed paper strips and operated by gearing from said supply shaft, said gearing comprising a gear disengageably clutched to said supply shaft and a clutch wheel secured to said gear to manually and independently rotate each of said supply rolls.

5. In cigarette machines, a plurality of tobacco feeding and cigarette forming devices, paper feeding means for each of said cigarette forming devices comprising gripping paper feeders and gearing for said feeders comprising a clutch member for each and a common supply shaft on which said clutch members are mounted, a coöperating spring clutch member loose on said shaft and connected to each of said feeders, said clutch members having points of engagement spaced around said shaft in correspondence with the amount of movement of said shaft in feeding a single wrapper and means to manually operate each of said feeders when the corresponding clutch is disengaged.

[Claims 6 to 10 not printed in the Gazette.]

877,828. TRACK-SANDING DEVICE. JOHN W. BRADY, Neodesha, Kans., assignor of one-half to Ellis N. Walker, Neodesha, Kans. Filed May 25, 1907. Serial No. 375,671.

1. A sanding device comprising a casing or dome, air pipes leading into the casing or dome and out through the sides thereof, nozzles fitted to said air pipes, said nozzles being fitted in couplings connected to the sand pipes, and hoods connected to the sand pipes inside the casing or dome.



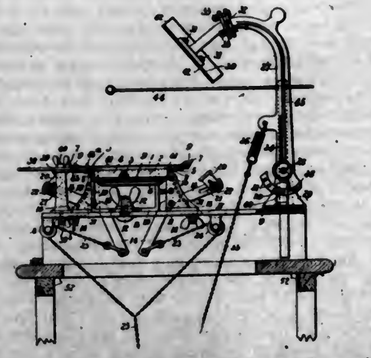
2. In a sanding device, the combination of air pipes, a casing, said air pipes extending transversely across and through the walls of the casing, air nozzles fitted to said pipes and extending into couplings to which the sand pipes are connected, and removable plugs fitted in the upper ends of the nozzles.

3. In a sanding device, the combination of a casing, air pipes leading from the cab into the casing, said air pipes being curved and branched, pipes connected to each branch and having curved divergent portions leading out through the sides of the casing, nozzles fitted to said pipes outside the casing, said nozzles being fitted to couplings communicating with the interior of the casing, and deflectors or hoods secured to said sand pipes inside the casing.

4. In a sanding device, the combination of a casing, air pipes leading out through the sides of said casing and provided with nozzles, removable plugs in said nozzles, sand pipes leading into the casing and provided with deflectors, the outlets of said nozzles being disposed at right angles to said sand pipes.

5. In a sanding device, the combination of a casing, air pipe connections between said casing and the air brake system of the locomotive, nozzles on the ends of said air pipes, said nozzles having restricted outlets, sand pipes leading into the casing and deflectors secured to the inner ends of said sand pipes, said deflectors having oppositely inclined upper walls and an open bottom and end.

877,829. BOX MAKING AND COVERING MACHINE. WILLIAM R. COMINOS, Wimbledon, England. Filed Dec. 10, 1907. Serial No. 405,940.



1. In a box making and covering machine, the combination of a supporting frame, an arm pivotally supported at one end of said frame, said arm being provided with box holding means at the other end, a die upon which a box blank may be held by said means, a spring normally holding said plate out of contact with said die, adjustable means limiting the return movement of said arm under the influence of said spring, resilient pulling devices for swinging the box holding means into contact with said die, and means for holding the box blank subsequently to and independently of the movement of said box holding means to clamp the blank, substantially as described.

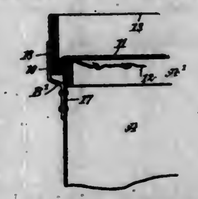
2. In a box making and covering machine and in combination a hinged arm, a rigid die having folding wings upon which a box blank is held by said arm to be folded, an adjustable framework for rigidly supporting said die, means for adjusting said framework, adjustably mounted pivotal levers for folding the die wings and blank on two sides thereof, adjustable supports for said levers, means for adjusting said supports and means for operating said levers subsequently to the operation of and independently of said arm.

3. In a box making and covering machine and in combination a hinged arm, a rigid die having folding wings upon which a box blank is held by said arm to be folded, an adjustable framework for rigidly supporting said die, means for adjusting said framework, adjustably mounted pivotal levers for folding the die wings and blank on two sides thereof, adjustable presser heads carried by said levers, means for adjusting said presser heads, adjustable supports for said levers, means for adjusting said supports, and means for operating said levers subsequently to the operation of and independently of said arm.

4. In a box making and covering machine and in combination a hinged arm, means for actuating said arm, a rigid die having folding wings upon which a box blank is held by said arm to be folded, an adjustable framework upon which said die is rigidly supported, means for adjusting said framework, pivotally mounted closure levers for folding the die wings and blank on two sides thereof, adjustable supports for said levers, means for adjusting said supports, and means for operating said levers subsequently to the operation of and independently of said arm.

5. In a box making and covering machine and in combination, a hinged arm, a removable plate carried thereby, a ball joint in said arm for adjusting said plate, a pulling member for actuating said arm, a rigid removable die having folding wings upon which a blank is held by said arm to be folded, means carried by said die for tucking in the corners of said blank, pivotally mounted levers for folding said die wings and said blank, and means for actuating said levers subsequently to the operation of and independently of said arm.

877,830. DRUM. ATHERTON D. CONVERSE, Winchendon, Mass. Filed Apr. 23, 1907. Serial No. 369,847.



1. In a drum, the combination with the body, the flesh or tuck hoop surrounding the body at the end, the head carried by the tuck hoop and resting on the edge of the body, and the rim, of a plurality of fixed stays spaced apart and engaging with the flesh or tuck hoop and the rim, the said stays preventing the rim from shifting, and maintaining it in position relatively to the said head.

2. In a drum, the combination with the body, the flesh or tuck hoops encircling the body at the ends, the heads carried by the tuck hoops and the rims in alinement with the tuck hoops, of a plurality of stays located at each end of the drum and each comprising a metal strip engaging

the outer faces of the tuck hoops and the rims, the said stays being rigidly secured to a part of the drum.

3. In a drum, the combination with the body, a flesh or tuck hoop, a head and a rim, of metal stays for preventing the rim from shifting relatively to the head and the flesh or tuck hoop, the said stays being in engagement with the outer faces of said rim and tuck hoop, and fastening devices extending through the stays and rigidly securing them to a part of the drum.

4. In a drum, the combination with a body, the tuck hoops engaging the outer face of the body at each end thereof, the heads carried thereby and the rims, of stays rigidly secured to the rims at their outer faces and extending to an engagement with the outer faces of the tuck hoops.

5. In a drum, the combination with the body, the tuck hoops, the heads carried by the said hoops, and the rims, of stays located at the outside of the rims and extending to an engagement with the outside faces of the tuck hoops, and eyelets securing the said stays to the said rims, through which eyelets the tightening ropes may be passed.

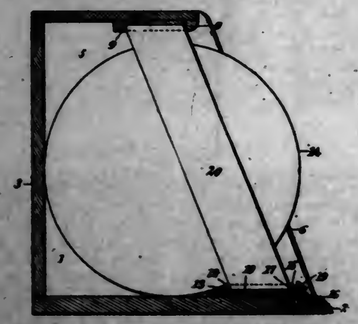
[Claim 6 not printed in the Gazette.]

877,831. AUGER-BIT. PATRICK J. CREEDON, Peterborough, Ontario, Canada. Filed Mar. 4, 1907. Serial No. 360,574.



An auger having a main spiral web with a cutting edge at the bottom thereof, and having also a second, short spiral web which has a pitch less than that of the main web and extends sufficiently around the axis of the bit to overlap said cutting edge.

877,832. CABINET FOR HOLDING PHONOGRAPH DISK RECORDS. XAVIER CUKIER, New York, N. Y. Filed May 13, 1907. Serial No. 373,335.

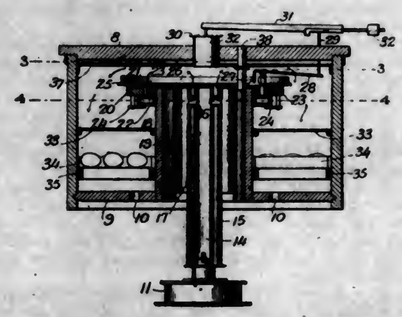


1. A cabinet for phonograph disks, having a cover with a rack formed on the under side thereof, said rack having recesses with shoulders at the inner ends thereof, a bottom, a rack formed on the upper side thereof, inclined slats having their lower ends held in said bottom rack and their upper ends in said recesses abutting said shoulders whereby said shoulders support said slats, and removable means for holding said slats in position at said bottom rack.

2. A cabinet for holding phonograph disks, having a cover and a bottom, a plurality of slats arranged between said cover and said bottom, means for retaining said slats on the under side of said cover and on said bottom, a removable batten on said bottom disposed before said slats on said bottom, and slides mounted on said batten and carrying characters indicating the classification of the records in said cabinet.

3. A cabinet for holding phonograph disks having a cover with a rack formed on the under side thereof, said rack having notches with shoulders formed at the ends thereof, a second rack on the bottom of said cabinet and having notches open at the forward ends thereof, inclined slats having their upper ends inserted in said first-named notches and abutting the said shoulders whereby said shoulders support said slats, a removable batten adjacent to said second rack and retaining said slats in the notches thereof, and slides mounted on said batten and having characters indicating the classes of the records in said cabinet.

877,833. INCUBATOR. CHRIST DAHL, Brooklyn, N. Y. Filed Jan. 23, 1907. Serial No. 353,721.



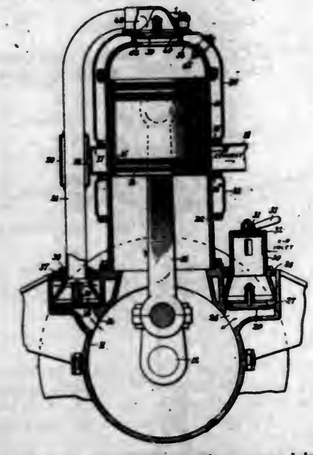
1. An incubator having a box or body, a structure therein forming a chamber open at its lower side, heat radiating means extending upwardly in and discharging from the bottom of said chamber, and an air inlet duct heated by said heat radiating means and discharging into the upper portion of said box of the body.

2. An incubator comprising a box or body having ventilating openings in its lower side, a structure in said box or body forming a chamber therein, means extending through the said chamber to supply fresh air to such box or body, means to heat such chamber and cause the latter by radiation to heat the air in the box or body, a platform on such heater, evaporating pans on the under side of and connected to such platform, a thermostat on such platform, and a ventilating device in the upper portion of said box or body including a movable element, and operating means for such movable element, actuated by such thermostat.

3. An incubator having a structure therein forming a heat radiating chamber and provided at its upper end with a platform projecting beyond the sides thereof, evaporating pans under such platform and having tubes extending upwardly through such platform, and supporting devices for the said evaporating pans, depending from such platform and including buttons to be turned into and out of engagement with the bottoms of the evaporating pans.

4. An incubator comprising a box or body, a heat radiating element in the center thereof, egg trays in the lower portion of such box or body around such heat radiating device, a fabric above the egg trays and between the outer wall of such box or body and the heat radiating device, and means in the upper portion of such box or body to supply moisture thereto, such box or body having ventilating openings in its lower side.

877,834. INTERNAL-COMBUSTION ENGINE. PAUL DANIEL, New York, N. Y. Filed Mar. 11, 1907. Serial No. 361,845.



1. An internal combustion engine, comprising a working cylinder having an inlet valve, a conduit for delivering compressed air to said valve, and means for delivering compressed air to said valve, and means for delivering liquid fuel to said conduit, said means comprising an expansible device adapted to operate as a piston and a diaphragm connected to said expansible device and subjected to the pressure existing within the cylinder.

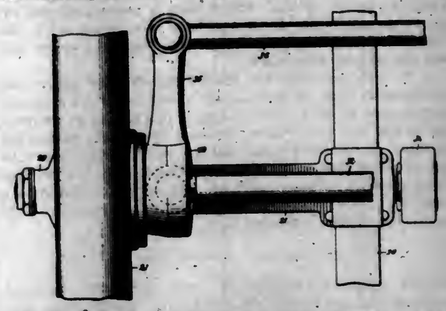
2. An internal combustion engine, comprising a working cylinder having an inlet valve, a conduit for delivering compressed air to said valve, means for delivering liquid fuel to said conduit, said means comprising an expansible device adapted to operate as a piston, and a diaphragm connected to said expansible device and subjected to the pressure existing within the cylinder, and means for controlling the movement of the diaphragm.

3. An internal combustion engine, comprising a working cylinder having an inlet valve, a conduit for delivering compressed air to said valve, and means for delivering liquid fuel to said conduit, said means comprising an oil delivery conduit having inlet and outlet valves, a chamber of variable capacity in communication therewith, and a diaphragm secured to one wall of said chamber and having one surface thereof subjected to the pressure existing within the working cylinder.

4. An internal combustion engine, comprising a working cylinder having an inlet valve, a conduit for delivering compressed air to said valve, and means for delivering liquid fuel to said conduit adjacent the outer surface of said valve, said means comprising an oil delivery conduit having inlet and outlet valves, a chamber communicating with said conduit intermediate said valves, said chamber being of variable capacity, a casing adjacent said chamber, a diaphragm within said casing and having one surface thereof subjected to the pressure existing within the working cylinder, and means operatively connected to said diaphragm for varying the capacity of said chamber, whereby when low pressure exists in the cylinder, liquid fuel is drawn into said chamber, and when high pressure exists in the cylinder, the liquid fuel is forced outward into the air conduit.

877,835. COMBINED STEERING AND DRIVING AXLE. PAUL DANIEL, New York, N. Y. Filed Mar. 12, 1907. Serial No. 361,930.

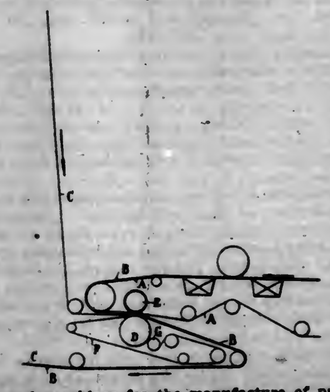
1. A motor vehicle, comprising a cross member adapted to support the vehicle body, a steering knuckle pivotally connected to each end thereof, wheels rotatably mounted upon said steering knuckles, a driving axle comprising a plurality of sections, one of said sections extending through one of the steering knuckles and having an enlarged end, and the other of said sections being connected thereto by a universal joint within said expanded end and anti-friction bearings intermediate said expanded end and said steering knuckle.



2. A motor vehicle, comprising a cross member, a steering knuckle pivotally mounted adjacent the end thereof, a vehicle wheel rotatably mounted upon said, steering knuckle, a driving axle comprising a plurality of sections, one of said sections being operatively connected to said wheel, and having a hollow expanded end, and the other of said sections being connected to the first mentioned section by a universal joint within said expanded end, and anti-friction bearings between said first mentioned section and said steering knuckle and disposed adjacent the intersection of the body of the section with the expanded end.

3. In a motor vehicle, the combination of a steering knuckle having a pivot portion and a cylindrical sleeve, a vehicle wheel rotatably mounted upon said sleeve, and a driving axle comprising a plurality of sections, one of said sections extending through said sleeve and the other of said sections being connected thereto by a universal joint, said sleeve being expanded adjacent each end thereof to provide for the reception of anti-friction bearings between the sleeve and the first mentioned section of the axle, and said section being expanded to form an enlarged end and a shoulder against which one of the bearings is seated.

877,836. PAPER-MAKING MACHINE. JEAN A. DUPONT, Paris, France. Filed Jan. 16, 1906. Serial No. 296,276.



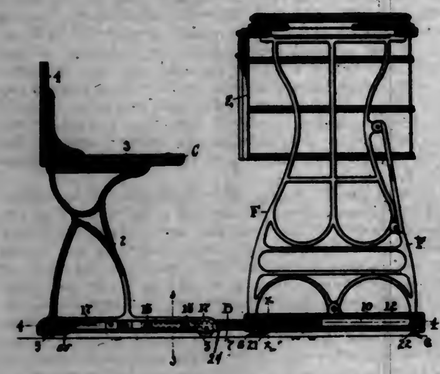
1. In web machines for the manufacture of paper, the combination with an endless belt of wire cloth, of a second endless belt of wire cloth having its upper run in contact with the lower run of the first belt, a couch roll beneath the second belt at the point of contact, a perforated roll coacting with the couch roll and above the first belt,

and an endless belt of felt between the couch roll and the second belt.

2. In web machines for the manufacture of paper the combination with a wire cloth for receiving the paper web, of a second wire cloth contacting with the first wire cloth, a couch roll contacting with the second wire cloth, at a point of contact of said wire cloths, a perforated roll cooperating with the couch roll and contacting with the first wire cloth, and a belt of felt between the couch roll and the second wire cloth.

3. In web machines for the manufacture of paper, the combination with an endless belt of wire cloth, of a second endless belt of wire cloth having a run in contact with a run of the first belt, rollers between which said contacting portions of the belts pass, and means in connection with one of said rollers for causing adhesion of the web of paper passing between the belts, the other of said rollers being perforated whereby to minimize the resistance to the means for causing adhesion.

877,837. SEWING-MACHINE ATTACHMENT. ANDREW EIBEN and ARPAD GYURCSO, Cleveland, Ohio. Filed May 27, 1907. Serial No. 375,798.



1. The frame of the machine having a cross-bar at each side at the bottom provided with lateral rests at each end having a top inclined surface, in combination with a chair having a bar at each side at the bottom connecting the chair with the frame and provided with projections adapted to slide and rest upon said lateral rests and thereby support the chair upon said frame.

2. A machine support having a transverse channeled bar at each side at the bottom provided with laterally projecting rests at each end, in combination with a chair having a forwardly projecting bar at each side at the bottom and provided with projections at each end adapted to move upon and seat on said rests, and connecting links slidably connecting said chair bars with the bars on said machine support and adapted to limit the withdrawal of the chair.

3. The combination of the machine frame and the chair frame and links at each side slidably connecting said frames at their bottom, the said chair frame having side-bars extending forward of the seat and provided with projections at their bottom, and the said machine frame having inwardly extending rests adapted to seat said projections thereon and thereby raise the chair off the floor, and the said links slotted lengthwise and having loose stop connections with said machine frame.

4. A machine support having side portions, a bar extending transversely across the bottom of each side portion, a laterally extending rest at each end of each bar, in combination with a chair adapted to enter the space between said side portions of the machine support, a bar at the bottom of the chair on each side thereof, each bar having a portion at each end thereof adapted to slide upon and rest on the top of one of said lateral rests, to thereby lift and support the chair out of contact with the floor, and slidable connections between the bars on the chair and the bars on the machine support.

877,838. JEWELRY-STAND. MONROE ENGELSMAN, New York, N. Y. Filed Oct. 8, 1906. Serial No. 338,013.



1. The combination in a stand of a base, a handle supported on the base, a rod supported in the handle, a bifurcated lug extending from the rod, a pin fastened to the bifurcated lug, a disk-support carried on the pin, means to clamp the disk-support at various angles on the pin, a disk clamped on the disk-support, means to hold the disk to the support in different angular positions, an arm for supporting an object fastened to the disk, and a tag adjustably secured to the arm.

2. The combination in a jewelry stand of a base, a handle supported on the base, a rod supported in the handle, a bifurcated lug extending from the rod, a pin fastened to the bifurcated lug, a disk-support carried on the pin, means to clamp the disk-support at various angles on the pin, a disk clamped on the disk-support, means to hold the disk to the support in different angular positions, an arm for supporting jewelry extending from the disk, a tag holder adjustably fastened to the disk, and a tag adjustably held on the tag holder.

3. The combination in a jewelry stand of a base, a handle supported in an opening in the base, a rod extending from the handle, a lug supported on the rod, a bar supported by the lug, other lugs supported on the bar, a disk support hinged to each lug, a disk clamped to each disk support, an arm extending from each disk, a tag holder adjustably secured to each arm, and a tag adjustably supported in each tag holder.

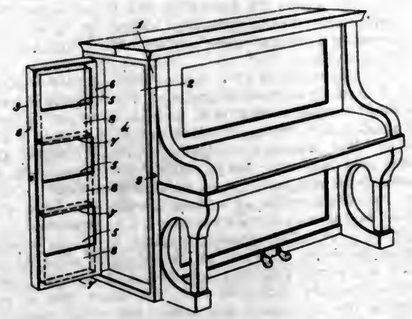
877,839. PIANO-CASE. IDA M. FIELD, Chicago, Ill. Filed Nov. 4, 1907. Serial No. 400,592.

1. An upright piano case having a partition adjacent to one end and forming a shallow end compartment, in combination with a door closing said compartment and forming the end panel of the case, and a receptacle for sheet music arranged within said compartment, substantially as described.

2. An upright piano case having a shallow music containing compartment arranged in the end thereof and a door closing said compartment, substantially as described.

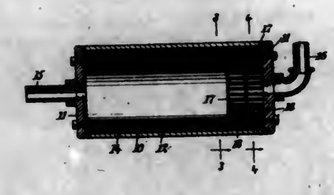
3. An upright piano case having a door arranged at one end thereof and a sheet music receptacle arranged on the inner face of said door, substantially as described.

4. An upright piano case having its end panel hinged to form a door in the end of the case and a plurality of sheet music receptacles arranged on the inner face of said door, substantially as described.



5. An upright piano case having a door arranged at the end thereof, sheet music receptacles on the inner face of said door and a false end closing the end of the main portion of the case, substantially as described.

877,840. MUFFLER. WALTER L. GEE, Saratoga Springs, N. Y., assignor to William M. Gage, Saratoga Springs, N. Y. Filed Apr. 22, 1907. Serial No. 369,566.



1. A muffler having a body formed of a sheet metal drum, heads engaging with the ends thereof, tie rods passing through the muffler and engaging the heads to hold them in place, a non-conducting covering encircling the drum between the heads, and a transverse baffle plate within the drum, said plate being provided with a plurality of openings therethrough.

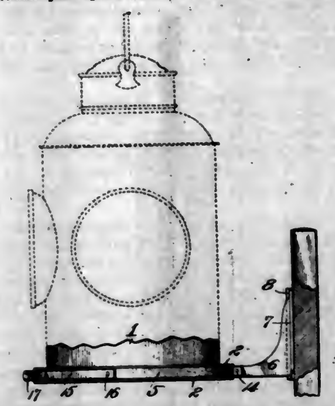
2. A muffler comprising a drum with inlet and outlet openings, a baffle plate therein, and a spacer for the baffle plate, said spacer being formed of annular corrugated sheet metal.

3. A muffler having a drum with inlet and outlet openings, a baffle plate therein, and an annular spacer for the baffle, said spacer being formed of sheet metal corrugated longitudinally of the muffler.

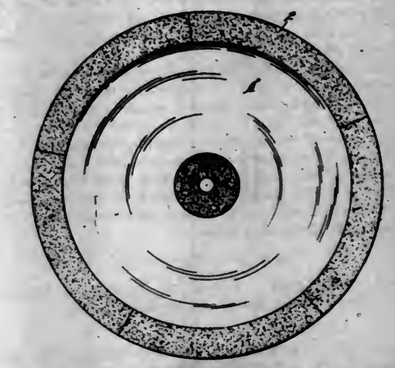
877,841. COMBINED BASE-FRAME AND BRACKET FOR SIGNAL-LAMPS. ALEXANDER H. HANDLAN, Jr., St. Louis, Mo. Filed Aug. 5, 1907. Serial No. 387,197.

1. The combination, with a signal lamp having a shell extending to the bottom thereof; of a reinforcing base frame surrounding and rigidly fastened to, the bottom of said shell and having outwardly projecting broad guard flanges providing a protection for the bottom of the shell and an extended support for the lamp.

2. In combination, with a signal lamp having a shell extending to the bottom thereof; of a reinforcing base frame, surrounding, and fastened to, the bottom of said shell, formed with a series of catch pin openings closed by the shell at their inner ends, and having outwardly projecting broad guard flanges providing a protection for the bottom of the shell and an extended support for the clamp, and a bracket having a sectional supporting ring formed with a catch pin opening, and a spring catch arm provided with a catch pin having a finger piece and secured to the supporting ring.



877,842. TALKING-MACHINE-DISK PROTECTOR. JESSIE M. HIGLEY, Niles, Cal. Filed July 2, 1907. Serial No. 381,882.



1. A record for a talking machine having a protective medium permanently secured to its exterior surface and serving to protect superposed records from direct contact with each other.

2. A record for a talking machine having an annular ring permanently secured to its exterior surface and serving to protect superposed records from direct contact with each other.

3. A talking machine record of disk-form having an annular ring fixed to the exterior thereof and serving to protect the record side of a second disk when two disks are placed flatwise together, said ring being formed of separate sections.

4. A talking machine record of disk-form having permanently attached to its surface opposite to that containing the record a soft surface of material having a slightly adherent character.

877,843. ELECTRIC HEATER. EDMUND F. HOSKIN, Evanston, Ill., assignor to The Hoskins Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 19, 1907. Serial No. 393,729.

1. An electric heater comprising, in combination, a handle-stem a coiled insulated resistance-wire on said stem and having its ends extended along the same forming ter-

minals, and a metal heat-transmitting head cast about said wire in intimate contact with the insulation thereon.



2. An electric heater comprising, in combination, a tubular handle-stem, a coiled insulated resistance-wire on said stem and having its ends extended through the same forming terminals, and a metal heat-transmitting head cast about said stem and wire in intimate contact with the insulation thereon.

3. An electric heater comprising, in combination, a handle-stem, a body of insulating material connected with said stem and having a resistance-wire coiled about it and a shell of insulating material in which said wire-wound body is confined and hermetically sealed, terminals leading from said wire, and a metal heat-transmitting head formed about said shell.

4. An electric heater comprising, in combination, a tubular handle-stem, a body of insulating material having a neck about which said stem fits at one end and provided with an external spiral groove, an electric resistance-wire having terminal end-sections extending through said stem and wound between said sections into said groove, a shell of insulating material in which said wire-wound body is confined, a cover hermetically sealed in the open end of said shell about said neck, and a metal heat-transmitting head formed about said shell.

877,844. TROLLEY. AUGUST W. HUHSMAN, Staunton, Ill. Filed May 25, 1907. Serial No. 375,660.



1. The combination of a trolley wheel having an axis, members having oblong apertures intermediate their length through which said axis passes, the upper ends of said members being outwardly curved and having opposed cams arranged over the top of the wheel, and the lower ends thereof being outwardly curved, springs carried on said axis forcing said members inwardly, and a line directly connecting the lower curved ends of said members together.

2. The combination of a trolley-wheel having a pivot-bolt, spring-pressed members having outwardly-curved heads carried by the pivot-bolt, opposed cams projecting from said heads, rollers carried by said cams, normally in contact, and means for separating the trolley-wheel from and replacing it on the conductor, automatically operating to spread said rollers apart, whereby the conductor may pass therebetween.

3. The combination of a trolley-wheel having a pivot-bolt, T-shaped members arranged at the opposite sides of the wheel carried on said bolt, springs interposed between the ends of said bolt and said members, and rollers carried by said members, normally in contact above said wheel, said members having outwardly-curved ends depending from said bolt, for the purpose described.

4. The combination of a fork having the outer ends thereof rabbeted to provide shoulders, a trolley-wheel journaled on a pivot-bolt passing through said fork, spring-pressed members arranged at the opposite sides of the wheel, in contact with said shoulders and carried by said pivot-bolt, means projecting from the upper ends of said members over the top of said wheel, and rollers normally in contact carried by said projecting means.

5. The combination of a fork having the outer ends thereof rabbeted to provide shoulders, a trolley wheel journaled on a pivot-bolt passing through said fork, T-shaped members carried on said bolt having the upper portions thereof off-set to bring them close to the opposite sides of the trolley wheel, springs carried by the bolt, forcing the members toward each other, and opposing rollers carried by said members overhanging the trolley wheel.

[Claim 6 not printed in the Gazette.]

877,845. PHONOGRAPHY. ISIDOR KITSEE, Philadelphia, Pa. Filed Aug. 1, 1907. Serial No. 386,676.

1. The method of producing phonographic records capable of amplifying the sound volume of the originals, consisting in first obtaining an enlarged photographic copy from the original record, and then producing commercial copies from said enlarged copy.

2. The method of producing phonographic records capable of amplifying the sound volume of the originals, consisting in first producing the original record upon a transparent base by outlining the sound waves thereon through the medium of an opaque material, enlarging photographically the record so produced, and then producing commercial copies from the enlargement of the original.

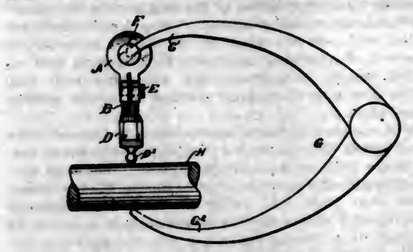
3. The method of producing phonographic records capable of amplifying the sound volume of the originals, consisting in first producing the original record upon a transparent base by depositing thereon an opaque material in outline of the sound waves, enlarging photographically the record so produced, and then producing commercial copies from the enlargement of the original.

4. The method of producing phonographic records capable of amplifying the sound volume of the originals, consisting in first producing the original record upon a transparent base by imparting to the latter an opaque outline conforming to the sound waves, enlarging photographically the record so produced, and then producing commercial copies from the enlargement of the original.

877,846. MICROMETER ATTACHMENT FOR MEASURING-TOOLS. GEORGE KOPYSKEY, New Orleans, La. Filed Sept. 7, 1907. Serial No. 391,795.

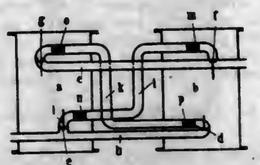
1. A micrometer attachment, comprising a supporting member having an interiorly threaded split hub, a rod threaded into the hub, a thimble carried by the rod and extending over the hub, the free end of said thimble being provided with a contact knob, said thimble and hub being provided with graduations for the purpose set forth, a clamping screw engaging the split hub to clamp the hub on the rod and a clamping bolt on the supporting member for securing the attachment to the measuring tool.

2. A micrometer attachment, comprising a supporting member having a hub, a rod threaded into the hub, a thimble carried by the rod and extending over the hub, the free end of the thimble being provided with a contact knob, said thimble and hub being provided with graduations for



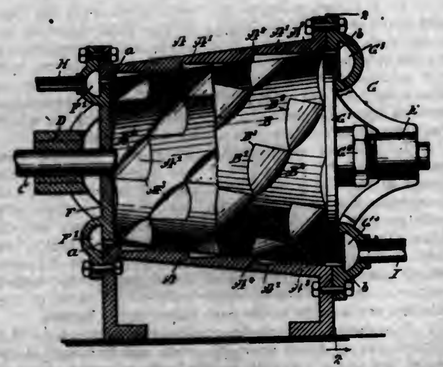
the purpose set forth, means for clamping the hub on the rod, and a clamping bolt on the supporting member for securing the attachment to the measuring tool.

877,847. FLUID-PRESSURE ENGINE. HUGO LENTZ, Halensee, Germany, and CHARLES BELLENS, Neuilly-sur-Seine, France. Filed Apr. 28, 1906. Serial No. 314,124.



In a fluid pressure engine, two groups of two double-acting cylinders, the cylinders of each group having cranks displaced through 180° to each other and through 90° to the other pair of cranks in the other group, ports at each end of the cylinders, crossed passages in each group of cylinders, connecting the ports at one end of the cylinders with the ports at the opposite end of the other cylinder of the same group, an admission passage *c* and an exhaust passage *h*, admission members *f*, *g*, connecting the ports at one end of each cylinder with the admission passage *c*, and exhaust members *d*, *e*, connecting the ports at the other end of each cylinder with the exhaust passage *h*.

877,848. FLUID-PRESSURE TURBINE. BENJAMIN E. LEWIS, Palouse, Wash. Filed Sept. 13, 1907. Serial No. 392,738.



1. A turbine, comprising a casing and a rotor therein, the opposite faces of the casing and rotor having pockets arranged in transverse registering rows, the pockets being approximately triangular in shape and the pockets of one row in the rotor overlapping the pockets of the next following row of pockets in the casing.

2. A turbine, comprising a casing and a rotor therein, the opposite faces of the casing and rotor having pockets arranged in transverse registering rows, the pockets in the casing and the pockets in the rotor being also arranged spirally.

3. A turbine, comprising a casing and a rotor therein, the opposite faces of the casing and rotor having pockets arranged in transverse registering rows, the pockets of one row in the rotor overlapping the pockets of the next following row of pockets in the casing, and the pockets in the casing and the pockets in the rotor being arranged spirally.

4. A turbine, comprising a casing and a rotor therein, the opposite faces of the casing and rotor having pockets arranged in transverse registering rows, the pockets being approximately triangular in shape and the pockets on the casing and the pockets on the rotor being arranged spirally.

5. A turbine, comprising a casing and a rotor therein, the opposite faces of the casing and rotor having pockets arranged in transverse registering rows, the pockets being approximately triangular in shape and the pockets on the casing and the pockets on the rotor being arranged spirally, the corners of adjacent pockets in a spiral being spaced apart.

[Claims 6 to 20 not printed in the Gazette.]

877,849. PIPE AND GAS CONNECTION. HERMAN E. LOBBE, Jersey City, N. J. Filed May 21, 1907. Serial No. 374,907.



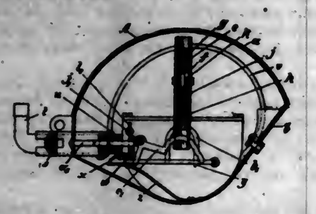
The combination with the pipe, provided with a conical outlet head, and an annular shoulder at the junction of the head with the pipe, of a fitting provided with a conical opening for receiving the head, a tubular operating lever having its lower portion bifurcated to straddle the fitting and pivoted thereto, a slotted collar engaging the annular shoulder, links connecting the collar with the operating lever, and a detent slidable in the tubular portion of the lever, said fitting being provided with a segmental lug for engagement by the detent, whereby to retain the operating lever in its adjusted position, said detent being grooved to permit it to straddle the lug.

877,850. APPARATUS FOR THE AUTOMATIC DISCHARGE OF FIREARMS ON ATTAINING A PREDETERMINED ELEVATION. THOMAS MANCIU, Iglau, Austria-Hungary. Filed Jan. 4, 1906. Serial No. 294,568.

1. In a gun, the combination, with the trigger, of a trigger-operating mechanism, and means, comprising a pendulum and a liquid containing receptacle inclosing the pendulum, for setting said trigger-operating mechanism in operation, substantially as described.

2. In a gun, the combination, with the trigger, of a spring-actuated trigger-operating mechanism normally held retracted, and means, comprising a pendulum and a

liquid containing receptacle inclosing the pendulum, for setting said trigger operating mechanism in operation, substantially as described.



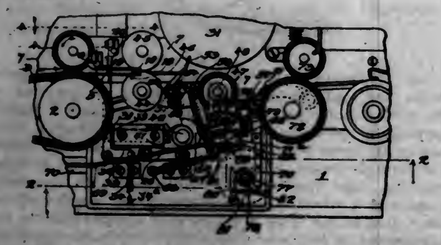
3. In a gun, the combination, with the trigger, of a spring-actuated trigger-operating mechanism, means for normally retaining said mechanism retracted against the tension of its spring, and means, comprising a pendulum and a liquid containing receptacle inclosing the pendulum, for causing said first named means to release the trigger-operating mechanism, substantially as described.

4. In a gun, the combination, with the trigger, of a trigger-operating mechanism, and means, comprising a pendulum and a liquid containing receptacle inclosing the pendulum, for setting said trigger-operating mechanism in operation, a part of said mechanism and said means being adjustable the one with reference to the other whereby to make said means actuate said mechanism at a predetermined elevation of the gun, substantially as described.

5. In a gun, the combination with the trigger, of a spring-actuated trigger-operating device, means for holding said device normally retracted, a mechanism for actuating said means whereby to cause it to release said device, and means comprising a pendulum and a liquid containing receptacle inclosing the pendulum, for setting said mechanism in operation, said mechanism being adjustable with reference to said last-named means whereby to make the same actuate said mechanism at a predetermined elevation of the gun, substantially as described.

[Claim 6 not printed in the Gazette.]

877,851. POSTMARKING AND CANCELING MACHINE. WARREN B. MARTINDALE, Chicago, Ill., assignor to Time Marking Machine Company, a Corporation of the District of Columbia. Filed Mar. 11, 1907. Serial No. 361,796.



1. In a machine of the class described, the combination with a printing die of a timing stop arranged to stand normally in the path of the mail-pieces, means operated synchronously with the rotation of the printing die for removing said stop from said pathway, and means for normally obstructing the action of said stop removing means actuated by the contact of a moving mail-piece for removing said obstruction.

2. In a machine of the class described, the combination with a continuously rotating printing die, of a stop arranged to stand normally in the pathway of the mail-pieces, means timed in harmony with the rotation of the printing die for removing said stop from said pathway, means for normally holding said removing means out of operative connection with said stop, and means actuated by the passage of a mail-piece for permitting the operation of said removing means.

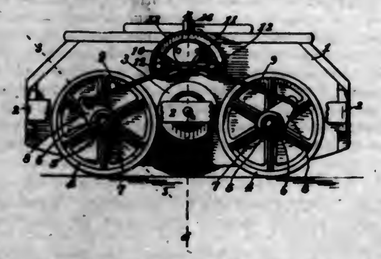
3. In a machine of the class described, the combination with a printing die of a timing-stop arranged to stand normally in the path of the mail-pieces, means operated synchronously with the rotation of the printing die for removing said stop from said pathway, means for normally obstructing said stop-removing means, means actuated by the contact of a moving mail-piece for releasing said obstructing means, and means for returning said stop removing means to its normal position after the passage of a mail-piece.

4. In a machine of the class described, the combination with a printing die of a timing stop arranged to stand normally in the path of the mail-pieces, means operated synchronously with the rotation of the printing die for removing said stop from said pathway, means for normally obstructing said stop removing means, means actuated by the contact of a moving mail-piece for releasing said obstructing means, and means for returning both said stop removing means and said releasing means to their respective normal positions after the passage of a mail-piece.

5. In a machine of the class described, the combination with a continuously rotating printing die, of means timed to the rotation of said die for positively forwarding mail-pieces thereto, a stop in the pathway of the mail-pieces preceding said positive forwarding means, means timed in harmony with the rotation of the printing die for removing said stop from said pathway, and means for normally holding said removing means out of operative connection with said stop and for bringing the same into operative connection therewith by the passage of a mail-piece.

[Claims 6 to 12 not printed in the Gazette.]

877,852. CARPET-SWEEPER. FRANCIS C. MASON and JOHN W. SHANAHAN, Grand Rapids, Mich., assignors to Bissell Carpet Sweeper Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Feb. 19, 1907. Serial No. 358,313.



1. In a carpet sweeper, in combination with the case and brush shaft, wheels having tubular hubs closed at the outer ends, rods inserted in the hubs and connecting the wheels in opposing pairs, said rods normally rotative with the connected wheels but rotative therein, bearings in which the hubs are journaled, arms extending outward and upward from the bearings, and spring supports on which the arms are pivoted to move inward and upward.

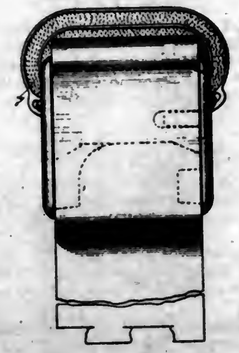
2. In a carpet sweeper, in combination with the case and brush shaft, supporting wheels having tubular hubs closed at the outer ends, rods inserted in said hubs and connecting the wheels in pairs, said rods being normally rotative with the connected wheels, and rotative therein when the wheels rotate unequally, bearings in which the hubs are journaled, arms on the bearings, ball supports spaced apart from the case and having base plates, spring supports pivoted at their outer ends to the arms of the bearings and secured to the base plates at the middle.

3. In a carpet sweeper the combination of a case, a ball support spaced apart from the case and having a horizontal bed plate attached to the case, a spring support having a horizontally disposed loop extending through an opening in the ball support, a clip on the bed plate and engaging the loop, and means for connecting the supporting wheels with the free ends of the spring support.

4. In a carpet sweeper, a case, a bed plate attached to the case and projecting horizontally therefrom, a spring support having a horizontally disposed loop at the middle, means for securing the loop to the bed plate, bearings attached to the free ends of the support and wheels journaled in the bearings.

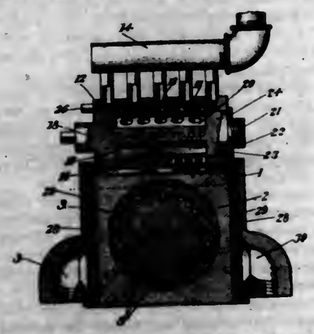
5. In a carpet sweeper the combination of a case, a pair of wheels, each wheel having a tubular hub, a rod having its respective ends inserted in said hubs and being wholly supported by the wheels, said rod being normally rotative with the wheels and adapted to slip or rotate in one of said hubs when the wheels rotate unequally, bearings in which the hubs of the wheels are journaled, and means extending outside of the wheels for connecting the bearings to the case.

877,853. ROLL TOILET-PAPER. GEORGE C. MATHER, Chicago, Ill., assignor of one-half to William Wirt Hurd, Chicago, Ill. Filed Oct. 1, 1906. Serial No. 336,861.



A roll of toilet paper consisting of an endless web wound upon a flexible, flattened, tubular core and provided with a plurality of adjacent transverse series of cuts extending entirely through one side of the roll, each cut being offset relatively to an adjoining cut of an adjacent series, the ends of proximate cuts overlapping, and the two laterally-outermost cuts at opposite edges of the roll being extended to and through the margins of the web.

877,854. ROTARY ENGINE. ALFONZO MERCER, Norfolk, Va., assignor of one-half to Terry B. Gordon, Norfolk, Va. Filed June 8, 1907. Serial No. 377,928.



1. In a rotary engine, the combination of a casing, a rotor mounted within the casing, end pieces applied to the casing and formed with annular grooves constituting chambers, the said rotor being formed with axially inclined ports and the end pieces with a second set of ports communicating with the grooves and inclined in an opposite direction to those of the rotor.

2. In a rotary engine, the combination of a casing, a rotor mounted within the casing, end pieces applied to the casing and provided with flanges fitting against the exterior thereof, the said end pieces being formed with annular grooves, the rotor being provided with axially inclined ports and the end pieces with a second set of ports communicating with the grooves and inclined in an opposite direction to those of the rotor, and means for supplying live fluid to one of the grooves and exhausting dead fluid from the opposite groove.

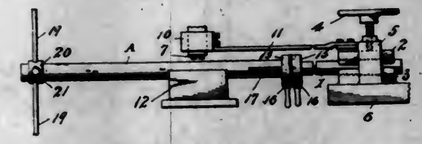
3. In a rotary engine, the combination of a casing provided with an exhaust chamber, a rotor mounted within the casing, means for supplying live fluid to the rotor and delivering dead fluid to the exhaust chamber, and a plate applied to the casing formed with a recess communicating with the exhaust chamber.

4. In a rotary engine, the combination of a casing formed with an exhaust port extending completely through the same, a rotor mounted within the casing, means for supplying live steam to the rotor and leading dead fluid to the exhaust chamber, and plates applied to opposite sides of the casing formed with recesses communicating with opposite ends of the exhaust chamber.

5. In a rotary engine, the combination of a casing, a rotor mounted therein and provided with a plurality of concentric circles, of transversely disposed ports inclined relatively to the axis of the rotor, fixed end pieces extending within the casing and each having a corresponding number of ports to those of the rotor and a grooved chamber to receive the actuating fluid prior to its admission to the ports, all substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

877,855. DEVICE FOR HOLDING, ALINING, AND PUNCHING METAL TUBES. WILLIAM B. MURRAY, Washington, D. C., assignor to Murray Engineering and Manufacturing Company, a Corporation of Virginia. Filed Apr. 30, 1907. Serial No. 371,070.



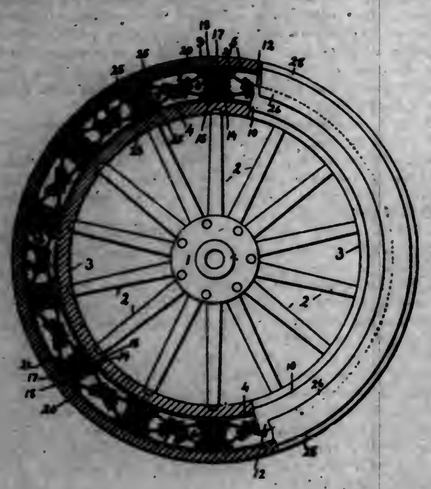
1. In a device of the character described, the combination with a punch, of a rigid tubular mandrel adapted to receive thereon a pipe to be punched, a die block removably carried by said mandrel, and a supporting saddle arranged directly beneath said punch and provided with a recess conformable to the contour of the pipe, said pipe being adapted to lie in said recess, and forming thereby a solid support for the mandrel under pressure of said punch, substantially as described.

2. In a device of the character described, the combination of a punch, a rigid, tubular mandrel adapted to receive thereon the pipe to be punched, means for adjustably clamping one end of said mandrel, a die block carried by said mandrel and adapted to be alined beneath said punch, coöperating elements carried by said pipe and said mandrel for alining the pipe, and a supporting saddle arranged beneath the punch and provided with a recess conformable to and adapted to receive therein the pipe, said pipe forming in turn a support for the mandrel therein, substantially as described.

877,856. SPRING-TIRE. THOMAS J. MCCARTHY, Los Angeles, Cal. Filed Mar. 27, 1906. Serial No. 308,197.

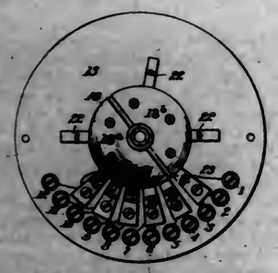
1. A wheel tire comprising concentric bands, one embracing and radially movable over the other and one of said bands fixed to the wheel, circumferentially arranged springs radially seated within and between said bands, fittings secured between said springs and said bands and provided with lugs at each corner, and two sets of diagonally-disposed springs arranged side by side between each two of

said radial springs and connected at their opposite ends with said lugs from the upper corner of one fitting to the lower corner of the other fitting.



2. A wheel tire comprising two circular bands flanged one over the other, an annular series of spiral springs radially seated within said bands, fittings on the ends of said springs and having lugs at each corner, means for anchoring the springs to fittings, pairs of diagonally-disposed springs arranged side by side between said radial springs and running obliquely in opposite directions, and means for securing said diagonal springs to said fittings and for engaging said lugs on opposite sides thereof.

877,857. TELEGRAPH-SWITCH. LEWIS H. PARCELS, Hiawatha, Kans., assignor of one-half to John H. Koger, Willis, Kans. Filed Aug. 5, 1907. Serial No. 387,102.



1. The combination, with a series of contact strips mounted on a suitable support, of electrical connections from a resonator sounder circuit and a plurality of local sounder circuits to said contact strips, and a switch comprising two semi-circular plates insulated from each other and arranged so that their edges will contact with said strips as said switch is rotated.

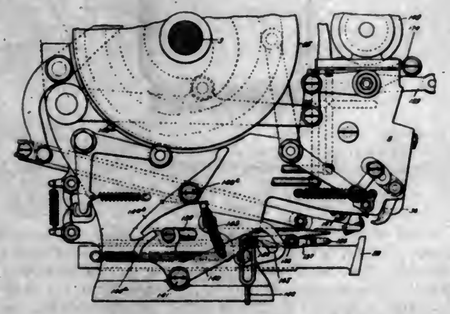
2. The combination, with a series of contact strips housed in a suitable casing, of electrical connections from a resonator sounder circuit and a plurality of local sounder circuits to said contact strips, and a switch comprising two semi-circular plates insulated from each other and arranged so that their edges will contact with said strips as said switch is rotated, an arm on the outside of said casing for rotating said disk, and a scale or dial below said arm for the purpose specified.

3. The combination, with a series of contact strips mounted on a suitable support, of twice as many binding posts secured to said support, electrical connections from each of said contact strips to two of said binding posts, and a switch having two plates insulated from each other and engaging said contact strips.

4. The combination, with a series of contact strips mounted on a suitable support, of twice as many binding posts secured to said support, electrical connections from each of said contact strips to two adjacent binding posts except one end contact piece which is connected with the opposite end binding posts, and a switch having two plates insulated from each other and engaging said contact strips.

5. The combination, with a series of contact strips mounted on a suitable support, of a split disk comprising two semi-circular concavo-convex plates mounted on a block of insulating material, said plates engaging said contact strips and means to rotate said disk for the purpose specified.

877,858. WELT AND THREAD CUTTING MEANS FOR SEWING-MACHINES. THOMAS G. PLANT, Boston, Mass., assignor to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed Sept. 27, 1906. Serial No. 336,465.



1. In a boot and shoe sewing machine, the combination with stitch-forming devices, welt-guiding means and welt severing means comprising relatively movable members, one of which sustains the welt as it is cut, means to move one member relative to the other, and means for holding the end of the severed welt.

2. In a boot and shoe sewing machine, the combination with stitch-forming devices, and means for guiding a boot or shoe in proper relation thereto for the stitching operations, of a welt-guide, and welt-severing and holding means whereby the welt may be severed and the welt strip held for the next stitching operation.

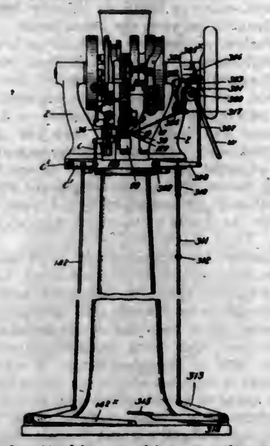
3. In a boot and shoe sewing machine, the combination with stitch-forming devices, and weans for guiding a boot or shoe in proper relation thereto for the stitching operations, of welt-guiding means, and a welt-severing device movable toward and from the stitch-forming devices and means for holding the end of the severed welt.

4. In a boot and shoe sewing machine, the combination with stitch-forming devices, and means for guiding a boot or shoe in proper relation thereto for the stitching operations, of a welt-severing device comprising a plurality of coöperating severing members, and treadle-operated means for relatively moving said members.

5. In a boot and shoe sewing machine, the combination with stitch-forming devices, and means for guiding a boot or shoe in proper relation thereto for the stitching operations, of a welt-severing device movable toward and from the said stitch-forming devices, treadle-actuated means for operating said welt-severing device in one direction to position it for welt cutting, and automatic means for moving it in an opposite direction.

[Claims 6 to 21 not printed in the Gazette.]

877,859. WELT-MEASURING MEANS FOR SEWING-MACHINES. THOMAS G. PLANT, Boston, Mass., assignor to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed Dec. 3, 1906. Serial No. 345,993.



1. In a welt attaching machine, a welt measuring device comprising stopping means for limiting the withdrawal of the welt upon withdrawal of the work from the machine.

2. In a welt attaching machine, a welt measuring device comprising adjustable stopping means for limiting the withdrawal of the welt upon withdrawal of the work from the machine.

3. The combination with welt end holding means of stopping means for limiting the travel of said welt in the direction of said holding means.

4. The combination with welt cutting and welt end holding means of means for limiting the travel of said welt in the direction of said holding means.

5. A welt-measuring device comprising welt deflecting means, means for adjusting or regulating said welt-deflecting means so as to vary the deflection, means to sustain said welt to permit of such deflection, and stopping means to limit the forward travel of the welt.

[Claims 6 to 13 not printed in the Gazette.]

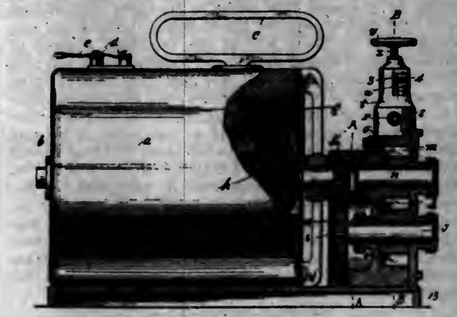
877,860. MUFFLER FOR EXPLOSIVE-ENGINES. HERBERT S. POWELL, Clinton, N. Y., assignor to Powell Muffler & Timer Company, Utica, N. Y., a Corporation. Filed Apr. 29, 1907. Serial No. 370,752.



A muffler consisting of heads having inlet and outlet openings, respectively, a series of nested sections combined with the heads in an elongated cylindrical form, each section being of cup form having a perforated bottom and the edge offset outwardly to receive the bottom end of the next adjacent section, and tie rods extending longitudinally through the muffler and binding the several sections and the heads together, substantially as set forth.

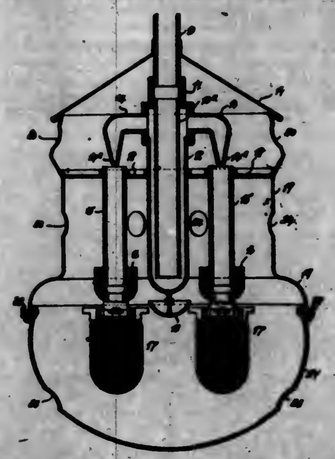
877,861. PORTABLE TIRE-INFLATER. JOHN W. RADU, Rochester, N. Y., assignor of one-half to Paul C. Wild, Rochester, N. Y. Filed July 13, 1907. Serial No. 383,698.

1. In an apparatus of the character described, the combination of a base-plate; an electric motor mounted thereon; an air-compressor mounted on said base-plate; mechanism connecting said motor and air-compressor, whereby said motor drives said air-compressor; means for connecting said air-compressor with the tube to be inflated; means for connecting electrically said motor and a suitable source of current; and means for carrying the apparatus by hand.



2. In an apparatus of the character described, the combination of a base-plate; an electric motor mounted thereon; an air-compressor mounted on said base-plate; mechanism connecting said motor and air-compressor, whereby said motor drives said air-compressor; a housing for said mechanism; means for connecting said air-compressor with the tube to be inflated; means for connecting electrically said motor and a suitable source of current; and a grip by which the apparatus may be carried by hand.

877,862. ALCOHOL-LAMP. ALCORN RECTOR, New York, N. Y., assignor to Warren B. Hutchinson, trustee, New York, N. Y. Filed Mar. 26, 1907. Serial No. 364,613.



1. A lamp of the kind described, comprising a pendent vaporiser having an outer tube closed at its lower end and an in-let tube extending into the outer tube, a series of mantles grouped around the vaporiser, and supply pipes connecting the mantles with the upper part of the vaporizer.

2. In a lamp of the kind described, the combination with the vaporiser consisting of a tube closed at its lower end, and the in-let pipe extending into the closed tube, of the cup suspended from the lower end of the vaporiser, a series of mantle tubes grouped around the vaporiser and carrying mantles at their lower ends, and pipes leading from the upper end of the vaporiser and discharging through restricted openings into the mantle tubes.

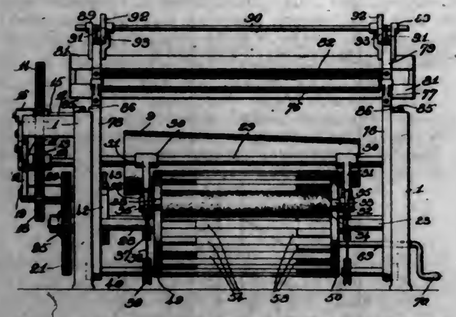
3. A lamp of the kind described, comprising an elongated pendent vaporiser comprising an outer tube closed

at its lower end, and an in-let tube extending into the outer tube, a series of mantle tubes grouped around the vaporiser, and having mantles at their lower ends, and pipes leading from the upper part of the vaporiser and discharging through jet openings into the mantle tubes.

4. A lamp of the kind described, comprising a vaporiser having an elongated tube closed at its lower end, and an in-let tube leading into the closed tube, a heating cup supported from the lower part of the vaporiser, a group of mantle tubes arranged around the vaporiser and carrying mantles at their lower ends, and discharge pipes leading from the upper part of the vaporiser into the mantle tubes.

5. A lamp of the kind described, comprising an elongated pendent vaporiser having a fuel in-let, a housing having a transverse diaphragm or plate dividing it into upper and lower parts, said housing fitting around the vaporiser, mantle tubes supported in the plate or diaphragm and carrying mantles at their lower ends, an air in-let into the upper part of the housing, means for supporting the globe on the lower part of the housing, heat exits in the lower part of the housing, and discharge pipes leading from the upper part of the vaporiser into the mantle tubes.

877,863. SLASHER. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Aug. 30, 1906. Serial No. 332,568.



1. In a slasher, a drum shaft, an extensible beam-actuating drum thereon comprising two heads rotatable with the shaft and movable toward and from each other, a cylindrical barrel composed of two alternating series of elements, each series being rigidly attached at one end to one of the heads, and at its other end extended past the inner end of the other series, and means operatively connected with the inner ends of the series of elements to vary the distance between the heads to thereby change the effective length of the drum, an element of one series sliding longitudinally between and being laterally supported by the two adjacent elements of the other series.

2. In a slasher, a rotatable shaft, drum-heads rotatable therewith and movable toward and from each other, a barrel composed of a series of laterally separated bars attached at one end to each of the heads, the bars of one series sliding longitudinally between the bars of the other series, an internal annular support for the other end of each series of bars, the support for each series of bars being nearer the head to which the other series is attached, and means to move one of said supports toward and from the adjacent head, to decrease or increase, respectively, the distance between the heads and thereby vary the effective length of the drum.

3. In a slasher, a rotatable shaft, drum-heads rotatable therewith and movable toward and from each other, a barrel composed of a series of laterally separated bars attached at one end to each of the heads, the bars of one series sliding longitudinally between the bars of the other series, an internal annular support for and rigidly attached to the other end of each series of bars, the support for each series of bars being nearer the head to which the other series is attached, threaded bosses in one of the supports, screwthreaded shafts extended therethrough and rotatably mounted in the adjacent head but held from longitudinal movement therein, and means to rotate said shafts in unison to move the connected support toward or from the said adjacent head, to thereby decrease or increase the distance between the drum-heads.

4. In a slasher, a rotatable shaft, drum-heads rotatable therewith and movable toward and from each other, a series of elongated, laterally separated bars rigidly attached at one end to each head, the opposite ends of the bars of the two series passing each other, said bars having convexed faces and radial sides, each bar of one series sliding longitudinally between and being laterally supported by the two adjacent bars of the other series, to constitute a cylindrical barrel of variable length for the drum, and means operatively connected with the ends of the bars farthest from the heads to vary the distance between the heads.

5. In a slasher, a rotatable shaft, drum-heads rotatable therewith and movable toward and from each other, a series of elongated, laterally separated bars rigidly attached at one end to each head, said bars having convexed faces and radial sides, each bar of one series sliding longitudinally between and being laterally supported by the two adjacent bars of the other series, to constitute a cylindrical barrel of variable length for the drum, two annular supports keyed to the shaft between the heads, the free ends of the bars of one head being attached to the opposite support, screw-shafts rotatably supported in the supports and coöperating with threaded bosses on one of them, said threaded bosses, means on the adjacent head to prevent longitudinal movement of the shafts, and means to effect simultaneous rotation of the screw-shafts to separate the heads or draw them toward each other.

[Claims 6 to 13 not printed in the Gazette.]

877,864. GAGE FOR SHOEMAKERS' USE. FRED L. RICHARDSON, Rockland, Mass., assignor of one-half to William F. Brock, Abington, Mass. Filed Sept. 21, 1907. Serial No. 393,885.



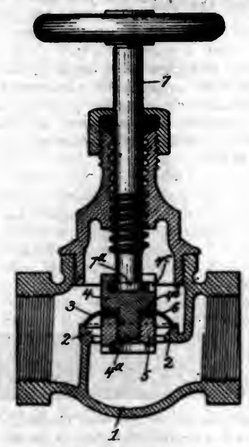
A gage having on its opposite edges notches of different widths for measuring the thickness of the sole, each notch having parallel opposed sides, said gage also having one end provided with two converging edges 5, 6, which meet in the comparatively sharp point 7, the edge 5 being provided with graduations for measuring the width of the sole extension.

877,865. VALVE. ALVA C. RICKSECKER, Jr., Chicago, Ill., assignor, by mesne assignments, to Ajax Valve Company, Chicago, Ill., a Corporation of New Jersey. Original application filed May 6, 1905, Serial No. 259,149. Divided and this application filed Sept. 29, 1906. Serial No. 336,706.

1. In a valve, a thin metal disk having an annular flexible outer portion for seating, in combination with a holder to which such disk is detachably secured and an inwardly sloping seat positioned relatively to the valve for the encounter of its inward slope by the edge only of the disk.

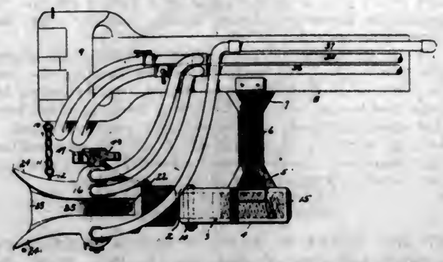
2. In a valve, a thin metal valve disk of dished or flaring form, in combination with a holder and means for securing the disk to the holder about the central portion, and an inwardly sloping seat positioned for the encounter of its inward slope by the outer circumference or edge only of the flaring portion of the disk.

3. In a valve, a thin metal disk of dished or flaring form concavo-convex in radial section; a holder for such disk on which the same is mounted with the concave side toward the seat, in combination with an inwardly sloping



seat whose inward slope is adapted to be encountered by the periphery of the concavo-convex disk.

877,866. AUTOMATIC PIPE-COUPLING FOR CARS. WILLIAM A. ROBERTSON, Newbern, N. C., assignor of one-fourth to Edward W. Pou, Smithfield, N. C. Filed Apr. 10, 1907. Serial No. 367,349.



1. In an automatic pipe coupling for cars, the combination with a car coupling, of a vertically arranged hanger bracket having a rigid connection with the car coupling draw bar and carrying a supporting box, of a pipe coupling head provided with a slotted draw bar section slidably fitting in said box, a retaining pin fitted to said box and engaging said slotted draw bar section, a draft spring for said draw bar section, and an auxiliary flexible hanger connected with the car coupling head and with the pipe coupling head.

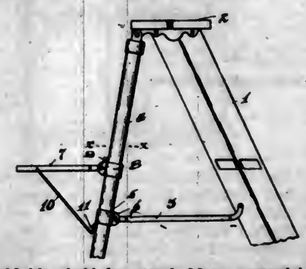
2. In an automatic pipe coupling for cars, a pipe coupling head comprising a bifurcated body having a pipe shoe provided with pipe connections, and a coupling arm lying opposite and in spaced relation to the inside coupling face of the shoe, said coupling arm carrying at its inner side a pressure spring.

3. In an automatic pipe coupling for cars, a pipe coupling head having a pipe shoe provided with pipe connections, and with a keeper groove in its outer side, said head being further provided with a coupling arm lying opposite the inside face of the shoe and carrying at its inner side a pressure spring having a slidably interlocking engagement with the keeper groove of the companion shoe.

4. In an automatic pipe coupling for cars, a pipe coupling head having a pipe shoe provided with pipe connections, a V-shaped guard fork at its outer end, and a longitudinal keeper groove in its outer side, said head being further provided with a coupling arm lying opposite the shoe and carrying at its inner side a longitudinally disposed offstanding pressure spring having a slidable interlocking engagement with the keeper groove of the companion shoe.

5. In an automatic pipe coupling for cars, a pipe coupling head having a pipe shoe provided with a series of circulating ports for the various pipes of the train, and a valve chamber intersecting said series of ports, a rotary valve plug mounted in the valve chamber and carrying at its upper end a swinging valve arm, and an off-standing tappet carried by the coupling head and arranged to engage the valve arm of the companion pipe shoe.

877,867. STEP-LADDER. JUDSON R. RUPE and WILLIAM F. BALZER, Richmond, Ind., assignors to Chandelier & Art Brass Works, Richmond, Ind., a Corporation. Filed Oct. 20, 1906. Serial No. 339,889.



1. A foldable shelf for step-ladders, comprising a shelf pivotally and slidably connected with the legs of the ladder, braces pivotally connected to said shelf at one end, the opposite ends terminating in looped knees and looped ends forming brace abutments and pivotal connections with the legs of the ladder, substantially as described.

2. A shelf for step-ladders, comprising a sleeve bracket loosely connected with the legs of the ladder, a shelf pivotally connected with said sleeve bracket, braces pivotally connected to said shelf at one end, the opposite ends terminating in looped knees and looped ends forming brace abutments and pivotal connections with the legs of the ladder, substantially as described.

3. In combination with the legs of a step ladder, slidable supports mounted upon the legs of the ladder, a shelf pivoted to said slidable supports braces pivoted to the shelf and loosely pivoted to the legs of the ladder, said braces provided with a knee bend forming a foot for said braces, substantially as described.

4. A step-ladder having stiles provided with legs pivotally connected thereto, locking braces pivotally connected to said stiles and slidably and pivotally connected to said legs, in combination with a shelf pivotally and slidably connected with said legs above the lock braces whereby said lock braces will move said shelf upwardly to a folded position when the ladder is folded, substantially as described.

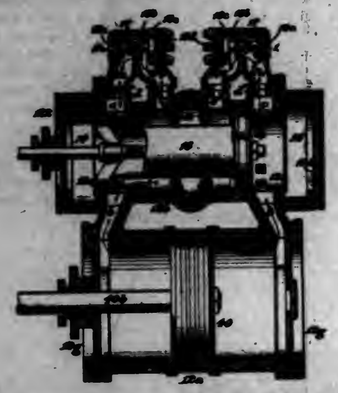
5. In combination with the legs of a step ladder, a shelf pivoted to slidable supports mounted upon the legs of the ladder, braces pivoted to the arms of the shelf and loosely pivoted to the legs thereof, and provided with a knee bend forming a foot for said brace, and means for maintaining said pivotal engagement with the legs, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

877,868. BY-PASS FOR LOCOMOTIVES. JAMES E. SAGUE and FRANCIS J. COLE, New York, N. Y.; said Cole assignor to American Locomotive Company, New York, N. Y., a Corporation of New York. Filed Mar. 28, 1906. Serial No. 308,440.

1. A by pass and air admission mechanism for locomotive cylinders, comprising a chest or casing having an air admission port at one of its ends and two adjacently located channels or passages leading from one of its sides, each adapted for direct connection to a valve chest port,

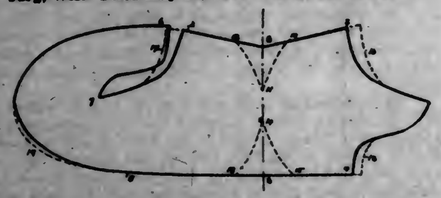
and a body or stem carrying a valve which controls the air admission port and a valve of larger diameter controlling communication from one to the other of the adjoining valve chest port passages or channels.



2. A by pass and air admission mechanism for locomotive cylinders, comprising a chest or casing having a cushion chamber at one of its ends and an air admission port at the other and two intermediate lateral channels or passages adapted for connection to a valve chest, a removable head closing the end of the cushion chamber, and a body or stem carrying a valve which controls the air admission port, a valve of larger diameter controlling communication between the lateral passages or channels, and a piston fitting in the cushion chamber.

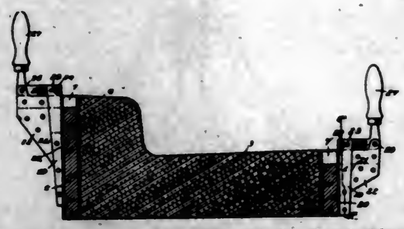
3. The combination, with a locomotive engine cylinder and its valve chest, of a chest or casing having two passages, one of which communicates with an exhaust space of the valve chest and is provided with a port leading to the atmosphere, and the other of which communicates with a steam space of the valve chest, a valve controlling a port to the atmosphere and exposed, on its outer side, to atmospheric pressure, a connected valve controlling communication between the two passages of the chest or casing and exposed, on it inner side, to the pressure in the steam space, and a connected piston, working in a cushion chamber in the chest or casing.

877,869. SHOE. CHARLES R. SCHLEIFER, Cedarburg, Wis., assignor to Excelsior Shoe & Slipper Company, Cedarburg, Wis. Filed May 14, 1906. Serial No. 316,620.



The method herein described of forming a shoe upper from a single piece of leather having when made up a centrally inwardly curved rear portion without cutting or stitching such heel portion, consisting, first, in cutting the shoe upper comprising a toe portion, and a continuous heel, ankle, an instep portion formed integrally, one side of the front portion being provided with a slit extending forwardly toward the longitudinal center of the upper; second, crimping and expanding the upper and lower heel end portions of the upper thus formed, leaving the centrally inwardly curved portion of the upper in substantially its normal unexpanded condition; third, in removing the surplus end portions of the upper which is produced by the outward expansion of the upper and lower edges of the shoe upper, and fourth, in folding and stitching the overlapping side portions of the blank together, all substantially as and for the purpose specified.

877,870. APPARATUS FOR MOLDING ARTIFICIAL-STONE BLOCKS. JAMES W. SHONE and JOHN N. RAUBER, Rochester, N. Y.; Walter V. Whitmore and Charles F. Miller executors of said Shone, deceased. Filed Feb. 4, 1905, Serial No. 244,112. Renewed Oct. 11, 1907. Serial No. 396,943.

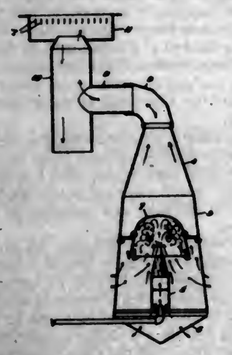


1. In an apparatus for molding blocks, the combination with boards for forming the side faces of the block and plates arranged between the boards, of arms on the plates extending beyond the boards, levers journaled thereon and locking devices connected to said levers and coöperating with the boards.

2. In an apparatus for molding artificial stone blocks, the combination with mold boards for forming the side faces of a block and end plates having arms extending beyond said boards, of locking members embracing the arms and levers pivoted on the latter each having one end engaging its respective locking member and the other end forming an operating handle.

3. In an apparatus for molding artificial stone blocks, the combination with mold boards for forming the side face of a block and end plates having arms extending beyond said boards, of plates secured to the sides of the arms and extending above and below their respective arms, a locking member comprising side pieces bearing against each plate and a lever pivoted between the plates and having one end connected to the locking member.

877,871. FURNACE. EDWIN N. SNITZER, Pittsburg, Pa. Original application filed Nov. 5, 1906, Serial No. 342,153. Divided and this application filed Nov. 16, 1907. Serial No. 402,430.



1. The combination with a furnace, and a hot air register, of a connection between the furnace and register having one opening into the furnace and a supplementary direct downward draft opening from the register independent of the furnace.

2. The combination with a furnace adapted to discharge the products of combustion directly through a register into a room, of a register and a connection between the furnace and the register comprising a casing having one opening from the furnace and a separate opening downward past the furnace opening, to allow direct escape of downdraft.

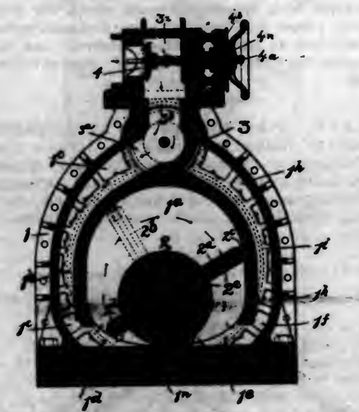
3. A register and a furnace having a casing, an outlet pipe from the casing having two branches, one connected with the register, and the other opening directly downward from the register to allow escape of downdraft.

4. The combination with a furnace comprising a casing, a burner and a reverberatory hood therein over the burner, of an outlet for the casing comprising a register box and a pipe connected thereto and to the furnace casing and having a separate direct downdraft passage to one side of the opening from the casing, whereby downdrafts are prevented from interfering with the operation of the burner and hood in the casing.

5. An attachment for heating furnaces comprising a register box having a downwardly directed extension and a side pipe connection between the furnace and said box entering the side wall of the register box extension.

[Claim 6 not printed in the Gazette.]

877,872. ROTARY ENGINE. ERNEST SENEC, Baltimore, Md. Filed May 15, 1907. Serial No. 373,795.



1. In a rotary engine the combination of a casing, a plurality of adjacent working chambers therein, steam chambers on opposite sides of said working chambers, the steam chambers at each side communicating,—ports connecting the lower ends of said chambers with the working chambers, a main shaft extending through the chambers and located eccentrically thereof, an enlargement on said shaft within each chamber and intermediate the ports thereof, a sliding abutment in each chamber extending diametrically through said enlargement, and steam inlet and outlet valves for connecting the inlet with either steam chamber and connecting the outlet with the other chamber.

2. A rotary engine comprising a plurality of adjacent working chambers, a shaft extending through the chambers and provided with enlargements in each chamber, said enlargements having diametrical slots, sliding abutments fitted in said slots, the abutments in adjacent chambers alternating in position, steam chambers on opposite sides of each working chamber, the steam chambers at the same side of the engine communicating with each other, and the opposite steam chambers communicating with the intermediate working chambers at opposite sides of the rotary enlargements; with steam inlet and steam outlet valve mechanism whereby steam is admitted to one set of steam chambers and exhausted through the other set of steam chambers.

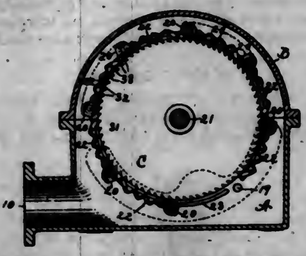
3. In a rotary engine the combination of a working chamber, a main shaft extending therethrough and located eccentrically thereof and provided with an enlargement in said chamber, a sliding abutment extending diametrically through said enlargement, and a steam chamber at each side of the working chamber, said steam chambers communicating with the working chamber at its lower end and at opposite sides of said enlargement; with a rotatable valve interposed between the upper ends of said chambers and provided with ports whereby when the valve is in one position communication is established between said chambers, and whereby when the valve is in other positions the ports may be set to communicate with one chamber while the other is cut off.

4. In a rotary steam engine the combination of a plurality of working chambers, rotary abutments in each working chamber formed at different angles, steam chambers on opposite sides of the working chambers, the sides of the working chambers respectively communicating therewith on opposite sides of the abutments, a steam inlet chamber, and an outlet chamber; with an inlet valve having ports whereby the valve may be caused to establish communication between the inlet chamber and either steam chamber, or to close the inlet and establish communication between both steam chambers; and an outlet valve adapted to establish communication between that steam chamber into which the steam is exhausted and the said outlet chambers, and means for simultaneously operating said valves.

5. In a rotary steam engine the combination of the working chambers and abutments therein, a steam inlet chamber, a steam outlet chamber, and opposite steam chambers communicating with the working chambers; with a pair of rotary valves respectively interposed between the inlet and outlet chambers and said steam chambers, and provided with ports whereby the inlet valve may be caused to establish communication between the inlet chamber and either steam chamber, and simultaneously the outlet valve caused to establish communication between the other steam chamber and the exhaust, and gearing for operating said valves simultaneously in opposite directions.

[Claims 6 to 11 not printed in the Gazette.]

877,873. STEAM-TURBINE. EDWARD C. TERRY, Hartford, Conn., assignor to Terry Steam Turbine Company, Hartford, Conn., a Corporation. Filed Nov. 18, 1907. Serial No. 402,575.



1. In a steam turbine, a case divided into two parts in a plane extending longitudinally through the axis of the turbine, separate steam chambers in the said two parts, and a bracket pipe connecting the said steam chambers.

2. In a steam turbine, a case divided into lower and upper parts in a horisontal plane extending longitudinally of the axis of the turbine, a main steam chamber in the lower part of the said case, two separate chambers in the upper part of the said case, and outside connections between the said chamber in the lower and the chambers in the upper part of the case.

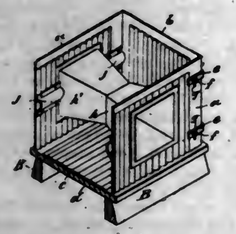
3. In a steam turbine, a case having a steam chamber in one side thereof with jet ports leading from the said chamber to the interior of the case, jet bodies seated on the side of the case over the said jet ports, and abutting bolts on the opposite side of the case for holding the said jet bodies in place.

4. In a steam turbine, the case having substantially annular ribs on its opposite sides and segments of reversing chambers seated upon and secured to the said ribs.

5. In a steam turbine, the case having substantially annular ribs on its opposite sides, segments of reversing chambers seated upon and secured to the said ribs, a steam chamber in one side of the said case, jet ports leading from the said chamber to the interior of the said case, jet bodies seated over the said jet ports, and means for holding the said jet bodies in place at the end of each of the segments of reversing chambers.

[Claims 6 and 7 not printed in the Gazette.]

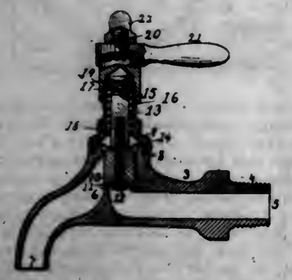
877,874. MOLD FOR CEMENT BLOCKS. STOYAN V. TSANOFF, New York, N. Y. Filed Feb. 7, 1907. Serial No. 356,212.



1. A mold of the character described comprising a bottom, upright sides and ends extended above the bottom and having separable connections, and taperd core sections held upon opposite sides of the mold, one of said core sections being hollow and having its smaller end of larger diameter than the smaller end of the other core section, and adapted, when the parts are in relation, to receive the smaller end of said other core section.

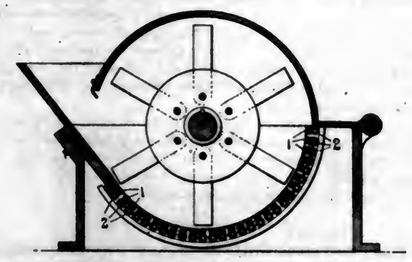
2. A mold of the character described comprising a bottom, upright sides and ends extended above the bottom and having separable connections, partitions extended parallel to the sides and separably connected with the ends and spaced from the sides and from each other, and alined tapered core sections held upon the sides and upon opposite faces of the partitions, one of each two adjacent core sections being hollow and having its smaller end of greater diameter than the smaller end of the adjacent core section and adapted, when the parts are in relation, to receive the smaller end of said adjacent core section.

877,875. STOP-COCK. JOSEPH E. VAN NOSTRAN, Canton, Ohio, assignor of one-half to George W. Shade, Canton, Ohio. Filed Mar. 13, 1907. Serial No. 362,166.



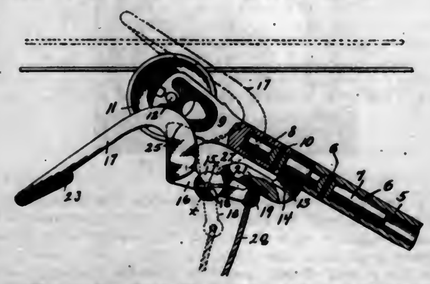
The combination of a stop-cock body having a valve-seat in it; a cap upon the body; a thimble freely screw-threaded upon the cap; a valve fitted to the said seat and provided with a stem which passes through the said cap and has a conical bearing against the said thimble; a spring acting between the cap and the stem to force the latter to a bearing against the thimble; the thimble being provided with a screw-threaded extension and with a radially corrugated shoulder around the extension; a handle freely fitted upon the thimble stem and having radial corrugations to register with the corrugations on the thimble, and a nut screw-threaded upon the said extension, substantially as shown and described.

877,876. CRUSHER AND PULVERIZER. MILTON F. WILLIAMS, St. Louis, Mo., assignor to Williams Patent Crusher & Pulverizer Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 1, 1907. Serial No. 365,708.



A crusher or pulverizer having a grinding surface which is provided with openings through which the pulverized material passes, and heating pipes arranged underneath said grinding surface in contact therewith and in alinement with the solid portions thereof; substantially as described.

877,877. WIRE-RETRIEVING ATTACHMENT FOR TROLLEY-WHEELS. WILLIAM C. ALTHEN, Columbus, Ohio, assignor of one-sixth to William F. Miesse, one-sixth to William N. Gearhart, one-sixth to Benjamin F. Hirt, and one-fourth to John T. Dunnick, Columbus, Ohio. Filed Mar. 22, 1907. Serial No. 363,909.

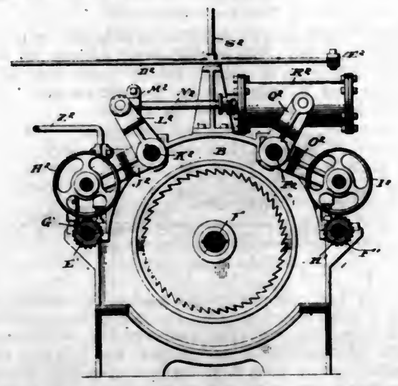


1. The combination with a trolley pole and wheel, of a wire retrieving yoke pivotally mounted in the rear of the trolley pole, said yoke normally lying below the trolley wire and being adapted to be thrown above said trolley wheel when a pull is given the trolley rope, means for insulating the yoke from the trolley pole when the yoke is in its lowermost position, and means for completing an electrical connection to the trolley pole when said yoke is in its uppermost position.

2. The combination with a trolley pole and wheel, of a wire retrieving yoke pivotally mounted in rear of the trolley pole, said yoke normally lying below the trolley wire and being adapted to be thrown above said trolley wheel when a pull is given the trolley rope, and ribs carried by the yoke which lie close to the trolley harp and which are adapted to receive the trolley wire between themselves and the sides of the yoke.

3. The combination with a trolley pole and wheel, of a bracket secured to said trolley pole and lying in the rear thereof, a yoke pivoted to the bracket, means for insulating said yoke from the bracket at its pivotal point, said yoke having a V-shaped wire guiding portion and an arm which extends beyond its pivotal point and is adapted to have a trolley rope secured thereto, and ribs carried by the yoke which lie close to the sides of the trolley harp and are adapted to receive the trolley wire between themselves and the side of the yoke, and means for insulating the free end of the arm that has the trolley rope secured thereto from the bracket.

877,878. GANG-EDGER. ULRICH ANDERSON, Fond du Lac, Wis., assignor to Giddings & Lewis Manufacturing Company, Fond du Lac, Wis., a Corporation of Wisconsin. Original application filed Jan. 29, 1907, Serial No. 354,762. Divided and this application filed Aug. 2, 1907. Serial No. 386,752.



1. In a gang-edger, the combination of a saw-arbor; a positively-driven feed roll upon each side of said arbor; a pair of rocker-shafts located above the arbor; a roll connected to each of said rocker-shafts by downwardly-extending arms, said rolls standing in line with the positively driven feed rolls; an arm extending upwardly from each of the rocker-shafts and positively connected thereto; a cylinder mounted upon one of said arms; and a piston-rod connected to the opposite arm.

2. In a gang-edger, the combination of a saw-arbor; a positively-driven feed roll mounted upon the frame of the machine at eacn side of the arbor; a pair of rocker-shafts mounted in the frame above the arbor; a pair of arms extending outwardly from each of said rocker-shafts; a feed roll journaled in each pair of arms; an arm extending upwardly from one of said rocker-shafts; a yoke projecting upward from the other rocker-shaft; a cylinder swiveled in said yoke; and a piston-rod connected to the piston in the cylinder and to the arm.

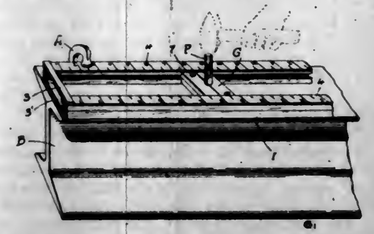
3. In a gang-edger, the combination of a saw-arbor; a positively-driven feed roll mounted upon each side of said arbor; a pair of rocker-shafts mounted in the frame above the arbor; a pair of arms extending outwardly from each of said rocker-shafts; a feed roll journaled in the outer end of each pair of arms, the roll standing in substantial alinement with its companion positively-driven feed roll; an arm extending upward from one of said rocker-shafts; a yoke projecting upward from the other rocker-shaft; a cylinder swiveled in said yoke; a piston-rod connected to the piston of the cylinder and at its outer end to the upwardly-extending arm; and means for causing said rocker-shafts to move in unison.

4. In a gang-edger, the combination of a saw arbor; positively-driven feed rolls located upon opposite sides of the arbor; a pair of rocker-shafts located in the frame of the machine above the arbor; arms extending outwardly from each of said rocker-shafts; a feed roll carried by the outer ends of said arms; an arm extending upwardly from one rocker-shaft; a supporting member extending upwardly from the other rocker-shaft; a cylinder carried by said supporting member; a piston-rod connected at one end to the piston in the cylinder and at the other end to the arm of the opposite rocker-shaft; and yielding connections between said rocker-shafts for normally causing them to move in unison and permitting one to yield independently of the other, substantially as and for the purpose specified.

5. In a gang-edger, the combination of a saw-arbor; a positively-driven feed roll located upon each side of said arbor; a pair of rocker-shafts mounted in the frame of the machine above the arbor; a pair of arms extending outwardly from each rocker-shaft; a roll carried by each pair of arms; a supporting member extending upwardly from one of said rocker-shafts; a cylinder carried thereby; an arm extending upwardly from the second rocker-shaft; a piston-rod connected to said arm, and to the piston in the cylinder; a pair of sector-shaped members secured to the rocker-shafts; and connections between said sector-shaped members, including a yielding device, whereby said members will, under normal conditions, move in unison but will permit one of the rolls to yield independently of the other, substantially as and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

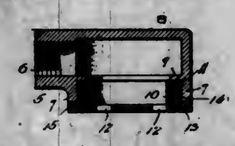
877,879. TEMPLET. HARRY B. ASH, St. Louis, Mo., assignor of one-tenth to Henry G. Conrad, St. Louis, Mo. Filed Jan. 16, 1907. Serial No. 352,572.



1. A templet comprising a longitudinal frame composed of side channel members, transverse terminal plates connecting the adjacent ends of the channels, gage-blocks mounted in the frame and sliding in the ways formed by the channels of the side members, each block being composed of two sections their adjacent faces being in a plane parallel to the upper and lower faces of the frame, screws mounted in one section and having their inner ends bearing against the adjacent section of the block whereby upon driving home the said screws the sections are forced into frictional engagement with the walls of the channels and thus clamped in position, the blocks being provided with holes for the passage therethrough of a centering punch, a scale marked along each side member of the frame, and an index on each block coöperating with the marks on the scale, the blocks being insertible into the channels of the frame from either end thereof.

2. A templet comprising a longitudinal frame having a suitable scale, a series of gage-blocks mounted in the frame and adapted to be shifted on the same to predetermined distances apart from one another, means carried by the blocks for securing the same to the frame in their adjusted position, the blocks being provided with holes for the reception of centering punches or tools.

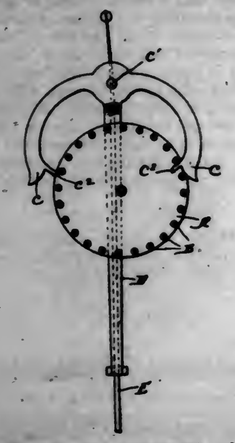
877,880. OUTLET-BOX. HARRY BECKER, Baltimore, Md. Filed Feb. 1, 1907. Serial No. 355,251.



1. An outlet box comprising a cylindrical casing, an annular flange extending from the inner walls thereof, a ring screwed into the end of said casing, and an insulating bushing held between said flange and said ring so as to swivel freely.

2. In an outlet box, an insulating perforated bushing, and a screw tapeaded ring surrounding said bushing and within which said bushing is free to turn.

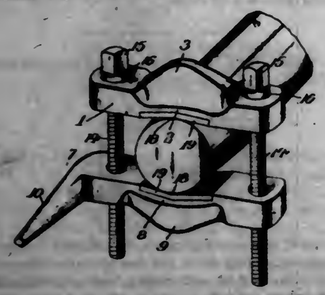
877,881. ESCAPEMENT. GEORGE W. BENNUM, Georgetown, Del. Filed May 16, 1905. Serial No. 260,650.



1. In combination, an escapement wheel comprising a pair of pivoted disk members capable of revolution, a series of rollers mounted on the disks for independent revolution, pivoted pallets adapted to contact with said rollers, the contacting faces of said pallets being curved concentrically of the pivotal point thereof, and a verge rod connected to the pallets, the innermost edge of the pallets being beveled, the face of the pallet below the engaging fingers thereof being outwardly and downwardly curved relative to said fingers, whereby a double impetus will be given to the verge rod as the pallets move out of engagement with the rollers.

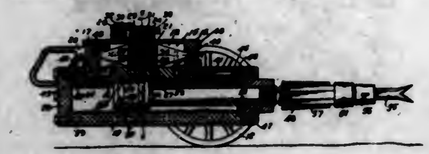
2. In combination, an escapement wheel having independently-movable pallet-engaging members, and pivoted pallets arranged to engage said members, the engaging face of each pallet being curved on a plane concentric with the pivot thereof, the relatively inner edge of each pallet being inclined to insure a moving pressure of the members on said pallets as the latter move out of engagement with the members, each pallet member below the engaging finger being formed with an engaging face curving outwardly and downwardly relative to said finger, said curved face being adapted to engage the escapement pins and impart an initial impetus to the pendulum prior to the engagement of the pallet fingers with said pins.

877,882. LATHE-DOG. GEORGE J. BLUM, Chicago, Ill. Filed June 13, 1904. Serial No. 212,852.



In a lathe dog, in combination, two holding jaws, each of said jaws having an opening extending therethrough at each of its ends, the outer end of each of said openings being of socket form and the inner end thereof flaring; screws connecting the corresponding ends of said jaws, the head of each of said screws being rounded to correspond with one of said sockets; and a nut on each of said screws having a rounded portion adapted to fit into the corresponding socket of the other jaw, said last mentioned socket being outwardly flaring and deep enough to contain substantially the entire nut and corresponding substantially in horizontal cross-section with the form of said nut, whereby said nut is free to oscillate in any direction in said socket but is held from turning on its axis.

877,883. PNEUMATIC MINING-MACHINE. WILLIAM B. BUTTS, New Philadelphia, Ohio, assignor of four-fifths to Fordyce C. Loomis, Edward Geiser, Charles N. Geiser, and William J. Wise, New Philadelphia, Ohio. Filed June 8, 1907. Serial No. 377,956.



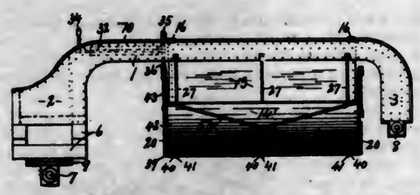
1. In a fluid operated mining machine, a cylinder provided with a plunger chamber and having inlet and outlet channels communicating therewith; a reciprocatory plunger disposed within said chamber and provided with a cutting tool; a fluid chest mounted upon said cylinder in communication with said inlet channels; an endwise reciprocatory member disposed within said chest; slide valves carried by said member and adapted to cover and uncover said inlet channels to control the admission of fluid to said chamber; a housing disposed within said chest, said housing having an outlet passage communicating with the cylinder outlet channel and having an inlet passage in common with said chest; and a rotary turbine disposed within said housing and operatively connected with said chamber.

2. In a fluid operated mining machine, a cylinder provided with a plunger chamber and having inlet and outlet channels communicating therewith; a reciprocatory plunger disposed within said chamber and provided with a cutting tool; a fluid chest mounted upon said cylinder in communication with said inlet channels; an endwise reciprocatory member disposed within said chest, said member having alining openings formed in its opposite sides, and inwardly directed seats formed in its under face at opposite ends thereof; a pair of slide-valves carried by said member and having their stem portions projecting into said seats, said valves being adapted to cover and uncover said inlet channels, to control the admission of fluid to said chamber; a rotatory turbine disposed within said chest; and a pair of eccentrics carried upon the turbine shaft and disposed within the openings in said member for operating the latter.

3. In a fluid operated mining machine, a cylinder provided with a plunger chamber and having inlet and outlet channels communicating therewith; a reciprocatory plunger disposed within said chamber and provided with a cutting tool; a fluid chest mounted upon said cylinder in communication with said inlet channels; an endwise reciprocatory member disposed within said chest; slide valves carried by said member and adapted to cover and uncover said inlet channels, to control the admission of fluid to said chamber; a two-part housing disposed within said chest, and consisting of an upper member and a lower member, said upper member having a fluid inlet passage in common with said chest, and said lower member having an outlet passage communicating with the outlet channel of said cylinder; and a rotatory turbine incased by said housing members and operatively connected with said reciprocatory member.

4. In a fluid operated mining machine, a cylinder provided with a plunger chamber and having inlet and outlet channels communicating therewith; a reciprocatory plunger disposed within said chamber and provided with a cutting tool; a fluid chest mounted upon said cylinder in communication with said inlet channels; an endwise reciprocatory member disposed within said chest and having openings formed in its opposite sides; slide valves carried by said member and adapted to cover and uncover said inlet channels to control the admission of fluid to said chamber; a two-part housing disposed within said chest and consisting of an upper member and a lower member, said upper member having a fluid inlet passage in common with said chest, and said lower member having an outlet passage communicating with the outlet channel of said cylinder; a rotary turbine incased by said housing members; and a pair of eccentrics carried by the turbine shaft and disposed within the openings in said reciprocatory member for operating the latter.

877,884. DUMP-WAGON. WILBUR L. COLLINS, Baldwinsville, N. Y., assignor of one-half to Edward L. Montague, Baldwinsville, N. Y. Filed July 29, 1907. Serial No. 386,014.



1. In a dump wagon, a dump box having laterally swinging bottom doors curved transversely and provided with end pieces pivoted to the ends of the box at opposite sides of the longitudinal center of said box, means for opening and closing the doors, and additional means brought into action by the door operating means for locking the doors in their closed position.

2. In a dump wagon, a box having laterally swinging bottom doors inclining outwardly and upwardly from their meeting edges and provided with end pieces extending some distance upwardly from the bottom and pivotally connected to the front and rear ends of the box at opposite sides of the longitudinal center of said box, means for locking the doors in their closed position, further means for opening and closing the doors, and connections between the door operating means and locking means whereby the doors are unlocked by the operation of the door operating means to open the doors.

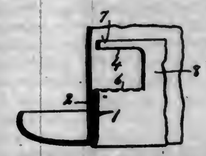
3. In a dump wagon, a dump box having laterally swinging bottom doors provided with upturned end pieces pivoted at the opposite ends of each on opposite sides of the longitudinal center of the box, a rock-shaft journaled on the box, a link eccentrically connected to the rock-shaft and to one of the doors, additional connections between said doors for transmitting motion from one to the other, a rock-shaft journaled on one of the doors and provided with means for engaging and locking one of the doors in its closed position, and connections between the door operating mechanism and rock-shaft for unlocking the doors just prior to opening the same.

4. In a dump wagon, a box having downwardly flaring sides and provided with laterally swinging bottom doors inclining upwardly from their meeting edges, said doors having up-turned end pieces pivoted to the ends of the box at opposite sides of its longitudinal center, a rock-shaft journaled on the box, a link eccentrically connected to the rock-shaft and to the end piece of one of the doors, means for transmitting motion from one door to the other, and additional means for locking the doors in their closed position.

5. In a dump wagon, a dump box having laterally swinging bottom doors curved upwardly from their meeting edges and provided with up-turned end pieces pivoted to the opposite ends of the box midway between its sides and longitudinal center, means for opening and closing the doors, and additional means brought into action by the door operating means for locking the doors in their closed position.

[Claim 6 not printed in the Gazette.]

877,885. SWEAT-BAND FOR HATS. HENRY B. CRAMPTON, Syracuse, N. Y., assignor of one-half to Charles B. Hawver, Syracuse, N. Y. Filed Mar. 12, 1907. Serial No. 361,964.



1. A sweat band for hats consisting of a single piece of leather having lengthwise and transverse incisions therethrough at intervals leaving the intermediate portion united at one edge to the main body to form flaps adapted to be folded between the main body and rim of the hat.

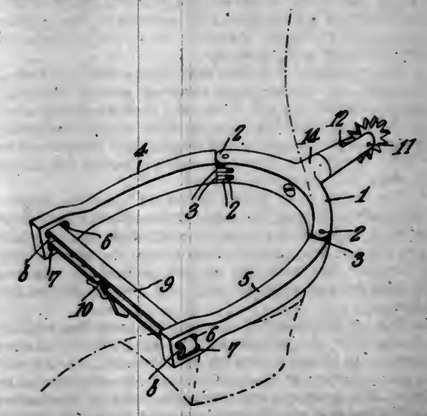
2. A sweat band having transverse slits and intervening integral flaps attached to the main body along one edge upon which the flaps are adapted to be folded between the band and body of the hat.

3. A sweat band having transverse slits and intervening integral flaps of substantially the same length as the distance between the transverse slits and attached to the main body along one edge upon which the flaps are adapted to be folded between the band and body of the hat, the folding line being within and parallel with the free edge of the sweat band.

4. A sweat band having lengthwise and transverse incisions therethrough to form intervening flaps adapted to be folded inwardly between the band and body of the hat, the lengthwise incisions being of greater length than the transverse incisions.

5. A sweat band cut at intervals to form intervening integral flaps within the main body of the band, said flaps being attached to the main body along one edge upon which the flaps are adapted to be folded between the band and body of the hat, the folding edge of the flap being within and parallel with the margin of the band.

877,886. RIDING-SPUR. DANIEL W. CROWDER, Hillham, Ind., assignor of one-half to David G. Morgan, Hillham, Ind. Filed Mar. 1, 1907. Serial No. 360,050.

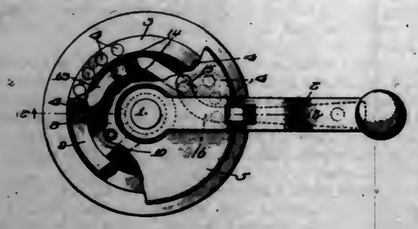


1. A riding spur embodying an intermediate section curved to fit the rear of a boot heel and having hinge

members on its opposite ends arranged at points substantially in line with the sides of the boot heel, a spur carried by the intermediate section, a pair of coöperating side sections having hinge members at their rear ends coöperating with those at the opposite ends of the intermediate section, and an adjustable device connecting the free ends of the side sections for adjusting the latter against the sides of the boot heel.

2. A riding spur embodying an intermediate section of a length sufficient to extend laterally to opposite sides of a boot heel and carrying a suitable spur, side sections pivotally attached to the ends of the intermediate section and each having a pair of parallel slots extending transversely therethrough forming a cross piece between them, and a securing strap extending through said slots and coöperating with the cross pieces of the respective side members for drawing the latter into coöperative relation with a boot heel.

877,887. CONTROLLER-REGULATOR. CYRUS P. EBERSOLE, Keokuk, Iowa, assignor, by mesne assignments, to Electric Service Supplies Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Sept. 1, 1904. Serial No. 223,020.



1. In combination, a controller operating member, an annular support, a series of movable stops depending from said support, a pawl arranged beneath said stops and engaging the same to enforce an intermittent movement of said operating member and locking the same in the position of rest, manually operated means for moving said stops to release said member, and a cover fitting over said annular member whereby the operative parts are entirely inclosed.

2. The combination, with a controller operating member, of a series of movable stops, a pawl arranged beneath and engaging said stops to enforce an intermittent movement of said member and locking said member in the positions of rest, and manually operated means for moving said stops to release said member.

3. The combination, with a controller operating member, of a series of movable stops mounted upon a stationary support, a pawl movable with said member beneath said stops and engaging the same to enforce an intermittent movement of said member and locking said member in the positions of rest, and manually operated means for moving said stops to release said member.

4. The combination, with a controller operating member, of a plurality of stops arranged in succession, a pawl movable with said member beneath said stops and arranged to engage the same and thereby arrest the movement of said member, and manually operated means for removing said stops from engagement with said pawl to release said member.

5. The combination, with a controller operating member, of a plurality of pins movable in a suitable stationary support, a pawl movable with said member beneath said pins and arranged to engage the same to arrest the movement of said member, and manually operated mechanism for removing said pins from engagement with said pawl to release said member.

[Claims 6 to 20 not printed in the Gazette.]

877,888. BREWER'S PITCH. CHARLES N. FORREST, Brooklyn, N. Y., assignor to The Barber Asphalt Paving Company, Philadelphia, Pa., a Corporation of West Virginia. Filed Dec. 22, 1906. Serial No. 349,175.

1. A brewer's pitch comprising a hard bitumen free from mineral matter, and a tempering agent which lowers the temperature at which the bitumen becomes fluid but which does not render it soft at atmospheric temperatures.

2. A brewer's pitch comprising a hard bitumen free from mineral matter, and wax tailings as a tempering agent, substantially as described.

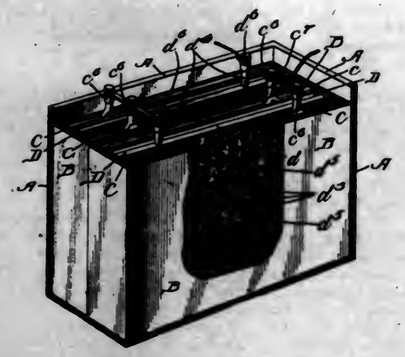
3. A brewer's pitch comprising a hard bitumen free from mineral matter, and a suitable tempering agent composed of wax tailings combined with a petroleum pitch.

4. A brewer's pitch comprising a hard bitumen; a tempering agent which lowers the temperature at which the bitumen becomes fluid but which does not render it soft at atmospheric temperatures; and an antiseptic substance.

5. A brewer's pitch comprising a hard bitumen as a base; wax tailings as a tempering agent; and a mixture of colophony and rosin oil; all combined in about the proportions specified.

[Claim 6 not printed in the Gazette.]

877,889. STORAGE BATTERY. WILLIAM GARDINER, Chicago, Ill., assignor, by mesne assignments, to Commercial Storage Battery Company, Chicago, Ill., a Corporation of Illinois. Filed May 2, 1905. Serial No. 258,510.



1. A grid comprising an oppositely disposed series of horizontal containing bars, and a series of vertical strengthening bars, said vertical bars being provided with a plurality of inwardly flaring lugs.

2. A grid comprising oppositely disposed series of horizontal, triangular containing bars, and a series of vertical strengthening bars, said vertical bars being provided with a plurality of inwardly flaring lugs.

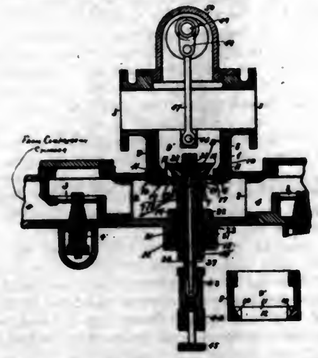
3. A grid comprising oppositely disposed series of horizontal, triangular containing bars set with apex outward, and a series of vertical strengthening bars, said vertical bars being provided with a plurality of inwardly flaring lugs.

4. A grid comprising oppositely disposed series of horizontal containing bars of a triangular cross-section, and a series of oppositely disposed vertical strengthening bars, each bar being provided with a series of inwardly flaring lugs or teeth, the teeth of oppositely disposed bars being in staggered relation to each other.

5. A grid comprising oppositely disposed series of horizontal containing bars of a triangular cross-section set with apex outward, and a series of oppositely disposed vertical strengthening bars, each bar being provided with a series of inwardly flaring lugs or teeth, the teeth of oppositely disposed bars being in staggered relation to each other.

[Claim 6 not printed in the Gazette.]

877,890. VAPORIZER. GEORGE H. GERBER and ALFRED WEILAND, Reading, Pa.; said Weiland assignor to said Gerber. Filed June 8, 1907. Serial No. 377,879.



1. A vaporizer provided with an inlet passage for air, an outlet passage for gaseous vapor, a passage between said air and vapor passages, and an adjustable liquid fuel and water supply nozzle concentrically arranged in the latter passage, forming one wall thereof, and from which the liquid fuel and water are discharged into the air in transit through said passage.

2. A vaporizer provided with an inlet passage for air, a valve in the passage, an outlet passage for gaseous vapor, an annular passage between said air and vapor passages, and an adjustable liquid fuel and water supply nozzle in the latter passage, forming one wall thereof and from which the liquid fuel and water are discharged into the air in transit through said passage.

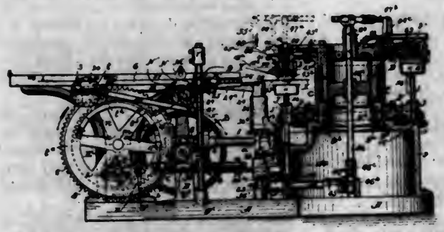
3. A vaporizer provided with air inlet passages, outlet passages for gaseous vapor arranged in a plane parallel with the plane of the air passages, an annular passage between said air and vapor passages, and an adjustable liquid fuel and water supply nozzle in the latter passage and forming one wall thereof.

4. A vaporizer provided with an air inlet passage, an outlet passage for gaseous vapor, a contracted passage between said air and vapor passages and a liquid fuel and water supply nozzle adjustable in said contracted passage to vary the area thereof, and whose discharge is induced by the air in transit.

5. A vaporizer provided with an air supply passage, and a vapor discharge passage, an annular passage between said air and vapor passages, a valve controlling the latter passage, and a liquid fuel supply nozzle forming one wall of said passage and adjustable therein to vary the area thereof, and arranged in the path of the air and heated thereby.

[Claims 6 to 18 not printed in the Gazette.]

877,891. BASKET-MACHINE. EMMET HORTON, Elmira, N. Y., assignor to Horton Basket Machine Company of West Virginia. Filed Sept. 15, 1898. Serial No. 691,030.



1. In a basket-making machine, a plurality of shaping dies arranged to travel collectively and bodily around a common center, in combination with means for revolving the dies individually while moving bodily, substantially as described.

2. In a basket-making machine, a revolving frame carrying two or more pairs of shaping dies adapted to receive between them the blanks composing the body portion of the basket, in combination with means for feeding and placing said blanks crosswise between the dies, and means for actuating each pair of dies relatively to each other.

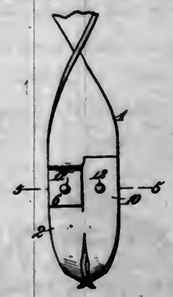
3. In a basket-making machine, a revolving frame or support carrying two or more sets of shaping dies arranged and adapted to travel around a common center, in combination with means for periodically arresting the dies, means for feeding bands to the dies, a stationary feed table adjacent to the path of the dies, and means for feeding and crossing the blanks for the body portions of the basket in position to be operated on by the dies, substantially as described.

4. In a basket-making machine, the combination of a series of forms and formers arranged to revolve about a common axis, means for thus revolving the forms and formers, means for revolving each form about its own individual axis, and means for operating the formers.

5. The combination of a series of forms and formers arranged to revolve about a common axis, means for revolving each form about its own individual axis, means for operating the formers, and means for supplying blanks and bands to the forms.

[Claims 6 to 29 not printed in the Gazette.]

877,892. DRILL. AARON E. JENNINGS and JAMES W. JENNINGS, Central City, Ky., assignors of one-third to Gregory Jennings, Lima, Ohio. Filed Mar. 20, 1907. Serial No. 363,476.



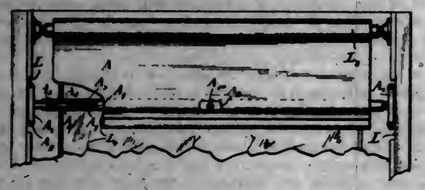
A drill for mining purposes comprising a shank section and a bit section, said shank section having its lower portion formed with a pair of tongues offset with respect to each other, said bit section having its upper portion offset to form shoulders and further having a notch in the top edge thereof, said upper portion of said bit section adapted to be positioned between and overlapped by the tongues of the shank section, and said tongues bearing against the shoulders of the bit section and means for securing the shank section to the bit section.

877,893. CURTAIN-FIXTURE. HERBERT E. KEELER, New York, N. Y., assignor to Curtain Supply Company, Chicago, Ill., a Corporation of New Jersey. Filed Feb. 24, 1903. Serial No. 144,620.

1. In a curtain fixture, a spring-actuated curtain, irregular guideways adjacent said curtain, spring-pressed shoes mounted on said curtain to reciprocate with respect thereto and to coöperate with said guideways, each of said shoes being provided with pivots and non-circular rotating guiding members having non-circular curved pivot openings therein through which said pivots pass to cause said guiding members to rotate irregularly as said shoes are moved along said guideways.

2. In a curtain fixture, a spring-actuated curtain, peri-

odically irregular guideways of corresponding pitch on both sides of said curtain, spring-pressed shoes mounted on said curtain to coöperate with said guideways and guiding members mounted in said shoes to engage the irregularities of said guideways and to be thereby moved against such spring pressure.



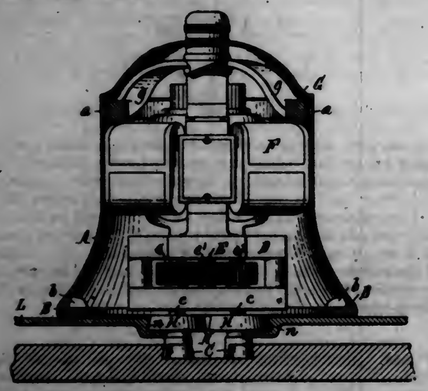
3. In a curtain fixture, a spring-actuated curtain, periodically irregular guideways adjacent said curtain, spring-pressed shoes mounted upon said curtain to coöperate with said guideways and rotating guiding members mounted in said shoes to engage said guideways to cause said shoes to be moved longitudinally of the curtain stick by said guideways as they move along said guideways.

4. In a curtain fixture, a spring-actuated curtain, periodically irregular guideways adjacent said curtain, spring-pressed shoes mounted on said curtain to coöperate with said guideways and guiding members in said shoes to engage said guideways to cause said shoes to be moved longitudinally of the curtain stick by said guideways as they move along said guideways.

5. In a curtain fixture, a curtain, periodically irregular guideways adjacent said curtain, shoes mounted on said curtain to be pressed into coöperation with said guideways and guiding members in said shoes to engage said guideways to cause said shoes to be moved longitudinally of the curtain stick by said guideways as they move along said guideways.

[Claims 6 to 25 not printed in the Gazette.]

877,894. ROUTING-MACHINE. GEORGE L. KELLEY, Buffalo, N. Y., assignor, by mesne assignments, to Stevenson Machine Company, Buffalo, N. Y. Filed July 23, 1906. Serial No. 327,292.



1. In a routing machine, the combination of a plurality of cutters, driving means therefor, a support in which said cutters are mounted and which is freely movable with respect to the work to change the relation of said cutters to the work, and means for guiding said cutters in the movement of said support, whereby said cutters will cut in paths parallel with each other or bearing any desired relation to each other depending upon the movements of said support, substantially as set forth.

2. In a routing machine, the combination of a plurality of cutters, driving means therefor, and a frame in which said cutters are mounted in substantially fixed relations to each other and which is freely movable and rotatable with respect to the work to change the relation of the cutters to the work, substantially as set forth.

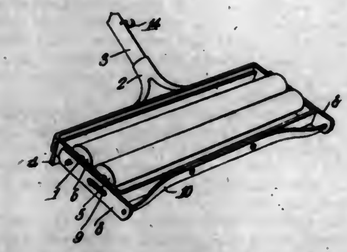
3. In a routing machine, the combination of a plurality of rotary cutters, means for driving the same, a frame in which said cutters are mounted and from which they extend downwardly to enter the work, and said frame being freely movable to change the relation of the cutters to the work, and means for guiding said cutters in the movements of the frame, substantially as set forth.

4. In a routing machine, the combination of a plurality of cutters journaled to rotate about vertical axes, driving means therefor, a supporting frame for said cutters which is movable freely and rotatable to change the relation of the cutters to the work, and guide means for said cutters, substantially as set forth.

5. In a routing machine, the combination of a frame which rests upon and is freely movable on a supporting surface, a plurality of cutters which are mounted in said frame and project below the same to enter the work, means for driving said cutters, and means for guiding said cutters in the movements of said frame, substantially as set forth.

[Claims 6 to 19 not printed in the Gazette.]

877,895. COMBINED MOP HEAD AND WRINGER. JOHN W. LAPPIN, Kokomo, Ind., assignor of one-half to Charles A. Styer, Kokomo, Ind. Filed Jan. 12, 1907. Serial No. 352,029.

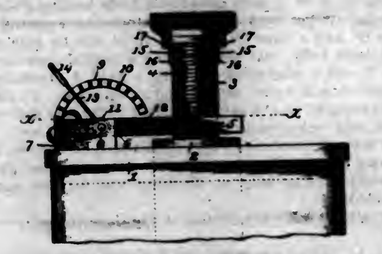


A mop head comprising a frame having elongated openings in its sides, a handle attached to the frame and with relation to which the frame is fixed, a roller journaled in the frame and being retained against lateral movement therein and having a shaft which projects beyond the sides of the frame, a roller having a shaft which projects through the openings in the sides of the frame and being capable of lateral movement therein, links having elongated openings which receive the ends of the shaft of the roller retained against lateral movement and bearings which receive the ends of the shaft of the roller having lateral movement said links being located against the sides of the frame and being capable of longitudinal movement independent of each other and a spring fixed to the frame and having ends which engage said links.

877,896. VIBRATOR. AUGUST R. LUSCHKA, Chicago, Ill., assignor to Motor Specialty Manufacturing Company, Chicago, Ill., a Corporation of South Dakota. Filed Nov. 19, 1906, Serial No. 343,995. Renewed June 22, 1907. Serial No. 380,242.

1. In a vibrator, the combination of a fixed anvil, an adjustable anvil, a hammer or interrupter arranged between the same and consisting of a plate of metal hinged to a fixed bracket, a coiled spring connected to said hammer, and means for adjusting the resiliency of said spring, substantially as set forth.

2. In a vibrator, the combination of a fixed anvil, an adjustable anvil, a hammer or interrupter arranged between the same and consisting of a plate of metal hinged to a fixed bracket, a coiled spring connected to said hammer, and means for adjusting the resiliency of said spring, the same comprising a ratchet sector and a manually operated extension of the spring adapted for engagement with said sector, substantially as set forth.



3. In a vibrator, the combination of a fixed anvil, an adjustable anvil, a hammer or interrupter arranged between the same and consisting of a plate of metal having pivot ears at one end, a fixed bracket having pivotal connection with said ears, a coiled spring encircling the pivot axis of said hammer, and means for adjusting the resiliency of said spring, substantially as set forth.

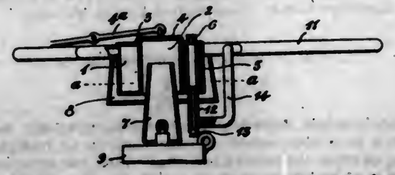
4. In a vibrator, the combination of a fixed anvil, an adjustable anvil, a hammer or interrupter arranged between the same and consisting of a plate of metal having pivot ears at one end, a fixed bracket having pivotal connection with said ears, a coiled spring encircling the pivot axis of said hammer, and means for adjusting the resiliency of said spring, the same comprising a ratchet sector and a manually operated extension of the spring adapted for engagement with said sector, substantially as set forth.

5. In a vibrator, the combination of a coil core forming a fixed anvil, a fixed bracket carrying an adjustable screw or anvil, a hammer or interrupter arranged between the anvils and consisting of a plate of metal hinged to a fixed bracket, a coiled spring connected to said hammer, and means for adjusting the resiliency of said spring, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

REISSUES.

12,742. INCUBATOR-HEATER. WILLIAM A. SUMNER, Fairfield, Nebr., assignor of one-third to Henry E. Spencer and one-third to Charles J. Harris. Filed May 21, 1907. Serial No. 374,946. Original No. 826,885, dated July 17, 1906, Serial No. 252,424.



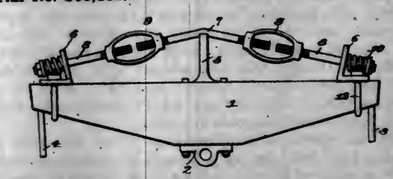
1. A heater comprising a boiler, a flow-pipe leading therefrom, a radiating element into which the flow-pipe discharges, a return-pipe leading from the radiating element and discharging into the lower portion of the boiler, and a seal and expansion element to contain water, extending above the boiler, having a vent at its upper end and having its lower end open and extending downwardly in the boiler to a point immediately above and proximate to the discharge end of the return-pipe.

2. A heater comprising a boiler, a flowpipe leading therefrom, a radiating element into which the flow-pipe discharges, a return-pipe leading from the radiating element, discharging into the lower portion of the boiler and having means to discharge the water from the boiler, the radiating element and the flow and return-pipes, and a filling, sealing and expansion pipe open at its upper end, extending upwardly from the boiler and having its lower portion extending downwardly in the boiler and its lower end open and disposed immediately above and proximate to the discharge end of the return pipe.

3. A water-heater comprising a boiler, a flow-pipe leading therefrom, a radiating element into which the flow-pipe discharges, a return-pipe leading from the radiating element and discharging into the lower portion of the boiler, a sealing element located within the boiler to contain water and having a vent at its upper end adjacent to the top of the boiler, said sealing element extending downwardly in the boiler and being provided with an opening at its lower end proximate to the discharge end of the return-pipe, for the purpose described.

4. In a heater for incubators, the combination of a boiler having a central heating flue open at its upper end, damper regulating means for closing the upper end of said flue, a radiating tube connected with the boiler, a casing open at its upper end and having a bottom, said casing receiving the boiler therein, the sides and bottom of the casing being spaced from the sides and bottom of the boiler, respectively, the spaces therebetween being in communication, and the top of the boiler extending as high as the top of the casing to permit air at atmospheric temperature to impinge directly against the boiler and enter the space between the casing and boiler on adjustment of the damper regulating means to open the damper, and a chimney passing upwardly through the bottom of the casing and extending above the space between said bottom and the boiler and into the central flue of the latter.

12,743. WALKING-BEAM TRUSS-ROD. ELMER W. COKELY, Coalinga, Cal. Filed Dec. 26, 1907. Serial No. 408,196. Original No. 868,646, dated Oct. 22, 1907, Serial No. 366,484.



1. The combination of a walking beam, a truss rod above and extending substantially from end to end of the beam and having a nut on each end thereof, a shaft box carried by the beam, brackets carried by the beam and secured thereto near each end thereof, and springs interposed between the brackets and the nut carried by each end of the rod, substantially as set forth.

2. The combination of a walking beam, a truss rod therefor extending substantially from end to end of the beam and having a nut on each end thereof, a shaft box carried by the beam, brackets carried by the beam and secured thereto near each end thereof, securing means passing entirely around the end of the beam, and springs interposed between the brackets and the nut on each end of the beam, substantially as described.

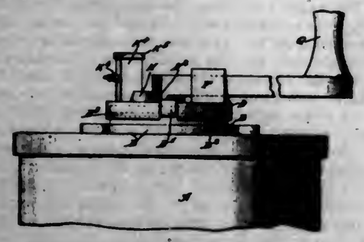
3. The combination of a walking beam, a truss rod above and extending substantially from end to end thereof and having a nut on each end, a shaft box carried by the beam, brackets near each end of the beam, yokes carried by the brackets and passing entirely around the beam, and springs interposed between the brackets and the nut on each end of the truss rod, substantially as described.

4. The combination with a walking beam of a truss rod therefor, means to support the rod at a distance above the beam near the center thereof, nuts to tighten the rod on each side of the support, brackets carried by the beam at each end thereof and through which the ends of the rod pass, springs interposed between the brackets and the nut on each end of the truss rod, and a shaft box carried by the beam below the same, substantially as described.

5. The combination of a walking beam, a truss rod there-

for, means to support the rod at a distance above the beam near the center thereof, nuts to tighten the rod on each side of the support, brackets carried by the beam at the ends thereof and through which the ends of the truss rod pass, U shaped yokes passing entirely around the ends of the beam and securing the brackets thereto, springs interposed between the brackets and the nut on each end of the truss rod, and a shaft box carried by the beam, substantially as described.

12,744. ELECTRIC-MOTOR-CONTROLLER REGULATOR. PAUL A. WEYAND, Maywood, Ill., assignor to Electric Service Supplies Company, Camden, N. J., a Corporation of New Jersey. Filed Mar. 18, 1907. Serial No. 363,157. Original No. 810,240, dated Jan. 16, 1906, Serial No. 265,215.



1. In an electric controller-regulator of the kind described, the combination of a main body having a base B, a cylindrical part B^2, a series of interior ratchet-teeth B^4 and B^5, a series of studs C and C', and a central apertrue B^6, said body being adapted to fit over an electric controller-rod and to be affixed to a controller, with a revoluble cover, D, having a central aperture E, a jaw F, adapted to receive the shank of a handle of an electric controller; and a pawl J, pivotally attached to the inside of said cover, said pawl being adapted to be engaged by the studs C and C', and to be deflected thereby into engagement with said ratchet-teeth; and means for returning said pawl from its deflected position to a normal position J^6, substantially as described and for the purposes specified.

2. In an electric-controller-regulator of the kind described a main body having a base B, a cylindrical projection B^2, a series of interior ratchet-teeth B^4 and B^5, a series of studs C and C' and an aperture B^6; with a cover, D having a central aperture E and a jaw F; means for securing said cover on the base part B^2, and of permitting the cover to be revolved thereon; and a pawl J, pivotally supported in said cover, said pawl having a post J^6, adapted to be engaged by the studs, C and C', and the pawl be thereby deflected when the cover is revolved, and means for returning said pawl from the deflected position to the normal position of rest J^6, substantially as described and for the purposes specified.

3. In an electric-controller-regulator of the kind described the combination of a main cylindrical body, having interior ratchet-teeth, studs and a central aperture, with a revoluble cover, having a central aperture E, a jaw F, and a stop-block L, and a pawl J, pivotally supported in said cover, said pawl being adapted to be engaged by the stud C and C' in the said main body, and to be deflected thereby into engagement with the said ratchet-teeth when said cover is revolved; and means for returning said pawl from its deflected positions to a normal position J^6, substantially as described and for the purposes specified.

4. In an electrical controller-regulator of the kind described, the combination of a main cylindrical body having a series of interior ratchet-teeth and a series of studs C and C', and a central aperture B^6, and a cover D, adapted to fit and to be revolved on said main body, said cover having a central aperture E, a jaw F, and stop-block L; with a pawl J, pivotally supported in said cover, said pawl being adapted to be engaged by the said studs and to be deflected thereby into engagement with the said ratchet-teeth when said cover is revolved on said main body; and means for returning said pawl when so deflected to a normal position of rest J^6; substantially as described and for the purposes specified.

5. In an electric controller of the kind described the combination of a main cylindrical body having a series of interior ratchet-teeth, a series of studs and a central aperture B^6, and a cover D, adapted to fit and be revolved on said main body, said cover having a central aperture E, a jaw F and a stop-block L; with a pawl J pivotally supported in said cover, said pawl having a post J^6, adapted to be engaged by the said studs, and to thereby deflect said pawl into engagement with the said ratchet-teeth when said cover is revolved on said main body; and means for returning said pawl when so deflected, to a normal position of rest; substantially as described and for the purposes specified.

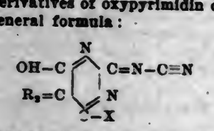
[Claims 6 to 32 not printed in the Gazette.]

12,745. PYRIMIDIN DERIVATIVE. LEO WEBER, Darmstadt, Germany. Filed Nov. 5, 1907. Serial No. 400,895. Original No. 848,791, dated April 2, 1907, Serial No. 223,746.

1. The process of producing new derivatives of oxypyrimidin consisting in condensing dicyandiamid with negatively substituted acetic-acid esters in a solution of an alcoholate, boiling the liquid whereby the new derivative is formed, and isolating the same in the manner well known for this class of bodies, substantially as described.

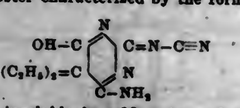
2. The process of producing 2-cyanimino-4-amino-5-diethyl-6-oxypyrimidin consisting in condensing dicyandiamid with diethylcyanacetic-acid ester in a solution of sodium ethylate, boiling the liquid and isolating the precipitated crystalline mass by filtration, substantially as described.

3. The new derivatives of oxypyrimidin characterized by the following general formula:



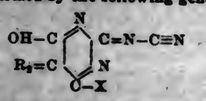
in which R represents hydrogen atoms which may be replaced by alkyl radicals and X a methyl, hydroxyl or amido group, produced by condensation of dicyandiamid and negatively substituted acetic-acid esters, and which new bodies are difficultly soluble in hot water and alcohol, readily soluble in alkaline liquids, forming salts with the alkalies and which are decomposed into 2-oxypyrimidin derivatives, carbonic acid and ammonia on prolonged boiling with dilute acids, substantially as described.

4. The new 2-cyanimino-4-amino-5-diethyl-6-oxypyrimidin produced by condensation of dicyandiamid and diethylcyanacetic-acid ester characterized by the formula:



which is nearly insoluble in cold water, relatively easily soluble in a dilute solution of carbonate or of hydrate of soda, in warm alcohol and in boiling water, and crystallizes from the latter in small needles, which melt at 265° centigrade approximately.

5. As a new article of manufacture, a substance obtainable from oxypyrimidin and which on prolonged boiling with dilute hydrochloric acid is decomposed into 2-oxypyrimidin derivative, carbonic acid and ammonia and which is characterized by the following general formula:



in which R represents a hydrogen atom which may be replaced by alkyl radical and X a methyl, hydroxyl or amido group.

DESIGNS.

39,033. BADGE. LOUIS CALDWELL, East Orange, N. J. Filed Dec. 17, 1907. Serial No. 406,941. Term of patent 3½ years.



The ornamental design for a badge, as shown.

39,034. BROOCH OR SIMILAR ARTICLE. JOSEPH MARION ROSSI, New York, N. Y. Filed Aug. 7, 1907. Serial No. 387,572. Term of patent 14 years.



The ornamental design for a brooch or similar article as shown.

39,035. BRACELET. SAMUEL MITCHELL, Newark, N. J., assignor to L. Fritzsche & Co., Newark, N. J., a Firm. Filed Aug. 15, 1907. Serial No. 388,735. Term of patent 7 years.



The ornamental design for a bracelet, as shown.

39,036. BRACELET. SAMUEL MITCHELL, Newark, N. J., assignor to L. Fritzsche & Co., Newark, N. J., a Firm. Filed Aug. 15, 1907. Serial No. 388,736. Term of patent 7 years.



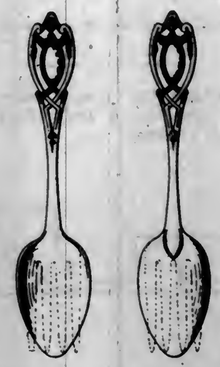
The ornamental design for a bracelet, as shown.

39,037. BRACELET. SAMUEL MITCHELL, Newark, N. J., assignor to L. Fritzsche & Co., Newark, N. J., a Firm. Filed Aug. 15, 1907. Serial No. 388,737. Term of patent 7 years.



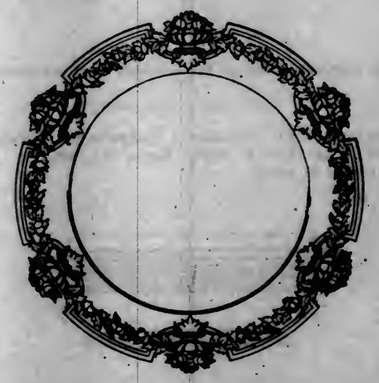
The ornamental design for a bracelet, as shown.

39,038. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. GEORGE C. LUNT, Greenfield, Mass., assignor to Rogers, Lunt & Bowlen Company, Greenfield, Mass., a Corporation of Massachusetts. Filed Dec. 16, 1907. Serial No. 406,785. Term of patent 7 years.



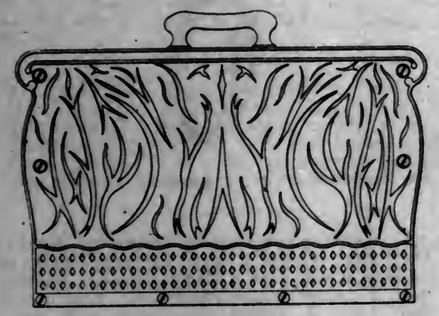
The ornamental design for a handle for a spoon, fork, or similar article, as shown.

39,039. PLATE OR SIMILAR ARTICLE. GEORGE A. ALEXANDER, Philadelphia, Pa., assignor to Davis & Galt, Philadelphia, Pa., a Corporation of New Jersey. Filed Dec. 14, 1907. Serial No. 406,567. Term of patent 7 years.



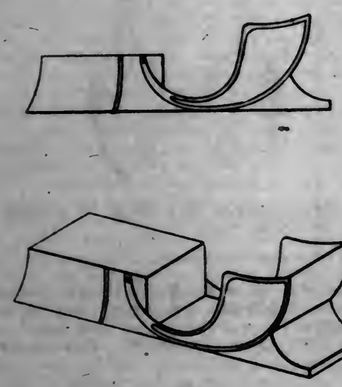
The ornamental design for a plate or similar article as shown.

39,040. ELECTRIC-HEATER CASING. FRANCIS C. GREEN, New York, N. Y. Filed Nov. 30, 1907. Serial No. 404,629. Term of patent 14 years.



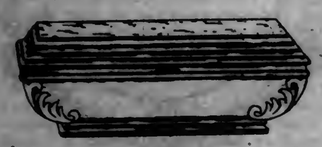
The ornamental design for an electric heater casing as shown.

39,041. VEHICLE-BODY. HIRAM PERCY MAXIM, Hartford, Conn. Filed Nov. 6, 1907. Serial No. 401,030. Term of patent 14 years.



The ornamental design for a vehicle body, as shown.

39,042. CASKET. HERMAN J. RADEMACHER, Milwaukee, Wis. Filed Dec. 4, 1907. Serial No. 405,126. Term of patent 3½ years.



The ornamental design for a casket, as shown.

39,043. WOMAN'S COAT. NATHAN REISMAN, Cleveland, Ohio, assignor to H. Black and Company, Cleveland, Ohio, a Partnership. Filed Nov. 18, 1907. Serial No. 402,766. Term of patent 3½ years.



The ornamental design for a woman's coat as shown.

39,044. WOMAN'S COAT. NATHAN REISMAN, Cleveland, Ohio, assignor to H. Black and Company, Cleveland, Ohio, a Partnership. Filed Nov. 18, 1907. Serial No. 402,767. Term of patent 3½ years.



The ornamental design for a woman's coat as shown.

39,045. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed Dec. 4, 1907. Serial No. 405,130. Term of patent 3½ years.



The ornamental design for a rug substantially as shown.

39,046. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed Dec. 4, 1907. Serial No. 405,132. Term of patent 3½ years.



The ornamental design for a rug substantially as shown.

39,047. DRINKING-GLASS. LOUIS BESSIÈRE, Paris, France. Filed Dec. 11, 1907. Serial No. 406,109. Term of patent 7 years.



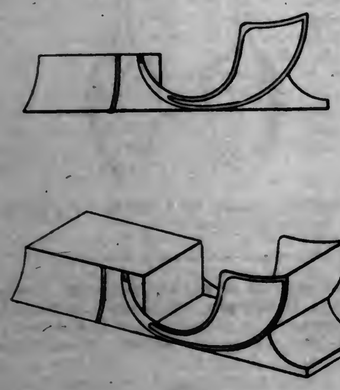
The ornamental design for a drinking glass, as shown.

39,040. ELECTRIC-HEATER CASING. FRANCIS C. GREEN, New York, N. Y. Filed Nov. 30, 1907. Serial No. 404,629. Term of patent 14 years.



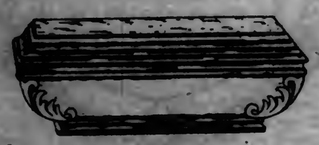
The ornamental design for an electric heater casing as shown.

39,041. VEHICLE-BODY. HIRAM PERCY MAXIM, Hartford, Conn. Filed Nov. 6, 1907. Serial No. 401,030. Term of patent 14 years.



The ornamental design for a vehicle body, as shown.

39,042. CASKET. HERMAN J. RADEMACHER, Milwaukee, Wis. Filed Dec. 4, 1907. Serial No. 405,126. Term of patent 3½ years.



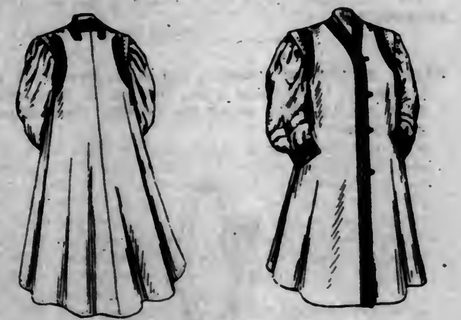
The ornamental design for a casket, as shown.

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The ornamental design for a woman's coat as shown.

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The ornamental design for a woman's coat as shown.

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The ornamental design for a rug substantially as shown.

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The ornamental design for a rug substantially as shown.

39,047. DRINKING-GLASS. LOUIS BRESSIER, Paris, France. Filed Dec. 11, 1907. Serial No. 406,109. Term of patent 7 years.



The ornamental design for a drinking glass, as shown.

TRADE-MARKS

PUBLISHED JANUARY 28, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 13,021. (CLASS 37. PAPER AND STATIONERY.) WILLIAM S. MITCHELL, Little Rock, Ark. Filed Sept. 25, 1905.

Legal Light

Particular description of goods.—Printed Blank Forms.

Ser. No. 16,610. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUISE SCHOETTLER, ANNA HILLENBRAND, and LEO A. SCHMITZ, San Francisco, Cal., executors of the estate of J. Peter Schmitz. Filed Jan. 27, 1906. Used ten years.

Myosin

Particular description of goods.—A Tonic and Remedy for Indigestion.

Ser. No. 17,977. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ORIENT SPRAY COMPANY, New York, N. Y. Filed Mar. 17, 1906.



MAGICO

Particular description of goods.—Disinfectants, Deodorizers, and Insecticides in Liquid Form.

Ser. No. 20,299. (CLASS 39. CLOTHING.) KUH, NATHAN AND FISCHER COMPANY, Chicago, Ill. Filed June 18, 1906.

"SINCERITY CLOTHES"

Particular description of goods.—Coats, Vests, Trousers, and Overcoats.

Ser. No. 24,331. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) ERNST C. BARTELS AKTIEN-GESELLSCHAFT, Hamburg, Germany. Filed Dec. 29, 1906.

Kasinat

Particular description of goods.—Paints and Paint-Colors and Binders for Paint-Colors.

Ser. No. 26,560. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) THE LINO PAINT COMPANY, Collinwood, Ohio. Filed Apr. 8, 1907.

LINO

Particular description of goods.—Mineral Paint and Turpentine.

Ser. No. 26,720. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) C. A. MARSH & Co., Attleboro, Mass. Filed Apr. 15, 1907.



Particular description of goods.—Fobs, Lorgnettes, Necklaces, Neck-Chains, Vest-Chains, Bracelets, and Chatelaine-Pins.

Ser. No. 26,977. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE E. H. JACOBS MANUFACTURING COMPANY, Killingly, Conn. Filed Apr. 29, 1907. Used ten years.



Particular description of goods.—Lug-Straps.

Ser. No. 27,050. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PAUL JACOB, St. Etienne, France. Filed May 1, 1907.



Particular description of goods.—A Remedy for Coughs and Colds.

Ser. No. 27,089. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) SOUR LAKE CHEMICAL CO., Houston, Tex. Filed May 3, 1907.



Particular description of goods.—Soap.

Ser. No. 27,574. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) S. AMBROSE MANUFACTURING COMPANY, Indianapolis, Ind. Filed May 22, 1907.



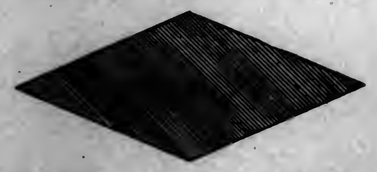
Particular description of goods.—Dressing for the Soles of Shoes.

Ser. No. 27,690. (CLASS 30. CLOTHING.) FRANK A. McGOWAN, Canton, Ohio. Filed May 27, 1907.

"WIGGLE-TOE-BELTS"

Particular description of goods.—Children's Leather and Cloth Shoes.

Ser. No. 27,912. (CLASS 39. CLOTHING.) VICTOR E. VAILS, Kokomo, Ind. Filed June 6, 1907.
The diamond being printed green.



Particular description of goods.—Leather, Rubber, and Canvas Shoes.

Ser. No. 29,172. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS AND PARTS THEREOF.) H. MUELLER MANUFACTURING COMPANY, Decatur, Ill. Filed Aug. 1, 1907. Used ten years.

MUELLER

Particular description of goods.—Calking-Tools.

Ser. No. 29,712. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) DUSEL, GOODLOE & Co., INCORPORATED, Philadelphia, Pa. Filed Aug. 31, 1907.

At the Sign of the Golden Pipe



The pipe being yellow.
Particular description of goods.—Pipes.

Ser. No. 30,398. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) GEO. BORGFELDT & Co., New York, N. Y. Filed Oct. 3, 1907.

WINGFIELD

Particular description of goods.—Tennis-Balls.

Ser. No. 30,576. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARY M. SNYDER, Washburn, W. Va. Filed Oct. 12, 1907.



Particular description of goods.—A Hair-Restorer.

Ser. No. 30,834. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) CHARLES A. BERTRAM, Chicago, Ill. Filed Oct. 28, 1907.

EASY

Particular description of goods.—A Temporary Filling for Teeth.

Ser. No. 31,072. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) TANQUERAY GORDON & Co. LIMITED, London, England. Filed Nov. 8, 1907.



Particular description of goods.—Jamaica Rum.

Ser. No. 31,073. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) TANQUERAY GORDON & Co. LIMITED, London, England. Filed Nov. 8, 1907.



Particular description of goods.—Sloe Gin.

Ser. No. 31,248. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BERTHA FIEDLER, New York, N. Y. Filed Nov. 19, 1907.

FAT-FOE

Particular description of goods.—A Salve or Ointment.

Ser. No. 31,267. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLARD WHITE COMPANY, Chicago, Ill. Filed Nov. 20, 1907.

MELOROSE

Particular description of goods.—Face-Powder, Toilet Cream, and Rouge.

Ser. No. 31,275. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MARIE BALAY, St. Etienne, France. Filed Nov. 21, 1907.



Particular description of goods.—Ribbons.

Ser. No. 31,302. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE WAUKESHA ARCADIAN CO., Waukesha, Wis. Filed Nov. 22, 1907.



Particular description of goods.—Mineral Water and Ginger-Ale.

Ser. No. 31,314. (CLASS 43. THREAD AND YARN.) THE NONOTUCK SILK COMPANY, Florence, Mass. Filed Nov. 23, 1907.

FILANET FLOSS

Particular description of goods.—Silk, Cotton, and Flax Thread.

Ser. No. 31,360. (CLASS 39. CLOTHING.) GEORGE BAKER AND SONS, Brooklyn, N Y. Filed Nov. 25, 1907.

STARTRIGHT

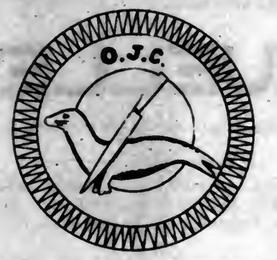
Particular description of goods.—Leather Shoes.

Ser. No. 31,391. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) MILLER BROS., New York, N. Y. Filed Nov. 27, 1907.

VELVEDGE

Particular description of goods.—Manicure Implements Adapted for Abrading and Polishing the Nails.

Ser. No. 31,395. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS AND PARTS THEREOF.) OTTO J. COPPINS, Hobart, Ind. Filed Nov. 27, 1907.



Particular description of goods.—Dough Cutters and Crimpers.

Ser. No. 31,396. (CLASS 39. CLOTHING.) GEO. D. WITT SHOE COMPANY, Lynchburg, Va. Filed Nov. 27, 1907.

Dixie

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 31,477. (CLASS 37. PAPER AND STATIONERY.) CONTINENTAL PAPER BAG COMPANY, New York, N. Y. Filed Nov. 30, 1907.

HYGEIA

Particular description of goods.—Toilet-Paper.

Ser. No. 31,478. (CLASS 37. PAPER AND STATIONERY.) CONTINENTAL PAPER BAG COMPANY, New York, N. Y. Filed Nov. 30, 1907.



Particular description of goods.—Toilet-Paper.

Ser. No. 31,480. (CLASS 39. CLOTHING.) H. JACOB & SONS, New York, N. Y. Filed Nov. 30, 1907.

FLUFFY
RUFFLES

Particular description of goods.—Leather Shoes.

Ser. No. 31,483. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CHARLES M. BROOKS, Hoboken, N. J. Filed Nov. 30, 1907.

LEMOS

Particular description of goods.—A Preparation of Lemons.

Ser. No. 31,484. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE MORSE BROUGHTON COMPANY, New York, N. Y. Filed Nov. 30, 1907.



Particular description of goods.—Patterns for Garments and Wearing-Apparel.

Ser. No. 31,493. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CURTISS MEDICINE COMPANY, Denver, Colo. Filed Dec. 2, 1907.

VARICOSA

Particular description of goods.—Ointments, Antiseptic Solutions, Systemic Circulation-Capsules, and Tonic Tablets.

Ser. No. 31,523. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEBHARDT CHILI POWDER CO., San Antonio, Tex. Filed Dec. 3, 1907.



Particular description of goods.—A Chilli-Spice Preparation.

Ser. No. 31,574. (CLASS 37. PAPER AND STATIONERY.) J. C. BLAIR COMPANY, Huntingdon, Pa. Filed Dec. 5, 1907.

New Century

Particular description of goods.—Paper for Writing and Printing Purposes, Drawing-Paper, Pencil-Paper, Envelops, Writing-Tablets, Pencil-Tablets, Drawing-Tablets, Spelling-Tablets, Blank Books, Papeteries, (Folded Sheets,) and Papeteries, (Tablets, Single or Folded Sheets.)

Ser. No. 31,615. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) VALLAT & PERRONNET, St. Etienne, France. Filed Dec. 7, 1907.



Particular description of goods.—Ribbons.

Ser. No. 31,617. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) VALLAT & PERRONNET, St. Etienne, France. Filed Dec. 7, 1907.



Particular description of goods.—Ribbons.

Ser. No. 31,618. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) VALLAT & PERRONNET, St. Etienne, France. Filed Dec. 7, 1907.



Particular description of goods.—Ribbons.

Ser. No. 31,619. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) VALLAT & PERRONNET, St. Etienne, France. Filed Dec. 7, 1907.



Particular description of goods.—Ribbons.

Ser. No. 31,620. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) VALLAT & PERRONNET, St. Etienne, France. Filed Dec. 7, 1907.



Particular description of goods.—Ribbons.

Ser. No. 31,622. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) F. AUGUST LUTTIES, St. Louis, Mo. Filed Dec. 9, 1907.

CREMEOLINE

Particular description of goods.—Demulcent, Toilet Cream and Skin Food.

Ser. No. 31,636. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS AND PARTS THEREOF.) H. MUELLER MANUFACTURING COMPANY, Decatur, Ill. Filed Dec. 9, 1907. Used ten years.

PREMIER

Particular description of goods.—Tapping-Machines for Water and Gas Mains.

Ser. No. 31,637. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS AND PARTS THEREOF.) H. MUELLER MANUFACTURING COMPANY, Decatur, Ill. Filed Dec. 9, 1907. Used ten years.

MUELLER

Particular description of goods.—Tapping-Machines for Water and Gas Mains.

Ser. No. 31,643. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) EDWARD & JOHN BURKE, LIMITED, Dublin, Ireland, and New York, N. Y. Filed Dec. 10, 1907.

CLIO

Particular description of goods.—Gin.

Ser. No. 31,651. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) MERCHANTS ICE & COLD STORAGE CO., Louisville, Ky. Filed Dec. 10, 1907.

PURAK

Particular description of goods.—Distilled Water, Ginger-Ale, Raspberry-Soda, Lemon-Soda, Lemon-Sour, Strawberry-Soda, Root-Beer, Birch-Beer, Orange-Cider, Cherry-Phosphate, Cream-Soda, Chocolate-Cream, Sarsaparilla-Soda, Club-Soda, Grape-Juice, and Mineral Waters.

Ser. No. 31,659. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) ANNA L. PINKERTON-GARDINER, Los Angeles, Cal. Filed Dec. 10, 1907.

MISSION

Particular description of goods.—Incubators and Brooders.

Ser. No. 31,673. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) F. AUGUST LUTTIES, St. Louis, Mo. Filed Dec. 11, 1907.

ROSODOL

Particular description of goods.—Liquid Dentifrice, Dental Powder, Dental Cream, and Dental Paste.

Ser. No. 31,712. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARION J. BACON, Camden, N. J. Filed Dec. 13, 1907.



Particular description of goods.—A Remedy for the Blood, Consumption, Coughs and Colds, Diarrhea, Cholera, and Summer Complaints, a Tonic, and an Eye-Water.

Ser. No. 31,719. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) STEPHEN J. BIRCKHEAD, Baltimore, Md. Filed Dec. 14, 1907.

PHYSTUPILO

Particular description of goods.—An Ointment for the Treatment of Rectal Diseases.

Ser. No. 31,721. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. FRANCIS & Co., Detroit, Mich. Filed Dec. 14, 1907.

AGNES SOREL

Particular description of goods.—Perfumes and Face-Powders.

Ser. No. 31,796. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham N. C., and Memphis, Tenn. Filed Dec. 17, 1907.



Particular description of goods.—Fertilizers.

Ser. No. 31,797. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham N. C., and Memphis, Tenn. Filed Dec. 17, 1907.



Particular description of goods.—Fertilizers.

Ser. No. 31,798. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham N. C., and Memphis, Tenn. Filed Dec. 17, 1907.



Particular description of goods.—Fertilizers.

Ser. No. 31,799. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham N. C., and Memphis, Tenn. Filed Dec. 17, 1907. Used ten years.

GRAIN & GRASS GROWER

Particular description of goods.—Fertilizers.

Ser. No. 31,801. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham N. C., and Memphis, Tenn. Filed Dec. 17, 1907. Used ten years.

MONTGOMERY FERTILIZER CO

Particular description of goods.—Fertilizers.

Ser. No. 31,802. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham N. C., and Memphis, Tenn. Filed Dec. 17, 1907. Used ten years.

COMMERCIAL GUANO CO.'S COMPLETE COTTON FERTILIZER

Particular description of goods.—Fertilizers.

Ser. No. 31,803. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham N. C., and Memphis, Tenn. Filed Dec. 17, 1907. Used ten years.

SOUTHERN FERTILIZER CO'S. PURE ANIMAL BONE VEGETABLE FERTILIZER

Particular description of goods.—Fertilizers.

Ser. No. 31,804. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham N. C., and Memphis, Tenn. Filed Dec. 17, 1907. Used ten years.

SOLUBLE GUANO

Particular description of goods.—Fertilizers.

TRADE-MARKS

REGISTERED JANUARY 28, 1908.

67,228. CALCIUM CYANAMID. AMERICAN CYANAMID COMPANY, New York, N. Y.
Filed October 19, 1907. Serial No. 30,666. PUBLISHED NOVEMBER 26, 1907.

67,229. OVERCOATS, COATS, VESTS, AND TROUSERS. BLOCK BROTHERS CLOTHING COMPANY, St. Joseph, Mo.
Filed September 20, 1907. Serial No. 30,101. PUBLISHED NOVEMBER 26, 1907.

67,230. WALL-PLASTER. EMPIRE GYPSUM COMPANY, Garbutt, N. Y.
Filed September 26, 1907. Serial No. 30,241½. PUBLISHED NOVEMBER 26, 1907.

67,231. WALL-PLASTER. EMPIRE GYPSUM COMPANY, Garbutt, N. Y.
Filed September 26, 1907. Serial No. 30,242½. PUBLISHED NOVEMBER 26, 1907.

67,232. WALL-PLASTER. EMPIRE GYPSUM COMPANY, Garbutt, N. Y.
Filed September 26, 1907. Serial No. 30,243½. PUBLISHED NOVEMBER 26, 1907.

67,233. EXPLOSIVE POWDER, INCLUDING SMOKELESS POWDER. THE HAZARD POWDER COMPANY, Hazardville, Conn.
Filed August 18, 1906. Serial No. 21,661. PUBLISHED NOVEMBER 26, 1907.

67,234. CERTAIN CLOTHING. ISAACS BROTHERS, New York, N. Y.
Filed August 26, 1907. Serial No. 29,602. PUBLISHED NOVEMBER 26, 1907.

67,235. MATCHES. JÖNKÖPINGS OCH VULCANS TÄNDSTICKSFABRIKSAKTIEBOLAG, Jönköping, Sweden.
Filed August 21, 1907. Serial No. 29,499. PUBLISHED NOVEMBER 26, 1907.

67,236. DRESS AND NEGLIGÉE SHIRTS. JACOC LAUER. Baltimore, Md.
Filed September 30, 1907. Serial No. 30,308. PUBLISHED NOVEMBER 26, 1907.

67,237. OVERALLS, TEXTILE SHIRTS, DUCK COATS, JACKETS, AND PANTS. MULRONEY MANUFACTURING COMPANY, Fort Dodge, Iowa
Filed August 30, 1907. Serial No. 29,689. PUBLISHED NOVEMBER 26, 1907.

67,238. MEN'S OVERSHIRTS OF WOVEN MATERIAL. THE WASHINGTON SHIRT CO., Chicago, Ill.
Filed September 16, 1907. Serial No. 29,998. PUBLISHED NOVEMBER 26, 1907.

67,239. BASE-BALL GLOVES. A. J. REACH COMPANY, Philadelphia, Pa.
Filed October 3, 1907. Serial No. 30,392. PUBLISHED NOVEMBER 26, 1907.

67,240. CIGARETTE-PAPER. BRAUNSTEIN & CIE., Paris, France.
Filed September 21, 1907. Serial No. 30,142. PUBLISHED NOVEMBER 26, 1907.

67,241. SKIRT AND TROUSERS HANGER MADE OF METAL. FREAR NOVELTY CO., Albany, N. Y.
Filed September 26, 1907. Serial No. 30,225. PUBLISHED NOVEMBER 26, 1907.

67,242. CIGARS. JAMES E. MORONEY, Philadelphia, Pa., executor of James Moroney, deceased.
Filed October 3, 1907. Serial No. 30,391. PUBLISHED NOVEMBER 26, 1907.

67,243. CIGARS. VICENTE PORTUONDO COMPANY, Philadelphia, Pa.
Filed September 27, 1907. Serial No. 30,263. PUBLISHED NOVEMBER 26, 1907.

67,244. FISHING LINES, REELS, HOOKS, AND FLIES BULLARD & GORMLEY CO., Chicago, Ill.
Filed September 29, 1906. Serial No. 22,378. PUBLISHED NOVEMBER 26, 1907.

67,245. TYPE-WRITING MACHINES. ELLIOTT-FISHER CO., New York, N. Y.
Filed October 15, 1907. Serial No. 30,605. PUBLISHED NOVEMBER 26, 1907.

67,246. SMOKING-TOBACCO, CIGARS, AND CIGARETTES. GLOBE TOBACCO COMPANY, Detroit, Mich.
Filed October 13, 1906. Serial No. 22,674. PUBLISHED NOVEMBER 26, 1907.

67,247. RAZORS. A. GRAEF, New York, N. Y.
Filed October 10, 1907. Serial No. 30,534. PUBLISHED NOVEMBER 26, 1907.

67,248. SOAP FOR CLEANING AUTOMOBILES. THEODOR METZGER, Stamford, Conn.
Filed October 12, 1907. Serial No. 30,571. PUBLISHED NOVEMBER 26, 1907.

67,249. REFRIGERATORS. THE ODORLESS REFRIGERATOR COMPANY, Chattanooga, Tenn.
Filed October 16, 1907. Serial No. 30,631. PUBLISHED NOVEMBER 26, 1907.

67,250. NIPPERS AND PLIERS WITHOUT A CUTTING EDGE. UTICA DROP FORGE AND TOOL CO., Utica, N. Y.
Filed October 5, 1907. Serial No. 30,430. PUBLISHED NOVEMBER 26, 1907.

67,251. PADLOCKS. THE YALE & TOWNE MANUFACTURING COMPANY, Stamford, Conn.
Filed October 24, 1907. Serial No. 30,768. PUBLISHED NOVEMBER 26, 1907.

67,252. TOILET-BRUSHES. CAUVIGNY BRUSH CO., New York, N. Y.
Filed October 19, 1907. Serial No. 30,663. PUBLISHED NOVEMBER 26, 1907.

67,253. CERTAIN GAME. E. I. HORSMAN CO., New York, N. Y.
Filed September 27, 1907. Serial No. 30,257. PUBLISHED NOVEMBER 26, 1907.

67,254. CERTAIN MACHINES. FORTUNA MACHINE CO., New York, N. Y.
Filed August 27, 1907. Serial No. 29,612. PUBLISHED NOVEMBER 26, 1907.

67,255. CERTAIN CUTLERY AND EDGE-TOOLS. JOSEPH F. MCCOY CO., New York, N. Y.
Filed August 16, 1907. Serial No. 29,418. PUBLISHED NOVEMBER 26, 1907.

67,256. BROOMS. LEE BROOM & DUSTER COMPANY, Lincoln, Nebr.
Filed October 5, 1907. Serial No. 30,427. PUBLISHED NOVEMBER 26, 1907.

67,257. BROOMS. LEE BROOM & DUSTER COMPANY, Lincoln, Nebr.
Filed October 19, 1907. Serial No. 30,674. PUBLISHED NOVEMBER 26, 1907.

67,258. BROOMS AND WHISK-BROOMS. LEE BROOM & DUSTER COMPANY, Lincoln, Nebr.
Filed October 19 1907. Serial No. 30 675. PUBLISHED NOVEMBER 26, 1907.

67,259. BROOMS. LEE BROOM & DUSTER COMPANY, Lincoln, Nebr.
Filed October 19, 1907. Serial No. 30,676. PUBLISHED NOVEMBER 26, 1907.

67,260. CIGARETTES, CIGARS, SMOKING AND CHEWING TOBACCO. MASPERO FRÈRES, LIMITED, London, England.
Filed July 8, 1905. Serial No. 9,916. PUBLISHED NOVEMBER 26, 1907.

67,261. CIGARS, CIGARETTES, SMOKING AND CHEWING TOBACCO. MASPERO FRÈRES, LIMITED, London, England.
Filed September 25, 1905. Serial No. 12,965. PUBLISHED NOVEMBER 26, 1907.

67,262. GALVANIZED IRON AND STEEL SHEETING. THE MONMOUTHSHIRE STEEL AND TINPLATE COMPANY LIMITED, Pontymister, near Newport, Wales, England.
Filed May 16, 1907. Serial No. 27,422. PUBLISHED NOVEMBER 26, 1907.

67,263. CIGARS. THE MUTUAL DRUG COMPANY, Cleveland, Ohio.
Filed October 21, 1907. Serial No. 30,706. PUBLISHED NOVEMBER 26, 1907.

67,264. CIGARETTES. PHILIP MORRIS & CO., LTD., New York, N. Y.
Filed October 17, 1907. Serial No. 30,643. PUBLISHED NOVEMBER 26, 1907.

67,265. CIGARETTES. PHILIP MORRIS & CO., LTD., New York, N. Y.
Filed October 17, 1907. Serial No. 30,647. PUBLISHED NOVEMBER 26, 1907.

67,266. CIGARETTES. PHILIP MORRIS & CO., LTD., New York, N. Y.
Filed October 17, 1907. Serial No. 30,650. PUBLISHED NOVEMBER 26, 1907.

67,267. LARD. CHARLES WOLFF PACKING COMPANY, Topeka, Kans.
Filed December 28, 1906. Serial No. 24,312. PUBLISHED JULY 16, 1907.

67,268. WHISKY. ADAM HILL, London, England, assignor to John Robertson & Sons Limited, Dundee, Scotland.
Filed January 29, 1907. Serial No. 24,987. PUBLISHED NOVEMBER 26, 1907.

67,269. CERTAIN DRIED FRUITS. THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal.
Filed September 6, 1907. Serial No. 29,785. PUBLISHED NOVEMBER 26, 1907.

67,270. CERTAIN DRIED FRUITS. THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal.
Filed September 6, 1907. Serial No. 29,786. PUBLISHED NOVEMBER 26, 1907.

67,271. CERTAIN DRIED FRUITS. THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal.
Filed September 6, 1907. Serial No. 29,787. PUBLISHED NOVEMBER 26, 1907.

67,272. ANCHOVIES, TUNNY, SARDINES, SARDELLES, AND MOSCARDINI. P. PASTENE & CO., Boston, Mass.
Filed September 16, 1907. Serial No. 29,986. PUBLISHED NOVEMBER 26, 1907.

67,273. PUDDING PREPARATIONS. WALTER RÜEGG, Basel, Switzerland.
Filed June 25, 1907. Serial No. 28,380. PUBLISHED NOVEMBER 26, 1907.

67,274. CERTAIN FOODS. THE J. K. ARMSBY COMPANY, San Francisco, Cal., and Chicago, Ill.
Filed October 12, 1907. Serial No. 30,555. PUBLISHED NOVEMBER 26, 1907.

67,275. CERTAIN DRIED FRUITS. THE J. K. ARMSBY COMPANY, San Francisco, Cal., and Chicago, Ill.
Filed October 12, 1907. Serial No. 30,556. PUBLISHED NOVEMBER 26, 1907.

67,276. CERTAIN DRIED FRUITS. THE J. K. ARMSBY COMPANY, San Francisco, Cal., and Chicago, Ill.
Filed October 12, 1907. Serial No. 30,557. PUBLISHED NOVEMBER 26, 1907.

67,277. CERTAIN CANNED AND DRIED FRUITS. THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal.
Filed October 12, 1907. Serial No. 30,559. PUBLISHED NOVEMBER 26, 1907.

67,278. CERTAIN CANNED AND DRIED FRUITS. THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal.
Filed October 12, 1907. Serial No. 30,558. PUBLISHED NOVEMBER 26, 1907.

67,279. CANDY. THE STERN & SAALBERG COMPANY, New York, N. Y.
Filed October 16, 1907. Serial No. 30,629. PUBLISHED NOVEMBER 26, 1907.

67,280. KNIT GLOVES AND LADIES' HOSIERY. DAVID J. ABRAHAM, Berkeley, Cal.
Filed August 10, 1906. Serial No. 21,458. PUBLISHED NOVEMBER 26, 1907.

67,281. GINGHAMS. WM. ANDERSON & CO., New York, N. Y.
Filed September 18, 1905. Serial No. 12,750. PUBLISHED NOVEMBER 26, 1907.

67,282. ELECTRICAL SWITCHES. THE ARROW ELECTRIC COMPANY, Hartford, Conn.
Filed October 16, 1907. Serial No. 30,630. PUBLISHED NOVEMBER 26, 1907.

67,283. PAPER AND CLOTH COATED WITH ABRASIVE MATERIAL. HERMAN BEHR & CO., New York, N. Y.
Filed July 20, 1905. Serial No. 10,584. PUBLISHED JULY 30, 1907.

67,284. COTTON PIECE GOODS. BOOTT MILLS, Lowell, Mass.
Filed September 7, 1906. Serial No. 21,983. PUBLISHED NOVEMBER 26, 1907.

67,285. COTTON PIECE GOODS. BOOTT MILLS, Lowell, Mass.
Filed September 7, 1906. Serial No. 21,985. PUBLISHED NOVEMBER 26, 1907.

67,286. COMFORTS. THE CHAS. A. MAISH CO., Cincinnati, Ohio.
Filed September 19, 1907. Serial No. 30,079. PUBLISHED NOVEMBER 26, 1907.

67,287. PHOTOGRAPHIC DEVELOPING SUBSTANCE. CHEMISCHE FABRIK AUF ACTIEN (VORM. E. SCHERING), Berlin, Germany.
Filed February 9, 1907. Serial No. 25,220. PUBLISHED NOVEMBER 26, 1907.

67,288. PHOTOGRAPHIC DEVELOPING SUBSTANCE. CHEMISCHE FABRIK AUF ACTIEN (VORM. E. SCHERING), Berlin, Germany.
Filed July 1, 1907. Serial No. 28,529. PUBLISHED NOVEMBER 26, 1907.

67,289. ANTISEPTIC POWDERS. CHARLES V. CROSS, San Francisco, Cal.
Filed October 4, 1907. Serial No. 30,419. PUBLISHED NOVEMBER 26, 1907.

67,290. ELECTRIC-COIL-INSULATING COMPOUND. DIELECTRIC MANUFACTURING COMPANY, St. Louis, Mo.
Filed October 4, 1907. Serial No. 30,418. PUBLISHED NOVEMBER 26, 1907.

67,291. TABLE-SALT, BLUE, AND AMMONIA. DRAKE & COMPANY, Easton, Pa.
Filed July 18, 1907. Serial No. 28,869. PUBLISHED NOVEMBER 26, 1907.

67,292. TEXTILE COTTON FABRIC WATERPROOFED WITH OIL. FEDERAL WATERPROOFING CO., St. Joseph, Mo.
Filed September 14, 1907. Serial No. 29,970. PUBLISHED NOVEMBER 26, 1907.

67,293. COTTON PIECE GOODS. GARNER & CO., New York, N. Y.
Filed October 1, 1907. Serial No. 30,328. PUBLISHED NOVEMBER 26, 1907.

67,294. COTTON PIECE GOODS. GARNER & CO., New York, N. Y.
Filed October 1, 1907. Serial No. 30,329. PUBLISHED NOVEMBER 26, 1907

67,295. CERTAIN ANTISEPTICS AND GERMICIDES. THE H. B. CLAFLIN COMPANY, New York, N. Y.
Filed June 20, 1907. Serial No. 26,262. PUBLISHED NOVEMBER 26, 1907.

67,296. CORSET-STAYS. INTERNATIONAL CORSET COMPANY, Aurora, Ill.
Filed September 21, 1907. Serial No. 30,139. PUBLISHED NOVEMBER 26, 1907.

67,297. WOVEN RUGS. KILMARNOCK TEXTILE MANUFACTURING CO., Chicago, Ill.
Filed September 16, 1907. Serial No. 29,982. PUBLISHED NOVEMBER 26, 1907.

67,298. UMBRELLAS AND PARASOLS. KRAUT & FINVER BROS., New York, N. Y.
Filed October 2, 1907. Serial No. 30,358. PUBLISHED NOVEMBER 12, 1907.

67,299. TOILET SOAP. THE REMMERS SOAP CO., Cincinnati, Ohio.
Filed April 4, 1906. Serial No. 18,493. PUBLISHED MAY 14, 1907.

67,300. ANTISEPTIC SOLUTION. SHARP & DOHME, Baltimore, Md.
Filed September 21, 1907. Serial No. 30,132. PUBLISHED NOVEMBER 26, 1907.

67,301. SHEET-METAL CHAINS. THE SMITH & EGGE MFG. CO., Bridgeport, Conn.
Filed September 18, 1907. Serial No. 30,055. PUBLISHED NOVEMBER 26, 1907.

67,302. WOMEN'S AND MISSES' RIBBED UNDERWEAR. SOUTHDOWN KNITTING CO., Allentown, Pa.
Filed October 24, 1907. Serial No. 30,765. PUBLISHED NOVEMBER 26, 1907.

67,303. WOMEN'S AND MISSES' RIBBED UNDERWEAR. SOUTHDOWN KNITTING CO., Allentown, Pa.
Filed October 24, 1907. Serial No. 30,766. PUBLISHED NOVEMBER 26, 1907.

67,304. ODORLESS DEODORANT FOR THE TOILET. VAIL BROTHERS, Philadelphia, Pa.
Filed October 12, 1907. Serial No. 30,581. PUBLISHED NOVEMBER 26, 1907.

67,305. CANNED SARDINES. JASPER WYMAN & SON, Millbridge, Me.
Filed August 26, 1907. Serial No. 29,582. PUBLISHED NOVEMBER 26, 1907.

67,306. CHOCOLATES. AMERICAN CANDY CO., Milwaukee, Wis.
Filed October 21, 1907. Serial No, 30,692. PUBLISHED NOVEMBER 26, 1907.

67,307. YEAST. CLYDE B. BLACKWELL, Statesville, N. C.
Filed September 23, 1907. Serial No. 30,148. PUBLISHED NOVEMBER 26, 1907.

67,308. POULTRY FOOD. CRYSTAL CARBONATE LIME COMPANY, Louisiana, Mo.
Filed September 26, 1907. Serial No. 30,219. PUBLISHED NOVEMBER 26, 1907.

67,309. CANNED FISH, CLAMS, LOBSTERS, SHRIMPS, AND CHOWDER. E. T. SMITH COMPANY, Worcester, Mass.
Filed October 7, 1907. Serial No. 30,459. PUBLISHED NOVEMBER 26, 1907.

67,310. YEAST AND CERTAIN CEREAL FOODS. FISCHER BROS., Seattle, Wash.
Filed June 11, 1907. Serial No. 28,035. PUBLISHED NOVEMBER 26, 1907.

67,311. WHISKY. THE GOLDEN HILL DISTILLING CO., Columbus, Ohio.
Filed October 15, 1907. Serial No. 30,606. PUBLISHED NOVEMBER 26, 1907.

67,312. FOOD FOR LIVE STOCK. THE GREAT WESTERN CEREAL COMPANY, Chicago, Ill.
Filed August 8, 1907. Serial No. 29,282. PUBLISHED NOVEMBER 26, 1907.

67,313. CANDIED POPCORN, CANDY, AND CHEWING GUM. WILLIAM S. HANNAH, East St. Louis, Ill.
Filed October 3, 1907. Serial No. 30,266. PUBLISHED NOVEMBER 26, 1907

67,314. CANNED VEGETABLES. ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill.
Filed September 26, 1907. Serial No. 30,241. PUBLISHED NOVEMBER 26, 1907.

67,315. CANNED CORN. ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill.
Filed September 26, 1907. Serial No. 30,245. PUBLISHED NOVEMBER 26, 1907.

67,316. CANNED FRUITS AND VEGETABLES. JOHN HOFFMANN & SONS CO., Milwaukee, Wis.
Filed September 9, 1907. Serial No. 29,809. PUBLISHED NOVEMBER 26, 1907.

67,317. CANNED FRUITS AND VEGETABLES. JOHN HOFFMANN & SONS CO., Milwaukee, Wis.
Filed September 9, 1907. Serial No. 29,812. PUBLISHED NOVEMBER 26, 1907.

67,318. WINTER-WHEAT FLOUR. J. E. LANE & SON, Golconda, Ill.
Filed September 28, 1907. Serial No. 30,287. PUBLISHED NOVEMBER 26, 1907.

67,319. WHISKY. THE LIVE OAK DISTILLING COMPANY, Cincinnati, Ohio.
Filed October 14, 1907. Serial No. 30,600. PUBLISHED NOVEMBER 26, 1907.

67,320. COCOA. HENRY MAILLARD, New York, N. Y.
Filed September 13, 1907. Serial No. 29,947. PUBLISHED NOVEMBER 26, 1907.

67,321. CRANBERRIES. MANOMET CRANBERRY COMPANY, Plymouth, Mass.
Filed October 2, 1907. Serial No. 30,342. PUBLISHED NOVEMBER 26, 1907.

67,322. CANNED VEGETABLES. SIEGEL COOPER & CO., Chicago, Ill.
Filed May 13, 1905. Serial No. 5,434. PUBLISHED NOVEMBER 26, 1907.

67,323. CANNED SALMON. THLINKET PACKING AND TRADING CO., Portland, Oreg.
Filed December 29, 1906. Serial No. 24,345. PUBLISHED MAY 7, 1907.

67,324. CANNED SALMON. THLINKET PACKING AND TRADING CO., Portland, Oreg.
Filed December 29, 1906. Serial No. 24,347. PUBLISHED MAY 7, 1907.

67,325. TRADE MAGAZINES AND TRADE JOURNALS. BIBLE & FITCH, New York, N. Y.
Filed September 20, 1907. Serial No. 30,100. PUBLISHED NOVEMBER 26, 1907.

67,326. NATURAL MINERAL WATERS AND CARBONATED BEVERAGES. BORELLO BROS., San Rafael, Cal.
Filed October 3, 1907. Serial No. 30,260. PUBLISHED NOVEMBER 26, 1907.

67,327. CARBON-BLACK, LAMPBLACK, AND GAS-BLACK. GODFREY L. CABOT, Boston, Mass.
Filed July 11, 1906. Serial No. 20,851. PUBLISHED NOVEMBER 26, 1907.

67,328. REMEDIES FOR CERTAIN DISEASES. J. MARCUS CARGILL, Baltimore, Md.
Filed October 11, 1907. Serial No. 30,545. PUBLISHED NOVEMBER 26, 1907.

67,329. LEATHER BELTING. CHARLES MUNSON BELTING CO., New York, N. Y.
Filed April 13, 1907. Serial No. 26,684. PUBLISHED NOVEMBER 26, 1907.

67,330. CERTAIN REMEDY. THE DAVID E. FOUTZ CO., Baltimore, Md.
Filed May 1, 1905. Serial No. 3,872. PUBLISHED NOVEMBER 26, 1907.

67,331. LEATHER BELTING. DETROIT OAK BELTING CO., Detroit, Mich.
Filed October 21, 1907. Serial No. 30,696. PUBLISHED NOVEMBER 26, 1907.

67,332. CERTAIN STOVES. DUPARQUET, HUOT & MONEUSE CO., New York, N. Y.
Filed September 19, 1907. Serial No. 30,084. PUBLISHED NOVEMBER 26, 1907.

67,333. CANDLES. THE EMERY CANDLE CO., Cincinnati, Ohio.
Filed October 7, 1907. Serial No. 30,457. PUBLISHED NOVEMBER 26 1907.

67,334. CANDLES. THE EMERY CANDLE CO., Cincinnati, Ohio.
Filed October 7, 1907. Serial No. 30,458. PUBLISHED NOVEMBER 26, 1907.

67,335. POLISH FOR FURNITURE. ALBERT S. HICKS, Grand Rapids, Mich.
Filed September 23, 1907. Serial No. 30,161. PUBLISHED NOVEMBER 26, 1907.

67,336. REMEDY FOR CERTAIN DISEASES. ALFRED P. JONES, Minneapolis, Minn.
Filed September 12, 1907. Serial No. 29,879. PUBLISHED NOVEMBER 26, 1907.

67,337. MIXED PAINTS AND VARNISHES. "LE RIPOLIN," (SOCIÉTÉ ANONYME FRANÇAISE DE PEINTURES LAQUÉES ET D'ENDUITS SOUS-MARINS, PROCÉDÉS LEFRANC & BRIEGLEB RÉUNIS,) Paris, France.
Filed August 29, 1905. Serial No. 12,080. PUBLISHED NOVEMBER 26, 1907.

67,338. MACHINERY PACKING. NEW YORK BELTING AND PACKING COMPANY, LTD., New York, N. Y.
Filed June 17, 1907. Serial No. 28,173. PUBLISHED NOVEMBER 26, 1907.

67,339. TOOTH-POWDER, TOOTH-PASTE, OR TOOTH-WASH. WALTER K. PEEK, New York, N. Y.
Filed October 25, 1907. Serial No. 30,788. PUBLISHED NOVEMBER 26, 1907.

67,340. TREATISES ON MEDICINES AND SUPPLEMENTS THERETO. PHYSICIANS PUBLISHING COMPANY, Boston, Mass.
Filed May 20, 1907. Serial No. 27,773. PUBLISHED NOVEMBER 26, 1907.

67,341. LUBRICATING OILS AND GREASES. CHARLES H. REED & CO., Brockton, Mass.
Filed October 1, 1907. Serial No. 30,327. PUBLISHED NOVEMBER 26, 1907.

67,342. OIL-LAMPS. STANDARD OIL CO. OF NEW YORK, New York, N. Y.
Filed September 3, 1907. Serial No. 29,716. PUBLISHED NOVEMBER 26, 1907.

67,343. OIL-LAMPS. STANDARD OIL CO. OF NEW YORK, New York, N. Y.
Filed September 3, 1907. Serial No. 29,717. PUBLISHED NOVEMBER 26, 1907.

67,344. ROCK-CIDER. CHARLES R. TOLLE, Los Angeles, Cal.
Filed September 23, 1907. Serial No. 30,172. PUBLISHED NOVEMBER 26, 1907.

67,345. GRAPHITE LUBRICANTS. THE UNITED STATES GRAPHITE COMPANY, Saginaw, Mich.
Filed October 3, 1907. Serial No. 30,407. PUBLISHED NOVEMBER 26, 1907.

67,346. GRAPHITE PAINT AND PIPE-CEMENT. THE UNITED STATES GRAPHITE COMPANY, Saginaw, Mich.
Filed October 3, 1907. Serial No. 30,408. PUBLISHED NOVEMBER 26, 1907.

67,347. PILLS. EDMUND VIERTEL, Detroit, Mich.
Filed September 12, 1907. Serial No. 29,896. PUBLISHED NOVEMBER 26, 1907.

67,348. GINGER-ALE AND SARSAPARILLA. WHANN LITHIA SPRINGS CO., Franklin, Pa.
Filed September 18, 1907. Serial No. 30,063. PUBLISHED NOVEMBER 26, 1907.

67,349. EYE REMEDIES. LEW ARNTZ, Des Moines, Iowa.
Filed March 30, 1906. Serial No. 18,375. PUBLISHED NOVEMBER 26, 1907.

67,350. LINIMENTS AND UNGUENTS. BARDELL & SCHICK, Joliet, Ill.
Filed September 5, 1907. Serial No. 29,764. PUBLISHED NOVEMBER 26, 1907.

67,351. ALE, PORTER, LAGER-BEER, AND STOUT. BRADDSTON & WOERS, New York, N. Y.
Filed April 19, 1906. Serial No. 2,267. PUBLISHED NOVEMBER 26, 1907.

67,352. CERTAIN REMEDY. MARGARET C. CORNELLY, New York, N. Y.
Filed August 24, 1907. Serial No. 29,568. PUBLISHED NOVEMBER 26, 1907.

67,353. TOOTH-POWDER. CHARLES E. DUCK, Baltimore, Md.
Filed October 8, 1907. Serial No. 30,483. PUBLISHED NOVEMBER 26, 1907.

67,354. REMEDY FOR DYSPEPSIA, HEADACHE, AND NAUSEA. FRANK FULLER, New York, N. Y.
Filed October 7, 1907. Serial No. 30,469. PUBLISHED NOVEMBER 26, 1907.

67,355. DENTIFRICES IN LIQUID, POWDER, PASTE, AND SOAP FORM. HENRY J. S. HALL, WM. HENRY HALL, AND MARTHA M. HALL, New York, N. Y., AND IRAD HAWLEY, Orange, N. J., executors of William Henry Hall, deceased.
Filed August 8, 1907. Serial No. 29,308. PUBLISHED NOVEMBER 26, 1907.

67,356. DENTAL OBTUNDENTS. GEORGE N. HEIN, San Francisco, Cal.
Filed August 30, 1907. Serial No. 29,685. PUBLISHED NOVEMBER 26, 1907.

67,357. REMEDY FOR LAXATIVE AND BLOOD-PURIFYING PURPOSES. THE IRON-OX REMEDY COMPANY, Detroit, Mich.
Filed October 12, 1907. Serial No. 30,568. PUBLISHED NOVEMBER 26, 1907.

67,358. MEDICINES FOR DISEASES OF THE STOMACH AND LIVER. ALEXANDER LA BELL, Detroit, Mich.
Filed October 9, 1907. Serial No. 30,503. PUBLISHED NOVEMBER 26, 1907.

67,359. AROMATIC BITTERS. FRANK R. LEONORI, New York, N. Y.
Filed October 10, 1907. Serial No. 30,524. PUBLISHED NOVEMBER 26, 1907.

67,360. AROMATIC BITTERS. FRANK R. LEONORI, New York, N. Y.
Filed October 10, 1907. Serial No. 30,525. PUBLISHED NOVEMBER 26, 1907.

67,361. REMEDY FOR CRAMPS AND BOTS IN HORSES. SIDNEY S. MCCARVER, Fordyce, Ark.
Filed May 24, 1907. Serial No. 27,629. PUBLISHED NOVEMBER 26, 1907.

67,362. LINIMENTS. OLAX REMEDY COMPANY, Desplaines, Ill.
Filed October 9, 1907. Serial No. 30,512. PUBLISHED NOVEMBER 26, 1907.

67,363. REMEDY FOR PURIFYING THE BLOOD. P. L. CUSACHS, LIMITED, New Orleans, La.
Filed March 21, 1907. Serial No. 26,126. PUBLISHED APRIL 30, 1907.

67,364. COUGH MEDICINES. RICKETTS BROS., Detroit, Mich.
Filed October 7, 1907. Serial No. 30,474. PUBLISHED NOVEMBER 26, 1907.

67,365. REMEDY FOR THE TREATMENT OF DISEASES OF EYES. THOMAS SHOCKLEY, Topaz, Mo.
Filed September 23, 1907. Serial No. 30,160. PUBLISHED NOVEMBER 26, 1907.

67,366. STOCK-TONICS. THE STOCK FOOD COMPANY OF AMERICA, Minneapolis, Minn.
Filed October 8, 1906. Serial No. 23,699. PUBLISHED NOVEMBER 26, 1907.

67,367. LAXATIVE TABLETS. FREDERICK W. SULTAN, St. Louis, Mo.
Filed July 29, 1907. Serial No. 29,083. PUBLISHED NOVEMBER 26, 1907.

67,368. TALCUM POWDER. TALCUM PUFF COMPANY, INC., Asheville, N. C.
Filed May 4, 1907. Serial No. 27,123. PUBLISHED NOVEMBER 26, 1907.

67,369. MALT EXTRACT. THEO. HAMM BREWING CO., St. Paul, Minn.
Filed August 26, 1907. Serial No. 29,691. PUBLISHED NOVEMBER 26, 1907.

67,370. MALT EXTRACT. THE VA. BREWING CO., Roanoke, Va.
Filed October 7, 1907. Serial No. 30,455. PUBLISHED NOVEMBER 26, 1907.

67,371. LOZENGES OR TROCHES FOR COUGHS, COLDS, AND THROAT TROUBLES. GEORGE NICHOLAS WANSER, Cranford township, Union county, N. J.
Filed April 15, 1907. Serial No. 26,731. PUBLISHED NOVEMBER 26, 1907.

67,372. DENTIFRICE AND PERFUMERY. HENRY SOLOMON WELLCOME, London, England.
Filed October 9, 1907. Serial No. 30,519. PUBLISHED NOVEMBER 26, 1907.

67,373. LEATHER. A. C. LAWRENCE LEATHER CO., Boston, Mass.
Filed October 14, 1907. Serial No. 30,599. PUBLISHED NOVEMBER 26, 1907.

67,374. CERTAIN LEATHER ARTICLES. J. M. DELANEY & CO., New York, N. Y.
Filed January 4, 1907. Serial No, 24,433. PUBLISHED NOVEMBER 26, 1907.

67,375. CERTAIN LEATHER ARTICLES. J. M. DELANEY & CO., New York, N. Y.
Filed January 4, 1907. Serial No. 24,435. PUBLISHED NOVEMBER 26, 1907.

67,376. LEATHER BOOTS AND SHOES. GEO. F. DITTMANN BOOT & SHOE COMPANY, St. Louis, Mo.
Filed September 27, 1907. Serial No. 30,255. PUBLISHED NOVEMBER 26, 1907.

67,377. PRINTING AND WRITING PAPER. GRAHAM PAPER CO., St. Louis, Mo.
Filed May 17, 1907. Serial No. 27,451. PUBLISHED NOVEMBER 26, 1907.

67,378. PRINTING AND WRITING PAPER. GRAHAM PAPER CO., St. Louis, Mo.
Filed May 17, 1907. Serial No. 27,455. PUBLISHED NOVEMBER 26, 1907.

67,379. CHILDREN'S LEATHER AND CANVAS SHOES. LAMKIN AND FOSTER, INC., Boston, Mass.
Filed April 29, 1907. Serial No. 26,998. PUBLISHED NOVEMBER 26, 1907.

67,380. ERASERS MADE OF RUBBER AND OF RUBBER SUBSTITUTES. JULIUS LEHMANN, New York, N. Y.
Filed October 22, 1907. Serial No. 30,726. PUBLISHED NOVEMBER 26, 1907.

67,381. LEATHER BOOTS, SHOES, AND SLIPPERS. M. D. WELLS CO., Chicago, Ill.
Filed July 31, 1905. Serial No. 11,076. PUBLISHED JUNE 12, 1906.

67,382. LEATHER BOOTS, SHOES, AND SLIPPERS. M. D. WELLS CO., Chicago, Ill.
Filed July 31, 1905. Serial No. 11,080. PUBLISHED AUGUST 28, 1906.

67,383. LEATHER SHOES. R. P. SMITH & SONS CO., Chicago, Ill.
Filed October 19, 1907. Serial No. 30,682. PUBLISHED NOVEMBER 26, 1907.

67,384. LEATHER SHOES. R. P. SMITH & SONS CO., Chicago, Ill.
Filed October 19, 1907. Serial No. 30,683. PUBLISHED NOVEMBER 26, 1907.

67,385. LEATHER SHOES. R. P. SMITH & SONS CO., Chicago, Ill.
Filed October 19, 1907. Serial No. 30,684. PUBLISHED NOVEMBER 26, 1907.

67,386. LEATHER SHOES. R. P. SMITH & SONS CO., Chicago, Ill.
Filed October 19, 1907. Serial No. 30,685. PUBLISHED NOVEMBER 26, 1907.

67,387. LEATHER BOOTS AND SHOES. SHOEMART COMPANY, St. Louis, Mo.
Filed October 10, 1907. Serial No. 30,532. PUBLISHED NOVEMBER 26, 1907.

67,388. MEDICINE USED IN THE TREATMENT OF PULMONARY DISEASES. WILLIAM C. TYNDALE, Geneva and Chicago, Ill.
Filed March 28, 1907. Serial No. 26,316. PUBLISHED NOVEMBER 26, 1907.

67,389. LEATHER BOOTS AND SHOES FOR WOMEN'S WEAR. VANCE SHOE COMPANY, Wheeling, W. Va.
Filed November 17, 1906. Serial No. 23,433. PUBLISHED NOVEMBER 26, 1907.

TRADE-MARKS CANCELED.

51,488. INCANDESCENT MANTLES, LAMPS, AND LAMP-FITTINGS. WELSBACH LIGHT COMPANY, Gloucester City, N. J. Registered April 17, 1906. Canceled January 10, 1908.

52,907. STEEL. CRUCIBLE STEEL COMPANY OF AMERICA, Pittsburg, Pa. Registered May 22, 1906. Canceled December 30, 1907.

60,827. REMEDY FOR ALL DISEASES OF THE KIDNEYS, STOMACH, LIVER, AND BLOOD. MARK C. BOSTWICK, Alpena, Mich. Registered February 19, 1907. Canceled January 16, 1908.

61,217. WHEAT-FLOUR. CENTRAL KANSAS MILLING COMPANY, Lyons, Kans. Registered March 12, 1907. Canceled December 26, 1907.

LABELS

REGISTERED JANUARY 28, 1908.

14,008.—*Title:* "EL STILO." (For Cigars.) THE MOEHLE LITHOGRAPHIC CO., New York, N. Y. Filed December 26, 1907.

14,009.—*Title:* "HENRY DRAPER." (For Cigars.) THE MOEHLE LITHOGRAPHIC CO., New York, N. Y. Filed December 26, 1907.

14,010.—*Title:* "EL VINCERO." (For Cigars.) THE MOEHLE LITHOGRAPHIC CO., New York, N. Y. Filed December 26, 1907.

14,011.—*Title:* "ROVER." (For Cigars.) THE MOEHLE LITHOGRAPHIC CO., New York, N. Y. Filed December 26, 1907.

14,012.—*Title:* "ALMA." (For Cigars.) THE MOEHLE LITHOGRAPHIC CO., New York, N. Y. Filed December 26, 1907.

14,013.—*Title:* "JOHN TORREY." (For Cigars.) THE MOEHLE LITHOGRAPHIC CO., New York, N. Y. Filed December 26, 1907.

14,014.—*Title:* "J. CLAVEL COMPANY." (For Cordials.) J. CLAVEL WINE & CORDIAL CO., New York, N. Y. Filed December 23, 1907.

14,015.—*Title:* "J. CLAVEL COMPANY." (For Cordials.) J. CLAVEL WINE & CORDIAL CO., New York, N. Y. Filed December 23, 1907.

14,016.—*Title:* "INDIAN TONIC BITTERS." (For a Medical Compound.) JOHN C. VEADER, Missoula, Mont. Filed December 23, 1907.

14,017.—*Title:* "WOODRUFF CELEBRATED STICKING PLASTER." (For Sticking-Plaster.) BELLE A. PERRY, Oshkosh, Wis. Filed December 28, 1907.

14,018.—*Title:* "STEEL-GRAY ENAMELED WARE." (For Enameled Ware.) THE REPUBLIC METALWARE CO., Buffalo, N. Y. Filed December 28, 1907.

14,019.—*Title:* "EYELETS." (For Metal Specialties.) EDWIN B. STIMPSON COMPANY, New York, N. Y. Filed December 26, 1907.

PRINTS

REGISTERED JANUARY 28, 1908.

2,206.—*Title:* "DR. STORK." (For Malt Elixir.) PETER HAND BREWING COMPANY, Chicago, Ill. Filed December 13, 1907.

2,207.—*Title:* "BY THE YARD OR BUY THE GARMENT." (For Linings.) A. G. HYDE & SONS, New York, N. Y. Filed December 26, 1907.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

HAMM *v.* BLACK.

PATENT INTERFERENCE.

Decided June 19, 1907.

1 INTERFERENCE—PRIORITY—LACK OF DILIGENCE.

Evidence held to show that B., while the first to conceive the invention in issue, was the last to reduce to practice and was not exercising diligence at the time H. entered the field and subsequently thereto and priority properly awarded to H.

2. SAME—SAME—SAME—WORK ON OTHER INVENTIONS.

Where an inventor has a conception of a device which can be put to practical use upon devices existing in the art, delay in reducing the invention to practice for the purpose of perfecting other inventions to be used in connection therewith cannot be considered as an exercise of due diligence where another has in the meantime entered the field and reduced the invention to practice.

3. SAME—SAME—INVENTION BY THIRD PARTY.

The question whether a third party not involved in an interference is the real inventor of the subject-matter in issue is not pertinent to the question of priority of invention.

APPEAL from Examiners-in-Chief.

SIGNAL LAMP OR LANTERN GLASS HOLDER.

Mr. Louis K. Gillson for Hamm.

Mr. Harold Serrell for Black.

MOORE, *Assistant Commissioner, now Commissioner:*

This is an appeal by Black from the decision of the Examiners-in-Chief affirming the decision of the Examiner of Interferences and awarding priority of invention to Hamm on the following issue:

1. In a signal-lantern, an apertured frame-arm for a color-glass having an angular rim extending around the major portion of the periphery of the glass, a finger overturned from the rim at one side and a pivoted plate at the opposite side with an offset free end to pass over the edge of the glass.

2. In a signal-lantern, an apertured frame-arm for a color-glass having an angular rim extending around the major portion of the periphery of the glass, a finger overturned from the rim at one side, a pivoted plate at the opposite side with an offset free end to pass over the edge of the glass, and means for holding the said pivoted plate in place free from accidental displacement by vibration.

3. In a signal-lantern, an apertured frame-arm for a color-glass having an angular rim extending around the major portion of the periphery of the glass, a finger overturned from the rim at one side, a pivoted plate at the opposite side with an offset free end to pass over the edge of the glass, the frame-arm being provided with a recess and the pivoted plate with an interlocking projection for holding said pivoted plate in an initial position of use free from accidental displacement by vibration.

4. In a signal-lantern, an apertured frame-arm, composed of an apertured sheet-metal part and a plate connected thereto by rivets, a rim formed on the sheet-metal part bounding the major portion of the aperture therein and into which rim the color-glass is adapted to be received and fit, a finger overturned from the rim at one side and a pivoted plate with an offset free end to extend over the opposite edge of the color-glass, secured to the plate portion of the frame-arm and adapted to be turned toward the glass to hold the same, or away from the glass to release the same.

The invention in issue relates to improvements in means for removably holding a glass in an adjustable frame of a signal-lamp and consists in providing a flanged sheet-metal frame of the desired form with a finger bent over from the flange at one side and a pivoted finger having an offset end at the opposite side to embrace the edge of the glass. The pivoted finger acts as a turn-button and is secured from displacement by a projection which interlocks with a depression in the frame.

The Examiners-in-Chief and the Examiner of Interferences concurred in finding that although Black was first to conceive he was lacking in diligence at the time Hamm entered the field and reduced the invention to practice, and accordingly awarded priority of invention to Hamm.

Black is a patentee, and in view of the fact that Hamm's application was not filed until after he became aware of the existence of Black's patent (Hamm, X-Q. 52) the burden is heavily upon him to establish priority of invention beyond a reasonable doubt.

The testimony in behalf of Black clearly shows, and it is not seriously disputed, that Black conceived the invention in issue as early as January, 1903, and that he reduced the invention to practice by constructing a full-sized lamp—Black's Exhibit No. 2—in June, 1904.

Hamm alleges in his preliminary statement that he conceived the invention on or about March 30, 1904, and reduced the same to practice on or about April 14, 1904. He offers in evidence a full-sized lamp, "Hamm's Exhibit Tail Lamp," which he says is one of a pair which was completed April 14, 1904. This lamp clearly embodies the invention and constitutes a reduction to practice thereof.

It is contended in behalf of Black that the testimony offered by Hamm is insufficient to establish conception or reduction to practice by him at the date alleged.

Hamm, who is in the employ of The Adams & Westlake Company, testifies that the order for the construction of the pair of lamps, one of which is Hamm's Exhibit Tail Lamp in evidence, was entered in the order-books of that company on March 23, 1904, that work was begun on these lamps March 28, and the lamps completed April 14, 1904. This shop-order, which is numbered 24,061 and bears the date March 24, 1904, is offered in evidence. (Hamm's Exhibit Shop Order.) It calls for a—

Pair No. 83 Tail Lamps with 1-5" green to engine 1-5" green to side 1-5" white with ruby & green auto slides to rear. Lamps to have No. 1 signal-burner and double stationary bracket like on *B[P* Neg. 896 with handle under bottom of lamp Copper Founts.

Peterson, the foreman of The Adams & Westlake Company, identifies the exhibit lamp as one which was made under this order by reason of the fact that this lamp was one of the first pair made by that company which had two green lenses and one white lens, with an automatic device for changing the colors, and having a bracket of that particular form. (Qs. 14, 15; X-Qs. 39–41.) Peterson offered in evidence certain pay-roll time-sheets of a workman, J. G. McGregor, (Exhibits, Time Sheet A and B,) covering a period from March 28 to April 23, 1904, and it is stipulated by opposing counsel that if the time-keeper, Brightspecker, were called as a witness he would testify that these time-sheets were filled by him at the time they purport to be dated and correctly state the numbers of the orders upon which McGregor was employed during the period covered by them.

These time-sheets show that work was done upon order No. 24,061, above referred to, during a period from March 28 to April 13, 1904. McGregor, who is called as a witness, testifies that he made Hamm's Exhibit Engine Tail Lamp in the spring of 1904 under Peterson's direction and that but one pair of lamps of this precise character was made, although he continued to make lamps embodying the invention in issue. He states upon cross-examination that his memory as to the time he made these lamps was refreshed by reference to the time-sheets brought to his attention by Peterson. This pair of lamps was placed in service on the Pennsylvania lines west of Pittsburg in May, 1904, and other lamps embodying the invention in issue have been made continuously to the present time by The Adams & Westlake Company.

The testimony of Peterson, McGregor, and Hamm that the exhibit lamp and its mate were completed April, 1904, and were the only lamps of this precise character which were made, their identification of this exhibit lamp with that called for by the shop-order, and the time-sheet record showing work upon lamps corresponding in order-number to the shop-order in March and April, 1904, are believed to conclusively establish the construction of the exhibit lamp in April, 1904, and the testimony of Peterson (Q. 26) and McGregor (Qs. 9–10) that the swinging frames for the glass are the same as when first made shows that it constituted a reduction to practice of the invention at that time.

It is contended by Black that the testimony does not show that Hamm was the inventor of the device in issue. The question whether a third party not involved in an interference is the real inventor of the subject-matter in issue is not pertinent to the question of priority of invention. (*Foster* v. *Antisdel*, C. D., 1899, 413; 88 O. G., 1527; *Garrels et al.* v. *Freeman*, C. D., 1903, 542; 103 O. G., 1683; *Prindle* v. *Brown*, C. D., 1904, 680; 112 O. G., 957.) In this case, however, there appears to be no reason to doubt that Hamm was the inventor of the device in issue. Hamm avers that he is the inventor, and Peterson states, (Q. 31:)

Well, I believe it (the invention) was Mr. Hamm's, I think. I am sure of that.

It having been established that Hamm was first to reduce the invention to practice, it remains to be seen whether Black was active at the time Hamm entered the field and thereafter exercised diligence in reducing the invention to practice. It appears that in January, 1904, Eklund, under Black's instructions, made a model, which is offered in evidence as Black's Exhibit 1. This model does not embody the "finger overturned from the rim at one side," nor the "pivoted plate at the opposite side with an offset free end to pass over the edge of the glass," called for by the issue. A perforated plate having an offset and projecting lug corresponding to the pivoted plate of the issue is attached to the frame and, according to the testimony of Black and Eklund, has been so attached since January, 1904, for the purpose of illustrating the pivoted catch to be embodied in full-sized lanterns.

It appears from the testimony of Black and Eklund that this model was made to demonstrate a mechanism for operating the colored glasses from the outside of the lamp, and that when Black became satisfied that the mechanism for shifting the colored glasses would operate properly he "told the experimenter not to bother with this pivoted plate on this identical model until he had the lamp completely made and then put the pivot on the frame-arm." (Black, Q. 29.) Eklund testifies to the same effect. (Q. 20.) It does not appear from the testimony that Black made any further effort to reduce the invention in issue to practice until a lantern which is offered in evidence as Black's Exhibit No. 2 was made. This lantern was begun in May and completed in June, 1904. (Black, Qs. 30—37, X-Q. 54; Eklund, Qs. 21—23.)

It is urged that Black's delay in reducing the invention in issue to practice was due to his efforts to perfect a mechanism for operating the frames embodying the invention in issue. In view of Black's testimony that he was satisfied with the mechanism for operating the pivoted frames in January, 1904, this contention is believed to be without foundation. Furthermore, the invention in issue is independent of the mechanism for operating the frames and appears to be applicable to any lantern in which such colored glasses are used. Where an inventor has a conception of a device which could be put to practical use at any time upon devices existing in the art, delay in reducing the invention to practice for the purpose of perfecting other inventions to be used in connection therewith cannot be considered as an exercise of due diligence where another has in the meantime entered the field and reduced the invention to practice. (*Lotterhand* v. *Hanson*, C. D., 1904, 647; 110 O. G., 861; *Stapleton* v. *Kinney*, C. D., 414; 96 O. G., 1432.)

By having conclusively established reduction to practice of the invention in April, 1904, during the period of Black's inactivity, Hamm has sustained the burden of proof resting upon him.

The decision of the Examiners-in-Chief awarding priority of invention to Hamm is affirmed.

EBERSOLE v. DURKIN.

PATENT INTERFERENCE.

Decided August 1, 1907.

1. INTERFERENCE—EVIDENCE—ORAL TESTIMONY.

Where witnesses have an independent recollection of events and the dates of their occurrence, the records of which are accessible to opposing counsel, it is unnecessary that documentary evidence be produced as a means of refreshing their recollection.

2. SAME—SAME—SAME—REDUCTION TO PRACTICE.

The statement of witnesses who were thoroughly familiar with the construction of a device that it operated successfully *Held* sufficient to establish a successful test where the operation of the device is easily understood and the device itself is in evidence and found to satisfactorily perform the intended functions.

3. SAME—REDUCTION TO PRACTICE—CHARACTER OF TESTS.

Where devices of the kind involved were well understood and the only point to be determined by a test was whether upon the operation of the controller-handle the dog which was attached thereto would move in the way stated, *Held* that it was not necessary that a test be performed under conditions of actual service in order to establish a reduction to practice.

APPEAL from Examiners-in-Chief.

CONTROLLER.

Messrs. Jones & Addington and *Messrs. Jones, Addington & Ames* for Ebersole.

Mr. Charles N. Butler for Durkin.

MOORE, *Commissioner:*

This is an appeal by Ebersole from a decision of the Examiners-in-Chief affirming the decision of the Examiner of Interferences and awarding priority of invention to Durkin on the following issue:

1. A controller provided with a dog jointed to permit its movement in two directions, a series of stops for engaging said dog, and a rack for throwing said dog into engagement with said stops.
2. A controller provided with a dog jointed to permit its movement in two directions, stops for engaging said dog, and serrations for throwing said dog against said stops, the construction being such that the dog will automatically disengage.
3. A controller provided with an oscillating dog having a pivotal action in transverse directions, a supporting and limiting mechanism for said dog, and means for shifting and holding said dog.
4. A controller provided with a revolving supporting and limiting device, an oscillating dog having a universal-joint connection with said device for supporting it and limiting its action, stops for engaging said dog, and serrations for throwing said dog against stops, said dog being disengaged from said stops automatically.

The invention in issue relates to controller-regulators which are designed to prevent an operator from too rapidly cutting out the resistance in a motor-circuit and comprises a handle adapted to be mounted on the controller-shaft provided with a compound dog capable of movement in two directions arranged to coöperate with a rack and stops fixed to the controller-casing, whereby the operator is obliged to turn the controller slowly step by step.

Ebersole does not claim to have conceived the invention prior to the first part of February, 1904. It is claimed on behalf of Durkin that he reduced the invention to practice in the month of January, 1904, and it has been found by each of the lower tribunals that Durkin did reduce the invention to practice at this time by the construction and operation of a device which is known in the record as "Durkin's Exhibit E." In the view which I take of the case this is the only question which need be considered.

Prior to the conception of the invention in controversy Durkin devised several different forms of mechanism intended to accomplish the function of the device in issue. The present device differs from the prior ones and from prior devices of this character principally in the form of the pawl or dog which coöperates with the fixed rack and stops. Durkin states that he first conceived the idea about December, 1903; that work was begun on Exhibit E in Eckersley's shop during the first part of January, 1904; that the device was completed and in its present condition about the 6th or 7th of January, and that it worked all right at that time.

The workman who made this exhibit, Wetzel, states that he worked on it in the "fore part of January" and that it was completed and in its present form before January 20, 1904. He fixes the date of the completion of this exhibit as being immediately after the holidays and also by reference to a conversation with applicant, Durkin, during which Durkin told him that he was going to be married on January 20 and gave him a few cigars.

Eckersley, in whose shop this Exhibit E was made, states that the exhibit was made before January 20, 1904, and that it worked all right. This witness is also able to recall the date as being just before Durkin's marriage.

It is contended by counsel for Ebersole that since Durkin did not testify as to the date of his marriage and as no record evidence was produced with respect to this event the bare recollection of the witnesses is insufficient to establish this date; but as the witnesses seemed to have an independent recollection of the events in question and the date of their occurrence it was unnecessary to produce documentary evidence as a means of refreshing their recollection. They testify positively as to the date, their testimony is uncontradicted and unshaken by cross-examination, and I see no reason for disregarding it or concluding that they were mistaken, especially in view of the fact that the event to which they referred as a means for fixing the date was one which was not exclusively within their knowledge, but which could have easily been disproved by counsel for Ebersole had he been apprehensive that they were mistaken.

Counsel for Ebersole points out certain apparent inconsistencies in Durkin's record, presumably with the purpose to show that the testimony is to be given but little weight. It is pointed out that although Durkin states that he did not "get the idea" until December, 1903, he states that he began work on Exhibit E in July, 1903; but the part which Durkin states he made in July, 1903, was the rack, which, while it forms a part of the new combination set forth in the issue, is, in fact, an old construction, similar to those used by the applicant in his previous inventions. It seems clear from the whole record that this rack, which he says he made in July, 1903, was made for use with one of the prior constructions of controller-handles and not with a view to its use with the specific construction of pawl which forms the gist of the invention in issue. It is further pointed out that although it is claimed that Exhibit E was completed before Durkin's marriage Durkin, in answer to cross-question 103, in which he is asked why a construction like Exhibit E was not put into use in New York city instead of another construction, made the following statement:

A. The reason was, at the time I got up Exhibit E in 1904 I did not have money enough to back it up, as I had a wife and family to take care of, and other things to take up my money. That was the reason that I tried to get Mr. Baird, Taylor and others interested in my machine. If I had had money enough at that time I would have put it into New York, but "D," Exhibit D, was in New York at that time that I was getting up Exhibit E, knowing that Exhibit E was simpler than "D."

At first sight this answer appears to be inconsistent

with the claim that Exhibit E was made before Durkin's marriage; but it seems obvious to me that the witness had in mind not the time when the exhibit was made but the time when the invention was ready for commercial exploitation, since the commercial use of the device was the matter under consideration, and since, if this was not what was in the witness's mind, that part of the answer which states that he "did not have money enough to back it up" would be without point, because the witness unquestionably had the money to complete, and did, in fact, complete, the exhibit to which he referred.

I am of the opinion that the evidence is sufficient to show that Exhibit E was complete and in its present condition prior to January 20, 1904.

It is further strenuously urged that Exhibit E is not a reduction to practice because it was never tested in actual practice on a controller; but, as pointed out by the lower tribunals, devices of this character were well understood at the time this exhibit was made, and the only point to be determined by a test was whether, upon the operation of the controller-handle, the dog which was attached thereto would function in the way intended. This could be determined just as well by the operation of the exhibit as it stands on its block of wood as if it were attached to the shaft of a controller. The witnesses state that it operated satisfactorily when it was completed. It is objected that this is only the conclusion of the witnesses, and it is urged that their bare statements are not sufficient on this point, but that they should have stated how the device was tested and how the parts behaved under the test. While this is not one of those simple devices which requires no test to demonstrate its operativeness, it is so simple that the bare statement that it operated satisfactorily by witnesses who thoroughly understood its construction and knew what it was intended to do is sufficient evidence of a successful test, particularly where the device itself, unchanged, is introduced in evidence and is found to satisfactorily perform its intended functions.

It is therefore held that Durkin reduced the invention to practice before it was conceived by Ebersole.

The decision of the Examiners-in-Chief awarding priority of invention to Durkin is affirmed.

EX PARTE EMPIRE GRAIN & ELEVATOR CO.

APPLICATION FOR REGISTRATION OF TRADE-MARK.

Decided November 21, 1907.

TRADE-MARK—"NEVERFAIL"—DESCRIPTIVE.

The word "Neverfail" as a trade-mark for stock and poultry food properly refused registration, since it is descriptive of the character or quality of the goods to which it is applied.

ON APPEAL.

TRADE-MARK FOR FEED FOR STOCK AND POULTRY.

Messrs. Alexander & Dowell for the applicants.

MOORE, *Commissioner:*

This is an appeal from the action of the Examiner of Trade-Marks refusing to register the mark "Neverfail" as a trade-mark for stock and poultry food for the reason that it is descriptive of the character or quality thereof and is not registrable in view of section 5 of the Trade-Mark Act.

The specimen filed with the application to show how the mark is actually used upon the goods contains in addition to "Neverfail" the words "Egg Producer Blended Chicken Feed Makes Hens Lay." The Examiner of Trade-Marks held that it is clearly the intention of the label to indicate that the use of the said chicken feed will never fail to make hens lay. This is believed to be the natural inference from the label as used. Undoubtedly as applied to stock or poultry food the mark indicates that the food will never fail to have the desired effect and is therefore descriptive of the quality of the food.

The mark is very similar to the word "Infallible," which was refused registration as a trade-mark for flour on the ground that it was descriptive of the quality of the goods, in the case of *ex parte The Sauers Milling Company*, (129 O. G., 3161.) In fact, one of the definitions given in *Webster's Unabridged Dictionary* for "infallible" is "not liable to fail."

The mark of the application is also similar to the following marks, which have been refused registration on the ground that they are descriptive of the goods with which they were used: "Nevers-Tick," for lubricants, (*ex parte Woolworth*, 100 O. G., 1976;) "Worthmore," for shoes, (*ex parte Block Brothers Clothing Company*, 124 O. G., 1521;) "Rust? Never!" for hooks and eyes, (*ex parte The De Long Hook and Eye Company*, 128 O. G., 885;) "Self Loading," for cartridges, (*The Peters Cartridge Company* v. *The Winchester Repeating Arms Company*, 128 O. G., 3287.)

Likewise the United States Circuit Court of Appeals in the case of *Fuller* v. *Huff* (92 O. G., 1620) held "Health Food" not to be a technical trade-mark for food, because the term means health food or health-producing food and is therefore descriptive of quality.

Obviously appellant should not be permitted to monopolize the term "Neverfail" for food of any kind, since any other manufacturer has an equal right to describe his goods by stating they "never fail" to produce certain results.

The decision of the Examiner is affirmed.

JOSLEYN v. HULSE.

PATENT INTERFERENCE.

Decided January 20, 1908.

1. INTERFERENCE PRACTICE—RULE 109.

No appeal lies from a favorable decision rendered on a motion to amend under Rule 109 whether rendered by the Examiner or the Examiners-in-Chief.

2. SAME—SAME—RULE 130.

The fact that a party cannot under the provisions of Rule 109 bring a motion to dissolve as to counts added to the issue of the interference will not of itself prevent him from urging under the provisions of Rule 130 the right of his opponent to make the claims.

ON PETITION.

TYPE-WRITING MACHINE.

Mr. Jacob Felbel for Josleyn.

Messrs. Knight Bros. for Hulse.

BILLINGS, *Assistant Commissioner:*

This is a petition by Josleyn that an appeal filed by him from a decision of the Examiners-in-Chief be heard and decided and that if the decision be affirmed an order be entered granting to Josleyn permission to urge

under the provisions of Rule 130 the non-patentability to Hulse of the claims involved.

It appears that Hulse brought a motion under Rule 109 to amend the issue by the addtion of certain claims which had been made by Josleyn. The motion was denied by the Primary Examiner, but on appeal his decision was reversed by the Examiners-in-Chief. It is from this decision that Josleyn desires to appeal.

Rule 124 provides that no appeal will be permitted from an affirmative decision rendered on a motion to dissolve on the question of the right to make the claims, and this applies to a decision rendered by the Examiners-in-Chief as well as to a decision by the Primary Examiner. (*Coleman* v. *Bullard* v. *Struble*, 114 O. G., 973.) The question of the right of Hulse to make the claims in the case arose on a motion brought under Rule 109; but the same reasons for not permitting an appeal from a favorable decision exists in this case as on a motion to dissolve. In the case of *Townsend* v. *Copeland* v. *Robinson* (126 O. G., 1355) it was pointed out that the practice on motions under Rule 109 should follow the practice under Rule 124.

As to the second part of the petition, an order such as asked for would not be proper at this time, as the question of a party's right under Rule 130 to argue the question of the patenability of the claims to his opponent is one which should be passed upon in the first instance by the Examiner of Interferences. It is thought, however, proper to state that the fact that Josleyn has not made a motion to dissolve the interference as to the counts included in the motion to amend brought under Rule 109 should not of itself prevent him from urging the question of non-patentability to Hulse at the final hearing. Rule 130 explicitly covers the case as here presented, for it states that the moving party must have duly presented and prosecuted a motion under Rule 122 for dissolution upon the ground in question "or show good reason why such a motion was not presented and prosecuted." Inasmuch as Rule 109 provides that—

> motions for dissolution will not be transmitted in regard thereto where the questions raised could have been disposed of in connection with the admission of the claims—

and where the record clearly shows that these questions were duly raised and disposed of in connection with the admission of the claims good reasons are apparent "why such a motion was not presented and prosecuted." It is evident, moreover, that what Rule 130 requires is that the question of the patentability of the claims to the other party shall have been duly presented and prosecuted before the Primary Examiner, and it is therefore immaterial whether this was done on a motion to dissolve or on a motion to amend.

The petition is denied.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

RIES v. KIRKEGAARD AND JEBSEN.

Decided December 11, 1907.

1. APPEAL—REVIEW BY COURT OF CONCURRENT DECISIONS OF PATENT OFFICE TRIBUNALS.

To justify the court of appeals in reversing the concurrent decisions of the Patent Office tribunals on a conclusion of facts, plain error must be shown.

2. INTERFERENCE — ORIGINALITY — ACTS INCONSISTENT WITH CLAIM TO ORIGINATION.

Where R., who was a patent solicitor, familiar with the patent law, both as inventor and solicitor, entered into a contract with K. and J., joint claimants of the invention in issue, according to the terms of which he was to attempt the sale of the invention and if he was successful he was to have one-third of the proceeds, *Held* to constitute a substantial acknowledgment that the invention was made by K. and J.

Messrs. Pennie & Goldsborough and *Mr. Charles S. Champion* for the appellant.

Mr. A. W. Proctor and *Mr. W. M. Stockbridge* for the appellee.

SHEPARD, *C. J.:*

This is an appeal from the decision of the Commissioner of Patents in an interference proceeding.

The issue of the interference was declared in ten counts. Without setting them out, it is sufficient to say that the invention of the issue relates to improvements in crown-seal bottle-stoppers, and consists substantially of a metallic cap having a beaded split flange, a divided ring inclosed in the bead, and a lever attached to one end of the ring and having a narrow eccentric slot engaging the other end of the ring. When the lever is moved in one direction the ring is contracted and the flange forced against an inclined shoulder near the mouth of the bottle causing the cap to firmly engage it. By moving the lever in the opposite direction the ring and flange are expanded, and the cap readily disengaged from the bottle.

Ries, the senior party, who filed application April 13, 1904, claimed conception between 1884, and 1887, drawings and disclosure in September, 1903, and reduction to practice in October, 1903. Kirkegaard and Jebsen who filed April 15, 1904, claimed conception, disclosure, construction and reduction to practice December 4, 1903. The tribunals of the Patent Office, unanimous in their award of priority to Kirkegaard and Jebsen, rejected the evidence of Ries's earliest alleged conception as wholly insufficient to establish his claim. In this they were undoubtedly right.

The real issue was whether Kirkegaard and Jebsen were real inventors, or derived their knowledge from the disclosures of Ries. Kirkegaard was the owner of a machine-shop, and had made some prior inventions. Ries was an inventor of a considerable number of devices, largely electrical, and was, moreover, a patent solicitor. While not a patent lawyer he had prepared statements in interference. He conducted the examination of witnesses, on his own behalf, and with some skill. He was on friendly terms with Kirkegaard and often engaged him to construct machines for him. During November and December of 1903, the latter was constructing a complicated machine for Ries, who was often in the shop. During this time Kirkegaard was working on a bottle-cap, for which he applied for a patent on December 16, 1903. Patent thereon was issued to him April 26, 1904. The invention of the issue is an improvement upon the patented construction, which appellees claim was suggested by Jebsen. Both stoppers include a metal cap having a slotted and flexible edge, a clamping-ring for this edge, and a cam-lever for drawing the ring tightly around, thereby compressing the flexible edge of the cap into a groove upon the bottle-neck. In the

patented construction the clamping-ring is made of one piece of wire, has two free ends, and rests loosely on a flange or bead formed on the edge of the cap; there is also a single clamping-lever with a cam engaging a free end of the clamping-ring and adapted to contract but not to expand it. The clamping-ring of the improvement, of the issue, is a two-part wire inclosed in the bead of the cap, and having four free ends; the clamping-lever is in the form of a bail and has a cam-slot at each of its ends that is capable of both clamping and expanding the ring. The patented device was liable to become dismembered when not in use. This was obviated in the improved structure by inclosing the two-part wire in a bead of the flange, and introducing the bail form of clamping-lever. The substitution of a double cam action secured both contraction and expansion as desired. Ries saw the patented construction, and claims to have substantially disclosed his former invention of the improvement. The appellees claim that upon seeing the same construction, Jebsen suggested the improved one, which Kirkegaard worked out. Hence the application as joint inventors. The case turns on this disputed point. The several tribunals, after a careful review of all the evidence, which it is unnecessary to repeat, came to the conclusion that Kirkegaard and Jebsen were the actual inventors.

There are some circumstances disclosed by the testimony, particularly as regards dates of drawings and work of construction, which involve this question in some doubt; and in such cases, it is the settled rule that the concurrent judgment of the Office tribunals will not be disturbed. To justify reversal, plain error must be shown in such a conclusion of fact.

Any doubt as to the point, however, is settled by subsequent transactions between the parties. Immediately after the construction, Ries entered into a contract with Kirkegaard and Jebsen to attempt the sale of the invention. If successful he was to have one-third of the proceeds of sale; the consummation he assumed at his own expense. He took sample-caps and exhibited them to a manufacturer, but failed to effect a sale. Reis who, as has been remarked, was a patent solicitor, drew this contract. Consequently. his attempt to give it a very restrictive, if not a concealed meaning, does not come in good grace. The substantial effect of the contract was an acknowledgment of the ownership by the other parties, not only of the patented construction but the improvement of the issue. Ries admitted that he was under the impression at the time that the appellees had filed their application for patent for the improvement. In this he was in error. Having failed to effect the sale, he filed his own application, which was followed two days later by the appellees. Ries's explanation of his motives in entering into this agreement is far from satisfactory. Being familiar with the patent law, both as inventor and solicitor, he must be presumed to have known, when attempting to sell the invention, that a patent to appellees for a device of which he, and not they were the actual inventors would be void.

The Commissioner was right in deciding the question of originality in favor of Kirkegaard and Jebsen; and without further discussion, his decision will be affirmed. It is so ordered, and that this decision be certified to the Commissioner of Patents as the law requires. Affirmed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 23, 1908.

D. L. Wing & Company, their assigns or legal representatives take notice:

An interference having been declared by this Office between the application of J. F. Meyer & Sons' Milling Company, of 172-174 Laclede Bldg., St. Louis, Mo., for registration of a trade-mark and a trade-mark registered March 14, 1882, to D. L. Wing & Company, of St. Louis, Mo., and the notice of said declaration mailed by the Patent Office in the usual manner to the said D. L. Wing & Company having been returned undelivered, notice is hereby given to the said D. L. Wing & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 28, 1907.

Meade-Van Bokkelen Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Barton Vineyard Company, Limited, of Fresno, Cal., for registration of a trade-mark and a trade-mark registered to the Meade-Van Bokkelen Company, of Chicago, Ill., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Meade-Van Bokkelen Company having been returned undelivered, notice is hereby given to the said Meade-Van Bokkelen Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 28, 1907.

Noble and Streeter, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Joseph C. Allen, of Plainfield, N. J., for registration of a trade-mark and a trade-mark registered to Noble and Streeter, of New York, N. Y., and it appearing upon a showing made by the junior party that said Noble and Streeter have not been located, notice is hereby given to the said Noble and Streeter, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 28, 1907.

Irwin & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Walter S. Bare, of 227 North Duke street, Lancaster, Pa., for registration of a trade-mark registered to Irwin & Company, of 105 Milk street, Boston, Mass., and no response to the said declaration mailed by the Patent Office in the usual manner to Irwin & Company having been received, and there being no evidence of its having been received by the said Irwin & Company, it is presumed that the company has not received the same. Therefore notice is hereby given to the said Irwin & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that due notice of the declaration of this interference may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE *Commissioner.*

THE
OFFICIAL GAZETTE
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[BY AUTHORITY OF CONGRESS.]

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ISSUE OF FEBRUARY 4, 1908.

Patents	592	No. 877,897 to No. 878,488,	inclusive.
Designs	36	No. 39,048 to No. 39,083,	inclusive.
Trade-Marks	150	No. 67,390 to No. 67,539,	inclusive.
Labels	16	No. 14,020 to No. 14,035,	inclusive.
Prints	3	No. 2,208 to No. 2,210,	inclusive.
Reissues	3	No. 12,746 to No. 12,748,	inclusive.
Total	800		

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama		
Alaska, District of		
Arizona Territory		1
Arkansas	1	
California	22	4
Colorado	7	1
Connecticut	16	6
Delaware		
District of Columbia	5	
Florida		
Georgia	5	1
Hawaii Territory		1
Idaho	1	
Illinois	54	10
Indiana	13	3
Iowa	7	3
Kansas	8	
Kentucky	1	3
Louisiana		8
Maine	10	4
Maryland	5	1
Massachusetts	41	13
Michigan	14	4
Minnesota	13	3
Mississippi	2	
Missouri	12	4
Montana	2	
Nebraska	4	1
Nevada		
New Hampshire	1	
New Jersey	32	15
New Mexico Ter't'y	1	
New York	100	43
North Carolina	3	
North Dakota	3	
Ohio	42	4
Oklahoma	3	
Oregon	2	
Panama		
Pennsylvania	55	11
Philippine Islands		
Rhode Island	8	3
South Carolina	1	2
South Dakota	3	
Tennessee	4	
Texas	7	2
Utah	5	
Vermont	7	
Virginia	5	2
Washington	5	2
West Virginia	5	3
Wisconsin	8	
Wyoming		
U. S. Army		
U. S. Navy		
Total to citizens of the United States	543	158

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina		
Austria-Hungary	6	1
Belgium	4	
Brazil		
British West Indies		
Canada	12	1
Cape Colony		
Chile		
China		
Costa Rica		
Cuba	1	
Denmark		
Ecuador		
England	20	1
France	8	1
Germany	24	5
Haiti		
Ireland	1	
Italy	2	1
Japan		
Java		
Mexico		
Natal		
Netherlands		
Newfoundland		
New South Wales		
New Zealand	1	
Norway	1	1
Persia		
Queensland		
Roumania		
Russia		
Scotland	1	
South Australia		
Spain		
Sweden	1	
Switzerland	3	
Transvaal, South Africa		
Victoria		
Western Australia		
Total to citizens of foreign countries	85	11

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 18, 1908.

The heirs, executor, or administrator of Siman Miyata, take notice:

An interference has been declared by this Office between an application of the Standard Import Company, Limited, of New Orleans, La., and an application of Siman Miyata, of West Orange, N. J., both for registration of a trade-mark, and a letter has been filed in the case from the attorney of record for said Miyata stating that Miyata has died.

Notice is therefore hereby given to the heirs, executor, or administrator of the said Siman Miyata that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 22, 1908.

Joseph H. Brown, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of Kingan & Company, Limited, of Indianapolis, Ind., or registration of a trade-mark and a trade-mark registered to Joseph H. Brown, of Fort Worth, Tex., and a letter has been filed in the case by the attorney of record for said Brown stating that he is unable to locate his client.

Notice is therefore hereby given to said Joseph H. Brown, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

APPLICATIONS UNDER EXAMINATION

Condition at Close of Business January 28, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Jan. 13	Nov. 4	617
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Jan. 9	Nov. 26	360
303	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Jan. 7	Dec. 28	165
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Jan. 6	Nov. 25	207
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Dec. 30	Dec. 21	202
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	Dec. 28	Dec. 13	338
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Dec. 28	Oct. 21	362
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Dec. 27	Dec. 2	287
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Iron Structures; Loading and Unloading; Towers.	Dec. 26	Dec. 30	261
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	Dec. 26	Dec. 26	286
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Dec. 26	Dec. 23	304
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Dec. 26	Nov. 4	332
167	V. Bookbinding; Harvesters; Jewelry; Music.	Dec. 18	Nov. 5	379
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	Dec. 16	Dec. 14	433
306	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Dec. 16	Dec. 3	544
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Dec. 16	Dec. 2	347
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas, and Canes.	Dec. 12	Dec. 11	321
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilisers; Medicines; Preserving; Sugar and Salt.	Dec. 10	Dec. 7	224
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Dec. 9	Nov. 21	344
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	Dec. 9	Nov. 5	312
282	X. Carriages and Wagons	Dec. 9	Oct. 28	469
328	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	Dec. 6	Nov. 1	566

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Dec. 5	Dec. 9	281
327	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engine Valves; Steam-Engines.	Dec. 5	Nov. 30	240
322	XII. Elevators; Journal-Boxes; Lubrication; Machine Elements; Pulleys and Shafting.	Dec. 5	Nov. 4	611
280	XL. Baggage; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	De.	Oct. 5	716
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Dec. 3	Oct. 18	334
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Dec. 2	Sept. 27	563
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Nov. 27	Nov. 19	607
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	Nov. 22	Nov. 4	255
238	XIX. Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel; Stoves and Furnaces.	Nov. 20	Oct. 17	468
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Nov. 18	Sept. 9	569
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	Nov. 16	Sept. 6	629
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	Nov. 14	Sept. 18	335
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	Nov. 13	Sept. 3	417
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Nov. 12	Nov. 9	423
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Oct. 29	Sept. 23	587
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	Oct. 22	Sept. 25	598
109	XVI. Telegraphy; Telephony	Oct. 11	July 9	651
321	XXXIX. Baths and Closets; Water Distribution.	Oct. 11	July 8	919
352	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	Sept. 25	Sept. 3	872

Total number of applications awaiting action 17,735

161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.			
	Trade-Marks	Jan. 25	Dec. 18	314
	Designs	Jan. 18	Dec. 19	40
	Labels and Prints	Jan. 27	Jan. 25	7

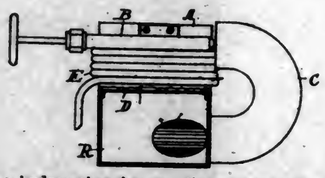
Money by Mail.

Money sent by mail to the Patent Office will be at the risk of the sender. Letters containing money should be registered.

PATENTS

GRANTED FEBRUARY 4, 1908.

877,897. HYDROCARBON-BURNER. SOLOMON W. BATES, Portland, Me., assignor to General Hydrocarbon Company, Portland, Me., a Corporation of Maine. Filed June 14, 1902. Serial No. 111,614.



1. In a hydrocarbon burner, the combination of a mixing chamber, an imperforate protecting casing above said mixing chamber, a perforated diaphragm between said mixing chamber and the protecting casing, a vaporizing coil contiguous to said protecting casing to be completely protected by said casing from the flame and a nozzle connected to said coil having a vapor jet orifice arranged to discharge into said mixing chamber.

2. In a hydrocarbon burner, the combination of a cylinder comprising a mixing chamber and a flame chamber the portion of said cylinder forming said flame chamber being imperforate, a perforated diaphragm between the chambers, a vaporizing coil around the flame chamber, a needle valve connected with said vaporizing coil and a vapor supply tube for conveying air and vapor from said needle valve to the mixing chamber.

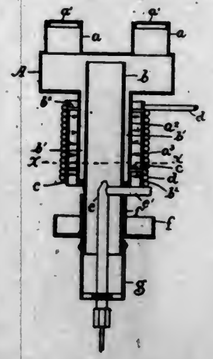
3. In a hydrocarbon burner, the combination of a cylinder, a perforated diaphragm within the same, a vaporizing coil on the outside of said cylinder above the diaphragm, a needle valve secured to the side of said cylinder and connected with said coil and having its axis disposed at right angles to the axis of the cylinder and a vapor supply tube for conveying vapor from said needle valve to the cylinder at a point below the diaphragm.

4. In a hydrocarbon burner the combination of a mixing chamber, an imperforate protecting casing arranged exteriorly of and adjacent to said mixing chamber, a perforated partition between said mixing chamber and the protecting casing, a vaporizing coil contiguous to said protecting partition to be completely protected by the same from direct contact with the flame and a vapor discharge nozzle for discharging vapor into said mixing chamber.

877,898. HYDROCARBON-BURNER. SOLOMON W. BATES, Portland, Me., assignor to General Hydrocarbon Company, Portland, Me., a Corporation of Maine. Filed Apr. 11, 1903. Serial No. 152,128.

1. In a hydro-carbon burner, the combination of a main mixing chamber having a perforated outlet for the main flame, a mixing tube leading to said mixing chamber, a vapor discharge nozzle opening into said mixing tube, an auxiliary mixing chamber connecting with said main mixing chamber and having perforations in the walls thereof, an imperforate cylinder surrounding said auxiliary chamber and forming an annular sub-flame space and a coil on said cylinder connecting with said nozzle.

2. In a hydrocarbon burner the combination of a main mixing chamber, having a perforated outlet for the main flame, a mixing tube leading to said mixing chamber, a vapor discharge nozzle opening into said mixing tube, an auxiliary mixing chamber below said main chamber and connected therewith and having perforations in the walls thereof, an imperforate cylinder surrounding said auxiliary chamber and forming an annular sub-flame space, and a coil on said cylinder connecting with said nozzle.



3. In a hydro-carbon burner, the combination of a main mixing chamber having a perforated outlet for the main flame, a mixing tube leading to said mixing chamber, a vapor discharge nozzle opening into said mixing tube, an annular extension to said mixing chamber surrounding said mixing tube having perforations in the walls thereof and connecting with said mixing chamber, a coil cylinder surrounding said extension forming an annular sub-flame space and a coil on said cylinder connected with said nozzle.

4. In a hydro-carbon burner, the combination of a mixing chamber having flame perforations therein, a mixing tube leading into said mixing chamber, a vapor discharge nozzle opening into said mixing tube, an imperforate coil cylinder surrounding a portion of said mixing chamber and forming an annular space into which said perforations discharge, and a vaporizing coil on said coil cylinder and connecting with said nozzle.

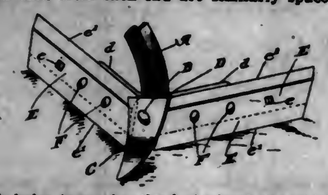
5. In a hydro-carbon burner, the combination of a mixing chamber having flame perforations therein, a mixing tube leading into said mixing chamber, a vapor discharge nozzle opening into said mixing tube, a coil cylinder composed of two concentrically arranged tubular metallic members having a non-metallic refractory substance between them surrounding some portion of said mixing chamber and forming an annular space into which said perforations discharge.

[Claims 6 and 7 not printed in the Gazette.]

877,899. COTTON-SCRAPE. CHARLES R. BOWEN, Jr., Jones county, Ga. Filed Aug. 30, 1907. Serial No. 390,736.

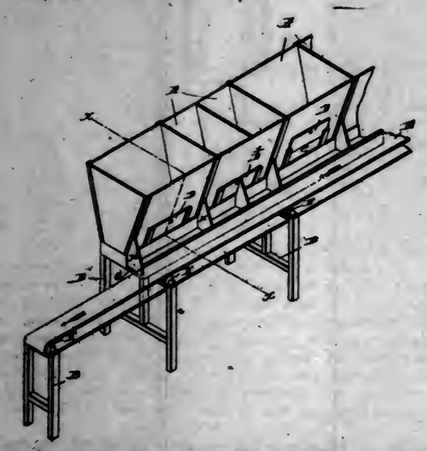
A scrape-attachment for plows comprising: a frog having a flat central portion and opposite lateral arms diverging rearwardly therefrom in a horizontal plane, said arms being each provided with two bolt-holes, and duplicate rhomboidal blades each having upper and lower cutting edges respectively beveled on opposite or reverse sides, said

blades being respectively arranged substantially parallel with and detachably bolted on said arms, each blade having an alined medial series of at least three bolt-holes so arranged that from each end are similarly spaced two of



such bolt-holes to receive the fastening bolts which engage in registering holes in said arms, the blades being thereby adapted to be transposed to opposite sides with their cutting edges reversed, substantially as described.

877,900. ASSEMBLING APPARATUS. JOSEPH R. BROWN, Washington, D. C., assignor to The Brown Bag-Filling Machine Company, Fitchburg, Mass., a Corporation of Massachusetts. Filed Apr. 27, 1907. Serial No. 370,703.



1. In an apparatus of the class described, a series of supply bins provided with discharge openings, a conveyer passing in front of said openings, a distributing reservoir between said conveyer and the discharge openings and arranged to receive the discharge from said supply bins.

2. In an apparatus of the class described, a series of supply bins provided with discharge openings, a conveyer passing in front of said openings, a discharge reservoir between said conveyer and the said discharge openings provided with a series of partitions extending upwardly therefrom whereby a series of distributing reservoirs are formed.

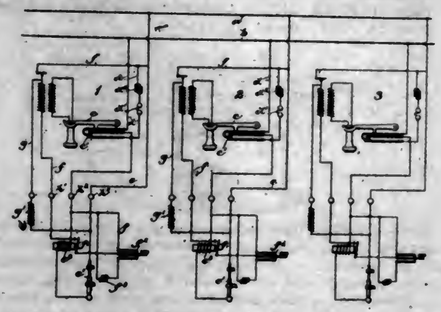
3. In an apparatus of the class described, a series of supply bins provided with discharge openings above the bottom of the bins, a conveyer passing in front of said openings, a series of distributing reservoirs one for each supply bin located between said conveyer and the said discharge openings and on the same level as the bottoms of the supply bins and arranged to receive the discharge from said bins.

4. In an apparatus of the class described, a series of supply bins provided with discharge openings above the bottom of the bins, a conveyer passing in front of said openings, a series of distributing reservoirs one for each supply bin located between said conveyer and the said discharge openings and on the same level as the bottoms of the supply bins and below the level of said conveyer.

5. In an apparatus of the class described, a series of supply bins provided with discharge openings above the bottom of the bins, a conveyer passing in front of said openings, a trough extending parallel with and between said conveyer and the said discharge openings and provided with a series of partitions extending upwardly therefrom to form a series of distributing reservoirs, one for each supply bin.

[Claim 6 not printed in the Gazette.]

877,901. LOCK-OUT DEVICE FOR PARTY-LINE TELEPHONES. WILLIAM M. BRUCE, Jr., Springfield, Ohio, assignor, by mesne assignments, to The American Automatic Telephone Company, Rochester, N. Y., a Corporation of New York. Filed Feb. 15, 1906. Serial No. 301,207.



1. In a common battery line telephone system, an electro-magnet at each subscriber's station means for bridging the same across the line, a normally open shunt around the said electro-magnet including the subscriber's talking instruments, and a circuit closer in said shunt adapted to be operated by said relay, and a second shunt having permanent resistance around said talking instrument, the resistance of said second shunt and the relay being such as to utilize the current from the central energy, and prevent any other relay on the line from being operated.

2. In a central energy party line telephone system, a series of stations including talking instruments, a main switch, a relay adapted to be bridged across the line by the operation of the main switch, a shunt around the relay including the subscriber's talking outfit, and a shunt around the talking outfit having a permanent resistance, and a circuit closer adapted to be operated by the electromagnetic force of said relay to bring said talking outfit and the permanent shunt thereof into circuit, said relay being of greater resistance than the resistance of said shunt around the talking outfit, whereby the operation of the one relay and the talking circuit will prevent the operation of any other relay on the line.

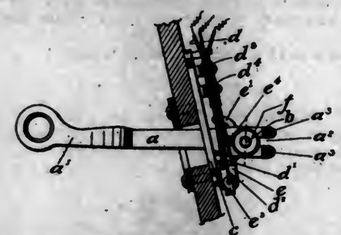
3. In a common battery party line telephone system, a relay at each subscriber's station means for bridging the same across the line, a shunt around said electro-magnet including the subscriber's talking instruments, a circuit closer in said shunt adapted to be operated by said relay, and a circuit breaker also in said shunt and associated with said relay, so that any jarring of said relay will operate said circuit breaker, substantially as and for the purpose specified.

4. In a common battery party line telephone system, an electro-magnet at each subscriber's station means for bridging the same across the line, a shunt around said electro-magnet including the subscriber's talking instrument, a circuit closer in said shunt adapted to be operated by the electro-magnetic force of said relay, and a gravity switch or circuit breaker associated with said relay, and also in said shunt, substantially as and for the purpose specified.

5. In combination with a subscriber's outfit for a central energy party line telephone system, a relay having a circuit closer, a gravity switch, and a shunt around the coils of said relay, all of said parts being mounted together and incorporated in a single instrument and connected to the subscriber's outfit so that the relay shall be in a normally open shunt around the talking instruments, and means for closing said shunt, substantially as and for the purpose specified.

[Claims 6 to 9 not printed in the Gazette.]

877,902. TELEPHONE-SWITCH. WILLIAM M. BRUCE, Jr., Springfield, Ohio, assignor, by mesne assignments, to The American Automatic Telephone Company, Rochester, N. Y., a Corporation of New York. Filed Feb. 18, 1907. Serial No. 357,788.



1. In a telephone switch, a frame or plate, contacting devices connected thereto, and a pivot also supported on said plate, a movable switch lever extending transversely of said plate and of said contacting devices, a movable arm supported on said pivot and having connections to one of said contacting devices, and a detachable slip connection for attaching and detaching said lever from said movable arm, substantially as specified.

2. The combination with a supporting plate and contacting devices, a movable arm pivoted to said plate, a switch lever bifurcated at its inner end and adapted to be projected over the pivot supporting said arm, and a projection on said arm to engage said lever, and a spring catch on said pivot to engage and hold said lever, substantially as specified.

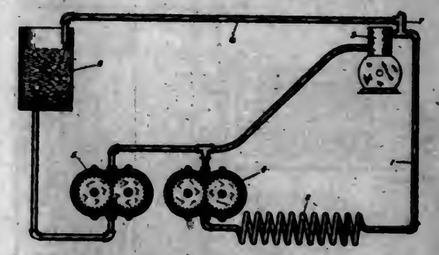
3. In a telephone switch, a main supporting plate, contacting devices supported on said plate parallel thereto, one of said contacting devices being movable and located centrally between two other contacting devices, a hinged arm connected to the movable contacting device, and a switch lever connected to said arm and extending substantially at right angles thereto, and a spring catch for connecting said arm and lever, substantially as and for the purpose specified.

4. The combination with the contacting devices and the swinging arm of a detacnable lever adapted to engage with the projection on said arm, and a spring catch to engage said lever, said spring catch being provided with a circular flange adapted to engage in a circular groove in said lever, substantially as specified.

5. The combination with contacting devices, a pivoted L-shaped arm and a stationary pivot on which said arm is journaled, of a switch lever bifurcated at its inner end and provided with grooved portions, which groove if extended would be circular, a spring catch on said pivot having a circular flange adapted to fit in the groove in said lever, the ends of the forks or bifurcations of said lever being beveled so as to be inserted under said spring catch, substantially as and for the purpose specified.

877,903. ART OF HEAT TRANSFERENCE. CHARLEY R. BUTLER, Carthage, Ind. Filed Dec. 4, 1905. Serial No. 290,097.

1. That improvement in the art of heat transference, which consists in providing a conduit circuit comprising a heater and radiator, positively circulating an oil through said conduit, heating the heater, permitting a portion of the oil to escape from the conduit after leaving the heater to permit escape of gases resulting from the heat, and driving an additional supply of oil into the system so as to maintain such material pressure of oil within the heater portion of the conduit as to substantially prevent the generation of gases within the conduit.



2. That improvement in the art of heat transference, which consists in providing a conduit circuit comprising a heater and radiator, positively circulating an oil through said conduit, heating the heater, permitting a portion of the oil to escape from the conduit after leaving the heater to permit escape of gases resulting form the heat and driving an additional supply of oil into the system in front of the heater, so as to maintain such material pressure of oil within the heater portion of the conduit as to substantially prevent the generation of gasas within the conduit.

3. That improvement in the art of heat transference, which consists in providing a conduit circuit comprising a heater and radiator, positively circulating a liquid through said conduit, heating the heater, permitting a portion of the liquid to escape from the conduit after leaving the heater to permit escape of gases resulting from the heat, and driving an additional supply of the liquid into the system so as to maintain such material pressure of liquid within the heater portion of the conduit as to substantially prevent the generation of gases within the conduit.

4. That improvement in the art of heat transference, which consists in providing a conduit circuit comprising a heater and radiator, positively circulating a liquid through said conduit, heating the heater, permitting a portion of the liquid to escape from the conduit after leaving the heater to permit escape of gases resulting from the heat and driving an additional supply of liquid into the system in front of the heater, so as to maintain such material pressure of liquid within the heater portion of the conduit as to substantially prevent the generation of gases within the conduit.

5. That improvement in the art of heat transference, which consists in circulating a liquid through a closed circuit of a heater and radiator by means of a pump, permitting an escape of a portion of the liquid in the line to permit escape of gases due to the heat, and introducing into said circuit an additional supply of liquid by a second pump to produce a pressure within the circuit such as to prevent the generation of gases in the circuit.

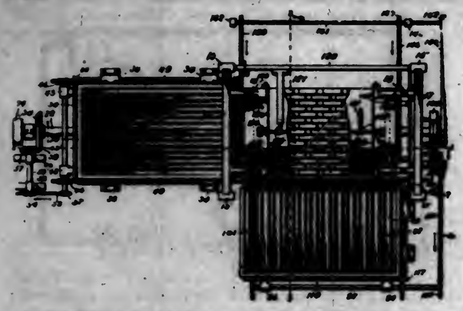
[Claims 6 to 8 not printed in the Gazette.]

877,904. SLAT-WEAVING MACHINE. HENRY W. CARPENTER, Washington, D. C., assignor to American Woven Lath Company, Washington, D. C., a Corporation of West Virginia. Filed May 5, 1906. Serial No. 315,414.

1. A machine for weaving slats of definite and substantially uniform length, comprising two members having complemental shed-formers provided with transverse slots, said shed-formers extending in one direction a distance equal to the length of the slats to be woven and in the other a distance equal to the width of the woven article, one of said members being bodily movable in right lines toward and from the other.

2. A machine for weaving slats of definite and substantially uniform length, comprising two members having complemental shed-formers provided with transverse slots, said shed-formers extending in one direction equal to the length of the slats to be woven and in the other equal to the width of the woven article, and means for bodily mov-

ing one of said members in right lines toward and from the other.



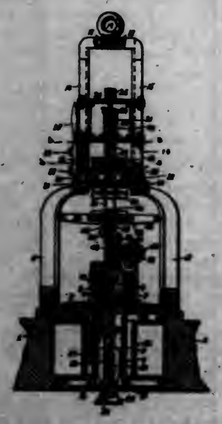
3. A machine for weaving slats of definite and substantially uniform length comprising two members having parallel series of complemental shed-formers provided with transverse slots, said shed-formers extending in one direction a distance equal to the length of the slats to be woven and in the other a distance equal to the width of the woven article, and means for simultaneously moving all of the shed-formers of one member toward and from the shed-formers of the other member.

4. A machine for weaving slats of definite and substantially uniform length comprising a lower stationary, and an upper movable member having parallel series of complemental shed-formers provided with transverse slots, said shed-formers extending in one direction a distance equal to the length of the slats to be woven, and in the other a distance equal to the width of the woven article, and means for bodily moving said upper member in right lines toward and from the lower member.

5. A machine for weaving slats of definite and substantially uniform length comprising two members having parallel series of stationary complemental shed-formers provided with transverse slots, said shed-formers extending in one direction a distance equal to the length of the slats to be woven and in the other a distance equal to the width of the woven article, and means for bodily moving one of said members toward and from the other.

[Claims 6 to 22 not printed in the Gazette.]

877,905. APPARATUS FOR FEEDING FUEL TO GAS-GENERATORS. CHARLES F. CATTELL, West Chester, Pa. Filed June 25, 1906. Serial No. 323,254.



1. The combination with a gas generator, of a shaft, a truncated cone on the lower end of the shaft, agitators above said cone, and a fuel chute leading to said agitators.

2. In combination with a gas generator, a shaft, a truncated cone on the lower end of said shaft, and fuel distributing vanes secured to said shaft.

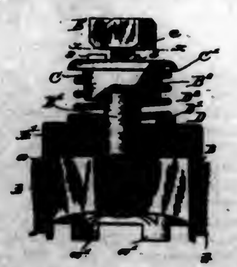
3. The combination with a gas generator, of a shaft, a truncated cone on the lower end of the shaft, fuel distributing vanes on said shaft and means for raising and lowering said shaft.

4. The combination with a gas generator, of a hollow shaft, a truncated cone on the lower end of said shaft, fuel distributing vanes on said shaft, and a water tube within said shaft and discharging into said cone, said shaft having a discharge opening at its upper end.

5. The combination with a gas generator, of a water jacket, of a shaft, vanes secured on said shaft, and means to raise said shaft to bring the vanes within the water jacket.

[Claims 6 to 11 not printed in the Gazette.]

877,906. VALVE FOR PUMPS, &c. EZRA E. CLARK, Springfield, Mass., assignor to Charles H. Phinney, trustee, Chestnut Hill, Mass. Filed June 11, 1903. Serial No. 160,968.



1. A ported valve seat, a central valve stem, a valve encircling and guided by said stem, a guard mounted on said stem, a spring interposed between said guard and said valve, said guard being formed with a polygonal hole and said stem throughout the part on which the guard slides being of corresponding polygonal form, a locking nut screw-threaded onto the end of the stem, means for preventing rotation of the nut and the guard when in engagement.

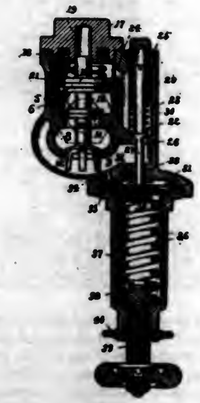
2. A ported valve seat, a central valve stem, a valve encircling and guided by said stem, a guard mounted on said stem, a spring interposed between said guard and said valve, said guard being formed with a polygonal hole and said stem throughout the part on which the guard slides being of corresponding polygonal form, a locking nut screw-threaded on said stem, coöperating projections and depressions located on the nut and the guard, whereby the nut is prevented from rotation and the position of the guard is secured.

3. In a device of the character described, the combination of a valve seat, a valve located on said seat, a spring to hold the valve to its seat, a valve stem, a collar on said stem, a nut threaded to said stem, means on the stem to normally hold said collar from turning on the same, and means in said collar for engaging and holding said nut from turning.

4. In a device of the character described, the combination with a valve seat, of a valve located on said seat, a spring to hold the valve to its seat, a valve stem, a collar normally held from turning on said stem, and a nut threaded on said stem and arranged to engage said collar to hold said nut from turning, one of said engaging parts, namely the collar and nut, being provided with a recess and the other constructed to engage said recess.

877,907. STEAM-PRESSURE-REDUCING VALVE. GEORGE W. COLLIN, Bridgeport, Conn. Filed Dec. 20, 1906. Serial No. 348,689.

1. In a steam pressure reducing valve, the combination with a casing containing a main valve chamber and having a side inlet and outlet, a cushion chamber adjoining the main valve chamber, a low pressure chamber, ports connecting said chambers, an auxiliary valve chamber beside and independent of main valve and having a separate detachable closing cap on upper end, an auxiliary valve in said chamber arranged to operate longitudinally of casing and to be removed through said top side, and a diaphragm connected with low pressure chamber to operate auxiliary valve.



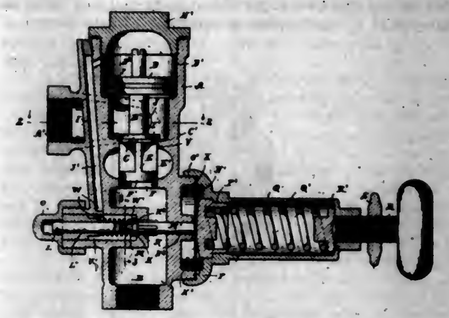
2. In a steam pressure reducing valve, the combination with a casing containing a main valve chamber having a side inlet, a cushion chamber adjoining the main valve chamber, a low pressure chamber, ports connecting said chambers, an outlet from the low pressure chamber directly opposite the inlet to main valve chamber, a valve body to engage the seats of ports, a connected auxiliary valve chamber beside and parallel with the main valve chamber and having a detachable cap on top end, an auxiliary valve in said auxiliary chamber adapted to operate vertically and parallel with the main valve and to be removed through said top end, and a diaphragm connected with low pressure chamber to operate auxiliary valve.

3. In a steam pressure reducing valve, the combination with a casing containing a main valve chamber having a side inlet, a cushion chamber adjoining the main valve chamber, a low pressure chamber, ports connecting said chambers, a valve to engage said ports, an auxiliary valve casing attached to the side of main casing and having a chamber therein connected with main valve chamber and a side outlet from low pressure chamber directly opposite the inlet, an auxiliary valve in said auxiliary chamber adapted to operate vertically and parallel with the main valve and to be removed through said top end, and a diaphragm connected with low pressure chamber and operate auxiliary valve.

877,908. REDUCING-VALVE. GEORGE W. COLLIN, Mansfield, Ohio. Filed Aug. 8, 1907. Serial No. 387,704.

1. In a valve of the class described, the combination with a casing having a steam chamber therein, a valve mounted in the casing and carrying a piston, a steam inlet in the side of the casing having a central transverse divisional wall arranged thereacross to introduce the incoming steam from opposite sides against and intermediate the piston and valve.

2. In a valve of the class described, the combination with a casing having a high pressure chamber, a cushion chamber and low pressure chamber, combined piston valve mounted in the casing and including a piston and port closing valves to operate intermediate the several chambers, a steam inlet inside of casing having a central divisional wall to divide the steam and introduce it to high pressure chamber on opposite sides of and intermediate of, piston and valve, a port extending through the said wall and connecting the high and low pressure chambers.



3. In a valve of the class described, the combination with a casing having a high pressure chamber, a cushion chamber and low pressure chamber, a combined piston and valve mounted in the casing and having a piston and port, closing valves to operate intermediate the several chambers, a steam inlet inside of casing having a central divisional wall to divide the steam and introduce it to high pressure chamber on opposite sides of and intermediate of piston and valve, an auxiliary valve, a port extending through the said divisional wall and connecting the high pressure chamber with auxiliary valve chamber and a diaphragm for operating said auxiliary valve.

4. In a valve of the class described, the combination with a casing having a steam chamber therein, a double valve mounted in the casing and carrying a piston, a steam inlet provided with a transverse divisional wall, and extended side ports which enter the chamber opposite but central of the valve stem in a way to equalize the pressure thereagainst.

5. In a valve of the class described, the combination with a casing having high and low pressure chambers, a cushion chamber, a combined piston and double valve mounted in the casing, an auxiliary valve chamber, a port leading from high pressure chamber to auxiliary valve chamber, an auxiliary valve, a slide rod pivotally connected to said auxiliary valve, a spring encircling the said rod and operating against the auxiliary valve, and a diaphragm to manipulate the auxiliary valve against the action of the spring.

[Claim 6 not printed in the Gazette.]

877,909. TYPE-WRITING MACHINE. THOMAS J. COO, Toronto, Ontario, Canada, assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Nov. 6, 1907. Serial No. 400,944.

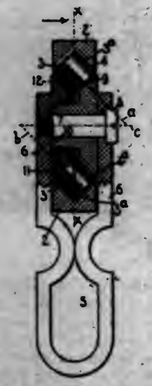
1. The combination of a type bar, a hanger, one of said parts having an eye with a roller bearing in the eye and the other of said parts having a bearing, and bearing rollers between the bearings, the axes of alternating rollers extending at angles to each other and to the axis of revolution of the type bar.

2. The combination of a type bar, a hanger, one of said parts having an eye with a roller bearing in the eye and the other of said parts having a bearing, bearing rollers between the bearings, the axes of alternating rollers extending at angles to each other and to the axis of revolution of the type bar, and means for effecting a relative adjustment between certain of said bearings.

3. The combination of a type bar, a hanger, relatively adjustable bearing cones carried by one of said parts and a bearing eye on the other part, and bearing rollers between the bearings of the eye and cones, the axes of alternating rollers extending at angles to each other and to the axis of revolution of the type bar.

4. The combination of a type bar, a hanger, one of said parts having an eye with a roller bearing in the eye and the other of said parts having a bearing, bearing rollers

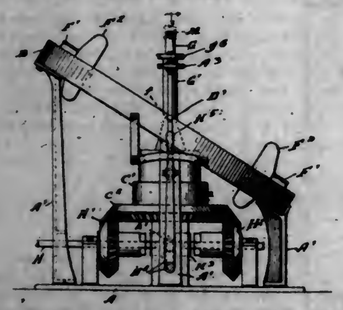
between the bearings, the axes of alternating rollers extending at angles to each other and to the axis of revolution of the type bar, and a roller separator that turns on the axis of the platen and coöperates with said rollers.



5. The combination of a bifurcated hanger, relatively adjustable bearing cones supported by said hanger between the arms thereof, a type bar having a bearing eye that surrounds said cones and rollers contained between the cones and bearing eye, the axes of certain of said rollers extending at angles to the axes of certain other of said rollers.

[Claims 6 to 9 not printed in the Gazette.]

877,910 ENGINE. JAMES COPELAND, Denver, Colo. Filed Nov. 19, 1906. Serial No. 344,002.



1. In combination with the cylinders and pistons, the inclined race having its bearing face continuously in one plane, against which the pistons act, and a hollow tapering axle provided with inlet and outlet ports, said cylinders being provided with coöperating inlet and outlet ports, said cylinders as one member and said hollow axle as the other member being rotatable one in respect to the other, and said pistons acting alternately each for about a half revolution, substantially as specified.

2. The combination with the cylinders and pistons, of an inclined race having its bearing face continuously in one plane, one of said members of said combination being rotatable in respect to the other, and a hollow tapering axle furnished with inlet and outlet ports, said cylinders having coöperating inlet and outlet ports through the walls thereof contacting with said hollow axle, and said cylinders and hollow axle being one rotatable in respect to the other substantially as specified.

3. The combination with the inclined circular race having its bearing face continuously in one plane, of cylinders and pistons and a rotary carrier upon which the cylinders and pistons are mounted, a stationary hollow tapering axle provided with inlet and outlet ports, said cylinders rotating about said axle and having coöperating inlet and outlet ports substantially as specified.

4. The combination with the inclined circular race having its bearing face continuously in one plane, of cylinders and pistons, a rotary carrier upon which the cylinders and pistons are mounted, and a stationary hollow tapering axle provided with inlet and outlet ports and about which the cylinders rotate, substantially as specified.

5. The combination with a circular inclined race, of cylinders and pistons acting against the race, a rotary carrier upon which the cylinders and pistons are mounted, a driving shaft and gears connecting the driving shaft with the rotary carrier, substantially as specified.

[Claims 6 to 19 not printed in the Gazette.]

877,911. KEYBOARD. ALONZO B. CROSS and BASCOM L. UMBERGER, Concord, N. C. Filed Oct. 13, 1906. Serial No. 338,822.



1. A key board made up of a series of white and black keys all of the white keys being provided with note indicating characters, and those of said keys in the bass being provided additionally with octave indicating characters, the black keys in the treble being interposed between certain of the white keys and bearing "sharp" characters and the black keys in the bass each bearing a plurality of characters indicating the notes of a chord in harmony with the note of an adjoining key, one of said black keys being interposed between every two white keys in the bass.

2. In a musical instrument the combination with groups of strings, the strings of each group adapted to produce different tones; of a keyboard comprising alternately arranged "black" and "white" keys, said "white" keys having characters thereon indicating the tones produced by the depression of the keys and each of said "black" keys having a series of characters thereon indicating the various tones produced by the depression of said keys, mechanism operated by the depression of each "black" key for sounding the strings of one group, a string for each "white" key, and mechanism operated by the depression of each "white" key for sounding the string thereof.

3. In a musical instrument a keyboard consisting of a series of similar keys having characters thereon indicating the tone produced by the depression of each key, and a second series of similar keys distinguished in appearance from the keys of the first series, one key of said second series being interposed between every two keys of the first series, each key of said second series having a plurality of characters thereon indicating several tones simultaneously produced by the depression of said key, and means operated by the depression of each key for sounding the tone or tones indicated upon the key.

877,912. PROCESS OF EXTRACTING SALTS FROM SOLUTIONS. HENRY M. CROWTHER, Salt Lake City, Utah. Filed Aug. 17, 1907. Serial No. 389,003.

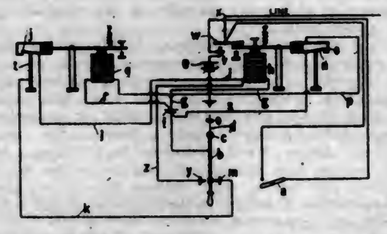
The process of extracting from liquids, or solutions, and waters, any dissolved metals, salts, compounds and combinations of elements, by greatly increasing surface evaporation by the application of any suitable absorbent material so arranged as to touch the surface of the liquid or solution and water under treatment, bringing into play the capillary action of said absorbent material to raise, spread and expose, and greatly increase surface evaporation, causing first concentration or reduction of volume of said liquids and finally evaporation to dryness, leaving deposit of solid, recoverable salts, previously in solution, also the association and mixture of reagents or chemical precipitants, in, with, and about the said absorbent material, to simultaneously effect the transformation of insoluble forms of the soluble forms of any metals, salts, etc. in the liquids, under treatment, such transformation and precipitation occurring in, with and about said absorbent material, substantially as herein described.

877,913. SURFACE-HOE. JOHN A. CRUMMER, Grant township, Pocahontas county, Iowa. Filed June 30, 1906. Serial No. 324,240.



A hoe comprising a blade, a handle socket, and arms connected with the two corners of the blade and with the socket, the arms when the implement is viewed from its ends, being rearwardly and then forwardly bowed, and when viewed in plan being laterally projected on relatively sharp curves beyond the blade ends to provide an unobstructed passage for earth and the like, and angularly deflected toward the front edge of the blade to permit the implement to work close to a plant or the like.

877,914. TELEGRAPHIC TRANSMITTER. PATRICK B. DELANY, South Orange, N. J. Filed Mar. 31, 1906. Serial No. 309,042.



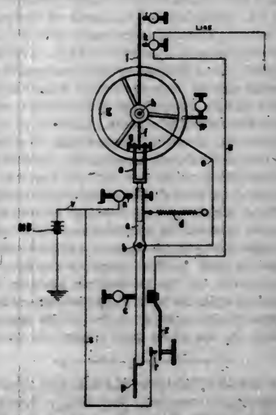
1. A telegraphic transmitter comprising the combination of a transmitting key, a single local battery, its circuit, an electro-magnet connected in the local circuit with the battery and key, said magnet being energized when the local circuit is closed by the key, and a second electro magnet also connected in local circuit with the battery, and contacts and circuit connections whereby when the first named magnet attracts its armature lever the circuit of the second magnet is closed, and on attraction of its armature lever, the circuit of the first magnet is opened, and line transmitting contacts controlled by one of such magnets, whereby so long as the key closes the local circuits of the first magnet the circuits of both magnets are automatically opened and closed at a regulated uniform rate and transmission of a succession of dot signals effected.

2. A telegraphic transmitter comprising the combination of a transmitting key, a single local battery, its circuit, an electro magnet connected in the local circuit with the battery and key, said magnet being energized when the local circuit is closed by the key, and a second electro magnet also connected in local circuit with the battery, normally separated contacts included in the circuit of the second magnet and controlled by the armature lever of the first magnet, adapted to automatically close when the armature lever of the first magnet is attracted, normally closed contacts controlled by the armature lever of the second magnet included in the local circuit of the first magnet, and automatically opened when the armature lever of the second magnet is attracted, and line contacts controlled by one of said magnets.

3. A telegraphic transmitter comprising the combination of a local transmitting member, a local battery, its circuit, an electro magnet connected in said local circuit with said battery and transmitting member, said magnet being energized when the said local circuit is closed by said transmitting member, a second electro magnet also connected with the said battery, line transmitting contacts controlled by one of said electro magnets, contacts and circuit connections whereby when the first electro magnet attracts its armature lever the circuit of the second electro magnet is closed, and on attraction of its armature lever the circuit of the first electro-magnet is opened, whereby, so long as the local transmitting member closes the local circuit of the first electro-magnet, said electro-magnet and the second electro-magnet are automatically opened and closed and a succession of impulses sent into the line by the line connected contacts.

4. A telegraphic transmitter comprising the combination of a local transmitting member, a source of electric energy connected thereto, two electro magnets also connected to said source of electric energy, contacts in the path of said transmitting member whereby the circuit of said source of electric energy may be completed through either of said electro magnets separately, two other electro-magnets also connected to said source of electric energy, contacts controlled by the first two electro-magnets, whereby said source of electric energy is completed through the second two electro-magnets and contacts controlled by the second two electro-magnets for opening the circuits of the first two electro magnets, whereby automatic vibration of the armature levers of one of the first two electro-magnets and one of the second two electro magnets is produced and maintained so long as the local transmitting member is held against one of its contacts, and whereby automatic vibration of the armature levers of the other of the first two electro-magnets and the other of the second two electro-magnets is produced and maintained so long as the local transmitting member is held against its other contact, and line connected contacts controlled by two of said armature levers for sending automatically made signal impulses to a distant station.

877,915. TELEGRAPHIC TRANSMITTER. PATRICK B. DELANY, South Orange, N. J. Filed Apr. 26, 1906. Serial No. 313,739.



1. In a telegraphic transmitter, the combination of a counterbalanced oscillator, a key lever controlling its movements, and circuit connection and contacts whereby when

the oscillator is set into action, dot signals are automatically, successively transmitted.

2. In a telegraphic transmitter, the combination of a counterbalanced oscillator, a key lever, an operative connection between the key lever and oscillator whereby on movement of the key lever the oscillator is set into operation, and circuit connections and contacts whereby dots may be automatically successively transmitted by the movements of the oscillator.

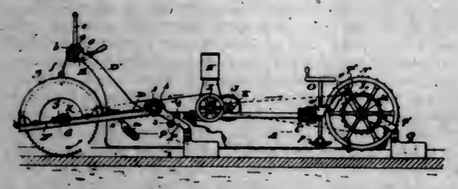
3. In a telegraphic transmitter, the combination of a key lever, a circular weighted oscillator moving about a vertical axis, contacts controlled by the circular oscillator and means controlled by the key lever for actuating the oscillator.

4. In a telegraphic transmitter, the combination of a counterbalanced rotatable member, transmitting contacts controlled thereby and means controlled by the key lever causing partial rotations of said member alternately in opposite directions.

5. In a telegraphic transmitter, the combination of a counterbalanced rotatable member, transmitting contacts controlled thereby, means controlled by the key lever causing partial rotations of said member alternately in opposite directions, and means also controlled by the key lever for arresting movement of the rotary member.

[Claims 6 and 7 not printed in the Gazette.]

877,916. ICE-HARVESTING MACHINE. THOMAS DIAMOND, Waukesha, Wis. Filed Jan. 14, 1907. Serial No. 352,134.



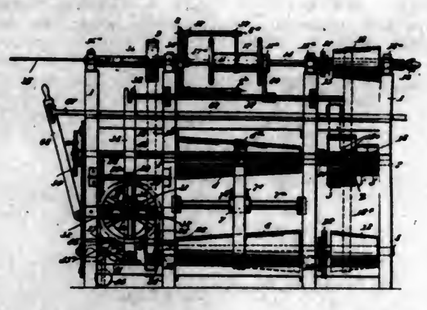
1. An ice cutting machine comprising a frame having runners and traction-wheels, a vertically adjustable swinging bail in connection with the rear of the frame, a series of rotary saws carried by the bail, a motor engine in gear-connection with the saws and traction-wheels, adjustable guide-shoes in advance of each of said saws and alined therewith, and means for raising the traction-wheels clear of the ice when the frame is to be turned.

2. An ice-cutting machine comprising a frame having runners and traction-wheels, a vertically adjustable swinging-bail in connection with the rear of the frame, adjustable stops carried by said frame in opposition to downward movement of the swinging-bail, a series of rotary saws carried by the bail, a motor in gear-connection with the saws, adjustable guide-shoes in advance of each of said saws and alined therewith, said guides being arranged to travel in kerfs previously cut by the particular saws in which they are lined, and means for raising the traction-wheels clear of the ice when the frame is to be turned.

3. An ice-cutting machine comprising a frame having runners and traction-wheels, a vertically adjustable swinging-bail in connection with the rear of the frame, adjustable stops carried by said frame in opposition to downward movement of the swinging-bail, a series of rotary saws carried by the bail, a motor in gear-connection with the saws, adjustable guide-shoes in advance of each of said saws and alined therewith, said guides being arranged to travel in kerfs previously cut by the particular saws in which they are lined, and a spindle in threaded-connection with the central portion of the frame, whereby the traction-wheels are raised from the ice when said frame is to be turned.

877,917. YARN-SPINNING MACHINE. LÉON DUCHAUQUIER, Houdeng-Goegnies, Belgium. Filed June 25, 1900. Serial No. 21,471.

1. In a yarn making machine, the combination of a driving shaft and main shaft with cone pulleys thereon, an adjustable connecting belt, a fork for adjusting said belt, a rotary flier, gearing for driving the said flier at a constant rate relatively to the main shaft, a bobbin shaft, additional cone-pulleys fast on said main-shaft and bobbin shaft respectively, an endless belt connecting the said pulleys and a screw shaft and nut adapted to shift this belt on the said cone-pulleys substantially as set forth.



2. In a yarn making machine, the combination of a bobbin shaft and means for rotating the same, with a device engaging the bobbin to reciprocate it along the said shaft, consisting of a rotary cam, a sliding plate having pins acted on by said cam to oscillate the said plate, and a rod reciprocated by said plate and carrying the above mentioned device for reciprocating the bobbin substantially as set forth.

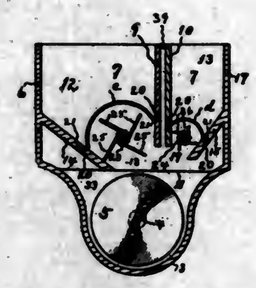
3. In a yarn making machine, a bobbin shaft, in combination with a main shaft cone pulleys and belt, a screw shaft and traveling nut for shifting the said belt, an adjustable stop-collar limiting the travel of said nut, a ratchet wheel turning said screw-shaft, a pawl or catch engaging said ratchet wheel, a counterpoised lever 49 carrying said pawl to turn said ratchet wheel as the said lever descends and permitting such descent only at the completion of each course of yarn on the spool substantially as set forth.

4. In a yarn making machine, a bobbin shaft in combination with a tubular shaft sleeved thereon, a spring catch or spring catches 16 attached to one of said shafts and engaging internal notches of the other, said catches also protruding beyond said outer shaft for convenience of compression by hand, thereby permitting the separation of said shafts at will, devices for supplying yarn to a bobbin on the said bobbin-shaft and mechanism for rotating the said tubular shaft, thereby through the aforesaid connections rotating also the bobbin shaft and bobbin substantially as set forth.

5. In a yarn-spinning machine, the combination of a main shaft a bobbin shaft with means for regularly decreasing the rotary speed of the bobbin after each layer of yarn has been wound thereon, the said means consisting of cone pulleys on both shafts and a belt a lever 35, positively connected devices whereby the rotation of said main shaft rocks the said lever, a lever 41 rocked by said lever 35, a counterbalanced arm 43 rocked by lever 41, a sliding plate 46 carried by one end of said arm and provided with two pins, a counterweighted lever 49 arranged to be rocked upward and downward by one or the other of said pins as the arm 43 oscillates, a pawl carried by lever 49, a ratchet wheel 50 operated by said pawl, and belt shifting mechanism operated by said ratchet-wheel for progressively moving the belt on the cone pulleys decreasing the rotation of the said bobbin shaft, the relative lengths of the contacting parts of lever 41 and beam 43 and the arrangement of the aforesaid parts being such as to provide for the momentary disengagement of said beam from said lever whenever the winding of a new layer of yarn on the bobbin is completed, whereupon the said counterbalanced beam and plate 46 return to their former position substantially as set forth.

[Claim 6 not printed in the Gazette.]

877,918. CEMENT-MIXING MACHINE. FRANKLIN J. EMAL, Pickrell, Nebr. Filed Sept. 7, 1907. Serial No. 391,786.



1. In a mixing machine, the combination of a containing receptacle having the transversely-disposed partition therein, a longitudinally disposed worm within the containing receptacle, the adjacently-disposed plates connected with said partition to form an opening therebetween and to form feeding-chambers upon planes above said longitudinally disposed worm, said feeding-chambers being provided with exit ports; a shaft within each feeding-chamber disposed parallel with said longitudinally-disposed worm and having lengthwise-extending blades thereon; a slidable closure traversing each feeding-chamber above the plane of each of said shafts; means to cause a revoluble movement of said longitudinally-disposed worm, and means to cause a revoluble movement of said shafts within the feeding-chambers.

2. In a mixing machine, the combination of a containing receptacle having the transversely-disposed partition therein, a longitudinally-disposed worm within the containing receptacle, the adjacently disposed plates connected with said partition to form an opening therebetween and to form feeding-chambers upon planes above said longitudinally-disposed worm, said feeding-chambers being provided with exit ports; a shaft within each feeding-chamber disposed parallel with said longitudinally-disposed worm and having lengthwise-extending blades thereon; an outwardly-curved slidable closure having an index thereon registering with said partition and traversing each feeding-chamber above the plane of each of said shafts; means to cause a revoluble movement of said longitudinally-disposed worm, and means to cause a revoluble movement of said shafts within the feeding-chambers.

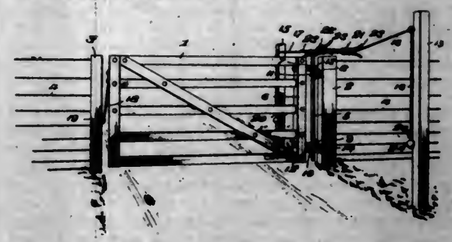
877,919. ELECTRICAL CONTACT DEVICE. FRIEDRICH FINK, Recklinghausen, Germany. Filed Feb. 25, 1907. Serial No. 359,200.



1. Electrical contact device, comprising the combination of a slotted block of insulating material, a pair of levers pivoted in the slots in said block, one of said levers consisting of insulating material, the other lever consisting partly of insulating and partly of conducting material having a slot in the conducting part, metal pins in the lower ends of said levers, said metal pins projecting laterally, a multiple layer spring fixed on the bottom of the block, the extremities of said spring pressing on the lower ends of the levers, contact springs on the bottom of said block, two of said contact springs being in connection with a battery, a terminal screw in said block, a connecting wire from said terminal screw to a third contact spring, a connecting wire leading from the terminal screw, and a second connecting wire leading from the conducting part of the one lever, all substantially as and for the purpose set forth.

2. In an electrical contact device the combination of a slotted block of insulating material, a first lever of insulating material pivoted in the block, a second lever consisting partly of insulating material and partly of conducting material, the conducting part of said second lever being provided with a slot adapted to receive a connecting wire, lateral projections on the lower part of each lever, two contact springs below the projections of the first lever, a terminal screw in the block, a wire from the terminal screw to one of said contact springs, the other contact spring being connected to a battery a third contact spring below the projection on the second lever, said third contact spring being connected to the battery, a multiple layer spring adapted to keep the projections on the levers out of contact with the contact springs, a wire leading from the terminal screw and a wire leading from the slot in the second lever, substantially as and for the purpose set forth.

877,920. GATE. WILLIAM S. FLICK, La Fayette, Ind. Filed May 16, 1907. Serial No. 373,893.



1. In a gate opener of the class described, the combination with a gate and supporting post therefor, of a shaft having oppositely disposed cranked portions thereon, eye-bolts secured to said gate and posts adapted to engage said cranked portions, and arm at the upper end of said shaft having radiating fingers thereon, cross arm secured to said arm, fingers at each end of said arms, and means engaging said arms to rotate the shaft, whereby the gate will be opened or closed.

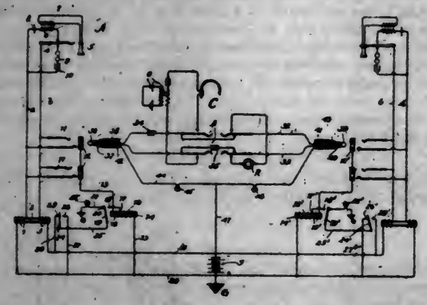
2. The combination with a gate and supporting post therefor, of means to open or close said gate comprising a shaft having oppositely disposed cranked portions adjacent its upper and lower end, eye-bolts carried by said gate and post adapted to engage said cranked portions, and arm at the upper end of said shaft and at right angles thereto, a cross arm secured at its central portion to the first mentioned arm and shaft, a pair of oppositely curved fingers at the ends of said arms, and means engaging said cross arm adapted to rest between said fingers to rotate said shaft and open or close the gate.

3. The combination with a gate and a supporting post therefor of means to automatically open or close said gate comprising a shaft having cranked portions adjacent its upper and lower ends, eye-bolts secured to said post and gate and engaging said cranked portions, and arm at right angles to said shaft, a cross arm secured to and extending an equal distance at each side of said first mentioned arm, a pair of fingers secured to the ends of said arm and cross arm, said fingers being oppositely curved, cables secured to opposite ends of said cross arm and between the fingers at the end of the first mentioned arm, and supports for the free ends of said cables, said cables being adapted to be pulled to rotate the shaft and thereby open or close the gate.

877,921. TELEPHONE-EXCHANGE SYSTEM. SAMUEL B. FOWLER, La Fayette, Ind. Filed May 22, 1906. Serial No. 318,155.

1. In a telephone exchange system, the combination with a telephone line leading from a central exchange to a sub-

station, of a cord circuit and a source of current at the central exchange, a supervisory relay and a supervisory signal at the central exchange, means upon connection of the cord circuit with the line for causing closure of a circuit primarily including said source of current, said supervisory lamp and all the windings of the supervisory relay, the resistance of said circuit being too great to allow actuation of the supervisory signal, there being sufficient current flow to allow actuation of the supervisory relay, and means upon actuation of the supervisory relay, for removing part of the resistance from said circuit to allow actuation of the supervisory signal.



2. In a telephone exchange system, the combination with a telephone line leading from a central exchange to a substation, of a cord circuit and a source of current at the central exchange, a supervisory relay and a supervisory signal at the central exchange, means upon connection of the cord circuit with the line for causing closure of a circuit primarily including said source of current, said supervisory lamp, and all the windings of the supervisory relay; the resistance of said circuit being too great to allow actuation of the supervisory signal, there being sufficient current flow to allow actuation of the supervisory relay, and means upon actuation of the supervisory relay for short circuiting part of the winding thereof whereupon sufficient current may flow through the circuit to actuate the supervisory signal.

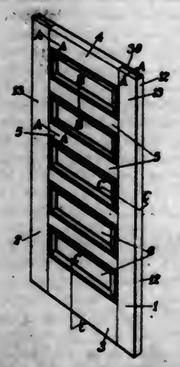
3. In a telephone exchange system, the combination with a telephone line leading from a central exchange to a substation, of a cord circuit and a source of current at the central exchange, a supervisory relay and a supervisory signal at the central exchange, means upon connection of the cord circuit with the line for causing closure of a circuit primarily including said source of current, said supervisory lamp and all the windings of the supervisory relay, the resistance of said circuit being too great to allow actuation of the supervisory signal, there being sufficient current flow to allow actuation of the supervisory relay, means upon actuation of the supervisory relay for short circuiting part of the winding thereof whereupon sufficient current may flow through the circuit to actuate the supervisory signal, and means upon actuation of substation apparatus for removing said short circuit and substituting therefor a short circuit path which causes the supervisory signal to become inert.

4. In a telephone exchange system, the combination with a telephone line leading from a central exchange to a substation, of a cord circuit and a source of current at the central exchange, a supervisory relay and a supervisory lamp at the central exchange, means operable when the cord circuit is connected with the line to call the substation for closing a circuit including said source of current, said supervisory lamp and all the winding of the supervisory relay, the resistance of said circuit with all the winding included being too great to allow sufficient current flow to illuminate the supervisory lamp, the current flow being normally sufficient to actuate the supervisory relay, a short circuit path connected with an intermediary point of the supervisory relay winding upon actuation of said relay and with one terminal of said source to render ineffective one part of the relay winding and to allow sufficient current flow through the circuit to illuminate the supervisory lamp, and means upon actuation of substation apparatus in response to the call from the central station for causing said short circuit to be connected with the other terminal of said source whereby said source is prevented from supplying current flow to illuminate the supervisory lamp..

5. In a telephone exchange system, the combination with a telephone line leading from a central exchange to a substation, of a cord circuit and a source of current at the central exchange, a supervisory relay and a supervisory lamp at the central exchange, means operable when the cord circuit is connected with the line to call the substation for closing a circuit including said source of current, said supervisory lamp and all the winding of the supervisory relay, the resistance of said circuit with all the winding included being too great to allow sufficient current flow to illuminate the supervisory lamp, the current flow being normally sufficient to actuate the supervisory relay, a short circuit path connected with an intermediary point of the supervisory relay winding upon actuation of said relay and with one terminal of said source to render ineffective one part of the relay winding and to allow sufficient current flow through the circuit to illuminate the supervisory lamp, and means upon actuation of substation apparatus in response to the call from the central station for causing said short circuit to be connected with the other terminal of said source, whereby substantially all the current flow from said source will pass through the part of the relay winding before short circuited, whereby said relay remains in its actuated condition and the supervisory lamp extinguished.

[Claims 6 to 11 not printed in the Gazette.]

877,922. METALLIC COVERING FOR DOORS. EDWIN B. GAGER, Columbus, Ohio, assignor to The Kinnear and Gager Manufacturing Company, a Corporation of Ohio. Filed May 8, 1907. Serial No. 372,570.

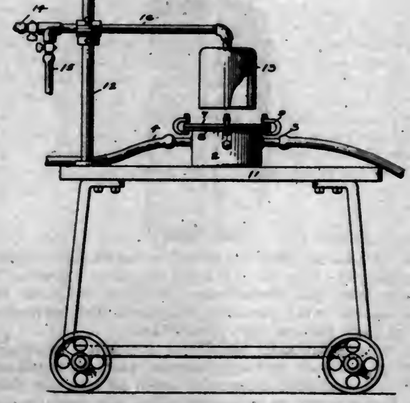


1. A door comprising a combustible core including side stiles and panels, a metallic covering for said door comprising a covering for each side stile formed of a single strip embracing both sides thereof and the ends, and being united at its ends by means of a concealed lap joint, a covering for each end stile formed of a single sheet and secured at its edges to said side stile coverings by means of concealed lap joints, a covering for each side of each panel, a covering for each side of each cross stile, said end stile coverings being joined at their ends to the panel coverings on opposite sides of said door, said cross stile coverings being secured at their ends to said side stile coverings, and being secured at their sides to said panel coverings, all of said connections being made by means of overlapping the ends of said coverings, and inserting a nail therethrough and pressing the outer portions of said overlapping portions into position to conceal said nail.

2. A metallic covering for combustible doors comprising a covering for each side stile formed of a single sheet of metal adapted to embrace said side stile, a covering for each end stile comprising a single sheet of metal adapted to embrace said end stile, a covering for each side of each cross stile, and a panel covering having its edge portions reversely curved to form overlying loops, a single loop formed on said cross stile covering adapted to embrace the lower loop formed on said panel covering, a nail driven through said cross stile and panel coverings and adapted to secure the same together and having its head positioned in the lower loop formed on said panel covering, the upper loop inclosing the end portion of the loop formed on said cross stile covering and being adapted to be pressed inwardly to cover said nail head and to form a concealed joint.

3. A metallic covering for combustible doors comprising a covering for each side stile formed of a single sheet of metal adapted to embrace said side stile, a covering for each end stile comprising a single sheet of metal adapted to embrace said end stile, a covering for each side of each cross stile, a covering for each side of each panel united at its ends to said side stile coverings and at its sides to said cross stile coverings by a joint formed by reversely curving the edge portions of said panel covering to form two loops thereon lying one above the other, a single loop formed upon said side stile or cross stile covering and adapted to embrace the lower loop on said panel covering and to lie with its end in the upper loop formed on said cross stile covering, a nail adapted to be inserted through said coverings into said combustible core and having its head positioned in the said lower loop, the said upper loop adapted to be then pressed into engagement with said nail to conceal the same, the joint thus formed being practically concealed.

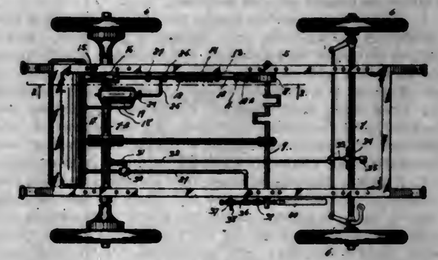
877,923. APPARATUS FOR FIRE-FINISHING GLASSWARE. REUBEN HALEY, Crafton, Pa., assignor to National Glass Company, Pittsburg, Pa. Filed Apr. 2, 1907. Serial No. 365,911.



1. In apparatus for fire-finishing glassware, the combination of a device for producing heat adapted to project heat against one surface of a glass article, a vessel or chamber adapted to contain a cooling medium, and an imperforate former adapted to be supported in the chamber containing the cooling medium and to come in contact with the other surface of the glass article; substantially as specified.

2. In apparatus for fire-finishing glassware, the combination of a gas burner adapted to project heat against one surface of a glass article, a vessel adapted to contain a cooling medium, and an imperforate former adapted to support the glass article and to sit within the vessel containing the cooling medium; substantially as specified.

877,924. AIR-COMPRESSOR MECHANISM FOR SELF-PROPELLED VEHICLES. ERNEST E. HAMPTON and CICERO G. SMITH, Palisade, Colo. Filed Oct. 1, 1906. Serial No. 336,965.

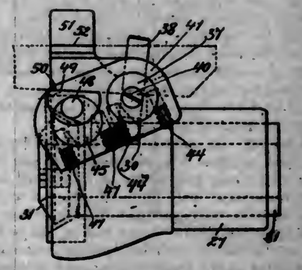


1. In air compressor mechanism for vehicles, the combination with a moving part of the vehicle, of an air receiver mounted on the vehicle, and means actuated by the air in the receiver for automatically rendering the compressor mechanism inoperative when the air has reached a predetermined limit of compression within the receiver, said means comprising a cylinder, a piston in the cylinder, a spring acting on the opposite face of the piston from that which is engaged by the air, and a rod connected with said piston and having a part adapted to engage the compressor mechanism for the purpose set forth.

2. The combination with a vehicle provided with a rotary shaft, of air compressor mechanism including a receiver, a piston, a piston rod, the latter having a part normally connected in operative relation with the said shaft, and means automatically actuated from the air within the receiver and adapted to act on the piston rod of the air compressor, whereby the said rod is thrown out of operative engagement with the said shaft when the air has reached a predetermined limit of compression within the receiver.

3. The combination with a self-propelled vehicle, of air compressor mechanism mounted thereon and having a piston rod connected in operative relation with a moving part of the vehicle, the said rod having two separated stops, a cylinder in communication with the receiver of the said mechanism, a piston in the cylinder, a spring acting on the opposite face of the piston from that which is engaged by the air, and a rod connected with said piston and having a part located between the said stops of the air compressor rod, the tension of the said spring being such that when the air reaches a predetermined limit of compression, it acts on the said piston and moves the latter against its spring sufficiently to disengage the air compressor rod from the moving part of the vehicle whereby the air compressor mechanism is automatically rendered inoperative.

877,925. TAPER-TURNING TOOL. JAMES HARTNESS, Springfield, Vt. Filed Mar. 29, 1905. Serial No. 252,635.



1. A turner comprising tubular telescoping members, movable longitudinally one with respect to the other, cut-

ters engaging both of said members, means by which the relative longitudinal movement of said members effects a substantially radial movement of said cutters, a templet, and mechanism controlled by the templet for effecting the relative movement of said members.

2. A turner comprising concentric tubular members longitudinally movable one with respect to the other, cutters carried by one of said members and arranged substantially radially with relation thereto, means on the other member for effecting a movement of the cutters towards or from the work when said members are relatively moved, and mechanism for effecting said described movement of said members, in combination with a templet controlling said mechanism and relatively to which said turner is movable.

3. A turner comprising concentric members movable longitudinally one with respect to the other, cutters engaging both of said members, means by which said cutters are moved towards or from the work by said relative movement of said members, and mechanism for effecting said relative movement of said members, in combination with a templet relatively to which said turner is movable for controlling said mechanism.

4. A taper-turner comprising concentric tubular members longitudinally movable, one longitudinally with respect to the other, cutters engaging both said members, means by which the cutters are moved substantially radially toward or from the work by said relative movement of said members, a rock-shaft arranged at an angle to the axis of said members, a bearing therefor stationary with respect to one of said members, and means on the rock-shaft for effecting said described relative movement of said members when said shaft is rocked.

5. A taper-turner comprising concentric members longitudinally movable, one with respect to the other, cutters engaging both said members, means by which said cutters are moved relatively to said members toward or from the work by said relative movement of said members, a rock-shaft, a bearing therefor stationary with respect to one of said members, means on the rock-shaft for effecting said described relative movement of said members when said shaft is rocked, a templet relatively to which said turner is movable, and a templet-controlled arm on said shaft for rocking said shaft.

[Claims 6 to 18 not printed in the Gazette.]

877,926. VAGINAL SYRINGE. EDWARD HILKER, Chicago, Ill. Filed May 4, 1907. Serial No. 371,798.



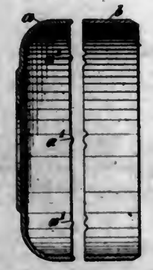
1. In a syringe, the combination with a compressible bulb, of a discharge nozzle in communication therewith and having perforations in its wall and an opening in its outer end, controlling valves in said bulb, a head-piece surrounding the nozzle at a distance therefrom and provided with a series of longitudinally extending and spaced apart bars, the said head-piece having an imperforate inwardly extending conical shaped portion on its outer end, the apex of which is located near the opening in the outer end of the discharging nozzle.

2. In a syringe, the combination with a soft rubber bulb having a neck portion integral therewith and reduced towards its outer end and provided near said end with a channeled transverse wall so as to afford a socket in the outer end of said neck portion, of a partition extending from said transverse wall to the end of the bulb opposite the same and dividing the bulb into two compartments, a head-piece fitted in the socket of the neck portion and having a series of longitudinally extending and spaced apart bars and an imperforate outer end, a perforated discharging nozzle located within the head-piece at a distance from the bars and outer end thereof, an outwardly opening valve in the transverse wall on one side of said partition and an inwardly opening valve therein on the other side of the partition, a tube communicating with each of said compartments, and a controlling valve in each of said tubes.

3. In a syringe, the combination with a two-compartment soft rubber bulb having a neck portion integral therewith and reduced towards its outer end, of a head-piece mounted on the outer end of the neck portion and having a series of longitudinally extending and spaced apart bars and provided at its outer end with an inwardly projecting conical shaped portion, a discharging nozzle located in the head-piece at a distance from the bars and conical shaped portion thereof, an outwardly opening valve in the neck portion of the bulb on one side of the partition thereof and an inwardly opening valve in said portion on the other side of the partition, a tube communicating with each of said compartments, and a controlling valve in each of said tubes.

4. In a syringe, the combination with a two-compartment soft rubber bulb having a neck portion integral therewith and reduced towards its outer end, of a head-piece mounted on the outer end of the neck portion and having a series of longitudinally extending and spaced apart bars, the said head-piece having an imperforate outer end, a discharging nozzle located in the head-piece at a distance from the bars and the imperforate outer end of the head-piece and provided with perforations in its walls and an opening in its outer end, an outwardly opening valve in the neck portion of the bulb on one side of the partition thereof and an inwardly opening valve in said portion on the other side of the partition, a tube communicating with each of said compartments, and a controlling valve in each of said tubes.

877,927. ANNULAR KNIFE. ERNST G. HOFFMANN, New Rochelle, N. Y. Filed May 14, 1907. Serial No. 373,592.



1. An annular knife comprising a cup-shaped base and a cylindrical blade, the two being integrally united at intervals about the circumference to secure the blade and base together while permitting expansion and contraction of the blade independently of the base.

2. An annular knife comprising a stamped cup-shaped base of soft steel and a cylindrical knife of high-grade steel, the two being integrally united at intervals about the circumference to secure the blade and base together while permitting expansion and contraction of the blade independently of the base.

3. An annular knife comprising a stamped cup-shaped base of soft steel with a well rounded internal shoulder and a cylindrical knife of high-grade steel, the two being integrally united at intervals about the circumference to secure the blade and base together while permitting expansion and contraction of the blade independently of the base.

877,928. COLLAR-SUPPORTER. ANTOINETTA ILLOWAY, New York, N. Y. Filed Aug. 24, 1906. Serial No. 331,841.

A collar supporter comprising a stiffening or spreading member having a stationary arm at each end, each arm having a pin offset therefrom and at right angles thereto, a movable arm pivoted to said stiffening member below



each pin of each stationary arm, and provided with a loop adapted to engage the end of said pin.

877,929. ICE-CREEPER. ALEXANDER B. JOHNSON, Mount Gilead, Ohio. Filed Nov. 8, 1906. Serial No. 342,451.



In a device of the character described, the combination with a shoe having the front face of its heel recessed, said front face presenting a vertical wall of a plate having a central opening formed therethrough, a spur located upon each side of said central opening and projecting from the rear face of the plate, a forwardly projecting ear at each end of said plate, a U-shaped member, the free ends of said U-shaped member terminating in down-turned arms, means for pivoting said downturned arms to the forwardly extending ears, and spurs formed upon the U-shaped member at the juncture of its side members with its cross member, said U-shaped member being adapted to be swung over against the bottom of the heel to thereby present said spurs to the ground or to be swung over to the instep of the shoe, said U-shaped member being of such length as to clear the instep of the shoe when swung to the latter position, and all of the parts being of such size as to lie within the recess of the heel.

877,930. KEY. OSCAR KATZENBERGER, San Antonio, Tex. Filed Dec. 22, 1906. Serial No. 349,023.



As an improved article of manufacture a key provided with a cylindrical shank having grooves extending along its length of irregular cross-sections forming bits and intervening recesses of different shapes and dimensions.

877,931. PADLOCK. OSCAR KATZENBERGER, San Antonio, Tex. Filed Dec. 22, 1906. Serial No. 349,024.

1. In a padlock, a rotatable operating tumbler, a plurality of wards of different formations concentrically disposed on said tumbler, and a rotatable key provided with concentrically arranged recesses to engage with said wards.

2. In a padlock, a movable operating tumbler, a plurality of wards of different formations on said tumbler, and a rotatable key having a cylindrical shank provided with a plurality of recesses extending longitudinally of the same and parallel with the axis of rotation of said key and shaped to register with said wards.



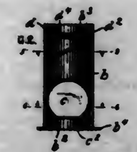
3. In a padlock, a rotatable operating tumbler provided with concentrically arranged recesses of different dimensions, a rotatable key, and bits concentrically arranged on said key to engage said recesses.

4. In a padlock, a movable operating tumbler provided with a plurality of recesses of different dimensions, a rotatable key having a cylindrical shank, and a plurality of bits extending longitudinally of said shank and parallel with the axis of rotation of said key and shaped to fit the recesses of said tumbler.

5. In a padlock, a movable operating tumbler, a plurality of wards of different formations on said tumbler separated by recesses of different dimensions, a rotatable key having a cylindrical shank, a plurality of bits extending longitudinally of said shank and parallel with the axis of rotation of said key and shaped to fit the recesses in said tumbler, and said shank provided with recesses between its bits shaped to fit said wards of the tumbler.

[Claims 6 to 16 not printed in the Gazette.]

877,932. GAS-PRESSURE-REGULATING DEVICE. THOMAS B. KEOGH, New York, N. Y., assignor of one-half to Max Garteniaub, New York, N. Y. Filed July 9, 1907. Serial No. 382,853.



A gas pressure regulating device adapted to be secured in a gas main or pipe and comprising a tube provided in each end with an annular band, the inner ends of said bands forming valve seats, and flap valves hinged to said valve seats and adapted to open inwardly, said valves being of slightly less diameter than said tube and one of said valves being provided with an aperture substantially as shown and described.

877,933. WATER-BOTTLE STOPPER. HENRY P. KRAFT, New York, N. Y., and MAXIMILIAN C. SCHWEINERT, West Hoboken, N. J. Filed May 28, 1906. Serial No. 319,030.



1. In a water bottle stopper or the like, the combination of a socket member having a seat, and a stopper having an external screw thread adapted to screw within

such member, said stopper being cup-shaped and open on its underside and its lower edge being adapted to co-act with said seat.

2. In a water bottle stopper or the like, the combination of a socket member having a seat, and a stopper having an external screw thread adapted to screw within such member, said stopper being provided with an enlarged portion on its lower edge adapted to co-act with said seat.

3. In a water bottle stopper or the like, the combination of a socket member having a seat and an annular gasket in said seat, and a cup-shaped stopper open on its underside, the lower edge of said stopper being adapted to contact with said gasket.

4. In a water bottle stopper or the like, the combination of a socket member having a seat and an annular gasket in said seat, said stopper having an enlarged portion at its lower edge adapted to form a seating face adapted to contact with said gasket.

5. In a water bottle stopper or the like, a stopper having its body portion formed in cup shape with its under face open, said stopper having its exterior wall screw-threaded to engage a socket, and having an enlarged portion at its lower edge adapted to form a seating face.

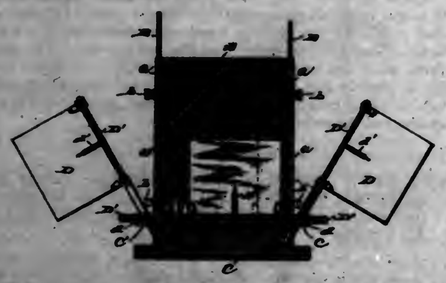
[Claims 6 to 8 not printed in the Gazette.]

877,934. GAGE FOR CARPENTERS' RULES, &c. ROBERT R. LEA, Newport, Me. Filed Oct. 11, 1907. Serial No. 396,991.



A gage for rules comprising a metallic clamping device having a slit formed therein, the walls of said slit each having a shoulder adapted to bear against the edge of a rule, one face of said member being recessed away adjacent to the inner end of the slit, thereby forming a resilient arm, a screw passing loosely through said arm, and engaging threads in said member, said screw having a shoulder adapted to bear against the outer face of the resilient arm, as set forth.

877,935. LOCOMOTIVE FLAG-SIGNAL AND CASE. JAMES P. LYON, Ogden, Utah, assignor of one-half to Daniel D. Rowlands, Ogden, Utah. Filed Dec. 15, 1906. Serial No. 347,924.



1. A locomotive having a boiler shell extension in front of the smoke stack, a flag signal case mounted on said extension in front of the smoke stack, and flags pivoted in said case to be displayed above the sides of the locomotive or to be housed within the case.

2. A locomotive having a boiler shell extension in front of the smoke stack, a head light on the forward end of said extension, and a flag signal and supporting devices for the same mounted upon the top of the boiler shell extension between the head light and smoke stack and arranged to be displayed above the boiler.

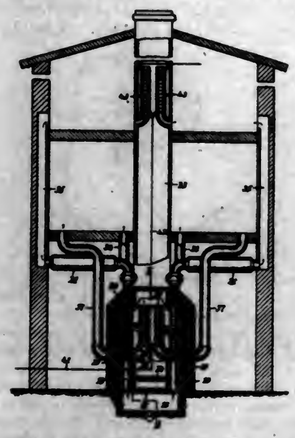
3. A flag signal, consisting of a case having upon opposite sides movable doors and a base, flags having their staffs pivoted to said base and arranged to be turned into or outside of the case, and stops for the lower ends of the flag staffs to limit the outward movement of the same.

4. A flag signal, consisting of a case having vertical guides at each side and sliding doors arranged therein and flags pivoted to be turned through said doors into or outside of the case.

5. A flag signal, consisting of a case having opposite doors and a base formed with a slotted and overhanging upper edge on each side and flags pivoted in said slots and turning into or out from the case.

[Claims 6 to 8 not printed in the Gazette.]

877,936. HEATING AND VENTILATING SYSTEM. WILLIAM R. MACDONALD, Pittsburg, Pa. Filed Feb. 12, 1907. Serial No. 356,943.

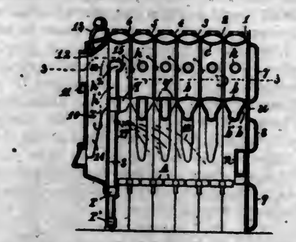


1. A heating and ventilating system, comprising a heating furnace, an air delivery conduit below the same, conduits extending upward from said delivery conduit and through the heating space of said furnace, means connected thereto for delivering the heated air to the rooms, an air conduit above the heating space of said furnace, return air conduits leading from said rooms upward through the heating space into said last mentioned conduit, and means connecting said conduits with the outside atmosphere, whereby an automatic circulation of air to and from the rooms is established.

2. A heating and ventilating system, comprising a furnace having a heating chamber, a grate within the same, a main air supply conduit below said grate and out of communication with the heating space, branch conduits extending upward from said main conduit and through the heating space of the furnace, conduits connected thereto and delivering to the rooms, a main air return conduit in the upper portion of said furnace but out of communication with the heating space thereof, return conduits leading from the rooms and extending upward therethrough into said main return conduit, and a conduit connecting said main return conduit with the chimney of the furnace.

3. A heating and ventilating system, comprising a heating furnace having oppositely disposed walls and a top wall inclosing a heating space, a bed plate, a grate mounted above the same, means for delivering air to the space beneath said bed plate, conduits extending from said space beneath the bed plate through the heating space upon opposite sides of the grate and through the top wall, means connecting said conduits with the interior of the rooms to be heated and ventilated, said top wall having a main air return conduit disposed therein, return conduits leading from the rooms through the side walls of the furnace and upward through the heating space into said main return conduit, a chimney, a conduit connecting said chimney with the heating space of the furnace, and an independent conduit connecting said chimney with the air return conduit in the top wall of the furnace.

877,937. VERTICAL SECTIONAL BOILER. WILLIAM M. MACKAY, Newark, N. J. Filed Apr. 12, 1907. Serial No. 367,842.



1. In a steam or hot water boiler, the flat vertical section herein described, having the side-tubes *a* connected by the crown-tube *b*, such side-tubes and crown-tubes forming water-legs and a fire-arch for the firebox, the water-legs sloped outwardly toward the crown-tube and having the hollow water-rib *f* expanded upwardly upon the inner side to increase the cross-sectional area as it approaches the crown-tube, and the section having the transverse water-tube *c* at the top connected with the water-legs and with the crown-tube by vertical water-tubes *e* and *g*, substantially as described.

2. In a steam or hot water boiler composed of flat vertical sections, the front section herein described having side-tubes *a* connected by the crown-tube *b'*, such side-tubes and crown-tube forming water-legs and a fire-arch, the water-legs being sloped outwardly toward the crown-tube, the water-bar *n* uniting the water-legs below the crown-tube with a door opening between such water-bar and the under side of the crown-tube, the vertical water-legs *p* connecting the water-bar *n* with the crown-tube *b* at the opposite edges of the door-opening, with space between the water-tubes *p* and the water-legs *a* for the insertion of a water-back and pipe-connections thereto, and the boiler sections having the transverse water-tube *c* at the top connected with the crown-tube *b* by vertical water-tubes *g*.

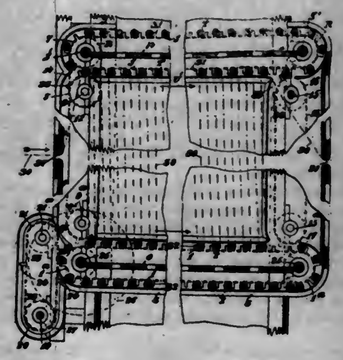
3. In a steam or hot water boiler composed of flat vertical sections, the rear section herein described having the side water-tubes *a'* connected by the crown-tube, forming an unobstructed water connection between the side-tubes, and by the top water-tube *c* and by the cross-tube *r* connecting the water-legs below the crown-tube, a plate connecting the side-tubes below the crown-tube, and vertical water-tubes *e* and *g* connecting the top tube *c* with the crown-tube and extended by passage *t* through the plate into connection with the cross-tube *r*, the vertical water-tubes *e* and *g* being connected intermediate to their ends to one another and to the side-tubes *d* by transverse tubes *h*, such transverse tubes forming an unobstructed water connection between the side-tubes *d* through the vertical tubes *e* and *g*.

4. A steam or hot water boiler composed of flat vertical sections having the water-legs *a* to inclose a firebox, the side-tubes of the sections being connected by a crown-tube and a top water-tube *c*, with vertical water-tubes *e* and *g* connecting the same, the crown-tubes in a plurality of the rear sections having the notches *q* and *q'* for the upward passage of the gases, the rear section having the water-legs *a'* connected by a plate with vertical water-passages *s* and *t*, and a cross-tube *r* connecting such passages below the crown-tube, and the crown-tube connecting with the said passages and forming likewise an unobstructed water-passage between the side-tubes, and a fusible plug inserted in one of the vertical passages upon the side of the plate next the firebox just below the crown-tube, to thoroughly drain all of the crown-tubes when the plug is melted.

5. In a steam or hot water boiler composed of flat vertical sections, a rear section having side water-tubes *a'* connected by a crown-tube and the top water-tube *c* and by the cross-tube *r* below the crown-tube, a plate connecting the side-tubes below the crown-tube, and vertical water-tubes connecting the top tube *c* and the crown-tube and extended by passages *t* through the plate into connection with the cross-tube, and front and intermediate sections having vertical water-tubes *e* adjacent to the side-tubes and having the full thickness of the section, and vertical tubes *g* disposed between the same, of a lesser thickness, to permit the lateral passage of the gases between the sections.

[Claims 6 to 9 not printed in the Gazette.]

877,938. APPARATUS FOR DRYING FABRICS OR FIBROUS MATERIAL. ARTHUR N. MARR, Thorner, near Leeds, England. Filed Sept. 6, 1906. Serial No. 333,565.



1. In a drying machine of the character described, a fan chamber, a drying chamber communicating therewith at its top and bottom, two sets of supports arranged in said drying chamber for carrying the material to be dried, and for holding the same in the form of loops or festoons, and means for causing said supports to travel continuously through said drying chamber.

2. In a drying machine of the character described, a drying chamber provided at its ends with inlet and exit openings, means for causing air to circulate therethrough, two sets of supports arranged in said chamber and means for causing said supports to travel continuously through said chamber, whereby they are adapted, to receive material consisting of an endless fabric, and form the same into loops.

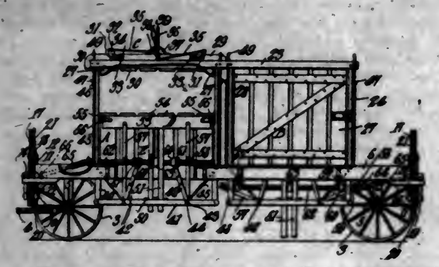
3. In a machine for drying endless fabric, a drying chamber, and means within said chamber for forming said fabric into festoons continuously, said means comprising two series of separate traveling supports, and raceways arranged to guide and carry said supports.

4. In a machine for drying endless fabric, a drying chamber, and means within said chamber for receiving said fabric, forming it into a series of continuous loops, carrying said loops through said chamber, and discharging the fabric from the chamber, said means comprising two parallel series of traveling supports, and means for transferring said supports from one series to the other, when the loops are formed.

5. In a machine for drying a continuous web of fibrous material in loops, a drying chamber, means within said chamber for supporting the loops at both ends, means within the chamber for automatically moving said supports to form the web into loops, means to convey the supports and the loops thereon through the chamber and means for moving the supports for dissolving said loops as the material leaves the chamber.

[Claims 6 to 13 not printed in the Gazette.]

877,939. MACHINE FOR BALING BROOM-CORN. CHARLES K. MILLER, Selling, Okla. Filed Apr. 12, 1907. Serial No. 367,776.



1. The combination with separate baling compartments, and independently operated compressing means therein; of rails extending above said compartments, a wheel supported closure mounted to travel upon the rails, and means for shifting the wheels to raise or lower the closure.

2. The combination with separate baling compartments, and independently operated compressing means therein; of rails extending above said compartments, a wheel supported closure mounted to travel upon the rails, means for raising or lowering the closure in relation to the compartments, and means for locking the closure in position above either compartment.

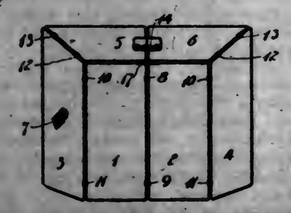
3. The combination with separate baling compartments, and independently operated compressing means therein; of rails extending above the compartments, a closure, rock shafts journaled upon the closure, arms extending therefrom, rollers carried by the arms and movable upon the rails, and means for simultaneously actuating the shaft to shift the rollers toward or from the rails, said closure being movable along the rails into position above either compartment.

4. The combination with separate baling compartments, and a closure movable into position above either compartment; of a compressing follower within each compartment, a continuously revoluble power shaft, and independent means for transmitting motion from said shaft to either follower to shift the follower in either direction.

5. The combination with a baling compartment and a follower therein; of toggles connected to and disposed to actuate the follower, an oppositely threaded feed screw supported by and disposed to actuate the toggles, a relatively fixed drive shaft, and telescopic means for transmitting motion from said shaft to the feed screw to adjust the toggles, said means being positively connected to the shaft and feed screw.

[Claims 6 to 10 not printed in the Gazette.]

877,940. FIREPLACE-SCREEN. CHARLES E. MITCHELL, New Britain, Conn. Filed Apr. 12, 1907. Serial No. 367,797.



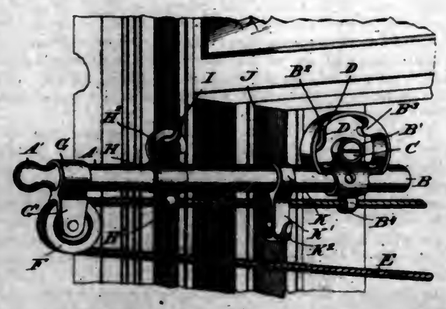
1. A fire screen, comprising a plurality of vertically hinged rectangular front pieces, side pieces and top pieces of trapezoidal form, the side pieces being vertically hinged to the adjacent front pieces, the top pieces being hinged to the top ends of the side pieces.

2. A fire screen, comprising a plurality of vertically hinged rectangular front pieces, side pieces and top pieces of trapezoidal form, the side pieces being vertically hinged to the adjacent front pieces, the top pieces being hinged to the top ends of the side pieces and fastening devices for the free ends of said top pieces.

3. A fire screen, comprising a plurality of corresponding rectangular front pieces hinged along their vertical edges, side pieces of trapezoidal form, the shorter vertical edges thereof corresponding in length to the height of the front pieces and being vertically hinged to the outer edges thereof, two top pieces of trapezoidal form, the oblique edges thereof being hinged to the oblique edges of the side pieces all of said pieces being of substantially the same width.

4. A fire screen, comprising a plurality of corresponding rectangular front pieces hinged along their vertical inner edges, side pieces of trapezoidal form, the shorter vertical edges corresponding in length to the height of the front pieces and being vertically hinged to the outer edges thereof, two top pieces of trapezoidal form, the oblique edges thereof being hinged to the oblique edges of the side pieces, the oblique edges of the top pieces and side pieces being formed at the same angle relatively to the parallel sides of said members respectively all of said pieces being of substantially the same width.

877,941. CLOTHES-LINE SUPPORT. HUGH MORRIS, New Rochelle, N. Y. Filed Mar. 9, 1907. Serial No. 361,542.



1. A clothes line support comprising a bar carrying a sleeve adapted to be pivoted to the window casing and provided with a hook adapted to engage a screw in the window-casing, a pulley mounted on said bar carrying a clothes line, a hook carried by the bar adjacent the pulley adapted to engage the hook secured in the window-frame, and a sleeve loosely mounted on said bar provided with an arm having oppositely disposed hooks adapted to engage the clothes line.

2. A clothes line support comprising a bar having a sleeve secured thereon adjacent one end provided with a semicircular ring having an inwardly projecting hook, means for pivotally supporting said sleeve on a window-casing, a pulley carried by the other end of said bar carrying a clothes line, and a hook carried by said bar for supporting the same in a horizontal position.

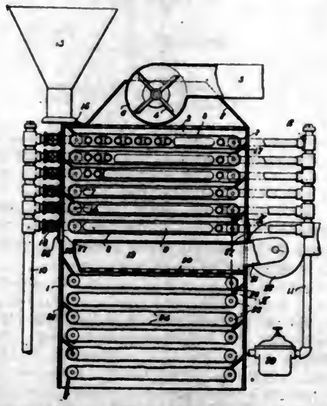
3. A clothes line support comprising a bar pivotally mounted on the casing outside the window sash, a stop carried by said bar adapted to engage a hook secured in the casing for supporting the bar in a vertical position, a pulley carried by the other end of said bar, a clothes line mounted on said pulley, and a hook adjustably mounted on said bar adapted to engage a hook secured in the window frame, for supporting the bar in a horizontal position.

4. The combination with a bar pivotally mounted on a screw secured in the window-casing, of a pulley mounted on one end of said bar carrying an endless clothes line, a hook loosely mounted on said bar adapted to engage the hook secured in the window-frame, and means slidably mounted on said bar for holding said endless line taut for the purpose described.

5. The combination with a bar having a sleeve secured on one end adapted to be pivotally connected to a window casing, a semicircular ring carried by said sleeve provided with a hook, a hook secured in the window casing extending out through said ring adapted to be engaged by said hook, a pulley mounted on the other end of said bar carrying a clothes line, and a hook slidably mounted on said bar adapted to engage a hook secured in the window-frame, for the purpose described.

[Claim 6 not printed in the Gazette.]

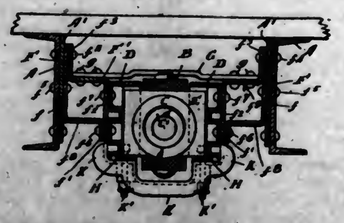
877,942. GRAIN DRYING AND COOLING MACHINE. STEPHEN J. MCCARTHY, Galveston, Tex. Filed May 17, 1907. Serial No. 374,198.



1. In an apparatus of the character described the combination with a casing; of upper and lower hoods opening downward into the casing and extending substantially throughout the transverse area thereof, heating coils interposed between the hoods, a series of aprons interposed between the hoods and movable around the coils, a second series of aprons located below the lower hood, the adjoining aprons of each series being movable in opposite directions respectively, all of said aprons being formed of an open mesh fabric, and separate means for establishing a current of air upward into the respective hoods to successively heat and cool material carried by the aprons.

2. In an apparatus of the character described the combination with a casing, and upper and lower hoods opening downward into the casing, there being an air passage past the lower hood; of a series of endless aprons interposed between the hoods, a second series of endless aprons below the lower hood, heating coils interposed between the hoods, means for establishing a current of air upward into the lower hood, and means for establishing a current of air upward from the air passage into contact with the coils and into the upper hood, the adjoining aprons of each series being movable in opposite directions respectively.

877,943. RAILWAY DRAFT-RIGGING. CHARLES J. NASH, Chicago, Ill., assignor to W. H. Miner Company, Chicago, Ill., a Corporation of Illinois. Filed July 15, 1907. Serial No. 383,805.



1. In a tender draft rigging, the combination with the center sills and draft-rigging-side-plates or stop castings, of two pair of opposing Z plates interposed between the center sills and side plates or stop castings, and having each long and short legs or members and an interposed horizontal member, the long member of one Z plate fitting against the center sill, and the long member of the other Z plate fitting against the stop casting and rivets connecting both Z plates with the center sill and both Z plates with the stop castings, substantially as specified.

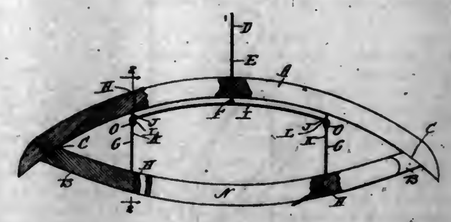
2. In a tender draft rigging, the combination with the center sills, of two pair of opposing Z plates secured thereto and side plates or stop casting secured to said Z plates, substantially as specified.

3. In a tender draft rigging, the combination with the center sills, of two pair of opposing Z plates secured thereto, side plates or stop castings secured to said Z plates and a tie plate extending between the short upright legs of the two inner Z plates and secured to the horizontal members thereof, substantially as specified.

4. In a tender draft rigging, the combination with the center sills and side plates or stop castings, of opposing Z plates between each center sill and the adjacent stop casting, the inner Z plate having a short upwardly projecting leg above the stop casting riveted to the center sill and the outer Z plate having a short downwardly projecting leg or member riveted to the stop casting, substantially as specified.

5. In a draft rigging, the combination with the center sill of a stop casting, and a bent plate interposed between and secured to both the center sill and stop casting, substantially as specified.

877,944. LADY'S SUIT-HANGER. ERNST T. NEUMANN, Chicago, Ill. Filed Aug. 28, 1907. Serial No. 390,457.



1. In a lady's suit hanger of the kind described, the combination consisting of two curved members affixed together in the form of a truss; an S hook secured in the center of the top cord of said truss; a pair of tie rods extending vertically through the top and bottom cords of said truss and cramped therein; a wire portion suspended from the top cord of said truss, the top of said portion being parallel with said top cord and extending from one of said tie rods to the other, the shoulders and legs of said arch extending horizontally and vertically in front of said tie rods and thereby adapted to support a member parallel with the lower cord of said truss; said member being adapted to form with the lower cord of said truss a pair of jaws; and a pair of rings encircling said tie rods and legs of said wire portion, said rings being adapted to be hung on said shoulders and to slide down said legs and rods and to thereby lock said jaws together.

2. In a suit hanger of the kind described, the combination with a main body consisting of an upper and lower member affixed together and forming a truss and means affixed or attached thereto adapted to suspend it; of a pair of rods permanently affixed in the top and bottom members of said truss, said rods being spaced from and parallel with each other, and a swinging portion suspended from the center of the upper member of said main body between said rods, and a member supported by said swinging portion, parallel with the lower member of said main body, and means for locking said parallel members together.

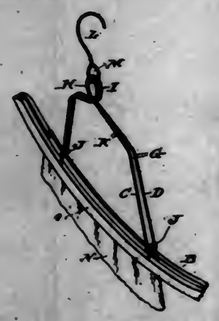
3. In a suit hanger of the kind described, the combination with a main body of two parts joined together to form a truss, a pair of wire rods extending from cord to cord of

said truss and affixed therein, said rods being spaced from and parallel with each other, of a swinging portion suspended from the upper cord of said truss said portion extending horizontally from the center under said cord to each of said rods, each end of said portion being bent to form a shoulder and to extend down in front of each rod to the lower cord, a member supported on the ends of said portion, said member being parallel with the lower cord, and movable means for locking said member and cord together.

4. In a suit hanger of the kind described, the combination with a main body forming a truss, a pair of rods extending parallel with each other from the upper to the lower cord of said truss and affixed therein, a pendent member pivotally attached to the center of the upper cord of said truss, of a member corresponding in form with the lower cord of said truss, said member being supported by said pendent member parallel with said lower cord, and means for locking and unlocking said member and lower cord.

5. In a suit hanger of the kind described, the combination with a main part in the form of a truss, a pair of rods affixed in the cords of said truss, said rods being spaced from and parallel with each other, a pendent member loosely suspended from the central upper cord of said main part, a member affixed to said pendent member and supported thereby parallel with the lower cord of said main part, of a pair of loose rings slidably supported one on each of said rods and on said pendent member adapted to be moved on said parts and to lock them together.

877,945. SKIRT-HOLDER. ERNST T. NEUMANN, Chicago, Ill. Filed Aug. 28, 1907. Serial No. 390,458.



A skirt hanger of the kind described, comprising jaws adapted to hold the waist band of a skirt, said jaws consisting of two members preferably of wood and of sufficient strength to maintain their alinement; a pair of wire arches permanently secured in said jaws, the top of each of said arches being nearly horizontal and having a central loop, said loops being adapted in size so that one loop will pass through the other and thereby form a pivotal point on which said jaws may be opened and closed; a pair of rings encircling and slidable on said arches, one on each side of said loops, said rings being adapted to hang on the horizontal part of said arches while said jaws are open and to slide down the legs of said arches when said jaws are closed on the hand of a skirt; and a hook secured in said loops by which said hanger is hung on a suitable support.

877,946. APPARATUS FOR CONTAINING AND INJECTING SERUMS AND OTHER SUBSTANCES. JAMES L. OVERTON, London, England, assignor to Henry Solomon Wellcome, London, England. Filed Feb. 4, 1907. Serial No. 355,719.

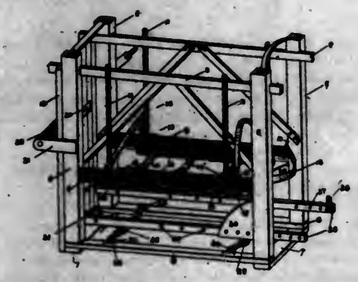
1. In an apparatus for injecting serum, etc., the combination of a container consisting of a tube having two open ends, a piston freely movable within the tube, a seal for hermetically sealing each end of the tube, the parts constructed to permit the introduction of a plunger after removing the seal from one end, and a needle and means for connecting it to the opposite end of the tube after removing the seal.



2. A container for the serum injector consisting of a tube having at each end a broad annular flat face, and a flat seal for each end and means for hermetically cementing said seal to each annular face.

3. A container for the serum injector consisting of a tube having at each end a broad annular flat face and a flat seal for each end, and an ear projecting from the seal for the purpose specified.

877,947. HORSESHOEING-STALL. LEWIS PENDLETON, Stanardsville, Va. Filed June 14, 1907. Serial No. 379,062.



A horseshoeing stall comprising a supporting frame, rollers mounted on opposite sides thereof and having sockets, operating levers mounted in said sockets, chains fastened to the rollers, rods carried by the chains, straps connecting said rods, rings loosely mounted on the rollers, straps connected at their ends to the rings, a breeching-strap at one end of the frame, and means for securing the animal's feet.

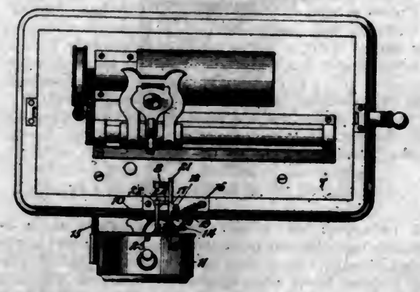
877,948. CASTER. WILLIAM B. RAND, Boston, Mass. Filed Aug. 5, 1907. Serial No. 387,237.



In combination with a caster having a pintle, means for retaining the pintle in the socket of a furniture leg, said means comprising two independent plate springs disposed on opposite sides of the pintle, each spring being bent inwardly at its ends to form arms, the arms of the two springs overlapping each other and being perforated

for the passage of the pintle, the springs being normally bowed outwardly at their middle and adapted to engage the sides of the socket in the leg.

877,949. STARTING MEANS FOR SOUND-REPRODUCING MECHANISM. PETER M. RAVENSKILDE, Cabery, Ill. Filed June 22, 1907. Serial No. 380,274.



1. In mechanism of the class set forth, the combination with a plate and means for fastening the same to a sound reproducing instrument, of a lever fulcrumed between its ends on the plate, a spring connected to one arm of the lever and to the plate, a detent pivotally mounted on the plate and having one end movable to and from a position in the path of movement of one arm of the lever to hold it against movement by the spring, a bracket having an outstanding arm, means for mounting the bracket on the sound reproducing instrument, a clock, a guideway secured to the under side of the clock and slidably engaging the arm of the bracket, and a swinging arm mounted on and actuated by the clock, said arm engaging the detent to move the same to a position to permit the actuation of the lever by the spring.

2. In mechanism of the class set forth, the combination with sound reproducing mechanism, of controlling means therefor including a lever, means for actuating the lever, a detent comprising a bell crank, one arm of which engages the lever to hold it against movement by the actuating means, a motor, and a device operated by the motor and engaging the other arm of the bell crank for moving it and releasing the lever.

3. In mechanism of the class set forth, the combination with sound reproducing mechanism, of controlling means therefor, a tripping member for the controlling means, a spring connected to the member for operating it, a detent comprising a bell crank, one arm of which engages the member to hold it against movement by the actuating means, a motor, and a device operated by the motor and engaging the other arm of the bell crank for moving it to release the member.

4. In mechanism of the character set forth, the combination with sound reproducing mechanism, of controlling means therefor including a lever fulcrumed between its ends, a spring connected to one arm of the lever, a detent comprising a bell crank, one arm of which engages with the opposite arm of the lever to that connected to the spring, a motor, and a swinging arm operated by the motor and engaging the other arm of the bell crank to move the same and release the lever.

5. In mechanism of the character set forth, the combination with a casing and sound reproducing mechanism carried thereby, of a supporting bracket secured to one side of the casing, a clock detachably mounted on the supporting bracket and including a motor, a swinging arm operated by the motor, a stop for limiting the swinging movement of the arm, controlling means for the sound reproducing mechanism including a lever fulcrumed between its ends, a spring connected to the outer arm of the lever, and a detent comprising a bell crank, one arm of which detachably engages the inner end of the lever, the other arm being disposed in the path of movement of the swinging arm of the clock.

877,950. BORING-BAR. CARROLL L. RIKER, Jr., New York, N. Y. Filed Mar. 15, 1907. Serial No. 362,498.



1. The combination in a boring bar, of a bar member having an axially disposed chamber, a key slidable in said chamber, means for preventing the rotation of the key, said key having tool engaging faces, said bar being provided with a tool seat transversely disposed to said chamber, a tool carrying key engaging faces mounted in said tool seat and engaging the said faces on the sliding key, said key having a shank provided with a screw thread, a split thimble having a chamber within it for receiving said shank and having a portion of the walls of such chamber screw threaded for engagement with said screw thread, the split in said thimble extending through said screw threaded portion, a clamping nut for binding said split thimble upon the shank of the key, a screw threaded thimble rotatably mounted upon the end of the split thimble and prevented from reciprocation thereon and having screw threaded engagement with the boring bar.

2. The combination in a boring bar, of a bar member having an axially disposed chamber, a key slidable in said chamber, means for preventing the rotation of the key, said key having slanting rack teeth upon it and open spaces at the ends of the rack teeth, said bar being provided with a tool seat transversely disposed to said axial chamber, a tool carrying rack in said tool seat for engaging with the rack on the sliding key, and means for actuating said key.

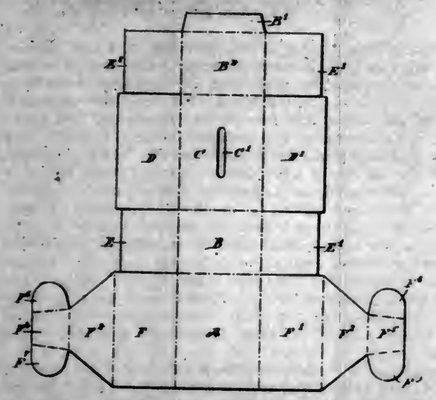
3. In a boring bar, the combination of a bar member having an axially disposed cavity, a sliding key mounted in said cavity and provided with rack teeth disposed at an acute angle to the normal, said bar and key carrying cooperative means for preventing the rotation of the key and said key having a screw threaded shank longer than said rack, a toolway passing through the bar and intersecting the cavity therein, a tool mounted in said toolway and provided with a socket, a rack engaging said tool and having a nose seated in said socket, said rack having teeth for mating with the teeth upon said key and said key having at the ends of the rack spaces for permitting the disengagement of the racks, and means for actuating said sliding key.

4. In a boring bar, the combination of a bar member having a cavity, the open end of said cavity being enlarged and having a coarse screw thread upon its walls, a sliding key mounted in said cavity and provided with tool engaging faces, a toolway passing through the bar and intersecting the cavity therein, a tool mounted in said toolway and provided with faces for engaging the faces on the key, a split thimble having a chamber within it for receiving the screw threaded shank of the key and provided at its ends with a screw thread for engaging said screw threaded shank and provided exteriorly of such screw threaded portion with a screw thread, such thimble being split longitudinally through the portion provided with said screw threads, and a binding nut for engaging said external screw threads of the split thimble, said thimble being provided with a wrench engaging portion, a screw threaded thimble mounted upon said split thimble for rotation, a pair of collars fast upon said split thimble and engaging the ends of said screw threaded thimble for preventing the longitudinal movement of said split thimble, said screw threaded thimble being provided with coarse threads engaging those on the end of the cavity in the bar member.

877,951. COIN-RECEPTACLE. ELLWOOD W. ROBERTS, New York, N. Y. Filed Dec. 23, 1905. Serial No. 293,118.

1. A coin receptacle having locking flaps connected therewith adapted to pass into the receptacle through a

slot in one of the walls of the receptacle, the locking flaps forming between them a passageway for the insertion of the coin, and the said locking flaps having integral means engaging the under surface of the said wall to hold the locking flaps against removal and to prevent coins within the receptacle from entering the passageway.



2. A coin receptacle having locking flaps connected therewith adapted to pass into the receptacle through a slot in one of the walls of the receptacle, the locking flaps forming between them a passageway for the insertion of the coin, and the said locking flaps having integral foldable side wings engaging the under surface of the said wall to hold the locking flaps against removal and to prevent coins within the receptacle from entering the passageway.

3. A coin receptacle provided with a top having a slot, and extension pieces connected with the bottom thereof and folding over the top on opposite sides of the slot, the extension pieces having locking flaps for insertion into the slot to form between them a passageway for the introduction of a coin, the locking flaps having foldable wings engaging the under side of the said top to hold the locking flaps in place and to prevent coins within the receptacle from entering the passageway.

4. A coin receptacle formed of a single blank the top of which has a slot, the portion of the blank forming the bottom of the box having extension pieces folding over the portion of the blank forming the sides of the box and partly over the top from opposite sides, the extension pieces terminating in locking flaps having foldable wings, the locking flaps and their folded wings passing through the said slot to the inside of the box and forming between them a passageway for the insertion of the coin, the said wings abutting against the under side of the said top and locking the extension pieces in place and to prevent coins within the receptacle from entering the passageway.

5. A coin receptacle having a slot in one of the walls thereof and having extension pieces connected with the opposite wall and extending on the outside of the receptacle to the slot, said pieces having locking flaps extending into the slot and forming between them a passageway for the introduction of a coin, said flaps having laterally foldable wings for engaging the under side of the top to hold the locking flaps in place and to prevent the coins within the receptacle from entering the slit between the flaps.

[Claim 6 not printed in the Gazette.]

877,952. MAIL-BOX. NATHANIEL SALTONSTALL, Battle Creek, Mich. Filed Dec. 31, 1906. Serial No. 350,127.

1. In a mail box, the combination with a back portion having an inwardly-rolled top edge and a cover having a rolled upper edge adapted to interlock within said rolled top edge to form a hinge, the longitudinal edges of the interlocked parts being curved acutely to form stiffened ribs, and means to prevent said parts from longitudinal displacement, as and for the purpose set forth.



2. In a mail box, a back portion provided at its bottom and top with outwardly-rolled edges, a front portion having inwardly-bent sides with outwardly-flaring edges and a rolled lower edge adapted to interlock within the bottom roll of the back, a cover having a rolled upper edge adapted to interlock within the upper roll of the back and form a hinge, and means to prevent said parts from longitudinal displacement, and means to secure the front and back together when placed against a background or building.

3. In a mail box, a back portion provided at its bottom and top with outwardly and inwardly-rolled edges, a front portion having inwardly-bent sides with outwardly-flaring curved edges adapted to receive the back portion, and a rolled lower edge adapted to interlock within the bottom roll of the back portion, a cover having downwardly-flaring sides, a rolled front edge, a rolled upper edge adapted to interlock within the upper roll of the back and form a hinge, ears formed at either end of the upper cover roll to prevent the same from lontitudinal displacement with the back portion, substantially as, and for the purpose set forth.

4. The combination with a mail box, of a detachable wire loop having an outwardly flaring upper extremity adapted to bear against said box, said loop having oppositely-disposed coils falling below said box and terminating in upwardly and inwardly-curved ends adapted to engage openings in the sides of said box to secure the same thereto, as, and for the purpose set forth.

5. In a mail box, the combination with a back portion having an inwardly-rolled top edge and a cover having a rolled upper edge adapted to interlock within said roll of the back portion, annular-shaped convex ribs formed on said rolled top edge of the back portion, and annular-shaped convex ribs formed on the rolled upper edge of said cover, the ribs of said cover portion adapted to interlock within the ribs of said back portion, substantially as, and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

877,953. TROLLEY. JEAN E. SAUCIER, Montreal, Quebec, Canada. Filed Oct. 6, 1905. Serial No. 281,578.



1. In combination with a trolley pole, a yoke secured thereon, a second yoke pivotally secured to the first yoke, a roller on the second yoke, a spring on the second yoke, and means for adjusting the tension of the spring.

2. In combination with a trolley pole, a yoke secured thereon, and provided with integral lugs, a second yoke pivoted to the first yoke, a roller on the second yoke, a spring on the second yoke, and means for adjusting the tension of the spring.

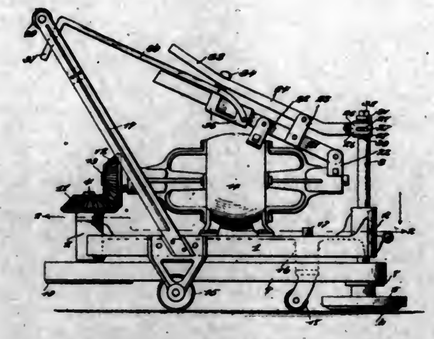
3. In combination with a trolley pole, a yoke secured thereon, and provided with integral lugs, a second yoke pivotally secured to the first yoke, and provided with curved arms, a roller on the second yoke, a spring on the second yoke, and means for adjusting the tension of the spring.

4. In combination with a trolley pole, a yoke secured thereon, and provided with integral lugs, a second yoke pivotally secured to the first yoke, and provided with curved outwardly expanded arms, a roller on the second yoke, a spring on the second yoke, and means for adjusting the tension of the spring.

5. In combination with a trolley pole, a yoke secured thereon, a second yoke pivotally secured to the first yoke, means for limiting the movement of the second yoke, a roller on the second yoke, a spring on the second yoke, and means for adjusting the tension of the spring.

[Claims 6 to 10 not printed in the Gazette.]

877,954. POLISHING-MACHINE. RUDOLPH T. SCHUTTLER, Oshkosh, Wis. Filed Oct. 7, 1907. Serial No. 396,302.

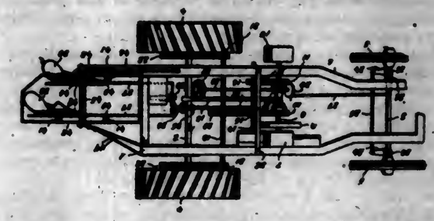


1. In a surfacing machine, a frame, a motor having a driving shaft mounted thereon, said frame having at one end a polishing mechanism having a shaft while the other end is provided with gear mechanism for transmitting power to the polishing mechanism, and a belt forming the medium for transmitting the power from the gear mechanism to the polishing mechanism, means for raising and lowering the polishing mechanism comprising a pivotally mounted lever having an angularly disposed rear portion and pivotally mounted at its front end to the shaft of the polishing mechanism, a bar having a movably mounted slide to engage the angularly disposed rear portion so as to raise and lower said polishing mechanism.

2. In a surfacing machine, a frame, a polishing mechanism at one end thereof having a shaft, a motor fixed to the frame, gear and belt mechanisms for transmitting power from the opposite end of the frame to the polishing mechanism, means for raising and lowering said polishing mechanism comprising a lever having an angularly disposed portion and pivoted to the shaft of the polishing mechanism, a bar, a slide movably mounted thereon and adapted to engage said angularly disposed portion for raising and lowering the polishing mechanism when moved rearwardly.

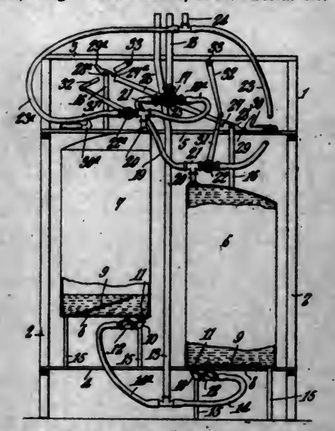
3. In a surfacing machine, a polishing mechanism, a motor having gear and belt mechanisms for operating the polishing mechanism, means disposed and supported upon the upper portion of the motor for raising and lowering the polishing mechanism comprising a lever having angularly disposed means, an angularly disposed bar, a member slidable thereon adapted to engage said angularly disposed means for raising and lowering the polishing mechanism.

877,955. MOTOR-PLOW. GEORGE M. SHIMP, Celina, Ohio. Filed Nov. 21, 1906. Serial No. 344,481.



A plow for attachment to a traction motor, comprising beams having lugs, a frame having vertically elongated sockets receiving said lugs and extending transversely of the beams, arms for attachment with the motor, links depending from said arms and attaching with the frame, a shaft journaled upon the arms, a lever attached to said shaft, a flexible element connecting the beams with the shaft, a clevis attached to the beams and a coupling rod having a vertical portion passing through the clevis and an adjacent inclined portion.

877,956. WATER-ELEVATOR. MILO R. SHOURDS, North Powder, Oreg. Filed June 6, 1907. Serial No. 377,573.



1. Combined in a water elevator, a pair of receptacles adapted to rise and fall alternately, a compressed air valve, a flexible pipe between each receptacle and said valve, means operated by the movement of said receptacle to change the direction of flow of compressed air from said valve, a valved opening in each receptacle for the admission of water, a flexible water outlet pipe leading from each receptacle, air outlet valves movable with said receptacle, and means for alternately opening and closing said outlet valves as the receptacles rise and fall.

2. Combined in a water elevator, a pair of alternating vertically movable receptacles, valved water inlet openings and outlet pipes at the bottom of each receptacle, a compressed air valve, pipe connections from said valve to each receptacle, means operated by the rise of said receptacles for operating the air inlet valve, an air outlet valve fixed to each receptacle, means for opening and closing said valves with the movement of the receptacles, and automatic means for locking said receptacles in their lower positions.

3. Combined in a water elevator, a pair of alternating vertically movable receptacles, water inlets at the bottom thereof, and valved water outlet pipes also leading from the bottom, a compressed air valve for admitting air to said receptacles, an air outlet valve fixed to and movable with each receptacle, a lever attached at its ends to said

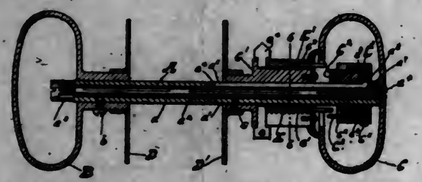
receptacles and centrally to said air valve for changing the direction of flow of the compressed air, and automatic means for alternately engaging the ends of said lever for holding the receptacles in operative position while being filled and emptied respectively.

4. Combined in a water elevator, a pair of receptacles, adapted to be alternately raised and lowered to be filled with and emptied of water, a three way valve attached to a compressed air pipe and to each receptacle, a rocking lever fixed at its center to the plug of said three-way valve, and its ends adapted to be lifted alternately by the lowermost receptacle when it rises and turn the valve plug to change the direction of flow of compressed air, a latch at each side of the elevator frame for alternately holding said receptacle fixed while being emptied, and a valved air outlet pipe attached to each receptacle.

5. Combined in a water elevator, a pair of receptacles adapted to be alternately raised and lowered, means for admitting water into and out of said receptacle, a compressed air valve mechanism for alternately admitting air to said receptacles, an air outlet valve fixed to each receptacle and connected to an exhaust pipe, an arm attached to each outlet valve, and a similar arm pivoted to each of said valve arms and to the frame of the apparatus.

[Claim 6 not printed in the Gazette.]

877,957. PERMUTATION-LOCK. CHARLES SMITH, Cleveland, Ohio, assignor of one-third to Warren H. Noble, Cleveland, Ohio. Filed Mar. 28, 1906. Serial No. 308,486.



1. In a lock, the combination with a divided spindle, of a bar adapted to unite the same, a rotatable cam-sleeve adapted to control the operation of said bar, and permutable means for rotating said sleeve.

2. In a lock, the combination with a divided spindle, of a spring-actuated member adapted to unite the same, a cam adapted to control said member, and permutable means for operating said cam.

3. In a lock, permutable actuating means including a rotatable sleeve provided with a plurality of inclined engaging faces, and a plurality of movable members adapted to engage said inclined faces and thereby rotate said sleeve.

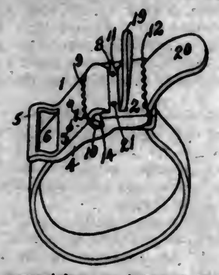
4. In a lock, permutable actuating means including a rotatable sleeve having one end serrated; and a plurality of movable members adapted to engage the inclined faces of such serrations.

5. In a lock, the combination with a movable member, of permutable actuating means therefor including a rotatable sleeve adapted to move said member, a second sleeve mounted thereon and provided with a plurality of inclined engaging faces, and a plurality of movable members adapted to engage said inclined faces and thereby rotate said sleeve.

[Claims 6 to 13 not printed in the Gazette.]

877,958. BUCKLE. JOSEPH S. SOURBY, Bath township, Summit county, Ohio. Filed Apr. 24, 1907. Serial No. 370,013.

1. A buckle comprising an integral body portion provided with a transverse medial opening and reinforcing side flanges arranged at an agle with said body portion, and provided with bearings in proximity to said opening, and a removable skeleton tongue having means to pivot in said bearings, and further provided with an abruptly-upturned front edge arranged to form in association with one edge of said body portion a belt clamping means.



2. A buckle comprising an integral body portion provided with a medial slot having one serrated edge and depending side flanges provided with notches connecting with said slot and further provided with a serrated front edge, and an open tongue provided with ears arranged to pivot in said notches and having a ledge along the free end thereof terminating in an abruptly-upturned portion arranged to form in association with said serrated front edge of said body portion a clamping means.

3. A buckle comprising an integral body portion provided with a medial opening having one serrated edge and depending side flanges provided with notches uniting with said opening and further provided at one end with an upturned looped end and at the other with a plurality of serrations extending approximately across said body portion and arranged to constitute a working edge for said buckle, and an open tongue provided with ears pivoted in said notches, said tongue having a ledge along its free end terminating in an abruptly-upturned portion arranged to form in association with the serrated portion of said body portion a clamping means.

4. A buckle comprising an integral body portion provided with a medial opening having a serrated edge, the portions of said buckle on either side of said opening being at an angle with each other and further provided with depending side flanges connecting the portions of said body together, said flanges having notches uniting with said medial opening, and an open tongue provided with ears to pivot in said notches, and an abruptly-upturned free end arranged to form in association with one edge of said buckle a belt clamping means.

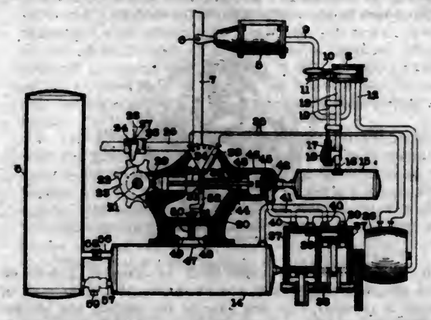
5. A buckle comprising an integral body portion provided with a medial opening having a serrated edge, the portions of said buckle on either side of said opening being at an angle with each other, and depending side flanges uniting the two portions of said body together provided with notches uniting with said medial opening, and an open tongue arranged to be inserted through said opening and pivot on ears extending therefrom bearing in said notches, said tongue being of a width to be inclosed between the side flanges of said body portion and further provided with an abruptly-upturned edge arranged to form in association with one edge of said body portion a belt clamping means.

[Claims 6 to 9 not printed in the Gazette.]

877,959. FLUID-PRESSURE BRAKE SYSTEM. GEORGE M. SPENCER, St. Louis, Mo. Filed Aug. 3, 1907. Serial No. 386,922.

1. In a fluid pressure brake system, the combination with a brake cylinder, of an operative supply therefor, a generator connected with said supply, an equalizing tank into which said brake cylinder is adapted to discharge, a check valve for preventing the return of air from said equalizing tank, and connections between said equalizing tank and generator.

2. In a fluid pressure brake system, the combination with a brake cylinder, of an operative supply therefor, a generator connected with said supply, an equalizing tank, connections between said brake cylinder and equalizing tank, said connections being provided with a vent to the atmosphere, and connections between said equalizing tank and brake generator.



3. In a fluid pressure brake system, the combination with a brake cylinder, of an operative supply therefor, a generator connected with said supply, an equalizing tank, connections between said brake cylinder and equalizing tank, said connections being provided with a manually operated vent to the atmosphere, and connections between said equalizing tank and brake generator.

4. In a fluid pressure brake system, the combination with a brake cylinder, of a supply tank therefor, an equalizing tank, a valve adapted to place said brake cylinder in connection with either said supply tank or equalizing tank, a manually controlled vent from said cylinder to the atmosphere, and a generator connected with said equalizing and supply tank.

5. In a fluid pressure brake system, the combination with a brake cylinder, of a supply tank therefor, an equalizing tank, a valve adapted to place said brake cylinder in connection with either said equalizing or supply tank, a vent to the atmosphere adapted to be operated by the movement of said valve, and a generator connected with said equalizing and supply tanks.

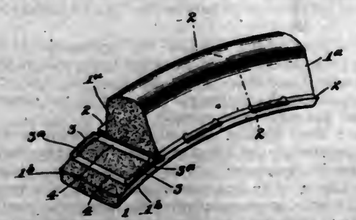
[Claims 6 to 30 not printed in the Gazette.]

877,960. HAIR-DYER. LUCENA STAFFORD, Spokane, Wash. Filed June 26, 1907. Serial No. 380,705.



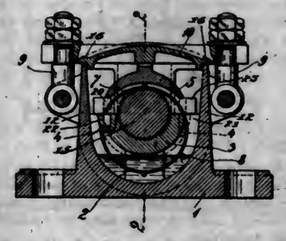
In a device for dyeing hair, an approximately U shaped member, elongated, provided at the open end thereof with a pad or cushion on the inner surface of each prong, such pads or cushions being retained in their positions by a member engaging their side edges and a portion of their exposed surfaces said member being attached to the prongs of the said U shaped member, substantially as set forth.

877,961. TIRE CONSTRUCTION. WILLIAM F. STEARNS, Batavia, N. Y. Filed Feb. 15, 1906. Serial No. 301,191.



In tire construction, the combination of a channel-iron with an elastic tire having a laterally-projecting, circumferentially-extending flange at each side of its base; a series of separate, quadrilateral, metallic, open-bodied cross-pieces spaced apart one from another, and embedded crosswise of and in the tire, with their end walls in contact with the inner walls of the side flanges of the channel-iron, and the outer surfaces of their end walls substantially flush with the outer surfaces of the tire flanges; and a circumferentially-extending retaining-wire around each tire flange, the wires binding the ends of the cross-pieces against the inner side walls of the channel-iron flanges, and the transverse portions of the metallic cross-pieces being substantially in a transverse plane of the tire, coincident with the outer surfaces of the tire flanges.

877,962. AUTOMATIC LUBRICATOR FOR SHAFT-BEARINGS. JAKOB R. STEIGER, Neuenkirchen, Austria-Hungary. Filed May 10, 1906. Serial No. 317,759.



In a self-lubricating bearing for journals the combination of a casing comprising a base portion and a cover, said base portion being adapted to receive the lubricant and having upwardly projecting side and end walls, said end walls being recessed to receive the journal and the inner faces thereof tapering from their bases to their upper margins, said cover having a relatively thin flange engaging the side walls of said base portion, end projections fitting inside the end walls of said base portion and closing portions of the recesses therein not occupied by the journal, said end portions being recessed to embrace the journal, a supporting bearing for said journal comprising a lower portion mounted in the base of said casing and extending upwardly about the journal to a horizontal plane intersecting the axis thereof, a cap portion provided with pins entering said bearing at the ends thereof, said cap portion engaging the bearing and journal at its ends and spanning the journal and forming a cavity between the ends of said bearing, and an oiling cylinder extending throughout the length of said cavity and over said bearing and journaled into the lubricant, the cavity of said cap portion having a radius approximately greater than said oiling cylinder, said cap portion being cut away laterally to permit free passage of said cylinder.

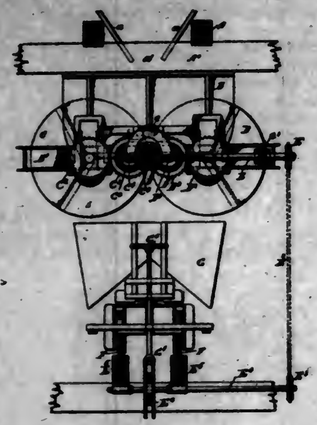
877,963. VALVE-GATE AND OPERATING MEANS THEREFOR. ADOLPH SUCK, Boston, Mass. Filed June 11, 1906. Serial No. 321,090.

1. In a hopper gate, a chamber formed in said gate and comprising two parallel shafts each carrying a pair of disks mounted axially thereon, webs extending from disk to disk between each pair of disks, said web forming the floor and ends of the chamber, and means whereby said shafts are rotatable in opposite directions, as described.

2. In a hopper gate, a chamber comprising two pairs of pivoted disks forming the ends of the chamber and having webs extending between each pair of disks to form the side walls of the chamber, and means whereby said disks are rotated, said means comprising a train of gears, and means whereby said gears are turned to open the floor of said chamber.

3. In a hopper gate, two pairs of disks, each connected by a series of webs, each pair of disks also being mounted upon a shaft, a train of gears connecting said shafts, an armed wheel, and means connecting said armed wheel with said gears, said armed wheel being adapted to be turned

and cause the rotation of said disks towards each other to dump the load, as described.



4. A hopper gate, comprising two rotary sections, each comprising two disks and a plurality of webs each extending from one disk to the other, and means connected with said disks whereby said sections may be rotated towards each other, as described.

5. A hopper gate, comprising two rotary sections, each comprising an axis, means for closing the ends of the section, and means for dividing it into a plurality of chambers parallel with its axis each chamber extending from end to end of the section, said sections being located in such relation to each other that the chambers of one will in turn supplement the chambers of the other, and means whereby said sections may be rotated in unison towards each other, as described.

[Claims 6 and 7 not printed in the Gazette.]

877,964. WEARING-APPAREL. JEREMIAH A. SULLIVAN, Newton Highlands, Mass. Filed Mar. 12, 1907. Serial No. 362,046.



1. In combination with a heavy lined garment having lined sleeves, the lining at the arm-pit being reduced in thickness, and a shield attached at such point where the lining is reduced, said garment and shield having alined ventilating perforations.

2. In combination with a fur-lined coat having the fur shaved from the body and arm pit thereof, of a shield attached at such point.

3. In combination with a furlined coat having the fur shaved from the body and arm pit thereof, of a shield attached at such point, said garment and shield having alined ventilating perforations therethrough.

877,965. ROTARY ENGINE. FERDINAND SÖREN, New York, N. Y. Filed Dec. 18, 1906. Serial No. 348,450. Renewed Oct. 10, 1907. Serial No. 396,775.

1. In a device of the class described, a float piston, an annular groove on each flat face of the piston adjacent to the periphery, and a resilient packing ring located in the groove, and moving out of the grooves by its resiliency at an angle other than a right angle to the axis of the piston.

2. In a device of the class described, a float piston, an annular groove on each flat face of the piston adjacent to the periphery, and a resilient packing ring located in the groove, and moving out of the groove by its own resiliency at an angle of 45° to the axis of the piston.



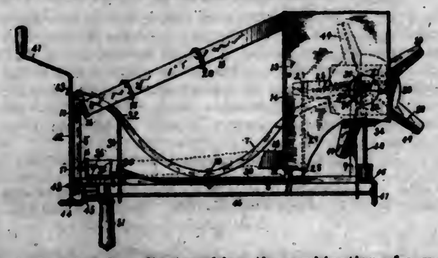
3. A float-piston provided with an annular groove on each flat face adjacent to the periphery the inner wall of which is parallel with the axis of the piston, the bottom wall at an angle thereto, and the outer wall forming an obtuse angle with the bottom wall, and a packing ring of resilient material snugly fitting in the groove.

4. In a device of the class described, a float-piston, an annular broken groove on each flat face of the piston adjacent to the periphery so shaped that a packing-ring therein may move out of the groove on a line at an acute angle to the axial line of the piston, a float-recess in one side of the piston adjacent to the float, a float-recess groove of the same curve as the float-recess the ends of which connect with the ends of the annular broken groove formed in the face of the piston adjacent to the float recess, and a packing piece or ring located in the float-recess-groove.

5. In a device of the class described, a float-piston, an annular broken groove on each flat-face of the piston adjacent to the periphery so shaped that a packing-ring therein may move out of the groove on a line at an acute angle to the axial line of the piston, a float-recess in one side of the piston adjacent to the float, a float-recess groove of the same curve as the float-recess, the ends of which connect with the ends of the annular broken groove formed in the face of the piston adjacent to the float recess, and a packing piece or ring located in the float-recess-groove and secured at one end to the annular packing ring.

[Claims 6 to 22 not printed in the Gazette.]

877,966. SEEDER. GUST E. SWANSON, Laporte, Ind. Filed Dec. 19, 1906. Serial No. 348,640.



1. In a hand seeding machine, the combination of a supporting frame adapted to be attached to the side of the operator, a seed receptacle arranged upon the rear of said frame, means for agitating the seed within the receptacle, and seed distributing mechanism.

2. In a hand seeding machine, the combination with a seed receptacle provided with distributing mechanism, of a seed agitator arranged in said receptacle, a supporting frame adapted to be attached to the side of the operator, and a plurality of straps adapted to engage the shoulders.

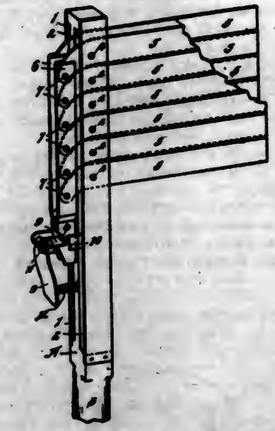
3. In a hand seeding machine, the combination with a receptacle, and seed distributing mechanism, of means for agitating the seed within said receptacle, a supporting frame adapted to engage the side of the operator, a plurality of adjustable straps adapted to engage the operator's shoulders, and a handle fixed to said frame.

4. In a seeding machine, the combination with a receptacle and a seed distributing mechanism, of means for agitating the seed within said receptacle, a framework adapted to engage the side of the operator, a plurality of straps adapted to engage the shoulders of the operator, auxiliary straps adapted to pass beneath the arms, a handle fixed to said frame and means for operating said distributing mechanism.

5. In a hand seeding machine, the combination with a receptacle provided with seed distributing mechanism, of a support consisting of a frame forming three sides of a rectangle, and an auxiliary member forming a brace for the frame, said brace being curved to conform to the side of the operator, and means for securely attaching said frame to the body of the user.

[Claims 6 and 7 not printed in the Gazette.]

877,967. METALLIC RAILWAY-SIGNAL. JOHN H. TAYLOR, Waterloo, Nebr. Filed Mar. 4, 1907. Serial No. 360,538.



1. A signal comprising longitudinally recessed staff and a series of hinged metallic sections to form a flag.

2. A signal comprising a longitudinally recessed staff and a series of hinged metallic sections having engagement with one another to form a flag.

3. A signal comprising a longitudinally recessed staff, a series of folding metallic sections pivotally connected to said staff and means for locking the same.

4. A signal comprising a longitudinally recessed staff, a plurality of pivotally held metallic sections arranged to form a flag, and means for connecting said sections.

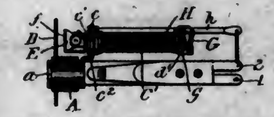
5. A signal comprising a longitudinally recessed staff, a plurality of metallic sections pivotally connected to said staff and means for connecting said sections with one another to form a folding flag.

[Claims 6 and 7 not printed in the Gazette.]

877,968. COMBINED TELEPHONE DROP AND JACK. HENRY C. THOMSON, Boston, Mass., assignor to Electric Goods Manufacturing Company, Boston, Mass., a Corporation of Maine. Filed June 7, 1907. Serial No. 377,740.

1. The combination of a telephone jack and signal-drop, a grooved and perforated insulating block upon which the same is mounted, a sleeve for the jack-plug inserted in said perforated block, and a transparent guard-plate mounted in the grooved insulating block in said jack in front of, but not touching, said signal-drop; and substantially as described and shown.

2. The combination of a telephone jack composed of a brass frame, three or more circuit springs with insulators and terminals sustained by said frame, a grooved and perforated insulating block upon which the frame is mounted, and a sleeve for the jack-plug inserted in said perforated block, with an annunciator-drop consisting of two magnets, slotted front and rear supports therefor, a signal-drop loosely pivoted before the front support, an armature loosely mounted on the rear support, a pin mounted on said



armature, passing through the slotted supports and communicating motion from the armature to said drop, a bracket by which the said annunciator-drop is fixedly mounted upon said jack, and a transparent guard-plate mounted in the grooved insulating block in said jack in front of, but not touching, said signal-drop; all substantially as described and shown.

877,969. SHAFT END. CHARLES E. TITCHENER, Binghamton, N. Y. Filed June 5, 1907. Serial No. 377,424.



The combination with a shaft, and a shaft-end having a wooden filler meeting the end of said shaft in a square butt joint, of a dowel pin uniting said shaft and filler, said pin being composed of two serrated bars slotted from one end and assembled in a cruciform structure.

877,970. PNEUMATIC TIRE. OTTO UHLMANN, Taunton, Mass. Filed Feb. 16, 1907. Serial No. 357,602.



1. A vehicle wheel comprising a concaved felly, a pneumatic inner tube resting in said felly, a convexed tube cover fitting over the outer portion of the inner tube, a removable annular plate at each side the felly extending partially over the tube cover, an outer casing extending over the tube cover and upper portion of said annular plates and provided with a heel piece at each lower edge, a removable annular plate at each side the felly outside said annular plate and provided with a hook-shaped flange at its upper edge to grasp said heel piece, and means for maintaining the parts in assembled position.

2. A vehicle wheel comprising a concaved felly, a pneumatic inner tube resting in said felly, a convexed tube cover fitting over the outer portion of the inner tube, a removable annular plate at each side the felly extending partially over the tube cover, an outer casing extending over the tube cover and upper portion of said annular plates and provided with a heel piece at each lower edge, a removable annular plate at each side the felly outside said annular plate and provided with a hook-shaped flange

at its upper edge to grasp said heel piece, and a series of bolts passing through and uniting said annular plates and felly to hold the parts in assembled position.

877,971. VEHICLE-BRAKE. WILLIAM J. WATSON, Evart, Mich. Filed June 29, 1907. Serial No. 381,527.



1. In an automatic vehicle brake, the combination with the running gear of the vehicle including a draft tongue, of a brake beam, a sleeve slidably mounted upon the draft tongue, said sleeve having a depending lug, a spring confined within the sleeve, a two-part brake rod connecting the depending lug and the brake beam, a guide secured to the under face of the tongue for the support and guidance of the brake rod, the tongue, the brake rod and said guide being each provided with a perforation, a locking bolt arranged for insertion in the perforations of the tongue, the brake rod and the guide to hold the brake mechanism out of operation, a lever pivotally mounted upon the tongue and provided with an arm intermediate its ends, and a link connection between said arm and said bolt.

2. In an automatic vehicle brake, the combination with the running gear of the vehicle including a draft tongue, of a brake beam, a sleeve slidably mounted upon the outer end of the draft tongue, said sleeve having a depending lug provided with a series of perforations, a spring confined within the sleeve, a brake rod connection having interchangeable engagement in the perforations of said lug, guides secured to the under face of the tongue for the support and guidance of the brake rod connection, the tongue, the brake rod connection and one of said guides being each provided with a perforation, a locking bolt arranged for insertion in the perforations of the tongue, said guide and the brake rod connection to hold the brake mechanism out of operation, a weighted lever pivotally mounted upon the tongue, and provided intermediate its ends with an arm, and a link connection between said arm and said locking bolt whereby the latter may be thrown into and out of locking position.

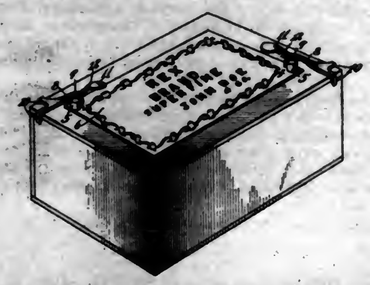
3. In an automatic vehicle brake, the combination with the running-gear of the vehicle including a draft tongue, of a brake beam, a spring controlled sleeve mounted upon the outer end of the draft beam, a locking bolt arranged for engagement with the brake rod connection to hold the latter out of operative position, a lever pivotally mounted upon the tongue and provided intermediate its ends with a rearwardly directed arm, and a pivoted link connection between said arm and bolt whereby the locking bolt may be thrown into and out of operative position.

4. In an automatic vehicle brake, the combination with the running-gear of the vehicle including a draft tongue, of a brake beam, a spring controlled sleeve mounted upon the outer end of the draft tongue, a locking bolt arranged for engagement with the brake rod connection to hold the latter out of operative position, a lever pivotally mounted upon the tongue and provided intermediate its ends with an arm, and a link connection between said arm and bolt whereby the locking bolt may be thrown into and out of operative position, said lever being weighted at its outer end whereby the locking bolt may be held normally out of locking position.

877,972. STENCIL-HOLDER. PHILIP J. WEBER, Jr., Chicago, Ill. Filed Nov. 6, 1907. Serial No. 401,019.

1. In combination, with a stencil, of independent arms secured thereto at different locations and adapted to disengagingly engage the corners of a rectangular packing box and means for causing said arms to tend normally to assume acting position.

2. The combination, with a stencil, of a pair of arms secured thereto, each having means for disengagingly engaging two side surfaces of a rectangular packing box, said arms being located diagonally opposite to each other, whereby a single pair of arms prevents the stencil from slipping in any direction upon the surface to be marked.



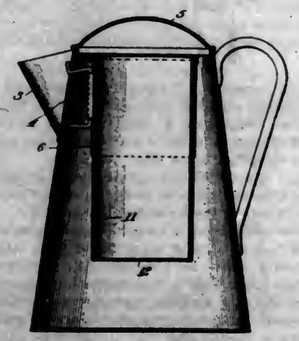
3. In combination, with a stencil, of a pair of arms secured thereto each having means for disengagingly engaging two side surfaces of a rectangular packing box said arms being located diagonally opposite to each other and means acting upon said arms for causing them to normally assume acting position.

4. The combination with a stencil of posts secured symmetrically with reference to the edges thereof, arms pivotally secured to said posts, means on said arms for engaging the corners of a rectangular parallelepiped, and means for urging said arm to adjusted position.

5. In combination a stencil, posts on said stencil, arms mounted on said posts, means carried by said arms and adapted to engage the corners of a rectangular parallelepiped, springs interposed between said posts and said arms for the purpose described, and handles for operating said arms against the force of said springs.

[Claims 6 and 7 not printed in the Gazette.]

877,973. COFFEE OR TEA POT. ISRAEL J. WEBSTER, Paulding, Ohio. Filed June 10, 1907. Serial No. 378,182.

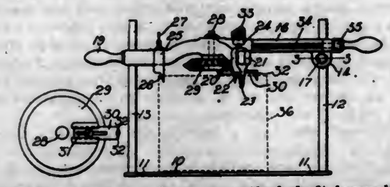


1. In a device of the class described, the combination with a body including a strainer, of a holder for the material, a fastening device comprising a tubular member connected to said holder, and a bracket formed from a single piece of wire bent intermediate its ends with the intermediate portions disposed within said tubular fastening and the bight portion distended and bent laterally into a triangular foot and bearing against the body and with the free ends bent laterally and passed through the strainer and terminating in upwardly directed fingers lying against the outer face of the strainer.

2. In a device of the class described, the combination with a body including a strainer, of a holder for the material and having a vertical slit, a fastening device comprising a member formed of sheet metal bent into a tube with the terminals thrust through said slit and extended in opposite directions within the holder, and a bracket formed from a single piece of wire bent intermediate its ends with the intermediate portion disposed within the tubular portion of said fastening device and the bight portion distended and bent laterally into a triangular foot and bearing against the body and with the free ends bent laterally and passed through the strainer and terminating in upwardly directed fingers lying against the outer face of the strainer.

3. In a coffee or tea pot, the combination with a body including a strainer; of a sleeve; a bracket secured to the sleeve, said bracket being formed of a single piece of material bent intermediate its ends and formed into a triangular shaped foot portion for engagement with the inner face of said strainer with its extremities bent to provide diverging arms terminating in fingers, the arms and fingers being directed through perforations of the strainer with the fingers lying against the outer face of the strainer whereby the sleeve may be supported centrally of the body, a second sleeve within the aforesaid sleeve; and a coffee or tea holder supported between said sleeves.

877,974. CAN-OPENER. GARDNER K. WINCHENBACH, Waldoboro, Me. Filed Apr. 20, 1907. Serial No. 369,222.



1. In a can opener, a frame, a vertical shaft journaled in said frame, a plurality of vertical spurs on said frame adapted to puncture a can, said spurs being adjustably mounted toward and away from said shaft, a member fast to said shaft below said frame, a knife fast to said member, said knife having a vertical cutting edge, and a crank operatively connected to said vertical shaft.

2. In a can opener, a main frame, two vertical posts fast to said frame, a block vertically movable on one of said posts, means to secure said block to said post, a secondary frame pivotally mounted on said block to swing about a horizontal axis, said secondary frame provided with a jaw adapted to engage one of said posts, a handle fast to said secondary frame, a vertical shaft journaled in said secondary frame, a plurality of spurs adjustably mounted on said secondary frame toward and away from said shaft, said spurs adapted to puncture a can, a bevel gear fast to said shaft below said secondary frame, a knife adjustably mounted on said gear to move toward and away from said shaft, said knife having a vertical cutting edge, a bevel pinion meshing into said bevel gear, a horizontal shaft to which said pinion is fast, said horisontal shaft journaled on said secondary frame, and a crank fast to said horisontal shaft.

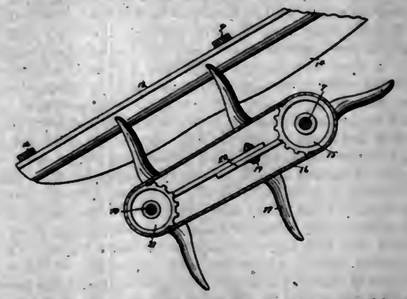
3. In a can opener, a frame, a vertical shaft journaled in said frame, a plurality of stops against which a can may be located, said stops being adjustably supported on said frame to be moved toward and away from said shaft; a member fast to said shaft below said frame, a knife supported on said member, and a crank operatively connected to said vertical shaft.

4. In a can opener, a frame, a vertical shaft journaled in said frame, a plurality of collars adjustably mounted on said frame to be moved toward and away from said shaft, a plurality of stops on said collars, respectively, against which a can may be located, a plurality of spurs on said collars, respectively, adapted to puncture said can, a member fast to said shaft below said frame, a knife fast to said member, said knife having a vertical cutting edge, and a crank operatively connected to said vertical shaft.

5. In a can opener, a main frame, a secondary frame supported on said main frame, a vertical shaft journaled in said secondary frame, a plurality of vertical spurs on said secondary frame adapted to puncture a can, said spurs being adjustably mounted to be moved toward and away from said shaft, a bevel gear fast to said shaft below said secondary frame, a bevel pinion meshing into said bevel gear a horizontal shaft to which said pinion is fast, said horizontal shaft being journaled on said secondary frame, a knife supported on said gear, and a crank fast to said horizontal shaft.

[Claims 6 and 7 not printed in the Gazette.]

877,975. BEET-TOPPER. CLARENCE L. WINTERBURN, Kalamazoo, Mich. Filed Mar. 7, 1907. Serial No. 361,116.



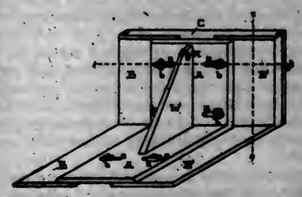
1. In a structure of the class described, the combination with the main frame, of a knife arranged horisontally and at an angle to the line of draft; a deflector plate secured to the rear edge of said knife; a driven sprocket; an idler sprocket; and a chain carried thereby having outwardly-projecting fingers adapted to coact with said knife and deflector plate, as described.

2. In a structure of the class described, the combination with the main frame, of a knife arranged horisontally and at an angle to the line of draft; a deflector plate arranged at the rear of said knife; a driven sprocket; an idler sprocket; and a chain carried thereby having outwardly-projecting fingers adapted to coact with said knife and deflector plate, as described.

3. In a structure of the class described, the combination with the main frame, of a knife; a deflector plate secured to the rear edge of said knife; a driven sprocket; an idler sprocket; and a chain carried thereby having outwardly-projecting fingers adapted to coact with said knife and deflector plate, as described.

4. In a structure of the class described, the combination with the main frame, of a knife; a deflector plate arranged at the rear of said knife; a driven sprocket; an idler sprocket; and a chain carried thereby having outwardly-projecting fingers adapted to coact with said knife and deflector plate, as described.

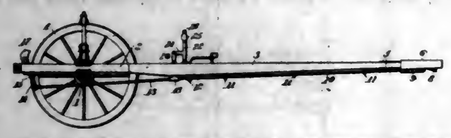
877,976. STOVE ATTACHMENT. MARIE E. WOOD, New York, N. Y. Filed Mar. 15, 1905. Serial No. 250,210.



1. A stove attachment comprising a central angle plate provided with transverse slots and with a strengthening web having an opening, side angle plates provided with holes or openings adapted to register with the slots in the central angle plate, the vertical outside faces of the side angle plates being provided at their side edges with outwardly extending flanges having inner angular sides adapt-

at its upper edge to grasp said heel piece, and a series of bolts passing through and uniting said annular plates and felly to hold the parts in assembled position.

877,971. VEHICLE-BRAKE. WILLIAM J. WATSON, Evart, Mich. Filed June 29, 1907. Serial No. 381,527.



1. In an automatic vehicle brake, the combination with the running gear of the vehicle including a draft tongue, of a brake beam, a sleeve slidably mounted upon the draft tongue, said sleeve having a depending lug, a spring confined within the sleeve, a two-part brake rod connecting the depending lug and the brake beam, a guide secured to the under face of the tongue for the support and guidance of the brake rod, the tongue, the brake rod and said guide being each provided with a perforation, a locking bolt arranged for insertion in the perforations of the tongue, the brake rod and the guide to hold the brake mechanism out of operation, a lever pivotally mounted upon the tongue and provided with an arm intermediate its ends, and a link connection between said arm and said bolt.

2. In an automatic vehicle brake, the combination with the running gear of the vehicle including a draft tongue, of a brake beam, a sleeve slidably mounted upon the outer end of the draft tongue, said sleeve having a depending lug provided with a series of perforations, a spring confined within the sleeve, a brake rod connection having interchangeable engagement in the perforations of said lug, guides secured to the under face of the tongue for the support and guidance of the brake rod connection, the tongue, the brake rod connection and one of said guides being each provided with a perforation, a locking bolt arranged for insertion in the perforations of the tongue, said guide and the brake rod connection to hold the brake mechanism out of operation, a weighted lever pivotally mounted upon the tongue, and provided intermediate its ends with an arm, and a link connection between said arm and said locking bolt whereby the latter may be thrown into and out of locking position.

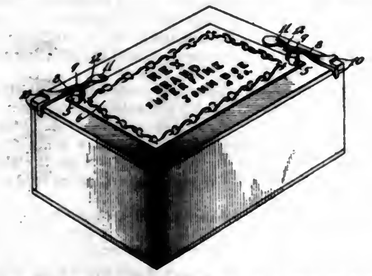
3. In an automatic vehicle brake, the combination with the running-gear of the vehicle including a draft tongue, of a brake beam, a spring-controlled sleeve mounted upon the outer end of the draft beam, a locking bolt arranged for engagement with the brake rod connection to hold the latter out of operative position, a lever pivotally mounted upon the tongue and provided intermediate its ends with a rearwardly directed arm, and a pivoted link connection between said arm and bolt whereby the locking bolt may be thrown into and out of operative position.

4. In an automatic vehicle brake, the combination with the running-gear of the vehicle including a draft tongue, of a brake beam, a spring controlled sleeve mounted upon the outer end of the draft tongue, a locking bolt arranged for engagement with the brake rod connection to hold the latter out of operative position, a lever pivotally mounted upon the tongue and provided intermediate its ends with an arm, and a link connection between said arm and bolt whereby the locking bolt may be thrown into and out of operative position, said lever being weighted at its outer end whereby the locking bolt may be held normally out of locking position.

877,972. STENCIL-HOLDER. PHILIP J. WEBER, Jr., Chicago, Ill. Filed Nov. 6, 1907. Serial No. 401,019.

1. In combination, with a stencil, of independent arms secured thereto at different locations and adapted to disengagingly engage the corners of a rectangular packing box and means for causing said arms to tend normally to assume acting position.

2. The combination, with a stencil, of a pair of arms secured thereto, each having means for disengagingly engaging two side surfaces of a rectangular packing box, said arms being located diagonally opposite to each other, whereby a single pair of arms prevents the stencil from slipping in any direction upon the surface to be marked.



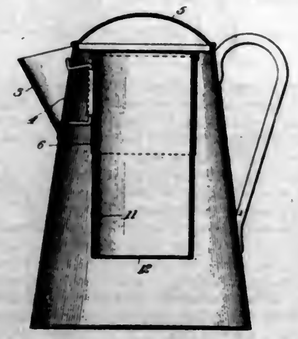
3. In combination, with a stencil, of a pair of arms secured thereto each having means for disengagingly engaging two side surfaces of a rectangular packing box said arms being located diagonally opposite to each other and means acting upon said arms for causing them to normally assume acting position.

4. The combination with a stencil of posts secured symmetrically with reference to the edges thereof, arms pivotally secured to said posts, means on said arms for engaging the corners of a rectangular parallelepiped, and means for urging said arm to adjusted position.

5. In combination a stencil, posts on said stencil, arms mounted on said posts, means carried by said arms and adapted to engage the corners of a rectangular parallelepiped, springs interposed between said posts and said arms for the purpose described, and handles for operating said arms against the force of said springs.

[Claims 6 and 7 not printed in the Gazette.]

877,973. COFFEE OR TEA POT. ISRAEL J. WEBSTER, Paulding, Ohio. Filed June 10, 1907. Serial No. 378,182.

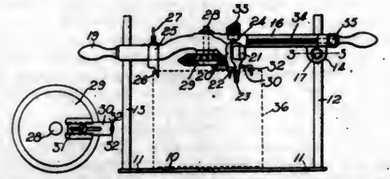


1. In a device of the class described, the combination with a body including a strainer, of a holder for the material, a fastening device comprising a tubular member connected to said holder, and a bracket formed from a single piece of wire bent intermediate its ends with the intermediate portions disposed within said tubular fastening and the bight portion distended and bent laterally into a triangular foot and bearing against the body and with the free ends bent laterally and passed through the strainer and terminating in upwardly directed fingers lying against the outer face of the strainer.

2. In a device of the class described, the combination with a body including a strainer, of a holder for the material and having a vertical slit, a fastening device comprising a member formed of sheet metal bent into a tube with the terminals thrust through said slit and extended in opposite directions within the holder, and a bracket formed from a single piece of wire bent intermediate its ends with the intermediate portion disposed within the tubular portion of said fastening device and the bight portion distended and bent laterally into a triangular foot and bearing against the body and with the free ends bent laterally and passed through the strainer and terminating in upwardly directed fingers lying against the outer face of the strainer.

3. In a coffee or tea pot, the combination with a body including a strainer; of a sleeve; a bracket secured to the sleeve, said bracket being formed of a single piece of material bent intermediate its ends and formed into a triangular shaped foot portion for engagement with the inner face of said strainer with its extremities bent to provide diverging arms terminating in fingers, the arms and fingers being directed through perforations of the strainer with the fingers lying against the outer face of the strainer whereby the sleeve may be supported centrally of the body, a second sleeve within the aforesaid sleeve; and a coffee or tea holder supported between said sleeves.

877,974. CAN-OPENER. GARDNER K. WINCHENBACH, Waldoboro, Me. Filed Apr. 20, 1907. Serial No. 369,222.



1. In a can opener, a frame, a vertical shaft journaled in said frame, a plurality of vertical spurs on said frame adapted to puncture a can, said spurs being adjustably mounted toward and away from said shaft, a member fast to said shaft below said frame, a knife fast to said member, said knife having a vertical cutting edge, and a crank operatively connected to said vertical shaft.

2. In a can opener, a main frame, two vertical posts fast to said frame, a block vertically movable on one of said posts, means to secure said block to said post, a secondary frame pivotally mounted on said block to swing about a horizontal axis, said secondary frame provided with a jaw adapted to engage one of said posts, a handle fast to said secondary frame, a vertical shaft journaled in said secondary frame, a plurality of spurs adjustably mounted on said secondary frame toward and away from said shaft, said spurs adapted to puncture a can, a bevel gear fast to said shaft below said secondary frame, a knife adjustably mounted on said gear to move toward and away from said shaft, said knife having a vertical cutting edge, a bevel pinion meshing into said bevel gear, a horizontal shaft to which said pinion is fast, said horizontal shaft journaled on said secondary frame, and a crank fast to said horizontal shaft.

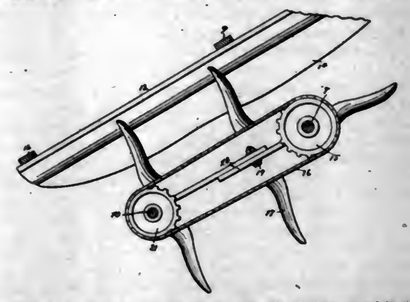
3. In a can opener, a frame, a vertical shaft journaled in said frame, a plurality of stops against which a can may be located, said stops being adjustably supported on said frame to be moved toward and away from said shaft; a member fast to said shaft below said frame, a knife supported on said member, and a crank operatively connected to said vertical shaft.

4. In a can opener, a frame, a vertical shaft journaled in said frame, a plurality of collars adjustably mounted on said frame to be moved toward and away from said shaft, a plurality of stops on said collars, respectively, against which a can may be located, a plurality of spurs on said collars, respectively, adapted to puncture said can, a member fast to said shaft below said frame, a knife fast to said member, said knife having a vertical cutting edge, and a crank operatively connected to said vertical shaft.

5. In a can opener, a main frame, a secondary frame supported on said main frame, a vertical shaft journaled in said secondary frame, a plurality of vertical spurs on said secondary frame adapted to puncture a can, said spurs being adjustably mounted to be moved toward and away from said shaft, a bevel gear fast to said shaft below said secondary frame, a bevel pinion meshing into said bevel gear a horizontal shaft to which said pinion is fast, said horizontal shaft being journaled on said secondary frame, a knife supported on said gear, and a crank fast to said horizontal shaft.

[Claims 6 and 7 not printed in the Gazette.]

877,975. BEET-TOPPER. CLARENCE L. WINTERBURN, Kalamazoo, Mich. Filed Mar. 7, 1907. Serial No. 361,116.



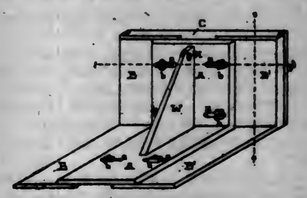
1. In a structure of the class described, the combination with the main frame, of a knife arranged horizontally and at an angle to the line of draft; a deflector plate secured to the rear edge of said knife; a driven sprocket; an idler sprocket; and a chain carried thereby having outwardly-projecting fingers adapted to coact with said knife and deflector plate, as described.

2. In a structure of the class described, the combination with the main frame, of a knife arranged horizontally and at an angle to the line of draft; a deflector plate arranged at the rear of said knife; a driven sprocket; an idler sprocket; and a chain carried thereby having outwardly-projecting fingers adapted to coact with said knife and deflector plate, as described.

3. In a structure of the class described, the combination with the main frame, of a knife; a deflector plate secured to the rear edge of said knife; a driven sprocket; an idler sprocket; and a chain carried thereby having outwardly-projecting fingers adapted to coact with said knife and deflector plate, as described.

4. In a structure of the class described, the combination with the main frame, of a knife; a deflector plate arranged at the rear of said knife; a driven sprocket; an idler sprocket; and a chain carried thereby having outwardly-projecting fingers adapted to coact with said knife and deflector plate, as described.

877,976. STOVE ATTACHMENT. MARIE E. WOOD, New York, N. Y. Filed Mar. 15, 1905. Serial No. 250,210.



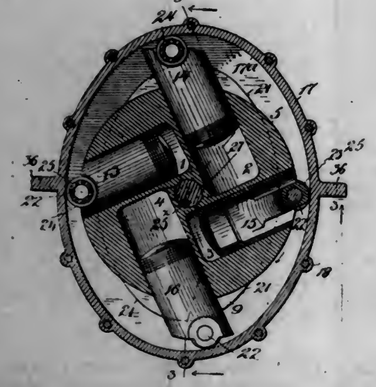
1. A stove attachment comprising a central angle plate provided with transverse slots and with a strengthening web having an opening, side angle plates provided with holes or openings adapted to register with the slots in the central angle plate, the vertical outside faces of the side angle plates being provided at their side edges with outwardly extending flanges having inner angular sides adapt-

ed to form a dove-tail recess, a facing of cement covering the vertical faces of the angle plates and fitting in the dove-tail recess, and bolts passing through the slots and the holes in the plates to retain the parts in adjusted positions.

2. A stove attachment comprising a central angle plate provided with transverse slots and with a strengthening web having an opening, side angle plates provided with holes or openings adapted to register with the slots in the central angle plate, the vertical outside faces of the side angle plates being provided at their side edges with outwardly extending flanges having inner angular sides adapted to form a dove-tail recess, a facing of cement covering the vertical faces of the angle plates and fitting in the dove-tail recess, lugs with enlarged ends projecting from the face of said side angle plates into and securing said facing of cement, and bolts passing through the slots and the holes in the plates to retain the parts in adjusted positions.

3. A stove attachment comprising a central angle plate provided with transverse slots and with a strengthening web having an opening, side angle plates provided with holes or openings adapted to register with the slots in the central angle plate, the vertical outside faces of the side angle plates being provided at their side edges with outwardly extending flanges having inner angular sides adapted to form a dove-tail recess, a facing of cement covering the vertical faces of the angle plates and fitting in the dove-tail recess, lugs with enlarged ends projecting from the face of said side angle plates into and securing said facing of cement, flanges projecting from the bottom of the vertical outside faces of said side angle plates, and bolts passing through the slots and the holes in the plates to retain the parts in adjusted positions.

877,977. MOTOR. FRANK C. AXTELL, Short Hills, N. J. Filed Mar. 19, 1907. Serial No. 363,259.



1. A motor comprising a cylinder disposed substantially tangentially with respect to its axis of rotation, means for rotatively supporting said cylinder, a piston for said cylinder, means for causing a given point of said piston to describe an approximately elliptical path or curve around its axis of rotation during one revolution of the cylinder to cause the piston to make four strokes during such revolution, and means to admit fluid to and discharge it from said cylinder.

2. A motor comprising a cylinder disposed substantially tangentially with respect to its axis of rotation, a support for said cylinder, a piston for said cylinder, an elliptical guide having its center substantially coincident with the axis of said support, means connecting said piston with said elliptical guide for causing said piston to reciprocate four times in its cylinder during one revolution thereof, and means to admit fluid to and discharge it from said cylinder.

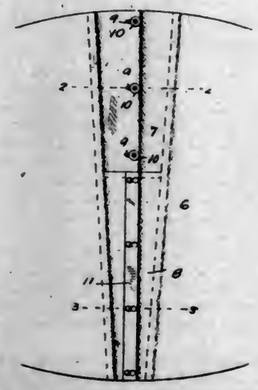
3. A motor comprising a cylinder disposed substantially tangentially with respect to its axis of rotation, a support for said cylinder, a piston for said cylinder, an elliptical guide having its center substantially coincident with the axis of said support, means connecting said piston with said elliptical guide for causing said piston to reciprocate four times in its cylinder during one revolution thereof, said cylinder having inlet and exhaust ports near its inner end, separate inlet and exhaust ports to communicate therewith, and means to ignite compressed charges in said cylinder.

4. A motor comprising a plurality of cylinders disposed substantially tangentially with respect to their axis of rotation, a rotative support for said cylinders, pistons for said cylinders, an elliptical guide having its axis substantially concentric with the axis of rotation of said cylinder support, means operatively connecting said pistons with said elliptical guide to cause each of said pistons to reciprocate four times during each complete revolution of each cylinder, and means to admit fluid to and discharge fluid from said cylinders successively.

5. A motor comprising a plurality of cylinders disposed substantially tangentially with respect to their axis of rotation, a rotative support for said cylinders, pistons for said cylinders, an elliptical guide having its axis substantially concentric with the axis of rotation of said cylinder support, means operatively connecting said pistons with said elliptical guide to cause each of said pistons to reciprocate four times during each complete revolution of each cylinder, means to admit fluid to and discharge fluid from said cylinders successively, said cylinders having ports, and an igniter located in position to communicate with said ports of said cylinders.

[Claims 6 and 7 not printed in the Gazette.]

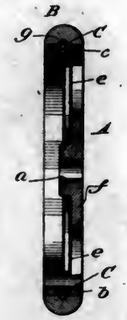
877,978. CORSET. MARY BACHURA, Collyer, Kans. Filed May 28, 1907. Serial No. 376,150.



1. A corset having an upper elastic wing and a lower inelastic wing secured to each of its front edges, non-resilient fastening means located upon the adjacent edges of said elastic wings, and mutually engaging resilient fastening members terminating at the meeting point between the elastic and inelastic wings.

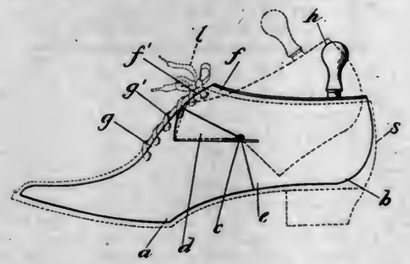
2. A corset having an upper elastic wing and a lower inelastic wing secured to each of its front edges, one of said elastic wings being provided with a vertical series of button-holes located at its outer edge, and a correspondingly-arranged series of buttons carried by the other elastic wing, and a pair of mutually engaging metallic clasps secured to the adjacent edges of said inelastic wings, said clasps terminating at the meeting point between the elastic and inelastic wings.

877,979. MODEL OR GUIDE WHEEL FOR LATHES. DANIEL K. BARRY, Newport, N. H. Filed Sept. 3, 1907. Serial No. 391,064.



A wheel, comprising a body having an annular portion provided with radially disposed apertures, a rim of harder and more durable metal than the body surrounding the annular portion of the body; the said rim having a flat side corresponding in width and opposed to the annular portion of the body and also having a longitudinal central groove in its said flat side, and screws extending through the radial apertures in the annular portion of the body and into the longitudinal central groove of the rim.

877,980. SHOE-FORM. CHARLES A. BATCHELDER, Brockton, Mass., assignor to O. A. Miller Treeing Machine Company, Portland, Me., a Corporation of Maine. Filed Feb. 16, 1906. Serial No. 301,450.



1. A shoe form presenting a continuous or unbroken top surface and comprising a forepart, and a heelpart provided with an instep-supporting surface and connected to the forepart at a single pivotal point, the face of the forepart adjacent to the heelpart being provided with a recess shaped to receive the instep-supporting surface of the heelpart when the heelpart is turned about said pivotal connection for collapsing the form.

2. A shoe form comprising a forepart, and a heelpart provided with an instep-supporting portion and arranged for movement with relation to the forepart to extend the instep portion of the shoe on the form when said parts are relatively moved toward their normal position.

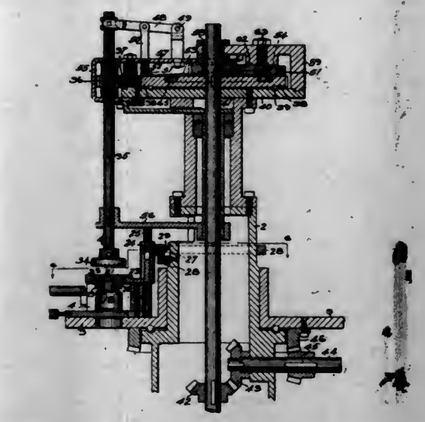
3. A shoe form comprising a forepart, a heelpart provided with an instep-supporting surface, and a movable connection between the forepart and the heelpart located with relation to the instep-supporting surface to cause said surface to be carried outwardly with relation to the instep of a shoe on the form when the heelpart is moved toward its normal position with relation to the forepart.

4. A shoe form comprising a forepart, a heelpart provided with an instep-supporting surface and formed with relation to the forepart to provide a recess between the adjacent faces of said parts, and a movable connection between the forepart and the heelpart so located with relation to said instep-supporting portion of the heelpart that the instep-supporting portion will move into said recess when the form is collapsed.

5. A shoe form comprising a forepart, and a heelpart provided with an instep-supporting portion, combined with a pivotal connection between said parts so located with relation to said instep-supporting portion as to allow said portion to move downwardly and forwardly for collapsing the form without being projected beyond the contour of the shoe on the form.

[Claims 6 to 11 not printed in the Gazette.]

877,981. GLASS PRESSING AND BLOWING MACHINE. ARTHUR W. BEESON, Washington, Pa., assignor of one-half to George W. Henning, Washington, Pa. Filed Apr. 10, 1907. Serial No. 367,357.



1. Molding apparatus comprising in combination, a mold support, a mold stationary on said support and including a vertically movable internally threaded ring, a coöperating presser, and automatic mechanism movable to engage said ring and rotate it and simultaneously lift the same.

2. Molding apparatus comprising in combination, a mold support, a mold stationary on said support and including a vertically movable internally threaded ring, a coöperating presser, mechanism movable to engage said ring and rotate the same, and independent means for raising said ring while being rotated and subsequently lowering the same.

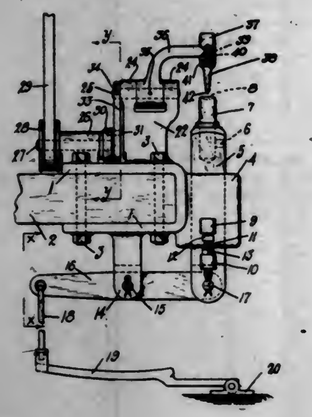
3. Molding apparatus comprising in combination, a mold support, a mold stationary on said support and including a vertically movable internally threaded ring, a coöperating presser, mechanism movable to engage said ring and arranged to rotate the same, and a cam arranged to raise said ring while being rotated and to subsequently lower the same.

4. Molding apparatus comprising in combination, a carrier, a series of molds on said carrier and each including a vertically movable internally threaded ring, a coöperating presser with which the molds are successively brought into relation, and mechanism traveling with the molds and arranged to engage the rings and rotate and simultaneously lift the same.

5. Molding apparatus comprising in combination, a carrier, a series of molds on said carrier and each including a vertically movable internally threaded ring, a coöperating presser with which the molds are successively brought into relation, mechanism traveling with the molds and arranged to engage the rings and rotate the same, and independent mechanism for raising said rings while being rotated.

[Claims 6 to 26 not printed in the Gazette]

877,982. RIVETING-MACHINE. THOMAS S. BENNETT, Attleboro, Mass. Filed June 24, 1907. Serial No. 380,440.



1. In a riveting machine, the combination with the frame, of a rock shaft mounted in the frame, an arm fixed to the shaft, and substantially parallel with said shaft, a tool holder upon the arm, a riveting tool in the tool holder, and means for rocking the rock-shaft.

2. In a riveting machine, the combination with the frame, of a rock shaft mounted in the frame, a supporting arm fixed upon the shaft, a tool holder upon the supporting arm, a driving shaft also mounted in the frame, a vibrating arm fixed to the rock shaft, and means upon the driving shaft for actuating the vibrating arm.

3. In a riveting machine, the combination with the frame, of a rock shaft mounted in the frame, a supporting arm upon the shaft, a tool holder upon the supporting arm, a driving shaft also mounted in the frame, a vibrating arm fixed to the rock shaft, and means upon the driving shaft engaging the vibrating arm for actuating the vibrating arm.

4. In a riveting machine, the combination with the frame, of a rock shaft mounted in the frame, means fixed to the rock shaft for holding a riveting tool, an arm fixed to the rock shaft, a driving shaft also mounted in the frame, and means upon the driving shaft and engaging the arm for reciprocating the arm.

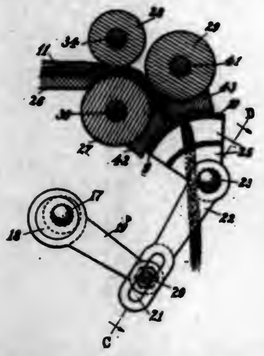
5. In a riveting machine, the combination with the frame, of a rock shaft mounted in the frame, means fixed to the rock shaft for holding a riveting tool, a vibrating arm fixed to the rock shaft, a driving shaft also mounted in the frame, and a crank connection between the driving shaft and vibrating arm.

[Claims 6 to 13 not printed in the Gazette.]

877,983. RAMIE-DECORTICATOR. HUBERT J. BOEKEN, Dueren, Germany. Filed July 24, 1906. Serial No. 327,511.

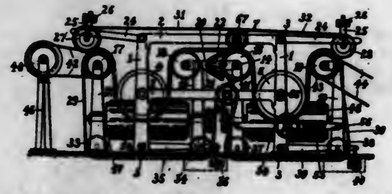
1. In a ramie-decorticator the combination of a stalk-feeding device, rigid lips forming with their opposing faces a guide-slot and with their outer side-faces a concave surface, knifelike teeth facing each other and oscillating adjacent said concave surface, and means for regulating the degree of oscillation of said teeth, substantially as shown and described.

2. In a ramie-decorticator the combination of a stalk-feeding device, rigid lips forming with their opposing faces a guide-slot adjacent said feeding device and with their outer side-faces a uniformly curved concave surface, blunt-edged knifelike teeth facing each other and oscillating adjacent said concave surface, adjustable means for regulating the throw of said oscillating teeth, and means for



operating said feeding device and said oscillating teeth, substantially as shown and described.

877,984. MACHINE FOR DIVESTING PARTS OF PLANTS OF THEIR FLESHY SUBSTANCE. HUBERT J. BOEKEN, Dueren, Germany. Filed July 24, 1906. Serial No. 327,512.

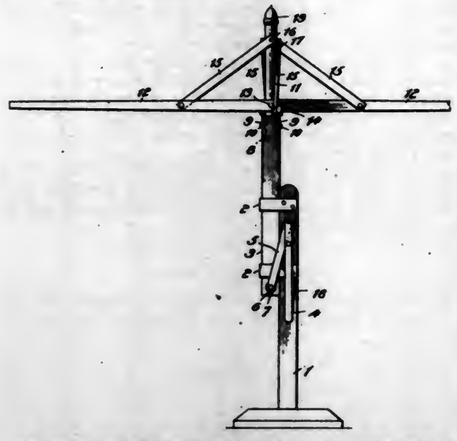


1. In a machine for divesting parts of plants of their fleshy substance the combination with a knife-armed scutcher having a circumferential velocity in excess of the downward motion of the descending parts of plants, of a voluntarily rotating contact piece arranged below a horizontal plane passing through the axis of said scutcher and laterally of the latter, a conveyer-pulley arranged laterally of said scutcher and above and adjacent to said contact-piece, and means for retaining the parts of plants on the conveyer-pulley during their divestation on their descent, substantially as set forth.

2. In a machine for divesting parts of plants of their fleshy substance the combination with a knife-armed scutcher having a circumferential velocity in excess of the downward motion of the descending parts of plants, of a voluntarily rotating and with respect to said scutcher adjustable contact-piece arranged below a horizontal plane passing through the axis of said scutcher and laterally of the latter, a conveyer-pulley likewise arranged laterally of said scutcher and vertically above said contact-piece to closely approach said contact-piece, and means for securely retaining said parts of plants on said conveyer-pulley during their divestation on their descent, substantially as set forth.

877,985. CLOTHES-DRYING REEL. WILLIAM J. COULTER, Toronto, Ontario, Canada. Filed June 21, 1906. Serial No. 322,751.

1. In a clothes-drying reel, the combination with a single ground-post or standard provided with guides, of a lifting-member composed of a wooden section and a metallic section, the wooden section being vertically-slidable in the guides and having its upper end provided with a socket reinforced by two sets of bolts or bars, each set arranged at right-angles to the other, whereby injury to said upper end, by wear and tear, is prevented, and a bearing formed for the upper or metal section, and means for raising and lowering the lifting-member.



2. In a clothes-drying reel, the combination with a single ground-post or standard provided with guides, of a lifting-member composed of a wooden section and a metallic section, the wooden section being vertically-slidable in the guides and having its upper end provided with a socket reinforced by two sets of bolts or bars, each set arranged at right-angles to the other, whereby injury to said upper end, by wear and tear, is prevented, and a bearing formed for the upper or metal section, arms pivoted to the upper or metal section, pivoted braces for maintaining the arms in extended position, and means for raising and lowering the lifting-member.

877,986. TRUSS. LUMAN H. DAVIS, Bridgeport, Conn. Filed May 14, 1906. Serial No. 316,668.



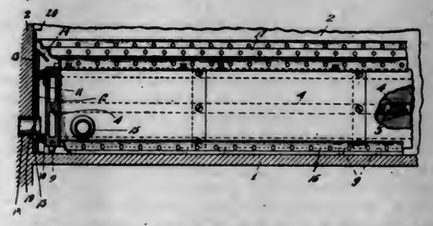
1. In a truss, a concavo convex pad, studs projecting from the concave surface and integral therewith, a plate secured to the studs, a non metallic covering for the pad and secured between the plate and studs, a ball-socket secured to the plate, a shell, a ball on its end to rest in said socket, a spring in axial alinement with the ball with one end secured within said ball, adjustable means outside of said ball to engage the other end of said spring, a body wire, a clamp removably and adjustably secured thereto, a longitudinal pad support adjustably mounted in the shell, and means for connecting said clamp thereto, for the purpose set forth.

2. In a truss, a concavo convex pad, studs projecting from the concave surface and integral therewith, a plate secured thereto, a ball-socket secured to said plate, a ball mounted in the socket, a spring in axial alinement with the ball and projecting through the plate, a support for the outer end of the spring, means for adjusting said support to regulate the tension of the spring, and means to prevent lateral displacement of said spring support, for the purpose set forth.

3. In a truss, a pad, a plate secured to its outer surface, a ball-socket secured to said plate, a shell having on one end a ball to rest in said socket, said ball having a central hole therethrough, a tension spring projecting through said hole and secured at one end within the ball, forked studs on the plate, a spring support mounted therein to be engaged by the outer end of the spring, means for adjusting said spring support to regulate the tension of the spring, a body wire, a clamp adjustably and removably secured thereto, a pad support having a longitudinal adjustment in the shell, means for securing the clamp thereto, for the purpose set forth.

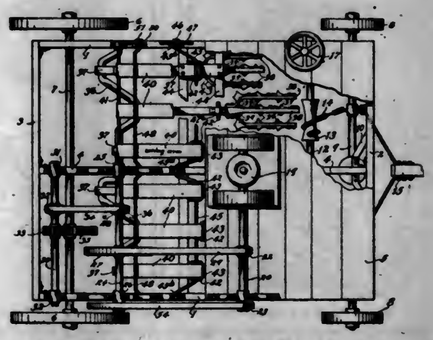
4. In a truss, a pad, a plate secured to its outer surface, a ball-socket on the outside of the plate, an open mouth shell having a ball to engage with said socket, a spring in axial alinement with the ball with one end secured within the ball, an adjustable spring support to which the opposite end of said spring is connected, means for adjusting said support to regulate the tension of the spring, a body wire, an open mouth clamp adjustably secured thereto, a pad-support having a longitudinal adjustment in the shell, means to prevent its rotation, means for securing the clamp to the pad-support, and means on said clamp and the outer end of the clamp-support to secure the pad in any of its rotatable positions, for the purpose set forth.

877,987. RADIATOR. EDSON E. DESCHANE and JOSEPH C. LITTLEWOOD, Minneapolis, Minn. Filed Apr. 9, 1906. Serial No. 310,731.



In a device of the kind described, the combination with a plurality of flat hollow sections united and having communication at their abutting ends, of wall plates spaced apart from said radiator sections and having downturned deflecting flanges, and a perforated molding strip applied to the upper portions of said radiator sections and extended upward and over the deflecting flange of said wall plate, substantially as described.

877,988. POWER-CULTIVATOR. CHARLES EDWARDS, Drayton, N. D. Filed Mar. 20, 1907. Serial No. 363,353.



1. In a machine of the kind described, the combination with a truck, of a power driven crank shaft mounted on the rear portion of the frame of said truck, a multiplicity of tedder-acting levers connected to said crank shaft at their rear ends, extended in a forwardly direction and provided at their free front ends with teeth or hoes, and links pivotally supported at their upper ends from said truck frame and pivotally connected at their lower ends

to the intermediate portions of the said tedder-acting levers, substantially as described.

2. In a machine of the kind described, the combination with a truck, of a power driven crank shaft mounted on the rear portion of the frame of said truck, a multiplicity of tedder-acting levers connected to said crank shaft at their rear ends, extended in a forwardly direction and provided at their free front ends with teeth or hoes, and links pivotally and yieldingly supported at their upper ends from said truck frame and pivotally connected at their lower ends to the intermediate portions of the said tedder acting levers, substantially as described.

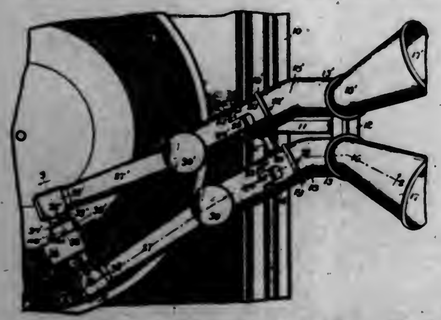
3. In a machine of the kind described, the combination with a crank shaft and means for rotating the same under the forward movement of the machine, of a multiplicity of tedder-acting levers connected to said crank shaft at one end and provided at their free ends with teeth or hoes, yieldingly supported arms carried by the truck frame, links connecting the free ends of said supporting arms to the intermediate portions of the respective levers, and means for vertically adjusting said supporting arms to vary the depth of cut of the teeth or hoes of said levers, substantially as described.

4. In a machine of the kind described, the combination with a crank shaft and means for rotating the same under the forward movement of the machine, of a multiplicity of tedder-acting levers connected to said crank shaft at their rear ends and provided at their forward ends with teeth or hoes, of spring supporting arms pivotally connected to the truck frame at one end, links connecting the free ends of said spring arms to the intermediate portions of said levers, means for vertically adjusting the free ends of said spring arms, and means for varying the downward pressure of said spring arms, substantially as described.

5. In a machine of the kind described, the combination with a crank shaft having cranks set at angles, of a multiplicity of tedder-acting levers pivotally connected at one end to the cranks of said shaft and provided at their free ends with teeth or hoes, yielding arms carried by the truck frame, links connecting the free ends of said arms to the intermediate portions of the respective levers, a crank bail mounted on the truck frame and underlying and supporting the free ends of said yielding arms, a latch lever attached to said adjusting bail, and a latch segment on the truck frame coöperating with said latch lever, substantially as described.

[Claim 6 not printed in the Gazette.]

877,989. TALKING-MACHINE. JOHN C. ENGLISH, Camden, N. J. Filed Sept. 11, 1905. Serial No. 277,805.



1. In a talking machine, the combination with the sound box and stylus, of means for maintaining the plane of the stylus substantially tangential to the record grooves as the sound box swings across the record and for taking vibrations from each side of the sound box.

2. In a talking machine the combination in a single structure of means for taking the vibrations from each side of the sound box and for maintaining the plane of the stylus substantially tangential to the record grooves as the sound box swings across the record.

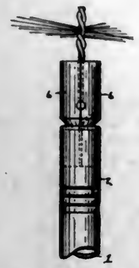
3. In a talking machine, the combination with the sound box and stylus, of means for taking vibrations from each side of the sound box and maintaining the plane of the stylus substantially tangential to the record grooves as the sound box swings across the record, the said parts being of heavy and rigid construction to limit the transmission of vibrations to the air confined in said tubes.

4. In a talking machine, the combination with a sound box and stylus, of pivoted sound tubes connected with the sides of the sound box for taking vibrations from each side thereof and for maintaining the plane of the stylus substantially tangential to the record grooves as the sound box swings across the record.

5. In a talking machine, the combination with a sound box of a plurality of swinging reproducer arms independently pivoted to opposite sides of said reproducer and to a fixed part of the machine.

[Claims 6 to 22 not printed in the Gazette.]

877,990. BRUSH-HOLDER. RUDOLPH FEHLER, Milwaukee, Wis. Filed Feb. 23, 1907. Serial No. 358,804.



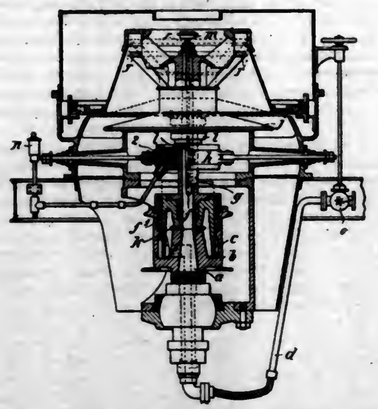
1. In a brush holder for bottle washing machines a tubular sleeve adapted to be connected with a revoluble water duct, a pair of brush retaining jaws of similar size and shape respectively provided with a pair of longitudinal grooves and a transverse groove in combination with a brush provided with a longitudinal loop, the respective sides and end portions of said loop being adapted respectively to register with and be supported by and within the longitudinal and transverse grooves of said jaws.

2. In a brush holder of the class described, a pair of jaws pivotally supported in connection with the discharge end of a revoluble tubular duct, said jaws being respectively provided with a pair of parallel longitudinal grooves and a transverse groove in combination with the supporting loop of a rotary brush shank, the side and end portions of said loop being adapted to register with and be supported by and within the longitudinal and transverse grooves of said jaws and means for locking said jaws around and in contact with the loop of said shank.

877,991. CENTRIFUGAL MACHINE. LUDWIG FUCHS, Rohrbach, Austria-Hungary. Filed Feb. 3, 1906. Serial No. 299,243.

1. In a centrifugal machine the combination with a drum having a movable bottom adapted to be disengaged therefrom, of a hollow rotatable spindle carrying said drum, a pulley secured to said spindle, a hollow plunger arranged in said pulley and connected with the movable bottom of the drum and means to admit and withdraw fluid under pressure to and from the said plunger respectively to raise and lower the same together with the movable bottom of the drum at will.

2. In a centrifugal machine the combination with a drum, having a movable bottom, adapted to be disengaged from said drum, of a hollow rotatable spindle carrying said drum, a pulley secured to the said spindle, a hollow plunger arranged in said pulley, a sleeve secured to the said plunger and surrounding the said hollow spindle, a ring screwed to the upper end of said sleeve adapted to act on the movable bottom of the drum, and means to admit and withdraw fluid under pressure to and from the hollow plunger respectively, to raise and lower the same together with the movable bottom of the drum at will.



3. In a centrifugal machine the combination with a drum, having a movable bottom adapted to be disengaged from said drum, of a hollow rotatable spindle carrying said drum, a pulley secured to the said spindle, a hollow plunger arranged in said pulley, a connection between the said plunger and the said movable bottom, means to admit fluid under pressure to the said plunger through the said hollow spindle, so as to raise the said plunger and movable bottom, connected therewith, and packing rings between the said plunger and the said pulley on one side and the hollow spindle on the other side.

4. In a centrifugal machine the combination with a drum, having a movable bottom adapted to be disengaged therefrom, of a rotatable hollow spindle, a pulley attached thereto, a hollow plunger connected with the said movable bottom and arranged in the pulley, means to admit fluid under pressure through the hollow spindle to the said plunger, and a hydraulic piston connected with the said plunger acting as a brake for the movements of said plunger.

5. In a centrifugal machine the combination with a drum, having a movable bottom adapted to be raised and lowered towards and away from the drum, of a rotatable hollow spindle carrying the said drum, a pulley secured to the said hollow spindle, a hollow plunger arranged in said pulley, a sleeve connecting the said plunger with the said movable bottom, a hydraulic piston carried by the said sleeve to act as a brake on the movements of the said plunger and bottom, and a casing surrounding the said plunger and guiding the same.

[Claims 6 and 7 not printed in the Gazette.]

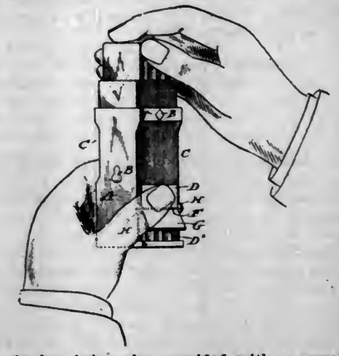
877,992. PLAYING-CARD SHUFFLER AND TRUMP-INDICATOR. JOSEPH GAUNT, Armley, England. Filed Apr. 6, 1907. Serial No. 366,671.

1. A card shuffling device, comprising a box having opposite sides and a front and back and open at one end, the opposite sides of the box being provided with openings, in one of which is pivoted a supplemental card holder.

2. A card shuffling device, comprising a box having opposite sides and a front and back and open at one end, the opposite sides of the box being provided with openings, in one of which is a pivoted member having grooves and ribs, the box being also provided on the sides thereof with representations of the various suits of cards.

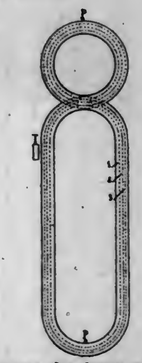
3. A card shuffling device, comprising a box having opposite sides and a front and back and open at one end, the opposite sides of the box being provided with openings and the bottom thereof with means for holding a powder therein.

4. A card shuffling device, comprising a box having opposite sides and a front and back and open at one end, the opposite sides of the box being provided with openings and the bottom thereof with means for holding a powder, one



side of the box being also provided with a movable supplemental card holder which operates through the opening therein.

877,993. RACING TRACK OR COURSE. JEAN B. GEORGES, Toulon-sur-Allier, France. Filed Sept. 24, 1906. Serial No. 335,880.



1. A track or course for horse racing or cycle racing and the like in the form of the figure 8 and guide lines on the track for defining the course to be followed by every competitor, so that all the competitors shall cover an equal distance.

2. A track or race course for horse racing or cycle racing and the like in the form of the figure 8, guide lines on the track for defining the course to be followed by each competitor and photographic apparatus placed at the two ends of the track, one inside, the other outside, for checking the positions of the horses.

3. A track or course for horse racing or cycle racing and the like enabling the distances to be covered to be lengthened or shortened and comprising a track in a straight line, and tracks of different lengths in the form of the figure 8 running into the straight track.

877,994. NOSE-GUARD FOR EYEGLASSES. DALLAS F. GREEN, Fort Wayne, Ind. Filed Feb. 12, 1907. Serial No. 357,046.

1. A nose-guard for eye-glasses consisting of an apertured guard-plate arranged entirely at the rear of its support, and provided upon its forward edge with an integral coiled helical spring arranged both above and below its support, adapted to multiply the self-adjusting flexibility of the guard, in combination with a spring nose bridge.

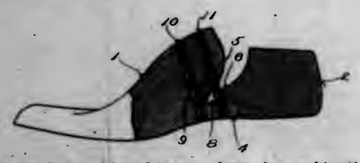
2. In a nose-guard for eye-glasses formed entirely of spring metal, an oblique spring metal apertured guard-plate arranged at the rear of its support, and provided substantially midway of its ends with a divided lateral coiled helical spring-connection to the supporting lens clip to increase the self adjusting properties of the guard in combination with a spring bridge.



3. The combination in eye-glasses of a spring-bow, and a spring-metal nose-guard arranged entirely at the rear of the said bow, and provided upon its front edge with coiled helical springs by means of which it is fixed to its support and its self-adjusting flexibility is increased.

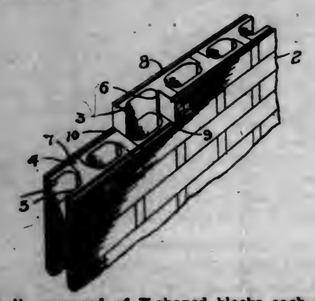
4. An eyeglass nose-guard formed of an apertured spring metal plate arranged at the rear of its support, and united to the supporting lens-clip at the rear edge thereof by means of a divided coiled helical spring connection in compact arrangement, whereby the self-adjusting flexibility of the guard is appreciably multiplied in combination with a spring-bow.

877,995. LAST. STEPHEN M. HAMBLIN, Stoughton, Mass., assignor to Bay State Last Company, Stoughton, Mass., a Corporation of Massachusetts. Filed Aug. 15, 1907. Serial No. 388,619.



In a divided or hinged last or form, in combination, the heel-part constructed with the forward extension formed with the integral roll and the uniform bearing tangential to the said roll; the fore-part constructed with the cylindrical transverse socket receiving the said roll and clasping more than one-half the circumference of the latter, the shank-extension projecting rearward of the said socket, and the uniform bearing tangential to the socket; and the dowel inserted in the instep-portion and shank-extension of the fore-part, passing through a hole in the roll, and holding the socket contracted upon the roll.

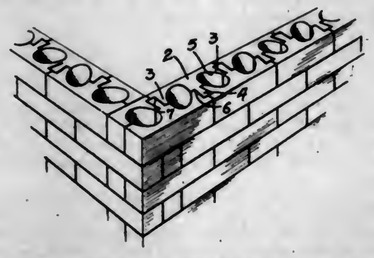
877,996. CONCRETE-BUILDING-BLOCK WALL. FRANCIS M. HENRY, Minneapolis, Minn. Filed Jan. 19, 1907. Serial No. 353,074.



1. A wall composed of T-shaped blocks each having a rectangular head forming a stretcher with a tongue molded transversely on said head midway between its ends and forming a header, the inner surface of said head on each side of said tongue being concave and the recesses therein extending continuously from the base of said tongue to points near the ends of said head, and the ends of said head having webs projecting therefrom in planes substantially parallel with the plane of said tongue and on the same side of the block, and the ends of said webs being coincident with the longitudinal center of the wall, and the webs having recesses in the ends of the block corresponding substantially to those on said tongue and into which web recesses the tongues of the adjoining blocks are adapted to fit, and the tongues in the block on one side of the wall being opposite the joint between the ends of the blocks on the other side of the wall and invisible from said other side and the concave surfaces in the opposite blocks forming vertical flues, substantially as described.

2. A wall composed of T-shaped blocks each having a rectangular head forming a stretcher and a single tongue molded transversely on said head midway between its ends and forming a header, the ends of said rectangular head having webs projecting therefrom in planes substantially parallel with the plane of said tongue and on the same side of the block, and the surface of said head having recesses formed therein and extending continuously between said webs and tongue and said tongue having recesses on each side in line substantially with the ends of said webs and coincident with the longitudinal center of the wall, and the adjoining blocks in each horizontal course being reversely arranged, and the webs on the head of one block fitting into the recesses in the tongues of contiguous blocks, and the surfaces of the heads and the ends of the tongues alternating in each horizontal course on both sides of the wall, whereby a Flemish bond construction will be formed, and said recesses forming, when the blocks are placed in the wall, a series of vertical air flues, substantially as described.

877,997. CONCRETE-BUILDING-BLOCK WALL. FRANCIS M. HENRY, Minneapolis, Minn. Filed Aug. 12, 1907. Serial No. 388, 117.

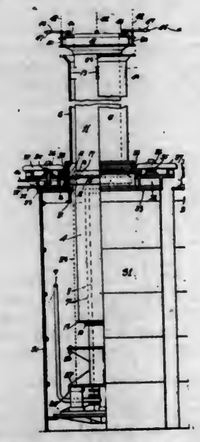


1. A wall composed of T-shaped blocks, each having a rectangular head forming a stretcher with a dove-tailed tongue molded transversely on said head midway between its ends, said tongue having recesses on each side and the inner ends of said recesses coinciding with the longitudinal middle line of block and the inner surface of said head on each side of said tongue being concave and the ends of said head having webs projecting therefrom in planes substantially parallel with the plane of said tongue and on the same side of the block, and the ends of said webs being coincident with the longitudinal center of the wall, and said webs having recesses in the ends of the block corresponding substantially to those on said tongue and into which web recesses the tongues of the adjoining blocks are adapted to fit, and the tongues in the block on one side of the wall being opposite the joint between the ends of the blocks on the other side of the wall and invisible from said other side and the concave surfaces in the opposite blocks forming vertical flues, substantially as described.

2. A wall composed of T-shaped blocks each having a rectangular head with a tongue molded transversely on said head midway between its ends, said tongue having recesses on each side and the ends of said head having webs projecting therefrom in planes substantially parallel with the plane of said tongue and on the same side of the block, and the ends of said webs and the inner ends of the recesses in said tongue being coincident with the longitudinal center of the wall, and said webs having recesses in the ends of the block to receive the tongue on the opposite contiguous block, and the ends of said tongues being opposite the joint between the ends of contiguous blocks on the same side of the wall and concealed on the outside and forming a lock between the opposite blocks, and there being concave surfaces formed between said tongues, and the ends of the blocks and said concave surfaces forming vertical air flues that are substantially oval in cross section and diagonal with respect to the center line of the wall, for the purpose specified.

3. A wall composed of T-shaped blocks each having a rectangular head with a centrally arranged tongue extending transversely of the block, said tongue having recesses in its opposite side faces and the ends of said block having terminal webs projecting outwardly therefrom on the same side of the block and parallel substantially with said tongue, said tongue being dove-tailed in form and said terminal webs having recesses adapted to receive said tongue, and the ends of the tongues being opposite the joints between the ends of contiguous blocks on the same side of the wall and concealed on the outside and forming a locking means between contiguous blocks, and the outer faces of said blocks having a series of closely arranged, shallow, vertical grooves therein, those of one block being adapted to register with the corresponding grooves of the blocks above and below when the blocks are built into the wall and thereby form continuous grooves extending vertically in the face of the wall.

877,998. MACHINE FOR FORMING SAND MOLDS. FRED HERBERT, Birtley, England. Filed Aug. 13, 1906. Serial No. 330,292.



1. In a machine for making sand molds, a flask to receive the sand, a main pattern, means for moving the same into the said flask, a socket pattern, means for moving the same up to its work and means actuated by said main pattern moving means for positively withdrawing the same to initial position.

2. In a machine for making sand molds, a flask, a main pattern, and means for moving the same into said flask, in combination with a socket pattern, means for advancing the same to its working position, and stops for adjustably regulating the extent of such advancing movement.

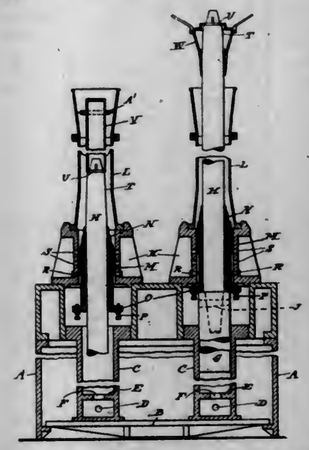
3. In a machine for making sand molds, a flask, a main pattern, and means for moving the same into said flask, in combination with a socket pattern, means for advancing the same to its work, means for locking the same in its working position, means for releasing said locking means, and means actuated by the main pattern moving means for positively returning said socket pattern to its initial position.

4. In a machine for making sand molds, a flask, a main pattern, and means for moving the same into said flask, in combination with a socket pattern, means connected to move with the main pattern and arranged to engage the socket pattern whereby said socket pattern is advanced to its work, means for locking the socket pattern in its working position, means for automatically releasing said locking mechanism, and means for positively returning the socket pattern to its initial position.

5. In a machine for making sand molds, a flask, a main pattern, and means for moving the same into said flask, in combination with a socket pattern through which the main pattern freely works, a flange carried by the main pattern, and arranged to engage the socket pattern to advance the latter to its work, and means for positively withdrawing said socket pattern to its initial position.

[Claims 6 to 22 not printed in the Gazette.]

877,999. MACHINE FOR MAKING SAND MOLDS. FRED HERBERT, Birtley, England. Filed Dec. 26, 1906. Serial No. 349,539.



1. In a machine for forming sand molds, the combination with a main casing, of a stationary cylinder arranged therein and adapted to receive an operating medium, a piston operating in said cylinder and having a socket or seat in the end thereof, a main pattern having its lower end stepped and secured in said socket or seat, the upper end of said main pattern being tapered and provided with a shoulder, an auxiliary casing, a sleeve of extended length, supported in said auxiliary casing and through which said pattern operates, a flask supported upon said auxiliary casing, to receive the pattern therethrough, and a measuring tool supported upon the shoulder at the upper end of said pattern.

2. In a machine for forming sand molds, the combination with a stationary cylinder and a piston plunger operating therein, said piston plunger having a seat in the upper end thereof, of a pattern having its lower end stepped and secured in said seat, the upper end of said pattern being tapered and provided with a shoulder forming a seat, a measuring tool, supported and centered upon said shoulder, a flask arranged to receive the pattern and the measuring tool longitudinally through the bore thereof, a sleeve of extended length supported below the flask in position to receive the pattern therethrough, said sleeve having a socket pattern at its upper end, and means for adjusting the position of the sleeve with reference to its support, said sleeve arranged to be engaged by the piston whereby it is advanced to its work.

3. In a machine for making sand molds, the combination with a cylinder and a plunger, a pattern carried by the plunger, and a flask, of a sleeve of extended length, arranged below the flask and through which the pattern op-

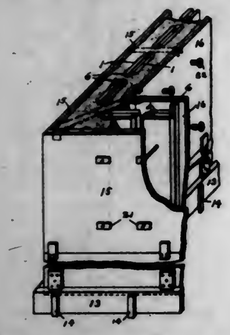
erates, means for adjustably supporting said sleeve with reference to the flask, said sleeve adapted to be engaged by the plunger whereby it is advanced endwise towards the flask, and set screws for adjustably regulating the extent of such advancing movement, said sleeve carrying a socket pattern at its upper end.

4. In a machine for making sand molds, the combination with a cylinder, a plunger operating therein, a pattern stepped and removably secured in a seat formed in the end of the plunger, and having a supporting shoulder at its upper end, a measuring tool adapted to be supported and carried by said shoulder, and a flask, of an auxiliary casing, a sleeve of extended length adjustably supported therein for movement endwise towards the flask, said sleeve formed with a socket pattern at its upper end, the plunger adapted to engage the lower end of said sleeve to advance the same.

5. In a machine for making sand molds, the combination with a cylinder, a plunger operating therein, and having a seat in the end thereof, a pattern having its lower end received and secured in said seat, a measuring tool supported and centered upon the upper end of the pattern, and a flask, the upper end of said pattern being tapered, of a casing supporting said flask, a sleeve of extended length arranged within said casing for endwise movement therein, said pattern operating through said sleeve, the lower end of said sleeve adapted to be engaged by the end of the plunger whereby said sleeve is moved endwise, means for adjustably supporting said sleeve, a socket pattern carried by the upper end of the sleeve, and means for adjustably limiting the endwise movement of the sleeve.

[Claims 6 to 8 not printed in the Gazette.]

878,000. WALL-MOLD. JOSEPH W. HOLMAN, Detroit, Mich. Filed Sept. 3, 1907. Serial No. 391,015.



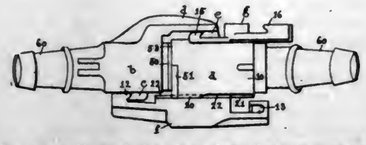
1. In a wall mold, the combination of outer forms for the sides of the wall, cores for forming air spaces in said wall and comprising sides and ends, and a retaining device adapted to pass through holes in the outer forms and core walls to position the cores and each provided with an enlarged part to engage the outer face of one of the sides of the core, and a projecting pin adjacent thereto which will engage with the opposite face of said side of the core.

2. In a wall mold, the combination of cores comprising sides and liners to separate the sides, the sides formed flat with beveled edges and having their outer side and edges covered with sheet metal so bent as to form projecting edges, the liners having grooves to receive those projecting edges on the sides, whereby the parts will be so positioned that the liners may be withdrawn longitudinally from between the sides, but lateral movement between the parts will be prevented.

3. In a wall mold, the combination of means for forming the sides of the wall, cores comprising sides and liners to hold the sides separated, both sides and liners being provided with projections to prevent lateral movement between them but permitting relative longitudinal movement, and retaining means adapted to engage one of the sides to hold the core in position.

4. In a wall mold, the combination of cores comprising sides and liners to separate the sides, the sides formed flat with beveled edges and having their outer side and edges covered with sheet metal so bent as to form projecting edges, the liners having grooves to receive these projecting edges on the sides, whereby the parts will be so positioned that the liners may be withdrawn longitudinally from between the sides, but lateral movement between the parts will be prevented, a retaining device adapted to pass through holes in the sides to position the core, and provided with an enlarged portion to engage the outer side of one of the sides of the core, and a projecting pin adjacent thereto which will engage with the opposite side of said side of the core, whereby the core will be positioned in the wall.

878,001. STEAM COUPLING-HEAD. BENJAMIN F. HUDSON, Saugus, Mass. Filed Aug. 6, 1907. Serial No. 387,281.



1. In a coupling of the class described, in combination, a coupling head, and levers pivoted to the opposite sides of said head and provided on opposite sides of their pivots with projections, substantially as described.

2. In a coupling of the class described, in combination, a coupling head provided at its front end with a gasket, a slide to lock said gasket to said head, and a lever pivoted to the side of said head and coöperating with said slide to lock it to said head, substantially as described.

3. In a coupling of the class described, in combination, a coupling head provided on its opposite sides with projections forming stops, levers pivoted to the sides of said head and provided with locking fingers on opposite sides of the pivots for said levers, and springs to act on said levers to normally force them into line with said stops, substantially as described.

4. In a coupling of the class described, in combination, a coupling head, and levers pivoted to the opposite sides of said head and provided on opposite sides of their pivots with projections out of line with each other, substantially as described.

5. In a coupling of the class described, in combination, a coupling head, and levers pivoted to said head and having means on opposite sides of their pivots for permitting the said levers to connect the coupling heads to coöperating couplings of different sizes, substantially as described.

878,002. LADLE-CARRIER. CLARENCE H. IMBODEN and JOHN J. LAWLOR, Greensburg, Pa. Filed Jan. 29, 1906. Serial No. 298,571.



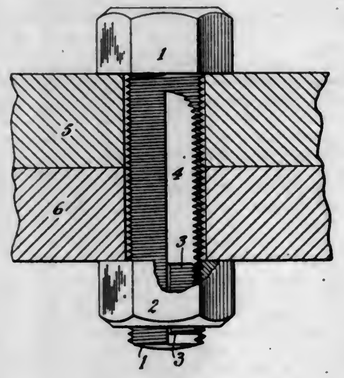
1. In ladle barrow, the combination of a pair of legs, a wheel journaled directly on said legs, a frame having a front horizontal portion secured to the upper ends of said legs, an intermediate depressed portion and a rear vertical portion, and a ladle carrier secured to the vertical portion and provided with rearwardly projecting handles.

2. In a ladle barrow, the combination of a pair of legs, a wheel journaled directly on said legs, a frame having a front horizontal portion secured to the upper ends of said legs, an intermediate depressed portion, and a rear vertical portion, a foot secured to the depressed portion of the frame, and a ladle carrier secured to the vertical portion of the frame and provided with a forwardly projecting ladle carrying ring and with rearwardly projecting handles.

3. In a ladle barrow, the combination of a frame having a front horizontal portion, an intermediate depressed portion and a rear vertical portion, a wheel mounted on the front end of the frame, a bearing block mounted on the vertical rear portion of the frame, means for raising and lowering said bearing block, and a ladle carrier mounted in said bearing block and provided with a forwardly projecting ladle carrying ring and rearwardly projecting handles.

4. In a ladle barrow, the combination of a frame having a front horizontal portion, an intermediate depressed portion and a rear vertical portion, a wheel mounted on the forward end of the frame, a bearing block mounted in the rear vertical portion of the frame, a screw arranged to elevate and lower said bearing block, a shaft rotatably mounted in said bearing block and provided with a forwardly projecting ladle carrying portion and rearwardly projecting handles, and means for locking said shaft against rotation.

878,003. BOLT. MORRIS JACOBS, New York, N. Y. Filed Dec. 26, 1906. Serial No. 349,543.



1. The combination of a screw-threaded bolt having therein a V-shaped longitudinal groove the apex line of whose reëntrant angle lies on a radial plane of the bolt and such groove lying wholly at one side of a diametrical plane of the bolt coinciding with such radial plane, one of the sides of such groove being substantially wider than the other, a screw-threaded cam-rocker of less arc than the groove so as to be rockable therein and having two adjacent plane faces joined in a fulcrum-edge adapted to pivotally seat in the bottom of the groove, the narrower side of the groove forming an abutment to prevent the rocker from slipping as it moves to locking position, one of the faces of the locker being substantially wider than the other, such wider face lying in contact with the wider side of the groove in the unlocked position of the rocker and being angularly spaced therefrom in the locking position, and a screw-threaded nut coöperative with the bolt and rocker, the rocker being adapted to have its screw threads frictionally engaged by the screw threads of the nut to rock the rocker upon its fulcrum-edge.

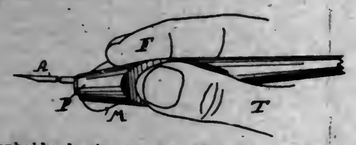
2. The combination of a screw-threaded bolt having therein a V-shaped longitudinal groove extending substantially the length of the threaded portion thereof and the apex line of whose reëntrant angle lies on a radial plane of the bolt and such groove lying wholly at one side of a diametrical plane of the bolt coinciding with such radial plane, one of the sides of such groove being substantially wider than the other, a screw-threaded cam-rocker of less arc than the groove and less of length than the groove and placeable at different locations therealong and having two adjacent plane faces one of which is substantially wider than the other, such wider face lying in contact with the wider side of the groove in the unlocked position of the rocker and being angularly spaced therefrom in the locking position, and a screw-threaded nut coöperative with the bolt and rocker in the various locations of the rocker.

3. The combination of a screw-threaded bolt provided with a longitudinal groove having plane sides forming a reëntrant non-obtuse angle whose apex lies on a radius of the bolt and such groove lying wholly at one side of the bolt diameter which coincides with such radius, one of the sides of such groove being substantially wider than the other and substantially wider than the shortest distance from the apex of the angle to the circumferential line of the bolt, a screw-threaded cam-rocker of less arc than the groove so as to be rockable therein and having two adjacent plane faces at an acute angle to each other and joined in a fulcrum-edge adapted to pivotally seat in the bottom of the groove, the narrower side of the groove forming a shoulder against which the fulcrum-edge of the rocker abuts as the rocker rocks to locking position, one of the faces of the rocker being substantially wider than the other and of a width substantially greater than the shortest distance between the apex of the above-named reëntrant angle and the circumferential line of the bolt, the wider face of the rocker being adjacent to the wider side of the groove and in contact therewith in the unlocked position of the rocker and angularly spaced therefrom in the locking position, and a screw-threaded nut coöperative with the bolt and rocker, the rocker being adapted to have its screw threads frictionally engaged by the screw threads of the nut to rock the rocker upon its fulcrum-edge.

4. The combination of a screw-threaded bolt provided with a longitudinal groove extending substantially the length of the threaded portion thereof and having plane sides forming a reëntrant non-obtuse angle, such sides being united to each other by a concave groove-portion, one of such sides being substantially wider than the shortest distance from the greatest depth of the groove to the circumferential line of the bolt and the other of such sides being of a width equal to such distance, a screw-threaded cam-rocker having two adjacent plane faces at an acute angle to each other and joined in a convex edge adapted to pivotally seat in the correspondingly concave bottom of the groove, such rocker being of less arc than the groove so as to be rockable therein and of less length than the groove so as to be placeable at different locations therealong and having one of its faces substantially wider than the shortest distance from the greatest depth of the groove to the circumferential line of the bolt and having its other face of a width not less than such shortest distance, the wider face of the rocker being adjacent to the wider side of the groove and in contact therewith in the unlocked position of the rocker and angularly spaced therefrom in the locking position, and a screw-threaded nut coöperative with the bolt and rocker.

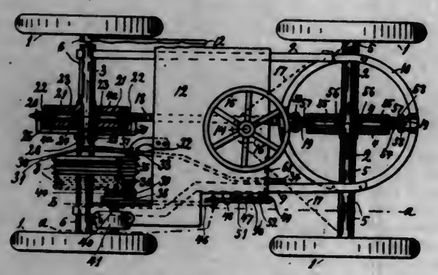
5. The combination of a screw-threaded bolt having therein a V-shaped longitudinal groove extending substantially the length of the threaded portion thereof, a screw-threaded cam-rocker of less arc than the groove so as to be rockable therein and having two adjacent plane faces joined in a fulcrum-edge adapted to pivotally seat in the bottom of the groove, one side of the groove forming a shoulder against which the fulcrum-edge of the rocker abuts as the rocker rocks to locking position, the rocker being of less length than the groove and placeable at different locations therealong, and a screw-threaded nut coöperative with the bolt and rocker in the different locations of the rocker, the rocker being adapted to have its screw threads frictionally engaged by the screw threads of the nut to rock the rocker upon its fulcrum edge.

878,004. PENHOLDER. ALBERT JAHN, Berlin, Germany. Filed Nov. 9, 1906. Serial No. 342,626.



A penholder having on one side of the front end thereof a beveled plane face longitudinal the axis of the holder, an upper face adjacent thereto, the adjacent edges of said faces forming in part a sharp edge and a projection on the opposite side of the holder provided with a clamping device for the pen.

878,005. AUTOMOBILE DRIVING-GEAR. JOHN E. JOHNSON, Leaf Mountain township, Ottertail county, Minn. Filed Feb. 16, 1907. Serial No. 357,657.



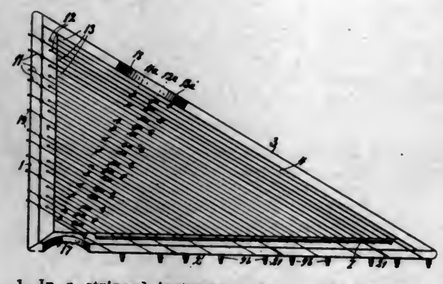
1. In an automobile, the combination with a supporting frame, of a front and rear axle, each divided in the middle, supporting wheels fixed on the outer ends of the axle-section and bevel gears at the inner ends thereof, hubs journaled upon the abutting ends of the axle-sections and provided with radial arms, compensating-gears journaled at the ends of said arms and meshing with the bevel gears, a ring-shaped sprocket-wheel trunnioned on the ends of the journals of the compensating gears, and an endless chain-belt engaging said sprocket wheels and thereby turn the rear and front shaft simultaneously, said front sprocket-wheel having a ring 54 held to it by two diametrically opposite trunnions, and the ring having at ninety degrees from said trunnions internal trunnions at the ends of the journals of the compensating gears, means for imparting rotary motion to said sprocket-wheels, means for guiding the front sprocket wheel, and means for steering the front wheels by swinging the entire front axle in a horizontal plane.

2. In an automobile, the combination with a supporting frame and a front and rear axle and supporting wheels thereon, of sprocket wheels one on each shaft, an endless chain engaging the two wheels to drive them, a spider secured to one side of one of the sprocket-wheels, a friction wheel engaging the spider, and a friction pinion adapted to engage the friction wheel, and means for applying motive power to the friction pinion to turn it.

3. In an automobile, a propelling mechanism involving a driven friction pulley with V-shaped peripheric grooves in its face, a fulcrumed lever adjacent thereto, a driven shaft central with said fulcrum, a gear-wheel fixed on said shaft, means for tilting and holding the lever in various positions, two friction pinions mounted on studs, each having peripheric grooves fitting the friction wheel, and gears fixed to them and receiving rotary motion from said driven gear; an idler-gear interposed between the driven gear and the gear fixed to one of the friction pinions, so as to give it a reverse motion to that of the other pinion; one of said friction pinions having a diametrically reduced portion adapted to impart slow but powerful motion to the friction wheel, and means for bringing the friction wheel and said reduced section of the pinion into operative position and contact when so desired.

4. In an automobile, a propelling mechanism involving a driven friction pulley with V-shaped peripheric grooves in its face, a fulcrumed lever adjacent thereto, a driven shaft central with said fulcrum, a gear wheel fixed on said shaft, means for tilting and holding the lever in various positions, two friction pinions mounted on studs, each having peripheric grooves fitting the friction wheel, and gears fixed to them and receiving motion from said driven gear; an idler-gear interposed between the driven gear and the gear to one of the friction pinions, and means transmitting the rotary motion of the friction wheel to the rear and front axle of the vehicle, substantially as shown and described.

878,006. STRINGED MUSICAL INSTRUMENT. PETER JOHNSON, Downing, Wis. Filed Apr. 25, 1907. Serial No. 370,173.

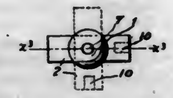


1. In a stringed instrument, the combination with a three-cornered horizontally elongated box-shaped frame adapted to stand upon a table and having one long and one short side inclined outward at the top, of strings arranged in two sets, one set having the strings extended from the bottom edge of the short side to the top edge of the long side, and the other set having the strings extended from the top edge of the short side to the bottom edge of the long side the strings of one set passing between the strings of the other set.

2. In a stringed instrument, the combination with a three-cornered horizontally elongated box-shaped frame adapted to stand upon a table and having one long and one short side inclined outward at the top, of strings arranged in two sets, one set having the strings extended from the bottom edge of the short side to the top edge of the long side, and the other set having the strings extended from the top edge of the short side to the bottom edge of the long side, the strings of one set passing between the strings of the other set, said long side of the frame having a longitudinal slot with notches in the lower side thereof, a third set of strings having its strings passed alternately between the strings of the other sets and the string ends thereof secured to the short side at an elevation between the first two sets, and the opposite string-ends passed through said notches and secured outside the frame, said third set of strings occupying an elevation slightly above the crossing of the first two sets of strings.

3. In a stringed instrument, the combination with a three-cornered horizontally elongated box-shaped frame adapted to stand upon a table and having one long and one short side inclined outward at the top, of strings arranged in two sets, one set having the strings extended from the bottom edge of the short side to the top edge of the long side, and the other set having the strings extended from the top edge of the short side to the bottom edge of the long side, the strings of one set passing between the strings of the other set, said long side of the frame having a longitudinal slot with notches in the lower side thereof, a third set of strings having its strings passed alternately between the strings of the other sets and the string ends thereof secured to the short side at an elevation between the first two sets, and the opposite string-ends passed through notches in the slot in the long side and secured outside the frame, said third set of strings occupying an elevation slightly above the crossing of the first two sets of strings, said frame having in its two longest sides cut out clearings for the hands playing on the strings.

878,007. SELF-ARIGHTING STAMP. ERNST A. KIRCHNER, Minneapolis, Minn. Filed Mar. 27, 1907. Serial No. 364,807.

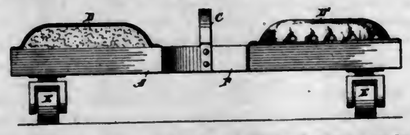


1. In a hand operated stamp, the combination with a handle, of a printing head pivotally connected thereto, with its axis of rotation approximately coincident with the axis of said handle, and provided with an excess of weight on one side of its pivotal connection, substantially as described.

2. In a hand operated stamp, the combination with a handle, of a printing head pivotally connected thereto and provided with an excess of weight on one side of its pivotal connection, and means for clamping said head to said handle and for releasing the same for pivotal movement, substantially as described.

3. In a hand operated stamp, the combination with a handle, of a printing head pivotally connected thereto and provided with an eccentrically located weight for righting the same, and a finger operated spring pressed device normally clamping said printing head to said handle but movable to release the same for pivotal movements, substantially as described.

878,008. KNEE-REST. HARRY M. LANDFIELD, New York, N. Y. Filed Apr. 3, 1907. Serial No. 366,166.



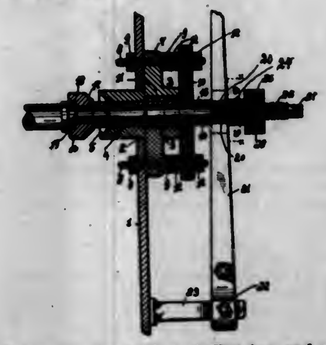
1. A knee rest comprising a platform having a reduced central portion, pads on the upper surface of the platform one on each side of said reduced portion, and a handle secured to the reduced central portion of the platform.

2. A knee rest provided with a reduced portion, a handle secured at said reduced portion, a plurality of spaced pads, and means for permitting the knee rest to be shifted from one place to another.

878,009. STUFFING-BOX FOR THROTTLES AND VALVE-STEMS. JOHN MALOY and ARCHIBALD WHITE, Dunbar, Pa., assignors of one-third to F. J. McFarland, Dunbar, Pa. Filed Nov. 28, 1905. Serial No. 289,446.

1. The combination with a front boiler plate, a stuffing box protruding through said plate and secured thereto, said stuffing box having a seat formed in its inner end, of a sleeve extending through said stuffing box, a head carried by the inner end of said sleeve and adapted to engage in the seat of said stuffing box, a throttle rod passing through said sleeve, a collar carried by said rod and adapted to engage the head of said sleeve, the outer end of said rod being screw threaded to engage said sleeve, a throttle lever detachably connected to said sleeve and employed to actuate said sleeve and said rod, a jam nut mounted upon the end of said rod and adapted to engage said sleeve, substantially as described.

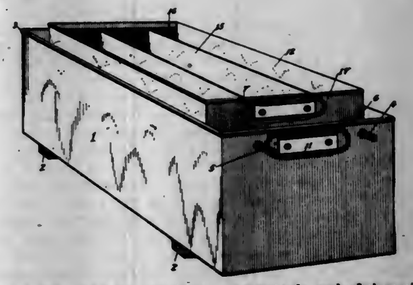
2. The combination with a stuffing box and a throttle lever, said stuffing box having a seat formed in its inner end, of a sleeve extending through said stuffing box, a head carried by said sleeve and adapted to engage in the seat of said box, a throttle rod extending through said sleeve, a collar carried by said rod and adapted to engage the head of said sleeve, means to move the head of said sleeve within the seat of said stuffing box, means to fix said head therein, means to adjust said rod relative to said sleeve, substantially as described.



3. The combination with a stuffing box and a throttle, of a sleeve extending through said stuffing box and detachably connected to said throttle, a head carried by said sleeve, a throttle rod extending through said sleeve, a collar carried by said rod and adapted to engage said head, means to move the head of said sleeve into engagement with said stuffing box, and means to adjust said rod relative to said sleeve, substantially as described.

4. The combination with a stuffing box and a throttle lever, of a sleeve extending through said stuffing box and detachably connected to said throttle lever, a head carried by said sleeve, a throttle rod extending through said sleeve, means to move said head in engagement with said stuffing box, and means to adjust said rod, substantially as described.

878,010. CUTLERY-WASHING MACHINE. WILLIAM E. MERRELL, Stockton, Cal. Filed May 3, 1907. Serial No. 371,739.



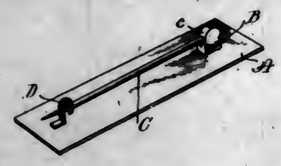
In a dish washing machine, a receptacle embodying side and end walls and having a foraminous bottom, removable plates mounted in said receptacle, and longitudinally-extending members secured to said plates and forming said receptacle with a plurality of compartments.

878,011. PIN AND THE LIKE. FRANK H. NOBLE, Chicago, Ill. Filed Aug. 1, 1904. Serial No. 219,044.

1. In a device of the class described, the combination with a fastening pin having an enlarged spherical end, of a bifurcated block forming a base or pedestal adapted to be secured at its bottom end to the body of the device, the two divisions of said block supporting two substantially hemispherical socket portions integral with such divisions and which coöperates to form a spherical socket adapted to receive the enlarged spherical end of the pin; substantially as described.

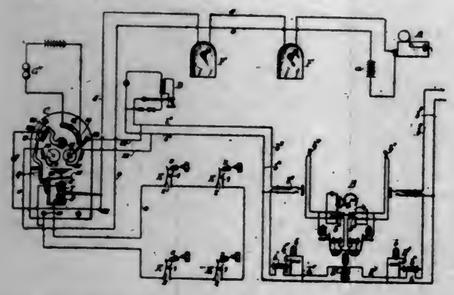
2. In a device of the class described, the combination

with a fastening pin having an enlarged spherical end, of a bifurcated block forming a base or pedestal adapted to be secured at its bottom end to the body of the device, the two divisions of said block supporting two circular rims



integral with such divisions and coöperating to form a joint in which the enlarged spherical end of the pin is pivotally held so as to be capable of rotation; substantially as described.

878,012. AUTOMATIC ELECTRIC SUPERVISORY AND SIGNALING SYSTEM. JAMES G. NOLEN, Chicago, Ill., assignor of one-half to Frank B. Cook, Chicago, Ill. Filed Dec. 23, 1902. Serial No. 136,325.



1. An electric signaling system, comprising a box containing signal transmitting mechanism normally in a condition to be released, a district messenger signal receiving and recording device suitably connected with said box, a telephone switchboard electrically independent of said district messenger signal service also suitably connected with said box, a plurality of heat responsive devices suitably connected with said box, a plurality of fire extinguisher valves, a switch associated with each valve, a plurality of doors and windows, a switch associated with each door and window, all of said switches being suitably connected with said box, a battery for supplying current over the telephone line, another battery for supplying current over the district messenger line, said last-mentioned battery being located at the station having the signal receiving and recording device, and electrically operated means adapted to release the mechanism of said box upon the operation of any one of said heat responsive devices or switches, whereby the operation of either a heat responsive device or a switch acts to automatically set said mechanism in operation and thereby transmit signals over the telephone and district messenger lines.

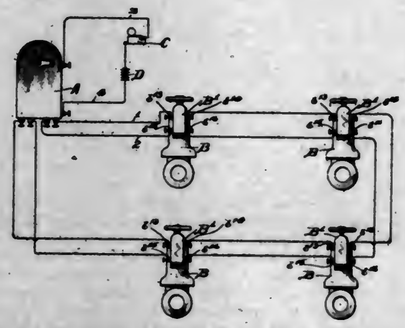
2. A signaling system comprising a master box containing signal transmitting mechanism held normally in a condition to be released, an electro-magnet in said box adapted when energized to release said mechanism, a normally closed district messenger line circuit including said magnet, and including a battery at central station for keeping said circuit normally charged, a normally open telephone line circuit, a shunt around said magnet including a number of heat responsive devices, a number of fire extinguisher valves, a switch associated with each valve, a second shunt around said magnet including said switches, a number of doors or windows, a switch associated with each door or window, and a third shunt around said magnet including said last mentioned switches, whereby the opening of any one of said shunts operates to automatically release the mechanism of said box, so as to cause the same to transmit signals over all the telephone and district messenger lines.

3. In a signaling system, the combination of a telephone line circuit, suitable switchboard apparatus involving a line signal for said line circuit, signal transmitting mechanism connected with the line circuit, a number of heat responsive devices suitably connected with said signal transmitting mechanism, a number of fire extinguisher valves, and a number of switches associated with said valves, said switches being suitably connected with said signal transmitting mechanism, together with a battery at a central station for keeping the circuit of the said heat-responsive devices normally charged, whereby the operation of any one of said heat responsive devices or switches causes said signal transmitting mechanism to operate said line signal.

4. In a signaling system, the combination of suitable telephone switchboard apparatus involving a line signal, a signal transmitting device having line connection with said switchboard apparatus, and a plurality of heat responsive devices suitably connected with said signal transmitting device, together with a battery at a central station for keeping the circuit of the said heat responsive devices normally charged, each heat responsive device when operated causing said signal transmitting device to operate said line signal.

5. The combination of a signal, a master box connected with said signal, said master box being normally in a pulled condition, an electro-magnet connected and arranged for releasing said box, said magnet having an armature engaging a movable part of the mechanism of said box, a number of switches connected with said magnet, said switches being distributed through the building in which the master box is located, a battery at the central station for keeping the circuit of said switches normally charged, each switch when operated causing sufficient current to flow through the electro-magnet to energize the latter, a catch for automatically holding said armature when the latter is attracted by the magnet, and means comprising a winding handle for causing said catch to automatically release said armature only when the box is restored to its normally pulled condition.

878,013. ELECTRIC SIGNALING SYSTEM. JAMES G. NOLEN, Chicago, Ill., assignor, by direct and mesne assignments, of one-half to Frank B. Cook, Chicago, Ill., and one-half to Automatic Fire Protection Company, a Corporation of Maine. Filed Mar. 11, 1904. Serial No. 197,702.



1. An electric signaling system, comprising a box having normally wound-up clockwork and a releasing-magnet, a central source of current and signal-receiving apparatus connected with said box, a plurality of signal-initiating devices, said magnet having four differential windings connected with said signal-initiating devices by parallel conductors, and a resistance-coil connected in parallel with one of said conductors and in series with two of said windings, there being a normally charged circuit including said windings and parallel conductors.

2. An electrical signaling system, comprising a box having normally wound-up clockwork and a releasing-magnet, a centralized source of current and signal-receiving apparatus connected with said box, and a plurality of valve-operated switches, said releasing-magnet having differential windings connected by parallel conductors with said switches, there being a normally charged circuit including said windings and parallel conductors.

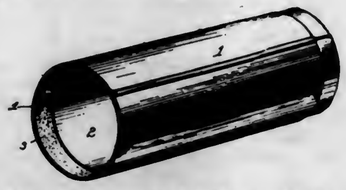
3. An electrical signaling system, comprising a box having normally wound-up clockwork and a releasing-magnet, a centralized source of current and signal-receiving apparatus, and a valve-operated switch having normally open contacts, said magnet having differential windings connected by parallel conductors with said switch, there being a normally charged circuit including said windings and parallel conductors.

4. An electrical signaling system, comprising a box having normally wound-up clockwork and a releasing-magnet, a centralized source of current and signal-receiving apparatus connected with said box, a fire extinguisher system valve, a switch associated with said valve and adapted to be operated in the manipulation of the valve, said magnet having four differential windings connected by two parallel conductors with said switch, there being a normally charged circuit including the said windings and parallel conductors.

5. An electrical signaling system, including a box having normally wound-up clockwork and a releasing-magnet, a source of current and signal-receiving apparatus at the central station, suitable line connection between the said box and the central station, a plurally of signal-initiating devices, said magnet having four differential windings connected by two parallel conductors with said signal-initiating devices, and a resistance-coil of relatively high resistance as compared with the resistance of said windings, the said resistance-coil being connected in parallel with one of said conductors and in series with two of said windings, there being a normally charged line circuit including said windings and parallel conductors.

[Claims 6 to 11 not printed in the Gazette.]

878,014. PIPE. JOHN J. O'TOOLE, Alliance, Ohio. Filed Sept. 24, 1907. Serial No. 394,284.



1. A pipe for the purpose specified, consisting of two concentric pipes, the innermost one of said pipes having unconnected longitudinal edges, and an intermediate sheet of asbestos, substantially as and for the purpose specified.

2. A pipe for the purpose specified, consisting of inner and outer members, the outer member extended beyond the inner member and the inner member extended beyond the outer member at opposite ends of the pipe sections, said inner member having non-connected longitudinal edges, and a sheet of asbestos located between said inner and outer members, substantially as and for the purpose specified.

3. As an improved article of manufacture, a pipe consisting of inner and outer pipe members, a non-metallic sheet located between and in contact with the inner and outer pipe members, said inner pipe member having disconnected longitudinal edges, substantially as and for the purpose specified.

878,015. TUBULAR METALLIC SPRING-TIRE. JAMES K. PARKER, Longbeach, Cal. Filed Dec. 12, 1906. Serial No. 347,554.

1. A vehicle wheel tire compressing a rim body, a sectional tubular elastic metal tire secured thereon, and springs within the sections and bearing outwardly thereon said springs extending between the rim body and the metallic tire sections.



2. A vehicle wheel tire comprising a rim body, a sectional tubular elastic metal tire secured thereon, and straps secured to the rim body and extending over the joints between the sections.

3. A vehicle wheel tire comprising a rim body, a sectional tubular elastic metal tire secured thereon, straps secured to the rim body and extending over the joints between the sections, and armor means formed as a band extending under the said straps and over the tubular sections.

4. A vehicle wheel tire comprising a rim body, a sectional tubular elastic metal tire secured thereon, straps secured to the rim body and extending over the joints between the sections, springs within the sections pressing outwardly thereon, armor means formed as a band extending under the said straps and over the tubular sections, the ends of the tubular sections having interengaging channel portions.

5. A vehicle wheel tire comprising a rim body formed as a core ring, and a tubular sectional metallic tire partly surrounding the rim body but having its outer portion separated therefrom, in combination with a wheel rim provided with clamping means engaging the exterior of said metallic sectional tire and pressing the same against the core ring.

[Claims 6 and 7 not printed in the Gazette.]

878,016. AUTOMATIC BRAKE-OPERATING ATTACHMENT FOR SIGNALS. WARREN C. PATTERSON, Tamaqua, Pa., assignor of one-half to Charles C. Gibson, Williamsport, Pa. Filed Mar. 26, 1907. Serial No. 364,691.



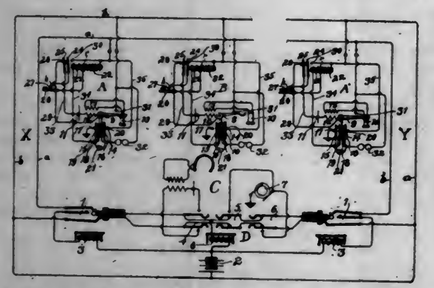
1. In a device of the class described, the combination with an air brake valve, of a pivotally mounted operating arm arranged to swing downward to a position for operating the said valve, and means arranged to receive the arm at a point intermediate of the ends thereof for supporting the same when the said arm is in position for operating the valve.

2. In a device of the class described, the combination with an air brake valve, of a pivotally mounted air brake

bar or member, and a support provided with a vertical standard having a crotch to receive the bar or member at a point intermediate of the ends thereof, a horizontal base supporting the standard, and inclined braces mounted on the base and located at opposite sides of the standard.

3. In a device of the class described, the combination with an air brake valve, of an oscillatory air brake operating bar or member pivotally mounted at an intermediate point and provided at one of its arms with a weight for counter-balancing the other arm, a standard having a fork arranged to receive the latter arm, a signal, and means operated by the signal for automatically swinging the bar or member to and from the standard.

878,017. PARTY-LINE TELEPHONE SYSTEM. ARTHUR F. POOLE, Wheeling, W. Va. Filed Feb. 20, 1905. Serial No. 246,404.



1. In a party line telephone system, the combination with a party line, of a plurality of substations connected therewith, telephonic apparatus and a relay at each substation, said telephonic apparatus being inoperative when said relay is inert, a low resistance path and a high resistance path for including said relay, actuation of said relay causing the telephonic apparatus to become operative, and a source of current for supplying current flow through said paths, the current flow from said source when the low resistance path is included in circuit at one substation being insufficient to actuate the relay at any other substation, whereby the telephonic apparatus at any other substation remains inoperative.

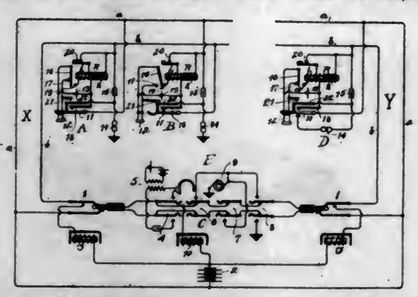
2. In a telephone system, the combination with a party line, of a plurality of substations connected therewith, a relay and telephonic apparatus at each substation, said telephonic apparatus when said relay is inert being rendered inoperative, a low resistance winding for said relay included in the relay circuit, a high resistance also included in the relay circuit, energization of said relay at one substation causing telephonic apparatus thereat to be rendered operative and the high resistance in the relay circuit to be removed from circuit, and a source of current for supplying said line and the substation circuits, the current flow upon energization of the relay at the one substation being insufficient to cause actuation of relays at other substations connected with the line, whereby the telephonic apparatus at the other substations is maintained in an inoperative condition.

3. In a telephone system, the combination with a party line, of a plurality of substations connected therewith, telephonic apparatus at each substation, a relay at each substation provided with a low resistance winding and a high resistance winding, said telephonic apparatus when said relay is inert being rendered inoperative, and a source for supplying current to the line, current flow through said relay upon actuation of switching apparatus at one substation causing energization of said relay to short circuit the high resistance winding from circuit, the current flow from said source being thereupon of insufficient strength to cause actuation of relays at other substations through the high resistance winding, and means at the first substation for causing reinclusion in circuit of the high resistance winding whereby the relays at other substations may be actuated.

4. In a telephone system, the combination with a party line, of a plurality of substations connected therewith, a relay and telephonic apparatus at each substation, said telephonic apparatus when said relay is inert being rendered inoperative, a low resistance winding for said relay included in the relay circuit, a high resistance also included in the relay circuit, energization of said relay at one substation causing the telephonic apparatus thereat to be rendered operative and the high resistance in the relay circuit to be removed from circuit, a source of current for supplying said line and the substation circuits, the current flow upon energization of the relay at the one substation being insufficient to cause actuation of relays at other substations connected with the line, whereby the telephonic apparatus at the other substations is maintained in an inoperative condition, and means at the one substation for causing reinclusion in circuit of the high resistance, whereby the current flow will be rendered sufficient to actuate other relays connected with the line.

[Claims 6 to 24 not printed in the Gazette.]

878,018. LOCK-OUT TELEPHONE SYSTEM. ARTHUR F. POOLE, Wheeling, W. Va. Filed Dec. 30, 1905, Serial No. 294,028. Renewed Sept. 27, 1907. Serial No. 394,810.



1. In a telephone system, the combination with a party line, of a plurality of substations connected therewith, telephonic apparatus at each substation, a source for supplying current to the line and substations, a relay at each substation for controlling the operativeness of the telephonic apparatus thereat, said relay having two windings, means upon actuation of substation apparatus for causing first current flow through one of said windings to energize the relay and then current flow also through the other winding to assist in maintaining energization of said relay, energization of said relay causing the telephonic apparatus to become effective.

2. In a telephone system, the combination with a line, of a plurality of substations connected therewith, a source for supplying current to the line and substations, telephonic and switching apparatus at each substation, a relay for controlling the operativeness of the telephonic apparatus, said relay having two windings, actuation of switching apparatus at the substation causing first the closure of a circuit including one of said windings, means adapted upon current flow through said winding to cause the closure of a circuit in parallel with said first circuit and including telephonic apparatus and the other relay winding, said circuits being in parallel and affording a path through the substation for current from said source, said first winding being of high resistance whereby the greater part of said current will flow through the circuit containing the telephonic apparatus and the other winding, said telephonic apparatus being rendered effective upon actuation of said relay.

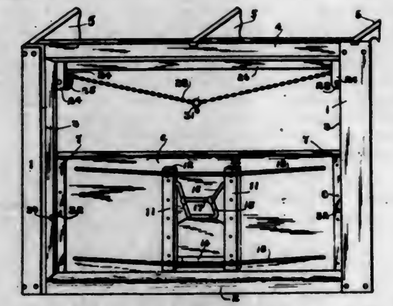
3. In a telephone system, the combination with a line, of a substation connected therewith, a source for supplying current to the line and substation, telephonic and switching apparatus at the substation, a relay at the substation controlling the operativeness of the telephonic apparatus, two windings for said relay, actuation of switching apparatus at the substation causing first closure of a circuit including one of said windings whereby the relay is energized to render the telephonic apparatus operative, a second circuit closed upon actuation of the relay and including telephonic apparatus, said windings acting cumulatively to maintain energization of the relay, said first winding being of high resistance whereby the current flow through the substation is all confined practically to the circuit containing the telephonic apparatus.

4. In a telephone system, the combination with a line, of a substation connected therewith, a source for supplying current to the line and substation, telephonic apparatus at the substation normally ineffective, a relay at the substation having two windings, actuation of switching apparatus at the substation causing current flow through one of said windings to energize the relay to render the telephonic apparatus operative, the second winding of the relay being included in circuit upon energization of the relay by the first winding to assist said first winding in maintaining actuation of the relay.

5. In a telephone system, the combination with a line, of a substation connected therewith, a source for supplying current to the line and substation, telephonic apparatus at the substation normally ineffective, a relay at the substation having two windings, actuation of switching apparatus at the substation causing current flow through one of said windings to energize the relay to render the telephonic apparatus operative, the second winding of the relay being included in circuit upon energization of the relay by the first winding to assist said first winding in maintaining actuation of the relay, said windings upon action of the relay being included in parallel circuits.

[Claims 6 to 53 not printed in the Gazette.]

878,019. GRAIN-CAR DOOR. MATTHEW REID, Somerset, Manitoba, Canada. Filed May 29, 1907. Serial No. 376,226.



1. In a device of the class described the combination with the side posts of the door frame and the grain door sliding vertically on the side posts, of a chain secured at its ends to the ends of the grain door, a pair of overhung pulleys over which the chain passes and a hook on the central part of the chain adapted to engage with a part of the door when the door is raised to hold said door in raised position as and for the purpose specified.

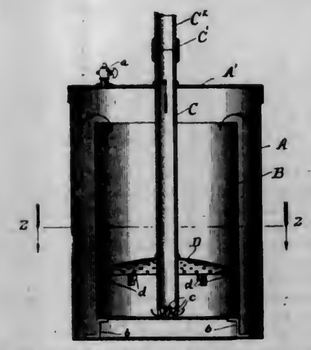
2. In a device of the class described the combination with the car door frame and a grain door adapted to slide vertically on the frame, of hangers above the door and capable of lateral movement, and a chain passing over pulleys carried by the hangers and with its ends fastened to the door, as and for the purpose specified.

3. In a device of the class described the combination with the frame of the car door and the grain door adapted to slide vertically on tracks carried by the side members of the frame, of a set of hangers slidable on a track longitudinally within the car and above the door, pulleys carried by the hangers, a chain having its extending ends fastened to the grain door and passing upwardly through the pulleys, and a hook carried by the chain adapted to engage with a receiving member on the grain door, as and for the purpose specified.

4. In a device of the class described the combination with the frame of the car door, the grain door adapted to slide vertically on the side members of the frame, of a U-shaped track swung from the cross supports of the car, hangers adapted to operate on the track and carrying pulleys at their lower ends the said hangers being spaced apart by means of an inter-connecting beam, a chain passing over the pulleys and having its extending ends connected to the grain door, and a hook carried by the chain adapted to engage with a receiving member carried towards the lower edge of the grain door, as and for the purpose specified.

5. In a device of the class described, a U-shaped track suspended to have a lateral swinging movement from the top of the car, hangers having a portion engaging each side of the track, a spacing bar below the track to which the hangers are secured, a door and a chain connecting the door to the hangers.

878,020. CULINARY BOILER OR STEAMER. ALFRED B. RICE, Racine, Wis. Filed June 15, 1906. Serial No. 321,838.



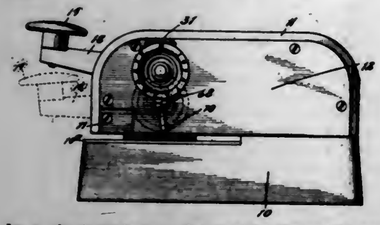
1. A boiler of the character described, comprising an outer casing, an inner vessel of smaller diameter arranged within said outer casing and open at its top, a perforated false bottom within the inner vessel and a discharge pipe leading from beneath the false bottom of the inner vessel above the open top of said inner vessel and through the upper part of the outer casing, said outer casing being closed against the escape of steam except through said discharge pipe.

2. A boiler of the character described, comprising an outer casing having a cover secured thereto, an inner vessel of smaller diameter arranged within said outer casing and being open at its top, a discharge pipe leading downward through the cover of said outer casing to a point near the bottom of the inner vessel and a perforated false bottom within said inner vessel arranged above the lower end of said discharge pipe whereby the steam will pass through the material and whereby the juices extracted may be withdrawn through said discharge pipe.

3. A boiler of the character described, comprising an outer casing having a cover secured thereto and having a vent cock, an inner vessel of smaller diameter arranged

within said outer casing, said inner vessel being open at its top to permit the steam to pass downward therethrough, a perforated false bottom within said inner vessel and an open ended discharge pipe extending from adjacent the bottom of said inner vessel below said false bottom up through the cover of said casing and provided with a coupling to which a pipe may be attached for withdrawing the contents from the inner vessel.

878,021. CHECK-PROTECTOR. NATHANIEL B. RICE, Chicago, Ill., assignor of one-half to Alfred D. Plamondon, Chicago, Ill. Filed June 5, 1907. Serial No. 377,420.



1. In a check-protector, the combination with mechanism for advancing a strip of paper, of means for breaking the surface of the paper from both sides, and means for impressing a character upon the previously broken portion of said strip.

2. In a check-protector, the combination with means for advancing a strip of paper, of means for giving to said strip of paper a plurality of perforations to break the surface of the same from both sides over a given area, and means for printing a character upon the previously broken area.

3. In a check-protector, the combination with a base, an operating-lever mounted thereon, and means operated by said lever to advance said strip of paper, of means operated by said lever to puncture and break the surface of said paper from both sides over a determined area, and means operated by said lever to print a character upon the previously broken area.

4. In a check-protector, the combination with a base, an operating-lever supported thereon, of means operated by said lever adapted to give to said paper a number of perforations from both sides in order to break the surface over a given area, mechanism operated by said lever adapted to print a character upon the previously broken surface, and means operated by said lever to advance the strip of paper a given distance after each puncturing and printing operation.

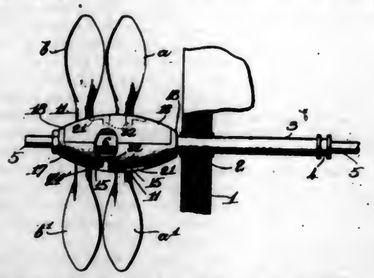
5. The combination with a base and an operating lever mounted on said base, of means carried by said base and operated by said lever to break the surface of a strip of paper from both sides over a given portion of its area, mechanism operated by said lever to print a character upon the previously broken surface of said strip of paper, and mechanism operated by said lever to intermittently advance the strip of paper after each breaking and printing operation.

[Claims 6 to 8 not printed in the Gazette.]

878,022. SPEED-CONTROLLING REVERSING-PROPELLER. CHARLES F. ROPER, Hopedale, Mass., assignor to C. F. Roper & Company, Hopedale, Mass., a Firm. Filed Oct. 29, 1906. Serial No. 341,004.

1. A rotatable shaft, a hub fixed thereon and having rigid, radially extended and elongated bearing studs thereon in diametrically opposite pairs, a propeller blade pivotally mounted on each stud, each blade having a deep socket extending well into the solid body thereof to receive the stud, and a single controlling means to effect equal and opposite angular movement of the blades of a pair and also to vary the angularity of the blades of one pair relatively to those of the other pair.

2. A rotatable shaft, a hub fixed thereon and having integral therewith opposite pairs of independent, radially extended and elongated bearing studs thereon, a propeller blade pivotally mounted on each stud and having a deep socket extended into the solid body of the blade to receive the stud, and controlling means common to both pairs of blades to vary the relative angularity of the blades of the two pairs.



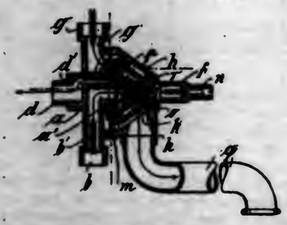
3. A rotatable shaft, a hub fixed thereon and having opposite pairs of integral radially extended and elongated bearing studs thereon, and a propeller blade pivotally mounted on each stud, each blade having a heavy, elongated hub the opening through which is extended into the body of the blade, to receive the stud and provide an elongated, strong and rigid bearing-connection between the blade and the hub, and a lateral foot extended from the blade-hub provided with a follower eccentric to such hub, combined with controlling means operatively connected with the eccentric followers of the several blades, to effect equal and opposite angular movement of the blades of a pair and also to vary the angularity of the blades of one pair relatively to those of the other pair.

4. A rotatable shaft, a hub fast thereon and having rigid, oppositely extended and elongated pairs of bearing studs thereon, two pairs of propeller blades pivotally mounted on said studs, each blade having a deep socket to receive the stud and a follower eccentric to the base of the blade, and a combined controller and casing surrounding the hub and shaft and movable longitudinally relatively thereto, the controller being longitudinally slotted on opposite sides to receive the bases of the blades and having cam-slots to coöperate with the followers.

5. A rotatable shaft, a hub fast thereon and having rigid, oppositely extended and elongated pairs of bearing studs thereon, two pairs of propeller blades pivotally mounted on said studs, each blade having a hub-like base provided with a stud-receiving socket extended into the body of the blade, and a follower eccentric to the base, and a separable two-part combined controller and casing surrounding the hub and shaft and movable longitudinally relatively thereto, the parts of the controller being longitudinally slotted to receive the bases of the blades and having cam-slots to receive and coöperate with the followers.

[Claims 6 to 11 not printed in the Gazette.]

878,023. MIXING-VALVE. RICHARD ROST, Leipsig, Germany. Filed May 20, 1907. Serial No. 374,792.

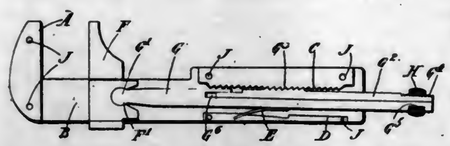


1. A mixing valve for cold and warm water, comprising a rotary cone, a disk-valve, and a flexible connection between said cone and valve, whereby the closing motion of the valve is retarded.

2. A mixing valve for cold and warm water, embracing a rotary cone, a disk valve, and a flexible connection between said cone and valve, the port of said disk valve moving successively from closed position over one of two recesses in the valve-seat and hot-water opening.

3. A mixing valve for cold and warm water, embracing a rotary cone, a disk-valve, and a flexible connection between said cone and valve, said cone having only a part of its widened circumference in engagement with the inclosing cap of said cone, for controlling the opening and closing of the hot-water opening, as the valve is actuated.

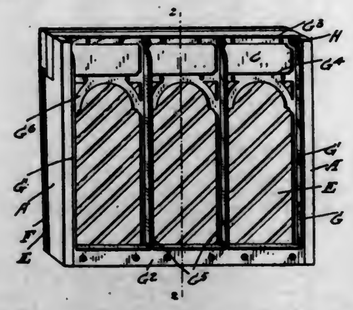
878,024. SPANNER AND WRENCH. JOHN SINCLAIR, Belfast, Ireland. Filed May 6, 1907. Serial No. 372,197.



1. In a spanner or wrench the combination of a handle plate, a fixed jaw thereon, a movable jaw sliding on said handle plate, a compound bar G in two portions, one portion pivoted to the movable jaw and the other portion movable relatively to the pivoted portion, said bar extending parallel with and beyond the handle plate, means for quickly engaging and disengaging the bar and the handle plate and means for moving the two portions of the bar relatively to each other, substantially as set forth.

2. In a spanner or wrench the combination of a handle plate B, a fixed jaw thereon, a movable jaw sliding on said handle plate, a recess F^1 in said movable jaw, a compound bar G having a head G^1 pivoted in the recess, a rack C on the handle plate, teeth G^2 on a movable portion G^3 of the bar adapted to engage with the teeth on the rack, a spring E acting to keep said teeth normally in engagement with the rack, a tongue on the movable portion G^3 of the bar engaging with the recess on the other portion to keep said portions in alinement, a cover plate B^1 inclosing the rack and the adjacent portions of the bar, a screw-thread near the end of the portion G^3 of the bar, a recess on the adjacent part of the other portion of the bar and a nut held in the recess and engaging with the screw-thread all substantially as set forth.

878,025. UPRIGHT PIANO. JOHN J. THOMAS, Guelph, Ontario, Canada. Filed June 22, 1907. Serial No. 380,335.

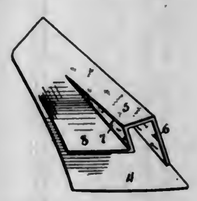


1. In an upright piano, the combination with the interior wooden piano frame comprising the side posts, bottom block head block and wrest plank and sounding board suitably disposed and held thereby, of a sustaining frame comprising the end vertical bars held on the inside of the posts, the intermediate vertical bars, the top and intermediate horizontal plates secured to the head block and the bottom horizontal plate secured to the bottom block as and for the purpose specified.

2. In an upright piano, the combination with the interior wooden piano frame comprising the side posts, bottom block, head block and wrest plank and sounding board suitably disposed and held thereby, of a sustaining frame comprising the end vertical angle bars held on the inside of the posts, the intermediate vertical rib bars, the top and intermediate horizontal plates secured to the head block and the bottom horizontal angle plate secured to the bottom block, the vertical bars and bottom plate having their rear sides lie flush with the rear sides of the wooden posts of the wooden frame as and for the purpose specified.

3. In an upright piano, the combination with the interior wooden piano frame comprising the side posts, bottom block head block, and wrest plank and sounding board suitably disposed and held thereby, of a sustaining frame comprising the end vertical bars held on the inside of the posts the intermediate vertical bars, the top and intermediate horizontal plates secured to the head block and the bottom horizontal plate secured to the bottom block, the intermediate plate having downwardly depending portions forming arches extending between the vertical bars as and for the purpose specified.

878,026. PLOW-POINT. WATSON TITUS, South Haven, Kans., assignor of one-sixth to Charles C. Shawver and one-sixth to Charles P. Hangen, Wellington, Kans., and one-third to Charles H. Davis, South, Haven, Kans. Filed June 15, 1903. Serial No. 161,610.



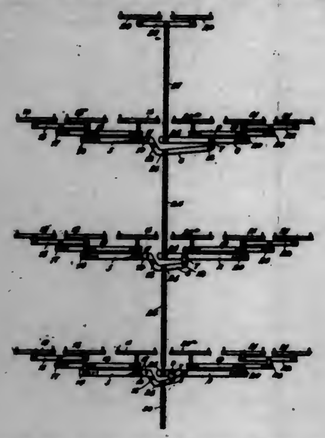
A plow point comprising a body having on its under side an integral, rectangular, tapering socket portion, and a resilient tongue integral with the body and connected thereto at one end, one edge of the tongue being connected to one side of said rectangular socket portion, a tapering space being provided between the body and the tongue and that portion of the socket to which the tongue is connected.

878,027. DRAFT-EQUALIZER. JENNINGS VAN MATRE, Paso Robles, Cal. Filed Jan. 28, 1907. Serial No. 354,471.

1. In a draft equalizer, the combination with an evener beam having a rearwardly offset inner portion provided with a forwardly extending terminal, of a lever fulcrumed between its ends on said terminal and having its inner arm operating in advance of the rearwardly offset portion, whiffletrees connected to the outer ends of the beam and lever, a rearwardly extending draft cable connected to the rearwardly offset portion of the beam in rear of the inner end of the lever, a forwardly extending draft cable connected to the inner end of the lever in direct line with the connection of the rearwardly extending cable with the beam so that said cables are in the line of draft when straight ahead, and whiffletrees connected to the forwardly extending cable.

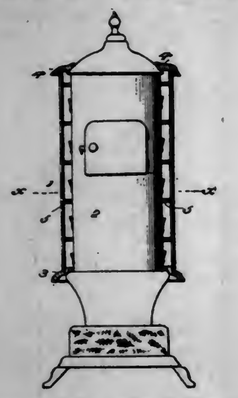
2. In a draft equalizer, the combination with a plurality of evener beams, having inner offset terminal portions provided with forwardly extending terminal ears, of levers fulcrumed between their ends on the terminal ears and having their inner ends disposed at different distances from said ears, whiffletrees connected to the outer ends of

the evener beams and to the outer ends of the levers, and cables connecting the offset portions of the evener beams



with the levers of the next adjacent beams, said cables being disposed in substantial alinement.

878,028. HEATING-STOVE. HARRY WAGNER, St. Louis, Mo. Filed Feb. 26, 1907. Serial No. 359,348.



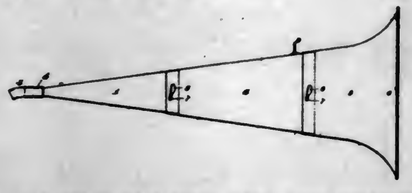
1. In combination with a stove, a jacket or casing inclosing the same and spaced therefrom and projections studding the inner side of said jacket and touching the outer surface of the stove, said projections being flattened and tapering to a point towards their inner ends to bring a minimum amount of metal in direct contact with the stove body.

2. In combination with a stove, a jacket or casing inclosing the same and spaced therefrom, and flattened and tapered projections studding the inner side of the said jacket, the said projections having a staggered arrangement to cause air circulating in the space between the stove and casing to take a tortuous path, the tapered ends of the projections touching the stove to hold the casing spaced therefrom.

3. In combination with a heater, a sheet metal casing surrounding the same and having portions partly cut therefrom and pressed inward to form openings in the side of the casing, and a plurality of inner projections extending across the space between the heater and casing, said projections having a horizontal arrangement and tapered towards their inner ends to bring a minimum amount of metal in contact with the heater.

4. The combination of a stove, rings carried by the stove, a casing inclosing the stove and spaced therefrom, the said casing being held between the rings, and projections studding the inner side of the casing, the said projections tapering to a point and engaging the stove to hold the jacket spaced therefrom.

878,029. PHONOGRAPH-HORN. PETER WEBER, East Orange, N. J., assignor to New Jersey Patent Company, Orange, N. J., a Corporation of New Jersey. Filed June 29, 1904. Serial No. 214,595.

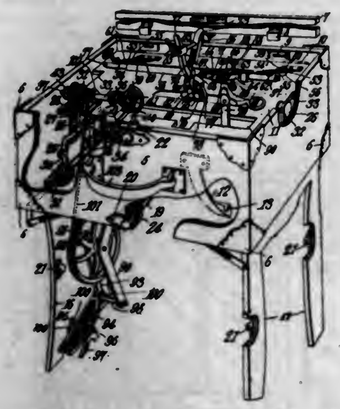


1. As a new article of manufacture, a horn comprising a plurality of tapered sections provided with coöperating projections and inclined slots having enlarged portions whereby the sections may be firmly engaged with each other, the taper of the sections and inclination of the locking shoulders being such as to produce such engagement by less than one complete rotation of one section with respect to the adjacent section, substantially as set forth.

2. In a device of the character described, a tapering section having an inclined locking shoulder and a second tapered section having a projection adapted to press against said inclined shoulder, the taper of the sections and inclination of the locking shoulder being such that the overlap of the two sections is reduced by the locking movement, substantially as set forth.

3. As a new article of manufacture, a phonograph horn, made of sections secured together by joints, consisting of projections engaging inclined slots having enlarged portions, substantially as set forth.

878,030. SHEAR-GRINDING MACHINE. GEORGE WEBBER, Pittsfield, Mass. Filed Mar. 21, 1907. Serial No. 363,595.



1. A grinding machine including a case, a pivoted platform disposed within the case and forming a support for the grinding mechanism, and means for locking the free end of the platform in raised or lowered position.

2. A grinding machine including a case, a tilting platform disposed within the case and forming a support for the grinding mechanism, a tool-holder mounted on the platform, and means for locking the free end of the platform in raised or lowered position.

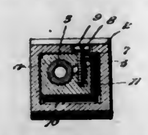
3. A grinding machine including a case, a platform pivotally mounted for tilting movement within the case and forming a support for the grinding mechanism, a guide rod secured to the platform, a tool-holder slidably mounted for longitudinal movement on the guide rod, and means for locking the free end of the platform in raised or lowered position.

4. A grinding machine including a case having pivoted sections movable laterally to open position and constituting supporting legs, a platform pivotally mounted for tilting movement within the case and forming a support for the grinding mechanism, a tool-holder carried by the platform and movable into and out of engagement with the grinding mechanism, and means for locking the free end of the platform in raised or lowered position.

5. A grinding machine including a case having pivoted sections movable laterally to open position and constituting supporting legs, a platform pivotally mounted for tilting movement within the case, a grinding element carried by the platform, means secured to one of the legs for actuating the grinding element, and means for locking the free end of the platform in raised or lowered position.

[Claims 6 to 18 not printed in the Gazette.]

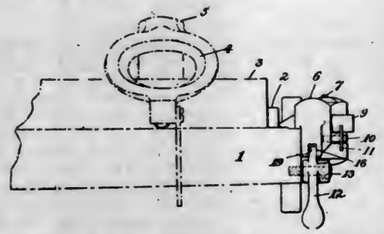
878,031. JOURNAL-BEARING. FRED L. ADAMS, Prophetstown, Ill. Filed Apr. 6, 1907. Serial No. 366,761.



1. The combination with a journal box formed with a substantially rectangular chamber, means for supporting said box, and a shaft extending into said box, of a bearing block encircling the shaft and fitting in said box, and springs interposed between two adjacent walls of said chamber and the block, as and for the purpose set forth.

2. The combination with a journal box provided with a substantially rectangular chamber, means for supporting said box, and a shaft extending into the box, of a block encircling the shaft and fitting within said chamber, said block being square in cross section at its middle and tapering and rounding towards each end, and springs interposed between two adjacent walls of the chamber and the block, and adapted to force said block against the two opposite walls.

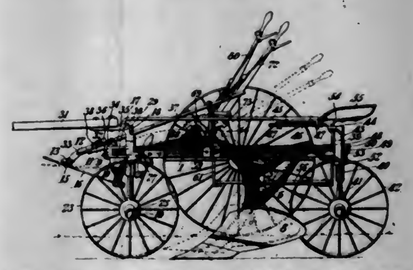
878,032. PHONOGRAPH. EDWARD L. AIKEN, East Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Aug. 3, 1905. Serial No. 272,462.



1. In a phonograph, the combination with the frame or body, rotating mandrel and pivoted end gate carrying a bearing for the outer end of the mandrel and provided with a recess, of a locking latch, a pin carried by the frame upon which said latch is pivoted on an axis substantially parallel to the axis of the mandrel, a spring coöperating with said pin to press against said latch, and a projection extending from said latch in position to engage the recess of said end gate and hold it in its closed position, one of said engaging parts being provided with a sloping cam surface for causing the latch to compress the spring and thereby hold the end gate in position under pressure, substantially as set forth.

2. In a phonograph, the combination with the frame or body, rotating mandrel and pivoted end gate carrying a bearing for the outer end of the mandrel and provided with a recess in its lower surface, of a pin carried by said body and substantially parallel to the axis of the mandrel, a locking latch pivoted on said pin, a spring coöperating with said pin to press against said latch, said latch having an upwardly extending projection adapted to engage the recess in the end gate so as to hold it in its closed position, and in a downwardly extending finger piece for operating said latch, substantially as set forth.

878,033. BREAKING-PLOW. JOHN D. ARRAS, Rawson, Ohio. Filed Jan. 22, 1907. Serial No. 353,504.



1. In a plow, a frame a plow beam attached thereto, a guide mounted upon the frame, a bar slidably engaging said guide, a bearing carried by the bar, a shaft journaled in the bearing, a furrow wheel journaled upon the shaft, a gear segment pivoted upon the guide, a link connecting said segment with said bearing and a shaft and worm gear engaging said gear segment.

2. In a plow, a frame a beam attached thereto, a shaft vertically journaled thereto and having a downwardly inclined portion which forms a spindle, a collar having a cup-shaped end located upon said spindle and being capable of adjustment longitudinally thereof, a wheel having a hub provided at its ends with frusto-conical extensions, one of which enters the cup-shaped end of said collar and a cap having a frusto-conical recess which receives the opposite end of the wheel hub.

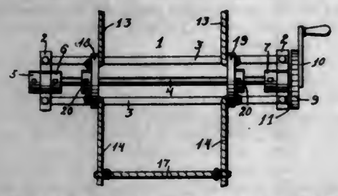
3. In a plow, a frame, a beam pivoted thereto, a platform carried by the frame, a bearing-plate attached to said platform, and lying opposite the rear portion of the beam.

4. In a plow, a frame, a beam pivoted to the frame, a shaft journaled upon the frame, a crank carried by said shaft, a link pivotally connecting the crank with the beam, a ratchet lever fixed to the shaft, a bracket journaled upon the shaft, a ground wheel journaled upon said bracket, a ratchet lever journaled upon the shaft, a spring connected at one end to the last said ratchet lever and at its opposite end to said bracket, a gear segment attached to the first said ratchet lever and lying in the path of the pawl of the last said ratchet lever.

5. In a plow, a frame, a beam pivotally supported thereby, a shaft journaled upon the frame, a crank attached to said shaft, a link connecting said crank with said beam, a spring connected at one end with said shaft and at its other end with said frame, a ratchet lever fixed to the said shaft, a gear segment attached to said ratchet lever, a ratchet lever journaled upon the shaft and carrying a pawl for engagement with said gear segment, a bracket journaled upon the shaft, a ground wheel journaled upon said bracket, and a spring connecting the last said lever with said bracket.

[Claims 6 and 7 not printed in the Gazette.]

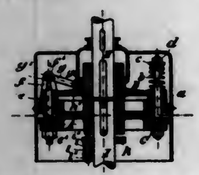
878,034. LOAD-BINDER. TURNER BARNES, Tulip, Mo. Filed June 8, 1907. Serial No. 377,966.



1. A load binding device comprising a portable windlass frame, a transverse shaft journaled in said frame, means for preventing retrograde rotation of the shaft, a crank handle at one end of the shaft for rotating the same, drum heads arranged upon the intermediate portion of said shaft and formed with transverse apertures, cables having their inner ends passed through and secured in said apertures and adapted to be wound in opposite directions upon the portion of the shaft between said heads, hooks upon the outer or free ends of said cables and set screws in said hooks, substantially as and for the purpose set forth.

2. A load binding device comprising a portable windlass frame to rest upon the top of the load, a transverse shaft journaled in said frame, a ratchet wheel on the shaft, a pawl upon the frame to engage said ratchet wheel, a crank handle at one end of the shaft for rotating the same, drum heads adjustably mounted upon the intermediate portion of the shaft and formed at diametrically opposite points with transverse apertures, pairs of binding cables having their inner ends passed through the apertures in said heads and knotted or enlarged to retain them in said apertures, said ends of the cables being adapted to be wound in opposite directions upon the portion of the shaft between said heads, flexible connections between the intermediate portions of the cables of each pair to space them apart, hooks upon the free or outer ends of said cables and set screws in said hooks, substantially as and for the purpose set forth.

878,035. CONE FRICTION-COUPLING. HUGO BAUM-GARTNER-MIČA, Basel, Switzerland. Filed Oct. 2, 1905. Serial No. 281,088.

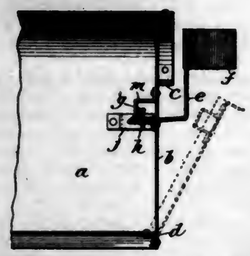


In a double cone friction coupling, a driving shaft and a driven shaft in line with each other, a single cone secured to the said driven shaft and having holes, a single cone ring slidable on the said cone, a double cone slidably secured to the said driving shaft to rotate the said single cone and cone ring, bolts secured to the said cone ring passing through the said holes and springs thereon for holding the said cone ring in contact with one side of the said double cone and the other side of the latter in contact with the said single cone, means for moving the said cone ring out of contact with the said double cone and springs for moving the latter out of contact with the said single cone, all combined substantially as and for the purpose set forth.

878,036. MAIL-BOX SIGNAL. THURSTON G. BROWN, Buckland, Va. Filed May 18, 1907. Serial No. 374,472.

1. A signal for mail boxes and the like, comprising a semaphore pivotally mounted on the box and means operated by the closing of the box closure to lock said signal in exposed and retracted positions, respectively.

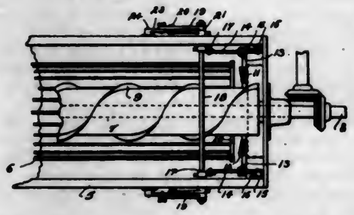
2. A signal for mail boxes and the like, comprising a semaphore carrying member adapted to be pivotally mounted on the box, and means to be associated with the box closure for locking said arm in both the exposed and retracted positions of the semaphore.



3. A signal for mail boxes and the like, comprising a semaphore carrying member adapted to be pivotally mounted on the box having an angularly disposed portion, and a detent to be associated with the box closure to coöperate with the said angular portion to lock the said arm in both the exposed and retracted positions of the semaphore.

4. A signal for mail boxes and the like, comprising a semaphore carrying rod having an angularly disposed arm and an intermediate stop, a yoke adapted to be secured to the box in which the arm is journaled and with which the stop coöperates to limit the movement of the semaphore in both directions, and a detent adapted to be secured to the box closure to engage the angular arm to lock the semaphore in both exposed and retracted positions.

878,037. COB-GATE FOR CORN-SHELLERS. ANDREW H. BERNS and HERMAN A. BERNS, Chebanse, Ill. Filed Feb. 25, 1907. Serial No. 359,225.



1. In a corn sheller, the combination with a shelling cylinder and casing, of a cob gate, corresponding in shape to the end of said casing and mounted adjacent thereto, and means for yieldingly holding said gate in normal position.

2. In a corn sheller, the combination with a shelling cylinder and casing, of a cob gate of substantially ring form mounted at the discharge end of said casing, and means for holding said gate in normal position.
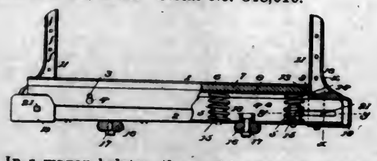
3. The combination with a casing, of a shelling cylinder arranged within said casing and adapted to discharge cobs at the end of said casing, a gate arranged at the end of said casing and adapted to coact therewith and with said shelling cylinder to regulate the discharge of the cobs, said gate being preferably in the form of a ring corresponding with the discharge area at the end of said casing, means for supporting said gate, and means for holding said gate in normally closed position.

4. In a cob gate for corn shellers, the combination of a ring mounted adjacent to the discharge end of the sheller casing, arms extending from said ring, rods engaging with said arms, pivoted arms for supporting the ends of said rods, arms secured to a shaft and pivoted to the opposite ends of said rods, and a spring for holding said shaft so that the gate will be in a normally closed position.

5. The combination of a casing, a cylinder in said casing, a gate closing between said cylinder and said casing at one end thereof, bars or rods connected with said gate, arms for supporting said bars or rods, and an adjustable spring acting on said arms for holding said gate in closed position.

[Claim 6 not printed in the Gazette.]

878,038. WAGON-BOLSTER. FREDERICK W. BLECKLEY, Hazleton, Pa., assignor to Pressed Steel Wagon Bolster Co., Hazleton, Pa., a Corporation of Pennsylvania. Filed Dec. 15, 1906. Serial No. 348,010.



1. In a wagon bolster, the combination of a lower member, stakes mounted thereon, and an upper member movable with respect to the lower member and comprising a section having slots formed therein to receive the stakes, the sides of the slots carrying outstanding flanges, and a second section mounted upon the first mentioned section and formed with slots receiving the before mentioned outstanding flanges.

2. In a wagon bolster, the combination of a lower member, standards adjustable thereon and an upper member, the latter comprising a metal cap piece having slots in its ends and flanges at the edges of the slots, and a board secured to the cap piece and having kerfs to receive the said flanges, the outer parts of the boards separated by corresponding kerfs being adapted to be cut away to receive the standards.

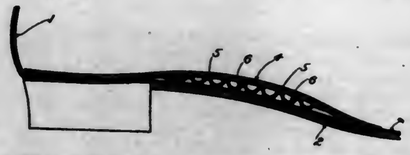
3. In a bolster for vehicles, the combination of companion members, one of said members adapted to have stakes adjustably fitted thereto and the other member comprising a cap piece, a board and a wear plate, the cap piece and wear plate having inwardly extended slots at their ends and flanges projected from one of said parts in line with the sides of said slots and the board having kerfs to receive said flanges, the outer portions of the parts separated by kerfs being adapted to be cut away to receive the standards.

4. In a wagon bolster, the combination of a lower member formed with upwardly extended flanges, an upper member comprising pendent side flanges having a telescoping connection with the before mentioned flanges of the lower member, and stakes adjustably mounted upon the lower member and formed with sockets closing the open ends of the bolster.

5. In a vehicle bolster, the combination of a member having side pieces, or flanges, channeled strut pieces fitted within the bolster and adapted to brace the side pieces thereof and bolts for securing the bolster to the running gear and having their heads fitted between the flanges of the channeled struts.

[Claim 6 not printed in the Gazette.]

878,039. ARCH-SUPPORTER. CHARLES E. BULLARD, Brookline, Mass., assignor of one-half to George R Stetson, New Bedford, Mass. Filed Sept. 13, 1907. Serial No. 392,669.



1. The improved arch-supporter comprising the sole-piece of flexible material shaped to fit within the heel-portion, waist, and forepart of a boot or shoe, and having at the intermediate or shank-portion thereof yielding projections forming a cushion to occupy and support the arch of the wearer's foot.

2. The improved arch-supporter comprising the sole-piece of flexible material shaped to fit within the heel-portion and waist of a boot or shoe, and having at the shank-portion thereof numerous prominent portions containing small air-cells and forming a cushion to occupy and support the arch of the wearer's foot.

3. The improved arch-supporter comprising the sole-piece of flexible material shaped to fit within the heel-portion and waist of a boot or shoe, and having the shank-portion thereof provided with an arch-cushion formed with numerous small hollow yielding projections.

4. The improved arch-supporter having the body-portion thereof shaped to fit within the heel-portion and waist of a boot or shoe, and having hollow yielding projections decreasing in height from middle of shank-portion toward front and rear, respectively, forming a graduated arch-cushion.

5. The improved arch-supporter having the body-portion thereof shaped to fit within the heel-portion and waist of a boot or shoe, and having a yielding cushion containing numerous small air-cells and graduated in height from middle toward front and rear, respectively, to occupy and support the arch of the wearer's foot.

878,040. SEAT-CUSHION. THOMAS N. BURKE, Chicago, Ill. Filed Feb. 21, 1906. Serial No. 302,216.



1. The combination of a seat, a lock strike on the seat having an opening and notches therein, a detachable cushion, means carried by the cushion to automatically make locking engagement with the lock strike when the cushion is arranged in place on the seat, and ribs on the cushion to enter said notches.

2. The combination of a seat, a lock strike on the seat, a detachable cushion having a central opening, spring arms carried by the cushion in said opening, fingers on said arms to make locking engagement with the lock strike when the cushion is arranged in place on the seat, and a key adapted to be inserted in said opening to release the fingers.

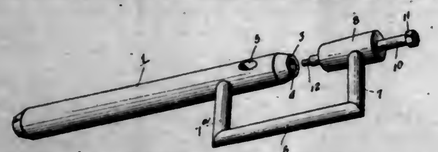
3. The combination of a seat, a lock strike on the seat, a detachable cushion having a central opening, a spring made of spring wire arranged in said opening, said spring having arms connected at their upper ends by a coil and provided at their lower ends with laterally projecting fingers to engage the lock strike, and a removable key adapted to be inserted in said opening to release the fingers.

4. The combination of a seat, a lock strike on the seat, a detachable cushion having a central opening, and yielding fingers carried by the cushion below said opening to automatically make locking engagement with the lock strike when the cushion is arranged in place on the seat, said fingers having beveled ends whereby they are caused to move inwardly when said ends engage the lock strike in arranging the cushion in place.

878,041. RIVET-EXTRACTOR. JOHN BUTSCH, Sr., Crossville, Ill. Filed Aug. 7, 1907. Serial No. 387,546.

The herein described tool comprising a straight handle bar formed at its outer end with a concentric longitudinally extending bore or opening terminating in a rearwardly and outwardly inclined passage which opens upon one side of said bar, said outer end being also tapered to provide a narrow annular bearing surface or anvil, a U-shaped bracket having one of its parallel arms formed integral with said bar and projecting at right angles from the latter at a suitable distance from its anvil end, the

connecting portion of said bracket being parallel with said bar, the other arm of said bracket being formed with a bearing or guide arranged in longitudinal alinement with said bar and spaced from said anvil, said bearing being formed with a longitudinal bore or opening and with a transverse screw threaded opening, a punch slidably arranged in the longitudinal opening in the bearing



and having at its inner end a reduced portion or point and at its outer end an enlarged portion or head, said punch being also formed with a longitudinal groove provided with closed ends, and a stop screw arranged in the threaded opening in said bearing and having a reduced inner end to project into the groove in the punch, substantially as shown and described.

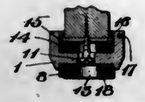
878,042. NUT-LOCK. WILLIAM CHESTERMAN, Walston, Pa., assignor of one-fourth to D. Smiley, one-fourth to L. B. Buterbaugh, and one-fourth to D. W. Richards, Walston, Pa. Filed Jan. 17, 1907. Serial No. 352,754.



1. In a device of the class described, in combination, a bolt having a plurality of longitudinal grooves extending through its threaded portion, said grooves being substantially V-shaped and each comprising a radial and a rearwardly inclined wall, a nut having wrench-receiving faces and an internally threaded opening to receive the bolt and provided in one edge with a recess communicating with said opening and terminating in an open end at one corner of the nut and in a closed end near the adjacent corner, a locking pawl having a transversely disposed cylindrical end pivoted at the open end of said recess with said cylindrical end lying entirely within said recess and lying at all positions of movement in contact with the three adjacent walls of said recess, the free end of said pawl being provided with a pointed tooth adapted to fit in said V-shaped groove for locking the nut against retrograde movement, but adapted to slide freely over said grooves during a forward movement, shoulders on one of said wrench receiving faces and near the closed end of said recess and formed by a cut-away portion, a T-shaped leaf spring having arms adapted to fit said cut away portion and to be flush with the adjacent wrench-receiving faces, the body part of said spring closely fitting said recess and having a tapering beveled end adapted to press on said pawl and form a substantially unbroken surface therewith, said leaf spring and said pawl closely fitting said recess and forming a closure therefor, and a key-hole in the face of said nut adapted to receive a key for rotation directly under said pawl to unlock the same, the moving parts being arranged to lie at all times within the wrench receiving faces of the nut.

2. In a device of the class described, in combination, a bolt having a plurality of longitudinal grooves extending through its threaded portion, said grooves being substantially V-shaped in cross section and each presenting a straight and a rearwardly inclined wall, a nut having an opening internally threaded to receive the bolt and provided in one edge with a recess communicating with said opening and terminating in an open end at one corner of the nut and in a closed end near the adjacent corner, a locking pawl pivoted in said recess at one end and provided at its free end with a tooth to engage the V-shaped grooves for locking the nut against retrograde movement but adapted to slide freely over said grooves during a forward movement of the nut, shoulders in the wrench receiving face of the nut on each side of the closed end of said recess, transverse thereto and formed by an offset in said face, a T-shaped leaf spring having broad arms adapted to lie in said offset portion and to be flush with said wrench-receiving face, said leaf spring also having a narrow body portion adapted to project into said recess and to bear upon the free end of said pawl, said pawl and the body portion of said pawl being of a width equaling that of said recess and jointly forming a closure therefor, and a key hole in the face of the nut adapted to receive a key for rotation immediately under the pawl to raise the same, the parts of the nut being so arranged that the movable parts remain within the plane of the wrench-receiving surfaces when the nut is rotated.

878,043. PAD FOR WRITING-MACHINES, FURNITURE, &c. CLARENCE C. CHRISMAN, St. Louis, Mo. Filed Jan. 12, 1907. Serial No. 352,064.



1. A pad of the class described, comprising a rigid cup-shaped member, in the bottom of which is formed an aperture, an elastic ring arranged on the under side of the cup-shaped member, an elastic ring within the cup-shaped member, and means arranged through the aperture in the cup-shaped member and the elastic ring therein for yieldingly attaching the pad to the base of a structure.

2. A pad of the class described, comprising a rigid cup-shaped member, in the bottom of which is formed an aperture, an elastic ring arranged on the under side of the cup-shaped member, an elastic ring within the cup-shaped member, a rigid member on the top side of the last mentioned elastic member, and means passing through the cup-shaped member, the upper elastic ring, and the rigid member of said ring for yieldingly attaching the pad to the base of an object.

3. A pad of the class described, constructed with a cup shaped member, an elastic member carried by the under side of said cup shaped member, an elastic member arranged within the cup shaped member, and there being air chambers formed in said elastic members.

4. A pad of the class described, constructed with a cup shaped member, an elastic member carried by the under side of said cup shaped member, an elastic member arranged within the cup shaped member, and there being communicating air chambers formed in said elastic members.

5. A pad of the class described, comprising a cup shaped member, in the bottom of which is formed an aperture, an elastic ring arranged on the under side of the cup shaped member, and an elastic ring arranged within the cup shaped member.

[Claims 6 to 8 not printed in the Gazette.]

878,044. ROTARY WATER-PRESSURE MOTOR. PETER T. COFFIELD, Dayton, Ohio, assignor to P. T. Coffield & Son, Dayton, Ohio, a Firm. Filed Aug. 3, 1907. Serial No. 388,870.

1. In a rotary pressure motor, a casing having two or more pockets, a driver or swinging valve located in each pocket, a double piston rotatable in said casing and adapted to seal the motor and to prevent slip or waste of fluid while passing any one of said drivers or swinging valves, and means for supplying and exhausting the water to and from the motor.

2. In a rotary pressure motor, a casing having pockets therein, drivers or swinging valves located in said pockets, a double piston rotatable in said casing, the shaft carrying said piston having inlet and exhaust passages therein through which the supply and discharge of fluid to and from the motor takes place.



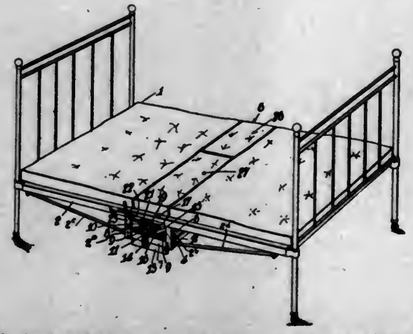
3. In a rotary pressure motor, a casing having pockets therein, drivers or swinging valves in said pockets, a double piston rotatable in said casing, a central shaft carrying said double piston and provided with inlet and exhaust passages and a double-gland stuffing box.

4. In a rotary pressure motor, a casing having pockets therein, drivers or swinging valves in said pockets, and a double piston coöperating with said valves and pockets to prevent slip or waste of fluid at any point in the rotation of the piston, and means for supplying and exhausting the motive fluid.

5. In a rotary pressure motor, a cylinder having pockets, swinging valves in said pockets, springs exerting inward pressure on said valves, and a double piston in the cylinder adapted to move each valve outwardly in passing the same, and permitting said valve to move inwardly when passed by said piston and thereby prevent slip or waste of fluid when the piston is passing the pockets in the cylinder, and means for supplying and exhausting the motive fluid.

[Claims 6 to 16 not printed in the Gazette.]

878,045. INVALID OR HOISTING BED. JOHN J. COLLINS, Clemo, Pa. Filed Mar. 21, 1907. Serial No. 363,623.



1. An invalid bed comprising a frame having oppositely disposed depressions or recesses formed in the side members thereof, means extending transversely of said bed and connected with the side walls of said recesses, a series of cam arms pivotally connected intermediately of their ends to said means, an operating rod pivotally connected with the lower ends of said arms, means for locking said rod in out-drawn position to hold said cam arms upright, a slide supported on said cam arms and a sectional mattress support mounted on said slide.

2. An invalid bed comprising a frame having a vertically movable section, a member arranged transversely of said frame adjacent to said section, supporting arms for said section pivoted intermediately of their ends to said transversely arranged member, means for operating said arms to raise and lower said section and a sliding member arranged on said section.

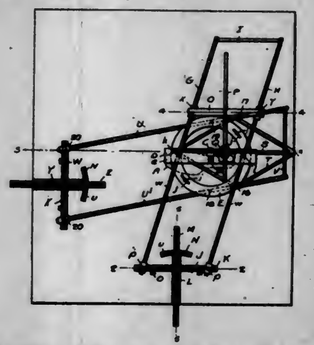
3. An invalid bed comprising a frame having a vertically movable section, supporting arms for said section pivoted intermediately of their ends to said frame, means for operating said arms to raise and lower said section, a sliding member arranged on said section and a bed-pan supporting member arranged to slide transversely in said vertically movable section.

4. An invalid bed comprising a frame having a vertically movable section, supporting arms for said section pivoted intermediately of their ends to said frame, means for operating said arms to raise and lower said section, a sliding member arranged on said section, a bed-pan supporting member arranged to slide transversely in said vertically movable section and means for locking said slide in closed position.

5. An invalid bed comprising a frame having a vertically movable section, supporting arms for said section pivoted intermediately of their ends to said frame, means for operating said arms to raise and lower said section, a sliding member arranged on said section and a spring pressed latch for engaging said slide to lock it in closed position.

[Claim 6 not printed in the Gazette.]

878,046. PATTERN-GRADING MACHINE. LOUIS E. CÔTÉ, Ottawa, Ontario, Canada. Filed May 23, 1906. Serial No. 318,424.



1. In a device of the class described the combination with the means for producing a copy of a pattern normally enlarged or decreased in two different directions in different proportions of mechanical means operable independently of the means for producing the copy for shifting the point at which the contour of any given side of the copy shall start.

2. In a device of the class described the combination with a marker and the follower of means for transmitting the movement of the follower to the marker and enlarging or decreasing it in two given directions in different proportions and means for adjusting the transmitting means to change the angular relation of the two directions of enlargement or decrease as and for the purpose specified.

3. In a device of the class described the combination with the follower and marking means of means for communicating the motion of the follower in a given direction and simultaneously increasing or decreasing the amount of motion so transmitted, means for transmitting the motion of the follower in a direction inclined to the first direction to the marker and simultaneously increasing or decreasing the amount of motion transmitted, means for varying the ratio of increase or decrease of the motions in either direction and means for adjusting the transmitting means to change the angular relation of the two directions of enlargement or decrease as and for the purpose specified.

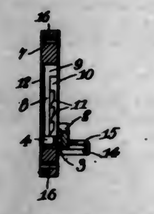
4. In a device of the class described the combination with the marking means, a block supporting the same having two slots transversely extending therethrough in different directions, of two rods extending through said slots

respectively and slidable therein, a follower, means operated by the follower for giving each rod a parallel movement and means for increasing or decreasing the amount of motion transmitted from the follower to the rods in different ratios for each rod as and for the purpose specified.

5. The combination with the follower and the supporting means therefor, of a lever pivoted to the supporting means, and having a scale thereon, means permitting a sliding movement of the end of the lever in a given direction, a follower, means for giving the follower the movement of a point on said lever in a given direction, and means for adjusting the said means to change the point, the ratio of increase or decrease of the movement of the marker in a given direction over the movement of the follower, being the ratio of the distance from the end to the pivoting point of the lever to the distance from the pivoting point to the said adjustable point, as and for the purpose specified.

[Claims 6 to 25 not printed in the Gazette.]

878,047. HASP-LOCK. GEORGE F. DARRACOTT, Aberdeen, Miss. Filed Aug. 30, 1907. Serial No. 390,695.



1. A lock of the class described, comprising a hasp bar, a headed keeper engaging stud on one end of said bar, a keeper plate having formed therein a segmental slot adapted to be engaged by said headed stud, means arranged in said keeper plate to prevent the upward movement of the hasp bar on said keeper plate, an apertured locking lug on said keeper plate, and a similar sealing lug on said hasp adapted to be engaged with the lug on said keeper plate to receive a sealing device, substantially as described.

2. A lock of the class described, comprising a hasp bar, a keeper engaging stud secured to one end of said bar, a laterally projecting head on said stud, a keeper plate having formed therein a curved or segmental slot adapted to receive the headed stud on the hasp bar, inwardly projecting flanges formed along the opposite edges of said slot, locking notches formed on the inner side of said flanges and adapted to be engaged by the head on the stud of said hasp bar, and means to hold said head in engagement with said notches, substantially as described.

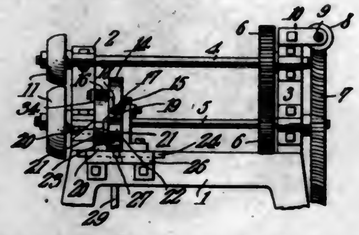
3. A lock of the class described, comprising a hasp bar, a keeper engaging stud secured to one end of said bar, a laterally projecting head on said stud, a keeper plate having formed therein a curved or segmental slot adapted to receive the headed stud on the hasp bar, inwardly projecting flanges formed along the opposite edges of said slot and adapted to be engaged by the head on the stud of said hasp bar, and a spring adapted to hold said head in engagement with said flanges, substantially as described.

878,048. SHEARING AND PUNCHING MECHANISM. JAMES I. DEPEW, Loup City, Nebr. Filed Aug. 5, 1907. Serial No. 387,131.

1. In a machine of the character described the combination with a fixed jaw and a pivoted jaw coöperating therewith; of revoluble means for actuating the pivoted jaw in one direction, and manually operated means for shifting the jaw into engagement with the revoluble means.

2. In a machine of the character described the combination with a fixed jaw and a pivoted jaw; of revoluble means for actuating the jaw in one direction, manually operated means for shifting the jaw into engagement with said revoluble means, and means for locking the jaw out of engagement with the revoluble means.

3. In a machine of the character described the combination with a pivoted member and teeth upon said member; of a revoluble mutilated gear disposed to mesh with and shift said member in one direction during the rotation of the gear, and means for shifting said member into engagement with the gear.

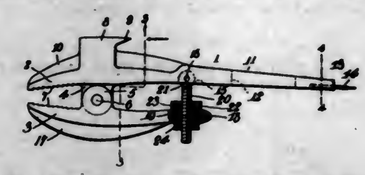


4. In a machine of the character described the combination with a pivoted member, and means for supporting material in the path of said member to be operated upon thereby; of a revoluble actuating element disposed to intermittently engage the pivoted member and shift it in one direction, and manually operated means for shifting said member in the opposite direction.

5. In a machine of the character described the combination with a pivoted member, and means for supporting material in the path of said member to be operated upon thereby; of a revoluble actuating element disposed to intermittently engage the pivoted member and shift it in one direction, manually operated means for shifting said member in the opposite direction, and means for locking said member against movement in one direction.

[Claim 6 not printed in the Gazette.]

878,049. COMBINATION-TOOL. EDMUND B. DIKEMAN, Chicago, Ill. Filed Aug. 1, 1907. Serial No. 386,630.

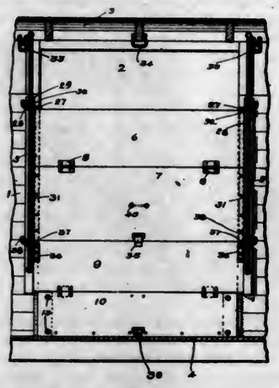


1. In a combination tool of the character described, a main or stationary jaw having a handle, a strengthening rib on the outer side of said jaw, an adjustable jaw pivotally connected to said main jaw and co-acting therewith to form a vise, a strengthening rib on the outer side of said adjustable jaw, an adjustable bar pivotally mounted in said main jaw, an adjustable mechanism carried by said adjustable jaw to engage said adjusting bar, and means to removably secure said adjusting mechanism in operative position, substantially as described.

2. A combination tool comprising a pair of jaws having on their inner sides apertured connecting lugs, a pivot pin arranged through said lugs whereby said jaws are pivotally connected together, an adjusting bolt pivotally mounted on the inner side of one of said jaws, a thimble nut loosely mounted in the adjacent end of the opposite jaw, an operating head formed on the inner end of said thimble nut, a securing nut adapted to be screwed onto the outer end of said thimble nut to hold the same in place when the latter is screwed on or off said adjusting bolt to open or close the jaws of the wrench, substantially as described.

3. In combination with a tool of the character described, a main or stationary jaw having an integral handle, a strengthening rib on the outer side of said jaw, an apertured pivot lug on the inner side of the same, an adjustable jaw, a strengthening rib on the outer side of said jaw, an apertured pivot lug on the inner side of the same to engage the pivot lug on said main jaw, a pivot pin arranged through said lugs whereby said jaws are pivotally connected together, a threaded adjusting bolt pivotally mounted in said main jaw, a thimble nut loosely mounted in said adjustable jaw, interior threads formed in one end of said nut to engage the threads on said bolt, exterior screw threads on the outer end of said nut, and a securing nut adapted to be screwed onto the threaded outer end of said thimble nut whereby the same is held in an operative position in said adjustable jaw, substantially as described.

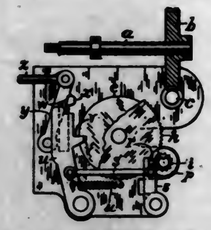
878,050. GRAIN-DOOR. WINFIELD S. DRISKELL, Gretna, Nebr. Filed Apr. 26, 1906. Serial No. 313,832.



1. In a vertically slidable and swingable grain door, the combination with vertical guide rods and laterally extending pivot bars carried by the door and slidably and pivotally connected with the guide rods, of stirrups secured adjacent the car roof, and hooks formed on the ends of the pivot bars, said hooks being engageable with the stirrups by raising the door to the top of the guide rods and then swinging the same on the axes of the pivot bars.

2. In a two-part vertically slidable and swingable grain door, the combination with vertical guide rods and laterally extending pivot bars carried by each part of the door, of rings passing diagonally around the pivot bars and guide rods to slidably and pivotally connect the same, double stirrups secured adjacent the car roof, hooks formed on the ends of the pivot bars, said hooks being engageable with the stirrups by raising the door parts and then swinging the same on the axes of the pivot bars, means carried adjacent the car roof for supporting one side of the upper door part, and means carried on said upper door part for supporting one side of the lower door part.

878,051. MECHANICAL MOVEMENT. ELMER G. EBERHARDT, Newark, N. J., assignor to Eberhardt Brothers Machine Company, Newark, N. J., a Corporation of New Jersey. Filed May 21, 1907. Serial No. 374,825.



1. In a mechanical movement, the combination, with a rotary stop-disk having a notch in the edge, of mechanism for rotating the disk a single revolution, a movable stop-piece with a spring for pressing it toward the rim of the disk and having one side perpendicular to the motion of the disk and the opposite side sloped in the direction of the motion, the notch in the disk having a radial side to be arrested by the perpendicular side of the stop-piece and a sloping side corresponding with the sloping side of the stop-piece, the means for pressing the stop-piece into the notch operating to complete the rotation of the disk.

2. In a mechanical movement, a rotary stop-disk with a notch in the edge, means for securing an exact complete rotation of the disk, comprising a clutch rotatable with the stop-disk, a continuously running driver to rotate such clutch, a stop-lever having a stop piece with one side sloped in the direction of the disk's motion and pressed normally toward the edge of the disk, the notch in the disk being correspondingly sloped upon its forward side, and means actuated by the stop-lever for disconnecting the clutch from the rotating driver when the stop-piece has partly entered the notch.

3. In a mechanical movement, a rotary stop-disk with a notch in the edge, means for securing an exact complete rotation of the disk, comprising a gear rotatable with the stop-disk, a pinion for driving such gear having a clutch upon its hub, a continuously running driver with a corresponding clutch, means for pressing the clutch parts normally together, a clutch-lever for retracting the clutch parts when desired, a stop-lever having a stop-piece with one side sloped in the direction of the disk's motion and pressed normally toward the edge of the disk, the notch in the disk being correspondingly sloped upon its forward side, and a connection between the stop-lever and clutch-lever operating when the stop-piece partly enters the notch to disconnect the clutch and stop the positive movement of the disk, its final movement being effected by the sloping face of the stop-piece.

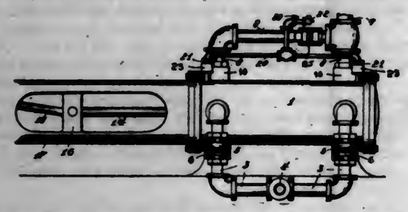
4. In a mechanical movement, a rotary stop-disk with a notch in the edge, means for securing an exact complete rotation of the disk, comprising a gear rotatable with the stop-disk, a pinion for driving such gear having a clutch upon its hub, a continually running driver with a corresponding clutch, means for pressing the clutch-parts normally together, a clutch-lever for retracting the clutch-parts when desired, a stop-lever having a stop-piece with one side sloped in the direction of the disk's motion and pressed normally toward the edge of the disk, the notch in the disk being correspondingly sloped upon its forward side, an arm adjacent to the stop-lever with "pull-out-rod" for oscillating the same, and a detachable dog and pawl connection between the arm and the stop-lever to automatically release the stop-lever when the stop-piece is pulled from the notch in the disk, and a connection between the stop-lever and clutch-lever operating when the stop-piece partly enters the notch to disconnect the clutch and stop the positive movement of the disk.

5. In a mechanical movement, a rotary stop-disk with a notch in the edge, means for securing an exact complete rotation of the disk, comprising a gear rotatable with the stop-disk, a pinion for driving such gear having a clutch upon its hub, a continuously running driver with a corresponding clutch, means for pressing the clutch-parts normally together, a clutch-lever for retracting the clutch-parts when desired, a stop-lever having a stop-piece with one side sloped in the direction of the disk's motion and pressed normally toward the edge of the disk, the notch in the disk being correspondingly sloped upon its forward side, and the pinion having a collar p with sloping notch q therein, the clutch-lever s having clutch-shifting pin r movable into the path of the collar and engaging the sloping notch, a connection between the stop-lever and clutch-lever for retracting the shifting-pin r from the sloping notch q when the stop-piece is retracted, and means for momentarily withdrawing the stop-lever from the edge of the disk.

878,052. PUMP. JOHN A. ELLIOTT, Butte, Mont. Filed Dec. 17, 1906. Serial No. 348,273.

A pump comprising a cylinder having oppositely disposed valve-controlled inlet and exhaust ports opening hori-

sontally thereinto at points adjacent its ends, main inlet and discharge pipes, branch pipes connecting said main pipes respectively with the inlet and exhaust ports, exhaust valves arranged in the branch exhaust pipes vertically disposed branch relief pipes communicating with the cylinder at points near its ends and on a vertical line centrally between the inlet and exhaust ports, a main relief pipe con-



necting the branch pipes, pressure operative relief valves reversibly arranged in the latter, a manually operable cut off valve removably applied to the end of the main relief pipe for controlling the opening and closing of the latter, a check valve disposed in the discharge pipe between the exhaust valves and a piston for reciprocation in the cylinder.

878,053. HARDENING OF CAST-IRON AND THE LIKE. HELEN EMETT, New Westminster, British Columbia, Canada, administratrix of George Henry Hawkins Emett, deceased. Filed Feb. 17, 1906. Serial No. 301,679.

1. The hereindescribed compound for hardening iron, consisting of flowers of sulfur, red lead and lamp black.

2. The hereindescribed compound for hardening iron consisting of flowers of sulfur, dry red lead and lamp black in substantially the proportions of 8 pounds of sulfur, 1 pound of lead and 4 ounces of lamp black.

878,054. PULLEY. CHARLES F. FOOTE, Salida, Colo. Filed Feb. 9, 1907. Serial No. 356,583.

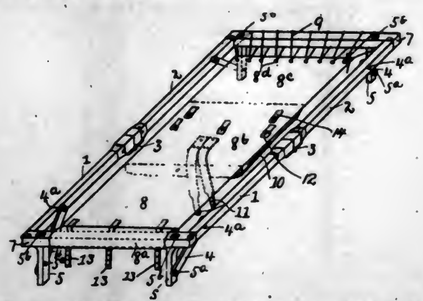


In combination with a pulley designed for use in connection with awnings or the like, said pulley having an eye connected to the block by means of a swivel joint, a guard arranged adjacent to the pulley wheel and block and adapted to have the operating rope or cord passed loosely therethrough, said guard being constructed of a length of wire bent into a coil and having an end portion extended and looped about the aforesaid eye of the pulley.

878,055. CONVERTIBLE COT AND PACK-SACK. CHARLES F. FORSELL and THURE EKROOT, Duluth, Minn. Filed June 18, 1906. Serial No. 322,192.

1. In a convertible cot and packsack, the combination of a frame having detachable side and end rails, of a hammock portion having an open hem at one end adapted to engage one end rail, and provided at its opposite end with a lace adapted to engage the other end rail, detachable legs adapted to engage and support said end rails, pivoted braces connecting said legs to said side rails, a pocket carried by the under side of said hammock, carrying straps secured to the under side of said hammock at a point within said pocket, near the mouth thereof, buckles secured to the under side of said hammock near the closed end of said pocket, flap-closing straps secured to the under face of said hammock near the open hem thereof, and buckles secured to the inner face of said pocket.

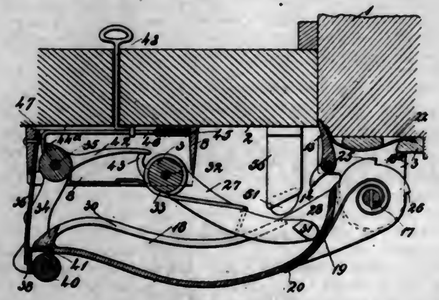
2. A convertible cot and pack sack, comprising a sack having a closing flap provided with an open hem at its free end, carrying straps and buckles secured to the back of said sack, flap closing straps secured to said flap near said open hem, buckles secured to the front of said sack near its lower end, a cot frame having detachable side and end rails, said end rails being made in sections, means for securing the sections of the end rails together, detachable legs, braces for securing said legs to said side rails, and a lengthening piece secured to said sack and provided at its free end with a lace and adapted to be housed within said sack when the device is not in operation as a cot, said sack being adapted to be opened out to form a hammock adapted to coöperate with said frame to form a cot, substantially as described.



3. A convertible cot and pack sack comprising a sack having a closing flap, a lengthening piece secured to the bottom of said sack and adapted to be housed therein when the device is in operation as a pack sack, said lengthening piece being adapted to be drawn out and to coöperate with a part of the body of said sack and with said flap to form a load sustaining hammock portion of a cot, and a frame adapted to coöperate with said hammock portion to form a cot.

4. In a convertible cot and packsack, a hammock and sack member comprising a sack having a closing flap, and a lengthening piece secured to the bottom of said sack, said lengthening piece being adapted to coöperate with a part of the body of said sack and with said flap to form said hammock member.

878,056. SAFETY DOOR CHECK AND LOCK. VINCENS FRANCEK and JOHANN DYTRYCH, Chicago, Ill. Filed Sept. 4, 1907. Serial No. 391,379.



1. In a door check and lock, the combination of a swinging arm pivoted to the door casing, a latch carried by the door and movable into and out of engagement with the arm and arranged to engage the arm and prevent movement thereof when the door is closed, and key-operated means to release the latch.

2. In a door check and lock, the combination of a swinging arm pivoted to the door casing, a link connected to the door and having a sliding engagement with the arm limited to stop the door when swung partly open, a latch

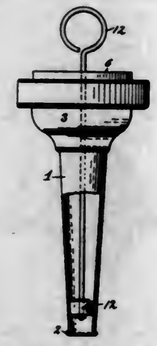
carried by the door and movable to engage the arm when the door is closed, and key operated means to release the latch and disengage the link from the arm.

3. In a door check and lock, the combination of a swinging arm pivoted to the door casing and having a spring tending to swing the same in toward the door, a spring latch pivotally connected to the door and arranged to engage the end of the arm and hold the same when the door is closed and a detent pivoted to the door casing beside the arm and arranged to engage the arm and hold the same in open position while the door is open, the detent having a projection extending into the path of the door and arranged to be struck thereby, to release the detent and allow the arm to swing to closed position and engage the latch, when the door is closed.

4. In a door lock, the combination of a spring-actuated swinging arm pivoted to the door casing, a detent for holding the same, a spring locking latch carried by the door and locking with the arm when the door is closed, and means actuated by closure of the door to release the detent and permit the arm to swing to engagement with the latch.

5. In a door check and lock, the combination of a swinging arm pivoted to the door casing, a link pivoted to the door and engaging with the arm, a spring catch pivoted to the door and engageable with the arm when the door is closed, the link having a projecting heel, a lever pivoted on the door and bearing against said heel and adapted to disengage the link from the arm, said lever and latch having projections, and a key-operated slide having an offset portion bearing against said projections and arranged to release the latch and turn the lever when operated.

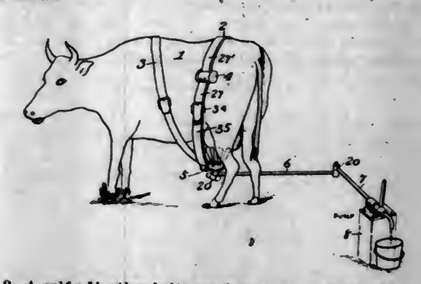
878,057. TEAT-CUP. FLOYD B. GROFF, St. Johnsville, N. Y. Filed July 2, 1907. Serial No. 381,892.



A teat-cup, consisting of a tapering tube, terminating at its upper end in a bowl and horizontal flange; a threaded ring, fitting around said bowl under said flange; a mouth-piece, consisting of an annular ring, a horizontal flange and an apron, said mouth-piece fitting into said bowl with its flange resting on said horizontal flange, and a threaded cap, fitting down on said flange and screwing on said ring, substantially as shown and described and for the purposes set forth.

878,058. SELF-ADJUSTING BELT FOR COW-MILKERS. FLOYD B. GROFF, St. Johnsville, N. Y. Filed Oct. 1, 1907. Serial No. 395,440.

1. The combination of the upper belt 27^1; winding devices 4, one secured to each end of said belt; lower belts 27, secured to the lower part of said winding devices; buckles 34, one secured to the lower end of each of said belts 27; straps 35, secured in said buckles; hook 36, secured to the lower ends of said straps; loops 9^1, and perforated plate 9, secured between said loops, said plate holding the cups, connections, and pipes that lead to a pail, substantially as shown and described and for the purposes set forth.



2. A self-adjusting belt, consisting of a cylinder 21, provided with upper and lower longitudinal slots 28 and 29, respectively; tie-rods 22, 23 and nuts 23^1; roller 26, working around said rod 23; axle 24, journaled in the end pieces of said cylinder; a drum 25, secured on said axle; a belt 27, having one end secured to said drum, its other end passing down over the roller 26, and through said lower slot; a spring 33, having one end secured to said drum and the other to the corresponding end of said tie-rod 22, passing thence up through said upper slot of said cylinder; a perforated disk, provided with notches 31 and 32, situated at the left of said belts and encircling said drum; buckles 34, secured to the free ends of belts 27 and 27^1; straps 35, secured to said buckles, and hooks 36, secured to the lower ends of said straps, said hooks adapted to hook in the loops 9^1, of the perforated plate 9, substantially as shown and described and for the purposes set forth.

3. A self-adjusting belt, consisting of a strap adapted to pass over the back of a milch cow; winding members, one situated on each side of the cow and secured to each end of said strap; straps, each having one end secured to the winding member of said winding device, passing down through the lower part thereof and over a roller; lower straps adjustably secured to the lower ends of said last-mentioned straps, and hooks secured to the free ends of said lower straps, said hooks adapted to be secured in the loops of a perforated plate, substantially as shown and described and for the purposes set forth.

878,059. MAGAZINE-FEED MATCH-BOX. LLOYD HAMILL, Olathe, Kans. Filed July 23, 1906. Serial No. 327,340.

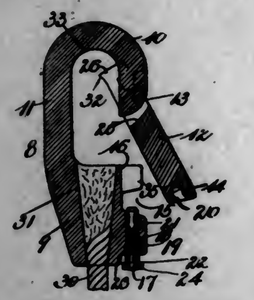


1. A magazine-feed match box, comprising a box portion, parts to form a trough at one end of the same, comprising a body portion to project upwardly and forwardly from the lower front edge of the box portion, and wings to project upwardly and rearwardly from the sides of said body portion and fit against the sides of the box portion, and provided with slots, and a sliding tubular cover to envelop the major portion of the box portion and to enter said slots.

2. A magazine-feed match box, comprising a box portion, an attachment comprising a part extending upwardly and forwardly from the lower front edge of the box portion when the latter is disposed vertically, a part projecting from the lower edge of said upwardly and forwardly arranged portion into the box portion and resting on the lower end thereof, and parts or wings projecting upwardly and rearwardly from the sides of said upwardly and for-

wardly extending portion and fitting against the sides of the box portion and provided with slots, and a tubular cover for the box portion, withdrawn to uncover the lower end of the same, and having the lower edge of its front wall engaging said slots to assist in holding wings and the parts from which they project, in position.

878,060. ROPE-SOCKET. ROBERT A. HAMMOND, Sandwich, Mass. Filed Oct. 16, 1906. Serial No. 339,192.



1. A rope socket comprising in its construction a hook and a locking arm pivoted thereto, said arm constructed to interlock at its opposite ends with said hook.

2. A rope socket comprising in its construction a hook, a locking arm pivoted thereto, means to lock said arm against rotation, and projections upon opposite ends of said arm adapted to interlock with said hook.

3. A rope socket comprising in its construction a hook consisting of a base; a curved end and a standard connecting said curved end to said base; and a locking arm pivoted to said curved end, said locking arm having projections thereon at opposite ends thereof adapted to interlock with said base and hook, respectively.

4. A rope socket comprising in its construction, a hook consisting of a base, a curved end, and a standard connecting said curved end to said base; a locking arm pivoted to said curved end, the free end of said arm having lateral projections thereon forming a T-head adapted to project into a T-slot provided in said base, and a spring pin adapted to slide longitudinally of said base to enter a recess in said T-head.

5. A rope socket comprising in its construction, a hook consisting of a base, a curved end, and a standard connecting said curved end to said base; a pivot on said curved end, and a locking arm journaled upon said pivot, said locking arm projecting beyond said pivot toward said curved end and having a projection thereon adapted to interlock with a projection on said curved end.

[Claims 6 to 8 not printed in the Gazette.]

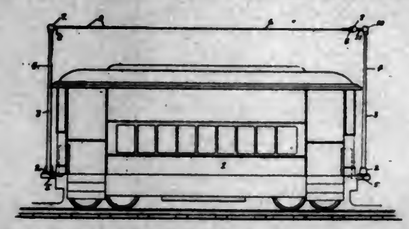
878,061. SHOE. ERNEST G. HEALEY, Fort Dodge, Iowa. Filed Nov. 1, 1906. Serial No. 342,148.



1. A shoe comprising an upper, two welts secured to the outer edge of the upper, an insole, the outer welt turned inward under the insole, an outer sole underlying the insole, and outer welt, and the edges of the inner welt and outer sole secured together.

2. In a shoe, an upper, two welts sewed to the outside of the bottom edge portion of the upper, the outer welt turned inward and an insole fixed thereto, as set forth.

878,062. TROLLEY-BRUSH. GEORGE HEINEMAN, San Francisco, Cal. Filed Sept. 13, 1907. Serial No. 392,728.

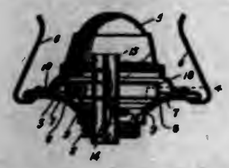


1. An overhead trolley-brush for electrically operated cars, the same comprising a series of longitudinally disposed wires, and a series of transverse wires arranged in close proximity to each other and connected to the said longitudinally disposed wires, the said transverse wires forming the field of the trolley-brush, the length of the said trolley-brush being substantially the length of the car by which it is to be carried.

2. The combination with an electrically operated car, of a trolley-brush pole secured to each end thereof and extended above the roof of the car, of cross-heads connected to each of the said poles, a series of longitudinally disposed wires secured to the said cross-heads, and a series of transverse wires connected to the longitudinally disposed wires and constituting the field of the trolley-brush.

3. The combination with an electrically operated car, of an insulated trolley brush pole secured to each end of the car and extended above the roof thereof, of connections between the said poles and the motors of the car, of an arm secured to a noninsulated portion of one of the said poles, of a cross-head connected to said arm, a cross-head secured to a noninsulated portion of the opposite trolley brush pole, of a series of longitudinally disposed wires connecting the said cross-heads, and a series of transverse wires connecting the longitudinally disposed wires, the said wires constituting the field of the trolley-brush.

878,063. LAMP-BURNER. JOHN A. HELSABECK, Ether, N. C. Filed Aug. 20, 1907. Serial No. 389,407.



1. A lamp burner comprising a body having radially projecting arms, a perforated chimney-supporting base plate arranged above the body and secured upon said arms, a wick tube arranged in said body and plate, and an imperforate guard plate or partition surrounding the wick tube and arranged between said base plate and said body, said guard plate or partition being of greater diameter than said body and having around its edge a depending flange engaged with and secured to said arms of the body, substantially as and for the purpose set forth.

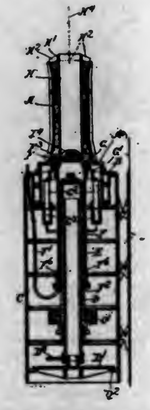
2. A lamp burner comprising a body provided with radial arms, a perforated chimney supporting base plate arranged above the body and secured to the outer portions of said arms, a wick tube arranged in said body and plate, and an imperforate guard plate or partition surrounding the wick tube and arranged between the base plate and the body, said guard plate or partition being of greater diameter than the body and carrying attaching projections to engage the arms of the body, substantially as and for the purpose set forth.

3. A lamp burner comprising a body having radiating arms, a perforated chimney supporting base plate attached to said arms, resilient chimney holding arms connected to the arms of the body, a wick tube arranged in the body and base plate and an imperforate guard plate or partition surrounding the wick tube and arranged between the body and the base plate, said guard plate having a surrounding flange notched to receive the chimney holding arms and provided with projections to engage the arms on the body, substantially as described.

4. A lamp burner comprising a body having radiating arms, a perforated chimney supporting base plate attached to said arms, resilient chimney holding arms connected to the arms of the body, a wick tube arranged in the body and base plate and formed with transverse slots arranged upon opposite sides of the same to lessen the conduction of heat from the upper to the lower portion of said tube, an imperforate guard plate or partition arranged upon the wick tube above its slots and between the base plate and the body, and means for securing said guard plate to the arms on the body, substantially as described.

5. A lamp burner comprising a body, a perforated chimney supporting base plate arranged above the same, a wick tube arranged in said body and plate and formed upon its opposite sides with transverse slots to lessen the conduction of heat from the upper to the lower portion of said tube, and an imperforate guard plate or partition arranged upon the wick tube above its slots and between the body and the base plate, substantially as described.

878,064. MOLDING-MACHINE. FRED HERBERT, Birtley, England. Filed Dec. 20, 1905. Serial No. 292,549.



1. In a molding machine, a power cylinder, a carrying cylinder telescoped thereover, a pattern carried by said carrying cylinder, a flask, and means for admitting power medium to said power cylinder to operate said carrying cylinder.

2. In a molding machine, a power cylinder, a pattern telescoped over said cylinder, a flask, means for supporting the same in line with said pattern, and means for admitting power medium to said cylinder to move said pattern through the flask.

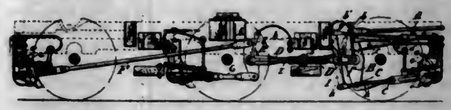
3. In a molding machine, a stationary power cylinder, open at one end, a pattern telescoped over the open end of said cylinder, a flask, means for supporting said flask in line with said pattern and means for admitting power medium to said cylinder to move said pattern into said flask.

4. In a molding machine, a stationary power cylinder, open at one end, a carrying cylinder telescoped over the open end of said power cylinder, a pattern carried by said carrying cylinder, a flask, means for supporting said flask in line with said pattern, and means for admitting power medium to said power cylinder.

5. In a molding machine, a power cylinder open at one end, a carrying cylinder telescoped over the open end of said power cylinder, a pattern telescoped over the carrying cylinder, a flask, means for supporting the same in line with said pattern, and means for admitting power medium to the power cylinder.

[Claims 6 to 47 not printed in the Gazette.]

878,065. BRAKE-APPLYING MECHANISM. JAMES M. HINES, Albany, N. Y. Filed Nov. 4, 1907. Serial No. 400,618.



1. In a brake-applying mechanism for vehicles, a system of brake-applying rods and levers including a telescoping take-up device, and mechanism for actuating the take-up device comprising a floating lever, mechanism attached to one end of said lever adapted to permit the movement of that end in one direction and prevent its return movement in the other direction, connections extending from the brake-beams to the floating lever adapted to impart an excess movement of any brake-beam toward the wheels to the aforesaid end of the floating lever in the permitted direction and to limit the movement of the brake-beams away from the wheels, and a connection extending from the aforesaid parts to one portion of the telescoping take-up device, whereby on the application of the brakes slack in the system causes the floating lever to assume a new position, and on the release the take-up device is actuated to take up the slack in the system, substantially as described.

2. In a brake-applying mechanism for vehicles, a primary and a secondary live lever, connections from said levers to the respective brake beams, a two-part connecting rod between said levers, a take-up device interposed between the two parts of said rod, and mechanism for actuating the take-up device comprising a floating lever having a pivot capable of lateral movement, mechanism attached to the upper end of the said lever adapted to permit the movement of that end in one direction and prevent its return movement in the other direction, a connection including a lost motion device between the central portion of the floating lever and a brake-beam actuated by the secondary live lever, whereby an excess movement of such beam shifts the pivot of the floating lever, and a connection including a lost motion device between the lower portion of the floating lever and the brake-beam actuated by the primary live lever, whereby an excess movement of such beam turns the floating lever on its pivot, substantially as described.

3. In a brake-applying mechanism for six-wheel trucks, a freely suspended primary live lever, a brake-applying rod attached thereto above the center, a brake rod extending from the live lever below the center to the brake beam of the forward wheels, a freely suspended secondary live lever, a two-part connecting rod extending from the central portion of the primary live lever to the central portion of the secondary live lever, a take-up device interposed between the two parts of said rod, brake rods extending from the upper and lower portions of the secondary live lever to the rear and middle brake-beams, respectively, and mechanism for actuating the take-up device comprising a floating lever having a pivot capable of lateral movement, mechanism attached to the upper end of the said lever adapted to permit the movement of that end in one direction and prevent its return movement in the other direction, a connection including a lost motion device between the central portion of the floating lever and the secondary live lever, and a connection including a lost motion device between the lower portion of the floating lever and the brake-beam of the forward wheels, substantially as described.

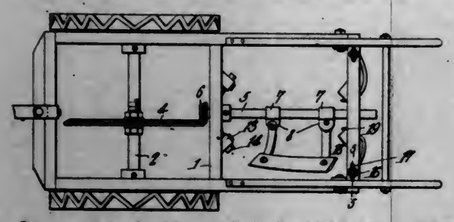
4. In a brake-applying mechanism for six-wheel trucks, a freely suspended primary live lever, a brake-applying rod attached thereto above the center, a brake-rod extending from the primary live lever to the brake-beam of the forward wheels, a freely suspended secondary live lever, a two-part connecting rod extending from the central por-

tion of the primary live lever to the central portion of the secondary live lever, a take-up box interposed between the two parts of said rod, brake rods extending from the upper and lower portions of the secondary live lever to the rear and middle brake-beams, respectively, a floating lever mounted in elongated bearings supported by the truck frame, a pawl-box, a rack upon which the pawl-box slides, a connection extending from the pawl-box to the upper end of the floating lever, an adjusting rod extending from the forward brake beam to the lower end of the floating lever and connected thereto by a lost motion device, and an adjusting rod extending from the secondary live lever to the central portion of the floating lever and connected thereto by a lost motion device, whereby upon application of the brakes the slack in any portion of the brake rigging causes the adjusting rods to adjust the position of the pawl box and establish a new fulcrum for the floating lever, and upon the release of the brakes the adjusting rods limit the movement of the secondary live lever and the forward brake beam, and the further return movement of the primary live lever actuates the take-up box to take up the slack in the system, substantially as described.

5. In a brake-applying mechanism, a two-part connecting rod, one part of which terminates in a yoke and the other part in a head sliding within said yoke, toothed racks on said yoke, toothed cheek blocks on said head spring pressed into engagement with said racks, a lever attached to said cheek blocks and adapted to withdraw them from said racks, and an actuating rod extending from said lever, substantially as described.

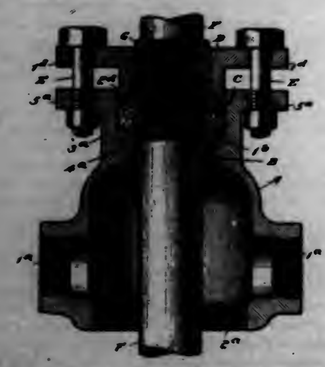
[Claims 6 to 8 not printed in the Gazette.]

878,066. COTTON-CHOPPER. SIDNEY W. JACKSON, Dillon, S. C. Filed Mar. 9, 1907. Serial No. 361,516.



In a cotton chopper, a shaft journaled for rotation thereon, cuffs mounted upon the shaft and being capable of axial and longitudinal adjustment thereon, curved standards attached to the cuffs and a volute blade carried by the standards.

878,067. CASING-HEAD. DAVID K. JOHNSTON, Oil City, Pa., assignor to Oil Well Supply Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Nov. 29, 1907. Serial No. 404,372.



1. In a casing-head, the combination with means for supporting a well tube coupling, of a packing ring adapted to be pressed laterally against the coupling, and means for pressing said packing ring against said coupling.

2. A casing head having one or more gas outlets, a stuffing-box extension formed with a seat for supporting a casing-head ring, a casing-head ring which is adapted to support a well tube coupling, a stuffing-box gland, and a packing ring located within the stuffing-box and adapted to be pressed against the coupling by said gland and casing-head ring.

3. A casing-head having one or more gas outlets, a stuffing-box extension provided upon its interior with an annular seat for supporting a casing-head ring, a casing-head ring which is adapted to engage and support a well tube coupling, a stuffing-box gland which is adapted to embrace the coupling, and a packing ring which is interposed between said casing-head ring and said gland and which is also adapted to embrace the coupling.

4. A casing-head having a stuffing-box, a gland, and means located within said stuffing-box for supporting a well tube coupling.

878,068. HOLDER FOR BROOMS AND THE LIKE. WILLARD JONES, Auburn, Me. Filed May 24, 1907. Serial No. 375,525.



1. A device of the character described formed in a single piece of wire bent to form a stem, eyes adjoining the stem, hooked arms extending from the eyes, and oppositely disposed bowed loops interposed between the arms and constituting a clip, said loops being spaced by an integral coil.

2. A device of the character described formed in a single piece of wire and comprising a screw threaded stem, oppositely disposed eyes adjacent the stem, said eyes being disposed in substantially the same plane, hooked arms extending from the eyes, said arms being disposed along diverging lines, oppositely bowed loops interposed between the arms and constituting a clip, the outer ends of said loops diverging to form guides, and a coil interposed between the inner portions of the loops and constituting resilient spacing means.

878,069. GUARD DEVICE. ABRAHAM S. JOSEPHS, New York, N. Y. Filed July 20, 1907. Serial No. 384,791.



1. In a guard device, a safety pin and a substantially circular guard ring secured to the back thereof.

2. A guard device, comprising a pin member, a spring member, a back member, a substantially circular guard ring secured to the back member, and a catch member.

3. In a device of the character described, a substantially circular ring, arms extending from each side thereof, a spring and pin at the end of one arm, and a catch at the end of the other arm, adapted to be engaged by the pin.

4. A jewelry guard comprising a one-piece safety pin and substantially circular guard ring.

5. A jewelry guard comprising a substantially circular ring formed in a piece of wire, the ends of the wire twisted upon themselves and extended in opposite directions, a loop formed in one end and bent toward the ring, a spring formed in the other end, and a pin extending therefrom to engage the loop.

878,070. PLAYING-BALL. CHARLES T. KINGZETT, Kensington, and ERIC P. KINGZETT, Caterham, England. Filed Jan. 21, 1907. Serial No. 353,342.

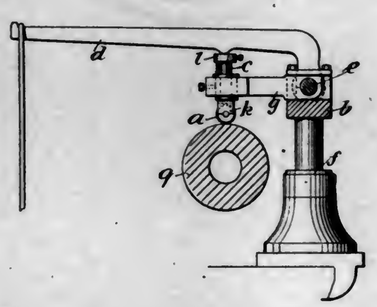


1. A ball consisting of a core formed of a colloid body in a gelatinous condition and a covering or shell therefor.

2. A ball consisting of a core formed of a mixture of a colloid body and water, such mixture being in a gelatinous condition and a covering or shell therefor.

3. A ball consisting of a core formed of a colloid body in a gelatinous condition, a layer of india rubber surrounding the core and a covering or shell of gutta percha surrounding the rubber.

878,071. MACHINE FOR PRESSING LINES OR DESIGNS INTO ROLLERS. ROBERT LAING, Radcliffe, England. Filed Apr. 26, 1907. Serial No. 370,414.

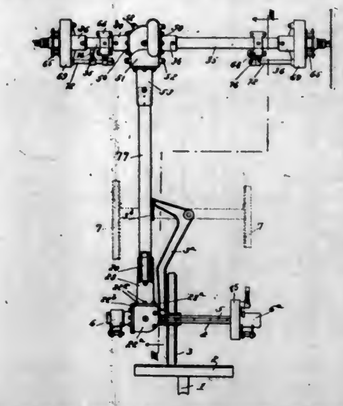


1. In a machine for pressing lines and designs into rollers of the character described, a mill head, a frame fulcrumed thereto, a number of mills individually vertically movable in the said frame and a pressure lever for each of the said mills, all combined substantially as and for the purpose set forth.

2. In a machine for pressing lines and designs into rollers of the character described, a mill head, a frame fulcrumed thereto, a number of mill holders individually vertically movable in the said frame, a pressure lever for each of and means for the rotary adjustment of said holders, all combined substantially as and for the purpose set forth.

3. In a machine for pressing lines and designs into rollers of the character described, a mill head, a frame fulcrumed thereto, a number of individually vertically movable mill holders and a bush around each in the said frame, a pressure lever for each of and springs supporting the said holders, means for preventing the rotation of the said holder in the said bush and means for the rotary adjustment of the said bush in the said frame, all combined substantially as and for the purpose set forth.

878,072. TRANSMISSION-GEAR FOR AUTOMOBILES. JOHN W. LAMBERT, Anderson, Ind., assignor to The Buckeye Manufacturing Company, Anderson, Ind., a Corporation of Indiana. Filed Jan. 26, 1907. Serial No. 354,178.



1. A driving mechanism comprising a driving friction disk, a driven friction disk, a shaft carrying the driven friction disk, means for mounting said shaft to permit it to have a backward and forward movement, a beveled gear carried by said shaft, a longitudinal shaft, a gear carried by said longitudinal shaft meshing with the gear on the shaft of the driven disk, a rear axle, gears connecting the rear end of the longitudinal shaft with the rear axle, and means whereby the shaft of the driven friction disk may be moved backward and forward without moving the gear carried by said shaft away from the gear carried by the longitudinal shaft.

2. A driving mechanism comprising a driving friction disk, a driven friction disk, a shaft for said driven disk adapted to be moved toward and from the driving disk, a rear axle, a longitudinal shaft, a gear driving means connecting the shaft of the driven disk with said longitudinal shaft, and said longitudinal shaft with the rear axle, and means for permiting said shaft of the driven disk to be moved toward and from the driving disk without changing the relation of the gears in the gear driving means.

3. A driving means comprising a driving disk, a driven disk, a shaft for said driven disk movable toward and from the driving disk, a rear axle, a longitudinal shaft, gears connecting said shaft with the rear axle, gears connecting said longitudinal shaft with the shaft of the driven disk, one end of said longitudinal shaft being rigidly connected to its gearing, the other end thereof being slidingly connected thereto.

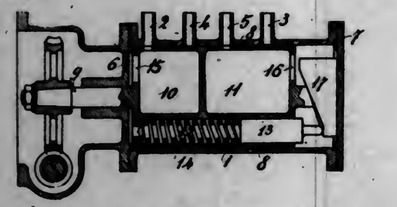
4. A driving mechanism comprising a driving disk, a driven disk, a shaft for said driven disk adapted to be moved toward and from the driving disk, a longitudinal shaft, gears connecting said shaft to the shaft of the driven disk, said longitudinal shaft being rigidly connected to one of said gears, a two-part rear axle, differential gearing connecting the two parts of said axle, a gear slidingly engaging the rear end of the longitudinal shaft, and means connecting said gear to the differential gearing on the rear axle.

5. A driving mechanism comprising a driving disk, a driven disk, a shaft for said driven disk, swinging bearings for said shaft, a tubular bearing box mounted in one of said swinging bearings, a gear case connected to said bearing box, a beveled gear on said shaft within said gear case, a rearwardly extending shaft support carried by said gear case, a longitudinally extending shaft mounted in said shaft support, a gear rigidly secured to said shaft and meshing with the beveled gear on the shaft of the driven disk, a thrust bearing within said shaft support and adapted to take the rearward thrust of said beveled

gear, a two-part rear axle, differential gear connecting the parts of said rear axle, a gear on the rear end of the longitudinal shaft and in sliding engagement therewith, a support for said shaft at the rear end thereof, said gear meshing with and operating the differential gearing on the rear axle.

[Claims 6 to 12 not printed in the Gazette.]

878,073. LUBRICANT-DISTRIBUTER FOR ENGINES. VINCENZO LANCIA, Turin, Italy, assignor to Lancia & Co., Turin, Italy. Filed May 13, 1907. Serial No. 373,486.

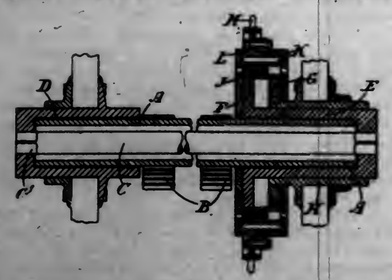


1. An engine lubricant distributer comprising a cylindrical casing closed at its ends a rotatable cylinder provided with two chambers communicating respectively with the ends of the casing, suction and discharge branches on the casing communicating with corresponding openings in the said chambers, a third chamber in said cylinder communicating at its ends with the two chambers, a displacer piston in said third chamber and means within the casing for reciprocating the piston in the cylinder chamber substantially as described.

2. An engine lubricant distributer comprising a cylindrical casing closed at its ends a rotatable cylinder provided with two chambers communicating respectively with the ends of the casing, suction and discharge branches on the casing communicating with corresponding openings in the said chambers, a third chamber in said cylinder communicating at its ends with the two chambers, a displacer piston in said third chamber, a spring in said cylinder chamber for operating the piston in one direction and a cam for operating it in the other direction substantially as described.

3. In an engine lubricant distributer of the kind described a casing, a compartmented cylinder within said casing, comprising two chambers with a separating wall and a third chamber forming an open-ended cylinder below the two chambers, a piston in said third chamber, and means for operating the same, substantially as described.

878,074. MOTOR-VEHICLE. JOSEF LATZEL, London, England. Filed June 10, 1907. Serial No. 378,242.

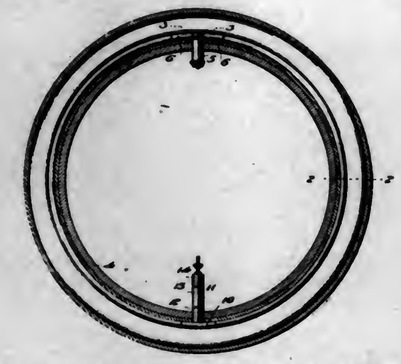


1. In combination, a driven gear member, an undivided stationary supporting axle member road wheels supported thereon and a continuous undivided rotating axle member connected to the driven gear member and to the road wheels substantially as set forth.

2. In combination, a driven gear member, an undivided stationary supporting axle member, road wheels supported thereon, a differential gear supported thereon and connected to the driven gear member and a continuous undivided rotating axle member connected to the differential gear and to the road wheels, substantially as set forth.

3. In combination, an undivided tubular stationary supporting axle member, a continuous undivided rotating axle member contained therein, a differential gear supported thereon, one road wheel supported on said tubular axle member and connected to the rotating axle member, a sleeve mounted on the tubular axle member and connected to the rotating axle member and to the differential gear, one road wheel mounted on said sleeve and connected to said differential gear and a driven gear member connected to said differential gear, substantially as set forth.

878,075. PNEUMATIC TIRE. HENRY D. B. LEFFERTS and ELIPHALET DE CAMP, Orange, N. J. Filed Jan. 15, 1907. Serial No. 352,440.



1. A pneumatic tire comprising an outer casing, a normally inflated main inner tube having a valve stem, and a normally deflated divided supplemental reserve tube arranged without the main inner tube and having terminal soft cap portions disposed in opposite relation to the valve stem, said soft cap portions being adapted to be inflated about said valve stem for the main inner tube.

2. In a tire of the class described, the combination with the outer casing and the main inner tube, of a normally deflated supplemental reserve tube having an extensible and contractible valve stem.

3. In a tire of the class described, the combination with the outer casing and the main inner tube, of a normally deflated supplemental reserve tube provided with an extensible and contractible valve stem, said valve stem consisting of a series of detachably connected valve stem sections having inner and outer washer joints.

4. In a tire of the class described, the combination with the outer casing and the main inner tube, of the normally deflated supplemental reserve tube provided with an extensible and contractible valve stem, said valve stem consisting of three or more detachably connected sections, the outermost valve carrying section being interchangeable with the intermediate section or sections, and the joint connection between each two sections consisting of a threaded socket and interior washer seat provided in and on one of the sections and an exteriorly threaded connecting pin and inside washer carried on the other of said sections.

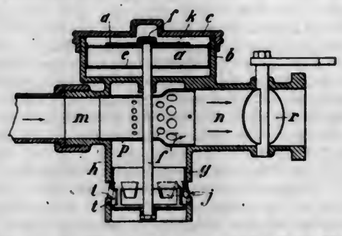
878,076. CLOCK AND WATCH. JULIUS LICHTENSTEIN, Göttingen, Germany. Filed July 8, 1907. Serial No. 382,753.

A safety contrivance for the springs of clocks and watches, comprising in combination with the clock spring, its winding-up bolt, and base disk; a lower sleeve (*f*) arranged in said clock spring, and an upper sleeve (*e*) arranged above said clock spring on said bolt and provided with a notch (e^4), a separate spiral spring arranged on said bolt between said sleeves, a key (*m*) designed to fit said bolt, a movable pin (*h*, *i*) designed to catch into the notch in said upper sleeve, a lateral rod (*k*) projecting from said pin, and a projection (*l*) provided on said clock



spring and adapted to engage said rod and thus to cause said pin to leave said notch in said upper sleeve upon the clock spring being sufficiently wound up, for the purpose set forth.

878,077. CUSHIONING DEVICE FOR AUTOMATIC DILUTION-VALVES IN CARBURETERS. ADÈLE A. LONGUEMARE, Paris, France. Filed Jan. 15, 1907. Serial No. 352,359.



1. In a device of the character described the combination with a member movable by variations of pressure, of a closed cylinder, a hollow piston in said cylinder and provided in each face with a plurality of holes, and an operative connection between said piston and said member.

2. In a device of the character described the combination with a member movable by variations of pressure, of a closed cylinder, a hollow piston in said cylinder and provided in each face with a plurality of holes, adjustable means to vary the total area of said holes and an operative connection between said piston and said member.

3. In a device of the character described the combination with a member movable by variations of pressure, of a closed cylinder, a hollow piston in said cylinder and provided in each face with a plurality of holes, adjustable means to close one of said holes and an operative connection between said piston and said member.

4. In a device of the character described the combination with a member movable by variations of pressure, of a closed cylinder, a hollow piston in said cylinder and provided in each face with a plurality of holes, adjustable means to close any desired number of said holes and an operative connection between said piston and said member.

5. In a device of the character described the combination with a member movable by variations of pressure, of a closed cylinder, a hollow piston in said cylinder and provided in each face with a plurality of holes, a disk of smaller diameter than said piston applied to one face thereof for the purpose described, and an operative connection between said piston and said member.

[Claims 6 and 7 not printed in the Gazette.]

878,078. VIBRATORY MASSAGE APPARATUS. GEORGE R. MACOMBER, New York, N. Y. Filed Aug. 24, 1907. Serial No. 390,005.

1. A vibratory massage apparatus comprising a casing with a tubular shell connected therewith, a rotatable shaft mounted within said tubular shell, gear mechanism within the casing for rotating said shaft, a disk fitted to said shaft, radial threaded arms upon said disk, weighted balls of different diameters, each having a diametrically disposed threaded hole formed therein and mounted upon said threaded arms, a large and a small ball being mounted upon arms which are in alinement with each other, as set forth.



2. A vibratory massage apparatus comprising a casing with a tubular shell connected therewith, a rotatable shaft mounted within said tubular shell, gear mechanism within the casing for rotating said shaft, a disk fitted to said shaft, radial threaded arms upon said disk, weighted balls adjustably held upon said arms, one end of said tubular shell flaring and having a flange about its edge, and a saucer shaped closure telescoping over said flange, as set forth.

3. A vibratory massage apparatus comprising a casing with a tubular shell connected therewith, a rotatable shaft mounted within said tubular shell, gear mechanism within the casing for rotating said shaft, a disk fitted to said shaft, radial threaded arms upon said disk, weighted balls adjustably held upon said arms, one end of said tubular shell flaring and having a flange about its edge, a saucer shaped closure telescoping over said flange, a lug projecting from the circumference of said saucer shaped member at right angles to the axis of the shaft, and a cup removably held upon said lug, as set forth.

4. A vibratory massage apparatus comprising a casing with a tubular shell connected therewith, a rotatable shaft mounted within said tubular shell, gear mechanism within the casing for rotating said shaft, a disk fitted to said shaft, radial threaded arms upon said disk, weighted balls adjustably held upon said arms, a chambered handle telescoping over the shank portion of the casing, the shank portion of said casing being hollow, a spring fastened at one end within said shank portion of the casing and its other end to said handle, as set forth.

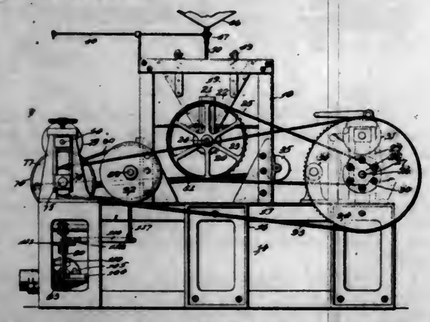
5. A vibratory massage apparatus comprising a casing with a tubular shell connected therewith, a rotatable shaft mounted within said tubular shell, gear mechanism within the casing for rotating said shaft, a disk fitted to said shaft, radial threaded arms upon said disk, weighted balls adjustably held upon said arms, a chambered handle telescoping over the shank portion of the casing, the shank portion of said casing being hollow, a spring fastened at one end within said shank portion of the casing and its other end to said handle, flexible rings mounted about the hollow shank portion of the casing and interposed between said shank portion and the inner surface of the chamber of the handle, as set forth.

878,079. WINDING AND CUTTING MACHINE. CHARLES A. MARQUIS, St. Louis, Mo. Filed Mar. 19, 1907. Serial No. 363,178.

1. A winding and cutting machine comprising a suitable frame through which the material is passed, a spindle revolving mechanism, a set of knives revolubly mounted and located on each side of the sheet of material, means for operating the revoluble knives to sever the material at a given length, means for discontinuing the operation of the knives after the material is to be cut, and means for automatically discontinuing the operation of the machine at the time when the material is cut, substantially as specified.

2. A winding and cutting machine comprising a frame, a plurality of guide and feed rollers mounted in the frame over which and through which the sheet of material is passed to be wound upon a spindle, a spindle operating mechanism, knives located in the frame to sever the ma-

terial when a required amount is wound upon the spindle, a knife operating mechanism, a mechanism for automatically placing the knives in and out of operation, a driving mechanism, a lever mechanism for placing the driving mechanism in and out of operation, means for automatically discontinuing the operation of the machine when the knives have been operated and the material severed, and an adjusting mechanism for accommodating various lengths of spindles upon which the material is to be wound, substantially as specified.



3. A winding and cutting machine comprising a frame, feed rollers mounted upon said frame, guide rollers mounted upon said frame, a set of knife carrying rollers mounted upon said frame, between the feed rollers and knife carrying rollers and over the guide rollers the sheet of material is to be passed, a hopper mounted upon the frame and above the sheet of material, an adjustable spindle retaining mechanism carried by the frame to accommodate various lengths of spindles, a spindle retaining and operating mechanism carried by the frame, a mechanism for controlling the knife carrying rollers so as to bring said knives in contact with the material and sever the same when a required amount of material is wound upon the spindle, a lever mechanism for operating the knife roller mechanism, a disk mounted in the frame to contact with the lever mechanism for placing in operation the knife operating mechanism, a lever mechanism for placing the machine in and out of operation, means carried by the disk to contact with the lever mechanism to automatically discontinue the operation of the machine at the time the knives have severed the sheet of material, substantially as specified.

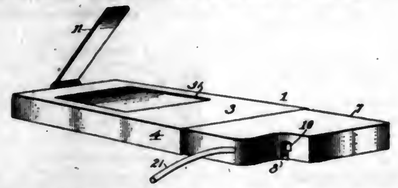
4. A device of the class described comprising a spindle retaining and operating mechanism, a driving mechanism, a lever mechanism arranged to place the driving mechanism in operation by the operator, a set of knife rollers, a trigger mechanism carried upon the shaft of one of the knife rollers, a shoe located in alinement with the trigger mechanism for placing the rollers in and out of operation, means for operating the shoe to permit the trigger mechanism to operate and revolve the knives, a disk revolubly mounted in the frame to operate the lever mechanism whereby the shoe is raised and lowered, and means whereby a lever mechanism is operated to discontinue the operation of the driving mechanism at the point when the material is severed by the knives, substantially as specified.

5. A device of the class described comprising a spindle operating mechanism, a set of knives, means for operating the knives to sever the sheet of material at a time when a given amount of material is wound upon the spindle, and means for discontinuing the operation of the knives and spindle after the material has been cut, and means for calculating the number of rolls wound by the machine, substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

878,080. WRITING DEVICE. WILLIAM C. MASSEY, Atlanta, Ga. Filed Feb. 23, 1905. Serial No. 247,037.

1. In a portable writing device, the combination with a table, of means for suspending the table from the body of a wearer in operative position for service, and means consisting of a table extension, movably interposed between the table and the body of the wearer, for steadily supporting and presenting the table in operative position.



2. In a portable writing device, the combination with a table, of means for suspending the table from the body of a wearer in operative position for service, a table extension, and clip hinges operative to yieldingly hold the extension and table together, substantially as and for the purpose specified.

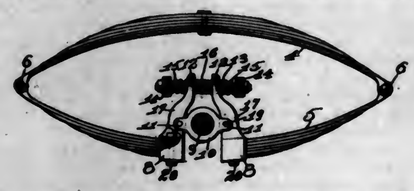
3. In a portable writing device, the combination with a hollow body part comprising a writing table, of a table extension hinged to the body part and adapted to fold into the body part, and means for suspending the device from the body of a writer.

4. In a portable writing device, the combination with a table, of means for suspending it from the body of a writer, means provided with a curved recess adapted to fit the body of the wearer and interposed between the same and the table for steadily supporting and presenting it in position, and a movable arm adapted to constitute a continuation of the said recess, substantially as and for the purpose specified.

5. In a portable writing device, the combination with a table, of means for suspending it from the body of a writer, means provided with a curved recess adapted to fit the body of the wearer and interposed between the same and the table for steadily supporting and presenting it in position, and an endwise movable arm adapted to constitute a continuation of the said recess, substantially as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

878,081. VEHICLE-SPRING. CHARLES A. MEREDITH, St. Louis, Mo. Filed Sept. 3, 1907. Serial No. 391,245.

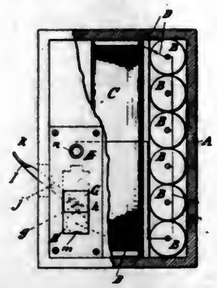


1. A spring of the class described comprising an upper section; a lower section; supports connected with the lower section; a sleeve mounted upon the axle of the vehicle and pivotally connected to the supports; an auxiliary spring carried by the supports to provide a more even and equal movement to the vehicle springs, substantially as specified.

2. A device of the class described comprising a spring of the elliptic type; a pair of supports connected to the lower section of said spring; a sleeve connected to said supports in combination with an axle upon which the sleeve is mounted; a bolt passing through the upper ends of the supports, and a plurality of springs mounted upon the bolt between and on each side of the supports to assist in the resiliency of the spring, substantially as specified.

878,082. COMBINED CIGAR TIP-CUTTER AND LIGHTER. THOMAS P. MOODY, Chicago, Ill. Filed July 20, 1907. Serial No. 384,785.

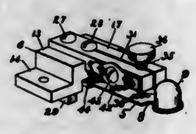
1. A cigar cutter and lighter comprising a box having a hole in the top, a holder for inflammable material adjacent the same, a combined knife and cover operating to cut a cigar tip at the hole and to open and close the holder, and electrical devices operated by said knife to light said material when the holder is opened.



2. A cigar cutter and lighter having a movable knife to cut the tip, a holder for inflammable material adjacent the same, a movable cover for said holder, connected to said knife and operating therewith to open the holder when the knife is advanced and to close the same when the knife is retracted, and electrical means to light the said material when the holder is opened.

3. A cigar cutter and lighter comprising a box having a hole in the top, a holder for inflammable material adjacent the same and having an electrical contact piece therein, and a sliding knife mounted on the top of the box and having a knife at one end engaged to cut a cigar tip at said hole and having at the other end a cover arranged to slide on and off the holder, to open or close the same, said cover having a contact piece which wipes over the said contact piece to produce a spark, and a source of electricity connected to said contact pieces.

878,083. VIBRATOR. WALTER N. NICHOLLS and FREDERIC W. NICHOLLS, Toronto, Ontario, Canada. Filed Apr. 17, 1907. Serial No. 368,726.



1. In a vibrator, the combination with the magnet core, of a vibrator reed having an inclosure at the outer end thereof, and an independent member loosely retained within said inclosure, substantially as described.

2. In a vibrator, the combination with the magnet core, of a vibrator reed suitably supported and having a closed chamber at its outer end, and a ball of suitable material held within said chamber and fitting loosely therein, substantially as described.

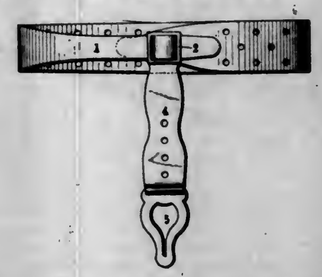
3. In a vibrator, the combination with the magnet core, of a supporting bracket, a vibrator reed fixedly secured to said bracket and extending above said core and having a closed chamber at its outer end, a suitable ball loosely retained within said chamber, an arm fixedly secured to said bracket and extending therefrom above said vibrator reed, and a contact screw adjustably secured in said arm and engaging said reed, substantially as described.

4. In a vibrator, the combination with a magnet secured to a suitable base having the core thereof projecting through said base, of a supporting bracket having a recess in the underside thereof, a vibrator reed fixedly secured in said recess in said bracket and insulated therefrom and extending outwardly therefrom above said magnet core and having a substantially circular shaped outer end, an inverted cup shaped cap fixedly secured to the circular shaped portion of said vibrator reed, a spherical member loosely retained within said cap, an arm secured to the upper side of said supporting bracket and extending outwardly therefrom above said reed, and a contact screw adjustably secured in said arm, substantially as described.

5. In a vibrator, the combination with a magnet secured to a suitable base having the core thereof projecting through said base, of a supporting bracket having a recess in the under side thereof, a vibrator reed fixedly secured in said recess in said bracket and insulated therefrom and extending outwardly therefrom above said magnet core and having a substantially circular shaped outlet end, an inverted cup shaped cap having the edge thereof flared outwardly and resting on the circular shaped end of said vibrator reed, said flange being turned over the edge thereof and fixedly securing said cap to said reed, a spherical member loosely retained within said cap, an arm secured to the upper side of said supporting bracket and extending outwardly therefrom above said reed, and a contact screw adjustably secured in said arm, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

878,084. GARTER. BENJAMIN E. PANETH, New York, N. Y., assignor to Casper Bloomberg, New York, N. Y. Filed July 27, 1907. Serial No. 385,814.



1. A garter comprising a leg encircling band; an integral strap extending from the band in the same plane and depending therefrom adjacent to one end; both band and strap being formed to shape from a sheet of material without folding; means on the end of the depending strap for engaging the sock; and two part means on the ends of the band for securing it together, one of said parts being adjustably secured to the band and the other fixed thereto in line with the depending strap.

2. A garter comprising a leg encircling band; a plurality of integral straps extending from the band in the same plane and depending therefrom, one of which is adjacent to one end of the band; both band and straps being cut to shape from a sheet of material without folding; means on the ends of said straps for engaging the sock; and two part means on the ends of the band for securing it together, one of said parts being adjustably secured to the band and the other fixed thereto in line with the depending strap adjacent to the end of the band.

878,085. CHAIN-GRATE STOKER. ALFRED E. PARKER, London, England, and ERNEST H. PEABODY, New York, N. Y. Filed Oct. 24, 1906. Serial No. 340,311.



1. In a traveling grate a plurality of bars each provided with lateral projections extending over the ends of adjacent bars.

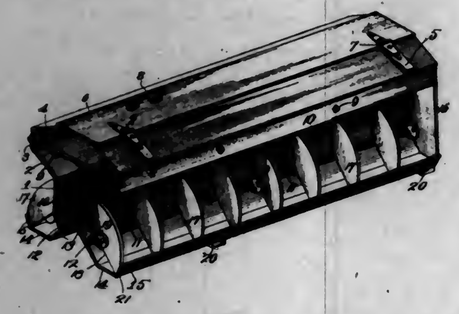
2. In a traveling grate a plurality of bars each provided with lateral projections extending over the ends of adja-

cent bars and suitable lateral connections between said bars.

3. In a traveling grate a plurality of bars each provided with lateral projections extending over the ends of adjacent bars said bars being so arranged as to provide non-vertical air spaces between them.

4. In a traveling grate composed of a plurality of bars suitably connected, each bar having its ends depressed below the fire surface of the grate and provided with projections between its ends extending laterally and made flush with the fire surface of the grate, said projections substantially fitting into and intermeshing with the depressions between the abutting ends of the adjacent bars.

878,086. FEED-TROUGH. L Z. PEARSON, Kearney, Mo. Filed Sept. 13, 1906. Serial No. 334,442.

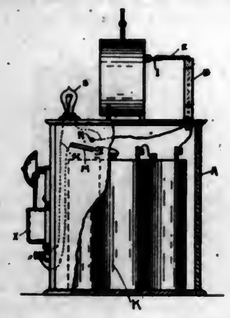


1. A feed trough comprising a hopper having a cover, troughs below and at opposite sides of the hopper with their inner walls converging upward and meeting at a point within the hopper, partitions pitched downward and outward from opposite sides of the hopper into the trough and having their lower edges substantially paralleling the contiguous inner walls of the troughs, valves hinged to the lower edges of the hopper and adapted to swing outward under the partitions or inward of the side walls of the hopper and against the inner walls of the troughs, and turn buttons secured to certain of the partitions and adapted to project inward thereof to hold the valves closed or to be turned to permit said valves to swing open.

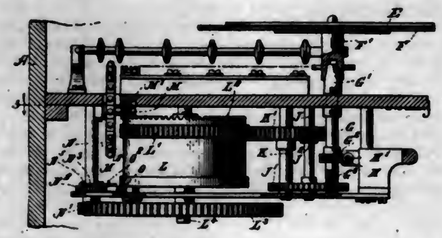
2. A feed trough, comprising a hopper, valves hinged to the lower edges of the same, troughs below the hopper and having their inner walls converging upwardly and meeting at a point within the hopper and above the lower edges of the valves thereof and having their outer walls diverging upwardly and terminating in a plane lower than that of the lower edges of the valves, partitions subdividing the troughs and bearing at their opposite ends against the hopper and the outer walls of the troughs, and turn buttons suitably supported and adapted to limit the outward movement of the valves.

878,087. ELECTRIC ALARM OPERATED BY ALARM-CLOCKS. EDWARD PLOUDER, St. Louis, Mo. Filed Mar. 20, 1907. Serial No. 363,445.

The combination with an alarm clock of a vertical metallic post having two perforated projections upon it, one perforated projection near each end; an armed metallic rod adapted to close a circuit by being forced down through the said perforated projections by a spring, the arm of the metallic rod adapted to be placed on the top of the alarm stem of the clock and released when the alarm of the clock is set free; a spring connected at one end to the upper perforated projection of the vertical metallic post and the other end connected to the armed metallic rod, adapted to force the armed metallic rod down and in contact with one of the terminals of an electric circuit; and an electric circuit including a source of electricity, an incandescent light, an electric bell, and a circuit closing switch between the electric bell and the source of electricity, all electrically connected, the terminals of which circuit are closed by the armed metallic rod descending.

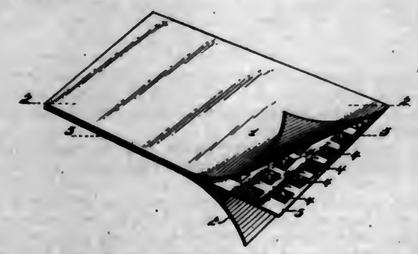


878,088. MUSIC-BOX. ERNEST P. RIESSNER, Wahren, Germany. Filed July 21, 1905. Serial No. 270,671.



In a music box, a governor shaft, a governor carried thereby a vertical shaft in direct driving connection with the governor shaft, a holder for a note-sheet, and driving means for such sheet, said driving means being operatively connected with the said vertical shaft, and a removable support for a talking machine record, carried by the upper end of said vertical shaft at a level above the note-sheet holder.

878,089. PRESS-BOARD. KNIGHT E. ROGERS, South Manchester, Conn. Filed June 17, 1907. Serial No. 379,319.



1. A press board consisting of an interior filler of perforated sheet metal having projections therein, an upper paper covering and a lower paper covering, said paper coverings being each secured to said metallic filler by the bent over projections of the filler being enmeshed in said paper coverings, substantially as described.

2. A press board consisting of an interior filler of perforated sheet metal having projections on one surface and corresponding depressions on the other surface, paper coverings for such metallic filler, one of said paper coverings being secured to the metallic filler by said projections being bent over and enmeshed within said covering, and the other covering being secured to said filler by being enmeshed in said depressions, substantially as described.

878,090. BUCKLE FOR WEBBING. FRIEND A. RUSS, Greenwich, and JOHN B. RUSS, Derby, Conn. Filed June 17, 1907. Serial No. 379,529.



1. As an article of manufacture a buckle comprising a sheet metal plate having a tranverse slot therein the edges of which are adapted to frictionally engage and grip a running webbing, the lower portion of said plate being narrowed to a width substantially equal to the length of said slot and terminating at its lower extremity in an integral transverse lip of corresponding width adapted to be pressed toward said plate to confine and conceal the end of such webbing.

2. In combination, a webbing, a buckle comprising a sheet metal plate having a slot therein the edges of which are adapted to frictionally engage and grip the running portion of said webbing, that portion of the plate below the slot being bent upon itself to form a holding lip for the end of the webbing, the said lip terminating adjacent to the lower side of the slot.

3. A sheet metal buckle having a slot therein for the passage of a running webbing and terminating at its lower extremity in a transverse lip adapted to be pressed toward the body of the buckle, in combination with a webbing having its running portion threaded through the slot in the buckle and having one extremity confined and concealed between the lip and body of the buckle.

4. The combination with a running webbing, of a sheet metal buckle having a slot therein of a width substantially equal to the thickness of the webbing and terminating at its lower extremity in a transverse lip, said webbing passing downwardly through the slot in the buckle, thence returned and having its extremity confined and concealed between the body of the buckle and the lip.

5. The combination with running webbing, of a buckle having a slot therein of a width substantially equal to the thickness of the webbing and terminating at its lower extremity in an integral lip folded upwardly and rearwardly, said webbing being threaded through the slot in the buckle passing over the rear face of the buckle above the slot therein and having the extremity of the lower reach confined and concealed between the body of the buckle and the lip thereon, whereby the webbing embracing the lip is held in contact with the rear surface of the running portion of said webbing.

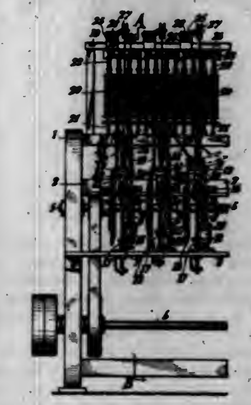
[Claims 6 to 8 not printed in the Gazette.]

878,091. APPARATUS FOR MAKING COPS. JAKOB SCHÄRER-NUSSBAUMER, Erlenbach, Switzerland. Filed Aug. 1, 1905. Serial No. 272,199.

1. In a machine for making cops, a vertically slidable, non-rotating spindle, a toothed element rotatable about the spindle, friction means to drive said element, a winding mechanism driven by said element, a second toothed element engaging with the first toothed element, a rotating cam driven from the second toothed element, and means on the spindle engaging the cam whereby said spindle is rapidly raised and lowered by the cam.

2. In a machine for making cops, a vertically movable, non-rotatable spindle, a rotatable sleeve on the spindle having long teeth, means to frictionally drive the sleeve, a winding mechanism driven by said sleeve, a gear wheel meshing with the teeth on said sleeve, a spiral cam rotated by the gear wheel, and a pin on the spindle engaging the cam, whereby the spindle is rapidly reciprocated.

3. In a machine for winding cops, a shaft having a number of friction wheels thereon, a friction disk having a toothed sleeve driven by each friction wheel, a cop carrying spindle vertically reciprocable and non-rotatable in each sleeve, a pin adjustable on each spindle, a gear wheel gearing with each sleeve and a high pitch spiral cam rotated by each wheel and engaged by the pin on the spindle.



4. In a machine for winding cops, the combination with the frictionally driven winding means and a vertically reciprocable cop spindle; of a crank arm and a weight operated by the winding means when in its end position to rotate the weight and arm and lift said means from its driving position, substantially as described.

5. In a machine for winding cops, the combination with frictionally driven winding means and a vertically reciprocable cop spindle, of a crank arm, a weight thereon, a stop connected to said weight and operated by the winding means when in its end position to rotate the weight and arm and lift said means from its driving position, substantially as described.

878,092. APPARATUS FOR MANUFACTURING METAL TUBES. ARNOLD SCHWIEGER, Berlin, Germany. Filed Oct. 4, 1905. Serial No. 281,347.

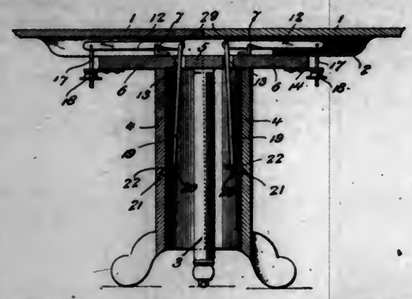


1. In a hydraulic press the combination with the plunger and its driving piston, of a mandrel, means for moving the mandrel independently of the plunger and piston, and connection between the driving piston and the mandrel whereby the mandrel may be driven by the piston.

2. In a hydraulic press, the combination with the plunger and its driving piston, of a mandrel, means for moving the mandrel independently of the plunger and piston, and connection between the driving piston and the mandrel whereby the mandrel may be driven by the piston and at a speed different from that of the plunger.

3. In a hydraulic press, the combination with the pressure cylinder terminating in a matrix, of a plunger, a driving piston for the plunger, a mandrel, means for projecting the mandrel through the pressure cylinder into the matrix, and a connection between the driving piston and the mandrel whereby the mandrel is caused to advance in the matrix during the pressing operation.

878,093. EXTENSION-TABLE. FRANK J. SENG, Chicago, Ill., assignor to The Seng Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 13, 1906. Serial No. 311,506.



1. The combination, with an extension table embodying pedestal sections of levers fulcrumed upon each of the pedestal sections, rods connected to the inner ends of the levers and at their lower ends to the pedestal sections at the inner side of the latter, and adjusting means connected to the outer ends of the levers.

2. The combination with an extension table embodying pedestal sections, of levers mounted upon each of the pedestal sections, adjusting means connected to the outer ends of the levers, and rods connected to the inner ends of the levers and loosely connected at their lower ends to the pedestal sections at the inner side of the latter.

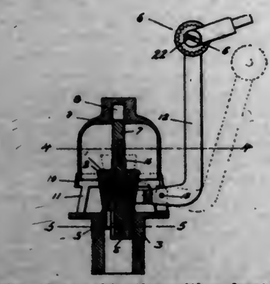
3. The combination, with an extension table embodying pedestal sections, of levers mounted upon the pedestal sections, rods connected to the inner ends of the levers, depending within the pedestal sections and connected to the same, draw-rods connected to the outer ends of the levers, bearings for said draw-rods mounted on the cross-pieces of said pedestal sections, and nuts threaded on the draw-rods and bearing against said bearings.

4. The combination with an extension table embodying pedestal sections, of bifurcated bearing-plates mounted upon each of the pedestal sections, levers loosely mounted in the bifurcations of the plates, means for vertically adjusting the outer ends of the levers, openings formed in the upper ends of the pedestal sections, and rods extending through the openings into the pedestal sections and secured at their lower ends thereto.

5. The combination, with an extension table embodying pedestal sections, of bifurcated bearing plates carried by the pedestal sections, levers loosely mounted in the bifurcations of the plates, means for adjusting the rear ends of the levers, and rods connected to the inner ends of the levers and to the interiors of the pedestal sections.

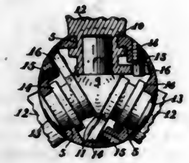
[Claims 6 to 8 not printed in the Gazette.]

878,094. VALVE FOR FLUSHING-TANKS. GEORGE G. SEYMOUR, Troy, N. Y. Filed Mar. 30, 1906. Serial No. 308,840.



In a valve, the combination with a frusto-conical valve-seat, and slideways above and below said seat; of a frusto-conical valve-plug having projections from its opposite ends occupying said slideways throughout the movement of the valve to and from its seat; a lever having a bifurcated end; and a pair of links separately connected, each at its lower end to one arm of the bifurcated lever and at the other end to said valve-plug intermediately of its end-projections.

878,095. REVERSIBLE PROPELLER-WHEEL. CLAUDE SINTZ, Grand Rapids, Mich. Filed June 22, 1906. Serial No. 322,901.



1. A propeller wheel, comprising a head adapted to be secured to a shaft, radial studs on the head, a shell surrounding the head, radial slots in the shell opposite the studs, blades having tubular shanks rotative on the studs and adapted to traverse the slots, flanges on the shanks engaging and traversing the inner surface of the shell, and means for connecting the shell and shanks to rotate and adjust the blades on the studs.

2. A propeller wheel, comprising a head adapted to be attached to a shaft, radial studs on the head, a shell having radial slots opposite said studs, said shell and slots being open at the rear, a conical cap detachably secured to the rear of the shell to close the shell and slots, blades having tubular shanks rotative on the studs, flanges on the shanks engaging and traversing the interior of the shell and means for connecting the shell and shanks to adjust and hold the blades.

3. A propeller wheel, comprising a head adapted to be fixed on the end of a shaft, radial studs on the head, a shell surrounding the head and longitudinally adjustable, said shell having slots opposite the respective studs, blades having tubular shanks journaled on the studs and traversing the slots, flanges on the shanks engaging and traversing the inner surface of the shell, slotted arms on the shanks and pins fixed in the shell and engaging the slots of the arms.

4. A propeller wheel, comprising a head adapted to be fixed on a shaft, radial studs on the head, a tubular shell surrounding the head and having radial slots opposite the studs, means for slidably connecting the head and shell, blades having tubular shanks journaled on the studs and traversing the slots, flanges on the shanks and engaging the inner surface of the shell, and a detachable cap to close or open the rear end of the shell and slots therein.

5. A propeller wheel, comprising a substantially pear-shaped shell having radial slots, said shell and slots being open at the rear end, a detachable conical cap to close the shell and slots, a head within the shell and slidably connected thereto, radial studs on the head and projecting within the said slots, blades having tubular shanks journaled on the studs and traversing the slots, flanges on the shanks engaging and traversing the inner surface of the shell and means for connecting the shell, and shanks to adjust and hold the blades.

[Claims 6 to 10 not printed in the Gazette.]

878,096. VALVE FOR PIANO OR ORGAN PLAYERS. HARRY M. SMITH, Chicago, Ill., assignor to Lyon & Healy, Chicago, Ill., a Corporation of Illinois. Filed Nov. 3, 1906. Serial No. 341,959.

1. A piano or organ player comprising a valve-chamber, apertured valve-seats fitted within the upper and lower ends of said chamber, a valve-stem provided with a shoulder and adapted to slide up and down in the bearing afforded by said valve-seats, a couple of valve-disks fitted upon said stem, and a separating member fitted upon said stem and separating the two valve-disks, said valve-disks and their separating member being so adjusted as to rest upon said shoulder.

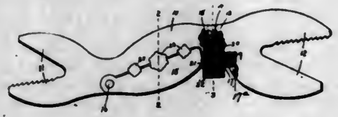


2. A piano or organ player comprising a valve-chamber, apertured valve-seats applied to the upper and lower ends of said chamber, a shouldered valve-stem extending through both of said valve-seats, and a couple of separated valve-disks fitted upon the said stem and held against the shoulder thereon, said disks being adapted to play between the said valve-seats.

3. A piano or organ player comprising a tracker-board, and perforated music, fingers actuated by power pneumatics, exhaust apparatus, a horizontally disposed valve-board provided with a valve-chamber, valve-seats consisting of flat apertured disks fitted within the upper and lower ends of said chamber, a shouldered valve-stem extending through both of said valve-seats, a couple of separated valve-disks mounted upon said stem and resting upon the shoulder thereof, each valve-seat having an integral portion serving as a bearing for the valve-stem, and a pneumatically-actuated diaphragm arranged to engage the lower end of said valve-stem.

4. A piano or organ player comprising a valve chamber, apertured valve-seats fitting within the upper and lower ends of said chamber, a valve-stem adapted to slide up and down in the bearing afforded by said valve-seats, a couple of valve disks fitted upon said stem, and a separating member fitting upon said stem and separating said valve disks.

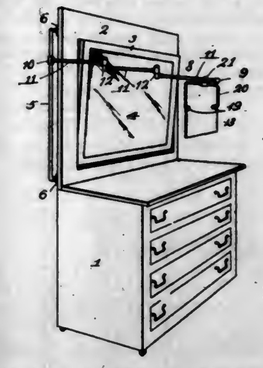
878,097. THREAD-CUTTING DEVICE. RALPH A. SMITH, Marshalltown, Iowa, assignor, by direct and mesne assignments, of one-half to Gus A. Smith, Laurel, Iowa, and one-half to George E. Wetmore and Theodore L. Wetmore, Galesburg, Ill. Filed June 2, 1906. Serial No. 320,203.



In a thread cutting device, the combination with a body comprising a main portion having a lateral enlargement at one end, in the inner edge of which is a notch 17ª open at its outer end, and also having a chamber in its inner edge, adjacent to said notch, and a threaded opening extending from said chamber to its outer edge, and further having a die recess in its inner edge at an intermediate point of its length, and an auxiliary body portion hinged to the main body portion, at the end thereof remote from the lateral enlargement, and having a die recess in its inner edge and a lug 17 at its forward end movable into and out of the notch in the lateral enlargement of the main portion and also having a chamber in the inner side of the lug 17 opposed to the chamber of the main portion and an opening in the outer wall of its chamber; of a coiled spring arranged in the opposed chambers of the body portions, and a headed screw extending through the opening in the auxiliary body portion and engaging the thread in the opening in the main body portion.

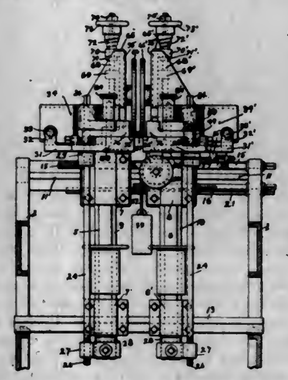
878,098. MIRROR ATTACHMENT. THOMAS E. SUTTON, Kansas City, Mo., assignor, by mesne assignments, to Harry W. Shelly, Kansas City, Mo. Filed Mar. 2, 1907. Serial No. 360,258.

1. In a device of the character described, the combination with a horizontally swinging bracket; of a mirror containing frame having bearings at its opposite sides, a bail having inturned ends journaled friction tight in said bearings, a sleeve mounted slidably and friction tight on said bracket, and pivotal connections between the sleeve and bail whereby the latter may be adjusted in a vertical plane around the bracket and may be swung on its connections in a plane at right angles thereto.



2. In a device of the character described, the combination with a swinging extensible bracket; of a mirror-containing frame having bearings at its opposite sides, a bail having inturned ends journaled friction tight in said bearings, a sleeve mounted slidably and friction tight on said bracket, and connections between the sleeve and bail whereby the latter may be adjusted in a vertical plane around the bracket.

878,099. PLANING-MACHINE. JOHN R. THOMAS, Cincinnati, Ohio, assignor to J. A. Fay & Egan Company, Cincinnati, Ohio, a Corporation of West Virginia. Filed Sept. 3, 1907. Serial No. 391,075.



1. In a planing machine, the combination, with a side-head leg, of a roller hold-down thereon swinging outwardly on a substantially horizontal axis.

2. In a planing machine, the combination, with a side-head leg, of a shaving-head thereon swinging outwardly on a substantially horizontal axis and a hold-down roller for the stock mounted on and moving with said shaving-hood.

3. In a planing machine, the combination of a side-head leg, a shaving-hood pivoted thereon and having an upright extending therefrom, a slide on said upright, means for adjusting said slide up and down on said upright, and a hold-down roller on said slide.

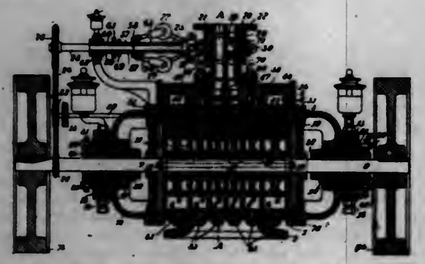
4. In a planing machine, the combination of a side-head leg, a shaving-hood pivoted thereon and having an up-

right extending therefrom, a yielding slide on said upright, means for adjusting said slide up and down on said upright, and a hold-down roller on said slide, substantially as described.

5. In a planing machine, the combination of a side-head leg, a chip-breaker pivoted thereon for horisontal movement, a shaving-hood above said chip-breaker and pivoted to said side-head leg for up and down movement, an upright on said shaving-hood, a yielding slide, means for adjusting said yielding slide up and down on said upright, and a hold-down roller journaled on said slide, substantially as described.

[Claim 6 not printed in the Gazette.]

878,100. ROTARY MOTOR. HUGO VAN BERESTEYN, Brussels, Belgium. Filed Sept. 13, 1906. Serial No. 334,487.



1. In a rotary motor the combination with a suitable cylinder having an upper extension and divided into a plurality of working chambers, of a plurality of rotary vane pistons working one in each of the said chambers adapted to operate under different working pressures and keyed on a common working shaft, and means for operatively admitting working fluid to the said working chambers comprising two plates adapted to slide within a chamber in the extension of the cylinder over distributing ports formed in the said extension, there being a plurality of ports for each piston chamber and which ports are adapted to distribute working fluid to the different piston chambers, each of said plates having a passage adapted to register in different positions with the distributing ports leading to one of the high pressure chambers and said plates having channels in their lower faces adapted to register with others of the said distributing ports to convey the motive fluid that has acted in the high pressure chambers into the intermediate pressure chambers, and being provided with channels adapted to register with still others of the said distributing ports to convey the motive fluid that has acted in the intermediate pressure chambers into the low pressure chambers, and means for allowing the fluid to escape from the low-pressure chambers after acting therein comprising holes formed in the said slide plates and leading to the exterior.

2. In a rotary motor the combination with a suitable cylinder having an upper extension and divided into a plurality of working chambers, of a plurality of rotary vane pistons working one in each of the said chambers adapted to operate under different working pressures and keyed on a common working shaft, and means for operatively admitting working fluid to the said working chamber comprising two plates adapted to slide within a chamber in the extension of the cylinder over distributing ports formed in the said extension, there being a plurality of ports for each piston chamber and which ports are adapted to distribute working fluid to the different piston chambers, each of said plates having a passage adapted to register in different positions with the distributing ports leading to one of the high pressure chambers and said plates having channels in their lower faces adapted to register with others of the said distributing ports to convey the motive fluid that has acted in the high pressure chambers into the intermediate pressure chambers, and being provided with channels adapted to register with still others of the said distributing ports to convey the motive fluid that has acted in the intermediate pressure chambers into the low pressure chambers, and means for allowing the fluid to escape from the low-pressure chambers after acting therein comprising holes formed in the said slide plates and leading to the exterior, and means for closing communication between the working chambers when the piston vanes pass the dead point comprising rotary shafts and sector shaped cones on each of said shafts arranged to control the communication between the various pressure chambers.

3. In a rotary motor the combination of a cylinder comprising an upper and a lower half cylinder, a plurality of frames provided with an eccentric cylindrical opening, these frames being inserted into the said cylinder, means for preventing rotation of the said frames in the cylinder, a plurality of plates arranged between and at the ends of the said frames, means for holding the said plates and frames together, cylindrical pistons the number of which corresponds to that of the said frames and keyed on a common shaft between the said plates, a radially movable vane in each of the said pistons, means for pressing the wing against the inner wall of the said cylindrical opening of the said frames, means for compensating the wear and tear of the friction parts, means for operatively admitting pressure fluid to the piston wings, substantially as and for the purpose set forth.

4. In a rotary motor the combination of a cylinder comprising two half cylinders bolted together, a plurality of frames provided with registering eccentric cylindrical openings and snugly fitted into the said cylinder, keys engaging grooves provided in the said frames and corresponding grooves arranged in the said cylinders, plates arranged between and at the ends of the said frames, bolts holding the said frames and plates together, cylindrical pistons keyed on a common shaft and fitting between said plates a radially movable vane arranged in each of the said pistons a spring arranged behind each vane, a passage arranged in the piston and adapted to convey pressure fluid behind the said wing for pressing same against the inner wall of the said cylindrical opening of the said frames, cylinder heads secured to the ends of the said cylinder, bearings secured to the said cylinder heads and provided each with an opening having cylindrical top and bottom walls and flat side walls, a sleeve having approximately the same outlines and adjustably mounted into the said opening, the said sleeve having an inner cup shaped aperture adapted to receive the bushing, a stop ring adapted to prevent axial motion of the bushing, the said plates and cylinder heads being provided where the motor shaft passes with ovalised central holes adapted to allow radial adjustment of the said shaft, substantially as and for the purpose set forth.

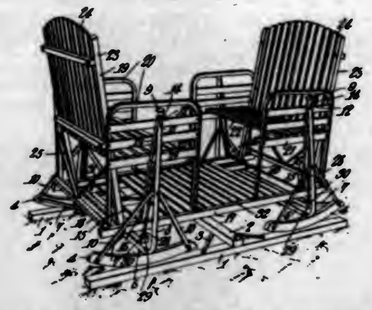
5. In a rotary motor the combination with a cylinder, a plurality of working chambers, two groups of working vane pistons arranged in the said chambers, of a valve slide face arranged in the upper part of the cylinder, two sets of admission and escape ports in the said slide face, two slides adapted to slide on the said face each corresponding to one of the said groups of pistons, admission ports, communication passages and exhaust ports adapted to register either with the admission or exhaust ports of the said slide face, means for actuating the said slides from the outside of the cylinder and means for admitting pressure fluid to the said admission ports and cutting off the said admission, substantially as and for the purpose set forth.

[Claims 6 to 10 not printed in the Gazette.]

878,101. SWING. OLER P. VROOM, Linneus, Mo., assignor to The Superior Hay Stacker Manufacturing Co., Linneus, Mo. Filed Mar. 4, 1907. Serial No. 360,437.

1. A device of the character described comprising standards mounted to rock, hangers pivotally connected to and suspended from the standards and oscillatory frames pivotally connected to and suspended from the hangers and disposed in eccentric relation to each other.

2. A device of the character described comprising standards disposed to rock, an oscillatory seat supporting frame suspended between and supported by the standards, an oscillatory platform hangers pivotally connected to the platform and the standards, said platform being movable independently of the frame.



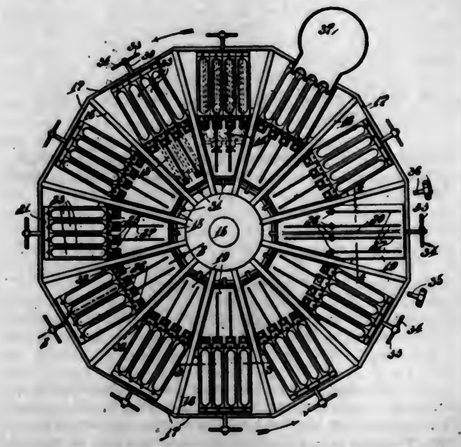
3. A device of the character described comprising rockers, supports rigidly connected thereto and extending therefrom; and independently movable oscillatory frames suspended from the supports said frames being at all times in horizontal planes and being movable along eccentric lines.

4. The combination with rockers disposed in pairs; of rigid connections between the rockers of each pair, supports extending from the rockers, bails pivotally connected to each pair of supports, a frame pivotally supported by the bails, hangers pivotally connected to the supports and below the bails, a frame connected to the hangers and extending under the first mentioned frame, and a platform upon the frame of the hangers and extending into the first mentioned frame, said platform and its frame being movable in an arc eccentric with the arc of movement of the other frame.

5. A device of the character described comprising standards mounted to rock, a seat supporting frame extending from the standards and disposed to oscillate independently of the movement of the standards, and a platform suspended from the standards and disposed to oscillate independently of the movement of the standards, said platform and frame being movable along eccentric lines.

[Claims 6 and 7 not printed in the Gazette.]

878,102. CASTING-MACHINE. ARTHUR L. WALKER, Dongan Hills, N. Y. Filed Dec. 4, 1906. Serial No. 346,227.



1. In a casting machine, the combination of a rotatable structure or carrier, supporting members having trunnioned relationship with the carrier, and molds disengageably connected with the trunnioned supporting members.

2. In a casting machine, the combination of a rotatable structure or carrier, supporting members having trunnioned relationship with the carrier, a plurality of molds, and adjustable means for securing the molds to the trunnioned supporting members.

3. In a casting machine, the combination of a rotatable structure or carrier, supporting members having trunnioned relationship with the carrier, a plurality of molds, and adjustable means adapted to be operated independently with respect to each mold for securing the molds to the trunnioned supporting members.

4. In a casting machine, the combination of a rotatable structure or carrier, supporting members having trunnioned relationship with the carrier, molds adapted to be disengageably connected with the supporting members, and clamping means on the trunnioned supporting members having a movable element for accommodating different sized molds.

5. In a casting machine, the combination of a rotatable structure, a plurality of removable molds, mold supporting members eccentrically trunnioned on the rotatable structure and means for limiting the pivotal movement of the trunnioned members.

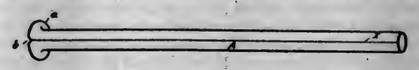
[Claims 6 to 23 not printed in the Gazette.]

878,103. MACHINE FOR DYEING BOBBINS AND THE LIKE. CONRAD WANGLEBEN, Crefeld, Germany. Filed Feb. 23, 1906. Serial No. 302,391.



In an apparatus for dyeing cops, bobbins and similar goods, the combination with a tank containing the liquid dye, and having a channel provided in its bottom, the said bottom having openings therein, a suction-pipe terminating in said channel, an air chamber at the delivery end of the said tank arranged in line therewith and having a perforated top-plate, an exhaust-pipe terminating in said air-chamber, a perforated apron adapted to receive the cops or bobbins, means to move said apron in contact with the perforated bottom of said tank and over the perforated top of the said air-chamber.

878,104. COP-TUBE. SIMON W. WARDWELL, Providence, R. I. Filed July 27, 1906. Serial No. 328,057.

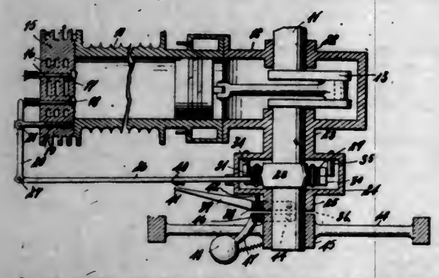


A cop tube of sheet metal in tubular form, with a close but unjoined seam, having a flange with an indentation, formed by expanding the end of the tube and thereby diverging the edges of the seam.

878,105. GOVERNOR AND VALVE MOVEMENT. GEORGE WOLKE, Jacksonville, Ill., assignor of one-fourth to Edward P. Kirby and one-fourth to William K. McLaughlin, Jacksonville, Ill. Filed Jan. 7, 1907, Serial No. 351,190. Renewed Dec. 26, 1907. Serial No. 408,268.

1. An engine having an exhaust valve, an eccentric rotative by the motion of said engine, two annular members coupled together and rotatably mounted upon said eccentric, said members being provided with peripheral teeth, a pair of spaced stop members arranged to alter-

nately engage the teeth of one of the members to intermittently rotate the coupled members, a rod operatively connected with the valve and having one of its ends extended into the teeth of the other annular member, a governor associated with said engine, and means operated by the governor to hold the rod against movement upon an abnormal increase in the speed of the engine.



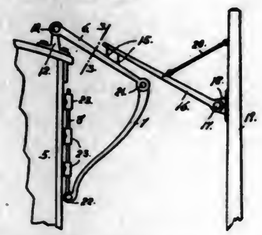
2. An engine having an exhaust valve, an eccentric rotative by the motion of said engine, two annular members coupled together and rotative upon said eccentric and provided with peripheral teeth with twice as many teeth in one member as in the other, stop members spaced apart and adapted to be alternately engaged by the annular member which has the greatest number of teeth to intermittently rotate the coupled members, a rod operatively connected to said valve with one end extending into the teeth of the annular member which has the least number of teeth, a governor associated with said engine, and means whereby said rod is held from movement by abnormal increase of speed of the engine.

3. An engine having an exhaust valve, an eccentric rotative by the motion of said engine, a casing upon the engine frame and inclosing said eccentric two annular members coupled together and rotative upon said eccentric and provided with peripheral teeth, with twice as many teeth in one member as in the other, stop members spaced apart within said casing and adapted to be alternately engaged by the annular member which has the greatest number of teeth to intermittently rotate the coupled annular members, a rod operatively connected at one end with said valve and extending into said casing and into the path of the annular member which has the greatest number of teeth, a governor associated with said engine, and means whereby said rod is held for movement by an abnormal increase of the speed of the engine.

4. The combination with an engine including a drive shaft and an exhaust valve in the cylinder thereof, of an eccentric carried by said shaft, two annular members having spaced peripheral teeth and rotatively associated with said eccentric, one of said annular members having twice as many teeth as the other, spaced stops adapted to be alternately engaged by the annular member which has the greatest number of teeth whereby the coupled annular members are intermittently rotated, a rod operatively connected to said exhaust valve and extending into the path of the annular member which has the least number of teeth, whereby said valve will be actuated by the motion of the engine.

5. The combination with an engine including a drive shaft and an exhaust valve in the cylinder thereof, of an eccentric carried by said shaft, two annular members having spaced peripheral teeth and rotatively associated with said eccentric, one of said annular members having twice as many teeth as the other, spaced stops adapted to be alternately engaged by the annular member which has the greatest number of teeth whereby the coupled annular members are intermittently rotated, a rod operatively connected to said exhaust valve and extending into the path of the annular member which has the least number of teeth, whereby said valve will be actuated by the motion of the engine and provided with a lateral stop, a swinging arm yieldably disposed relative to said rod, a weighted member swinging from said arm, means for maintaining said arm yieldably in inoperative position, and means whereby said weighted member is caused to operate said swinging arm and engage the same with said stop rod.

878,106. ELECTRICAL SIGNALING APPARATUS. BENJAMIN F. WOODING, Denver, Colo. Filed Feb. 23, 1906. Serial No. 302,385.



1. In electrical signaling apparatus, the combination of signaling conductors suitably arranged, of a yieldingly-retained contact pivotally mounted on the train and having an inclined member adapted to engage the conductors in operative relation and for the purpose set forth.

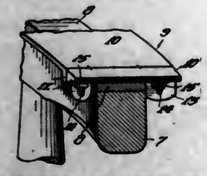
2. In electrical railway signaling apparatus, the combination with signaling conductors arranged to form a block system, of a spring-actuated contact pivoted on the train and having an inclined member adapted to engage the said conductors, the movement of the contact being sufficient to compensate for the swaying of the train when in motion.

3. In signaling apparatus, the combination with signaling conductors, of a contact arm pivotally connected with the train and spring-held to permit the necessary degree of oscillation and inclined to compensate for the varying position of the train with reference to the line of the signaling conductors.

4. In railway signaling apparatus, the combination with signaling conductors arranged in sections or blocks, the extremities of the sections of the two conductors being staggered, a spring-held contact pivotally mounted on the train for closing the circuit between trains when on the same signaling section or block, the said contact having an inclined member having sufficient movement to maintain it in operative relation with the signaling conductors regardless of the swaying movement of the train.

5. In electrical signaling apparatus for railways, the combination of conductors divided into sections or blocks, a local circuit mounted on the train, signaling mechanism included in said circuit, a yieldingly-retained contact pivotally mounted on the train and having an inclined member engaging the conductor, and a suitable connection between the said contact and the local circuit for closing the latter and operating the signaling mechanism, substantially as described.

878,107. SUPPLEMENTAL DETACHABLE VEHICLE-TIRE. HARRISON YARNELL, Los Angeles, Cal. Filed Dec. 12, 1906. Serial No. 347,435.

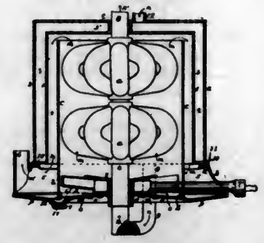


1. A supplemental tire for vehicle wheels comprising a plurality of segmental sections, each having notched ends, the notches being cut non-medially of the sections and the ends formed by the notches constituting attaching tongues; and means for securing the tongues of the abutting sections together to form a continuous tire.

2. A supplemental tire for vehicle wheels comprising a plurality of integral segmental sections, each having notched ends, the notches being cut non-medially of the sections and the ends formed by the notches constituting attaching tongues; and means for securing the tongues of the abutting sections together to form a continuous tire.

3. A supplemental tire for vehicle wheels comprising a plurality of segmental sections having their ends bent inwardly and having non-medial end notches cut in said bent portions; said notched bent ends adapted to straddle an ordinary tire and to form attaching tongues.

878,108. WATER-HEATER. HOMER ANDERSON, Peekskill, N. Y. Filed May 2, 1903. Serial No. 155,254.



1. The combination in a water heater of an annular water-jacket, a base with a flue outlet, a casing dividing the space within the water-jacket and the base in two compartments, water sections within the casing, a heating medium at the base of and within the casing, and a water connection between the water jacket and the sections.

2. The combination substantially as shown of a burner plate adapted to concentrate the drip of condensation, a rim on said plate for the attachment of a flue casing, the plate having perforations within the said rim, a base resting on said plate provided with an outlet and a flange to receive a water jacket, an inverted cup-shaped annular water jacket on said flange, the water jacket provided with a hole in the top for the passage of a water pipe, a flue casing within the water jacket resting on the burner plate, a burner at the bottom of the flue casing, water sections within the flue casing, a pipe connection between the water jacket and the water sections, and a pipe connection in the water jacket.

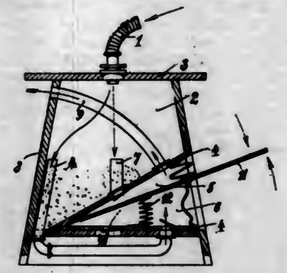
3. In a water heater the combination of heating sections united together one above the other, a base to support a burner under the sections, a burner on said base, the base provided with a circulating passage and a pipe outlet, an annular water jacket on the top rim of the base, the water jacket having a chamber at the top with an opening through it for a pipe, a casing between the sections and the water jacket, and the water jacket having a connection with the heating sections.

4. In a water heater the combination of heating sections united together one above the other, a burner under the sections, an annular cup-like water jacket with an opening in the top inverted over said sections, a cold water supply to the jacket, a connection from the jacket below and through the burner to the heating sections, and an outflow pipe from the top section.

5. In a water heater the combination of heating sections superposed one upon the other, a burner under the sections, an annular cup-like water jacket inverted over and inclosing the sections, the water jacket provided with an opening in the top for an outlet pipe from the sections, a cold water supply entering the water jacket, the water jacket connected with the sections by means of a pipe extending from the water jacket below and up through the burner to the lower section, and an outflow pipe from the top section through the opening in the water jacket.

[Claims 6 and 7 not printed in the Gazette.]

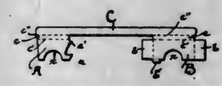
878,109. SUCTION CLEANING APPARATUS. ERNST K. A. BAUMANN and FRIEDRICH W. SEYBOTH, Zwickau, Germany. Filed Mar. 21, 1907. Serial No. 363,537.



1. The improved suction cleaning apparatus, comprising, in combination, a stool having a hinged seat, a dust collecting chamber having a downwardly sloping base disposed below said seat, and manually actuated double-acting bellows fitted below said chamber and having passages for receiving inflowing air and discharging the air, substantially as described.

2. The improved suction cleaning apparatus, comprising, in combination, a stool having a hinged seat, a dust collecting box located below said seat and having a downwardly sloping base and a roof formed with an annular arch, a filter cloth closing the opening of the box, a frame stretching said filter cloth, said frame resting on said arched roof, and manually actuated double-acting bellows fitted below said box and having passages for receiving inflowing air and discharging the air, substantially as described.

878,110. CIGAR-CLIPPER. MAYNARD BIXBY, Salt Lake City, Utah. Filed Feb. 16, 1907. Serial No. 357,672.



1. A cigar clipper comprising a resilient strip folded upon itself at its middle, cutting blades formed in one piece with and on each end of the strip each of said blades being formed from material projecting out from one side of said strip and folded over upon the strip so that the plane of the blades is at right angles to the plane of the strip and the axis of said blades parallel to the axis of the strip, the said blades being opposed to but in contact with each other, the contacting face of one blade having an inwardly folded wing adapted to engage with the edge of the other blade, and a tooth or detent projecting therefrom, the opposite blade being provided with an upper and a lower notch adapted to engage one or the other with said detent to hold the blades together in a closed position or to prevent the blades entirely separating in their open position.

2. A cigar clipper comprising a resilient strip folded upon itself at its middle, a projection on each end of the strip folded over upon the body of the strip and then bent into a plane at right angles with the plane of the strip, the said projections being formed with knife edges, and thus forming the cutting blades of the clipper.

3. A cigar clipper comprising a resilient strip folded upon itself at its middle, cutting blades formed in one piece with and on each end of the strip, folded over upon the middle of the strip and then bent at right angles so that the plane of the blades is at right angles to the plane of the strip, said blades being opposed to and in contact with each other, one of said blades having inwardly folded lateral wings forming guides for the other cutting blade and having means whereby the two blades may be held closed.

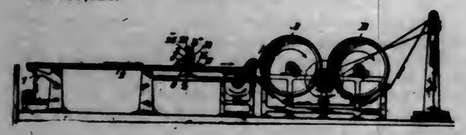
4. A cigar clipper comprising a resilient strip folded upon itself at its middle, cutting blades formed on each

end of the strip and bent at right angles thereto, and one of said blades having inwardly folded, lateral wings forming guides for the other cutting blade.

5. A cigar clipper comprising a resilient strip folded upon itself at its middle, cutting blades formed on each end of the strip and bent at right angles thereto, and one of said blades having inwardly folded, lateral wings forming guides for the other cutting blade, and a downwardly folded lug located at the top of one of said guides partly closing the end of the same, the opposite blade having projecting teeth adapted to engage with said lug.

[Claim 6 not printed in the Gazette.]

878,111. APPLIANCE FOR SEVERING EMBROIDERED WEB. ARNOLD BOSSHARD, Arbon, Switzerland, assignor to The Firm of Aktien-Gesellschaft Arnold B. Heine & Co., Arbon, Switzerland. Filed Feb. 4, 1907. Serial No. 355,714.



1. In an embroidered web severing appliance, in combination, a plurality of spring controlled tubular arms provided with nozzles which bear against the edge of the embroidery of each pattern row, means located above the web for supporting the nozzle pipes, and means for feeding corrosive fluid to the nozzles, substantially as described.

2. In an embroidered web severing appliance, in combination, a plurality of corrosive fluid feed pipes constituting tubular arms provided with nozzles which bear against the edge of the embroidery of each pattern-row, a cylinder through which each pipe passes, a coiled spring within the cylinder attached at one end to the latter and at the other end to the pipe, a carrier to which the cylinder is vertically adjustable and a beam extending across the web and supporting all the carriers in common, substantially as described.

3. In an embroidered web severing appliance, in combination, a plurality of corrosive fluid feed pipes constituting tubular arms provided with nozzles which bear against the edge of the embroidery of each pattern-row, a cylinder through which each pipe passes, a coiled spring within the cylinder attached at one end to the latter and at the other end to the pipe, a perforated carrier to which the cylinder is vertically adjustable, a beam extending across the web and passing through and supporting all the carriers, an eccentric located in each carrier and bearing on the beam, and means for operating the eccentric, substantially as described.

4. In an embroidered web severing appliance, in combination, a plurality of corrosive fluid feed pipes constituting tubular arms provided with nozzles which bear against the edge of the embroidery of each pattern-row, a cylinder through which each pipe passes, a coiled spring within the cylinder attached at one end to the latter and at the other end to the pipe, a carrier to which the cylinder is vertically adjustable, a racked beam extending across the web and supporting all the carriers in common, a pinion shaft, mounted parallel with the beam and engaging the racked portion thereof, and a crank for rotating the shaft, substantially as described.

5. In an embroidered web severing appliance, in combination, a plurality of pipes constituting tubular arms provided with nozzles which bear against the edge of the embroidery of each pattern-row, means located above the web for supporting the nozzle pipes, a corrosive fluid supply pipe feeding all the nozzle pipes in common and divided longitudinally into two perforated chambers, and perforated collars turning on the supply pipe, each controlling one aperture of each supply pipe chamber and each communicating with one of the nozzle pipes, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

878,112. ELECTROMECHANICAL SWITCHBOARD-SIGNAL. ERNEST W. BRACKETT, Elyria, Ohio, assignor to The Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Filed May 29, 1907. Serial No. 376,433.

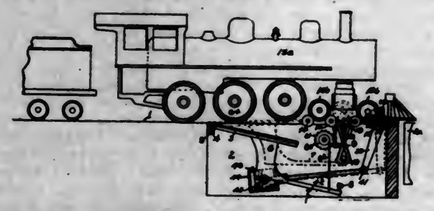


1. In an electromechanical switchboard signal, an electromagnet having a central core provided with an arc shaped tongue at one end thereof, a U-shaped return bar secured to the other end of said core and provided with forwardly extending arms, a nonmagnetic shaft journaled between said arms, a light hemispherical target having integral arms secured to said shaft at its central portion, a nonmagnetic U-shaped member secured to the shaft on the opposite side from said target, an armature secured to said nonmagnetic U-shaped member and having extended ends, said armature being adapted to swing toward the core of the magnet when the line is energized and to straddle said arc-shaped tongue.

2. In an electromechanical switchboard signal, an electromagnet having a central core provided with an arc-shaped tongue at one end thereof, a U-shaped return bar secured to the other end of said core and provided with forwardly extending arms, a nonmagnetic shaft journaled between said arms, a light hemispherical target having integral arms riveted to said shaft at its central portion, a nonmagnetic U-shaped member disposed on the opposite side of the shaft from said target and having its arms secured to the ends of said shaft, an armature provided with extended ends secured to said nonmagnetic U-shaped member and adapted to swing toward the core of the magnet when the latter is energized and to straddle the arc-shaped tongue.

3. In an electromechanical switchboard signal, an electromagnet having a central core provided with an arc-shaped tongue at one end thereof, a U-shaped return bar secured to the other end of said core and provided with forwardly extending arms, a shaft journaled between said arms, a target secured to said shaft on one side thereof, and an armature having extended ends secured on the opposite side of said shaft and adapted to swing toward the core of the magnet when the latter is energized and to straddle said arc-shaped tongue.

878,113. RAILWAY SAFETY APPLIANCE. MICHAEL D. BRESLAUER and SAMUEL W. CLARK, Norfolk, Va. Filed Apr. 3, 1907. Serial No. 366,214.



1. An apparatus of the class described comprising a pit, a section of rails pivoted to one end of the pit and normally horizontal, and means for permitting said rails to assume an angle when released.

2. An apparatus of the class described comprising a railway track, a pit, a section of hinged rails extending partly over said pit, means for holding said rails in a horizontal position, and means for dropping the rails into said pit.

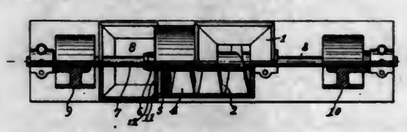
3. An apparatus of the class described and in combination with a draw bridge, of a track, a pit, a section of pivoted tracks normally held horizontal, means adapted to place said track at an angle when a locomotive is over said pit.

4. An apparatus of the class described and in combination with railway track approaches to a drawbridge, of a pit near said bridge, a movable track over the track, jointed levers adapted to hold the movable track approximately horizontal, and wedge means for spreading said jointed levers; to drop the movable track.

5. An apparatus of the class described comprising a pit, a pivoted track section, a latch pin thereon, a set of jointed tong levers adapted to keep said track section in a horizontal position, and wedges adapted to spread said jointed levers to release the track.

[Claims 6 to 24 not printed in the Gazette.]

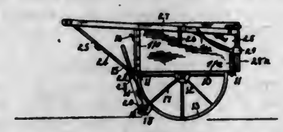
878,114. CURD-MILL. JOHN BROUWERS, Zeeland, Mich. Filed Sept. 17, 1907. Serial No. 393,330.



1. In a curd mill, the combination of a cylindrical case, a hopper near one end of the case, a screw conveyer in the case, a perforated head in the end of the case opposite the hopper, a rotary cutter having radial blades located between the conveyer and the perforated head, and means for independently rotating the cutter and the conveyer.

2. In a curd mill, the combination of a cylindrical case, a hopper above one end of the case, a perforated head in the other end of the case, a sleeve in the axis of the perforated head and forming a journal bearing for the conveyer shaft, a rotary cutter attached to the sleeve and having radial blades located between the end of the conveyer and the perforated head, a shaft fixed in the outer end of the sleeve to drive the cutter, and means for independently driving the conveyer.

878,115. DUMPING-CART. BENJAMIN F. BROWN, Bridgeton, Ind. Filed June 5, 1907. Serial No. 377,306.



1. In a dumping cart, the combination with the body of the cart and handles attached thereto of a supporting member having link connection with the axle, a loop fixed to the body of the vehicle and engaging said member, and link connection between the said body and the handles.

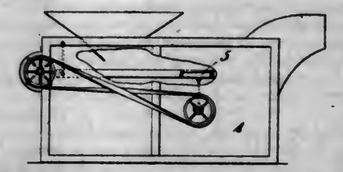
2. In a dumping cart, the combination with the body, handle-bars pivoted to said body, and means for locking said handle bars against pivotal movement, of a supporting member having sliding engagement with a slotted arm connected to said body, links connecting said member with the axle, and a pin fixed in said member and adapted to engage a hook secured to the end gate.

3. In a dumping cart, the combination with the body, handle-bars pivoted thereto and an adjustable support, of toggle lever connections between the handle-bars and said body.

4. In a dumping cart, the combination with the body, handle bars pivoted thereto, and an end gate fixed to said bars, of toggle lever connections between the handle-bars and said body, said connections comprising a bail pivoted to the body, and a plurality of links pivoted to said handle-bars, and having pivotal connection with said bail.

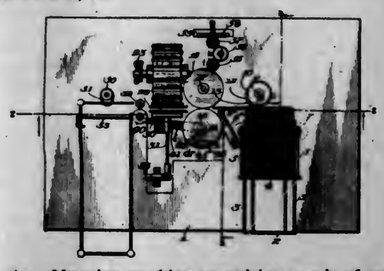
5. In a dumping cart, the combination with the body, handle-bars pivoted thereto, and an end gate carried on said bars, of toggle jointed levers connecting the handle-bars with the body, and a supporting leg pivotally connected with levers mounted to turn on the axle, and having adjustable connection with said body.

878,116. METHOD OF SEPARATING BUCKHORN AND PLANTAIN SEEDS FROM CLOVER-SEEDS. JOSEPH P. BURGESS, Depauw, Ind. Filed Oct. 25, 1906. Serial No. 340,566.



The herein described method of separating clover seeds from buckhorn and plantain seeds which consists in placing the mixed seeds in a body of water to cause oily and gummy exudations from the buckhorn and plantain seeds respectively, removing the floating buckhorn seeds from the surface of the water, draining the remaining mixture, subsequently thoroughly mixing the same with a relatively large proportion of sawdust and screening the so prepared mixture to separate the clover seeds.

878,117. ADDRESSING-MACHINE. MARTIN BURKE and JOSEPH BURKE, Chicago, Ill. Filed Nov. 12, 1906. Serial No. 343,091.



1. An addressing machine comprising a pair of coöperating rollers, one of which is provided with types for the card of the party sending out the addressed articles, and addressing mechanism comprising a series of connected type-bearing frames, means for advancing said frames into printing position, a reciprocating plunger to coöperate with the type-bearing frame in printing position, and means for actuating said plunger and said card printing rolls.

2. An addressing machine, comprising a rotary wheel carrying a chain composed of connected frames each provided with an address, and ratchet mechanism for intermittently advancing said wheel, a rotary shaft for actuating said ratchet mechanism, means for rotating said shaft, a reciprocating plunger to coöperate with the address in printing position, a reciprocating link operating said plunger, a pivoted lever 32 operating said link, a link 34 connected with said lever 32, a cam on said rotary shaft, and a pin on said link 34 for reciprocating the latter.

3. In an addressing machine, the combination of two rolls 14 and 15 arranged side by side and in contact with one another, the roll 14 having an upper section 14^a and lower section 14^b, and the roll 15 having an upper section 15^a and lower section 15^b, whereof the sections 14^a and 15^a coöperate and contact with one another and the sections 14^b and 15^b do the same, the upper sections 14^a and 15^a being adapted to feed the articles to be printed upon, and one of the lower sections being provided with printing devices and the other being adapted to coöperate therewith, whereby said lower sections print upon the article fed by the upper sections, rotary shafts carrying said rolls, means for driving one of said shafts, gear connections between the same and the other shaft, and inking rollers coöperating with said type-carrying roll.

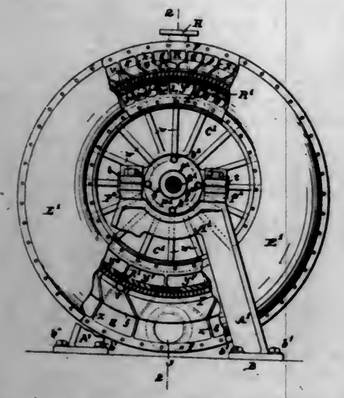
4. The combination with the printing mechanism, of feed rolls 14 and 15 arranged to feed the articles to be

printed upon to the printing mechanism, a pair of rolls 39 and 40 to feed the articles away from the printing mechanism, a swinging arm 41 carrying the roll 40, and mechanism for swinging said arm to withdraw the roll 40 from the roll 39 during the printing operation.

5. The combination with the printing mechanism, of feed rolls 14 and 15 arranged to feed the articles to be printed upon to the printing mechanism, a pair of rolls 39 and 40 to feed the articles away from the printing mechanism, a swinging arm 41 carrying the roll 40, a cam rotating with the roll 14, a pivoted lever 46 arranged to be actuated by said cam, and a connection between said lever 46 and arm 41 whereby the latter is actuated to intermittently withdraw the roll 40 from feeding position.

[Claims 6 to 8 not printed in the Gazette.]

878,118. EXPANSIBLE-FLUID TURBINE. BENJAMIN S. CHURCH, New York, N. Y. Filed Oct. 5, 1904. Serial No. 227,294.



1. A turbine for expansible fluids comprising a casing having a plurality of series of chambers for the expansible fluid, graduated ports in the said casing leading from one chamber into the next succeeding chamber of the series, and a wheel having bucket blades interposed between each of the said ports and its succeeding chamber.

2. A turbine for expansible fluids comprising a casing having a plurality of series of chambers, each series having its chambers arranged radially side by side with graduated ports in the said casing leading from one chamber into the next succeeding chamber of the series, and a wheel having bucket blades interposed between each of the said ports and its succeeding chamber.

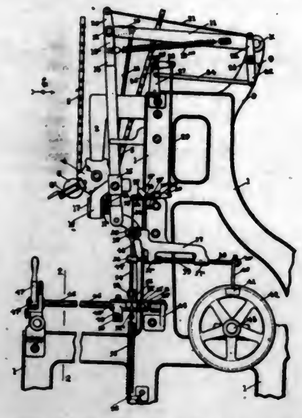
3. A turbine for expansible fluids comprising a wheel-disk having bucket blades arranged in circles concentric with its axis of rotation, and a casing provided with a plurality of series of chambers, each chamber having a graduated port or nozzle leading into the chamber next succeeding it, and each of the said series of chambers being situated adjoining one face of the wheel disk, a row of bucket blades being interposed between each of the ports and the next succeeding chamber of each of the said series of chambers.

4. A turbine for expansible fluids comprising a wheel disk provided with bucket blades and a casing having a plurality of chambers arranged in a plurality of series with a graduated port or nozzle leading from each chamber to the chamber next succeeding it, each series of chambers being situated adjoining one face of the wheel-disk and the said chambers and graduated ports increasing in size to correspond with the increasing volume of the expanding fluid.

5. A turbine for expansible fluids comprising a wheel-disk provided with bucket blades, and a casing having chambers arranged radially in series and communicating by means of ports proportioned to produce a predetermined fall of pressure, each of said series being situated adjoining the face of said wheel disk.

[Claims 6 to 8 not printed in the Gazette.]

878,119. LOOM FOR WEAVING TUFTED FABRICS. JOHN A. CLARK, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed June 15, 1906. Serial No. 321,874.



1. In a loom of the class described for weaving tufted fabrics, the combination with a tuft yarn beam, and clamps for clamping the beam, of connections from said clamps to mechanism for stopping the loom, and said mechanism, automatically operated in case of the failure of the clamps to operate.

2. In a loom of the class described for weaving tufted fabrics, the combination with the clamps for holding the tuft yarn beams as they are removed from and placed upon the endless chain, of mechanism connected with said clamps to automatically stop the loom in case the clamps fail to hold the tuft yarn beam.

3. In a loom of the class described for weaving tufted fabrics, the combination with the clamps for holding the tuft yarn beams as they are removed from and placed upon the endless chain, of connections, intermediate said clamps and mechanism to automatically stop the loom in case said clamps fail to operate in the proper manner, and said mechanism.

4. In a loom of the class described for weaving tufted fabrics, the combination with the clamps for holding the tuft yarn beams as they are removed from and placed upon the endless chain, of connections, intermediate said clamps, and mechanism to automatically stop the loom in case said clamps fail to operate in the proper manner, and said mechanism and supplemental mechanism for rendering such mechanism inoperative to stop the loom.

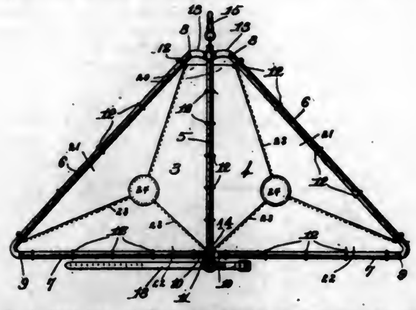
878,120. FOLDABLE FEED-BAG. THOMAS CLISH, Lynn, Mass. Filed May 14, 1907. Serial No. 373,580.

1. A frame for a feed bag comprising a central member, a side member hinged thereto at one end, and an end member pivoted to the opposite end of the side member and having a sliding engagement with the central member.

2. In a feed bag, a frame having a central member, a side member pivoted thereto at one end and an end member pivoted to the side member and having sliding engagement with the central member, in combination with a feed receptacle supported by said frame.

3. A feed bag comprising a foldable frame having a central member, two side members pivoted thereto, and two end members pivoted to the side members and having sliding engagement with the central member, and feed-receiving receptacles supported by said frame.

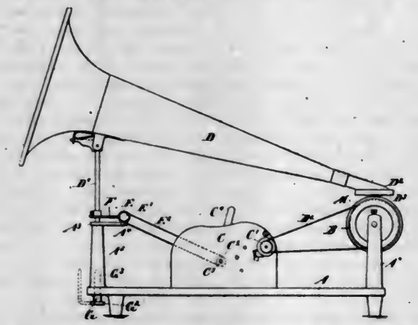
4. A frame for a feed bag comprising a central member, two side members pivoted thereto and two end members pivoted to the side members and having sliding engagement with the central member.



5. A feed bag of flexible material presenting two compartments, each compartment having triangular sides united along their downwardly converging edges and presenting a triangular open top, the adjacent sides of the two compartments being connected at their upper edges, and eyelets arranged at intervals along the upper edges of said compartments by which they are supported when in use.

[Claim 6 not printed in the Gazette.]

878,121. FEED MECHANISM FOR PHONOGRAPHS. WILLIAM A. COOK, New York, N. Y. Filed June 3, 1907. Serial No. 376,913.



1. In a machine of the character set forth, a reproducer adapted to serve with a record, a pintle on which said reproducer is mounted, a worm-wheel on said pintle, a worm meshing with said worm-wheel, and means for rotating said worm.

2. In a machine of the character set forth, a reproducer adapted to serve with a record, a pintle on which said reproducer is mounted, a worm-wheel on said pintle, a worm meshing with said worm-wheel, means for rotating said worm, and means for freeing said pintle from engagement with said worm.

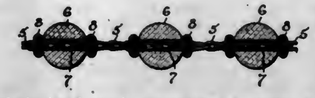
3. In a machine of the character set forth, a reproducer adapted to serve with a record, a pintle on which said reproducer is mounted, a worm-wheel on said pintle, a worm meshing with said worm-wheel, means for rotating said worm, and means for moving said worm-wheel and worm out of mesh with each other.

4. In a machine of the character set forth, a reproducer adapted to serve with a record, a pintle on which said reproducer is mounted, a worm-wheel on said pintle, a worm meshing with said worm-wheel, means for rotating said worm, and means for moving said pintle axially to engage said worm-wheel and worm.

5. In a machine of the character set forth, a reproducer adapted to serve with a record, a pintle on which said reproducer is mounted, a post in which said pintle is received, a worm-wheel on said pintle, a worm meshing with said worm-wheel, means for rotating said worm, a screw in said post set axially to said pintle and serving as a step therefor, and means for turning said screw to lower or raise said pintle and thereby engage or disengage said worm-wheel and worm.

[Claims 6 to 8 not printed in the Gazette.]

878,122. JEWELER'S CHAIN AND BEAD STOCK. JOHN COSTELLO, Providence, R. I. Filed July 30, 1907. Serial No. 386,264.



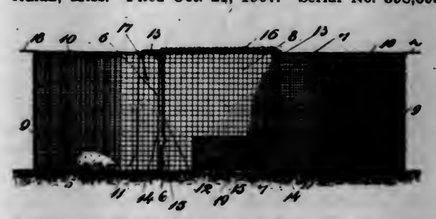
1. A chain bead stock comprising a chain, a series of spaced beads on the chain and a ring secured on the chain at each side of a bead.

2. A chain bead stock comprising a chain, a series of spaced beads on the chain, and a ring embedded in the chain at each side of a bead.

3. A chain bead stock comprising a compact flexible chain, a series of spaced beads on the chain, and a split ring embedded in the chain at each side of a bead.

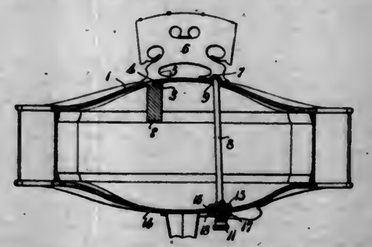
4. In a chain bead stock, the combination of a chain 5, a series of beads 6 6 each bead having a perforation 7 for the chain 5, and a series of split rings 8 8 embedded in the chain 5, as described.

878,123. ANIMAL-TRAP. THOMAS J. CRUMP, Meridian, Miss., assignor of one-half to Samuel Cockrell, Meridian, Miss. Filed Oct. 21, 1907. Serial No. 398,395.



A trap comprising a cage having a compartment provided with a contracted entrance, a barrier adjacent to and in front of the contracted end of said entrance, a second compartment having an opening communicating with the first mentioned compartment, and a swinging door for said opening.

878,124. VIOLIN AND THE LIKE. JOHN W. D'ARMON, Clinton, Ky. Filed Feb. 23, 1907. Serial No. 358,864.

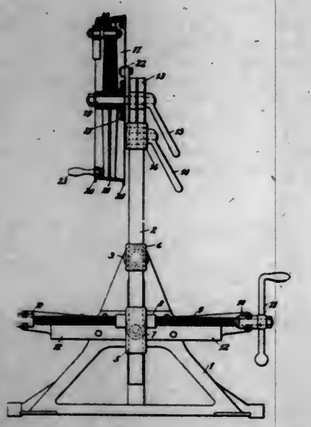


1. The combination with a stringed instrument having a belly and a bridge upon the belly of the instrument; of an interiorly threaded sleeve extending through the bottom of the instrument, means upon the sleeve for clamp-

ing the bottom to hold the sleeve against displacement, and bridge-engaging and supporting means adjustably engaging the sleeve and extending through and out of contact with the belly of the instrument.

2. The combination with a stringed instrument having an opening in the belly thereof and a bridge upon the belly located at one end over the opening; of a sleeve extending through the bottom of the instrument and having a threaded bore, clamping members upon the sleeve, washers interposed between said members and the opposite faces of the bottom, a spindle inserted through the sleeve and the opening and engaging the bridge, said spindle having an enlarged screw-threaded portion disposed to engage the sleeve, and a head upon one end of the stem, said spindle being disposed when rotated in one direction to lift a portion of the bridge out of contact with the belly of the instrument.

878,125. REEL FOR COIL-WINDINGS. ISAAC DE KAISER, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 3, 1906. Serial No. 304,134.



1. In a reel for winding coils in the slots of dynamo-electric machines, the combination with a base or pedestal, of a rod or bar supported thereon, a substantially horizontal shaft adjustably attached to the upper end of the rod, a pulley rotatably mounted upon said shaft, and means for adjusting the angular position of the rod.

2. In a reel for winding coils in the slots of dynamo-electric machines, the combination with a base or pedestal, and a rod or bar supported thereon, of a substantially horizontal shaft adjustably attached to the upper end of the rod, a pulley rotatably mounted upon said shaft, and means for adjusting the angular position of the rod, said means comprising a substantially horizontal screw-threaded shaft, a traveling nut mounted on said shaft, and a guide-bearing that engages the lower end of said rod and said clamping nut.

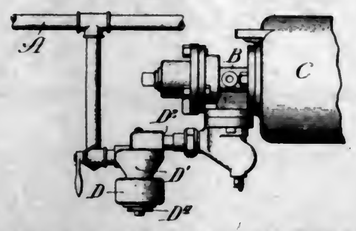
3. The combination with a base or pedestal, of a substantially upright rod or bar pivotally mounted near its middle point upon said base, means for adjusting the angular position of said rod, a shaft attached to the upper end of the rod with its axis perpendicular thereto, a pulley rotatably mounted on said shaft, and means for vertically and rotatably adjusting the position of said shaft relative to the rod.

4. The combination with a base or pedestal, of a substantially upright rod or bar pivotally mounted near its middle point upon said base, means for adjusting the angular position of said rod, a shaft attached to the upper end of the rod with its axis perpendicular thereto, a pulley having a relatively wide and conical rim surface and having annular flanges at the edges of the rim, and means for vertically and rotatably adjusting the position of said shaft relative to the rod.

5. In a reel for facilitating the hand winding of coils for dynamo-electric machines, the combination with a base and a normally upright but angularly adjustable rod supported thereon, of a shaft mounted upon said rod near its upper end, a pulley on said shaft, and means for clamping a conductor to the surface of the pulley.

[Claims 6 to 10 not printed in the Gazette.]

878,126. DUST-COLLECTOR. WILLIAM A. DERBY, Aurora, Ill. Filed Feb. 12, 1907. Serial No. 356,970.



1. In a dust collector, a casing provided with an upper separating chamber and a lower collecting chamber said lower collecting chamber having its upper wall provided with an outwardly projecting ledge surrounding such opening, with a contracted free opening between them, the separating chamber being provided with a central opening in its upper wall, a wall above the upper wall of the separating chamber and inclosing said perforation, said wall being formed to inclose an exhaust port, an air inlet port extending tangentially from the upper part of the separating chamber, a stem extending through the upper opening in the collecting chamber and supported by the wall of the port, and a guard-head attached at its center the lower end of said stem in line with the opening between the separating and collecting chambers.

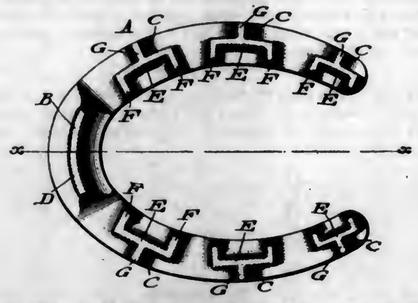
2. In a dust collector, a casing provided with an upper separating chamber and a lower collecting chamber said lower collecting chamber having its upper wall provided with an outwardly projecting ledge surrounding such opening, with a contracted free opening between them, the separating chamber being provided with a central opening in its upper wall, a wall above the upper wall of the separating chamber and inclosing said perforation, said wall being formed to inclose an exhaust port, an air inlet port extending tangentially from the upper part of the separating chamber, a stem extending through the upper opening in the collecting chamber and supported by the wall of the port, and a guard-head attached at its center the lower end of said stem in line with the opening between the separating and collecting chambers and above the level of said opening.

878,127. HORSESHOE. JACOB P. DETWILER, Philadelphia, Pa. Filed Mar. 19, 1907. Serial No. 363,239.

1. A horse shoe provided with a calk rigid therewith and comprising a body portion extending substantially in the direction of the length of the shoe, and transversely extending limbs disposed upon opposite sides of the body portion, said limbs being out of alinement with each other and each extending upon one side only of the body portion, said limbs and body portion mutually bracing each other and the shoe.

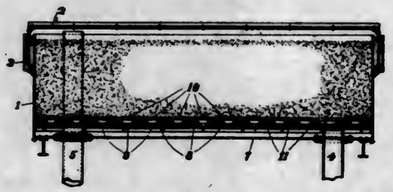
2. As an improved article of manufacture, a horse shoe having formed integral therewith calks each having a body portion substantially parallel with the inner and outer edges of the shoe and having transversely extending limbs at each end extending from one side only of said body portion, and an intermediate limb extending from said body portion in the opposite direction.

3. As an improved article of manufacture, a horse shoe having formed integral therewith calks each having a body portion substantially parallel with the inner and outer edges of the shoe and having transversely extending limbs at each end extending from one side only of said body portion, and an intermediate limb extending



from said body portion in the opposite direction, said limbs being integral with the body portion and mutually bracing the same and each other.

878,128. PURIFIER-BOX. HENRY L. DOHERTY, Madison, Wis. Filed Nov. 12, 1906. Serial No. 343,055.



1. A purifier box for holding pulverulent purifying material having a substantially horizontal bottom provided with relatively narrow substantially vertical gas ports and also having relatively wide shielding elements above such narrow ports and so spaced away therefrom vertically that pulverulent material falling therearound and assuming an angle of repose on said bottom while forming substantial hillocks shall not reach said ports.

2. A purifier box for holding pulverulent purifying material having a bottom provided with substantially vertical, relatively narrow gas ports; said box being provided with relatively wide shielding elements structurally separate from said bottom, located above the several gas ports and so spaced away therefrom that pulverulent material falling around said shielding elements and assuming an angle-of-repose upon said bottom while forming substantial hillocks thereon shall not reach the openings of said ports.

3. A purifier box for holding pulverulent purifying material provided with a false bottom having relatively small openings therein and a second false bottom having relatively large openings therein, located above the first bottom, the two sets of openings being relatively staggered and the distance between the two bottoms and the diameters of the openings of the two sets being so adjusted that pulverulent material falling through the upper, large openings while forming substantial hillocks on the lower bottom shall have an angle of repose thereon preventing its reaching the margins of the lower, narrower openings.

4. A purifier box for holding pulverulent material provided with an outlet for gas drawing from the upper portion of the box, a gas inlet communicating with the lower portion, a material-supporting false bottom above the inlet provided with relatively wide openings, and a second false bottom between the first and the inlet provided with relatively narrow openings staggered with respect to the first openings, said false bottoms being relatively so spaced apart as to cause the second openings to be beyond the angle of repose assumed by material freely falling through the first openings while allowing substantial hillocks of such material to form on the said second bottom.

5. A purifier box for holding pulverulent purifying material provided with gas outlets and inlets and also provided with a double false bottom, one such bottom consisting of a series of slats and the other of an orificed partition located below the slat bottom, said slats being wider than the orifices of the partition and located above the same, the width of the several slats and the vertical distance apart of the two bottoms being so related that pulverulent material falling between the slats shall form substantial hillocks on the orificed partition in assuming an angle of repose thereon without reaching the margins of the orifices.

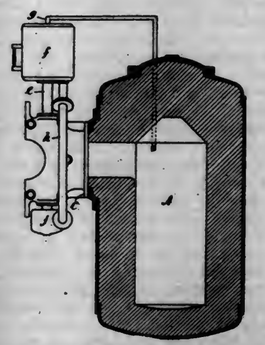
[Claims 6 to 9 not printed in the Gazette.]

878,129. SHOE-LACE AND TONGUE-STAY. HUNTINGTON DOWNER, Hayburn, Idaho. Filed Feb. 5, 1907. Serial No. 355,905.



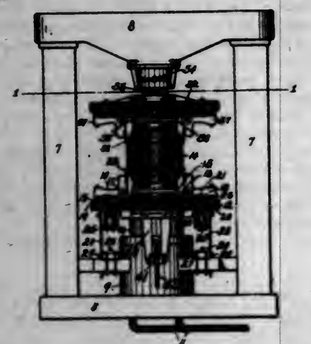
The combination with a plate having an opening extending from one end thereof, a flange surrounding a portion of the said opening, said plate extending at the sides laterally of the flange and having that end adjacent the opening therein slitted to form spring tongues and having ears c adjacent the tongues and in line with the flange thereof, a closure plate having ears b^2 for coöperating with the ears c, said ears b^2 having cam portion b^3 for coacting with the spring tongues a^4, said plate B having a flange b to fit over the flange on the opposing plate and having a solid portion b^5 to fit over the opening in the said opposing plate, all being arranged substantially as shown and described.

878,130. MEANS FOR COOLING THE SUPPLY-PASSAGE OF GAS-TURBINES. JENS W. A. ELLING, Christiania, Norway. Filed Aug. 18, 1904. Serial No. 221,274.



The combination of a gas turbine, a furnace, a gas supply conduit communicating with said gas turbine and furnace, a jacket adapted to contain a cooling medium surrounding said conduit, and means to maintain approximately the same pressure in the jacket as in the conduit, substantially as described.

878,131. HUB-BANDING MACHINE. ORLANDO A. FRICK, Defiance, Ohio. Filed Oct. 8, 1907. Serial No. 396,501.



1. In combination in a hub-banding machine, two relatively movable thrust-members, a circular series of blocks mounted on the face of each of such members, said blocks being radially adjustable on the members, an angled thrust-finger pivotally carried by each block and having one portion vertically disposed and the other portion horizontally disposed and standing longitudinally of its block, yielding means associated with the end of said horizontal portion of each thrust-finger and its block to normally retain such parts spaced, and means for imparting relative movements to said members whereby they operate to press the end bands on an interposed hub and the ends of the vertical portions of the thrust-fingers operate to press the center bands.

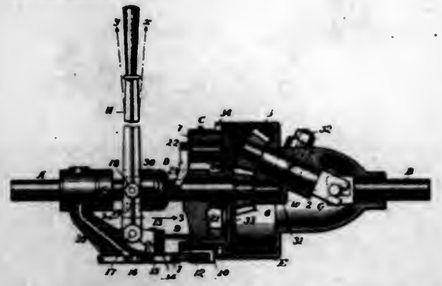
2. In combination in a hub-banding machine, upper and lower relatively movable compressor members having their inner faces each provided with an annular series of radial grooves, elongated blocks mounted in said grooves for independent radial adjustment relative to said members, bell-crank-shaped fingers pivoted at the angles thereof to the inner end portions of the blocks and having their horizontal arms extending outwardly and disposed in the vertical planes of their blocks, yielding means interposed between the outer end of each arm and its block, and means for imparting relative compressing movements to the thrust-members.

3. In combination in a hub-banding machine, a frame, a crown plate, a screw operating in the frame and carrying said plate for vertical adjustment, end and center-band thrust parts carried by said plate, a subjacent pressure table, an annular series of thrust-fingers pivotally carried by said table, said fingers having vertical center-band coacting portions and horizontally-extending portions, compression-springs interposed between the horizontally-extending portions of the fingers and the table, a plunger carrying the table, and means for moving the plunger to raise the table.

4. In combination in a hub-banding machine, a frame, a crown-plate, a screw working in the frame and carrying said plate for vertical adjustment, end and center-band thrust-parts carried by the plate, a subjacent plunger, horizontal tracks at opposite sides of the plunger, a table having rollers for operating on said tracks whereby the table can be moved over the plunger or laterally thereof, an annular series of thrust-fingers pivotally carried by said table, said fingers having vertically-disposed center-band coacting portions and horizontally-extending portions, compression members disposed between the horizontally-extending portions of the fingers and the table, and means for operating the plunger to raise the table.

5. In combination in a hub-banding machine, a vertical cylinder, a plunger operating therein, horizontal rails on opposite sides of the plunger below the plane of its top, a truck mounted for horizontal movement on said rails and movable over said plunger, a thrust plate carried by the truck platform, a circular series of blocks mounted for radial adjustment on the truck platform, angled thrust-fingers pivotally carried by said blocks and having vertically-disposed portions for acting on a center-band and horizontally-disposed portions, yielding means disposed between the horizontal portions of the fingers and the platform, and upper pressure means coöperating with the truck and thrust-fingers when elevated to press the center and end bands of an interposed hub in position, substantially as described.

878,132. REVERSING-GEAR. FRANK G. GIES, Detroit, Mich., assignor to Gies Gear Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 22, 1907. Serial No. 363,855.



1. In a reversing gear, the combination with driving and driven shafts, of an intermediate inclined shaft connected to turn with the driving shaft, a casing having bearings for said shafts, gears on the inclined shaft and on the driven shaft engaging each other, a frame or support, and means for connecting said casing to turn with the driven shaft and also for connecting it immovably with the frame or support.

2. The combination in a reversing gear with separated driving and driven shafts in line with each other, of a casing supported to turn about both shafts, an inclined shaft turning in bearings in said casing and connected to turn with the driving shaft, a gear on the inclined shaft, a gear on the driven shaft engaging therewith, means for holding the casing immovable and releasing the same, and means for connecting the casing to and releasing it from connection with the driven shaft.

3. The combination of the shafts A, B, inclined shaft F connected to turn with the shaft B, gears between the shafts A and F, a support for the shaft F adapted to rotate about the axes of the shafts A, B, means for locking the said support to the base and for releasing the same, and means for locking the said support to and releasing it from connection with the shaft A.

4. The combination with the driving and driven shafts, casing, and intermediate gearing, of a clutch device between the casing and the driven shaft, a split ring encircling part of the casing and secured to a fixed bearing at one end, a two armed lever having one arm bearing upon the free end of the said ring, and a hand control lever bearing upon the other arm of said two armed lever.

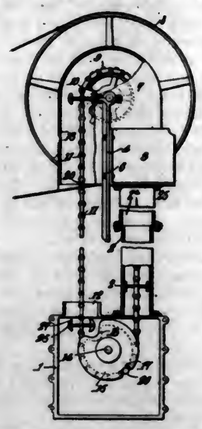
5. The combination with the driving and driven shafts, intermediate gearing, and casing having a flange 7, of the split rings inside and outside of said flange, a sleeve upon one of the shafts for operating the inside split ring, a two armed lever adapted to engage the outside split ring, and a hand control lever having an arm adapted to engage one arm of the two armed lever and a stud adapted to engage said sleeve.

[Claim 6 not printed in the Gazette.]

878,133. WATER-ELEVATOR. JAMES A. GOODNER, Rocky Ford, Colo. Filed Jan. 8, 1907. Serial No. 351,376.

1. A piston for chain pumps comprising a chain link, a disk integral with, and surrounding the link between its ends, a ring surrounding and secured to the disk, and arcuate guides extending from the opposite faces of the ring.

2. A piston for water elevators comprising a flanged disk a chain link integral with the disk and extending from opposite faces thereof, a ring secured upon the flange of the disk and surrounding said disk, and arcuate guides upon opposite faces of the ring.



3. In a water elevator a chain comprising disks, links integral with and extending from opposite faces of the disks, rings secured upon the disks and constituting pistons, each ring and its disk being disposed in the same plane, arcuate guides upon opposite faces of the rings, links interposed between and connecting the links of the disks, and sheave-engaging devices extending laterally from the joints of certain interposed links.

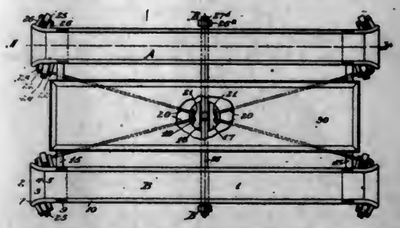
4. In a water elevator the combination with a sheave having an annular flange, there being a recess extending into the periphery of the sheave and a diametrically opposite notch disposed in the flange only of the sheave, and a driving element; of a chain supported by the driving element and extending under the sheave, means extending laterally from certain joints of the chain for engaging the notch within the sheave, a disk integral with one of the links between the laterally extending means, said disk being interposed between the ends of its link, a ring surrounding and secured to said disk and constituting a piston, and arcuate guides upon opposite faces of the ring.

878,134. BRUSH. HERBERT V. HARDMAN, Belleville, N. J. Filed June 13, 1906. Serial No. 321,436.



A brush comprising a handle portion having an abruptly conical end, a sheet metal ferrule having one of its ends conical and having a screw thread spun on the other end, a brush knot, and a sheet metal screw-threaded ferrule to grasp the brush knot with its threads, the threads also receiving the threads of the ferrule to lock the handle portion in the ferrule.

878,135. TURN-TABLE. HERBERT HASTINGS, Rochester, N. Y. Filed Jan. 8, 1906. Serial No. 295,034.



1. A turntable for vehicles comprising two parallel connected runways adapted to receive the wheels of a vehicle and supporting wheels located between and at the ends of each runway at the inner and outer sides thereof and at different distances from the axis of the turntable.

2. A turntable for vehicles comprising two parallel connected runways adapted to receive the wheels of a vehicle and supporting wheels arranged in pairs at the ends of the runways, one of each of said pairs of supporting wheels being arranged at an angle to the runway at the inner side thereof and the other similarly positioned at the outer side of the runway and at a different distance from the axis of the turn table.

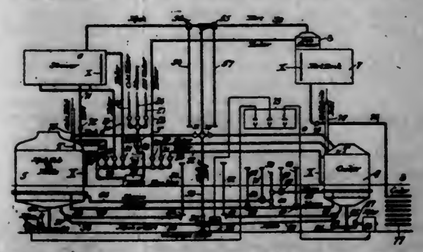
3. In a turntable, the combination with parallel runways and a plurality of supporting wheels located at the ends of each runway on opposite sides thereof at different distances from a central point and having their axes extending radially relatively thereto, and supporting wheels located centrally of the runways on the outer sides of the latter.

4. In a turntable, the combination with parallel runways each comprising a spacing member and shoes located at each end thereof, and struts located between the runways, of tie rods connected to the shoes and operating to hold them in engagement with their respective spacing members and to draw the runways relatively toward each other and supporting wheels on the several shoes.

5. In a turntable, the combination with two parallel runways and struts located between them, of a head arranged between the runways, tie rods extending radially from the head and connected to the ends of the runways and wheels located at the inner and outer side of each end of said runways having their axes disposed radially of a center common to both runways.

[Claims 6 to 10 not printed in the Gazette.]

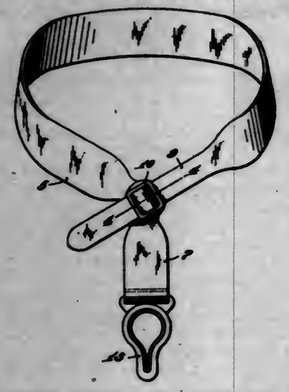
878,136. BREW-HOUSE EQUIPMENT. MAX HENIUS, Chicago, Ill. Filed Apr. 19, 1907. Serial No. 369,067.



In a brew-house, an apparatus equipment therefor comprising, in combination, a plurality of intercommunicating vessels all on one floor of the building and adapted to

have performed in them the various steps involved in producing the wort, said vessels being equipped with the necessary temperature and liquid gages visible from a common and convenient point on said floor, and controlling means for the operations in said vessels centering thereat, whereby the operations of the several vessels may be controlled from such point, and the condition of the contents of the several vessels be ascertained therefrom, for the purpose set forth.

878,137. GARMENT-SUPPORTER. MAX HIRSCH, Philadelphia, Pa. Filed Mar. 22, 1907. Serial No. 363,836.

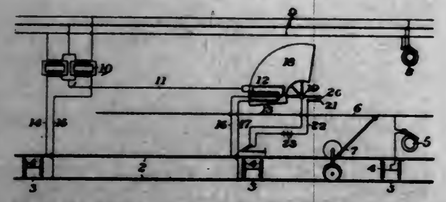


1. In a garment supporter, the combination of two flat flexible bands, a loose pivot connecting said bands so that one band will turn on the pivot independently of the other band, a stud mounted on said pivotal connection, and an adjustable socket member for coöperating with the stud to disengageably connect the opposite ends of one of said bands.

2. In a garter, the combination of two flexible bands, a loose pivot providing means for securing an end to end pivotal connection therebetween, a garment fastener on the free end of one band and adjustable socket and stud means for disengageably connecting the two ends of the other band.

3. In a garter, the combination with a suitable garment fastener of two flexible bands, a loose pivot providing means for securing a pivotal connection between the two ends of one band and one end of the other band, said connection being disengageable with respect to one end of one band and also having an adjustable element.

878,138. ALTERNATING-CURRENT SIGNALING APPARATUS FOR ELECTRIC RAILWAYS. JOHN S. HOLLIDAY, Wilkinsburg, Pa., assignor to Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed June 3, 1907. Serial No. 376,897.



1. In an electric railway system, employing a single-phase propulsion current, a signaling circuit, a two-phase generator for supplying the same with two-phase current, and a relay having two windings connected one to each track rail and in parallel with respect to the signaling current and in series with respect to any propulsion current which may flow through them from one track rail to the other; substantially as described.

2. In an alternating current signaling system, sectional track rails, a two-phase transmission line, a two-phase transformer having its primaries connected to the transmission line and one terminal of each of its secondaries connected to opposite track rails, and a relay having two windings, one terminal of each of which is connected to the transformer secondaries and the other terminals of which are connected respectively to opposite track rails, said windings and track rails, and the connections for the windings constituting two permanently closed track circuits for each block; substantially as described.

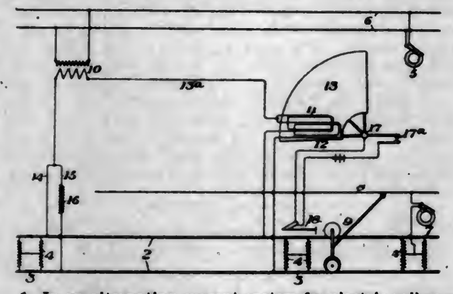
3. In alternating current signaling apparatus, a relay having two windings forming parts of two different permanently closed track circuits for the block controlled by said relay, one of said circuits including one track rail only, and the other circuit including the opposite track rail only; substantially as described.

4. In alternating current signaling apparatus, a relay having two windings forming parts of two different permanently closed track circuits for the block controlled by said relay, and means whereby the currents in said circuits are made to differ in phase; substantially as described.

5. In an alternating current signaling system, a relay having two windings which are connected in series across the track rails, and in parallel in the signaling circuit; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

878,139. ALTERNATING-CURRENT SIGNALING APPARATUS FOR ELECTRIC RAILWAYS. JOHN S. HOLLIDAY, Wilkinsburg, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed June 28, 1907. Serial No. 381,218.



1. In an alternating current system for electric railways using alternating current for both signaling and propulsion purposes, a relay having two windings, and circuit connections therefor whereby the phase of the signaling current passing through said windings is split, while the phase of any propulsion current which may pass therethrough is not changed; substantially as described.

2. In an alternating current system for electric railways using alternating current for both signaling and propulsion purposes, a relay having two windings which are in series with each other with respect to propulsion current which may flow from one rail to the other, and in parallel with respect to the signaling current, and means in series with one of said windings for changing the phase of the signaling current passing therethrough; substantially as described.

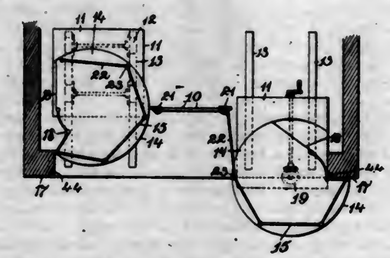
3. In an alternating current system for electric railways using alternating current for both signaling and propulsion purposes, a relay having two displaced windings connected in series across the track and in parallel with respect to the signaling current, and means for changing the phase of the signaling current in the two windings; substantially as described.

4. In an electric railway system using a single phase propulsion circuit, and a single phase signaling circuit, sectional rails, a relay having two sets of windings, means whereby the phase of the signaling circuit passing through said windings is normally displaced, while the phase of any propulsion current passing therethrough is not changed, said windings being so connected that the presence of a train in the section put the currents in said windings in phase with each other; substantially as described.

5. In an alternating current system for electric railways, a relay having a contact-operating member movable in both directions from a central position, two sets of windings arranged to act on said member, an inductance, and means for connecting the inductance in series with either one of said windings; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

878,140. STORE-FRONT. WILLIAM H. HOOVER, Jr., Elizabeth, N. J. Filed May 10, 1907. Serial No. 372,880.



1. A display window for store fronts comprising a window portion adapted to swing inside the building and arranged to be swung to cover a portion of the front walls of the building.

2. A display window for store fronts comprising a platform, arranged in the front of a building, that can be moved within the building line, or arranged to project therefrom, and a display portion arranged on the platform and adapted to be swung around and project beyond the platform to cover a portion of the front of the building.

3. A display window for store fronts comprising a platform arranged to be moved, and a display portion mounted thereon and arranged to be swung so as to project from one side of the platform.

4. A display window for store fronts comprising a platform arranged to slide, and a window portion pivotally mounted on the platform and arranged to be swung around to cover a portion of the front of the building adjacent to the window, and to be swung to allow the platform to be slid within the building.

5. A display window for store fronts comprising a sliding platform, a window portion arranged to pivotally swing on the platform and having an overhanging portion to project from the platform, and a mechanism on the platform for rotating the window portion.

[Claims 6 to 12 not printed in the Gazette.]

878,141. METALLIC SHEET-PILING (DRIVING POINT.) GEORGE W. JACKSON, Chicago, Ill. Filed Sept. 10, 1907. Serial No. 392,160.

1. The combination with a metal sheet piling section comprising two side members secured rigidly together and provided with marginal inwardly directed flanges, of a tapered driving point fitting between and fixedly attached to the lower ends of said members, said driving point being narrower than the side members and the flanges of the side members being cut away a distance above the lower end of said driving point.

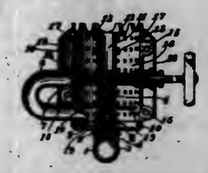
2. The combination with a metal sheet piling section comprising two side members secured rigidly together, of a tapered driving point fitting between said members, said side members of the section fitting outside the tapered portions of the point and means for fixedly attaching the point to said members.



3. The combination with a metal sheet piling section comprising two side members secured rigidly together, of a tapered driving point fitting between said members, said side members of the section fitting outside the tapered portions of the point, and means for fixedly attaching the point to said members, said tapered portions of the point being provided with shoulders against which lower end margins of the section members abut.

4. An integral driving point for metal sheet piling sections comprising upper parallel portions, lower converging or tapered portions and a strengthening web extending between and connecting the lateral parts of said driving point.

878,142. VAPOR-BURNER. FRANK KITZSTEINER, Grand Rapids, Mich., assignor to The Quick Work Stove Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 8, 1907. Serial No. 366,978.



1. In a vapor burner, a vertical tubular generator, a transversely disposed needle valve in said generator, a perforated tube surrounding the generator and spaced apart therefrom, an annular cup at the bottom of the generator and tube and closing the space therebetween, a hood surrounding the perforated tube and spaced apart therefrom, the space between said tube and said hood being open at the bottom and closed at the top and a U-shaped mixing tube extending from the needle valve to close above the cup and having a lateral opening between the tube and hood and a downwardly turned lip at the lower end.

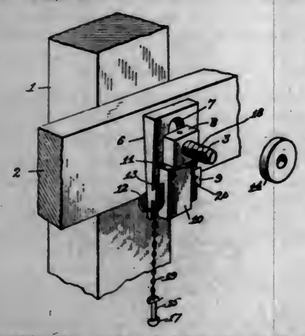
2. In a vapor burner, a generator comprising a vertically disposed tube, a perforated tube surrounding the same, radial plates on the generator tube and near the lower end thereof and spaced apart from the perforated tube, a transversely disposed needle valve above the generator and communicating therewith, and a U-shaped tube in one end of which the needle valve is inserted, said tube having a lateral opening near the needle valve, and having its other end opening toward the lower part of the generator, and below the radial plates thereon whereby the plates deflect the flame toward the perforated tube.

3. In a vapor burner, the combination of a generator comprising a vertically disposed tube open at the top and closed near the middle by a transverse needle valve communicating with the lower part of the tube, means for supplying fluid to the lower part of the tube, radial heat absorbing members arranged at intervals on the tube, a U-shaped mixing tube having the needle valve inserted in one end and the other end opening toward the lower part of the generator tube and below the needle valve and heat absorbing members, a perforated tube surrounding the generator and spaced apart therefrom, a hood surrounding the

perforated tube and spaced apart therefrom, and means for closing the space between the upper end of the hood and the perforated tube.

4. In a vapor burner, an axially disposed tube extending vertically therethrough, means for supplying fluid to the lower end of said tube, a transversely disposed needle valve extending through the tube near the middle thereof and communicating with the lower part thereof, a filling of foraminous heat-resisting material in the lower part of the tube, a perforated tube surrounding the first named tube and spaced apart therefrom, an annular cup closing the space between the lower ends of said tubes, an outwardly projecting flange on the perforated tube and above the perforations therein, a hood surrounding the perforated tube and spaced apart therefrom, said hood also having a contracted upper end engaging the flange and supporting the hood, and a U-shaped tube in one end of which the needle valve is inserted, the other end of said tube being beneath the needle valve and opposite the lower part of the axial tube, said U-shaped tube also having a lateral opening near the needle valve and between the perforated tube and the hood.

878,143. COMBINED NUT-LOCK AND ANTIRATTLER. JAMES W. KOCH, Tamaqua, Pa. Filed July 23, 1907. Serial No. 385,116.



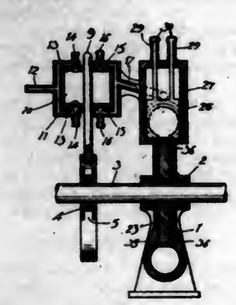
1. In combination, a threaded bolt, a nut thereon, a vertically adjustable apertured wedge plate between said bolt and the part through which said bolt passes, and a weight removably mounted on said wedge plate and adapted when positioned to contact with and lock said nut against rotation.

2. In combination, a threaded bolt, a nut thereon, a vertically adjustable apertured wedge plate between said nut and the part through which said bolt passes, and a weight sliding on said wedge plate and having its face adjacent to said nut angularly disposed to engage and wedge against said nut.

3. In combination, a threaded bolt, a nut thereon, a vertically adjustable apertured wedge plate between said nut and the part through which said nut passes, a weight sliding on said wedge plate and having its face adjacent to said nut angularly disposed to engage and wedge against said nut, a washer on said bolt outside of said nut, and a key having enlarged ends passing through an aperture in said bolt and locked thereon by turning.

878,144. ROTARY EXPLOSIVE-ENGINE. JOHN D. LONG, San Francisco, Cal. Filed May 16, 1907. Serial No. 374,036.

1. The combination of a shaft, a rotary piston secured thereto having a web and an annular segmental head, of substantially circular cross section, a casing having an annular working chamber in which said piston rotates, and an explosion chamber connected with said working chamber, a spring-actuated gate adapted to close the working chamber of the cylinder behind the piston, the piston being formed with a sloping front face to lift said gate, packing rings around the piston, the casing having recesses for said rings, the ends of said rings having sliding pieces adapted to abut against the sides of the piston, and springs for pressing said sliding pieces thereagainst, substantially as described.



2. The combination of a shaft, a rotary piston, secured thereto having a web and an annular segmental head, of substantially circular cross section, a casing having an annular working chamber in which said piston rotates, and an explosion chamber connected with said working chamber, a spring-actuated gate adapted to close the working chamber of cylinder behind the piston, the piston being formed with a sloping front face to lift said gate, packing rings around the piston having forwardly and inwardly sloping inner surfaces, substantially as described.

3. The combination of a shaft, a rotary piston secured thereto having a web and an annular segmental head of substantially circular cross section, a casing having an annular working chamber in which said piston rotates and an explosion chamber connected with said working chamber, a spring actuated gate adapted to close the working chamber behind the piston, the piston being formed with a sloping front face to lift said gate, a compression chamber, a piston reciprocating therein, a valve-controlled feed pipe leading to said chamber, a valve-controlled supply conduit leading from said chamber to the cylinder, and means for reciprocating said latter piston from the rotary movement of the shaft, substantially as described.

4. The combination of a shaft, a rotary piston secured thereto, a casing having an annular working chamber in which said piston rotates, and an explosion chamber connected with said working chamber, a spring-actuated gate adapted to close the working chamber of the cylinder behind the piston, the piston being formed with a sloping front face to lift said gate, a compression chamber, a piston reciprocating therein, a valve-controlled feed pipe leading to said chamber, a valve-controlled supply conduit leading from said chamber to the cylinder, and means for reciprocating said latter piston from the rotary movement of the shaft, said means comprising a circular device upon the shaft and a loop around said device and connected to said piston, said loop and device having parts adapted to engage each other and impart reciprocating motion to the loop from the rotary motion of the shaft, substantially as described.

5. The combination of a shaft, a rotary piston secured thereto, a casing having an annular working chamber in which said piston rotates, and an explosion chamber connected with said working chamber, a spring-actuated gate adapted to close the working chamber of the cylinder behind the piston, the piston being formed with a sloping front face to lift said gate, a compression chamber, a piston reciprocating therein, a valve-controlled feed pipe leading to said chamber, a valve-controlled supply conduit leading from said chamber to the cylinder, and means for reciprocating said latter piston from the rotary movement of the shaft, said means comprising a grooved circular device upon the shaft, having a bridge in said groove and a loop connected to the piston, said loop having inwardly extending lugs entering said groove and adapted to be engaged by said bridge, substantially as described.

[Claim 6 not printed in the Gazette.]

878,145. TUBE OR FLUE CLEANER. JOHN R. MIDDLETON, Everett, Mass. Filed Dec. 19, 1905. Serial No. 292,477.



1. A boiler tube or flue cleaner comprising a fluted drill pointed member having one end reduced to form a shank and a shoulder, the shank having a screw-threaded portion, a plurality of cup-shaped cutters fixedly mounted upon the shank portion of the drill-pointed member, one cutter differing in form from the remaining cutters and disposed adjacent the aforesaid shoulder, and collars mounted upon the shank to hold the cutters in spaced relation.

2. A boiler tube or flue cleaner composed of a fluted drill-pointed member having a reduced portion forming a shank and a shoulder, the shank having a screw-threaded portion, a plurality of cup-shaped cutters fixedly mounted upon said shank portion, all of the cutters being fluted and one cutter being disposed against said shoulder, a nut upon the shank, spaced collars between the cutters and said shoulder and nut to hold the cutters in spaced relation, a screw-threaded socket sleeve to receive the free end of said shank, a shank extension 11 secured in said socket sleeve, and a nut fitted upon said shank extension.

878,146. ELECTRIC SIGN. DANIEL F. MILLER, Lowell, Mass. Filed Mar. 14, 1906. Serial No. 306,036.



1. In an electrically illuminated sign, a stationary box comprising a sign or design formed by transparent letters or parts on an opaque field, and apertured opaque transverse partitions in said box, combined with a revoluble framework inside said box and comprising a plurality of disks connected by standards, electric lights carried by and between said disks, a plurality of concentric contact strips of unequal lengths carried by the top disk and each electrically connected with the lights between a different pair of disks, a plurality of contact fingers carried by said box and adapted to make a circuit through the concentric contact strips, suitable connections to complete the circuit for the lights, and means for revolving said framework.

2. In an electrically illuminated sign, a stationary box comprising opaque sides on which are transparent signs or designs, apertured opaque transverse partitions in said box, combined with a revoluble framework which passes through the apertured partitions in said box and carries corresponding partitions, electric lights carried by and between the partitions in the framework, means for revolving the framework, electrical connections with the lights and the source of electricity, and sliding contacts carried by the framework adapted to make and break the circuits for the lights.

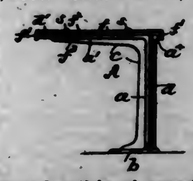
3. In an electrically illuminated sign, a stationary box comprising opaque sides on which are transparent signs or designs, apertured opaque transverse partitions in said box, combined with a revoluble framework which passes through the apertured partitions in said box and carries partitions corresponding with the partitions thereof, electric lights carried by and between the partitions in the revoluble framework, panes of different colored glass arranged about the lights and carried by the framework, means for revolving the framework, electrical connections with the lights and the source of electricity, and sliding contacts carried by the framework adapted to make and break the circuits for the lights.

4. In an electrically illuminated sign, a stationary outer case comprising a transparent sign, combined with a plurality of parallel partitions carried by a revoluble framework, a plurality of electric lights interposed between and carried by said partitions, conductors forming a permanent electrical connection between the lights and a source of electricity, a plurality of contact strips in the form of concentric arcs carried by the top of the framework and each connected with lights between different partitions, stationary contact fingers adapted to rest on top of the framework and to complete the circuit with the source of electricity through the concentric contact strips as the framework revolves, and means for revolving the framework, as described.

5. In an electrically illuminated sign, a stationary outer case comprising a transparent sign, combined with a plurality of parallel partitions carried by a revoluble framework, a plurality of electric lights interposed between and carried by said partitions, a plurality of panes of different colored glass arranged about the lights and carried by the framework, conductors forming a permanent electrical connection between the lights and a source of electricity, a plurality of contacts in the form of concentric arcs carried by the top of the framework and each connected with lights between different partitions, stationary contact fingers adapted to rest on top of the framework and to complete the circuit with the source of electricity through the concentric contact strips as the framework revolves, and means for revolving the framework, as described.

[Claims 6 and 7 not printed in the Gazette.]

878,147. COUNTER-PROTECTING DEVICE FOR STORES, &c. JOSEPH B. MONETTE, Providence, R. I. Filed Nov. 19, 1907. Serial No. 402,798.



1. As an improved article of manufacture a bracket of the character described, the same comprising a standard part terminating in a suitable base and having oppositely disposed vertically extending grooves adapted to

receive therein the adjacent ends of a pair of glass side plates, a top or table member integral with and arranged at an angle to said standard having its forward end extending in front of said grooves, and means connected with the bracket for detachably securing glass plates to the upper surface of said table portion.

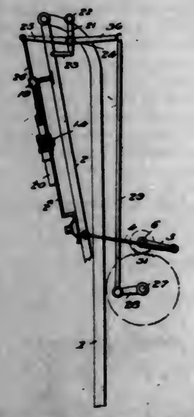
2. In a counter protecting device, the combination with a bracket member, arranged to receive vertically disposed glass side plates, and a flat table member integral therewith, of a clamping strip extending the length of said table portion having its ends bent downwardly and forming a space between the strip and table to receive and support therein the adjacent ends of a pair of upper glass plates, substantially as described.

3. The vertically grooved bracket A, arranged to receive the ends of a pair of glass side plates, having a flat table member a^1 integral therewith and extending in front a short distance to form a support for the corresponding edge portion of a pair of upper glass plates when mounted on the table, and a metal clamping strip detachably secured to the table adapted when in use to maintain the upper plates in position and also for completely concealing the joints of the latter both edgewise and endwise.

4. The combination with a counter or analogous structure, of a plurality of suitably spaced counter protecting brackets A detachably secured thereto, side and top plates of glass, g, g^1, substantially uniform in length removably seated in said brackets, and narrow clamping strips f of metal bearing upon said top plates and secured to the brackets, the ends f^1 of said clamping members being bent downwardly and completely concealing the adjacent ends of the top plates, substantially as described.

5. In a counter protecting device, the combination of a main bracket member arranged to receive vertically disposed glass side plates, a flat table member integral with the bracket, a clamping strip located above and extending the length of said table part adapted to receive and support between them the adjacent ends of a pair of upper glass plates, a supplemental or smaller bracket pivoted to the rear of said main bracket constructed to support a glass shelf, and means for varying the angular position of the movable bracket.

878,148. SHUTTLE-MOTION FOR LOOMS. MARTIN MOUL, Hanover, Pa. Filed Apr. 29, 1907. Serial No. 370,853.



1. In a shuttle motion for looms, the combination with a swinging lathe-frame, and shuttle bars carried thereby, of means carried by the lathe-frame for reciprocating said shuttle bars, a swinging hanger having a connection with the lathe-frame, means carried by the hanger for operating the shuttle bar operating means, and driving means coöperating therewith.

2. In a shuttle motion for looms, the combination with a swinging lathe-frame, of shuttle bars carried thereby, means carried by the lathe-frame for operating the shuttle bars, a swinging hanger having a connection with the lathe-frame, a lever hung from the hanger and operatively connected with the shuttle bar operating means, and means for rocking said lever.

3. In a shuttle motion for looms, the combination with a swinging lathe-frame, of shuttle bars carried thereby, means carried by the lathe-frame for operating the shuttle bars, a swinging hanger having a connection with the lathe frame, a lever hung from the hanger and operatively connected with the shuttle bar operating means, another lever for rocking the aforesaid lever, a rotary driving crank and a pitman connecting the driving crank and the lever last named.

878,149. BUTTON. THOMAS J. MCGOVERN, Hartford, Conn. Filed May 11, 1906. Serial No. 316,418.

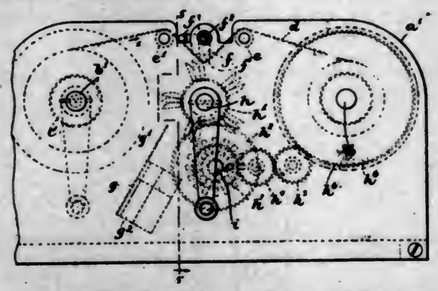


1. A button having a stem extending from the back thereof, a spirally arranged coil located to provide a space therebetween and the stem, said stem extending transversely of the axis of the coil, and a neck connecting the lower end of the stem and coil.

2. A button, a stem extending from the back thereof, a spirally arranged coil extending above the lower end of the stem to form a space therebetween and said stem, the latter extending diametrically of the coil, and a neck connecting said coil and the lower end of the stem.

3. A button, a stem extending from the back thereof, a spirally arranged coil located above the lower end of the stem and providing a space between said stem and coil, and a neck uniting said coil and the lower end of the stem.

878,150. MECHANICAL MUSICAL INSTRUMENT. JOHN MCTAMMANY, Providence, R. I., and EUGENE A. FORD, Uxbridge, Mass., assignors, by direct and mesne assignments, to F. A. McTammany, New York, N. Y. Filed Mar. 3, 1902. Serial No. 96,382.



1. A musical instrument comprising a rotatable shaft, a picker mounted to rotate therewith, a flexible selector adapted to govern the movement of said picker, and means for rotating said picker independently of the rotation of said shaft.

2. A mechanical musical instrument comprising a rotatable shaft, a picker mounted to rotate therewith, a flexible selector, means whereby said selector follows a tortuous path, and means for rotating said picker independently of the rotation of said shaft.

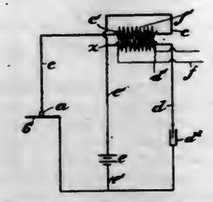
3. A mechanical musical instrument comprising a rotatable shaft, a picker mounted to rotate therewith, said picker having fixed teeth movable in a constant path about a fixed axis, a selector adapted to govern the movement of said picker, and means for rotating said picker independently of the rotation of said shaft.

4. A mechanical musical instrument comprising a rotatable shaft, a picker mounted to rotate therewith, said picker having fixed teeth movable in a constant path about a fixed axis, a flexible selector adapted to govern the movement of said picker, means whereby said selector follows a tortuous path to engage said picker, and means for rotating said picker independently of the rotation of said shaft.

5. A mechanical musical instrument comprising a rotatable shaft, a picker mounted thereon and having fixed teeth movable in a constant path about a fixed axis, a sounding device, a selector, means whereby said shaft will cause a tooth of said picker to normally rest against said selector without motion until a perforation in the selector registers therewith, and means for rotating said picker independently of the rotation of said shaft.

[Claims 6 to 43 not printed in the Gazette.]

878,151. TELEPHONE SYSTEM. ALBERT L. PARCELLE, Boston, Mass.; Walter A. Parcelle administrator of Albert L. Parcelle, deceased. Filed Sept. 22, 1906. Serial No. 335,762.



1. In a telephone system, a local transmitter circuit, comprising branch circuits arranged in multiple, only one having therein a microphone, and each of said circuits having a primary winding with a separate core; and a receiver circuit having a secondary winding common to said primary windings and cores.

2. In a telephone system, a source of power, a transmitter circuit comprising two or more branch circuits connected in multiple with each other and with said source of power, one of said branch circuits including a microphone, and all of said branch circuits including primary windings with separate cores; and a receiver circuit having a secondary winding common to said primary windings and cores.

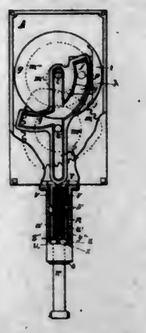
3. An electrical apparatus comprising a source of power, branch circuits in multiple with relation to each other but connected with said source of power; a primary coil in each of said branch circuits with a separate core; a secondary winding common to all of said primary coils and cores; and means in one of said branch circuits for varying the current flowing therethrough.

4. In a telephone system, the combination with a transmitter circuit comprising a plurality of conductors arranged in parallel, a transmitter in one of the conductors and a condenser in another of said conductors, of a receiving circuit, and an induction coil having a primary winding in both the transmitter and condenser conductors and a secondary winding coöperating with the primary windings, and being included in the receiving circuit.

878,152. HAND ROCK-DRILL. CHRISTIAN F. PAUL, Jr., Peekskill, N. Y., assignor to The Paul & Kreuger Rock Drill Company, a Corporation of New York. Filed June 21, 1906. Serial No. 322,669.

1. In a hand rock drill the combination of a curved yoke for imparting a reciprocating motion to the drill, and a variable speed gearing for operating the yoke comprising an eccentric wheel and a wheel adapted to engage with the eccentric wheel for driving the same.

2. In a hand rock drill the combination with a yoke for imparting a reciprocating motion to the drill, of a crank for giving motion to the yoke, said crank having a movable crank-pin comprising a crank disk, a slot in the disk, a movable block in said slot, the crank-pin secured in the movable block, and springs bearing against the block to retain it in its normal position in the slot.



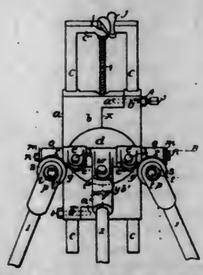
3. In a hand rock drill the combination with a yoke for imparting a reciprocating motion to the drill, of the drill spindle swiveled to the end of the yoke, and a spring within the drill-spindle acting upon the yoke-spindle to elastically keep the yoke-spindle seated in the drill-spindle.

4. The combination in a rock drill of a yoke for imparting a reciprocating motion to the drill, the yoke having a quadrant shaped slot for the crank connection, the slot pitched from a horizontal so that radii from its curves will meet in a center in a vertical plane with the center of the crank-pin when the crankpin is at its left-center, and a variable gear for operating the same comprising an eccentric pinion fast to the crank-disk, and a driving wheel adapted to engage with the eccentric pinion.

5. In a rock drill, in a crank for imparting a reciprocating motion to the drill, a movable crank-pin comprising a crank-disk a slot in the crank-disk, a movable block in said slot, the crank-pin secured in said block, and springs bearing against the block to retain it in its normal position.

[Claims 6 and 7 not printed in the Gazette.]

878,153. SUPPORT FOR ROCK-DRILLING MACHINES. CHRISTIAN F. PAUL, Jr., Peekskill, N. Y., assignor to The Paul & Kreuger Rock Drill Company, a Corporation of New York. Filed Apr. 16, 1907. Serial No. 368,541.



1. In a support for a hand rock-drilling machine the combination with guide rails for the machine, of a frame for securing them to a tripod comprising two plates divided centrally and having overlapping extensions at their ends to receive clamping bolts, each plate having a coincident semi-circular, angularly undercut recess to receive a disk provided with tripod legs, and bolts through the overlapping extensions for binding the plates together.

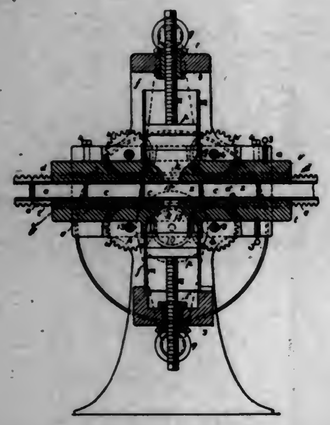
2. In a support for a rock drilling machine a combination with guide rails for the drilling machine, of a frame secured to the guide rails comprising two plates divided centrally and having overlapping ends to receive clamping bolts, a circular, angularly undercut recess to receive a tripod disk, a disk fitting the recess with tripod legs at-

tached thereto, and bolts in the overlapping ends of the plates for binding the plates against the disk.

3. In a support for a rock-drilling machine, the combination with guide rails for the drilling machine of a frame comprising circularly recessed plates secured to the rails and adapted to clamp a tripod disk in the recess, a tripod disk fitted to the recess, the disk having clamping lugs, a shaft through said lugs, a head for a tripod leg on the shaft between the said lugs and adapted by means of a bolt and a slot outward from the shaft bearing to be clamped on the shaft, and a swiveled leg-head on the shaft outside of each of the lugs on the disk, the swiveled heads adapted to be clamped fast together and upon the shaft.

4. In a support for a rock-drilling machine, the combination with guide rails for the drilling machine, of a frame secured to the guide rails comprising two plates divided centrally with overlapping ends to receive clamping bolts, clamping bolts in said ends, a circular, angularly undercut recess to receive a tripod disk centrally of the plates, and a disk fitted to the recess, the disk having clampable lugs, a shaft through the lugs, a head for a tripod leg on the shaft between said lugs and adapted to be clamped on the shaft, and a swiveled leg-head on each end of the shaft outside of the lugs on the disk, the swiveled heads each adapted to be clamped in its swivel and upon the shaft by a single bolt.

878,154. MACHINE FOR MANUFACTURING CEREAL BISCUIT. HENRY D. PERKY, Glencoe, Md.; Laban Sparks administrator of said Henry D. Perky, deceased. Filed Apr. 2, 1906. Serial No. 309,278.



1. A molding pan consisting of a body portion having the shape of the article desired and having a removable plane plate provided with reducing perforations.

2. A mold pan having removable top and bottom plates provided with reducing perforations.

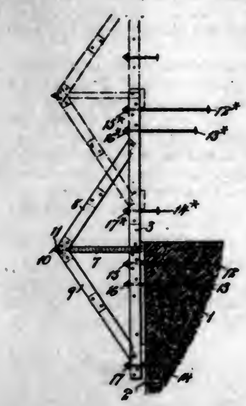
3. A molding pan consisting of a body portion having an opening conforming to the shape of the article desired, and removable plane top and bottom plates having reducing perforations and means of engagement with said body portion.

4. A molding pan consisting of a body portion and a removable plane plate having reducing perforations, means of engagement with said body portion, and means of engagement with devices for moving the same.

5. A molding pan consisting of a body portion, and a removable plane plate having reducing perforations, and means of engagement with said body portion, in combination with means for moving said plate, and means for feeding material thereto.

[Claims 6 to 8 not printed in the Gazette.]

878,155. MEANS FOR USE IN BUILDING CONCRETE WALLS AND THE LIKE. ROBERT W. POMMERER, New York, N. Y., assignor of one-half to William J. Gilsen, New York, N. Y. Filed Aug. 4, 1906. Serial No. 329,151.



Means for use in building concrete walls and the like consisting of a facing truss comprising a vertical beam, upper and lower laterally extending planks, laterally and vertically arranged diagonal braces connecting said beam and said planks, means for securing the parts rigidly together and bolts removably secured to the upper and lower portions of the vertical beam.

878,156. AUTOMOBILE RUNNING-GEAR. CHARLES T. PRATT, Frankfort, N. Y. Filed Apr. 10, 1907. Serial No. 367,308.



1. The combination in an automobile running gear of the frame and axle and pair of steerable ground wheels carrying one end of the frame, and pair of independent levers intermediately pivoted to the frame, an axle and pair of ground wheels carrying the rear ends of said levers and an axle and steerable pair of ground wheels carrying the forward ends of said levers and connected therewith by a suspending shackle all arranged to carry the other end of the frame, substantially as set forth.

2. The combination in an automobile running gear of a frame and axle and pair of steerable ground wheels carrying the forward end, a pair of independent longitudinally arranged levers hinged at an intermediate point to and supporting the rear end of the frame, an axle and ground wheels carrying the rear ends of said levers, an intermediate axle and steerable ground wheels carrying the forward end of said levers, and parallel reach rods connecting the front and intermediate axles, substantially as set forth.

3. The combination in an automobile running gear of a frame, an axle and pair of steerable ground wheels carrying the forward end, a pair of longitudinally arranged side levers on which the rear end of the frame is pivotally mounted, a transverse shaft arranged intermediate the length of said levers on which said levers are pivotally mounted, a rear axle on which the rear ends of said side levers are mounted, and an intermediate axle on which the forward end of said levers are mounted, an arm from the rear axle to said shaft and ground wheels provided on said rear and intermediate axles, substantially as set forth.

4. The combination in an automobile running gear of a body frame and means for carrying and steering the forward end, a truck carrying the rear end consisting of a rear and intermediate axles and longitudinally extending side levers flexibly connected to the rear and intermediate axles, a transverse connection between the said levers on which they are respectively pivoted, an arm from the rear axle to said transverse connection, a pair of traction wheels provided on the rear axle and a pair of steerable ground wheels provided on the intermediate axle, and means for applying power to the traction wheels through the rear axle, substantially as set forth.

5. The combination in an automobile running gear of a body frame, a forward axle, a rear axle and an intermediate axle, steerable ground wheels provided on the forward and intermediate axles, reach rods connecting the forward and intermediate axles and steering rods connecting the forward steerable wheels with the intermediate steerable wheels, substantially as set forth.

[Claim 6 not printed in the Gazette.]

878,157. CABLE-HOIST CONVEYER. BYRON C. RIBLET, Spokane, Wash. Filed Nov. 23, 1904. Serial No. 234,030.



1. In a hoist conveyer, a track, a trolley on said track, a wheel carried by said trolley, hoisting mechanism disposed laterally of said wheel and actuated thereby, a cable passing over said wheel, independent winding drums receiving the ends of said cable, and a separate back-haul cable connected to said trolley, substantially as described.

2. In a hoist conveyer, a track, a trolley on said track, a wheel carried by said trolley, a pair of hoisting drums actuated by said wheel, a cable passing over said wheel, independent winding drums receiving the ends of said cable, and a separate back-haul cable connected to said trolley, substantially as described.

3. In a hoist conveyer, a track, a trolley on said track, a wheel carried by said trolley, a pair of hoisting drums actuated by said wheel and oppositely disposed with respect thereto, a hoisting rope connected to said drums, a cable passing over said wheel, independent winding drums receiving the ends of said cable, and a separate back-haul cable connected to said trolley, substantially as described.

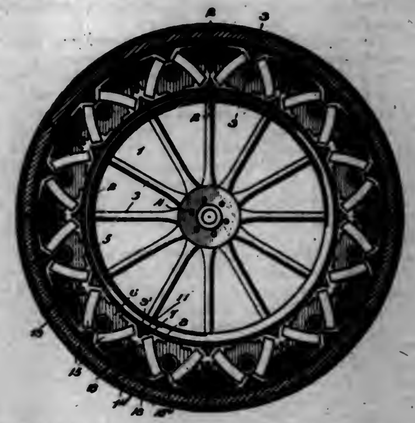
4. In a hoist conveyer, a track, a trolley on said track, a wheel carried by said trolley, a pair of hoisting drums geared with said wheel and mounted on shafts extending at right angles to the shaft of said wheel, a cable passing over said wheel, independent winding drums receiving the ends of said cable, and a separate back-haul cable connected to said trolley, substantially as described.

5. In a cable hoist conveyer, the combination with the towers, and the track rope, of the pendant frames, the trolley wheels rotatably mounted in said pendant frames, a shaft journaled in said pendants, gears on said shaft, hoisting drums and cables operatively connected to said gears and a cable grip-wheel secured to said shaft, a cable mounted on said grip wheel, having its opposite ends operatively attached to and wound on suitable power driven cable drums, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

878,158. VEHICLE-WHEEL. WILLIAM E. SCHNEIDER, Washington, D. C., assignor to Schneider Manufacturing Company of New Jersey, a Corporation of New Jersey. Filed Feb. 25, 1907. Serial No. 359,195.

1. In a wheel of the character described the combination with the felly, of a rim or band around the periphery thereof, a series of stops arranged on said rim or band, a tire for said wheel, a series of stops associated with said tire, a series of obliquely disposed struts each having one end thereof in engagement with one of the first mentioned stops and the other end thereof in engagement with one of the last mentioned stops, each of said series of stops being provided with troughs for the reception of the struts, substantially as described.



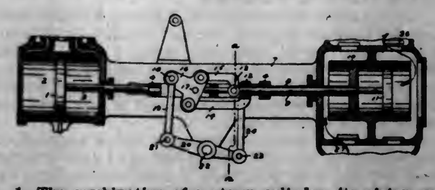
2. In a wheel of the character described the combination with the felly, of a series of stops associated therewith, a tire for said wheel, a series of stops associated with said tire, a series of diagonal struts each having one end thereof in engagement with one of the first mentioned stops and the other end thereof in engagement with one of the last mentioned stops, each of said series of stops being provided with a trough to receive each of said struts, substantially as described.

3. In a wheel of the character described the combination with the felly thereof, of a series of stops associated therewith, a tire for said wheel, a series of stops associated with said tire, a series of diagonal struts interposed between the two series of stops, and a trough on each of said stops to receive said struts, substantially as described.

4. In a wheel of the character described the combination with the tire and felly thereof, of a series of inner stops, a series of diagonal struts accommodated thereby, each of said stops being provided with a trough for said struts and provided with a transverse groove in the base thereof to accommodate a transverse bolt, and provided with a transverse groove in the outer portion thereof to accommodate a transverse bolt, substantially as described.

5. In a wheel of the character described the combination with the tire and felly thereof, of a series of inner stops, a series of outer stops, a series of diagonal struts accommodated by said stops, a face plate on each side of each of said two series of stops, each of said series of stops being provided with transverse grooves to accommodate transverse bolts for fastening the two pairs of face plates together, substantially as described.

878,159. PUMPING-ENGINE. JOHN C. SMITH, Cleveland, Ohio. Filed Jan. 18, 1905. Serial No. 241,627.



1. The combination of a steam cylinder, its piston and piston rod, a rocker connected with said piston rod on a transverse pivot, and having an approximately vertical

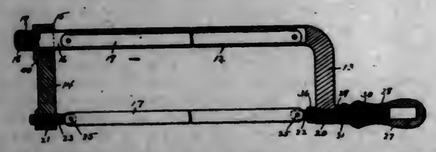
arm and an approximately horizontal arm, a pump cylinder, its piston and piston rod, a link connecting the pump piston rod with the approximately vertical arm of said rocker and a swinging link pivotally connected with the approximately horizontal arm of said rocker, and a movable device to which the other end of said link is pivoted for increasing the movement of said rocker, substantially as specified.

2. The combination of a steam cylinder, its piston, a reciprocating member operated by said piston, a rocker having a transverse pivotal connection with said reciprocating member, a pump cylinder, a piston therein, and a rod transmitting motion to said pump piston, with a link pivotally connected with said pump piston rod and one arm of said rocker, a rocker beam pivoted on a fixed fulcrum, a link connecting one arm of said rocker beam with an arm of the rocker first named, and a second link pivotally connected with the said reciprocating member and with the opposite arm of the rocker beam, substantially as specified.

3. The combination of a steam cylinder, its piston and piston rod, a yoke secured to said rod, a pump cylinder, its piston, and piston rod, a rocker pivotally connected with said yoke and suitably connected with said pump piston rod, a rocker beam pivoted on a fixed fulcrum, a link connecting one arm of the rocker beam with one arm of the rocker, and a second link pivotally connected with the opposite arm of the rocker beam and with said yoke, substantially as specified.

4. The combination of a steam cylinder, its piston, and a rod connected with said piston, a pump cylinder, a piston therein, a tubular piston rod secured to said piston, a second piston in the pump cylinder, and a rod secured thereto and extending out through said tubular rod, with a three-armed rocker having a pivotal connection with the steam piston rod, links respectively connecting two arms of said rocker with the two pump piston rods, a rocker beam pivoted on a fixed fulcrum, a link connecting one arm of said rocker beam with the third arm of the rocker, and another link connecting the opposite end of the rocker beam with the rod of the steam piston, substantially as specified.

878,160. HACKSAW. WILLIAM M. STEBBINS, Montague, Mass., assignor to Millers Falls Company, Millers Falls, Mass., a Corporation of Massachusetts. Filed Sept. 13, 1907. Serial No. 392,660.



1. A hack-saw frame comprising a hollow longitudinal back-bar, open at one end, the width of the cavity within said back-bar being greater in one direction than the width of the hack-saw and the length of said cavity exceeding the length of the hack-saw, and two arms angularly arranged relatively to the back-bar, said arms having means for engaging and straining a saw-blade, and means for confining blades within said cavity, whereby the bar is adapted to serve as a magazine.

2. A hack-saw frame comprising a hollow longitudinal back-bar open at its outer end and having a rigidly attached inner arm, an outer arm having a head inclosing and adjustably mounted on said bar, said arms having means for engaging and straining a saw-blade, and a movable stop, for obstructing the open end of said cavity to retain the contents thereof.

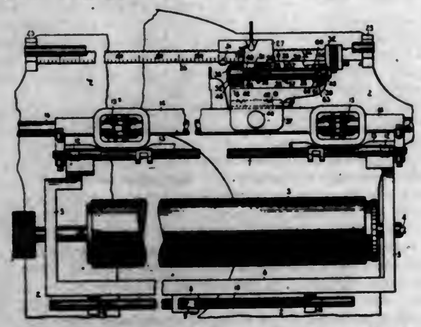
3. A hack-saw frame comprising a hollow longitudinal back-bar open at its outer end and having a rigidly attached inner arm, an outer arm having a head inclosing and adjustably mounted on said bar, said arms having means for engaging and straining a saw-blade, the width of the cavity within said back-bar being greater in one direction than the width of the hack-saw and the length of said cavity exceeding the length of the hack-saw, and a removable closure for the open end of the cavity.

4. A hack-saw frame comprising a longitudinal back-bar having an inner arm and an outer arm, each angularly arranged relatively to said bar, each arm having a socket, outer and inner saw-blade-engaging members rotatable in said sockets, each member having a flat blade-seat and a stud projecting therefrom, the socket on the outer arm and the corresponding outer member having means for locking said member at different rotative adjustments, while the inner member is longitudinally movable in the socket of the inner arm, said inner member being screw-threaded, a rotatable handle having at its inner end a rigidly attached nut which is rotatable with the handle on the screw-threaded inner member, the rotation of said handle and nut causing a longitudinal adjustment of the inner member, and a washer interposed between said nut and the socket of the inner arm, and engaged to rotate with and slide on the inner member, said washer and the socket of the inner arm having complemental means for locking the washer and the inner member at different rotative adjustments.

5. A hack-saw frame comprising a longitudinal back-bar having at one end a rigidly attached inner arm, an outer arm adjustably mounted on said bar, said arms having means for engaging and straining a saw-blade, the bar having a longitudinal blade-receiving cavity which is open at the outer end of the bar, and a movable stop for obstructing the open end of said cavity to retain the contents thereof, said stop when in place, serving to prevent the removal of the adjustable arm from the back-bar.

[Claim 6 not printed in the Gazette.]

878,161. TYPE-WRITING MACHINE. HERBERT H. STEELE, Syracuse, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Mar. 10, 1906. Serial No. 305,274.



1. In a typewriting machine, the combination of a traveling carriage; a stop thereon; and a stop on the frame of the machine, said carriage stop being movable by the stop on the frame into and out of engaging position.

2. In a typewriting machine, the combination of a traveling carriage; a stop member thereon; a stop on the frame of the machine, said carriage stop member being provided with a plurality of contacting surfaces; and means operating to control said carriage stop member to bring different contacting surfaces to operative position.

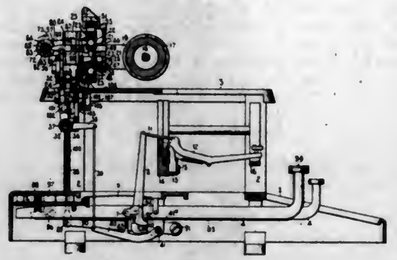
3. In a typewriting machine, the combination of a traveling carriage; a stop thereon; a coöperative stop on the frame; and means co-acting with said carriage stop to move it into and out of line with the coöperative stop, said co-action being caused by the stop on the machine frame.

4. In a typewriting machine, the combination of a traveling carriage, a group of stop devices comprising a two-part stop device on the carriage and a stop device on the frame of the machine, one part of the stop device on the carriage being movable on the other part in one direction by the stop device on the frame, and means coöperating with the movable part of the stop device on the carriage to move it in another direction.

5. In a typewriting machine, the combination of a traveling carriage; a group or set of stop devices comprising a two-part stop device on the carriage and a stop device on the frame of the machine, coöperative with the carriage stop device to effect a relative movement of translation between the parts of the latter; and means coöperating with one of said parts to give it rotary movement.

[Claims 6 to 17 not printed in the Gazette.]

878,162. TYPE-WRITING MACHINE. HERBERT H. STEELE, Syracuse, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Mar. 19, 1906. Serial No. 306,862.



1. In a typewriting machine, the combination of a traveling carriage; stop devices coöperative to arrest said carriage in both directions of its travel; means caused to operate automatically by the travel of the carriage to set certain of said stop devices, which are initially in inoperative position, in position to cause the arrest of the carriage at one time; and means operative to set certain of said stop devices to arrest the carriage at another time.

2. In a typewriting machine, the combination of a traveling carriage; stop devices coöperative to arrest said carriage in both directions of its travel; means caused to operate automatically by the travel of the carriage to set certain of said stop devices, which are initially in inoperative position, in position to cause the arrest of the carriage in one direction; and means operative to set certain of said stop devices to arrest the carriage in the other direction.

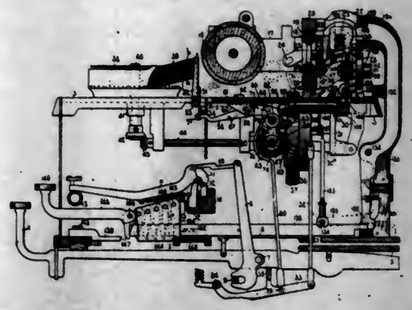
3. In a typewriting machine, the combination of a traveling carriage; stop devices coöperative to arrest said carriage in both directions of its travel; means caused to operate automatically by the travel of the carriage to set certain of said stop devices, which are initially in inoperative position, in position to cause the arrest of the carriage in one direction; and hand actuated means operative to set certain of said stop devices to arrest the carriage in the opposite direction.

4. In a typewriting machine, the combination of a traveling carriage; stops coöperative to arrest said carriage in both directions of its travel; means caused to operate automatically by the travel of the carriage to set a plurality of said stops to cause the arrest of the carriage at different points, each of said plurality of stops operating to arrest the carriage at one point only; and key actuated means for setting certain of said stops to arrest the carriage.

5. In a typewriting machine, the combination of a traveling carriage; stops coöperative to arrest said carriage in both directions of its travel; means caused to operate automatically by the travel of the carriage to set a plurality of said stops to cause the arrest of the carriage in one direction at different points, each of said plurality of stops operating to arrest the carriage at one point only; and means operative to set certain other of said stops to arrest the carriage in the opposite direction.

[Claims 6 to 52 not printed in the Gazette.]

878,163. TYPE-WRITING MACHINE. HERBERT H. STEELE, Syracuse, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Sept. 1, 1906. Serial No. 332,949.



1. In a typewriting machine, the combination with a platen, printing instrumentalities, a ribbon having fields of different characteristics, and means for feeding the ribbon longitudinally, of means for automatically shifting a part of the ribbon mechanism at a predetermined point in the printing line to shift or change the ribbon field coöperative with the printing instrumentalities.

2. In a typewriting machine, the combination with a traveling element or carriage, printing instrumentalities, ribbon fields of different characteristics, and longitudinal-ribbon feeding means, of means operating automatically at a predetermined point in the carriage travel to shift or change the ribbon field coöperative with the printing instrumentalities when they are actuated.

3. In a typewriting machine, the combination with a carriage, printing instrumentalities, a ribbon having fields of different characteristics, and means for feeding the ribbon longitudinally, of means operating automatically at a predetermined point in the carriage travel to shift or change the ribbon field coöperative with the printing instrumentalities, said means being adjustable to vary the point in the carriage travel at which the shift or change of ribbon fields takes place.

4. In a typewriting machine, the combination with a carriage, printing instrumentalities, ribbon fields of different characteristics, and longitudinal-ribbon feeding means, of shifting members, one operatively connected with the carriage and one on a fixed part, said members coöperating at a predetermined point in the carriage travel to change the ribbon field coöperative with the printing instrumentalities.

5. In a typewriting machine, the combination with a traveling element or carriage, printing instrumentalities, a ribbon having fields of different characteristics, and means for feeding the ribbon longitudinally, of two shifting members, one operatively connected with the carriage and one on a fixed part, said members being capable of co-operating during the movements of the carriage in both directions of its travel to change the ribbon field co-operative with the printing instrumentalities.

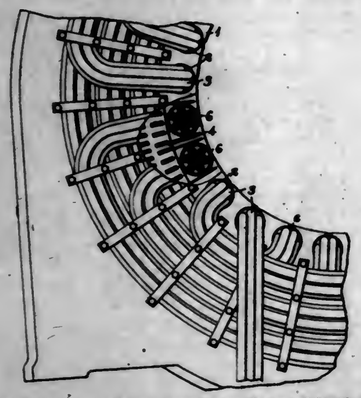
[Claims 6 to 89 not printed in the Gazette.]

878,164. TOOTH-BRUSH. WILLIAM N. TAYLOR, Diamond, Cal. Filed July 8, 1907. Serial No. 382,787.



In a toothbrush, the combination of a head formed of thin resilient material and being cylindrical in shape and having a narrow slot from one end to the other, a soft material carried in the head, and a handle integral with the head and extending longitudinally in line therefrom.

878,165. DYNAMO-ELECTRIC MACHINE. ROBERT M. TINGLEY, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 4, 1906. Serial No. 309,908.



1. In a dynamo-electric machine, the combination with a stationary frame, of a magnetizable core comprising groups of magnetizable laminæ separated by ventilating spaces and having a plurality of slots, of spacing rings which fit into said ventilating spaces and encircle said slots.

2. In a dynamo-electric machine, the combination with a magnetizable core structure having ventilating spaces and core slots substantially perpendicular to each other, of spacing rings which encircle the slots and fit into said ventilating spaces.

3. In a dynamo-electric machine, the combination with a laminated core structure having slots which are perpendicular to the planes of the laminæ, of ventilating plates located at intervals between said laminæ, and spacing members which are located in the ventilating spaces and which make the walls of the slots continuous.

4. In a dynamo-electric machine, the combination with a laminated core structure having slots for the reception of coils, of spacing members which are located at intervals between the laminæ and encircle the slots.

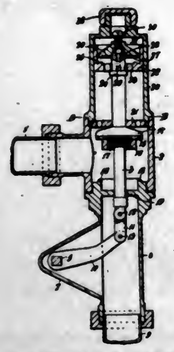
5. In a dynamo-electric machine, the combination with a laminated core structure having slots for the reception of coils, and ventilating plates at intervals between laminæ, of spacing members of non-magnetizable material which are located in the ventilating spaces, to conform to the shape of the slots and encircle the same.

[Claims 6 and 7 not printed in the Gazette.]

878,166. FLUSHING-VALVE FOR WATER-CLOSETS. WILLIAM TURNBULL, Wellington, New Zealand. Filed Aug. 6, 1906. Serial No. 329,515.

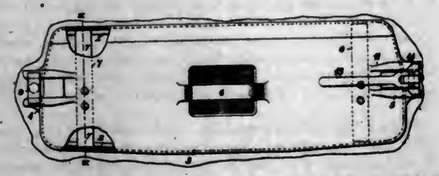
1. For the purpose indicated, a flushing valve comprising in combination, a valve chamber, a downpipe cap secured to the bottom of the valve chamber, a seating upon the cap, and entering the valve chamber, a regulating chamber secured to the valve chamber, a perforated bottom to the regulating chamber, a valve rod having a recess in its upper end and radial holes communicating with the recess, the said rod passing through the valve chamber and into the regulating chamber, a stop valve within the valve chamber rigidly with the valve rod, a perforated plunger fitting loosely upon the upper end of the valve rod and resting upon a shoulder formed on the valve rod, a valve seating upon the plunger, a regulating valve fixed to the top of the valve rod, means for regulating the flow of water through the recess of the valve rod, and means for operating the valve rod, substantially as set forth.

2. For the purpose indicated, a flushing valve comprising in combination, a valve chamber, a downpipe cap secured to the bottom of the valve chamber, a seating upon the cap and entering the valve chamber, a regulating chamber secured to the valve chamber, a perforated bottom to the regulating chamber, a valve rod having a recess in its upper end and radial holes communicating with the recess, the said rod passing through the valve chamber and into the regulating chamber, a stop valve within the valve chamber rigidly with the valve rod, a perforated plunger fitting loosely upon the upper end of the valve rod and resting upon a shoulder formed on the valve rod, a valve seating upon the plunger, a regulating valve fixed to the top of the valve rod, a screw having a saw cut through its stem and fitting the recess in the valve rod, a screw cap closing the top of the regulating chamber, and means for operating the valve rod, substantially as set forth.



3. For the purpose indicated, a flushing valve comprising in combination, a valve chamber, a downpipe cap secured to the bottom of the valve chamber, a seating upon the cap and entering the valve chamber, a regulating chamber secured to the valve chamber, a perforated bottom to the regulating chamber, a valve rod having a recess in its upper end and radial holes communicating with the recess, the said rod passing through the valve chamber and into the regulating chamber, a stop valve within the valve chamber rigidly with the valve rod, a perforated plunger fitting loosely upon the upper end of the valve rod and resting upon a shoulder formed on the valve rod, a valve seating upon the plunger, a regulating valve fixed to the top of the valve rod, means for regulating the flow of water through the recess of the valve rod, a shaft entering a recess in the cap of the downpipe, a stuffing box on the downpipe and through which the shaft passes, a handle upon the shaft, an arm within the recess and fixed to the shaft, and a link and pins coupling the arm to the valve rod, substantially as set forth.

878,167. COMMUTATOR-COVER. JOHN E. WEBSTER, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 6, 1906. Serial No. 299,763.



1. A commutator cover for dynamo-electric machines comprising a flanged plate, cross strips of resilient material attached thereto and means for fastening the cover to the frame of the machine.

2. A commutator cover for dynamo-electric machines comprising a flanged plate of suitable shape and slightly larger than the opening which it covers, and flat cross springs that are attached to the cover and the extremities of which extend over the edge of the opening.

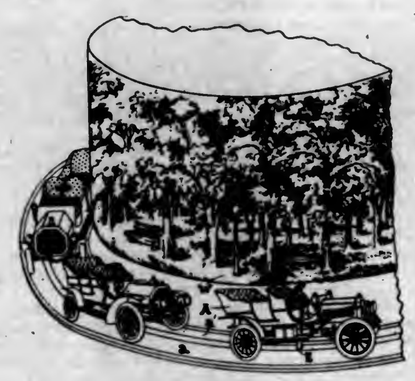
3. A commutator cover for dynamo-electric machines comprising a flanged plate having forked end projections, cross strips of resilient material attached to the plate, a bolt adapted to engage one of said forked projections and a latch mechanism adapted to engage the other of said forked projections.

4. In a dynamo-electric machine, the combination with a field magnet frame which constitutes an inclosing casing and has an opening, a cover for said opening and means for fastening said cover to the frame, of resilient means interposed between the cover and the frame and serving to hold the cover at a short distance from the frame to allow ventilation of the interior and to prevent chattering.

5. In a dynamo-electric machine, the combination with a field magnet frame which constitutes an inclosing casing and has an opening surrounded by a flanged edge, a cover for said opening of such size as to overhang the flange, forked projections on opposite ends of said cover and clamping bolts to engage said projections, of resilient cross springs which are attached to the cover near its extremities and extend over the flange on each side.

[Claims 6 to 8 not printed in the Gazette.]

878,168. PLEASURE-GIVING MACHINE. LEON W. WHIPPLE, Lowell, Mass. Filed May 10, 1907. Serial No. 373,006.



1. The combination in an automobile pleasure-giving machine, of a plurality of automobiles, one or more being provided with means of self propulsion, with a circular, continuous divided, slanting stationary floor, over which the automobiles travel, as set forth.

2. The combination in an automobile pleasure-giving machine, of automobiles adapted to propel themselves on a divided, slanting, stationary floor, whose outer divisional edge is supported from beneath and whose inner divisional edge is suspended from above, all substantially as set forth.

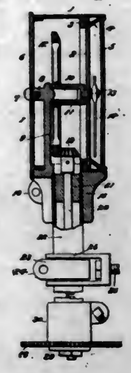
3. The combination in an automobile pleasure-giving machine, of divided, slanting, stationary floors with automobiles adapted to travel over them, and with a single guide rod made fast to the automobile, which extends between the divided floors to the circular, stationary guide track beneath as set forth.

4. The combination in an automobile pleasure-giving machine, of automobiles provided with guide-rods which extend downward vertically to a point beneath the floor then slanting slightly inward, with circular, continuous, stationary guide-track being engaged by the lower end of guide-rods, all substantially as set forth.

5. The combination in an automobile pleasure-giving machine, of automobiles provided with guide-rods which extend downward vertically to a point beneath the floor, with connecting-rods joining the adjacent guide-rods and thus forming one continuous string beneath the floor, as has been shown.

[Claims 6 to 11 not printed in the Gazette.]

878,169. INDICATOR FOR BALING-PRESSES. CHESTER A. WHITEHORN, Lawton, Iowa. Filed May 22, 1907. Serial No. 375,094.



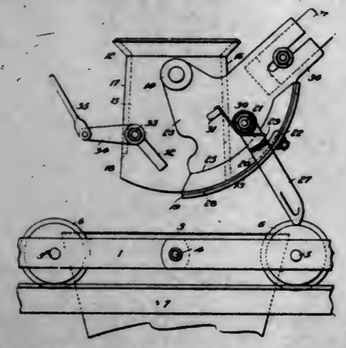
1. An indicator of the character described, comprising a casing, a gear wheel mounted in said casing, the casing being provided with a face plate, a pointer carried by said gear wheel and adapted to be passed over the face of the said plate, a shaft provided with a pinion meshing with said gear wheel, a sheathing in which said shaft is journaled, a bracket forming a support for the gear wheel and formed with a dove-tailed tongue, a compressible base piece inclosing the upper end of said sheathing and formed with a recess in which said tongue fits, means for compressing said base piece around the tongue and sheath, a spur gear secured to said shaft, and means for supporting the aforesaid parts on the framework of a baling press.

2. The combination with a baling press framework, of a yoke secured thereto, a sheathing mounted in said yoke, a collar secured to the sheathing between the members of the yoke and supporting the sheathing within the yoke, shafting mounted in said sheathing, a spur wheel carried by said shafting and adapted to engage with the bale to turn the shaft as the bale is completed, a clamping collar secured to said sheathing, a yielding connection between said collar and the framework, whereby to hold the spur wheel in yielding engagement with the bale, a base piece secured to the upper end of said sheathing, a casing secured on said base piece, a gear wheel mounted in said casing and having a driving connection with the shafting, and a pointer carried by said gear wheel, the casing being provided with a dial around which the pointer is adapted to sweep.

3. An indicator of the character described, comprising a casing, a bracket mounted in said casing, provided with a forwardly extending stub shaft, an actuating gear wheel formed with a hollow hub journaled on said shaft, the casing being provided with a dial, and the hub being provided with a projection protruding forwardly through the dial, a pointer secured to the protruding end of the hub, the said bracket being provided with a dove-tailed tongue, a base piece split at its rear end and formed with apertured ears at opposite sides of the split, a clamping bolt working through said ears to compress the base piece, said base piece being formed with a recess in which the tongue of the bracket fits, sheathing mounted in the base piece, a shaft journaled in said sheathing, a pinion meshing with the gear wheel and secured on said shaft, a yoke provided with apertured members accommodating the sheathing, a fastening bolt secured to the cross piece of said yoke, a collar clamped on the sheathing and mounted between the members of the yoke whereby to support the sheathing

from the yoke, a spur gear mounted on the lower end of said shaft, a collar mounted on the lower end of the sheathing and provided with apertured ears, a bolt working through said ears and adapted to draw the ears together whereby to compress the collar around the sheathing, and a spring hook connected to the bolt and designed for attachment to a press framework.

878,170. CONVEYER. FREEMAN R. WILLSON, Jr., Worthington, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Mar. 28, 1905. Serial No. 252,573.



1. In a loader for a conveyer, the combination with a chute, a pair of endless chains and a series of conveyer elements carried by the chains and arranged to travel beneath the chute and to receive material therefrom, of a valve arranged to normally cut off the flow of material through said chute and adapted to be swung bodily around a fixed axis to permit the flow of material from the said chute the length of the valve being greater than the cross-dimension of the chute, and means connected with the valve engaging with and operated by one of the said chains for moving the valve to permit delivery of material to the said conveyer elements.

2. In a loader for a conveyer, the combination with a series of buckets to be loaded and endless chains to which the buckets are pivoted, of a chute through which material is delivered to the buckets, a pivoted valve arranged to normally cut off the flow of material through the chute, and a trip arm connected with the valve and arranged to extend into the path of the carrying chains for the buckets and to be operated thereby to move the valve in one direction, substantially as set forth.

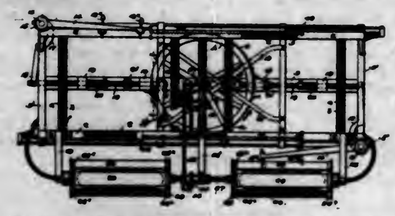
3. In a loader for a conveyer, the combination of a chute through which material is delivered, an endless conveyer comprising a pair of carrying chains and a series of buckets pivoted thereto and arranged to move while in a normal swinging condition close to the delivery end of the chute, a valve arranged to cover the end of the chute and to cut off the flow of material through it, means for moving the valve to open the chute arranged to be operated by one of the said carrying chains, substantially as set forth.

4. In a conveyer, the combination with a series of conveyer elements, of a chute arranged above said elements and adapted to deliver material thereto, and having side walls with curved bottom edges a valve interposed between said conveyer and said chute and adapted to control the flow of the material from the chute, and comprising a curvilinear plate having its concave surface arranged to move in close proximity to the curved edges of the side walls and to normally support the material in the chute, and means operated directly by the moving conveyer for swinging said plate in the arc of a circle to permit the flow of material from the chute.

5. In a conveyer, the combination with a series of conveyer elements and a chute adapted to deliver material thereto, of a valve pivotally mounted in position and arranged to check the flow of material from the said chute, and the trip arm pivotally connected to said valve and normally held yieldingly relatively thereto and a stop on the valve adapted to be engaged by said trip arm to swing the valve around the axis of its pivotal connection.

[Claims 6 to 11 not printed in the Gazette.]

878,171. ADVERTISING APPARATUS. CHARLES A. YALE and CHARLES E. YALE, Burlington, Vt., assignors to Yale Wonder Clock Company, Burlington, Vt., a Corporation of Vermont. Filed Oct. 9, 1906. Serial No. 338,155.



1. An apparatus of the character described, comprising a frame, a wheel, reciprocating mechanism carried by said frame and operated by said wheel, pusher-arms supported by the frame, and mechanism secured to the said frame engaging the reciprocating mechanism and operated thereby for displaying different colored lights.

2. An advertising apparatus including a frame, a wheel, reciprocating mechanism operated by said wheel, upright pusher-bars carried by said reciprocating mechanism, pusher-arms carried by the frame, sliding rods adapted to operate the pusher-arms, and means carried by the frame and said wheel for locking and unlocking said sliding rods.

3. An apparatus of the character described comprising a frame, a wheel, racks operated by said wheel and caused to travel in unison, pusher-arms, and sliding rods for rocking the pusher-arms back and forth.

4. An apparatus of the character described comprising a frame, a wheel, mechanism reciprocated by said wheel, a cam secured to the wheel, sliding rods operated by said cam, and means for locking and unlocking said sliding rods.

5. An apparatus of the character described, including a frame, a wheel, reciprocating mechanism supported by said frame and operated by said wheel, and means engaging with said reciprocating mechanism and operated thereby for displaying a different colored light or shade at intervals.

[Claims 6 to 14 not printed in the Gazette.]

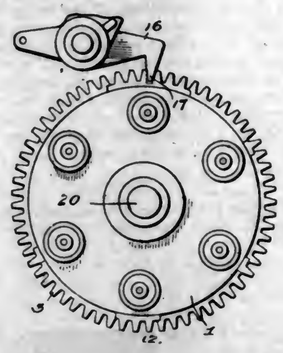
878,172. PERCENTAGE MECHANISM FOR COIN-CONTROLLED APPARATUS. CHARLES E. YALE, Burlington, Vt., assignor to Yale Wonder Clock Company, Burlington, Vt., a Corporation of Vermont. Filed July 7, 1905. Serial No. 268,685.

1. In percentage mechanism for coin controlled apparatus, a drum having a plurality of apertures in its periphery, and adjustable means for varying the areas of said apertures.

2. In a mechanism of the character described, a drum having a series of apertures of different sizes in its periphery, and means for regulating the sizes of said apertures, in combination with pawls or dogs adapted to engage said apertures and serving as a stop for said drum, substantially as described.

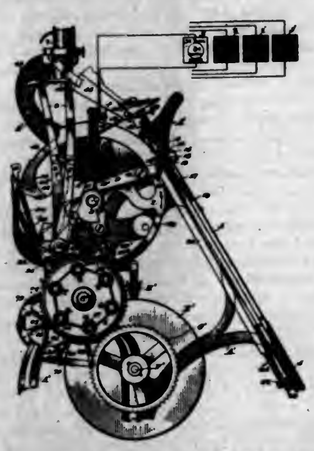
3. In mechanism of the character described, a drum having a series of apertures therein, and adjustable slides for covering more or less of each aperture, for the purpose set forth.

4. In apparatus of the character described, a spring actuated drum having a series of apertures in the periphery thereof, adjustable slides for exposing more or less of said apertures, and a series of pawls adapted to engage said apertures and stop the revolution of said drum.



5. In apparatus of the character described, a drum, having a series of apertures in the periphery thereof, slides, set screws for adjusting the slides for covering more or less of the apertures, a spring ring, a spring therein, gear teeth on the ring, and pawls adapted to engage said apertures and stop the revolution of the drum, substantially as described.

878,173. AUTOMATIC CASHIER AND DISCOUNT MACHINE. CHARLES E. YALE, Burlington, Vt., assignor to Yale Wonder Clock Company, Burlington, Vt., a Corporation of Vermont. Filed Oct. 9, 1906. Serial No. 338,156.



1. An automatic cashier and discounting machine including coin controlled mechanism coin-receiving means, check ejecting mechanism, and means for indicating in advance the variable value of the check to be ejected when a coin is deposited into the coin receiver.

2. An automatic cashier and discounting apparatus comprising, coin controlled mechanism, and means for electrically indicating in advance the variable value of the check to be ejected after a coin is deposited into the coin chute or receiver.

3. An automatic cashier and discount machine comprising coin controlled mechanism, discount or percentage mechanism, and means for indicating in advance the variable value to be received by a customer after a coin is deposited into a coin receiver.

4. An automatic cashier and discounting machine including coin controlled mechanism, percentage mechanism, and means operatively connected with said coin controlled mechanism and percentage mechanism, whereby future money investment may be calculated in advance of the investment.

5. An automatic cashier and discounting apparatus including coin controlled mechanism, discount or percentage mechanism, and mechanical means for calculating future money investments in advance of the actual investments.

[Claims 6 to 16 not printed in the Gazette.]

878,174. FISH SCALING AND CLEANING MACHINE. GEORGE P. YEAKEL, Norristown, Pa., assignor of one-third to Charles Keller, Norristown, Pa. Filed July 17, 1905, Serial No. 270,053. Renewed Aug. 8, 1907. Serial No. 387,667.



1. A machine of the character described, comprising a scaling device, with its carrying frame arranged to have a sliding movement and provided with a rotary shaft equipped with numerous wires with loose outer or free ends, a traveling endless-belt arranged in connection therewith, clamps carried by said endless-belt, means effective to set said clamps to engage a fish, and means adapted for imparting an intermittent lateral movement when said clamps have arrived about opposite said scaling device to prevent contact therebetween to said scaling-device-carrying frame.

2. A machine of the character described, comprising a traveling endless-belt carrying a clamp having its jaw-equipped members fulcrumed upon a right-angled support with one arm thereof effective to retain said clamp in operative relation to the fish, and means for setting said jaw-members in open position for receiving or engaging the fish the horizontal arm or portion of said support adapted to provide for holding the support in operative position together with said clamp.

3. A machine of the character described, comprising a traveling endless-belt, a clamp having its jaw-members fulcrumed upon a right-angled support connected to said belt, said jaw-members themselves being practically right-angled in outline, with their jaws at the lower ends of their vertical portions and their horizontal portions held normally apart by an interposed spring, and means for setting said jaws in open position, for engagement with the fish the horizontal arm of said support adapted to hold said support in operative position together with said clamp.

4. A machine of the character described, comprising a traveling endless-belt, a clamp having its jaw-equipped members fulcrumed upon a right-angled support with one arm thereof adapted to retain said clamp in operative relation to the fish, means for setting said jaw-members in open-position for receiving or engaging the fish, and a scaling device arranged to operate in connection with said fish-engaging clamps the horizontal arm of said support adapted to hold the support in operative position, together with said clamp.

5. A machine of the character described, comprising a traveling endless-belt, a fish-engaging or carrying clamp a right-angled support or bracket connected to said belt and having said clamp pivoted thereto, the horisontal arm of the support adapted to retain the latter in operative position together with said clamp, and a rotary saw arranged in the path of the movement of the fish for cutting or severing the latter.

[Claims 6 to 18 not printed in the Gazette.]

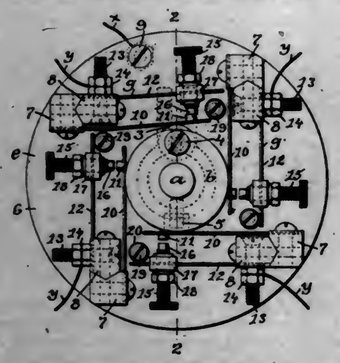
878,175. BOTTLE-STOPPER. JOHN S. ALSTON, Atlantic City, N. J. Filed Apr. 18, 1907. Serial No. 368,889.



1. In a device of the character described, the combination of a valve and valve seat, a ball associated with said valve, a valve guard having a perforated cylindrical end portion, a flaring fluted portion adjacent said ball, a cylindrical body portion and a fluted rim for engagement with the neck of a bottle, substantially as described.

2. In a device of the character described, the combination of a valve and valve seat for insertion within the neck of a bottle, a ball associated with said valve, a guard having a perforated cylindrical end portion, a flaring portion adjacent said ball, a cylindrical body portion and a flaring rim for engagement with the neck of a bottle, substantially as described.

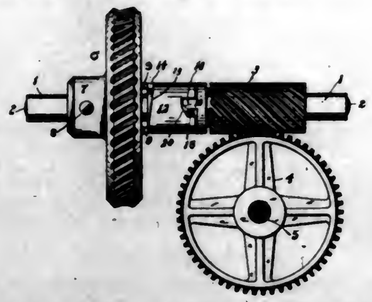
878,176. SPARK-TIMER. DARWIN ALMY, Providence, R. I. Filed May 16, 1906. Serial No. 317,247.



1. In a spark timer, the combination with a shaft *a*, of a cam *b* in the form of a collar having the roll 3 rotatably secured in a recess in the collar by a screw pin 4 in a position for the roll to extend beyond the periphery of the collar and adjustably secured to the shaft by a set bolt 5, a screw-threaded trunnion *d* supporting the shaft, a metal frame *e* having the internally screw-thread hub *f*, the flat face 6, a plurality of lugs 7 7 formed integral with the frame on the face 6, an insulating block 8 secured to each lug and interfitting therewith, a binding post 9 secured to the frame *e*, a plurality of switches *g g* each switch consisting of a flat spring 10 having a contact point 11 adjacent its free end and rigidly secured at its opposite end to a lug 7 in a position for the roll 3 on the cam to engage the spring, a flat spring 12 rigidly secured at one end to the adjoining insulating block 8 by a screw 13 and the nuts 14, and a screw post 15 having the contact point 16 adjustably secured to the free end of the spring by a split block 17 and a nut 18 in a position for the contact point 11 to engage with the contact point 16, and a plurality of stops 19 19 consisting of a screw covered with an insulating material 20 and secured to the frame *e* on the face 6 in a position for the free end of the spring 12 to engage with the stop and hold the contact points in their open position, whereby a direct electrical connection is made with the springs 10 and 12 and a reciprocating sliding contact is given to the contact points 11 and 16 on the springs, as described.

2. A spark timer embodying a disk, lugs secured to one of the faces of said disk, blocks of insulating material of less width than said lugs secured to the inner faces of the latter, a flat spring having a contact point secured to each of said lugs, a second flat spring secured to each of said blocks, a split block having an opening receiving said second flat spring, said second spring and split block having registering screw threaded openings therethrough, and a screw post having a contact point on its inner end adjustably secured in said registering openings.

878,177. CLUTCH. OSCAR ANDERSON, Kearny, N. J. Filed Aug. 21, 1906. Serial No. 331,432.



1. In a clutch, the combination of a shaft, driving and driven members arranged on said shaft, and an intermediate member also arranged on said shaft between the said driving and driven members and being capable of both rotary and longitudinal movement, the adjacent end edges of the driven and intermediate members having a set of coöperating clutch pins and recesses each presenting an inclined bottom 13 and end shoulder 14 and the adjacent end edges of the driving and intermediate members having a set of coöperating projections 10 and recesses 15 each presenting opposite parallel walls and a beveled bottom, the recesses of both said sets being cut in the end edges of the intermediate member and the clutch pins and projections being on the other members.

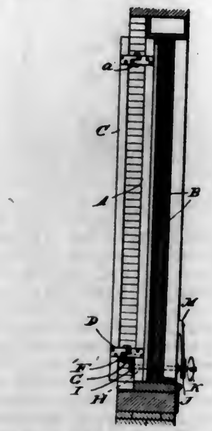
2. In a clutch, the combination of a shaft, driving and driven members arranged on said shaft, and an intermediate member also arranged on said shaft between the said driving and driven members and being capable of both rotary and longitudinal movement, the adjacent end edges of the driven and intermediate members presenting cooperating surfaces adapted to engage upon forward movement of the intermediate member and engage upon its stopping and the adjacent end edges of the driving and intermediate members having one a projection substantially parallel to the axis of rotation and the other a recess providing side walls substantially parallel to the axis of rotation and a beveled bottom, said recess opening radially outward through the periphery of the member and its said surfaces being adapted to be engaged by the coöperating projection to move the intermediate member longitudinally, to rotate it without tendency to longitudinal movement and to hold it against rotation.

3. In a clutch, the combination of a shaft, a driven member on said shaft, an intermediate member also on said shaft adapted to engage said driven member to turn the same and being capable of both rotary and longitudinal movement and having a perforation 23 through its wall, a spring extending transversely around the intermediate member for a portion of its circumference, a projection on said spring entering the said perforation in the intermediate member and engaging the shaft, said spring being adapted to force said projection against the shaft, and a driving member adapted to engage said intermediate member both to move it longitudinally and to rotate it without tendency to longitudinal movement.

4. In a clutch, the combination of a shaft, a driven member on said shaft, an intermediate member also on said shaft adapted to engage said driven member to turn the same and being capable of both rotary and longitudinal movement and having a perforation 23 through its wall, a spring having a doubled portion projecting into said perforation of the intermediate member and engaging the shaft and another portion extending transversely around the outside of the intermediate member and adapted to force the said doubled portion against the shaft, and a driving member adapted to engage said intermediate member both to move it longitudinally and to rotate it without tendency to longitudinal movement.

5. In a clutch, the combination of a driven member, a shaft on which said member is fixed, an intermediate member on said shaft adapted to engage said driven member to turn the same and being capable of both rotary and longitudinal movement, and a worm mounted upon said shaft and adapted at its end next the intermediate member to engage the same both to move it longitudinally and to rotate it without any tendency to longitudinal movement, that portion of the shaft upon which said worm is mounted being reduced and providing a shoulder to limit movement of the worm toward the intermediate member.

878,178. SHUTTER-WORKER. WILLIAM J. AUMEN, Allentown, Pa. Filed Nov. 8, 1907. Serial No. 401,267.

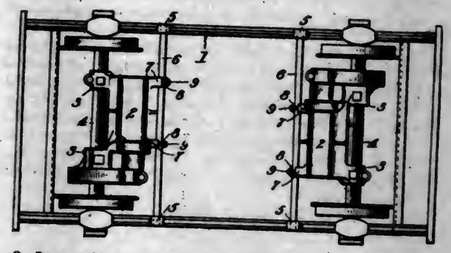


The combination with a window frame, a shutter hinged thereto, a shaft journaled in the frame and extending from the inner side to the outer side thereof, gearing connecting said shaft with the shutter, a toothed wheel fixed on the portion of the shaft at the inner side of the frame, and a handle also fixed on said portion of the shaft; of a spring strip fixed to the inner side of the frame and having a free end normally arranged in one of the intermediate spaces of the toothed wheel and also arranged to be sprung toward the frame and out of engagement with the toothed wheel.

878,179. STREET-CAR-MOTOR MOUNTING. EDWARD A. BARBER, Watertown, N. Y. Filed July 18, 1907. Serial No. 384,483.

1. In a car the combination with the truck, of a transverse rod rigidly secured thereto and extending transversely thereof, and a motor, one end of which is rigidly secured to said rod while its other end is mounted on an axle of the truck.

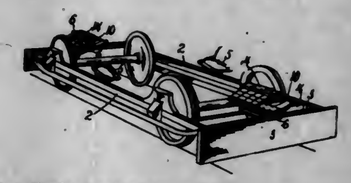
2. In a railway truck for street railway cars the combination of the rigid truck frame having an axle suitably mounted therein, a motor having bearings upon and driving connection with the axle and a transverse bar rigidly connected at its ends to the rigid truck frame and having the motor connected thereto and rigidly secured against movement thereon.



3. In a railway truck for street railway cars the combination of the rigid truck frame having an axle suitably mounted therein, a motor having bearings upon and driving connection with the axle and a transverse bar rigidly connected at its ends to the rigid truck frame and having the motor connected thereto at a plurality of points and rigidly secured against movement thereon or angular movement relatively thereto.

4. In a truck for street railway cars the combination of the rigid truck frame having an axle mounted therein, a motor mounted upon the axle through bearings free from lateral abutment on the axle, and in driving relation to the axle and a transverse bar rigidly connected at its ends to the rigid truck frame and having the motor connected therewith at a plurality of points and rigidly secured against both vertical and transverse movement thereon.

878,180. CAR. EDWARD A. BARBER, Watertown, N. Y. Filed July 18, 1907. Serial No. 384,484.



1. In a single truck street railway car the combination of the truck-frame suitably mounted upon the wheels, the car body, and the main supporting springs connecting the car body to the truck frame; the car body being balanced over the springs, and said springs being mounted upon middle points in the ends of the truck frame, and said body and truck being free from vertically restraining connections at the corners of the truck.

2. In a single truck street railway car the combination of the truck-frame suitably mounted upon the wheels, the car body, and the main supporting springs connecting the car body to the truck frame; the car body being balanced over the springs, and said springs being mounted upon middle points in the ends of the truck frame through the medium of rocking bearings, and said body and truck being free from vertically restraining connections at the corners of the truck.

3. In a single truck street railway car, the combination of the truck-frame suitably mounted upon the wheels, the car body, and main supporting springs connecting the car body to the truck frame; said springs being mounted upon the ends of the truck frame and connected to both the truck frame and the car body through the medium of rocking bearings in the middle longitudinal line of the car and said truck and body being free from vertically restraining connections at the corners thereof.

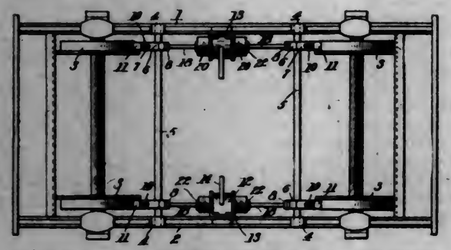
4. In a single truck street railway car the combination of the single truck-frame suitably mounted upon the wheels, the car-body, and main supporting springs connecting the car-body to the truck frame; said springs being mounted upon the ends of the truck frame and connected

to the truck frame in the middle longitudinal line of the car and said truck and body being free from vertically restraining connections at the corners thereof, but having yielding limiting connections at intermediate points on the sides.

5. A truck for single truck street-railway cars comprising a truck-frame having suitable mountings for pairs of wheels near its ends, and supporting springs through which the body is to be supported upon the truck, adapted for connection with the car body, and secured to the ends of the truck-frame at points midway between the sides thereof; said truck being free at its corners from connections which would restrain relative vertical movement between the truck and body.

[Claim 6 not printed in the Gazette.]

878,181. SINGLE-TRUCK CAR. EDWARD A. BARBER, Watertown, N. Y. Filed July 18, 1907. Serial No. 384,485.



1. A truck for single truck street railway cars comprising side frames, pairs of wheels journaled near the respective ends of the truck, between said side frames, and brakes comprising fixed brake-members secured at intermediate points to, and projecting inwardly from the respective side frames of the truck, the opposed movable members of the brakes, brake shoes supported in braking relation to the wheels, and rods connected at their respective ends to the movable members of the brakes and with the brake shoes.

2. A truck for single truck street railway cars comprising side frames, pairs of wheels journaled near the respective ends of the truck, between said side frames, and brakes comprising fluid pressure cylinders supported at intermediate points on, and projecting inwardly from the respective side frames, opposed pistons fitted in said cylinders, brake shoes supported in braking relation to the wheels and piston rods connected at their respective ends to the pistons and with the brake shoes, but free from confinement between their ends.

3. A truck for single truck street railway cars comprising continuous side frames rigidly connected together at their ends, pairs of wheels between the side frames, journaled in bearings near the respective ends of the truck, and providing an elongated wheel base, rods extending transversely between and rigidly connected to the side frames near the respective pairs of wheels, brake shoes suspended from said rods, in braking relation to the wheels, brake cylinders mounted upon the side frames at points intermediate of the rods and having connections through which fluid pressure is supplied, and projecting inwardly from said side-frames into the planes of the wheels, opposed pistons in said cylinders, and piston rods connecting the respective pistons directly with the brake shoes.

878,182. SOLDERING APPLIANCE. CHARLES C. BLAKE, Brookline, Mass. Filed Nov. 22, 1906. Serial No. 344,660.

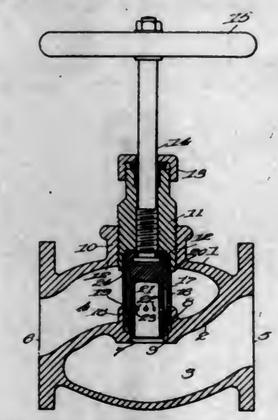
1. A hand implement for the application of soldering flux, comprising a collapsible receptacle for the flux provided with a reduced-outlet spout or nozzle constructed of stiff metal having an aversion for solder and less fusible than solder.

2. A hand implement for the application of soldering flux, comprising a collapsible receptacle for the flux provided with a tapering metal spout or nozzle possessing the characteristics of aversion for solder, sufficient stiffness to avoid bending when the flux is applied to position for use, and less fusibility than solder.



3. A hand implement for the application of soldering flux, comprising a collapsible receptacle for the flux provided with a metal spout or nozzle possessing the characteristics of aversion for solder, sufficient stiffness to avoid bending when the flux is applied to position for use, and less fusibility than solder, a fusible stopper being inserted in the orifice of said nozzle.

878,183. VALVE. HERMANN BRAUNER, Jägerndorf, Austria-Hungary. Filed Jan. 22, 1906. Serial No. 297,302.



1. A valve comprising in combination a casing provided with a diaphragm forming two compartments communicating with the inlet and the outlet of the valve, said diaphragm having a centrally disposed passage provided with a recessed portion for receiving packing, a cylinder fitting in said recessed portion upon said packing, said cylinder being provided with apertures and an internal recessed portion, a gland member for said casing engaging the upper portion of said cylinder, a piston valve closure externally recessed to form with said cylinder recess an annular chamber, said cylinder and piston closure having shoulders adapted for engagement and said piston closure having apertures communicating with said annular chamber, and a valve stem for operating said piston closure.

2. A valve comprising in combination, a casing provided with a diaphragm forming two compartments communicating respectively with the inlet and outlet of said valve, said diaphragm having a passage provided with a recessed portion for receiving packing, a cylinder fitting in said recessed portion upon said packing and provided with apertures, a gland member for said casing engaging the upper portion of said cylinder, a piston valve closure having apertures communicating with said cylinder apertures, said cylinder and piston having abutting shoulders whereby said packing may be tightened, and means for operating said piston.

3. A valve comprising in combination, a casing provided with a diaphragm forming two compartments communicating respectively with the inlet and outlet of said valve, said diaphragm having a passage provided with a recessed portion for receiving packing, a cylinder fitting in said recessed portion upon said packing and provided with an internally recessed portion and apertures, a piston valve closure externally recessed to form with said cylinder recess an annular chamber and having apertures communicating with said cylinder apertures through said chamber, and means for operating said piston.

4. A valve comprising in combination, a casing provided with a diaphragm having a recessed portion for receiving packing, a cylinder fitting in said recessed portion upon said packing, means for engaging said cylinder to tighten said packing, a piston slidably mounted in said cylinder, and means whereby movement of said piston may serve to tighten said packing.

878,184. APPARATUS FOR APPLYING RIBBON GOLD-LEAF AND THE LIKE. GEORG BRÄUNLEIN, Nuremberg, Germany. Filed Dec. 7, 1906. Serial No. 346,762.



1. In a device for applying metallic leaf or ribbon, the combination of a strip of metal bent upon itself to form a handle portion and having a forwardly extending bearing portion, a threaded reel spindle and a threaded brush spindle mounted in said bearing portion and projecting laterally therefrom, two plates mounted on said spindles and spaced apart from each other, a bearing strip mounted on said spindles and located abreast of the outermost plate, nuts for said spindles, springs interposed between said nuts and said strip, a package reel interposed between said plates and mounted on said reel spindle, and a brush interposed between said plates and mounted on said brush spindle and adapted to engage the ribbon while the latter is being applied.

2. In a device for applying metal leaf or ribbon, the combination of a handle having a bearing portion, a threaded reel spindle and a threaded brush spindle mounted in said bearing portion and projecting laterally therefrom, two plates mounted on said spindles and spaced apart from each other, a bearing strip mounted on said spindles abreast of the outermost plate, nuts for said spindles, springs interposed between said nuts and said strip, a package reel interposed between said plates and mounted on said reel spindle, and a brush interposed between said plates and mounted on said brush spindle and adapted to engage the ribbon while the latter is being applied.

3. In a device for applying metallic leaf or ribbon, the combination of a handle, a reel spindle and a brush spindle mounted in said handle, plates mounted on said spindles, a package reel interposed between said plates and mounted on said reel spindle, a brush interposed between said plates and mounted on said brush spindle and adapted to engage the ribbon while the latter is being applied, and yieldingly acting adjustable means for said spindles for holding the parts in place.

4. In a device for applying metallic leaf or ribbon, the combination of a portable mechanism comprising a handle, means associated therewith for supplying the leaf or ribbon, and a circular brush associated with said handle and peripherally engaging the leaf or ribbon when the same is being applied whereby pressure applied to the handle serves to impart a compressive strain on the bristles of the brush in the direction of their length.

5. In a device for applying metallic leaf or ribbon, the combination of a portable mechanism designed for manual operation and comprising means for supplying the leaf or ribbon, a brush having bristle portions, and a support for said means and brush, said support serving to hold said brush in a manner to effect perpendicular and straight endwise engagement of the bristle portions with the ribbon when the same is being applied, the engagement being such that a compressive and variable strain may be thrust upon said bristles in the direction of their length.

[Claims 6 and 7 not printed in the Gazette.]

878,185. MEANS FOR CASTING TYPE. FRANK H. BROWN and JOHN E. HANRAHAN, Baltimore, and GEORGE A. BOYDEN, Mount Washington, Md., assignors to National Compositype Company, Baltimore, Md., a Corporation of Delaware. Filed Apr. 13, 1904. Serial No. 203,047.



1. Means for casting type comprising a matrix having a key or index, and an insert mold member provided with casting faces of predetermined dimensions and also marked to conform to said key or index.

2. Means for casting type comprising a matrix having a key or index, and an ejector member having a casting face of predetermined dimensions, said ejector being marked to conform to said key or index.

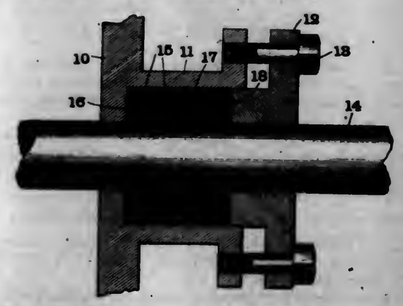
3. Means for casting type comprising a matrix having a key or index, and a plurality of mold members of different characteristics and each provided with casting faces of predetermined dimensions, said mold parts being each marked to conform to said key or index.

4. Means for casting type comprising a matrix having a key or index, and predetermined means for regulating the setwise size of the cast, said regulating means being indicated by said key or index.

5. Means for casting type comprising a matrix having a key or index, an ejector having a casting face of predetermined dimensions, said ejector being marked to conform to said key or index, and predetermined means for regulating the setwise size of the cast, said regulating means being also indicated upon said matrix.

[Claims 6 to 10 not printed in the Gazette.]

878,186. PISTON-ROD PACKING. LEE M. BYRNES, St. Louis, Mo., and GAYRIE H. KENDRICK, Little Rock, Ark. Filed Sept. 26, 1907. Serial No. 394,671.

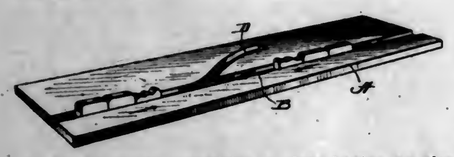


1. The combination with an elastic external strip provided with a protruding inner face, of a less elastic internal strip having an integral reëntrant external face in contact with the inner face of said first named strip.

2. The combination with an elastic external strip provided with an angular protruding inner face, of a less elastic internal strip having an angular reëntrant external face corresponding in shape with and in contact with said inner face.

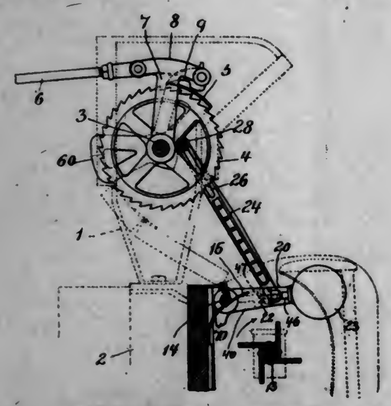
3. The combination with an elastic external strip provided with an inner face having an angular protrusion centrally disposed on said face, of a less elastic internal strip provided with an external face having a reëntrant angle centrally placed in said face, and corresponding in shape with said angular protrusion, said faces being in contact throughout their entire area.

878,187. PUZZLE. SOLON S. CAHILL, Brunswick, Me. Filed Apr. 16, 1907. Serial No. 368,458.



A railway puzzle comprising a plate having an elongated straight groove with a branching groove leading therefrom at an angle and terminating blindly, blocks fitted to move within said grooves, and forming two trains of more than two blocks each, said branching groove being of sufficient length to receive only two of said blocks.

878,188. FEED ATTACHMENT FOR COTTON-GINS. CALVIN B. P. CARVER, Bridgewater, Mass., assignor to Carver Cotton Gin Company, East Bridgewater, Mass., a Corporation of Massachusetts. Filed Feb. 26, 1906. Serial No. 302,860.



1. In a cotton-gin, or linter, a weight-supporting arm pivoted upon the float-board-shaft, and provided with a segment, a second arm rigidly secured upon said shaft, formed with a detent to engage said segment.

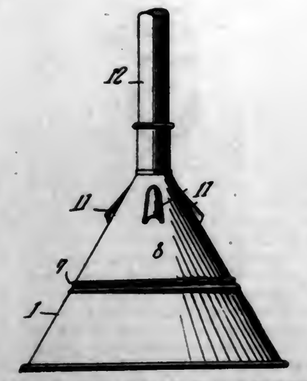
2. In a cotton-gin, or linter, a weight-supporting arm pivoted upon the float-board-shaft, a second arm, or member, rigidly secured to said shaft and complemental engaging parts upon said arms.

878,189. METHOD OF PREPARING BARLEY. JOHN A. CAVERHILL, Tillsonburg, Ontario, Canada. Filed Apr. 12, 1906. Serial No. 311,282.

1. In the method of preparing barley in the manufacture of food products, soaking the grain in water for ten to twelve hours having a temperature of substantially seventy-five degrees (Fahrenheit), removing the grain to a receptacle having a temperature of about ninety to one hundred and five degrees (Fahrenheit) and subjecting the grain to said temperature during substantially twenty-five hours, spraying the grain in the meantime with steam or warm water and agitating it so as to insure a free circulation of air therethrough, then removing the grain before the blade emerges therefrom to a receptacle having a temperature of over one hundred degrees (Fahrenheit) to rapidly dry it, and then removing the husks from the grains, substantially as described.

2. The method of preparing barley comprising soaking the grains in water of the temperature of substantially seventy-five degrees (Fahrenheit) for ten hours, removing the grains to a receptacle and subjecting them to a temperature of about ninety to one hundred and five degrees (Fahrenheit) for a period of twenty-five to forty hours while being sprayed with steam or warm water and agitated so as to insure a free circulation of air therethrough, then removing the grains before the blades emerge therefrom to a receptacle having a temperature of over one hundred degrees (Fahrenheit) to dry the grain rapidly and prevent further germination, then removing the husks from the grains, then submitting the kernels to the action of steam to soften and partially cook them, and finally rolling the grains into flakes, substantially as described.

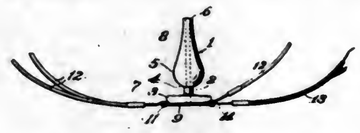
878,190. CLOTHES-POUNDER. HARRY L. CROOKER, Union City, Pa. Filed June 22, 1907. Serial No. 380,331.



A conical clothes pounder sub-divided transversely into a frusto-conical base and a conical cap, said cap and base being disposed to lap at their adjoining ends, said lapping portions being screw threaded and constituting means for detachably connecting the sections together, a disk secured to the threaded end of the base section and having a central depression, a tapered tube extending through and above the depressed portion of the disk and immovably connected thereto, said tube having apertures therein located above the bottom of the depressed portion of the disk, said tube and depression constituting a trap for sediment within the pounder and above the base section, and a tube immovably connected to the apex of the cap section and disposed to embrace and bear against that portion of the apertured tube projecting into the cap section, there being outlets within the cap section and adjacent the apex.

878,191. RECTAL SUPPORTER. HERBERT E. CUNNINGHAM, Los Angeles, Cal. Filed Oct. 9, 1905. Serial No. 281,889.

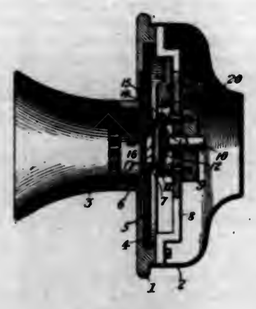
1. A rectal supporter comprising a longitudinally-perforated zinc body having a pear shaped inner end, a neck, and a substantially button-shaped outer end, a perforated cross-bar on the button, the outer surface of said button being rounded to form a space between the ends of the bar and said surface, tapes secured to the ends of said bar, and a conductor hooked in one of the perforations in the ends of the bar.



2. A rectal supporter comprising a spindle-shaped body having a distended portion terminating on one end in a slender tapering contraction and at the other abruptly in a neck, said neck having a head formed in continuation therewith and consisting of a disk-like button-shaped trough arranged to snugly fit the anal end, and an opening extending centrally through the supporter from end to end.

3. A rectal supporter comprising a longitudinally-perforated zinc body consisting of a spindle-shaped inner end, a neck and a button-like outer end, said inner end having a long, slender taper ending substantially in a feather edge, and said ends forming shoulders at the ends of the neck.

878,192. TELEPHONE-TRANSMITTER. WILLIAM W. DEAN, Elyria, Ohio, assignor to The Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Filed Aug. 9, 1905. Serial No. 273,458.



1. In a telephone transmitter, a cup containing granular material, a diaphragm having a stiffening rib or flange, and an electrode carried by said cup and intraperipherally engaged by said flange, said electrode receiving motion transmitted directly from the diaphragm through said flange.

2. A telephone transmitter comprising a cup containing granular material, a diaphragm having a stiffening rib or flange, and an electrode carried by said cup, resting intraperipherally and directly against the edges of said flange so as to receive motion therefrom.

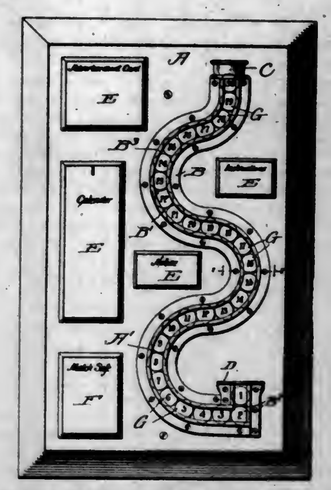
3. A transmitter comprising a cup containing granular material, a diaphragm having a central stiffening rib or flange and an electrode carried by said cup resting upon the flange and receiving motion intraperipherally therethrough from said diaphragm.

4. A telephone transmitter comprising a resistance button, an electrode carried by said button, securing means for said electrode, said securing means forming a flange, and a diaphragm having a stiffening rib or flange directly engaging said electrode inside of said securing means.

5. A telephone transmitter having a resistance button comprising a metal cup, an electrode movably connected therewith, an electrode held therein by upsetting the edges of the cup, said upset edges forming a flange, and means in engagement with said last named electrode inside the flange for transmitting motion to the button.

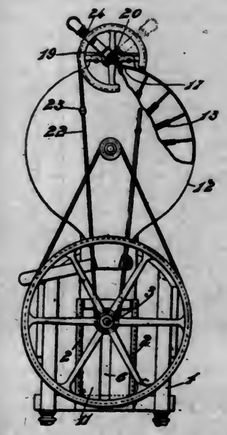
[Claims 6 to 9 not printed in the Gazette.]

878,193. BARBER'S CHECK SYSTEM. CORNELIUS L. DERR, Cleveland, Ohio. Filed Mar. 29, 1907. Serial No. 365,424.



A device of the kind described comprising S-shaped angled and flanged guide-strips, a base-board upon which said guide-strips are secured, an S-shaped channel being formed between the strips, the said channel opening upwardly at each end, and a plurality of circular disks bearing numerals traveling in said channel, and held therein at points intermediate the ends of the channel by flanges of the guide strips.

878,194. WATER-MOTOR. FRANK A. DINSMORE, Fredonia, N. Y. Original application filed Mar. 9, 1906, Serial No. 305,100. Divided and this application filed Oct. 22, 1906, Serial No. 340,057. Renewed Dec. 26, 1907. Serial No. 408,151.



1. The combination with a shaft; of a motor wheel removed from said shaft, means for transmitting motion from said wheel to the shaft, means for uninterruptedly directing motive fluid against the wheel, and means operated by the wheel for actuating the fluid directing means to reverse the wheel.

2. The combination with a shaft; of a motor wheel, a nozzle for directing water thereagainst, means for transmitting motion from the wheel to the shaft, and mechan-

ism operated by the wheel for shifting the nozzle at predetermined intervals to reverse the wheel.

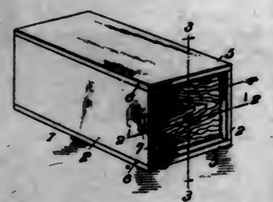
3. The combination with a shaft; of a water motor, mechanism for transmitting motion from the motor to the shaft, a nozzle for directing water into the motor, and means driven by the motor for shifting the nozzle to reverse the motor.

4. The combination with a shaft; of a motor, mechanism for transmitting motion therefrom to the shaft, a nozzle for directing motive fluid into the motor, and a nozzle shifting device operated by the motor for contacting with and shifting the nozzle to reverse the motor.

5. The combination with a shaft; of a motor, mechanism for transmitting rotary motion from the motor to the shaft, a nozzle pivotally mounted upon the motor for directing fluid thereinto, and a trip actuated by the motor and adapted to contact with and shift the nozzle to reverse the motor.

[Claims 6 to 10 not printed in the Gazette.]

878,195. TOBACCO BOX OR CADDY. ALEXANDER J. FEILD, Raleigh, N. C., assignor to The American Box and Veneer Company, Raleigh, N. C., a Corporation of North Carolina. Filed July 29, 1905. Serial No. 271,795.



1. A packing box having grooves in the inner faces of its several walls, the grooves of opposite walls being on the same plane but out of alinement with the grooves of the adjacent walls, and a plurality of panels each covering the cross sectional area inclosed by the walls of the box and having two of its reverse ends fitted in opposite grooves its remaining ends being in contact with the inner faces of the walls to which they are adjacent.

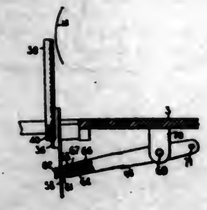
2. A packing box having grooves in the inner faces of its several walls, the grooves of opposite walls being on the same plane but out of alinement with the grooves of the adjacent walls, and a plurality of panels each covering the cross sectional area inclosed by the walls of the box and having two of its reverse ends fitted in opposite grooves, its remaining ends being in contact with the inner faces of the walls to which they are adjacent the opposed faces of said panels abutting against each other.

3. The combination with a box having grooves on the inner faces of each of its walls, the grooves of opposite walls being on corresponding planes but out of alinement with the grooves of the adjacent walls, of a series of panels each covering the cross sectional area inclosed by the walls of the box and designed to fit at its ends in opposite grooves, its remaining ends being in contact with the inner faces of the walls to which they are adjacent and an end head of size equal to the internal cross sectional area of the box bearing against the innermost panel.

878,196. TYPE-WRITING MACHINE. JACOB FELBEL, New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Sept. 26, 1906. Serial No. 336,314.

1. In a typewriting machine, the combination of a vibratory ribbon carrier; actuating means pivotally connected therewith and operative to give a constant throw to the ribbon carrier; and means for changing the pivotal point of connection between the ribbon carrier and its actuating means without changing the extent of throw of the vibrator.

2. In a typewriting machine, the combination of a vibratory ribbon carrier having a plurality of bearing openings one over the other; and an operating lever having a part adapted to coöperate at will with one or another of said bearing openings.



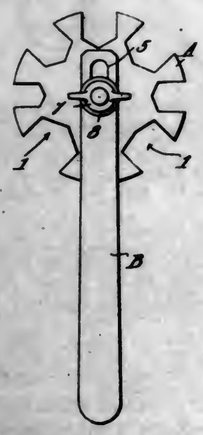
3. In a typewriting machine, the combination of a vibratory ribbon carrier comprising a stem provided with a plurality of bearing openings; and a flexible operating lever having a portion adapted to coöperate at will with one or another of said bearing openings.

4. In a front strike writing machine and in a ribbon mechanism, the combination of an operating lever, a ribbon vibrator having two different points of connection one above the other for said lever, said lever being adapted to be connected at either of said points by a manual movement of said vibrator up or down so as to disengage one point of said vibrator from said lever and engage the other point of said vibrator with the same part of said lever and at the same point.

5. In a ribbon mechanism, the combination of a ribbon vibrator provided with two points of connection, an actuating lever therefor having a single point of connection with said vibrator, the parts being constructed so that the vibrator may be disconnected from the lever at one connecting point and engaged with said lever at the other connecting point.

[Claims 6 to 11 not printed in the Gazette.]

878,197. WRENCH. JOHN F. FISHER, Oceana, W. Va., assignor of one-half to Edgar W. Worrell, Oceana, W. Va. Filed Jan. 26, 1907. Serial No. 354,296.



A wrench comprising a disk like head provided at its periphery with a plurality of nut seats of different sizes, a handle having a slot in one end and a tooth adjacent thereto and of the same thickness as the head, said tooth being arranged to engage the nut seats to hold the head against rotation, a bolt carried by the head and projecting through the slot, the bolt head being polygonal in form and flush with the outer face of the disk head, whereby an uninterrupted face is provided to engage the object operated upon, and a clamping nut carried by the bolt.

878,198. CAR-RACK. JOHN B. FOLEY, New Haven, Conn. Filed July 31, 1907. Serial No. 386,329.



1. In car rack construction, a bracket provided with bearing sockets comprising pairs of compression sections or halves for receiving the rails of the body part of the rack, and means for clamping the compression sections together and gripping them upon the rails.

2. In car rack construction, a bracket provided with bearing sockets comprising pairs of compression sections or halves for receiving the rails, and clamping screws connecting the compression section and adapted to force them together and grip them upon the rails.

3. In car rack construction, a bracket provided with bearing sockets comprising pairs of compression sections or halves for receiving the rails, and clamping screws connecting the respective halves of the bearing sockets through the bore thereof, to clamp them together and upon the rails.

4. In car rack construction, a bracket provided with half bearings or sections forming a rigid component part thereof for supporting the rack rails, and yielding half bearings or sections forming integral bearing sockets in combination with the supporting sections, and connected with and clamped thereto by compression screws secured through the half sections in the bore of the socket and forming stops for the rack rails.

5. In car rack construction, the combination of a body part provided with parallel end tenons, and brackets provided with bearing sockets receiving the end tenons of the body part, the bearing sockets comprising half bearings or sections clamped together and upon the end tenons or rails by clamping screws secured through the respective sections in the bore of the sockets adjacent the ends of the tenons.

[Claims 6 to 10 not printed in the Gazette.]

878,199. VEIN-TUBE. WILLIAM H. FREEMAN, Freehold, N. J. Filed Jan. 30, 1907. Serial No. 354,882.



A vein tube comprising a straight cylindrical body portion open at one end and having lateral openings in its wall adjacent said open end, a plunger rod working through the opposite end and carrying a solid cylindrical plunger within the body portion, and an outlet branch leading from the body of the tube at a suitable distance from the end to permit the plunger to be drawn out beyond the outlet branch, substantially as described.

878,200. HUB-ATTACHING DEVICE. SAMUEL GNAGY, Strasburg, Ohio. Filed Mar. 2, 1907. Serial No. 360,187.

1. The combination with a spindle having a peripheral shoulder thereon, of a bearing sleeve fitting the spindle having a shoulder coöperating with that of the spindle to prevent relative longitudinal movement of the parts in one direction, a collar held from relative longitudinal movement on the spindle, and a rotatable retaining device forming an operative connection between the sleeve and said collar for preventing relative longitudinal movement of these parts.

2. The combination with a spindle having a peripheral shoulder thereon, of a bearing sleeve fitted over said spindle and having a portion arranged to coöperate with said shoulder to receive the end thrust of the parts in one direction, a set of locking projections formed on a part of the sleeve, a collar on the spindle arranged to coöperate with the shoulder thereon, and a retaining disk coöperating with said locking projections to prevent relative end thrust between the sleeve and said collar.



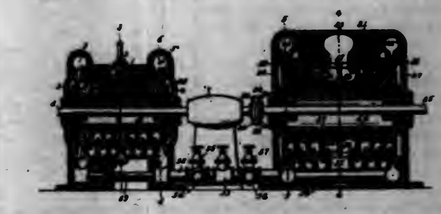
3. The combination with a spindle having a shoulder thereon, of a sleeve fitted over the spindle and having a portion adapted to coöperate with one side of said collar, a thrust collar fitted loosely over the shaft at the rear of said shoulder having a portion arranged to coöperate with it at its rear, a set of locking projections formed on the sleeve, and a rotatable retaining disk having notches adapted to permit the passage of said projections and provided with wedge surfaces to coöperate with said projections to take up end thrust between the shoulder on the spindle and the sleeve and collar.

4. The combination with a spindle having a peripheral shoulder thereon, of a sleeve fitted to turn on said spindle and having a portion adapted to coöperate with the forward surface of the shoulder, a collar loosely fitted on the spindle and having a flange adapted to coöperate with the rear surface of said shoulder, said flange having notches in its periphery, a set of locking projections on the sleeve adapted to pass through the notches in said flange in removing or applying the sleeve, and a retaining disk rotatable relatively to the sleeve and collar and having notches to permit the passage of the locking projections when the disk is in unlocked position and having portions arranged to coöperate with said projections to lock the collar in cooperative relation with the sleeve.

5. The combination with a spindle, and a bearing sleeve fitted to turn thereon, of a rotatable retaining device for preventing relative axial disengagement of the spindle and sleeve, and means for holding the said device in different rotary positions of adjustment to compensate for the end thrust.

[Claims 6 to 12 not printed in the Gazette.]

878,201. TURBINE. RICHARD H. GOLDSBOROUGH, Washington, D. C. Filed May 14, 1906. Serial No. 316,732.



1. A compound turbine system constituting a series of independent units, each unit comprising a casing and a rotor, and means for conducting the exhaust from one unit to both ends of the casing of the succeeding unit of said series, substantially as described.

2. A compound turbine system constituting a series of independent units, the primary unit of said series comprising a rotor and a casing provided with an exhaust chamber at each end, each secondary unit comprising a rotor and a casing provided with admission chambers at each end, and connections from the exhaust chambers of each unit to the admission chambers of the succeeding unit of the series, substantially as described.

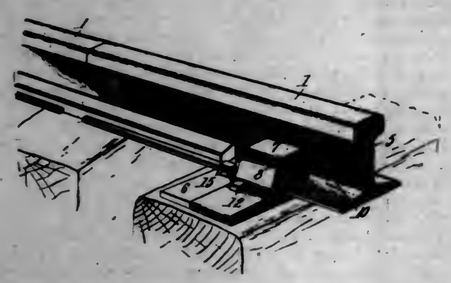
3. A compound turbine system constituting a primary unit and a secondary unit, each of said units comprising a casing and rotor, said primary unit constructed with medial admission chambers and with exhaust chambers at each end of its casing, said secondary unit constructed with admission chambers at each end of its casing, and means connecting the primary exhaust chambers with the secondary admission chambers, substantially as described.

4. A compound turbine system constituting a primary unit and a secondary unit, each of said units comprising a casing and rotor, said primary unit constructed with exhaust chambers at each end of its casing, said secondary unit constructed with admission chambers at each end of its casing, and means for establishing free communication between said several exhaust chambers and admission chambers, substantially as described.

5. A compound turbine system constituting a primary unit and a secondary unit, each of said units comprising a casing and rotor, said primary unit constructed with exhaust chambers at each end of its casing, means for maintaining said exhaust chambers in free communication, said secondary unit constructed with admission chambers at each end of its casing, and means connecting the primary exhaust chambers with the secondary admission chambers, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

878,202. RAIL CHAIR AND FASTENER. JOHN A. GOSSARD, South Solon, Ohio. Filed Apr. 30, 1907. Serial No. 371,100.



1. In a rail fastener the combination with rails having the adjoining ends of their webs and base flanges cut away to form a transverse opening; of a supporting block insertible into the opening and beneath the adjoining ends of the heads of the rails, oppositely extending holding plates integral with the block and disposed to bear upon opposite faces of the webs, and a rail chair disposed to bind said plates against the heads and webs of the rails.

2. In a rail fastener the combination with rails having the adjoining ends of their webs and base flanges cut away to form a transverse opening; of a supporting block insertible into the opening and beneath the adjoining ends of the heads of the rails, oppositely extending holding plates integral with the block and disposed to bear upon opposite faces of the webs, and rail engaging and supporting means for holding said plates against the webs and heads of the rails.

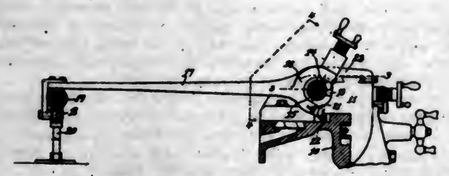
3. The combination with rails, and holding means extending between, and longitudinally upon opposite faces of the webs of the rails; of a chair comprising a base plate, and oppositely disposed jaws engaging the flanges of a rail upon the base plate, said jaws being disposed to bind the holding means against the web and head of a rail.

4. In a rail joint the combination with rails having the adjoining ends of their flanges and webs cut away to form a transverse opening; of holding means insertible into said opening and disposed to straddle the webs of the rails, and a chair seat slidably mounted upon the base of each rail and disposed to lap and retain the holding means.

5. In a rail joint the combination with rails having the adjoining ends of their flanges and webs cut away to form a transverse opening; of holding means extending between and engaging the rails, said means comprising a block seated within said opening, and integral plates extending therefrom and disposed to straddle the ends of the webs, and a chair movable longitudinally upon the base of each rail and disposed to lap the plates to hold them against the rails.

[Claims 6 to 8 not printed in the Gazette.]

878,203. METAL-TURNING MECHANISM. JAMES HARTNESS, Springfield, Vt. Filed Nov. 27, 1905. Serial No. 289,192.



1. In a lathe in which the work is held in end bearings, the combination with a slide or carriage and a finishing cutter thereon, of a holder carrying a roughing cutter and a rest in different planes along the work and adapted to be supported by the work independently of said carriage, and means on the slide for maintaining said finishing cutter in a position between the rest and the roughing cutter.

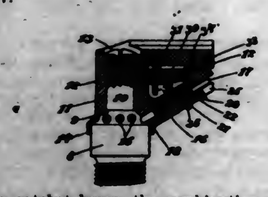
2. In a lathe in which the work is held in end bearings, the combination with a bed, a slide or carriage guided on the bed and a finishing cutter thereon, of a roughing cutter arranged to precede the finishing cutter, a rest arranged to follow the finishing cutter and bear against the finished work, and a holder for the roughing cutter and the rest for holding them in said relative positions.

3. An attachment for a lathe comprising a holder, a rest and a cutter mounted and held in predetermined relation on said holder, and adapted to be supported by the work, and an arm or lever on said holder for eliminating the lifting or bending strain of the cutter on the work, said rest and cutter being separated in lines axial of the work, whereby they may be employed in connection with an intervening finishing cutter carried by a slide on the bed.

4. In a lathe, a tool-slide, a finishing cutter thereon, a roughing cutter, a rest for the roughing cutter, a holder for said roughing cutter and said rest, said holder being adapted to be supported by the engagement of the rest and the cutter with the work, a pusher on the slide for moving the holder, and a lifting-strain-eliminating arm or lever on the holder, said roughing cutter, said finishing cutter and said rest being arranged and adapted to engage the work in the order named.

5. A lathe comprising a bed, a slide guided thereon, a finishing cutter mounted on said slide, a roughing cutter and means connected to the roughing cutter for balancing the lifting or bending strain of the roughing cutter on the work, said roughing cutter and said means being adapted to be supported by the work, and said means being arranged to engage the finished portion of the work for controlling the radial position of said roughing cutter.

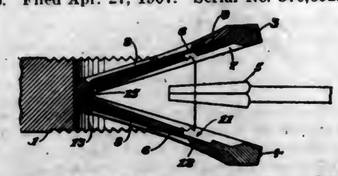
878,204. RATCHET-BRACE. GEORGE M. D. HEARD, Painesville, Ohio. Filed Jan. 14, 1907. Serial No. 352,097.



1. In a ratchet brace, the combination of a chuck, cylindrical sockets in the heads thereof, a stock, or bracket, an offset from said stock, or bracket, slots in said offset, the middle slot being deeper than the outer slots, a cylindrically-shaped beveled-headed plunger carried in said offset, and a pin upon said plunger, said pin seating in said slots, said plunger sinking deeply into said sockets when said pin is in said middle socket, but only slightly when said pin is in said outer sockets.

2. A ratchet brace having a bracket comprising three members, the sweep-arm engaging one of said members, the chuck passing through another of said members, a cylindrically-shaped beveled-headed plunger passing through the third member, said plunger being adapted to seat in cylindrical sockets on said chuck, said first-mentioned and said second-mentioned members being approximately at right-angles to each other and said third mentioned member connecting the extremities of said other-mentioned members, and means for clamping the sweep-arm to the bracket, said means being disposed in the space between said three members.

878,205. BRACE. GEORGE M. D. HEARD, Painesville, Ohio. Filed Apr. 27, 1907. Serial No. 370,602.



1. A chuck-jaw having a concavity to receive the bit-shank, a recess to receive a spring, and a longitudinal groove on the side opposite said concavity, said recess being cut from the shank-receiving concavity to a depth which leaves a web of metal on the side of said jaw opposite said concavity, said groove being in substantial alinement with said recess, said spring fitting into said groove and said recess and bearing against said web.

2. A pair of chuck-jaws each having a longitudinal groove on the outer side thereof, a slot disposed at right angles to said groove and extending from a point adjacent the end thereof to one side of the jaw, and a socket in substantial alinement with said groove, combined with a spring, which spring comprises a pair of approximately straight side-arms and an approximately straight cross-arm, said side-arms resting in said groove and the ends thereof seating in said sockets, said cross-arm passing through said slots.

3. A pair of chuck-jaws, each having a groove on the outer side thereof, a slot at right angles to said groove, and a spring-receiving socket, combined with a spring which passes through said slots, rests in said grooves, and seats in said sockets.

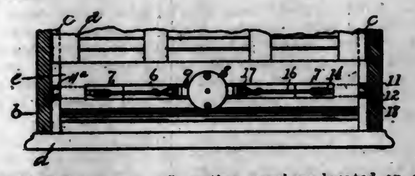
4. A pair of chuck-jaws, each having a socket and a slot therein, and a spring which passes through said slots and projects into said sockets, said spring extending in approximately a straight line from said slots to said sockets, said slots being at right angles to those arms of the spring which are inserted in said sockets.

5. A pair of chuck-jaws, each having a longitudinal groove on the outer side thereof, a slot cut inwardly from one side of the jaw at right angles to said groove to a depth equaling the distance from the side of the jaw to the wall of said groove farthest removed therefrom, and a socket in substantial alinement with said groove, combined with a spring which passes through said slots, rests in said grooves, and seats in said sockets.

[Claims 6 and 7 not printed in the Gazette.]

878,206. BOLT FOR DESKS AND OTHER STRUCTURES. CHARLES E. JOHNSON, New Britain, Conn., assignor to The Corbin Cabinet Lock Company, New Britain, Conn., a Corporation of Connecticut. Filed Dec. 19, 1906. Serial No. 348,544.

1. A sliding cover, a coöperating member having a guideway and a keeper, a portion of said cover terminating without said guideway, a case borne by and projecting beyond the end of said portion and forming a guide to engage said guideway, a bolt located within said casing and adapted to engage said keeper, and means for operating the bolt.



2. A sliding cover, coöperating members located on opposite ends thereof, each of said members having a guideway and a keeper, a portion of said cover terminating without said guideway, casings borne by and projecting beyond said portions of the cover and forming guides for each end thereof engaging said guideways, a bolt located within said casing and adapted to engage a keeper, and means for operating the bolts.

3. A sliding cover including an edge rail having an opening extending inward from the end thereof, a coöperating member having a guideway and a keeper, a casing insertible within said opening from but projecting beyond the end of the cover to form a guide, a bolt located within the casing and adapted to engage said keeper, and means for operating the bolt.

4. A closure including a side part having a guideway and a keeper, a cover having a portion projecting within said guideway and an edge rail flexibly secured to the cover and terminating short of the guideway, a bolt casing having its end projecting beyond the end of the edge rail and engaging said guideway, a bolt located within said casing to engage said keeper, and means for operating the bolt.

5. A sliding cover having a casing recess extending inward from its end, a coöperating member having a guideway and a keeper, a casing located within said recess and having an enlarged end projecting beyond the edge of the cover to form a guide, said enlarged end having a shoulder abutting against the end of the cover, a bolt located within the casing and having its end projecting thereout of to engage said keeper, and means for operating the bolt.

[Claims 6 and 7 not printed in the Gazette.]

878,207. FLY-CATCHER. HENRY A. KESSLER, Los Angeles, Cal. Filed Apr. 10, 1907. Serial No. 369,172.

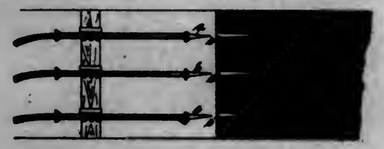


1. A fly catcher comprising a base, a rod supported thereon, a paste applying device mounted to slide on said rod and adapted to apply paste thereto, and a scraper mounted to slide on said rod above the paste applying

device and consisting of pivoted plates spring pressed to swing outwardly away from the rod, said plates being provided with a latch and a keeper, respectively, designed for interlocking engagement to hold the plates clamped around the rod.

2. A fly catcher, comprising a base, a rod supported thereon, a paste applying reservoir mounted to slide on said rod and provided with a closure, said cap being provided with a tube encircling the rod and provided with a lateral extension 10, and plates adapted to encircle said rod and pivotally mounted on the said extension, as and for the purpose set forth.

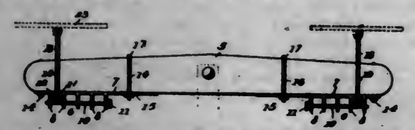
878,208. MINING PROCESS. JACOB KIRSCHNIOK, Zabrze, Germany. Filed May 27, 1904. Serial No. 210,019.



1. The process of cutting holes or slots in minerals which consists in directing one or more fine jets of water under a very high pressure against the mineral in the direction the hole or cut is desired.

2. The process of cutting holes or slots in minerals which consists in delivering one or more fine jets of water under a pressure of from 50 to 100 atmospheres against the mineral in the direction which the hole or cut is desired and in close proximity to the mineral surface on which the jet acts.

878,209. EVENER. THEODORE KREUTZ, Sweetbriar, N. D. Filed July 29, 1907. Serial No. 386,031.



1. In an evener, the combination with a doubletree, of castings located at the ends of the doubletree, each of said castings including an attaching plate disposed against the rearward face of the doubletree and carrying a plurality of rearwardly extending spaced ears, said ears having alining perforations adjacent to their rearward edges, a rod removably engaged through said perforations of each casting, fastening devices engaged with the attaching plates and with the doubletree, a swingletree for each end of the doubletree, and attaching members connected with the swingletrees, said attaching members being engaged around the ends of the doubletree and including portions lying between pairs of the ears of the castings, and arranged for interchangeable engagement between the several pairs of ears.

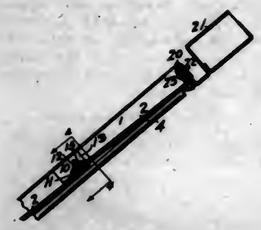
2. A casting for eveners comprising an attaching plate, a plurality of rearwardly extending spaced ears carried by said plate and provided with alining openings adjacent to their free ends, said plate extending longitudinally beyond the ears in both directions and having a fastener receiving opening in one of said extended portions, the other extended portion having lateral wings provided with openings for the reception of fasteners.

878,210. PROCESS FOR THE REDUCTION OF REFRACTORY OXIDS. KARL A. KÜHNE, Dresden, Germany, assignor to Titan-Gesellschaft mit beschränkter Haftung, Dresden, Germany, a Corporation. Filed June 11, 1907. Serial No. 378,453.

1. The process for the reduction of refractory oxids which consists in mixing throughout the mass thereof aluminium, and a persulfate of a metal, and then igniting the mixture.

2. The process for the reduction of refractory oxids which consists in mixing throughout the mass thereof aluminium, and a persulfate of an alkali metal, and then igniting the mixture.

878,211. BAR FOR SKYLIGHTS AND SIMILAR CONSTRUCTIONS. JOHN LEPPLA, Pittsburg, Pa. Filed May 24, 1907. Serial No. 375,477.



1. In a roof structure for skylights, greenhouses, etc., the combination of a metallic bar having a seat for the glass or other roof member, and having a vertical web projecting above said seat, a clip provided with a seat for receiving the edge of the glass or other roofing member and having a vertical portion lying adjacent to the vertical web of the bar, and a key member projecting through alining holes in the vertical web of the bar and vertical part of the clip.

2. In a roof structure for greenhouses, skylights, etc., the combination of a metallic bar having seats on opposite sides for the glass or other roof member and having a vertical web projecting above said seats, clips provided with seats for receiving the edge of the glass or other roofing member, and having vertical portions lying respectively on opposite sides of the vertical webs of the bar, and a key member projecting through alining holes of the vertical web of the bar and in the vertical portions of the clips on opposite sides of said web and secqring said parts together.

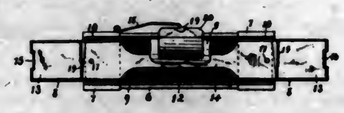
3. In a roof structure for skylights, greenhouses, etc., the combination of a metallic bar having a seat for the glass or other roofing member and having a vertical web projecting above said seat, a clip provided with a seat for receiving the edge of the glass or other roofing member and having a vertical portion lying adjacent to the vertical web of the bar, and a yielding key member projecting through alining holes in the web of the bar and the vertical portion of the clip.

4. In a roof structure for skylights, greenhouses, etc., the combination of a metallic bar having a seat for the glass or other roofing member and having a vertical web projecting above said seat, a clip provided with a seat for receiving the edge of the glass or other roofing member and having a vertical portion lying adjacent to the vertical web of the bar, and a key member formed of resilient metal and angular in cross section and projecting through alining holes in the web bar and the vertical portion of the clip.

5. In a roof structure for skylights, greenhouses, etc., the combination of a metallic bar having a seat for the glass or other roofing member, and having a vertical web projecting above said seat, of a sheet metal clip having portions bent substantially parallel to form a groove to receive the edge of the sheet and having a vertical portion lying adjacent to the vertical web of the bar, and a yielding and resilient key member projecting through alining holes in the web of the bar and the vertical portion of the clip and bearing upon one of the parallel members forming the groove for the glass.

[Claims 6 and 7 not printed in the Gazette.]

878,212. ELECTRIC FUSE. SWAN J. LEVEEN, Rock Island, Ill., assignor of one-half to The Electric Construction and Machinery Company, Rock Island, Ill. Filed Nov. 3, 1906. Serial No. 341,821.



1. A fuse-shell comprising two separable corresponding complementary sections composed of suitable non-conductive material, each of said sections having metal caps secured to its ends, said caps having integral portions adapted to embrace a fuse-plate, and means for separably connecting the caps of the complementary sections.

2. A fuse-shell comprising two semi-cylindrical complementary sections composed of suitable non-conductive material, each of said sections having metal-caps secured to its ends, said caps having integral extensions adapted to embrace a fuse-plate, and having separable interlocking portions.

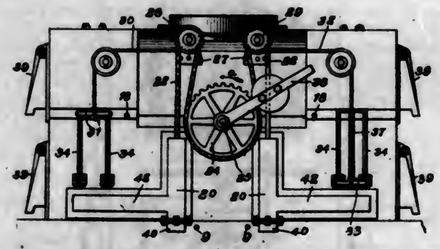
3. A fuse-shell comprising two semi-cylindrical sections composed of a suitable non-conductive material, each of said sections having metal end-pieces adapted to contact with a fuse-plate, said end-pieces having detachable interlocking portions.

4. In a fuse device of the character described, fusible elements comprising a fuse-plate of relatively low resistance and a fuse-wire of relatively high resistance, said wire connected with said plate and exposed for a portion of its length, and means under tension engaging the exposed portion of said wire.

5. In a fuse device of the character described, fusible elements comprising a fuse-plate, a fuse-wire having its ends wrapped around said plate, and indicating means connected with said fuse-wire, said means exerting tension on said wire.

[Claims 6 to 17 not printed in the Gazette.]

878,213. VALVE FOR FURNACES. CHARLES LONGENECKER, Beaver, Pa. Filed Apr. 17, 1907. Serial No. 368,797.



1. A furnace having in combination two chambers connected to a port, a valve controlling said port, means outside of the chambers for shifting the valve and rods connecting the valve to the shifting means and arranged in grooves in the side walls of one of the chambers.

2. A valve mechanism for furnaces having in combination a pair of valves, mechanism for shifting said valves, a second pair of valves, mechanism for shifting the second pair of valves and adapted to be shifted by the mechanism operating the first pair of valves and weight applied to the mechanism for shifting the first pair of valves to insure the complete shifting of all the valves.

878,214. VENTILATOR. JACOB LORENZ, St. Louis, Mo. Filed Dec. 8, 1906. Serial No. 346,150.

1. In a device of the character described, the combination of stiles, slats pivotally mounted therein, a pair of slots in one of said stiles disposed at right angles to each other, a controlling rod in one of said slots, studs projecting from said rod and through the other of said slots, and engaging said slats eccentrically.



2. In a device of the character described, the combination of stiles, shoulders thereupon, V-shaped slats supported by said stiles and said shoulders, a pair of slots on the side opposite the shouldered side of one of said stiles, said slots being approximately at right angles to each other, a controlling-rod in one of said slots, and studs projecting from said rod through the other of said slots, said studs eccentrically engaging said slats.

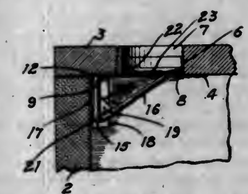
3. In a device of the character described, the combination of two series of separately-actuatable wings, both series of wings having a common series of pivots, stiles having shoulders thereupon and recesses therein, said pivots being thereby supported, a pair of slots in one of said stiles, said slots being approximately at right angles to each other, a controlling-rod in one of said slots, and studs projecting therefrom through the other of said slots, said studs eccentrically engaging said wings.

4. In a device of the character described, the combination of a frame composed of stiles and rails, a shoulder on each stile, V-shaped slats supported by said stiles and said shoulders, slots in one of said stiles, a controlling rod in one of said slots, and studs which project from said rod through the other of said slots and eccentrically engage said slats, the walls of said last-mentioned slot being approximately parallel to the plane in which the axes of said slats lie.

5. In a device of the character described, the combination of stiles, shoulders thereupon, grooves in said shoulders, recesses in said stiles, said recesses registering with said grooves, a series of V-shaped slats, said slats having wings unequal in length, said shorter wings extending from shoulder to shoulder, and said longer wings extending from stile to stile, and tenons projecting from said V-shaped slats into said recesses, thereby pivotally to support said slats.

[Claims 6 and 7 not printed in the Gazette.]

878,215. LOCK AND SEALING DEVICE. GEORGE H. MAAS, Milwaukee, Wis. Filed Mar. 28, 1907. Serial No. 364,953.



1. In a device of the class described, the combination, with a case having a cover and a lock device therefor, the cover of said case having a bushing contiguous to said lock device, and a disk concave in form fitting within said bushing and having a hole in its central portion, and a filling material fitting within the hole in said disk, and the edges of said disk bearing on the wall of said bushing whereby access to said lock device is prevented and said bushing having means to prevent said disk from being pushed entirely therethrough.

2. The combination, with a case and a cover therefor having an opening, and a bushing fitting within said opening, of a metallic device of comparatively thin material fitting within said bushing and having a central hole and a lead filler therefor, and the middle portion of said disk be-

ing pressed inwardly beyond its edge, and a cover lock accessible through the hole in said disk when said filler is punctured and said bushing having means to prevent said metallic device from being pushed entirely therethrough.

3. The combination, with a shipping case having a cover provided with a hole therein and a disk of comparatively thin material fitting within said hole and having a central opening and a filler therefor, the middle portion of said disk being pressed inwardly beyond its edge and said filler being adapted to be punctured, and a case lock accessible through said disk when said filler is perforated and said hole being of less diameter at its inner end, whereby said disk is prevented from being pushed through into said case.

4. The combination, with a case having a cover provided with a hole therein, of a plate secured to said cover and having an opening to coincide with the hole in said cover, a flange provided on said plate and fitting within said cover hole and forming a lining or bushing therefor, a disk of comparatively thin material fitting within said bushing, said disk having a hole therein and a filler for said hole, and a case lock accessible through the hole in said disk when the filler is punctured and said bushing having means for preventing said disk from being pushed entirely therethrough.

5. A sealing device comprising a bushing and a disk of flexible material fitting therein, said disk having a hole extending therethrough, and a filler for said hole, and the middle portion of said disk being pressed inwardly beyond the edge thereof when the device is in use, and said cup having means for preventing said disk from being pushed entirely therethrough substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

878,216. BOOK OF ACCOUNT. WILLIAM T. MACDOUGALL, Woodbridge, N. J. Filed Feb. 20, 1907. Serial No. 358,503.



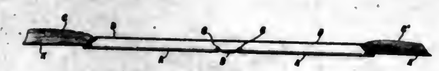
1. A book embodying covers and a back permanently hinged together, an interior comprising a flexible corrugated binding strip provided with means whereby it may be attached to and detached from the back at will, both the inner and outer ridges of the binding strip being free to separate from each other when the book is opened, and a series of leaves bound in sections to the binding strip.

2. A book embodying covers and a back permanently hinged together, an interior comprising a flexible corrugated binding strip provided with means whereby it may be attached to and detached from the back at will, both the inner and outer ridges of the binding strip being free to separate from each other when the book is opened, and a series of leaf sections, each section being separately bound to the binding strip.

3. A book embodying covers and a back permanently hinged together, an interior comprising a flexible corrugated binding strip provided with laterally projecting flexible strips adapted to engage the back whereby the interior may be attached to and detached from the back at will, both the inner and outer ridges of the binding strip being free to separate from each other when the book is opened, and means for attaching the laterally projecting flexible strips to the back, and leaves folded upon themselves and connected with the binding strip.

878,217. BOOK OF ACCOUNT. WILLIAM T. MACDOUGALL, Woodbridge, N. J. Filed Feb. 20, 1907. Serial No. 358,504.

1. A book embodying covers and a back, an interior consisting of two separable assemblages of leaves, means whereby each assemblage may be detachably attached to the cover adjoining it adjacent to the back thereof and guiding and confining devices connected with the covers near their outer edges and which engage with each assemblage of leaves.



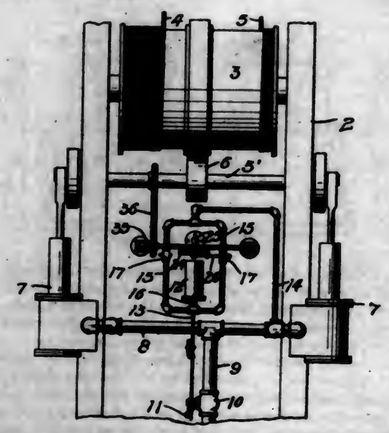
2. A book embodying covers and a back, an interior consisting of two separable assemblages of leaves, means whereby each assemblage may be detachably attached to the cover adjoining it adjacent to the back and other means attached to the covers for confining the two assemblages within the covers when they are separated.

3. A book embodying covers and a back, an interior consisting of two assemblages of leaves slidably separable toward and from the back, guiding and confining devices attached to each of the covers adjacent to their outer edges and which engage with the assemblages of leaves.

4. A book embodying covers and a back, an interior consisting of two separable assemblages of leaves, devices attached to each cover near the back of the book and other devices attached to the respective assemblages of leaves adapted to engage with and disengage from said attaching devices on the covers, whereby the assemblages of leaves may be centrally held between the covers and detached therefrom without disorganizing any part of the interior and supplemental guiding and confining devices connected with each of the covers near their outer edges and which engage with each assemblage of leaves.

5. A book embodying covers and a back, an interior consisting of two separable assemblages of leaves, means whereby each assemblage may be detachably attached to the cover which adjoins it adjacent to the back thereof, guiding and confining devices attached near the outer edges of each of the covers and which slidably engage with each assemblage of leaves whereby they may be moved to the right and left respectively and yet be held to the covers.

878,218. ATTACHMENT FOR HOISTING-ENGINES. HARRY MAKER, Hibbing, Minn., assignor of one-half to F. E. Downing, Hibbing, Minn. Filed Oct. 20, 1906. Serial No. 339,745.



1. The combination, with a hoisting drum, having a cable wound upon each side of the center thereof in opposite directions, a driving shaft geared to the middle portion of said drum, engines having their pistons connected to the ends of said driving shaft, a transverse pipe connecting the cylinders of said engines, a fluid pressure supply pipe leading into said transverse pipe, a throttle valve having a suitable lever and located in said supply pipe, a cylinder, a piston therein connected with said lever, a pipe connected with said transverse fluid pressure pipe and with one end of said last named cylinder, valves provided in said pipe and means operatively connected with said driving shaft and arranged to operate said valves to admit fluid pressure to one end of said throttle valve cylinder and operate said throttle valve when the drum has reached predetermined points.

2. The combination, with a hoisting engine, its driving shaft and drum, of a cylinder and a piston therefor connected with the throttle lever, a valve arranged to control the admission of steam to said cylinder, a gear provided with a series of holes near its periphery, means for operating said gear from said driving shaft, and an arm adjustably mounted in said holes on said gear and having a head arranged to engage said valve, for the purpose specified.

3. The combination, with a hoisting engine, its driving shaft and drum provided with cables wound thereon in opposite directions, of a cylinder and a piston therefor connected with the throttle lever of said engine, valves arranged to control the admission of steam to said cylinder, a gear wheel operatively connected with said shaft and driven thereby, and arms adjustably mounted on said wheel and adapted to alternately engage said valves and operate the same when said drum has revolved a certain predetermined number of revolutions in either direction.

4. The combination, with a hoisting engine and its driving shaft, of a drum operating from said shaft and provided with cables wound thereon in opposite directions, a cylinder, a piston therefor, connected with the throttle valve of said engine, spring pressed valves having sliding stems and arranged to control the admission of steam to said cylinder, and rocking arms for engaging and operating said valves one at a time when said drum has revolved a certain predetermined number of revolutions in either direction.

5. The combination, with a suitable frame, of a drum mounted therein and having cables wound thereon in opposite directions, a driving shaft geared to the middle portion of said drum, engines mounted in said frame and connected with the ends of said driving shaft, a transverse pipe connecting the cylinders of said engines, a steam supply pipe leading into said transverse pipe, a throttle valve provided with a suitable lever and arranged in said supply pipe, a cylinder having an open end and a piston connected with said lever, a pipe extending on each side of said last named cylinder and connected with said transverse steam pipe and also with the closed end of said cylinder, valves provided in said pipe, and means operatively connected with said driving shaft and arranged to operate said valves to admit steam to the closed end of said cylinder and operate said throttle when the drum has reached predetermined points.

[Claim 6 not printed in the Gazette.]

878,219. LADY'S AND CHILD'S HAT. KATHERINE E. MANN, Baltimore, Md. Filed Feb. 1, 1906. Serial No. 298,915.



A hat comprising a brim having a center opening; an endless band attached to said brim around the center opening; a crown having a top surface of hexagon shape and larger in diameter than the diameter of the endless band, and having sides consisting of tangs whose edges are concave-curved and contract downward and are attached to the said endless band, and a V-shaped point between every two of said side tangs.

878,220. STEM-WINDING WATCH. ROBERT MANTHEY, Jersey City, N. J. Filed Apr. 5, 1907. Serial No. 366,538.



1. In a watch, the combination with the front plate which furnishes bearings for the train works, of a block or bridge piece secured thereto and a pendant made integral with the said block or bridge piece.

2. In a watch, the combination with the front and back plates which furnish the bearings for the train works, and winding and setting mechanism carried thereby, of a block or bridge piece and pendant secured to the said front plate, a stem and a wheel carried thereby and adapted to actuate either the winding or setting mechanism.

3. In a watch, the combination with the front and back plates which furnish the bearings for the train works, and winding and setting mechanism carried thereby, of a block or bridge piece and pendant secured to the said front plate, a stem and a wheel carried thereby which is normally in engagement with the winding mechanism and may be disengaged therefrom and placed in engagement with the setting mechanism.

4. A watch movement having front and back plates which furnish the bearings for the train works, the space between the plates around the works being open to permit the works to be inspected when the movement is uncased, and a pendant rigidly connected with the movement to serve as a support for the entire movement when removed from a case.

5. In a watch, the combination with front and back plates which furnish the bearings for the train works, a block or bridge piece secured to the front plate and a pendant made integral with the said bridge piece, said bridge piece and back plate being provided with slots, of a back winding wheel having a staff engaging said slots, an intermediate wheel, a spring for normally retaining the back winding wheel in engagement with the intermediate wheel, a stem and a wheel carried thereby and engaging the back winding wheel, so that forward movement of the wheel upon the stem will actuate the back winding wheel and backward movement of the wheel upon the stem will move the back winding wheel out of engagement with the intermediate wheel against the power of the spring.

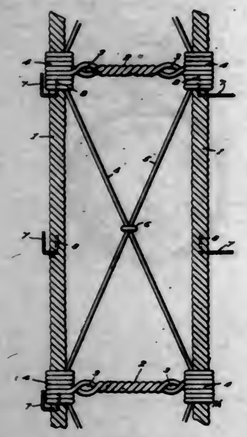
[Claims 6 to 15 not printed in the Gazette.]

878,221. TRUSS FOR IRON STRUCTURES. HERBERT C. MATTHEWS, Salt Lake City, Utah. Filed Apr. 3, 1907. Serial No. 366,222.

1. A truss or stud comprising longitudinal members composed of twisted wires, spreaders extending from one member to the other, and consisting of twisted wires, the terminal ends of said wires being wrapped around the longitudinal members, crossed braces extending through the wrapped portions of the spreader, and loops or rings connecting the intersecting portions of the cross braces.

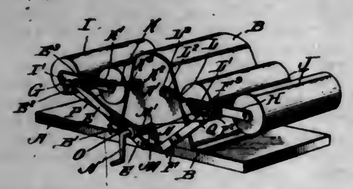
2. A truss or stud for metal structures comprising longitudinal members comprising twisted wire strands, spreaders connecting said strands, crossed braces connecting said spreaders and longitudinal members, said spreaders hav-

ing oppositely disposed loops for the purpose described, and malleable metal hooks secured at intervals to the lon-



gitudinal members for holding metal laths, substantially as described.

878,222. COW-MILKER. JOHN M. MATTIS, Tripp, S. D. Filed Feb. 25, 1907. Serial No. 359,141.



1. In a device of the kind described, the combination with a base provided with a block having inclined sides, of a sheet of metal secured over said blocks provided with troughs at its ends, spring actuated arms mounted on said base and rollers carried by said arm.

2. The combination with a base provided with an upwardly extending block having converging sides, of spring actuated arms mounted on said base carrying a shaft, arms mounted on said shaft carrying rollers adapted to engage said sides of said blocks and means for operating said shaft.

3. The combination with a base provided with an upwardly extending block, of a sheet of metal secured over said block provided with troughs at its ends, spring actuated arms mounted on said base carrying shafts, bars secured on said shafts, rollers mounted in said bars and means for operating said shaft.

to engage the sides of said block and means for operating with a base provided with a block having converging sides, of arms carried by said base, a shaft mounted in said arms, bars mounted on said shaft carrying rollers adapted to engage the sides of said block and means for operating said shaft.

5. The combination with a base provided with an upwardly extending block having inclined sides, of a sheet of metal secured over said block provided with troughs at its ends, a trough arranged under the lower ends of said trough, arms carried by said base and rollers carried by said arms.

[Claim 6 not printed in the Gazette.]

878,223. INHALER. AUGUST F. MEISSELBACH, Newark, N. J., assignor to A. F. Meisselbach & Brother, Newark, N. J., a Corporation of New Jersey. Filed Nov. 28, 1906. Serial No. 345,537.

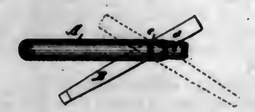


1. In an inhaler, the combination of a pair of cups or capsules, each having an internal shoulder therein, a spring connecting said capsules, said spring having T-heads at its ends bent into circular form and inserted into said capsules against said shoulders, with the margins of said capsules flanged over upon the edges of said circularly formed T-heads.

2. In an inhaler, the combination of a pair of cups or capsules, each having an internal shoulder therein, a spring having integral rings at its ends, said rings being fitted into said capsules against said shoulders and held in position by the flanged margins of said capsules.

3. In an inhaler, the combination of a spring having rings integral with its ends, a pair of capsules, said rings being fitted into said capsules and means upon said capsules for securing said rings in position.

878,224. POCKET-TOOL. AUGUST F. MEISSELBACH and PLINY CATUCCI, Newark, N. J., assignors to A. F. Meisselbach & Brother, Newark, N. J., a Corporation of New Jersey. Filed Nov. 27, 1907. Serial No. 404,032.



1. A pocket tool, comprising a handle composed of a strip of metal U-shaped in cross-section and bent into an elongated oval shape, to form a pair of externally tapered clamping jaws, a flat blade or tool pivotally connected to said jaws and a clamping ferrule detachably secured to said jaws to clamp the same to said blade or tool.

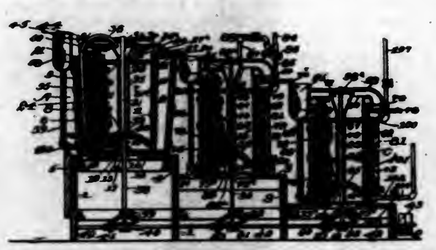
2. A pocket tool, comprising a handle, a pivoted blade or tool and a clamping ferrule, said handle consisting of a strip of hollow half round metal bent into an elongated oval with the ends thereof forming a pair of externally tapered clamping jaws to receive and clamp said pivoted blade, with the ferrule secured in position upon said jaws to prevent their separation.

3. A pocket tool, comprising a handle formed from a strip of hollow half round metal bent into an elongated oval, the ends thereof forming a pair of tapered clamping jaws, a clamping ferrule having a tapered bore to receive said jaws, a bayonet slot in said ferrule and a pin upon one of said jaws for coöperation with said slot to draw said jaws into clamping engagement with a blade or tool to be held therebetween.

878,225. PASTEURIZER. JOHN C. MILLER, Canton, Ohio, assignor to The Miller Pasteurizing Machine Company, Canton, Ohio, a Corporation of Ohio. Filed Aug. 10, 1903. Serial No. 169,024.

1. In an apparatus for treating milk and other liquids, the combination of a frame, a heating mechanism having two concentric vessels, of which one rotates relatively to the other, means for supplying a heating agent to each of the said vessels, a tank supplying milk to said receptacle and adapted to hold a body thereof higher than that of said heating mechanism, a cooling mechanism adapted to hold the milk after it leaves the heating mechanism at a level lower than the level of the milk in the heating mechanism and comprising two concentric vessels adapted to hold bodies of a cooling medium and of which vessels one is rotatable relatively to the other, a power mechanism below the said heating mechanism and cooling mechanism,

two trains of devices for connecting the rotary vessels respectively in the heating and cooling mechanisms with power mechanism, and conductors for conveying milk or other liquid from the heating mechanism to the cooling mechanism, substantially as set forth.



2. In an apparatus for treating milk or other liquids, the combination of a supporting frame, a heating mechanism having a stationary external vessel and an inner rotary vessel, the adjacent walls of which vessels form a reduced passageway around the inner vessel for the milk, a cooling mechanism having a stationary outer vessel and a rotary inner vessel, the adjacent walls of which form a reduced passageway for the cooling of the milk, a rotary vertical power shaft passing through the bottom of the outer vessel of the heating mechanism and detachably connected with the inner rotary vessel, a vertically arranged power shaft passing through the bottom of the outer vessel of the cooling mechanism and detachably connected with the inner rotary cooling vessel, power devices below the heating mechanism and the cooling mechanism and connected to both of said vertical shafts, substantially as set forth.

3. In an apparatus for treating milk and other liquids, the combination of a frame, a stationary vessel mounted on said frame and adapted to hold a body of water around the passageway for the milk which is being treated, an inner rotary vessel holding a body of water inside of the said milk passageway and cut off from the body of water in said stationary vessel, a driving shaft mounted in fixed relations to the outer vessel and below the inner rotary vessel, said inner rotary vessel being arranged to be detached upwardly from said shaft and to be lifted out from the exterior vessel independently of the said shaft, and the power transmitting devices below the inner rotary vessel for driving said shaft, substantially as set forth.

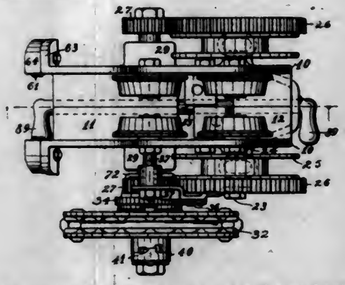
4. In an apparatus for treating milk and other liquids, the combination of an inner rotary vessel adapted to hold a body of water, an outer chamber having an inner cylindrical wall 73 and an outer wall formed with a helical groove 78 extending continuously from the top to the bottom, said outer wall being secured to the inner and forming a continuous helical passageway for liquid, substantially as set forth.

5. In an apparatus for treating milk and other liquids, a metallic heat-conducting wall with which the milk or liquid to be treated is arranged to contact, and a helically grooved wall having rows of perforations through its helically grooved portion and solder connections between said first described heat-conducting wall and said helically grooved wall extending through said perforations in said helically grooved wall.

[Claims 6 to 14 not printed in the Gazette.]

878,226. HOIST. EDWARD Y. MOORE, Cleveland, Ohio. Filed July 10, 1906. Serial No. 325,447.

1. The combination of a hoist frame, supporting wheels carried thereby and adapted to ride on the lower flange of an overhead trackway, a pair of elevating wheels on opposite sides of said frame, gears in rigid connection with said elevating wheels, a shaft extending crosswise of the frame and adapted to stand beneath such trackway, pinions on said shaft engaging such gears, a flexible raising member secured to said elevating wheels and depending in a pair of loops beneath said shaft and onto the opposite side thereof, and an equalizing sheave carried by the hoist frame, the loops of the flexible member joining over the equalizing sheave.



2. The combination, in a hoist, of a frame having upwardly projecting sides, supporting wheels carried on the inner faces of the frame sides, elevating wheels carried on the outer faces of such sides, a driving shaft extending crosswise beneath the side portions of the frame, gearing connecting said shaft with the elevating wheels, a pair of equalizing sheaves carried by the frame on the opposite side of the shaft from the elevating wheels, and a flexible raising member passing intermediately over said sheaves and depending in a pair of loops, the other ends of which are mounted on said elevating wheels.

3. The combination of a grapple, a bar swiveled thereto, a pair of sheaves carried by said bar, a hoist frame, supporting wheels carried thereby, elevating wheels carried thereby, an equalizing member carried by said frame, and a flexible elevating member bent intermediately over said equalizing member and passing diagonally downward between the sheaves in the swiveled bar and diagonally upward to the elevating wheels.

4. In a hoist, the combination with a frame, of a main shaft journaled therein, a pair of elevating wheels geared with said shaft, an equalizing sheave carried by the hoist frame, and a flexible elevating member passing over the equalizing sheave and downward and upward in a pair of loops, the ends of said flexible member running onto the far sides of the elevating wheels.

5. In a hoist, the combination of a frame, a driving shaft carried thereby, an elevating wheel on one side of the shaft geared with it, a flexible raising member running off of the elevating wheel on the side opposite the driving shaft, said member passing diagonally downward and then upward in a loop beneath the driving shaft, said flexible member being supported by the hoist frame on the side of said shaft opposite the elevating wheel.

[Claims 6 to 10 not printed in the Gazette.]

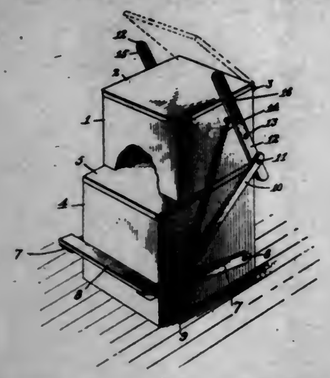
878,227. PLATE-HOLDER. JOHN T. MCKEAN, Santa Cruz, Cal. Filed July 19, 1907. Serial No. 384,559.



1. A plate-holder having a sectional partition, removable and insertible through the plate opening in the frame.

2. A plate-holder comprising a frame and a partition, said partition consisting of a fixed rim flange portion and a removable flexible center to seat against said rim flange, substantially as described.

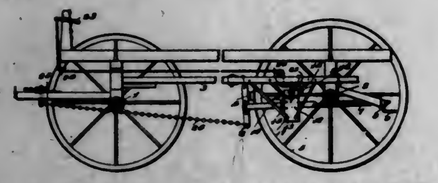
878,228. CABINET. SILLUS DA COSTA NEWMAN, Jellico, Tenn. Filed June 3, 1907. Serial No. 377,086.



1. A cabinet or receptacle, embodying a body portion, a hinged lid, a foot treadle, side arms carrying said treadle and pivoted at their rear ends, levers pivoted intermediate their length and slidably connected to said lid at their upper ends, and connecting bars pivoted to said side bars and to said levers at the lower ends of the latter.

2. A cabinet or receptacle embodying a body portion, a hinged lid, a foot treadle, side arms carrying said treadle and pivoted at their rear ends, levers pivoted intermediate their length and slidably connected to said lid at their upper ends, connecting bars pivoted to said side bars and to said levers at the lower ends of the latter, and springs connecting said side bars and said levers above the pivots of the latter to normally retain said lid closed.

878,229. AUTOMATIC WAGON-BRAKE. GARDNER M. OLSON, Cokato, Minn. Filed July 19, 1907. Serial No. 384,578.

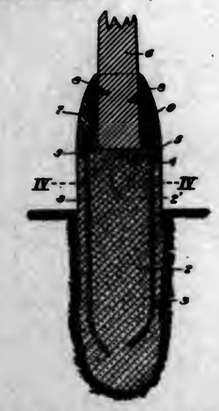


1. In combination, a brake device, a longitudinally movable bar connecting with said brake device, a spring normally exerting a pressure upon said bar and tending to set the brakes, a guide comprising spaced plates to receive between them the said bar, a lock bolt mounted upon said plates and coöperating with said bar to hold the brakes released, and means for applying the draft to the said bar to hold the brakes out of action.

2. In combination, a brake device, a longitudinally movable bar having connection with said brake device, a spring connected with said longitudinal bar and normally exerting a force thereon to apply the brake, transversely spaced plates having said longitudinal bar arranged between them, means for connecting said plates and directing the longitudinal bar in its movements, a lock device mounted upon said plates and coöperating with the longitudinal bar to hold the brake out of action, and means for releasing said lock device to permit automatic action of the brakes.

878,230. POLE. ROBERT S. ORR, Pittsburg, Pa. Filed May 2, 1907. Serial No. 371,432.

1. As an article of manufacture, the combination with a base of concrete having a beveled edge, of anchoring rods embedded therein extending upwardly beyond the base and having inwardly turned securing terminals, said terminals being spaced apart for insertion of an upper pole and adapted to be driven thereinto and to be assembled more closely together to secure the pole to the base, substantially as set forth.



2. As an article of manufacture, the combination with a base of concrete having a beveled edge, of anchoring rods embedded therein extending upwardly of varying lengths beyond the base and having inwardly turned securing terminals, said terminals being spaced apart for insertion of an upper pole and adapted to be driven thereinto and to be assembled more closely together to secure the pole to the base, substantially as set forth.

3. As an article of manufacture, the combination with a base of concrete having a beveled edge, of anchoring rods embedded therein extending vertically upward beyond the base and having inwardly turned securing terminals, said rods being adapted to embrace the base of an upper pole and to be driven thereinto by their terminals, whereby the rods are inclined inwardly towards their points of attachment with the pole, substantially as set forth.

4. As an article of manufacture, the combination with a base of concrete having a beveled edge, of anchoring rods embedded therein extending vertically upward beyond the base and having inwardly turned securing terminals, said rods being adapted to embrace the base of an upper pole and to be driven thereinto by their terminals whereby the rods are inclined inwardly towards their points of attachment with the pole, and provide intervening spaces between them and the pole for a surrounding covering material, substantially as set forth.

5. As an article of manufacture, the combination with a cylindrical base of concrete having a flat top and a beveled edge, of an annularly arranged series of anchoring rods projecting beyond the top of the base and provided with inwardly turned extremities.

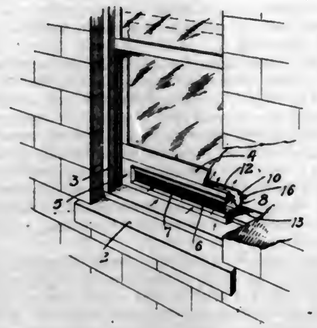
[Claims 6 to 18 not printed in the Gazette.]

878,231. VENTILATOR. ALFRED A. PACKER, St. Paul, Minn. Filed Apr. 20, 1907. Serial No. 369,242.

1. A window ventilator comprising a board or plate having an opening extending lengthwise thereof, a screen for said opening, a substantially cylindrical shell having an opening in its side wall coinciding with the opening in said board, and secured to said board on the inside of the window, and said shell having an opening in its upper walls and a swinging valve semi-cylindrical in form located in said shell and arranged to swing back and forth therein and regulate the passage of air, through said opening, and means within said shell for deflecting the incoming currents of air and preventing them from passing in a direct line therethrough substantially as described.

2. A window ventilator comprising a plate adapted to rest on the window sill between it and the lower sash and

extending across the window from side to side, said plate having an opening extending lengthwise therein, a shell provided on the inner side of said plate and having an opening in its side wall coinciding with the opening in said plate and said shell having a second opening in its upper walls, a plate provided within said shell and arranged to deflect the incoming currents of air, a valve pivoted within said shell and arranged to close the opening in the upper walls thereof, and means for adjusting said valve to increase or decrease the size of said opening.



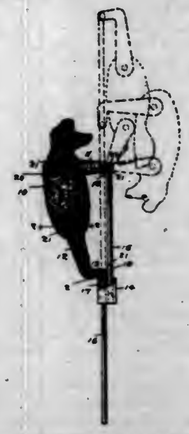
3. A window ventilator comprising a plate adapted to be placed on the sill between it and the sash and having an opening extending lengthwise therein, a substantially cylindrical shell having an opening to coincide with the opening in said plate and secured to the inner side of said plate, said shell having an opening in its upper wall extending lengthwise thereof, a swinging valve provided in said shell and having a wall arranged to close said last named opening and prevent the entrance of air therethrough, and a deflector plate arranged in the upper part of the opening in the side wall of said shell and inclined downwardly and inwardly from said opening and adapted to direct and deflect the air to the opposite wall of said shell, substantially as described.

4. The combination, with a window sash, of a plate adapted to be placed under the sash, and on the upper edge of which plate the sash rests, said plate having an opening extending therethrough and a shell having a corresponding opening in its side walls and coinciding with the opening in said plate, a deflector plate provided in said shell and inclined inwardly and downwardly from the opening therethrough, and said shell having a second opening in its upper walls near said sash, a valve adapted to regulate the currents of air flowing through said second opening, and means for adjusting said valve.

5. The combination, with a window sash, of a plate adapted to be placed under the sash, said plate having an opening extending therethrough and a shell having a corresponding opening in its side walls and coinciding with the opening in said plate, said shell having a second opening in its upper walls near said sash, a valve adapted to regulate the flow of air through said second opening, and means for deflecting the currents of air flowing through said first named opening to prevent them from passing in a direct line through said shell, substantially as described.

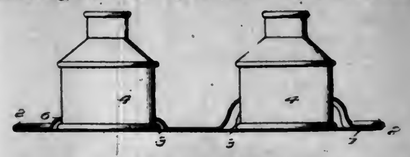
878,232. TOY BEAR. IDA PARMLY, Bridgeport, Conn. Filed Oct. 12, 1907. Serial No. 397,081.

A toy consisting of an animal figure comprising a ody and fore legs and hind legs pivoted thereto by means of pieces of wire passing through the body and the legs and concavo-convex retaining plates having two holes, the ends of the wire being passed through a hole in each plate and then curved and passed downward through the other hole, a carrier comprising a block having a retaining rod extending therefrom and an operating rod sliding freely through



the block, the fore legs being pivoted to the holding rod and the hind legs to the operating rod.

878,233. INK-BOTTLE HOLDER. WESLEY S. PAULSON, Pittsburg, Pa. Filed Apr. 17, 1907. Serial No. 368,697.



1. A stand for bottles and the like comprising a base plate having an opening formed therein, and a series of spring tongues of different sizes projecting within the opening and designed to engage the bottle in different planes.

2. A stand for bottles and the like comprising a base plate having an opening formed therein, alternately arranged long and short spring tongues projecting within the opening and being designed to engage the bottle in different planes.

878,234. COMBINED ENVELOP AND LETTER-SHEET. WILLIAM A. PRIDMORE, Chicago, Ill. Filed Sept. 3, 1907. Serial No. 391,137.



1. A combined envelop and letter-sheet primarily folded inwardly from opposite edges in substantially parallel folds, then folded transversely to form a series of not less than three folded sections, the sections at one end of the sheet, as primarily folded, forming a pocket into which is inserted the section at the opposite end.

2. A combined envelop and letter sheet primarily folded inwardly from opposite edges in substantially parallel

folds, then folded transversely to form a series of not less than three folded sections, the section at one end of the sheet, as primarily folded, forming a pocket for the reception of the section at the opposite end, and means upon one wall of the inclosing section for adhesively securing the same to a wall of the inclosed section.

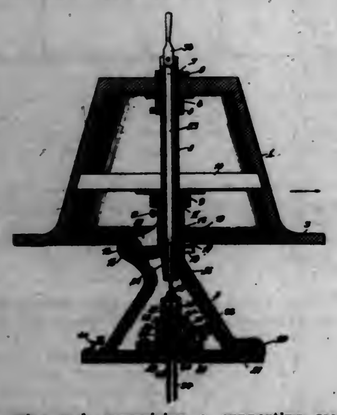
3. A combined envelop and letter sheet primarily folded inwardly from opposite edges in substantially parallel folds, the portion between said folds at one end being provided with adhesive material thereon to form a sealing flap, then folded transversely to form a series of not less than three folded sections, the section provided with said flap forming a pocket, of which said flap constitutes a part, for the reception of the section at the opposite end, whereby the outer wall of said latter section may be adhesively secured to said flap.

4. A combined envelop and letter-sheet having a preliminary sealing flap upon one edge and a final sealing flap arranged, when folded upon itself, to form a pocket to receive a section of the folded sheet to one wall of which pocket said flap may be adhesively secured.

5. A combined envelop and letter-sheet having a preliminary sealing flap upon one edge thereof for attaching opposite edges of the sheet to each other by folding the sheet inwardly in parallel folds, and a final sealing flap upon an adjacent edge provided with adhesive material upon its inner face between the lines of said fold which folds are extended to include said flap to form a pocket for the reception of a section of a subsequent fold to one wall of which pocket said flap may be sealed.

[Claims 6 to 8 not printed in the Gazette.]

878,235. AUTOMATIC SAFETY APPLIANCE FOR WIRE-REELS. JUAN H. REECE, Joliet, Ill., assignor to Humphrey & Son, Joliet, Ill., a Copartnership. Filed June 18, 1907. Serial No. 379,632.



1. A wire reel, comprising a supporting member, a standard hinged at its lower forward side to the supporting member, an upright post hinged to the rear upper side of the standard, both hinged members hinged so as to tilt in a vertical direction, a rotary carrier journaled on the post, a plunger rod extending through the center of the post, a lower plunger rod slidably mounted in the standard and adapted to be normally depressed by the upper plunger rod, and a valve connected to the supporting member and located immediately below and in line with the lower plunger rod and having the valve stem normally in contact with said plunger rod for holding the valve seated, whereby the valve may be opened by moving the carrier on its hinge or the standard on its hinge and pressure allowed to flow through the valve, substantially as described.

2. A reel, comprising a fixed supporting member, a supporting member hinged thereto, a carrier rotatably mounted with respect to the hinged member and adapted to be tilted therewith in a vertical direction, a valve connected with the fixed supporting member for controlling the flow of pressure, and a valve controlling member adapted to be raised when not subjected to pressure and adapted to be depressed by the weight of the carrier and hinged supporting member when in operative position, substantially as described.

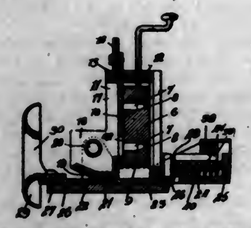
3. A reel comprising a fixed supporting member, a supporting member hinged thereto, a carrier rotatably mounted with respect to the hinged member and adapted to be tilted therewith in a vertical direction, a valve connected with the fixed supporting member for controlling the flow of pressure and adapted to be normally raised and adapted to be depressed by the weight of the carrier and hinged supporting member when in operative position, substantially as described.

4. A reel, comprising a fixed supporting member, a supporting member hinged thereto, a carrier rotatably mounted with respect to the hinged member and adapted to be tilted therewith in a vertical direction, a valve connected to the fixed supporting member and located below the carrier and in alinement with the axis thereof, a valve stem upwardly projecting from the valve and a member movable with the hinged supporting member and adapted to contact and depress the valve stem when the hinged member and carrier are moved to operative position, substantially as described.

5. A reel comprising a fixed supporting member, a standard hinged at its lower forward side to the supporting member, an upright post hinged to the rear upper side of the standard, both hinged members hinged so as to tilt in a vertical direction, a rotary carrier journaled on the post, a pressure valve connected with the supporting member normally open to permit the flow of pressure, and means adapted to close the valve when the two hinged sections are in vertical position and adapted to release the valve when either section is tilted in a vertical direction, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

878,236. WIRE-DIE SAFETY APPLIANCE. JUAN H. REECE, Joliet, Ill., assignor to Humphrey & Sons, Joliet, Ill., a Copartnership. Filed June 20, 1907. Serial No. 379,975.



1. In a safety appliance of the character described, the combination of a wire die block, means for engaging a strand of wire, a guard member located in front of the die block and mounted so as to permit of movement when pressure is applied, and connections between the guide member and the wire engaging means constructed and arranged so as to operate the latter when the said guide member is moved in the proper direction.

2. In a safety appliance of the character described, the combination of a wire die block, means located on the discharging side of the die block for engaging a strand of wire after leaving the die block, a guard member located in front of the die block and mounted so as to permit of movement when pressure is applied, and connections between the guide member and the wire engaging means constructed and arranged so as to operate the latter when the said guide member is moved in the proper direction.

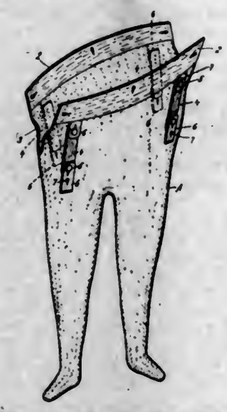
3. In a safety appliance of the character described, the combination of a wire die block, normally distended wire engaging mechanism adapted to engage the wire after leaving the die block, a guard member located in front of the die block and mounted so as to permit of movement when pressure is applied, and connections between the guide member and the wire engaging mechanism constructed and arranged so as to contact the latter and bring the same into contact with the wire when the guide member is moved in the proper direction, substantially as described.

4. In a safety appliance of the character indicated, the combination of a die block, normally distended wire gripping mechanism adapted to grip the wire after leaving the die block, a slidably mounted guard plate through which the wire runs, and a connection between the guard plate and the grippers for closing them on the wire, substantially as described.

5. In a safety appliance of the character described, the combination of a wire die block, a pair of slidably mounted wedge-shaped clamping blocks, grippers carried by the clamping blocks and normally distended to permit the passage of the wire, a guard member located in front of the die block and mounted so as to permit of movement when pressure is applied, and connections between the guide member and the slidably mounted clamping blocks constructed and arranged so as to move the latter into clamping position when said guide member is moved in the proper direction, substantially as described.

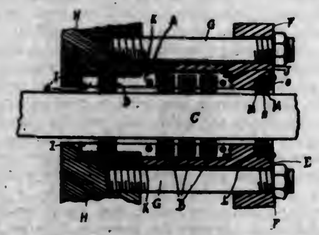
[Claims 6 to 9 not printed in the Gazette.]

878,237. COMBINATION-GARMENT. MARY E. ROGERS, Johnsville, Cal. Filed Aug. 21, 1907. Serial No. 389,483.



A combination garment comprising drawers and stockings made in one piece, the drawers having a waistband and being slit vertically near the top, elastic bands on either side of the slits, and adjustable detachable connections between the bands and the garment.

878,238. METALLIC PACKING. GEORGE D. ROLLINS, Philadelphia, Pa. Filed May 4, 1907. Serial No. 371,829.



1. In a metallic packing the combination of a split casing of two diameters, the reduced portion thereof being adapted to fit within the recess formed in the cylinder head, packing rings located in grooves formed in the split casing, a groove formed in the reduced portion of said casing for the reception of a metal supporting ring, an outer casing adapted to fit around the enlarged portion of the split casing and hold said split casing in place, a recess formed in the outer face of the outer casing, fibrous material located within said recess and a plate adapted to hold said fibrous material in place, as specified.

2. In a metallic packing the combination of a split casing of two diameters, the reduced portion thereof being adapted to fit within a recess formed in the cylinder head, packing rings located in grooves formed in the split casing, a groove formed in the reduced portion of said casing for the reception of a split supporting ring, an outer casing adapted to fit around the enlarged portion of the split casing and hold said split casing in place, a recess formed in the outer face of the outer casing, fibrous material located within said recess, a plate adapted to hold said fibrous material in place and means for feeding oil to said fibrous material, as specified.

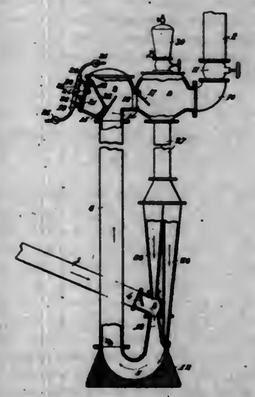
3. In a metallic packing, a split casing of two diameters, the reduced portion being adapted to fit within a recess formed in the head of the cylinder, said casing having internal grooves for the reception of packing rings, as specified.

4. In a metallic packing the combination of a split casing of two diameters, the outer casing adapted to fit over and secure said split casing in place, a recess formed in the outer face of the outer casing, two washer disks through which the rod may slide, an absorbent material located between the two disks and a ring for securing said disks and absorbent material in place, as specified.

5. In a metallic packing the combination of a split casing of two diameters, grooves formed in the enlarged portion of the casing for the reception of packing rings, a groove formed in the reduced portion of the casing a split supporting ring, fitted within the last named groove, an outer casing adapted to fit over and secure said split casing in place, a recess formed in the outer face of the outer casing, two washer disks through which the rod may slide, an absorbent material located between the two disks and a ring for securing said disks and absorbent material in place, as specified.

[Claims 6 and 7 not printed in the Gazette.]

878,239. HYDRAULIC RAM. LEOPOLD RUBACH, South Chicago, Ill. Filed Oct. 10, 1907. Serial No. 396,719.



1. In a device of the class described, an inlet pipe and a delivery pipe, in combination with a passageway connecting said inlet and said delivery pipes, means for injecting water into said passageway under pressure due to the head of water in the delivery pipe and means for automatically varying the pressure in said passageway as and for the purpose specified.

2. In a device of the class described, an inlet pipe and a delivery pipe in combination with a passageway connecting said pipe, means for injecting water into said passageway

under pressure due to the head of water in the delivery pipe, means for automatically cutting off a portion of said passageway and means for varying the pressure in said portion, substantially as and for the purpose specified.

3. In a device of the class described, an inlet pipe and a delivery pipe in combination with a chamber, into which said inlet pipe discharges, a passageway connecting said chamber with said delivery pipe, means for injecting water into said chamber under pressure due to the head of water in said delivery pipe, means for injecting water into said passageway under the same head and means for varying the pressure in a portion of said passageway as and for the purpose specified.

4. In a device of the class described, an inlet pipe and a delivery pipe in combination with a passageway connecting said pipes, means for drawing in and injecting water from said inlet pipe into said passageway under pressure due to the head of water in said delivery pipe, a chamber forming a portion of said passageway, valves for closing said chamber when the pressure therein equals the pressure in the other portion of said passageway and means for reducing the pressure in said chamber at such times, substantially as described.

878,240. FINISH-REMOVER. PATRICK J. RYAN, New York, N. Y., assignor to Chadeloid Chemical Company, New York, N. Y., a Corporation of West Virginia. Filed June 22, 1907. Serial No. 380,194.

1. The finish remover comprising approximately benzol 1 part, acetone 2 parts, with which from 1¼ to 1½ pounds per gallon of bone dust, pulverized burned bones and of fecula has been incorporated to increase the consistency of the remover and retard its evaporation.

2. The finish remover comprising approximately 1 part of benzol, 2 parts of acetone, with which a substantial proportion of stiffening and evaporation retarding material including bone dust has been added.

3. The finish remover comprising volatile solvent material including benzol, with which a substantial proportion of stiffening and evaporation retarding material including fecula and bone dust has been incorporated.

4. The remover comprising volatile solvent material with which a substantial proportion of stiffening and evaporation retarding material including bone dust has been incorporated.

5. The remover comprising volatile solvent material with which a substantial proportion of bone dust, pulverized burned bones and of fecula has been incorporated to increase the consistency of the remover and retard the evaporation thereof.

878,241. FILLING-TUBE FOR LIQUIDS. ADOLPH SCHNEIDER, Chicago, Ill. Filed Apr. 25, 1907. Serial No. 370,320.

1. In a filling tube for liquid, the combination of a fixed vertical liquid supply tube, a siphon tube in communication with the liquid supply tube, a fixed vertical casing surrounding the liquid supply tube with a conducting passage for pressure around the liquid supply tube, an endwise slidable tube encircling the fixed liquid supply tube with a conducting passage for pressure between the two tubes and vertically slidable within the fixed vertical casing, a head carried by the endwise slidable tube, a sealing gasket for the head with a conducting passage for pressure between the head, the sealing gasket and the liquid supply tube, opened when the head and gasket are partially elevated and means for returning the endwise slidable tube, the head and the sealing gasket to normal position, substantially as described.

2. In a filling tube for liquids, the combination of a fixed vertical liquid supply tube, a siphon tube in communication with the vertical liquid supply tube, a fixed vertical casing surrounding the liquid supply tube with a conducting passage for pressure around the liquid supply tube, a closing plug for the upper end of the outer casing and carrying the liquid supply and siphon tubes, an endwise slidable tube encircling the fixed liquid supply tube with a conducting passage for pressure between the two tubes, a head carried by the endwise slidable tube, a sealing gasket for the head with a conducting passage for pressure between the head, the sealing gasket and the liquid supply tube, opened when the head and gasket are partially elevated and means for returning the endwise slidable tube, the head and the sealing gasket to normal position, substantially as described.
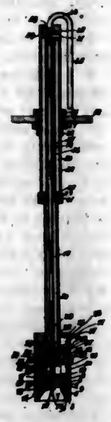


3. In a filling tube for liquids, the combination of a fixed vertical liquid supply tube, a siphon tube in communication with the vertical liquid supply tube, a fixed vertical casing surrounding the liquid supply tube with a conducting passage for pressure around the liquid supply tube, a closing plug for the upper end of the fixed vertical casing and carrying the liquid supply and siphon tubes, a weighted endwise slidable tube encircling the liquid supply tube with a conducting passage for pressure between the two tubes, a head on the upper end of the slidable tube and having circumferential packing rings and entered into the outer casing, a head carried by the endwise slidable tube at its lower end, a sealing gasket for the head with a conducting passage for pressure between the head, the sealing gasket and the liquid supply tube, opened when the head and gasket are partially elevated, substantially as described.

4. In a filling tube for liquids, the combination of a fixed vertical liquid supply tube, a fixed vertical casing surrounding the liquid supply tube, a central guide tube around the liquid supply tube, with a conducting passage for pressure between the guide tube and the liquid supply tube, a weighted endwise slidable tube encircling the liquid supply tube with a conducting passage for pressure between the two tubes, a head carried by the endwise slidable tube, a sealing gasket for the head with a conducting passage for pressure between the head, the sealing gasket and the liquid supply tube, opened when the head and gasket are partially elevated, substantially as described.

5. In a filling tube for liquids, the combination of a fixed vertical liquid supply tube, a fixed vertical casing surrounding the liquid supply tube, a central guide tube around the liquid supply tube with a conducting passage for pressure between the guide tube and the liquid supply tube, a siphon tube in communication with the vertical liquid supply tube, a closing plug for the upper end of the fixed vertical casing and carrying the liquid supply tube, the central guide tube and the siphon tube, a weighted endwise slidable tube encircling the liquid supply tube with a conducting passage for pressure between the two tubes, a head carried by the endwise slidable tube, a sealing gasket for the head with a conducting passage for pressure between the head, the sealing gasket and the liquid supply tube, opened when the head and gasket are partially elevated, substantially as described.

878,242. SEALING-HEAD FOR FILLING-TUBES FOR LIQUIDS. ADOLPH SCHNEIDER, Chicago, Ill. Filed Apr. 26, 1907. Serial No. 370,411.



1. In a sealing head for filling tubes, the combination of a head having a central lower chamber, a lateral extension of the central lower chamber, an upper and lower side chamber in a common vertical plane with the lateral extension at one side of the central lower chamber, a lateral passage inwardly leading from the lower end of the upper side chamber, and an upper central chamber into which the lateral passage opens, and a float actuated valve controlling communication in both directions between the upper and lower side chambers, substantially as described.

2. In a sealing head for filling tubes, the combination of a head having a central lower chamber, a lateral extension of the central lower chamber, an upper and lower chamber in a common vertical plane at one side of the central chamber, a lateral passage leading from the upper side chamber, and an upper central chamber into which the lateral passage opens, a slidable collar, an arm laterally extending from the sliding collar, with the collar and arm operative in the central lower chamber and its lateral extension, a float engaged by and initially raised by the lateral arm, a stem carried by the float, and a valve at each end of the stem controlling communication between the upper and lower side chambers, substantially as described.

3. In a sealing head for filling tubes, the combination of a head having a central lower chamber, a lateral extension of the central lower chamber, an upper and lower chamber in a common vertical plane at one side of the central chamber, a lateral passage leading from the upper side chamber, and an upper central chamber into which the lateral passage opens, a slidable collar, an arm laterally extending from the sliding collar, with the collar and arm operative in the central lower chamber and its lateral extension, a float engaged by and initially raised by the lateral arm, a stem carried by the float, a valve at each end of the stem, and a cross wall between the upper and lower side chambers and having a port controlled by the valves on the valve stem, substantially as described.

4. In a sealing head for filling tubes, the combination of a head having a central lower chamber, a lateral extension of the central lower chamber, an upper and lower chamber in a common vertical plane at one side of the central chamber, a lateral passage leading from the upper side chamber, and an upper central chamber into which the lateral passage opens, a slidable collar, an arm laterally extending from the sliding collar, with the collar and arm operative in the central lower chamber and its lateral extension, a float engaged by and initially raised by the lateral arm, a stem carried by the float, a valve at each end of the stem controlling communication between the upper and lower side chambers, and a filling tube extending through the head and encircled by the sliding collar, with a passage between the filling tube and the slidable collar, substantially as described.

5. In a sealing head for filling tubes, the combination of a head having a central lower chamber, a lateral extension of the central lower chamber, an upper and lower chamber in a common vertical plane at one side of the central chamber, a lateral passage leading from the upper side chamber, and an upper central chamber into which the lateral passage opens, a slidable collar, an arm laterally extending from the sliding collar, with the collar and arm operative in the central lower chamber and its lateral extension, a float engaged by and initially raised by the lateral arm, a stem carried by the float, a valve at each end of the stem controlling communication between the upper and lower side chambers, and a pressure supply tube having a passage in communication with the upper central chamber of the head, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

878,243. FILLING-TUBE FOR LIQUIDS. ADOLPH SCHNEIDER, Chicago, Ill. Filed Apr. 29, 1907. Serial No. 370,864.



1. In a filling tube for liquids, the combination of a fixed liquid supply tube, a pressure transmitting tube consisting of a fixed upper member and a lower member slidable in the fixed member, a slidable sealing head having therein a pressure transmitting passage, and movable on the liquid supply tube and having the slidable member of the pressure transmitting tube entered thereinto and movable therewith, and a headed valve on the lower end of the sliding member of the pressure transmitting tube, said valve controlling the flow of pressure between the pressure transmitting tube and the pressure transmitting passage in the sealing head, substantially as described.

2. In a filling tube for liquids, the combination of a fixed liquid supply tube, a slidable tube for transmitting pressure, a slidable sealing head having therein a pressure transmitting passage with a lateral extension therefrom and movable on the liquid supply tube, and having the slidable pressure transmitting tube entered thereinto and movable therewith, the head having an initial movement independent of the tube, a headed valve on the lower end of the slidable tube for transmitting pressure and controlling the flow of pressure through such tube, and a fixed tube for transmitting pressure and located in the filling tank and in which the slidable pressure transmitting tube is vertically movable, substantially as described.

3. In a filling tube for liquids, the combination of a fixed liquid supply tube having an endwise discharge port at its lower end, a slidable tube for transmitting pressure, a slidable sealing head having therein a pressure transmitting passage and encircling and movable on the liquid supply tube, and having the slidable tube for transmitting pressure entered thereinto and movable therewith, the
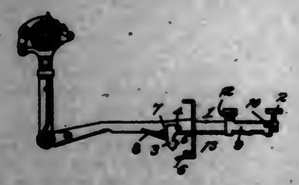
head having an initial movement independent of the tube, a weighted valve for the liquid supply tube located and operating within the tube at the discharge end thereof, a stem for the valve projecting through the discharge port at the lower end of the liquid supply tube, and a headed valve for the slidable pressure transmitting tube at the discharge end thereof, opened by the initial upward movement of the sealing head and when opened engaged by the head and raising the tube with the upward movement of the head, substantially as described.

4. In a filling tube for liquids, the combination of a fixed liquid supply tube, a tube for transmitting pressure consisting of a sliding section and a fixed section, with the fixed section entered into a liquid supply tank and the sliding section movable in the fixed section, a piston on the upper end of the sliding section of the pressure transmitting tube, operating in the fixed section of the tube and closing the section against the admission of liquid pressure below the piston and furnishing a stop and support for the movable section of the pressure transmitting tube, a slidable sealing head having therein a pressure transmitting passage with a lateral extension leading therefrom and encircling and movable on the liquid supply tube, and a headed valve at the lower end of the sliding section of the pressure transmitting tube, controlling the flow of pressure in the tube and forming a contact for raising the sliding section of the tube with the upward movement of the sealing head, substantially as described.

5. In a filling tube for liquids, the combination of a fixed liquid supply tube having an endwise discharge port at its lower end, a tube for transmitting pressure consisting of a sliding section and a fixed section, with the fixed section entered into a liquid supply tank and the sliding section movable in the fixed section, a piston on the upper end of the sliding section, operating in the fixed section of the tube and closing the section against the admission of liquid below the piston and furnishing a stop and support for the movable section of the pressure transmitting tube, a slidable sealing head having therein a pressure transmitting passage with a lateral extension leading therefrom, and encircling and movable on the liquid supply tube, a weighted valve located and operating within the liquid supply tube, a stem for the valve projecting through the discharge port at the end of the liquid supply tube, and a headed valve for the sliding section of the pressure transmitting tube at the discharge end thereof, opened by the initial upward movement of the sealing head and when opened forming a contact for raising the sliding section of the tube with the upward movement of the sealing head, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

878,244. SHIFT MECHANISM FOR TYPE-WRITING MACHINES. JEROME B. SECOR, Derby, Conn., assignor to The Williams Typewriter Company, Derby, Conn., a Corporation of Iowa. Filed Oct. 19, 1906. Serial No. 339,667.



1. In a shift mechanism for typewriting machines, the combination of a shift lever having a finger key fixed thereto for depressing said shift lever; a secondary lever pivoted at one end to the shift lever and having at its other end a key for depressing it, a locking latch pivoted independently to the main shift lever, a suitable keeper for said latch, a spring retracting the locking latch to normal inoperative position and a yielding connection between the secondary lever and the locking latch pressing the locking latch, in opposition to its retracting spring, into position to engage its keeper when the secondary lever is depressed.

2. In a shift mechanism for typewriting machines, the combination of a vertically vibrating shift key lever, a locking latch pivoted thereto, a keeper with which said latch may be made to engage to hold the said lever in shifted position, a spring retracting the latch to normal position out of reach of its keeper, a secondary lever pivoted by its front end near the front end of the shift key lever and having at its rear end a key adapted for use alternatively with the usual shift lever key to depress the shift lever and a rearwardly extending arm forming a connection between the secondary lever and the locking latch, forcing said latch in opposition to the stress of its retracting spring into position to engage its keeper when said secondary lever key is used to depress the shift-lever.

3. In a shift mechanism for type-writing machines, the combination of a shift key-lever of common form, a secondary key-lever pivoted at its forward end to the shift lever, capable of limited vibration thereon and having at its rear end a finger-key adapted for use alternatively with the usual shift-lever-key to depress said shift-lever, a locking latch on the shift-lever, a keeper with which the latch may be forced into engagement, a connecting arm between the secondary key-lever and the latch, forcing the latch into position to engage its keeper when the secondary lever is depressed, and a spring normally retracting the locking latch out of reach of its keeper and, through the medium of the connecting arm, holding the secondary lever in its upper position relatively to the shift-key lever.

4. In a mechanism for typewriting machines, the combination of a shift-key-lever, a secondary lever of U-shape in transverse section, straddling the shift key-lever from beneath, pivoted thereto at its front end, bifurcated, and projecting at its rear end above the shift key-lever and capable of limited vertical motion relatively thereto, a finger key on the upwardly projecting rear end of the secondary lever, a locking latch on the shift key-lever normally retracted from engagement with its keeper and an arm fixed by its forward end to the lower part of the secondary key-lever, extending longitudinally beneath the shift key-lever and engaging with the locking latch to force the latter into position to engage its keeper when the secondary key-lever is depressed.

5. In a shift mechanism for typewriting machines, the combination of a shift key lever, a secondary lever of U-shape straddling the shift lever from below, pivoted thereto at its front end and formed at bottom with a plurality of transverse connecting bars, a flat spring attached by its front end to the front transverse bar of the secondary lever extending in and out between said transverse bars and projecting rearward beneath the shift lever, a locking latch pivoted to the shift lever and depending therefrom in position to be deflected by the rearwardly projecting arm, a keeper in position to be engaged by the pivoted latch when depressed and deflected and a spring connected to the pivoted latch and serving to retract the same to normal position out of engagement with its keeper.

878,245. SPYING-APERTURE FOR DOORS, WALLS, AND THE LIKE. JOHN SHACKLEY, Whitehaven, England. Filed Aug. 6, 1907. Serial No. 387,353.

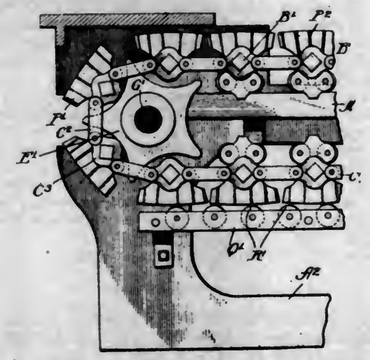
1. The combination with a door, wall, or the like, provided with two openings extending therethrough, of a glass held in one of said openings, a removable closure secured to the door or the like at the rear side of said opening, a lens held in the other opening, and a reflector secured to the door or the like at the back of said last named opening and spaced therefrom, said reflector being formed at its lower side with a segmental rim.

2. The combination with a door, wall, or the like, provided with two openings extending therethrough, of a glass held in one of said openings, a removable closure for the rear side of said opening, a lens held in the other opening, a reflector at the rear side of the last named opening and spaced therefrom, said reflector being formed at its lower side with a segmental rim, said rim being formed with a downwardly projecting arm secured to the door or the like, a back plate secured to the door at the



rear of the last named opening, and an angular plate, one part of which is adapted to be slipped back of the edge of said back plate into frictional engagement with the same and the rear face of the door, over the reflector.

878,246. FURNACE-GRATE. HENRY SIEBEN and LAWRENCE DANHOFF, Chicago, Ill. Filed Aug. 12, 1903. Serial No. 169,236.



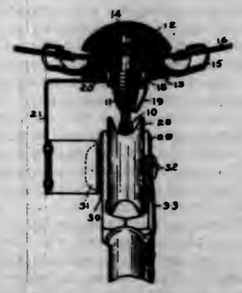
1. In a boiler furnace, a grate comprising grate bars, independent grate elements strung upon each of said bars, each grate element including a hub portion and a segmental portion, the hub portions being strung upon said bars and the segmental portions forming a support for the bed of fuel, the hub portion of one of the grate elements adjacent each end of each grate bar being provided with spaced depending portions, a guide roller secured between the depending portion, guide rails arranged to extend longitudinally of the furnace chamber and transverse with respect to the length of the grate bars upon which said guide rollers are arranged to rest, sprocket chains connecting said grate bars, and means for actuating said chains.

2. In a boiler furnace, a grate comprising grate bars, removable grate elements each having a hub portion and a segmental portion, the hub portions adapted to be strung upon the grate bars and the segmental portions forming a support for the fuel bed, one of said grate elements near each end of each grate bar having an enlarged segmental portion, and guide rails arranged in the path of movement of the grate elements having the enlarged segmental portions, to form a supporting guide therefor and to support the corresponding bars of the grate, a sprocket chain connecting said grate bars, and means for actuating said chain.

3. In a boiler furnace, a grate comprising grate bars, grate elements removably mounted thereon, each including a hub portion and a segmental portion, one of said grate elements near each end of each grate bar having an enlarged segmental portion, and rollers mounted upon the hub portion thereof, guide rails upon which said rollers are supported and guided during one portion of the travel of said grate bars, guiding rails for supporting and guiding the enlarged segmental portions of said elements during another portion of the travel of the grate bars, said segmental portions and guiding rails forming a support for the corresponding grate bars, sprocket chains connecting said grate bars, and means for actuating said chains.

4. In a boiler furnace, a movable grate comprising grate bars polygonal shaped in cross section, grate elements each having a hub portion and a segmental portion, the hub portions having openings therethrough corresponding in shape to the cross sectional shape of the grate bars and adapted to be strung upon the grate bars, each grate bar carrying a series of said elements, driving links strung upon the ends of the grate bars, connecting links for the driving links at adjacent ends of the grate bars, thereby forming actuating chains for the grate bars, and means for actuating said chains.

878,247. OVERHEAD ELECTRIC CONTACT. THOMAS W. SMALL, Cleveland, Ohio, assignor, by mesne assignments, to The Acme Automatic Street Indicating Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 5, 1906. Serial No. 346,402.



1. The combination with a trolley harp carrying at its side a contact boss, and a contact making device presenting to such boss a plurality of flexible contacts arranged to bend in the direction in which the trolley is moving.

2. A trolley hanger, a contact device adapted to be carried thereby and including a depending member and a series of flexible metallic plates arranged side by side with their broad sides transverse to the direction of travel of the trolley, combined with a trolley harp having a contact boss on its side adapted to engage such contacts successively.

3. A contact making device comprising a series of projecting flexible flat metallic plates, and a bent plate to which said flexible plates are secured with their flat sides adjacent and which acts as a hanger therefor.

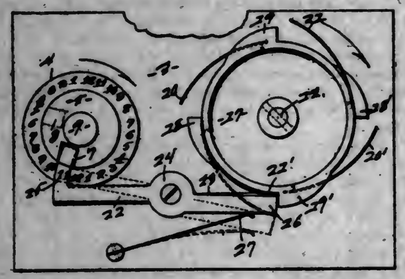
4. The combination in a contact device of a supporting structure having a horizontal and vertical plate, a plurality of U-shaped sheet metal members riveted to the vertical portion of the plate to present contact members, the horizontal portion of the plate being adapted to be clamped in a trolley hanger.

5. The combination with a trolley hanger supporting a trolley wire, and a trolley having a contact boss on the side of its harp, of a contact member carried by the hanger and having a downwardly extending portion and

a series of plates projecting inward from such downward portion with their edges free and adapted to be engaged by such boss.

[Claims 6 to 10 not printed in the Gazette.]

878,248. AUTOMATIC TIME-SWITCH. HARRY B. SNELL, Toledo, Ohio, assignor to The Snell-Judd Company, a Corporation of Ohio. Filed Dec. 10, 1907. Serial No. 405,874.



1. In a time mechanism for actuating electric switches, a motor-driven arbor connected with the switch, an escapement wheel upon said arbor having two pairs of diametrically opposed shoulders operating in different planes of movement and having the shoulders of one pair disposed at quarter distances from those of the other, a pair of pivoted levers acting alternately to engage the shoulders of the escapement wheel, springs carried by the escapement wheel to force the levers from engagement with the shoulders, and a timing mechanism to release the levers, substantially as described.

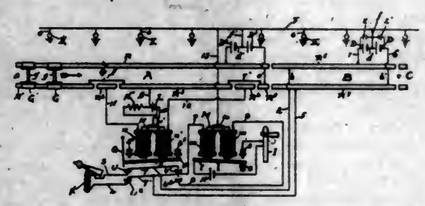
2. In a time mechanism for actuating electric switches, a motor-driven arbor connected with a switch, an escapement wheel upon said arbor having two pairs of diametrically opposed shoulders operating in different planes of movement, the shoulders of one pair disposed at quarter distances from those of the other, a pair of pivoted levers adapted to alternately engage the shoulders of the escapement wheel, springs carried by the escapement wheel to force the levers from engagement with the shoulders, and a pair of clock-driven disks provided with notches at their peripheries to release the levers at predetermined times, substantially as described.

3. In a time mechanism for actuating electric switches, a motor-driven arbor connected with the switch to be operated, an escapement wheel on said arbor having two pairs of diametrically opposed shoulders operating in different planes of movement, the shoulders of one pair at quarter distances from those of the other, a pair of centrally pivoted levers alternately engaging the shoulders at one end and provided with angular extension at the opposite ends, springs carried by the escapement wheel having free ends adjacent to the shoulders and adapted to force the levers from engagement with the shoulders, a pair of clock driven disks having peripheries traversed by the angular ends of the levers, and each disk provided with a notch to receive the angular ends of the levers, substantially as described.

878,249. ELECTRIC APPARATUS FOR RAILWAY SIGNALING. HENRY W. SPANG, New York, N. Y., assignor, by mesne assignments, to Charles H. Ketcham, Yonkers, N. Y. Filed Jan. 12, 1903. Serial No. 138,612.

1. In a railway signaling system, the combination substantially as described, of rails of an insulated section of railway track, a generator connected with the farther end of said section, a resistance, normally in circuit, and a signal controlling relay, normally out of circuit, located ahead of the near end of the said section and means adapted for controlling the connections of the said resistance and relay for excluding the resistance and including the relay and causing the operation of the latter.

2. In a railway signaling system, the combination substantially as described, of rails of an insulated section of railway track, a generator connected with the farther end of said section, a resistance, normally in circuit and a signal controlling relay, normally out of circuit, located ahead of the near end of said section and means governed by a passing train adapted for controlling the connections of the said resistance and relay for excluding the resistance and including the relay and causing the operation of the latter.



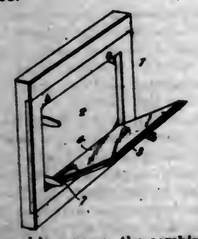
3. In a railway signaling system, the combination substantially as described, of rails of an insulated section of railway track, a generator connected with the farther end of said section, an indicator, normally in circuit, and a signal controlling relay, normally out of circuit, located ahead of the near end of said section and means governed by a passing train adapted for controlling the connections of the said indicator and relay for excluding the indicator and including the relay, and causing the successive operation of the indicator and relay.

4. In a railway signaling system, the combination substantially as described, of the rails of an insulated section of railway track, a generator connected with the farther end of said section, an indicator, normally in circuit and a signal controlling relay, normally out of circuit, located ahead of the near end of said section, a circuit controller adapted for excluding the indicator and including the relay and vice versa and means controlled by a locomotive for operating the circuit controller.

5. In a railway signaling system, the combination, substantially as described of the rails of an insulated section of railway track, a generator connected with the farther end of said section, a resistance, normally in circuit and a signal controlling relay, normally out of circuit, located ahead of the near end of said section, and a circuit controller having contacts with immersion points and bodies of mercury adapted for excluding the resistance and including the relay and vice versa.

[Claims 6 to 30 not printed in the Gazette.]

878,250. PHOTOGRAPHIC CAMERA. LAYMAN M. STERNBERGH, Paterson, N. J. Filed June 28, 1907. Serial No. 381,268.



1. In a photographic camera, the combination of a focusing screen frame having the usual opening and ground glass screen, a door for closing said opening, and a mirror applied to the inner side of the door for reflecting the image thrown upon the focusing screen.

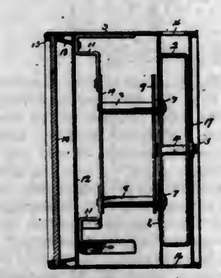
2. In a photographic camera, the combination of a focusing screen frame having the usual opening and ground glass screen, a door for closing said opening, a mirror applied to the inner side of the door for reflecting the image thrown upon the focusing screen, and means for connecting the door to the focusing screen frame at either side of the opening, whereby said door may be swung outward and downward from its uppermost edge when the focusing screen frame is arranged with the opening either horizontal or vertical.

3. In a photographic camera, the combination of a focusing screen frame having an oblong opening, a door for closing said opening and provided upon its inner side with a reflecting mirror, hinges fitted to the focusing screen frame along adjacent sides of the opening therein, and interlocking means between said hinges and adjacent edges of the door whereby either set of hinges may be detached from the door to admit of the latter being swung upon the opposite set of hinges.

4. In a photographic camera, the combination of a focusing screen frame having an oblong opening, a door for closing said opening and provided upon its inner side with a reflecting mirror, hinges fitted to the focusing screen frame along adjacent sides of the opening therein, interlocking means between said hinges and adjacent edges of the door whereby either set of hinges may be detached from the door to admit of the latter being swung upon the opposite set of hinges, and interlocking means between one of the hinges and the door to hold the latter open at the desired angular position.

5. In a photographic camera, the combination of a screen frame having an oblong opening, a door for closing said opening and provided upon its inner side with a mirror, hinges fitted to adjacent sides of the focusing screen frame and having one member of each loose and provided with interlocking studs, and sockets along a short and a long side of the door and in corresponding edges thereof to cooperate with the studs of the loose members in the aforementioned hinges, whereby the door may be swung open upon either a short or a long side and secured when opened to the required angular position.

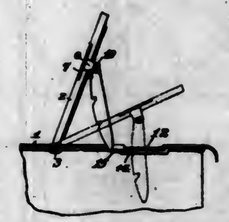
878,251. ALARM-CLOCK. ELMER E. STOCKTON and ARTHUR H. PORTER, Bristol Conn., assignors to The E. Ingraham Co., Bristol, Conn., a Corporation. Filed May 27, 1907. Serial No. 376,011.



1. In an alarm clock, the combination with a circular case-body the rear portion of which is pierced to form sound holes, of a case-back adapted to be inserted into the open rear end of the said case-body, a movement-frame located within the said case-body, a dust-guard located between the said movement-frame and the said sound holes, and a flanged sheet-metal bell arranged concentrically within the rear portion of the case-body and located between the said dust-guard and case-back, whereby the bell is located inside instead of outside of the case-body and so protected thereby.

2. In an alarm clock, the combination with a circular sheet-metal case-body the rear portion of which is pierced to form sound-holes, of a case-back adapted to be inserted into the open rear end of the said case-body, a movement-frame located within the said case-body, a dust-guard carried by the said movement-frame and located between the same and the said sound-holes, and a flanged sheet-metal bell carried by the said guard, arranged concentrically within the rear portion of the case-body and located between the said guard and case-back whereby the bell is located inside instead of outside of the case-body and so protected thereby.

878,252. ADJUSTABLE TOP FOR COOKING-STOVES. WILLIAM A. STOWE, Worcester, Mass., assignor to Sill Stove Works, Rochester, N. Y., a Corporation of New York. Filed Oct. 31, 1904. Serial No. 230,726.



1. The combination with a stove and a cover arranged in pivotal relation therewith, of a latch pivoted on one of the parts, a projection arranged on the other part at a point between the latch and the pivot of the cover with which projection the said latch is adapted to coöperate to hold the cover in open position when the latter is raised, means for disengaging the latch from the projection by a further upward movement of the cover and means for automatically returning the latch to an operative position relatively to the projection when the cover is lowered.

2. The combination with a stove top, a cover supporting projection thereon, and a cover pivotally mounted on the stove top, of a latch freely suspended on the cover at a point arranged to move over the said projection and toward the pivot of the cover during opening movement of the latter to carry the latch into coöperative relation with said projection and retain the cover in open position, and means for swinging the latch clear of the said projection during lowering movement of the cover.

3. The combination with a stove top, and a cover pivotally mounted thereon, of a latch suspended to swing freely in opposite directions from one of the parts, a projection arranged on the other part at a point between the pivot of the cover and the point of suspension of the latch and disengaged from the latter when the cover is lowered, the latch being carried into engagement with the projection on a relative swinging movement of the latch in one direction during opening movement of the cover about its pivot, and means for swinging said latch in another direction to clear said projection and permit lowering movement of the cover.

4. The combination with the stove top, and a cover in pivotal relation therewith, of a toothed latch pivotally suspended on one of the parts, a projection normally disengaged from the latch and arranged on the other part at a point between the latch and the center of relative movement of the parts, the latch being arranged to engage the projection by a relative movement of the parts about their pivot, a cam being formed on one of the parts adjacent to said projection for guiding the latch into a position to engage the projection.

5. The combination with the stove, and a cover mounted in pivotal relation therewith, of a projection on one of the parts having a latch-engaging portion at its forward edge, and a cam on its rear and side edges, of a toothed latch on the other part pivoted to swing in the plane of relative movement of the parts and coöperate with the forward edge of said projection, and arranged to override the projection by a continued movement of the parts, return movement of the parts causing the latch to traverse the cam at the rear and side of the projection and return to normal position opposite to the forward edge of said projection.

[Claim 6 not printed in the Gazette.]

878,253. WINDOW. AUGUST STRAUBMAAR, Paterson, N. J. Filed July 16, 1907. Serial No. 383,987.



A window provided with an outer groove, an inner groove having a lower curved section communicating with the outer groove, a by-pass connecting the grooves, a branch groove opening into the inner groove directly above the lower curved section thereof, a pair of sashes, and upper and lower pins on the sashes adapted to engage the by-pass and branch groove respectively, substantially as specified.

878,254. GOLF-BALL. WILLIAM TAYLOR, Leicester, England. Filed Sept. 11, 1906. Serial No. 334,123.



1. A golf ball with spherical surface pitted with isolated cavities of large surface area relatively to their depth, substantially circular in plan, with steep sides at the peripheries only of said cavities, and of a depth not exceeding one-eighth of their diameter.

2. A golf ball with spherical surface pitted with isolated cavities of large surface area relatively to their depth, substantially circular in plan, with steep sides at the peripheries only of said cavities, and dished or concave bottoms, and of a depth not exceeding one-eighth of their diameter.

3. A golf ball with spherical surface pitted with isolated cavities, the surface immediately surrounding the cavities sloping inwardly to the lips of said cavities.

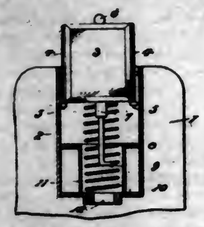
4. A golf ball with spherical surface pitted with isolated cavities of large surface area relatively to their depth, substantially circular in plan, with steep sides at the peripheries only of said cavities, and of a diameter not less than nine-hundredths nor greater than fifteen-hundredths of an inch, and of a depth not exceeding fourteen thousandths of an inch.

5. A golf ball with spherical surface pitted with isolated cavities with large surface area relatively to their depth, substantially circular in plan with steep sides at the peripheries only of said cavities, and dished or concave bottoms, and of a diameter not less than nine-hundredths nor greater than fifteen-hundredths of an inch, and of a depth not exceeding fourteen-thousandths of an inch.

[Claims 6 and 7 not printed in the Gazette.]

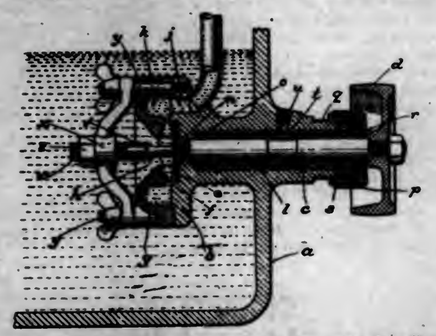
878,255. MIRROR ATTACHMENT FOR CHAIRS. CATHARINE I. THOMPSON, Bensonhurst, N. Y. Filed July 20, 1907. Serial No. 384,716.

The herein-described mirror attachment for chairs, consisting of a case provided at its bottom with an opening, a tube within the bottom of the case and surrounding said opening, a coil spring mounted in said tube, a mirror adapted to fit in the upper end of said case, a stem projecting from the bottom of the mirror, and a spring latch depending from and secured to the stem and adapted to



extend through the tube and bottom of the case, the said latch being provided with an angularly disposed end for engagement with the bottom of the case, and a spring encircling said latch and the stem and adapted to move the mirror upwardly from the case.

878,256. CENTRIFUGAL PUMP. WILLIAM H. THORNE, Mount Airy, Pa., assignor to William Sellers and Company, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 23, 1907. Serial No. 389,769.



1. In a centrifugal pump of the character described, the combination with the disk and its driving shaft, of a movable stop in the water chamber of the pump on the inlet side of the disk and in line with the axis of the disk, and means to adjust the position of said stop.

2. In a centrifugal pump of the character described, the combination with the cover forming the water chamber, the disk and its driving shaft, of a movable stop in the water chamber of the pump in line with the axis of the disk and between the disk and the cover, and means to adjust the position of said stop.

3. In a centrifugal pump of the character described, the combination with the disk and its driving shaft, of a cylinder in the water chamber of the pump and in line with the axis of the disk, a screw to which said cylinder is secured, a fixed bar having a threaded orifice in which said screw works.

4. In a centrifugal pump of the character described, the combination with the disk and its driving shaft, of a cylinder in the water chamber of the pump and in line with the axis of the disk, a screw to which said cylinder is secured, a fixed bar having a threaded orifice in which said screw works, and means to lock said screw from rotation.

5. In a centrifugal pump of the character described, the combination with the disk and its driving shaft, of a cylinder in the water chamber of the pump and in line with the axis of the disk, a screw to which said cylinder is secured, a fixed bar having a threaded orifice in which said screw works, and a jam nut to lock said screw from rotation.

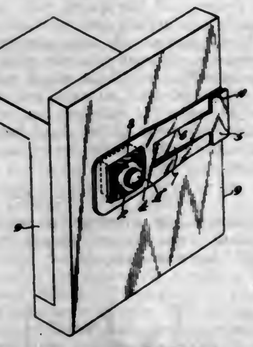
878,257. HOT-AIR REGISTER. SILAS TUTTLE, New York, N. Y. Filed May 28, 1907. Serial No. 376,107.



1. In a register of the type herein set forth, a frame having internal flanges, vanes, and pivot pins on said vanes, a vane operating device formed of a single piece of spring sheet metal and comprising an elongated bar, a head projecting from one edge thereof, and a spring extending substantially parallel to said edge: the said pivot pins extending through one of said frame flanges, the said bar resting at one longitudinal edge upon said vane pivot pins and the said spring being in frictional contact with the under side of the other of said frame flanges.

2. In a register of the type herein set forth, a frame having internal flanges, vanes, pivot pins on said vanes, and a vane operating device formed of a single piece of spring sheet metal and comprising an elongated bar, a flange on one longitudinal edge thereof, a head projecting from the opposite edge and leaf springs extending from opposite sides of said head: the said pivot pins extending through one of said frame flanges, the said operating bar flange resting upon said pivot pins and the said springs being in frictional contact with the under side of the other of said frame flanges.

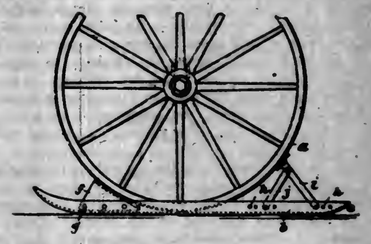
878,258. NUT-LOCK. FRANCIS M. VOLK, Minturn, Cal. Filed Apr. 17, 1907. Serial No. 368,731.



A nutlock comprising the combination of a support, a bolt passing therethrough, a nut on the bolt, a spring-plate adapted to be clamped between the nut and said support, said plate having a cross-head at its outer end, and a locking-plate having an opening in one portion adapted to fit over said nut, said locking-plate having a longitudinally-extending slot formed between said opening and the outer or free end of the plate, the spring-plate passing through the slot in the locking-plate and the free end of the locking-plate passing beneath the cross-head of the spring-plate and adapted to fulcrum against said support, whereby the locking plate is yieldingly-clamped between the spring-plate and the support and serves to lift the spring-plate and place the same under tension when the locking-plate is lifted or turned outward from the nut.

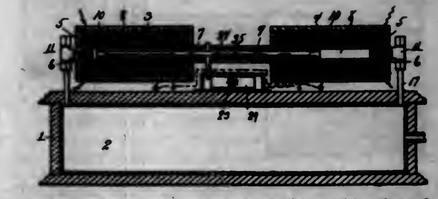
878,259. REMOVABLE SLEIGH-RUNNER FOR VEHICLES. HIRAM H. WALSH, Newburgh, N. Y. Filed May 28, 1907. Serial No. 376,102.

1. The combination of a runner proper, a wheel supported thereby, a chock arranged on the runner forward of the wheel and engaged thereby, and a back-stop arranged back of the wheel and comprising two members pivoted together and engageable with the runners at different points therein, one of said members bearing against the wheel at a point above a straight line connecting the pivot of said member and the center of the wheel, substantially as described.



2. The combination of a runner proper, a wheel supported thereby, a chock arranged on the runner forward of the wheel and engaged thereby, and a back-stop arranged back of the wheel, having limited elasticity and comprising two members pivoted together and engageable with the runner at different points therein, one of said members bearing against the wheel at a point above a straight line connecting the pivot of said member and the center of the wheel, substantially as described.

878,260. ELECTRIC AIR-COMPRESSOR. NELSON M. WATSON, Detroit, Mich. Filed Apr. 23, 1906. Serial No. 313,138.



1. In an electric air compressor, the combination of the reciprocatory plunger, the air cylinder within which said plunger works, an air reservoir, means connecting said reservoir with said cylinder to afford a passage for the air, an electric circuit including an electro magnet for reciprocating said plunger, means actuated by the plunger in its movement for cutting said magnet into and out of circuit, and means connected with the cylinder and actuated by fluid pressure for opening said electric circuit.

2. In an air compressor, the combination of the opposed electro-magnets, said magnets having air cylinders arranged axially therein, a plunger having its ends lying within said cylinders and provided with suitable pistons, said plunger forming the armatures of said magnets being adapted to be reciprocated by the alternate energization thereof, a source of electricity with which said magnets are connected by independent circuits, circuit openers and closers operatively associated with said plunger and actuated by the movement thereof to shift the current from one magnet to the other in reciprocal succession at the terminal of the stroke of the plunger in either direction, and means connecting the air cylinders with an air reservoir.

3. In an electric air pump, the combination of the opposed electro-magnets arranged in axial alinement, an air cylinder in each of said magnets, a reciprocatory plunger having pistons at its ends lying in said air cylinders, a source of electricity, an independent circuit connecting each of the magnets with said source of electricity, a reciprocatory cross bar having a contact at each end adapted to successively close the circuits through the magnets, and means for actuating said bar by a reciprocation of said plunger.

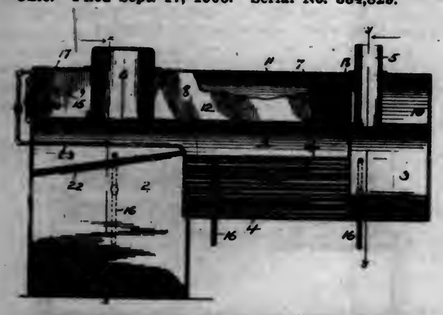
4. In an air compressor, the combination of the opposed electro-magnets arranged in axial alinement, an air

cylinder in each of said magnets centrally disposed, a reciprocatory plunger having a piston at each end, said pistons lying in said air cylinders, a source of electricity connected by independent lines with said magnets, a reciprocatory cross bar, a base plate on which said bar is mounted connected electrically with said source of electricity, the ends of said cross bar carrying contact brushes adapted to successively close the circuits through said magnets, a member on said bar for shifting it longitudinally and a pin upon the plunger engaging said member.

5. In an air compressor, the combination of an electromagnet having an air cylinder therein, a plunger adapted to reciprocate in said cylinder, an air reservoir, a valve controlled air pipe connecting the cylinder with said reservoir, a reciprocatory plunger adapted to move in the air cylinder actuated by successively energizing said magnet, a source of electricity included in the electric circuit with said magnet, a circuit opener in said circuit, and means actuated by the air pressure in the reservoir for opening said circuit.

[Claims 6 to 8 not printed in the Gazette.]

878,261. STEAM-BOILER. ISRAEL WILLIAMS, Lima, Ohio. Filed Sept. 17, 1906. Serial No. 334,829.



1. In an apparatus of the character described, the combination with a boiler, of a feed water heating and purifying chamber above the same means dividing said chamber into a series of communicating compartments, and gravity and automatic feed pipes connecting said boiler with the chamber.

2. In an apparatus of the character described, the combination with a boiler of a feed water heating and purifyng chamber above the same means dividing said chamber into a series of communicating compartments, a gravity feed water pipe connecting the chamber with the boiler and a steam pipe connecting the upper portion of chamber with the upper portion of boiler and valves in said pipes.

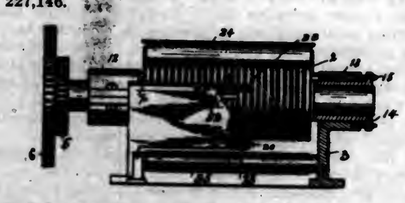
3. In an apparatus of the character described, the combination with a boiler, of a feed water heating and purifying chamber above the same means dividing said chamber into a series of communicating compartments, an automatic feed water pipe connecting the chamber with the boiler, and an automatic steam pipe connecting the chamber with the boiler, and normally closed by the water in the boiler, and when opened, compelling the passage of feed water to the boiler through said first mentioned automatic feed water pipe.

4. In an apparatus of the character described, the combination with a boiler, of a casing or shell secured above the boiler, and the boiler constituting the bottom of said casing or shell, partitions dividing said casing or shell and compelling a circuitous passage therethrough of the feed water to highly heat and purify the same, and means for feeding the water from said casing or shell into the boiler.

5. In an apparatus of the character described, the combination with a steam boiler furnace and a feed water heater and purifier above the same, of an inclined or slanting crown sheet on combustion chamber, an automatic feed water pipe connecting the heating and purifying chamber with the boiler, and an automatic steam pipe connecting the heating and purifying chamber with the boiler and terminating at a point near the highest point of the crown sheet and normally submerged in the water.

[Claims 6 to 10 not printed in the Gazette.]

878,262. SHREDDING-MACHINE. WILLIAM E. WILLIAMS, Chicago, Ill. Filed Oct. 4, 1904. Serial No. 227,146.



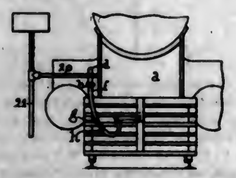
1. In a shredding machine, the combination with a pair of parallel, osculating co-acting rolls each having a series of circumferential grooves registering with ungrooved portions of the companion roll, of means for removing material from the grooves.

2. In a shredding machine a set of grooved rolls having alternate grooves and flat spaces, mounted in such manner that the grooves of one are opposite the spaces of the other and provided with adjustments for the rolls to secure a nicety of adjustment of the spaces, and means for removing the material from the grooves.

3. In a shredding machine a set of rolls provided with alternate grooves and flat spaces, with means for adjusting the rolls to and from each other, and means for adjusting them longitudinally, and provided with scrapers for scraping the material from the rolls.

4. In a shredding machine, a set of rolls provided with alternate circumferential grooves and flat spaces with means for adjusting the rolls together and longitudinally, with scrapers composed of individual fingers for scraping the grooves, and with flat scrapers for scraping the spaces substantially as shown.

878,263. PORTABLE AUTOMATIC STOP MECHANISM FOR CARS. PAUL WINSOR, Weston, Mass. Filed Aug. 21, 1907. Serial No. 389,475.



1. The combination with a car provided with an air-brake system, of a portable automatic stop mechanism detachably secured to said car and comprising a chambered body portion, means to vent said body portion, a flexible pipe or hose connected with said chambered body portion, and a coupler attached to said pipe or hose and connected with the air brake system of the car, substantially as described.

2. The combination with a car provided with an air brake system, of a portable automatic stop mechanism detachably attached to said car and operatively connected with the air brake system, substantially as described.

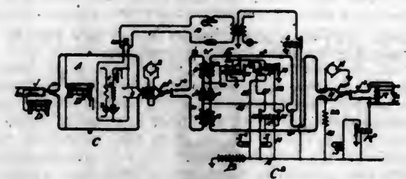
3. An automatic stop mechanism for railway cars, comprising a chambered body having a frangible portion, a flexible pipe attached to said chambered body, and a coupler attached to said flexible pipe, substantially as described.

4. An automatic stop mechanism for railway cars, comprising a chambered body having a glass tube connected therewith, a flexible pipe attached to said chambered body, and a coupler attached to said flexible pipe, substantially as described.

5. An automatic stop mechanism for railway cars, comprising a chambered body normally closed air-tight and provided with means for venting the same, a flexible pipe attached to said chambered body, and a coupler attached to said flexible pipe, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

878,264. TELEPHONE CENTRAL-OFFICE APPARATUS. CHARLES S. WINSTON, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 21, 1904. Serial No. 237,744.



1. The combination with a trunk circuit extending between telephone switchboard sections, of a cord circuit at the outgoing end of the trunk provided with a bridged clearing-out signal, and means whereby when the connection is taken down at the incoming end of the trunk a current is sent through said clearing-out signal in the cord circuit at the outgoing end of the trunk, substantially as described.

2. The combination with a telephone trunk circuit extending between different switchboard sections, of a cord circuit at the outgoing end of the trunk, provided with a bridged clearing-out signal and adapted for use to establish connections between the telephone lines terminating in the switchboard at said end of the trunk and also for connecting such lines with the trunk, and means whereby when the connection is taken down at the incoming end of the trunk a clearing-out current is sent through said clearing-out signal in the cord circuit at the opposite end of the trunk, substantially as described.

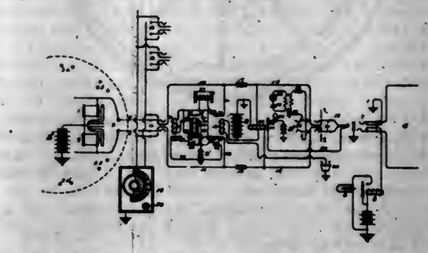
3. The combination with a trunk circuit extending between a magneto telephone exchange and a common battery exchange, of cord circuits to connect the lines of the magneto exchange with the said trunk circuit, a discount signal for said cord circuit, a connecting cord provided for the trunk of the common battery office to enable the same to be directly connected with the subscribers' lines terminating at said office, means for indicating to the operator at the common battery office when the subscriber of the line with which the trunk is connected has hung up his receiver, whereby the connection may be taken down at said office and the subscriber's line released and means at the common battery exchange for actuating this disconnect signal, substantially as described.

4. The combination with a trunk circuit extending between a magneto office and a common battery office, a cord circuit at the former office provided with a bridged clearing-out drop and adapted for connecting together the subscribers' lines of said office and for connecting such lines with the trunk, a trunk cord provided for the trunk at the common battery office to enable the same to be directly connected with the telephone lines terminating at said office, means for giving the disconnect signal to the operator at the latter office when the common battery subscriber hangs up his telephone, and means whereby when the connection is taken down at said common battery office a source of current is connected with the trunk to send current thereover to the magneto exchange and through the clearing-out signal in the cord circuit to thereby operate the same and indicate to the operator at the magneto office that the conversation has terminated, substantially as described.

5. The combination with a trunk circuit extending between a magneto central office and a common battery central office, of a cord circuit provided with a bridged clearing-out drop at the former office to connect the subscribers' lines with the trunk, a connecting cord for the trunk at the latter office to enable the same to be directly connected with the subscribers' lines, a source of current at the latter office included by the trunk cord in the telephone line to furnish current thereover for conversation, and means whereby when the common battery subscriber hangs up his telephone the disconnect signal is given to the operator at the common battery office and when the trunk is disconnected from the line said source is connected with the outgoing end of the trunk to send current thereover to the magneto office to operate the clearing-out drop in the cord circuit, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

878,265. AUTOMATIC TRUNKING SYSTEM. CHARLES S. WINSTON, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1907. Serial No. 350,335.



1. In a telephone system, the combination with automatic and manual subscribers' lines terminating in their respective offices, of a trunk circuit for connecting the lines of the two systems for conversation extending between the offices and terminating at the manual exchange in a cord and plug, and means to maintain a ground connection on both limbs of the telephone line for a short duration of time when the conversation has been terminated, substantially as described.

2. In a telephone system, the combination with automatic and manual subscribers' lines terminating in their respective offices, of a trunk circuit for connecting the lines of the two systems for conversation extending between the offices and terminating in the manual exchange in a cord and plug, and means to make and maintain a restoring connection with the trunk line for a short duration of time when the conversation has been terminated, substantially as described.

3. In a telephone system, the combination with automatic and manual subscribers' lines terminating in their respective offices, of a trunk circuit for connecting the lines of the two systems for conversation extending between the offices and terminating in the manual exchange in a cord and plug, and means for maintaining a connection with the trunk when the conversation has been terminated, the control of such means permitting the removal of the plug from the annual subscriber's line without the actuation of such means, substantially as described.

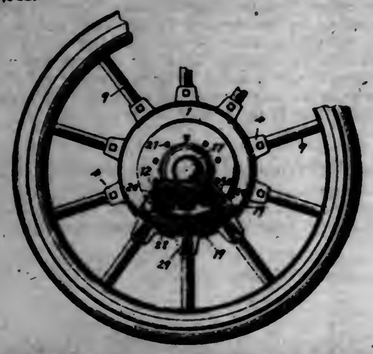
4. In a telephone system, the combination with automatic and manual subscribers' lines, of a trunk circuit for connecting such lines for conversation, a plug and a terminal for one end of said trunk line, a seat switch for said plug, and means operated by the actuation of said plug-seat-switch for maintaining a connection with the trunk line for a short duration of time after the plug-seat-switch has been actuated, substantially as described.

5. In a telephone system, the combination with automatic and manual subscribers' lines, of a trunk circuit for connecting such lines for conversation, a plug and a terminal for one end of said trunk line, a seat switch for said plug, and means for maintaining a ground connection on

both limbs of the trunk line for a short duration of time after the plug-seat-switch has been actuated, substantially as described.

[Claim 6 not printed in the Gazette.]

878,266. VEHICLE-WHEEL. GEORGE W. T. AKEHURST, White Marsh, Md. Filed Feb. 27, 1907. Serial No. 359,542.



1. A vehicle wheel having a central chamber provided with an annular wall; a hollow hub in said chamber and having perforated side walls; bolts passing through the annular wall and also through the perforations in the side walls of the hollow hub; rollers on said bolts to contact with the circular walls of the perforations, and a cushioning means interposed between the hollow hub and the wall of the chamber.

2. A vehicle wheel having outside plates forming a chamber; a circular movable hub having two side walls and a hollow space between and fitted in said chamber and said walls provided with a series of circular openings, 20, arranged in a circle around the center of the hub; a bolt, 21, extending from one outside plate through a circular opening in the hub to the other outside plate; two friction rollers on each bolt to contact with the rim-edges of the circular openings in the hub, a sleeve, 26,, on the bolt separating the two rollers and a cushioning means between the outside plate and circular hub.

878,267. CHAIR. JAMES E. BAKER, New York, N. Y. Filed Apr. 27, 1906. Serial No. 313,960.



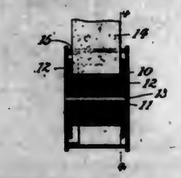
1 A chair having a pair of front legs, a pair of horizontal rungs near the lower ends of said front legs connecting said front legs with the back of the chair, a pair of back legs supported by said rungs at points in front of the back of the chair, and a seat frame supported by said front and back legs, substantially as and for the purposes described.

2. A chair having a pair of front legs, a pair of horizontal rungs near the lower ends of said front legs connecting said front legs with the back of the chair, a pair of back legs supported by said rungs at points in front of the back of the chair, a seat frame supported by said front and back legs and a central brace connecting the back of the seat frame with the back of the chair, substantially as described.

3. In a chair, the main seat frame 2, whose rear edge is spaced in front of the back 3, of the chair, a pair of front legs 5 supporting the front of the said seat frame, a pair of legs 6 supporting the rear edge of the seat frame and a pair of rungs 7 supporting the said legs 6, substantially as described.

4. In a chair, a back which rests upon the floor, a pair of front legs which rest upon the floor, a pair of horizontal rungs which connect the said front legs with the said back near the lower ends thereof, a pair of shorter back legs fastened to said rungs at points in front of said back, and a seat frame spaced in front of the said back and supported by the said front and back legs, substantially as and for the purposes set forth.

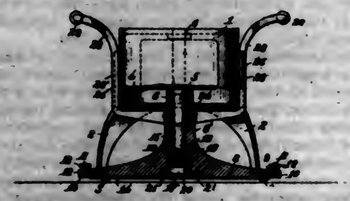
878,268. FLY-CATCHER. FRANZ BAYER, New York, N. Y. Filed Aug. 2, 1907. Serial No. 386,701.



1. A fly catcher comprising a casing having one end closed and the other end open, and with a slot in its side, a spindle mounted in said closed end and extending at its free end beyond the open end of the casing, a reel comprising a sleeve rotatably engaging said spindle and carrying spaced heads, a cover for said casing comprising a head having a central aperture to receive the projecting portion of said spindle, and with a rim bearing in said casing at its open side, and an adhesive belt wound upon said reel and passing out through the slot of the casing.

2. A fly catcher comprising a casing closed at one end and with the other end open and with a slot in one side, a spindle mounted in said closed end and extending at its free end beyond the open end of the casing, a reel comprising a sleeve rotatably engaging said spindle and carrying spaced heads, a cover for said casing comprising a head having a central aperture to receive the projecting portion of said spindle and with a rim bearing in the open end of said casing, an adhesive belt connected at one end to the sleeve of the reel and extending through said slot, and a suspending device connected at the other end of the belt.

878,269. FLOOR-FINISHING APPARATUS. NIELS D. S. K. BECK, Chicago, Ill., assignor to Louis Broz, Chicago, Ill. Filed Oct. 10, 1907. Serial No. 396,715.



1. In a device of the class described, a suitable frame mounted upon rollers, in combination with a motor mounted in said frame, a vertical shaft driven by said motor, a disk rotatably fixed and longitudinally slidable on said shaft, and means for manually depressing said disk, substantially as described.

2. In a device of the class described, a suitable frame mounted upon rollers, in combination with a motor mounted in said frame, a vertical shaft driven by said motor, a disk rotatably fixed but longitudinally slidable upon said shaft, a spring for normally maintaining said disk in retracted position and means for manually depressing said disk, substantially as described.

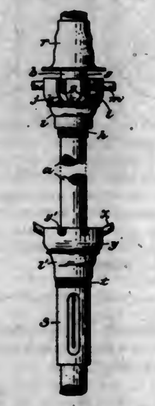
3. In a device of the class described, a suitable frame mounted upon rollers, in combination with a motor arranged in said frame, a vertical shaft driven by said motor, a disk rotatably fixed and longitudinally slidable upon one end of said shaft, a spring arranged within said disk for normally holding the same in retracted position and means for depressing said disk, substantially as described.

4. In a device of the class described, a frame mounted upon rollers, in combination with a motor arranged within said frame, a vertical shaft driven by said motor, a disk rotatably fixed and vertically slidable upon said shaft, a recess in the lower portion of said disk, a collar on the lower end of said shaft within said recess, a spring interposed between said collar and the top of said recess for normally holding said disk in retracted position and means for lowering said disk, substantially as described.

5. In a device of the class described, a suitable frame mounted upon rollers, in combination with a motor mounted in said frame, a vertical shaft driven by said motor, a disk rotatably fixed and vertically slidable on said shaft, a recess in the lower portion of said disk and about the end of said shaft, means therein for normally maintaining said disk in retracted position, a plate closing said recess and suitable means for depressing said disk, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

878,270. UMBRELLA OR PARASOL FRAME. AUGUSTUS BLAKE and PETER KRETZER, Indianapolis, Ind., assignors of one-third to Frans Binginger, Indianapolis, Ind. Filed July 29, 1907. Serial No. 386,128.



1. In an umbrella or parasol frame, the combination of a sleeve secured at one end thereof and having external screw threads on the other end, said sleeve having two annular ribs struck up thereon, two counter part annular plates on the sleeve between said ribs and secured thereby together and to the sleeve, each plate having a flaring annular flange in which are notches, a notched bowl-shaped ferrule on said sleeve and extending over the flange of the nearer one to the flange of the farther one of said plates, and a nut on said screw threads and engaging said bowl-shaped ferrule, with ribs extending through said notches and having heads held by said bowl-shaped ferrule between said flanges.

2. In an umbrella or parasol frame, the combination of a staff, a sliding sleeve on the staff having a flange on one end thereof and external screw threads spaced from the flange, the sleeve having also an annular rib struck up thereon between the flange and the screw threads, two counter part annular plates on the sleeve between said flange and said rib and thereby secured together and to the sleeve, each plate having a flaring annular notched flange, a notched bowl-shaped ferrule on said sliding sleeve and extending over the flange of the near one to the flange of the farther one of said plates, and a nut on said screw threads and engaging said bowl-shaped ferrule, with spreaders extending through the notches of said flanges and ferrule and having heads held by said bowl-shaped ferrule between said flanges.

3. In an umbrella or parasol frame, the combination of a sleeve having two annular ribs struck up thereon, two annular plates on the sleeve between said ribs and secured thereby together and to the sleeve, each plate having a flaring annular flange, the flange of one of said plates having a plurality of notches therein, and a notched bowl-shaped ferrule secured on said sleeve and extending over the flange of the nearer one to the flange of the farther one of said plates, with ribs extending through the notches of said bowl-shaped ferrule and having heads held by said ferrule between said flanges, said ribs being movable into or out of the notches of said flange.

4. In an umbrella or parasol frame, the combination of a staff, a sliding sleeve on the staff having a flange on one end thereof and having also an annular rib struck up thereon near said flange, two annular plates on the sleeve between said flange and said rib and thereby secured together and to the sleeve, each plate having a flaring annular flange, the flange of one of said plates having a plurality of notches therein, a notched bowl-shaped ferrule on said sleeve and extending over the flange of the nearer one to the flange of the farther one of said plates, and means securing said ferrule removably on said sleeve, with spreaders extending through the notches of said flange and ferrule and having heads held by said ferrule between said flanges.

878,271. SEED-CORN TREE. JAMES C. BLACKFORD, Chicago, Ill. Filed June 3, 1907. Serial No. 376,905.



1. In a seed corn tree, the combination with a rod forming the tree body, of a plurality of prong members loosely strung upon said rod, spacing members between said prongs also strung upon said rod, and means confining said prongs and spacing members in position upon said rod.

2. In a seed corn tree, the combination with a rod non-circular in cross-section, of a plurality of sets of prongs fitting, and non-rotatably mounted upon, said rod, and spacing devices between the several sets of prongs, each set comprising four prongs arranged at right angles to each other, the prongs of alternating sets extending in planes midway between the planes of the prongs of adjacent sets.

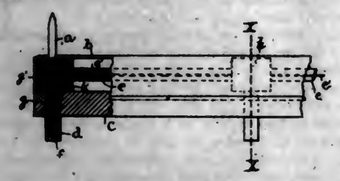
3. In a seed corn tree, the combination of a rod-like tree body provided with means for suspending it from above, a series of prong members removably mounted thereon, arranged in symmetrically disposed angular relation to each other and vertically spaced apart, and means confining said prongs in fixed relation to each other.

4. In combination with a seed corn tree having prongs

the base end portions of which are non-circular in cross-section, of a series of tags adapted at their lower ends to fit upon said prongs and be held in upstanding position thereon.

5. In a seed corn tree, the combination of a rod-like tree body of uniform size and rectangular in cross-sectional form throughout its principal length, the crossed pairs of prong bars provided at their intersections with eyes fitting the tree body, the removable space spools interposed between the successive pairs of prong bars, and means for removably confining said spools and prong bars upon the tree body.

878,272. CONDUCTOR FOR DISCHARGING HIGH-VOLTAGE ELECTRIC CHARGES. WILLIAM H. CHAPMAN, Portland, Me. Filed May 18, 1906. Serial No. 317,427.



1. A conductor for discharging high voltage electricity into the air, having one or more discharging points, each of which has inserted between it and the source of supply a section of material having relatively high resistance which will limit the quantity of electricity of high voltage which will pass in an instantaneous discharge.

2. A conductor for discharging high voltage electricity into the air having one or more fine discharging points, said conductor having a section adjacent to each discharging point composed of material with a relatively high resistance located between the conductor and the discharging point which will allow a limited quantity of electricity of high voltage to pass in an instantaneous discharge.

3. In a conductor for discharging high voltage electricity into the air, the combination of a main conductor and branches extending therefrom terminating in fine discharging points each of said branches having a section composed of material with a relatively high resistance which will allow a limited quantity of electricity of high voltage to pass in an instantaneous discharge.

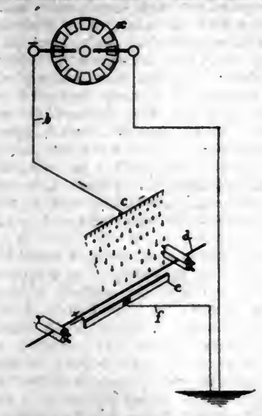
4. In a conductor for discharging high voltage electricity into the air, the combination of an insulated or protected main conductor, one or more tubes of insulating material secured to and extending laterally from said main conductor, a plug of high resistance material in said tube electrically connected at its inner end with said main conductor and a fine discharging wire connected to the outer end of said plug and terminating in the open air.

5. In a conductor for discharging high voltage electricity into the air, the combination of an insulated main conductor or cable, a cylinder through which said cable passes having a screw threaded opening in the side thereof, a tube of insulating material having a threaded end adapted to engage said threaded opening, a plug of high resistance material in said tube electrically connected by its inner end with the main conductor and a fine discharging wire connected with the outer end of said plug and terminating in the air.

[Claim 6 not printed in the Gazette.]

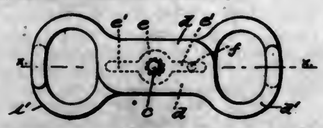
878,273. METHOD OF NEUTRALIZING STATIC ELECTRICITY. WILLIAM H. CHAPMAN, Portland, Me. Filed May 25, 1906. Serial No. 318,772.

The herein described process of neutralizing static electricity in yarn or other like moving material which consists of subjecting the material to the action of a charge of high voltage electricity radiated from one or more discharging points, said electricity being of a polarity wholly or in greater part opposite to that of the electricity in the material and placing a grounded conductor at such a point as described with relation to the charged conductor and the material that it will divert or attract the



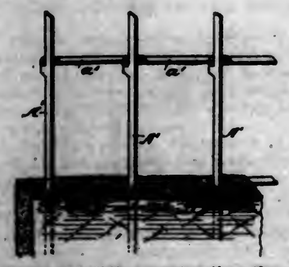
electricity of said charge when the material is in a substantially neutral condition, but not otherwise.

878,274. KEY-RING DEVICE. BURT V. CLARK, Providence, and WILLIAM C. COOKSON, Arctic, R. I. Filed Mar. 7, 1907. Serial No. 361,153.



In a key-ring device, the combination of two S-shaped members whose body portions extend straight and are pivoted together at their central part, one of said members having a circular groove surrounding its pivot center and meeting with two oppositely extending grooves which decrease in depth toward their extremities, and a ball roller to operate in the grooves of said member to impinge against and hold by frictional contact the other member, substantially as set forth.

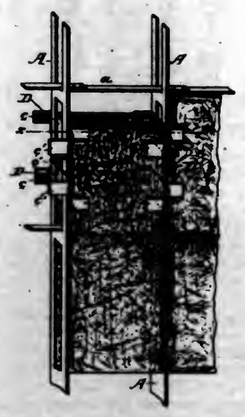
878,275. FIREPROOF BUILDING CONSTRUCTION. CORNELIUS COLLINS, San Francisco, Cal. Filed Mar. 12, 1906. Serial No. 305,730.



1. In a fireproof building construction, the combination of parallel strips and bracing pieces extending transversely therebetween and forming therewith a metallic frame work, a fabric secured to the strips and extending between the like edges of adjacent strips, said bracing pieces lying in a vertical plane at one side of the said edges of the strips and said fabric having the portion intermediate of the edges of said strips drawn inward to one side of the plane of the outer edges of the strips and substantially in contact with the bracing pieces, and secured to the bracing pieces said fabric adapted to receive a coating of plastic material.

2. A fireproof construction consisting of a metallic frame work composed of parallel metal strips and bracing pieces extending transversely therebetween and forming a connection between adjacent strips, said bracing pieces cut out of the body of the strips so that their side edges lie in a vertical plane at one side of the corresponding edges of the strip, a lathing surface or fabric extending between the like edges of adjacent strips having the portion intermediate of the adjacent strips drawn inward towards and substantially in contact with and secured to the bracing pieces whereby intermediate portions of the fabric are placed under tension to form substantially a rigid bed, and a plastic coating over the lathing or fabric and embedding the same and the metallic frame work.

878,276. FIREPROOF BUILDING CONSTRUCTION. CORNELIUS COLLINS, San Francisco, Cal. Filed Mar. 14, 1906. Serial No. 305,978.



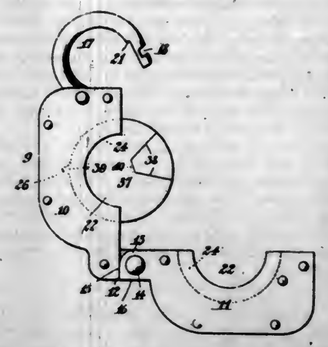
1. A fireproof building construction comprising parallel strips and transverse bracing pieces extending therebetween, tiles or slabs between said strips and serving as a surface for an outer plaster coating, and clips extending transversely across the strips and embracing the strips and having tongues adapted to be bent over the slabs or tiles parallel with the sides thereof whereby the slabs or tiles are retained in place against lateral displacement.

2. A fireproof building construction comprising parallel strips, tongues fixed to said strips and extending transversely therefrom, tiers of fire-resisting slabs or tiles arranged on edge between said strips, and clips located between the strips and adjacent edges of the slabs or tiles extending transversely across the strips and embracing one side and the edges of the strips, said clips having tongue portions at the ends adapted to be bent over the sides of the slabs or tiles to hold the slabs or tiles against lateral displacement.

3. A fire proof building construction having in combination parallel strips and transverse bracing pieces extending therebetween, tiles or slabs between said pieces serving as a surface for the outer plastic coating, and clips extending transversely across the strips and embracing the edges of the latter, said clips having a plural series of tongues with the tongues of one series bent in one direction over the edges of the strips and the tongues of the other series bent in opposite direction over the slabs or tiles whereby the latter are retained in place against lateral displacement.

4. A fire proof building construction having in combination a frame work of structural metal and parallel courses of spaced fire resisting slabs or tiles arranged on edge, and means engaging the side edges for holding the slabs in place against lateral displacement, and means for spacing and connecting the uppermost slabs or tiles of adjacent courses, said last-named means comprising a clip extending transversely across the space between parallel tiles and over the top edges of said tiles, said clip being divided longitudinally from both ends to form a double set of tongues at each end, the tongues of one set being bent over the outer surface of the slab and the tongues of the other set being bent over the inner surface of the tiles.

878,277. SEAL-LOCK. HENRY V. CONOVER, Buffalo, N. Y., assignor of one-half to Charles Oishei, Buffalo, N. Y. Filed Oct. 7, 1907. Serial No. 396,278.



1. In a seal-lock, the combination of a lock-body having an endless groove, a shackle, locking-mechanism adapted to engage said shackle to lock the same and normally in a position free of said shackle, and a seal having its marginal portion fitting within said endless groove and serving to move said locking-mechanism into engagement with said shackle.

2. In a seal-lock, the combination of a lock-body comprising two parts, a shackle pivotally connected to one of said parts and adapted for locking engagement with the other of said parts, locking-mechanism in said last-mentioned part, and a destructible seal coöperating with said locking-mechanism and whereby said shackle is caused to be locked.

3. In a seal-lock, the combination of a lock-body comprising two pivotally connected members having coinciding grooves forming an opening when said members are moved into closed position, a shackle pivoted at one end to one of said members and having its other end adapted to enter the other of said members, locking-mechanism in said last-mentioned member, and a destructible seal held in the opening formed by said members and serving to move the locking-mechanism into engagement with said shackle.

4. In a seal-lock, the combination of two pivotally-connected members, a destructible seal held between said members, a shackle pivotally secured at one end to one of said members with its other free end adapted to enter the other of said members, spring-governed locking-mechanism normally held out of range of said shackle and adapted to be moved into engagement with said shackle by said seal.

5. In a seal-lock, the combination of two pivotally-connected members, each member having a pocket and an opening which coincide when said members are held in closed position, a flat seal held in said pockets and exposed through said openings, a shackle, and locking-mechanism controlled by said seal.

[Claims 6 to 9 not printed in the Gazette.]

878,278. VENTILATING SYSTEM. PATRICK J. CONNOY, New York, N. Y., assignor to International Subway & Tunnel Ventilating Company, New York, N. Y., a Corporation of New York. Filed Oct. 11, 1905. Serial No. 282,243.

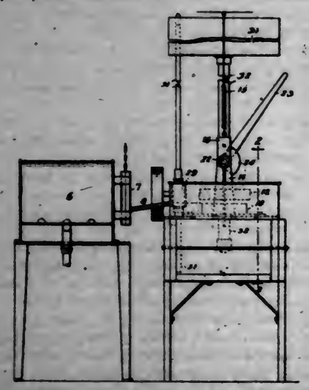


1. In ventilating systems for subways, a pair of air conduits extending from the open air into under-ground passages, the discharge ends of such conduits extending beyond each other and means for drawing air from the outside atmosphere into the conduits and discharging the same into the subterranean passages.

2. In ventilating systems, a pair of air conduits extending from the open air into an under-ground passage, the entrance of such conduits being furnished with a gooseneck, the discharge ends of such conduits extending beyond each other, and means for drawing air into such conduits from the outside atmosphere and discharging the same into such under-ground passage.

3. In ventilating systems, a pair of air conduits, extending from the open air into an under-ground passage, the discharge ends of such conduits discharging in opposite directions into the subway, their relative position being such that the discharge from one conduit will not interfere with the discharge from the other, and means for drawing air from the outside atmosphere into such underground passages.

878,279. APPARATUS FOR HARDENING METAL. LEWIS E. CURTIS, Chicago, Ill., assignor to Breckenridge Jones, trustee, St. Louis, Mo. Filed Sept. 30, 1905. Serial No. 280,770.

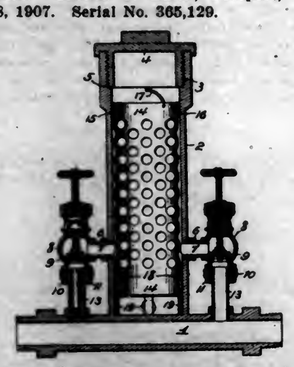


1. The combination with the clamping means having an inclosed chamber in which the article to be hardened may be located during the hardening operation, and a lever for operating said means, of a pipe supplying oil under pressure to said chamber, an outlet for the oil, and a valve in said pipe connected to and operated by said lever when it operates the clamping means.

2. The apparatus for hardening cutter rings consisting of the plate 12 and bed 10 having recesses on their proximate faces forming a hardening chamber, an oil inlet pipe, supporting rings in said chamber between which the cutter rings are positioned, an outlet for the oil, means for forcing the plate and bed together, embracing an operating lever, and a valve controlling said inlet pipe and mechanically connected to said lever so as to be operated simultaneously therewith.

3. The apparatus for hardening cutter rings consisting of the plate 12 and bed 10 having recesses on their proximate faces forming a hardening chamber, an oil inlet pipe delivering the oil at the center of the chamber, supporting rings in said chamber between which the cutter rings are positioned, an annular outlet for the oil, means for forcing the plate and bed together, embracing an operating lever, and a valve controlling said inlet pipe and mechanically connected to said lever so as to be operated simultaneously therewith.

878,280. APPARATUS FOR CLEANING WATER-HEATERS. GEORGE J. DEHN, Freeport, Ill. Filed Mar. 28, 1907. Serial No. 365,129.



1. The combination with a pipe section, a receptacle, and inlet and outlet pipes connecting said pipe section and receptacle, of a removable cage for holding a compound or chemical, located within said receptacle and a closure for the top of the receptacle.

2. The combination with a pipe section, a receptacle and inlet or outlet pipes connecting said pipe section and receptacle the said inlet and outlet pipes being connected to the receptacle at points above the base of the latter, of a removable cage for holding a compound or chemical, located within said receptacle, and a closure for the top of the receptacle.

3. The combination with a pipe section, a receptacle thereon, inlet and outlet pipes connecting said pipe section and receptacle, the said pipes being connected to the receptacle at points above the base of the latter, and a drain cock connected to said receptacle below the inlet and outlet pipe connections, of a removable cage for holding a compound or chemical, located within said receptacle and a closure for the top of the receptacle.

4. The combination with a pipe section and a receptacle and inlet and outlet pipes connecting said pipe section and receptacle, of a cage located within said receptacle and constructed to permit of the free passage of water through same, the said cage resting with its bottom in a plane above the bottom of the receptacle, and a closure for the receptacle.

5. The combination with a pipe section, a receptacle, and inlet and outlet pipes connecting said pipe section and receptacle, of a removable cage located within said receptacle, and having open sides, a closed bottom and supporting legs, and a closure for receptacle.

[Claims 6 and 7 not printed in the Gazette.]

878,281. LOOSE-LEAF BINDER. ALEXANDER DOM, Hartwell, Ohio, assignor to The Twinlock Company, Cincinnati, Ohio, a Corporation of Ohio. Filed May 28, 1906. Serial No. 319,106.

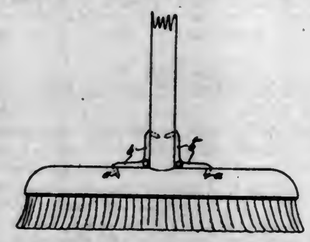
1. The combination of a base-member having posts, a clamping-member apertured to receive the posts and provided with an aperture having a projection at its edge, an operating bolt mounted to turn in the aperture and having a part engageable with said projection to limit its turning-movement, and locking means actuated from the bolt and engageable with said posts.

2. The combination of a base-member having posts, a clamping-member apertured to receive the posts, a central actuating means on the clamping-member, a bearing-plate wherein said means is held to turn, pins connecting the ends of the bearing-plate with the clamping-member at opposite sides of the operating means, and locking-members guided on said pins at opposite sides of the operating means and actuated from said means for endwise movement in and out of locking-engagement with the posts of the base-member.



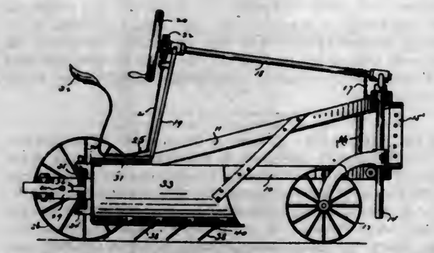
3. The combination of a base-member having a pair of spaced upright posts, a clamping-member having rearwardly-open slots adapted to receive said posts, resilient locking-members movable endwise on the clamping-member into and out of locking-engagement with the said posts, operating means for moving the locking-members in unison, and a single retracting-spring having a pair of inclined arms adapted to engage notched upbent parts at the inner adjacent ends of the respective locking-members to automatically retract the same away from locking-engagement.

878,282. DEVICE FOR FASTENING THE HANDLES IN BRUSHES, SCRUBBERS, AND THE LIKE. AUGUST EISEL, Iserlohn, Germany. Filed June 21, 1907. Serial No. 380,112.



A device for the fastening of the handles of brushes, scrubbers, and the like, which consists of two limbs *b* pivotally connected with one another, each provided with a pointed hook *a* somewhat inclined to the said limbs, adapted to be driven into the brush and the handle one point into the brush and the other into the handle.

878,283. GRADER AND EXCAVATOR. WILLIAM F. FINK, La Jara, Colo., assignor of one-third to Frank H. Phillips, La Jara, Colo. Filed Apr. 1, 1907. Serial No. 365,666.



1. A grading and excavating machine including a frame, an excavating scoop mounted in connection therewith, transporting wheels for the frame, and means for mounting said wheels so they may travel beside the frame or behind the frame in the trench made by the scoop.

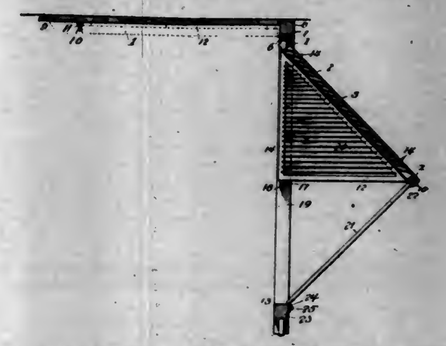
2. A grading and excavating machine including a frame, an excavating scoop mounted in connection therewith, forward and rear transporting wheels for said frame, means for vertically adjusting the forward end of said frame on its transporting means whereby the forward end of the scoop may be tilted to an excavating position and elevated to a transporting position.

3. A grading and excavating machine including a frame, an excavating scoop mounted in connection therewith, transporting wheels for said frame, and means for vertically moving either or both the forward or rear portions of said frame as desired.

4. A grading and excavating machine including a frame, an excavating scoop mounted in connection therewith, a rod mounted vertically movable in the forward end of the frame, a wheel carried by said rod, a shaft mounted on the upper end of said rod and extending rearward, means for actuating said shaft, and a cable that winds upon said shaft and at its lower end is secured to said frame.

5. A grading and excavating machine including a frame, a scoop with a forward cutting edge and with the remainder of the bottom formed entirely of dumping plates, a crank rod at each side of the machine, means for simultaneously actuating the crank rods, and connecting rods adjustable in length extending from said crank rods to said dumping plates for holding them closed and opening the same.

878,284. PORCH-AWNING. CHRISTIAN FRANTZ, Niagara Falls, N. Y. Filed Apr. 8, 1907. Serial No. 366,984.



1. In an awning, an awning frame having at its upper edge pivoting means to permit the awning to swing on both sides of a vertical plane, means carried by said frame for retaining it in an inclined position on one side of said plane, and means for retaining said frame in substantially horizontal position upon the other side of the vertical plane.

2. In an awning, an awning frame having at its upper edge pivoting means, awning end pieces pivotally connected to the frame to fold against the same, means for securing the free ends of said end pieces in contact with the frame, and means for securing the free ends of said end pieces to a fixed member.

3. In an awning, an awning frame pivoted at its upper edge, a triangular awning end piece pivotally connected to the frame, a vertical support, and means for securing the free end of said end piece to either said support or the frame.

4. In an awning, an awning frame pivoted at its upper edge to permit the awning to swing on both sides of a vertical plane, a triangular awning end piece pivotally connected to the frame, a vertical support, means for securing the free end of said end piece to either said support or the frame, an attaching device connected to the free edge of the frame, and a coöperating device secured to a fixed part to retain said frame in substantially horizontal position on one side of the vertical plane.

5. In an awning, an awning frame comprising sections mounted for longitudinal adjustment upon each other, a securing device for retaining said sections in adjusted po-

sition, a pivotal connection between said sections and a support to permit them to be swung to a horizontal position on one side and an inclined position on the other side of a vertical plane, and means for securing said sections in either inclined or horizontal position.

[Claims 6 to 8 not printed in the Gazette.]

878,285. POTATO-HARVESTER. FREDERICK W. HEIMBURGER, Huron, Ohio. Filed Feb. 2, 1907. Serial No. 355,481.



1. In a potato harvester, the combination of a frame, a plow or scoop, an endless carrier triangular in outline and having its apex adjacent to the plow or scoop, a second endless carrier within the former carrier and extending in the same general direction, with its delivery end spaced from the base portion of the former carrier, a transverse endless carrier located within the base portion of the former carrier with its upper surface in position to receive the material delivered from the second carrier, and means for driving said carriers, substantially as specified.

2. In a potato harvester, the combination of a frame having at the forward end thereof a plow or scoop, an endless carrier having the front end thereof located adjacent to said plow or scoop in position to receive the materials discharged therefrom, a second carrier within the first-mentioned carrier and having its upper surface spaced therefrom, means for driving said carriers at different rates of speed, and means for shaking the upper portion of the second carrier, substantially as specified.

3. In a potato harvester, the combination of a frame having at the forward end thereof a plow or scoop, an endless carrier having the front end thereof located adjacent to said plow or scoop in position to receive the material discharged therefrom, a second carrier within the first-mentioned carrier and having its upper surface spaced therefrom, said second carrier having finer meshes than the first-mentioned carrier, means for driving said carriers at different rates of speed, and means for shaking the upper portion of the second carrier.

4. In a potato harvester, the combination of a plow or scoop, a carrier having its forward end adjacent to the plow or scoop to receive materials discharged therefrom, an apron supported above said carrier and in close proximity thereto, a second carrier below the first-mentioned carrier, and means for driving said carriers at different rates of speed, substantially as specified.

5. In a potato harvester, the combination of a plow or scoop, a carrier having the forward end thereof adjacent to the plow or scoop to receive the materials discharged therefrom, and a flexible apron above said carrier, substantially as specified.

[Claims 6 to 12 not printed in the Gazette.]

878,286. BOILER-TUBE CLEANER. ROBERT O. HODGE, Buffalo, N. Y. Filed May 31, 1906. Serial No. 319,504.



1. A boiler tube cleaner comprising a rotary body or carrier having a steam inlet, and a steam delivery nozzle mounted on said body and capable of being shifted into different angles relatively to the axis of the body, substantially as set forth.

2. A boiler tube cleaner comprising a rotary body or carrier having a steam inlet, and a steam delivery nozzle rotatable on the body about an axis which is arranged at an obtuse angle to the axis of the body and adapted to be rotated with the body and also movable radially relatively thereto in all directions, substantially as set forth.

3. A boiler tube cleaner comprising a rotatable body having a steam supply and rotatable discharge nozzle pivoted on said body at an angle to the axis thereof and having its outlet arranged at an angle to the axis of its pivot, substantially as set forth.

4. A boiler tube cleaner comprising a rotatable body having a steam supply at its rear end and a head at its front end which is inclined at an angle to the axis of the body, and a rotatable nozzle having a rear or inlet portion which is pivoted in said head and adapted to rotate in the plane thereof and a front or outlet portion which is arranged at an angle to the plane of rotation of the nozzle, substantially as set forth.

5. A boiler tube cleaner comprising a rotatable body having a steam supply, a rotatable discharge nozzle pivoted on said body at an angle to the axis thereof and having its outlet arranged at an angle to the axis of its pivot and means for rotating said body and nozzle at different rates, substantially as set forth.

[Claims 6 to 20 not printed in the Gazette.]

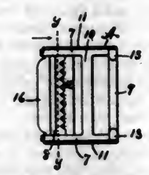
878,287. BOTTLE-SEALING DEVICE. ALEXANDER HOSTETTLER, Columbus, Ohio. Filed July 22, 1907. Serial No. 384,990.

1. A bottle sealing device comprising, in combination, a compressible member consisting of a single integral solid piece of cork formed as a flat cylindrical portion 5 with a cylindrical portion 6 of smaller diameter projecting from one face thereof, the axes of said cylindrical portions coinciding in the same straight line, and a metallic cap including integrally therewith a circumferential pendent flexible flange, said cap containing said compressible member, and said flange adapted to be pressed inward at its lower edge to engage a shoulder on the outer side of the neck of the bottle at its top, and said cork being of a thickness approximately equal the depth of the cap.

2. A bottle sealing device comprising, in combination, a compressible member consisting of a single integral solid piece of compressible material formed as a flat cylindrical portion 5 with a cylindrical portion 6 of smaller diameter projecting centrally from one face thereof, the axes of said cylindrical portions coinciding in the same straight line, and a metallic cap including integrally therewith a circumferential pendent flexible flange said cap containing said compressible member, and said flange adapted to be pressed inward at its lower edge to engage a shoulder on the outer side of the neck of the bottle at its top, and said cork being of a thickness approximately equal the depth of the cap.

878,288. BUCKLE. ERNEST N. HUMPHREY, New Britain, Conn., assignor to Traut & Hine Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed July 1, 1907. Serial No. 381,618.

1. In a buckle, the combination of a sliding bar with a buckle frame formed of a piece of sheet metal doubled upon itself, the said piece of metal being practically two frames, each having side bars, a middle bar and an end bar, which bars are brought substantially together in the completed frame while one end bar is common to the said two frames, thereby forming one end bar, the middle bar and the two side bars of the completed frame of two thicknesses while one end bar is of only one thickness, the said sliding bar being arranged to slide within the said side bars to and from that end bar which is of a single thickness only.

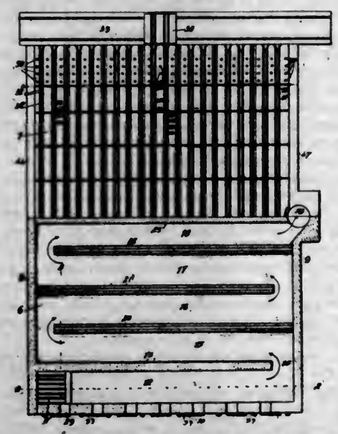


2. In a buckle, the combination of a sliding bar in the form a slotted plate having a finger bar at the outer edge thereof, with a buckle frame formed of a piece of sheet metal doubled upon itself to form side bars having ways for the said sliding bar to move in, and with the doubled over portion of the said side bars in position to be engaged by the outer edge of the said sliding bar to prevent the said bar from being pulled out of the frame.

3. In a buckle, the combination of a sliding bar of a plate like form with a buckle frame formed of a piece of sheet metal doubled upon itself to form side bars of two thicknesses with a space between the said two thicknesses for receiving and guiding the sliding bar and bent up side flanges at the outer edges of the said side bars for retaining the said plate-like bar within the said place.

4. In a buckle, the combination of a sliding bar with a buckle frame formed of a piece of sheet metal doubled upon itself to form side bars of two thicknesses with a space for the slide between them, bent up side flanges at the outer edge of the said side bars and holding lugs formed on one thickness of the bars and bent over the other thickness for holding the two thicknesses together.

878,289. WIRE-BAKING OVEN. HARRY B. HUMPHREY, Joliet, Ill., assignor to Humphrey & Sons, Joliet, Ill., a Copartnership consisting of Horace Fred Humphrey and Harry B. Humphrey. Filed June 13, 1907. Serial No. 378,825.



1. In a baker of the class described, the combination of a flue structure, a baking chamber above the flue structure and having a metallic floor provided with openings, a partition of impervious material interposed between the fire space of the flue structure and the metallic floor, in position to leave a heating space immediately below the openings in the floor, and ports leading to the heating space for protecting the metallic floor and providing a circulation of air, substantially as described.

2. In a baker of the class described, the combination of a flue structure, a baking chamber above the flue structure and having a metallic floor provided with openings, an arch of impervious material interposed between the fire space of the flue structure and the metallic floor, in position to leave a heating space immediately below the openings in the floor, and ports leading to the heating space for protecting the metallic floor and providing a circulation of air, substantially as described.

3. In a baker of the class described, the combination of a flue structure, a baking chamber above the flue structure and having a floor provided with openings, a partition of impervious material interposed between the fire space of the flue structure and the floor, in position to leave a heating space immediately below the openings in the floor, and ports leading to the heating space for protecting the floor and providing a circulation of air, substantially as described.

4. In a baker of the class described, the combination of a flue structure, a baking chamber above the flue structure and having a floor provided with openings, an arch of impervious material interposed between the fire space of the flue structure and the floor, in position to leave a heating space immediately below the openings in the floor, and ports leading to the heating space for protecting the floor and providing a circulation of air, substantially as described.

5. In a baker of the class described, the combination of a flue structure having sinuous passages, a stack in communication therewith, a baking structure divided into ovens running in right angle relation with respect to the flue passages, a flooring for the ovens, provided, above the first flue passage, with openings, a partition of impervious material bridging the first flue passage and leaving a heating space below the perforated floor, and ports for supplying air to said heating space, whereby the floor of the baking structure is protected and a circulation of air created, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

878,290. WIRE-ANNEALING FURNACE. HARRY B. HUMPHREY, Joliet, Ill., assignor to Humphrey & Sons, Joliet, Ill., a Copartnership consisting of Horace Fred Humphrey and Harry B. Humphrey. Filed June 14, 1907. Serial No. 379,014.



1. In combination with a wire annealing furnace having upper and lower arches provided with wire holes, a straight supporting shaft, a plurality of circular bearings eccentrically mounted on the shaft and in substantial alinement with the line of curvature of the wire holes in the arches, and sheaves rotatably mounted on the bearings and having their wire travel surfaces in register with the upper and lower line of wire holes, substantially as described.

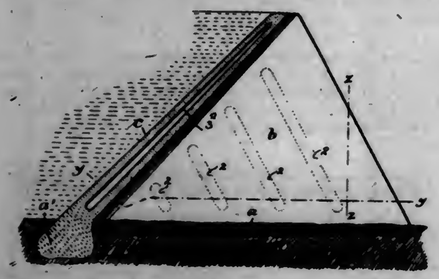
2. In combination with a wire annealing furnace having upper and lower arches provided with wire holes, a straight supporting shaft, a plurality of circular bearings eccentrically mounted on the shaft and in substantial alinement with the line of curvature of the wire holes in the arches, the bearings being each provided with a water space of suitable size to coöperate with the water spaces in adjoining bearings to provide a water channel, and sheaves rotatably mounted on the bearings, substantially as described.

3. In combination with a wire annealing furnace having upper and lower arches provided with wire holes, a straight supporting shaft, a plurality of circular bearings eccentrically mounted on the shaft and in substantial alinement with the line of curvature of the wire holes in the arches, the bearings being each provided with a water space of suitable size to coöperate with the water spaces in adjoining bearings to provide a water channel, the bearings being further provided with oil pockets having oil vents adapted to lubricate the bearings, and sheaves rotatably mounted on the bearings, substantially as described.

4. In combination with a wire annealing furnace having upper and lower arches provided with wire holes, brackets on the end of the furnace, a stationary shaft supported by the brackets, a plurality of bearings, each comprising a flanged periphery and each having an oil chamber and a water chamber separated by means of a partition wall, the partition wall having formed therein a mounting for the shaft, said mountings being so positioned that when the bearings are inserted onto the shaft they will maintain a position co-incident with the line of curvature of the arches and form a water channel from end to end of the bearing structure, means for conveying oil to the several oil chambers, and sheaves rotatably mounted on the several bearings and having their bearing surfaces in register with the upper and lower wire holes with which they coöperate, substantially as described.

5. In combination with a wire annealing furnace having upper and lower arches provided with wire holes, brackets on the end of the furnace, a stationary shaft supported by the brackets, a plurality of bearings, each comprising a flanged periphery and each having an oil chamber and a water chamber separated by means of a partition wall, the partition wall having formed therein a mounting for the shaft, said mountings being so positioned that when the bearings are inserted onto the shaft they will maintain a position co-incident with the line of curvature of the arches and form a water channel from end to end of the bearing structure, means for conveying oil to the several chambers, sheaves carried by the bearings, and rollers interposed between the bearings and the sheaves, substantially as described.

878,291. SHELL-DAM. EDWIN B. JENNINGS, New York, N. Y. Filed Oct. 21, 1907. Serial No. 398,355.



1. A shell dam comprising a series of buttress piers suitably spaced apart and inclined walls along one edge of said piers formed integrally therewith and arched between and transversely of the lines of the buttress piers and toward the impounded water, said buttress piers and inclined walls being constructed with series of circular cavities therein.

2. A shell dam comprising a series of buttress piers set parallel and spaced apart at a predetermined distance and inclined walls arched between and transversely on the lines of the buttress piers and toward the impounded water, with the arches sprung from the center of the buttress piers, the said buttress piers being each formed with series of elliptical cavities therein parallel with the outer edge of the buttress piers and the inclined walls formed with elliptical cavities therein in series running lengthwise from near the foot to near the top of the walls and all of said elliptical cavities arranged with the longest axis in line with the centers of the walls and piers.

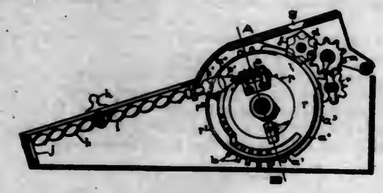
3. A shell dam comprising a series of buttress piers set parallel and spaced apart at a predetermined distance and inclined walls arched between and transversely on the lines of the buttress piers and toward the impounded water, with the arches sprung from the center of the buttress piers, the said buttress piers being each formed with series of elliptical cavities therein parallel with the outer edge of the buttress piers and the inclined walls formed with circular cavities therein in series running lengthwise from near the foot to near the top of the walls.

4. A shell dam comprising a series of buttress piers suitably spaced apart and inclined walls along one edge of said piers formed integrally therewith and arched between and transversely of the lines of the buttress piers and toward the impounded water, said buttress piers and inclined walls being constructed with series of circular cavities therein and the buttress piers being wider at their lower foot portions than at the top.

5. A shell dam comprising a series of buttress piers suitably spaced apart and inclined walls along one edge of said piers formed integrally therewith and arched between and transversely of the lines of the buttress piers and toward the impounded water, the outer up stream surfaces of the arched walls being formed on a greater radius than are the inner surfaces between the buttresses whereby the arches thinnest at the centers are increased in thickness at the ends joining into the buttress piers.

[Claim 6 not printed in the Gazette.]

878,292. CALCULATING-MACHINE. ADOLF M. JOHANSON and IVAR HULTMAN, Stockholm, Sweden. Filed June 6, 1905. Serial No. 263,961.



1. In a calculating machine the combination with the main wheels and the gear wheels coöperating therewith, of polygonal disks partaking in the movement of said gear wheels means for actuating the register wheels and fixed and shifting cams coöperating with the polygonal disks to positively stop the movement of said disks and the figure wheels at the proper moments, substantially as set forth.

2. In a calculating machine the combination with the main wheels and the fixed and movable cams, means for actuating the register wheels, of means for shifting the position of a movable cam, consisting of a worm on the main wheel, a worm wheel engaging the same and means for preventing movement of said worm except when the main wheel is in zero position.

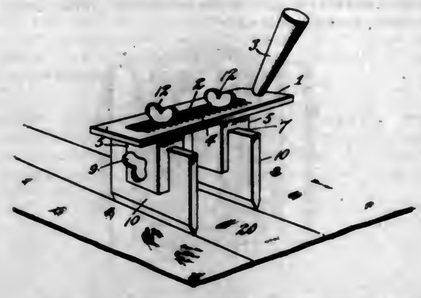
3. In a calculating machine the combination with the main wheels and the fixed and movable cams, means for actuating the register wheels, of means for shifting the positions of a movable cam, consisting of a worm on the main wheel, a worm wheel engaging the same and means for preventing movement of said worm except when the main wheel is in zero postion, said means embodying a flange on the main wheel having a gap and a spindle mounted in the casing and having a fork opposite said gap when said wheel is in zero position.

4. In a calculating machine the combination of the main wheels, the cams a^1 r^1, a ring r sleeved on the shaft of the main wheel, the gear wheels having polygonal disks, shiftable cogs, the cam a^1 having gaps and the shiftable cam r^1 having corresponding gaps, carrying wheels and intermediate wheels, the carrying cams corresponding to said gaps, means for actuating the register wheels and means for stopping the turning of the carrying wheels at proper intervals.

5. In a calculating machine, the combination of the main wheels the cams a^1 r^1, a ring r sleeved on the shaft of the main wheel, the gear wheels having polygonal disks, shiftable cogs, the cam a^1 having gaps and the shiftable cam r^1 having corresponding gaps carrying wheels and intermediate wheels, the carrying cams corresponding to said gaps means for actuating the register wheels and means for stopping the turning of the carrying wheels at proper intervals, a worm, a worm-wheel and connections for shifting the position of the movable cam relatively to the main wheel.

[Claim 6 not printed in the Gazette.]

878,293. MARKING DEVICE. FRANK J. KADAN, Baltimore, Md. Filed Mar. 16, 1907. Serial No. 362,703.

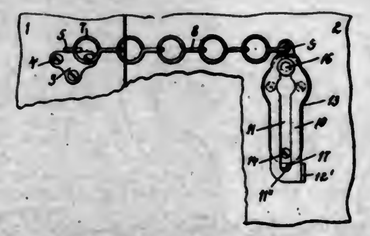


1. A marking device comprising a connecting plate, an operating handle therefor, said plate being formed with a longitudinally arranged slot, the surface of the plate adjacent the slot being provided with a scale, blocks connected to the under surface of said plate and of less width than the width of the plate, the lower portion of said blocks being formed with transversely arranged recesses and marking devices arranged in said recesses.

2. A marking device comprising a connecting plate, an operating handle therefor, said plate being formed with a longitudinally arranged slot, blocks formed with threaded openings, said screws extending through the slot and plate and engaging the threaded openings in the blocks, the lower portion of said blocks being formed with transversely extending recesses, said recesses extending entirely through the blocks from side to side and marking devices secured in said recesses.

3. A marking device comprising a connecting plate, an operating handle therefor, said plate being formed with a longitudinally arranged slot, blocks formed with threaded openings, said screws extending through the slot in the plate and engaging the threaded openings in the blocks, the lower portion of said blocks being formed with transversely extending recesses, said recesses extending entirely through the blocks from side to side and so arranged therein as to form one wall of greater thickness than the other, marking devices arranged in said recesses, and connecting means for said marking device extending through the thicker wall of said block.

878,294. DOOR-CHAIN. JOSEPH KLEIDMANN, New York, N. Y., assignor to Chafee Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Oct. 12, 1907. Serial No. 397,128.
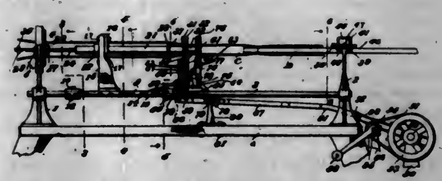


1. In a fastening device for doors, the combination with a flexible member adapted to be attached to the door, of a bar secured to said flexible member, a holding bracket secured to said door, a pin on said holding bracket and adapted to secure said bar to said door at a plurality of points of said bar, said bar being suited to draw said flexible member taut when the bar is swung around said pin so as to ocupy a position substantially at right angles to the longitudinal axis of said flexible member.

2. In a fastening device for doors, the combination with a flexible member adapted to be attached to the door frame, of a bar secured to said flexible member, a holding bracket on the door, a pin on said holding bracket engaging said bar and adapted to fasten the same to said door at a plurality of points of said bar, said bar being suited to draw said flexible member taut when the same is swung around said pin, and means on said bracket engaging said bar and locking the same when said bar is in a position parallel to the line passing through said pin and said engaging means.

3. In a fastening device for doors, the combination with a flexible member adapted to be attached to the door frame, of a bar secured to said flexible member and having a longitudinal slot, a holding bracket attached to the door and carrying a pin adapted to engage said slot, and locking means on said holding bracket and engaging said slot when said bar is in a position parallel to the line passing through said pin and said locking means.

4. In a fastening device for doors, the combination with a flexible member adapted to be attached to the door frame, of a bar secured to said flexible member and having a longitudinal slot, a holding bracket attached to the door and carrying a pin adapted to engage said slot, and a wedge-shaped projection on said holding bracket and engaging said slot when said bar is in a position parallel to the line passing through said pin and wedge-shaped projection.

878,295. MOP AND BRUSH MAKING MACHINE. ERNEST KOELLA, Rockford, Tenn., assignor to Myer Bridges Company, Louisville, Ky., a Corporation. Filed Jan. 12, 1905, Serial No. 240,794. Renewed June 26, 1907. Serial No. 380,944.



1. In a machine for making mops and brushes, mechanism for holding the end portions of a plurality of continuous cords parallel to each other and surrounding a space of proper size and form to receive the end of a handle, substantially as described.

2. In a machine for making mops and brushes, mechanism for holding the end portions of a plurality of continuous cords parallel to each other and surrounding a space of proper size and form to receive the end of a handle, and a support for said handle, substantially as described.

3. In a machine for making mops and brushes, mechanism for holding the end portions of a plurality of continuous cords parallel to each other and surrounding a space of proper size and form to receive the end of a handle, a support for said handle, said support and said holding mechanism being relatively reciprocable in a path parallel to said cylindrical space, substantially as described.

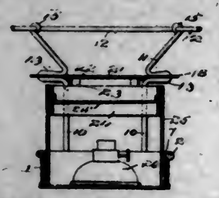
4. In a machine for making mops and brushes, mechanism for holding the end portions of a plurality of continuous cords parallel to each other and surrounding a space of proper size and form to receive the end of a handle, and a knife guide adjacent said holding mechanism, substantially as described.

5. In a machine for making mops and brushes, mechanism for guiding and mechanism for periodically gripping the end portions of continuous cords in a tubular group,

said mechanism being open for the introduction of a handle within, and approximately parallel to the axis of, said group of cords, substantially as described.

[Claims 6 to 35 not printed in the Gazette.]

878,296. VAPORIZER FOR MEDICAMENTS. EVA L. LOVELESS, Corning, N. Y. Filed July 23, 1906. Serial No. 327,456.



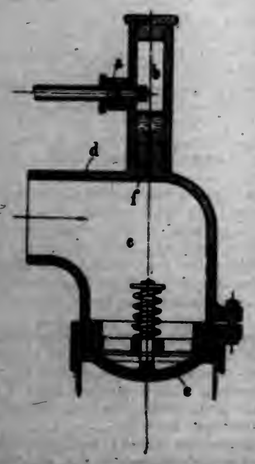
1. In a vaporizer for medicaments, the combination of a base formed with an upstanding flange, a band positioned with said flange and engaging the same, a framework subtained from movement by the band and supported by said base, and a lamp positioned within the framework substantially as described.

2. In a vaporizer for medicaments, the combination of a base formed with an upstanding flange, a band engaging the flange, a framework retained from movement by the band and supported by said base, and a lamp supported by said base, and a deflector supported by the frame substantially as described.

3. In a vaporizer for medicaments, the combination of a base formed with an upstanding flange, a band bearing against the flange and formed with pressed-out portions, a framework provided with upright members engaging the pressed-out portions of the band, and a lamp positioned within the framework and a deflector for said lamp supported by said frame work, substantially as described.

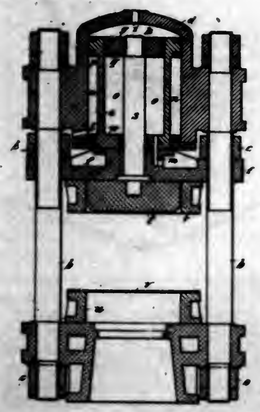
4. A vaporizer for medicaments comprising a base, a lamp supported thereby, uprights supported by said base, said uprights being bent intermediate their length, outward at right angles and then inward for forming an offset portion and then upward at an angle, a guard ring secured to the upper end of said uprights and a deflector supported by said offset portions of said uprights substantially as described.

878,297. CARBURETER. LÉON M. J. C. LEVAVASSEUR, Puteaux, France. Filed May 16, 1907. Serial No. 373,922.



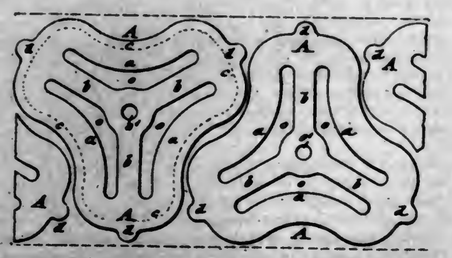
In a carbureter, the combination, with the admission-chamber for the air having a lateral branch, and a valve in the lower part of said chamber which is opened by the suction of the engine, of a hydrocarbon container mounted on said chamber at its upper part and having a capillary passage directly above and in alinement with said valve, and means for supplying the hydrocarbon to said container.

878,298. PRESS. IVOR LICHTIG, Bonn-Süd, Germany, assignor to Bonner Maschinenfabrik & Eisengiesserei Fr. Mönkemöller & Cie., Bonn, Germany. Filed July 8, 1905. Serial No. 268,814.



In an hydraulic press, the combination with a closed-top cylinder, an open-top closed-bottom hollow piston in said cylinder, and a solid piston within said hollow piston, said cylinder having a port *i* communicating with the space above both pistons and a port *l* communicating with the space beneath the hollow piston, and said hollow piston having a port *m* in communication with the space beneath the solid piston; of a pipe conducting fluid under pressure to port *i*, a reservoir, a by-pass in said pipe having a branch 15 communicating with said reservoir, a branch 3 leading from said by-pass in advance of branch 15 to port *l*, a branch 4 between said other branches leading to port *m*, a relief valve in the by-pass between branches 4 and 15, a forward-opening check valve in the by-pass between branches 3 and 4, branch 3 having an outlet in advance of said check valve, a valve 7 adapted in one position to close the pipe and cause the fluid to enter the by-pass, a valve 8 adapted when valve 7 is open to close the by-pass in advance of the branches leaving the outlet to branch 3 open, and, when valve 7 is closed, to open the by-pass and close said outlet, and operating means for valves 7 and 8.

878,299. GLOBE-HOLDER FOR GAS-BURNERS. WILLIAM LIVINGSTONE, New York, N. Y., assignor to himself and John H. Dale, New York, N. Y. Filed Mar. 11, 1907. Serial No. 361,734.



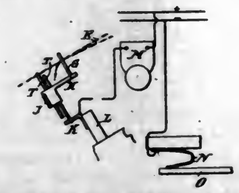
1. A blank for globe-holders consisting of a substantially triangular piece of sheet-metal having elongated openings substantially parallel to the sides.

2. A blank for globe-holders consisting of a piece of sheet-metal of substantially triangular shape, having inwardly curved sides and inwardly curved elongated openings parallel to the sides.

3. A blank for globe-holders consisting of a substantially triangular piece of metal having convex corner-portions and openings extending approximately parallel to the sides of the blank.

4. A blank for globe-holders consisting of a substantially triangular piece of sheet-metal having convex corner-portions and concave side-portions, there being elongated openings extending substantially parallel to the sides and defining arms extending radially from the center to the corner-portions.

878,300. COMBINATION GUIDE AND ALARM FOR SLUBBING, REDUCING, AND ROVING FRAMES AND LIKE SPINNING AND TWISTING MACHINES. JOSEPH LUMB, Huddersfield, England. Filed Apr. 26, 1907. Serial No. 370,467.



A combination guide and detector for slubbing, reducing, and like spinning and twisting machines, comprising a perforated guide bracket, U-shaped detector devices suspended from the slubbings with their ends hanging freely in the perforations in said guide bracket, the limbs of the detector devices being of unequal length so that, when raised and turned, the short limbs may rest on said guide bracket, while the long limbs still extend into their guide perforations, and signal means operable by the falling of a detector device.

878,301. ADVERTISING DEVICE. ADAM B. MACKIE, Glasgow, Scotland. Filed Oct. 25, 1905. Serial No. 284,340.



A letter formed with a narrow beveled projecting edge all around it with flat extensions beyond said edge at top and bottom, combined with a frame inclosing said letter and having strips thereon with slots between said strips and the front part of the frame into which said flat extensions fit, and means closing the frame at one end, the other end of said frame having a socket extended across the width thereof and forming the end of said frame and receiving a pivot pin.

878,302. INSULATOR. HARLEY R. MARKEL, Dayton, Ohio. Filed July 10, 1907. Serial No. 382,989.

1. An insulator having a two-part body consisting of a pair of duplicate matching members provided with similarly arranged wire openings, and each having a central guard tenon presenting a shoulder next to the adjacent wire opening, and a keeper mortise for the tenon of the other member.

2. An insulator having a two-part body consisting of a pair of duplicate matching block members provided with similarly arranged wire openings and each having an inside centrally located angular guard tenon presenting a shoulder next to the adjacent wire opening, and also having a keeper mortise extending beyond said tenon and receiving the corresponding tenon of the other block member.

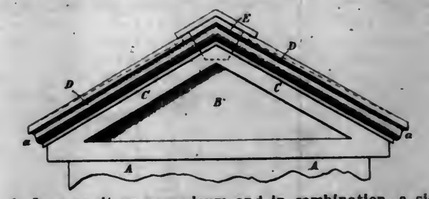


3. An insulator having a two-part body consisting of a pair of duplicate matching block members, each block member being of an approximate L-shape and provided in the inner side of its base portion with a wire holding groove and in the end of its arm portion with a wire seat, each member being further provided upon the inner side of its base portion with an angular guard tenon offset to present a shoulder next to said groove, each member also having on the inner side of its arm portion a longitudinally disposed keeper mortise extending beyond said tenon.

4. An insulator having a two piece body provided in each member with a diagonal fastener hole extending therethrough.

5. An insulator having a two part body consisting of a pair of duplicate, matching, and interlocking members, provided with similarly arranged wire grooves upon opposite sides of the longitudinal axis of the body, the latter being further provided in each member with an oblique fastener hole.

878,303. NON-CONDENSING AND STORM-PROOF MAUSOLEUM, &c. THOMAS J. MOORE, New York, N. Y. Filed Feb. 5, 1906. Serial No. 299,450.



1. In a vault or mausoleum and in combination, a side wall having an air inlet at or near its bottom, a roof stone, a ridge-piece, an air passage located between them at their place of juncture, a wainscot and a ceiling separated from the side wall and roof so as to provide an air passage leading from the air inlet at the bottom to the outlet at the top, as described.

2. In a vault or mausoleum the combination of a side wall having an air-inlet opening at or near its bottom, a recessed roof stone, a ridge-piece having a recess which placed coincident with that of the roof stone provides an air passage at the upper part of the structure, a wainscot and a ceiling placed at such distances from the side wall and roof of the structure as to provide air passages from the opening at or near the bottom to that provided at or near the top of the structure, as described.

3. In a vault or mausoleum, the combination of a side wall having an air inlet at or near the bottom, a recessed roof stone, a ridge-piece having a recess which placed coincident with that of the roof stone provides an air passage at the upper part of the structure, a wainscot placed at such distance from the wall, as to provide an air passage from the air opening at or near the bottom to that provided at or near the top, and a chamber formed between the ceiling of the structure and its roof, and a deflector in said chamber provided to the under side of the ridge-piece, as described.

4. In a vault or mausoleum the combination of a side wall having an air inlet at or near its bottom, a recessed roof stone channeled in its upper surface, and recessed

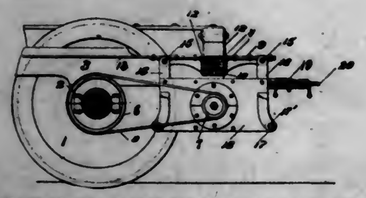
from its channel through the inner edge thereof, a ridge-piece having a recess which is placed coincident with the recess of the roof stone and provides an air passage at the upper part of the structure, a wainscot placed at such distance from the wall as to provide an air passage from the inlet opening at or near the bottom of the structure to the air outlet at the top thereof, whereby the air outlet is protected against entrance of rain, etc., as described.

878,304. SPOUT FOR CANS. WILLIAM MCADOO, Reading, Pa. Filed Jan. 23, 1906. Serial No. 297,411.



In a device of the class described, an inverted circular cup having a flange and a spout, said cup having in its side wall a slot and in its top a vent, a circular plate having openings registering with the vent and spout and fitting snugly within the side walls of the cup, a movable, perforated plate located directly under the top of the cup and having a peripheral lug which projects through said slot, a semi-elastic filler also having openings registering with said spout and air vent and interposed between the plate and the movable plate, and a retaining rivet passing through said cup, plate, filler and movable plate and serving as a pivot for the movable plate.

878,305. MEANS FOR MOUNTING AND DRIVING DYNAMOS FOR ELECTRIC-CAR LIGHTING. ALEXANDER MCGARY and JOHN W. JEPSON, New York, N. Y., assignors, by direct and mesne assignments, to Bliss Electric Car Lighting Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 18, 1905. Serial No. 288,055.



1. Means for mounting a dynamo upon a car or other vehicle comprising the end sill or beam of the car truck and a frame carried by said sill or beam for supporting a dynamo directly beneath said sill or beam.

2. Means for mounting a dynamo on a car or other vehicle, comprising a car truck, a supporting frame or plate mounted upon the end sill of said truck and a dynamo carried by said frame or plate directly beneath said end sill and a driving connection from the car wheel or axle to the dynamo.

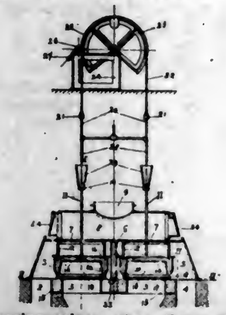
3. Means for mounting a dynamo on a car or other vehicle, comprising the end sill or beam of the car truck, a saddle plate mounted on said beam and having portions projecting laterally on each side thereof, suspension members pivotally connected to said laterally projecting portions, a dynamo machine carried by and between said suspension members and a driving connection between said dynamo and the car wheel or axle.

4. Means for mounting a dynamo upon a car or other vehicle, comprising the end sill or beam of the car truck, a saddle plate mounted upon said sill or beam and formed with a recess, the sides of which are adapted to embrace said beam, supporting links or members pivotally connected to said saddle plate on opposite sides of said plate, a dynamo machine carried by said members, and driving connection between a car wheel or axle and the dynamo.

5. Means for mounting a dynamo upon a car or other vehicle, comprising the combination with the end sill or beam of the truck, of a plate mounted on said sill or beam, a pair of stay-rails secured to said truck and projecting over said sill or beam, said plate secured to said rails on each side of the sill or beam, and a dynamo supported by said plate beneath said sill or beam.

[Claims 6 to 21 not printed in the Gazette.]

878,306. REVERSING-VALVE FOR REGENERATIVE FURNACES. JOHN B. NAU, New York, N. Y. Filed July 25, 1906. Serial No. 327,729.



1. In a reversing valve system, the combination of two valve chambers, each valve chamber having an upper valve-seat, a lower valve-seat, and a valve, the two valves being so connected together through their moving apparatus, that at one time one valve will make a seal with its upper seat only, while the other valve makes a seal with its lower seat only, and at another time both valves will make simultaneously seals with their upper seats, leaving a free passage below between each valve and its lower valve seat.

2. In a reversing valve system, the combination of two valve chambers and one gas chamber, each valve chamber having an upper valve-seat, a lower valve-seat, and a valve, the two valves being so connected together through their moving apparatus, that at one time one valve will make a seal with its upper seat only, while the other valve makes a seal with its lower seat only, and at another time both valves will make simultaneously seals with their upper seats, leaving a free passage below between each valve and its lower valve seat.

3. In a reversing valve system, the combination of two valve chambers, each valve chamber having an upper water-sealing valve seat, a lower water-sealing valve seat, and moving between its two seats, a valve, too short to make at one time water-seals with both its upper and lower seats, the two valves being so connected together through their moving apparatus, that at one time one valve will make a seal with its upper seat only, while the other valve makes a seal with its lower seat only, and at another time both valves will make simultaneously seals with their upper seats, leaving a free passage below between each valve and its lower valve seat.

4. In a reversing valve system, the combination of two valve chambers and one gas chamber, each valve chamber having an upper water-sealing valve seat, a lower water-sealing valve seat, and moving between its two seats, a valve, too short to make at one time water-seals with both its upper and lower seats, the two valves being so connected together through their moving apparatus, that at one time one valve will make a seal with its upper seat only, while the other valve makes a seal with its lower seat only, and at another time both valves will make simultaneously seals with their upper seats, leaving a free passage below between each valve and its lower valve seat.

5. In a reversing valve system the combination of the two valves with their moving apparatus, each valve being inclosed in a valve chamber having an upper valve seat and a lower valve seat, and both valves being so connected together by said moving apparatus, that at one time one valve will make a seal with its upper seat only, while the other valve will make a seal with its lower seat only, and at another time, both valves can be made to make simultaneously seals with their upper seats, leaving a free passage below between each valve and its lower seat, said moving apparatus being composed of the two valve stems and a cable connecting said stems and a wheel over which runs the cable and a toothed sector and a pinion acting on said sector and means to operate said pinion and to place and maintain either one valve in any desired intermediate position, the position of the other valve remaining dependent on the position of the first one.

[Claims 6 to 9 not printed in the Gazette.]

878,307. MEANS FOR DISPLAYING ARTICLES OF MERCHANDISE. WILLIAM O'SULLIVAN, New York, N. Y., assignor to Manhattan Briar Pipe Company, New York, N. Y., a Corporation of New York. Filed May 17, 1906. Serial No. 317,252.



1. A device of the character described formed of a single piece of spring material and comprising an exterior supporting member; an interior bore-engaging member terminating in a wall-engaging end, having a depending wall-engaging and tag-receiving loop or leg, and an intermediate releasing loop extending above said wall-engaging end; and a reach connecting said exterior and interior members.

2. A device of the character described comprising an exterior supporting member having a depending leg with an angularly disposed foot or shoe, an interior wall-engaging member; and a reach connecting said exterior and interior members.

878,308. PROCESS FOR THE MANUFACTURE OF MAPS IN COLORS AND IN RELIEF. ANDRÉ PATESSON, Uccle, Belgium. Filed Aug. 19, 1907. Serial No. 389,151.



1. A process for the production of maps on a non-plane surface which consists in engraving on the walls of a mold for said map surface, a series of latitude and longitude lines forming a network, placing a sheet of caoutchouc over the mold, pressing said sheet into said mold by means of a counter-mold thereby obtaining an imprint of the net work, withdrawing the counter-mold and sheet from the press mold completing the map with the aid of such latitude and longitude lines as guides, and fixing the sheet on the upper surface of a smooth-walled finishing mold, pressing the sheet by means of a core, previously coated with a suitable adhesive substance, into said smooth-walled mold, and withdrawing said core as soon as the sheet has become adhered thereto, thereby forming a map with a network of lines, substantially as described.

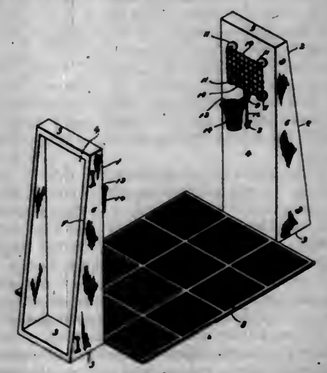
2. A process for the production of maps on a non-plane surface which consists in engraving on the walls of a mold for said map surface, a series of latitude and longitude lines forming a network, placing a sheet of caoutchouc over the mold, pressing said sheet into said mold by means of a counter-mold thereby obtaining an imprint of the network, withdrawing the counter-mold and sheet from said press mold, employing the flat distorted projection of said network as a templet for delineating on the sheet the requisite features, reproducing on sheets of caoutchouc in one or more colors copies of said imprinted sheet by means of some suitable printing process, fixing one of said copies on the upper surface of a smooth walled finishing mold, pressing said copy by means of a core previously coated with a suitable adhesive substance into said smooth walled mold, and withdrawing said core when the said copy has become adhered thereto, thereby forming a copy of a map in one or more colors, substantially as described.

3. A process for the production of contour maps which consist in engraving on the walls of a mold for said map surface a series of latitude and longitude lines forming a network, placing a sheet of caoutchouc over the mold, pressing said sheet by means of a corresponding counter-mold into said mold, thereby imprinting the sheet with an imprint of the network, withdrawing the counter-mold and sheet from said press mold, delineating on the distorted network the requisite features, printing in one or more colors on sheets of caoutchouc copies of said imprinted sheet, fixing one of said copies on the upper surface of a smooth walled finishing mold, pressing said copy by means of a core previously coated with a suitable adhesive substance, into the said smooth-walled mold, and withdrawing said core when the copy has become adhered thereto, thereby forming a copy of a map in one or more colors and also in relief, substantially as described.

4. A process for producing an image upon a non-plane surface, which consists in providing the walls of a mold for said surface with suitable guide lines, taking an impression of said mold and guide lines, withdrawing said impression from the mold, completing the image with the aid of said guide lines upon said impression and pressing said completed image together with an adhesive core into a smooth-walled mold corresponding in shape to that first used, and withdrawing said core and image after they have become united.

5. A process for producing an image upon a non-plane surface, which consists in providing the walls of a mold for said surface with suitable guide lines, taking an impression of said mold and guide lines, withdrawing said impression from the mold, completing the image with the aid of said guide lines upon said impression, reproducing said completed image by means of some suitable printing process, and pressing one of said copies together with an adhesive core into a smooth-walled mold corresponding in shape to that first used and withdrawing said core and copy after they have become united.

878,309. GAME APPARATUS. JOHN L. E. PELL and EDWARD L. C. CLARK, Great Barrington, Mass. Filed May 20, 1905, Serial No. 261,304. Renewed June 29, 1907. Serial No 381,549.



1. The herein described game apparatus comprising a game containing box, a pair of baskets and frames therefor, the halves of said box forming a pair of supports one for each basket, each support provided with means to receive and hold a basket frame.

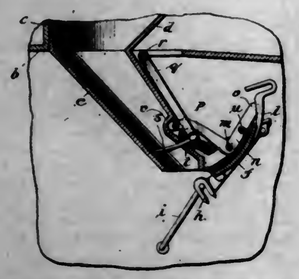
2. The herein described game apparatus comprising a game containing box, a pair of baskets and frames therefor, the halves of said box forming a pair of supports one for each basket, each support having a broad base and a surface at right angles thereto and sides having oblique edges, each support provided with means to receive and hold a basket.

3. The herein described game apparatus comprising a pair of supports, sockets thereon, each support provided with a deadening net and a basket a common frame for net and basket and a post on the frame adapted to fit the sockets.

4. The herein described game apparatus comprising a pair of supports, sockets thereon, a rectangular frame having projections on its rear, and a post depending from its lower edge, a basket holding frame extending at right angles to the post, said post adapted to be removably attached to the sockets.

5. The herein described game apparatus comprising a pair of supports, composed of two portions of a box each having a broad base and a surface in a plane at right angles thereto and sides having oblique edges, frames adapted to project from the front surfaces of the portions, in combination with baskets carried by said frames and a ring on each support adapted to receive and support a basket frame.

878,310. CARBID-FEED FOR ACETYLENE-GENERATORS. ALGERNON S. PHELPS, Jr., Chicago, Ill. Filed May 29, 1906. Serial No. 319,397.



1. In a carbid feed, the combination, with a feed shoe, of a plurality of fingers tending to simultaneously interpose from above into the path of travel of the carbid to the shoe, and means for controlling said fingers.

2. In a carbid feed, the combination, with a feed shoe, of a plurality of independent fingers tending to interpose from above into the path of travel of the carbid to the shoe, and means actuated by the movement of the shoe to control the fingers.

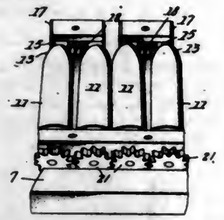
3. In a carbid feed, the combination, with a feed shoe, of a plurality of fingers tending to interpose from above into the path of travel of the carbid to the shoe during the feed movement of the shoe, and means actuated near the close of the return movement of the shoe to withdraw said fingers.

4. In a carbid feed, the combination with a feed shoe, of a plurality of independent fingers pivotally mounted in such a position as to be capable of interposition from above into the path of travel of the carbid to the shoe, a pivoted dog controlling the movement of the fingers, and means carried by the shoe and actuated during its feed movement to permit the interposition of the fingers in the path of the carbid and near the close of the return movement of the shoe to withdraw said fingers.

5. In a carbid feed, the combination with a feed shoe, of a plurality of independent fingers pivotally mounted in such a position as to tend by gravity to interpose from above into the path of travel of the carbid to the shoe, a pivoted dog restraining the movement of the fingers, and means carried by the shoe and actuated after the beginning of its feed movement to permit the interposition of the fingers in the path of the carbid and near the close of the return movement of the shoe to retract the dog to a position to withdraw said fingers, the movement of the fingers being accelerated beyond that of the shoe.

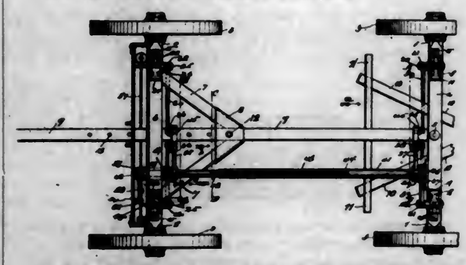
[Claims 6 to 10 not printed in the Gazette.]

878,311. FLAX-HARVESTER. JULIUS H. PHILIPP, Port Huron, Mich., assignor of one-half to Charles F. Garaghty, Detroit, Mich. Filed Mar. 8, 1907. Serial No. 361,240.



In a flax harvester, in combination, a platform, a sill at the front thereof, guards secured to the under side of the sill and projecting forwardly therefrom and having lower edges curved upwardly at the front, and also having recesses in the rear side, said recesses being undercut in the guards at the top, a series of pairs of pulling rollers set in said recesses and having bearing boxes at the upper end slidable laterally in the said undercut part of the recesses, gears between the rollers at the lower end thereof, and cap pieces secured to the top of the sill and to the upper edge of the guards, over said gears.

878,312. PORTABLE WEIGHING APPARATUS FOR FARM-WAGONS. JOHN D. REED, Greencastle, Ind., assignor of one-half to Eustace B. Halliday, Acton, Ind. Filed Apr. 20, 1907. Serial No. 369,274.



1. In a portable weighing apparatus for wagons, the combination with forward and rear load carrying levers each composed of a shorter and a longer lever arm, said levers having their shorter arms situated to coöperate to support the body of the wagon, of an extensible shaft extending longitudinally of the wagon, coöperating lever arms on said extensible shaft operatively connected to the longer arms of said load carrying levers, a counter lever arm on said extensible shaft, and a weight indicating means connected to the latter.

2. In a portable weighing apparatus for wagons, the combination with forward and rear load carrying levers arranged in opposing pairs and each composed of a longer and a shorter lever arm, said levers having their shorter arms situated to coöperate to support the body of the wagon, an extensible shaft extending longitudinally of the wagon, coöperating lever arms on said extensible shaft connected to the longer arms of said load carrying levers, a counter lever arm on said extensible shaft, a weighing beam, and means connecting said weighing beam and said counter lever arm whereby the former may be disengaged from the weighing apparatus.

3. In a portable weighing apparatus for wagons, the combination with forward and rear load carrying levers, each composed of a shorter and a longer lever arm, said levers having their shorter arms situated to coöperate to support the body of the wagon and the longer arms situated to swing adjacent the forward and rear bolsters, of a shaft extending longitudinally of the wagon and carried by said bolsters, coöperating lever arms secured to said shaft and situated to be connected to operate the load carrying lever arms, a counter lever on said shaft, a weight or scale beam, and means for connecting said counter lever and said scale beam.

4. In a portable weighing apparatus for wagons, the combination with forward and rear load carrying levers, each composed of a longer and a shorter lever arm, said levers having their shorter arms situated to coöperate to support the body of the wagon and their longer arms situated adjacent the forward and rear bolsters, of a shaft extending longitudinally of the wagon, coöperating lever arms secured on said shaft and situated to be operatively connected to the longer arms of said load carrying levers, a counter lever arm on said shaft, a scale beam, links depending from said counter lever arm to connect to said scale beam and means for releasing the counter lever arm and the mechanism connected thereto and said scale beam from the load to be weighed.

5. In a portable weighing apparatus for wagons, the combination with forward and rear load carrying levers composed each of a longer and a shorter lever arm, knife bearing edges on said shorter arms situated to coöperate to support the body of the wagon, and bearing plates situated directly over said knife bearing edges, of an extensible shaft extending longitudinally of said wagon, coöperating lever arms secured on said extensible shaft, links depending from the ends of said coöperating lever arms and connected at their lower ends to the longer arms of the load carrying levers, a counter lever arm, a scale beam, links depending from said counter lever arm to connect to said scale beam, an eccentric journaled in the swinging end of said counter lever arm, an eccentric operating lever, and link pins by said eccentric, substantially as set forth.

[Claim 6 not printed in the Gazette.]

878,313. SHOE-FORM. WILLARD C. RICHARDSON, Lynn, and ERNEST W. FORD, Salem, Mass. Filed Aug. 23, 1906. Serial No. 331,715.



1. A shoe form comprising a fore part and a heel part formed of sheet material and provided with overlapping extremities pivoted together at the waist of the form, one of the pivoted extremities at each side being offset to bring the outer surfaces of the parts into substantially the same plane so that the outer surface of the form is substantially continuous and unbroken at the waist of the form, substantially as described.

2. A shoe form of flexible sheet material provided with a width-adjusting device comprising bars attached to the opposite sides of the form and having overlapping ends, and a binding device provided with a set screw for securing the ends of the bars together in adjusted position, substantially as described.

878,314. PROCESS OF MORDANTING WOOL. PHILLIPS ROGERS, Wollaston, Mass. Filed May 24, 1906. Serial No. 318,462.

1. The process of mordanting wool which consists in forming ammonium bichromate by the reaction between an alkali bichromate and an ammonium salt, and subsequently decomposing the ammonium bichromate in the presence of the wool.

2. The process of mordanting wool which consists in boiling the wool to be dyed in a bath containing an alkali bichromate and an ammonium salt, with the formation and subsequently decomposition of ammonium bichromate.

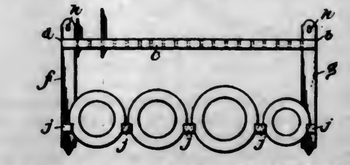
3. The process of mordanting wool which consists in forming ammonium bichromate in a bath, in the presence of the wool, from an alkali bichromate and an ammonium salt, by boiling; and decomposing the ammonium bichromate, also in the presence of the wool, by continued boiling.

4. The process of mordanting wool by subjecting the same to the action of a solution of alkali bichromate, and an ammonium salt.

5. The process of mordanting wool by placing the wool in a bath composed of a solution of an alkali bichromate and a salt of ammonia, and heating the bath.

[Claim 6 not printed in the Gazette.]

878,315. DISH-DRAINER. GASPAR SAMSÓ, New York, N. Y. Filed Feb. 19, 1907. Serial No. 358,323.



A dish drainer comprising an open rectangular frame provided with the upright bars *f* and *g* each of which is provided at its top with a slot *h* so that it may be hung on suitable supports on a wall, a second rectangular frame secured to said first named frame near the top and below said notches, said second named frame being provided on its two sides with oppositely opposed and downwardly beveled grooves adapted to receive dishes and a series of horizontally arranged unevenly spaced parallel bars shorter than the width of the said second named frame, secured to the said first named frame at its lower side, said parallel bars having oppositely opposed downwardly beveled grooves at right angles to said first named grooves, and also adapted to receive dishes whereby said dish drainer is adapted for receiving dishes of different sizes on said bars and holding them at right angles to the dishes held on said second named frame, substantially as described.

878,316. SPRING FOR VEHICLES. GEORG SCHWARZ, Eisenach, Germany. Filed Mar. 1, 1907. Serial No. 359,992.



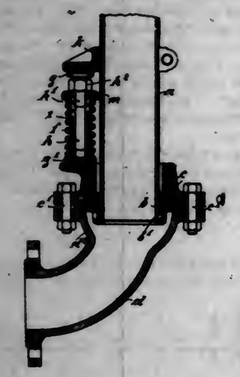
1. A vehicle spring having pivotal connection with an axle to allow free movement to the latter and the spring, and lateral tension means coöperative with the pivotal axle connection.

2. In a vehicle body and axle, a spring, brackets carried by the body, links connecting the spring with the brackets, and a pivotal bracket carried by the axle and having connection with said spring, whereby the latter and the axle are freely movable with respect to the body.

878,317. EXPANSION-JOINT DEVICE. FRANZ SEIFFERT, Berlin, Germany. Filed Jan. 4, 1907. Serial No. 350,813.

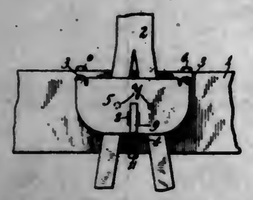
1. In the herein described steam piping the combination of an expansion pipe transversely applied to the steam piping and having partly spherical faces at its ends, flanges having partly spherical faces fitting steam tight on the first mentioned faces, the faces being pressed against each other by the inner steam pressure, and springs which are supported on the one side by the said flanges and on the

other side by the expansion pipe for holding the tightening surfaces in contact, when a vacuum happens in the steam piping, the spring being eccentrically arranged on the expansion pipe.



2. In the herein described steam piping the combination of an expansion pipe transversely applied to the steam piping, rings fixed to the end of the expansion pipe and having partly spherical faces, flanges, having a partly spherical face, against which the partly spherical faces of the rings are tightly pressed by the inner steam pressure, and having a bearing with a partly spherical face, abutments *k* fixedly attached to the expansion pipe and having partly spherical faces, springs eccentrically arranged upon the expansion pipe and supporting stems consisting of two telescoped parts and having ends with partly spherical faces supporting against the partly spherical bearing of the flanges and of the abutments and means for adjusting the springs.

878,318. HARNESS-BUCKLE. IRA SELLERS, Edmonton, Alberta, Canada. Filed Aug. 10, 1906. Serial No. 329,977.



1. In a harness buckle, a plate provided with hooks and with an opening, and an insertible member disposed in the opening and provided with a hook extending beyond the edge of the plate.

2. In a harness buckle, a plate provided with hooks and with an opening, and an insertible rockable member disposed in the opening and provided with a hook extending beyond the edge of the plate.

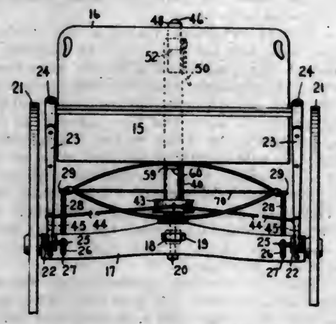
3. In a harness buckle, a plate provided with hooks and with an opening, and an insertible rockable member disposed in the opening and provided with a hook extending beyond the edge of the plate and with means to prevent its rocking.

4. In a harness buckle, a plate provided with hooks adjacent one edge and provided with an opening adjacent its opposite edge, and an insertible member provided with a recess in which the wall of the opening is disposed and provided with a hook extending beyond the edge of the plate.

5. In a harness buckle, a plate provided with hooks adjacent one edge and provided with an opening adjacent its opposite edge, and an insertible member provided with a recess in which the wall of the opening is disposed and provided with a hook and provided with a guard lug engaging the under face of the plate.

[Claim 6 not printed in the Gazette.]

878,319. HORSE-RELEASER. BERT L. SINCLAIR and LISHA L. LESLIE, Santa Fe, N. Mex. Filed Sept. 30, 1907. Serial No. 395,255.



1. In a device of the class described, the combination with a vehicle bed, the front axle thereof, the thill clips carried by the axle, and the thills, of rockers mounted upon the axle, pins carried by the rockers and projecting through the thill clips and the thills, springs for normally holding the rockers in position to maintain the pins in the engagement stated, an operating shaft journaled vertically through the bed of the vehicle, the shaft being provided with a bore and with openings in opposite sides which open into the bore, a pin slidable vertically into the bore and being cut-away to register, when at the lower limit of its movement, with the said opening, a strap connected at its ends to cranked portions of the rockers and passed through the openings in the shaft and the cut-away portion of the pin, a hand lever pivoted at the upper end of the shaft for vertical swinging movement, and connection between the pin and the lever whereby when the lever is swung vertically the pin will be moved upwardly to exert a pull upon the strap.

2. In a device of the class described, the combination with a vehicle bed, the front axle thereof, the thill clips carried by the axle, and the thills, of rockers mounted upon the axle, pins carried by the rockers and projecting through the thill clips and the thills, springs for normally holding the rockers in position to maintain the pins in the engagement stated, an operating shaft journaled vertically through the bed of the vehicle, the shaft being provided with a bore and with openings in opposite sides which open into the bore, a pin slidable vertically in the bore and being cut-away to register, when at the lower limit of its movement, with the said opening, a strap connected at its ends to cranked portions of the rockers and passed through the openings in the shaft and the cut-away portion of the pin, a hand lever pivoted at the upper end of the shaft for vertical swinging movement, connection between the pin and the lever whereby when the lever is swung vertically the pin will be moved upwardly to exert a pull upon the strap, and flexible connection between the shaft and each end of the axle whereby the shaft may be rotated through the instrumentality of the hand lever to swing the axle.

3. In a device of the class described, the combination with a vehicle bed, the front axle thereof, the thill clips carried by the axle, and the thills, of rockers mounted upon the axle, pins carried by the rockers and projecting through the thill clips and the thills, springs for normally holding the rockers in position to maintain the pins in the engagement stated, an operating shaft journaled vertically through the bed of the vehicle, the shaft being provided with a bore and with openings in opposite sides which open into the bore, a pin slidable vertically in the bore and being cut-away to register, when at the lower limit

of its movement, with the said opening, a strap connected at its ends to cranked portions of the rockers and passed through the openings in the shaft and the cut-away portion of the pin, a hand lever pivoted at the upper end of the shaft for vertical swinging movement, connection between the pin and the lever whereby when the lever is swung vertically the pin will be moved upwardly to exert a pull upon the strap, flexible connection between the shaft and each end of the axle whereby the shaft may be rotated through the instrumentality of the hand lever to swing the axle, and a latch for holding the hand lever in raised position when so swung.

4. In a device of the class described, the combination with a vehicle bed, the front axle thereof, the thill clips carried by the axle, and the thills, or rockers mounted upon the axle, pins carried by the rockers and projecting through the thill clips and the thills, springs for normally holding the rockers in position to maintain the pins in the engagement stated, an operating shaft journaled vertically through the bed of the vehicle, the shaft being provided with a bore and with openings in opposite sides which open into the bore, a pin slidable vertically in the bore and being cut-away to register, when at the lower limit of its movement, with the said opening, a strap connected at its ends to cranked portions of the rockers and passed through the openings in the shaft and the cut-away portion of the pin, a hand lever pivoted at the upper end of the shaft for vertical swinging movement, connection between the pin and the lever whereby when the lever is swung vertically the pin will be moved upwardly to exert a pull upon the strap, flexible connection between the shaft and each end of the axle whereby the shaft may be rotated through the instrumentality of the hand lever to swing the axle, and a spring latch for holding the hand lever in raised position when so swung.

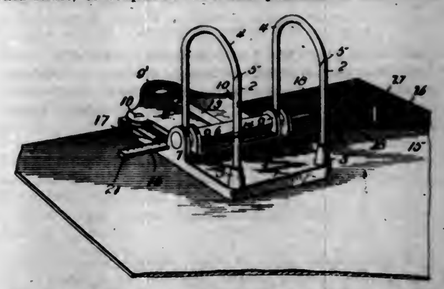
5. In a device of the class described, the combination with a vehicle bed, the front axle thereof, the thill clips carried by the axle, and the thills, of rockers mounted upon the axle, pins carried by the rockers and projecting through the thill clips and the thills, springs for normally holding the rockers in position to maintain the pins in the engagememnt stated, an operating shaft journaled vertically through the bed of the vehicle, the shaft being provided with a bore and with openings in opposite sides which open into the bore, a pin slidable vertically in the bore and being cut-away to register, when at the lower limit of its movement, with the said opening, a strap connected at its ends to cranked portions of the rockers and passed through the openings in the shaft and the cut-away portion of the pin, a hand lever pivoted at the upper end of the shaft for vertical swinging movement, connection between the pin and the lever whereby when the lever is swung vertically the pin will be moved upwardly to exert a pull upon the strap, flexible connection between the shaft and each end of the axle whereby the shaft may be rotated through the instrumentality of the hand lever to swing the axle, a spring latch for holding the hand lever in raised position when so swung, and a manually operable means for disengaging the latch from the lever to permit dropping of the same to normal position.

[Claim 6 not printed in the Gazette.]

878,320. PAPER FILE AND PUNCH. CHARLES SPIRO, New York, N. Y. Filed Sept. 20, 1907. Serial No. 393,863.

1. In a paper file, a base provided with impaling pins, pivoting lugs provided upon said body, a rock shaft mounted in said lugs and carrying transfer wires, a punch plate extended in an opposite direction to said wires and having lugs pivoted to said shaft, and unitary means for holding said shaft and plate under tension.

2. In a paper file, a base provided with impaling pins, pivoting lugs provided upon said base, a rock shaft mounted in said lugs and carrying transfer wires, means for holding said shaft under tension, a punch plate pivotally mounted upon said shaft, to coöperate with said punches.

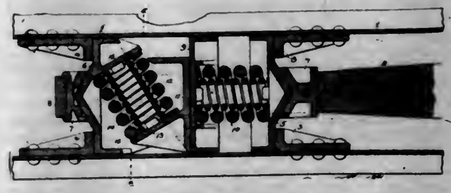


4. In a paper file, a base provided with impaling pins, pivoting lugs carried by said base, a rock shaft mounted in said lugs, transfer wires carried by said shaft, a punch plate pivoted upon the rock shaft, and a tension spring carried by punch plate and bearing in contact with a retaining face upon said rock shaft.

5. In a paper file, a base provided with impaling pins, pivoting lugs carried by said base, a rock shaft mounted in said lugs, transfer wires carried by said rock shaft, a punch plate pivoted upon the rock shaft, and a flat tension spring secured at one end to said punch plate and disposed at its opposite end in contact with an angular face upon said rock shaft.

[Claims 6 to 8 not printed in the Gazette.]

878,321. FRICTION DRAFT-GEAR FOR RAILWAY-CARS. ARNOLD STUCKI, Pittsburg, Pa., assignor to Forsyth Brothers Company, Chicago, Ill., a Corporation of Illinois. Filed May 14, 1904. Serial No. 208,013.



1. A spring friction structure for the draft gear of railway cars, comprising a spring element and frictionally engaged devices meeting in one diagonal plane and imparting pressure thereto, and a supplementary spring through which pressure is transmitted to said spring friction structure, substantially as specified.

2. A spring friction structure for the draft gear of railway cars, said structure comprising a spring element, members with side plates having diagonal bearing upon each other and end plates providing bearings for the interposed spring element, and a supplementary spring, through the medium of which pressure is applied, substantially as specified.

3. A spring friction structure for the draft gear of railway cars, having a spring element disposed diagonally in respect to the longitudinal axis of the draft gear, substantially as specified.
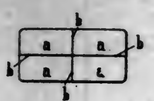
4. A spring friction structure for the draft gear of railway cars, having a spring element disposed diagonally in respect to the longitudinal axis of the draft gear, and a supplementary spring parallel with the longitudinal axis of the draft gear and through which pressure is exerted upon said spring friction structure, substantially as specified.

5. A spring friction structure for the draft gear of railway cars, having a spring element disposed diagonally in respect to the longitudinal axis of the draft gear, and

frictionally engaged devices for imparting pressure to said spring element in the direction of its axis, substantially as specified.

[Claims 6 to 32 not printed in the Gazette.]

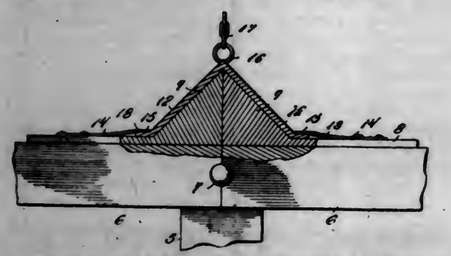
878,322. CEMENTED LITHOGRAPHIC STONE. HUBERT WAGNER, Munich, Germany, assignor to Charlottenburger Farbwerke Aktiengesellschaft, Charlottenburg, Prussia, Germany. Filed Feb. 23, 1904. Serial No. 194,951.



1. A lithographic plate or roller, comprising a plurality of lithographic stones united together by a mixture of shellac cement and powdered lithographic stone.

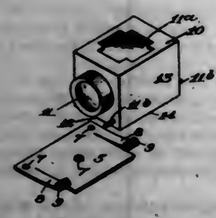
2. The combination in a lithographic plate or roller of separate pieces of lithographic stone and binding agent substantially consisting of shellac dissolved in alcohol and sulfuric ether and including powdered lithographic stone.

878,323. HORSE-RELEASER. ALTON WHITE, Raywood, Tex. Filed July 7, 1906. Serial No. 325,137.



A device of the class described comprising a whiffle-tree separated at its middle transversely, the ends of the sections thus formed being provided with registering recesses for the reception of the pivot bolt for the tree, substantially triangular head sections secured upon the rear edges of the sections and extending rearwardly therefrom and combining to form a triangular head which is pointed rearwardly, a hollow triangular shaped cap loosely fitted over the head, said cap being provided at its forward corners with laterally extending flanges, leaf springs secured to the attaching portions of the head sections and extending toward each other and at their free ends overlapping the flanges upon the cap, and a flexible pull device connected with the apex of the cap.

878,324. VIEW-FINDER. HENRY J. WINTER, Rochester, N. Y., assignor to Eastman Kodak Co., Rochester, N. Y., a Corporation of New York. Filed Oct. 2, 1907. Serial No. 395,491.



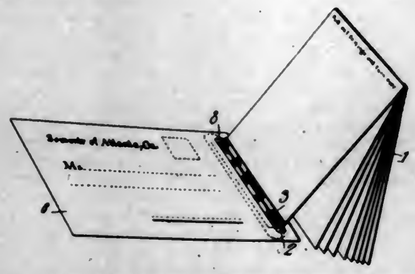
1. In a view finder, the combination with a support provided with yielding bearings, of a finder box, pivoted in said bearings having two contact faces adapted to rest alternately against the face of the support and provided with a portion engaging the latter as the box is rotated and arranged a greater distance from the pivot than either of said faces.

2. In a view finder, the combination with a support, of a pair of resilient arms carried thereby and a finder box pivoted to said arms having two contact faces adapted to rest alternately against the face of the support and provided with a portion engaging the latter as the box is rotated and arranged a greater distance from the pivot than either of said faces.

3. In a view finder, the combination with a supporting plate of elastic material having integral portions struck up therefrom to form resilient arms, of a finder box pivoted to said arms having two contact faces adapted to rest alternately against the face of the support and provided with a portion engaging the latter as the box is rotated and arranged a greater distance from the pivot than either of said faces.

4. The combination with a finder box, and pivots at opposite ends thereof, of a plate underlying said box and spring arms formed integrally with the ends of the plate and forming bearings for said pivots.

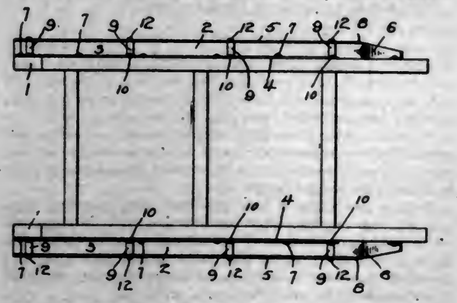
878,325. VIEW-FOLDER AND MAILING-CASE THEREFOR. MAX WITT, Atlanta, Ga. Filed June 6, 1907. Serial No. 377,662.



1. A folder, a bar hinged to one end thereof and being of greater length than the breadth of the folder, a case having at one side an opening through which the folder may pass without obstruction but which is less in length than the length of the bar.

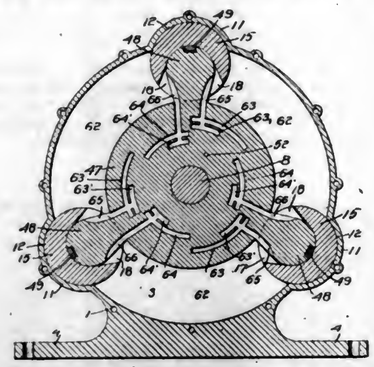
2. A folder having at the free end of one of its sides a hinged bar, said bar being of greater length than the breadth of the folder, a case having in the vicinity of one of the ends of one of its sides an elongated opening through which the said folder may freely slide but which is less in length than the length of the said bar.

878,326. SHOE FOR SLEDS. WILLIAM C. ABELSON, Plaza, N. D. Filed June 12, 1907. Serial No. 378,641.



The combination with a sled runner, of a shoe formed to be secured to the side thereof and comprising a tread portion constructed with an inner flange disposed at an acute angle thereto, with an outer flange, said tread portion being curved upwardly at its front end, and fastening means engaged through said inner flange with the runner.

878,327. ROTARY ENGINE. JOHN L. ADAMS, Tacoma, Wash. Filed June 5, 1907. Serial No. 377,389.



1. A rotary engine comprising a casing, a power shaft projected therethrough, a casting mounted upon said power shaft, pistons carried by said casting, displaceable valves in said casing, means for moving said valves during the rotation of said pistons, cylinder heads secured to said casing, one of said cylinder heads being formed with a steam chest comprising independent chambers, said casting being formed with steam passages terminating adjacent said pistons on each side thereof, a valve plate interposed between said steam chest and said casting for controlling the admission and exhaust of steam between said casing and said steam chest, a throttle valve for controlling the admission of steam to and the exhaust of steam from said respective chambers of said steam chest, means for moving said valve plate and means for simultaneously moving said throttle valve.

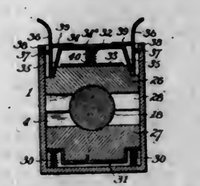
2. A steam engine of the type set forth, comprising a cylindrical casing, a power shaft projected therethrough, a casting carried by said power shaft, pistons carried by said casting, displaceable valves in said casing for coöperating said pistons, means for moving said valves during the rotation of said pistons, cylinder heads secured to said casing, one of said cylinder heads being formed with a steam chest, said steam chest being formed with independent steam chambers, a controlling valve for admitting steam in one chamber and permitting its exhaust from the other, said casting being formed with steam passages discharging on each side of said pistons, means for controlling the communication between said casting and the chambers of said steam chest and means for correspondingly moving said controlling valve.

3. A steam engine of the type set forth, comprising a cylindrical casing, a power shaft projected therethrough, cylinder heads closing the ends of said casing, one of said cylinder heads being formed with a steam chest constructed with independent chambers, a casting on said power shaft, pistons carried by said casting, rotatable valves in said casing formed with recesses to receive said pistons, means for rotating said valves during the rotation of said pistons, a controlling valve designed to control the steam entering and exhausting from said chambers, a rotary valve plate between said chambers and said piston and formed with a plurality of ports, said steam chest being formed with ports designed to register with the several ports of said valve plate, means for moving said valve plate to cover and uncover the ports of said steam chest in controlling the passage of steam to and from said casing, and means for simultaneously moving said controlling valve.

4. A steam engine of the type set forth, comprising a casing, a power shaft projected therethrough, cylinder heads closing the ends of said casing, one of said cylinder heads being formed with a steam chest, said steam chest being formed with independent chambers, each having inlet and exhaust communication with said cylinder, a valve plate having ports designed to uncover the inlet port of one chamber, and to close the exhaust port thereof, and to uncover the inlet port of the other chamber and to open the exhaust port thereof, a controlling valve designed to permit of the admission of steam into one of said chambers, and the simultaneous exhaust of steam from the other of said chambers, means for moving said valve plate and means for simultaneously and correspondingly operating said controlling valve.

5. A steam engine of the type set forth, comprising a casing, a power shaft projected therethrough, cylinder heads closing the ends of said casing, one of said cylinder heads being constructed with a steam chest having independent chambers, a casting carried by said power shaft, pistons carried by said casting, said casting being constructed in one of its faces with curved grooves arranged in pairs and severally in non-alined relation, radially extending grooves leading from each pair of said curved grooves, and communicating at each side of the pistons, the outermost of each pair of said curved grooves being elongated and the innermost of each pair of said grooves being short, said steam chest being formed with inlet ports and exhaust ports designed to afford communication between each of said chambers with each of said respective pairs of curved grooves, a valve plate interposed between said casting and said steam chest and having ports formed to register with the ports of the latter and the grooves of the former, the ports of said valve plate being formed to establish independent inlet communication with the elongated or short grooves of either of said pairs, from one of said chambers and to establish exhaust communication between the grooves of the other of said pairs with the other of said chambers, a controlling valve having independent communication with the chambers of said steam chest and formed to permit the admission of steam to one of said chambers and the simultaneous exhaust of steam from the other of said chambers, means for manipulating said valve plate and means for simultaneously operating said controlling valve.

878,328. CAR-AXLE JOURNAL-BOX. CLAYTON T. ARNOLD, Wilkes-Barre, Pa. Filed May 6, 1907. Serial No. 372,188.



1. In a car-axle journal box, the combination with a box having a vertical compartment open at its upper end and through which compartment the axle is adapted to pass transversely, and provided with stop-shoulders at the upper ends of the compartment, of guard-plates slidably and removably mounted in the compartment and having overlapping flanges, springs interposed between the lower guard plate and bottom of the compartment, a removable securing device located in the upper end of the compartment and having spring members engaging the stop-shoulders, and a spring interposed between the securing device and upper guard-plate.

2. In a car-axle journal box, the combination with a box having a vertical compartment open at its upper end and through which compartment the axle is adapted to pass transversely, and provided with stop-shoulders at the upper ends of the compartment, of guard-plates slidably and removably mounted in the compartment and hav-

ing overlapping flanges, springs interposed between the lower guard-plate and bottom of the compartment, a removable securing device located in the upper end of the compartment and having spring members engaging the stop-shoulders, and a boss formed on its inner side, a wear-plate bearing upon the guard-plate and having a boss on a line with the aforesaid boss, and a helical spring interposed between the securing device and wear-plate and engaging the bosses, substantially as shown and described.

3. In a car-axle journal box, the combination with a box having a vertical compartment open at its upper end and through which the axle passes transversely, and provided with stop-shoulders at the upper end of the compartment, of guard-plates slidable in the compartment and having overlapping flanges, springs interposed between the lower guard-plate and the bottom of the compartment, a removable securing device located in the upper end of the compartment and comprising a horizontal portion having downwardly and upwardly projecting spring members, the upwardly projecting members having shoulders which engage the stop-shoulders of the box and terminate in hand-grasping portions, and a spring interposed between the horizontal portion of the securing device and the upper guard-plate, substantially as shown and described.

4. In a car-axle journal box, the combination with the axle and box, the latter having a vertical compartment open at its upper end and through which compartment the axle passes transversely, and provided with stop-shoulders at the upper end of the compartment, of guard-plates slidable in the compartment to embrace the axle and having overlapping flanges, springs interposed between the lower guard-plate and bottom of the compartment, a removable securing device located in the upper end of the compartment and comprising a horizontal portion having downwardly and upwardly projecting spring members at its ends, the upwardly-projecting members having shoulders which engage the stop-shoulders of the box and the horizontal portion of the securing device having a boss on its underside, a wear-plate bearing on the upper guard-plate and having a boss on its upper side, and a helical spring interposed between the securing device and wear-plate and engaging at its ends with the aforesaid bosses.

5. In a car-axle journal-box, the combination, with a box having a vertical compartment at its rear end through which the axle passes transversely, the opposite end walls of said compartment having stop shoulders at their upper ends, of guard-plates slidably mounted in the vertical compartment and adapted to bear against the upper and lower sides of the axle and having overlapping flanges, springs interposed between the bottom of the compartment and lower guard plate, and a securing device for the upper guard plate comprising a horizontal portion with downwardly projecting members at its outer ends integrally connected to upwardly-projecting spring members or catches having shoulders which engage the stop shoulders at the upper ends of the compartment, and arms projecting from said spring members or catches and bearing upon the horizontal portion of the securing device, together with a compression spring interposed between the said horizontal portion and the upper guard-plate, substantially as shown and described.

878,329. DUST-COLLECTING APPARATUS. GEORGES R. BIMM, Paris, France. Filed Mar. 25, 1907. Serial No. 364,543.



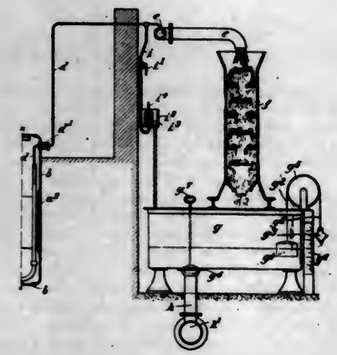
1. A portable dust collecting apparatus comprising in combination, a pump, a nozzle chamber communicating with said pump, a nozzle movably mounted in said chamber and adapted to be moved abreast of the surface to be cleaned, and an air filter interposed between said pump and chamber

2. A portable dust collecting apparatus comprising in combination, a nozzle chamber provided with a nozzle and a wall forming with the upper wall of said chamber a conduit and with the lower wall of said chamber a dust trap, and a pump communicating with said chamber.

3. A portable dust collecting apparatus comprising in combination, a nozzle chamber provided with a nozzle and a wall forming with one wall of said chamber a conduit and with another wall thereof a dust trap, said wall and the walls of said chamber being recessed, said nozzle being movably mounted in said recess, and a pump communicating with said chamber.

4. A portable dust collecting apparatus comprising in combination, a pump, a nozzle chamber communicating with said pump and provided with a dust trap, and a nozzle movably mounted in said chamber and adapted to be operated abreast of the surface to be cleaned.

878,330. STEAM-GENERATOR. JAMES BLAKE, Silvertown, England, assignor of one-half to John W. Macdonald, Silvertown, England. Filed Jan. 2, 1907. Serial No. 350,484.



1. In a steam generator, a collector pipe having perforations therein and an upturned portion extending above the water level and being open and an ejection pipe inserted in the said collector pipe and extending exteriorly of the shell of the boiler.

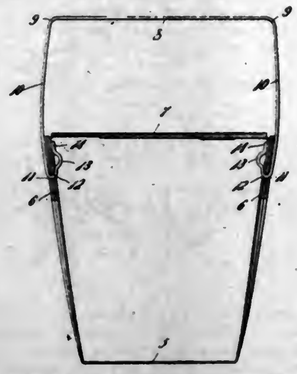
2. In a steam generator, the combination with the collector pipe and ejector pipe of a cock on said ejector pipe having a diaphragm formed with an aperture alined with the bore of the plug of said cock.

3. In a steam generator, the combination of a collector pipe, an ejector pipe, a cock on said ejector pipe, a diaphragm in said cock having an aperture alined with the bore of the plug in said cock, and a blow down cock in the bottom of the boiler.

4. In a steam generator, the combination with the shell of the boiler and a blow down cock, of a collector pipe having perforations therein and arranged near the bottom of the said shell, an upturned portion on said collector pipe ascending above the high water level in the boiler and being open to the boiler and an ejector pipe inserted in the said upturned portion of the collector pipe so as to descend therein to about the low water level in the boiler.

5. In a steam generator the combination with the shell of the boiler and a blow down cock, of a collector pipe having perforations therein and arranged near the bottom of the said shell, an upturned portion on said collector pipe ascending above the high water level in the boiler, an ejector pipe inserted in the said upturned portion of the collector pipe so as to descend therein to about the low water level in the boiler, and a cock on the said ejector pipe having a diaphragm therein formed with an aperture arranged in alinement with the bore of the plug of said cock.

878,331. WIRE HANDLE FOR PAPER VESSELS. CHARLES T. BLOOMER, Newark, N. Y. Filed July 2, 1906. Serial No. 324,447.



1. A receptacle having a pivoted supporting bail the opposite ends of which are extended through the exterior walls of the receptacle and bent upwardly to form fingers adapted to bear against the interior walls of the receptacle, the free ends of said fingers being disposed parallel with and adapted to bear against the interior walls of the receptacle and the intermediate portion thereof being extended laterally within the receptacle to form bearing surfaces adapted to bear against an adjacent receptacle when several of the receptacles are nested.

2. A receptacle having a pivoted supporting bail the opposite ends of which are extended through the exterior walls of the receptacle and bent upwardly to form terminal fingers adapted to bear against the interior walls of the receptacle, there being projections formed in the bent ends of the bail beneath the terminal fingers and extending within the receptacle for engagement with the exterior walls of an adjacent section when several of said receptacles are nested.

3. A receptacle having a pivoted supporting bail formed of a single piece of wire the opposite ends of which are disposed in contact with the exterior walls of the receptacle and thence extended laterally through said walls and bent upwardly within the receptacle to form terminal fingers disposed parallel with the interior walls of the receptacle and adapted to bear against the same, the wire forming the bent ends of the bail being extended laterally beneath the terminal fingers to produce intermediate projections adapted to bear against the exterior walls of an adjacent receptacle when several of said receptacles are nested.

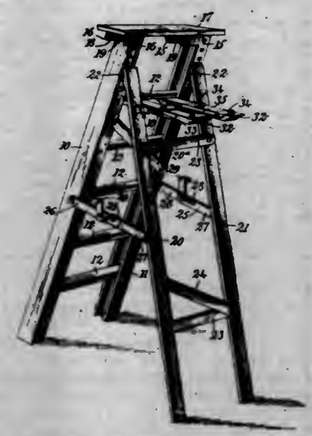
878,332. COLLAPSIBLE LADDER. WILLIAM J. BLUNDELL, New York, N. Y. Filed Mar. 26, 1907. Serial No. 364,609.

1. In combination, a ladder, including oppositely-disposed side rails and treads connecting said side rails, said ladder being collapsible in its own plane; legs connected to said side rails and movable in respect thereto, and a shelf or platform pivotally connected to said legs and collapsible in its own plane.

2. In combination, a ladder formed of oppositely-disposed side rails and treads connecting said side rails, said ladder being collapsible in its own plane, and a shelf or platform supported adjacent one end of said ladder and movable into a plane substantially parallel to the plane of the ladder and collapsible in said plane as said ladder is collapsed.

3. In a step-ladder, the combination of oppositely disposed side rails movable in respect to each other, treads connecting said side rails, legs connected to said side rails and movable in respect thereto, and a shelf or platform adjacent the top tread collapsible laterally and in its own plane.

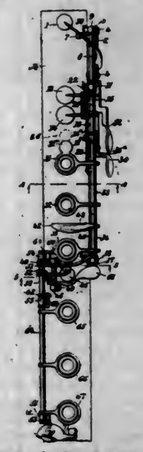
4. In a step-ladder, the combination of oppositely disposed side rails movable in respect to each other, treads connecting said side rails, legs connected to said side rails and movable in respect thereto, and a shelf or platform carried by said legs and in engagement with one of the treads said shelf or platform being collapsible laterally and in its own plane.



5. In a step-ladder, the combination of oppositely disposed side rails movable in respect to each other, treads connecting said side rails, legs connected to said side rails and movable in respect thereto, and a shelf or platform collapsible laterally and in its own plane pivotally connected to one of said legs and pivotally and slidably connected to the other leg.

[Claim 6 not printed in the Gazette.]

878,333. CLARINET. HENRY BONN, Jr., Scranton, Pa. Filed Mar. 23, 1904. Serial No. 199,533.



1. A clarinet having a body, a normally open A-key and a normally open G-sharp key at the front of said body, a thumb hole at the back of the body, a thumb hole key normally open over the thumb hole, a connection between the said thumb-hole key and the said G-sharp key, and a connection between the said G-sharp key and the said A-key to close both the said A-key and the said G-sharp key on pressing the said thumb hole key.

2. A clarinet having a body, a normally open A-key, a normally open G-sharp key, an arm thereon a thumb hole

at the back of the said body, a thumb hole key normally open over the said thumb hole, an arm on the said thumb hole key and extending under the said arm on the said G-sharp key to close the latter on pressing the thumb hole key, and a connection between the said G-sharp key and the said A-key to close the latter on closing the said G-sharp key.

3. A clarinet having a normally closed B-flat key having a finger piece in position to be pressed by the thumb of the left hand, and a trilling lever having a finger piece in position to be pressed by the forefinger of the left hand, and an arm on the said trilling lever engaging the said B-flat key for opening the same on pressing the finger piece of the trilling lever.

4. A clarinet having a normally open A-key, a normally closed C-sharp key, and an operating part common to both keys to close the A-key on opening the C-sharp key.

5. A clarinet having a normally open A-key, a normally open G-sharp key, means for closing the said A-key on closing the said G-sharp key, a ring in position to be pressed by the third finger of the left hand, and a connection between the said ring and the said G-sharp key to close the same simultaneously and thereby the A-key on pressing the said ring.

[Claims 6 to 14 not printed in the Gazette.]

878,334. GAME APPARATUS. SPOTSWOOD D. BOWERS, Bridgeport, Conn. Filed June 12, 1907. Serial No. 378,531.



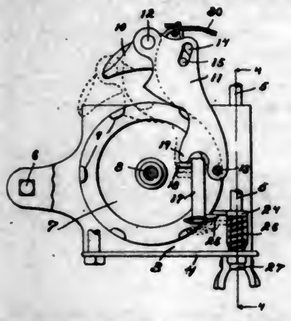
1. A game apparatus comprising a game-board having a zig-zag path represented thereon provided at intervals with distinguishing points, and having a number of paths intersecting the zig-zag path, the point of intersection being at said distinguishing points.

2. A game apparatus comprising a game-board having represented thereon a zig-zag course or path having a start and a finish and provided at intervals throughout its extent with distinguishing points, a number of irregular paths extending across the board and intersecting said zig-zag path at several points, the points of intersection being at said distinguishing points.

3. A game apparatus comprising a game-board having represented thereon a zig-zag path extending thereacross and provided at intervals with distinguishing points, a number of paths extending across the board and intersecting said zig-zag paths at the distinguishing points and a number of paths arranged to connect the last-mentioned path at several points.

4. A game apparatus comprising a game-board having thereon a zig-zag path consisting of the representation of animal tracks having at intervals a track colored or marked to distinguish it from the remainder of the tracks, a plurality of paths intersecting the zig-zag path at said distinguishing tracks, said paths being formed of representations of human footprints, and connecting paths connecting said last mentioned paths at several points, said connecting paths being designed to represent human footprints.

878,335. HOISTING APPARATUS. ALLEN P. BOYER, Goshen, Ind. Filed Sept. 18, 1907. Serial No. 393,440.



1. The combination with a frame, of a pulley having teeth thereon; a link having a slot therein, pivoted on said frame, the pivot for said link being arranged in front of the journal for said pulley; a clutch member having a curved engaging face adapted to coact with the pulley in gripping a rope, pivotally mounted on said link; a pin on said clutch member adapted to engage said slot in said link whereby the pivotal movement of said clutch member is limited; a dog adapted to hold said link in its elevated position; a return spring therefor; a downwardly and forwardly-projecting V-shaped fixed pawl or tooth on said link adapted to engage the teeth on said pulley when said link is released by said dog; a hoisting rope; a trip member for said dog to which said rope is connected; and a return spring for said trip member.

2. The combination with a frame, of a pulley having teeth thereon; a link pivoted on said frame, the pivot for said link being arranged in front of the journal for said pulley; a clutch member adapted to coact with the pulley in gripping a rope, pivotally mounted on said link; a dog adapted to hold said link in its elevated position; a return spring therefor; a downwardly and forwardly-projecting V-shaped pawl or tooth on said link adapted to engage the teeth on said pulley when said link is released by said dog; a hoisting rope; a trip member for said dog to which the said rope is connected; and a return spring for said trip member.

3. The combination with a frame, of a pulley having teeth thereon; a link having a slot therein pivoted on said frame, the pivot for said link being arranged in front of the journal for said pulley; a clutch member having a curved engaging face adapted to coact with the pulley in gripping a rope, pivotally mounted on said link; a pin on said clutch member adapted to engage said slot in said link whereby the pivotal movement of said clutch member is limited; a dog adapted to hold said link in its elevated position; a return spring therefor; a pawl on said link adapted to engage the teeth on said pulley when said link is released by said dog; a hoisting rope; a trip member for said dog to which the said rope is connected; and a return spring for said trip member.

4. The combination with a frame, of a pulley having teeth thereon; a link pivoted on said frame, the pivot for said link being arranged in front of the journal for said pulley; a clutch member adapted to coact with the pulley in gripping a rope pivotally mounted on said link; a dog adapted to hold said link in its elevated position; a return spring therefor; a pawl on said link adapted to engage the teeth on said pulley when said link is released by said dog; a hoisting rope; a trip member for said dog to which the said rope is connected; and a return spring for said trip member.

5. The combination with a frame, of a pulley having teeth thereon; a link having a slot therein pivoted on said frame, the pivot for said link being arranged in front of the journal for said pulley; a clutch member having a curved engaging face adapted to coact with the pulley in gripping a rope, pivotally mounted on said link; a pin on said clutch member adapted to engage said slot in said link whereby the pivotal movement of said clutch member is limited; a dog adapted to hold said link in its elevated position; and a downwardly and forwardly-projecting V-shaped fixed pawl or tooth on said link adapted to engage the teeth on said pulley when said link is released by said dog; a hoisting rope; and a trip member for said dog to which the said rope is connected.

[Claims 6 to 37 not printed in the Gazette.]

878,336. BAG-HOLDER. ZADOK R. BROWN, Lodi, N. Y. Filed Jan. 7, 1907. Serial No. 351,157.



1. A device of the class described comprising a stand, a follower guided on the stand, a fixed hopper secured to the upper end of the follower, a foot lever fulcrumed on the stand, a link connected with the lever and follower and arranged to hold the free end of the lever upwardly when the follower is in lowered position, and a member disposed directly below the fulcrum of the lever for engaging the latter when the follower is in raised position, the weight of the follower and attached parts serving to hold the point of connection between the lever and link out of line with the fulcrum of the lever and point of connection of the link with the follower.

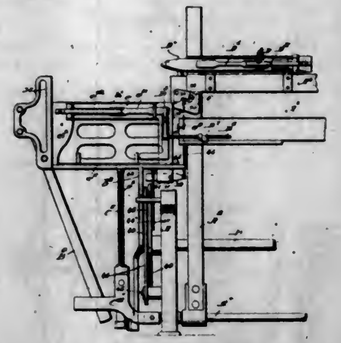
2. The combination of a stand comprising a pair of spaced standards, a pair of cross members connected with the standards and suitably spaced apart, a follower guided between the standards, a hopper secured to the follower, a foot lever fulcrumed on one of the standards at a point between the members and adapted to swing on a horizontal axis, a link pivotally connected with one end of the lever, a pivotal connection between the link and follower at a point intermediate the members, and means for attaching a bag to the hopper, the lower cross member serving as a stop for the free end of the lever to hold the latter and link against movement under the weight of the follower and attached parts, and the said link serving to engage the upper cross member to prevent the follower from being withdrawn from the stand.

878,337. WEFT-REPLENISHING LOOM. WILLIAM H. BROTHERS, Dedham, Mass., assignor, by mesne assignments, to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Mar. 15, 1906. Serial No. 306,175.

1. In a loom, a lay, a shifting shuttle-box, means for moving the shuttle-box on the lay, a shuttle having a feeler and a regulating device, and mechanism actuated by said regulating device to determine the time when the shifting shuttle-box shall be moved to effect a change of shuttle.

2. In a loom, a lay, a shifting shuttle-box, an actuator, a shuttle having a feeler and regulator, a hook, hook-controlling mechanism, bunter mechanism, and bunter-controlling means, the latter being actuated by the regulator of the shuttle when the filling is to be changed, to thereby place the bunter mechanism so that it may move the hook-controller to position said hook in the path of movement of said actuator to lift the shuttle-box.

3. In a loom, a lay, a shifting shuttle-box, an actuator, a hook, hook-controlling mechanism, bunter mechanism carried by the lay, and automatic means to move the bunter mechanism to engage and move said hook-controlling mechanism to effect the engagement of said hook with said actuator to raise the shuttle-box.



4. In a loom, a lay, a shuttle-box at one end thereof and a depressor, combined with a shuttle, a feeler carried thereby, a spring to move the feeler to engage the filling mass in the shuttle, a regulator, a stronger spring to move it in one direction, said depressor moving said regulator in the other direction that the spring of the feeler may move the latter to contact with the filling-mass.

5. A lay, having at one end a shuttle-box provided with a depressor, combined with a shuttle having a spring-controlled feeler, and a spring-controlled regulator, the action of the depressor on the regulator permitting the feeler to contact intermittingly with the filling in the shuttle.

[Claims 6 to 10 not printed in the Gazette.]

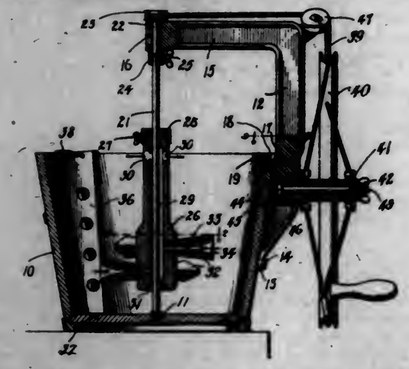
878,338. CAR. EZRA S. BUCKNAM, Philadelphia, Pa., assignor, by mesne assignments, to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 7, 1906. Serial No. 320,522.



A car having posts supporting the roof and head-lining thereby forming a sash pocket, upper and lower over-lapping and contacting sashes, pinties on both sashes, a short groove 7 formed in the roof portion of the stanchions and following the outer line of the car from the upper end of the upper sash and thence inwardly following the line of the roof to a point a little less than one-half way up the roof chamber, lower grooves 8 for the pinties of the lower sash extending substantially parallel to the groove 7 throughout a portion of their length and parallel to the roof in the extreme upper portion, the said upper portion being practically in alinement with the groove 7,

whereby each sash may be moved independently of the other sash and held in its raised position in the roof pocket, both sashes using independent slideways and pintle ways.

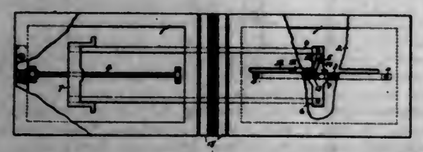
878,339. AERATING-CHURN. EDWIN H. BURNES, Amsterdam, N. Y. Filed Nov. 29, 1907. Serial No. 404,412.



1. In apparatus of the class described, the combination of a receptacle, a step bearing in the bottom thereof, a vertical shaft supported on said bearing for rapid rotation, a supporting frame detachably secured to the receptacle, driving means carried by said frame and including a short shaft section having a loose driving connection with said vertical shaft, and a dasher mounted on said vertical shaft and comprising a counterbored barrel having air inlet ports at its upper end and a plurality of beaters attached to and projecting outwardly from said barrel in parallel horizontal planes, each of said beaters having a central bore communicating with the aforesaid counterbore, the outer end of said bore being flared, and the outer end of the beater being widened both horizontally and vertically, for the purposes set forth.

2. In combination, a receptacle, a shaft therein, a dasher arranged thereon for rapid rotation, a supporting frame detachably secured to the receptacle and having a horizontal arm, said arm having a vertical bearing above said shaft, a short shaft section journaled in said bearing and having a loose connection with the aforesaid shaft, a bolt mounted in said frame for vertical adjustment, a sleeve surrounding said bolt, means to clamp said sleeve and bolt to the frame in adjusted position, and driving means for said dasher and shaft sections including a wheel journaled on said sleeve, substantially as set forth.

878,340. TEMPORARY BINDER. HARRY F. BUSHONG, Kalamazoo, Mich., assignor to Kalamazoo Loose Leaf Binder Company, Kalamazoo, Mich. Filed Dec. 31, 1906. Serial No. 350,267.



1. The combination with the covers having chambers therein, the inner walls of one of said covers being provided with a slot, of binding cords; cross-bars to which said binding cords are secured arranged in said chambers in said covers; a ratchet-bar on which one of said cross-bars is slidably mounted arranged in the cover having the slotted inner wall; a pawl seat on said cross-bar; a bar-like pawl having downturned ends adapted to embrace the said cross-bar arranged on said seat; a spring for said pawl pivoted on said cross-bar adapted to be adjusted to hold said pawl into or out of its engaging position; a finger-piece for said spring adapted to be manipulated through said slot in said cover; a finger-piece pivoted on said cross-bar arranged through the said slot on said cover, said finger-piece being adapted to fold down into said slot, for the purpose specified.

2. The combination with the covers having chambers therein, the inner walls of one of said covers being provided with a slot; binding cords; cross-bars to which said binding cords are secured arranged in said chambers in said covers; a ratchet-bar on which one of said cross-bars is slidably mounted arranged in the cover having the slotted inner wall; a pawl seat on said cross-bar; a bar-like pawl having downturned ends adapted to embrace the said cross-bar arranged on said seat; a spring for said pawl pivoted on said cross-bar adapted to be adjusted to hold said pawl into or out of its engaging position; a finger-piece for said spring adapted to be manipulated through said slot in said cover; a finger-piece pivoted on said cross-bar through the said slot on said cover, said finger-piece being adapted to fold down into said slot; and a longitudinally arranged screw shaft for adjusting the other of said cross-bars, for the purpose specified.

3. The combination with the covers having chambers therein, the inner walls of one of said covers being provided with a slot; binding cords; cross-bars to which said binding cords are secured arranged in said chambers in said covers; a ratchet-bar on which one of said cross-bars is slidably mounted arranged in the cover having the slotted inner wall; a pawl on said cross-bar; a bar-like pawl having downturned ends adapted to embrace the said cross-bar arranged thereon; a spring for said pawl adapted to be adjusted to hold said pawl into or out of its engaging position; a finger-piece for said spring adapted to be manipulated through said slot in said cover; a finger-piece pivoted on said cross-bar through the said slot on said cover, said finger-piece being adapted to fold down into said slot; and a longitudinally arranged screw shaft for adjusting the other of said cross-bars, for the purpose specified.

4. The combination with the covers having chambers therein, the inner walls of one of said covers being provided with a slot, of binding cords; cross-bars to which said binding cords are secured arranged in said chambers in said covers; a ratchet-bar on which one of said cross-bars is slidably mounted arranged in the cover having the slotted inner wall; a pawl on said cross-bar; a spring for said pawl adapted to be adjusted to hold said pawl into or out of its engaging position; a finger-piece for said spring adapted to be manipulated through said slot in said cover; a finger-piece pivoted on said cross-bar arranged through the said slot on said cover, said finger-piece being adapted to fold down into said slot, for the purpose specified.

5. The combination with the covers having a chamber therein, the inner wall of said cover being provided with a slot, of binding cords; a cross-bar to which the ends of said binding cords are secured arranged in said chamber in said cover; a ratchet on which said cross-bar is slidably mounted arranged in said cover; a pawl seat on said cross-bar; a bar-like pawl having downturned ends adapted to embrace the said cross-bar arranged on said seat; a spring for said pawl pivoted on said cross-bar adapted to be adjusted to hold said pawl into or out of its engaging position; a finger-piece for said pawl adapted to be manipulated through said slot in said cover; and a finger-piece pivoted on said cross-bar arranged through the said slot on said cover, said finger-piece being adapted to fold down into said slot, for the purpose specified.

[Claims 6 to 26 not printed in the Gazette.]

878,341. FIREPROOF SHUTTER. JOHN CAHILL, Norfolk, Va. Filed Mar. 30, 1907. Serial No. 365,477.

1. A fire-proof roller blind, shutter or like construction comprising a plurality of flexible sheets of varying lengths, proportionately divided and riveted together at spaced intervals, the arrangement being such that when the curtain is unrolled there are air chambers or pockets and when rolled one sheet is in continuous contact with the next adjacent sheet, substantially as specified.



2. A fire-proof roller blind, shutter or like construction comprising a flat sheet, a corrugated sheet and an interposed sheet of fire-resistant material, said sheets being formed of flexible material and being of varying length and being proportionately divided, the corrugating being effected by raising the sheet at spaced intervals and securing the sheets together by rivets whereby when rolled one sheet is in continuous contact with the next adjacent sheet, substantially as specified.

3. A fire-proof roller blind, shutter or like construction comprising continuous flexible metal sheets and an interposed sheet of fire-resistant material, said sheets varying in length and being proportionately divided and being secured at spaced intervals whereby one of said metal sheets and the interposed sheet is corrugated when unrolled and smooth when rolled whereby a compact rolling is insured, substantially as described.

4. A fire-proof roller blind, shutter or like construction comprising flexible metal sheets and an interposed sheet of fire-resistant material, said sheets being secured together at spaced intervals, one of said metal sheets and the interposed sheet being longer than the other sheet and being corrugated when unrolled and uncorrugated when rolled said sheets being proportionately divided, substantially as specified.

5. A fire-proof roller blind, shutter or like construction comprising flexible metal sheets and an intermediate asbestos sheet, the latter and one of the metal sheets being corrugated when unrolled and uncorrugated when rolled which is effected by making them longer than the other sheet and securing them at intervals by rivets said sheets being proportionately divided, substantially as specified.

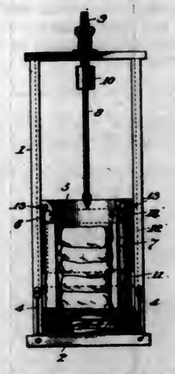
[Claims 6 and 7 not printed in the Gazette.]

878,342. BALING DEVICE. GAVIN N. CAMPBELL, Evansville, Ind. Filed June 5, 1907. Serial No. 377,429.

1. A device for baling articles in a receptacle for shipment, comprising a tube substantially of the dimensions of the receptacle to be filled, having an open side and open bottom permitting the articles to be supported without resting upon the tube, said tube serving to retain the articles in position while being baled and its open side permitting the articles to be introduced therethrough and stacked in the tube, and means by which the tube may be withdrawn from around the bale, substantially as described.

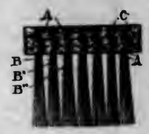
2. A baling device comprising a frame and a slidable open face tube constituting a baling chamber in which to stack and hold articles while being baled, substantially as described.

3. A baling device comprising a frame, a slidable open face tube constituting a baling chamber in which to stack and hold articles while being baled, and a counterbalance connected with the tube, substantially as described.



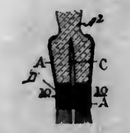
4. A baling device comprising a frame, a platform carried by the frame, and a slidable open face tube constituting a baling chamber in which to stack and hold articles while being baled, said tube being sustained adjacent to said platform, substantially as described.

878,343. MANUFACTURE OF BRUSHES AND BROOMS. PHILIPPE CHAZAL, Lyon, France. Filed June 18, 1906. Serial No. 322,199.



A brush or broom comprising a laminated stock consisting of a plurality of strips having the greater part of their surfaces from the lower edge upwards undulated and cut back for the remainder of their height up to their back edges so as to form grooves in the back of the stock wider than the space between adjacent strips, brush fiber located between the adjacent undulated surfaces of said strips with the rear ends in said grooves means for holding the strips firmly together and cementitious matter in said grooves substantially as described.

878,344. MANUFACTURE OF BRUSHES. PHILIPPE CHAZAL, Lyon, France. Filed June 18, 1906. Serial No. 322,200.



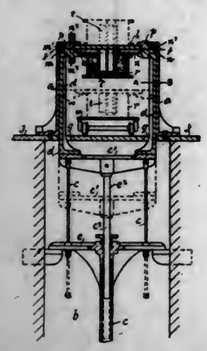
1. A brush comprising a flexible band coiled and compressed to form a stock, brush fiber located between the convolutions of said band, a handle, and a lateral enlargement at one end of the band forming a ferrule whereby the latter may be attached to the handle substantially as described.

2. A brush comprising a flexible band coiled and compressed to form a stock, brush fiber located between the convolutions of said band, a compressible metallic stem attached to the inner end of said band, a handle, and an enlargement at the other end of said band adapted to form a ferrule for reception of the handle substantially as described.

3. A brush comprising a flexible band coiled and compressed to form a stock, brush fiber located between the

convolutions of said band, a handle, an enlargement at one end of the band adapted to form a ferrule for reception of the handle, nails connecting together the convolutions of the band, and binding material disposed in said ferrule for connecting the band and brush material substantially as described.

878,345. SAND-MOLDING MACHINE. JAMES J. CHIPCHASE, Horwich, England. Filed Oct. 20, 1906. Serial No. 339,864.



1. In a molding machine, supporting brackets, a stripping plate adapted to support the mold box and provided with an aperture through which the pattern may enter said box, and a pattern plate, in combination with cooperating half bearings for said stripping and pattern plates and means for journaling the same upon the supporting brackets.

2. In a molding machine, supporting brackets, a stripping plate adapted to support the mold box and provided with an aperture through which the pattern may enter said box, and a pattern plate in combination with cooperating half bearings for said stripping and pattern plates, means for journaling the same upon the supporting brackets, said bearings being provided with an opening adapted to receive a supporting stop whereby one of said plates may be supported during the removal of the other.

878,346. WATCHMAKER'S HAIR-SPRING GAGE. ELIJAH CLARK, Alameda, Cal., assignor to Joseph Nordman, San Francisco, Cal. Filed Apr. 19, 1907. Serial No. 369,164.

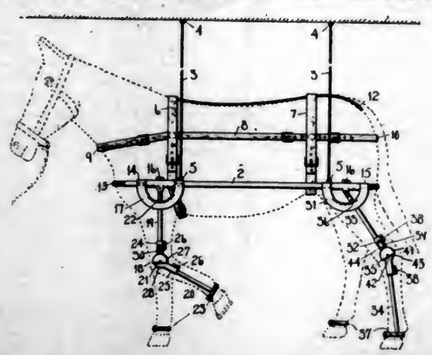


1. A watchmaker's hair-spring gage comprising a scale, a support therefor, a spiral hair spring having one end attached to the support, and extensible from said point of attachment along the scale, means for temporarily attaching to the remaining end of the said spring the hair-spring to be tested, and an indicating-device on the said spiral spring for marking on the scale the movement of the said spring under extension.

2. In a hair-spring gage the combination of a scale, a support therefor, a spiral hair spring having its outermost coil attached to the support, a pointer carried by the innermost coil of said spring, and means for attaching to the said innermost coil one end of the hair-spring to be tested.

3. In a watchmaker's hair spring gage the combination of a horizontally arranged scale, supports therefor, a hair spring having its outer convolution attached to one of said supports and its opposite end free, a pointer attached to the free end and movable substantially parallel to said scale, and means on the free end of the spring for connecting thereto a hair spring to be tested.

878,347. SHOEING-HARNESS. WALTER M. CLEMENT, Aurora, S. D. Filed July 8, 1907. Serial No. 382,765.



1. A shoe harness embracing supporting means, sleeves slidably arranged thereon, leg members pivotally mounted upon said sleeves and comprising upper and lower sections, an intermediate section, said intermediate section comprising upper and lower members having tubular outer ends to receive the inner ends of the upper and lower sections, set screws for adjustably securing said ends in place, a segmental socket formed in the lower end of the upper intermediate member, a circular head on the upper end of the lower member of said intermediate section, said circular head being pivotally mounted in said socket, a series of teeth formed on the outer edge of said head, means adapted to be engaged with said teeth for the retention of the sections of said members at any desired angle, and means connecting the lower end of the lower sections of the members with the ankle of the horse.

2. A shoeing harness comprising side bars adapted to be arranged on each side of the body of a horse, a series of straps to hold said bars in place, overhead supporting rods connected to the latter, sleeves adjustably mounted on said bars near their opposite ends, set screws to hold said sleeves in their adjusted position, leg braces pivotally mounted on said sleeves, said braces comprising upper and lower sections and an intermediate section, said intermediate section comprising upper and lower members having tubular outer ends to receive the inner ends of the upper and lower sections, set screws to adjustably secure said ends in place, a segmental socket formed on the lower end of the upper intermediate member, a circular head on the upper end of the lower member of said intermediate sections, said circular head being pivotally mounted in said socket, a series of teeth formed in the upper edge of said head, a pawl adapted to be engaged with said teeth to hold the sections of said members at any desired angle, and a strap to connect the lower end of the lower sections of the brace with the ankle of the horse, substantially as described.

878,348. CARDING-MACHINE CYLINDER AND CLOTHING THEREFOR. CHARLES A. COBBETT, Newton, Mass. Filed Mar. 5, 1906. Serial No. 304,408.



A carding machine cylinder presenting on its periphery spiral toothed lines and alternately disposed space lines, each toothed line being composed of a plurality of rows of teeth spaced apart and disposed in staggered relation, the space lines being each of greater width than the spaces between the contiguous teeth in the toothed lines, and a detachable filling strip arranged in the space lines and having its outer surface disposed in a plane below that of the outer ends of the teeth.

878,349. CHECK-PROTECTOR. DUDLEY H. COHEN, New York, N. Y. Filed Sept. 10, 1907. Serial No. 392,119.



1. A check protector, comprising a central member, an annular member inclosing the central member and a top member placed on the annular member and provided at one side with a radial segmental extension, said central member being provided centrally with a raised knob or handle around which the annular member and top member are rotatable said central member, annular member and radial segmental extension being provided with printing surfaces in the same horizontal plane.

2. A check protector, comprising a central member, an annular member inclosing the central member and provided with an inwardly directed annular flange or rim which rests thereon, and a top member placed on the annular member and provided at one side with a radial segmental extension, the central member being also provided centrally with a raised knob or handle around which the annular member and top member are rotatable said central member, annular member and radial segmental extension being provided with printing surfaces in the same horizontal plane.

3. A check protector, comprising a central member, an annular member inclosing the central member and provided with an inwardly directed annular flange or rim which rests thereon, and a top member placed on the annular member and provided at one side with a radial segmental extension, the central member being also provided centrally with a raised knob or handle around which the annular member and top member are rotatable, and means for locking the top member to the central member.

4. A check protector, comprising a knob or handle provided with a central stamp member, a rotatable part mounted on the central stamp member and provided with an annular stamp member which incloses the central stamp member and is in the same plane, and a top rotatable part mounted on the first named rotatable part and provided at one side with an extension stamp member in the same plane as the central and annular stamp members.

5. A check protector, comprising a central stamp member provided on one side with a knob or handle, a rotatable part mounted on the central stamp member and provided with an annular stamp member which incloses the central stamp member and is in the same plane, and a top rotatable part mounted on the last named rotatable part and provided at one side with a segmental stamp member in the same plane as the annular stamp member and the central stamp member.

[Claims 6 to 8 not printed in the Gazette.]

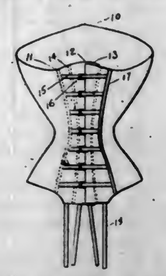
878,350. CLASP FOR HOSE-SUPPORTERS. JOSEPH COHEN, New York, N. Y. Filed Apr. 5, 1907. Serial No. 366,630.

A clasp for hose supporters, composed of a single piece of sheet-metal so folded as to be substantially Y-shaped in cross section and having throughout the length of its straight, opposed, upper edges a series of alternately-placed, inwardly- and downwardly- curved serrations adapted to be permanently attached to an article of apparel by being clenched therethrough by pressure against the opposite inner surface of the clasp, the doubled leg of the clasp having its plates folded into contact with each



other and provided with registering slots for the attachment of webbing.

878,351. CORSET. JOSEPH COHEN, New York, N. Y. Filed Aug. 20, 1907. Serial No. 389,372.



1. A corset having its front formed of overlapping flexible portions, and separable fastening members fixedly connected to the corset and extending over said front, one of the members of each set of fastenings being attached to the free edge of one of the flexible portions, the coacting member being secured to the corset at the point of connection of the opposing flexible portion and the corset, said members being adjustable to vary the distance between their securing points.

2. A corset having flexible portions secured to each of its front edges, said portions being adapted to overlap, adjustable fastening members adapted to join across the front opening of the corset, one member of each set of fastenings being secured to the free edge of one of the flexible portions and the coacting member being secured to the corset body along the line of attachment of the other flexible portion, and means for temporarily retaining the free ends of said coacting fastening members when the fastenings are connected.

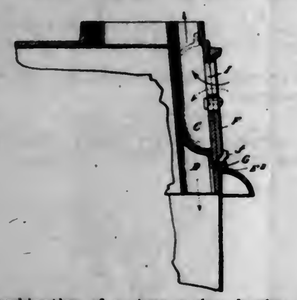
3. A corset having flexible portions secured to each of its front edges, sai dportions being adapted to overlap, adacross the front opening of the corset, independently adjustable fastening members adapted to join across said front opening, one member of each set of fastenings being secured to the free edge of one flexible portion and the coacting member being secured to the corset body and extending outside the other flexible portion, and a strip secured at a plurality of points along the junction of the corset body and one flexible portion to provide openings to removably retain the free end of said coacting fastening members when the fastening members are connected.

878,352. STOVE. ERNEST C. COLE, Chicago, Ill., assignor to Cole Manufacturing Company, Chicago, Ill., a Corporation. Filed Aug. 23, 1907. Serial No. 389,821.

1. The combination of a stove casing having a pair of inlet openings, and valve devices controlling the same, of a double cup shape draft flue on the inner wall of the casing open at its side next the said inner wall and closed at its opposite side and having an upwardly opening flue communicating with one of the inlet openings, and a downwardly opening flue communicating with the other inlet opening, substantially as and for the purposes set forth.

2. In a stove a draft attachment having flues and open at one side and closed at its opposite side, whereby it may

fit at its open side against a stove wall having inlet openings communicating with their respective flues and having a downwardly opening flue closed at its upper end and an upwardly opening flue closed at its lower end, the said flues being uncommunicating and arranged side by side with the lower end of the upwardly opening flue lapping alongside the upper end of the downwardly opening flue.



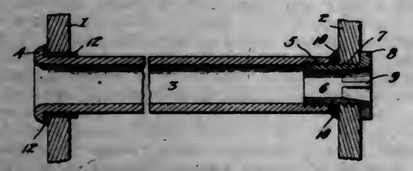
3. The combination of a stove casing, having a pair of adjacent inlet openings, a damper pivoted between and controlling the said openings, an upwardly opening flue in communication with one of the inlet openings, and a downwardly opening flue alongside the upwardly opening flue and communicating with the other inlet opening, substantially as set forth.

4. The combination in a stove, with the casing and the pipe collar, of a double cup shape draft flue arranged within the casing, and having an upwardly opening flue discharging at its upper end and extending at such end within the pipe collar, and also provided alongside the said upwardly opening flue with a downwardly opening flue discharging to the combustion chamber, the casing having inlet openings communicating with said flues and a damper having an opening which may be adjusted into register with either of said inlet openings, substantially as set forth.

5. The combination in a stove casing with a pair of inlet openings and a double cup shape draft flue having an upwardly opening flue communicating with one of the inlet openings, and a downwardly opening flue alongside the upwardly opening flue and communicating with the other inlet opening, and a damper having an opening which may be adjusted into register with either of the inlet openings and also having an imperforate portion which may be adjusted to close either or both of said openings, all substantially as and for the purpose set forth.

[Claims 6 to 10 not printed in the Gazette.]

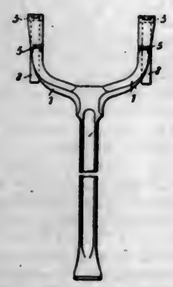
878,353. BOILER-TUBE. WALTER A. COMPTON, Columbus, Ohio. Application filed June 11, 1906, Serial No. 321,225. Renewed June 24, 1907. Serial No. 380,543.



1. The combination with the front and rear tube sheets of a boiler having therein alined boiler tube passages, of a boiler tube adapted to be inserted through the passage in said front tube sheet, an annular flange on the forward end of said tube to engage the outer side of said tube sheet, a hollow exteriorly threaded bushing adapted to be screwed through the passage in the rear tube sheet and into the threaded rear end of said tube, an annular flange or bead formed on the outer end of said bushing to engage the outer sides of said rear tube sheet, a sleeve or gasket arranged on the forward end of said tube and passing through the aperture in the front tube sheet, and around the flange on said forward end of the tube, and a washer arranged between the rear end of the tube and the adjacent side of the rear tube sheet, substantially as described.

2. The combination with the front and rear tube sheets, of a boiler having therein alined boiler tube passages, of a boiler tube adapted to be inserted through the passage in said front tube sheet, an annular flange on the forward end of said tube to engage the outer side of said tube sheet, a hollow, exteriorly threaded bushing adapted to be screwed through the passage in the rear tube sheet and into the threaded rear end of said tube, an annular flange or bead formed on the outer end of said bushing to engage the outer sides of said rear tube sheet, lugs or ribs formed on the inner wall of said hollow bushing to facilitate the engagement of a wrench therewith, a sleeve or gasket arranged on the forward end of said tube and passing through the aperture in the front tube sheet, and around the flange on said forward end of the tube and a washer arranged between the rear end of the tube and the adjacent side of the rear tube sheet, substantially as described.

878,354. TIRE-SETTING TOOL. ROBERT CONNELL, Gainsborough, England. Filed July 21, 1906. Serial No. 327,164.



1. A tire tool comprising a lever, a plurality of curved arms secured thereto, the ends of which are adapted to be inserted between the tire and the rim, means in connection with said arms for lifting the tire after their ends have been inserted, struts rotatably secured to the ends of the arms and means intermediate the ends of said struts for bracing the same against the rim after the ends of the arms carrying said struts have been inserted.

2. A tire tool comprising a lever, a plurality of curved arms secured thereto, the ends of which are adapted to be inserted between the ends of the tire and the rim, adjustable stops on said arms for lifting the tire after the ends of said arms have been inserted, struts rotatably secured to the ends of the arms and means intermediate the ends of said struts for bracing the same against the rim after the ends of the arms carrying said struts have been inserted.

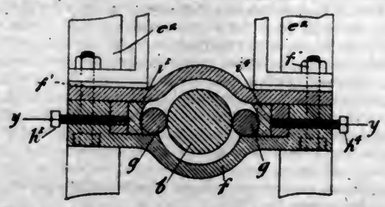
3. A tire tool comprising a lever arm, one end of which is adapted to be inserted between the tire and the rim, a strut piece rotatably secured to said end of the lever arm, and means intermediate the ends of said strut for bracing the same against the rim after the end of the lever arm carrying said strut has been inserted.

4. A tire tool comprising a lever arm, one end of which is adapted to be inserted between the tire and the rim, a strut piece rotatably secured to said end of the lever arm, and a yielding stop intermediate the ends of said strut for bracing the same against the rim after the end of the lever arm carrying said strut has been inserted.

5. A tire tool comprising a lever arm, one end of which is adapted to be inserted between the tire and the rim, a strut piece rotatably secured to said end of the lever arm, and a spring actuated yielding stop intermediate the ends of said strut for bracing the same against the rim after the end of the lever arm carrying said strut has been inserted.

[Claims 6 to 8 not printed in the Gazette.]

878,355. JOURNAL-BOX FOR ROAD AND OTHER VEHICLES. JOHN E. COOPER, Stratford, London, England. Filed Apr. 5, 1907. Serial No. 366,569.

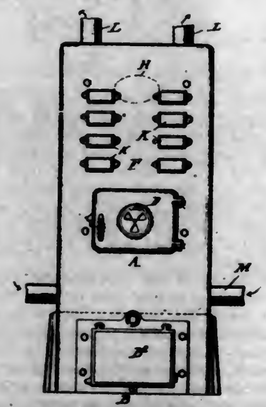


1. In an antifriction mechanism, the combination of an upper axle, a lower axle, suitable connections between the same, said lower axle provided with collars, a split box, antifriction devices and bearing pieces placed on each side of said lower axle in said box between said collars and set screws contacting with said bearing pieces for adjusting said antifriction devices, whereby lateral friction is lessened and the upper and lower axles may be maintained always in proper vertical alinement, substantially as described.

2. In antifriction mechanism of the kind hereinbefore referred to, the combination of a hanger, an upper axle and a lower axle provided with collars horisontally hung in said hanger, a split box securely held at the lower end of said hanger, side rollers contained in the said split box, bearing pieces placed on each side of said rollers in each side of said box and between said collars, and set screws contacting with said bearing pieces for adjusting the same, whereby lateral friction is lessened and the said lower axle can be always maintained in proper vertical alinement with said upper axle, substantially as described.

3. In an antifriction mechanism, the combination of a hanger, an upper axle loosely mounted in the same, a spring on which the same rests, a lower axle securely held at the lower end of said hanger, suitable connections between the said upper axle and said lower axle, said lower axle provided with collars, a split box securely held in said hanger, antifriction devices and bearing pieces placed on each side of said lower axle in said split box and between said collars and set screws for contacting with said bearing pieces and for adjusting said antifriction devices, whereby lateral friction is lessened and the upper and lower axles may be maintained always in proper vertical alinement, substantially as described.

878,356. HOT-WATER HEATER. JOEL A. COPPRIDGE and EDDIE W. COPPRIDGE, Richmond, Va. Filed Mar. 5, 1907. Serial No. 360,693.



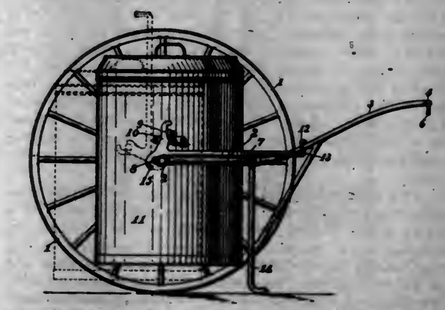
A hot water heater comprising a body and a fire pot therein, the body having a water space, or chamber extending around three sides thereof and having the other side of the body provided with a door above the fire pot and the said side being provided below such door with a water back forming one side of the fire pot and connected with the main water space or chamber of the body, a series of alternating baffle partitions extending within the body from side to side thereof and terminating alternately at points spaced away from the walls of the body, said partitions comprising a series of tubes and plates overlying the same, the tubes of the several series being smaller than those of the next lower series and the tubes of the several series connecting independently with the water space of the body, substantially as and for the purpose set forth.

878,357. COMBINED PUMP AND WELL CURB. WILLIAM A. CRUMLY, Springfield, Ill. Filed Dec. 19, 1906. Serial No. 348,612.



The combination of a sectional well-lining comprising a curb-section of obdurate material, such as iron, of length suitable to extend below the frost line when said curb-section is embedded in the ground, and having at its upper end a tapering socket adapted to accommodate the tapering lower part of a pump stock; complemental well-lining sections of relatively fragile material such as glazed sewer pipe, adapted to connect with the lower end of said curb-section and adapted to communicate with a reservoir; and a pump stock having a tapering lower part fitting and self-centering in the tapering socket at the upper end of said curb-section and provided with a pipe adapted to extend through said curb-section and through said complemental sections of the well lining.

878,358. CARRIER FOR CANS, CASKS, &c. JOHN CUMMINGS, Grand Rapids, Mich. Filed May 10, 1907. Serial No. 373,009.



1. The combination of an axle bent in a semi-circle, oppositely projecting journals on said axle, wheels

mounted on the journals, a handle attached to the axle, a lever bent in semi-circular form and having its ends pivoted to the axle and also having arms provided with forked ends to engage projections on a can or other article to be carried, and means for securing the lever to the handle.

2. The combination of an axle bent to embrace a can or other article to be carried, wheels journaled on the axle, a handle attached to the axle, a lever also bent to embrace said can, and pivoted to the axle, bell crank arms of the lever having divided ends to engage projections, a stop to limit the backward movement of the lever, and means for attaching the lever to the handle.

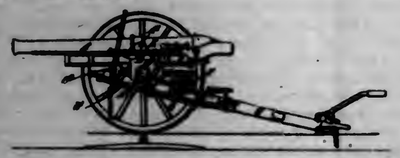
3. The combination of a can having hooks at its opposite sides, an axle bent to embrace the can, a handle attached to the axle, a lever bent to embrace the can and pivoted on the axle, lateral arms on the lever adapted to engage the hooks and support the can, and means for detachably securing the lever to the handle.

4. The combination of an axle bent in semi-circular form at the middle, wheels journaled on the ends of the axle, a handle attached to the axle, a lever also bent in semi-circular form and pivoted to the axle, bell crank arms on the lever, a stop to limit the rearward movement of the lever, an upward extension of the lever having a recess to receive the handle and a hook on the lever to engage the handle and hold it in the recess.

5. The combination of a can having hooks at its opposite sides, an axle bent to embrace the can, wheels journaled on the axle, a lever bent to embrace the can and pivoted on the axle, bell crank arms on the lever and having divided ends to engage the hooks on the can, stops on the lever to engage the axle and limit the backward movement of the lever, an upward extension of the lever having a recess to receive the handle and a hook pivoted on the extension and detachably engaging the handle.

[Claim 6 not printed in the Gazette.]

878,359. FIELD-GUN CARRIAGE. ARTHUR T. DAWSON and GEORGE T. BUCKHAM, Westminster, London, England, assignors to Vickers Sons & Maxim Limited, Westminster, London, England. Filed Jan. 6, 1905. Serial No. 239,028.



1. In a field gun-carriage, the combination with the gun-carriage, the sight-bar, the top-carriage and the trail; of a screw arranged longitudinally with respect to the trail and wholly within the same, means for actuating said screw, and means whereby its movement imparts angular motion to the gun-cradle about its trunnions.

2. In a field gun-carriage, the combination with the gun-cradle, the sight-bar, the top-carriage and the trail; of a ranging screw located longitudinally within the trail, an elevating screw co-axial with respect to said ranging screw, means for actuating the ranging screw, means for actuating the elevating screw, means whereby the actuation of the ranging screw imparts motion to the gun-cradle about its trunnions, and means whereby the actuation of the elevating screw imparts simultaneous motion to the said gun-cradle and sight-bar, substantially as described.

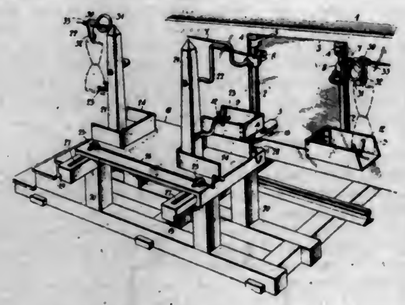
3. In a field gun-carriage, the combination with the gun-cradle, the sight-bar, the top-carriage and the trail; of a ranging screw located longitudinally within the trail, an elevating screw co-axial with respect to said ranging screw, means for actuating the ranging screw from one side of the carriage, means for actuating the elevating screw from the other side of the carriage, means whereby the actuation of the ranging screw imparts motion to the gun-cradle about its trunnions, and means whereby the actuation of the elevating screw imparts simultaneous motion to the said gun-cradle and sight-bar, substantially as described.

4. In a field gun-carriage, the combination with the gun-cradle, the sight-bar, the top-carriage and the trail; of a ranging screw located longitudinally within the trail, an elevating screw co-axial with respect to said ranging screw, toothed gearing located within the trail for operating said screws independently, means for actuating said toothed gearing from opposite sides of the carriage, means whereby the actuation of the ranging screw imparts motion to the gun-cradle about its trunnions, and means whereby the actuation of the elevating screw imparts simultaneous motion to said gun-cradle and sight-bar, substantially as described.

5. In a field gun-carriage, the combination with the gun-cradle, the sight-bar, the top-carriage and the trail; of a ranging screw located longitudinally within the trail, an elevating screw concentrically situated around the ranging screw, a longitudinal bearing for the elevating screw situated within the trail and adapted to turn about the pivotal axis of the top-carriage, toothed gearing located within the trail for actuating the ranging screw, toothed gearing also located within the trail for actuating the elevating screw and the ranging screw simultaneously, means for operating the two sets of said toothed gearing independently of each other from opposite sides of the carriage, means whereby the actuation of the ranging screw imparts motion to the gun-cradle about its trunnions, means whereby the actuation of the elevating screw imparts simultaneous motion to the gun-cradle and sight-bar, a gear-casing carrying said two sets of toothed gearing and adapted to slide transversely within the trail, means for connecting said gear-casing with the rearward extension of the top-carriage, and means for traversing said top carriage about its pivot, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

878,360. MAIL-BAG CATCHING AND DELIVERING APPARATUS. JOHN C. DAYTON, Petersburg, W. Va. Filed Sept. 21, 1907. Serial No. 393,951.



1. In a mechanism of the class described, the combination, with a car, of a vertical post located at one side of the doorway and provided at opposite ends with crank arms pivotally connected to the roof and floor of the car, whereby the post may be moved bodily from inoperative position within the interior of the car into operative position in the doorway a movable member adapted for engagement with one of said crank arms to retain the post in operative position; and a bag-supporting hook carried by said post.

2. In a mechanism of the class described, the combination, with a car, of a vertical post located at one side of the doorway; supporting members carried by said post at its opposite ends and pivotally connected to the roof and floor of the car, to permit the post to be moved bodily from inoperative position within the interior of the car into operative position in the doorway; means adapted for engagement with one of said members, to retain said post in operative position; and a bag-supporting arm carried by said post.

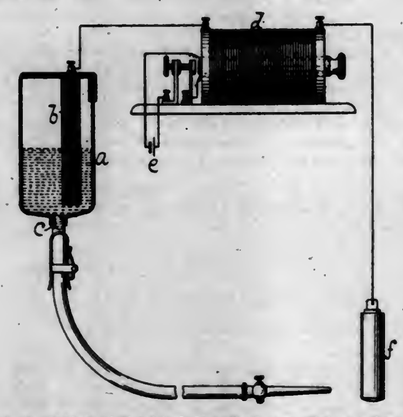
3. In a mechanism of the class described, the combination, with a car, of a vertical post located at one side of the doorway; supporting members carried by said post at its opposite ends and pivotally connected to the roof and floor of the car, to permit the post to be removed bodily from inoperative position within the interior of the car into operative position in the doorway; a resilient member adapted for engagement with one of said members, to retain said post in operative position; and a bag-supporting arm carried by said post.

4. In a mechanism of the class described, the combination, with a car, of a vertical post located at one side of the doorway; supporting members carried by said post at its opposite ends and pivotally connected to the roof and floor of the car, to permit the post to be moved bodily from inoperative position within the interior of the car into operative position in the doorway; a resilient member secured to the floor of the car and adapted for engagement with the lower supporting member, to retain said post in operative position; and a bag-supporting arm carried by said post.

5. In a mechanism of the class described, the combination, with a car, of a vertical post located at one side of the doorway and movable bodily from inoperative position within the interior of the car into operative position in the doorway; a bag-supporting hook carried by said post; and potential means for automatically returning said post into its inoperative position.

[Claims 6 to 26 not printed in the Gazette.]

878,361. ELECTROLYTIC IRRIGATOR. PIERINO DEL GAUDIO. New York, N. Y. Filed July 8, 1907. Serial No. 382,706.



1. A device of the kind described comprising a fountain with outlet and a battery having a terminal contained in the fountain clear of the outlet.

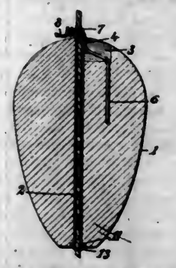
2. A device of the kind described comprising a fountain with outlet and a battery having a terminal contained in the fountain clear of the outlet, and out of contact with the body of the user.

3. A device of the kind described comprising a fountain with two compartments, an insulating partition for separating the compartments, an outlet for each compartment, and a battery having a terminal in each compartment clear of the outlets to avoid contact of the terminals with the body.

878,362. FISH-LINE FLOAT. JAMES S. DENNING, Burlington, Vt. Filed June 26, 1907. Serial No. 380,914.

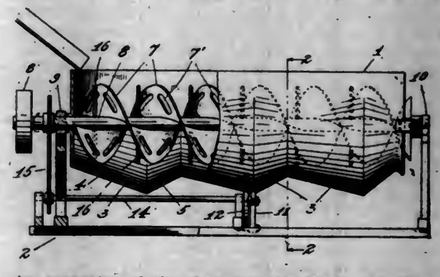
1. A float for a fish line, having a main slot for the line and a lateral slot, a line holder having a shank attached to said float in said lateral slot and having a resilient coil disposed on an axis transverse to the axis of said float and transversely to said first slot.

2. A float having a slot in the side thereof, a resilient holding device at one end of said body adjacent said slot and having a resilient coil disposed transversely of said slot to hold the line therein, and an auxiliary holder at



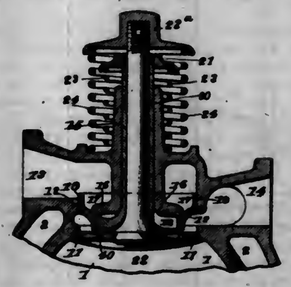
the other end of said body, alining with said slot and having resilient arms forming a contracted throat therebetween to hold the line.

878,363. CONCENTRATOR. JACOB E. DOGGWYLER, Seattle, Wash. Filed July 10, 1906. Serial No. 325,538.



An apparatus of the character described comprising a pan substantially U-shape in cross section, formed in its wall with pockets substantially V-shape in cross section, the alternating walls of said pockets being longer than the others, said pockets extending about the bottom of said pan and well upwardly at each side thereof and having the end portions of their walls curved inwardly and terminating at points below the top of said pan, means supporting said pan for reciprocation, and a helical blade mounted for rotation in said pan and extending over the pockets thereof, as specified.

878,364. EXPLOSION-ENGINE. CHARLES L. EDWARDS, Vernon, N. Y. Filed Mar. 8, 1907. Serial No. 361,214.



1. In an explosion engine, the combination with a cylinder provided with a water jacket, and having in the end thereof an opening in which are formed an inner conical and an outer cylindrical valve seat, and having an inlet port and an exhaust port communicating with the open-

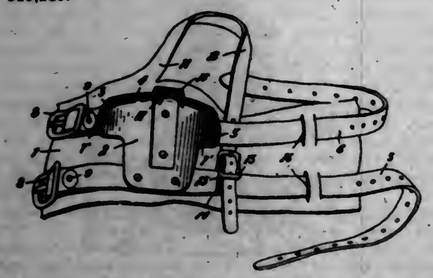
ing, of an exhaust valve normally resting on the conical seat and closing the opening, said valve having a stem extending out of the cylinder, said cylinder being provided with a valve stem guide provided on its inner end with a petticoat, an inlet valve having a plurality of openings therethrough, normally closed by the petticoat, said valve moving in the cylindrical seat, and having a stem encircling the exhaust valve stem, said valve having a peripheral flange adapted to close the exhaust port, when moved away from the petticoat, concentric springs resting at their inner ends against the cylinder, and encircling the valve stems, the outer spring being of greater strength than the inner spring, a collar on each of the stems for engaging the outer ends of said springs, the collar on the exhaust valve stem being of greater diameter and engaging the stronger spring, said collars being spaced apart whereby the continued movement of the exhaust valve stem after the opening of the exhaust port will move the inlet valve to close the exhaust port and to open the inlet port, a drive shaft, a piston in the cylinder and connected therewith, and a connection between the drive shaft and the valve stem for operating the same at regular intervals.

2. In an explosion engine, the combination with a cylinder having an end opening in which are formed an inner conical and an outer cylindrical valve seat, and having inlet and exhaust pipes communicating with the opening, of an exhaust valve normally resting on the conical seat and closing the opening, said cylinder being provided with a valve stem guide having at its inner end a petticoat, an inlet valve having a plurality of openings therethrough normally closed by the petticoat, said valve moving in the cylindrical seat, and having a peripheral flange adapted to close the exhaust port when moved away from the petticoat, springs acting to seat said valves, a drive shaft, a piston in the cylinder connected with the drive shaft, means whereby the drive shaft may open said exhaust valve at predetermined intervals, and means whereby the exhaust valve may open the inlet valve when said exhaust valve is fully opened.

3. In an explosion engine, the combination with a cylinder having an end opening in which are formed an inner conical and an outer cylindrical valve seat, and having inlet and exhaust pipes communicating with the opening, of an exhaust valve normally resting on the conical seat and closing the opening, said cylinder being provided with a valve stem guide having at its inner end a petticoat, an inlet valve having a plurality of openings therethrough normally closed by the petticoat, the said valve moving in the cylindrical seat, and having a peripheral flange adapted to close the exhaust port when moved away from the petticoat, springs acting to seat said valves, a drive shaft, a piston in the cylinder connected with the drive shaft, means whereby the drive shaft may open said exhaust valve at predetermined intervals, and means whereby the exhaust valve may open the inlet valve when said exhaust valve is fully opened, the combination with the exhaust valve stem of a collar on the stem, a spring encircling the stem and resting at its inner end against the cylinder, and at its outer end against the collar, a collar on the inlet valve stem, and a spring encircling the inlet valve stem and resting at its inner end against the cylinder, and at its outer end against the collar on the inlet valve stem, the spring on the exhaust valve stem being stronger than the spring on the inlet valve stem, and the collar on the exhaust valve stem being of greater diameter than the collar on the inlet valve stem, whereby the continued movement of the exhaust valve stem after the opening of the exhaust port will move the inlet valve to close the exhaust port and to open the inlet port.

4. In an explosion engine, the combination with a cylinder having an end opening in which are formed an inner conical and an outer cylindrical valve seat, and having inlet and exhaust pipes communicating with the opening, of an exhaust valve normally resting on the conical seat and closing the opening, said cylinder being provided with a valve stem guide having at its inner end a petticoat, an inlet valve having a plurality of openings therethrough normally closed by the petticoat, the said valve moving in the cylindrical seat, and having a peripheral flange adapted to close the exhaust port when moved away from the petticoat, springs acting to seat said valves, means for opening the exhaust valve at predetermined intervals and for opening the inlet valve at the end of the opening movement of the exhaust valve.

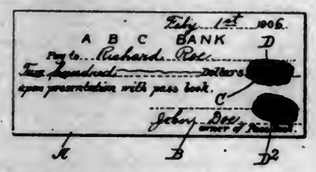
878,365. CORN-HUSKER. JOE W. EATZ, Maple River Junction, Iowa. Filed May 28, 1906. Serial No. 319,189.



1. A corn husker comprising a pad provided with loops, wrist straps passed through the loops, one end of each of the straps being provided with a buckle, and one of the straps being provided intermediate of its ends with a buckle disposed approximately at right angles to its terminal buckle, a thumb strap forming an integral extension of the pad and being adapted to pass beneath one of the wrist straps and to engage the intermediate buckle of the other strap, a supporting plate secured to the pad and to the straps, and a pronged hook carried by the plate.

2. A corn husker comprising a pad provided with loops, wrist straps passed through the loops, one end of each of the straps being provided with a buckle, and one of the straps being provided intermediate of its ends with a buckle disposed approximately at right angles to its terminal buckle, a thumb strap forming an integral extension of the pad and being adapted to pass beneath one of the wrist straps and to engage the intermediate buckle of the other strap, a supporting plate secured to the pad and to the straps, and having its upper edge concaved, and a pronged hook carried by the plate.

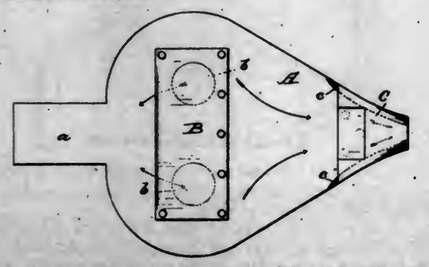
878,366. MEANS AND METHOD FOR DETECTING AND PREVENTING FRAUD. EDWARD A. EVANS, Chicago, Ill. Filed Feb. 8, 1906. Serial No. 300,049.



1. A document bearing matter constituting it evidence for the payment of money or other valuable thing having an identifying characteristic associated therewith consisting of an imprinted finger mark superimposed upon an effective part of said document so that such part cannot be changed without detection.

2. A document bearing matter constituting it a valid claim for the payment of money or other valuable thing which has associated therewith an identifying characteristic consisting of the imprinted finger mark of one of the parties to said document, said mark being superimposed upon the indication of the money or valuable thing for which said document purports to be a claim.

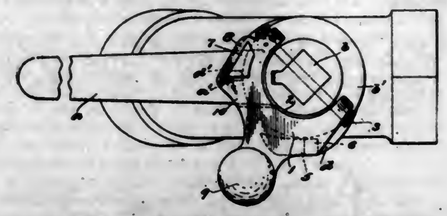
878,367. HAND-BELLOWS. JOHN H. FECKER and CHARLES C. JELLEFF, Piqua, Ohio. Filed May 29, 1906. Serial No. 319,332.



1. A molder's hand bellows comprising a board or side section having an air inlet opening, a flap valve attached to the board about its sides and along the edge nearest to the air exit opening, a pair of converging strips attached to the board, a block of less length than the strips attached thereto to partially overlie the same, a board hinged to the block, and a bellows casing, substantially as shown.

2. Hand-bellows provided with a nozzle that is shaped to adapt the bellows for use by molders, such bellows comprising similarly shaped boards, one of the boards having therethrough a valved air inlet opening, a discharge nozzle provided with discharge strips that extend beyond the point where one of the boards is attached to the other board, and a bellows casing, substantially as shown and for the purpose set forth.

878,368. SELF-LOCKING ATTACHMENT FOR ANGLE-COCKS. WILLIAM C. FEIGHAN, Philadelphia, Pa. Filed Apr. 17, 1907. Serial No. 368,640.

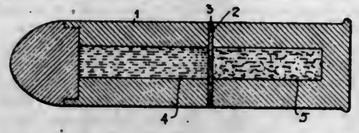


1. A device of the class described comprising a plug cock, a casing having stops to limit the movement of the cock at its open and closed positions, a handle for said cock having a projection for engaging one of the limit stops on the case and vertically reversible means pivotally secured to the cock adapted to engage the other of said stops for preventing accidental movement of the cock.

2. A device of the class described comprising a plug cock, a casing having stops to limit the movement of the cock at its open and closed positions, a handle for said cock having a projection for engaging either of said limit stops, and a reversible member adapted to be moved vertically upon an arc of a circle pivotally secured to the cock and handle having oppositely disposed projections for engaging one at a time the alternate stops for preventing accidental movement of the cock.

3. A device of the class described comprising a plug cock, a casing having stops to limit the movement of the cock at its open and closed positions, a handle for said cock having a projection for engaging either of said limit stops, and a reversible member pivoted to said cock and handle and adapted to be moved vertically upon an arc of a circle said member having oppositely disposed faces equipped with projections adapted to alternately lie in the path of and engage the other of the aforesaid limit stops during the turning of the handle to prevent accidental movement of the cock.

878,369. CARTRIDGE. GEORGE A. FINSTER, Schenectady, N. Y. Filed Aug. 16, 1907. Serial No. 388,912.

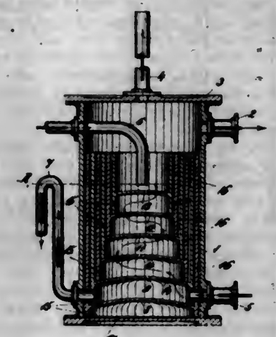


1. An explosive projectile composed of two separably connected members having a frangible partition arranged between them at the point of connection, one member containing an explosive compound and the other means for exploding said compound when coming in contact therewith.

2. An explosive projectile composed of two separably connected members, one of which has an internally screw-threaded flange provided on its meeting face and the other an externally screw-threaded flange for coöperation with the flange on the other member, and a frangible partition arranged between the meeting ends of said members.

878,370. APPARATUS FOR THE CHEMICAL PURIFICATION OF OILS AND THE LIKE. JOSEF FISCHER, Vienna, Austria-Hungary. Filed July 31, 1905. Serial No. 271,932.

1. An apparatus for the chemical purification of oils, comprising a vessel provided with a supply-pipe at the upper part and a gooseneck pipe at the lower part for the purifying liquid, a supply-pipe at the lower and a discharge-pipe at the upper end for the oil to be purified, a cover provided with an outlet-pipe for the escape of the gases, and a number of superposed perforated partitions or screens provided with downwardly extending circumferential flanges and upwardly extending cylinders in line therewith which form a cylindrical mantle for each wall, which are placed telescopically one within the other.



2. An apparatus for the chemical purification of oils, comprising a purifying vessel and a number of interior perforated partition-walls of gradually diminishing diameter, and provided with downwardly extending flanges and upwardly extending cylinders in line with said flanges.

3. An apparatus for the chemical purification of oils, comprising a purifying vessel, and a number of interior perforated partition-walls provided with downwardly extending flanges and cylindrical extensions in line therewith, said partition-walls being made with gradually diminishing diameter and provided with perforations within the flanges of the next adjacent partition-walls, the flanges of the cylinders being located telescopically one within the other, and the upper ends being arranged at the same level.

878,371. ALARM-CLOCK. EDWARD E. GAGE, New York, N. Y. Filed Mar. 15, 1907. Serial No. 362,443.



1. An alarm clock provided with a supplemental alarm set dial, and means whereby the alarm may be set to operate at any hour or fractional parts thereof, and supplemental alarm set devices whereby the alarm may be set to operate at any minute of the day or night, comprising an annular rotary minute dial mounted on and inclosing the hour dial of the clock, a supplemental arbor slidably mounted on and rotatable on the minute arbor and on which the hour arbor is mounted, said supplemental arbor being provided on its inner side with a tooth adapted to enter a recess in the minute gear, a spring lever pivoted to the frame of the clock mechanism and provided with an aperture through which the supplemental arbor passes, said spring lever being passed out through the casing of the clock and adapted to be operated by hand, and an operating hand connected with the supplemental arbor and adapted during its rotation to engage and carry with it the annular minute dial and to be automatically released therefrom at a predetermined time, said spring lever being also adapted to engage a trigger connected

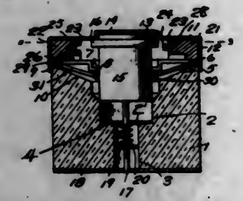
with the escapement shaft with which the hammer of the alarm device is also connected.

2. In a clock alarm setting mechanism, a suplemental tubular arbor mounted between the hour and minute arbors and provided at its inner end with a tooth adapted to engage a cam recess in the minute gear, and an indicator operating hand connected with the supplemental arbor and movable between the hour and minute hands, in combination with a spring lever mounted on the inner end of the supplemental arbor and one end of which is secured to the framework of the clock mechanism, said spring lever being adapted to engage a trigger secured to the escapement shaft.

3. In a clock alarm setting mechanism, a supplemental tubular arbor mounted between the hour and minute arbors and provided at its inner end with a tooth adapted to engage a cam recess in the minute gear, and an indicator operating hand connected with the supplemental arbor and movable between the hour and minute hands, in combination with a spring lever mounted on the inner end of the supplemental arbor and one end of which is secured to the framework of the clock mechanism, said spring lever being adapted to engage a trigger secured to the escapement shaft, and the free end of said lever being projected through the casing of the clock.

4. A supplemental alarm setting mechanism for clocks, comprising a supplemental arbor mounted between the hour and minute arbors and provided with an operating hand movable between the hour and minute hands the supplemental arbor being provided at its inner end with a tooth adapted to engage a cam recess in the minute gear, a spring lever pivoted to the framework of the clock mechanism and adapted to move the supplemental arbor longitudinally and to engage a trigger secured to the escapement shaft, an annular rotary minute dial inclosing the hour dial of the clock, a rotary glass inclosing the dials of the clock, and a pin operating in connection with the operating hand and passing through said glass, said operating hand being adapted in its rotation to engage the annular minute dial and to release the same at a predetermined time.

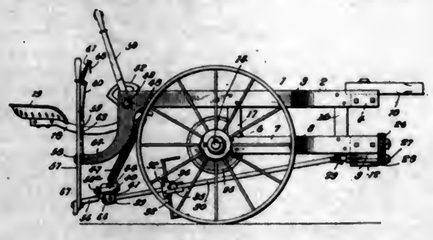
878,372. INK-WELL. ANDREW GAILEY, Williamsburg, Pa. Filed Mar. 12, 1907. Serial No. 361,947.



1. An ink-well of the class described, comprising a body portion having communicating enlarged and reduced central openings extending therethrough, a retaining plate fixed to said body portion and spaced away therefrom, a cylindrical ink-well body in said enlarged openings and having a shank projected through said reduced openings, a pin on said shank, a coil-spring interposed between said pin and said cylindrical body, said body portion having recesses on each side of said enlarged openings, triangular shaped plates supported between said body portion and said retaining plate, the adjacent inner corners of said triangular shaped plates constituting fulcrums therefor, and links disposed within said recesses, and having pivotal connection with said cylindrical body on each side thereof and with said triangular shaped plates.

2. In an ink-well, a body portion having central communicating enlarged and reduced openings, a cylindrical ink-well body in said enlarged opening said body having an open end and having a shank in said reduced opening, a spring engaging said shank, to force the same downwardly, plates supported above said body portion and designed for movement toward one another, to close the open end of said cylindrical body, said body portion having recesses on each side of said body and connections between said body and said plates and disposed within said recesses.

878,373. COTTON-CHOPPER. GRANVILLE B. GAUNTT, Taylor, Tex., assignor of one-half to Frank C. Floeckinger, Taylor, Tex. Filed Aug. 31, 1907. Serial No. 390,900.



1. A cotton chopper comprising connected upper and lower frames, each composed of side bars converging at their front ends and connected together, a tongue connected with the front of the upper frame, a shaft journaled in the rear ends of the side bars of the lower frame, wheels on the ends of the shaft, a block between the front ends of the side bars of the lower frame, said block being provided with upper and lower bearings, a shaft journaled in the upper bearing, and provided with a pinion at its front end and with a bevel gear at its rear end, a bevel gear on the driving shaft meshing therewith, a counter shaft journaled to the lower bearing and provided with a pinion meshing with the pinion on the upper shaft, a hoe shaft having a universal joint connection with the counter shaft, a hub on the hoe shaft near the rear end thereof, said hub being provided with a plurality of transverse openings, hoes comprising a shank for insertion in the holes of the hub, and a blade arranged at right angles to the shank and parallel with the shaft, set screws for securing the blade in place, a plate in which the rear end of the shaft is journaled, a shaft journaled in the rear ends of the side bars of the upper frame, and provided with arms projecting therefrom, springs connecting the arms with the ends of the plate, means for oscillating said shaft whereby to raise and lower the hoe shaft, and means for swinging the plate from side to side of the frame.

2. A cotton chopper, comprising connected upper and lower frames, each composed of side bars converging at their front ends and connected together, a tongue connected with the front of the upper frame, a shaft journaled in the rear ends of the side bars of the lower frame, wheels on the ends of the shafts, a block between the front ends of the side bars of the lower frame, said block being provided with upper and lower bearings, a shaft journaled in the upper bearing and provided with a pinion at its front end and with a bevel gear at its rear end, a bevel gear on the driving shaft meshing therewith, a counter shaft journaled in the lower bearing and provided with a pinion meshing with the pinion on the upper shaft, a hoe shaft having a universal joint connection with the counter shaft, a hub on the hoe shaft near the rear end thereof, hoes comprising a shank connected with the hub, and a blade arranged parallel with the shaft, a plate in which the rear end of the shaft is journaled, a shaft journaled in the rear ends of the side bars of the upper frame, and provided with arms projecting therefrom, springs connecting the arms with the ends of the plate, means for oscillating said shaft whereby to raise and lower the hoe shaft, and means for swinging the plate from side to side of the frame.

3. A cotton chopper comprising connected upper and lower frames, each composed of side bars converging at their front ends and connected together, a tongue connected with the front of the upper frame, a shaft journaled in the rear ends of the side bars of the lower frame, wheels on the end of the shaft, a block between the front

ends of the side bars of the lower frame, said block being provided with upper and lower bearings, a shaft journaled in the upper bearing and provided with a pinion at its front end, a driving connection between the said shaft and the driving shaft, a counter shaft journaled in the lower bearing, and provided with a pinion meshing with the pinion on the upper shaft, a hoe shaft having a universal joint connection with the counter shaft, a plurality of hoes connected with the shaft, a plate in which the rear end of the hoe shaft is journaled, means in connection with said plate for raising and lowering the rear end of the hoe shaft, and means in connection with the plate for swinging said plate transversely of the frame.

4. A cotton chopper, comprising a frame, a tongue connected therewith, a shaft journaled on the rear frame, wheels for supporting the shaft, a block connected with the front of the frame and provided with upper and lower bearings, a shaft journaled in the upper bearing and having a driving connection with the wheels, a counter shaft journaled in the lower bearing and having a driving connection with the upper shaft, a hoe shaft having a universal joint connection with the counter shaft, a plurality of hoes connected with the hoe shaft, a plate in which the rear end of the hoe shaft is journaled, a yielding connection between the plate and the rear frame, means for raising and lowering the plate, and means for swinging the plate transversely of the frame.

5. A cotton chopper comprising connected upper and lower frames, wheels for supporting the lower frame, a shaft journaled in the lower frame longitudinally thereof, a driving connection between the wheels and the shaft, a hoe shaft having a universal joint connection with said shaft, a plate in which the rear end of the hoe shaft is journaled, a yielding connection between the hoe shaft and the upper frame, means in connection with the upper frame for raising and lowering the plate, means in connection with the upper frame for swinging the plate transversely thereof, and a plurality of hoes connected with the hoe shaft, each of said hoes comprising a shank arranged perpendicular to the shaft, and a blade extending parallel therewith.

[Claim 6 not printed in the Gazette.]

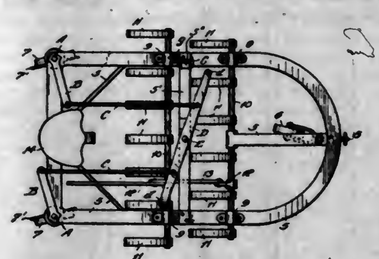
878,374. COFFEE OR TEA PERCOLATOR. FRIEDRICH GEISSLER, Klotzsche, near Dresden, Germany. Filed June 15, 1906. Serial No. 321,929.



1. In a coffee or tea percolator, the combination with a receptacle open at the top and having a holder for the material to be treated at the bottom thereof, of a cover for closing the receptacle having a deep rim extending down into the receptacle with a clearance space between said rim and wall of the receptacle, said cover being free to rise and fall with the variations in internal pressure and a filling branch for the infusing liquid opening into the percolator below the lower edge of the cover, the liquid forming a seal between the rim of the cover and wall of the percolator.

2. In a coffee or tea percolator and in combination a receptacle having a large top opening a cover for said opening with a deep rim extending down into said receptacle, a clearance space between said rim and the sides of said receptacle, a sieve forming the bottom of said receptacle, a tubular branch of small diameter arranged to one side of said receptacle and opening into said receptacle adjacent to the upper surface of said sieve, a funnel-shaped top to said tubular branch and a cover for said top.

878,375. CULTIVATOR. CHARLES W. GIBBS, Peshastin, Wash. Filed Feb. 18, 1907. Serial No. 357,902.



1. A cultivator embodying a frame formed with sides which are depressed central of their length, posts extending vertically through the rear end of said frame, a wheel rotatably secured to each post, a transverse bridge member secured at its ends to the depressed parts of the frame sides and having its central portion in approximately the same horizontal plane as the rear end of the frame, an operating lever pivoted to the central part of said bridge member, and connections between said operating lever and said bridge.

2. In a cultivator, a pair of wheels turnable in a horizontal rotary plane, an operating lever for actuating said wheels, a pivoted open link formed to receive an end of said lever, and a projecting part from said link for engagement with and operable by the foot of the operator.

3. A cultivator embodying a frame, wheel-carrying posts rotatably mounted on the frame, a transverse bridge member secured by its ends to the sides of said frame, an operating lever pivoted to the top face of said bridge member central of the length of the latter, a radial arm carried by each post, and bars connected to said arms and to said lever, said lever at its ends being curved to form foot engaging parts, and means to lock said lever to said frame.

4. A cultivator embodying a frame, wheel-carrying posts rotatably mounted on the frame, a centrally arched transverse bridge member secured to said frame, an arm carried by each post, an operating lever pivoted to the upper face of said bridge member, connections between said lever and said arms, and means on the bridge member for locking said lever against movement.

878,376. LAMP. ADOLPH L. GLAENTZER, New York, N. Y. Filed Feb. 23, 1904, Serial No. 194,910. Renewed July 12, 1907. Serial No. 383,514.

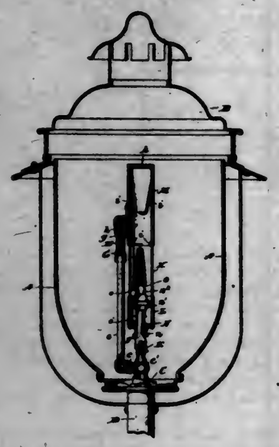
1. In a lamp having a mantle, the combination of a chimney having means for supporting the mantle, a support directly connected to the gas pipe, and means for removably attaching said chimney to said support.

2. In a lamp having a mantle, the combination of a chimney having means for supporting the mantle, and having a normally downwardly projecting rod attached thereto, and an upwardly opening socket connected to the lower part of the lamp and in which said rod is adapted to be received.

3. In a lamp having a burner and mantle, the combination of a chimney having means for supporting the mantle, and having a normally downwardly projecting rod attached thereto, an upwardly opening socket in which said rod is adapted to be received, and a pin on said rod engaging an L-shaped slot in said socket to secure such parts together.

4. In a lamp having a mantle, the combination of a chimney having a mantle and having a rod secured thereto parallel to the chimney, a vertical socket attached to the fixed parts of the lamp, a pin on said rod and an L-shaped

slot in said socket to secure said parts together, a tube extending vertically upward from the gas cock, a slide on said chimney carrying a lower chimney section, and a mixing chamber in said lower chimney section, said mixing chamber having a tube extending downward therefrom, the vertical portion of said L-shaped slot being so positioned that said pin will only be in line therewith when said tube depending from said mixing chamber is in line with said tube extending upward from said cock.



5. In a lamp having a mantle, the combination of a chimney having a mantle and having a rod secured thereto parallel to the chimney, a vertical socket attached to the fixed parts of the lamp, a pin on said rod and an L-shaped slot in said socket to secure said parts together, a tube extending vertically upward from the gas cock, a slide on said chimney carrying a lower chimney section, a mixing chamber in said lower chimney section said mixing chamber having a tube extending downward therefrom, the vertical portion of said L-shaped slot being so positioned that said pin will only be in line therewith when said tube depending from said mixing chamber is in line with said tube extending upward from said cock, there being a latch on said slide, said latch being so positioned as to catch on said chimney when the lower chimney section is against the lower end of the chimney.

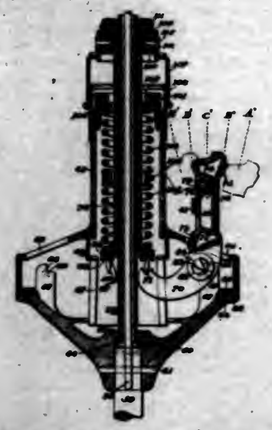
[Claim 6 not printed in the Gazette.]

878,377. GOVERNOR. WILLIAM H. GLOCKER and WILLIAM M. WHITE, Philadelphia, Pa. Filed June 1, 1906. Serial No. 319,736.

1. In a speed governor, the combination of a rotatable shaft, a hollow centrifugal member pivoted thereon, said member containing liquid which under the varying centrifugal force due to variations in the speed of rotation of said shaft moves so as to shift the center of gravity of said member, and connections from said centrifugal member for varying the action of the element which controls the supply of power to the motor by which said shaft is rotated.

2. In a speed governor, the combination of a rotatable shaft, a centrifugal member containing a plurality of communicating chambers pivoted thereon, said chambers containing liquid which under the varying centrifugal force due to the variations in the speed of rotation of said shaft passes from one chamber to another to shift the center of gravity of said member, and connections from said centrifugal member for varying the action of the element which controls the supply of power to the motor by which said shaft is rotated.

3. In a speed governor, the combination of a rotatable shaft, a hollow centrifugal member pivoted thereon, said member containing liquid which under the varying centrifugal force due to variations in the speed of rotation of said shaft moves so as to shift the center of gravity of said member, and connections from said centrifugal member for varying the action of the element which controls the supply of power to the motor by which said shaft is rotated.



4. In a speed governor, the combination of a rotatable shaft, a centrifugal member containing a plurality of communicating chambers pivoted thereon; said chambers containing liquid which under the varying centrifugal force due to the variations in the speed of rotation of said shaft passes from one chamber to another to shift the center of gravity of said member, and connections from said centrifugal member for varying the action of the element which controls the supply of power to the motor by which said shaft is rotated.

5. In a speed governor, the combination of a rotatable shaft, a centrifugal member containing a plurality of communicating chambers pivoted thereon, said chambers being both upon one side of the fulcrum of said member and containing liquid which under the varying centrifugal force due to the variations in the speed of rotation of said shaft passes from one chamber to another to shift the center of gravity of said member, and connections from said centrifugal member for varying the action of the element which controls the supply of power to the motor by which said shaft is rotated.

[Claims 6 to 25 not printed in the Gazette.]

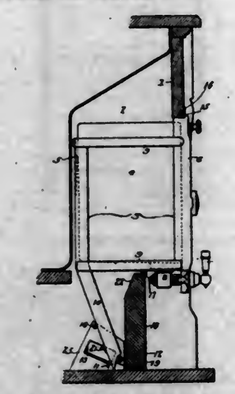
878,378. TYPE-WRITER. WILLY GOERWITZ, Berlin, Germany. Filed July 11, 1905. Serial No. 269,158.



1. In a type-writer, the combination with a rack on the carriage, of a shaft mounted in the frame to turn, a pinion on said shaft and permanently meshed with said rack, an escapement wheel on said shaft, a plate mounted in the frame to rock around an axis at right angles to said shaft, means for transmitting the motion from any key to said plate, a detent fast on said plate and adapted to engage in said escapement wheel on the key being depressed, a pawl-carrier mounted on said plate to rock and to slide, a spring-pressed pawl on said pawl-carrier and adapted to normally engage in said escapement wheel it being thereby pressed in one direction so that its tooth registers with said detent, a spring pressing said pawl-carrier in the opposite direction so that said spring-pressed pawl on being released is shifted into a position for engagement in the following tooth space of said escapement wheel, and means independent of the keys for shifting at will said pawl-carrier and thereby moving said spring-pressed pawl out of engagement with said escapement wheel to liberate the carriage.

2. In a type-writer, the combination with a rack on the carriage, of a hollow shaft at right angles to said rack and mounted in the frame to turn, a pinion at the one end of said hollow shaft and permanently meshing with said rack, an escapement wheel at the other end of said hollow shaft, a vertical plate mounted in the frame to rock around an axis at right angles to said hollow shaft, means for transmitting the motion from any key to said vertical plate, a detent fast on said vertical plate and adapted to engage in said escapement wheel on the key being depressed, a pawl-carrier mounted on said vertical plate to rock and to vertically slide and provided with a projection, a spring-pressed pawl on said pawl-carrier and adapted to normally engage in said escapement wheel it being thereby pressed in one direction so that its tooth registers with said detent, a spring pressing said pawl-carrier in the opposite direction so that said spring-pressed pawl on being released is shifted into a position for engagement in the following tooth space of said escapement wheel, a shaft mounted in said hollow shaft to rock, an arm at the one end of said shaft and adapted to press upon the projection of said pawl-carrier, a second arm at the other end of said shaft and carrying a roller, a spring pressing said second arm in one direction, a plate parallel to said rack and vertically guided on the carriage and in contact with said roller, and means for vertically pressing at will said plate for moving said second arm in the opposite direction and thus shifting said pawl-carrier and thereby moving said spring-pressed pawl out of engagement with said escapement wheel to liberate the carriage.

878,379. SODA-WATER FOUNTAIN. LOUIS G. GREEN, Philadelphia, Pa., assignor to himself, Robert M. Green, Frank D. Green, and Robert M. Green, Jr., trading as Robert M. Green & Sons, Philadelphia, Pa. Filed Feb. 15, 1904. Serial No. 193,643.



1. In a soda water fountain, the combination of the casing having a front recess, a removable jar mounted in said recess, a removable frame carrying said jar, an elongated forwardly projecting depending leg carried by said frame, and a cross-bar at the lower part of the casing for engaging said depending leg, said cross-bar having a plurality of projections for engagement with the depending member whereby the jar may be supported in different positions, inclined and otherwise, with respect to the fountain casing.

2. The combination in a soda water fountain, of the casing having a recess at the front, a wall extending across the fountain and partially filling said recess, a syrup container removably mounted in said recess, a retaining member combined with said container and having a curved end, said retaining member being disposed behind the wall, a cross bar for engaging the curved portion of said retainer to hold the syrup container in a vertical position, and a bridge piece engaging the rear of said retainer and coacting with the cross bar to support the syrup container in vertical position.

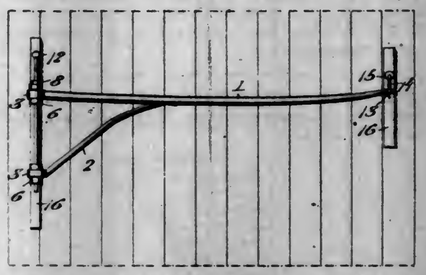
3. The combination in a soda water fountain, of a casing having a recess at the front, a wall extending across said fountain and partially filling said recess, a syrup container removably mounted in said recess, a retaining member combined with said container and extending below the same, said retaining member being disposed behind the wall, means engaging said retainer to hold the syrup container in the vertical position, a lug carried by said retainer, and means for engaging said lug whereby the jar may be supported in a tilted position.

4. The combination in a soda water fountain, of the casing having a front recess, a syrup jar mounted in said recess, a frame in which said syrup jar is mounted, said frame having an elongated forwardly projecting depending leg, means for engaging said leg whereby the jar may be supported in a vertical position, a bridge piece for guiding the lower end of the leg when tilting the syrup jar and means for engaging said leg to support the jar in a tilted position.

5. In a soda water fountain, the combination of a casing having a front recess, a wall extending across the fountain and partly filling said recess, a syrup container removably mounted in said recess, retaining means combined with said container and extending below the same, said retaining means being disposed on opposite sides of said wall, and means behind said wall engaging a portion of said retaining means, another part of said retaining means adapted to engage the wall, whereby the syrup container may be supported in vertical and inclined positions.

[Claims 6 to 10 not printed in the Gazette.]

878,380. HARNESS-HOOK. HERSCHEL GREENLAND, Helena, Okla. Filed Mar. 13, 1906. Serial No. 305,902.

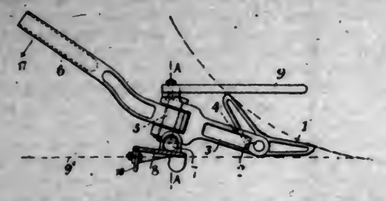


A device of the character described comprising bracket arms with inner bifurcated attaching ends and having slotted heads with perforations at their outer ends, a downwardly curved harness hook having a brace secured to its under surface, the inner ends of the hook and brace being provided with knuckles having perforations to engage respectively the slotted heads of the bracket arms, a headed pin having a collar secured thereon, said pin serving to have one portion of its length inserted through the perforations of the bracket-arms and through the perforations of the knuckles and said pin serving to project above the collar to prevent rearward displacement of harness when mounted on said hook, substantially as described.

878,381. CAR-MOVER. VIKTOR GUSZTÁV, Vienna, Austria-Hungary. Filed Dec. 5, 1906. Serial No. 346,411.

1. A car mover comprising an acting lever, and a hand-lever the head of said acting lever pivotally connected with a base and a pivot within said head, located obliquely

to and above the said pivotal connection and the hand-lever fulcrumed upon said pivots, substantially as described.



2. A car mover comprising a hand-lever and an acting lever with a forked lever head, horizontal pivots to said head and an upright pivot secured in said head, said pivot connecting the hand-lever to the acting lever, substantially as described.

3. A car mover comprising an acting lever, an angle-lever pivotally secured to the front end of the said acting lever and a hand-lever to the head end, a pivotal bolt in the said head end and a horizontal pivot arranged below and located obliquely to the said pivotal bolt, substantially as described.

4. In a car mover an angle shaped thrust block pivoted at its vertex or angular point on the acting lever which is pivoted on the base plate, and a hand lever carried by said acting lever, substantially as described.

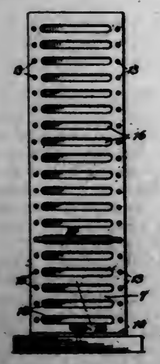
5. In a car mover a thrust block in the shape of an angle-lever pivoted to the front end of the acting lever, an upright pivot in the head end, a hand-lever upon said upright pivot and horisontal pivots below and obliquely to the said upright pivots, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

878,382. COMPOSITION OF MATTER TO BE USED AS A CEMENT COMPOUND. CHARLES GUY, Iola, Kans., assignor to The Petrific Cement Company, Iola, Kans. Filed Aug. 12, 1907. Serial No. 388,242.

The herein described composition of matter, consisting of silicate of aluminium, magnesium, sulfate of calcium, calamin, oxid of iron, arsenious acid, silicate dioxid, casein, salts of sodium, and water, substantially as described and for the purpose specified.

878,383. SKIRT-MEASURING DEVICE. MARTHA C. HAMMOND, Chattanooga, Tenn. Filed Sept. 7, 1907. Serial No. 391,841.



1. In a device of the character described, the combination with a base, of standards mounted on the base, one of said standards being adjustable toward and from the other, and a gage device connecting the standards and bridging the space between them, said gage device being vertically adjustable to different positions on the standards.

2. In a device of the character described, the combination with a base, of spaced standards mounted on the base, and a gage device detachably passing through one of the standards, bridging the space between said standards and detachably engaging the other standard, said gage device being vertically adjustable to different positions on the standards.

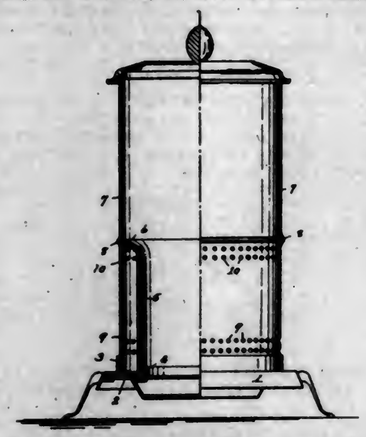
3. In a device of the character described, the combination with a base, of spaced standards mounted on the base, and a substantially U-shaped gage device having spaced arms that detachably pass through one of the standards and engage the other, said arms bridging the space between the standards, and said gage device being vertically adjustable to different positions on the standards.

4. In a device of the character described, the combination with a base, of spaced parallel standards mounted on the base and having a series of alined openings in their upright margins, and a gage having spaced arms that pass through the alined openings and bridge the space between the standards, said gage being vertically adjustable on the standards.

5. In a device of the character described, the combination with a base, of an upright standard having an offset foot secured to the base, a coacting standard having an offset foot located on the base and provided with a slot, a holding screw passing through the slot and engaged in the base, said standards being provided with vertical series of openings, and a gage device that passes through the opening and bridges the space between the standards.

[Claim 6 not printed in the Gazette.]

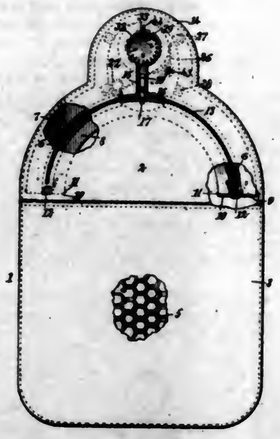
878,384. HEATING-STOVE. JACOB J. HARPEL, Sinking Spring, Pa. Filed May 10, 1906. Serial No. 316,066.



A heating stove comprising a base having a circumferential groove with upstanding parallel flanges at the inner and outer edges thereof, the outer flange being of greater vertical dimension, a cylindrical pot mounted thereon and having its weight sustained thereby the lower end of said pot resting in said groove against the inner flange thereof, said pot having at its upper edge a laterally disposed integral annular flange, a sheet metal casing secured in said groove against the outer flange thereof and being spaced from said pot, said casing having an imperforate circumferential groove which receives the laterally-disposed flange of the pot and fits snugly about the same but which is not positively secured thereto, said casing being provided below the upper edge of the pot with an upper and lower series of perforations.

878,385. POCKET. LOUIS HARTEL, Cherryvale, Kans. Filed May 8, 1907. Serial No. 372,519.

1. A pocket, comprising a body having an opening, a hinged member for closing said opening, and a lock comprising a movable dial carrying a dial pin rigid therewith, said dial pin consisting of a part angular in cross section and a part round in cross section, a disk having an angular opening adapted to receive said part angular in cross section, a second disk adapted to be movably mounted upon said part round in cross section, and a catch controlled by said disks and serving to secure said member in a closed position, said lock being operable by means of a predetermined combination of its parts.



2. A pocket, comprising a body having an opening, a hinged member for closing said opening, a lock comprising a movable dial carrying a dial pin rigid therewith, said dial pin consisting of a part angular in cross section and a part round in cross section, a disk having an angular opening adapted to receive said part angular in cross section, a second disk adapted to be movably mounted upon said part round in cross section, and a catch serving to secure said member in a closed position, said second disk being operable by said first disk, said disks controlling said catch, the pocket having a reinforcement for the body thereof consisting of a metal netting.

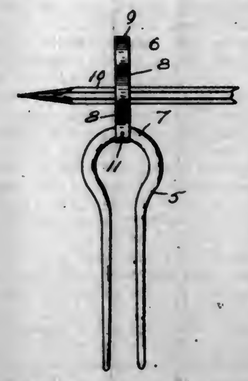
3. A pocket, comprising a body having an opening, a hinged member for closing said opening, a catch for securing said member in a closed position, a lock comprising a movable dial carrying a dial pin rigid therewith, said dial pin consisting of a part angular in cross section and a part round in cross section, a disk having an angular opening adapted to receive said part angular in cross section, and a second disk adapted to be movably mounted upon said part round in cross section, said disks having radial recesses adapted to permit the operation of said catch when said disks are in a predetermined position, said second disk being controlled by said first disk.

4. A pocket, comprising a body having rigid hinged jaws presenting an opening therebetween, a catch for securing said jaws one to the other, and a lock comprising a movable dial carrying a dial pin rigid therewith, said dial pin consisting of a part angular in cross section and a part round in cross section, a disk having an angular opening adapted to receive said part angular in cross section, and a second disk adapted to be removably mounted upon said part round in cross section, said disks having radial recesses adapted to permit the operation of said catch when said disks are in a predetermined position, said second disk being controlled by said first disk, said lock being operable by a predetermined variable combination of its parts.

5. A pocket, comprising a body having a jaw, a second jaw hinged to said first jaw, said jaws presenting an opening therebetween, means for normally forcing said jaws apart, a catch for securing said jaws one to the other, and a lock comprising a movable dial carrying a dial pin rigid therewith, said dial pin consisting of a part angular in cross section and a part round in cross section, a disk having an angular opening adapted to receive said part angular in cross section, and a second disk adapted to be movably mounted upon said part round in cross section, said disks having radial recesses adapted to permit a movement of said catch to release said jaws when said disks are in a predetermined position, said second disk having a guideway concentric therewith, said first disk having a projection adapted to move in said guideway.

[Claim 6 not printed in the Gazette.]

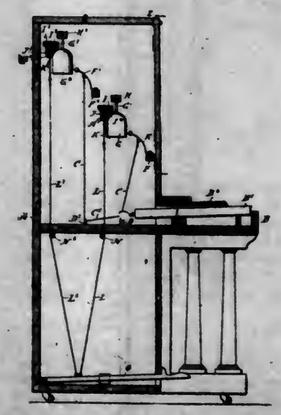
878,386. HAIR-PIN ATTACHMENT. CARL HARTMAN, Springfield, S. D. Filed July 8, 1907. Serial No. 382,672.



1. The combination of a hair pin and a pencil-carrying clip attached thereto, the clip being formed of a single strip of spring metal bent upon itself to provide front and rear members adapted to receive a pencil therebetween.

2. The combination of a hair pin and a verfical clip secured at its lower end thereto, said clip being formed of a single strip of spring metal bent upon itself to provide a front and rear member adapted to receive a pencil therebetween, the pencil when in place extending at right-angles to the hair pin.

878,387. BELL-PIANO. JOE HAVASSY, Copperhill, Tenn. Filed June 13, 1907. Serial No. 378,800.



1. A bell piano comprising a series of suspended bells, a key-board having keys, a spring striker for engaging each bell exteriorly, a cord connection between each key and a striker to sound the corresponding bell, a sliding

and spring-pressed damper rail for engaging the series of bells, and a pedal connected with the said damper rail to move the latter in engagement with the said series of bells on pressing the said pedal.

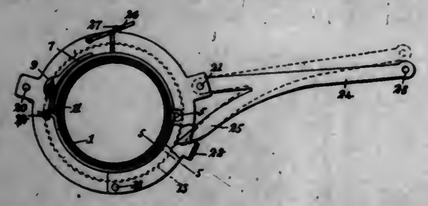
2. A bell piano comprising a series of suspended bells, a key-board having keys, a spring striker for engaging each bell exteriorly, a cord connection between each key and a striker to sound the corresponding bell, a damper rail mounted to slide vertically and adapted to engage the series of bells, a pedal connected with the said damper rail to move the latter in engagement with the said series of bells on pressing the said pedal, and springs for returning the said damper rail to normal inactive position on releasing the pedal.

3. A bell piano comprising a series of suspended bells, a key-board having keys, a spring-striker for each bell, a cord connection between each key and a striker to sound the corresponding bell, a spring-pressed damper rail normally held out of engagement with the said bells, a pedal, and a cord connection between the said pedal and the said damper rail to move the latter in contact with the said series of bells and against the tension of the springs of the damper rail.

4. A bell piano comprising two series of suspended bells, the bells of one series being tuned to the tones of a diatonic scale and the other series of bells to semitones, the two series of bells completing the chromatic scale through a plurality of octaves, sets of spring strikers for engaging the said series of bells exteriorly, a key-board having white and black keys, and cord connections between the said series of strikers and the white and black keys of the key-board.

5. A bell piano, comprising two series of suspended bells, the bells of one series being tuned to the tones of a diatonic scale and the other series of bells to semitones, the two series of bells completing the chromatic scale through a plurality of octaves, sets of spring strikers for engaging the series of bells, exteriorly, a key-board having white and black keys, cord connections between the said series of strikers and the white and black keys of the key-board, damper-rails mounted to slide up and down, springs on which rest the said rails, the springs normally holding the damper rails out of engagement with the corresponding sets of bells, pedals, and cord connections between the pedals and the said damper rails.

878,388. PIPE-WRENCH. AUGUST B. HEIMANN, Coalinga, Cal. Filed Nov. 14, 1907. Serial No. 402,101.



1. In a pipe wrench of the class described, in combination, a sleeve, means for clamping the same rigidly to a pipe, said sleeve being formed in sections and having a ratchet wheel formed thereupon, a ring formed in segments adapted to be applied over said ratchet wheel and engaging the sides thereof, and a lever pivotally attached to said ring and having a pawl engaging said ratchet wheel.

2. In a wrench of the class described, in combination, a clamping sleeve adapted to be rigidly secured to a pipe and having a ratchet wheel formed thereupon, said clamping sleeve having pivotally connected segments, an adjustable clamping device for locking the free ends of said segments to secure said sleeve to the pipe, a ring formed in segments pivotally attached together, said segments having each a pair of curved plates lying on opposite sides of said ratchet wheel and engaging the side faces thereof, means for locking said ring segments together, and a lever pivotally attached to said ring and having a pawl engaging said ratchet wheel.

3. In a wrench of the class described, in combination, a clamp formed in segments pivotally attached together and adapted to be attached to a pipe, one of said segments having clamping levers pivotally attached thereto, said levers having a head with a plurality of openings therein, links adapted to be attached in said openings, the segment opposite said clamping levers having means for engaging said links, a ratchet wheel formed on said clamp, a ring adapted to be applied to said ratchet wheel and rotatable freely on said clamp, and a lever carried by said ring and having a pawl engaging said ratchet wheel.

4. In a wrench of the class described, in combination, a clamping sleeve formed in pivotally connected segments and adapted to be secured rigidly to a pipe, a ratchet wheel formed on said sleeve, a ring composed of segments having double plates spaced apart to receive said ratchet wheel therebetween, a shackle carried by one of said ring segments and adapted to engage the opposite ring segment to hold said ring upon said ratchet wheel, a lever attached to said ring and having a pawl engaging said ratchet wheel, and a strap connecting the plates of the segment carrying said lever and guarding the point of said pawl.

878,389. PUMP. MILTON J. HENRY, Oak Park, Ill. Filed June 6, 1907. Serial No. 377,493.



1. The combination with a bottle or other receptacle, of a pump comprising a compression chamber and an expansion chamber, a tube connecting said compression and expansion chambers, and a hollow stopper having a cover adapted to support said pump, substantially as described.

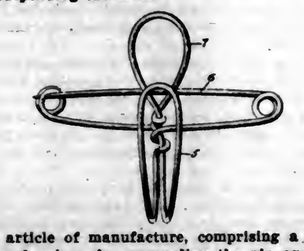
2. The combination with a receptacle, of a compression pump, a stopper having a spout, a cover for said stopper, a tube passing through said cover, said tube having a compression chamber mounted upon its upper end, and an expansible bulb on its lower end, substantially as and for the purpose specified.

3. In combination with a receptacle, a tapering, hollow, metallic stopper having a spout, a cover, a tube passing through said cover, said tube having perforations near its lower end and having said lower end inclosed within an expansible bulb.

4. In combination with a bottle or other receptacle, a stopper having a spout, a cover, a tube passing through said cover, a compression chamber, an expansion chamber, and a washer surrounding said stopper to insure a perfect fit between said stopper and said bottle.

878,390. SKIRT AND WAIST HANGER. CHARLOTTE W. HEWLETT, New York, N. Y. Filed Nov. 7, 1907. Serial No. 401,114.

1. An article of manufacture, comprising a hook, a safety-pin arranged transversely of and connected with the hook, and a loop connected with the hook and safety-pin for suspending the same.



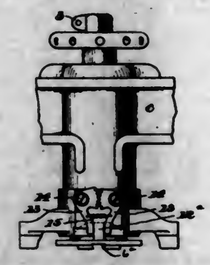
2. An article of manufacture, comprising a safety-pin, a hook, and a loop for suspending the pin and hook, all made of a single piece of wire with the catch-supporting member of the pin made in two sections, one of which passes into the hook and the other passes into the loop.

3. An article of manufacture, comprising a hook and an upwardly-projecting loop connected therewith, and a safety-pin arranged transversely of the loop and hook and in substantially the same plane as the loop, the hook, safety-pin and loop being composed of a single piece of wire.

4. An article of manufacture, comprising a wire safety-pin coiled at the opposite ends to respectively provide a spring and a catch for the pin, a wire hook, and a wire loop arranged substantially transversely of the pin at the center thereof and composed of the same piece of wire employed in the making of the pin, and with the catch-supporting member of said pin made in two sections, one of which passes into the hook and the other passing into the loop.

5. An article of manufacture, comprising a safety-pin having a hook substantially centrally depending from the catch-supporting member and arranged transversely thereto, and suspending means projecting upwardly from the hook above the pin.

878,391. SOLE-LAYING MACHINE. JOHN J. HEYS, Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed Apr. 19, 1906. Serial No. 312,558.



1. A machine of the class disclosed comprising a shoe support, a form support, supporting means for the latter constructed and arranged to permit said form support to adjust itself freely to the angular and alinement position of the work presented to it, and means to restore said form support angularly and alinedly to predetermined relation to said work support after each operation.

2. A machine of the class disclosed comprising a shoe support, a form support and a universal mount for the latter having its center of motion substantially at the form surface and means disposed about the universal mount tending to restore the parts to central position when free to move.

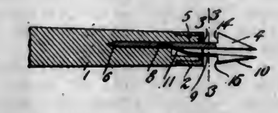
3. A machine of the class disclosed comprising a shoe support, a form support, and means to cause relative approach to the same means permitting free alinement adjustment of said form support to the opposed shoe support and connected segmental gear restoring devices to restore said alinement to predetermined relation to said shoe support after each operation of the machine.

4. A machine of the class disclosed comprising a shoe support, a form support and means to cause relative approach of the same, the form carrier 1 and the universally mounted form support 4, the centering pins 10 and gear restoring devices 13.

5. A machine of the class disclosed comprising a shoe support, a form support and means to cause relative approach of the same, the universal connection 1—4, and the supporting pin 6, the spring *m* and adjusting device *o*, together with the centering and restoring devices 10 and 13.

[Claims 6 to 9 not printed in the Gazette.]

878,392. SWINGLETREE. MILO HICKS, Essex, Mo. Filed May 6, 1907. Serial No. 371,997.

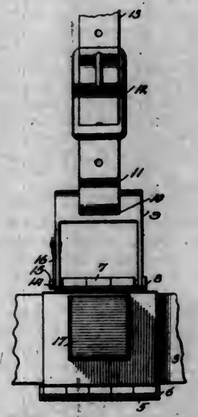


1. The combination of a swingletree or the like, a hook shaped member having a shank driven into the swingletree and provided with an inclined slot in the shank, and a spring catch fixed in the said slot.

2. The combination of a swingletree, a hook-shaped trace holder provided with a shank driven into the swingletree, said shank having a slot, and a spring catch secured in the slot before the said shank is driven into the swingletree and coöperating with the hook for securing a trace in the latter.

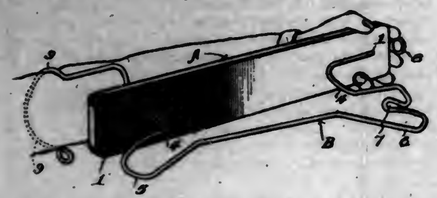
3. The combination of a swingletree having a chamber, a ferrule thereon provided with a T-shaped opening, a trace holder provided with a shank and extending through the opening and driven into the swingletree, a spring secured to the shank and extending through the chamber and out of the opening of the ferrule, and a catch on the spring.

878,393. TRACE-CARRIER. HARRY HILL, Kiowa, Kans. Filed June 28, 1906. Serial No. 323,796.



A trace carrier including a clamp having a pair of relatively broad members hinged together at one end and means to connect the opposite ends of said members together to clamp them on opposite sides of the trace, said members being provided with offset portions on their outer sides forming corresponding seats on their inner sides and packing strips in the said seats for engagement with opposite sides of the trace.

878,394. CLOTHES-LINE REEL. LOUIS HOLLE, Chicago, Ill. Filed July 26, 1907. Serial No. 385,689.



1. In a device of the class described a base board, and a wire frame secured upon the same, said cleat being provided with loops adjacent to the base board and ears adjacent to the loop, and one of said ears having an indented portion forming a catch.

2. A clothes line reel comprising a base board, a winding frame secured thereupon, and a curved bracket pivoted upon the back of the base board and capable of swinging forwardly and rearwardly of the latter.

3. A clothes line reel comprising a base board, a wire winding frame secured thereupon and having loops and ears, one of said ears being formed with an indentation constituting a catch; and a curved bracket member pivoted upon the back of the base board and capable of swinging forwardly of the latter.

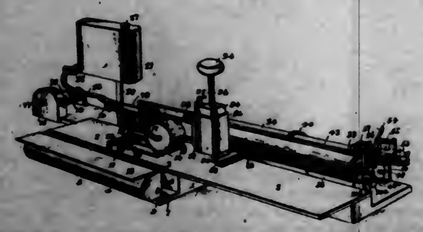
878,395. DOOR-HANGER. PAUL F. HOLSTERS, Brussels, Belgium. Filed Mar. 22, 1907. Serial No. 363,975.



1. In a device of the character described, a grooved member secured to the frame-work of the building or other structure, a door, a knob on said door engaging said groove, the knob consisting of a cylindrical shank portion having a flattened head and a base portion forming a dovetail joint with the grooved member, and a locking device bearing against the flattened portion of the head.

2. In a device of the character described, a grooved member secured to the framework of a building or other structure, said grooved member having a narrowed entrance slot, a door, and a knob on said door engaging said groove, the knob consisting of a cylindrical shank portion having a flattened head and a base portion forming a dovetailed joint with the grooved member, and a device bearing against the flattened portion of the head for holding the knob in position.

878,396. ENVELOP-STAMPING MACHINE. OSCAR M. HUMAN, Sherman, Tex. Filed May 25, 1906. Serial No. 318,721.



1. In a machine of the class described, the combination with a moistening device, of a table provided with a water receiving chamber located below the surface of the table to receive the drip from the moistening device and adapted to prevent the drip from running over the surface of the table, and supporting means spaced from the bottom of the chamber and provided with openings and receiving the moistening device.

2. In a machine of the class described, the combination with a moistening device, of a table provided with a water receiving chamber located below the surface of the table to receive the drip from the moistening device, and supporting means spaced from the bottom of the chamber and receiving the moistening device and consisting of a grating having openings.

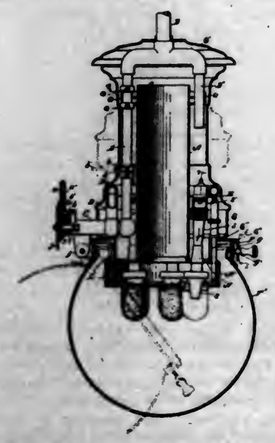
3. In a machine of the class described, the combination with a moistening device, of a table provided with a rectangular recess forming a water receiving chamber located below the surface of the table to receive the drip from the moistening device, and a rectangular support spaced from the bottom of the recess and provided with openings for the passage of water and receiving the moistening device.

4. In a machine of the class described, the combination of a stamp carriage having an escapement bar, means for actuating the carriage to feed the stamps, a spring actuated stop dog for engaging the escapement bar, said stop dog having a limited movement to carry it away from the engaging portion of the contiguous tooth of the escapement bar, stamp affixing mechanism, and means operated by the stamp affixing mechanism for carrying the escapement bar out of engagement with the stop dog.

5. In a machine of the class described, the combination of a stamp carriage having an escapement bar, means for actuating the carriage to feed the stamps, a spring actuated stop dog for engaging the escapement bar, said stop dog having a limited movement to carry it away from the engaging portion of the contiguous tooth of the escapement bar, stamp affixing mechanism, and a pivoted pawl or dog operated by the stamp affixing mechanism and arranged to carry the escapement bar out of engagement with the stop dog.

[Claims 6 to 21 not printed in the Gazette.]

878,397. GAS-LAMP. ALFRED H. HUMPHREY, New York, N. Y. Filed June 22, 1906. Serial No. 322,891.



1. In a gas lamp, the combination with a gas delivery pipe of a chimney having an outwardly projecting flange at its lower end, secured to said delivery pipe; a valve casing at the lower end of said gas delivery pipe, projecting outwardly therefrom; a gas delivery ring through which said chimney is arranged, connected to said gas delivery pipe; a plurality of inverted burners arranged through said flange on said chimney, connected to said gas delivery ring; a globe adapted to inclose the lower portion of said chimney; a depending ear on said valve, to which said globe is hinged; a casing band having an outwardly projecting flange at its upper end, arranged on said flange on said chimney; a vertically adjustable casing adapted to rest on said casing band, said casing having a slot therein adapted to receive said valve casing; a rest for holding said casing in its elevated position, and a deflector plate, slidably arranged on said delivery pipe, co-acting for the purpose specified.

2. In a gas lamp, the combination with a gas delivery pipe of a chimney having an outwardly projecting flange at its lower end, secured to said delivery pipe; a valve casing at the lower end of said gas delivery pipe, projecting outwardly therefrom; a gas delivery ring through which said chimney is arranged, connected to said gas delivery pipe; a plurality of inverted burners arranged through said flange on said chimney connected to said gas delivery ring; a casing band having an outwardly projecting flange at its upper end, arranged on said flange on said chimney; a vertically adjustable casing adapted to rest on said casing band, said casing having a slot therein adapted to receive said valve casing; a rest for holding said casing in its elevated position, and a deflector plate, slidably arranged on said delivery pipe, co-acting for the purpose specified.

3. In a gas lamp, the combination with a gas delivery pipe of a chimney having an outwardly projecting flange at its lower end secured to said delivery pipe; a valve casing at the lower end of said gas delivery pipe, projecting outwardly therefrom; a gas delivery ring through which said chimney is arranged, connected to said gas delivery pipe; a plurality of inverted burners arranged through said flange on said chimney connected to said gas delivery ring; a casing band having an outwardly projecting flange at its upper end, arranged on said flange on said chimney; a vertically adjustable casing adapted to rest on said casing band, said casing having a slot therein adapted to receive said valve casing, and a deflector plate, slidably arranged on said delivery pipe, co-acting for the purpose specified.

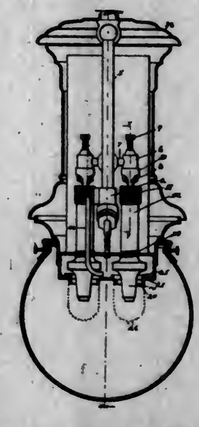
4. In a gas lamp, the combination with a gas delivery pipe of a chimney having an outwardly projecting flange at its lower end, secured to said delivery pipe; a valve casing at the lower end of said gas delivery pipe, projecting outwardly therefrom; a gas delivery ring through which said chimney is arranged, connected to said gas delivery pipe; a plurality of inverted burners arranged through said flange on said chimney connected to said gas delivery rings; a casing band having an outwardly projecting flange at its upper end, arranged on said flange on said chimney; a vertically adjustable casing adapted to rest on said casing band, said casing having a slot therein adapted to receive said valve casing; a rest for holding said casing in its elevated position, co-acting for the purpose specified.

5. In a gas lamp, the combination with a gas delivery pipe of a chimney having an outwardly projecting flange at its lower end, secured to said delivery pipe; a valve casing at the lower end of said gas delivery pipe, projecting outwardly therefrom; a gas delivery ring through which said chimney is arranged, connected to said gas delivery pipe; a plurality of inverted burners arranged through said flange on said chimney connected to said gas delivery ring; a casing band having an outwardly projecting flange at its upper end, arranged on said flange on said chimney; a vertically adjustable casing adapted to rest on said casing band, said casing having a slot therein adapted to receive said valve casing, co-acting for the purpose specified.

[Claims 6 to 24 not printed in the Gazette.]

878,398. GAS-LAMP. ALFRED H. HUMPHREY, New York, N. Y. Filed Nov. 26, 1906. Serial No. 345,168.

1. In a gas lamp, the combination with a gas supply pipe, of a valve at the lower end thereof; a T-shaped gas delivery pipe projecting upwardly from said valve; a plurality of downwardly directed delivery nozzles carried by the horizontal portion of said T-shaped delivery pipe; a flat chimney provided with an outwardly and downwardly projecting flange at its bottom, the chimney being at one side of the center of the flange; inverted burner tubes arranged through said chimney flange; a plurality of inverted burner tips on said tubes arranged in alinement below said flange; a downwardly flaring rectangular reflector hinged at one end of said chimney; a suitable catch therefor arranged at the opposite end of said chimney; a globe resting on the top of said reflector; a plate-like mantle-support having a row of mantle-holder openings therein adapted to fit into said flange on said chimney; a revolubly and vertically adjustable supporting-rod for said mantle-support arranged at the end of said chimney opposite the hinge for said reflector whereby said mantle-holder may be swung away from said reflector when the same is opened; a casing adapted to rest on said chimney flange; and a deflector arranged above the casing slidably mounted on said supply pipe, for the purpose specified.



2. In a gas lamp, the combination with a gas supply pipe, of a valve at the lower end thereof; a T-shaped gas delivery pipe projecting upwardly from said valve; a plurality of downwardly directed delivery nozzles carried by the horizontal portion of said T-shaped delivery pipe; a flat chimney provided with an outwardly and downwardly projecting flange at its bottom, the chimney being at one side of the center of the flange; inverted burner tubes arranged through said chimney flange; a plurality of inverted burner tips on said tubes arranged in alinement below said flange; a downwardly flaring rectangular reflector hinged at one end of said chimney; a suitable catch therefor arranged at the opposite end of said chimney; a plate-like mantle-support having a row of mantle-holder openings therein adapted to fit into said flange on said chimney; a revolubly and vertically adjustable supporting-rod for said mantle-support arranged at the end of said chimney opposite the hinge for said reflector whereby said mantle-holder may be swung away from said reflector when the same is opened; a casing adapted to rest on said chimney flange; and a deflector arranged above the casing slidably mounted on said supply pipe, for the purpose specified.

3. In a gas lamp, the combination with a gas supply pipe, of a valve at the lower end thereof; a T-shaped gas delivery pipe projecting upwardly from said valve; a plurality of downwardly directed delivery nozzles carried by the horizontal portion of said T-shaped delivery pipe; a flat chimney provided with an outwardly and downwardly projecting flange at its bottom, the chimney being at one side of the center of the flange; inverted burner tubes arranged through said chimney flange; a plurality of inverted burner tips on said tubes arranged in alinement below said flange; a plate-like mantle-support having a row of mantle-holder openings therein adapted to fit into said flange on said chimney; a revolubly and vertically adjustable supporting-rod for said mantle-support; a casing adapted to rest on said chimney flange; and a de-

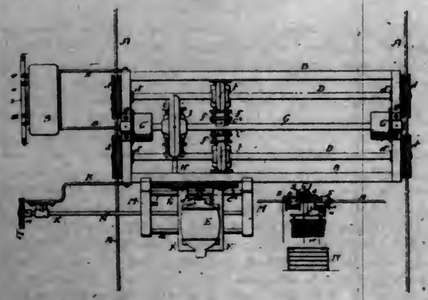
flector arranged above the casing slidably mounted on said supply pipe, for the purpose specified.

4. In a gas lamp, the combination with a gas supply pipe, of a valve at the lower end thereof; a T-shaped gas delivery pipe projecting upwardly from said valve; a plurality of downwardly directed delivery nozzles carried by the horizontal portion of said T-shaped delivery pipe; a flat chimney provided with a flange at its bottom, the chimney being at one side of the center of the flange; inverted burner tubes arranged through said chimney flange; a plurality of inverted burner tips on said tubes arranged in alinement below said flange; a downwardly flaring rectangular reflector hinged at one end of said chimney; a suitable catch therefor arranged at the opposite end of said chimney; a casing adapted to rest on said chimney flange; and a deflector arranged above the casing slidably mounted on said supply pipe, for the purpose specified.

5. In a gas lamp, the combination with a gas supply pipe, of a valve at the lower end thereof; a T-shaped gas delivery pipe projecting upwardly from said valve; a plurality of downwardly directed delivery nozzles carried by the horizontal portion of said T-shaped delivery pipe; a flat chimney provided with a flange at its bottom, the chimney being at one side of the center of the flange; inverted burner tubes arranged through said chimney flanges; a plurality of inverted burner tips on said tubes arranged in alinement below said flange; a casing adapted to rest on said chimney flange; and a deflector arranged above the casing slidably mounted on said supply pipe, for the purpose specified.

[Claims 6 to 33 not printed in the Gazette.]

878,399. HOISTING APPARATUS FOR DYEING AND OTHER MACHINES. JOSEPH HUSSONG, Camden, N. J., assignor to Hussong Dyeing Machine Company, Groveville, N. J., a Corporation of New Jersey. Filed Feb. 14, 1907. Serial No. 357,351.



1. The combination in a hoisting apparatus, of a carriage, a traversing shaft on the carriage, wheels for said shaft, rails upon which the wheels travel, a drum shaft also having bearings on the carriage, a drum on the said shaft, a motor, gearing between the motor and the drum shaft, and gearing between the motor and the traversing shaft, guideways for the motor, with means for sliding bodily the motor on its guideways so as to operatively connect it with either of the said shafts, substantially as described.

2. The combination of a carriage, a traversing shaft mounted on the carriage and having wheels, rails upon which the wheels are mounted, a drum shaft mounted on the carriage and having a drum, two shafts arranged at right angles to the said traversing shaft and drum shaft, worm gearing connecting one of said shafts with the traversing shaft and the other shaft with the drum shaft, a motor adjustably mounted on the carriage, means for shifting the motor, said motor being arranged to be thrown into gear with either shaft, substantially as described.

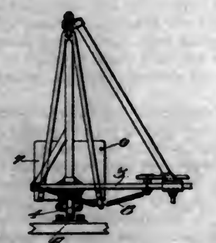
3. The combination of a frame, two shafts mounted on the frame, each shaft having wheels, tracks upon which the wheels are mounted, a worm wheel on one of said shafts, a shaft mounted at right angles to the said shaft, a worm on the said shaft, a gear wheel on the end of the said shaft, a drum shaft, a drum thereon, a worm wheel on the drum shaft, a shaft arranged at right angles to the said drum shaft and extending parallel with the other driving shaft, a worm on said shaft meshing with the worm wheel, gear wheels on the driving shafts, said gear wheels being spaced apart, a motor adjustably mounted on the carriage, a pinion on the motor, with means for shifting the motor so as to throw the pinion into engagement with either of the gear wheels, substantially as described.

4. The combination of a carriage, two traversing shafts mounted on the carriage, and each having wheels, rails upon which the wheels are mounted, a driving shaft arranged at right angles to the said shafts and geared to both of the traversing shafts, a drum shaft having drums thereon, a driving shaft arranged at right angles to the drum shaft and geared thereto, gears on each of the driving shafts, a motor adjustably mounted on the carriage and having a pinion, with means for shifting the motor so as to throw said pinion into gear with either one of the gear wheels on the driving shafts, substantially as described.

5. The combination of a carriage, two traversing shafts mounted on the carriage, wheels on the said shafts, rails upon which the wheels are mounted, a driving shaft arranged at right angles to the traversing shafts, worm and worm gearing connecting each traversing shaft with the driving shaft, a gear wheel on said driving shaft, a drum shaft, two drums mounted thereon, a driving shaft for said drum shaft, worm and worm gearing between the driving shaft and the drum shaft, a gear wheel on the said shaft, a motor adjustably mounted on the said carriage, means for shifting the motor, said motor having a pinion arranged to be shifted into gear with the gear wheel on either of the driving shafts, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

878,400. AMUSEMENT DEVICE. FRANK J. JOHNSTON, Oakpark, Cal., assignor to F. J. Johnston Circle Wave Amusement Co., Sacramento, Cal., a Corporation of California. Filed Dec. 7, 1906. Serial No. 346,718.



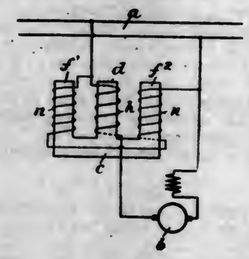
1. An improved pleasure apparatus having in combination a continuous track, a rotary platform, rollers at the perimeter of the platform engaging the track, a centrally disposed mast and braces or guys connecting the same with the platform, supports carried by the platform, and arranged perpendicular to the platform and to the axis of the rollers, passenger conveyances arranged one between each pair of supports, hangers secured to the passenger conveyances said hangers having their upper ends pivotally connected to the supports whereby the conveyances are capable of swinging transversely of the platform.

2. An improved pleasure apparatus having in combination a continuous track, a rotary platform, rollers at the perimeter of the platform engaging the track, supports carried by the platform, and arranged perpendicular to the platform and to the axes of the rollers, passenger conveyances arranged one between each pair of supports, hangers secured to the passenger conveyances said hangers having their upper ends pivotally connected to the supports whereby the conveyances are capable of swinging transversely of the platform, said hangers being forked and the members thereof diverging downwardly and being secured to the conveyances at opposite sides of the center thereof, and springs for limiting the swinging movement of said conveyances.

3. An improved amusement apparatus having in combination a flat circular track transversely inclined and devoid of undulations, a central mast mounted for rotation concentric with said track and perpendicular to the plane thereof, a platform rigid with said mast parallel with the plane of said track, braces or guys connecting the mast with said platform, rollers in the perimeter of said platform and adapted to run on said track, seats for passengers on said platform, standards projecting from the platform perpendicular thereto and to the axis of the rollers, said seats being suspended from the upper ends of the standards whereby the seats may have a limited oscillating movement transversely of the track.

878,401. [WITHDRAWN.]
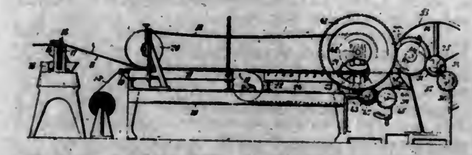
878,402. MAGNET FOR ALTERNATING CURRENTS. CHRISTIAN KRÄMER, Frankfort-on-the-Main, Germany, assignor to Felten & Guilleaume Lahmeyerwerke Actien-Gesellschaft, Frankfort-on-the-Main, Germany. Filed Mar. 12, 1906. Serial No. 305,720.



1. The combination with a source of single phase-alternating current, of an electro magnet comprising a core consisting of three parallel pole pieces and a yoke connecting the same, and windings upon said pole pieces, the winding upon one of said pole pieces being connected in series across said source with a substantially non-phase-displacing, current-reducing means, the windings upon the other two pole pieces being connected in series across said source.

2. The combination with a source of single phase alternating current, of an electro magnet comprising a core consisting of three parallel pole pieces and a yoke connecting the same, and windings upon said pole pieces, the winding upon one of said pole pieces being connected in series with a motor across said source, the windings upon the other two pole pieces being connected in series across said source.

878,403. MANUFACTURE OF CELLULAR BOARDS. SAMUEL M. LANGSTON, Camden, N. J. Filed June 27, 1907. Serial No. 381,048.



1. An apparatus of the character described, comprising a stationary heater having a smooth surface, and means spaced therefrom and movable in relation thereto for advancing the paper and holding it in resilient engagement with said heater.

2. In a machine for making cellular board, the combination of a stationary heater having a smooth surface, and pressure-applying mechanism for advancing the board and holding it in resilient engagement with said heater.

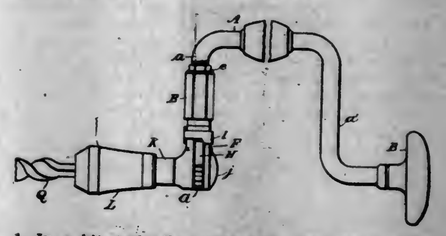
3. In a machine for making cellular board, the combination of a stationary heater, and means spaced therefrom and movable substantially parallel to the surface thereof for advancing the board and holding it in resilient engagement with said heater.

4. A machine for making double-faced corrugated paper, comprising means for drawing a strip of single-faced corrugated paper and a strip of facing paper through the machine each under tension, means for applying paste to the crowns of the corrugations of the corrugated strip and then bringing the facing strip into contact therewith, a stationary heater in engagement with which the facing strip passes, and means traveling with said corrugated strip for holding said facing strip in engagement with said stationary heater.

5. A machine for making double-faced corrugated paper, comprising a stationary heater having a smooth surface, and an endless belt traveling adjacent said surface and serving to advance the paper, and also to hold it in resilient engagement with said stationary heater.

[Claims 6 to 13 not printed in the Gazette.]

878,404. BIT-STOCK. ISRAEL LARSON, Sandy, Utah. Filed Jan. 26, 1907. Serial No. 354,301.



1. In a bit-stock, the combination with the end of a sweep bar, of a plug having cross mortises in its lower end, a threaded thimble, tenons on said thimble to engage said mortises, a threaded stock, a threaded tie-bolt engaging said thimble and said stock, means to releasably hold said plug and said thimble in operative contact and means to connect said stock with a bit holder, as specified.

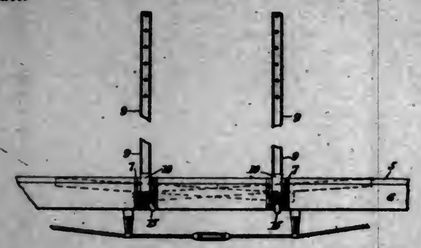
2. The combination with the threaded end of a sweep bar of a plug having an exterior shoulder and with cross mortises in its lower end, a thimble partly threaded within and without, tenons on the upper end of said thimble to engage the mortises in said plug, an internally threaded stock, a threaded tie-bolt to engage said thimble and said stock, a sleeve having screw connection with said thimble, a shoulder on said sleeve abutting said shoulder on said plug, a jam nut on the upper end of said plug to hold said sleeve in position, a shaft rigid on a bit holder rotatable in said stock and a connection between said stock and said shaft, as described.

878,405. CAR-STAKE. FRED W. LAWRENCE, Bonner, Mont., assignor of one-half to George H. Clynick, Bonner, Mont. Filed Oct. 4, 1907. Serial No. 395,888.

1. A car stake, comprising a channeled metal body, a recessed sill plate wherein the stake may be seated, a washer plate contacting with the channeled face of the stake, a transverse pivot bolt, and nuts on the bolt that by adjustment clamp the washer plate on the stake or release it.

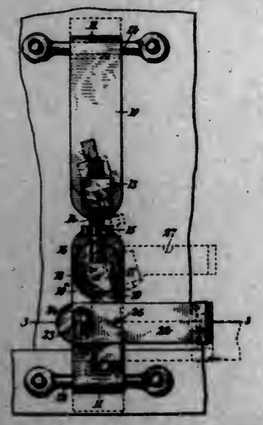
2. A car stake, comprising a channeled metal body, a recessed sill plate wherein the stake may be seated, a shouldered pivot bolt threaded at each end, jam nuts on one end of said bolt, a washer plate contacting with the channeled face of the stake and perforated for the reception of the

pivot bolt, and a nut on said bolt bearing upon the washer plate.



3. A car stake, comprising a channeled metal body, a recessed sill plate wherein the stake may be seated, a shouldered pivot bolt threaded on each end and passing through perforations in the stake and sill plate, the shoulder on the bolt seating on the edge of the perforation in the sill plate, jam nuts on one end of the pivot bolt, a perforated washer plate through which the pivot bolt passes, a nut screwing on the bolt and bearing upon the washer plate, and a crotched lever pivoted at its fork upon said nut.

878,406. TRUNK-FASTENER. GEORGE J. LOOS, New York, N. Y., assignor to John H. B. Boyle, New York, N. Y. Filed June 6, 1907. Serial No. 377,587.



1. A fastener for a trunk or other like body, comprising detachable end pieces, a lever permanently pivoted to one of said end pieces, a nut directly pivoted to said other end piece, and a screw in threaded engagement with said nut, having a pivotal connection with said lever eccentric to the pivot of said lever.

2. A fastener for a trunk or other like body, comprising end pieces, a lever pivotally connected with one of said end pieces, a nut pivoted to the other of said end pieces, a bearing block pivoted to said lever eccentric to the pivotal connection thereof, and a screw journaled in said bearing block in threaded engagement with said nut.

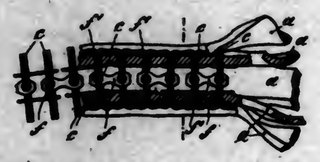
3. A fastener for a trunk or other like body, comprising end pieces, a lever pivotally connected with one of said end pieces, a nut pivoted to the other of said end pieces, a bearing block pivoted to said lever eccentric to the pivotal connection thereof, a screw journaled in said bearing block in threaded engagement with said nut, and means for locking said lever.

4. A fastener for a trunk or other like body, comprising end pieces having hooked outer ends, a lever pivoted to one of said end pieces, a nut pivoted to the other of said end pieces, a bearing block pivoted to said lever eccentric to the pivotal connection thereof, a screw in threaded engagement with said nut and journaled in said bearing block, and a hasp having a projection for locking said lever.

5. A fastener for a trunk or other like body comprising end pieces having a lever adjustment and a screw adjustment connecting them together, a staple carried by one of said end pieces, and a hasp having an opening for receiving the staple and provided with a projection movable into the path of the lever.

[Claims 6 to 8 not printed in the Gazette.]

878,407. CABLE OR ROPE. GIULIO MAGALDI, Buccino, Italy. Filed July 2, 1906. Serial No. 324,466.



1. A cable of the class described comprising longitudinal strips and spiders having radial arms to which the strips are secured.

2. A cable of the class described comprising longitudinal strips, and spiders having radial arms extended through and fastened to said strips.

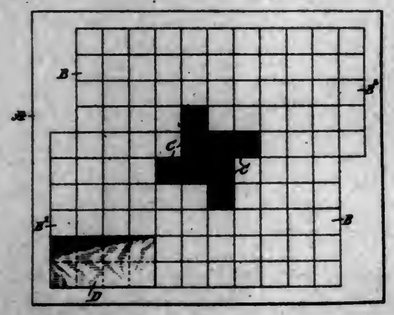
3. A cable of the class described comprising longitudinal strips, and spiders having radial arms, said strips being laced between and around said arms.

4. A cable of the class described comprising longitudinal strips, and spiders having radial arms to which the strips are secured by binding over the ends of the arms.

5. A cable of the class described comprising longitudinal strips, spiders having radial arms to which the strips are secured, and washers on said arms bearing against the inner sides of the strips.

[Claims 6 to 15 not printed in the Gazette.]

878,408. PUZZLE. RALPH D. MARTIN, Habana, Cuba. Filed May 21, 1907. Serial No. 374,889.



1. A puzzle comprising a board having fields of uniform size, starting and stopping stations, and a playing block adapted to be tumbled over the said fields from one station to the other, one dimension of the block corresponding to a side of a field and the remaining dimensions to multiples of the said side of a field.

2. A puzzle comprising a board provided on its face with contiguous fields of uniform size and having stations covering a plurality of fields and surrounded by the fields, and a block to be tumbled over the said fields, one of the dimensions of the block corresponding to the side of a field and the remaining dimensions corresponding to a multiple of the side of the field.

3. A puzzle comprising a board provided on its face with contiguous fields of uniform size, and a playing block to be tumbled over the said fields and having a thickness

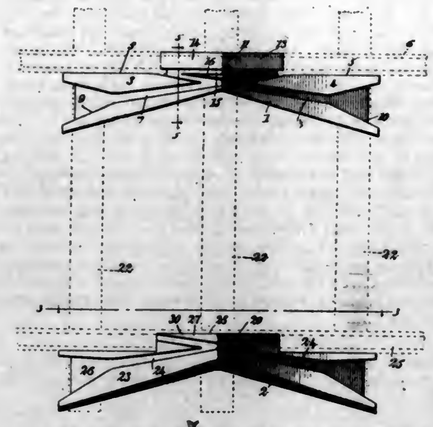
corresponding to a side of a field, and having its width and length corresponding to a multiple of the thickness of the block.

4. A puzzle comprising a board provided on its face with contiguous fields of uniform size, and a playing block to be tumbled over the said fields and having a thickness corresponding to a side of a field, the width of the block being double the size of the thickness of the block, and the length of the block corresponding to a multiple larger than two of the thickness of the block.

5. A puzzle comprising a board provided on its face with contiguous square playing fields of uniform size, and having stations at or near the center of the board, and each of the size of two of the said square playing fields, the end of a station abutting against the side of an adjacent station, and a rectangular playing block having a thickness corresponding to the side of a playing field, the width of the playing block being double the thickness of the block, and the length of the block being four times the thickness of the block.

[Claims 6 and 7 not printed in the Gazette.]

878,409. CAR-REPLACER. HENRY E. MATTHEWS and WALTER P. MATTHEWS, Salida, Colo. Filed May 28, 1907. Serial No. 376,051.



1. A car replacer having a pair of oppositely extending guide arms with alining sides adapted to be applied to the side of the rail, and having a shoe projecting over the rail and presenting inclined upper faces meeting near the middle transverse axis of said shoe, said arms having guide grooves extending upwardly in the upper faces thereof affording means for guiding the wheels.

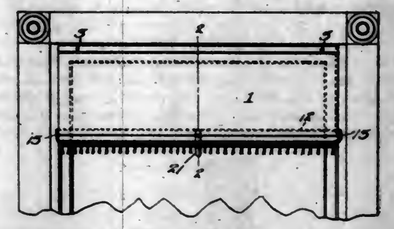
2. A car replacer having oppositely extending guide arms presenting alining side faces adapted to be applied to the side of the rail, said side faces having pockets therein and having notches on the under side thereof receiving the cross ties, said guide arms having grooves in the upper faces thereof adapted to guide a wheel onto the rail.

3. An inside replacer having guide arms and a shoe projecting over the rail, said shoe having a longitudinal guide groove therein alining with the inner side of the rail and adapted to pass an undisplaced wheel rolling on the rail.

4. An inside replacer having guide arms inclining downwardly from the middle transverse axis thereof and having grooves on the upper faces of said arms intersecting each other, a shoe projecting over the rail having a longitudinal groove at the side of the rail connecting said guide grooves, said longitudinal groove affording means for passing an undisplaced wheel.

5. An outside replacer having oppositely extending guide arms with a shoe projecting therefrom over the rail, said shoe presenting inclined upper faces extending downwardly from the middle transverse axis of the said replacer, said guide arms being inclined and having guide grooves on the upper sides thereof intersecting on said axis and extending down said inclined faces to points near the inner side of the rail.

878,410. CURTAIN-FIXTURE. HENRY K. MEIS, Lawton, Okla. Filed May 11, 1907. Serial No. 373,085.

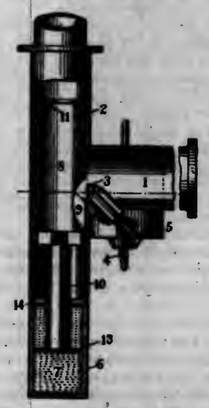


1. A window shade having a roller at the lower end thereof, a spring to revolve said roller in one direction to cause the shade to coil thereon, means coöperating with the spring to cause the shade to coil on the roller and a clamp carried by the shade to prevent rotation of said roller.

2. A window shade having a roller at the lower end thereof, a spring to revolve said roller in one direction to cause the shade to coil thereon, a yoke in which said roller is mounted, said yoke bearing against one side of said shade, and a clamp suspended from said yoke to prevent casual rotation of the roller.

3. A shade fixture of the class described comprising a yoke element to bear against one side of the shade and having arms to extend beyond the opposite side thereof, a roller having an axle on which it revolves, said axle being secured to said yoke element, a spring coiled on said axle, having one end attached thereto and the other end attached to said roller, and a clamping device suspended from the said yoke element to prevent casual rotation of said roller by the action of said spring.

878,411. CARBURETER FOR INTERNAL-COMBUSTION ENGINES. OGDEN MINTON, Brooklyn, N. Y. Filed Aug. 2, 1907. Serial No. 386,685.



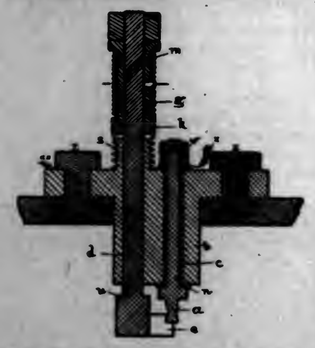
1. A carbureter comprising an air inlet, a fuel supply pipe, a valve therein, and a liquid receptacle containing a supporting fluid for said valve, a float secured to said valve for immersion in said liquid, and means attached to said valve, upon which the inward suction of the air may act to raise the same.

2. A carbureter comprising an air inlet, a fuel supply pipe, a valve therein having a float, a liquid chamber for said float, a supporting liquid, an air current lifting mem-

ber for said valve and a steadying member for said float, adapted to restrain the flow of the liquid upon the movement of the valve.

3. A carbureter, comprising an air inlet, a fuel supply pipe, a valve therein having a variable immersion float adapted to support the same, secured thereto, a liquid chamber for said float, an air current lifting member for said valve, and a liquid checking device for steadying the movement of said valve.

878,412. **ELECTRIC SPARKING DEVICE FOR GAS-ENGINES.** EDWARD R. MOFFITT, San Francisco, Cal., assignor to Imperial Gas Engine Co., San Francisco, Cal., a Corporation of California. Filed Mar. 13, 1907. Serial No. 362,197.



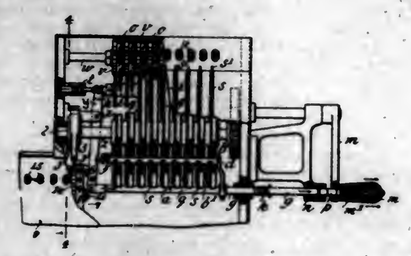
1. In an electric sparking device adapted for use in gas engines, the combination of a stationary electrode, a rotatable stem carrying the contact piece that constitutes the movable electrode, a tappet piece loosely fitted on the stem so as to be rotatable relative thereto, a sleeve also loose upon the stem, the sleeve and tappet piece being provided with locking or interengaging shoulders, arranged to permit a rotative movement of one relative to the other, means for securing the sleeve fast to the stem in one or another position of rotative adjustment, and a spring connected at its opposite ends respectively with the tappet piece and the said sleeve, substantially as set forth.

2. In an electric sparking-device for a gas engine, the combination of a plug, the stationary electrode therein, a stem free to oscillate about its axis and also movable longitudinally in the plug and carrying a contact-piece on the end inside the explosion-chamber of the engine, a tappet-piece loosely fitted on the stem and rotatably movable thereon, a coiled spring connected at one end with the stem, its other end being connected with the tappet-piece, and a coiled spring interposed between the said tappet-piece and the plug, substantially as described for operation as set forth.

878,413. **CALCULATING-MACHINE.** ARTHUR MÜLLER, Gautzsch, Germany, assignor to Leipsiger Pöbrenwerke Gesellschaft mit beschränkter Haftung, Lausen, near Markraustädt, Germany. Filed Feb. 27, 1904. Serial No. 195,594.

1. In a calculating machine, the combination with the adjusting rings and operating crank handle, of a bolt formed with raised parts and adapted to lock the whole of the rings, means for locking said handle, and mechanism connecting the bolt with the handle locking means in such manner that when the handle is locked the adjusting rings are released and when the handle is released the adjusting rings are locked.

2. In a calculating machine, the combination with the adjusting rings and operating crank handle of a bolt formed with raised parts and adapted to lock the whole of the rings, a bolt connected with said handle and adapted to lock the said handle and means for connecting the adjusting ring bolt with the handle locking bolt in such manner that when the handle is locked the adjusting rings are released, and when the handle is released the adjusting rings are locked.



3. In a calculating machine, the combination with the adjusting rings and operating crank handle of a bolt formed with raised parts and adapted to lock the whole of the rings, means for locking said handle, and mechanism connecting the bolt with the handle locking means in such manner that when the handle is locked the adjusting rings are released and when the handle is released the adjusting rings are locked, a series of counting disks arranged behind the cover of the casing and arranged to show the calculating number, toothed segments on the adjusting rings, wheels adapted to engage the segments and mounted to rotate freely on a longitudinally displaceable shaft, and means for connecting the shaft with the crank handle so that when the crank handle is released the shaft is displaceable to put the wheels thereon out of gear so that the adjusted number remains visible during the whole of the calculating operation.

4. In a calculating machine a machine frame a disk shaft z, and a registering disk wheel 6 mounted therein, a slotted lever arranged on the machine frame between the reckoning disk shaft z and the registering disk wheel 6, a fixed pin 5 working in the slot in the lever and an eccentric on the shaft z coöperating with the pin to impart an oscillating motion to the lever in such a manner that the end of the slotted lever is moved into a notch in the registering disk wheel 6 when the eccentric moves downwards and thereupon in swinging upwards or downwards actuates the disk.

878,414. **PYROGRAPHIC TOOL.** JOHN P. MÜLLER, New Rochelle, N. Y. Filed Feb. 14, 1907. Serial No. 357,309.

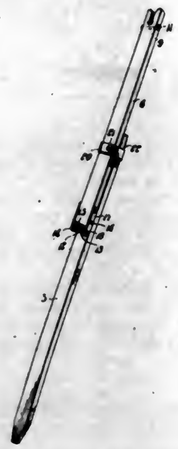


The combination of a pyrographical tool provided with lugs on its periphery intermediate of its ends, and a wooden handle on the tool and having bores of different diameters, the larger bore being at the inner end of the handle and of less length than the smaller bore, and the smaller bore being of a diameter about the same as that of the tool, whereby the lugs of the tool will compress the material of the handle so as to securely hold the handle on the tool.

878,415. **CLOTHES-LINE PROP.** DAVID MCDOUGALL, Fall River, Mass. Filed Mar. 4, 1907. Serial No. 360,419.

1. A clothes line prop including a relatively stationary section having one end thereof inclined or beveled, a relatively movable section pivotally mounted on the stationary section and having its free end formed with a recess opening through the adjacent end of said section for the reception of the clothes line, and a locking collar slidably mounted on the movable section and adapted to engage the inclined end of the stationary section for locking said sections in extended position.

2. A clothes line prop including a relatively stationary section, a bracket secured to one face of the stationary section at a point intermediate the opposite ends of the same and provided with spaced laterally extending perforated ears, a movable section having reinforcing plates secured to the opposite longitudinal edges thereof, a plate extending transversely across one end of the movable section and having its opposite ends interposed between the ears and reinforcing plates, a bolt extending through the perforations in the ears and engaging the reinforcing and transverse plates, and a collar slidably mounted on the movable section and adapted to engage the adjacent end of the stationary section.



878,416. **CLOTHES-LINE PROP.** DAVID MCDOUGALL, Fall River, Mass. Filed Mar. 4, 1907. Serial No. 360,421.



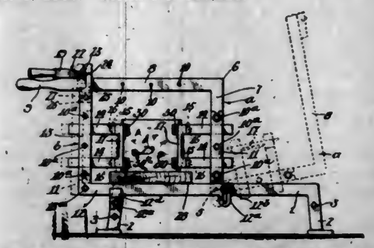
1. A clothes line prop including extensible sections, a yoke carried by one of the sections embracing the mating section, and a spring pressed locking member carried by said mating section and adapted to engage said yoke for locking the sections in extended position.

2. A clothes line prop including extensible sections movable one upon the other to extended position, a sleeve secured to and forming a housing for one end of one section and provided with a yoke embracing the mating section, and a strap secured to said mating section and provided with an inwardly extending hook adapted to engage the yoke for locking the sections in extended position.

3. A clothes line prop including longitudinally adjustable sections, a yoke secured to one end of each section and embracing the mating section, and a locking member secured to one of said sections and provided with a terminal hook adapted to engage the yoke of the mating section for locking said sections in extended position.

4. A clothes line prop including longitudinally adjustable sections slidably mounted one upon the other, a yoke rigidly secured to one end of each section, and a spring pressed locking member secured to one of the sections and having its free end bent inwardly to form a hook the bill of which yieldably engages the face of the said section, said hook being adapted to engage the yoke of the mating section for locking said sections in extended position.

878,417. **ARTIFICIAL-STONE MACHINE.** THOMAS A. MCMURTRIE, Los Angeles, Cal., assignor, by mesne assignments, to Kimmerle Concrete Machinery Company, Los Angeles, Cal., a Corporation of California. Filed Apr. 8, 1907. Serial No. 367,126.



1. In an artificial stone machine, a base frame, a superstructure pivoted thereto, the superstructure comprising two sections, clamping plates carried by the respective sections, supporting bars adjustably held in position on the respective sections by said clamping plates, and face plates connected with and supported by the supporting bars.

2. In an artificial stone machine, a base frame, a superstructure comprising two sections, each section formed of a pair of L-shaped bars, the bars of one section being pivoted to the base frame, the bars of the other section having slotted ends, and studs on said pivoted bars engaging in the slotted ends of the other bars for sliding one section along the base frame when the pivoted bars are unlocked and swung on their pivots.

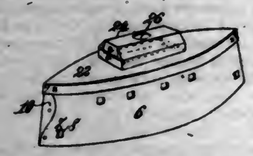
3. In an artificial stone machine, a base frame, a superstructure mounted thereon comprising two sections articulated together, one of said sections being pivoted to the base frame, locking cams on the pivoted section, each locking cam having a convex cam face and an inclined cam face, the other section having notches, each notch affording a shoulder, and a bearing face adapted to coact with the respective cam faces on the associated cam.

4. In an artificial stone machine, a base frame, a superstructure comprising two sections, each section formed of a pair of L-shaped arms, the arms of one section being pivoted to the base frame, the arms of the other section having slotted ends engaging studs on the pivoted arms, and adjustable off-set lugs on the base frame for supporting the arms which have the slotted ends.

5. In an artificial stone machine, a base frame, a superstructure comprising two sections, each section formed of a pair of L-shaped arms, the arms of one section being pivoted to the base frame, the arms of the other section having slotted ends engaging studs on the pivoted arms, adjustable offset lugs on the base frame for supporting the arms which have the slotted ends, and offset lugs attached to the vertical arms of a section and adapted to receive and support the arms of the pivoted section, and locking cams carried by the pivoted section for forcing the arms into said latter lugs.

[Claims 6 to 9 not printed in the Gazette.]

878,418. LIGHT-BOX. CHAUNCEY M. OLIN, Vincennes, Ind. Filed Jan. 18, 1907. Serial No. 352,960.

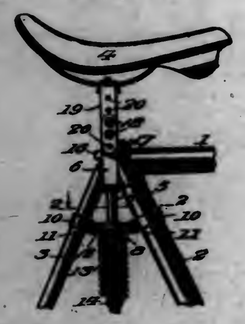


1. A blank for use in light boxes provided at each end with a flap and two tabs, the tabs being at the sides of the blank and the flaps being substantially centrally disposed between the respective tabs, the sides of the flaps commencing at their inner end diverging outwardly on augular lines and beyond the termination of said angular lines being in parallelism.

2. A blank for use in light boxes having parallel tabs at the ends thereof, flaps between said tabs also at the ends of the blank, and wings at said ends located respectively between said flaps and tabs.

3. A blank for use in light boxes having a substantially central portion of approximately elliptical shape, and wings united with said central portion substantially between the ends thereof, said central portion having an opening and being provided at said opening with flexible wings adapted, when folded, to form a wall therearound.

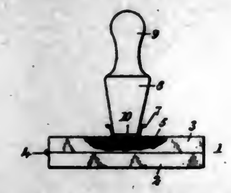
878,419. SADDLE-POST. CARL OLSON, Washington, D. C. Filed Jan. 18, 1906, Serial No. 296,587. Renewed July 13, 1907. Serial No. 383,623.



1. In combination with a velocipede frame including a tubular brace, a member seated in the upper end of said brace and having a head provided with guide openings, a saddle post having its upper end bifurcated to form side portions arranged for movement respectively in said guide openings, clips attached to the frame, a bearing member supported by said clips and having a guide opening to slidably receive the lower portion of the saddle post, a saddle carried by the latter, and an expansible spring arranged upon the lower portion of the post and having its lower end attached to the latter and its upper end attached to the bearing member.

2. In combination with a velocipede frame including a tubular brace member, a bearing plug seated in the upper end of said member and having a head provided with opposed bearing openings, a vertically movable saddle post having a forked portion presenting side bars arranged for movement respectively in said openings, a post section adjustably connected with the side portions of the post, a saddle carried by said section, a bearing member connected in the frame beneath said head and having a guide opening to slidably receive the lower portion of the post, and an expansible spring arranged on the lower portion of the post and attached at its lower end to the latter, the upper end of the spring being attached to the lower bearing member.

878,420. INKING-PAD. DENIS T. O'SULLIVAN, West Orange, N. J. Filed Apr. 26, 1907. Serial No. 370,480.

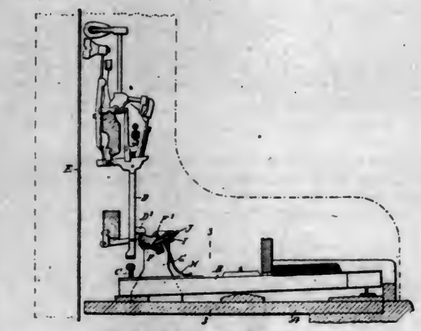


1. An inking pad having a removable cover excluding the air and having a small opening in which a small removable stamp may be seated.

2. An inking pad having a body of absorbent material with a removable cover excluding the air, said cover having a small opening with upwardly projecting flanges adapted to support a small removable stamp in an upright position.

3. An inking pad having a removable cover with an opening of reduced dimensions therein, the edges of said opening being bent upwardly to form flanges whereby a stamp unattached to said cover may be supported by said flanges.

878,421. MUTE ATTACHMENT FOR PIANOS. EDMUND I. PFEIFER, Austin, Tex. Filed July 3, 1907. Serial No. 382,052.



1. In a mute attachment for pianos, keys, a piano action having lifter rods, a rocking rail for engagement with the lifter rods, to lift the said rods off the keys, and springs carried by the rail for engagement with the keys at the time the rail is in engagement with the litfer rods.

2. A piano having keys, a piano action provided with lifter rods having lugs, a mute rail mounted to rock and in position to engage the said lugs, to lift the lifter rods off the keys, and springs on the said rail for engaging the keys at the time the lifter rods are lifted off the keys.

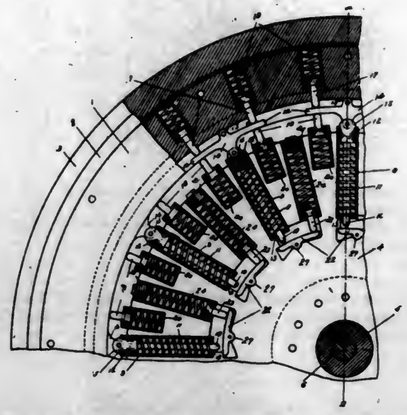
3. A piano having keys, a piano action provided with lifter rods having lugs, a mute rail mounted to rock and in position to engage the said lugs to lift the lifter rods off the keys, springs on the said rail for engaging the keys at the time the lifter rods are lifted off the keys, and means for regulating the tension of the said springs.

4. A piano having keys, a piano action provided with lifter rods having lugs, a mute rail mounted to rock and in position to engage the said lugs, to lift the lifter rods off the keys, springs on the said rail for engaging the keys at the time the lifter rods are lifted off the keys, and manually controlled rocking means for rocking the said mute rail.

5. A piano having keys, a piano action provided with lifter rods having lugs, a mute rail mounted to rock and in position to engage the said lugs, to lift the lifter rods off the keys, springs on the said rail for engaging the keys at the time the lifter rods are lifted off the keys, manually controlled rocking means for rocking the said mute rail, and locking means for locking the said rocking means in position.

[Claim 6 not printed in the Gazette.]

878,422. SPRING-WHEEL. WILLIAM J. PHELAN, Bennington, Vt. Filed Jan. 9, 1907. Serial No. 351,474.



1. In a spring-wheel, and in combination, a relatively movable hub and felly; a reciprocatory spring-actuated plunger-rod mounted upon the hub; a head upon the outer end of said plunger-rod; and a link pivotally connected at its opposite ends to the felly and a plunger-head and having its opposite ends directly engageable with said felly and plunger-head.

2. In a spring-wheel, and in combination, a relatively movable hub and felly, said felly having concaved seats; reciprocatory spring-actuated plunger-rods mounted upon the hub in line with the respective seats on the felly; a head on each plunger-rod provided with a concaved seat; and a link loosely pivoted to the felly and a plunger-head respectively, and having convexed ends adapted to directly engage the concaved seats on said felly and plunger-head respectively.

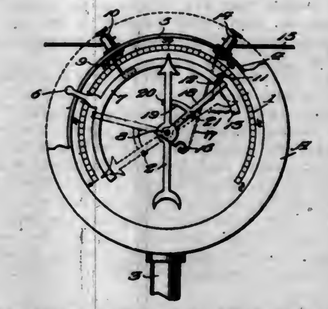
3. In a spring-wheel, and in combination, a relatively movable hub and felly; spring-actuated plunger-rods mounted upon the hub; a link pivotally connected at one end to a plunger-rod and at the other end to the felly, and having a lateral offset; spring-actuated mechanism mounted upon the felly, engageable with one side of said link-offset; and spring-actuated mechanism mounted upon the hub engageable with the opposite side of said link-offset.

4. In a spring-wheel, and in combination, a relatively movable hub and felly; reciprocatory spring-actuated plunger-rods mounted upon the hub; links each pivotally connected at one end to the felly and at the other end to a plunger-rod, and having oppositely projecting offsets; and a pair of spring-actuated members engageable with the respective link-offsets.

5. In a spring-wheel, and in combination, a relatively movable hub and felly; reciprocatory spring-actuated felly-supporting plunger-rods mounted upon the hub; a lever mounted upon the hub with one arm located in the path of said plunger; and spring-actuated mechanism mounted upon the hub engageable with the other arm of said lever.

878,423. COMBINED GAGE AND CIRCUIT-CLOSER. JOSEPH F. RAYNES, Hyde Park, Mass. Filed May 21, 1907. Serial No. 374,872.

1. The combination of a gage comprising a dial and a hand relatively movable, with an automatic switch controlled by the movable element of the gage, said switch comprising an adjustable contact, a magnet carried thereby, and a swinging contact slidably engaging the first and adapted to be attracted by the magnet for opening the switch.



2. In an apparatus of the class described, the combination of a gage including a dial and a hand, with an automatic switch comprising a relatively stationary contact, a movable contact, a lost motion connection between the movable contact and hand whereby the latter actuates the said contact, and a device arranged to cause the switch to suddenly open and remain in such position.

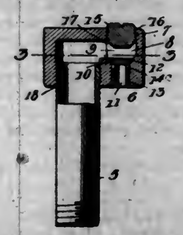
3. In an apparatus of the class described, the combination of a gage including a dial and a hand, with an automatic switch, said switch comprising a relatively stationary segmental contact disposed over the dial, a movable contact adapted to bear on the first and actuated by the hand, and a magnet arranged to operate on the movable contact to open the switch.

4. In an apparatus of the class described, the combination of a dial and a hand, with an automatic switch comprising a relatively stationary contact means for mounting the contact to permit of relative adjustment between the contact and dial, a movable contact mounted to slide on the first contact, means for moving the second contact over the first by the hand, and means for quickly disengaging the movable from the stationary contact independently of the hand when a certain predetermined pressure is reached.

5. In an apparatus of the class described, the combination of a gage including a dial and a hand, with an automatic switch comprising an arcuate relatively stationary contact and mounted to be adjustable relatively to the dial, a magnet mechanically connected and adjustable therewith and insulated therefrom, a movable contact having a sliding engagement with the first contact and adapted to be disengaged therefrom by the magnet, and means for actuating the movable contact by said hand.

[Claims 6 and 7 not printed in the Gazette.]

878,424. AIR-VALVE FOR STENCH OR WATER-SEAL TRAPS. GEORGE W. RENTON, Brooklyn, N. Y. Filed June 6, 1907. Serial No. 377,575.

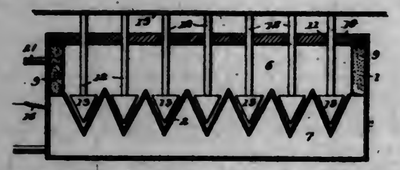


1. In an air valve for water seal traps, an upright tube adapted to be connected with the longer leg of the trap, a horizontally disposed valve carrying member of conical form with curved ends in horizontal section screwing on the upper end of the tube near its large end and having a vertical valve opening in its bottom near its small end.

and a longitudinal air passage for establishing communication between said valve opening and the tube, a valve normally closing the inner end of the valve opening, and having a tubular stem with diametrically opposite ports working therein, and a plug screwing in the top of the valve carrying member for limiting the vertical movement of the valve.

2. An air valve for water seal traps, a tube adapted to be connected with the longer leg of the trap, a horizontally disposed valve carrying member of tapering form in horizontal section, having a vertical screw threaded bore in its top near its small end, a valve opening in its bottom, communicating with said bore, a screw threaded bore in its bottom near its large end, and a longitudinal air passage communicating with the valve opening and said last mentioned bore, a valve normally closing the inner end of the valve opening and having a tubular stem with air ports to work therein, and a plug screwing in said first metioned bore for limiting the vertical movement of the valve.

878,425. ELECTROLYTIC APPARATUS FOR ELECTROLYSIS OF METALLIC SALTS. WILLIAM H. RINES, Rumford Falls, Me. Filed June 17, 1907. Serial No. 379,427.



1. In an apparatus of the character described, the combination of a receptacle and a cathode plate having deep V-shaped corrugations in cross section arranged in said receptacle.

2. In an apparatus of the character described, the combination of a receptacle, a cathode plate having deep V-shaped corrugations in cross section arranged horizontally therein, and a diaphragm of asbestos, substantially conforming with said plate, arranged over the same.

3. In an apparatus of the character described, the combination of a receptacle, a cathode plate having deep V-shaped corrugations in cross section, insulated portions and perforated between said insulated portions maintained horizontally therein, and a diaphragm of asbestos conforming substantially with the shape of said plate arranged above the same.

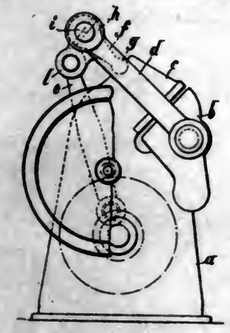
4. In an apparatus of the character described, the combination of a receptacle, a cathode plate having deep V-shaped corrugations in cross section, insulated portions and perforated between said portions maintained horizontally therein, and a diaphragm of asbestos conforming substantially with said plate and arranged over the same, and means for securing said diaphragm in position.

5. In an apparatus of the character described, the combination of a receptacle, a corrugated cathode plate having insulated portions and perforated between said portions extending entirely across and from one end to a point adjacent the opposite end of said receptacle, a vertical plate secured to the free end of said cathode plate and extending entirely across said receptacle, and a diaphragm conforming substantially with the shape of said cathode plate arranged over the same, with means for securing said diaphragm in position.

[Claims 6 and 7 not printed in the Gazette.]

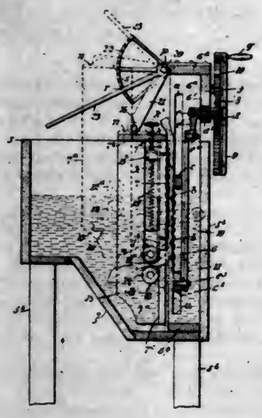
878,426. PLATEN PRINTING-PRESS. MAX ROCKSTROH, Klein-Sedlitz, Germany. Filed Feb. 5, 1906. Serial No. 299,552.

In a platen printing press, a platen, a pair of actuating rods therefor, a solid member the length of which corresponds to the space between the said rods, said member having a cylindrical lower edge, a bed-plate having a cylindrical groove extending over the whole breadth thereof, said cylindrical edge of said member adapted to oscillate in said groove, a pitman, and means for connecting



said member at its upper side ends to the actuating rods and at its center to said pitman.

878,427. WASHING-MACHINE. DAVID A. SAWYER, Unionville, Iowa. Filed Aug. 20, 1907. Serial No. 389,385.

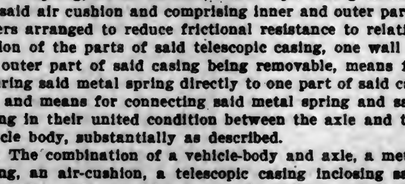


1. The combination with a suds box, of a stationary frame therein, a rubber board reciprocable on said frame, a coöperating frame, a rubber board thereon, links suspending the last-mentioned frame from the other frame, a rock shaft, links engaging the rock shaft and the suspended frame, a lever on the rock shaft, and a toothed sector on the stationary frame with which a toe on the lever may engage.

2. In a washing machine, the combination with a suds box, a stationary frame therein a ribbed rubber board reciprocal on this frame, means for reciprocating said rubber board, a second frame that is laterally adjustable, a rubber board fixed on said frame, and means for adjusting the second frame, of a device for feeding fabrics upward between the rubber boards consisting of a roller journaled at its ends in the second frame near the lower end thereof, a similar roller journaled in boxes slidable on the second frame above the other roller, springs pressing on said boxes, and means for rotating the rollers toward each other.

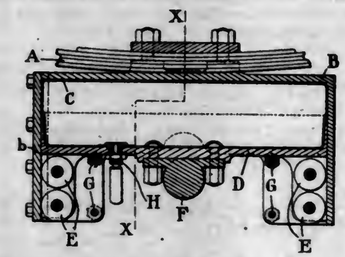
878,428. CATTLE-STANCHION. HERMAN SIEDSCHLAG, Monroe, Wis. Filed Apr. 20, 1907. Serial No. 369,295.

1. In a device of the class described, a pair of sills, uprights secured therebetween, cap rails upon said uprights, spring-actuated stanchion-bars pivoted between the sills and extending between the cap rails, latch plates hinged upon the latter and adapted to hold the free ends of the stanchion-bars with the actuating springs under tension, tongues pivoted upon one of the cap rails adjacent to the free ends of the latch plates, and a suitably guided spring-actuated flexible element connecting said tongues in series and having an operating handle.



2. In a device of the class described, a pair of sills, uprights secured therebetween, cap rails upon said uprights, spring-actuated stanchion-bars pivoted between the sills and extending between the cap rails, gravity-latch plates hinged upon the cap rails and adapted to engage the free ends of the stanchion-bars, means for simultaneously releasing the latch plates from the stanchion-bars, longitudinally slidable spring-actuated rods, and push arms adjustably secured upon said rods in proximity to the free ends of the stanchion-bars.

878,429. SPRING FOR VEHICLES. RICHARD H. STEVENS, Chigwell, and TIMOTHY HALL, Romford, England. Filed Dec. 28, 1906. Serial No. 349,911.

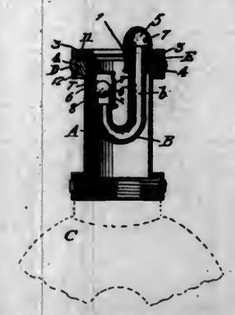


1. The combination of a vehicle body and axle, a metal spring, an air cushion, a telescopic casing inclosing said air-cushion and comprising two shells which are elongated in the direction of the length of the vehicle and which fits loosely one within the other at their sides, anti-friction rollers for connecting said shells and transmitting the horizontally-acting tractive forces from one shell to the other, means for securing said metal spring directly to one of said shells, and means for connecting said metal spring and said casing in their united condition between the axle and the vehicle body, substantially as described.

2. The combination with a vehicle body and an axle, of a metal spring, an air cushion, a telescopic casing containing said air cushion and comprising inner and outer parts, rollers arranged to reduce frictional resistance to relative motion of the parts of said telescopic casing, one wall of the outer part of said casing being removable, means for securing said metal spring directly to one part of said casing, and means for connecting said metal spring and said casing in their united condition between the axle and the vehicle body, substantially as described.

3. The combination of a vehicle-body and axle, a metal spring, an air-cushion, a telescopic casing inclosing said air-cushion and comprising two shells which are elongated in the direction of the length of the vehicle and which fit loosely one within the other at their sides and of which the outer shell has a removable end-wall, anti-friction rollers for connecting said shells and transmitting the horizontally-acting tractive forces from one shell to the other, means for securing said metal spring directly to one of said shells, and means for connecting said metal spring and said casing in their united condition between the vehicle and the axle-body.

878,430. ANTISIPHON-VALVE. WILLIAM B. THOMSON, Charleroi, Pa. Filed Aug. 12, 1907. Serial No. 388,075.



1. In an air inlet valve for sewer traps, the combination with a casing adapted to be detachably secured to the crown of the trap, of a removable lid for the casing, a clamping collar securing the lid in position, a bent tube having one end detachably secured to the lid and depending within the casing and having at its other end a vertically facing valve seat, and a valve fitting the seat.

2. In an air inlet valve for sewer traps, the combination with a casing adapted to be detachably secured to the crown of the trap, of a removable apertured lid for the casing, a collar having exterior screw threaded engagement with the upper portion of the casing and an internal flange engaging the outer surface of the lid, a bent tube screw threaded into the aperture of the lid and depending within the casing and having at its other end a vertically facing valve seat, a ball valve fitting the seat, and a cage inclosing said valve.

3. In an air inlet valve for sewer traps, the combination with a casing adapted to be detachably secured to the crown of the trap, of a removable apertured lid for the casing, packing between the lid and the casing, a collar having exterior screw threaded engagement with the upper portion of the casing and an internal flange engaging the outer surface of the lid, a bent tube screw threaded into the aperture of the lid and depending within the casing and having at its other end a vertically facing valve seat, a valve fitting the seat, a shield perforated in its upper part inclosing the valve, and a strainer secured to the tube outside the lid.

878,431. HAND SIGNALING-LANTERN. EDWARD M. TOMLINSON, Petersfield, England. Filed Apr. 26, 1907. Serial No. 370,443.

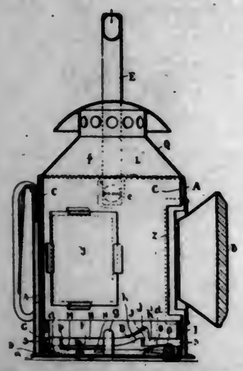
1. In a hand-signaling lantern, the combination of an outer cylindrical body provided with windows, an inner cylindrical frame mounted to turn in the body and carrying different colored glasses, and means for rotating the frame relatively to the body by rotating the said body.

2. In a hand-signaling lantern, the combination of an outer cylindrical body provided with windows, an inner cylindrical frame mounted to turn in the body and carrying different colored glasses, means for rotating the frame relatively to the body by rotating the said body, and means for checking the movement of the frame after a definite angular rotation thereof with respect to the body.

3. In a hand-signaling lantern, the combination of an outer cylindrical body provided with ratchet teeth, and an inner cylindrical frame free to turn in the body and having a notched lower edge adapted to engage the ratchet teeth substantially as specified.

4. In a hand-signaling lantern, the combination of an outer cylindrical body, a pin attached to the body and adapted to move in a vertical plane, and an inner cylin-

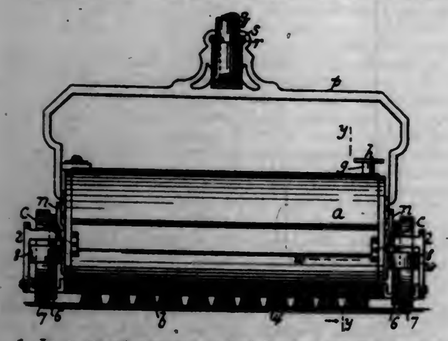
drical frame free to turn in the body and having around its periphery an endless groove divided into sections by vertical portions substantially as specified, the pin being adapted to ride in the groove and check the movement of the frame after passing through a predetermined angle of rotation.



5. In a hand-signaling lantern, the combination of an outer cylindrical body provided with ratchet teeth, an inner cylindrical frame free to turn in the body and having a notched lower edge, and a bail handle attached to the body, whereby the frame will be turned in the body when a sudden rotary movement is given to the body by means of the bail.

[Claims 6 to 10 not printed in the Gazette.]

878,432. CARPET-SWEEPER. THOMAS L. TOTTEN, Brooklyn, N. Y. Filed Jan. 31, 1907. Serial No. 355,047.



1. In a carpet sweeper, a bail having parallel uprights provided with eyes, a handle provided with oppositely arranged grooves in its lower end and a shoulder near its lower extremity, said uprights adapted to fit in said grooves and said shoulder being located below and adjacent to said eyes, and a locking ring adapted to pass through said eyes and engage said shoulder.

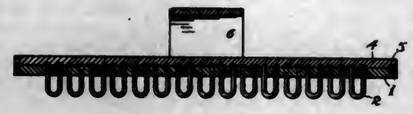
2. A carpet sweeper comprising a casing provided with vertically elongated bearings, gudgeons adapted to turn and play in said bearings, carriers swinging on the gudgeons and wheels on the carriers geared to the gudgeons, said gudgeons being spring pressed or yielding to releasably engage a brush.

3. A carpet sweeper comprising a casing having its sides provided with bearing slots of limited extent so as not to pass through the bottom edges of said casing, a rotary brush in said casing, gudgeons connected with the brush and extending outside the casing and adapted to turn and play in said bearing slots, carriers swinging on the gudgeons and wheels on the carriers geared to the gudgeons, said carriers and wheels all being outside of and free or clear from the casing so as to leave the side wall of the casing unbroken except at said bearing slots.

4. A carpet sweeper comprising a casing provided with bearing plates, said casing and plates having vertical bearing slots, a rotary brush in said casing, gudgeons guided in the slots and detachably engaging the brush, and springs yieldingly holding said gudgeons in engagement with the brush.

5. A carpet sweeper comprising a casing provided with bearing plates, said casing and plates having vertical bearing slots, a rotary brush in said casing, gudgeons guided in the slots and detachably engaging the brush, traction wheels geared to the gudgeons, threaded stems connected with the gudgeons, eyes on said plates through which the stems loosely pass, and nuts adjustable on the stems to limit the downward movement of the gudgeons and brush.

878,433. CURRYCOMB. ROBERT N. TUNSTALL and FRED SICOTTE, Guerneville, Cal. Filed Aug. 30, 1907. Serial No. 390,717.



A curry-comb comprising a flexible support, and staples secured therein in parallel rows, each staple being arranged in a plane containing its row, and having its prongs bent down upon the rear side of the flexible support in opposite directions from the plane of the staple, the middle or loop portion being in form substantially a semi-circle of diameter the full width of the staple, substantially as described.

878,434. DRAW-PLATE BAKING-OVEN. FRANK H. VAN HOUTEN, Fishkill-on-the-Hudson, N. Y., assignor to Dutchess Tool Company. Fishkill-on-the-Hudson, N. Y., a Corporation of New York. Filed Aug. 9, 1904. Serial No. 220,131.

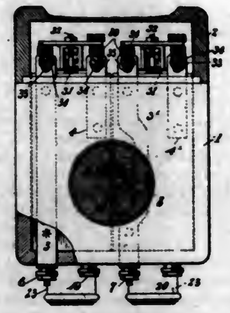


An oven having fixed longitudinal rails located entirely within it and adjustable guiding and supporting rollers carried in brackets on the outside of the front wall of the oven in proximity to the door opening, a sliding carriage embodying longitudinal rails supported at all times at the front by said rollers and at the rear by the rails within the oven, differential anti-friction rollers interposed between the carriage rails and the fixed rails and a draw plate mounted on rollers traveling on the carriage rails and movable with the carriage to a position outside the oven, both of said traveling rollers working in slot ways in the rails and carriage respectively.

878,435. INDUCTION-COIL. RICHARD VARLEY, Englewood, N. J., assignor to The Autocoil Company, a Corporation of New Jersey. Filed Feb. 8, 1905. Serial No. 244,720.

1. The combination of a box having secured to its wall two metallic strips, forming part of an electric circuit, and an induction coil unit provided with means for mechanical and electrical engagement with said strips.

2. The combination of a box having two metallic strips attached to one of its walls and each provided with a notch in its end, an exterior binding post carried by one of said strips, and an induction coil unit having two electrical terminals in the form of binding devices adapted to engage the notches in the respective strips to mechanically sustain the coil in the box and electrically connect it with circuits.



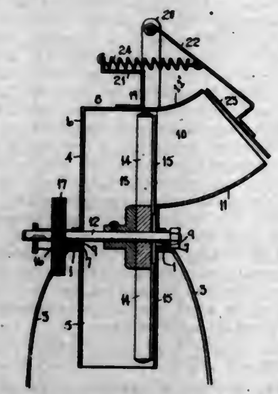
3. The combination of a box having a plurality of strips secured to one of its walls, said strips projecting through the bottom of the box and carrying binding posts and projecting above said wall and a plurality of induction coil units having metallic fastening devices adapted to engage said projecting strips and serving to mechanically sustain the coil units and electrically connect them in circuit.

4. In combination, a box or frame, a plurality of induction coils mounted therein, individual mechanical and electrical connections for each coil whereby any one of them may be removed without disturbing the connections of the others, and a single switch for controlling the primary current to all the coils.

5. In combination, a box or frame, a plurality of induction coils mounted therein, individual connections for the primary winding of each coil, means whereby any coil can be removed from the box or frame without disturbing the primary connections of the other coils, and a single switch for controlling the primary current to all the coils.

[Claims 6 to 17 not printed in the Gazette.]

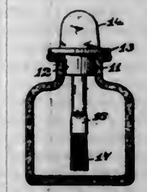
878,436. VEGETABLE-SLICING MACHINE. JOHN J. VAVRUSKA, Cleveland, Ohio. Filed June 10, 1907. Serial No. 378,241.



1. A vegetable slicing machine, a casing having a feed opening in one side, and a feed spout surrounding said opening, a standard mounted on said casing, a follower bar pivoted to said standard, a follower secured to the free end of said follower bar and working in said feed spout, a slot in said feed spout adapted to receive said follower bar, a cutting disk journaled in said casing, and a coiled spring connected to said standard and an intermediate point of said follower to yieldably press said follower toward said cutting disk.

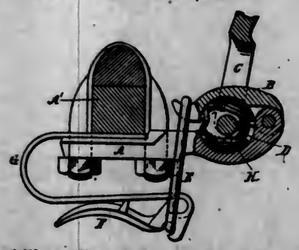
2. In a vegetable slicing machine, a frame consisting of horizontally lying side and end strips having suitable supports, a casing consisting of a lower section having near its top an outwardly extending flange adapted to lie on said strips to support said section, an upper section having an outwardly extending flange at its lower edge, adapted to lie on the flange of said lower section, hinges connecting said flanges, a shaft mounted for rotation on said side strips on each side of said casing and extending through said casing at the meeting line of said flanges, a cutting disk rigidly secured to said shaft for rotation therewith, an opening in the vertical side of said upper casing, a spout extending laterally and upwardly from said side, a slot extending longitudinally in the upper side of said spout, a follower bar pivoted above said spout and adapted to move in said slot, a follower rigidly secured to said bar and a spring fastened at one end to parts supported by said upper casing at the other end to said follower bar at a point between its pivoted end and the part thereof received by said slot.

878,437. STOPPER AND BRUSH FOR RECEPTACLES. BERNARD G. VOLGER, Passaic, N. J., assignor to B. G. Volger Manufacturing Company, Inc., Passaic, N. J., a Corporation of New Jersey. Filed Oct. 11, 1907. Serial No. 396,899.



A bottle stopper made of one piece of resilient non-porous substance, comprising a stopper portion having a downwardly opening recess for the reception of a brush tube, an annular shield at the top of the stopper, and a flattened finger piece having its broad sides slightly tapered together toward the top and the ends thereof widened out toward the shield, so that the cross-sectional area of the finger-piece increases toward the shield.

878,438. ANTIRATTLING DEVICE FOR THILL-COUPLINGS. HENRY E. VOSBURGH, Auburn, N. Y. Filed Sept. 13, 1906. Serial No. 334,467.



1. In a thill-coupling of the character described, having a spherical bearing and a socket therefor, a coiled spring interposed between the spherical bearing and the wall of the socket.

2. In a thill-coupling of the character described, having a spherical bearing and a socket therefor, a coiled spring enveloping the spherical bearing and adapted to control the spherical bearing in the socket.

3. In a thill-coupling of the character described, having a spherical bearing and a socket therefor, a coiled spring enveloping the spherical bearing, and held closely to the surface thereof by pressure from part of the socket.

4. In a coupling having a spherical bearing and a socket therefor; a coiled spring loosely enveloping the spherical bearing on opposite sides thereof and adapted to be clamped into close contact with the spherical bearing by the walls of the socket.

5. A coiled spring composed of two semispherical parts, their bases opposed and separated, and a connection between the bases.

[Claim 6 not printed in the Gazette.]

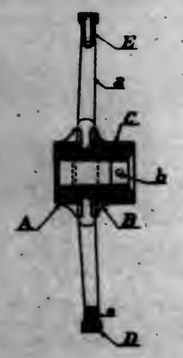
878,439. MEASURING AND GAGING TOOL. AUGUST WAGNIERE, Los Angeles, Cal. Filed Nov. 19, 1906. Serial No. 344,158.



1. A measuring and gaging tool comprising a body formed with arms at its forward end having their inner faces extending divergently from the body at an acute angle thereto providing a contracted V shaped notch, and with an inner caliper head at the rear end of the body and a scale member having an outer caliper head and mounted on the body and adapted to slide longitudinally thereof between the arms; the body and the scale member being graduated for measuring the movement of the scale member.

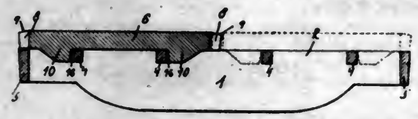
2. A measuring and gaging tool comprising a body formed with arms at its forward end having their inner faces extending divergently from the body at an angle thereto so that the shortest distance from the point of intersection of said faces to any circle tangent to the faces is equal to the diameter of said circle and with an inner caliper head at the rear end of the body and a scale member having an outer caliper head and mounted on the body and adapted to slide longitudinally thereof between the arms; the body and the scale member being graduated for measuring the movement of the scale member.

878,440. VEHICLE-WHEEL. PHILIP W. WALTZ, Vallejo, Cal. Filed Feb. 11, 1907. Serial No. 356,914.



A vehicle wheel comprising spokes, a felly, a hub having a cylindrical portion threaded at its end and a spider provided with grooves adapted to receive the inner ends of the spokes, a sleeve slidably freely on said hub, provided with a tapering portion adapted to engage the inner ends of the spokes to force them outward and a spider provided with grooves to receive the inner ends of spokes, and a nut adapted to screw onto the hub to force the sleeve inwardly.

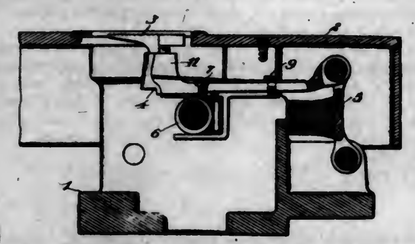
878,441. SECTIONAL CULM. JAMES S. WILSON, Scranton, Pa. Filed Mar. 14, 1907. Serial No. 362,338.



1. In a culm bar, a grate bar provided with parallel side pieces and cross bars therebetween, and grate sections thereon, each section being provided with shoulders at its ends, the central ones of which are adapted to engage with opposite faces of two of said cross bars and the lateral shoulders being adapted to engage with the outer sides of said side pieces.

2. In a culm bar, a grate bar provided with parallel side pieces and cross pieces therebetween, and grate sections thereon, each section being provided with a mid rib and depending side pieces and having shoulders adjacent to its ends, two of said shoulders being on the mid rib and adapted to engage with the opposite sides of two of the said cross bars, and the other shoulders extending inwardly from the side pieces in position for engaging with the sides of said side pieces, the engaging portions of said shoulders being inclined.

878,442. SEWING-MACHINE. RUSSEL G. WOODWARD, Waukegan, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 27, 1906. Serial No. 340,894.



1. In combination a feed bar, a feed dog carried thereby, means for operating said feed bar, comprising an operating part arranged beneath the line of feed and in the rear of the feed dog and a dust pretector extending over said operating part; substantially as described.

2. In combination a feed bar, a feed dog carried thereby, means for operating said feed bar, comprising an operating part, arranged beneath the feed bar, a dust protector secured to said feed bar, and extending over said operating part; substantially as described.

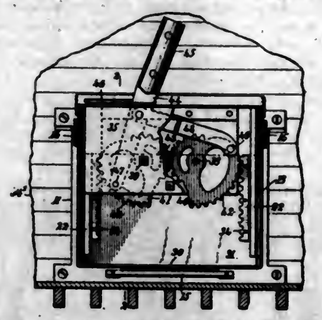
3. In combination, a feed bar, a feed dog carried thereby, means for operating said feed bar, comprising an operating part arranged beneath the feed bar, and a rectangular plate having a recess at its forward end, secured to said feed bar, and extending over said operating part; substantially as described.

4. A dust protecting plate for the feed mechanism of a sewing machine, comprising a flat rectangular plate, adapted to be attached to the feed bar, and having a recess in one of its edges adapted to engage the feed dog supporting shank on said feed bar.

878,443. GRAIN-CHUTE. ARANZA G. YOUNG, New London, Conn. Filed Oct. 31, 1907. Serial No. 400,028.

1. A chute, a gate mounted to slide in the chute, racks carried by the gate, gears within the chute and meshing with each other and engaging said racks, a lever mounted to swing transversely of the chute, and connected with one of the gears for operating the gate.

2. A chute, a gate mounted to slide in the chute between its receiving and delivering ends, racks carried by the gate, gears mounted within the chute, meshing with each other and engaging said racks, and exteriorly operated means for imparting movement to the gears.



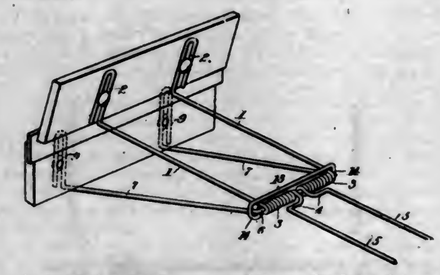
3. A chute, a gate mounted to slide in the chute, racks carried by the gate, gears each having two sectors of different radii, the teeth of one sector of each gear engaging a rack, the other sectors being in mesh, and means for imparting movement to one of the gears.

4. A gate mounted for sliding movement, racks for the gate, gears meshing with each other and with the racks, each gear being provided with two sectors of different radii, and means for moving the gears.

5. In a chute or like device, a gate mounted for sliding movement, racks for the gate, gears meshing with each other and with the racks, each gear having two sectors of different radii, the sectors of the greatest radius operating the racks, and means for moving the gears.

[Claims 6 to 9 not printed in the Gazette.]

878,444. WINDOW-WASHER. GORDON P. YOUNG, Gloversville, N. Y. Filed Aug. 19, 1907. Serial No. 389,210.

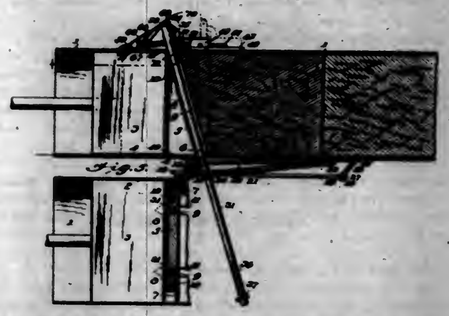


1. A window washer, comprising a fixed member composed of looped wires having coils, and a movable member hingedly connected to the coils and likewise having loops at its ends, boards or plates secured to the looped ends of the respective members, and a clip connecting the fixed and movable members.

2. A window washer, composed of two wires each having a loop on its end, a coiled portion and an extension beyond the coiled portion and constituting the fixed member, and a movable member hingedly connected with the coils of the fixed member and having diverging limbs ending in loops, a clip applied to the limbs of the movable member and embracing the fixed member, and means applied to the loops to hold a washing or cleaning agent, such as a cloth.

3. A window-washer, comprising a fixed member composed of looped wires having coils, and a movable member hingedly connected to the coils and likewise having loops at its ends, boards or plates secured to the looped ends of the respective members, a strip of yielding material permanently secured to one of said boards or plates and projecting beyond the front edge thereof, and a clip connecting the fixed and movable members.

878,445. HAY-BALER. ROBERT E. ZIMMERMAN, Troy, Kans., assignor of one-third to Sardius M. Brewster, Troy, Kans. Filed May 4, 1907. Serial No. 371,767.



1. In a hay baler, the combination with the pressing chamber and the follower reciprocable therein, of a door hinged to the side of the pressing chamber and adapted to be swung thereacross by the forward movement of the follower, said door being provided with upper and lower horizontal transverse openings therethrough, and with slots on its inner face communicating with the openings, brackets projecting from the hinged edge of the door, a bolt connecting the free ends of the brackets, a V-shaped link pivoted on the bolt, a lever pivoted to the chamber and connected by one end to the link, whereby to swing the door into the path of movement of the follower, brackets provided with bearings secured to the chamber and spaced apart from the hinged edge of the door, springs connecting said brackets with the brackets on the door, a crank shaft journaled in the bearings, the end of said shaft being bent at right angles to the shaft and normally projecting at right angles from the chamber, a link connecting the cranked portion of the shaft with the bolt, needles arranged in the openings in the door, said needles being provided intermediate their length with slots through which pass the extended ends of the crank shaft, and with longitudinal slots at the end engaging the door, pins crossing said last named slots, grooved wheels journaled in the slots behind the pins and projecting through the slots of the door, needle guides projecting from the hinged edge of the door and comprising bars provided with a bearing adjacent the door, and with a loop at their free end through which passes the needle, wire carrying reels journaled in the bearings, wire carrying reels on the opposite side of the chamber, and a twisting mechanism adjacent to each of said last named reels, the needles engaging the wires from said last named reels with the pin and from said first named reels with the grooved wheel, whereby to insert said wires in the twisting mechanism.

2. The combination with the pressing chamber and the follower reciprocable therein, of a door hinged to the side of the pressing chamber and adapted to be swung thereacross by the forward movement of the follower, wire supporting reels connected with the door, needles movable transversely within the door and provided with grooved wheels over which pass the wires from the reels, guides for the needles, wire carrying reels on the opposite side of the chamber from the door, a twisting mechanism adjacent to each of said last named reels, said needles being provided with slots intermediate their length, needle drivers engaging the slots, means whereby the swinging of the door across the chamber will operate the drivers to move the needles transversely of the door to insert the wires in the twisting mechanism, means whereby the continued movement of the door will operate the twisting mechanism to twist the wires, and means in connection with the twisting mechanism for severing the wires after the twisting thereof at approximately the center of the twisted portion thereof.

3. The combination with the pressing chamber and the follower reciprocable therein, of a door hinged to the side

of the pressing chamber and adapted to be swung thereacross by the forward movement of the follower, wire supporting reels connected with the door, needles movable transversely in the door and provided with grooved wheels over which pass the wires from the reels, guides for the needles comprising bars connected with the door and provided adjacent to the door with bearings in which said reels are journaled and at their free ends with loops through which pass the needles, wire carrying reels on the opposite side of the chamber from the door, a twisting mechanism adjacent to each of said last named reels, means whereby the swinging of the door across the chamber will move the needles transversely of the door to insert the wires in the twisting mechanism, means whereby the continued movement of the door will operate the twisting mechanism to twist the wires, and means in connection with the twisting mechanism for severing the wires after the twisting thereof at approximately the center of the twisted portion thereof.

4. The combination with the pressing chamber and the follower reciprocable therein, of a door hinged to the side of the pressing chamber and adapted to be swung thereacross by the forward movement of the follower, wire supporting reels connected with the door, needles movable transversely within the door and provided with grooved wheels over which pass the wires from the reels, guides for the needles, wire carrying reels on the opposite side of the chamber from the door, a twisting mechanism adjacent to each of said last named reels, a crank shaft journaled on the chamber and spaced apart from the door, the ends of said shaft being extended at right angles to the chamber, said needles being provided with slots through which said extended ends pass, a connection between the crank portion of the shaft and the door, whereby the swinging of the door across the chamber will move the needles to insert the wires in the twisting mechanism, means whereby the continued movement of the door will operate the twisting mechanism to twist the wires, and means in connection with the twisting mechanism for severing the wires after the twisting thereof at approximately the center of the twisted portion thereof.

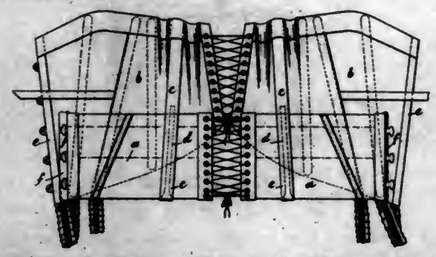
5. The combination with the pressing chamber and the follower reciprocable therein, of a door hinged to the side of the pressing chamber and adapted to be swung thereacross by the forward movement of the follower, means for swinging the door into the path of the follower, comprising brackets projecting from the hinged edge of the door, a bolt connecting the brackets, a link pivoted on the bolt, a lever pivoted to the casing and having one end connected with the link, springs connected with the bolt for normally retaining the door out of the path of the follower, wire supporting reels connected with the door, needles movable transversely within the door and provided with grooved wheels over which pass the wires from the reel, guides for the needles, wire carrying reels on the opposite side of the chamber from the door, a twisting mechanism adjacent to each of said last named reels, means whereby the swinging of the door across the chamber will move the needles transversely of the door to insert the wires in the twisting mechanism, means whereby the continued movement of the door will operate the twisting mechanism to twist the wires, and means in connection with the twisting mechanism for severing the wires after the twisting thereof at approximately the center of the twisted portion thereof.

[Claims 6 to 17 not printed in the Gazette.]

878,446. CORSET. EDOUARD ABADIE-LEOTARD, Paris, France. Filed Jan. 28, 1905. Serial No. 243,163.

1. The combination of a corset adapted to embrace the thoracic parts, a belt adapted to embrace the abdominal parts, said corset and belt being provided, respectively, with independent fastening devices, and a connection extended between the corset and belt, for holding them in relation, said connection being adapted to permit independent movement of the belt and corset relatively one to the other both at the back and front parts of the corset.

2. The combination, with a corset to embrace the thoracic parts, said corset being provided on its inner surface with loops, of a belt to embrace the abdominal parts, said belt being loosely threaded through and engaging said loops and provided at its ends with fastening devices which are independent of the corset, the corset and belt being wholly independent of each other, both at the back and the front, in their movements and action in compressing the body.

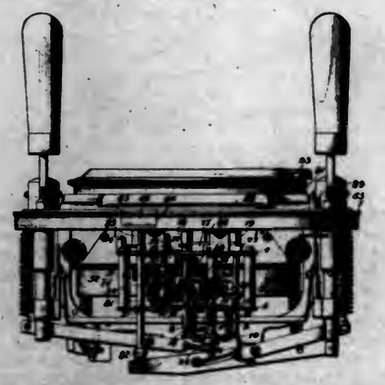


3. The combination with a corset having at its respective opposite sides triangular gores *g* of elastic fabric, and provided with loops *d* to form retainers for a waist-band, of the said band engaging loosely said loops and provided at its ends with fastening devices independent of those of the corset.

4. A corset having on its inner face, at its respective opposite sides and at its lower edge, loops *d*, in combination with a broad waist-band *a*, loosely engaging said loops, said corset and band having each fastening devices to secure them on the body of the wearer.

5. A corset provided at its respective sides, on its inner face, and depending below its lower edge, with loops *d* forming continuations of spring blades *c*, secured to the corset, in combination with a relatively broad waist-band *a* loosely engaging said loops and having its upper edge disposed within the corset.

878,447. TIME-PRINTING MECHANISM. HENRY ABBOTT, New York, N. Y., assignor to Calculagraph Company, New York, N. Y., a Corporation of New Jersey. Filed May 23, 1905. Serial No. 261,916.



1. In a time-printing device, the combination of a die for recording time, mechanism for rotating said die, means to advance said die for printing and means for retracting said die, said last mentioned means consisting of springs, and means whereby the moving parts are relieved from the pressure of said springs when the die is in a retracted position.

2. In a time-printing device, the combination of a rotatable die, a spring motor for rotating said die, means for advancing said die for printing, springs for retracting said die, and stops to prevent movement of said springs to the full limit of the retracting movement of said die.

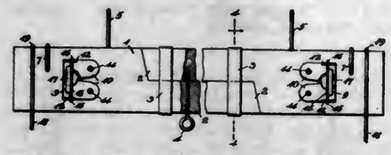
3. In a time-printing device, the combination of an arbor carrying a printing die, a spring motor for rotating said arbor, a spring adapted to engage a shoulder on said arbor for retracting the die, and a stop to prevent movement of said spring to the limit of the retracting movement of the die.

4. In a time-printing device, the combination of an arbor carrying a printing die, a spring motor adapted to rotate said arbor, a forked spring adapted to engage a neck on said arbor for retracting said die, and a stop against which said spring is adapted to contact before said arbor has reached the limit of its retracting movements.

5. In a time-printing device, the combination of a rotatable printing die, a sleeve by which said die is carried, a collar on said sleeve, and a part adapted to engage both sides of said collar for printing and retracting said die.

[Claims 6 to 31 not printed in the Gazette.]

878,448. CURTAIN-BRACKET AND SHADE-ROLLER SUPPORT. FRANCIS ADAMS, Pawtucket, R. I. Filed Aug. 22, 1907. Serial No. 389,720.

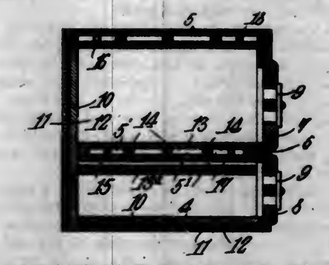


1. A shade roller support, comprising an extensible supporting bar provided with means for detachably engaging a window frame, bracket supports mounted on said bar and comprising pivotally connected plates detachably connected with said bar and having right angularly formed oppositely disposed apertured bearing lugs, and shade roller brackets having studs pivotally mounted in said apertured bearing lugs and provided with stops to limit the outward movement thereof.

2. A shade roller support, comprising an extensible supporting bar provided with means for detachably engaging a window frame, bracket supports mounted on said bar and each comprising two L-shaped plates having the short arms thereof pivotally connected, and their long arms extended in the same direction and detachably connected with said bar, said plates being provided with apertured lugs projecting at right angles therefrom, and shade roller brackets having studs pivotally mounted in said lugs and provided with stops for limiting the outward swing thereof.

3. A curtain bracket and shade roller support comprising a supporting bar formed in sections, the inner ends of which are notched or recessed and are adapted to overlap, holding bands arranged around said overlapping ends of the sections, a set screw adapted to hold said sections together in their adjusted position, supporting hooks secured to the upper edge of said bar whereby the same may be engaged with a window frame, sockets arranged in the upper edge of the bar, curtain pole brackets adapted to be detachably connected with said sockets, shade roller brackets comprising supporting plates having formed in their onter ends apertures or notches to receive the pintles of the shade roller, pivoted lugs formed on the opposite inner corners of said plates, a stop flange formed on the inner edge thereof, bracket securing plates comprising pivotally connected sections, fastening screws adapted to detachably secure said sections of the fastening plates to the supporting bar, and right-angularly formed apertured bearing lugs or ears formed on said fastening plates to receive the pivot studs on the inner corners of the supporting plates, whereby the latter are pivotally mounted to swing outwardly to an operative position or inwardly along side the supporting bar to an inoperative position, substantially as described.

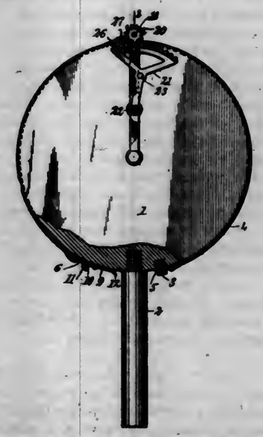
878,449. STEAM COOKING-RANGE. JESSE B. BARRETT, Niagara Falls, N. Y. Filed Apr. 18, 1907. Serial No. 368,936.



1. A range having heat insulated back, sides and bottom, and a rectangular frame front, a top plate, and an interior shelf dividing the range into two ovens, the upper one heated at the top and bottom and the lower one heated only at the top, said top plate and shelf each being a hollow closed structure having parallel baffles extending partly across the structure and attached at one end only, and alternately to opposite sides to form a tortuous passage from end to end of each structure, and steam supply and exhaust pipes, connected respectively to opposite ends of each tortuous passage.

2. A range having a top, and a horizontal shelf dividing the oven into two parts said top plate and shelf, each being a hollow closed structure having interior parallel partitions extending alternately from one side nearly to the other to form in each a tortuous passage, and steam supply and exhaust pipes connected respectively to opposite ends of the tortuous passages, each passage having separate inlet and outlet pipes, said top plate and shelf radiating from each side applied heat.

878,450. SAFETY-RAZOR AND STROPPING DEVICE. SUMTER B. BATTEY, New York, N. Y. Filed Apr. 24, 1907. Serial No. 370,036.



1. In a stropping device, in combination, a body having a circumferentially disposed face, a strop mounted on said face, and mechanism for applying a razor blade to said strop, and rotating on a fixed axis on said body.

2. In a stropping device, in combination, a body having a face disposed in an arc with a strop mounted thereupon, means rotating on the center of said arc for reciprocating a blade applied to said strop, and automatic means for reversing the said blade with each reciprocation.

3. In a stropping device, in combination, a body having a circumferentially disposed face, means for attaching a strop upon said face, a pivotally mounted arm, means for

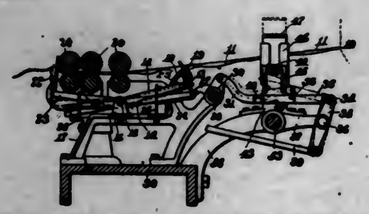
mounting a razor blade on said arm in a position to apply the edge thereof to said strop, a handle mounted on said arm for reciprocating the same, and means actuated by said handle for reversing said blade.

4. In a stropping device, in combination, a body presenting a circumferentially disposed face, means for attaching a strop upon said face, an arm pivotally attached to said body, means for mounting a razor blade upon said arm in a position to apply the edge thereof to said strop, a member loosely attached to said arm and having a handle adapted to reciprocate said arm, and automatic means for reversing the position of said blade with the reversal of movement of said firm.

5. In a stropping device, in combination, a body having a circumferentially disposed face, means for mounting a strop thereupon, a radially disposed arm attached to said said body, a roller rotatably mounted in the end of said arm, a pinion carried by said roller, means for mounting a blade in said roller to apply the edge thereof to said strop, a segment pivotally mounted on said arm and meshing with said pinion, and a handle on said segment affording means for reciprocating said arm.

[Claim 6 not printed in the Gazette.]

878,451. DEVICE FOR PREVENTING SINGLES IN ROVING AND SIMILAR FRAMES. THOMAS BENTLEY, Hopkinton, Mass., assignor of one-fourth to Martin V. Phipps, Hopkinton, Mass., and one-fourth to Sam K. Paige, Brookline, Mass. Filed Apr. 11, 1906. Serial No. 311,022.



1. In an apparatus of the class described, the combination with a pair of drawing rolls adapted to move a set of slivers, and mechanism adapted to stop said rolls, of a movable detector for each sliver, means for breaking all the slivers of the set at a point in advance of the drawing rolls, and mechanism between said breaking device and each detector whereby the accidental breakage of either sliver will effect the breakage of the other slivers at the point mentioned and operate said stopping mechanism.

2. In an apparatus of the class described, the combination with a pair of drawing rolls adapted to move a set of slivers, of a pair of pivoted members, a detector secured to the end of each of said members and engaging with a sliver, a pivoted lever intermediate said members provided with projections thereon in the path of said pivoted members, and a breaking device secured to the opposite end of said pivoted lever engaging the slivers when united and adapted to break the same when actuated by the operation of either of said pivoted members due to the breakage of a disunited sliver.

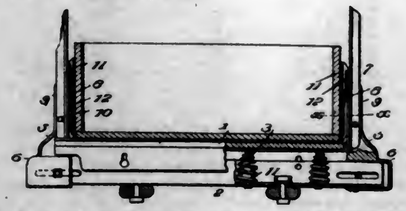
3. In an apparatus of the class described, the combination with a pair of drawing rolls adapted to move a set of slivers, of a pair of pivoted members, a detector secured to the end of each of said members and engaging with a sliver, a breaking device engaging with the united slivers in advance of the drawing rolls, and means between and parallel to said pivoted members provided with a projection in the path of movement of each pivoted member whereby the accidental breakage of one of said slivers will cause an operation of said breaking device through said pivoted member to sever said united slivers.

4. In an apparatus of the class described, the combination with a plurality of drawing rolls adapted to move and unite a set of slivers passing between the same, of a pair of pivoted members, a detector secured to one end of each of said members and engaging with each of said slivers upon one side of said drawing rolls, and a breaking device engaging with the united slivers on the other side of said drawing rolls, and means connected to said breaking device movable in a plane intermediate and parallel to the plane of movement of said pivoted members and provided with a projection in the path of movement of each pivoted member whereby the breaking device will be operated by either of said detectors when the sliver breaks with which said detector is engaging.

5. In an apparatus of the class described, the combination with a pair of drawing rolls adapted to move and unite a set of slivers, of a movable detector for each sliver, means for breaking all the slivers of the set at a point in advance of the drawing rolls, mechanism between said breaking device and each detector, a projecting member on each detector, and a normally oscillating feeler to engage and positively move a released detector for a limited distance to thereby positively move the breaking device to cause the united slivers passing from the drawing roll to be severed.

[Claims 6 to 13 not printed in the Gazette.]

878,452. WAGON. FREDERICK W. BLECKLEY, Hazleton, Pa., assignor to Pressed Steel Wagon Bolster Co., Hazleton, Pa., a Corporation of Pennsylvania. Filed Dec. 15, 1906. Serial No. 348,011.



1. In a device of the character described, the combination of a support, a stake mounted upon the support and provided at its front and rear edges with laterally extended flanges, and an extension having an end thereof bifurcated to receive the stake, the members of the bifurcation fitting between the flanges and being guided in their movements thereby.

2. In a device of the character described, the combination of a support, a stake mounted upon the support, and provided at its front and rear edges with laterally extended flanges, and an extension of T-form, the outstanding rib thereof being bifurcated at one end of the extension to receive the stake, the members of the bifurcation fitting between the flanges of the stake and being guided in their movements thereby.

878,453. INSOLE. NICHOLAS C. BOHR, Boston, Mass., assignor to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed Oct. 22, 1906. Serial No. 339,904.



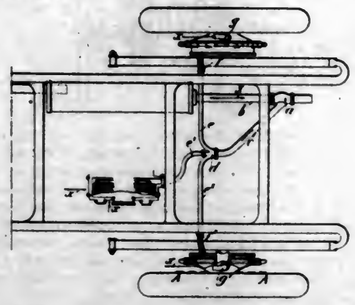
1. The described insole for boots and shoes having a channel, a lip upturned from said channel, a marginal consolidated portion outside said lip, and reinforcing material secured to the sole inside the channel lip.

2. The described insole for boots and shoes, the same comprising a channel having an upturned lip, a marginal beveled portion outside said lip, a consolidated portion between the beveled portion and said lip, and provided within said lip with reinforcing material.

3. The described reinforced insole for boots and shoes, comprising a channel having an upturned lip, reinforcing material applied to the channel within said lip, and an outer marginal portion consolidated substantially to the level of the bottom of the reinforced channel.

4. The described reinforced insole, provided with a channel having an upturned channel lip, a reinforcing fabric applied to the sole and extended within the channel, and a marginal sole portion outside said lip having a consolidated face substantially in the plane of the reinforced bottom of the channel.

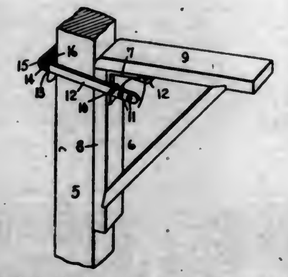
878,454. APPARATUS FOR COOLING THE BRAKES OF MOTOR ROAD-VEHICLES. JULES CAILLET, Paris, France, assignor to Société Anonyme des Automobiles Peugeot, Paris, France. Filed Sept. 10, 1907. Serial No. 392,126.



1. An arrangement for cooling the brakes of motor road vehicles comprising air pipes leading to the brake drums, flexible pipe sections connecting the air pipes to the drums, air holes provided on the brake drums, and means adapted to cause air to pass through the air tubes, substantially as described and for the purpose set forth.

2. An arrangement for cooling the brakes of motor road vehicles comprising air pipes, e, e^1, e^2, flexible pipe sections f f^1 connecting one end of the air pipes to the brake drums, an ejecting chamber a placed in the path of the exhaust gases, an air collector c into which lead the free ends of the air pipes and which leads itself to the ejecting chamber, and fresh air inlets g g^1 provided in each of the brake drums, substantially as described and for the purpose set forth.

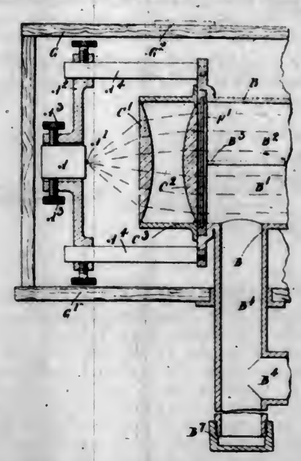
878,455. ADJUSTABLE BRACKET. LLEWELLYN D. CARTER, Muscatine, Iowa. Filed Sept. 10, 1907. Serial No. 392,222.



1. A bracket of the type set forth comprising an L-shaped casting, a back piece and a shelf piece secured to the respective angular faces thereof, said casting having laterally projecting pins, side straps having at corresponding ends thereof series of openings, said pins being designed for engagement selectively through said openings, said straps being formed at their outer ends with openings and a cam shaped gripping member having axially projecting pins for engagement in said last named openings.

2. A bracket of the type set forth, comprising in combination with a supporting post, a bracket structure designed to be held against said post, arms pivoted to said bracket structure and designed for adjustment to selected positions with relation thereto, and a gripping element carried by said arms for engagement with said post.

878,456. AUTOMATIC APPARATUS FOR DETECTING SMOKE AND THE LIKE. HORACE DARWIN, Cambridge, England. Filed Dec. 6, 1907. Serial No. 405,456.



1. In an apparatus of the character described, the combination of a source of radiation, means sensitive to radiation and adapted to receive the rays from said source, means for interposing the smoke in the path of some of said rays, while leaving the passage of the remaining rays unobstructed, and means actuated by said ray-receiving means adapted to sound an alarm when the smoke exceeds a certain denseness.

2. In automatic apparatus for detecting smoke and the like, the combination of a source of radiation placed so as to radiate through a sample of the smoke to be tested and balanced devices sensitive to radiation and having a part placed so as to receive radiation which has emanated from the said source and passed through the said smoke-sample whereby the said devices are unbalanced.

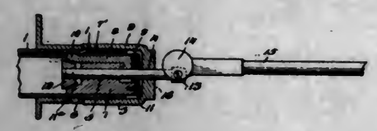
3. In automatic apparatus for detecting smoke and the like, the combination with a source of radiation, an element for gathering such radiation into a parallel beam, means for interposing in the path of such parallel beam a sample of the smoke to be tested, an element for reconcentrating the parallel beam to form an image of the said source of radiation, devices sensitive to radiation placed so as to receive the image, and alarm apparatus operatively connected with the said sensitive devices and adapted to give a signal automatically when the denseness of the smoke-sample exceeds its greatest permissible value.

4. In automatic apparatus for detecting smoke and the like, the combination of a source of radiation A^1, an adjustable support for said source of radiation, a condensing lens system C^1 C^2, a box B divided lengthwise by a partition B^3 into two chambers B^1 B^2, pipes B^4 B^5 leading respectively to and from the chamber B^1 and communicating with the source of smoke to be tested, lenses D^1 D^2 in the chambers B^1 B^2 respectively, two sets of thermo-electric junctions E^1 E^2 adjustably supported so as to receive the two images of the source of radiation formed by the lenses D^1 D^2, and a galvonometer connected in series with the two sets of thermo-electric junctions.

5. In automatic apparatus for detecting smoke and the like, the combination of a source of radiation A^1, an adjustable support for said source of radiation, a condensing lens system C^1 C^2, a box B divided lengthwise by a partition B^3 into two chambers B^1 B^2, pipes B^4 B^5 leading respectively to and from the chamber B^1 and communicating with the source of smoke to be tested, lenses D^1 D^2 in the chambers B^1 and B^2 respectively, two sets of thermo-electric junctions E^1 E^2 adjustably supported so as to receive the two images of the source of radiation formed by the lenses D^1 D^2, a galvanometer connected in series with the two sets of thermo-electric junctions, and a relay capable

of being operated by the deflection of the galvanometer so as to cause a signal to be given automatically when the denseness of the smoke-sample exceeds its greatest permissible value.

878,457. RADIATOR-NIPPLE-DRAWING DEVICE. JOHN DELLER, Harrisburg, Pa. Filed Aug. 8, 1907. Serial No. 387,650.



1. In a device of this character, the combination of a stationary member, a cylindrical smooth exterior surfaced casing adapted to be inserted into a nipple, a series of fingers carried thereby and having their free ends at the inner end of the casing, a spring for normally holding the free ends of the fingers within the periphery of the casing, a rod passing through the member and casing, means carried upon the inner end of the rod adapted to force the free ends of fingers outwardly into engagement with the nipple, and means connected with the outer end of the rod adapted to coöperate with the stationary member to expand the fingers and finally withdraw the nipple.

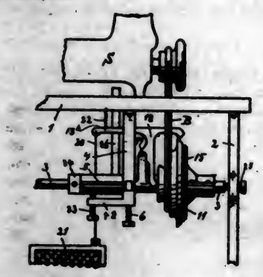
2. In a device of this character, the combination of a stationary member, a cylindrical smooth exterior surfaced casing having a central bore adapted to be inserted within a nipple, a series of fingers pivoted in said casing and adapted to be projected radially to engage the nipple, a spring for normally holding the fingers within the casing so as not to extend beyond the exterior thereof, a rod extending through the casing and member, means carried upon its inner end adapted to project the fingers, and means connected with the outer end of the rod adapted to coöperate with the stationary member to move the rod to cause the fingers to be projected to engage the nipple and to withdraw the nipple simultaneously.

3. In a device of this character, the combination of a stationary member adapted to surround the outer end of a nipple, a cylinder adapted to be inserted within the nipple, radial expanding means carried thereby adapted to engage the interior of the nipple by extending beyond the exterior of the cylinder, means for normally holding the expanding means so that they do not project beyond the periphery of the cylinder, means for expanding said radially expanding means, said means passing through the member and the cylinder, and means connected to said expanding means operating means adapted to coöperate with the stationary member to expand the radial expanding means and withdraw the nipple.

4. In a device of this character, the combination of a cup having a central opening, a rod slidably mounted in said opening, a cylindrical casing slidably mounted on said rod and within the cup, a series of fingers, each having one end secured to the casing and their free ends seated within but free to move outwardly of the cup, means for normally holding the free ends of the fingers to prevent them extending beyond the periphery of the casing, and a truncated head mounted upon the inner end of the rod and adapted when forced into the casing to project the free ends of the fingers.

5. In a device of this character, the combination of a cup having a central opening and a flat outer face, a rod slidably mounted in said opening, a cylindrical casing slidably mounted on said rod and within the cup, a series of fingers, each having one end secured to the casing and their free ends seated within but free to move outwardly of the cup, a truncated head mounted upon the inner end of the rod, and a lever having a cam end, which is pivotally secured to the outer end of the rod exterior of the cup, whereby the cam co-acts with the flat outer surface of the cup and operates the rod and extends the fingers.

878,458. FRICTION-CLUTCH DRIVING MECHANISM. JOSEPH A. FIRSCHING, Utica, N. Y. Filed May 17, 1907. Serial No. 374,128.

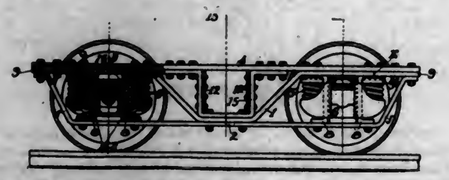


1. The combination of a driven shaft, a bearing concentric with the shaft, a band pulley mounted on said bearing for rotation and lateral movement and having at its periphery an inclined wedging face and an inclined friction face, a friction disk secured on said shaft and arranged adjacent to said pulley, a lever for forcing the pulley against the friction disk, and means for withdrawing the pulley from the friction disk consisting of a finger engaging said inclined or wedging face on the periphery of the pulley, substantially as set forth.

2. The combination in a friction clutch driving mechanism of a driven shaft, a two-part band pulley mounted on said bearing for rotation and lateral movement and having a friction face and a wedging face at its periphery, a two-part friction disk secured to and rotating with the shaft and arranged in proximity to the said pulley and means for moving the pulley toward and from the friction disk consisting of a bell crank lever having a forked arm engaging the end of the pulley and a finger engaging the wedging face thereof, substantially as set forth.

3. The combination in a driving clutch mechanism of a shaft hanger arranged to be applied to a shaft in position, a separable bearing box adapted to be applied to the shaft in position and placed in the hanger and having an external bearing surface at one side of the hanger, means for adjusting the position and supporting the box in the hanger, a separable pulley arranged to be placed about the shaft and mounted on said bearing surface for rotation and lateral movement and having a friction face, a separable friction disk arranged to be applied to and clamped on the shaft in position, and means for moving the pulley laterally into and out of engagement with the friction disk, substantially as set forth.

878,459. RAILWAY-TRUCK FRAME. CORNELIUS FURMAN, Decatur, Ill. Filed June 20, 1907. Serial No. 379,977.



1. In a railway truck frame structure, side bars having their ends bent at angles, end bars also having their ends bent at angles each breaking joint with the angles of the side bars at the corners of the truck, a truss connected with the side bars and with its extremities abutting against those of the end bars, a bracket connected with the side bar and with the depressed portion of said truss, and transom bars carried by the bracket.

2. In a railway truck frame structure, side bars having their ends bent at angles and end bars also having their ends bent at angles each breaking joint with the angles of the side bars at the corners of the truck, a truss connected with the side bar and with its extremities abutting against those of the end bars, a bracket connected with the side bar and with the depressed portion of said truss, transom bars carried by the bracket, a second truss whose ends are connected with the frame at its corners and whose body underlies the first truss, and journal boxes at either side of the bracket and between said second truss and the ends of said first truss.

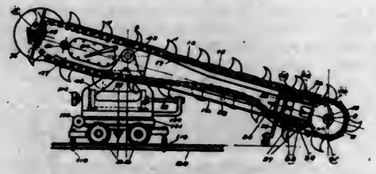
3. In a railway truck frame structure, side bars having their ends bent at angles, end bars also having their ends bent at angles each breaking joint with the angles of the side bars at the corners of the truck, a truss connected with the side bar and with its extremities abutting against those of the end bars, a bracket connected with the side bar and with the depressed portion of said truss, transom bars carried by the bracket, a second truss whose ends are connected with the frame at its corners and whose body underlies the first truss, two pairs of guides connecting the trusses, a head at the upper end of each outermost guide spanning the joint between the ends of the upper truss and end bars, and a journal box removably mounted between the members of each pair.

4. In a railway truck frame structure, the combination with the side bar, a truss, and the transom supported between them; of a pair of upright guides near each end of the truss and whose members have heads and feet connected with the bar and truss respectively, a journal box having channels loosely embracing said guides and also having wings, a spring between each wing and the superimposed head of the guide, and chafing plates removably interposed between each box and the adjacent guides.

5. In a railway truck frame structure, the combination with the side bar, a truss, and the transom supported between them; of a pair of upright guides near each end of the truss and whose members have heads and feet connected with the bar and truss respectively, a journal box having channels loosely embracing said guides and also having wings, a spring between each wing and the superimposed head of the guide, and on either side of each box two chafing plates of which one is removably connected with the guide and the other with the box.

[Claims 6 and 7 not printed in the Gazette.]

878,460. EXCAVATOR. HOWARD GREER, Jr., Chicago, Ill., and JAMES R. THOMPSON, Ironwood, Mich. Filed May 27, 1904. Serial No. 210,003.



1. In a machine for the purpose described, the combination of an approximately horizontal excavator frame, a conveyer movable longitudinally thereof and comprising buckets and shields placed between and movable with said buckets and means mounted under said shields for driving said conveyer.

2. In a machine for the purpose described, the combination of an excavator frame, a motor mounted thereon, and an endless conveyer mounted on said frame and surrounding said motor and operatively connected with said motor.

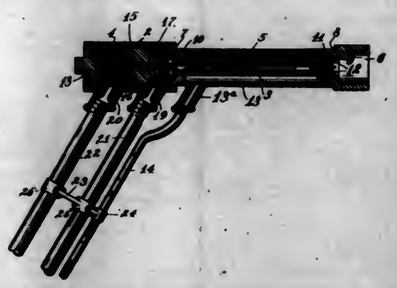
3. In a machine for the purpose described, the combination of an excavator frame pivoted on a horizontal axis and also rotatable laterally, a conveyer movable lengthwise of said frame and a motor connected with said conveyer and also mounted on said frame.

4. In a machine for the purpose described, the combination of an excavator frame, a truck on which said conveyer frame is mounted and with reference to which said frame is movable bodily horizontally, a conveyer movable longitudinally of said frame and means for driving said conveyer.

5. In a machine for the purpose described, the combination of an excavator frame, a truck on which said frame is mounted and with reference to which it is movable bodily horizontally, yielding means for moving said frame horizontally, mounted on said truck, and means for driving said conveyer.

[Claims 6 to 17 not printed in the Gazette.]

878,461. APPARATUS AND PROCESS FOR BURNING ACETYLENE OR SIMILAR GASES. JOHN HARRIS, Cleveland, Ohio, assignor to The Harris Caloric Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 8, 1907. Serial No. 366,916.



1. The process of burning acetylene or similar gas rich in carbon which consists in projecting said gas in a converging direction into a mixing tube, projecting air under pressure centrally of the converging gas, mingling the gas and air in said tube, permitting the mixture to expand, and admitting to such expanded mixture, beyond the end of the mixing tube, a relatively limited supply of oxygen, substantially as specified.

2. The process of burning acetylene or similar gas rich in carbon which consists in projecting the gas in a converging direction into a mixing tube, projecting air under pressure centrally and axially of the converging gas and of said mixing tube, permitting the mixture to expand beyond the end of the mixing tube, igniting the mixture, and supplying to the base of the flame thus produced oxygen in a limited quantity, substantially as specified.

3. The process of burning acetylene which consists in mingling acetylene with air under pressure in a mixing tube, permitting the mixture to expand within a chamber, and projecting oxygen in a series of converging jets into said mixture, substantially as specified.

4. The process of burning acetylene which consists in mingling acetylene with air under pressure in a mixing tube, permitting the mixture to expand within a chamber, igniting the mixture, and projecting oxygen in a converging direction into the base of the flame.

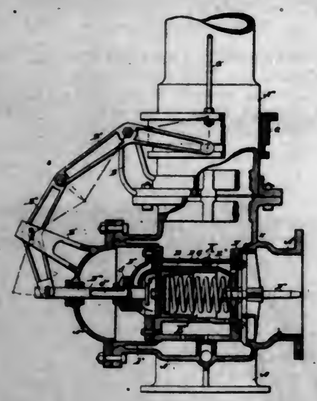
5. The process of burning acetylene or similar gas rich in carbon which consists in mingling the gas with air under pressure in a mixing tube, permitting the mixture to expand beyond the end of the mixing tube, and supplying oxygen in limited quantity to said mixture adjacent to the outlet end of the mixing tube, substantially as specified.

[Claims 6 to 15 not printed in the Gazette.]

878,462. STAND-PIPE. JAMES HENDERSON, Three Rivers, Mich., assignor to Sheffield Car Company, Three Rivers, Mich. Filed Nov. 12, 1906. Serial No. 343,058.

1. The combination of a main valve casing; a valve body, one end of which is provided with a valve and the opposite end with a piston, the piston being of larger area than the valve; a suitable cylinder within which said piston reciprocates there being a passage through the valve body to a suitable aperture within the cylinder; an auxiliary valve with a tubular stem arranged to open

and close the passage to the cylinder; and an auxiliary valve on the same stem for connecting the cylinder to the outside through the hollow valve stem; and a relief piston within the valve held normally in position by a resisting spring, co-acting for the purpose specified.



2. The combination of a main valve casing; a valve body, one end of which is provided with a valve and the opposite end with a piston, the piston being of larger area than the valve; a suitable cylinder within which said piston reciprocates there being a passage through the valve body to a suitable aperture within the cylinder; an auxiliary valve with a tubular stem arranged to open and close the passage to the cylinder; and an auxiliary valve on the same stem for connecting the cylinder to the outside through the tubular valve stem, co-acting for the purpose specified.

3. The combination of a main valve casing; a valve body, one end of which is provided with a valve and the opposite end with a piston, the piston being of larger area than the valve; a suitable cylinder within which said piston reciprocates there being a passage through the valve body to a suitable aperture within the cylinder; an auxiliary valve arranged to open and close the passage to the cylinder; an auxiliary valve for connecting the cylinder to the outside; and a relief piston within the valve, held normally in position by a resisting spring, co-acting for the purpose specified.

4. The combination of a main valve casing; a valve body, one end of which is provided with a valve and the opposite end with a piston, the piston being of larger area than the valve; a suitable cylinder within which said piston reciprocates there being a passage through the valve body to a suitable aperture within the cylinder; an auxiliary valve arranged to open and close the passage to the cylinder; a valve stem having a passage therethrough connecting the interior of the cylinder to the outside; and an auxiliary valve for controlling the passage in the valve stem leading to the outside, for the purpose specified.

5. The combination of a main valve casing; a valve body, one end of which is provided with a valve lid and the opposite end with a piston, the piston being of larger area than the valve; a suitable main cylinder within which the piston reciprocates; an auxiliary cylinder within the valve body, the end thereof opening into the main cylinder by suitable passages; an auxiliary piston within said auxiliary cylinder; a spring for holding the said auxiliary piston normally outward; and connections from the water main to the main cylinder, co-acting as specified, whereby the valve and its piston can be moved into the main cylinder and the auxiliary piston into the auxiliary cylinder to cushion the valve and relieve the water-hammer.

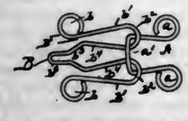
[Claim 6 not printed in the Gazette.]

878,463. PROCESS OF MANUFACTURING INCANDESCENT BODIES FOR ELECTRIC LAMPS. ALEXANDER JUST and FRANZ HANAMAN, Budapest, Austria-Hungary. Original application filed July 6, 1905, Serial No. 268,523. Divided and this application filed Jan. 7, 1907. Serial No. 351,113.

1. The method of producing an incandescent body for electric lamps, which consists in subjecting a carbon body coated with tungsten for a certain period to a high temperature under the influence of an electric current in an atmosphere of a neutral gas to cause the carbon core to be dissolved in the metal forming a carbid thereby, and then removing the carbon from the carbid thus produced, substantially as and for the purpose described.

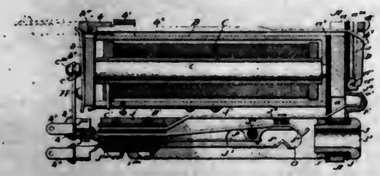
2. The method of producing an incandescent body for electric lamps, which consists in subjecting a carbon body coated with tungsten for a certain period to a high temperature under the influence of an electric current in an atmosphere of a neutral gas to cause the carbon core to be dissolved in the metal forming a carbid thereby and then removing, chemically, the carbon of the carbid thus produced, substantially as and for the purpose described.

878,464. HOOK AND EYE. WALTER H. KNOBLOCH, Erie, and JAMES M. BURGET, Pittsburg, Pa.; said Burget assignor to said Knobloch. Filed Apr. 6, 1906. Serial No. 310,392.



In a hook and eye the combination of an eye, and a hook having the eyelets *b*, rearwardly extending sides *b'*, forwardly extending tongue arranged approximately in transverse alinement with said sides, the walls of the tongue being spread near the eyelets so as to form a contracted passage, the spreading of the sides of the tongue being more abrupt from the point than from the rear and the point of the tongue extending between and beyond the eyelets.

878,465. ELECTRICAL SIGNALING AND SWITCHING APPARATUS. RAY H. MANSON, Elyria, Ohio, assignor to The Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Original application filed Sept. 10, 1906, Serial No. 334,008. Divided and this application filed May 29, 1907. Serial No. 376,423.

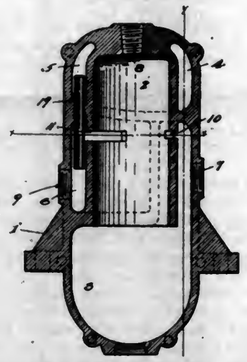


1. A spring jack comprising a front supporting plate, a pair of side frames cross-connected by a front yoke, contact springs supported between the side frames, and a thimble passing through the front plate and secured in the front yoke of the frame, whereby the jack is separately assembled and attached to its front plate by the thimble only, substantially as described.

2. A spring jack comprising side plates connected by transverse bridges or yokes, contact springs mounted upon one of the bridges and lying between the side plates, one of said side plates being provided with a sight opening opposite to and permitting inspection of the contacts, substantially as described.

3. A spring jack comprising a pair of side plates connected by a front yoke perforated for the passage of the plug, and a rear yoke for receiving the springs, a raised stud or anvil supported between and across the side plates, and contact springs secured upon said rear yoke or bridged and resting upon said stud, substantially as described.

878,466. GAS-ENGINE CASING OR FRAME. IRVING P. MILLER and LAWRENCE M. RAKESTRAW, Toledo, Ohio, assignors to Wm. M. Hogle and Lacey Y. Williams, Toledo, Ohio. Filed Feb. 4, 1907. Serial No. 355,612.



1. The combination with an integral casting for a gas engine having an open space 3 at one end for a crank chamber, a space 6 for exhaust gases, and spaces 4 and 5 for water, of two plates each of the length of the casting applied to opposite sides of the same and closing the said spaces so as to form inclosed crank, water, and exhaust-gas chambers.

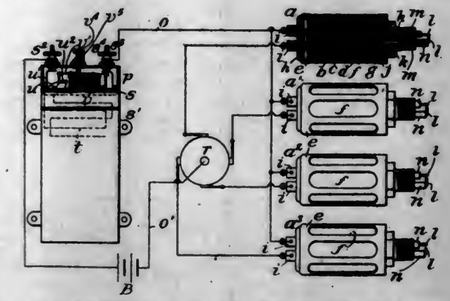
2. The combination with an integral casting for a gas engine having a cylindrical opening 2 at one end to receive a piston, a space 3 at the opposite end for a crank chamber, spaces 4 and 5 to receive water, and a space 6 for exhaust gases, said spaces being formed by the walls of the casting, of side plates secured to the two open sides of the casting, said plates entirely closing the crank chamber space 3, and forming with the spaces 4 and 5 and space 6 an inclosed water space and an inclosed space for exhaust gases outside the cylindrical opening for the piston.

3. The combination with an integral casting for a gas engine having two of its opposite sides lying in substantially parallel planes, a longitudinal cylinder opening at one end, spaces for water and exhaust gases adjacent the cylinder opening, and a space for a crank chamber at the other end, of two plates, one secured to each of the said opposite sides of the casting and entirely closing the spaces for the water, exhaust gases and the crank, whereby inclosed spaces for water, exhaust gases and a crank are formed.

4. The combination with a casting for a gas engine having two of its sides in parallel planes extending from end to end of the casting, with open spaces bounded by the walls, of two plates of the same length as the casting and removably secured to said two parallel sides of the casting and closing said open spaces so as to form inclosed spaces for water and a crank.

878,467. INDUCTION-COIL SYSTEM. ISRAEL C. ORSWELL, Amesbury, Mass., assignor to Orswell Igniter Company, Boston, Mass., a Corporation of Maine. Original application filed Jan. 25, 1906, Serial No. 297,702. Divided and this application filed Apr. 20, 1907. Serial No. 369,211.

1. An apparatus of the class described, having a casing, an insulating base or block therein dividing the casing into upper and lower compartments, a vibrator device mounted upon said block in the upper compartment, said device comprising a pair of magnet coils secured to said block, a resilient armature-carrying leaf spring having its free end above the coils and held at its other end upon a support at the side of the coils and near one end of the block, an armature secured to the under side of said spring between the same and the coils, while leaving the spring free to vibrate, a resilient contact member carrying a vibratory contact, the said member being supported upon the base adjacent its opposite end, with its free end adjacent the coils, and at the side of the electro-magnet the said contact member having an anvil device underlying the free end of the resilient armature member, a stationary contact overlying the vibratory movable contact of the resilient member and also supported upon the base or block at the side of the electromagnet, a hammer device on the end of the armature member adapted to strike the anvil device of the contact member on the attracted movement of the armature, and an adjustable stop screw above the resilient armature member to limit its upward and return movement.



2. An apparatus of the class described, having a casing, an insulating disk or block therein, dividing the casing into upper and lower compartments, a vibrator device mounted upon said block in the upper compartment, external binding posts for attachment to lead wires, and co-operating sets of resilient contacts and fixed contacts, the members of one set connected with the external binding posts, and the members of the other set connected with the vibrator terminals, and providing for the automatic making and breaking of the vibrator circuit when the vibrator and the adjacent casing structure undergo relative movement for the purpose of exposing the vibrator parts.

3. In an apparatus of the class described, a vibrator device comprising an insulating base, a pair of magnet coils secured to the base, a resilient armature-carrying leaf spring having its free end above the coils and having its other end supported upon the base at the side of the coils, an armature secured to the under side of said spring between the same and the coils while leaving the spring free to vibrate, said spring extending beyond said coils at the free end thereof, a resilient contact member carrying a vibratory contact, the said member being supported upon the base and at one side of said coils with its free end adjacent the coils, said contact member having an anvil device underlying the free end of the resilient member, a hammer device on the end of the armature member adapted to strike the anvil device of the contact member on the attracted movement of the armature, and an adjustable stop screw above the resilient armature member to limit its upward and return movement.

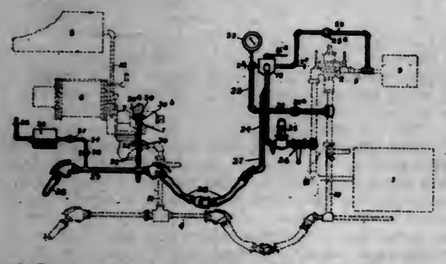
4. In an apparatus of the class described, a vibrator device comprising vibrator windings, a resilient armature member having its free end above the windings and held at its other end upon a support at the side of the windings while leaving the free end free to vibrate, a resilient contact member carrying a vibratory contact, said member being supported with its free end underlying and within the path of the free end of the armature member, a hammer device upon the free end of the armature member, an anvil device on the contact member adapted to be struck by the said hammer device, a stationary contact overlying the vibratory movable contact of the resilient member, and an

adjustable stop device to limit the backward or rearward movement of the armature member and an insulating block or base whereon said armature member and contact members are supported.

5. In an apparatus of the class described, a vibrator device comprising the vibrator windings v, the resilient armature member v', having its free end within the influence of the windings and fixedly held at its opposite end, the resilient contact member u located at one side of the vibrator windings v and carrying a vibratory contact, said member being within the path of the free end of the armature member, a hammer device v^3 upon the armature member adapted to engage the contact member, a stationary contact member u^3, mounted at one side of the vibrator windings v and closely adjacent the contact member u and an adjustable stop v^4 and an insulating block or base whereon said armature member and contact members are supported.

[Claims 6 to 15 not printed in the Gazette.]

878,468. AIR-BRAKE. WILLIAM G. PATTEN, Minneapolis, Minn., assignor of one-third to Samuel T. Johnson and two-thirds to George L. Matchan, Minneapolis, Minn. Continuation of applications Serial No. 289,227, filed Nov. 27, 1905, and Serial No. 354,844, filed Jan. 30, 1907. This application filed Mar. 11, 1907. Serial No. 361,797.



1. In an air brake apparatus, the combination with a primary train pipe, main charging reservoir, auxiliary reservoir, brake motor and triple valve, of a secondary train pipe leading from said main reservoir to said triple valve, and having connections for charging said auxiliary reservoir through said triple valve, while the triple piston of said triple valve is in a position to hold the brakes set, substantially as described.

2. In an air brake apparatus, the combination with a primary train pipe, main charging reservoir, auxiliary reservoir, brake motor and triple valve, of a secondary train pipe leading from said main reservoir and having branch conduits opening into the triple piston seat of said triple valve on opposite sides of the triple piston thereof, one of said branch conduits being connected to said auxiliary reservoir through said triple valve mechanism, whereby said auxiliary reservoir may be recharged while said triple piston is in a position to hold the brakes set, substantially as described.

3. In an air brake apparatus of the Westinghouse or New York type, a secondary train pipe leading from the main charging reservoir to one or more of the triple valves and arranged to supply a charge of air to the auxiliary reservoir, while the brakes are set, substantially as described.

4. In an air brake apparatus, of the Westinghouse or New York type, a secondary train pipe receiving air from the main reservoir and delivering the same into the triple piston seat of the triple valve, and a governor or reduction valve set to hold the maximum air pressure in the secondary train pipe below the maximum pressure of a primary train pipe, substantially as described.

5. In an air brake apparatus of the Westinghouse or New York type, a secondary train pipe receiving air from the main reservoir and delivering the same to the triple valve, and provided with a branch pipe arranged to deliver air into the triple piston seat of the triple valve, on the opposite sides of the head of said triple piston, branch pipes from said secondary train pipe, the one communicating with the equalizing reservoir and the other with the primary train pipe, on opposite sides of the primary brake valve, and a secondary brake valve operative, at will, to open up communication between said secondary train pipe and the primary train pipe, main charging reservoir, and equalizing reservoir, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

878,469. FEATHERING PADDLE ATTACHMENT FOR SMALL BOATS. WILLIAM RICKARDS, Portland, Oreg. Filed Mar. 24, 1906. Serial No. 307,878.



1. The combination with a boat, of a supporting frame affixed to the side thereof, a rod vertically pivoted in such frame, a bracket projecting horizontally from said rod, a dependent blade hinged to such bracket, means restraining the blade to a perpendicular position on the forward stroke of the paddle, and allowing the same to feather on the return stroke, a horizontal, pivoted handle-bar and means connecting the same with said pivoted rod, whereby the former is adapted to operate the paddle; the blade supporting-bracket being vertically movable on its supporting rod, so that the blade may be relatively adjusted to the depth of the boat in the water, and the parts being duplicated on both sides of the boat.

2. A paddle attachment for small boats, comprising a supporting frame adapted to be affixed to the side of a boat, a rod vertically pivoted in such frame, a bracket projecting horizontally from said rod, a dependent blade hinged to such bracket, means restraining the blade to a perpendicular position on the forward stroke of the paddle and allowing the same to feather on the return stroke; a handle-bar and a pivoted support therefor adapted to be affixed on the gunwale of the boat, and means connecting said handle-bar with said pivoted rod, whereby the former is adapted to operate the paddle, the blade-supporting bracket being adapted to be vertically movable on its supporting rod, so that the blade may be relatively adjusted to the depth of the boat in the water.

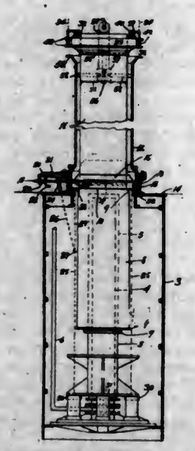
3. A paddle attachment for small boats, comprising a supporting frame, a rod made with arms f f, whereby the same is pivoted in vertical position in said frame, a bracket horizontally supported on such rod and comprising members m, m', a blade made with right-angle arms n n'', whereby such blade is hinged to the member m of the bracket, a handle-bar and a pivoted support therefor adapted to be affixed on the gunwale of the boat, and means connecting said handle-bar with said pivoted rod, whereby the former is adapted to operate the paddle.

4. A paddle attachment for small boats, comprising a supporting frame, a rod made with arms f f, whereby the same is pivoted in vertical position in said frame, a bracket horizontally supported on such rod and comprising members m, m', a blade made with right-angle arms n n'', whereby such blade is hinged to the member m of the bracket, a handle-bar and a pivoted support therefor adapted to be affixed on the gunwale of the boat, and means connecting said handle-bar with said pivoted rod, whereby the former is adapted to operate the paddle, said blade-supporting bracket being made with a slit-sleeve so as to be vertically adjustable on said rod, and having means for clamping said slit-sleeve in the position to which adjusted.

5. A paddle attachment for small boats, comprising a supporting frame, a rod made with arms f f, whereby the same is pivoted in vertical position in said frame, a bracket horizontally supported on such rod and comprising members m, m', a blade made with right-angle arms n n'', whereby such blade is hinged to the member m of the bracket, a handle-bar and a pivoted support therefor adapted to be affixed on the gunwale of the boat, and

means connecting said handle-bar with said pivoted rod, whereby the former is adapted to operate the paddle, said blade-supporting bracket being made with a slit sleeve so as to be vertically adjustable on said rod, and having means for clamping said slit-sleeve in the position to which adjusted, and a rope affixed to one of the lower corners of the blade for reversing the same, as described.

878,470. MACHINE FOR FORMING SAND MOLDS. WILLIS C. SWIFT, Hinsdale, Ill., assignor to Fred Herbert, Birtley, England. Filed July 5, 1906. Serial No. 324,719.



1. In a machine of the class described, a flask to receive the sand or other composition, a main pattern, and means for moving the main pattern longitudinally through said flask, in combination with an auxiliary or socket pattern, means for moving the same up to its work, and means for locking the same in its working position.

2. In a machine of the class described, a flask to receive the sand or other composition, a main pattern and means for moving the same through said flask, in combination with an auxiliary or socket pattern, means for moving the same up to its work, and means for automatically locking the same in its raised position.

3. In a machine of the class described, a flask, a main pattern and means for moving the main pattern into and out of said flask in combination with an auxiliary or socket pattern, means for moving the same up to its work, means for locking the same in its working position, and means for releasing said locking means.

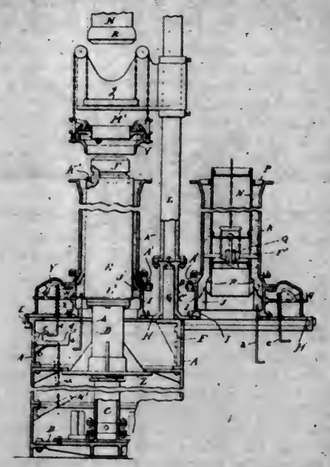
4. In a machine of the class described, a flask, a main pattern and means for moving the same into and out of said flask, in combination with an auxiliary or socket pattern, means for locking the same in its working position, and means for automatically releasing said locking means to permit said auxiliary or socket pattern to be returned to its initial position.

5. The combination with a flask and a main pattern, and means for moving said pattern into and out of said flask, of an auxiliary or socket pattern through which said main pattern operates, means for moving said auxiliary or socket pattern into its working position, and a spring pressed locking bolt or pin arranged to engage said auxiliary or socket pattern and lock the same in its working position.

[Claims 6 to 22 not printed in the Gazette.]

878,471. SAND-MOLD MACHINE. WILLIS C. SWIFT, Hinsdale, Ill., assignor to Fred Herbert, Birtley, England. Filed Jan. 24, 1907. Serial No. 353,878.

1. In a molding machine, the combination with a main pattern, and actuating mechanism therefor, of a flask, means for supporting a column of mold forming material within said flask, and means for transferring the flask containing the column of mold forming material, into and out of the line of movement of the main pattern.



2. In a molding machine, the combination with a main casing, a main pattern mounted therein to operate, and means for operating said pattern, of a flask, an auxiliary casing for supporting said flask, means for supporting a column of sand within said flask, and means for transferring said auxiliary casing and flask containing the column of sand into and out of the line of movement of the main pattern.

3. In a molding machine, the combination with a main casing, a main pattern, and power mechanism for operating the same, of a series of auxiliary supports, flasks adapted to be secured to said supports, and to receive columns of mold material therein, and means for successively moving said auxiliary supports with said flasks into and out of the line of movement of the main pattern.

4. In a molding machine, the combination with a main pattern and shaping devices, and means for operating the same, of a flask, means for supporting the same, means arranged within said flask for supporting a column of mold material therein, means for moving the filled flask into the line of movement of the main pattern, and means for removing the flask with the completed mold from such relation.

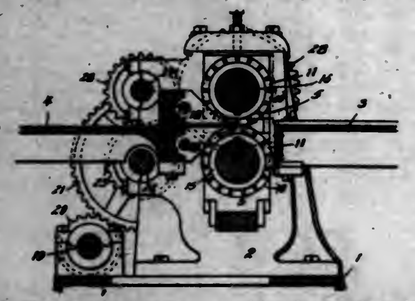
5. In a molding machine, the combination with a main casing, a main pattern arranged to operate therein, and means for operating said pattern, of a series of auxiliary casings, flasks, means for centering and securing a flask upon each of said auxiliary casings, means for supporting a column of sand within each flask and auxiliary casing, and means for successively moving said auxiliary casings and flasks into and out of the line of the main pattern.

[Claims 6 to 36 not printed in the Gazette.]

878,472. ROLLS FOR CUTTING SHEET METAL. LAWRENCE C. STEELE, Wheeling, W. Va., assignor to Lewis E. Curtis, Chicago, Ill. Filed June 16, 1905. Serial No. 265,482.

1. In cutting rolls for sheet metal, the combination with shearing cutters having their edges continuous on one side and interrupted on the other, of slitting cutters having interrupted edges arranged between the shearing cutters, a roll upon which all of said cutters are mounted, an opposing roll, similar shearing cutters on said opposing rolls countering the first mentioned shearing cutters, and similar slitting cutters also on the opposing roll between the shearing cutters and countering the first mentioned slitting cutters.

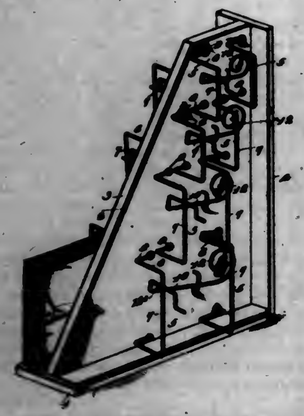
2. The combination in a machine for cutting sheet metal, of opposing arbors or mandrels, each provided with shearing cutters having continuous edges on one side and interrupted edges on the other side, and each also provided with slitting cutters having interrupted cutting edges, all the cutters of one arbor countering like cutters upon the other arbor.



3. The combination in a machine for cutting sheet metal, of opposing arbors or mandrels, each provided with a plurality of shearing cutters spaced apart, and a plurality of slitting cutters located between and filling the spaces between the shearing cutters, all the cutters of one arbor countering like cutters upon the other arbor.

4. The machine for manufacturing expanded metal from wide sheets consisting of opposing rolls each armed with shearing cutters for dividing the sheet into narrow sheets or strips, and with slitting cutters for slitting the several narrow sheets preparatory to expanding them, the cutters upon each roll countering like cutters upon the other roll.

878,473. PAPER-BAG HOLDER. FERDINAND THOMAS, Markleysburg, Pa. Filed Aug. 15, 1907. Serial No. 388,679.



1. A device of the character described, comprising a support provided with a compartment in which the articles to be held are placed on their edges and from which the articles are designed to be drawn by an endwise pull, and a spring tension device secured to said support and arranged to have a spring movement at right angles to the movement of withdrawal, said tension device being formed with an outwardly extending offset free end designed to press downwardly upon the uppermost edges of the articles in the compartment.

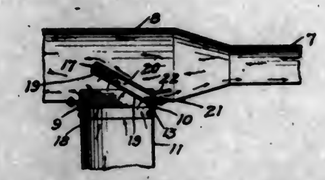
2. A device of the character described, comprising a support provided with a compartment having an opening through which the articles are designed to be withdrawn, and a tension device secured to said support and extending longitudinally in the compartment and provided with an outwardly projecting free end designed to extend across and bear upon the uppermost edges of the articles in the compartment.

3. A device of the character described, comprising a support consisting of a base and a vertically extending plate secured thereto, frames secured to said plate and projecting laterally therefrom, and provided with horizontally extending portions on which articles to be held are designed to be set on edge, and a spring tension device secured at its rear end to the plate and extending inwardly along the same, the front free end of the tension device extending outwardly and laterally and designed to press downwardly upon the upper edges of the articles within the frame.

4. A device of the character described, comprising a support consisting of a base, and a vertically extending plate secured thereto, front and rear frames secured to said plate and projecting laterally therefrom, and a tension device in the form of a spring rod secured at its rear end to the said plate and extending forwardly along the same and provided with an outwardly and laterally projecting arched free end located between the frames, as and for the purpose set forth.

5. A device of the character described, comprising a support consisting of a base, a vertically extending plate supported thereon, and a back plate secured to the base and the vertical plate, front and back frames projecting laterally from the vertical plate and formed with upper and lower horizontal portions, longitudinally connecting portions, and opposite ends provided with eyes for the reception of fastening devices to secure the frames to the plate, a spring rod having a coiled rear end secured to the plate, the rod extending forwardly from said end along the plate, and provided with an arched outwardly and laterally projecting free end for the purpose specified, and a staple secured to the plate and straddling the rod between its ends, whereby to limit the movement thereof.

878,474. VENTILATING DEVICE. JAMES L. WATERBURY and CLYDE WATERMAN, Minneapolis, Minn. Filed May 10, 1907. Serial No. 372,941.



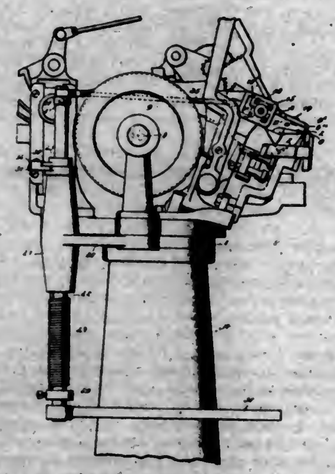
1. The combination, with a heater and smoke flue, of a foul air flue communicating with said smoke flue, a valve provided at the junction of said smoke flue with said foul air flue, said valve being hinged on one side and adapted to close the discharge end of said foul air flue and to be swung across and partially close the passage through said smoke flue, said valve having an imperforate top and a perforated bottom with a chamber between them and an opening through the wall of said chamber, through which opening a portion of the air brought up by said foul air flue and admitted to said chamber is directed along the bottom of said smoke flue to the heater.

2. The combination, with a heater and a smoke flue connected therewith and a foul air flue communicating with said smoke flue, a valve provided at the junction of said smoke flue and said foul air flue and pivotally supported at one edge on the side of said foul air flue contiguous to said heater, said valve being arranged to close the top of said foul air flue and adapted when partially open to deflect the foul air from said flue along the bottom of said smoke flue, the heated air being conducted through said smoke flue over said valve and along the upper walls of said smoke flue, whereby the foul air is prevented from acting as a check upon the heated gases passing through said smoke flue.

3. The combination, with a heater and a smoke flue having an enlarged section and a chimney communicating therewith, of a foul air flue leading into said enlarged section and of substantially the same diameter as said enlarged section, said foul air flue having an open end near the floor and adapted to conduct the impure air into said enlarged section and mingle it with the products of combustion from said smoke flue, and a valve hinged at the junction of said enlarged section with said foul air flue and adapted to close the discharge end of said foul air flue and swing across and partially close the passage through said enlarged section, and said valve having an imperforate top and a perforated bottom with a passage between them and through which passage a portion of the air brought up by said foul air flue and admitted to said enlarged section is directed along the bottom of said smoke flue to the heater while the remaining portion is mingled with the products of combustion and enters said chimney, substantially as described.

4. The combination, with a heater and a smoke flue connected therewith, of a chimney, said smoke flue having an enlarged section leading into said chimney and a foul air flue communicating with said enlarged section, a valve pivoted at the junction of said foul air flue with said enlarged smoke flue section and adapted when closed to prevent the discharge of foul air into said enlarged smoke flue section, said smoke flue being entirely unobstructed when said valve is closed and said valve when swung partially across said smoke flue acting as a deflector to direct the foul air currents along the bottom of said smoke flue and prevent them from acting as a check on the heated gases in the top of said smoke flue, substantially as described.

878,475. ROUGH-ROUNDING AND CHANNELING MACHINE. FREDERICK L. ALLEY, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 9, 1895, Serial No. 545,115. Divided and this application filed Nov. 6, 1895. Serial No. 568,082.



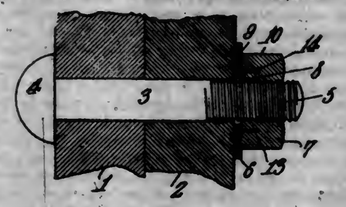
1. In a rounding and channeling machine, the combination with rounding and channeling knives and a four motion feed device, of a cutter plate, and two work engaging fingers, one on each side of the cutter plate, the ends of which engage the crease between the upper and the welt, said fingers coöperating with a four-motion feed device to grip the work, substantially as described.

2. In a rounding and channeling machine, the combination with rounding and channeling knives and a four-motion feed device, of a cutter plate, and two work engaging fingers, one on each side of the cutter plate, the ends of which engage the crease between the upper and the welt, and mechanism for moving one of said fingers laterally in the direction of the feed to coöperate with the four-motion feed device to feed the work, substantially as described.

3. In a rounding and channeling machine, the combination with rounding and channeling knives, of a cutter plate arranged to support the welt, a work feeding device and two work engaging fingers one on each side of the cutter plate the ends of which engage the crease between the upper and welt, substantially as described.

4. In a rounding and channeling machine, the combination with rounding and channeling knives, of a cutter plate arranged to support the welt, and means for guiding the shoe arranged to engage the crease between the upper and welt on both sides of the cutter plate, substantially as described.

878,476. NUT-LOCK. IRVING BARKER, Springfield, Ill., assignor of one-half to William D. Ryan, Springfield, Ill. Filed Apr. 20, 1907. Serial No. 369,307.



1. A nut lock comprising a nut having a narrow slot in its lower face extending entirely across said nut and formed with a tapering bottom, and a thin key with broad sides and tapering edges the lower one of which is a knife-edge, said key slidable in said slot and adapted to be driven into and through it, the knife edge cutting a seat the entire length of the key in the substance against which the nut bears, and the projecting portion of the key bent over on the side of the nut.

2. A nut lock comprising a washer having short teeth on its under side, a nut having a narrow slot in its lower face with a tapering bottom, and a thin tapering key slidable in said slot having a knife edge and thickened at one end, said key adapted to be driven through said slot cutting a seat for itself in said washer and having a projecting end.

878,477. CORN-HARVESTER. ROBERT B. BREWER, Oxford, Kans., assignor of one-half to S. R. Payne, Oxford, Kans. Filed Apr. 3, 1907. Serial No. 366,147.



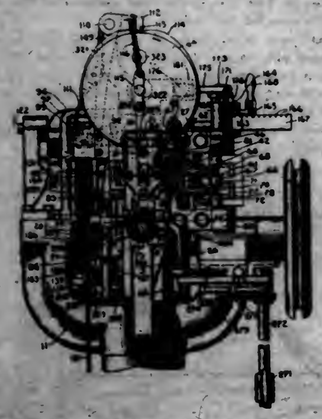
1. A harvester attachment of the character described, comprising a supporting frame-work embodying inner and outer sills, the inner sill being provided with pivoted latch bars, in combination with a vehicle body provided with a running board formed with slots to receive said latch bars, cutting mechanism carried by said frame-work and projecting forwardly therefrom, means for actuating said cutting mechanism, and a transversely traveling elevator carried by said framework and adapted to operate in the rear of the cutting mechanism, and means for operating said elevator.

2. A harvester attachment of the character described, comprising a supporting frame-work, means for supporting the same from a wagon body, a drive-shaft journaled in

the rear of said frame-work, a cutter shaft extending longitudinally of the frame-work and journaled therein, a driving connection between said drive shaft and the cutter shaft, guard fingers projecting forwardly from the frame-work, a cutter bar adapted to reciprocate through said guard fingers and having a pitman and crank connection with the cutter shaft, a transversely traveling elevator embodying an apron and rollers, the apron being formed with lags, upwardly and transversely extending standards adapted to project over the wagon body supporting the innermost roller of the elevator, a driving connection between said elevator and the cutter shaft, a reel mounted in the framework above the guard fingers, means for actuating said reel, and spring fingers projecting from the framework above the outer end of the elevator.

3. A harvester attachment of the character described, comprising a supporting framework, means for supporting the same from a wagon body, a drive shaft journaled in the rear of the framework, a cutter shaft extending longitudinally of the framework and journaled therein, a driving connection between said drive shaft and the cutter shaft, cutting mechanism operatively connected to the cutter shaft, a transversely traveling elevator embodying an apron and rollers, the apron being formed with lags, upwardly and transversely extending standards mounted on the framework and adapted to project over the wagon body and supporting the innermost roller of the elevator, a driving connection between the cutter shaft and the other roller of the elevator, a reel mounted in the framework above the cutting mechanism, and an operative connection between said reel and the drive shaft.

878,478. ROUGH-ROUNDING MACHINE. ANALDO M. ENGLISH, Boston, Mass., assignor to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed Aug. 9, 1906. Serial No. 329,866.



1. A machine for operating on the soles of boots and shoes containing in combination an operating tool, feeding means permitting a variable feed under manipulation of the operative, and work travel indicating means.

2. In a machine for operating upon the soles of boots and shoes, comprising in combination an operating tool having capacity for variable path movement, feeding means for the work, and means to control the path of tool movement, said means being arranged to indicate to the operative, while presenting the shoe to the operation of the machine, the relative travel of the work and said tool controlling means.

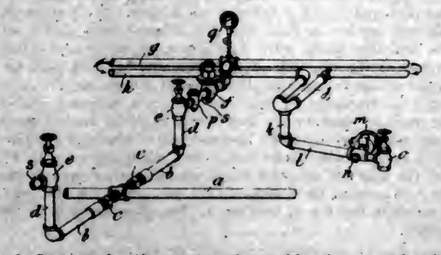
3. A machine for operating on the soles of boots and shoes, comprising, in combination, an operating tool, work-feeding means, controlling means for the tool, including a pattern positioned for visual inspection by the operative whereby the position of said controlling means may be determined relative to the progress of the work.

4. In a machine for trimming the soles of boots and shoes, the combination with a guide for the shoe, and a knife, said guide and knife being movable relative to each other to vary the width of the extension on the sole, of means constructed and arranged to indicate to the operator at any time the width of the extension being cut.

5. In a machine for trimming the soles of boots and shoes, the combination with a guide for the shoe, and a knife to trim the edge of the sole, said guide and knife being movable relative to each other to vary the width of the sole extension, of visual means to indicate to the operator at any time the relative position of the knife and guide.

[Claims 6 to 100 not printed in the Gazette.]

878,479. CAR-HEATING SYSTEM. EDWARD E. GOLD, New York, N. Y. Filed Aug. 10, 1905. Serial No. 273,542.

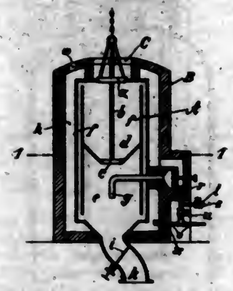


1. In a car heating system, in combination, a train pipe *a*, a horizontal branch *b* therefrom having a strainer *c* at the entrance to said branch and projecting into the train pipe, a vertical pipe projecting upward from said horizontal branch, an admission valve *e* at the upper end of said pipe *d* and accessible from within the car, a heater within the car, an automatic pressure regulator *f* between the admission valve and the heater, and a strainer *p* between the admission valve and the regulator, the entrance to said branch *b* being above the bottom of the train pipe, and an unobstructed passage for dirt being left along the bottom of said train pipe and for steam around the outside of said strainer, whereby the steam flows around the outside of said strainer to clean it and carry the dirt beyond it.

2. In a car heating system, in combination, a train pipe *a*, a horizontal branch *b* therefrom having a strainer *c* at the entrance to said branch and projecting into the train pipe, a vertical branch *d* projecting upward from said horizontal branch, an admission valve *e* at the upper end of said pipe *d* and accessible from within the car, a heater within the car, an automatic pressure regulator *f* between the admission valve and the heater, and a strainer *p* between the admission valve and the regulator, the entrance to said branch *p* being above the bottom of the train pipe, and an unobstructed passage for dirt being left along the bottom of said train pipe and for steam around the outside of said strainer, whereby the steam flows around the outside of said strainer to clean it and carry the dirt beyond it, said strainer *c* comprising a short length of pipe connected at one end to the main and forming a part of the branch and having a slitted head *r* constituting the portion which projects into the main pipe, and said strainer *p* comprising a fitting extending squarely across the pipe and having a removable cap *u* and an inclosed removable perforated cylinder *t*, the lower end of the fitting and cylinder thus forming a dirt trap which may be opened and cleaned.

3. In a car heating system, in combination, a train pipe *a*, a horizontal branch *b* therefrom having a strainer *c* at the entrance to said branch, a vertical pipe *d* projecting upward from said horizontal branch, an admission valve *e* at the upper end of said pipe *d* and accessible from within the car, a heater within the car, an automatic pressure regulator *f* between the admission valve and the heater, and a strainer *p* between the admission valve and the regulator.

878,480. APPARATUS FOR MANUFACTURING FUEL. PAUL HOERING, Berlin, Germany, assignor to The Firm of Torfkoks, Gesellschaft mit beschränkter Haftpflicht, Berlin, Germany. Original application filed Dec. 22, 1903, Serial No. 186,178. Divided and this application filed May 2, 1905. Serial No. 258,474.



1. An apparatus for coking aqueous bituminous combustibles, comprising a chamber for receiving the combustibles, means for withdrawing gases from the lower part of the chamber, means for conducting steam from the upper end of the chamber to the lower end thereof, and means for temporarily separating the upper part of the chamber from the lower part thereof.

2. An apparatus for coking aqueous bituminous combustibles, comprising a chamber for receiving the combustibles, means for withdrawing gases from the lower part of the chamber, means for conducting steam from the upper end of the chamber to the lower end thereof, means for temporarily separating the upper part of the chamber from the lower part thereof, and means for evacuating the charge of this lower part.

878,481. THERMOMETER. SEVERIN LACHAPELLE, Montreal, Quebec, Canada, assignor of one-fourth to George W. Parent and one-fourth to Gaston De Werthemer, Montreal, Quebec, Canada. Filed Aug. 1, 1907. Serial No. 386,577.

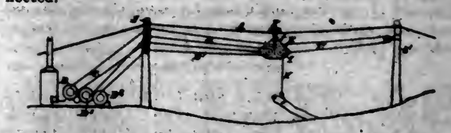


1. In combination with a thermometric column, having a bent portion, a strip disposed with one end against the bent portion of the column and provided with sections indicative of the physical condition of the person to whom the column is applied and a transparent casing disposed around the column and strip.

2. In combination with a thermometric column, having a bent portion, a strip disposed with one end against the bent portion of the column and provided with sections indicative of the physical condition of the person to whom the column is applied with a transparent casing disposed around the column and strip and having its upper end closed and attached to the upper end of the strip.

878,482. HOISTING AND CONVEYING DEVICE. THOMAS S. MILLER, South Orange, N. J., and JOSEPH H. DICKINSON, Atlanta, Ga.; said Dickinson assignor to The Lidgerwood Manufacturing Company, a Corporation of New York. Filed June 12, 1902. Serial No. 111,331.

1. In combination, a stationary drum, a traction rope operated thereby, a traveling drum, a rope operated by said drum for connection with an object to be hauled, two ropes having their tail ends at said drum and tending to operate the same in opposite directions and two stationary drums with which the head ends of said ropes are connected.



2. In combination, a traveling drum, a rope operated by said drum for connection with an object to be hauled, two stationary drums connected directly with said traveling drum by ropes tending to operate said traveling drum in opposite directions, a traction rope and a stationary drum for operating said rope.

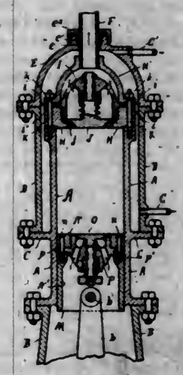
3. In a hoisting and conveying device, the combination with a trackway, a carriage thereon, and means for traversing the carriage of a fall rope drum and an auxiliary drum supported from the carriage and connected to turn together, said auxiliary drum being divided into two parts of unequal diameter, a hoist rope upon the hoist drum, a hoist operating rope upon the smaller portion of said auxiliary drum, and a slack pulling rope upon the larger portion of the auxiliary drum, said two last mentioned ropes being adapted to turn the drums oppositely.

4. In a conveying apparatus, in combination, a trackway, a load-carriage, a traction rope, a drum for operating the same, three connected drum members on said carriage, a fall-rope, a hoisting-rope and a slack-pulling-rope coiled, respectively, on said drum members, substantially as described; whereby the unwinding therefrom of the hoisting-rope produces a winding of the other two ropes and vice versa; both said hoisting and slack-pulling ropes extending from the same end of the trackway to said carriage and having their tail ends at said carriage.

5. In a conveying apparatus, in combination, a trackway, a load-carriage, a traction-rope, a drum for operating the same, a drum on said carriage containing a plurality of connected parts, hoisting and slack-pulling ropes extending, respectively, from the top and bottom of said drum toward the same end of the trackway and separate power drums whereby said ropes are respectively operated.

[Claims 6 to 8 not printed in the Gazette.]

878,483. ICE-MACHINE COMPRESSOR. CASPER W. MILES, Cincinnati, Ohio. Original application filed May 1, 1905, Serial No. 258,198. Divided and this application filed Mar. 9, 1906. Serial No. 305,020.

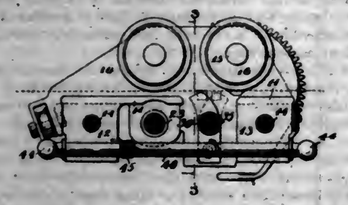


1. In an ice machine compressor, a plunger comprising a ring section and a cylindrical section, a valve cage threaded into the ring section and provided with an annular flange clamped in the joint between the ring section and cylindrical section, and means for clamping said ring section and cylindrical section together.

2. In an ice machine compressor, a cylinder, a cylinder head comprising a ring section and a cap section, a valve

cage threaded into said ring section and provided with an annular flange clamped in the joint between the ring section and cap section, and means for clamping the ring section and cap section together and to the end of the cylinder.

878,484. MECHANISM FOR LOCKING TROLLEYS. EDWARD Y. MOORE, Cleveland, Ohio. Original application filed July 10, 1906, Serial No. 325,447. Divided and this application filed Aug. 17, 1907. Serial No. 389,042.



1. The combination of a supporting trolley, a locking dog carried thereby and adapted to engage the supporting track for the trolley, a rock shaft, and a cam connection between the rock shaft and dog.

2. The combination, with a trolley frame, of a rock shaft mounted therein, a locking dog, and a cam and roller connection between the rock shaft and dog whereby the rocking of the shaft may operate the dog.

3. The combination of a trolley having supporting wheels adapted to travel on the lower flange of an I-beam and, a locking dog carried by the trolley and adapted to bite against the under side of the I-beam flange, and a cam adapted to move said dog.

4. The combination, with a frame having supporting wheels adapted to travel on the lower flange of an I-beam, of a longitudinal rock shaft carried by such frame beneath the I-beam, a locking dog adapted to engage the under side of the I-beam, and a cam connection between said dog and rock shaft.

5. The combination of a trolley having a pair of side plates, supporting wheels carried on the inner side of said side plates, a shaft connecting the side plates, a locking dog pivotally mounted on said shaft, and means for operating the dog.

[Claims 6 to 21 not printed in the Gazette.]

878,485. MANUFACTURED LEATHER. ALFRED W. CASE, Highland Park, Conn. Filed Feb. 7, 1907. Serial No. 356,155.

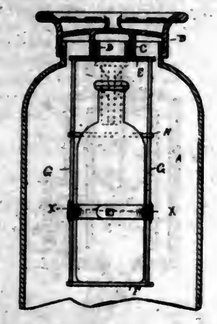
As an improved article of manufacture, a sheet of leather board formed from leather pulp material and after being formed and dried treated to a bath including rosin and heated mineral oil.

878,486. TOOTH-BRUSH. LOVITT H. CROWELL, Halifax, Nova Scotia, Canada; Edith Ray Crowell and Maurice Osborne Crowell executors of said Lovitt H. Crowell, deceased. Filed Jan. 24, 1906. Serial No. 297,555.



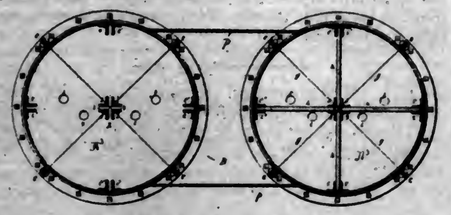
A tooth brush comprising a head and handle separately connected, a circular shield removably secured by and between said parts, and a threaded projection on the handle adapted to pass through said shield and cooperatively engage a threaded socket in the head of the tooth brush.

878,487. FIRE-EXTINGUISHER. JOHN L. HYDE, Portland, and OLE P. PETERSON, Falmouth, Me., assignors to Conqueror Fire Extinguisher Company, Portland, Me., a Corporation of Maine. Filed Nov. 7, 1907. Serial No. 401,045.



In a fire extinguisher, a suitable tank, a bottle-holding cage adapted to be mounted therein, said cage comprising top and bottom plates, vertically positioned posts secured to said plates and two interlocking bars pivotally mounted upon adjacent posts, the free end of one being provided with a socket and the free end of the other with a projecting lug adapted to interlock in said socket.

878,488. GRAIN TANK AND ELEVATOR. JOHN W. TOBIN, Minneapolis, Minn. Filed Apr. 28, 1906. Serial No. 314,303.



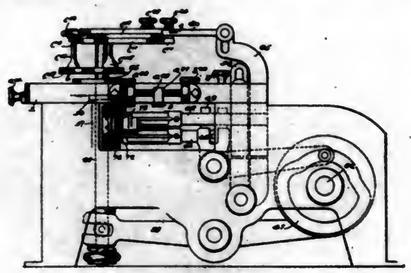
In a grain elevator, the combination of multiple tanks, and a work-house or elevator lying between them; said tanks consisting respectively of separable sections adapted to be bolted together to form the side walls thereof; of other separable sections adapted to form the roofs thereof, and of still other separable sections adapted to be bolted together to form the floors or bottoms thereof; and said intervening work-house consisting of a frame and covering therefor, said frame being composed of separable vertical horizontal and diagonal members, bolted to and supported by the said tanks, said covering being composed of pierced metal sheets or plates bolted together, and gussets or angle irons connecting the said vertical horizontal and diagonal members of said covering, substantially as shown and described.

REISSUES.

12,746. VAMP-FOLDING MACHINE. GEORGE F. DUNN, Brockton, Mass., assignor, by mesne assignments, to Boston Machine Works Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 2, 1908. Serial No. 409,087. Original No. 870,942, dated Nov. 12, 1907, Serial No. 174,843.

1. In a vamp folding machine, folding and forming mechanism, and means to adjust the same widthwise and lengthwise.

2. In a vamp folding machine, folding and forming mechanism, and means to simultaneously adjust the same widthwise and lengthwise.



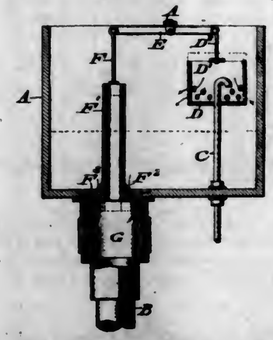
3. In a vamp folding machine, coöperating folding members, including a vamp edge engaging device having a substantially U-shaped working edge, conforming to the folded edge of the vamp, the sides of said device being adjustable longitudinally for changing the length of the working edge.

4. In a vamp folding machine, a former, having a substantially U-shaped working edge, conforming to the folded edge of the vamp, said former being longitudinally adjustable along the sides or legs of the U, for conforming to different sizes of vamps.

5. In a vamp folding machine, a folder, having a substantially U-shaped working edge, conforming to the folded edge of the vamp, said folder being longitudinally adjustable along the sides or legs of the U, for conforming to different sizes of vamps.

[Claims 6 to 36 not printed in the Gazette.]

12,747. FLUSH-TANK. OSCAR J. FABIAN, Philadelphia, Pa. Filed Apr. 24, 1906. Serial No. 313,520. Original No. 808,441, dated Dec. 26, 1905, Serial No. 245,589.



1. A device of the kind described, comprising a flush tank, a supply pipe, a discharge pipe, a pivoted lever, an apertured pipe-valve suspended from said lever upon one side of its pivot, and a receptacle carried by the lever and adapted to receive water from the supply and adapted to actuate the valve by reason of the weight of the water, said receptacle being perforated to permit the escape of a portion of the water prior to actuation of the valve.

2. A device of the kind described comprising a tank, a discharge-pipe, a valve therein, a supply-pipe, and a receptacle arranged within the tank and normally receiving the end of the supply pipe and adapted to receive the contents of the supply-pipe, means whereby the weight of water in the said receptacle closes the valve, said receptacle being perforated for permitting escape of a portion of the contents of the receptacle prior to the closing of the valve.

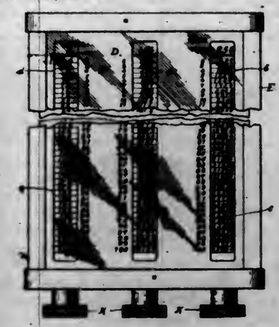
3. In a device of the character described, a flush tank, a supply pipe, a lever suitably fulcrumed, a rising and falling perforated receptacle carried by said lever and normally and at all times receiving the end of the supply pipe and adapted to receive water therefrom, an outlet from said tank, and an open-ended pipe having a portion thereof adapted to serve as a valve for closing said outlet, said pipe being connected to said lever and being seated by the upward movement of the pipe.

4. In a device of the character described, a flush tank, an outlet leading from the bottom thereof, a pipe apertured at its upper portion and having a valve around its lower end adapted to control said outlet and to be seated by upward movement, a lever to which the pipe is secured, an apertured receptacle, a support therefor depending from said lever, and a pipe having its discharge end normally received within and discharging into said receptacle.

5. In a device of the character described, a flush tank, an outlet leading from the bottom thereof, a pipe apertured at its upper portion and having a valve around its lower end adapted to control said outlet and to be seated by upward movement, a lever to which the pipe is secured, an apertured receptacle supported from said lever, and a pipe having its discharge end normally received within and discharging downwardly into said receptacle.

[Claim 6 not printed in the Gazette.]

12,748. COMPUTING-MACHINE. ADOLPHUS S. DENNIS, Cleveland, Ohio, assignor, by mesne assignments, to The Calculus Company. Filed Dec. 11, 1907. Serial No. 406,120. Original No. 842,138, dated Jan. 22, 1907. Serial No. 349,161.



1. In a computing-machine, a casing having visual openings, two or more pairs of rollers in parallel alinement, the rollers of each pair being superposed one above the other, whereby the top rollers may be brought close together, and each pair being independently operative, in combination with an index-strip fixed between each pair of rollers and having in each instance the same series of index-numbers thereupon, the same numbers in each series being in transverse alinement, and a separate sheet for each pair of rollers having columns of figures in parallel alinement adapted to show through said visual openings, said openings being adjacent to and parallel with said index-strips, and the corresponding numbers on the sheets and the index-strips being also in transverse alinement.

2. In a computing machine, a casing having visual openings, two or more pairs of rollers in parallel alinement, the rollers of each pair being superposed one above the other, whereby the top rollers may be brought close together, and each pair being independently operative, in combination with an index-strip fixed between each pair of rollers and having in each instance the same series of index-numbers, running from 1 to 100 thereupon, the same numbers in each series being in transverse alinement, and a separate sheet for each pair of rollers having columns of figures in parallel alinement adapted to show through said visual openings, said openings being adjacent to and parallel with said index-strips, and the corresponding numbers on the sheets and index-strips being also in transverse alinement.

3. In a computing-machine of the kind described, a casing, a series of pairs of rollers, each pair carrying a sheet, a gear-wheel at one end of each roller, a driving-

gear for each pair of gear-wheels, a division-wall separating the ends of the rollers proper from said gear-wheels and driving-gear and forming a guide for said sheets and also an inner journal for the driving-gear, and a washer upon the end of each roller fitting within an opening in said division-wall.

4. In a computing machine, a plurality of sheets upon each of which numbers are arranged in transverse columns and in longitudinal lines, the numbers in one of said longitudinal lines on each sheet being distinguished from the other lines in said sheet by special figures, the special figures on one sheet running consecutively from "1" to a preselected number, the special figures on the next adjacent sheet running consecutively from a number that is greater by one than the said preselected number up to a second preselected number, the special figures on the third sheet running consecutively from a number that is greater by one than the said second preselected number to a third preselected number, and so on throughout the capacity of the machine, an index coöperating with said sheets and carrying numbers arranged in a column parallel with the transverse columns on the sheets and transversely opposite the numbers therein, the numbers in the index running consecutively from a low to a higher number, each number in each of the transverse columns on the sheets being the product of the number in the index opposite thereto into the number composed of special figures in said column, and means for producing a relative movement between each sheet and the index, whereby the index and any column on any sheet may be brought into juxtaposition.

5. In a computing machine, a plurality of sheets upon each of which numbers are arranged in transverse columns and in longitudinal lines, the numbers in one of said longitudinal lines on each sheet being distinguished from the other lines in said sheet by special figures, the special figures on one sheet running consecutively from "1" to a preselected number, the special figures on the next adjacent sheet running consecutively from a number that is greater by one than the said preselected number up to a second preselected number, the special figures on the third sheet running consecutively from a number that is greater by one than the said second preselected number to a third preselected number, and so on throughout the capacity of the machine, a stationary index coöperating with said sheets and carrying numbers arranged in a column parallel with the transverse columns on the sheets and transversely opposite the numbers therein, the numbers in the index running consecutively from a low to a higher number, each number in each of the transverse columns on the sheets being the product of the number in the index opposite thereto into the number composed of special figures in said column, and means for moving each sheet relatively to the index, whereby the index and any column on any sheet may be brought into juxtaposition.

[Claims 6 to 9 not printed in the Gazette.]

DESIGNS.

39,048. LOCKET OR SIMILAR ARTICLE. FRANK W. ARNOLD, Providence, R. I., assignor to Wightman & Hough Company, a Corporation of Rhode Island. Filed Dec. 21, 1907. Serial No. 407,607. Term of patent 3½ years.



The ornamental design for a locket or a similar article as shown.

39,049. BEAD RING. ISAAC F. SCULLIN, Waseca, Minn. Filed Nov. 6, 1907. Serial No. 401,031. Term of patent 7 years.



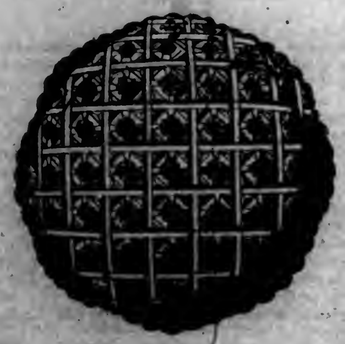
The ornamental design for a bead ring, as shown.

39,050. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. GEORGE P. ITTIG, Bridgeport, Conn., assignor to The E. H. H. Smith Silver Co., Bridgeport, Conn., a Corporation of Connecticut. Filed Dec. 19, 1907. Serial No. 407,267. Term of patent 3½ years.



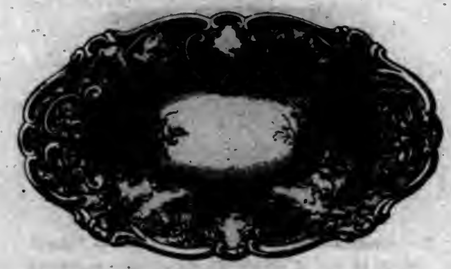
The ornamental design for a handle for spoons, forks, or similar articles.

39,051. GLASS DISH OR SIMILAR ARTICLE. WALTER E. EGGINTON, Corning, N. Y. Filed Nov. 14, 1907. Serial No. 402,212. Term of patent 7 years.



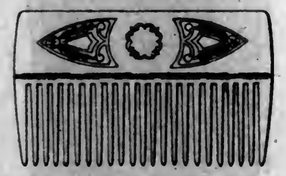
The ornamental design for a glass dish or similar article, as shown.

39,052. METAL DISH. WILLIAM KILIAN, Cincinnati, Ohio. Filed July 29, 1907. Serial No. 386,172. Term of patent 7 years.



The ornamental design for a metal dish, as shown.

39,053. COMB. SIDNEY WILLIAMS, Cranston, R. I. Filed Dec. 14, 1907. Serial No. 406,565. Term of patent 3½ years.



The ornamental design for a comb as shown.

39,054. ATOMIZER. CHRISTIAN WILLIAM MEINECKE, Jersey City, N. J., assignor to Whitall Tatum Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 2, 1906. Serial No. 337,131. Term of patent 14 years.



The ornamental design for an atomizer nozzle, as shown.

39,055. HARNESS ORNAMENT. SAMUEL W. REYNOLDS, West Toledo, Ohio. Filed Apr. 24, 1906. Serial No. 313,519. Term of patent 14 years.



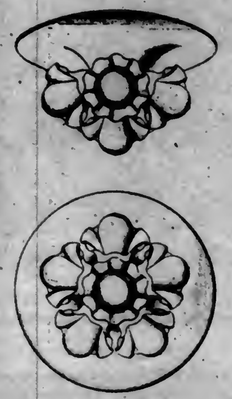
The ornamental design for a harness ornament, as shown.

39,056. MECHANICAL WHISTLE OR SIREN. JOHN GORDON, Jr., New Rochelle, N. Y. Filed Nov. 30, 1907. Serial No. 404,628. Term of patent 7 years.



The ornamental design for mechanical whistle or siren, as shown.

39,057. ELECTRIC-LIGHT CLUSTER. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 24, 1906. Serial No. 349,364. Term of patent 14 years.



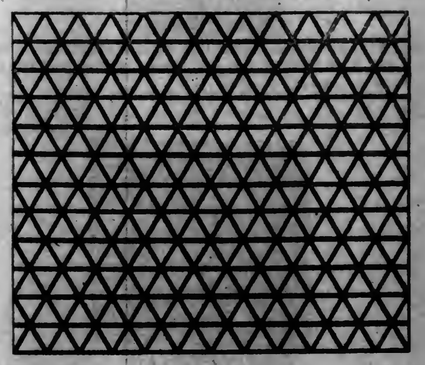
The ornamental design for electric-light cluster, as shown.

39,058. BARREL-COVER. THOMAS E. RAGLAND, Atlanta, Ga. Filed Nov. 20, 1907. Serial No. 403,089. Term of patent 14 years.



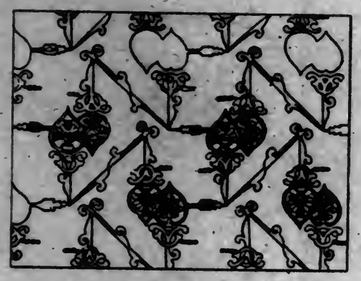
The ornamental design for a barrel cover, as shown.

39,059. PAVEMENT. FRANK F. LANDIS, Waynesboro, Pa. Filed Oct. 10, 1905. Serial No. 282,218. Term of patent 7 years.



The ornamental design for a pavement, as herein shown and described.

39,060. TEXTILE FABRIC. HELEN PARKER JOHNSTONE, Glenridge, N. J., assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Dec. 28, 1907. Serial No. 408,447. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

39,061. TEXTILE FABRIC. HELEN PARKER JOHNSTONE, Glenridge, N. J., assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Dec. 28, 1907. Serial No. 408,448. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

39,062. TEXTILE FABRIC. HERMAN JACOBSON, New York, N. Y. Filed Dec. 12, 1907. Serial No. 406,241. Term of patent 3½ years.



The ornamental design for textile fabric, as shown.

39,063. TEXTILE FABRIC. HERMAN JACOBSON, New York, N. Y. Filed Dec. 12, 1907. Serial No. 406,242. Term of patent 3½ years.



The ornamental design for textile fabric, as shown.

39,064. TEXTILE FABRIC. HERMAN JACOBSON, New York, N. Y. Filed Dec. 12, 1907. Serial No. 406,243. Term of patent 3½ years.



The ornamental design for textile fabric, as shown.

39,065. TEXTILE FABRIC. HERMAN JACOBSON, New York, N. Y. Filed Dec. 12, 1907. Serial No. 406,244. Term of patent 3½ years.



The ornamental design for textile fabric, as shown.

39,066. TEXTILE FABRIC. HERMAN JACOBSON, New York, N. Y. Filed Dec. 12, 1907. Serial No. 406,245. Term of patent 3½ years.



The ornamental design for textile fabric, as shown.

39,067. TEXTILE FABRIC. HERMAN JACOBSON, New York, N. Y. Filed Dec. 12, 1907. Serial No. 406,246. Term of patent 3½ years.



The ornamental design for textile fabric, as shown.

39,068. TEXTILE FABRIC. HERMAN JACOBSON, New York, N. Y. Filed Dec. 12, 1907. Serial No. 406,247. Term of patent 3½ years.



The ornamental design for textile fabric, as shown.

39,069. TEXTILE FABRIC. HERMAN JACOBSON, New York, N. Y. Filed Dec. 12, 1907. Serial No. 406,248. Term of patent 3½ years.



The ornamental design for textile fabric, as shown.

39,070. TEXTILE FABRIC. HERMAN JACOBSON, New York, N. Y. Filed Dec. 12, 1907. Serial No. 406,249. Term of patent 3½ years.



The ornamental design for textile fabric, as shown.

39,071. TEXTILE FABRIC. HERMAN JACOBSON, New York, N. Y. Filed Dec. 12, 1907. Serial No. 406,250. Term of patent 3½ years.



The ornamental design for textile fabric, as shown.

39,072. TEXTILE FABRIC. HERMAN JACOBSON, New York, N. Y. Filed Dec. 12, 1907. Serial No. 406,251. Term of patent 3½ years.



The ornamental design for textile fabric, as shown.

39,073. PILE FABRIC. FREDERIC E. KIP, Montclair, N. J. Filed Dec. 16, 1907. Serial No. 406,784. Term of patent 7 years.



The ornamental design for a pile fabric, as shown.

39,074. PILE FABRIC. FREDERIC E. KIP, Montclair, N. J. Filed Dec. 18, 1907. Serial No. 407,090. Term of patent 7 years.



The ornamental design for a pile fabric, as shown.

39,075. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed Nov. 20, 1907. Serial No. 403,090. Term of patent 3½ years.



The ornamental design for a rug substantially as shown.

39,076. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed Nov. 20, 1907. Serial No. 403,091. Term of patent 3½ years.



The ornamental design for a rug substantially as shown.

39,077. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed Nov. 20, 1907. Serial No. 403,092. Term of patent 3½ years.



The ornamental design for a rug substantially as shown.

39,078. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed Nov. 27, 1907. Serial No. 404,185. Term of patent 3½ years.



The ornamental design for a rug substantially as shown.

39,079. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed Nov. 27, 1907. Serial No. 404,186. Term of patent 3½ years.



The ornamental design for a rug substantially as shown.

39,080. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed Nov. 27, 1907. Serial No. 404,187. Term of patent 3½ years.



The ornamental design for a rug substantially as shown.

39,081. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed Nov. 27, 1907. Serial No. 404,188. Term of patent 3½ years.



The ornamental design for a rug substantially as shown.

39,082. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed Dec. 4, 1907. Serial No. 405,131. Term of patent 3½ years.



The ornamental design for a rug substantially as shown.

39,083. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed Dec. 4, 1907. Serial No. 405,133. Term of patent 3½ years.



The ornamental design for a rug substantially as shown.

TRADE-MARKS

PUBLISHED FEBRUARY 4, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 11,671. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) THE GOPHIR DIAMOND CO. LTD., London, England. Filed Aug. 15, 1905.

GOPHIR

Particular description of goods.—Imitation Precious and Semiprecious Stones and Rings, Brooches, Pendants, Bracelets, Ear-Rings, Necklaces, Buckles, Scarf-Pins, Hat-Pins, Buttons, Muff and Neck Chains, Neck and Hair Slides, Cuff Links and Buttons, Tiaras, Combs, and Hair Ornaments, and Miniature-Photo Frames Made of Solid or Plated Precious-Metal Ware.

Ser. No. 14,501. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EMMA HOMANN, Berlin, Germany. Filed Nov. 11, 1905.



Particular description of goods.—Chemical Preparations Constituting Remedies for or Protection Against Injuries to Vegetable Life Through Disease or Attacks of Animal Organisms.

Ser. No. 14,654. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) MARY ELIZABETH JOHNSON, trustee, Fitchburg, Mass. Filed Nov. 15, 1905.

Hammer the Hammer

Particular description of goods.—Rifles, Shotguns, Pistols, and Revolvers.

Ser. No. 14,655. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) MARY ELIZABETH JOHNSON, trustee, Fitchburg, Mass. Filed Nov. 15, 1905.

CHAMPION

Particular description of goods.—Rifles, Shotguns, Pistols, and Revolvers.

Ser. No. 14,656. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) MARY ELIZABETH JOHNSON, trustee, Fitchburg, Mass. Filed Nov. 15, 1905.

I. J.

Particular description of goods.—Rifles, Shotguns, Pistols, and Revolvers.

Ser. No. 14,788. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) MARY ELIZABETH JOHNSON, trustee, Fitchburg, Mass. Filed Nov. 18, 1905.



Particular description of goods.—Rifles, Shotguns, Pistols, and Revolvers.

Ser. No. 14,861. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) MARY ELIZABETH JOHNSON, trustee, Fitchburg, Mass. Filed Nov. 20, 1905.



Particular description of goods.—Rifles, Shotguns, Pistols, and Revolvers.

Ser. No. 18,311. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHEMISCHE FABRIK GÜSTROW, DR. HILLRINGHAUS & DR. HEILMANN, Güstrow, Germany. Filed Mar. 28, 1906.

Yohimbin Spiegel

Particular description of goods.—Aphrodisiacs.

Ser. No. 19,015. (CLASS 39. CLOTHING.) UNITED SHIRT AND COLLAR COMPANY, Troy, N. Y. Filed Apr. 23, 1906.



Particular description of goods.—Collars and Cuffs Made of Textile Fabric, Dress-Shirts, Negligée Shirts, Flannel Shirts, Outing-Shirts, Night-Shirts, and Shirt-Waists, Bath-Robes, Night-Robes, and Pajamas.

Ser. No. 22,047. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PIEDMONT MFG. CO., Greenville, S. C. Filed Sept. 12, 1906.



Particular description of goods.—Sheetings.

Ser. No. 22,739. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FOUQUET ET CIE., Paris, France. Filed Oct. 17, 1906.

SULFO-RHINOL

Particular description of goods.—Pharmaceutic and Antiseptic Hygienic Salves and Ointments for Diseases of the Nose and Throat.

Ser. No. 22,999. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM H. MINER, Chicago, Ill., and Chazy, N. Y. Filed Oct. 29, 1906.



Particular description of goods.—Ham, Bacon, and Sausages.

Ser. No. 23,330. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS AND PARTS THEREOF.) RUSSELL & ERWIN MANUFACTURING COMPANY, New Britain, Conn. Filed Nov. 14, 1906.

[redacted]

Particular description of goods.—Hatchets and Saws.

Ser. No. 24,274. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DEHLS & STEIN, INCORPORATED, New York, N. Y. Filed Dec. 26, 1906.

Microlin

Particular description of goods.—A Cleansing, Sterilizing, and Purifying Fluid for All Utensils and Apparatus Used in Breweries, Distilleries, and the Like.

Ser. No. 24,372. (CLASS 18. AGRICULTURAL AND DAIRY MACHINERY AND PARTS THEREOF.) ROCK ISLAND PLOW CO., Rock Island, Ill. Filed Dec. 31, 1906. Used ten years.

ROCK ISLAND

Particular description of goods.—Plows, Planters, Harrows, Cultivators, and Hay-Loaders.

Ser. No. 25,605. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALTON BAKING & CATERING CO., Alton, Ill. Filed Feb. 25, 1907.



Particular description of goods.—Bread.

Ser. No. 25,681. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) PERZINAL-POLIERMITTEL GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Munich, Germany. Filed Mar. 1, 1907.

Perzinal

Particular description of goods.—Wood-Polish.

Ser. No. 25,817. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KAHN-BECK CO., Los Angeles, Cal. Filed Mar. 7, 1907.



Particular description of goods.—Macaroni, Spaghetti, Vermicelli, Noodles, and Similar Paste Foods.

Ser. No. 25,839. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) PETER MAENDLER, St. Paul, Minn. Filed Mar. 8, 1907.

BOSS

Particular description of goods.—Brushes.

Ser. No. 25,840. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) PETER MAENDLER, St. Paul, Minn. Filed Mar. 8, 1907.

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Particular description of goods.—Brushes.

Ser. No. 26,068. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) THE EASTERN DYNAMITE COMPANY, Kenvil, N. J. Filed Mar. 19, 1907.



Particular description of goods.—High Explosives.

Ser. No. 26,814. (CLASS 37. PAPER AND STATIONERY.) CHARLES H. BESLY, Chicago, Ill. Filed Apr. 20, 1907.



Particular description of goods.—Letter and Document Files.

Ser. No. 26,864. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EDWARD C. FLACCUS, Wheeling, W. Va. Filed Apr. 23, 1907. Used ten years.



Particular description of goods.—Catsup, Chili-Sauce, Salad-Dressing, Prepared Mustard, Fruit Preserves and Jellies, Sweet and Sour Pickles, Olives, Table-Sauces, Except Worcestershire Sauce, Vinegar, Mince-Meat, Dried and Evaporated Fruits, Canned Fruits and Vegetables, Mushrooms, Soups, Beans with Tomato-Sauce, Stuffed Melon, Pepper Mangoes, Horse-Radish, and Chutney Relish.

Ser. No. 27,161. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. & R. LOGGIE, Loggieville, New Brunswick, Canada; Island Pond, Vt., and Columbia Falls and Vanceboro, Me. Filed May 6, 1907.



Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 27,304. (CLASS 27. HOROLOGICAL INSTRUMENTS.) NEWMAN CLOCK COMPANY, Chicago, Ill. Filed May 11, 1907. Used ten years.

Newman

Particular description of goods.—Time-Recording Clocks and Dials Therefor.

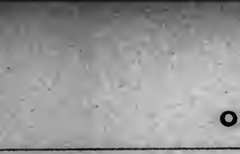
Ser. No. 28,735. (CLASS 38. PUBLICATIONS.) OPPORTUNITIES OF TODAY PUB. CO., Chicago, Ill. Filed July 11, 1907.

Opportunities of To-Day

Particular description of goods.—A Magazine.

Ser. No. 28,745. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. & R. LOGGIE, Loggieville, New Brunswick, Canada; Island Pond, Vt., and Columbia Falls and Vanceboro, Me. Filed July 12, 1907.

SEA GULL



Particular description of goods.—Canned Clams.

Ser. No. 28,793. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BYRON E. NOBLE, Montclair, N. J., assignor to Theodore H. Davies & Co., Limited, Honolulu, Hawaii. Filed July 13, 1907.



Particular description of goods.—Denims.

Ser. No. 28,863. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THOMAS HARPER & SONS LD., London, England. Filed July 18, 1907.



Particular description of goods.—Hand Sewing-Needles and Knitting-Needles.

Ser. No. 29,592. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS AND PARTS THEREOF.) BURRELL MANUFACTURING COMPANY, Bradley, Ill. Filed Aug. 26, 1907.

X-L-ALL

Particular description of goods.—Cement-Block Machines.

Ser. No. 29,621. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MYSTIC WINE OF LIFE CO., Bristol, Tenn. Filed Aug. 27, 1907.



Particular description of goods.—Remedy for Bruises, Cuts, Old or Fresh Sores, Burns, Scalds, Rheumatism, Neuralgia, Swellings, Lumbago, Spinal Affections, Sore Throat, Stiff Neck and Joints, Bleeding Piles, Sweeny, Fistula, Poll-Evil, Scratches, Swelled Hocks and Joints, Sprains, Hollow-Horn, Ring-Bone, Spavin, and Splint.

Ser. No. 29,806. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ELGIN BUTTER COMPANY, Elgin, Ill. Filed Sept. 9, 1907. Used ten years.



Particular description of goods.—Butter.

Ser. No. 29,807. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ELGIN BUTTER COMPANY, Elgin, Ill. Filed Sept. 9, 1907. Used ten years.



Particular description of goods.—Butter.

Ser. No. 30,017. (CLASS 39. CLOTHING.) NATIONAL INDIA RUBBER CO., Bristol, R. I. Filed Sept. 16, 1907. Used ten years.

CHAMPION

Particular description of goods.—Rubber Boots and Shoes and Rubber Soles.

Ser. No. 30,018. (CLASS 39. CLOTHING). NATIONAL INDIA RUBBER CO., Bristol, R. I. Filed Sept. 16, 1907.

Colonial

Particular description of goods.—Rubber Boots and Shoes and Rubber Soles.

Ser. No. 30,021. (CLASS 39. CLOTHING.) NATIONAL INDIA RUBBER CO., Bristol, R. I. Filed Sept. 16, 1907. Used ten years.

Vacation

Particular description of goods.—Tennis-Shoes Having Rubber Soles.

Ser. No. 30,045. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SWIFT AND COMPANY, Chicago, Ill. Filed Sept. 18, 1907.



Particular description of goods.—Hams, Bacon, Sausage, Lard, Oleomargarin, Lamb-Tongues, Dried Beef, and Cooked Ham.

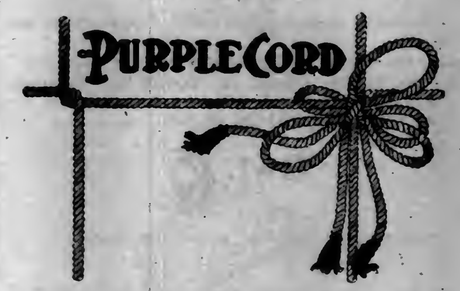
Ser. No. 30,206. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal. Filed Sept. 25, 1907.



The card being printed in red.

Particular description of goods.—Dried Fruits—Namely, Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, and Raisins.

Ser. No. 30,207. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal. Filed Sept. 25, 1907.



The cord being printed in purple.

Particular description of goods.—Dried Fruits—Namely, Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, and Raisins.

Ser. No. 30,325. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) WELSBACH COMPANY, Gloucester, N. J. Filed Oct. 1, 1907.

REFLEX

Particular description of goods.—Inverted Incandescent Mantles and Lamps and Lamp-Fittings Used in Connection Therewith.

Ser. No. 30,341. (CLASS 48. MALT EXTRACTS AND LIQUORS.) STROHMEYER & ARPE COMPANY, New York, N. Y. Filed Oct. 2, 1907. Used ten years.

SVENSK OL

Particular description of goods.—A Malt Preparation for Making a Beverage.

Ser. No. 30,505. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) L. EBSTEIN & BRO., New York, N. Y. Filed Oct. 9, 1907.

"MOTOVEIL"

Particular description of goods.—Woven Veilings.

Ser. No. 30,582. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) W. T. BASS & CO., Norfolk, Va. Filed Oct. 12, 1907.



Particular description of goods.—Coffees, Teas, and Spices.

Ser. No. 30,639. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BALTIMORE CHEWING GUM CO., Baltimore, Md. Filed Oct. 17, 1907.



Particular description of goods.—Chewing-Gum.

Ser. No. 30,668. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. J. MCGRATH COMPANY, Baltimore, Md. Filed Oct. 19, 1907.

CHAMPION



Particular description of goods.—Canned Fruits and Vegetables and Canned Oysters.

Ser. No. 30,689. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS AND PARTS THEREOF.) THE HART MANUFACTURING CO., Cleveland, Ohio. Filed Oct. 21, 1907.

DANDY

Particular description of goods.—Dies, Die-Stocks, and Screw-Threading Tools.

Ser. No. 30,793. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE ASHCROFT MANUFACTURING COMPANY, Bridgeport, Conn. Filed Oct. 26, 1907.



Particular description of goods.—Cocks, Siphons, Valves, Plugs, Springs, Steam-Traps, and Low-Water Detectors and Alarms Not Electrical.

Ser. No. 30,898. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EUGENIA F. WUJCIK, Boston, Mass. Filed Oct. 31, 1907.



Particular description of goods.—An Herbal Tea for the Treatment of Liver Trouble, Diseases of the Kidneys, Stomach Trouble, Loss of Appetite, Chronic Diseases, Scrofula, Rheumatism, and Wounds.

Ser. No. 31,063. (CLASS 39. CLOTHING.) KOPS BROS., New York, N. Y. Filed Nov. 7, 1907.

RESTING

Particular description of goods.—Corsets.

Ser. No. 31,100. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WILLIAM E. PANTON, New York, N. Y. Filed Nov. 9, 1907.

San Toy

Particular description of goods.—Woven Piece Goods of Silk, Wool, and Cotton.

Ser. No. 31,109. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EATON & HOBBS, Lynn, Mass. Filed Nov. 9, 1907. Used ten years.

National Pop Corn Works

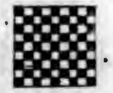
Particular description of goods.—Popcorn, Popcorn Confections and Candy.

Ser. No. 31,115. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE FRANKLIN COTTON MILL CO., Cincinnati, Ohio. Filed Nov. 11, 1907. Used ten years.

"TRIUMPH"

Particular description of goods.—Machine-Belting Made of Cotton.

Ser. No. 31,183. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. & G. COX LIMITED, Gorgie, Edinburgh, Scotland. Filed Nov. 15, 1907.



Alternate checks of red and blue, respectively.

Particular description of goods.—Gelatin for Use as Food.

Ser. No. 31,213. (CLASS 39. CLOTHING.) A. F. COX & SON, Portland, Me. Filed Nov. 16, 1907.

Urban

Particular description of goods.—Men's, Boys', Youths', Women's, Misses', and Children's Leather Boots and Shoes.

Ser. No. 31,218. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE PHYSICIANS CHEMICAL AND DRUG COMPANY, Denver, Colo. Filed Nov. 16, 1907.

G. M. P.

Particular description of goods.—Plasters for Medical and Surgical Purposes.

Ser. No. 31,221. (CLASS 33. GLASSWARE.) KOSCHERAK BROS., New York, N. Y. Filed Nov. 18, 1907.



Particular description of goods.—Glass Siphons.

Ser. No. 31,222. (CLASS 33. GLASSWARE.) KOSCHERAK BROS., New York, N. Y. Filed Nov. 18, 1907.



Particular description of goods.—Glass Siphons.

Ser. No. 31,240. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE MARKERT MEDICAL COMPANY, Brooklyn, N. Y. Filed Nov. 18, 1907.

AL-PI-NO

Particular description of goods.—A Liquid Remedy for Coughs, Colds, and Catarrh.

Ser. No. 31,249. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EAST INDIA COFFEE COMPANY, Boston, Mass. Filed Nov. 19, 1907.



Particular description of goods.—Tea, Coffee, and Chocolate.

Ser. No. 31,277. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) KAFFIR PLUME COMPANY, Chicago, Ill. Filed Nov. 21, 1907.



Particular description of goods.—Ostrich Plumes, Ostrich-Feather Boas, Ostrich-Feather Stoles, Ostrich-Feather Fans, and All Feathers Used for Millinery Trimmings.

Ser. No. 31,315. (CLASS 43. THREAD AND YARN.) THE NONOTUCK SILK COMPANY, Florence, Mass. Filed Nov. 23, 1907.

TIEKNIT

Particular description of goods.—Silk, Cotton, and Flax Thread.

Ser. No. 31,319. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) LINCOLN STOVE AND RANGE CO., Fremont, Ohio. Filed Nov. 23, 1907.



Particular description of goods.—Stoves, Ranges, and Parts Thereof.

Ser. No. 31,321. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) STANDARD OIL COMPANY, San Francisco and Oakland, Cal. Filed Nov. 23, 1907.



Particular description of goods.—Lubricating-Oils.

Ser. No. 31,350. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIS F. DARLING, West Derry, N. H. Filed Nov. 25, 1907.

DAR-LING-OIL

Particular description of goods.—A Remedy for Coughs, Colds, Catarrh, Hay-Fever, Croup, Sore Throat, Asthma.

Ser. No. 31,364. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LEA PIENAR, Rotterdam, Holland. Filed Nov. 26, 1907.



Particular description of goods.—A Remedy for All Affections of the Chest, Lungs, and Glands and for the Rickets, Whooping-Cough, and Asthma.

Ser. No. 31,441. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SWIFT & COMPANY, Chicago, Ill. Filed Nov. 29, 1907.

Swastika Brand

Particular description of goods.—Butter.

Ser. No. 31,446. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) MILLER-CANROBERT CO INC., New York, N. Y. Filed Nov. 29, 1907.

BI-CAN-TROB-UERT'S-MO

Particular description of goods.—Paints.

Ser. No. 31,449. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) BLACK DRUG AND CHEMICAL COMPANY, Akron, Ohio. Filed Nov. 29, 1907.



The letters being in red inclosed in a blue border, the stem and leaves in green, and the fruit in yellow.

Particular description of goods.—Liquids Composed of Water, Sugar, and the Juice of the Fruit of the Tree *Tamarindus Indica*.

Ser. No. 31,458. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS AND PARTS THEREOF.) THE H. C. MARSH COMPANY, Rockford, Ill. Filed Nov. 29, 1907. Used ten years.

H. C. MARSH

Particular description of goods.—Picture-Frame Machines, Picture-Frame Vises and Miter-Boxes.

Ser. No. 31,459. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NETRO CHEMICAL CO., Johnstown, Pa. Filed Nov. 29, 1907.

NETRO



COMPOUND

Particular description of goods.—Stock and Poultry Tonic.

Ser. No. 31,481. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALTA VISTA CREAMERY COMPANY, Fort Worth, Tex. Filed Nov. 30, 1907.

Alta Vista

Particular description of goods.—Milk, Cream, and Butter.

Ser. No. 31,496. (CLASS 39. CLOTHING.) JOSEPH H. CLARK, San Francisco, Cal. Filed Dec. 2, 1907.

"AJAX" SOX

Particular description of goods.—Socks and Stockings.

Ser. No. 31,501. (CLASS 11. INKS AND INKING MATERIALS.) F. S. WEBSTER COMPANY, Boston, Mass. Filed Dec. 2, 1907.



Particular description of goods.—Ink-Ribbons and Carbon-Paper.

Ser. No. 31,545. (CLASS 48. MALT EXTRACTS AND LIQUORS.) ENTERPRISE BREWING CO., San Francisco, Cal. Filed Dec. 4, 1907.



Particular description of goods.—Lager-Beer.

Ser. No. 31,546. (CLASS 48. MALT EXTRACTS AND LIQUORS.) ENTERPRISE BREWING CO., San Francisco, Cal. Filed Dec. 4, 1907.



Particular description of goods.—Lager-Beer.

Ser. No. 31,564. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VALLEY CITY MILLING COMPANY, Grand Rapids, Mich. Filed Dec. 4, 1907.

VIMCO

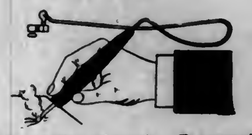
Particular description of goods.—Wheat-Flour, Cornmeal, Corn-Flour, Buckwheat-Flour, Rye-Flour, Shelled Corn, Beans, Oil-Meal, Stock Food, Poultry Food, Middlings, Bran, and Oats.

Ser. No. 31,571. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) FRANCIS HOOK & EYE & FASTENER CO., Niagara Falls, N. Y. Filed Dec. 4, 1907.

THE INDEX HOOK & EYE

Particular description of goods.—Hooks and Eyes for Garments.

Ser. No. 31,579. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) HERBERT HOLTON, New York, N. Y. Filed Dec. 5, 1907.



Particular description of goods.—Pyrographical or Burning Instruments or Tools and Appliances Therefor.

Ser. No. 31,585. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS AND PARTS THEREOF.) NATIONAL SWEEPER COMPANY, Newark, N. J. Filed Dec. 5, 1907.

Lucky

Particular description of goods.—Carpet-Sweepers.

Ser. No. 31,589. (CLASS 39. CLOTHING.) STRAWBRIDGE & CLOTHIER, Philadelphia, Pa. Filed Dec. 5, 1907.

MARCELL

Particular description of goods.—Leather Gloves.

Ser. No. 31,603. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARBUCKLE BROTHERS, New York, N. Y.; Pittsburg, Pa., and Chicago, Ill. Filed Dec. 7, 1907.



Particular description of goods.—Tea.

Ser. No. 31,604. (CLASS 47. WINES, EXCEPT MEDICATED.) BRAND BROTHERS COMPANY, Chicago, Ill. Filed Dec. 7, 1907.



Particular description of goods.—Wine.

Ser. No. 31,608. (CLASS 39. CLOTHING.) HAWES HAT COMPANY, New York, N. Y. Filed Dec. 7, 1907. Used ten years.

Hawes

Particular description of goods.—Felt Hats, and Straw, Silk, and Opera Hats, and Caps of All Kinds.

Ser. No. 31,610. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SEVEN DAY COFFEE COMPANY, New York, N. Y. Filed Dec. 7, 1907.

SEVEN DAY

Particular description of goods.—Coffee.

Ser. No. 31,633. (CLASS 39. CLOTHING.) KOPS BROS., New York, N. Y. Filed Dec. 9, 1907.

WILLOW-SHAPE

Particular description of goods.—Corsets.

Ser. No. 31,640. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ALFRED JOHN WELCH, Chicago, Ill. Filed Dec. 9, 1907.



Particular description of goods.—Metal, Glass, Marble, Varnish, and Japan Cleaners and Polishes, (Put Up in Powder, Paste, and Liquid Form.)

Ser. No. 31,649. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ABRAM R. CANTER, Wilkinsburg, Pa. Filed Dec. 10, 1907.

Reinos

Particular description of goods.—A Corn Remedy.

Ser. No. 31,681. (CLASS 39. CLOTHING.) WEINGARTEN BROS. INC., New York, N. Y. Filed Dec. 12, 1907.

Longline

Particular description of goods.—Corsets.

Ser. No. 31,698. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS AND PARTS THEREOF.) COLUMBIAN CUTLERY COMPANY, Reading, Pa. Filed Dec. 13, 1907.



Particular description of goods.—Sheep-Shears and Scythes.

Ser. No. 31,732. (CLASS 39. CLOTHING.) SWEET, ORR & COMPANY, New York, N. Y. Filed Dec. 16, 1907.



Particular description of goods.—Overalls and the Coats to Match the Same.

Ser. No. 31,746. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE PEOPLES BREWING CO., Terre Haute, Ind. Filed Dec. 16, 1907.



Particular description of goods.—Beer.

Ser. No. 31,768. (CLASS 10. FERTILIZERS.) RASIN-MONUMENTAL COMPANY OF ANNE ARUNDEL COUNTY, Baltimore, Md. Filed Dec. 17, 1907.

RASIN-MONUMENTAL

Particular description of goods.—Fertilizers.

Ser. No. 31,778. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WELLINGTON HARTMAN, Schuylkill Haven, Pa. Filed Dec. 17, 1907.



Particular description of goods.—A Remedy for Colic, Cramps, Diarrhea, Indigestion, and Flatulency.

Ser. No. 31,821. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) AMERICAN TYPE FOUNDERS COMPANY, Jersey City, N. J. Filed Dec. 18, 1907.

INLINE

Particular description of goods.—Fonts of Type.

Ser. No. 31,844. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) JOHN S. HOY, Albany, N. Y. Filed Dec. 19, 1907.

GR

Particular description of goods.—Roofing-Tin.

Ser. No. 31,846. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) MANHATTAN DRUG CO., New York, N. Y. Filed Dec. 19, 1907.

HEALEX

Particular description of goods.—Soap.

Ser. No. 31,862. (CLASS 27. HOROLOGICAL INSTRUMENTS.) AMERICAN-SWISS WATCH CO., New York, N. Y. Filed Dec. 20, 1907.

A.S.W.CO.

Particular description of goods.—Watches, Watchcases, and Watch-Movements.

Ser. No. 31,893. (CLASS 7. CORDAGE.) THE LINEN THREAD COMPANY, New York, N. Y. Filed Dec. 23, 1907.

L.T.Co

Particular description of goods.—Twine and Cord.

Ser. No. 31,941. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE OVERBROOK COMPANY, Philadelphia, Pa. Filed Dec. 27, 1907.



Particular description of goods.—Soap Dressings for All Black Shoes.

Ser. No. 31,961. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WISDOM SOAP COMPANY, Chicago, Ill. Filed Dec. 28, 1907.

WISDOM

Particular description of goods.—Soap.

TRADE-MARKS

REGISTERED FEBRUARY 4, 1908.

67,390. ELECTRIC LAMPS. AMERICAN ELECTRIC LAMP CO. OF N. Y., Philadelphia, Pa.
Filed October 21, 1907. Serial No. 30,663. PUBLISHED DECEMBER 3, 1907.

67,391. ANTISEPTIC REMEDIES FOR THE TREATMENT OF URINARY PASSAGES. CHEMISCHE FABRIK AUF ACTIEN (VORM. E. SCHERING), Berlin, Germany.
Filed April 5, 1906. Serial No. 18,711. PUBLISHED DECEMBER 3, 1907.

67,392. CERTAIN TEXTILE FABRICS. CHINA & JAPAN TRADING COMPANY, LIMITED, New York, N. Y.
Filed October 26, 1907. Serial No. 30,798. PUBLISHED DECEMBER 3, 1907.

67,393. CERTAIN TEXTILE FABRICS. CHINA & JAPAN TRADING COMPANY, LIMITED, New York, N. Y.
Filed October 26, 1907. Serial No. 30,800. PUBLISHED DECEMBER 3, 1907.

67,394. CERTAIN IRONING COMPOUND. GLO-ZO GLOSS CO., Philadelphia, Pa.
Filed October 24, 1907. Serial No. 30,769. PUBLISHED DECEMBER 3, 1907.

67,395. CERTAIN DRESS FABRICS. SIDNEY BLUMENTHAL & CO. INC., New York, N. Y.
Filed October 9, 1907. Serial No. 30,497. PUBLISHED DECEMBER 3, 1907.

67,396. CARBONATED HOP DRINKS. FLORIDA FRUIT OIL & EXTRACT CO., Atlanta, Ga., and St. Louis, Mo.
Filed October 14, 1907. Serial No. 30,597. PUBLISHED DECEMBER 3, 1907.

67,397. MINERAL, CARBONATED, AND AERATED WATERS. GLENN SPRINGS COMPANY, Glen Springs, S. C.
Filed October 19, 1907. Serial No. 30,678. PUBLISHED DECEMBER 3, 1907.

67,398. BRICKS. INDIANAPOLIS COMPOSITE BRICK COMPANY, Indianapolis, Ind.
Filed July 10, 1907. Serial No. 28,707. PUBLISHED DECEMBER 3, 1907.

67,399. NON-ALCOHOLIC PREPARATION FOR SODA-WATER SYRUPS. MAAS & WALDSTEIN EXTRACT COMPANY, New York, N. Y.
Filed September 26, 1907. Serial No. 30,226. PUBLISHED DECEMBER 3, 1907.

67,400. SEED-OATS. OLIVER PERRY LAWSON, McGregor, Tex.
Filed October 14, 1907. Serial No. 30,601. PUBLISHED DECEMBER 3, 1907.

67,401. SINKS MADE OF NATURAL STONE. THE NORCROSS CO., Cleveland, Ohio.
Filed April 12, 1906. Serial No. 18,744. PUBLISHED DECEMBER 3, 1907.

67,402. TABLE-WATERS. JACOB RIES, Shakopee, Minn.
Filed October 7, 1907. Serial No. 30,467. PUBLISHED DECEMBER 3, 1907.

67,403. CEMENT, LIME, AND PLASTER-OF-PARIS. UNION CEMENT AND LIME COMPANY, Louisville, Ky.
Filed July 16, 1906. Serial No. 20,964. PUBLISHED DECEMBER 3, 1907.

67,404. SILK PIECE GOODS. THE VALENTINE & BENTLEY SILK CO., New York, N. Y.
Filed October 26, 1907. Serial No. 30,808. PUBLISHED DECEMBER 3, 1907.

67,405. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed March 6, 1906. Serial No. 17,540. PUBLISHED DECEMBER 3 1907.

67,406. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed March 6, 1906. Serial No. 17,541. PUBLISHED DECEMBER 3, 1907.

67,407. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.: Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed March 15, 1906. Serial No. 17,831. PUBLISHED DECEMBER 3, 1907.

67,408. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.: Montgomery, Ala.; Durham, N. C., and Memphis, Tenn
Filed March 15, 1906. Serial No. 17,840. PUBLISHED DECEMBER 3, 1907.

67,409. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.: Montgomery, Ala: Durham, N. C., and Memphis, Tenn.
Filed March 15, 1906. Serial No. 17,841. PUBLISHED DECEMBER 3, 1907.

67,410. LINIMENTS. LEVI ALTSCHULER, Allegheny, Pa.
Filed October 17, 1907. Serial No. 30,636. PUBLISHED DECEMBER 3, 1907.

67,411. PREPARATION OF GEYSER MUD. THE ARIZONA WONDERINE CO., Phœnix, Ariz., and Los Angeles, Cal.
Filed February 6, 1907. Serial No. 25,173. PUBLISHED DECEMBER 3, 1907.

67,412. LINIMENT. THE C. F. BROWN CHEMICAL CO., New York, N. Y.
Filed October 9, 1907. Serial No. 30,510. PUBLISHED DECEMBER 3, 1907.

67,413. PERFUMES. FREDERICK STEARNS & CO., Detroit, Mich.
Filed October 15, 1907. Serial No. 30,616. PUBLISHED DECEMBER 3, 1907.

67,414. CERTAIN REMEDY. THE J. W. JAMES COMPANY, Wheeling, W. Va.
Filed October 25, 1907. Serial No. 30,776. PUBLISHED DECEMBER 3, 1907.

67,415. CERTAIN REMEDY. THE J. W. JAMES COMPANY, Wheeling, W. Va.
Filed October 25, 1907. Serial No. 30,778. PUBLISHED DECEMBER 3, 1907.

67,416. SCALP-TONIC. THE KNOWLTON DANDERINE CO., Chicago, Ill.
Filed October 26, 1907. Serial No. 30,807. PUBLISHED DECEMBER 3, 1907.

67,417. LINIMENT. LOUIS B. MARTIN, Boston, Mass.
Filed October 21, 1907. Serial No. 30,705. PUBLISHED DECEMBER 3, 1907.

67,418. LIQUID MEDICINE FOR THE TREATMENT OF RHEUMATISM. JOHN C. MILLER, Akron, Ohio.
Filed March 13, 1907. Serial No. 26,042. PUBLISHED DECEMBER 3, 1907.

67,419. REMEDIES FOR VENEREAL DISEASES. New York & London Drug Co., New York, N. Y.
Filed October 21, 1907. Serial No. 30,710. PUBLISHED DECEMBER 3 1907.

67,420. CERTAIN REMEDY. A. H. Niemann, Norfolk, Va.
Filed October 12, 1907. Serial No. 30,572. PUBLISHED DECEMBER 3, 1907.

67,421. MEDICATED PLASTERS. The Physicians Chemical and Drug Company, Denver, Colo.
Filed August 24, 1907. Serial No. 29,571. PUBLISHED DECEMBER 3, 1907.

67,422. CERTAIN VEGETABLE COMPOUNDS. Enrico P. Siccardi, New York, N. Y.
Filed October 21, 1907. Serial No. 30,715. PUBLISHED DECEMBER 3, 1907.

67,423. REMEDY FOR RHEUMATISM. Bertha F. Snyder, New Kensington, Pa.
Filed June 10, 1907. Serial No. 28,010. PUBLISHED DECEMBER 3, 1907.

67,424. HAIR-TONIC. The St. Luke Remedies Co., New York, N. Y.
Filed June 26, 1907. Serial No. 28,401. PUBLISHED DECEMBER 3, 1907.

67,425. REMEDY FOR BOWEL COMPLAINT IN POULTRY. Frank J. Tishenbanner, Gilmore City, Iowa.
Filed October 16, 1907. Serial No. 30,632. PUBLISHED DECEMBER 3, 1907.

67,426. REMEDIES FOR CORNS, CALLI, AND BUNIONS. The Tozs-O-K Medical Company, Welland, Ontario, Canada.
Filed May 13, 1907. Serial No. 27,336. PUBLISHED DECEMBER 3, 1907.

67,427. REMEDIES FOR INDIGESTION. "Tot" Company, Milan, Italy.
Filed July 22, 1907. Serial No. 28,941. PUBLISHED DECEMBER 3, 1907.

67,428. MACHINERY BELTS OF TEXTILE MATERIAL. Acme Belting Company, Phillipsburg, N. J.
Filed May 4, 1907. Serial No. 27,104. PUBLISHED DECEMBER 3, 1907.

67,429. WHIPS. Cargill, Cleveland & Co., Westfield, Mass.
Filed October 22, 1907. Serial No. 30,725. PUBLISHED DECEMBER 3, 1907.

67,430. BUTTER. The Elgin Butter Company, Elgin, Ill.
Filed September 9, 1907. Serial No. 29,808. PUBLISHED DECEMBER 3, 1907.

67,431. CERTAIN RUBBER GOODS. Geo. Borgfeldt & Co., New York, N. Y.
Filed October 3, 1907. Serial No. 30,401 PUBLISHED DECEMBER 3, 1907.

67,432. SARDINES. Globe Packing Company Lubec and Eastport, Me.
Filed October 16, 1907. Serial No. 30,624. PUBLISHED DECEMBER 3, 1907.

67,433. SARDINES. Globe Packing Company, Lubec and Eastport, Me.
Filed October 16, 1907. Serial No. 30,625. PUBLISHED DECEMBER 3, 1907.

67,434. CANDIES. Heywood Candy Manufacturing Company, Des Moines, Iowa.
Filed October 25, 1907. Serial No. 30,792. PUBLISHED DECEMBER 3, 1907.

67,435. PERIODICAL DEVOTED TO OPTICAL INTERESTS. The Jewelers Circular Pub. Co., New York, N. Y.
Filed July 29, 1907. Serial No. 29,086. PUBLISHED DECEMBER 3 1907.

67,436. TRACING-CLOTH. L. & C. Hardtmuth, Vienna and Budweis, Austria-Hungary, and London, England.
Filed May 25 1907. Serial No. 27,648. PUBLISHED DECEMBER 3, 1907.

67,437. RUBBER BOOTS AND SHOES. Lycoming Rubber Co., Williamsport, Pa.
Filed October 22, 1907 Serial No. 30,728. PUBLISHED DECEMBER 3, 1907.

67,438. LEATHER BOOTS AND SHOES. Lynchburg Shoe Co., Lynchburg, Va.
Filed April 1, 1907. Serial No. 26,380. PUBLISHED DECEMBER 3, 1907.

67,439. BISCUITS, CRACKERS, AND CAKES. The Marjenhoff Company, Charleston, S. C.
Filed October 21, 1907. Serial No. 30,709. PUBLISHED DECEMBER 3, 1907.

67,440. MONTHLY MAGAZINES DEVOTED TO SPORTS. National Sportsman (Inc.), Boston, Mass.
Filed October 15, 1907. Serial No. 30,607. PUBLISHED DECEMBER 3, 1907.

67,441. STOCK FOODS. The Quaker Oats Company, Jersey City, N. J.; Chicago, Ill.; Cedar Rapids, Iowa, and Akron, Ohio.
Filed September 13, 1907. Serial No. 29,939. PUBLISHED DECEMBER 3, 1907.

67,442. STOCK FOODS. The Quaker Oats Company, Jersey City, N. J.; Chicago, Ill.; Cedar Rapids, Iowa, and Akron, Ohio.
Filed September 13, 1907. Serial No. 29,940. PUBLISHED DECEMBER 3, 1907.

67,443. STOCK FOODS. The Quaker Oats Company, Jersey City, N. J.; Chicago, Ill.; Cedar Rapids, Iowa, and Akron, Ohio.
Filed September 13, 1907. Serial No. 29,942. PUBLISHED DECEMBER 3, 1907.

67,444. VINEGAR AND CANNED FRUITS AND VEGETABLES. Ridenour Baker Grocery Co., Kansas City, Mo.
Filed October 7, 1907. Serial No. 30,453. PUBLISHED DECEMBER 3, 1907.

67,445. GREEN, DRIED, AND PRESERVED FRUITS AND VEGETABLES. Glorietta Ranch Company, Clovis, Cal., and St. Paul, Minn.
Filed October 25, 1907. Serial No. 30,786. PUBLISHED DECEMBER 3, 1907.

67,446. BOURBON AND RYE WHISKY. Golden State Wine Co., Los Angeles, Cal.
Filed October 12, 1907. Serial No. 30,564. PUBLISHED DECEMBER 3, 1907.

67,447. MOLASSES. Penick & Ford Ltd., Shreveport and New Orleans, La.
Filed October 23, 1907. Serial No. 30,738. PUBLISHED DECEMBER 3, 1907.

67,448. MOLASSES. Penick & Ford Ltd., Shreveport and New Orleans, La.
Filed October 23, 1907. Serial No. 30,739. PUBLISHED DECEMBER 3, 1907.

67,449. MOLASSES. Penick & Ford Ltd., Shreveport and New Orleans, La.
Filed October 23, 1907. Serial No. 30,740. PUBLISHED DECEMBER 3, 1907.

67,450. MOLASSES. Penick & Ford Ltd., Shreveport and New Orleans, La.
Filed October 23, 1907. Serial No. 30,741. PUBLISHED DECEMBER 3, 1907.

67,451. MOLASSES. Penick & Ford Ltd., Shreveport and New Orleans, La.
Filed October 23, 1907. Serial No. 30,742. PUBLISHED DECEMBER 3, 1907.

67,452. MOLASSES. Penick & Ford Ltd., Shreveport and New Orleans, La.
Filed October 23, 1907. Serial No. 30,743. PUBLISHED DECEMBER 3, 1907.

67,453. RUBBER BOOTS AND SHOES. American Rubber Company, Boston, Mass.
Filed September 13, 1907. Serial No. 29,929. PUBLISHED DECEMBER 3, 1907.

67,454. RUBBER BOOTS AND SHOES. American Rubber Co., Boston, Mass.
Filed September 13, 1907. Serial No. 29,930. PUBLISHED DECEMBER 3, 1907.

67,455. STETHOSCOPES. Peter A. Aurness, Minneapolis, Minn.
Filed August 12, 1907 Serial No. 29,355. PUBLISHED DECEMBER 3, 1907.

67,456. TYPE-WRITING MACHINES. Justin Wm. Bamberger & Co., Munich, Germany.
Filed September 10, 1907. Serial No. 29,855. PUBLISHED DECEMBER 3, 1907.

67,457. RUBBER BOOTS AND SHOES. Boston Rubber Shoe Company, Boston, Mass.
Filed September 13, 1907. Serial No. 29,944. PUBLISHED DECEMBER 3, 1907.

67,458. RUBBER BOOTS AND SHOES. Boston Rubber Shoe Company, Boston Mass.
Filed September 13, 1907. Serial No. 29,945. PUBLISHED DECEMBER 3, 1907.

67,459. PADS FOR TRUSSES. Chesterman & Streeter, Philadelphia, Pa.
Filed October 25, 1907. Serial No. 30,785. PUBLISHED DECEMBER 3, 1907.

67,460. WRENCHES AND PLIERS. Crescent Tool Co., Jamestown, N. Y.
Filed September 30, 1907. Serial No. 30,321. PUBLISHED DECEMBER 3, 1907.

67,461. POLISHED DRILL-RODS AND DRAWN WIRE. Globe Wire Company, Limited, Sharpsburg, Pa.
Filed October 26, 1907. Serial No. 30,814. PUBLISHED DECEMBER 3 1907.

67,462. RUBBER BOOTS AND SHOES. Goodyear's India Rubber Glove M'f'g Co., Naugatuck, Conn.
Filed September 13, 1907. Serial No. 29,938. PUBLISHED DECEMBER 3, 1907.

67,463. RUBBER BOOTS AND SHOES. The Joseph Banigan Rubber Co., Providence, R. I.
Filed September 13, 1907. Serial No. 29,924. PUBLISHED DECEMBER 3, 1907.

67,464. RUBBER BOOTS AND SHOES. The Joseph Banigan Rubber Co., Providence, R. I.
Filed September 13, 1907. Serial No. 29,926. PUBLISHED DECEMBER 3, 1907.

67,465. BOOTS AND SHOES OF LEATHER AND LEATHER AND CLOTH. A. E. Little & Company, Lynn, Mass.
Filed October 21, 1907. Serial No. 30,704. PUBLISHED DECEMBER 3, 1907.

67,466. RUBBER BOOTS AND SHOES. Lycoming Rubber Co., Williamsport, Pa.
Filed October 22, 1907. Serial No. 30,727 PUBLISHED DECEMBER 3, 1907.

67,467. RUBBER BOOTS AND SHOES. Lycoming Rubber Co., Williamsport, Pa.
Filed October 22, 1907. Serial No. 30,729. PUBLISHED DECEMBER 3, 1907.

67,468. RUBBER BOOTS AND SHOES. Meyer Rubber Company, New Brunswick, N. J.
Filed September 13, 1907. Serial No. 29,927. PUBLISHED DECEMBER 3, 1907.

67,469. RUBBER BOOTS AND SHOES. New Brunswick Rubber Company, New Brunswick, N. J.
Filed September 13, 1907. Serial No. 29,946. PUBLISHED DECEMBER 3, 1907.

67,470. SERIES OF PRINTED AND ILLUSTRATED BOOKS. Gertrude Ina Robinson, New York, N. Y.
Filed October 1, 1907. Serial No. 30,324. PUBLISHED DECEMBER 3, 1907.

67,471. HORSESHOE-CALKS. The Rowe Patent Calk Company, Hartford, Conn.
Filed August 22, 1907. Serial No. 29,517. PUBLISHED DECEMBER 3, 1907.

67,472. RUBBER BOOTS AND SHOES. United States Rubber Company, New Brunswick, N. J.
Filed September 13, 1907. Serial No. 29,968. PUBLISHED DECEMBER 3, 1907.

67,473. CANNED SARDINES. A/s Stavanger Sardine Co., Stavanger, Norway.
Filed June 1, 1907. Serial No. 27,827. PUBLISHED DECEMBER 3, 1907

67,474. OIL-BURNING LAMPS. C. T. Ham Manufacturing Company, Rochester, N. Y.
Filed April 30, 1907. Serial No. 27,019. PUBLISHED DECEMBER 3, 1907.

67,475. BREAD AND CAKE PANS. F. M. Bower Co., New York, N. Y
Filed October 18, 1906. Serial No. 22,754. PUBLISHED DECEMBER 3, 1907.

67,476. CANNED FRUITS AND VEGETABLES. Geneva Preserving Company, Geneva, N. Y.
Filed October 28, 1907. Serial No. 30,828. PUBLISHED DECEMBER 3, 1907.

67,477. MONTHLY PUBLICATIONS. Elbert Hubbard, East Aurora, N. Y.
Filed October 19, 1907. Serial No. 30,664. PUBLISHED DECEMBER 3, 1907.

67,478. CERTAIN CANNED AND DRIED FRUITS. The J. K. Armsby Company, Chicago, Ill., and San Francisco, Cal.
Filed October 12, 1907. Serial No. 30,560. PUBLISHED DECEMBER 3, 1907.

67,479. CERTAIN WATER HEATERS AND TANKS. Kellogg-Mackay-Cameron Co., Chicago, Ill.
Filed August 3, 1907. Serial No. 29,204. PUBLISHED DECEMBER 3, 1907.

67,480. EYE-PROTECTORS. Philippe Charles Maurice Montbarbon, Paris, France.
Filed October 19, 1907. Serial No. 30,672. PUBLISHED DECEMBER 3, 1907.

67,481. CANNED FISH. Moos & Co., New York, N. Y.
Filed June 2, 1905. Serial No. 7,219. PUBLISHED DECEMBER 3, 1907.

67,482. CANNED SALMON. Northwestern Fisheries Company, Seattle, Wash.
Filed February 20, 1907. Serial No. 25,466. PUBLISHED JUNE 11, 1907.

67,483. CERTAIN CEREAL FOODS. The Quaker Oats Company, Jersey City, N. J., and Chicago, Ill.
Filed September 26, 1907. Serial No. 30,209. PUBLISHED DECEMBER 3 1907.

67,484. CERTAIN CEREAL FOODS. The Quaker Oats Company, Jersey City, N. J., and Chicago, Ill
Filed September 26, 1907. Serial No. 30,210. PUBLISHED DECEMBER 3, 1907.

67,485. CERTAIN CEREAL FOODS. The Quaker Oats Company, Jersey City, N. J., and Chicago, Ill.
Filed September 26, 1907. Serial No. 30,211. PUBLISHED DECEMBER 3, 1907.

67,486. CERTAIN HAND-KNIVES AND BLADES. The Stephen Richard Co., Southbridge, Mass.
Filed September 26, 1907. Serial No. 30,222. PUBLISHED DECEMBER 3, 1907.

67,487. SACCHARINE BUTTER. E. E. Post Co., Utica, N. Y.
Filed October 11, 1907. Serial No. 30,549. PUBLISHED DECEMBER 3, 1907.

67,488. LOOM-PICKERS AND LUG-STRAPS. The E. H. Jacobs Manufacturing Company, Killingly, Conn.
Filed April 29, 1907. Serial No. 26,976. PUBLISHED DECEMBER 3, 1907.

67,489. CERTAIN RESILIENT COMPOSITION. The Elastro Manufacturing Company, Hartford, Conn.
Filed August 15, 1907. Serial No. 29,405. PUBLISHED DECEMBER 3, 1907.

67,490. BUTTER. The Elgin Butter Company, Elgin, Ill.
Filed September 9, 1907. Serial No. 29,805. PUBLISHED DECEMBER 3, 1907.

67,491. CERTAIN CUTLERY. A. Feist & Co., Solingen, Germany.
Filed September 10, 1907. Serial No. 29,854. PUBLISHED DECEMBER 3, 1907.

67,492. CERTAIN FOODS. Fischer Bros., Seattle, Wash.
Filed June 11, 1907. Serial No. 28,037. PUBLISHED DECEMBER 3, 1907.

67,493. CANNED FRUITS AND VEGETABLES. GENEVA PRESERVING COMPANY, Geneva, N. Y.
Filed October 28, 1907. Serial No. 30,836. PUBLISHED DECEMBER 3, 1907.

67,494. CANNED FRUITS AND VEGETABLES. GENEVA PRESERVING COMPANY, Geneva, N. Y.
Filed October 28, 1907. Serial No. 30,837. PUBLISHED DECEMBER 3 1907.

67,495. CANNED FRUITS AND VEGETABLES GENEVA PRESERVING COMPANY, Geneva, N. Y.
Filed October 28, 1907. Serial No. 30,839. PUBLISHED DECEMBER 3, 1907.

67,496. CERTAIN BRUSHES. GEO. BORGFELDT & Co., New York, N. Y.
Filed October 3, 1907. Serial No. 30,400. PUBLISHED DECEMBER 3, 1907.

67,497. LEATHER BOOTS AND SHOES. ISAAC PROUTY & Co. (INCORPORATED), Boston, Mass.
Filed February 23, 1907. Serial No. 25,543. PUBLISHED DECEMBER 3, 1907.

67,498. LEATHER BOOTS AND SHOES. M. LEVY'S SONS, Shreveport, La.
Filed October 3, 1907. Serial No. 30,394. PUBLISHED DECEMBER 3, 1907.

67,499. CERTAIN FOODS. HOWARD W. LIGHT, Newtown, Conn.
Filed February 12, 1907. Serial No. 25,269. PUBLISHED DECEMBER 3, 1907.

67,500. GLASS BOTTLES. MARION FLINT GLASS COMPANY, Marion, Ind.
Filed October 16, 1907. Serial No. 30,626. PUBLISHED DECEMBER 3, 1907.

67,501. CHOCOLATES AND CHOCOLATE BONBONS. NEW ENGLAND CONFECTIONERY Co., Portland, Me., and Boston, Mass.
Filed October 4, 1907. Serial No. 30,416. PUBLISHED DECEMBER 3, 1907.

67,502. CANNED PINEAPPLES. PEARL CITY FRUIT COMPANY, LIMITED, Pearl City and Honolulu, Hawaii.
Filed May 29, 1907. Serial No. 27,756. PUBLISHED DECEMBER 3, 1907.

67,503. LEATHER SHOES. EDWARD A. QUIRI, Amsterdam, N. Y
Filed August 31, 1907. Serial No. 29,711. PUBLISHED DECEMBER 3, 1907.

67,504. WHEAT-FLOUR. RALSTON PURINA Co., St. Louis, Mo
Filed August 25, 1905. Serial No. 12,000. PUBLISHED MARCH 26, 1907.

67,505. PAPER AND ENVELOPS. RAYNOR & PERKINS ENVELOPE COMPANY, New York, N. Y.
Filed October 31, 1905. Serial No. 14,124. PUBLISHED DECEMBER 3, 1907.

67,506. ALBUMEN AND ALBUMINOUS FOOD COMPOUNDS. JOHANN A. WÜLFING, Berlin, Germany.
Filed June 24, 1907. Serial No. 28,365. PUBLISHED DECEMBER 3, 1907.

67,507. CERTAIN TOILET PREPARATIONS. ABBIE GERTRUDE BAUMGARTEN, New Rochelle, N. Y.
Filed October 24, 1907. Serial No. 30,761. PUBLISHED DECEMBER 3, 1907.

67,508. CERTAIN TOILET PREPARATIONS. ABBIE GERTRUDE BAUMGARTEN, New Rochelle, N. Y.
Filed October 24, 1907. Serial No. 30,762. PUBLISHED DECEMBER 3, 1907.

67,509. CERTAIN TOILET PREPARATIONS. ABBIE GERTRUDE BAUMGARTEN, New Rochelle, N. Y.
Filed October 24, 1907. Serial No. 30,763. PUBLISHED DECEMBER 3, 1907.

67,510. CERTAIN TOILET PREPARATIONS. ABBIE GERTRUDE BAUMGARTEN, New Rochelle, N. Y.
Filed October 24, 1907. Serial No. 30,764. PUBLISHED DECEMBER 3, 1907.

67,511. WHISKY. ELDER-HARRISON COMPANY, Baltimore, Md.
Filed August 31, 1907. Serial No. 29,702. PUBLISHED DECEMBER 3. 1907.

67,512. CERTAIN RUBBER TOYS. GEO. BORGFELDT & Co., New York, N. Y.
Filed October 3, 1907. Serial No. 30,399. PUBLISHED DECEMBER 3, 1907.

67,513. TEXTILE LEGGINGS AND OVERGAITERS. H JACOB & SONS, New York, N. Y.
Filed October 15, 1907. Serial No. 30,617. PUBLISHED DECEMBER 3, 1907.

67,514. GLOVES, MITTENS, AND GAUNTLETS MADE OF LEATHER. THE JOSEPH N. EISENDRATH COMPANY, Chicago, Ill.
Filed September 21, 1907. Serial No. 30,134. PUBLISHED DECEMBER 3, 1907.

67,515. HAT-HANGERS. JOHN J. KULHAWIK, Grand Rapids, Mich.
Filed September 16, 1907. Serial No. 30,011. PUBLISHED DECEMBER 3, 1907.

67,516. SOAP. THE N. K. FAIRBANK COMPANY, Chicago, Ill.
Filed July 13, 1905. Serial No. 10,223. PUBLISHED DECEMBER 3, 1907.

67,517. CANNED, BOTTLED, AND PRESERVED FRUITS AND VEGETABLES. MILTON C. NELLIS, New York, N. Y.
Filed October 23, 1907. Serial No. 30,756. PUBLISHED DECEMBER 3, 1907.

67,518. SPECTACLES AND EYEGLASSES. JACOB A. PFEIFER, Detroit, Mich.
Filed October 4, 1907. Serial No. 30,417. PUBLISHED DECEMBER 3, 1907.

67,519. JEWELRY. S. & B. LEDERER COMPANY, Providence, R. I.
Filed August 1, 1907. Serial No. 29,164. PUBLISHED DECEMBER 3, 1907.

67,520. LEATHER POCKET-BOOKS AND LEATHER PURSES. SCHEUER & BROTHER, New York, N. Y.
Filed July 31, 1907. Serial No. 29,142. PUBLISHED DECEMBER 3, 1907.

67,521. OVERALLS, JUMPERS, AND TROUSERS. TEXAS OVERALL COMPANY, Fort Worth, Tex.
Filed September 30, 1907. Serial No. 30,316. PUBLISHED DECEMBER 3, 1907.

67,522. ALE. W. A. ROSS & BROTHER, INC., New York, N. Y.
Filed October 12, 1907. Serial No. 30,574. PUBLISHED DECEMBER 3, 1907.

67,523. CERTAIN MEASURING APPLIANCES. THE ASHCROFT MANUFACTURING COMPANY, Bridgeport, Conn.
Filed August 24, 1907. Serial No. 29,563. PUBLISHED DECEMBER 3, 1907.

67,524. CERTAIN FRESH FRUITS. BAYLESS FRUIT Co., Lexington, Ky.
Filed August 22, 1907. Serial No. 29,518. PUBLISHED DECEMBER 3, 1907.

67,525. SMOKING AND CHEWING TOBACCO, CIGARS, CIGARETTES, AND CHEROOTS. CHARLES CHESTER BOGART, Middletown, N. Y.
Filed October 22, 1907. Serial No. 30,723. PUBLISHED DECEMBER 3, 1907.

67,526. WHISKY. CRIGLER & CRIGLER, Covington, Ky.
Filed August 18, 1906. Serial No. 21,662. PUBLISHED NOVEMBER 27, 1906.

67,527. CERTAIN FOOD PREPARATIONS. EDWARD C. FLACCUS, Wheeling, W. Va.
Filed April 23, 1907. Serial No. 26,866. PUBLISHED AUGUST 6, 1907.

67,528. SOAP FOR LAUNDRY AND HOUSEHOLD USE. THE HEWITT BROS. SOAP COMPANY, Dayton, Ohio.
Filed April 24, 1907. Serial No. 26,881. PUBLISHED JUNE 11, 1907.

67,529. LIQUID METAL-POLISH IN THE FORM OF A DETERGENT. KRAUSSE & AUERBACH, London, England.
Filed October 8, 1907. Serial No. 30,485 PUBLISHED DECEMBER 3, 1907.

67,530. CERTAIN MUSICAL APPARATUS AND PARTS. LUDWIG HUPFELD AKTIENGESELLSCHAFT, Leipzig, Germany.
Filed April 15, 1907. Serial No. 26,715. PUBLISHED SEPTEMBER 24, 1907.

67,531. LOCKETS, CUFF-PINS, AND FOBS. ROBERT B. MACDONALD, Attleboro, Mass.
Filed September 23, 1907. Serial No. 30,166. PUBLISHED DECEMBER 3, 1907.

67,532. CERTAIN CEREAL FOODS. NEBRASKA MERCANTILE COMPANY, Grand Island and St. Paul, Nebr.
Filed January 16, 1907. Serial No. 24,681. PUBLISHED APRIL 2, 1907.

67,533. KNITTED SWEATERS AND KNITTED BATHING-SUITS. LOEB NEWMAN, New York, N. Y.
Filed October 7, 1907. Serial No. 30,448. PUBLISHED DECEMBER 3, 1907.

67,534. CORNCOB PIPES. PHOENIX-AMERICAN PIPE WORKS, Washington, Mo
Filed September 23, 1907. Serial No. 30,150. PUBLISHED DECEMBER 3, 1907.

67,535. CERTAIN LACES. JOHN W. SMITH, Chester, Pa.
Filed October 24, 1907. Serial No. 30,772. PUBLISHED DECEMBER 3, 1907.

67,536. CERTAIN FOOD PREPARATIONS. STANDARD IMPORT Co. LTD., New Orleans, La.
Filed October 7, 1907. Serial No. 30,468. PUBLISHED DECEMBER 3, 1907.

67,537. NETTED VEILINGS. STEINER, ROSENSTEIN & TRAUB, New York, N. Y.
Filed September 7, 1907. Serial No. 29,791. PUBLISHED DECEMBER 3, 1907.

67,538. CERTAIN MEDICINES AND TOILET PREPARATIONS. THE UNIVERSAL DRUG AND CHEMICAL Co., Augusta, Me.; New York, N. Y., and Berwick, Pa.
Filed July 25, 1907. Serial No. 30,040. PUBLISHED DECEMBER 3, 1907.

67,539. MEN'S FELT, STRAW, AND STIFF HATS AND CLOTH CAPS. THE YALE HAT Co., Detroit, Mich.
Filed March 19, 1906. Serial No. 18,032. PUBLISHED DECEMBER 3, 1907.

LABELS

REGISTERED FEBRUARY 4, 1908.

14,020.—*Title:* "GYPSY QUEEN." (For Cigars.) CHRISTIAN SCHWEITZER, Crawfordsville, Ind. Filed December 12, 1907.

14,021.—*Title:* "RAJAH DEL DURBAR." (For Cigars.) ROBERT LOUGHLIN, Creston, Iowa. Filed December 31, 1907.

14,022.—*Title:* "DON GUSTO." (For Cigars.) A. C. HENSCHEL & Co., Chicago, Ill. Filed January 7, 1908.

14,023.—*Title:* "AUTO GIRL." (For Candy.) NATIONAL CANDY COMPANY, St. Louis, Mo. Filed December 30, 1907.

14,024.—*Title:* "MALTESE CROSS BRAND." (For Raisins.) WILLIS PIKE, Fresno, Cal. Filed December 30, 1907.

14,025.—*Title:* "OLDE ENGLISH MINCE." (For Mince.) OLIVER BROS., New York, N. Y. Filed December 19, 1907.

14,026.—*Title:* "LISTERATED PEPSIN GUM." (For Chewing-Gum.) COMMON SENSE GUM COMPANY, Boston, Mass. Filed January 7, 1908.

14,027.—*Title:* "TRIGG'S HAND WASH." (For a Hand and Face Lotion.) DR. F. M. TRIGG, East St. Louis, Ill. Filed January 6, 1908.

14,028.—*Title:* "FERRO-CHINA MARION." (For Medicine.) MARIANI BRO'S., New York, N. Y. Filed January 6, 1908.

14,029.—*Title:* "THOR-AX-INE." (For Medicine.) LAXACURA CHEMICAL CO., Lisbon, Ohio. Filed December 31, 1907.

14,030.—*Title:* "NEUROTUNDER." (For Local Anesthetics.) KREODEN MFG. CO., Los Angeles, Cal. Filed November 18, 1907.

14,031.—*Title:* "LITCH'S HYGIENIC BATH." (For Liniment.) LEMUEL W. LITCH, Lynn, Mass. Filed January 2, 1908.

14,032.—*Title:* "KANT STEAM." (For a Preparation to Prevent Steaming or Blurring of Eyeglasses in Cold Weather.) KANT STEAM CHEMICAL CO., Chicago, Ill. Filed January 2, 1908.

14,033.—*Title:* "SCHEUR'S NEVO-FADO, THE 'RITE' INK." (For Writing-Ink.) SCHEUR BROS., New York, N. Y. Filed December 30, 1907.

14,034.—*Title:* "THE ALL-WAYS SAFETY RAZOR." (For Safety-Razors.) AUTOMATIC UTILITIES COMPANY, New York, N. Y. Filed December 27, 1907.

14,035.—*Title:* "YE OLD COLONIALS." (For Rugs and Carpets.) JAMES V. MAWBY, Philadelphia, Pa. Filed January 7, 1908.

PRINTS

REGISTERED FEBRUARY 4, 1908.

2,208.—*Title:* "THE POWER BEHIND THE COOK." (For Flour.) WASHBURN-CROSBY COMPANY, Minneapolis, Minn. Filed January 2, 1908.

2,209.—*Title:* "RIVETS, WASHERS AND SHEET METAL SPECIALTIES." (For Rivets, Washers, Eyelets, and Metal Specialties.) EDWIN B. STIMPSON COMPANY, New York, N. Y. Filed December 30, 1907.

2,210.—*Title:* "PRECIOUS AND SEMI-PRECIOUS STONES AND WHERE FOUND." (For Precious and Semiprecious Stones.) MAXWELL & BERLET INC., Philadelphia, Pa. Filed December 30, 1907.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

GOULD v. BARNARD.

PATENT INTERFERENCE.

Decided October 8, 1907.

1. INTERFERENCE—TESTIMONY—REBUTTAL.
When G., the junior party, alleges in his preliminary statement disclosure to others in 1904 and neither he nor his witness, M., in his testimony-in-chief, refer to an earlier disclosure, *Held* that the testimony of M. in rebuttal that G. disclosed the invention to him in 1903 is not to be given credence.

2. SAME—ORIGINALITY—EMPLOYER AND EMPLOYEE.
Evidence considered and *Held* to show that B. originated the invention and that no such relation of employer and employee was shown to exist as would cause the invention to inure to the benefit of G.

APPEAL from Examiners-in-Chief.

FIRE ALARM APPARATUS.

Mr. Reuben L. Roberts for Gould.

Mr. William A. Megrath for Barnard.

MOORE, *Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief affirming the decision of the Examiner of Interferences and awarding priority of invention to Barnard.

The following count of the issue sufficiently illustrates the nature of the invention:

Count 1. In an electrical thermostat, a metal plate of relatively low fusing-point and a relatively porous insulating-sheet upon one side thereof, the two located between two metal plates of relatively high fusing-point in close contact therewith, an insulating-chamber which peripharally incloses the plate of low-fusing metal, and a terminal for a circuit-conductor electrically connected with each high-fusing plate, for the purpose described.

The invention in issue is a fire-detecting device designed to be connected in an electric circuit with an alarm. It comprises a metal plate having a relatively low fusing-point placed between and separated from two plates in the electric circuit, having relatively high fusing-points, by porous insulation. When the temperature in the vicinity of the device rises sufficiently to fuse the plate having the relatively low fusing-point, the molten metal penetrates the porous insulating material, completes the electric circuit, and actuates the alarm.

The question presented is that of originality rather than of priority of invention. At the time the invention was made Gould was president of the Montauk Fire Detecting Wire Company and Barnard a salesman for that company. It is claimed by the appellant, Gould, that the invention was disclosed by him to Barnard, who made drawings in accordance with his disclosure, and that a device embodying the invention in issue was made from these drawings. Gould also claims that whatever Barnard did should accrue to him, because of the relation of employer and employee. Barnard, on the other hand, claims to have made these drawings in view of a suggestion of Gould that the device the company was at that time making was not satisfactory and denies that Gould disclosed the invention to him or made any suggestions as to its manner of construction.

The Examiner of Interferences and the Examiners-in-Chief concurred in finding that Gould had failed to establish any disclosure of the invention to Barnard and that there was no relation of employer and employee between the contesting parties. They also found that the invention was made by Barnard and not by Gould. In my opinion the decisions of the lower tribunals are right.

Gould alleges in his preliminary statement that he conceived the invention in April, 1903, and disclosed it to others in May, 1904. His testimony is to the same effect. No evidence other than his unsupported testimony is presented in his testimony-in-chief to establish the alleged date of conception. Upon rebuttal, however, Montgomery, an employee of the Montauk Company, testifies that Gould disclosed the invention to him in October, 1903. This testimony is not to be given credence, since it was given after both Gould and Montgomery had testified in regard to the invention in their testimony-in-chief without referring to this alleged disclosure and after the proofs taken in behalf of Barnard had closed, and, further, for the reason that it is at variance with the allegations of Gould's preliminary statement.

It is not disputed that Gould was present at the time Barnard made the first drawing of the device in controversy; but Gould's testimony in regard to his alleged disclosure to Barnard is not corroborated. On the contrary, the circumstances surrounding the development of the invention indicate that the invention was made by Barnard and not by Gould.

The first drawing, Barnard's Exhibit No. 1, which is dated April 28–29, 1904, is witnessed by H. D. Montgomery and I. Richards, and it is admitted that these signatures were inscribed there by those persons on the dates appearing after their names. Gould

states that he made no objection to the witnesses affixing their names to these drawings, because he "believed them at that time to be witnessed as drawings and not inventions:" (Reb. Q. 36.)

Jenkins, who was a director of the Montauk Company in 1903 and 1904 and who was subpœnaed to testify in behalf of Barnard, says that he always understood that Barnard was the inventor and that he inferred that the act of Barnard in signing the drawing and having it witnessed constituted his claim to the invention.

He also states that he subsequently called this fact to Gould's attention when Gould, objecting to a claim of Barnard's for remuneration as excessive, said that he and not Barnard made the invention. Jenkins testifies concerning this circumstance as follows:

Q. 16. What did you say to Mr. Gould when he laid claim to this invention?
A. My recollection is hazy about it, but I am sure I said one thing to him, and that was that if he invented the thermostat himself why should he let the drawing go through witnessed.

It does not appear from the testimony that Gould claimed to be the inventor of the invention in issue at the time these drawings were made or at any time prior to the date upon which Barnard submitted to him a specific claim for stock in the company in exchange for the assignment of the invention.

After the construction of this drawing a thermostat was made in accordance therewith by the Bruckner Telephone Company under Barnard's directions. The bill therefor was charged to the Montauk Company and was paid by that company. After the construction of the device Barnard's attorney, Megrath, was called to the office of the Montauk Company for the purpose of arranging for an application for patent upon the invention, and it appears from the testimony of Barnard and Megrath that the question of the amount Barnard was to receive for this invention was discussed at this interview. Gould, however, denies that this matter was considered and that he ever gave Megrath instructions to prepare any application for him, but admits that the invention disclosed in Barnard's drawings, which included this invention, was discussed.

Megrath's blotter contains an entry under date of May 17, 1904, charging and preparing application on this and "systems" and "drawing" to the Montauk Fire Detecting Company. This bill was subsequently paid by Barnard.

It appears that no decision as to the amount of compensation Barnard was to receive was reached at the interview between Gould, Barnard, and Megrath, and that subsequently Barnard wrote a letter to Gould stating the amount of stock in the company he would accept for his inventions in thermostats. A press copy of this letter is in evidence. (Barnard's Exhibit No. 7.) Gould admits having received this letter, but alleges that it referred to an "automatic circuit-changer" and a "circuit-board," both of which he admits were invented by Barnard and were constructed at the expense of the Montauk Company. The circumstances above related all tend to support Barnard's claim to inventorship despite the denials and explanations made by Gould, and the testimony presented in behalf of Gould is clearly insufficient, in view of these circumstances, to sustain the burden of proof placed upon him as the junior applicant. The claim on behalf of Gould that the invention in issue belongs to Gould because of Barnard's having been in the employ of the Montauk Company at the time he made the drawings of the invention and directed its development is not warranted by the facts established in the testimony.

Barnard entered the employ of that company in the summer of 1903 as a salesman on commission. Subsequently, in March, 1904 he was paid fifteen dollars per week for work done for that company other than actual sales of their product. This work, according to Barnard's statement, was in remuneration of time spent in the company's interest as representing the company before underwriters and similar work. It does not appear that there was any contract, either expressed or implied, that he was employed to develop inventions for Gould or for the Montauk Company, as appears from Gould's testimony on cross-examination.

X-Q 47. Was there any understanding that any inventions Mr. Barnard made belonged to you?
A. He came there to work generally for the interests of myself and that of the company.

It furthermore appears that Barnard made other inventions during his connection with that company which were developed at the expense of the Montauk Company in the same manner as the one in issue and of which his claim to inventorship and ownership is not disputed.

In view of these facts it is clear that no such relation of employer and employee between Gould and Barnard is established as would cause the invention of the latter to inure to the benefit of the former.

The decision of the Examiners-in-Chief awarding priority of invention to Barnard is affirmed.

EX PARTE DEMPSEY.

APPLICATION FOR PATENT.

Decided December 21, 1907.

1. FINAL FEE—DELAY IN FILING—NOT ACCEPTED.
   A final fee which was inclosed in a letter registered at a substation of the post-office of Washington, D. C., at about half-past ten o'clock of the last day for payment, but which was not delivered to the Office until the second day thereafter because of an intervening Sunday, will not be accepted and applied, as it was filed outside of the period fixed by law.
2. POSTAL AUTHORITIES AGENTS OF SENDER.
   The postal authorities are the agents of the sender and not of the Patent Office, and a delay by them must be charged to the principal.
3. FINAL FEE RECEIVED LATE—CONSIDERATION OF METHODS OF DELIVERING MAIL.
   A final fee which is filed too late cannot be received on the ground that if the post-office instead of an agent of the Patent Office had delivered the same or if the agent of the Patent Office had called at the post-office late in the day instead of the middle thereof the fee would have reached the Patent Office in time. The Patent Office is required to send for its mail, and it cannot control this matter, and experience has shown that it is necessary to the security of those having business with the Office and is most convenient to the Office and the public to collect the registered mail shortly after midday, and no good reason is seen for departing from the practice.

ON PETITION.

METALLURGICAL FURNACE.

Mr. Walter H. Pumphrey for the applicant.

MOORE, *Commissioner:*

This is a petition that a final fee which reached the Office after the expiration of the six months allowed for the payment of final fees be received and applied.

It appears that the fee was inclosed in a letter which was registered at a substation of the post-office of Washington, D. C., at about half-past ten o'clock on the morning of November 27, 1907, which was the last day of the period allowed for payment; but the letter was not received at the Office until November 29, 1907.

With respect to the delivery of registered mail to this Office, it is the practice to send a special messenger to the post-office for the same at about 12.50 p. m. each day. When this messenger called at the post-office on November 27, 1907, the registered letter sent by petitioner was not delivered to him, and it did not reach the Office until November 29, 1907, the intervening day being a holiday.

It is clear that so far as there was any delay by the postal authorities this Office is not responsible therefor, as the post-office is the agent of the sender and not of the one to whom the mail is directed. It is urged, however, that the letter—

would have been delivered in ample time but for some special messenger service instituted or organized for the convenience of the Patent Office, which interfered with and prevented such regular delivery.

As to this, it is to be said that the Patent Office, like the other bureaus of the Government, is required to send for the official mail, and it is without the power of the Office to control this practice, which has been in vogue for many years. It is further urged that in any event registered mail should be delivered more than once a day, or at least that the delivery be made late in the day and not at noon. As to this point, it is to be said that the practice of which complaint is made has been determined by long experience and is deemed necessary for the security of those having business with the Office. It is believed that this practice results in the least inconvenience to the Office and to applicants in general and that it should not be changed in order to meet the unusual circumstances presented here. In this connection attention is directed to the decision of the Assistant Secretary of the Interior in the case of *ex parte Cannon*, (94 O. G., 2165; C. D., 1901, 263.) Applicants have six months in which to pay final fees, which is regarded as ample time, especially in view of the excellent transportation facilities which the world affords at the present time. In this case it would seem that proper precautions were not taken to insure delivery. It is well known that the registration of mail does not tend to insure quick delivery, but security. In choosing this method instead of special delivery or a delivery by special agent applicant assumed the risk of delay and must abide by the result.

The petition is denied.

MATTICE *v.* LANGWORTHY.

PATENT INTERFERENCE.

Decided January 22 1908.

INTERFERENCE—RULE 109—APPEAL.

Where an Examiner rejects claims presented by a party for interference under Rule 109, he should set a limit of appeal from his decision whether the claims had been allowed to the other party or had been made for the first time by the moving party.

ON PETITION.

MANGLE.

Messrs. Ward & Cameron and *Messrs. Meyers, Cushman & Rea* for Mattice.

Messrs. Arthur C. Fraser & Usina for Langworthy.

BILLINGS, *Assistant Commissioner:*

This is a petition by Mattice that the Commissioner adjudge that the decision of the Primary Examiner on Langworthy's motion to amend the issue under Rule 109 is final and that the Examiners-in-Chief have no jurisdiction to consider and determine an appeal therefrom.

It appears that within the time allowed for bringing such motions Langworthy filed a motion to amend the issue by the addition of two claims. This motion was transmitted to the Primary Examiner, and at the hearing thereon Langworthy presented two additional claims for the consideration of the Examiner. The Examiner held that the first two claims presented by Langworthy were not patentable and rejected the same and that he had no authority to consider the other two claims. Thereupon Langworthy brought a motion before the Examiner of Interferences to transmit a second motion to amend, which included the two claims which the Examiner had refused to consider. This motion was denied transmission, and on appeal to the Commissioner in a decision rendered December 20, 1907, the action of the Examiner in refusing to consider the claims presented at the hearing and the action of the Examiner of Interferences in refusing to transmit the second motion were held to have been proper. The question of Langworthy's right to appeal as to these two claims, which were numbered 8 and 9, is therefore settled.

As to the other two claims, Langworthy's appeal was taken in accordance with the practice laid down in *Townsend* v. *Copeland* v. *Robinson*, (126 O. G., 1355,) which decision pointed out that the Examiner should enter the claims and if he regarded them as unpatentable or that the moving party had no right to make them he should follow the practice under Rule 124—namely, to reject the claims, set a time for reconsideration, and if upon reconsideration he adhered to his original decision he should make his action final and set a limit of appeal therefrom. It is true that at the time this decision was rendered there was a distinction made between claims which had been allowed to the other party and were provided for under Rule 109 as it existed at that time and claims which were not included in the other party's case, but had been made for the first time by the moving party, and which were provided for under the Commissioner's decision in *Churchward* v. *Douglas* v. *Cutler*, (106 O. G., 2016.) Rule 109 was, however, amended on July 17, 1907, so as to include both of these cases, and it is believed that no distinction should be made between them as to the right of appeal.

The petition is denied.

EX PARTE C. SHENKBERG CO.

APPLICATION FOR REGISTRATION OF TRADE-MARK.

Decided January 24, 1908.

TRADE-MARKS—"NUTTY CORN"—DESCRIPTIVE.

The words "Nutty Corn" held to be descriptive of a mixture of candied nuts, corn, and cocoanut and registration of the same properly refused.

ON APPEAL.

TRADE-MARK FOR CONFECTIONERY.

Messrs. Spear, Middleton, Donaldson & Spear for the applicant.

BILLINGS, *Assistant Commissioner*:

This is an appeal from the decision of the Examiner of Trade-Marks refusing to register the words "Nutty Corn" as a trade-mark for a candied mixture of nuts and corn and cocoanut. The ground of the refusal is that the mark is descriptive of the goods and that registration is therefore prohibited by section 5 of the act of February 20, 1905.

The specimens on file show that this mark is applied to a mixture of candied nuts, corn, and cocoanut. Since the word "nutty" means abounding in nuts, it is believed that this mark as applied to candy would indicate candy which contains nuts and corn. It is therefore descriptive of the goods to which it is applied.

The refusal to register this mark is in accordance with the well-settled practice of the Office, as shown in the following decisions: *Ex parte Horlicks Food Company*, (C. D., 1898, 626,) where the words "Malted Milk" were refused registration as a trade-mark for a food preparation for infants; *ex parte G. H. Heublin & Bros.*, (C. D., 1899, 64,) where "Apple and Honey" was refused registration as a trade-mark for a cure for coughs and colds, the main ingredients of which were cider-brandy and honey; *ex parte Spayd*, (C. D., 1899, 19,) where the words "Bromo Soda Mint" were refused registration as a trade-mark for a remedy for certain named diseases.

The decision of the Examiner is affirmed.

DECISIONS OF THE SECRETARY OF THE INTERIOR.

IN RE DEMPSEY.

Decided January 20, 1908.

1. FINAL FEE—DELAY IN FILING—NOT ACCEPTED.

A final fee which was inclosed in a letter registered at a substation of the post-office of Washington, D. C., on the last day allowed for payment thereof and which reached the city post-office at about 2.30 p. m. of said day, but was not delivered to the Patent Office until the second day thereafter because of an intervening Sunday, should not be accepted and applied, as it was filed outside of the period fixed by law.

2. SAME—CONSTRUCTIVE DELIVERY TO PATENT OFFICE—EVIDENCE.

The contention that a final fee which was placed in a receptacle set apart for the Patent Office by the city post-office on the last day allowed for payment is constructively a delivery to the Patent Office has no basis in the absence of proof that the fee was so set apart.

3. EVIDENCE—RECORD OF POST-OFFICE CONCLUSIVE.

The records of the city post-office as to the time when a registered package was placed in a receptacle set apart for the use of the Patent Office will be accepted as conclusive.

Mr. Walter H. Pumphrey for the applicant.

DEPARTMENT OF THE INTERIOR,
Washington, D. C., January 20, 1908.

COMMISSIONER OF PATENTS.

SIR: The Department has considered the proffered appeal of William S. Dempsey from a decision of your Office of December 9, 1907, holding that the final fee in the matter of his application for Letters Patent for an invention was not received within the time allowed by law and the regulations of the Patent Office, and withholding patent for that reason.

Section 4885 of the Revised Statutes provides that—

Every patent shall bear date as of a day not later than six months from the time at which it was passed and allowed, and notice thereof was sent to the applicant, or his agent; and if the final fee is not paid within that period, the patent shall be withheld.

Rule 167 of the Patent Office, based on said section 4885, is as follows:

Every patent will bear date as of a day not later than six months from the time the application was passed and allowed and notice thereof was mailed to the applicant or his attorney, if within that period the final fee be paid to the Commissioner of Patents, or if it be paid to the Treasurer or any of the assistant treasurers or designated depositaries of the United States, and the certificate promptly forwarded to the Commissioner of Patents; and if the final fee be not paid within that period, the patent will be withheld.

A patent will not be antedated.

It is admitted that the payment of the final fee in this case was not made within the time provided by said section and said Rule 167, unless the depositing thereof by registered letter in a substation of the Washington city post-office on the last day of the period allowed by law, and its subsequent delivery to the central office in said city on that day, at 2.30 p. m., was a delivery to the Patent Office within the meaning of this statute.

This question was most carefully considered in an opinion of Assistant Attorney-General Van Deventer February 15, 1901, in the case of the appeal of Michael J. Cannon, involving a substantially similar question and contention. In that opinion, which was approved by the Secretary of the Interior, it was held that the postal authorities are not the agents of the Government for the collection of Patent Office fees; that the agents of the Government for this purpose are designated in the rules governing the practice of that Office, and that the postal authorities are not among the agents so designated. This would seem to be conclusive of the question here presented, but it is contended that the Patent Office has in the central city post-office at Washington a receptacle in which it is the practice to deposit all mail for the Patent Office, and that the registered letter containing the final fee in this case was deposited in said receptacle by the post-office authorities some hours before the closing of the official day in the Patent Office, and but for a regulation or custom under which the mail of said Office is not sent for, this letter would have been delivered therein long before the closing of office hours on such day. No proof of the fact on which this contention is based is furnished, and your Office reports that upon inquiry at the city post-office it has been ascertained by examination of the post-office records that such letter was not in fact placed in said receptacle on said day, and not until the following day.

The records of the post-office on this question of fact will be accepted as conclusive. There is, therefore, no basis for this contention, and without expressing an opinion as to its sufficiency, were it well founded in fact, the appeal is denied.

Very respectfully,

(Signed) JESSE E. WILSON,
Assistant Secretary.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

HOWELL, JR., v. HESS.

Decided December 11, 1907.

INTERFERENCE—REDUCTION TO PRACTICE BY AGENT.

An inventor conceived an invention and embodied it in a model which was submitted to the company that controlled the sale of the machine for which the improvement was designed, but the company refused to purchase the invention and returned the model to the inventor. An officer of such company disclosed it to the foreman of the factory of a subsidiary corporation, who set about adapting it to the machine made by them for the parent company, and a completed machine was built embodying such invention. *Held* that such reduction to practice does not inure to the inventor, as such companies were not acting as the inventor's agents, and the fact that they subsequently purchased and procured an assignment of the invention does not affect the question. (*Hunter* v. *Stikeman*, 85 O. G., 610; 13 App. D. C., 214, 226; *Robinson* v. *McCormick*, 128 O. G., 3289; 29 App. D. C., 98, 111; *Shuman* v. *Beall*, 123 O. G., 1664; 27 App., D. C., 324, 328, distinguished).

Mr. F. C. Somes and *Mr. Harold Binney* for the appellant.

Mr. W. W. Dodge, *Mr. L. B. Wight*, *Mr. Edward C. Davidson*, and *Mr. D. A. Carpenter* for the appellee.

SHEPARD, *C. J.*:

This is an appeal in an interference proceeding involving priority of invention of a dust shield or guard, the purpose of which is to protect the pivots of the type-bars of a type-writer from dirt and grit proceeding from erasures from the platen of a front-strike type-writer falling upon the segment upon which the type-bars are pivoted.

The issue is defined as follows:

1. In a type-writing machine, the combination of a type-bar formed with a recess therein, and a dust-shield for the bearing of said type-bar, said shield being adapted to be received within the recess in said type-bar.

2. In a front-strike type-writing machine, the combination of a type-bar segment, a series of segmentally-arranged type-bars pivoted to said segment and each provided with a recess therein, and a segmental strip that covers the pivot-bearings of said bars and is adapted to extend into the recess in each type-bar and constitutes a dust-guard to prevent the admission of dust or grit to said pivot-bearings.

3. In a type-writing machine, the combination of a pivoted type-bar, and a dust-shield to prevent the admission of dust to the pivot-bearing of the type-bar, said type-bar being formed to receive the dust-shield when the bar is in the printing position so as to enable the shield to cover the pivot-bearing and not interfere with the printing movement of the bar.

4. In a type-writing machine, the combination of a pivoted type-bar having a notch or recess, and a dust-shield which lies within said recess when the type-bar is in its printing position.

5. In a writing-machine, the combination of the platen, the type-bar segment, type-bars pivoted therein and notched or bent to form a recess in their front edges adjacent the pivots and a shield or guard located above the pivots, the front edge of which enters said recesses or notches as the type-bars approach the printing-point.

6. In a type-writing machine, the combination of a pivoted type-bar formed with a recess therein, and a dust-shield for the bearing of said type-bar located in close proximity to and partially inclosing said bearing, said shield being adapted to be received within the recess in said type-bar.

The application of Howell was filed December 26, 1901. Hess's application filed June 30, 1903, is a division of an earlier one filed August 28, 1901. The burden of overcoming this earlier date was cast upon Howell. The tribunals of the Patent Office concurred in awarding priority to Hess, and the case is here on final appeal from the Commissioner.

Hess claimed conception, disclosure, making of drawings and model in September, 1900. Without finally deciding whether this date was sufficiently proved, the Patent Office tribunals found it sufficient, in their view of the merits of the case, to give Hess the date of his application, of August 28, 1901. They also agreed in giving a date of conception to Howell as claimed by him in the spring of 1900. The award against him was based on his want of diligence in perfecting his invention before and at the time that Hess entered the field.

It is now contended, apparently for the first time as the decisions below contain no mention of it, that the model made by Howell in the spring of 1900 was such a complete device as of itself to amount to a reduction to practice. It is sufficient to say that in our opinion it was not one of those simple devices, complete in itself, the mere production of which readily demonstrated its practical utility. It was, as called in the preliminary statement, a model representing a device intended to be used as a part of a complicated machine, and the practical usefulness of which depended upon a test in that machine. (*Hammond* v. *Basch*, 24 App. D. C., 469, 474.)

According to the testimony of Howell this first structure which included a lever mechanism for the type-bars as well as the dust-shield, was submitted to the Underwood Typewriter Co. immediately after its construction in the spring of 1900. Nothing was done in regard to purchasing or using the invention, and Howell inquired about it during the summer. It was during the time shown by an officer of the Underwood Company to the mechanic of the Wagner Company—a subordinate corporation of the Underwood Company—who did not approve the key mechanism. Nothing more was done until late in December, 1900, when Howell was sent for by the president of the Underwood Company, who told him his patent solicitors had reported it unpatentable. Howell said that he had called on the solicitors and he agreed with them that the key-lever mechanism would infringe Felbel's patent. He said also that the solicitor was of opinion that there was not enough in the dust-guard to apply for a patent on alone. Underwood offered Howell some compensation for his work, which Howell refused. Howell then took the model home, and negotiations ended, until about the last of November, 1901, when Underwood called and obtained from Howell an agreement to assign the invention to the Wagner Company. It appears from the testimony of the representative of the Wagner Company that the dust-guard feature was disclosed to the factory foreman—the model having been shown by an agent of the Underwood Company—who set about adapting it to an Underwood type-writer, and completed it, and other parts of a new model machine, about March, 1901. The construction of this new machine was proceeded with and completed about November 1, 1901.

While Howell was doing practically nothing towards perfecting his machine, reducing it to actual practice, or taking steps to secure a patent, Hess entered the field, and three months before Howell assigned to the Wagner Company, filed his application for a patent. Undoubtedly the tribunals of the Patent Office were right in holding that so far as the acts of Howell were concerned, there was a failure of due diligence.

Assuming that what the Wagner Company did between April and November, 1900, amounted to a reduction of the invention to practice, it is earnestly contended that this was for, and inured to the benefit of Howell.

We cannot agree with this contention. Taking the most liberal view of the evidence, the case falls within the principle declared in *Hunter* v. *Stikeman*, (13 App. D. C., 214, 226,) where it was said by Chief Justice Alvey:

It is a well-settled principle in the patent law, that while that law accords the right to a patent to a later applicant who connects

by due diligence a prior conception, the reduction to practice must be by the applicant himself, or by his authorized agent, and not by some other third party. It is not enough to entitle an applicant to a patent that some one else has shown the practicability of the invention by reducing it to practice. The work of such third person will not be taken as sufficient to relieve the applicant of the consequences of his own want of diligence.

We think it clear that whatever the motive of the Underwood or Wagner Company in undertaking to utilize the invention in one of their machines, after declining to purchase, and returning the model to the inventor, they were not acting as his agents. That they subsequently purchased and procured an assignment of the invention does not affect the operation of the rule. (*Robinson* v. *McCormick*, 29 App. D. C., 98, 111.) The facts are essentially different from those in the case relied on by the appellant. (*Shuman* v. *Beall*, 27 App. D. C., 324, 328.)

In that case the inventor was in the employ of the corporation which reduced the invention to practice, had promised its officers a large interest in it, and had been led to believe that everything was done in the joint interest; and the evidence showed a deliberate effort to defraud him by colluding with another who obtained his knowledge from the true inventor.

The decision must be affirmed. The clerk will certify this decision to the Commissioner of Patents. Affirmed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., Jan. 29, 1908.

Helen Ryan & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The A. Spiegel Company, of Milwaukee, Wis., for registration of a trade-mark and a trade-mark registered to Helen Ryan & Company, of 12 South Elliott place, borough of Brooklyn, New York, N. Y., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Helen Ryan & Company having been returned undelivered, notice is hereby given to the said Helen Ryan & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 29, 1908.

Weber & Schillinger, their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The George Wiedemann Brewing Company, of Newport, Ky., for registration of a trade-mark and a trade-mark registered to Weber & Schillinger, of Louisville, Ky., and it appears from the record of the case that the registrant, Weber & Schillinger, cannot be located.

Notice is therefore hereby given to said Weber & Schillinger, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 29, 1908.

D. L. Wing & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of J. F. Meyer & Sons' Milling Company, of 172-174 Laclede Bldg., St. Louis, Mo., for registration of a trade-mark and a trade-mark registered March 14, 1882, to D. L. Wing & Company, of St. Louis, Mo., and the notice of said declaration mailed by the Patent Office in the usual manner to the said D. L. Wing & Company having been returned undelivered, notice is hereby given to the said D. L. Wing & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 28, 1907.

Meade-Van Bokkelen Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Barton Vineyard Company, Limited, of Fresno, Cal., for registration of a trade-mark and a trade-mark registered to the Meade-Van Bokkelen Company, of Chicago, Ill., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Meade-Van Bokkelen Company having been returned undelivered, notice is hereby given to the said Meade-Van Bokkelen Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 28, 1907.

Noble and Streeter, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Joseph C. Allen, of Plainfield, N. J., for registration of a trade-mark and a trade-mark registered to Noble and Streeter, of New York, N. Y., and it appearing upon a showing made by the junior party that said Noble and Streeter have not been located, notice is hereby given to the said Noble and Streeter, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 28, 1907.

Irwin & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Walter S. Bare, of 227 North Duke street, Lancaster, Pa., for registration of a trade-mark registered to Irwin & Company, of 185 Milk street, Boston, Mass., and no response to the said declaration mailed by the Patent Office in the usual manner to Irwin & Company having been received, and there being no evidence of its having been received by the said Irwin & Company, it is presumed that the company has not received the same. Therefore notice is hereby given to the said Irwin & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that due notice of the declaration of this interference may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
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United States Patent Office.
[BY AUTHORITY OF CONGRESS.]

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Patents	645	No. 878,489 to No. 879,133, inclusive.
Designs	49	No. 39,084 to No. 39,132, inclusive.
Trade-Marks	150	No. 67,540 to No. 67,689, inclusive.
Labels	10	No. 14,036 to No. 14,045, inclusive.
Prints	8	No. 2,211 to No. 2,218, inclusive.
Reissues	3	No. 12,749 to No. 12,751, inclusive.
Total	865	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	3	1	New Hampshire	2	.....
Alaska, District of	.....	.....	New Jersey	29	4
Arizona Territory	.....	.....	New Mexico Ter'y	.....	.....
Arkansas	2	.....	New York	87	32
California	59	2	North Carolina	3	.....
Colorado	3	4	North Dakota	4	1
Connecticut	16	3	Ohio	53	13
Delaware	2	.....	Oklahoma	4	.....
District of Columbia	7	1	Oregon	5	.....
Florida	1	.....	Panama	.....	.....
Georgia	5	1	Pennsylvania	49	18
Hawaii Territory	.....	.....	Philippine Islands	.....	.....
Idaho	1	.....	Rhode Island	8	3
Illinois	69	16	South Carolina	3	.....
Indiana	14	3	South Dakota	5	.....
Iowa	5	4	Tennessee	8	2
Kansas	7	2	Texas	7	2
Kentucky	3	3	Utah	4	.....
Louisiana	3	1	Vermont	2	.....
Maine	3	3	Virginia	7	2
Maryland	4	2	Washington	9	5
Massachusetts	40	15	West Virginia	5	2
Michigan	18	1	Wisconsin	11	2
Minnesota	10	.....	Wyoming	.....	.....
Mississippi	6	.....	U. S. Army	1	.....
Missouri	23	6	U. S. Navy	.....	.....
Montana	2	.....			
Nebraska	10	2	Total to citizens of the United States	624	156
Nevada	2	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	2	.....	Netherlands	.....	.....
Belgium	3	.....	Newfoundland	.....	.....
Brazil	.....	.....	New South Wales	.....	.....
British West Indies	.....	.....	New Zealand	2	.....
Canada	7	.....	Norway	.....	.....
Cape Colony	.....	.....	Persia	.....	.....
Chile	.....	.....	Queensland	.....	.....
China	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	3	.....
Cuba	.....	.....	Scotland	.....	2
Denmark	.....	.....	South Australia	.....	.....
Ecuador	.....	.....	Sweden	2	.....
England	10	2	Switzerland	4	1
France	15	1	Tasmania	1	.....
Germany	16	4	Transvaal, South Africa	2	.....
Haiti	.....	.....	Victoria	.....	1
Ireland	.....	.....	Western Australia	.....	.....
Italy	2	1			
Jamaica	1	.....	Total to citizens of foreign countries	70	12
Japan	.....	.....			
Mexico	.....	.....			

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 22, 1908.

Joseph H. Brown, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of Kingan & Company, Limited, of Indianapolis, Ind., for registration of a trade-mark and a trade-mark registered to Joseph H. Brown, of Fort Worth, Tex., and a letter has been filed in the case by the attorney of record for said Brown stating that he is unable to locate his client.

Notice is therefore hereby given to said Joseph H. Brown, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 18, 1908.

The heirs, executor, or administrator of Siman Miyata, take notice:

An interference has been declared by this Office between an application of the Standard Import Company, Limited, of New Orleans, La., and an application of Siman Miyata, of West Orange, N. J., both for registration of a trade-mark, and a letter has been filed in the case from the attorney of record for said Miyata stating that Miyata has died.

Notice is therefore hereby given to the heirs, executor, or administrator of the said Siman Miyata that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business February 4, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
303	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Jan. 21	Jan. 6	179
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Jan. 20	Nov. 15	619
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Jan. 14	Dec. 5	362
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Jan. 9	Dec. 28	195
170	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Jan. 9	Dec. 5	229
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Jan. 4	Dec. 23	305
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Jan. 4	Dec. 23	210
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Jan. 3	Oct. 24	370
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Iron Structures; Loading and Unloading; Towers.	Dec. 30	Jan. 4	254
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Dec. 30	Dec. 9	281
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	Dec. 28	Jan. 6	277
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	Dec. 28	Dec. 13	335
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Dec. 28	Nov. 9	339
308	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Dec. 26	Dec. 13	574
327	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Dec. 26	Dec. 9	236
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	Dec. 23	Dec. 18	431
167	V. Bookbinding; Harvesters; Jewelry; Music.	Dec. 23	Nov. 25	330
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus	Dec. 20	Nov. 25	371
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Dec. 18	Dec. 18	348
282	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	Dec. 13	Nov. 14	524
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas, and Canes.	Dec. 12	Dec. 16	202
332	X. Carriages and Wagons.....	Dec. 12	Oct. 26	475

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Dec. 11	Dec. 9	270
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	Dec. 11	Nov. 25	345
322	XII. Elevators; Journal-Boxes; Lubrication; Machine Elements; Pulleys and Shafting.	Dec. 11	Nov. 18	622
280	XL. Baggage; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Dec. 10	Oct. 14	603
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Dec. 9	Nov. 29	613
370	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers, Time-Controlling Mechanism.	Dec. 9	Oct. 18	348
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Dec. 6	Oct. 7	546
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	Dec. 4	Oct. 2	411
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Dec. 2	Sept. 19	535
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Nov. 25	Nov. 15	410
238	XIX. Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel; Stoves and Furnaces.	Nov. 23	Oct. 17	484
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	Nov. 22	Nov. 4	243
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	Nov. 20	Sept. 16	636
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	Nov. 14	Oct. 1	342
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordinance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	Nov. 9	Oct. 2	594
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Oct. 29	Oct. 2	506
321	XXXIX. Baths and Closets; Water Distribution.	Oct. 21	Aug. 7	929
109	XVI. Telegraphy; Telephony	Oct. 21	July 15	642
352	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	Oct. 2	Sept. 3	860

Total number of applications awaiting action 17,656

161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.			
	Trade-Marks.....	Jan. 30	Dec. 24	251
	Designs.....	Jan. 30	Dec. 27	52
	Labels and Prints.....	.....	.....	....

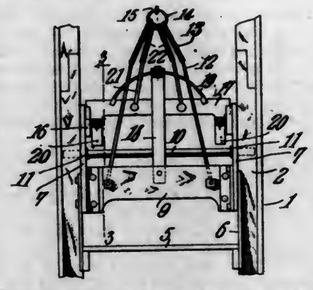
Notice.

Coupons unless properly filled out will not be accepted in payment for copies of publications.

PATENTS

GRANTED FEBRUARY 11, 1908.

878,489. SAFETY APPLIANCE FOR ELEVATORS. FRANCIS M. ASHBY, Princeton, Ind. Filed Aug. 24, 1907. Serial No. 390,059.



1. In combination with guides having grooves provided with edges describing compound curves, an elevator car mounted for movement between the guides, shafts mounted upon the elevator car and having their end portions lying within the grooves of the guides, and means mounted upon the elevator car for moving the shafts laterally into engagement with the edges of the grooves of the guides.

2. In combination with guides having grooves provided with edges which describe compound curves, an elevator car mounted for movement between the guides, shafts mounted upon the elevator car and having their end portions lying within the grooves of the guides, wedges mounted upon the elevator car and spring actuated means for projecting the wedges between the shafts.

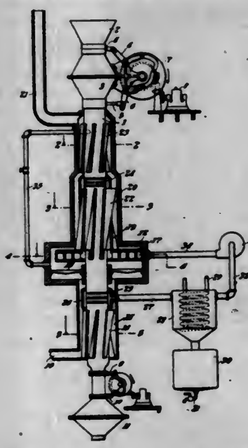
3. In combination with guides having grooves provided with edges which describe compound curves, an elevator car mounted for movement within the guides, shafts mounted upon the elevator car and having their ends lying within the guides, a movable bar mounted upon the elevator car and having wedges attached thereto, a spring bearing upon the bar and means operatively connecting the bar with the hoisting means of the elevator car.

4. In combination with guides having grooves with edges describing compound curves, an elevator car mounted for movement between the guides, a hoisting means for the car, shafts mounted upon the elevator car and having their end portions lying within the grooves of the guides, a bar movably mounted upon the elevator car and having depending wedges, a yoke attached to the top of the elevator car and passing over said bar, a spring attached to the yoke and bearing against the bar, and means connecting the top of the elevator car with the hoisting means and means connecting said bar with the hoisting means.

878,490. APPARATUS FOR DISTILLING COAL. JONAS W. AYLSWORTH, East Orange, and FRANK L. DYER, Montclair, N. J. Filed May 25, 1906. Serial No. 318,690.

1. An improved distilling apparatus comprising an elongated still, a furnace surrounding said still, a stack therefor inclosing the still, a heating coil in the furnace, a closed circulating system including said heating coil and a distilling zone maintained within the still, substantially as set forth.

2. A distilling apparatus comprising an elongated still having means between its ends for admitting heated gases thereinto and means at another point between its ends for discharging the heated gases carrying the vaporized distillate therefrom, and a furnace surrounding the still for heating the still and for heating the gases before their admission into the still, substantially as set forth.



3. An improved distilling apparatus, comprising a vertical still, means for introducing material at the upper end and means for removing material from the lower end of the still, a furnace surrounding the still, a stack therefrom inclosing the still, a heating coil in the furnace and a closed circulating system, including said heating coil, and a distilling zone maintained within the still, substantially as set forth.

4. In distilling apparatus, the combination with a still, of a series of inclined wings extending through the walls thereof and opening into a flue surrounding the still, substantially as set forth.

5. In a distilling apparatus, the combination with a still, of a reheater adjacent to the same, a jacket surrounding the still and forming a flue leading to said heater, and a series of wings extending from within the still through its walls into said flue, substantially as set forth.

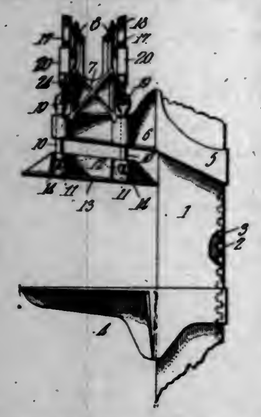
[Claims 6 and 7 not printed in the Gazette.]

878,491. GLUING-CLAMP. EUGENE BARKER, Batavia, N. Y. Filed Apr. 11, 1907. Serial No. 367,689.

1. The combination with a bar, a supporting arm outstanding therefrom, and upstanding arms upon the supporting arms; of push bars guided within and extending through the supporting arm, a jaw having spaced sockets, said push bars being pivotally mounted within the respective sockets, actuating cams pivotally connected to the upstanding arms, said cams engaging and disposed to actuate the push bars in either direction, said cams being disposed in parallel planes.

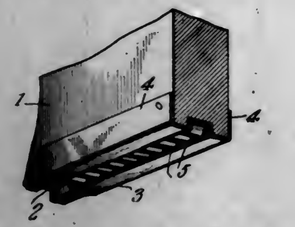
2. The combination with a bar, and a tiltable jaw movable longitudinally of the bar; of an arm outstanding from

the bar, push bars slidably mounted within the arm and pivotally connected to opposite portions of the jaw, and means carried by the arm for independently actuating the push bars in either direction to shift the jaw.



3. The combination with a support; of a cam carried thereby, a ratchet fixedly secured adjacent the cam, a locking lever carried by the cam and disposed to engage the ratchet, means carried by the cam for adjusting the locking lever upon its fulcrum, and a jaw connected to and disposed to be actuated by the cam.

878,492. CLAMP-BAR. EUGENE BARKER, Batavia, N. Y. Filed Apr. 16, 1907. Serial No. 368,526.



1. A bar for work clamps having a wear plate upon one face thereof, and a longitudinal series of transverse corrugations integral with said wear plate, said corrugations being flush with the wear plate and disposed entirely within the bar.

2. A bar for work clamps having a wear plate embracing one face and the edges thereof, and a longitudinally extending series of corrugations within said plate and projecting into the bar.

3. A bar for work clamps having a longitudinal groove therein, a wear plate upon the grooved face of the bar and lapping and secured to opposite faces of said bar, and a longitudinally extending series of transverse corrugations formed with the bar and projecting into the groove.

878,493. TOOL FOR ELECTRIC WIRES. HAROLD B. BARNES, Leadville, Colo. Filed Mar. 16, 1907. Serial No. 362,747.

1. A device of the character described, comprising side plates, handles pivotally mounted therein, a plurality of jaws pivotally mounted therein and adapted to be operated by said handles, an adjustable jaw mounted in one end of said pivotally mounted member, said jaw being designed to crush insulation on insulated wires, and means for removing the insulation crushed.

2. In a device of the character described, spaced side plates, jaw members pivoted between the side plates at one end, handle members pivoted between the side plates at the opposite ends and adapted to expand the inner ends of the jaw members, an auxiliary jaw member carried within the recess of the jaw and provided with a roughened face, cutters disposed upon opposite sides of the jaw members and adjustable relative to the face.



3. In a device of the character described, spaced side plates, jaw members pivoted between the side plates at one end, handle members pivoted between the side plates at the opposite ends and adapted to expand the inner ends of the jaw members, an auxiliary member carried within a recess of the jaw and adjustable relative to the opposing jaw, and cutters carried upon opposite sides of the block.

4. In a device of the character described, spaced side plates, jaw members pivoted at one end between the side plates and with one of said jaw members provided with a recess, handle members pivoted at the opposite end of the side plates, an auxiliary jaw member disposed within the recess of the jaw and movable relative to the opposing jaw, cutters carried upon opposite sides of the auxiliary jaw member, and opposed cutters carried by the opposing jaw in alinement with the cutters carried by the auxiliary jaw member.

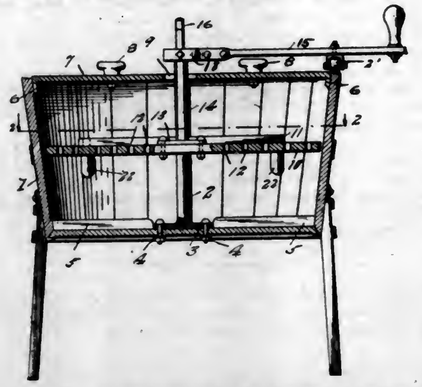
878,494. VINE-TRELLIS. GERHARD D. BASSE, Milwaukee, Wis. Filed Apr. 1, 1907. Serial No. 365,717.



1. In a vine supporting trellis, the combination of a plurality of rigid horizontal bars each provided with a plurality of twine receiving apertures, a plurality of vertically arranged pieces of twine secured to said bars within said apertures, a plurality of elastic rings secured to said pieces of twine, a weight suspended from the lower bar of the trellis, and means for temporarily suspending the trellis from a supporting wall.

2. In a vine supporting trellis of the class described the combination of a plurality of horizontal wooden bars provided with a plurality of cord receiving apertures, a metallic band inclosing the respective ends and front surface of said bars, means for securing said bands to said bars, a plurality of flexible cords secured to said bars within said apertures, and means for securing said trellis to a supporting wall.

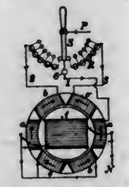
878,495. WASHING-MACHINE. HORACE G. BATT, Parnell, Mo. Filed Oct. 22, 1906. Serial No. 340,054.



1. A washing machine having a cylindrical receptacle, a post mounted centrally thereof, a plate revoluble in said receptacle and having a central aperture, surrounding said post, a handle surrounding and supported by said post, vertical rods carried by said plate and projecting through openings in said handle, and set screws engaging said rods and handle and adapted to secure said plate at any selected height within said receptacle.

2. A washing machine having a cylindrical receptacle, a post mounted centrally thereof, a plate revoluble in said receptacle and having a central aperture, surrounding said post, a handle surrounding and supported by said post and carrying a depending guide-wheel, parallel vertical rods carried by said plate and projecting through openings in said handle, and set screws carried by said handle and frictionally engaging said rods.

878,496. SYSTEM FOR CONTROLLING THE MOTION OF ELECTRICALLY-OPERATED ELEVATORS BY MEANS OF A SWITCH. WILLIAM BAXTER, Jr., Jersey City, N. J. Filed May 21, 1902. Serial No. 108,378.



1. In an electric elevator controlling system, the combination of a controller mover having an armature and constructed to vary its torque and angular position in accordance with variations in the currents transmitted to it, a car switch having connection with the controller mover, means constructed to vary the strength of currents transmitted through the switch to the controller mover in proper ratio to develop the torque and angular movement required in the controller mover armature, and a controller actuated by the controller mover to vary the velocity and direction of rotation of the elevator motor.

2. The combination of a car switch having means to divide a current into three branches and to vary their strength independently, also to vary the strength of the whole current, a controller mover having three sets of coils on one member, one for each branch current, the other member having one set traversed by all these currents, the width of the poles on one member and the width of the coils on the other member, being in a ratio of substantially 1 to 2, circuits connecting the car switch and the controller mover and a controller actuated by the controller mover adapted to vary the velocity and direction of rotation of the elevator motor.

3. In an electric elevator controller system, the combination of a controller-mover having a field and an armature and constructed to vary its torque and angular position in concordance with the variations transmitted to it, a car switch connected by a plurality of circuits with said controller-mover and having means adapted to divide a current into branches and to vary the strength of the current of the branches in proper ratio to produce the required rotation and torque of the controller-mover armature; and a controller actuated by the controller-mover and adapted to vary the velocity and direction of rotation of the elevator motor.

4. In an electric elevator controlling system, the combination of a controller-mover having a field and an armature a car switch connected by a plurality of circuits with said controller-mover and having means constructed to divide a current into branches and vary their strength independently, also to vary the strength of the whole current, the branch variations determining the angular position, and whole current variations determining the magnitude of torque of the controller-mover armature; suitable circuit connections; said controller-mover adapted to vary its torque and angular position in concordance with variations in the currents transmitted to it, and a controller actuated by the controller-mover and adapted to vary the velocity and direction of rotation of the elevator-motor.

5. The combination of a car switch having means constructed to divide a current into branches to vary the strength of the branch and whole currents independently, a controller-mover adapted to vary its torque and angular position in concordance with variation in the currents transmitted to it; variations in the branches being in accordance with the angular movement, variations in whole current being in accordance with torque, required of controller-mover armature; circuits connecting the switch and controller-mover, and a controller actuated by the controller-mover and adapted to vary the velocity and direction of rotation of the elevator-motor, substantially as described.

[Claims 6 to 181 not printed in the Gazette.]

878,497. PAPER CLIP OR FASTENER. CHARLES R. BLEAKNEY, Sidney, Ohio. Filed Mar. 13, 1907. Serial No. 362,223.



1. A paper clip or fastener, formed from a single piece of metal and provided with a plurality of end-portions, a penetrating point formed upon one of said portions, a cap formed upon the other portion opposite to said penetrating point, and a transverse rib struck up from said last mentioned portion contiguous to said cap and intermediate the edges of said portion, said rib formed back of the cap and contiguous to the narrowest part of the end portion, whereby a pocket is formed opening towards the front end of the clip.

2. A paper clip formed from a single piece and provided with a plurality of end-portions, one of said end-portions provided with a plurality of penetrating points, and the other portion provided with a plurality of caps and with a curved reinforcing rib formed thereon intermediate its edges, said caps and rib of the same height and producing a roughened surface and a pocket, the pocket opening upon the front end of the clip.

3. A paper clip, comprising a plurality of portions, a plurality of penetrating points formed upon one of said portions, a plurality of caps struck-up from the other portion and normally positioned above said penetrating points, and a curved, transverse rib struck-up from and intermediate the edges of said last-mentioned portion and having its ends terminate contiguous to said caps, whereby a pocket is formed upon said last-mentioned portion above its upper face.

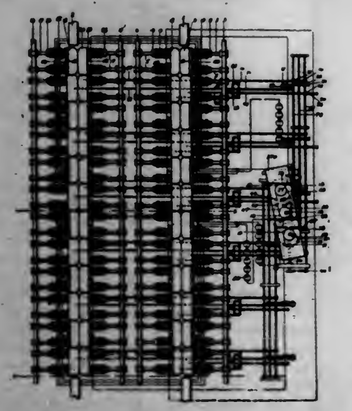
878,498. SWINGING ELECTRIC BRACKET. JOHN F. BROWN, Toledo, Ohio. Filed July 8, 1907. Serial No. 382,590.



1. In an electric fixture, a stationary part, a swinging arm jointed thereto and having a tubular extension at the axis of its joint with the stationary part, a non-conducting disk supported against rotation upon the stationary part, concentric conductor rings carried by said stationary disk, a second non-conducting disk carried upon the tubular extension of the swinging arm, resilient contact fingers supported by said second disk and adapted to traverse the concentric conductor rings, feed wires connected with the concentric rings, and flexible conductors leading from the resilient contact fingers to the outer end of the swinging arm through the tubular extension at the axis of its joint with the stationary part, substantially as described.

2. In an electric fixture, a stationary part, a swinging arm jointed thereto and having a tubular extension at the axis of its joint with the stationary part, a non-conducting disk supported against rotation upon the stationary part, concentric conductor rings carried by said stationary disk, a second non-conducting disk carried upon the tubular extension of the swinging arm and adjustable thereon relative to the stationary disk, resilient contact fingers supported by said second disk and adapted to traverse the concentric conductor rings, feed wires connected with the concentric rings, and flexible conductors leading from the resilient contact fingers to the outer end of the swinging arm through the tubular extension at the axis of its joint with the stationary part, substantially as described.

878,499. DEVICE FOR THE INSPECTION OF CAR-WHEELS. CHARLES BROWNING, Jr., Sacramento, Cal. Filed Dec. 18, 1906. Serial No. 348,473.



1. In a device of the character described a railway, and means disposed at intermediate points therein for automatically calipering the flanges of the wheels riding over said railway, as set forth.

2. In a device of the character described, a railway, means at intermediate points therein for testing the conditions of the flanges of car wheels passing over said railway, and means for recording the movements of such testing means, as described.

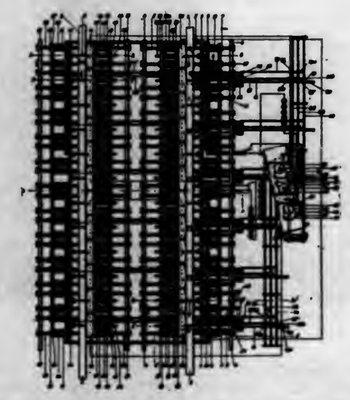
3. In a device of the character described a railway, and means formed as a part of said railway whereby the conditions of the flanges of wheels passing over said railway will be tested, as described.

4. In a device of the character described a means for testing the vertical wear of wheel flanges, a recording means, and electrical connections between said testing means and such recording means, as set forth.

5. In a device of the character described a plurality of blocks arranged end to end, means permitting said blocks to caliper car wheel flanges, and means connected with said blocks for recording the thickness of said flanges, as described.

[Claims 6 to 31 not printed in the Gazette.]

878,500. DEVICE FOR THE INSPECTION OF CAR-WHEELS. CHARLES BROWNING, Jr., Sacramento, Cal. Filed Mar. 15, 1907. Serial No. 362,519.



1. In a device of the kind described a rail provided with one or more slots disposed laterally therein, and means operating in said slots for testing and recording the condition of car wheels, as set forth.

2. In a device of the character described a rail provided with one or more lateral slots therein, and means operating in said slots for automatically testing and recording the condition of car wheels, as specified.

3. In a device of the character described a rail provided with one or more lateral slots, plates arranged in said slots and means in operative connection with said slots for testing and recording the condition of car wheels, as specified.

4. In a device of the kind described a rail provided with one or more lateral slots, plates arranged in said slots, springs in operative connection with and regulating the position of said plates, and a recording mechanism in operative connection with said plates, as specified.

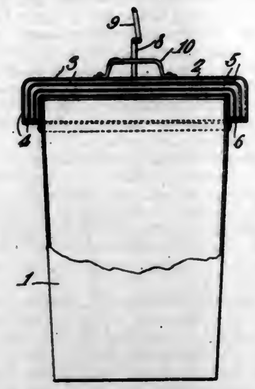
5. In a device of the kind described a rail provided with one or more lateral slots therein, spring actuated plates arranged in said slots, spring actuated blocks disposed in alinement with said plates on the opposite side of said rail, recording mechanism, and rods connecting said plates and blocks to said recording mechanism, as described.

[Claims 6 to 11 not printed in the Gazette.]

878,501. ICE-CAN. PAUL C. BURHANS, Phœnix, N. D. Filed Mar. 1, 1907. Serial No. 360,005.

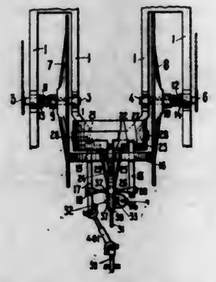
In a device of the class specified, a sheet metal can tapering in form and larger at its upper open end than at its bottom, a reinforcing frame secured to the outer face of the can at a point below and parallel to the upper edge thereof, and a cover formed of a series of spaced plates

arranged to form a plurality of dead air spaces, the edges of the plates being turned downward and resting on the



frame, the air spaces being continued through the downturned portions, substantially as specified.

878,502. GEARING. CARLO CAMPO, Turin, Italy. Filed Nov. 14, 1906. Serial No. 343,441.

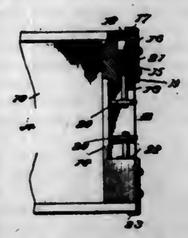


1. Mechanism for the transmission of motion, comprising shafts to be driven, disks movable longitudinally on said shafts, springs for pressing said disks inwardly, a stationary collar located between said disks, a drum rotatably supported by said collar, friction wheels carried by said drum and engaging with the disks, means for driving the wheels, means for removing the drum longitudinally in the collar for bringing the wheels into engagement with different parts of the disks and means for rotating the drum to bring different wheels into engagement with the disks to reverse the motion of the disks.

2. Mechanism for the transmission of motion comprising shafts to be driven, disks movable longitudinally thereon, said disks having conical rims, springs for forcing said disks inwardly, a supporting structure between the disks, two converging shafts on said structure, bevel wheels on said shafts engaging with each other, a driving shaft connected with one of said shafts, conical wheels on said shafts and means for bringing in mesh said conical wheels with either of the conical rims on the disks.

3. Mechanism for the transmission of motion comprising shafts to be driven, disks movable longitudinally thereon, said disks having conical rims thereon, springs for forcing said disks inwardly, a supporting structure between the disks, two shafts on said structure, friction wheels on said shafts engaging with each other, a driving shaft connected with one of said shafts, conical wheels on said shafts and means for bringing in mesh said conical wheels with either of the conical rims on the disks.

878,503. END PIECE FOR GALLEYS. OWEN L. CARTER, Washington, D. C., assignor of one-third to James K. Wallace, Washington, D. C. Filed Feb. 5, 1907. Serial No. 355,887.



1. In combination, a printer's galley comprising a bottom and side walls, an end-piece for closing an end of said galley and having its body resting upon the bottom thereof and snugly fitting between the side walls aforesaid, the opposite ends of the end piece having clips extending outwardly therefrom and against the adjacent vertical end edges of the side walls of the galley, said clips being bent laterally against the outer sides of the side walls, and thereby reinforcing the walls against outward strain, a catch being located at each end of the end piece and in detachable interlocking engagement with a side wall of the galley.

2. In combination, a printer's galley comprising a bottom and side walls, a detachable end piece for closing an end of the galley and consisting of a body resting upon the bottom of the galley between the side walls thereof and having enlargements at its opposite ends spaced from each other, catches slidably mounted in the enlargements of the body, springs also mounted in the said enlargements and bearing against the catches to normally hold the same in interlocking engagement with the walls of the galley, and thumb-pieces connected to the catches and arranged in the space between the enlargements of the body and movable towards each other in such space to disengage the catches from the galley in detaching the end-piece.

3. As an article of manufacture, a detachable end piece for galleys comprising a rigid body portion having end enlargements between which a recess is provided, said enlargements having longitudinal bores, a spring-operated locking plunger in each of the bores, the said plungers being in alinement with each other and with their adjacent ends extended into the aforesaid recess, thumb pieces secured upon said plunger ends and lying within the outlines of said body, and a clip on each of said enlargements, substantially as described.

4. A printer's galley provided with a base plate having open ends, a pair of fixed side rails, a removable and transposable end rail, and a spring bolt carried by the end rail and adapted to interlock with either end of the side rails.

878,504. MANUFACTURE OF NOSE-PIECES FOR SPECTACLES AND EYEGLASSES. WALTER A. COATES, Providence, R. I. Filed Mar. 9, 1906. Serial No. 305,170.



1. The method of making a nose-piece of U form having return bent extremities from base metal and with a gold covering which is thicker at the return bends,—which consists in forming a gold-covered base-metal wire with a thick intermediate portion, and extremities of reduced diameter, applying and uniting gold reinforce members on suitable portions of the reduced extremities of the wire, swaging the reinforce members and thereby tapering them towards their outer ends, and bending the wire at the reinforced regions to form the nose piece.

2. The method of making a nose-piece of U form having

return bent extremities from base-metal and with a gold covering which is thicker at the return bends,—which consists in forming a gold-covered base-metal wire with a thick intermediate portion, and extremities of reduced diameter, applying and uniting gold sleeves or ferrules on the portions of the reduced extremities of the wire against the shoulders thereof formed at the ends of the thick intermediate portion, swaging the ferrules and thereby elongating them over the reduced extremities of the wire, and tapering them towards their outer ends, and bending the wire at the reinforced regions to nose piece form.

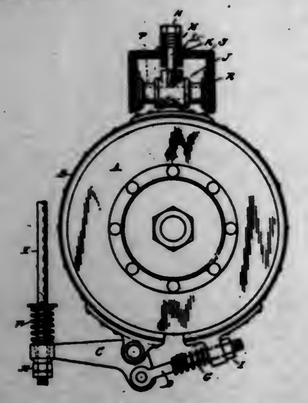
3. The method of making a nose-piece of U form having return bent extremities from base-metal and with a gold covering which is thicker at the return bends,—which consists in forming a gold-covered base-metal wire with a thick intermediate portion, and extremities of reduced diameter, and with the shoulders, at the junctions of the portions of the different diameters, beveled, constructing, applying, and uniting, gold reinforce members each having a flaring mouth at one end on the portions of the reduced extremities of the wire against the beveled shoulders thereof formed at the ends of the thick intermediate portion, swaging the reinforce members and thereby tapering them towards their outer ends, and bending the wire at the reinforced regions to the nose-piece form.

4. The method of making a nose piece of the character described, which consists in providing a gold-covered base-metal wire, swaging gold reinforce members on separated portions thereof between the middle and ends, and bending the wire at the reinforced regions to nose-piece form.

878,505. PROCESS FOR MAKING HALF-TONE CUTS. MARCELLUS C. COCHRAN, Cottage Grove, Oreg. Filed Jan. 26, 1907. Serial No. 354,226.

The process of making half-tone cuts consisting in taking a photographic impression on an ordinary emulsionized photographic film, plate or other substance, and thereafter subjecting said negative to successive baths, the first consisting of water, carbonate of soda, sulfite of soda, pyrogalic acid and oxolitic acid, and the second consisting of water, cyanid of potassium, and chlorid of silver, to thereby solidify the emulsion and raise the shadows of the negative.

878,506. BRAKE MECHANISM. HOWARD E. COFFIN, Lansing, Mich., assignor to Olds Motor Works, Lansing, Mich., a Corporation of Michigan. Filed Apr. 14, 1906. Serial No. 311,701.



1. The combination with a revoluble brake head and a brake strap surrounding the same, of an anchor for said brake strap movable towards or from the axis of the head, and means for preventing angular movement of said anchor, and for receiving the thrust therefrom comprising parallel laterally extending bearings upon opposite sides of the anchor.

2. The combination with a revoluble brake head and a brake strap surrounding the same, of an anchor for said strap connected thereto centrally between its ends and movable towards or from the axis of the head, means for yieldably drawing said anchor away from said head, and means for guiding said anchor to prevent angular movement thereof, and for receiving the thrust therefrom comprising parallel laterally extending bearings upon opposite sides of the anchor.

3. The combination with a revoluble brake head and a brake strap surrounding the same of an anchor connected to said brake strap, a rock arm connected to said anchor and movable in a plane at right angles to the plane of rotation towards and from the axis of said head, and a stationary bearing for preventing lateral movement of said rock arm, and for receiving the thrust transmitted therethrough.

4. The combination with a rotary brake head and a brake strap surrounding the same, of an anchor connected to said brake strap, a rock arm connected to said anchor and movable in a plane transverse to the plane of rotation towards or from the axis of said head, and stationary cheekplates embracing said rock arm for guiding the same, and receiving the thrust therefrom.

5. The combination with a revoluble brake head and a brake strap surrounding the same of an anchor connected to said brake strap, a bifurcated rock arm embracing said anchor and pivotally connected thereto, said rock arm being arranged in a plane transverse to the plane of rotation, a stationary bearing for preventing lateral movement of said rock arm, and a guide for said anchor restricting the movement thereof to the plane of rotation.

[Claim 6 not printed in the Gazette.]

878,507. OPTICIAN'S MEASURING INSTRUMENT. JOSEPH M. COGHLAN, Patchogue, N. Y. Filed Aug. 21, 1907. Serial No. 389,513.



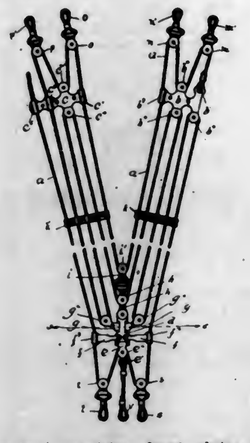
1. A measuring instrument comprising right angular disposed arms of different relative lengths, the short arm constituting a stop and having graduations along its outer edge, and the long arm being subdivided by a longitudinal dividing line and having scale graduations along opposite edges, and a slide mounted upon the aforesaid long arm and having its opposite end portions of different width, the narrow end constituting a stop to coöperate with the aforementioned short arm, and the outer edge of the wide end being in line with the outer edge of said short arm when the slide is moved against the inner edge thereof, the outer edge of said wide end being graduated in a similar manner to the graduations of the aforementioned short arm, and said slide having graduations upon opposite sides of a dividing line.

2. An optician's measure, consisting of right angularly disposed arms of different lengths, and provided with scale graduations, a slide mounted upon the long arm and having its end portions of different width, the narrow end constituting a stop coöperating with the short arm of the instrument and the wide end having an opening in its extremity with its opposite edges correspondingly stepped or off-set to form a separating gage.

3. A measure of the character set forth, comprising right angularly disposed arms of different length, a short arm constituting a stop and the long arm having graduations extending for a short distance along its outer edge from the outer edge of the said stop to determine the angle or crest measurement of the nose, and a slide movable upon said long arm and having its opposite ends of different widths, the outer edge of the wide end coming flush with the outer edge of the short arm of the instrument when the narrow end of the slide is moved against the inner edge of said short arm or stop.

4. In combination, angularly disposed arms of different lengths, a prism measure comprising a stem and a curved bar at one end of the stem and extending a like distance from opposite sides thereof and having similar graduations extending from the center towards opposite ends, said measure having its stem pivotally connected to the long arm of the instrument, and a keeper spaced from the curved bar and connected at its ends therewith, the long arm of the instrument being confined between said keeper and curved bar.

878,508. SUSPENDERS. HENRY COUTHRI, Uncasville, Conn. Filed Aug. 6, 1906. Serial No. 329,333.



1. A suspender comprising front plates formed with pulley supports and guide-eyes, a back plate, pulley supports pivotally mounted thereon, pulleys in said supports, laterally extending plates carrying guide-eyes pivoted to said back plate, and a single cord having one end secured to one of said front plates, and passed around said pulleys and through said guide-eyes on the front and back plates.

2. A suspender comprising front plates formed with pulley supports and guide-eyes, a back plate, pulley supports pivotally mounted thereon, pulleys in said supports, laterally extending plates carrying guide-eyes pivoted to said back plate, a single cord having one end secured to one of said front plates and passed around said pulleys and through said guide-eyes on the front and back plates, and a spring clasp on one of the front plates to engage the free end of said cord.

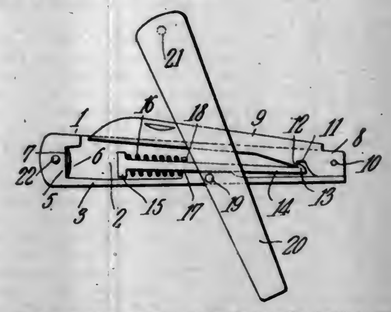
3. A suspender comprising front plates formed with pulley supports and guide-eyes, a back plate, pulley supports pivotally mounted thereon, pulleys in said supports, laterally extending plates carrying guide-eyes pivoted to said back plate, a single cord having one end secured to one of said front plates and passed around said pulleys and through said guide-eyes on the front and back plates, and pulleys hung from said cord and carrying button loops.

878,509. TRICK-KNIFE. WALTER E. DILLARD, Petersburg, Va. Filed June 4, 1907. Serial No. 377,200.

1. The combination with a knife handle having means therein for holding an explosive; of a firing pin concealed within the handle, and a knife blade designed when closed, to lock the firing pin in set position.

2. The combination with a knife handle having means therein for holding an explosive; of a spring pressed firing pin movably mounted within the handle, a knife blade, and means operated by the opening of the blade for releasing the firing pin.

3. The combination with a knife handle having means therein for holding an explosive; of a spring pressed firing pin movably mounted within the handle, a blade, means operated by the opening of the blade for releasing the firing pin, a closure for the handle.

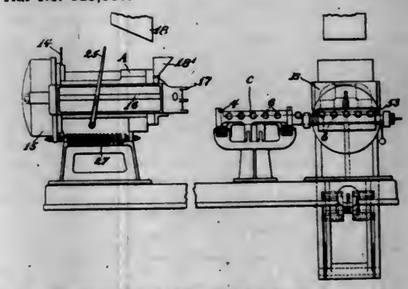


4. The combination with a knife handle having means therein for holding an explosive, and a knife blade pivotally mounted within the handle; of a spring pressed firing pin within the handle and disposed to be locked in set position by the blade when closed, and a closure for the handle.

5. The combination with a knife handle having means therein for holding an explosive, and a knife blade pivotally mounted within the handle; of a firing pin movably mounted within the handle and designed to be locked in set position by the blade when closed, and a side plate pivotally connected to the handle and constituting a closure.

[Claims 6 and 7 not printed in the Gazette.]

878,510. MOLDING-MACHINE. WILLIAM W. DOOLITTLE, Evanston, Ill., assignor to Crane Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 9, 1906. Serial No. 329,887.



1. In combination, a supporting member, a toothed rotatable ring located therein, a member mounted slidingly upon the first member and having teeth corresponding to those on the ring, a pattern mounted thereon, a second molding member movable relatively to the supporting member, means for rotating the ring, and means for moving the sliding toothed member back and forth.

2. In combination, a main supporting member, a molding member slidingly supported upon such first member for horizontal movement, means for moving such sliding member back and forth and for positively holding it in its advanced position, a second molding member movable relative to the main supporting member, in a horizontal plane and a fluid operated actuating means for moving the second molding member relatively to the slidingly mounted molding member to compact the sand between the members.

3. In combination, a horizontal flask supporting member 19, a flask 1 supported edgewise thereon, a pattern carrying member 10, a supporting member on which the

pattern carrying member is mounted for longitudinal movement, a cross head for engaging the back of the flask, power means for moving the pattern carrying member and cross head toward and from each other and means for moving and holding the pattern carrying member independent of the power means upon the supporting member either in advanced or retracted position.

4. In combination, a supporting base, a pattern carrying member and flask operating means mounted thereon for relative lateral movement toward and from each other, means for slidably supporting a flask on one of its edges intermediate the pattern carrying member and the flask operating means, and power means for moving the pattern carrying member and the flask operating means toward each other.

5. In combination, a supporting base, a pattern carrying member and flask operating means mounted thereon for relative lateral movement toward and from each other, means for slidably supporting a flask on one of its edges intermediate the pattern carrying member and the flask operating means, power means for moving the pattern carrying member and the flask operating means toward each other, and spring means for separating such parts.

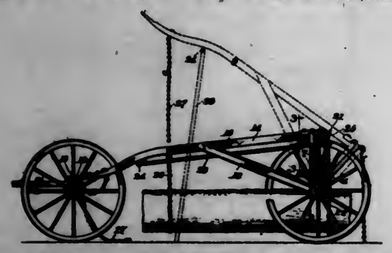
[Claims 6 and 7 not printed in the Gazette.]

878,511. FASTENER. WILLIAM B. H. DOWSE, West Newton, Mass., assignor to United States Fastener Company, Boston, Mass., a Corporation of Maine. Filed July 29, 1907. Serial No. 386,122.



A socket member of a snap-fastener comprising a stud receiving a case composed of an expansible dome having an outwardly turned annular flange at its base and a stud-catching collet crimped at its periphery over said annular flange and centrally perforate to admit a stud, a girdle to press and hold the garment material over said dome, the dome expanded over said girdle and within the material confined thereby.

878,512. LOGGING-TRUCK. JOHN W. EMERSON, Durham, N. C. Filed Apr. 12, 1907. Serial No. 367,751.



1 A vehicle frame of the character described comprising a bolster and a reach therefor, pairs of vertical struts secured to said bolster, an arch beam co-extensive in height with said struts and connecting said struts with the bolster, and removable axle skeins secured to the frame at the juncture of said arch beam and the struts.

2. A vehicle frame of the character described consisting of a bolster and a reach therefor, said bolster comprising a single cross beam, pairs of vertical beams secured at either end thereof, spaces between each of said pairs, arch beams connecting said cross and vertical beams, and axle skeins fitting within the spaces of said beams and secured thereto.

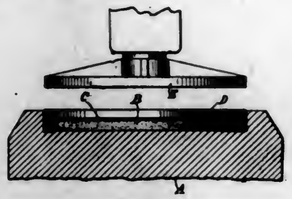
3. A vehicle frame of the character described consisting of a bolster and a reach therefor, said bolster comprising a single cross beam, spaced pairs of vertical beams secured thereto, spaced arch beams connecting said cross and vertical beams, axle skeins having tongues adapted to be removably secured between the spaces of said beams, and an adjusting pole carried by the reach for supporting the frame at various positions for loading.

4. In a loading truck of the character described, a bolster, said bolster comprising a cross T-beam, a pair of vertical angle iron standards on either end and disposed to either side thereof, an arch beam secured to said standards and the T-beam, and axle skeins secured at the junction of said standards and the arch beam.

5. In a loading truck of the character described, a bolster, said bolster comprising a cross T-beam, angle supports at either end and on opposite sides thereof, an arch beam connecting said supports and the T-beam, and axle skeins secured to said supports and the arch beam.

[Claim 6 not printed in the Gazette.]

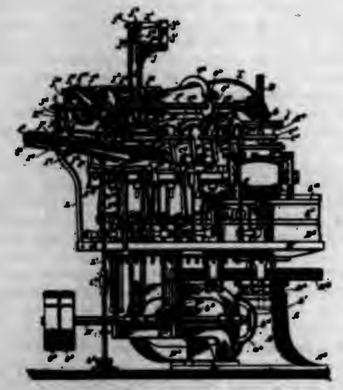
878,513. YIELDING MATRIX FOR SOUND-RECORDS. VICTOR H. EMERSON, New York, N. Y., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed June 29, 1905. Serial No. 267,590.



1. The combination with a press having two relatively-movable members of a flexible electro-deposited matrix of a sound-record, a yielding body at the back of said matrix between the same and one member of the press, and a tablet of comparatively rigid material for making a pressed sound-record on the other side of said matrix and between the same and the other member of said press.

2. The combination of a thin and comparatively flexible electro-deposited matrix of a sound-record and a backing of yielding material therefor.

878,514. MECHANISM FOR AFFIXING STAMPS AND SIMILAR DEVICES. EDWIN FIDELL, Jersey City, N. J. Filed June 16, 1905. Serial No. 265,488.



1. In mechanism of the character described, the combination with means for moving a packet in a horizontal curved path of travel, of means for feeding a sheet of joined stamps and for intermittently breaking a stamp therefrom, said feeding and breaking means being laterally disposed and in a plane radial to the packet travel, means for applying paste to the stamp back, and means for affixing the pasted stamp to the packet.

2. In means of the character described, the combination with devices for the advancement of packets, of means for feeding and breaking a stamp from a sheet, a head movable with the said devices for engaging the stamp, means for applying paste to the stamp back, and means for affixing the pasted stamp to the packet.

3. In means of the character described, the combination with devices for the advancement of packets, of means for feeding and breaking a stamp from a sheet, a head movable with the said devices for engaging a detached stamp, means for applying the paste to the stamp back, and means for affixing the pasted stamp to the packet.

4. In means of the character described, the combination with devices for the advancement of packets, of means for feeding and breaking a stamp from a sheet, a head movable with the said devices for engaging the detached stamp, means for applying paste to the stamp back, means for affixing the pasted stamp to the packet, and means for removing and delivering the stamped packet.

5. In means of the character described, the combination with devices for the advancement of packets, of a head movable with the said devices and adapted to engage the stamp, means for breaking the stamp from a sheet, means for applying paste to the stamp back, and a stripper carried by the head and adapted to disengage the stamp and affix it to the packet.

[Claims 6 to 11 not printed in the Gazette.]

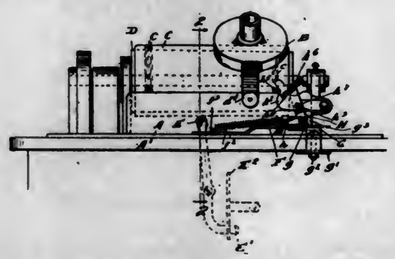
878,515. PROCESS OF PULVERIZING STONE. LEE K. FORSYTHE, Battle Creek, Mich., assignor of one-half to William L. Davies, Detroit, Mich. Filed May 11, 1907. Serial No. 373,151.

1. A process for preparing natural carbonate of lime in the form of stone for grinding which consists in heating the same to a temperature just below that at which carbonic-acid-gas is driven off, and treating the heated stone with water.

2. The process of preparing powdered natural carbonates in the form of stone, which consists in heating the stone to as high a temperature as is possible without driving off the carbonic-acid-gas, bringing the heated stone into contact with water, then crushing and grinding the same.

3. A process for preparing natural carbonates in the form of stone for grinding, which consists in heating the same to a high temperature without driving off the carbonic-acid-gas, and then treating the stone with water.

878,516. TALKING-MACHINE. IRA G. FOSLER, Chicago, Ill. Filed July 15, 1907. Serial No. 383,804.

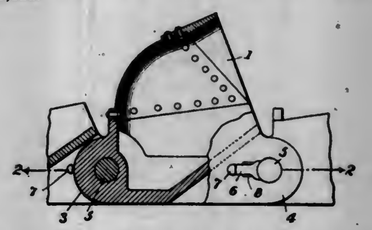


1. In a talking machine, the combination with the rotary record holder, reproducer, reproducer carriage and the stop lever, of an automatic stop slide having a setting projection, a spring for actuating said stop slide, a clamp upon which said stop slide reciprocates, a releasing trigger having an adjustable arm in the path of the reproducer carriage to automatically stop the machine and prevent overrunning of the sound record, said releasing trigger having an upright arm furnished with upper and lower rivets, and said adjustable arm having a pivot slot at its lower end and a curved slot at its upper end furnished with a plurality of adjusting notches adapted to engage said upper rivet, substantially as specified.

2. The automatic stop attachment for talking machines comprising a clamp having a movable clamp piece and clamp screw and provided with an upturned flange, a stop slide having a slot at one end to receive the stop lever of the talking machine, and a slot at the other end for connection with said clamp, a spring connecting said stop slide and clamp, a set projection on the stop slide and a releasing trigger furnished with an adjustable arm having a pivot slot and a curved slot furnished with a plurality of adjusting notches, substantially as specified.

3. The automatic stop attachment for talking machines comprising a clamp, a stop slide mounted thereon, and having a set projection for engagement with the releasing trigger and a slot to receive the stop lever of the talking machine, a spring connecting said stop slide and clamp and a releasing trigger mounted pivotally upon said clamp, said releasing trigger having an adjustable arm furnished with a pivot slot at its lower end and a curved slot at its upper end provided with a plurality of adjusting notches, substantially as specified.

878,517. DREDGE-BUCKET JOINT. ALEXANDER T. FRASER, Butte, Mont. Filed May 23, 1907. Serial No. 375,328.



1. In a chain of the character described, the combination with links having lugs, and pivot pins connecting lugs of adjacent links, of means for locking the pins to certain of said lugs comprising blocks seated in said lugs and bearing on the pins, and wedges extending substantially parallel with said pivot pins and bearing on said blocks.

2. In a chain of the character described, the combination with links having lugs, and pivot pins connecting lugs of adjacent links, of means for locking the pins to certain of said lugs comprising blocks seated in said lugs and each having a curved face adapted to bear on a pivot pin and having on opposite sides of its body projections adapted to engage the link lugs and prevent movement of said blocks longitudinally of the pivot pins, and wedges operating to hold said blocks in contact with the pivot pins.

3. In a chain of the character described, the combination with links each having a pair of separated lugs at one end adapted to receive between them a member of an adjacent link, and pivot pins each extending through the separated lugs of one link and the intermediate member of another link, of means for locking the pins to said separated lugs, comprising a block seated in each of said lugs and bearing on the pivot pins, and wedges extending through said lugs in the direction of the length of the pivot pin and holding said blocks against the pivot pin.

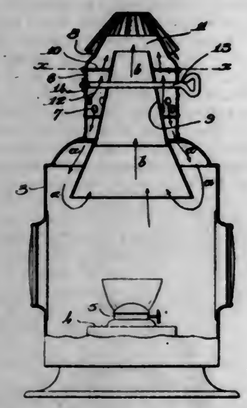
4. In a chain of the character described, the combination with links each having a pair of separated lugs at one end adapted to receive between them a member of an adjacent link, and pivot pins each extending through the separated lugs of one link and the intermediate member of another link, of means for locking the pins to said separated lugs, comprising a block seated in each of said lugs and bearing on the pivot pins, and wedges extending through said lugs in the direction of the length of the pivot pin and in rear of the member of the other link and holding said blocks against the pivot pin.

5. In a chain of the character described, the combination with links having lugs, and pivot pins connecting lugs of adjacent links, of blocks fitted in seats formed in the

lugs of one link and bearing against the pivot pin extending into said lugs, means engaging said block to prevent movement thereof longitudinally of the pivot pin, and wedges extending through the lugs in which the blocks are mounted and holding the blocks against the pivot pin.

[Claim 6 not printed in the Gazette.]

878,518. TOP-DRAFT LANTERN. WILLIAM E. FRESH, Woburn, Mass. Filed Oct. 28, 1907. Serial No. 399,508.



1. In a top draft lantern, the combination with an airtight body having a dome provided with a discharge chamber having discharge ports and a supply chamber having inlet ports, of a draft cone situated within the dome and extending into the discharge chamber, and a partition separating the discharge chamber from the supply chamber, said partition having therein equalizing ports which form a direct communication between said chambers.

2. In a top draft lantern, the combination with an airtight lantern body having a dome provided with a discharge chamber having discharge ports and a supply chamber provided with inlet ports, of a draft cone situated within the dome, a perforated partition surrounding the cone and situated between the inlet ports and the outlet ports, and a sustaining pin extending diametrically through the dome and through the cone.

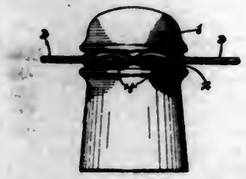
878,519. COMBINED STRAP AND STRAP-LOOP. WILLIAM P. GELABERT, Fulton, Mo. Filed Mar. 16, 1907. Serial No. 362,726.



1. A strap loop having a cross bar at each end, a plate integral with one of the end bars and projecting forwardly therefrom, said plate having a rivet hole, and a rivet passing through said hole for securing two members of a looped strap at a point beyond one end of the body of the loop.

2. The combination with a buckle and a looped strap engaging a member of the buckle, of a loop having a cross bar at each end, the end bar of the loop nearest the buckle having an integral plate projecting forwardly therefrom toward the buckle, and a rivet passing through said forwardly projecting loop and the two members of the strap loop which engages the buckle.

878,520. MEANS FOR TYING WIRES TO INSULATORS, &c. LEWIS W. GERDON, Meadville, Pa., assignor of one-half to Edwin P. Barnes, Cleveland, Ohio. Filed Oct. 14, 1907. Serial No. 397,375.



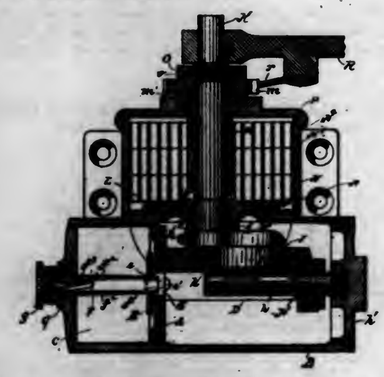
1. The combination with an insulator and a line wire of a tie for binding the line wire to the insulator consisting of two members each of which completely encircles the insulator, said members intersecting with each other and crossing the line wire at the point where the line wire is in contact with the insulator.

2. The combination with an insulator and a line wire of a tie for binding the line wire to the insulator consisting of two loops each of which completely encircles the insulator, said loops crossing each other and the line wire where the line wire is in contact with the insulator.

3. The combination with an insulator having a wire groove and a line wire adapted to lie in said groove of a tie wire bent around said insulator forming a loop around the bottom of the groove, the ends of said loop being crossed over said line wire and each other and bent around the insulator and twisted together forming a second loop above the first-mentioned loop.

4. The combination with an insulator and a line wire of a tie for binding the line wire to the insulator consisting of a wire extending around the insulator below the line wire and crossing the line wire where it contacts with the insulator and extending again around the insulator above the line wire and having its ends united together.

878,521. COMBINED DOOR CHECK AND SPRING. WILLIAM GILFILLAN, New Haven, Conn. Filed Feb. 13, 1902. Serial No. 93,918.



1. In a door check, the combination with a liquid checking chamber; of a removable cap for closing one end of said chamber; a piston having a head at the end away from said cap supported and guided by said chamber; a device carried by said cap and removable therewith for supporting and guiding the other end of said piston; a rotary spindle; and means for operating said piston longitudinally from said spindle, substantially as described.

2. In a door check, the combination with a liquid checking chamber; of an axially disposed arbor in said chamber; a piston having at one end a head supported and guided by said chamber, and its other end supported and guided by said arbor; a transverse race-way on said

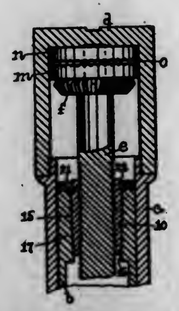
piston; a rotary spindle having a crank arm; and a depending crank eccentric on said arm whose diameter is equal to the width of said race-way, and having one point of its periphery in line with the axis of said spindle, said crank eccentric being adapted to directly engage the sides of said race-way to operate said piston longitudinally upon the rotation of said spindle, substantially as described.

3. In a door check, the combination with a liquid checking chamber; of a piston movable longitudinally therein; a transverse race or way formed on said piston; a rotary spindle having a crank eccentric adapted to engage in said race or way to operate said piston longitudinally upon the rotation of said spindle; a stop on said piston for limiting the rotation of said spindle; and means on said spindle for engaging said stop, substantially as described.

4. In a door check, the combination with a spring chamber; of a liquid checking chamber; a piston within said liquid chamber; a rotary spindle projecting from said spring chamber into said liquid chamber and engaging said piston to operate the same; a gland separating said chambers and having an aperture for said spindle; an enlargement or shoulder on the part of said spindle within said liquid chamber adapted to bear upward against said gland; and means for drawing said spindle longitudinally to adjust the tightness of the contact between said enlargement or shoulder and said gland, substantially as described.

5. In a door check, the combination with a spring chamber; of a cap on said spring chamber; a liquid checking chamber; a gland fixed between said spring and liquid chamber; a rotary spindle passing through said gland and cap, provided at its lower end with a shoulder adapted to bear upward against said gland; and a screw nut adapted to engage the upper end of said spindle and bear downward on said cap, substantially as described.

878,522. LIFTING-JACK. FRANK L. GORMLEY, Boston, Mass., assignor to A. O. Norton Incorporated, Boston, Mass., a Corporation. Filed Sept. 19, 1907. Serial No. 393,656.



1. In a lifting jack, in combination, a hollow standard having a tapering screw-threaded portion on its interior forming a tapering socket, a nut or sleeve having a longitudinally extended slit and provided on its exterior with tapering screw-threads to engage the screw-threads of said socket and having screw-threads on its interior, a threaded rod or screw engaging the interior screw-threads of said sleeve or nut, and a threaded collar on said sleeve or nut adapted to engage the said socket piece, substantially as described.

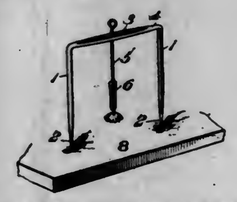
2. In a lifting-jack, in combination, a hollow standard having a tapering screw-threaded portion on its interior forming a tapering socket, a nut or sleeve having a longitudinally extended slit and provided on its exterior with tapering screw-threads to engage the screw-threads of said socket and having screw-threads on its interior, a threaded rod or screw engaging the interior screw-threads of said sleeve or nut, and means to limit the movement of said sleeve or nut into its socket, substantially as described.

3. In a lifting-jack, in combination, a hollow standard having a tapering screw-threaded portion on its interior forming a tapering socket, a nut or sleeve having a longitudinally extended slit and provided on its exterior with tapering screw-threads to engage the screw-threads of said socket and having screw-threads on its interior, and a threaded rod or screw engaging the interior screw-threads of said sleeve or nut, substantially as described.

4. In combination, a socket piece provided on its interior with a screw-threaded tapering portion, a contractible nut or sleeve provided on its exterior with a tapered screw-threaded portion coöperating with said tapered socket and having screw-threads on its interior, said nut or sleeve having an externally threaded circular portion at its end of larger diameter a screw engaging the interior screw-threads of said sleeve or nut, and a threaded collar engaging said circular portion, substantially as described.

5. A sleeve or nut provided with a longitudinally extended slot or slit, and having screw-threads on its interior and provided with a threaded tapering portion on its exterior, and a threaded circular portion at its end of greater diameter, substantially as described.

878,523. PINNING AND HOLDING DEVICE FOR JEWELRY. MOSES GREER, Atlanta, Ga. Filed Feb. 28, 1907. Serial No. 359,912.



1. A frame having pointed arms and having a portion connecting the arms and extending at right angles thereto and provided with a longitudinal clamping slot.

2. A supporting member provided with a clamping slot having spring walls, and a holding member removably held in said slot by the spring walls of the slot.

3. An approximately U-shaped frame provided with pointed ends and a clamping slot having spring walls; and a holding member removably held in the clamping slot by the spring walls of the slot and projecting between the two arms of the U-shaped frame.

878,524. SURGEON'S KNIFE. RICHARD K. GREGORY, Greensboro, N. C., assignor of one-half to John H. White, Baltimore, Md. Filed Sept. 24, 1907. Serial No. 394,380.



1. A knife of the character described, comprising a blade, and a handle, said handle being hollow and constituting a reservoir, the knife being provided with an opening leading from the interior of the reservoir to the exterior of the blade.

2. A knife of the character described, comprising a blade and a hollow handle, the knife being provided with an opening leading from the interior of the handle to the exterior of the blade, and a valve mounted in the handle.

3. A knife of the character described, comprising a blade and a hollow handle, the knife being provided with ports and channels leading from said ports to the blade, said

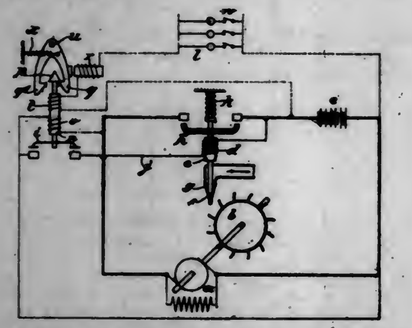
ports and channels establishing communication between the interior of the reservoir and the exterior of the blade.

4. A knife of the character described, comprising a blade and a hollow handle, the knife being provided with ports and channels leading from said ports and establishing communication between the interior of the handle and the exterior of the blade, said channels being provided next to the blade with divergent branches.

5. A knife of the character described, comprising a blade and a hollow handle, and a neck portion between the two, said neck portion being formed with shoulders and with ports in said shoulders establishing communication with the interior of the reservoir and the exterior of the neck portion, said neck portion being also formed with channels leading towards the blade from said ports.

[Claim 6 not printed in the Gazette.]

878,525. ELECTRIC INSTALLATION WORKING WITH TURBO-DYNAMOS AND ACCUMULATORS. MAX GROB, Winterthur, Switzerland. Filed Aug. 22, 1906. Serial No. 331,622.



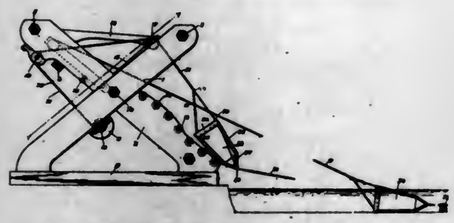
1. In electric installations working with turbo-dynamos and electric accumulators, the combination with a cut-off device for controlling the flow of driving fluid to the turbine and a switch for controlling the connection between the accumulator battery and the dynamo, of an automatic electro-magnetic device having a solenoid in a controlling circuit, and a spring-actuated movable core connected mechanically on the one hand to said turbine-controlling device and on the other hand to said connecting switch, so that when the electro-magnetic device is energized or de-energized the opening and closing of the turbine-controlling device is effected simultaneously with the operation of said switch for the closing or breaking of the connection between the dynamo and the accumulator battery, substantially as described.

2. In electric installations working with turbo-dynamos and electric accumulators the combination with a cut-off device for controlling the flow of driving fluid to the turbine, a connecting circuit between the accumulator battery and the dynamo and a main switch for controlling this circuit, of an electromagnetic device having a movable part connected mechanically on the one hand to said turbine controlling device and on the other hand to said main switch, a shunt circuit inclosing the winding of said electro-magnetic device, a secondary switch located in this shunt circuit in series with said winding shunted electromagnetic means for automatically controlling this secondary switch, and an electrically controlled catch device for governing the movable part of the last named electromagnetic means substantially as described.

3. In electric installations working with turbo-dynamos and electric accumulators the combination with a cut-off device for controlling the flow of driving fluid to the turbine, a connecting circuit between the accumulator battery and the dynamo and a main switch for controlling this circuit, of an electromagnetic device having a movable part connected mechanically on the one hand to said turbine controlling device and on the other hand to said main switch, a shunt circuit inclosing the winding of said electromagnetic device, a secondary switch located in this shunt circuit in series with said winding, a shunted solenoid, a movable core therein mechanically connected to the movable part of said secondary switch, a spring acted catch pawl adapted to coöperate with this core so as to retain it temporarily in a position corresponding to the opening of the secondary switch, a working circuit with a cut-off switch, and a releasing electro-magnet located in this working circuit and adapted to disengage said catch pawl from the core connected to the secondary switch, subondary switch, substantially as described.

4. In electric installations working with turbo-dynamos and electric accumulators the combination with a cut-off device for controlling the flow of driving fluid to the turbine, a connecting circuit between the accumulator battery and the dynamo and a main switch for controlling this circuit, of an electromagnetic device having a movable part connected mechanically on the one hand to said turbine controlling device and on the other hand to said main switch, a shunt circuit inclosing the winding of said electromagnetic device, a secondary switch located in this shunt circuit in series with said winding, a shunted solenoid, a movable core therein mechanically connected to the movable part of said secondary switch, a spring acted catch pawl adapted to coöperate with this core so as to retain it temporarily in a position corresponding to the opening of the secondary switch, another catch pawl connected bodily to the first named and adapted to catch the core connected to the secondary switch in an intermediate position when it is released from the first catch pawl, an electric lighting circuit with lamps and separate cut-off switches combined therewith, a releasing electromagnet located in the lighting circuit and adapted to act upon the first named catch pawl, and an auxiliary solenoid on the core connected to the secondary switch, placed in series with the releasing electromagnet in the lighting circuit, substantially as described.

878,526. TRIANGULAR DREDGING-BUCKET AND HOIST FOR SAME. CHARLES H. GUNN, Marysville, Cal. Filed Apr. 22, 1907. Serial No. 369,445.



1. In a device of the character described a hoisting machine having substantially X-shaped side frames suitably braced together, and formed of cross members, a plurality of rollers disposed between the lower ends of one set of said frame members, a cable means on said frame, buckets secured to said cable means, and means for automatically raising said buckets onto said rollers, and means for automatically dumping said buckets, as set forth.

2. In a device of the character set forth a hoisting frame, cable means thereon, triangular shaped dredging buckets secured to said cable means, and means for automatically raising said buckets onto said frame and dumping the same, as specified.

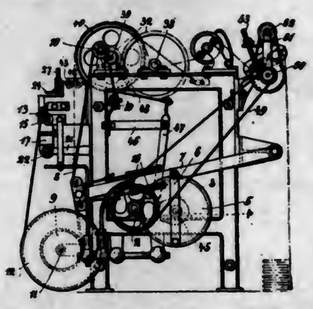
3. In a device of the character described a hoisting means, a cable arranged in connection therewith, triangular shaped buckets secured on said cable, and means whereby a forward movement of said cable will cause said buckets to tilt slightly forward, as set forth herein.

4. In a device of the character described a hoisting frame, an inclined roller receiving mechanism installed therein, oscillating arms pivotally secured to said frame and extending normally above the top of said roller mechanism, pulleys arranged in the tops of said arms, a cable suitably disposed through said pulleys and adapted to carry dredging buckets, and means on said cable for oscillating said arms as required, as specified.

5. In a device of the character described a hoisting frame, an inclined roller mechanism disposed thereon, oscillating arms pivotally mounted on said frame and extending normally above the upper end of said roller mechanism, a cable disposed through said arms and engaging with suitable hoisting drums, buckets secured to said cable, means for alternately advancing one bucket and drawing the other backward, and means on said cable for alternately oscillating said arms backward and forward, as set forth.

[Claims 6 to 13 not printed in the Gazette.]

878,527. MACHINE FOR CUTTING FABRICS. AUGUST HEIL, München-Gladbach, Germany, assignor to H. Simons, München-Gladbach, Germany. Filed June 24, 1907. Serial No. 380,562.



1. In a machine of the character described, a fixed knife, combined with a co-acting rotary cutter, means for reciprocating the latter along the fixed knife, and means for alternately swinging the rotary cutter towards and away from the fixed knife, substantially as specified.

2. In a machine of the character described, a fixed knife, combined with a rotary cutter, means for reciprocating the latter along the fixed knife, a cam, and means actuated by the cam for alternately swinging the rotary cutter towards and away from the fixed knife, substantially as specified.

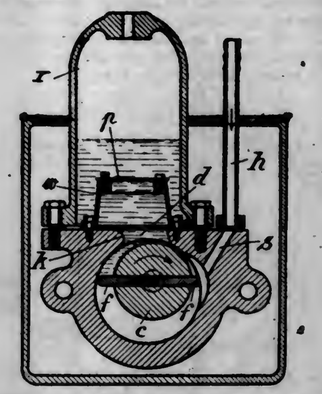
3. A machine of the character described, comprising a cutter, a reciprocating rope operably secured thereto, a fixed rope, a pulley operably connected to the cutter-spindle and engaged by the fixed rope, and a tilting frame operably engaging the cutter, substantially as specified.

4. A machine of the character described, comprising a cutter-holder, a rod on which the holder is slidable and rotatable, a frame oscillating on the axis of said rod, and means for guiding the holder along said frame, substantially as specified.

5. A machine of the character described, comprising a cutter, means for reciprocating the cutter, means for rotating the cutter, means for tilting the cutter, a cloth-feed roller, a rotatable disk having a scale, and a crank adjustably engaging the disk and operably secured to the cloth-feed roller, substantially as specified.

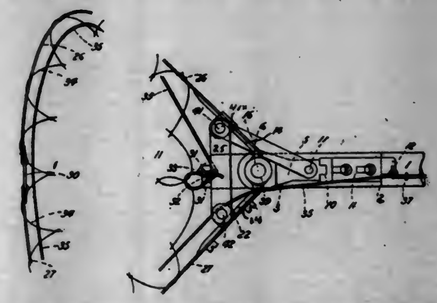
878,528. ROTARY PUMP FOR GASES. CARL HOFFMANN, Charlottenburg, Germany, assignor to Siemens-Schuckertwerke, Gesellschaft mit beschränkter Haftung, Berlin, Germany. Filed June 9, 1906. Serial No. 321,006.

1. A rotary pump for gases, comprising in combination, a pump chamber casing, having an inlet port suitably located and a relatively wide delivery port above, rotary means in the pump chamber for propelling gas therefrom to said delivery port, means for supplying a liquid packing, an intermediate casing forming a relatively wide chamber between and communicating with the delivery port below and the packing supplying means, a check valve in the upper portion of said intermediate casing adapted to permit escape of packing containing bubbles, and means for admitting packing free from bubbles into the lower portion of the chamber within said intermediate casing substantially equal in quantity to that escaping through said check valve.



2. A rotary pump for gases, comprising in combination, a pump casing having an inlet port suitably located and a delivery port above, rotary means in the pump chamber for propelling gas therefrom to said delivery port, a receptacle located above said delivery port and adapted to contain packing liquid, an intermediate casing forming a chamber between and communicating with the delivery port below and the packing liquid vessel above said intermediate casing having a volume equal to at least ten per cent. of the stroke volume of the pump, a check valve in the upper portion of said intermediate casing adapted to permit escape of packing containing bubbles and means for admitting packing free from bubbles into the lower portion of the chamber, within said intermediate casing substantially equal in quantity to that escaping through said check valve.

878,529. LANDING-NET. ALLAN HOLMES, Dunedin, New Zealand. Filed May 19, 1905. Serial No. 261,217.

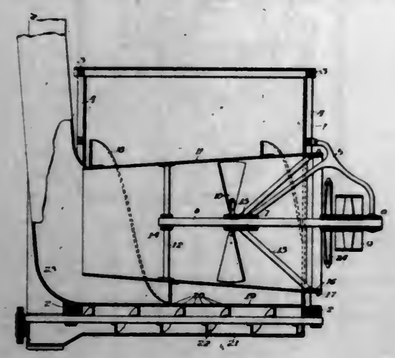


1. Improvements in landing nets comprising in combination a handle, a pivot pin thereon, a collapsible net frame consisting of two similar bands having one pair of ends linked together and the other pair of ends hinged to said pivot pin whereby the frame is revoluble on the pivot pin, a link pivotally secured by one end to the hinged end of one band near the pivot pins and pivotally secured by its other end to a bracket embracing and slidable on the other band, a link pivotally secured by one end to said bracket and by its other end to said handle and mechanism actuated by gravity for locking the frame in its extended position substantially as described.

2. Improvements in landing nets comprising in combination, a handle, a pivot pin thereon, a collapsible net frame

consisting of two similar bands having one pair of ends linked together and the other pair of ends hinged to said pivot pin whereby the frame is revoluble on the pivot pin, a connecting link pivotally secured by one end to the hinged end of one band near the pivot pin, and pivotally secured by its other end to a bracket embracing and slidable on the other band, a link pivotally secured by one end to said bracket and by its other end to said handle, a projection on the end of said handle, and a hanging tongue hinged to said connected link and adapted to engage said projection substantially as described.

878,530. PNEUMATIC STACKER. ANDREW J. INGLIS, Chicago, Ill. Filed May 13, 1907. Serial No. 373,196.



1. A pneumatic stacker having, in combination, a rotatable drum, a fan rotatable co-axially with said drum and inducing an air current therethrough, and a straw and air conduit communicating with the delivery end of said drum.

2. A pneumatic stacker having, in combination, a rotatable drum, a fan rotatably mounted within said drum and adapted to induce a current of air therethrough, and a straw and air conduit communicating with the delivery end of said drum.

3. A pneumatic stacker having, in combination, a rotatable drum, a fan rotatable co-axially therewith being surrounded thereby and inducing an air current therethrough, and a straw and air conduit communicating with the delivery end of said drum.

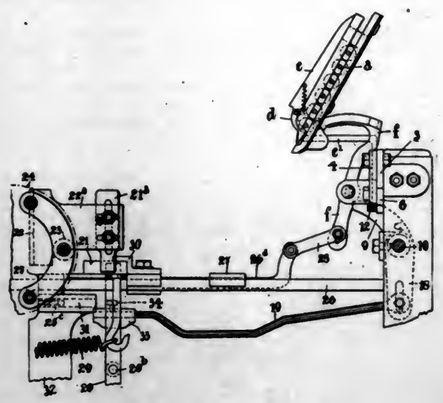
4. A pneumatic stacker having, in combination, a rotatable drum adapted to receive straw from a threshing machine, ribs arranged spirally on the periphery of said drum and adapted to convey the straw longitudinally thereof, a fan rotatably mounted within said drum and adapted to force a current of air therethrough, spirally arranged ribs on the inner surface of said drum, and an air and straw conduit communicating with the delivery end of the drum.

5. A pneumatic stacker having, in combination, a rotatable drum adapted to receive straw from a threshing machine and convey it longitudinally relative to said drum, a casing partially surrounding said drum at its bottom side, a series of perforations in said casing, and a grain receiver and conveyer below said casing adapted to receive the grain therefrom, a fan adapted to force a current of air through said drum, and a straw and air conduit communicating with the delivery end of said drum.

[Claim 6 not printed in the Gazette.]

878,531. WEFT-REPLENISHING LOOM. ARTHUR J. JACKSON, Ashton-on-Mersey, England. Filed July 30, 1906. Serial No. 328,333.

1. In combination in apparatus for automatically supplying weft carriers to loom shuttles on the failure of the weft, a self-threading loom shuttle, separate weft tongues for such shuttles and means for securing such weft tongues in the shuttle, a reservoir for such weft tongues, a pivoted ejector, a rod connected to the pivoted ejector, a slide connected to the rod, an elbow lever pivoted to the slide having an angle plate, a bowl on the spur wheel of the driving shaft of the loom, a pivoted lever arranged in conjunction with the elbow lever and means for oscillating the pivoted lever on failure of the weft supply to bring the angle plate into the path of the bowl to actuate the slide and means for insuring the correct positioning of the shuttle when automatically renewing the supply of weft therein substantially as described.



2. In apparatus for automatically supplying weft carriers to loom shuttles on the failure of weft a reservoir for the weft carriers, a pivoted ejector, a rod connected to the pivoted ejector, a slide connected to the rod, an elbow lever pivoted to the slide and carrying an angle plate, a bowl on the spur wheel of the driving shaft of the loom, a pivoted lever arranged in conjunction with the elbow lever and means for oscillating the pivoted lever on failure of the weft supply to partially rotate the elbow lever and thus bring the angle plate carried thereby into the path of the bowl on the spur wheel to actuate the slide and operate the pivoted ejector substantially as described.

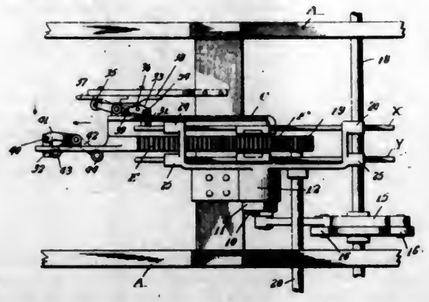
3. In apparatus of the indicated nature the means for actuating the pivoted ejector consisting of a slide, a rod connected to the ejector and to the slide, an elbow lever pivoted to the slide and carrying an adjustable angle plate, a rock shaft operated through the medium of the weft fork or feeler mechanism on the failure of the weft, a lever on such rock shaft, a rod connected to such lever and to a pivoted lever engaging with the elbow lever, a bowl on the spur wheel of the driving shaft arranged in the manner and substantially as described.

4. In combination in automatic weft supplying apparatus, shuttle tongues, bearing cops and means for inserting such shuttle tongues and cops into the shuttles between the picker guide rod and the shuttle box guard, said means consisting of a pivoted ejector, a slide adapted to operate the ejector and means for actuating the slide through the medium of a bowl carried by the spur wheel of the driving shaft of the loom, substantially as described.

5. The arrangement of parts for insuring the correct positioning of the shuttle when automatically renewing the supply of weft therein, consisting of a spindle, a spring against which the spindle is slidable, a cam piece on the spindle, a cranked arm on the spindle disposed behind the picker, a rotatable spindle connected to the slidable spindle, a crank on the rotatable spindle, a hooked finger actuated by the crank, a pin on such finger, a bracket formed with a curved slot in which slot the pin is slidable, a slot formed in the shuttle with which the hooked finger is adapted to engage, a cam on the loom frame to engage with the cam on the slidable spindle substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

878,532. MECHANICAL MOVEMENT. ROBERT T. JOHNSTON, Plainfield, N. J., assignor to The Campbell Printing Press & Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Mar. 30, 1904, Serial No. 200,745. Renewed June 15, 1907. Serial No. 379,179.



1. In a mechanical movement, the combination of a reciprocating bed or member, two controlling members periodically connected to the bed, and means for imparting a relatively opposite to-and-fro reversing motion to said two-controlling members.

2. In a mechanical movement, the combination of a reciprocating bed or member, mechanism for imparting the main movement thereto, and a reversing mechanism consisting of two oppositely moving rotating crank actuated controlling members periodically connected to the bed to reverse the movement thereof.

3. In a mechanical movement, the combination of a reciprocating bed or member, a driving mechanism therefor, two controlling members adapted to be periodically connected to the bed to reverse the same, and two oppositely disposed rotating cranks connected to actuate said controlling members.

4. In a mechanical movement, the combination of a reciprocating bed or member, a mechanism for imparting the main movement thereto, and a reversing mechanism consisting of two yokes, oppositely disposed cranks for actuating said yokes, and means for locking said yokes to the bed so that one yoke will reverse the movement of the bed in one direction and the other yoke will reverse the movement of the bed in the other direction.

5. In a mechanical movement, the combination of the bed, two racks carried thereby, a driving pinion, two oppositely disposed crank or wrist pins carried by said driving pinion, two yokes actuated from said oppositely disposed wrist pins, and means for connecting said yokes to the bed.

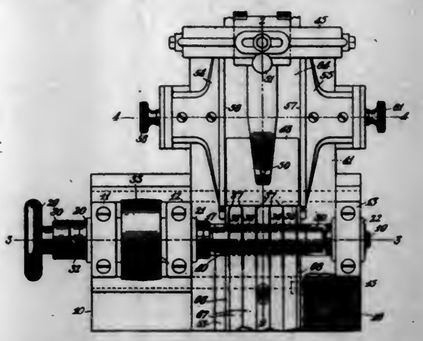
[Claims 6 and 7 not printed in the Gazette.]

878,533. WELT-STRIPPER. ROBERT K. JOHNSTONE, Salem, Mass., assignor to A. C. Lawrence Leather Company, a Corporation of Maine. Filed Feb. 26, 1907. Serial No. 350,466.

1. In a welt stripper, a base, a bearing mounted on said base, a spindle journaled in said bearing, a cutter fast to said spindle, a work table pivoted to said base with its axis parallel to the axis of said spindle, means for adjusting said work table relative to said spindle, two guides having guiding faces at right angles to the axis of said spindle, and instrumentalities for adjusting said guides relative to each other, said instrumentalities being independent of each other.

2. In a welt stripper, a base, a bearing mounted on said base, a spindle journaled in said bearing, a cutter fast to said spindle, a work table movable transversely of said spindle, means for adjusting said table relative to said spindle, two guides having guiding faces at right angles to the axis of said spindle, said guides slidably mounted on said table, and two adjusting screws adapted to move said guides, respectively, independently of each other and toward and away from each other.

3. In a welt stripper, a base, a fixed bearing mounted on said base, a shaft journaled in said bearing, a second bearing detachably attached to said base, an arbor one end of which is detachably attached to said shaft, the other end of said arbor being journaled in said detachable bearing, a plurality of circular cutters mounted on said arbor, a work table pivotally mounted on said base with its axis parallel to the axis of said arbor, and means for adjusting said work table toward said arbor.

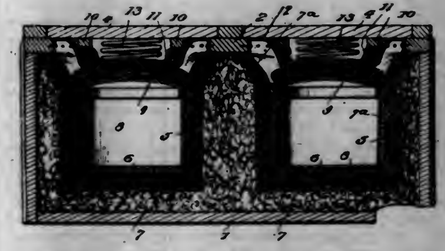


4. In a welt stripper, a base, a fixed bearing mounted on said base, a shaft journaled in said bearing, a second bearing detachably attached to said base, an arbor one end of which is detachably attached to said shaft, the other end of said arbor being journaled in said detachable bearing, a plurality of circular cutters mounted on said arbor, a work table pivotally mounted on said base with its axis parallel to the axis of said arbor, means for adjusting said work table toward said arbor, and two guides having guiding faces at right angles to the axis of said arbor.

5. In a welt stripper, a base, a fixed bearing mounted on said base, a hollow shaft journaled in said bearing, a second bearing detachably attached to said base, an arbor provided with a taper shank located in a tapered hole provided in said shaft, said arbor also provided with a screw-threaded stem extending from said shank, a nut rotatably mounted within said shaft, said nut having engagement with said stem, means for holding said nut against movement longitudinally of said shaft, a cutter mounted on said arbor, and a work table movable transversely of said arbor.

[Claims 6 to 9 not printed in the Gazette.]

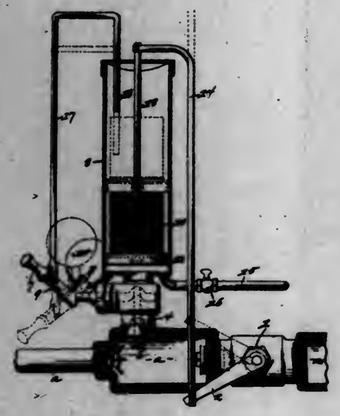
878,534. FIRELESS STOVE. WILLIAM KATZMANN, Chicago, Ill. Filed July 31, 1906. Serial No. 328,600.



A stove of the character described, consisting of a box provided with a transverse bar dividing it into two compartments, a cylinder in each of the respective compartments, each cylinder consisting of an asbestos sheet coiled upon itself, a plurality of asbestos disks mounted within the bottom of each cylinder, a stuffing of mineral wool separating the said cylinders from each other and

from the walls of the box, and textile linings fitting within the respective cylinders and secured to the walls of the box and to opposite sides of said transverse bar, whereby to hold the cylinders and disks in place, and lids for the box.

878,535. CLOSET-FLUSHING VALVE. WALTER KELLY, Toledo, Ohio. Filed June 9, 1906. Serial No. 320,942.



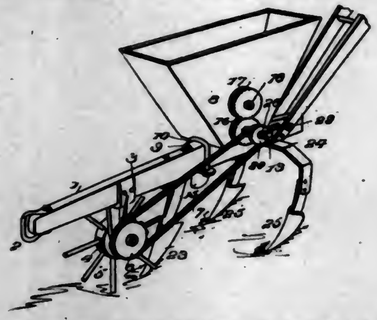
1. In a closet flushing device, a main supply-pipe, a valve controlling the passage of water therethrough, a cylinder connecting with the supply-pipe, a valve controlling the passage of water into the cylinder, a weighted piston movable in the cylinder and adapted to be elevated by the admission of water to the cylinder and adapted to be lowered by the weight of the piston discharging the water from the cylinder, a discharge outlet for the water in the cylinder, mannal means for admitting water to the cylinder, and means actuated by the movement of the piston for closing the valve admitting water to the cylinder and for successively opening and closing the valve controlling the passage of water through the main supply-pipe, substantially as described.

2. In a closet flushing device, the combination with a main supply pipe provided with an arm-operated valve, of a cylinder connected to said pipe, a lever-operated valve for controlling the passage of water into said cylinder, a weighted piston mounted in said cylinder provided with a piston-rod, a rod connecting said piston-rod to said arm-operated valve, and a rod carried by the lever-operated valve adapted to be engaged by said piston, for the purpose described.

3. In a closet flushing device, the combination with a main supply pipe, of a cylinder connected to said pipe, an arm-operated valve for closing said main-pipe, a lever-operated valve for controlling the passage of water into the cylinder provided with angled arms, a weight secured on one of said arms, a weighted piston arranged in said cylinder provided with a piston rod, an angled arm connecting the end of said piston-rod to the arm-operated valve, a rod carried by the other arm of the lever-operated valve provided with a return bend extending into said cylinder, and means for regulating the rate of discharge from said cylinder, for the purpose described.

4. In a closet flushing device, the combination with a main supply pipe provided with a valve, of a cylinder arranged on said pipe provided with a valve-controlled discharge tube, a lever-operated valve for controlling the passage of water into the cylinder, a weighted piston arranged in the cylinder provided with a piston-rod, a rod carried by said piston-rod for operating the valve of the main-pipe, and a rod carried by the lever-operated valve adapted to be engaged by said piston for the purpose described.

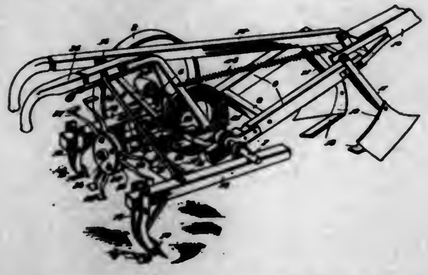
878,536. PLANTER. JOHN H. KENNEBREW, Columbus, Miss. Filed Apr. 17, 1907. Serial No. 368,680.



1. In a planter, the combination of a stock, a hopper mounted upon the stock, a trough at the bottom of the hopper, a discharge spout at one end of the trough, a spiral feeder operating within the trough, an angular agitator shaft journaled between the sides of the hopper, removable collars fitted upon the said angular shaft, tangential arms carried by the collars, and means for operating the feeder and agitator.

2. In a planter, the combination of a stock, a hopper mounted upon the stock, a trough at the bottom of the hopper formed by bending a piece of sheet material, bearing plates applied to opposite sides of the hopper, a spiral feeding mechanism operating within the trough, and journaled between the lower portions of the plates, an agitator journaled between the upper portions of the plates, and means for operating the feeder and agitator.

878,537. COTTON-CHOPPER. JOHN H. KENNEBREW, Columbus, Miss. Filed May 3, 1907. Serial No. 371,646.



1. In a cotton chopper, the combination of a traveling axle and its wheel, a framework extending rearwardly of said axle and pivotally mounted thereon, an actuating shaft journaled in said framework, a cotton chopper wheel mounted on said shaft, a driving gear wheel mounted on said axle, a gear wheel carried by the shaft and meshing with said first named gear wheel, means for raising and lowering said framework, and means for automatically throwing said gear wheels out of operative connection to the axle upon the raising of the framework.

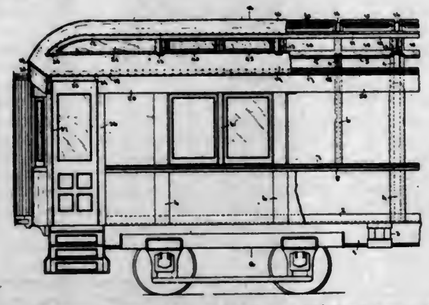
2. In a cotton chopper, the combination of a traveling axle and its wheels, of a rearwardly extending framework pivotally mounted on the axle, an actuating shaft journaled at its rear end in a beam of the framework, a yoke in which said shaft is also journaled, said yoke being pivotally mounted on the axle, a chopper wheel mounted on said shaft, said shaft being provided with a driving pinion, a gear wheel mounted loose on the axle and meshing with said pinion and adapted to move laterally on the axle for coupling and uncoupling connection therewith, means for raising and lowering the framework with the yoke, and a stationary finger having a laterally extending end adapted to engage the yoke upon the rising movement thereof whereby to slide the yoke laterally and carry the gear wheel laterally so as to disengage it from the axle.

3. In a cotton chopper, the combination of an axle and its traveling wheels, a rearwardly extending framework mounted on said axle, an actuating shaft journaled in said framework, means for driving said shaft, a cotton chopper wheel mounted to turn with said shaft and movable longitudinally thereon, a rack provided with a fork adapted to engage said wheel and move it forwardly or rearwardly on the actuating shaft, a toothed segment meshing with said rack, a support for said segment, a lever secured to said segment, an actuating cable secured to said lever and adapted to actuate the segment so as to move the rack forwardly, guiding supports for said cable, and a spring connected to said lever and to a portion of the framework, whereby to return the parts to normal position.

4. A cotton chopper, comprising an axle and traveling wheels therefor, a frame extending forwardly of the axle and pivotally mounted thereon, another frame extending rearwardly of the axle and pivotally mounted thereon, a chopper wheel supported by said last named frame, means for actuating said wheel, and diverging handles one of which is connected to the forwardly extending frame and is fulcrumed on the axle and the other of which is pivotally mounted on the axle and is operatively connected to the rearwardly extending frame to raise and lower the latter.

5. A cotton chopper, comprising an axle and traveling wheels therefor, a frame-work extending rearwardly from the axle and pivotally mounted thereon, an actuating shaft journaled in said frame-work, a chopper wheel mounted on said shaft, said shaft being provided with a driving pinion, a gear wheel mounted loose on the axle and spring pressed into engagement with said pinion, means for raising and lowering the frame-work on the axle, a stationary finger having a laterally extending end adapted to engage a portion of the frame-work upon the rising movement thereof, whereby to slide said portion laterally, the said portion carrying the shaft and its pinion and adapted to push the gear wheel along the axle against the action of its spring so as to disengage said gear wheel from the axle.

878,538. RAILWAY-CAR FRAME. WILLIAM F. KIESEL, Jr., Altoona, Pa. Filed Feb. 23, 1907. Serial No. 358,974.



1. In a car frame, the combination, with the frame posts having lower deck carlines formed by inturned extensions from the upper ends thereof, of longitudinal deck-plates having their lower edges flanged outwardly and riveted to the ends of said carline extensions.

2. In a car frame, the combination, with the frame posts having lower deck carlines formed by inturned extensions from the upper ends thereof, of longitudinal deck-plates having stiffening flanges formed along their lower edges to which the ends of the carline extensions are riveted, deck side-braces riveted to said carline extensions and to the deck-plates, and upper deck carlines riveted to the deck-plates between opposite side-braces.

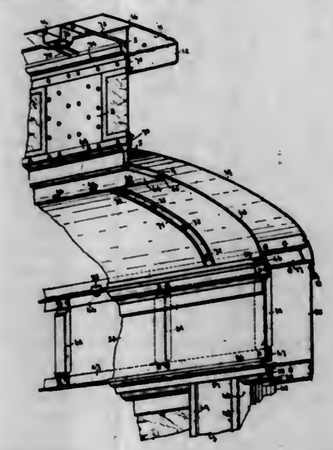
3. In a car frame, the combination, with the frame posts having lower deck carlines formed by inturned extensions from the upper ends thereof, of longitudinal deck-plates having stiffening flanges formed along their lower edges above which the ends of the carline extensions are riveted, lower deck roof sheets riveted in place on the outside of said extensions, the upper edges of said roof sheets being flanged and riveted to the deck-plates, and longitudinal brace members riveted to the posts to support the outer edges of said roof sheets.

4. In a car frame, the combination with the lower and upper deck carlines of deck-plates extending continuously from end to end of the car, said plates having outturned stiffening flanges formed thereon at top and bottom, substantially as and for the purpose set forth.

5. In a car frame, the combination, with the frame posts, of carlines connected to the same and comprising lower deck portions, upper deck portions, and vertical connecting portions, and deck-plates secured to the inner edges of the vertical connecting portions of the carlines and provided with outturned flanges at both top and bottom edges.

[Claims 6 to 20 not printed in the Gazette.]

878,539. INTERIOR FINISH FOR STEEL RAILWAY-CARS. WILLIAM F. KIESEL, Jr., Altoona, Pa. Filed Feb. 23, 1907. Serial No. 358,975.



1. The combination, with the main frame posts and the outside window-sill plates fastened between posts, of inside sill plates fitted in between posts and having down turned outside and inside flanges, the outside flanges resting upon the outside sill plates.

2. The combination, with the main frame posts, the outside window-sill plates fastened between posts and the intermediate posts resting upon the sill plates, of inside sill plates extending from main post to main post and brought together at their ends with butt joints, said inside sill plates being cut to fit between the posts and flanged downwardly at the outside where they rest upon the outside sill plates, said flanges serving as stops for the bottom of the window sashes.

3. The combination, with the main frame posts and the outside window-sill plates fastened between posts and provided with down turned flanges along their inner edges, of inside sill plates resting upon the outside sill plates and having flanges along their inward edges turned down opposite the outside sill flanges, and inside sheathing plates having their upper edges inserted between said flanges.

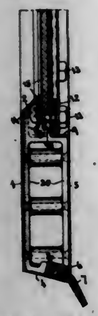
4. The combination, with the hollow main frame posts having inside cover plates, of inside sheathing plates extending from post to post, and vertical clamping strips covering the joints between sheathing plates and bolted to the cover plates to fasten the sheathing plates in place.

5. The combination, with the main frame posts and the outside window-sill plates fastened between posts with down turned flanges along their inward edges, of inside sill plates resting upon the outside sill plates and having

flanges along their inward edges turned down opposite the outside sill flanges, inside sheathing plates having their upper edges inserted between said flanges, said inside sill plates and sheathing plates being brought together with butt joints at the main posts, and vertical clamping strips covering the joints between sill and sheathing plates, said strips being bolted to the posts to fasten said plates in place.

[Claims 6 to 20 not printed in the Gazette.]

878,540. WINDOW-SASH. WILLIAM F. KIESEL, Jr., Altoona, Pa. Filed Apr. 23, 1907. Serial No. 369,749.



1. A window sash having stiles and rails composed of continuous outside and inside metal plates spaced apart and joined together along their outward edges, said plates being free to move toward or away from one another at their inward edges and bent to form between them a rabbet open at one side to receive the glass, a clamping strip applied to one of said plates and projecting over the open side of the rabbet, and means for drawing the other plate and said strip toward one another to engage and hold the glass within the rabbet.

2. A window sash having stiles and rails composed of outside and inside metal spaced apart and joined together along their outward edges, the inside plate having a return-bend formed along its free edge, and the outside plate having its free edge bent at right angles toward said return-bend to form a rabbet, a clamping strip applied to the outside plate and projecting over the rabbet, and bolts engaging said return-bend and the clamping strip to draw the two together.

3. A window sash having stiles and rails composed of outside and inside metal plates spaced apart and joined together along their outward edges, said plates having their free inward edges bent, the one with a return-bend and the other with a right angle bend to form a rabbet, the plates at intervals along said bends being provided with registering notches, bolts fitted into said notches and headed over on the inside to engage the return-bend, and a clamping strip held in place by said bolts to fasten the glass within the rabbet.

4. A window sash having its lower rail composed of outside and inside metal plates, the inside plate being flanged outwardly along its bottom edge and the outside plate being flanged inwardly along its bottom edge, said flanges being spaced apart to receive a weather strip, and means for fastening said flanges together.

878,541. WINDOW-SASH. WILLIAM F. KIESEL, Jr., Altoona, Pa. Filed Apr. 23, 1907. Serial No. 369,750.

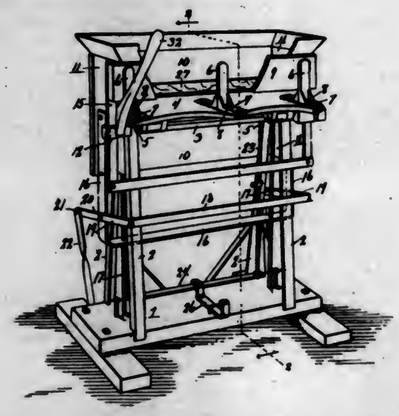
1. A window sash having stiles and rails formed from inside and outside plates of Z-shaped cross-section, the abutting flanges of said plates being riveted together and bent along their edges to form rabbets to receive the glass, and clamping strips fastened to said flanges to hold the glass in place.

2. A window sash having an inset surface on the stiles and rails and rabbets to receive the glass formed at the edges thereof, clamping strips of channel form having one flange set against said surface and the other flange positioned opposite the rabbets, and means for fastening said strips in place to hold the glass within the rabbets.



3. A window sash having stiles and rails formed from inside and outside plates set one against the other, one of said plates being bent away from the other to form a rabbet open at one side, and adjustable means applied to said plates for covering the open sides of the rabbets and fastening the glass within the rabbets.

878,542. CEMENT BLOCK AND BRICK MACHINE. SOLOMON M. KIMBLE, Jackson, Mich., assignor of two-thirds to Simplex Manufacturing Co., Jackson, Mich. Filed Mar. 5, 1906. Serial No. 304,232.

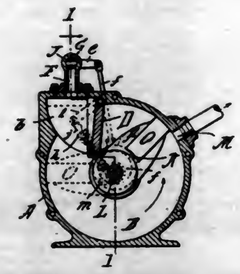


1. A mold of the character described, comprising a suitable frame, a bottom, a mold-section mounted to slide vertically with respect to said bottom, an actuating lever pivotally connected with the mold-section, an adjustable stop for supporting the mold-section, and a trip for disengaging said stop.

2. A mold of the character described, comprising a suitable frame, a bottom, a mold-section vertically adjustable with respect to said bottom, said mold-section having a depending bail, guide-rods passing through said bail, a pivoted lever engaging the bail for moving the mold-section vertically, depending spring-rods carrying stop-lugs adapted to engage the bail to support the mold-section and means for moving said spring-rods to disengage said lugs.

3. A cement brick and block machine, comprising a suitable frame, a mold mounted thereon consisting of a trilateral section forming three sides of the mold, a bottom, the fourth side of the mold carried on said bottom, said bottom and fourth side movable away from the remaining sides, the trilateral mold section being vertically movable with respect to the bottom, an actuating lever pivotally connected with the vertically movable mold section, an adjustable stop for supporting said mold section, and a trip for disengaging said stop.

878,543. STEAM-ENGINE. WINCENTY KAYGOWSKI, Chicopee Falls, Mass. Filed Sept. 9, 1907. Serial No. 391,894.

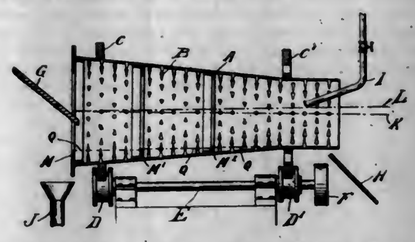


1. In an engine the combination with an engine-body having a central shaft opening, a plurality of annular pressure chambers concentrically surrounding the shaft opening, with contracted spaces in parallel planes which are perpendicular to the axis of the shaft opening, and which connect the shaft opening with the pressure chambers, said pressure chambers having each an enlargement at one side of and continued from such chamber, and each chamber enlargement having an inlet passage therewith connected and a cut off valve provided therefor, exhaust conduits leading from the pressure chambers, at points removed from said enlargements, an engine shaft extended through the engine body in said shaft opening and having radial arms extending in different directions through said connecting spaces and provided with piston disks movably fitting in the pressure chambers, pivotally mounted abutment gates adapted to have swinging movements in said chamber enlargements and provided with crank arms, cams on the engine shaft, and thrust rods coacting with said cams and connected with said crank arms.

2. In an engine the combination with an engine-body having a central shaft opening, a plurality of annular pressure chambers concentrically surrounding the shaft opening, with contracted spaces in parallel planes which are perpendicular to the axis of the shaft opening, and which connect the shaft opening with the pressure chambers, said pressure chambers having each an enlargement at one side of and continued from such chamber, and each chamber enlargement having an inlet passage therewith connected and a cut off valve provided therefor, exhaust conduits leading from the pressure chambers, at points removed from said enlargements, and said engine body having extending at its opposite heads apertured lugs *k*, an engine shaft extended through the engine body in said shaft opening and having radial arms extending in different directions through said connecting spaces and provided with piston disks movably fitting in the pressure chambers, abutment gates adapted to have swinging movements in said chamber enlargements, and short shafts on which the gates are secured, mounted in the engine body, projecting oppositely beyond the heads thereof, and having crank arms, cams on opposite end portions of the engine shaft, shouldered thrust rods coacting with said cams, guided through said apertured lugs *k*, and connected with said crank arms, and spiral springs encircling said thrust rods and in compression between said lugs and the shouldered portions of the thrust rods.

3. A steam engine having double pressure chambers and double concentric revoluble pistons arranged in opposition, comprising an engine body having a central shaft opening, annular pressure chambers concentrically surrounding the shaft opening, spaces in separated parallel planes perpendicular to the shaft opening axis connecting the shaft opening with the pressure chambers and said pressure chambers having enlargements at the upper portions thereof with inlet passages therewith connected, said engine body being made in an intermediate and two outer sections detachably united, as shown and described, and said double chambered engine body having exhaust openings and pressure inlet passages provided with cut off valves, means for operating said cut off valves, an engine shaft revolubly supported in the said shaft opening and constructed in two outer end sections, and an intermediate section, the outer shaft sections having integral therewith piston carrying arms oppositely extended and disposed in the spaces connecting the shaft opening with the pressure chambers, disk shaped pistons carried by said arms and revolubly movable in the annular pressure chambers, and clutch forming hubs at the inner sides of the piston carrying arms and the intermediate shaft section having clutch members at their opposite ends engaging the clutch hubs of the outer shaft sections, abutment gates movable in said chamber enlargements, shafts on which they are individually carried provided with crank arms, thrust rods connected with said crank arms, and cams on the engine shaft with which said thrust rods coact.

878,544. WASHING APPARATUS. MEREDITH LEITCH, Elizabeth, N. J., assignor, by mesne assignments, to Metal Process Company, a Corporation of New York. Filed Feb. 11, 1907. Serial No. 356,688.



1. In a washing apparatus, the combination of a gradually increasing shell mounted so as to have its axis at the smaller end of the shell lower than at its larger end and its bottom at the larger end lower than the smaller end, means for introducing water into said cylinder and means for causing said cylinder to revolve.

2. In a washing apparatus, the combination of a gradually increasing shell mounted so as to have its axis at the smaller end of the shell lower than at its larger end and its bottom at the larger end lower than at the smaller end, means for introducing water into said cylinder and means for causing said cylinder to revolve, said shell having a retarding flange for holding back the water.

3. In washing apparatus, the combination of a gradually increasing shell mounted so as to have its axis at the smaller end of the shell lower than at its larger end and its bottom at the larger end lower than at the smaller end, means for introducing water into said cylinder and means for causing said cylinder to revolve, said shell having a series of retarding flanges for producing a plurality of fields of water.

4. In a washing apparatus, the combination of a gradually increasing shell mounted so as to have its axis at the smaller end of the shell lower than at its larger end and its bottom at the larger end lower than at the smaller end, means for introducing water into said cylinder and means for causing said cylinder to revolve, said shell having internal projections.

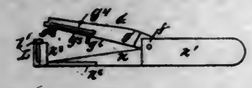
5. In a washing apparatus, the combination of a gradually increasing shell mounted so as to have its axis at the smaller end of the shell lower than at its larger end and its bottom at the larger end lower than at the smaller end, means for introducing water into said cylinder and means for causing said cylinder to revolve, said shell having external projections concentric with its axis, and revoluble wheels on which said projections rest.

[Claims 6 to 9 not printed in the Gazette.]

878,545. CUTTING IMPLEMENT. ABBOT A. LOW, Horseshoe, N. Y. Filed May 11, 1907. Serial No. 373,116.

1. In an implement of the character designated, the combination of a rigid knife blade and shank formed in-

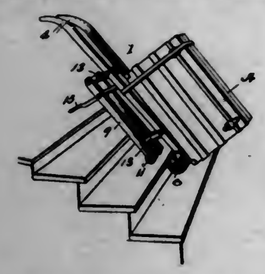
tegral therewith, a movable blade pivoted to said shank and formed with a rear extension, a spring bearing on said rear extension, and a lateral guard on said movable blade formed with a bearing surface parallel to the cutting edge of said blade for the purpose described.



2. In an implement of the character designated, the combination of a rigid blade and shank formed integral therewith, a movable blade pivotally connected to the shank, and formed with a rear extension, a spring bearing against said rear extension, an extension on the forward end of the rigid blade formed with a groove for the reception of the end of the movable blade, and a slide on said knife blade adapted to lock the end of said movable blade in said groove, for the purpose described.

3. In an implement of the character designated, the combination with a rigid knife blade and a shank formed integral therewith, a movable blade pivotally connected to the shank and formed with a rear extension, a spring bearing on said rear extension, a lateral guard on said stationary knife blade formed with a bearing surface parallel to the cutting edge thereof and a lateral bearing on said movable blade formed with a bearing surface parallel to the edge thereof, for the purpose specified.

878,546. HOUSE-TRUCK. JUSTUS H. LYON, Kearney, Nebr. Filed July 12, 1907. Serial No. 383,501.



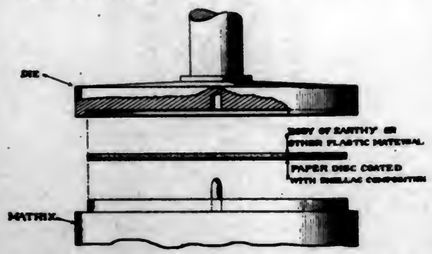
1. In a house truck, the combination of a main frame having wheels journaled at its forward end, a supplemental frame arranged below and pivotally connected to said main frame and having wheels journaled at its forward end, and a lever pivotally mounted within said frames for swinging the same with relation to one another, substantially as described.

2. In a house truck the combination of a main frame having wheels journaled at its forward end, a supplemental frame arranged below and pivotally connected to said main frame and having wheels journaled at its forward end, and a lever pivotally mounted within one of said frames and having pivotal connection with the other of said frames for swinging the same with relation to one another, substantially as described .

3. In a house truck, the combination of a main frame having wheels journaled at its forward end, a supplemental frame arranged below and pivotally connected to said main frame and provided with wheels journaled at its forward end an operating rod loosely connected at one end to a portion of said main frame and extending between said frames and a lever pivotally mounted within said supplemental frame and having pivotal connection with the end of said operating rod for swinging said frames with relation to one another, substantially as described.

4. In a house truck the combination of a main frame having wheels journaled at its forward end, a supplemental frame arranged below and pivotally connected to said main frame and having wheels journaled at its forward end, and a lever pivotally mounted within said supplemental frame and having pivotal connection with said main frame for swinging one of said frames with relation to the other, substantially as described.

878,547. PRODUCTION OF DISK SOUND-RECORDS. THOMAS H. MACDONALD, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Sept. 8, 1906. Serial No. 333,812.



1. The process which consists in coating sheets of paper with plastic material, and uniting two or more coated sheets to form a record tablet.

2. The process of manufacturing disk sound-records, which consists of applying shellac-powder to a disk of paper, applying the same upon a record-matrix, applying suitable backing-material upon the back of the paper, and compressing the same.

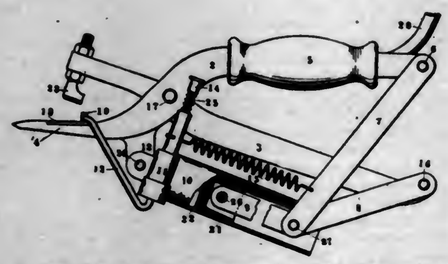
3. The process of manufacturing disk sound-records, which consists of applying shellac-powder to a disk of paper, applying the same upon a record-matrix, applying suitable backing-material upon the back of the paper, and compressing the same under heat.

4. The process of manufacturing disk sound-records, which consists of applying a shellac solution to a disk of paper, dusting the same with shellac powder, drying it, and compressing the same with a suitable backing against a record-matrix.

5. The process of manufacturing disk sound-records, which consists of applying a shellac solution to a disk of paper, dusting the same with shellac powder, drying it, and compressing the same with a suitable backing against a record-matrix in the presence of heat.

[Claims 6 to 8 not printed in the Gazette.]

878,548. PNEUMATIC TOOL. GROSVENOR D'W. MARCY, Dorchester, Mass. Filed Oct. 1, 1907. Serial No. 395,464.



1. In a device of the character described, the combination of a stationary member with a fluid pressure cylinder attached thereto and a movable member, the rear end thereof operating transversely between the stationary member and the attached cylinder.

2. In a device of the character described, a stationary member, a fluid pressure cylinder and a cylinder-head provided with lugs, in combination with a movable member, a portion thereof operating transversely between the stationary member and said cylinder.

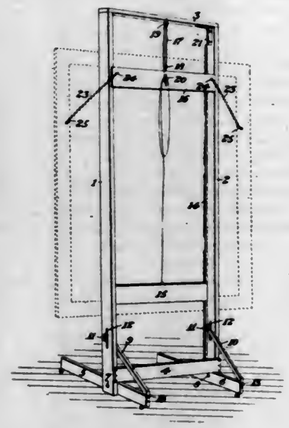
3. In a device of the character described, the combination of a stationary member and a fluid pressure cylinder attached thereto, with a movable member, links pivoted between the rear ends of said members, the rear end of the movable member operating transversely to and from the cylinder.

4. The combination with a cylinder and piston, of stationary and movable members, the cylinder being attached to the stationary member, a connecting rod attached to the piston, links pivoted to each of the two members and at their free ends to the connecting rod, and tool elements carried by the said members.

5. The combination with a cylinder and piston, of a stationary member, a movable member pivoted thereto, the cylinder being attached to the stationary member, a connecting rod attached to the piston, links pivoted to each of the two members, the longer link being pivoted to the stationary member, the links at their free ends pivoted to the connecting rod and tool elements carried by the said members.

[Claims 6 to 12 not printed in the Gazette.]

878,549. ARTIST'S EASEL. RICHARD F. MAYNARD, New York, N. Y. Filed Mar. 13, 1907. Serial No. 362,104.



1. An artist's easel comprising a vertical frame, an adjustable support vertically movable with reference to the frame, flexible connections secured to the support and adapted to extend forward for attachment to a picture frame, whereby a back-pull is exerted upon the picture frame and the latter is held against the easel.

2. An artist's easel comprising a rectangular vertical frame having slots or runways upon the inner faces of the vertical sides, a freely moving cross-piece in said runways, a second cross-piece adjustably supported within said runways, and an opening into one of the runways through which the last named cross-piece may be removed.

3. An artist's easel comprising a rectangular frame, upper and lower vertically movable cross-pieces, adjustable means for supporting the upper cross-piece, means for attaching a picture thereto, and means for attaching the lower cross-piece to the picture.

4. An artist's easel comprising vertical standards having runways upon their inner surfaces, two independent vertically movable cross-pieces fitting therein, means for attaching the cross-pieces to the top and bottom respectively of a picture frame, and means for adjusting the height of the upper of said cross-pieces.

5. An artist's easel comprising vertical standards having runways upon their inner surfaces, two independently vertically movable cross-pieces, a cord and pulley attached to the upper of said cross-pieces, means for detaching either a canvas stretcher or a picture frame thereto, and means for attaching the lower one of said cross-pieces to the canvas stretcher.

[Claims 6 to 11 not printed in the Gazette.]

878,550. FASTENER. ALBERT G. MEAD, Somerville, Mass., assignor to United States Fastener Company, a Corporation of Maine. Filed Jan. 23, 1905. Serial No. 242,264.



1. A snap fastener socket-piece comprising a base or flange member, an upwardly projecting member and an inturned downwardly projecting member, the said upwardly projecting member being integral with and connecting the base or flange member and the downwardly projecting member; the base or flange member taking part in the attachment of the socket-piece to material; the downwardly projecting member being formed with a stud-engaging mouth substantially in the plane of said base or flange member and enlarged above said mouth to accommodate the head of a stud and slitted to afford resiliency to coöperate with a stud; and the upwardly projecting member flared or diverged from the base or flange whereby the resilient parts of the downwardly projecting member near its mouth and the base or flange are brought into proximity to each other so that the latter forms a reinforcement or backing to prevent undue expansion of the former.

2. In a fastener socket, an integral socket piece comprising a flange, a hollow upwardly extending portion upwardly flared, and a portion turned toward the central space and downwardly to form spring tongues, combined with an attaching device, all combined substantially as and for the purposes set forth.

3. In a fastener socket, an integral socket piece comprising a flange, a hollow upwardly extending portion upwardly flared, and a portion turned toward the central space and downwardly and slitted to form spring tongues, combined with an attaching eyelet, the socket piece flange having a convex outer surface, all combined substantially as and for the purposes set forth.

4. In a snap fastener, the fabric, a yielding socket provided with a flared barrel, inner stud engaging tongues, and a convex base flange, combined with an attaching eyelet confining the imperforate material pressed against the socket barrel when by pressure said eyelet is deflected toward the contracted space formed by said flared barrel.

5. In a snap fastener, imperforate material, a yielding socket piece attached at the under side of said imperforate material without puncture of the material, and an attaching eyelet located on the opposite side of the material and coöperating with said socket piece, said eyelet having an outwardly extending upper flange whereby the material is displayed over the socket for constituting an ornamental finish.

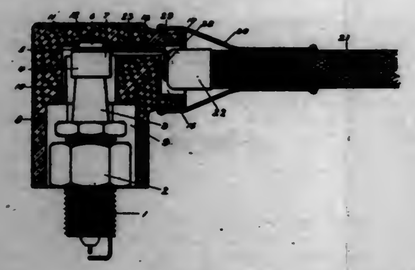
[Claim 6 not printed in the Gazette.]

878,551. PROTECTING-HOOD FOR SPARK-PLUGS. DAVID B. MILLS, East Orange, N. J. Filed Feb. 2, 1906. Serial No. 299,101.

1. A spark plug in combination with an insulating protecting hood having a central chamber of greater diameter at its base than the widest part of said plug, and provided throughout with plain non-engaging walls and a passage through the wall of the hood for a conductor, said hood being supported by the plug on which it rests said hood being removable from said plug by direct pull.

2. A spark plug in combination with an insulating protecting hood having a central chamber of greater diameter at its base than the widest part of said plug, and provided

throughout with plain non-engaging walls and a passage through the wall of the hood for a conductor, said hood being supported by the plug on which it rests, and means for sealing the passage for the conductor said hood being removable from said plug by direct pull.



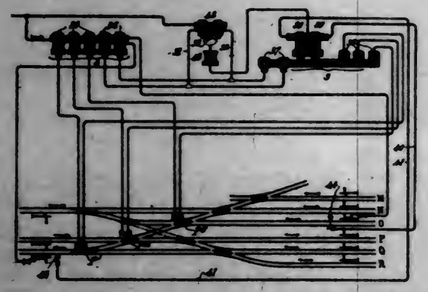
3. In combination, a spark plug having a terminal adapted to be connected with a conductor terminal by resilient engagement, a conductor terminal adapted to so engage said plug terminal, an insulating hood substantially fitting said plug and open at its bottom, and provided with a plain non-engaging interior wall, a passage in the wall for the insertion of the conductor terminal, said hood supported by said plug said hood being removable from said plug by direct pull.

4. In combination, a spark plug having a terminal adapted to be connected with a conductor terminal by resilient engagement, a conductor terminal adapted to so engage said plug terminal, an insulating hood substantially fitting said plug and open at its bottom, and provided with a plain non-engaging interior wall, a passage in the wall for the insertion of the conductor terminal, said hood supported by said plug, and an elastic sleeve secured to the conductor and adapted to be detachably secured to the hood around said passage for the terminal said hood being removable from said plug by direct pull.

5. A protecting hood for a spark plug terminal having an open end to receive the terminal and a passage through its wall for a conductor, and a bushing-like projection surrounding said passage provided with a hollow recess, near one end of which the passage opens.

[Claims 6 to 16 not printed in the Gazette.]

878,552. APPARATUS FOR WORKING AND INTERLOCKING SWITCH-POINTS AND SIGNALS FOR RAILWAYS. ALFRED MONARD, HORACE DUMARTIN, and ERNEST A. MOUTIER, Paris, France. Filed Nov. 10, 1905. Serial No. 286,722.



1. In apparatus for working and interlocking railway switches and signals, the combination in a single structure of operating levers mounted on a pythagorean table, and interchangeable identical interlocking devices arranged in three planes, operated by said levers, substantially as described.

2. In apparatus for working and interlocking railway switches and signals, a geographical interlocking mechanism including operating levers arranged in the compartments of a table orthogonally crosswise disposed, and means for blocking, relatively to the lever actuated, all other levers situated in the northeast and southwest regions of the table and included in a cross through the lever actuated, substantially as described.
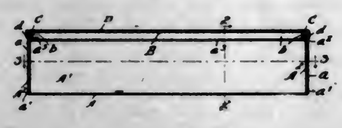
3. In apparatus for working and interlocking railway switches and signals, a table divided into compartments in horizontal rows and vertical columns, an operating lever in each compartment, cams on the shafts of said operating levers, interlocking levers moved by said cams, and horizontal and vertical bars engaged with said interlocking levers so as to produce interlockings thereof in the diagonal direction, substantially as described.

4. In apparatus for working and interlocking railway switches and signals, a table divided into compartments in horizontal rows and vertical columns, an operating lever in each compartment, and interlocking mechanisms applied to special levers or groups of levers and including cams on the shafts of said operating levers, interlocking levers moved by said cams, and horizontal and vertical bars engaged with said interlocking levers so as to produce interlockings thereof, substantially as described.

5. In apparatus for working and interlocking railway switches and signals, a table divided into compartments in horizontal rows and vertical columns, an operating lever in each compartment, cams on the shafts of said operating levers, interlocking levers moved by said cams, horizontal and vertical bars engaged with said interlocking levers so as to produce interlockings thereof, starting valves controlling pressure fluid and operated by said operating levers whereby the working devices of the switches are operated and the pressure fluid is conveyed thence to the signals of the transit line, said starting valve also effecting communication between the two ends of the fluid pressure duct corresponding to the said transit line, said starting valve being composed of two double valves arranged symmetrically and having a pressure duct situated above the valve box, a discharge duct below said box, and a duct of the apparatus to be worked communicating at the middle, and a rotary sector adapted to actuate one or other of said double valves as the sector is turned in one direction or the other.

[Claims 6 to 18 not printed in the Gazette.]

878,553. RECTANGULAR CAN FOR DRIED BEEF AND OTHER ARTICLES. WILLIAM J. MULLALEY and JOHN E. SCHENCK, Chicago, Ill., assignors to American Can Company, Chicago, Ill., a Corporation of New Jersey. Filed Mar. 8, 1906. Serial No. 304,857.



1. In a sheet metal rectangular hermetic closure can, the combination of a body A having integral upright sides A^1 and integral flanges a, said upright sides A^1 having integral right angle flanges a^1, separate piece upright ends A^2 soldered to said flanges on the bottom and upright side, said upright sides A^1 and ends A^2 having inturned downwardly projecting folds or flanges a^2 fitting flat thereagainst and inwardly projecting flanges a^3, of a thin or taggers tin inside hermetic covers B having downturned flanges b at its sides and ends fitting within and soldered to said downturned flanges or folds at the upper end of the can body, and a slip cover D having downturned flanges fitting and embracing the upper end of the rectangular can body, substantially as specified.

2. In a sheet metal rectangular hermetic closure can, the combination of a body A having integral upright sides A^1 and integral flanges a, said upright sides A^1 having integral right angle flanges a^1, separate piece upright ends A^2 soldered to said flanges on the bottom and upright sides, said upright sides A^1 and ends A^2 having inturned downwardly projecting folds or flanges a^2 fitting flat thereagainst and inwardly projecting flanges a^3, of a thin or taggers tin inside hermetic cover B having downturned flanges b at its sides and ends fitting within and soldered to said downturned flanges or folds at the upper end of the can body, substantially as specified.

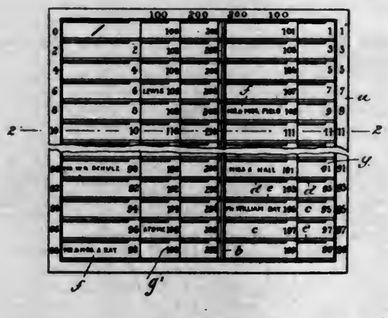
3. The rectangular hermetic closure can herein shown and described and comprising a bottom with integral upright sides, separate piece ends hermetically secured at their edges to said bottom, and upright sides, said upright sides and ends being provided at their upper edges with inturned folds or flanges and inwardly projecting flanges fitting flat thereagainst and a hermetic closure cover having downturned flanges fitting within the mouth of the can body and soldered thereto, substantially as specified.

4. The rectangular hermetic closure can herein shown and described and comprising a bottom with integral upright sides, separate piece ends hermetically secured at their edges to said bottom and upright sides, said upright sides and ends being provided at their upper edges with inturned folds or flanges fitting flat thereagainst and inwardly projecting flanges and a hermetic closure having downturned flanges fitting within the mouth of the can body and soldered thereto, said inside fitting hermetic cover having a vent to enable the can to be vacuumized after it is filled and its cover soldered in place, substantially as specified.

5. The rectangular hermetic closure can herein shown and described and comprising a bottom with integral upright sides, separate piece ends hermetically secured at their edges to said bottom and upright sides, said upright sides and ends being provided at their upper edges with inturned folds or flanges fitting flat thereagainst and inwardly projecting flanges and a hermetic closure cover having downturned flanges fitting within the mouth of the can body and soldered thereto, and an outer slip cover having integral flanges at its sides and ends and embracing the upper end of the can body, substantially as specified.

[Claim 6 not printed in the Gazette.]

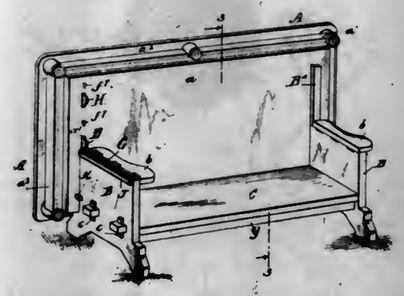
878,554. HOTEL-ROOM RACK. FREDERICK MUSCHENHEIM, New York, N. Y. Filed Sept. 7, 1907. Serial No. 391,823.



1. A hotel room rack comprising a frame, a series of pivots journaled therein, and overlapping card holders mounted on the pivots and projecting beyond both sides thereof, substantially as specified.

2. A hotel room rack comprising a frame, a series of pivots journaled therein, and card holders mounted on the pivots and projecting beyond both sides thereof, to form two wings, the length of each wing being less than the distance between two adjoining pivots, substantially as specified.

878,555. COMBINED SOFA OR SETTEE AND POOL OR BILLIARD TABLE. JACOB N. MCINTIRE, New York, N. Y., assignor to The Brunswick-Balke-Collender Company, New York, N. Y., a Corporation of Ohio. Filed Aug. 15, 1906. Serial No. 330,633.



1. In a convertible settee-game-table the combination, with one main portion comprising a seat and end parts; and another main part comprising a game-table bed, of stationary, straight track-rails securely fastened respectively to the tops of said settee end parts and having upwardly projecting rear ends; and peripherally grooved wheels mounted on a shaft arranged within and approximately, centrally, widthwise of the bed structure, and operating to support said bed on said straight rails while the former is in any horizontal position; and to permit the oscillation of the bed; all in substantially the manner and for the purpose hereinbefore set forth.

2. In a convertible settee-game-table the combination, with one main part comprising a seat and end pieces; another main part comprising the game-table bed; stationary track-rails mounted on the tops of the settee end pieces; and grooved wheels mounted in the game-table bed and traveling on said track-rails, of re-inforcing supports automatically caused to move into forcible contact with the bed bottom by the final horizontal movement of the bed, in one direction; and to be automatically thrown into disuse, by the initial movement of said bed, in the opposite direction; all substantially as set forth.

3. In a convertible settee-game-table of the type shown and described, the combination, with stationary track-rails mounted on the end pieces of the settee portion and having upwardly projecting rear ends, of a horizontally translatable game-table bed; and one set of members of a locking device, carried by said bed and adapted to be manipulated by hand, when the bed is in its position for use as a table, to co-act with said upturned rear ends of the track-rails, to effectuate the retention in place of the bed; substantially as set forth.

4. In a convertible settee-game-table of the type shown and described, the combination, with the bed portion, of a locking device member, adapted to engage with the rear end of the track-rail, carried by said bed, and comprising a pin or bar having a cam-like end portion and provided with a handle to facilitate manipulation of said member by hand; as and for the purpose set forth.

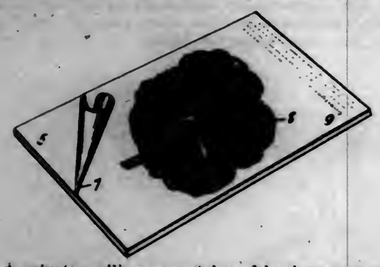
878,556. POST-CARD. OTTO PALM, Jr., New York, N. Y. Filed May 8, 1907. Serial No. 372,549.

1. A post card comprising a body portion of comparatively thick material, said post card bearing a removable decalcomania sheet.

2. A post card comprising a body portion of comparatively heavy paper and having a thin removable decalcomania sheet secured thereto.

3. A post card comprising a body portion of comparatively heavy paper, and a sheet of removable decalcomania transfer paper pasted to said post card.

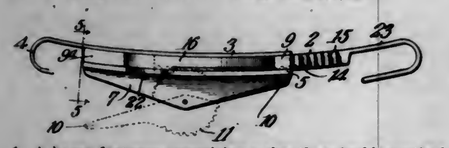
4. A post card prepared with a layer of removable transfer paper on its back, substantially as described.



5. A private mailing or postal card having a removable layer of transfer paper on its back which is printed with a decalcomania or transfer picture.

[Claims 6 and 7 not printed in the Gazette.]

878,557. HAME-FASTENER. TRUMAN PANGBURN, Alma, N. Y. Filed Oct. 10, 1907. Serial No. 396,814.

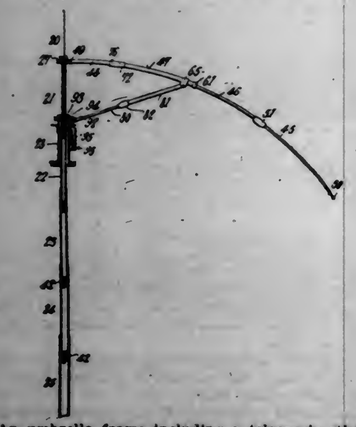


1. A hame fastener comprising a sheath, a double toothed rack bar longitudinally movable within the sheath, a locking dog for engaging one set of teeth of the rack bar, and a tensioning lever for engaging the other set of teeth.

2. A hame fastener comprising a sheath provided with a longitudinal channel, a double toothed rack bar movable within the channel, and a locking dog and a tensioning lever to coact with the two sets of teeth of the rack bar.

3. A hame fastener comprising a sheath embodying a front and a back plate properly spaced apart, spaced keepers carried by the back plate, a tensioning lever pivoted between the keepers and having a toothed segmental head projecting through the back plate, a dog pivotally mounted between the plates, and a double-toothed rack bar movable between the plates and adapted to be engaged by the dog and by the tensioning lever.

878,558. FOLDING UMBRELLA. GEORGE M. PETERS, St. Louis, Mo. Filed Apr. 4, 1907. Serial No. 366,384.



1. An umbrella frame including a telescopic stick, telescopic ribs and telescopic stretchers, the frame being arranged for extension and collapse when folded, one of the stick sections being connected to one section of each rib and serving to transmit movement from the stick to the ribs during both collapsing and extending operations, and one of the rib sections being connected to one of the stretcher sections and serving a like purpose, means for locking the sections of the ribs in extended position, locking rod in said stretcher sections, a runner, and a sleeve on said runner for engaging the heads of said locking rods and holding the same in release position, and means for holding the tips of all of the ribs during the extensile movement.

2. An umbrella stick formed of a series of telescopic sections, a spring carried by each of the sections and arranged to be placed under tensional strain during the latter portion of the extensile movement, and a locking pin held in locking position by said spring, there being a locking groove for the reception of such pin.

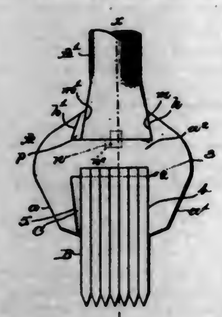
3. In a device of the class described, a stick formed of telescopic sections, a spring secured to the inner end of each of the intermediate sections and arranged to be placed under both tensional and torsional strain during the latter portion of the extensile movement, each section having at one end a pin and at the opposite end a groove, the pins and grooves being held in locking position by the springs.

4. In a telescopic structure of the class described, a pair of tubular sections arranged in telescopic relation, the outermost section having a groove formed in its inner face and extending parallel with the axis of such section, one end of the groove being of contracted width to form a pair of stop shoulders, and the end of the contracted portion being turned to form a terminal locking recess, a spring secured to the end of the innermost section, a block carried by the free end of the spring, and arranged to slide within the main groove, the limit of movement of the block being fixed by the shoulders, a pin projecting from the inner section and arranged to enter the contracted portion of the groove and the locking recess thereof after the spring has been subjected to both tensional and torsional strains, and a stop arranged at the opposite end of the main groove for limiting movement of the block during the collapsing of the sections.

5. A collapsible umbrella having members each formed of a plurality of telescopic sections, the end portion of one of the sections having a tapered socket, and the mating end of the adjacent section being split to form tongues that fit within such socket, a cam rod for spreading said tongues, and a spring tending to hold the cam rod in spreading position.

[Claims 6 and 7 not printed in the Gazette.]

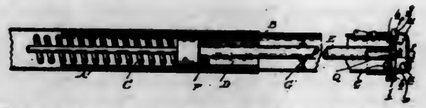
878,559. BUSH-HAMMER. ALFRED PINEL, Quincy, Mass. Filed July 25, 1907. Serial No. 385,509.



1. In a bush hammer, a head having a shank and forked to present depending arms, the inner side wall of one of said arms being inclined upwardly and outwardly and extending from the rear to the front of the head, a series of flat bits inserted between the side walls of the arms, and a wedge inserted between said inclined side wall and the face of the adjacent bit, the wedge increasing in thickness from its lower edge to its upper edge and also tapering in the direction of its length from one to the other end, the double taper of the wedge locking the bits in the head both laterally and longitudinally.

2. In a bush hammer, a head having a shank and forked to present depending arms, the inner side wall of one of said arms being inclined upwardly and outwardly and extending from the rear to the front of the head, a series of imperforate bits notched at their upper ends to embrace the head at front and rear thereof, and a wedge tapered in the direction of its length and also from its lower to its upper edge and inserted between the inclined side wall and the flat face of the adjacent bit.

878,560. AIR-GUN. DAVID F. POLLEY, Plymouth, Mich., assignor to Markham Air Rifle Company, Plymouth, Mich., a Corporation of Michigan. Filed May 16, 1904. Serial No. 208,227.



1. In an air gun, the combination with a barrel forming the spring housing, of a cylinder arranged within said barrel and separated from the walls thereof, and a forwardly extending false barrel fitting between the forward ends of said cylinder and spring housing and secured thereto forming reinforced walls at the point of connection.

2. In an air gun, the combination with a barrel forming the spring housing, of a cylinder arranged within said barrel and separated from the walls thereof, a forwardly extending false barrel fitting between the forward ends of said cylinder and spring housing and secured thereto forming reinforced walls at the point of connection, and a piston abutment arranged within the cylinder adjacent its connection with the forwardly extending false barrel and forming a bracing for the reinforced wall.

3. In an air gun, the combination with a barrel forming the spring housing, of a cylinder arranged within said barrel and separated from the walls thereof, a false barrel fitting between the forward ends of said cylinder and spring housing and secured thereto forming reinforced walls at the point of connection, a true barrel secured within the false barrel, and a piston abutment interposed between the inner end of the false barrel and the cylinder adjacent its connection with the false barrel and forming a bracing for the reinforced walls.

4. In an air gun the combination with a barrel forming a spring housing, of a cylinder arranged within said barrel and spaced from the walls thereof, a forwardly extending barrel fitting between said spring housing and cylinder and connected therewith, and a cup shaped piston abutment fitting within said cylinder at the point of connection between the barrels.

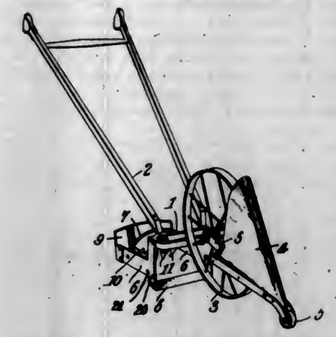
5. In an air gun the combination with a false barrel of a true barrel arranged therein, and forming a magazine of the space between said barrels, a cap closing said magazine and apertured in alinement with said true barrel being provided with a pocket in its lower portion for the reception of a single shot, and a gate arranged between the end of the true barrel and the inner face of the end of said cap said gate being provided with apertures adapted to register at different times with the magazine and the true barrel.

[Claims 6 to 9 not printed in the Gazette.]

878,561. WHEEL-HOE. MARCELLUS RAMSEY, North-Girard, Pa. Filed Mar. 23, 1907. Serial No. 364,139.

1. An implement as described comprising a frame, a wheel supporting the same, means for propelling the frame, an earth engaging blade carried by the frame, a hood supported upon the frame and passing over the forward portion of the supporting wheel.

2. An implement such as described comprising a frame, a wheel supporting the same, means for propelling the implement, an earth engaging blade carried by the frame, a hood pivotally attached to the frame and extending over the forward portion of the supporting wheel.



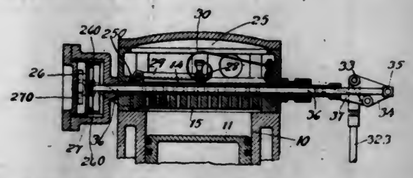
3. An implement such as described comprising a frame, a wheel supporting the same, means for propelling the implement, standards attached to the frame, an earth engaging blade carried by the standards and a bail connecting the standards together.

4. An implement such as described comprising a frame, a wheel supporting the same, means for propelling the implement, earth engaging elements, standards attached to the frame and a bail connecting the standards together.

5. An implement such as described comprising a frame, a wheel supporting the same, means for propelling the implement, standards attached to the frame, a blade adjustably pivoted to the standards and a bail connecting the standards together.

[Claim 6 not printed in the Gazette.]

878,562. VALVE MECHANISM FOR COMPRESSORS. SIDNEY A. REEVE, Worcester, Mass., assignor to Charles F. Brown, trustee, Reading, Mass. Filed Aug. 10, 1906. Serial No. 329,989.



1. A valve mechanism comprising a pressure-balanced valve, a motor piston therefor subject to the counter internal and external pressures, and means for yieldingly centralizing the valve.

2. A valve mechanism comprising a fluid-pressure chamber, a valve controlling communication between the interior and exterior of the chamber, a motor device for actuating said valve, subject in opposite directions to the internal and external fluid pressures, spring mechanism for yieldingly centralizing said valve, and means for increasing the mechanical advantage of the spring mechanism upon the valve at the extremes of movement of the valve.

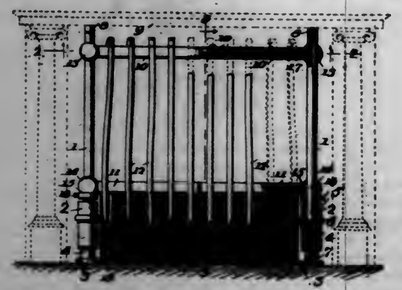
3. In a valve mechanism, the combination with a fluid-pressure cylinder and piston, of a pressure-balanced valve controlling communication with the interior of the cylinder, means for storing the force caused by movements of the valve, and a fluid-pressure valve motor controlled by variations in the pressure within the cylinder.

4. A valve mechanism comprising a cylinder, a valve of the grid type controlling communication with the interior of the compressor cylinder, means for opening and closing said valve by differences in the fluid pressures internal and external to said cylinder, and means for yieldingly centralizing said valve by mechanical pressure.

5. A valve mechanism comprising a fluid-pressure chamber, a valve of the grid type, a valve-operating piston receiving on opposite sides of the pressures internal and external to the chamber, a toggle mechanism for arresting the valve in full-open and full-closed positions, and a spring device associated with said toggle mechanism, for yieldingly maintaining the latter and the valve in an intermediate position, and acting with increased mechanical advantage on the valve in the extreme positions of the latter.

[Claims 6 to 10 not printed in the Gazette.]

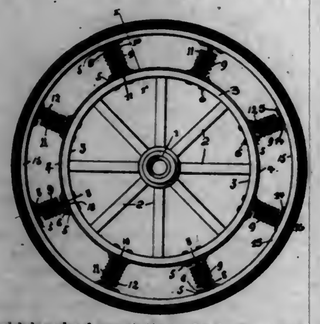
878,563. FIRE-GUARD. CHARLES H. REEVES, La Fayette, Ind. Filed Mar. 30, 1907. Serial No. 365,539.



1. A fire-guard comprising a base having a threaded stem, a standard, a nut screwed on the stem and having a socket in which the standard seats, and doors hinged to the standard.

2. A fire-guard comprising a standard, means for supporting the standard adjacent a fire place, hinges on the standard having horizontally presented threaded stems, and doors having top and bottom bars provided with threaded sockets in their inner ends into which the aforesaid stems screw.

878,564. WHEEL FOR VEHICLES. THOMAS W. RIEDER, Pittsburg, Pa. Filed Feb. 28, 1907. Serial No. 359,841.



1. A vehicle wheel consisting of a hub, radially disposed spokes carried thereby, an inner rim carried by said spokes, a felly surrounding said rim, spring fastening plates connecting with said felly and said rim, pins loosely mounted in said plates, coiled springs interposed between said plates, and having their two end convolutions bent to form eyelets to engage the ends of said pins upon each side of said wheel.

2. In a spring wheel, the combination of a rim, plates secured to said rim and each provided between its ends with a sleeve, a felly surrounding said rim, plates secured to the inner face of said felly, each provided between its ends with a sleeve, pins mounted in the sleeves of said plates on the rim and pins mounted in said plates on the felly, and coiled springs interposed between the plates on the rim and the plates on the felly, each spring formed at each end with a pair of oppositely disposed eyes to receive respectively the pins carried by the plates on the rim and the plates on the felly and secure said springs in position.

878,565. DOUBLE PLOW. WILLIAM L. SELMAN, Summerville, Ga. Filed Sept. 25, 1907. Serial No. 394,572.



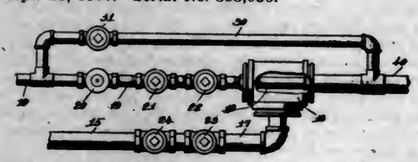
1. In a plow, the combination of a beam, a bracket carried by the beam and comprising a side bar and a lateral bar, a standard provided with a forwardly extending arm disposed transversely with respect to the lateral bar and having the extremity thereof pivotally connected to the side bar of the bracket in advance of the lateral bar, and means for adjustably clamping the arm to the lateral bar to hold the standard in the required position.

2. In a plow, the combination of a beam, a bracket carried by the beam and comprising a side bar and a lateral bar, a standard provided with a forwardly extending arm disposed transversely with respect to the lateral bar, a member adjustably mounted upon the side bar of the bracket and pivotally connected to the extremity of the forwardly extending arm of the standard, and means for adjustably clamping the arm to the lateral bar to hold the standard in the required position.

3. In a plow, the combination of a beam, a bracket mounted upon the beam and comprising a side piece and lateral bar, a clip adjustably secured to the side piece, a clamp adjustably secured to the lateral bar, and a standard provided with an arm the extremity of which is connected to the clip, the said arm being engaged by the clamp.

4. In a plow, the combination of a beam, a bracket comprising a side piece having one end thereof adjustably connected to the beam while the opposite end is provided with a lateral bar secured to the beam, a clip adjustably mounted upon the side pieces of the bracket, an adjustable clamp supported by the lateral bar of the bracket, and a standard provided with an arm engaged by the adjustable clamp and having the extremity thereof pivotally connected to the before mentioned clip.

878,566. MEANS FOR KEEPING SWITCHES CLEAR FROM SNOW AND ICE. FRANCIS G. SHAW, Boston, Mass., assignor to The International Switch & Signal Company, Boston, Mass., a Corporation of Maine. Filed Sept. 16, 1907. Serial No. 393,056.



1. In a device for keeping railway tracks free from snow and ice, the combination with such track, of a burner pipe adjacent thereto, a closed suction chamber communicating with said burner pipe, a gas pipe communicating with the suction chamber, a source of air supply under pressure, and a continuous unbroken pipe connected to such source and leading into the suction chamber, said pipe terminating in a nozzle located within said suction chamber.

2. In a device of the class described, a switch and pneumatic switch-operating mechanism therefor, in combination with burner pipes placed between the ties, a suction chamber communicating with said burner pipes, a gas pipe communicating with the suction chamber, and a nozzle within the suction chamber communicating with the air pipe of the pneumatic switch-operating mechanism.

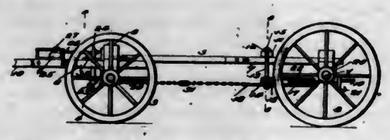
3. In a device of the class described, a switch and pneumatic switch-operating mechanism therefor in combination with burner pipes placed between the ties, a distributing pipe connected to said burner pipes, a suction chamber connected to said distributing pipe, a gas pipe communicating with the suction chamber, and a nozzle within the suction chamber communicating with the air pipe of the pneumatic switch-operating mechanism, the end of said nozzle being situated adjacent the outlet of the suction chamber.

4. In a device of the class described, a switch and pneumatic switch-operating mechanism therefor in combination with burner pipes placed between the ties, a distributing pipe connected to said burner pipes, a suction chamber connected to said distributing pipe, a gas pipe communicating with the suction chamber, a nozzle within the suction chamber, a pipe connecting said nozzle with the air pipe of the pneumatic switch-operating mechanism, and a reducing valve in said pipe.

5. In a device of the class described, the combination with a distributing pipe and burner pipes connected thereto, of a suction chamber connected to said distributing pipe, a gas pipe leading to the suction chamber, an air jet nozzle within the suction chamber, an air supply pipe communicating with said nozzle, and a by-pass connecting said air supply pipe with the distributing pipe.

[Claims 6 and 7 not printed in the Gazette.]

878,567. WAGON-BRAKE. GEORGE B. SHOWALTER, Broadway, Va. Filed Apr. 11, 1907. Serial No. 367,720.



1. The combination of a running gear comprising spaced hounds, a brake mechanism mounted upon the running gear, a lever mounted upon the running gear and extending between the spaced hounds, connecting means between the lever and brake mechanism, means for applying draft to the lever, and a cross piece connecting the hounds and adapted to engage the lever to hold the brake mechanism in an inoperative position.

2. The combination of a running gear comprising spaced hounds, a brake mechanism mounted upon the running gear, a lever pivotally mounted upon the running gear and extending between the spaced hounds, the said lever being provided with a key hole slot, a tension member connecting the brake mechanism and the lever and adjustably engaging the key hole slot, means for applying draft to the lever, and a locking member mounted upon the hounds and engaging the lever to hold the brake mechanism in an inoperative position.

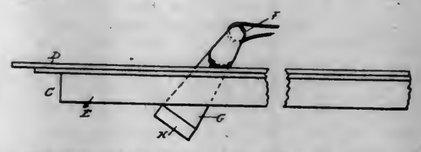
3. The combination of a running gear, comprising a front axle having a pair of spaced hounds applied thereto, a brake mechanism mounted upon the running gear, means normally holding the brake mechanism in an operative position, a whiffletree applied to the running gear, a lever carried by the front axle and extending between the spaced hounds, connecting means between the lever and the brake mechanism, connecting means between the lever and the whiffletree, and a second lever pivotally connected to one of the hounds and having a detachable connection with the opposite hound, the said lever being designed to engage the first mentioned lever to remove the brake mechanism from the control of the whiffletree.

4. The combination of a running gear, a brake beam suspended from the running gear, a whiffletree applied to the running gear, connecting means between the whiffletree and brake beam, a clevis embracing the brake beam and extending rearwardly therefrom, a bracket carried by the rear axle, a rod connected to the bracket and passing loosely through the end of the clevis, and a spring interposed between the end of the clevis and the extremity of the rod, the said spring operating to hold the brake beam normally in an operative position.

5. The combination of a running gear comprising front and rear axles connected by a reach and the rear axle and reach being provided with rear hounds, a transverse bar applied to the reach and rear hounds, a shaft loosely mounted upon the transverse bar and having the ends thereof extending downwardly to form hangers, a brake beam carried by the hangers, a clevis embracing the brake beam and extending rearwardly therefrom, a bracket applied to the rear axle, a rod connected to the bracket and having a sliding connection with the clevis, a spring cooperating with the rod and clevis to hold the brake beam normally in an operative position, a whiffletree applied to the running gear, and connecting means between the whiffletree and the brake beam.

[Claim 6 not printed in the Gazette.]

878,568. ADJUSTABLE STRAP-SECURING CLIP FOR VEHICLES. FREDERICK L. SMITH, Lansing, Mich., assignor to Olds Motor Works, Lansing Mich., a Corporation of Michigan. Filed Mar. 18, 1907. Serial No. 362,972.



1. The combination with a vehicle deck or flooring, of a rail extending longitudinally thereof, and a clip longitudinally slidable along said rail when in vertical position, and adapted to frictionally lock against the rail when in oblique position.

2. The combination with a vehicle deck or flooring, of a longitudinally slotted rail, extending along said flooring, a clip having a shank extending through said slot, and a head at the lower end of said shank for engaging the under face of the rail, substantially as, and for the purpose set forth.

3. The combination with a vehicle deck or flooring, of a longitudinally slotted rail extending along and secured to said flooring, and having an enlargement into said slot at one point in the length thereof, a clip provided with a downwardly extending headed shank, said shank being adapted to fit within said slot and said head to pass through the enlargement in said slot into engagement with the under side of the rail, substantially as, and for the purpose set forth.

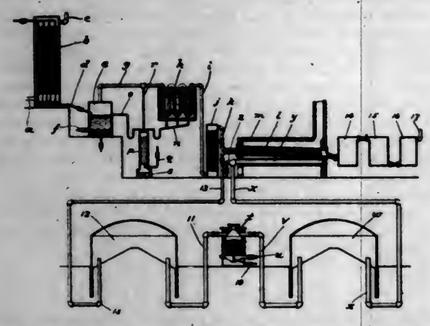
4. The combination with a vehicle deck or flooring, of a rail of T-shape cross section, having the web portion thereof centrally slotted, said rail extending along said flooring and being secured thereto, and a clip having a downwardly extending shank slidably fitting the slot in said rail, and a head at the lower end of said shank for engaging the under face of the rail, substantially as, and for the purpose set forth.

878,569. RECOVERY OF SULFUR FROM SULFUR-BEARING GASES. PAUL S. SMITH, Wilmington, Del., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed May 25, 1907. Serial No. 375,597.

1. The process of recovering sulfur from gases containing sulfur dioxid which consists in first separating therefrom sulfur dioxid, then bringing the sulfur dioxid in contact with water gas and highly heating the mixed gases whereby the sulfur dioxid is reduced to sulfur, and then condensing the sulfur, substantially as described.

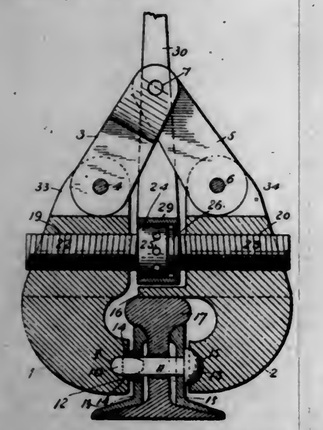
2. The process of recovering sulfur from gases con-

taining sulfur dioxid which consists in first separating sulfur dioxid from the mixed gases, then causing the sulfur dioxid to react with water gas to reduce the sulfur dioxid to sulfur, and then condensing the sulfur, substantially as described.



3. The process of recovering sulfur from sulfur dioxid which consists in successively forming producer gas and water gas, mixing the sulfur dioxid and water gas, heating said mixed gases by means of the producer gas, thereby causing the mixed gases to react with evolution of sulfur vapor, and then condensing the sulfur, substantially as described.

878,570. DEVICE FOR SECURING SPLIT BOLTS. JACOB J. SOUDER, Washington, D. C. Filed June 27, 1907. Serial No. 381,050.



1. A device of the class described, comprising a pair of jaws, one of which is laterally movable and provided with a swaging-cavity, and a right and left screw-threaded member engaging both jaws.

2. A device of the class described, comprising a pair of jaws, one of which is pivotally supported and laterally movable and provided with a swaging-cavity and means for engaging a key, and a right and left screw-threaded member engaging both jaws.

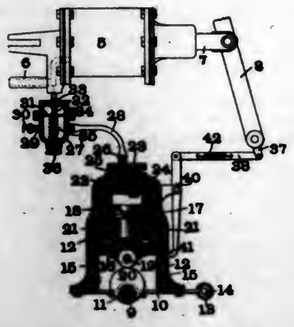
3. A device of the class described, comprising a pair of jaws, one of which is pivotally supported and laterally movable and provided with a swaging-cavity having converging walls and means for engaging a key, and a right and left screw-threaded member engaging both jaws for applying pressure to the swaging-jaw.

4. A device of the class described, comprising a pair of jaws, one of which is pivotally supported and laterally movable and provided with an elongated swaging-cavity having converging walls and means in the side walls of the cavity for engaging a key, and means for applying pressure to the swaging-jaw.

5. A device of the class described, comprising a pair of jaws, one of which is pivotally supported and laterally movable and provided with a swaging-cavity and grooves in the wall of the cavity for engaging a key, and means engaging the jaws between their ends for applying pressure thereto.

[Claims 6 to 15 not printed in the Gazette.]

878,571. AUTOMATIC GOVERNING DEVICE. GEORGE M. SPENCER, St. Louis, Mo. Filed Nov. 15, 1906. Serial No. 343,516.



1. The combination with a brake cylinder, of a relief valve therefor, a fluid pressure device for said relief valve, a pressure generator for said pressure device, and means for automatically limiting the volume of fluid delivered by said generator.

2. The combination with a brake cylinder, of a relief valve therefor, a fluid pressure device for said relief valve, a pressure generator for said pressure device, means for automatically limiting the pressure which can be generated by said generator, and other means for automatically limiting the volume of fluid delivered by said generator.

3. The combination with a brake cylinder, of a relief valve closing against the pressure in said cylinder, an abutment connected with and having a greater area than said valve, and a pressure generator delivering fluid to said abutment.

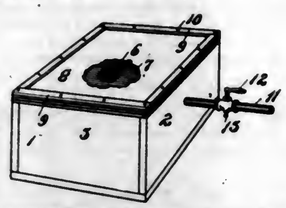
4. The combination with a brake cylinder, of a relief valve closing against the pressure in said cylinder, an abutment connected with and having a greater area than said valve, a pressure generator delivering fluid to said abutment, and means for automatically limiting the pressure which can be generated by said pressure generator.

5. The combination with a brake cylinder, of a relief valve closing against the pressure in said cylinder, an abutment connected with and having a greater area than said valve, a pressure generator delivering fluid to said abutment, and means contained in said generator for automatically limiting the pressure which can be generated thereby.

[Claims 6 to 10 not printed in the Gazette.]

878,572. MACHINE FOR MAKING RUBBER FOOTWEAR. ARTHUR C. SQUIRES, Akron, Ohio, assignor of one-eighth to Russell T. Dobson, Akron, Ohio, one-fourth to Elmer G. Lahr and two-sixteenths to Chester N. Russell, Cuyahoga Falls, Ohio, one-sixteenth to Charles Senn, Monroe Falls, Ohio, one-sixteenth to Nick Huber, Akron, Ohio, one-sixteenth to Harry E. Bowman, Cuyahoga Falls, Ohio, and one-sixteenth to Charles H. Stahl and one-tenth to George W. Gridley, Akron, Ohio. Filed Apr. 30, 1907. Serial No. 371,049.

1. A device of the class described comprising a hollow air-tight member, an elastic diaphragm extending across said member provided with a depending open-topped mold formed integral therewith, an inflexible member provided with an opening corresponding in contour to said mold superposed on said diaphragm, an elastic apron secured above said inflexible member and arranged to envelop articles forced into said mold, and means for producing an even and simultaneous pressure of said mold upon an object contained therein.



2. The combination in a device of the class described, of a hollow air-tight box, an elastic diaphragm extending across said box provided with a depending compressible mold formed integral therewith, a cover for said box provided with an opening so positioned as to register with the opening in said mold, a rubber apron mounted above said cover, means for securing said apron, cover and diaphragm to the open end of said box, and means for introducing a fluid under pressure to the interior of said box about said mold.

3. A device for fixedly superimposing adhesive members in forming articles comprising an elastic member arranged to inclose the article, an elastic sustaining means integral with said elastic member, a substantially rigid member provided with an opening registering with the opening in said elastic member for maintaining said member against outward distortion, and means for exerting a fluid pressure about said elastic member for compressing said member upon a form carrying superimposed adhesive portions of the article to be produced.

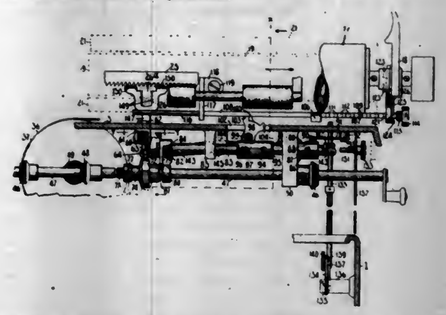
4. A device for forming articles of a plurality of adhesive superimpositions comprising an elastic envelop to inclose a form carrying said impositions elastically sustained, a rigid member provided with an opening registering with the opening in said envelop, an elastic apron suitably sustained on the opposite side of said rigid member arranged to be carried into said envelop and inclose the article while sustained therein, and a fluid pressure-producing instrumentality to cause the compression of said envelop on said article.

5. A device for producing articles from a plurality of adhesive members successively imposed on a suitable form comprising an elastic envelop conforming approximately to the shape of the article to be produced, and provided with an integral sustaining member for elastically maintaining said envelop, an elastic member adapted to cover the open face of said envelop and to inclose the article to be produced and be carried into said envelop with said article, and means for producing fluid pressure about said envelop, whereby the successive superimpositions on said form are caused to simultaneously adhere to one another.

878,573. TYPE-WRITING MACHINE. HERBERT H. STEELE, Syracuse, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Sept. 1, 1906. Serial No. 332,950.

1. In a typewriting machine, the combination with a carriage, step-by-step feeding mechanism therefor, types, a ribbon having fields of different characteristics, ribbon feeding mechanism, and tabulating mechanism including stops coöperative to arrest the carriage in a predetermined columnar position, of a shifting member operatively connected with the carriage and independent of the tabulating stops; a coöperating shifting member mounted on the frame of the machine; and means controlled by said shifting members for automatically changing the field of the ribbon exposed to the action of the types.

2. In a typewriting machine, the combination with a carriage, step-by-step feeding mechanism therefor, types, a ribbon normally removed from the printing point and having fields of different characteristics, ribbon feeding mechanism and tabulating mechanism including stops operative to arrest the carriage when released from its step-by-step feeding mechanism in predetermined columnar positions, of a shifting member operatively connected with the carriage and independent of the tabulating stops; a coöperative shifting member mounted on the frame of the machine; and means controlled by said shifting members to alter the extent of movement of the ribbon so as to change the ribbon field exposed to the types, said means operating during the movement of the carriage to a predetermined columnar position.



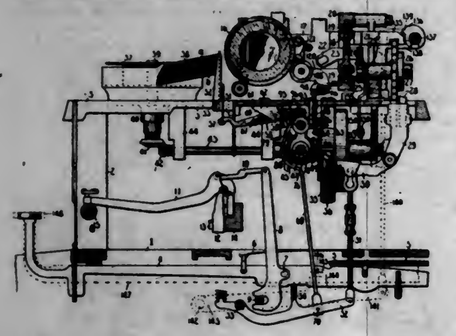
3. In a typewriting machine, the combination with a carriage, step-by-step feeding mechanism therefor, types, a ribbon having fields of different characteristics, a ribbon vibrator, ribbon feeding mechanism and tabulating mechanism including stops operative to arrest the carriage when released from its step-by-step feeding mechanism in predetermined columnar positions, of a shifting member operatively connected with the carriage and independent of the tabulating stops; a coöperating shifting member mounted on a fixed part; and means controlled by said shifting members and operative during the movement of the carriage to a predetermined columnar position to vary the throw of the vibrator and thereby change the field of the ribbon exposed to the types.

4. In a typewriting machine, the combination with a carriage, step-by-step feeding mechanism therefor, types, a ribbon having fields of different characteristics, a vibrator, actuating devices for the vibrator, ribbon feeding mechanism and tabulating mechanism including stops operative to arrest the carriage when released from its step-by-step feeding mechanism in predetermined columnar positions, of a stop member having a plurality of stopping portions coöperative with certain of said vibrator actuating devices to arrest the same at different points; a shifting member operatively connected with the carriage and independent of the tabulating stops; a coöperating shifting member mounted on a fixed part; and means controlled by said shifting members and operative during the movement of the carriage to a predetermined columnar position to shift or re-adjust said stop member.

5. In a typewriting machine, the combination with a carriage, step-by-step feeding mechanism therefor, types, a ribbon having fields of different characteristics, a vibrator, actuating devices for the vibrator, ribbon feeding mechanism and tabulating mechanism including stops operative to arrest the carriage when released from its step-by-step feeding mechanism in predetermined columnar positions, of a stop member having a plurality of stopping portions coöperative with certain of said vibrator actuating devices to vary the extent of movement thereof; means for shifting said stop member comprising a forked arm and a slide rod; and means for actuating said slide rod, said means including two shifting members, one mounted on a fixed part and the other mounted on the carriage and adjustable in the direction of its length and independent of the tabulating stops, said members coöperating during the run of the carriage to a predetermined columnar position.

[Claims 6 to 22 not printed in the Gazette.]

878,574. TYPE-WRITING MACHINE. HERBERT H. STEELE, Syracuse, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Sept. 1, 1906. Serial No. 332,951.



1. In a typewriting machine, the combination with a carriage and inking mechanism including inking surfaces of different characteristics, of means operative at a predetermined point in the travel of the carriage to change automatically from one inking surface to another, said means incinding two coöperative contact members one of which may be variably set to determine its point of cooperation with the other member, the change in the inking surfaces commencing when contact between said members commences, and means for again effecting a change of inking surface as soon as contact between said members ceases.

2. In a typewriting machine, the combination with a traveling element or carriage, printing instrumentalities, a ribbon having fields of different characteristics, and means for feeding the ribbon longitudinally, of ribbon field-changing means including two shifting members, one constantly operatively connected with the carriage and one on a fixed part, said members coöperating during the movements of the carriage in both directions of its travel, the coöperation of said members during the travel of the carriage in one direction only operating to change the ribbon field exposed to the printing instrumentalities, the change remaining only so long as said members are in coöperation, and the construction being such that the ribbon field changes again automatically when the coöperation of said members ceases.

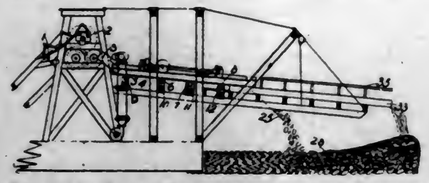
3. In a typewriting machine, the combination with a carriage, printing instrumentalities, a ribbon having fields of different characteristics, and means for feeding the ribbon longitudinally, of ribbon field-changing means including shifting members coöperative to change the ribbon field exposed to the action of the printing instrumentalities, the change remaining only so long as the shifting members are in coöperation, said shifting members being relatively adjustable to vary the point in the carriage travel at which the change of ribbon field occurs, and the construction being such that the ribbon field changes again automatically when the coöperation of said members ceases.

4. In a typewriting machine, the combination with a carriage, printing instrumentalities, a ribbon having fields of different characteristics, and means for feeding the ribbon longitudinally, of ribbon field-changing means including two shifting members, one on the carriage, said shifting members being coöperative to change the ribbon field exposed to the action of the printing instrumentalities, the change remaining only so long as the shifting members are in coöperation, the shifting member on the carriage being adjustable to vary the point at which the shifting of the ribbon takes place; and the construction being such that the ribbon field changes again automatically when the coöperation of said members ceases.

5. In a typewriting machine, the combination with a carriage, printing instrumentalities, a ribbon having fields of different characteristics, and a ribbon vibrator, of means for varying the extent of movement of said vibrator to change from one ribbon field to another said means comprising shifting members, one member constantly operatively connected with the carriage and one member on a fixed part, said members coöperating automatically at a predetermined point in the carriage travel, the ribbon field being and remaining changed only so long as said members remain in coöperation; and the construction being such that the ribbon field changes again automatically when the coöperation of said members ceases.

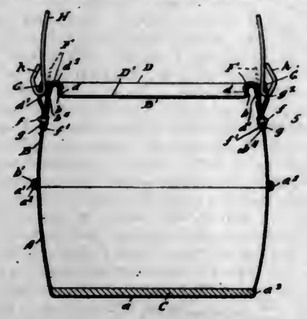
[Claims 6 to 37 not printed in the Gazette.]

878,575. ORE DREDGING AND SEPARATING APPARATUS. ISAAC STEVENSON and JOHN COOK, Port Chalmers, New Zealand. Filed Dec. 31, 1906. Serial No. 350,249.



In combination a dredge support, excavating means thereon, a chute adapted to receive the material directly from the excavating means, a rocking sluice box adapted to receive the material directly from the chute, said box having means for delivering the heavy tailings at the end thereof, and for delivering fine tailings intermediate its ends and separate run-ways for catching said fine material and distributing it on the top of and beyond the heavy tailings and adjustable means for rocking the sluice box transversely.

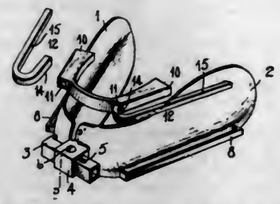
878,576. SHEET-STEEL KEG FOR WHITE LEAD. CHARLES STOLLBERG, Toledo, Ohio, assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 21, 1906. Serial No. 344,419.



1. A sheet steel or metal keg for white lead, comprising two bilged or barrel-shaped seamless sections, having outwardly projecting external annular flanges at their meeting ends, folded together into a seam uniting the two sections, the lower section having an integral bottom, the upper section being furnished at its upper end with an inwardly and downwardly curved flange or roll, a cover having inner and outer parallel flanges tightly fitting and embracing the flanged upper end of the upper section, a pair of cover holding clips, a pair of bail ears fitting over said clips, rivets extending through the bail ears and clips for securing the same to the upper body section, said body having external recesses therein to receive the lower ends of the bail ears and clips, and the bail ears having longitudinal recesses fitting and embracing the lower ends of the clips, substantially as specified.

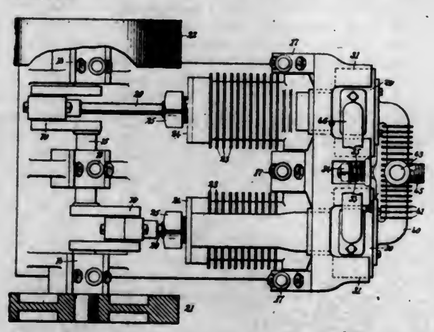
2. A sheet metal keg having a body provided at its upper or mouth end with an inwardly and downwardly curved flange or roll, a cover having the inner and outer parallel flanges tightly fitting and embracing the flanged upper end of said body, a pair of cover holding clips, a pair of bail ears fitting over said clips and rivets extending through the bail ears and clips for securing the same to the body, said body having external recesses therein to receive the lower ends of the bail ears and clips, and the bail ears having longitudinal recesses fitting and embracing the lower ends of the clips, substantially as specified.

878,577. DEVICE FOR REPAIRING FRACTURED JAWS. PETER STUKEY, Auburn, Ind. Filed Mar. 29, 1907. Serial No. 365,408.



In a device of the character described, in combination, a two-part splint member for the outside surface of a jaw-bone, comprising two members adjustably secured together at one end, and each provided with a securing rail, and a plate fitting against the teeth of said jaw, having attaching members secured thereto, adapted to be connected with said securing rails, substantially as and for the purpose set forth.

878,578. INTERNAL-COMBUSTION ENGINE. ROY S. THOMPSON, Chicago, Ill. Filed Apr. 2, 1907. Serial No. 365,983.



1. An internal combustion engine, comprising a movable cylinder, a piston operating therein, said cylinder having a passage communicating with each end thereof, and a stationary port-controlling member in engagement with said cylinder and having two separate conduits adapted to communicate with each of said passages, the communication between said passages and said conduits being determined by the position of said cylinder.

2. An internal combustion engine, comprising a plurality of cylinders, a piston operatively mounted within each cylinder, each of said pistons adapted to compress a fuel charge upon one side of the piston and to be moved by the ignition of a fuel charge upon the opposite side thereof, means for delivering the fuel charge compressed within each cylinder to another cylinder upon the ignition side of the piston thereof and a port-controlling member for each cylinder for controlling the admission and exhaust of gas from both ends thereof.

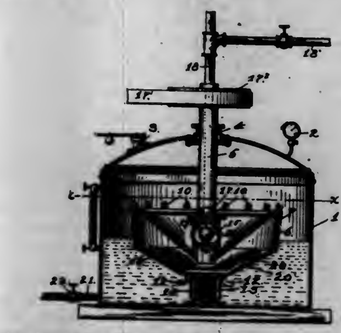
3. An internal combustion engine, comprising a plurality of cylinders, pistons located therein and adapted to compress a fuel charge upon one side thereof and be moved by the ignition of a fuel charge upon the opposite side thereof, means connecting said pistons whereby they operate simultaneously, one piston being upon the exhaust stroke at the time another piston is upon the explosion and compression stroke, means whereby the fuel charge compressed in the compression space of each cylinder is delivered to be ignited in another cylinder and a port-controlling member for each cylinder for controlling the admission and exhaust of gas from both ends thereof.

4. An internal combustion engine, comprising a plurality of cylinders, each having a piston operating therein, means connecting said pistons whereby they operate simultaneously, each of said cylinders having a passage communicating with each end thereof, and a plurality of conduits adapted to communicate with each of said passages, said conduits being so arranged that gas compressed in one end of each cylinder may be delivered to the opposite end of another cylinder.

5. An internal combustion engine, comprising two cylinders, pistons operating therein, means connecting said pistons whereby they operate simultaneously, each of said cylinders having separate passages leading to the opposite ends thereof, a port-controlling member in engagement with each cylinder and having separate passages adapted to be placed in communication with the passages of the cylinder, and a plurality of conduits connecting said port-controlling members, whereby the fuel charge compressed in one cylinder may be delivered for ignition against the piston of the other cylinder.

[Claims 6 to 13 not printed in the Gazette.]

878,579. AIR-COMPRESSOR. LAMARTINE C. TRENT, San Francisco, Cal. Filed Mar. 31, 1906. Serial No. 309,051.



1. An apparatus for the described purpose, the same comprising a pressure tank or cylinder, a receiver rotatably mounted therein, an inlet in said receiver for the admission of water, an air supply for admitting air to the interior of the receiver at the point of the admission of the water, outlets in the receiver for the escape of air under pressure, an auxiliary water inlet for said receiver connecting with the interior of said tank or cylinder and means for imparting rotation to the said receiver for centrifugally forcing air and water therefrom under pressure into the pressure tank or cylinder.

2. An apparatus for the described purpose, the same comprising a pressure tank or cylinder, a receiver rotatably mounted therein, inlets for admitting air and water into the receiver, outlets for the escape of air and water under pressure into the pressure tank or cylinder, means for regulating the area of said outlets and means for imparting rotation to the receiver for centrifugally expelling the air and water therefrom under pressure.

3. The combination with a pressure tank or cylinder, of a receiver rotatably mounted therein, into which receiver air and water are received and discharged directly therefrom under pressure into the pressure tank or cylinder, said receiver comprising oppositely disposed connected upwardly inclined annular walls, and an intermediate

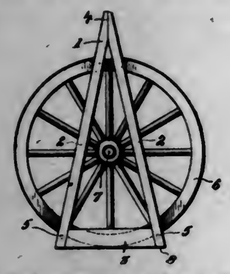
annular deflector disk constituting in connection with one of said walls a restricted passage and means for imparting rotation to the receiver for centrifugally expelling the air and water therefrom.

4. The combination with the pressure tank or cylinder, of a receiver rotatably mounted therein and comprising oppositely disposed connected annular walls, devices for supplying air and water to the interior of the receiver, a deflecting disk or plate within the receiver, inlets below said disk or plate for admitting a compressing body of liquid into the receiver, outlets in the receiver for the escape of air and water from within the receiver under pressure, and means for imparting rotation to the receiver for centrifugally expelling air and water therefrom under pressure.

5. In an air compressor, the combination with a pressure tank or cylinder, of an annular cup shaped receiver rotatably mounted therein for receiving air and water and expelling the same therefrom under pressure into the said pressure tank or cylinder.

[Claims 6 and 7 not printed in the Gazette.]

878,580. WHEEL-JACK. STEPHEN W. WALKER, Anson, Me., assignor of one-half to John W. Hannagan, Madison, Me. Filed July 25, 1907. Serial No. 385,478.



1. A wheel jack comprising a handle lever having at its base a pivoting edge and provided upon its opposite face with separated lateral projections disposed to travel in an arc beyond a vertical line from said pivot in the oscillation of the lever thereon.

2. A wheel jack comprising a handle lever having an angular pivoting edge provided upon its opposite face with separated lateral projections disposed intermediate of the pivoting edge and the opposite end of the lever.

3. A wheel jack comprising a handle lever having at its base a pivoting edge and provided upon its opposite face with lateral prongs spaced from each other, and disposed to travel in an arc beyond a vertical line from said pivot.

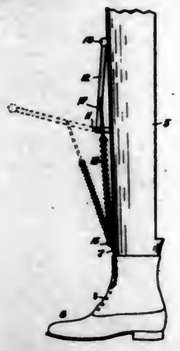
4. A wheel jack comprising a handle lever having at its base a pivoting edge and provided upon its opposite face with lateral prongs spaced from each other, and disposed to travel in an arc beyond a vertical line from said pivot and a base piece extending between said prongs and having a concave upper face intermediate thereof.

5. In a wheel jack, a handle lever comprising a triangular frame the base of which is formed with an angular pivoting edge throughout its length, and pins upon the opposite face of the base from said edge and spaced at the opposite ends of the base.

878,581. LACING ATTACHMENT FOR SHOE-TREES. JUSTIN A. WALLACE, Mishawaka, Ind. Filed Apr. 4, 1906. Serial No. 309,927.

1. The combination with a shoe-tree, of a lacing tape adapted for engagement with the upper of the shoe entirely around the vent thereof, and instrumentalities connected with the tape for drawing it taut to, stretch and lace the shoe upon the tree.

2. A shoe tree provided with a lever pivotally secured thereto, means for engaging the upper of the shoe at a plurality of points on opposite sides of the vent therein, a spring secured to said means and a toggle connection between the spring and the lever.



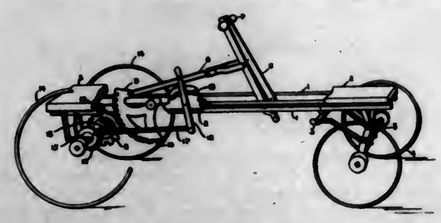
3. In a device of the class described, the combination with a shoe-tree, and a tape for lacing the shoe thereon, of means for operating on said tape comprising a lever secured to the tree adapted to have its free end rest against the shoe-tree and its pivoted end project in front of the shoe-tree, and connections between the tape and the lever, having pivotal connection with the latter.

4. A shoe-tree provided with a forwardly projecting supporting arm, a lever pivoted on the end of said arm, a lacing tape, and connection between the tape and the lever, said connections being pivoted to the lever intermediate its ends.

5. A shoe-tree provided with a lever secured thereto and arranged to swing vertically and stand in an inclined position with its free end resting against the tree, a lacing tape, a spring secured to the lacing tape, and a locking toggle connected with the spring and pivoted to the lever intermediate its ends.

[Claims 6 and 7 not printed in the Gazette.]

878,582. MECHANICAL MOTOR-VEHICLE PROPULSION. JOHN WEBER, Jr., Toledo, Ohio, assignor to The Toledo Metal Wheel Company, Toledo, Ohio, a Corporation of Ohio. Filed May 12, 1906. Serial No. 316,449.



1. A traction wheel, a driving element having a one-way clutch connection therewith in a given direction, and a reciprocable device constructed to actuate said element to drive the wheel in the given direction by one movement and to be disengaged from said element when manually or automatically operated to the extremity of its opposite movement.

2. A quadricycle, comprising a traction wheel, a driving pinion having a one-way clutch connection with the wheel in a given direction, and a reciprocable device including a segment constructed to actuate the pinion to drive the wheel in the given direction by one movement and to be disengaged from said element when at the extremity of its opposite movement, and a reciprocable member connected to the segment and controllable directly by the operator in both directions of its movement.

878,583. APPARATUS FOR CLEANING BOILER-TUBES. HENRY F. WEINLAND, Springfield, Ohio, assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Oct. 31, 1903. Serial No. 179,273.



1. An apparatus for cleaning boiler tubes comprising a cleaning tool adapted to pass through the tube, a portable mechanical motor, a rigid shaft connecting the motor and cleaning tool, and a universally flexible support for the motor, said support being secured so as to permit the free rise and fall of said motor, whereby all movements of the motor are unobstructed.

2. An apparatus for cleaning boiler tubes, comprising a cleaning tool adapted to pass through the tube, a portable mechanical motor of greater diameter than the tool and comprising a water wheel, its shaft and an inclosing casing provided with operating handles, a shaft rigidly connecting the cleaning tool and water wheel shaft, and means for supporting said motor so that it is free to move in a direction longitudinally of the tubes, said means comprising a counterweight, a pulley and a flexible connection between the counterweight and motor casing passing over the pulley, substantially as described.

3. An apparatus for cleaning boiler tubes, comprising a cleaning tool adapted to pass through the tube, a portable motor of greater diameter than the tool, means for supporting said motor so that it is free to move in a direction longitudinally of the tube, said means comprising a counterweight, a pulley, and a flexible connection between the counterweight and motor case passing over the pulley, and a shaft rigidly connecting the motor and cleaning tool and provided between said motor and tool with bearing rings adapted to fit the interior of the tube and moving longidinally with the shaft, said shaft rotating in said rings, substantially as described.

4. An apparatus for cleaning boiler tubes, comprising a cleaning tool adapted to pass through the tube, a motor of greater diameter than the tool, and a shaft rigidly connecting the motor and cleaning tool, said shaft being composed of a plurality of telescoping sections, and means for locking the sections in extended or contracted positions, substantially as described.

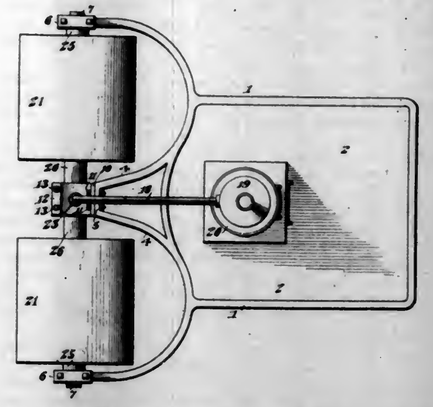
5. An apparatus for cleaning boiler tubes, comprising a cleaning tool adapted to pass through the tube, a motor of greater diameter than the tool, and a shaft rigidly connecting the motor and cleaning tool, said shaft being composed of a plurality of telescoping sections, and means for locking the sections in extended or contracted positions, some of said sections being provided with bearing rings adapted to fit the interior of the tube and moving longitudinally with the shaft, said shaft rotating in said rings, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

878,584. ICE-ROAD-MAKING MACHINE. AXEL WETTERVIK, Iron River, Mich., assignor to Klas A. Lindgren, Stambaugh, Mich. Filed Feb. 21, 1907. Serial No. 358,741.

1. An ice road making machine comprising a frame, spaced transversely disposed hollow rollers located in rear of and connected with the frame, a boiler mounted on the frame, and a feed pipe extending from the boiler into the space between the hollow rollers and communicating with the interior of each of the same for supplying steam to the rollers.

2. An ice road making machine comprising a frame, a boiler mounted on the frame, a tubular axle, a hollow roller mounted on the axle, the latter being provided within the roller with an aperture, a boiler mounted on the frame, and a feed pipe extending from the boiler and communicating with the axle.

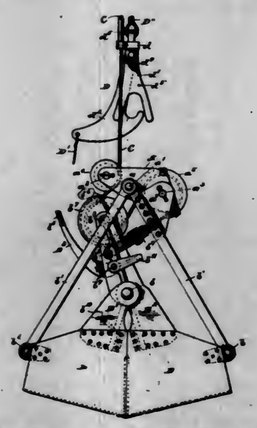


3. An ice road making machine comprising a frame provided with central and side bearings, tubular axles mounted on the bearings and having steam outlets, hollow rollers arranged on the axles and receiving the steam outlets, and a feed pipe connected with the central bearing for feeding steam to the hollow rollers.

4. An ice road making machine comprising a frame having central and side bearings, the central bearing being provided with opposite annular grooves, tubular axles arranged in the bearings and provided with annular flanges fitting in the grooves, and a feed pipe connected with the central bearing.

5. An ice road making machine comprising a frame provided at opposite sides with rearwardly extending arms, said frame being also provided at the center with rearwardly extending arms having a transverse connecting portion, central and side bearings carried by the said arms, hollow rollers arranged between the arms and journaled in the said bearings, and means for supplying steam to the rollers for heating the same.

878,585. CLAM-SHELL BUCKET. CHARLES C. WILLIAMS, Cleveland, Ohio. Filed May 10, 1907. Serial No. 372,876.



1. In mechanism of the class described, the combination of a frame; two scoop members pivotally connected at their inner ends; links connecting the outer ends of said mem-

bers with said frame; and a cable having one end secured exteriorly of said mechanism and connected to support said frame and members and normally close the latter.

2. In mechanism of the class described, the combination of a frame; two scoop members; arms borne by the inner portions of said members, respectively, said arms being pivotally secured together; links connecting the outer ends of said members with said frame; sheaves in the outer end of one of said arms and in said frame; and a cable having one end fixedly secured exteriorly of said mechanism and passing around said sheaves, said cable being adapted to support said frame and members and to normally close the latter.

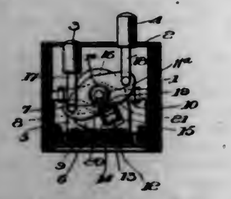
3. In mechanism of the class described, the combination of a frame; two scoop members pivotally connected at their inner ends, one of said members bearing an arm; links connecting the outer ends of said scoop members with said frame; three sheaves mounted in the free end of said scoop arm; two sheaves mounted in said frame; and a cable looped around one of the sheaves in said arm, the respective portions of said cable passing over one of the sheaves in said frame and one of the remaining sheaves of said arm in the order named.

4. In mechanism of the class described, the combination of a frame; two scoop members pivotally connected at their inner ends, one of said members bearing an arm; links connecting the outer ends of said scoop members with said frame; a pair of vertically disposed and one transversely disposed sheave mounted in the outer end of said scoop arm; a pair of vertically disposed sheaves mounted in said frame; and a cable looped around the transversely disposed sheave in said arm, the respective portions of said cable passing over one of the sheaves in said frame and one of said pair of vertical sheaves in said arm in the order named.

5. In mechanism of the class described, the combination of a frame; two scoop members pivotally connected at their inner ends, one of said members bearing an arm; links connecting the outer ends of said scoop members with said frame; three sheaves mounted in the outer end of said scoop arm; two sheaves mounted in said frame; and a dead end cable looped around one of the sheaves in said arm, the free and dead-end portions, respectively, of said cable passing from such loop over one of the sheaves in said frame and one of the remaining sheaves of said arm in the order named.

[Claims 6 to 26 not printed in the Gazette.]

878,586. PUSH-BUTTON SWITCH. HERBERT C. WILLIAMSON, New York, N. Y. Filed May 17, 1906. Serial No. 317,376.



1. In combination in a push button switch, a receptacle, a supporting plate mounted therein and provided with a ratchet, an oscillatory pawl plate pivotally mounted with reference thereto, a pawl borne in said plate and arranged to engage its ratchet, a contact bar movable with said ratchet plate, coöperating contacts in the receptacle and an oscillatory releasing plate arranged to release the pawl plate.

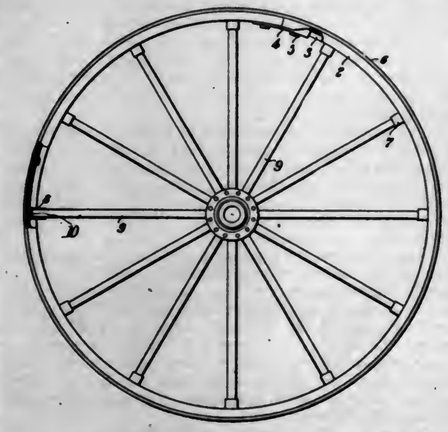
2. In combination in a push button switch, a receptacle, contacts mounted therein, a frame or support provided with a ratchet lug, a pawl plate pivotally arranged with reference to the supporting plate and provided with a spring pawl arranged to engage the ratchet lug on opposite sides, an oscillatory actuating plate pivoted and having a free movement with reference to the pawl plate, a coiled spring having one end in engagement with the actuating plate, a contact bar carried with the pawl plate and push buttons for moving the actuating plate.

3. In combination in a push button switch, a receptacle, a sheet metal frame secured therein and provided with a supporting pivot, a ratchet lug formed in the plane of the center of the plate, an oscillatory pawl plate mounted to swing upon the supporting pivot and provided with a spring pawl arranged to engage the ratchet lug upon opposite sides, an actuating plate provided with cams for depressing said pawl upon predetermined rotation of the plate and a spring intermediate the pawl plate and actuating plate.

4. In combination in a push button switch, a receptacle, a supporting plate mounted therein and having an opening therethrough, a ratchet lug projecting into the opening, a pawl plate pivoted to the supporting plate and having a spring pawl projecting through the plate to engage the ratchet lug on either side thereof, a spring having one end in engagement with the pawl plate and the opposite end in engagement with an actuating plate and an actuating plate pivoted with reference to the support and provided with cams for releasing the pawl from the ratchet upon predetermined movement of the parts.

5. In combination in a push button switch, a receptacle, a supporting plate mounted therein and provided with a ratchet, an oscillatory pawl plate pivotally mounted with reference thereto, a pawl appurtenant to said plate and arranged to engage the ratchet, a contact bar movable with said ratchet plate, coöperating contacts in the receptacle and means for releasing and moving the pawl plate.

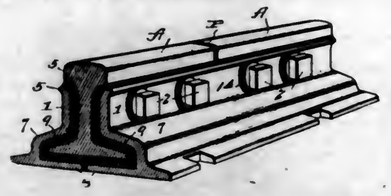
878,587. VEHICLE-WHEEL. GEORGE C. WIMPEE, Rome, Ga. Filed Mar. 18, 1907. Serial No. 363,056.



1. A wheel having a metallic felly having a continuous groove in the inner face thereof, sockets having closed bases fitted within the grooves, a spoke seated within each socket, securing devices extending through the felly and into the spokes, and a tire upon the felly for retaining the securing devices therein.

2. A wheel having a felly consisting of a metal strip having abutting ends, inwardly extending parallel flanges integral with the strip and forming an inner groove or channel, a coupling plate secured within the end portions of the grooves for fastening the ends of the strip together, sockets within the grooves and having closed bases, spokes seated within the sockets, securing devices extending through the felly and the bases of the sockets and into the spokes, and a tire extending over said securing devices to prevent displacement thereof.

878,588. INSULATED RAIL-JOINT. BENJAMIN WOLHAUPTER, New York, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed July 27, 1906. Serial No. 328,062.



1. A process of making insulated rail joints which consists first in setting up in spaced relation the rails and rail joint members to form thereby a mold having a molding space between said rails and members, and then casting plastic insulating material in said molding space to form an integrated body of insulation therein.

2. A process of making insulated rail joints, which consist first in setting up the rails and rail joint members in spaced relation to form thereby a mold having communicating molding spaces, then temporarily centering bolt hole cores through the bolt holes in the rail webs and joint members, then casting plastic insulating material in said molding spaces to form an integrated body of insulation therein, and finally removing said cores.

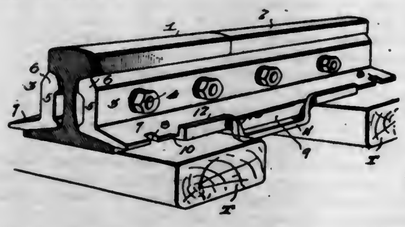
3. An insulated rail joint having an insulation consisting of an integrated molded body of insulating material cast between the rails and joint members.

4. In an insulated rail joint, the combination with the rails and joint members, of a continuous integral molded body of insulating material cast on and between said rails and joint members.

5. In an insulated rail joint, the combination with the rail joint members, of a molded integral body of insulating material entirely enveloping the sides and bottoms of the rail ends between the opposing faces of the latter and the joint members.

[Claim 6 not printed in the Gazette.]

878,589. REINFORCED ANGLE-BAR FOR RAIL-JOINTS. BENJAMIN WOLHAUPTER, New York, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed Jan. 19, 1907. Serial No. 353,014.



1. An angle bar for rail joints provided with a stiffening girder and a continuous reinforcement for said girder arranged to extend over the tops of the ties to carry the load clear of the corners of the ties.

2. An angle bar for rail joints provided with a pendent stiffening girder and a continuous reinforcement for said girder arranged to extend beyond the latter and over the tops of the ties.

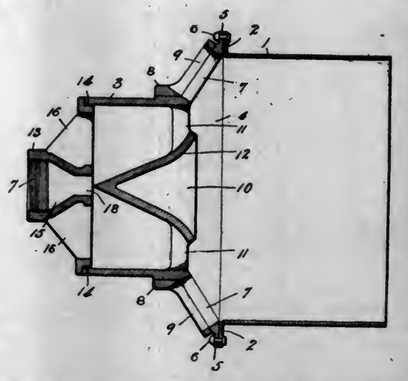
3. An angle bar for rail joints provided with a pendent stiffening girder, girder extensions arranged to extend over the ties, and a reinforcement for the girder and girder extensions.

4. An angle bar for rail joints provided with a pendent stiffening girder, horizontal girder extensions arranged to overlie the ties, and a reinforcement for the girder and girder extensions.

5. An angle bar for rail joints provided with a stiffening girder, horizontal girder extensions merged with said girder and arranged to overlie the ties, and a reinforcement for the girder and girder extensions.

[Claims 6 to 9 not printed in the Gazette.]

878,590. BURNER. LEVI D. YORK and GEORGE YOUNGMAN, Portsmouth, Ohio. Filed June 4, 1907. Serial No. 377,272.



1. In a burner, the combination of a body having a cylindrical portion and a flared rear portion, a spider removably secured in the front end of the body, a nozzle carried by the spider and co-axial with the body, a conical flame spreader supported by a spider centrally within the tubular portion of the body with its apex approximately in the plane of the mouth of the nozzle, and adjustable auxiliary air inlets in the flared portion of the body, introducing air directly into the body to the rear of the spreader.

2. In a burner, the combination of a body having a cylindrical portion and a flared rear portion, a spider removably secured in the front end of the body, a nozzle carried by the spider and co-axial with the body, a conical rearwardly flared flame spreader supported by a spider centrally within the tubular portion of the body with its apex approximately in the plane of the mouth of the nozzle, auxiliary air inlets in the flared portion of the body, introducing air directly into the body back of the rear end of the spreader, and a revoluble apertured ring located against the flared portion of the body for regulating the auxiliary air admission.

878,591. SWITCH DEVICE. KARL ABEL and FRIEDRICH PERVESLER, Vienna, Austria-Hungary. Filed Jan. 25, 1907. Serial No. 354,019.

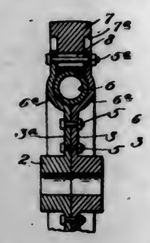


1. An electric switch or pole-changer comprising an insulating base, opposite pairs of spring contacts mounted thereon, spring contact strips secured to the base intermediate of said opposite pairs of contacts, the opposite ends of each spring strip extending over contacts of opposite pairs and push buttons mounted over the strips, each button extending over two spring strips, whereby two spring strips are brought into contact with a pair of said contacts by depressing a single button.

2. An electric switch or pole-changer comprising an insulating base, opposite pairs of spring contacts mounted thereon, cross-connections between diagonally opposite

contacts of said pairs, spring contact strips secured to the base intermediate of said opposite pairs of contacts, the opposite ends of each spring strip extending over contacts of opposite pairs, and push buttons mounted over the strips, each button extending over two spring strips, whereby two spring strips are brought into contact with a pair of said contacts by depressing a single button.

878,592. WHEEL. CHARLES ADAMS-RANDALL, New York, N. Y. Filed Feb. 21, 1906. Serial No. 302,312.



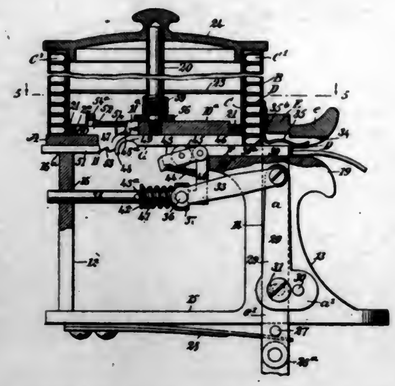
1. In a resilient wheel, the combination of a hub and spoke portion constructed in two halves and immovably secured together, the outer edges of the halves of the hub and spoke portion being free and opening into a seat at a distance inwardly between the same and the hub members, a pliable inflatable air cushion disposed in the seat, an independent outer tire or traction device having a portion movably extending inwardly between the outer free edges of the halves of the hub and spoke portion and resting on the outer part of the cushion, and means fixed to the free open edges of the two halves and extending transversely across said edges, the inner portion of the tire or traction device being movable on the said means.

2. In a resilient wheel, the combination of a hub and spoke portion constructed in two halves and having means for immovably securing the same together and having a seat near the free open edges thereof, a pliable inflatable air cushion disposed in said seat and inclosed by the halves of the spoke portion in which the said seat is formed, an outer independent tire or traction device surrounding the hub and spoke portion and having an inwardly projecting part movably engaging the space between the outer free edges of the said halves and resting on the cushion, the said inwardly projecting part being transversely slotted, and means fixed to the outer free edges of the two halves and extending transversely through the slots of the inwardly projecting part of the tire or traction device.

3. In a resilient wheel, the combination of a hub and spoke portion constructed in two halves and having means for immovably securing the same together and having a seat near the free open edges thereof, a pliable inflatable air cushion disposed in said seat and inclosed by the halves of the spoke portion in which the said seat is formed, an outer independent tire or traction device surrounding the hub and spoke portion and having an inwardly projecting part movably engaging the space between the outer free edges of the said halves and resting on the cushion, the said inwardly projecting part being transversely slotted, means fixed to the outer free edges of the two halves and extending transversely through the slots of the inwardly projecting part of the tire or traction device, and an annular plate fixed to the tire or traction device and movably projecting inwardly over and bearing upon the outer sides of the free ends of the halves of the hub and spoke portion.

4. In a resilient wheel, a hub and spoke section constructed in two halves which are immovably secured together, an inclosed seat being formed in the two halves inwardly a distance from the outer free edges of the two halves of the hub and spoke section, a pliable inflatable air cushion disposed in the said seat, an independent outer tire or tread device surrounding the hub and spoke section and movably fitted between the two halves of the latter outside of and bearing on the air cushion and formed with recesses in the opposite outer side portions thereof in which the outer free edges of the halves of the section are movable, and connecting rods fixed in the outer free edges of the two halves of the hub and spoke section and loosely engaged by the inner portion of the tire or tread device.

878,593. MACHINE FOR FEEDING AND AFFIXING LAUNDRY-TAGS. FRANK F. AKERLY and WILLIAM BORCHERT, Reno, Nev. Filed May 4, 1907. Serial No. 371,771.



1. In a machine for distributing and clenching tags and the like, a rotatable reservoir having chambers for the reception of tags, distributing means coöperating with the reservoir, a clenching mechanism, means for rotating the reservoir, and means controlled by the clenching mechanism for operating the rotating means, and the distributing means.

2. In a machine for distributing and clenching tags and the like, a rotatable reservoir for the tags, a clenching mechanism, a push-bar operated from said clenching mechanism for carrying one tag after the other in operative relation to said clenching mechanism, devices for rotating the reservoir, and devices for locking the same in discharge position, and means for operating the rotating and locking devices for the reservoir by the movement of the clenching mechanism.

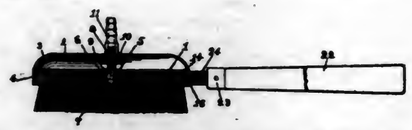
3. In a machine for distributing and clenching tags and the like, a rotatable reservoir for the tags, devices for rotating and locking the reservoir, a table, means for clenching the tags when so fed, which means have movement to and from the tags, and timedly operated connections between the clenching means and the rotating and locking devices, and the means for feeding the tags, whereby all of the said parts operate in harmony controlled by the clenching means.

4. In machines for distributing and clenching laundry tags and the like, a rotatable reservoir provided with compartments for the reception of tags, distributing means adapted to operate upon the lowermost tag in a given compartment, clenching means for the tag thus fed coöperating with the distributing means, and means controlled by the distributing and clenching means, for revolving the said reservoir.

5. In a machine for distributing and clenching laundry tags, a base structure including a base plate and a table, a clenching device operatively mounted in said base structure and having a movement to and from the table, a reservoir mounted to revolve upon a base plate adapted to contain laundry tags, a push bar operated from the said clenching device for carrying one tag after the other in operative relation to the said clenching device, and means operated by the push bar for revolving the reservoir at stated intervals.

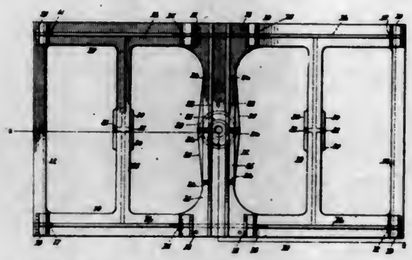
[Claim 6 not printed in the Gazette.]

878,594. FOUNTAIN BATH-BRUSH. WILLARD E. ALLEN, Toledo, Ohio. Filed Feb. 15, 1906. Serial No. 301,136.



In a fountain bath brush, the combination with the brush body 1, having the central orifice 5, of the nozzle 6, provided with the radially perforated flanged cap 7, and the threaded reduced portion 8, a nut 10 adapted to be run on the portion 8, and form a shoulder, the holder 2, having the central orifice 12 to receive the threaded end portion 8 of the nozzle, and a rim portion 4 adapted to receive the brush body, and a nipple 11 adapted to be run on the projecting end portion 8, and compress the back of the holder on the nut.

878,595. DOUBLE BODY-BOLSTER FOR RAILWAY-CARS. JOHN M. AMES, Dongan Hills, N. Y. Filed Apr. 5, 1907. Serial No. 366,459.



1. A double body-bolster comprising two side frames and a central beam connecting the same, said side frames having at their upper portions horizontal flanges affording seats for car center-sills and integral vertical flanges extending substantially the full length of said side frames from said center-sills outwardly and to the inner ends of which vertical flanges said center-sills may be secured; substantially as set forth.

2. A double body-bolster comprising two side frames and a central beam connecting the same, said side frames having at their upper portions horizontal flanges affording seats for car side-sills and integral vertical flanges extending substantially the full length of said side frames from said central beam outwardly and to the outer ends of which flanges said side-sills may be secured; substantially as set forth.

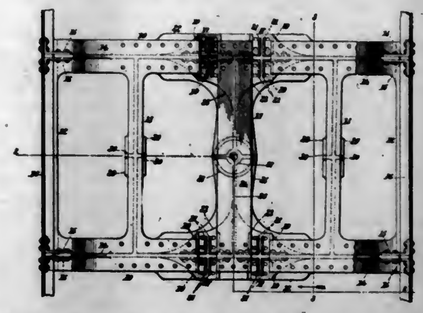
3. A double body-bolster comprising two side frames and a central beam connecting the same, said side frames having at their upper portions horizontal flanges affording seats for car center-sills and side-sills and integral vertical flanges extending substantially the full length of said side frames from said center-sills to said side-sills and to the respective ends of which flanges said center and side sills may be secured; substantially as set forth.

4. A double body-bolster comprising two side frames and a central beam connecting the same, said side frames having at their upper portions horizontal flanges affording seats for car center-sills and integral vertical flanges extending substantially the full length of said side frames from said center-sills outwardly and formed integrally at their inner ends adjacent to said central beam with laterally extended flanges to which the center-sills may be secured; substantially as set forth.

5. A double body-bolster comprising two side frames and a central beam connecting the same, said side frames having at their upper portions horizontal flanges affording seats for car side-sills and integral vertical flanges extending substantially the full length of said side frames from said central beam outwardly and formed integrally at their outer ends with laterally extended flanges to which the side-sills may be secured; substantially as set forth.

[Claims 6 to 13 not printed in the Gazette.]

878,596. DOUBLE BODY-BOLSTER FOR RAILWAY-CARS. JOHN M. AMES, Dongan Hills, N. Y. Filed Apr. 5, 1907. Serial No. 366,460.



1. A cast double body-bolster comprising two side-frames and a central beam connecting the same and integral at its ends therewith, said side frames being formed through their upper portions at opposite sides of each end of said beam with independent recesses and horizontal flanges at the bases thereof, said recesses being adapted to closely receive car center-sills and the webs of said side frames at opposite sides of said recesses affording means for securing said sills; substantially as set forth.

2. A cast double body-bolster comprising two side-frames and a central beam connecting the same and integral at its ends therewith, said side frames being formed through their upper portions at opposite sides of each end of said beam with independent recesses and horizontal flanges at the bases thereof, said recesses being adapted to closely receive car center-sills and the webs of said side frames at opposite sides of said recesses affording means for securing said sills, combined with top plates secured upon said side frames and engaging said sills; substantially as set forth.

3. A cast double body-bolster comprising two side-frames and a central beam connecting the same and integral at its ends therewith, said side frames being formed through their upper portions at opposite sides of each end of said beam with independent recesses and horizontal flanges at the bases thereof, said recesses being adapted to closely receive car center-sills and the webs of said side frames at opposite sides of said recesses being provided with knees extending from both sides of the webs for securing said sills, combined with top plates secured upon said side frames and engaging said sills; substantially as set forth.

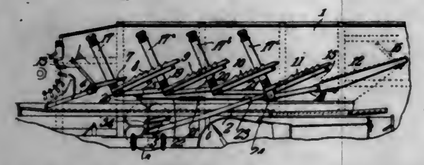
4. A cast double body-bolster comprising two side frames of I-shape and a central beam connecting the same and integral at its ends therewith, said side frames being formed through their upper portions at opposite sides of each end of said beam with independent recesses and horizontal flanges at the bases thereof, said recesses being adapted to closely receive car center-sills and the webs of said side frames at opposite sides of said recesses affording means for securing said sills, combined with top-plates riveted upon said side frames and extending across said recesses and over the tops of said sills; substantially as set forth.

5. A cast double body-bolster comprising two side frames of I-shape and a central beam of I-shape connecting the same and integral at its ends therewith, said side frames being formed through their upper portions at opposite sides of each end of said beam with independent recesses and horizontal flanges at the bases thereof, said

recesses being adapted to closely receive car center-sills and the webs of said side frames at opposite sides of said recesses being provided with knees extending from both sides of the webs for securing said sills, combined with top plates riveted to said side frames and crossing said recesses; substantially as set forth.

[Claims 6 to 13 not printed in the Gazette.]

878,597. STRAIN-EQUALIZER FOR GRAIN-SHAKERS. EMIL ANDERSON, Hastings, Nebr. Filed Aug. 13, 1907. Serial No. 388,363.



1. In a grain separator, a series of suspended shakers, links connecting each shaker with the one following, and a tensioning device connecting the two terminal links.

2. In a grain separator, a series of suspended shakers, links connecting each shaker with the one following, and an adjustable tensioning device connecting the two terminal links.

3. In a grain separator, a series of suspended shakers, links connecting each shaker with the one following, a coiled spring, and a pair of tensioning rods connected at their inner ends to the spring, the outer end of one of the rods being secured to one terminal link and the outer end of the other rod being adjustably connected with the other terminal link.

878,598. DEVICE FOR BUTTONING COLLARS. FRANK BAILEY, Hoboken, N. J. Filed Apr. 20, 1907. Serial No. 369,330.



A collar button device, comprising a tapered shank or handle portion the larger end of which is elliptical in cross section, said larger end being provided with a tube or sleeve which is also elliptical in cross section and one side portion of which is cut out at the end thereof together with a portion of said end, the remaining portion of said end being provided with an inwardly directed segmental flange in which is a central recess, the end of the shank or handle adjacent to said tube or sleeve being provided with an annular shoulder.

878,599. EYEGLASSES OR SPECTACLES. GEORGE BAUSCH, Syracuse, N. Y. Filed Aug. 18, 1904. Serial No. 221,244.



1. In eyeglasses, a bridge having a portion forming a hinge pintle, and a nose-guard having a hinge portion adapted to coöperate therewith.

2. In eyeglasses or spectacles, the combination with the lenses, of a bridge attached thereto embodying a strip having intermediate portions adapted to form pintles, and nose-guards having bearings thereon arranged to turn on said pintles of the bridge as axes.

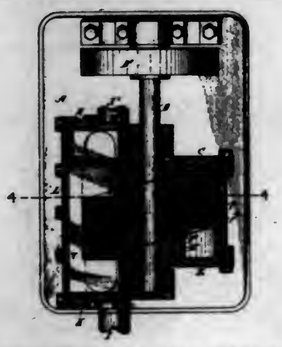
3. In eyeglasses or spectacles, the combination with the lenses and a bridge having a bowed central portion adapted to span the wearer's nose, the ends of the bowed portion extending rearwardly, and thence forwardly to the lenses, of a nose guard journaled to turn on the rearwardly-extending arms of the bridge.

4. In eyeglasses or spectacles, the combination with a bridge having pintles formed thereon, of nose-guards each embodying a nose-engaging surface, and a hinge portion arranged thereon intermediate the length of the nose-engaging surface and coöperating with the pintle on the bridge.

5. In eyeglasses or spectacles, the combination with the bridge having the horizontally arranged pintles formed thereon between its central portion and its points of attachment to the lenses, of nose guards journaled to turn on said pintles in planes approximately parallel to the plane of the lenses.

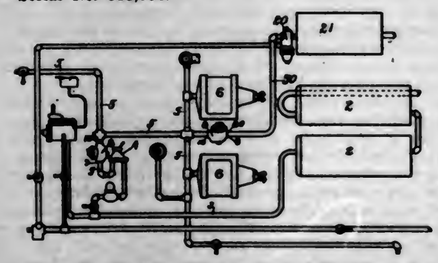
[Claims 6 and 7 not printed in the Gazette.]

878,600. ROTARY PUMP. REINOLD BERRENBERG, Boston, Mass. Filed Mar. 27, 1907. Serial No. 364,914.



A rotary pump comprising a casing having suitable inlet and outlet ports and having on the inner ends of the casing inwardly projecting bosses, the said bosses being grooved, whereby ways or guides are provided for the valve to slide in; a rotating piston, the central part of which is disk shaped and constructed to fit the faces of the said bosses and thereby form a comparatively water-tight joint, the outer part of said piston being an annular sinuous ring, the peripheral surface of which fits the inner cylindrical surface of the casing and a sliding valve constructed to be operated by said piston and to co-act with the same to force the contents of the piston chambers into the outlet ports, substantially as and for the purpose set forth.

878,601. AIR-BRAKE APPARATUS. HENRY F. BICKEL, Plainfield, N. J., assignor to New York Air Brake Company, a Corporation of New Jersey. Filed Oct. 15, 1906. Serial No. 338,996.



The combination with the brake cylinder of an air brake apparatus and the pipe or duct through which air is supplied thereto and exhausted therefrom; of the valvular appliance communicating with said brake cylinder

supply and exhaust pipe, and provided with an exhaust opening to the atmosphere; a valve controlling the said exhaust opening; and a piston yieldingly connected with said valve and movable relatively thereto, said piston being moved relative to said valve in response to flow of air towards the brake cylinder, and being engaged with the said valve and operated to open the same in response to flow of air from the brake cylinder, substantially as described.

878,602. SPLIT SHEET-METAL PULLEY. LEROY A. BIGGAR, Oneida, N. Y. Filed July 5, 1907. Serial No. 382,334.

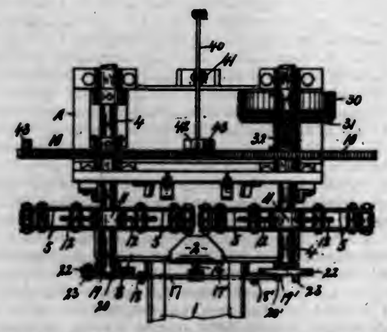


1. In a split pulley, a sheet metal hub and a sheet metal rim in combination with V-shape spoke-arms having their apexes secured to the hub and their outer ends secured to the rim and braces having their inner ends seated in the apexes of the spoke-arms and their outer ends secured to the spoke-arms at the meeting faces of the split pulley.

2. A split pulley comprising a hub section and a rim section, a series of outwardly diverging spoke-arms having their inner ends united and secured to the hub section and their outer ends deflected inwardly toward each other and secured to the rim section, and brace bars in the angle of the diverging spoke-arms and secured to the hub, and to the adjacent spoke-arms.

3. In a split pulley, a sheet metal rim and a hub in combination with sheet metal spokes having their inner ends concavo convex and seated on the periphery of the hub and their outer ends deflected laterally and secured to the inner face of the rim and brace-bars having their inner ends seated upon the concavo convex inner ends of the spokes and secured to the hub and their outer ends secured to the spokes, the intermediate portions of said brace bars being spaced apart from the adjacent portion of the spokes and disposed in planes substantially parallel with the meeting faces of the pulley sections, and clamping bolts passed through the intermediate portions of the brace-bars and adjacent spokes for securing the opposite pulley sections together.

878,603. CAN FEEDING AND RIGHTING MACHINE. MERTON D. BLAKESLEE, Cazenovia, N. Y., assignor of one-fourth to Henry Burden, Second, Cazenovia, N. Y. Filed Mar. 5, 1907. Serial No. 360,660.



1. In a can feeding and righting machine, a chute, mechanism for righting the cans and feeding them one by one into the chute, a driving element and slip-fed connections between the driving element and said mechanisms, and additional mechanism brought into action by the accumulations of cans in the chute for stopping the can righting and feeding mechanism irrespective of the driving element.

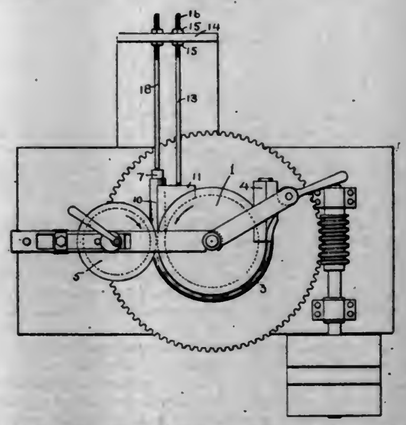
2. In a can feeding and righting device, a chute, mechanism for righting and feeding the cans into the chute, a movable deflector in the path of the righted cans for diverting alternate cans to different localities, automatic means for operating said deflector, a mechanism brought into action by the accumulation of cans in the chute for stopping the can feeding and righting mechanism.

3. In a can feeding and righting device, two rotary can feeding elements, can righting fingers on said elements, for entering the open ends of the cans and temporarily holding them with their upper ends uppermost while their opposite ends gravitate downwardly from the fingers, driving mechanism for said rotary elements, a chute for receiving the righted cans, a stop finger movable into and out of the path of the righted cans, and connections between the driving mechanism and said stop finger for actuating the latter, whereby the stopping of the cans in the chute prevents the action of the stop fingers and its actuating mechanism.

4. In a can feeding and righting device, two rotary can-feeding elements mounted on parallel axes spaced apart, means to feed the cans between said elements, can-righting fingers on said elements for entering the open ends of the cans and temporarily holding them with their open ends uppermost while their opposite ends gravitate downwardly from the fingers, and a driving mechanism including a driving element, and a friction disk engaged therewith.

5. In a can feeding and righting device, a chute, and mechanism for righting and feeding the cans into the chute, a movable deflector in the path of the righted cans for diverting alternate cans to different localities, and automatic means for operating said deflector.

878,604. MACHINE FOR BENDING PIPE. LOUIS H. BRINKMAN, West Hartford, Conn., assignor to Whitlock Coil Pipe Company, West Hartford, Conn., a Corporation of Connecticut. Filed June 15, 1904. Serial No. 212,688.



1. In a pipe bending machine, the combination with a forming roll around which the pipe is bent, of a block having one angle an acute angle, with one of the sides of said block forming said acute angle in contact with the forming roll and the other side in contact with the pipe to be bent, and means for holding said block in that position while the pipe is being bent.

2. In a pipe bending machine, the combination with a forming roll around which the pipe is bent, of means in contact with said forming roll for exerting pressure on the

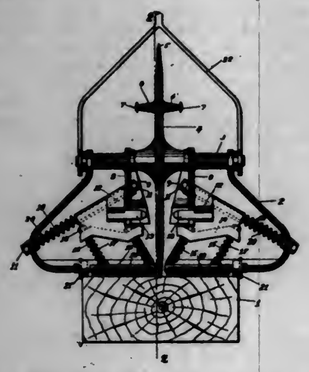
pipe to be bent immediately behind the bending point, and means for applying a bending strain to said pipe.

3. In a pipe bending machine, the combination with a forming roll around which the pipe is bent, of a block in contact with the forming roll and in contact with that side of the pipe which is compressed by the bending strain, means for holding said block in said contact with said forming roll and with said pipe, and means for applying a bending strain to the pipe.

4. In a pipe bending machine, the combination with a forming roll around which the pipe is bent, of a block in contact with the forming roll and in contact with that side of the pipe to be bent compressed by the bending strain, and means for adjusting said block in a line parallel with the pipe to be bent.

5. The combination with a forming roll and a mandrel, of a supporting block arranged to bear against the pipe to be bent between said forming roll and said mandrel and behind the bending point of said pipe, thereby pressing that side of said pipe against the mandrel, of an adjusting rod carrying said block and means for adjusting said rod in the fixed framework, whereby said block may be pressed against said pipe.

878,605. AUTOMATIC FRAMING-SPACER. JOSEPH BROADLEY, Fairoaks, Cal. Filed Mar. 18, 1907. Serial No. 362,857.



1. In a device of the character described, a frame, a shaft mounted for rotation in said frame, a wheel carried by said shaft, spring actuated pencils arranged in said frame and movable transversely of said wheel, means for actuating said pencils, a spring actuated device carried by said wheel and adapted to operate said pencil moving means at each revolution of said wheel.

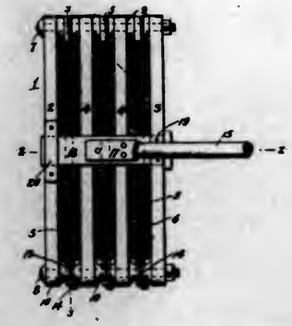
2. In a device of the character described a frame, a shaft journaled in the top thereof, a wheel secured to the center of said shaft, spring actuated buttons disposed on each side of said wheels, spring actuated pencils arranged in said frame, and means for operating said pencils by said buttons with each revolution of said wheel, as set forth.

3. In a device of the character described a frame, a shaft journaled in the top thereof, a wheel secured to the center of said shaft, spring actuated buttons disposed on each side of said wheel, downwardly depending plates on said frame on each side of said wheel, inclined cams on said plates adapted to receive said buttons, and spring actuated pencils arranged in said frame and having push buttons extending through said plates just in front of the highest end of said inclined cams, as set forth.

4. In a device of the character described a frame, a shaft journaled in the top thereof, a wheel secured to the center of said shaft, spring actuated buttons disposed on each side of said wheel, downwardly pending plates from said frame, on each side of said wheel, inclined cams on said plates adapted to receive said buttons, inclined rods secured in the said frame and said plates, sleeves mounted on said rods and having buttons extending through said plates just in front of the highest ends of said inclined cams, springs bearing between said sleeves and the sides of said frame, offsets on said sleeves, inclined rods arranged in said offsets and having pencil holders secured to their lower ends, pencils secured in said holders, springs bearing between said holders and said offsets, and nuts mounted on the upper ends of said last named rods, and a handle secured to said frame, as specified.

5. In a device of the kind described a frame, a rotating wheel therein, spring actuated pencil holders in said frame, means for driving said holders downward with each revolution of said wheel, and pencils dove tailed into said holders, as specified.

878,606. BRUSH. ROBERT C. BRYANT, Faroe, Miss. Filed July 8, 1907. Serial No. 382,794.



1. A brush head comprising relatively stationary bars arranged in spaced parallel relation, brush material retaining bars pivoted to swing between said stationary bars and means for retaining said pivoted bars between said stationary bars, substantially as described.

2. A brush head comprising relatively stationary bars arranged in spaced parallel relation, brush material retaining bars pivoted to swing between said stationary bars, said pivoted bars being of substantial U shape cross sections and having their depending longitudinal edges flared outwardly and notched to provide teeth, and means for retaining said pivoted bars between the stationary ones, substantially as described.

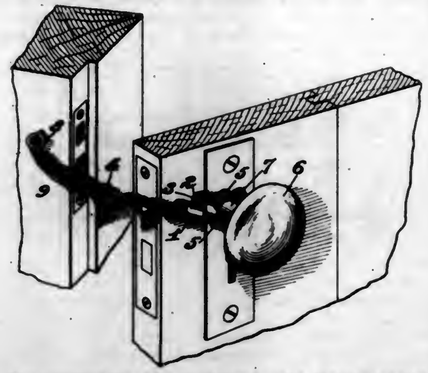
3. A brush head comprising relatively stationary bars arranged in spaced parallel relation, elements for spacing said bars apart, channeled bars pivoted for swinging movement between said stationary bars and adapted to retain brush material between the latter, said pivoted bars being notched to receive said spacing elements, and locking pins inserted in the ends of said pivoted bars and engaged with said elements, substantially as described.

4. A brush head comprising bars arranged in spaced parallel relation, bolts passed through said bars adjacent to their ends, brush material retaining bars pivoted at one end upon one of said bolts and adapted to swing between said spaced bars and means for detachably securing the free end of said pivoted bars to the other of said bolts, substantially as described.

5. A brush head comprising bars arranged in spaced parallel relation, bolts passed through said bars adjacent to their ends, means upon said bolts for spacing said bars apart, brush material retaining bars pivoted at one end upon one of said bolts and adapted to swing between said spaced bars, said pivoted bars being notched to receive the spacing means upon the other bolt and locking pins inserted in said pivoted bars and engagement with said spacing means, substantially as and for the purpose set forth.

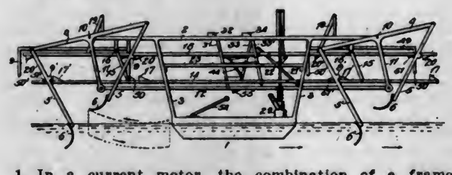
[Claim 6 not printed in the Gazette.]

878,607. DOOR-CHECK. ALEXANDER CAIRNS, St. Louis, Mo. Filed Nov. 4, 1907. Serial No. 400,713.



The combination in a door check, of a chain 4 having a slip loop 5, with a sleeve 1, having a longitudinal bore, connected to the door casing and knob, as set forth.

878,608. WATER-CURRENT MOTOR. JAMES A. CAMERON, Chicago, Ill. Filed Apr. 29, 1907. Serial No. 371,008.



1. In a current motor, the combination of a frame mounted above a stream, a pair of depending arms mounted to oscillate on said frame and each arranged to counterbalance the weight of the other, paddles secured to the lower ends of said arms, mechanism for presenting said paddles alternately to the action of the current, mechanism for causing each of said paddles to move in a direction opposite to the current of the stream when lifted therefrom, and mechanism for transmitting power from said paddles.

2. In a current motor, the combination of a frame mounted above a stream, a horizontally disposed balance beam mounted to oscillate in said frame, a pair of depending arms pivotally hung at opposite ends of said beam, paddles secured to the lower ends of said arms, mechanism for rocking said beam to present said paddles alternately to the action of the current, mechanism for causing each of said paddles to move in a direction opposite to the current of the stream when lifted therefrom, and mechanism for transmitting the power imparted to said paddles by the current.

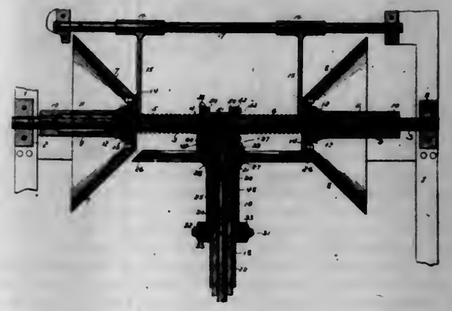
3. In a current motor, the combination of a frame mounted above a stream, a horizontally disposed balance beam mounted to oscillate in said frame, a pair of depending arms pivotally hung at opposite ends of said beam, paddles secured to the lower ends of said arms, mechanism for rocking said beam to present said paddles alternately to the action of the current, mechanism for causing each of said paddles to move in a direction opposite to the current of the stream when lifted therefrom, and mechanism for transmitting the power imparted to said paddles by the current, each of said paddles being adapted while immersed to furnish power for returning the other paddle to its initial position in the stream.

4. In a current motor, the combination of a frame mounted above a stream, a horizontally disposed balance beam mounted to oscillate in said frame, a pair of depending arms pivotally hung at opposite ends of said beam, paddles secured to the lower ends of said arms, mechanism for rocking said beam to present said paddles alternately to the action of the current, mechanism for causing each of said paddles to move in a direction opposite to the current of the stream when lifted therefrom, and mechanism for transmitting the power imparted to said paddles by the current, said rocking mechanism comprising means for holding said beam stationary while one of said paddles is immersed, and means for shifting the beam to the opposite inclination to immerse the other paddle when the first paddle has been moved a certain distance by the current.

5. In a current motor, the combination of a float, a balance beam mounted to oscillate on said float and overhanging the water, a pair of paddles suspended from opposite ends of said balance beam and movable thereon, mechanism for rocking said beam for alternately inserting one and withdrawing the other of said paddles from the stream, said paddles being adapted to be moved by the current when submerged, and mechanism connecting said paddles and adapted to cause the submerged paddle to move the other in the opposite direction.

[Claims 6 to 30 not printed in the Gazette.]

878,609. TRANSMISSION-GEARING. ALVIN O. CARMAN, Homer, Mich. Filed Aug. 2, 1907. Serial No. 386,850.



1. In a transmitting gearing, the combination with a driving shaft and a driven shaft, of cones on the driving shaft, a friction wheel on the driven shaft between said cones, means for moving said cones in opposite directions and for simultaneously moving the friction wheel to change the speed of the driven shaft, and means for shifting the cones simultaneously in the same direction for starting, stopping and reversing the operation of the driven shaft.

2. In a transmitting gearing, the combination with a driving shaft and a driven shaft, of cones on the driving shaft, a friction wheel on the driven shaft between the cones, threaded devices connected with said cones for moving them simultaneously in opposite directions, screw devices connected with the friction wheel, and means for simultaneously operating all of said screw devices to shift the relation of the cones and the friction wheel to each other to change the speed of the driven shaft.

3. In a transmitting gearing, the combination with a driving shaft and a driven shaft, of cones on the driving shaft, a beveled friction wheel on the driven shaft between the cones, and a cam device for shifting the cones longitudinally to cause one or the other or neither of said cones to engage the friction wheel for starting, reversing or stopping the driven shaft.

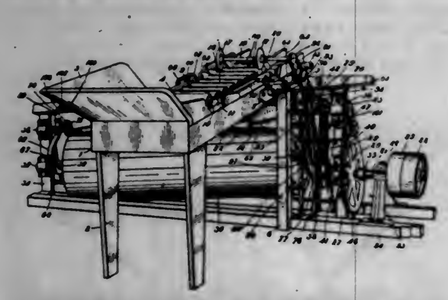
4. In a transmitting gearing, the combination with a driving shaft and a driven shaft, of cones mounted on the driving shaft to rotate therewith, a sleeve mounted on the driving shaft and having right and left hand threaded connection with the respective cones, a friction wheel on the driven shaft, a threaded shaft having threaded connection with the friction wheel, means for rotating said threaded

shaft and gearing between the threaded shaft and threaded sleeve.

5. In a transmitting gearing, the combination with a driving shaft and a driven shaft, of cones mounted on the driving shaft, a friction wheel on the driven shaft between said cones, a sleeve on the driving shaft and having threaded connection with the cones, means for rotating said sleeve to move the respective cones simultaneously in opposite directions, means for sliding said sleeve to move the cones simultaneously in the same direction, and means for shifting the friction wheel in a direction at right angles to the axis of the cones.

[Claims 6 to 8 not printed in the Gazette.]

878,610. MACHINE FOR HUSKING GREEN CORN. LEWIS J. CORYELL, Oshawa, Ontario, Canada. Filed Jan. 15, 1907. Serial No. 352,453.



1. A machine for husking green corn, comprising a rotating drum suitably journaled, a stripping roller suitably journaled and extending longitudinally above said drum and operatively connected therewith, a feed mechanism extending over said drum and operatively connected therewith, and means for moving the ears of corn into contact with said stripping roller, substantially as described.

2. A machine for husking green corn, comprising an endless carrier, a rotating drum beneath said carrier, a stripping roller journaled and rotating in the opposite direction to said drum adjacent to the periphery thereof, and means for moving the ears of corn dropped from said endless carrier to said drum over to said stripping roller, substantially as described.

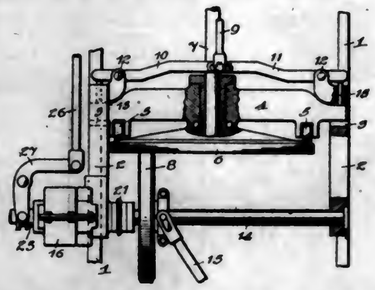
3. A machine for husking green corn, comprising an endless carrier, a drum suitably journaled and having one end elevated, a stripping roller suitably journaled and rotating in the opposite direction to said drum and adjacent to the periphery thereof, and a roller having an oscillatory movement over the said drum and moving the ears of corn dropped from said carrier to said drum over to said stripping roller, substantially as described.

4. A machine for husking green corn, comprising an endless carrier, a drum suitably journaled and having one end elevated, a stripping roller having helical grooves in the periphery thereof and rotating in the opposite direction to said drum and adjacent to the periphery of said drum, means for moving the ears of corn dropped from said endless carrier over to said stripping roller, substantially as described.

5. In a machine for husking green corn, the combination with the standards having a plurality of bearings therein, of a drum journaled in said bearings, a stripping roller journaled in other of said bearings adjacent to the periphery of said drum, a driving shaft suitably journaled, a sprocket mounted on said roller, a sprocket mounted on said driving shaft, a chain connecting said sprocket wheels for driving said roller, gear mechanism operatively connecting the shaft of said drum and said driving shaft, an endless carrier, and a chain and sprocket operating connection from said drum shaft to said endless carrier, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

878,611. TRANSMISSION-GEARING. EDWARD B. CRIBB, Shawnee, Okla. Filed May 28, 1907. Serial No. 376,181.



1. In a friction gearing, the combination with the engine shaft and the friction disk mounted thereon, of a pair of side frames, a transverse shaft mounted therein, a friction wheel secured upon said shaft, a sliding frame arranged in the rear of said friction disk, and levers for sliding said frame to force said disk into engagement with said friction wheel, substantially as described.

2. In a friction gearing, the combination with the engine shaft and the friction disk mounted thereon, of side frames provided with transverse openings therein, a transverse shaft mounted within said frames, a friction wheel secured upon said transverse shaft, a sliding arm mounted behind said friction disk in said transverse openings of said side frames, rollers carried by said arms and contacting with the rear face of said disk, and a lever mechanism for sliding said frame to force said disk into engagement with said friction wheel, substantially as described.

3. In a friction gearing, the combination with the engine shaft and the friction disk mounted thereon, of a pair of side frames, a transverse shaft mounted within said frames, a friction wheel keyed on said shaft to slide thereon across the face of said friction disk, a sliding frame arranged in the rear of said friction disk, and levers for sliding said frame to force said disk into engagement with said friction wheel, substantially as described.

4. In a friction gearing, the combination with the engine shaft and the friction disk mounted thereon, of side frames provided with openings therethrough, a transverse shaft mounted in said frames, a friction wheel keyed on said shaft to slide thereon across the face of said friction disk, a sliding arm mounted behind said friction disk within said openings in said side frames, rollers carried by said arm and contacting with the rear face of said disk, and a lever mechanism for sliding said frame to force said disk in engagement with said friction wheel, substantially as described.

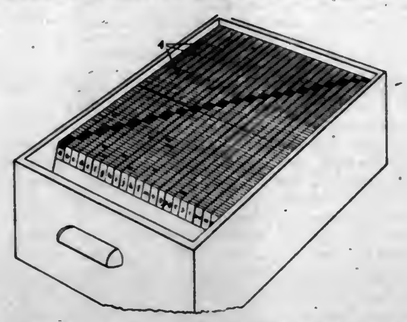
5. In a friction gearing, the combination with the engine shaft and the friction disk mounted thereon, of side frames provided with openings therein, a transverse shaft mounted in said side frames, a friction wheel keyed on said shaft to slide thereon across the face of said disk, a sliding frame mounted in the rear of said friction disk, a lever mechanism for sliding said frame to force said disk into engagement with said friction wheel, a loosely mounted driving sleeve carried by said transverse shaft, a sleeve keyed on said shaft to slide thereon, said sleeves being formed with clutch faces upon their adjacent ends and means for sliding said last named sleeve, substantially as described.

[Claim 6 not printed in the Gazette.]

878,612. INDEX. HENRY DENLINGER, Portland, Oreg. Filed Oct. 31, 1905. Serial No. 285,284.

1. A card or envelop provide with the letters of the alphabet and with one or more differentiated indicating marks so associated with the letters of said alphabet as to indicate in their order the first or initial letters of the name thereupon.

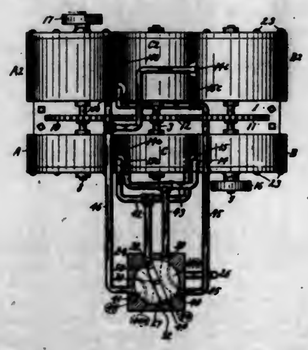
2. A set of cards or envelops provided with a series of division marks subdividing them into spaces and also provided with the letters of the alphabet, and with one or more indicating marks so positioned within said spaces as to indicate in their order the first or initial letters of the name associated therewith, substantially as described.



3. A card or envelop provided with a series of division marks subdividing a portion thereof into spaces and with the letters of the alphabet distributed within said spaces, and with one or more differentiated indicating marks distributed among said spaces to designate in their order the initial letters of the name thereon, substantially as described.

4. A filing envelop provided upon its face near its upper edge with a series of marks dividing it into spaces, some of said marks being differentiated to particularly designate certain letters of the alphabet distributed in said spaces upon said envelop, and with one or more colored indicating marks within said spaces and associated with the letters of the alphabet which are the first or initial letters of the name upon said envelop, substantially as described.

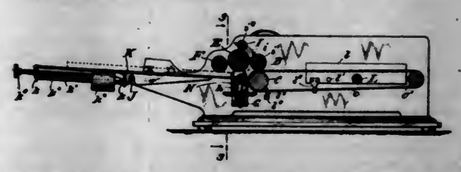
878,613. ROTARY ENGINE. GEORGE A. DIBBELL, Washburn, Wis. Filed Sept. 5, 1907. Serial No. 391,411.



1. A rotary engine having two working cylinders arranged parallel to each other and an intermediate smaller cylinder between the working cylinders and communicating with their interior, a central shaft in each cylinder, a piston or rotating plug snugly fitted in the intermediate cylinder and having in its face a longitudinal transversely segmental groove, a rotary piston fixed on each shaft of the working cylinder and being in peripherical contact with and of the same diameter as the plug so as to leave a steam space about the piston, at one side of each working piston a wing adapted to be moved by the steam through the steam space and to pass into the groove of the plug when passing the latter, gears fixed on all of said shafts and so meshed together that the wings of the working pistons pass alternately into the groove of the plug, said cylinders having at their points of union ports for the inlet and exhaust of steam, metallic packing rings fitting in the cylinders and against the ends of the pistons and the plug, and means for adjusting said rings against the ends of the pistons and plug.

2. A rotary engine having two working cylinders arranged parallel to each other and an intermediate smaller cylinder between the working cylinders and communicating with their interior, a central shaft in each cylinder, a piston or rotating plug snugly fitted in the intermediate cylinder and having in its face a longitudinal transversely segmental groove, a rotary piston fixed on each shaft of the working cylinder and being in peripherical contact with and of the same diameter as the plug so as to leave a steam space about the piston; at one side of each working piston a wing adapted to be moved by the steam through the steam space and to pass into the groove of the plug when passing the latter, gears fixed on all of said shafts and so meshed together that the wings of the working pistons pass alternately into the groove of the plug, said cylinders having at their points of union ports for the inlet and exhaust of steam, pipes extending from said ports, a valve connected with the pipes for starting, stopping and reversing the engine, longer cylinders in axial lines with the cylinders described, pistons and plug in the longer cylinders fixed on said shafts, and means for directing the steam from the smaller to longer cylinders through to the valve.

878,614. SHEET-FEEDING APPARATUS. ALBERT B. DICK, Lake Forest, Ill., assignor to A. B. Dick Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 14, 1907. Serial No. 362,309.



1. In sheet-feeding apparatus, the combination of a rotatable shaft, a roller loosely mounted thereon, a clutch between said roller and shaft, means for rotating said shaft intermittently, a support for a sheet-pile having one end thereof extending under said roller, an adjustable weight on said support exerting a constant pressure tending to move said end upwardly toward said roller, a pair of parallel rollers and means for operating the same to grip and forward a sheet fed thereto by said roller and to turn the roller upon its shaft, substantially as described.

2. In sheet-feeding apparatus, the combination of a support for a sheet-pile, means for feeding sheets from said pile successively and a stop to prevent the feed of more than one sheet at a time consisting of a roller having a circumferential groove therein and a rigidly-supported member entering within said groove, substantially as described.

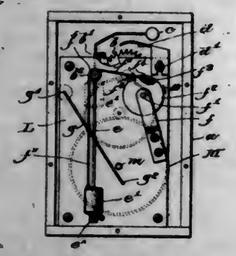
3. In sheet-feeding apparatus, the combination of a roller, means for operating the same, a support for a sheet-pile pivotally mounted with one end thereof extending under said roller and so arranged that said end is constantly pressed upwardly toward the roller, and a stop to prevent the feed of more than one sheet at a time consisting of a roller having a circumferential groove therein and a rigidly-supported member entering within said groove, substantially as described.

4. In sheet-feeding apparatus, the combination of a roller, means for operating the same intermittently, a support for a sheet-pile pivotally mounted with one end thereof extending under said roller, an adjustable weight for pressing said end upwardly toward said roller, a stop for preventing the feed of more than one sheet at a time consisting of a roller having a circumferential groove therein, a member entering within said groove and means for rotating said roller, a pair of rolls for forwarding a sheet fed by said roller past said stop, and means for rotating said rolls, substantially as described.

5. In sheet-feeding apparatus, the combination of a support for a sheet-pile, means for feeding sheets from said pile successively, and a stop to prevent the feed of more than one sheet at a time, consisting of a roller having a circumferential groove therein, a member coacting therewith, and means for adjusting said roller and member relatively to vary the extent to which the end of the member enters the groove in said roller and holding said parts rigidly in the position to which they are adjusted, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

878,615. TREMOLO-METER. CHARLES P. DOLAN, Boston, Mass. Filed June 8, 1907. Serial No. 377,915.



1. In apparatus of the class described, a sounding board, a coöperating tapper, a spring-motor operatively connected with and to vibrate the tapper, a speed regulator comprising a member fixedly connected with and oscillating in unison with the tapper and a weight longitudinally adjustable on said member, and manually operated means to at will change the position of the weight upon the oscillating member, to thereby increase or decrease the oscillatory speed of such member and the vibrations of the tapper.

2. In apparatus of the class described, a spring-motor, an escapement therefor, a pendulum and a tapper fixedly connected with said escapement, a weight freely movable on the pendulum toward and from its fulcrum, a sounding board with which the tapper coöperates, a manually rotatable disk, and a flexible connection between the weight and the periphery of the disk, whereby rotative movement of the latter in one or the other direction will raise or lower the weight and vary the speed vibration of the pendulum and tapper.

3. In apparatus of the class described, a spring-motor, an escapement therefor, a pendulum and a tapper fixedly connected with said escapement, a weight freely movable on the pendulum toward and from its fulcrum, a sounding board with which the tapper coöperates, a manually rotatable disk, a flexible connection between the weight and the periphery of the disk, rotation of the latter changing the position of the weight and thereby increasing or decreasing the vibratory speed of the tapper, a pointer fixedly connected with and to turn the disk, and a fixed dial concentric with the pointer axis and having thereon a scale indicating different speeds of vibration in accordance with a predetermined plan, whereby manual setting of the pointer to a given indication causes the vibration of the tapper at the speed denoted by the indication.

4. In apparatus of the class described, a vibrating tapper and a sounding board with which it coöperates, a spring-motor for the tapper, speed regulating means for said motor, including a pendulum having an adjustable weight, a speed-indicating dial, a manually movable pointer coöperating therewith, and means operated by setting of the pointer to adjust the position of the pendulum weight and cause the tapper to be vibrated at a speed corresponding to the selected indication on the dial.

5. In apparatus of the class described, a vibrating tapper and a sounding board with which it coöperates, a spring-motor for the tapper, speed regulating means for said motor, including a pendulum having an adjustable effective length, a dial indicating speed vibrations corresponding to a predetermined series of tremolos, a manually movable pointer coöperating with the dial, and means operated by setting of the the pointer to adjust the effective length of the pendulum and cause the beats of the tapper on the sounding board to accord with the selected indication on the dial.

[Claims 6 to 11 not printed in the Gazette.]

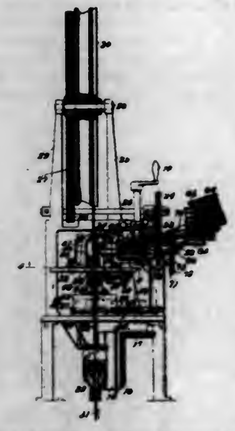
878,616. CUFF-BUTTON. GEORGE W. DOVER, Cranston, R. I. Filed Feb. 9, 1907. Serial No. 356,523.



1. In a button the combination with a solid bean, of a bar whose end is within the solid bean, and inclined rows of knurls upon the portion of the bar within the bean.

2. In a button the combination with a solid bean, of a bar whose end is within the solid bean, and intersecting inclined rows of knurls upon the portion of the bar within the bean.

878,617. APPARATUS FOR APPLYING INSULATION TO ELECTRICAL CONDUCTORS. LOUIS W. DOWNES, Providence, R. I. Filed June 15, 1905. Serial No. 265,389.



1. In an apparatus for applying fibrous insulating material to a conductor or wire, a carrier and means for rotating the same about the wire, means mounted upon and movable on the carrier during rotation thereof for applying fiber to the surface of the wire during rotation of the carrier about the wire, and means apart from the carrier for delivering fiber to the fiber-applying means on the carrier while the latter is in motion.

2. In apparatus for applying fibrous insulating material to a conductor or wire, a carrier and means for rotating the same about the wire, means mounted on the carrier for applying fiber to the surface of the wire during rotation of the carrier about the wire, and means apart from the carrier for delivering fiber into position to be picked up by the fiber-applying means on the carrier while the latter is in motion.

3. In apparatus for applying fibrous insulating material to a conductor or wire, a carrier and means for rotating the same about the wire, means mounted upon and movable on the carrier during rotation thereof for applying a layer of loose straightened fiber to the surface of the wire during rotation of the carrier about the wire, and means apart from the carrier for delivering fiber to the fiber-applying means on the carrier while the latter is in motion.

4. In apparatus for applying fibrous insulating material to a conductor or wire, a carrier and means for rotating the same about the wire, means mounted on bearings on the carrier for applying fiber to the surface of the wire during rotation of the carrier about the wire, driving connections for operating said fiber-applying means on said bearings to advance fibrous material to the surface of the wire during rotation of the carrier, and means apart from the carrier for delivering fiber to the fiber-applying means on the carrier while the latter is in motion.

5. In apparatus for applying fibrous insulating material to a conductor or wire, a carrier and means for rotating the same about the wire, means mounted on bearings on the carrier for applying a layer of loose straightened fiber to the surface of the wire during rotation of the carrier about the wire, driving connections for operating said fiber-applying means on said bearings to advance the layer of fibrous material to the surface of the wire during rotation of the carrier, and means apart from the carrier for delivering fiber to the fiber-applying means on the carrier while the latter is in motion.

[Claims 6 to 24 not printed in the Gazette.]

878,618. PROCESS OF DECOLORIZING TANNIC EXTRACTS. LORENZO DUFOUR, Genoa, Italy. Filed July 25, 1906. Serial No. 327,690.

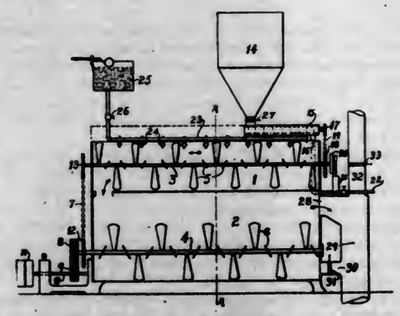
1. A process of treating tannic extracts which consists in adding thereto a reducing agent comprising in separate combinations the sulfurous acid radical and the phosphorous acid radical and adding thereto an acid capable of displacing the said radicals, substantially as described.

2. A process of treating tannic extracts which consists in adding thereto a reducing agent comprising in separate combinations the sulfurous acid radical and the phosphorous acid radical, adding thereto an acid capable of displacing the said radicals and heating the mixture, substantially as described.

3. A process of treating tannic extracts which consists in adding thereto a reducing agent comprising in separate combinations the sulfurous acid radical and the phosphorous acid radical, said reducing agent being associated with formaldehyde and adding thereto an acid capable of displacing the said radicals.

4. A process of treating tannic extracts which consists in adding thereto a reducing agent comprising in separate combinations the sulfurous acid radical and the phosphorous acid radical, said reducing agent being associated with formaldehyde, adding thereto an acid capable of displacing the said radicals and heating the mixture, substantially as described.

878,619. APPARATUS FOR-HYDRATING LIME. CARLETON ELLIS, New York, N. Y. Filed Sept. 6, 1905. Serial No. 277,175.



1. In an apparatus for hydrating lime, the combination of a chamber, a continuous lime-feeding mechanism constructed to feed comminuted lime thereto and means for continuously supplying an amount of water automatically proportioned to the amount of lime being fed at a point near the discharge of said lime-feeding mechanism.

2. In an apparatus for hydrating lime, the combination of a chamber, a continuous lime-feeding mechanism, constructed to feed comminuted lime thereto and a pump having operative connection with the lime-feeding mechanism for feeding a proportionate amount of water at a point near the discharge of said lime-feeding mechanism.

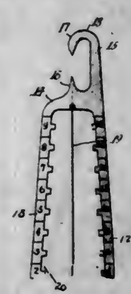
3. In an apparatus for hydrating lime, the combination of two or more connected passageways equipped with propelling devices, by means of which material may be caused to travel along said passageways in succession, means for continuously and uniformly feeding finely divided lime and water to the first of said passageways, and the said first passageway being so located as to be heated by a succeeding passageway.

4. In an apparatus for hydrating lime, the combination of a plurality of superimposed receptacles, equipped with conveyers, a passageway connecting said receptacles, an inlet in the upper receptacle for the introduction of crushed lime and water, and means for regulating the proportions of lime and water being fed to the apparatus.

5. In an apparatus for hydrating lime, the combination of a hydration trough, a superimposed mixing trough having an outlet near one end into the hydration trough, and near the other end a lime-feeding conveyer connected to a lime hopper for delivering a supply of crushed lime, a series of water spraying devices located along the top of the mixing trough, and means for regulating the flow of water therethrough.

[Claims 6 to 8 not printed in the Gazette.]

878,620. COMPUTING-SCALE. FRANK M. ENGELHARDT, Chicago, Ill., assignor to The Toledo Computing Scale Company, Toledo, Ohio, a corporation of New Jersey. Filed May 24, 1906. Serial No. 318,539.



1. In computing scales of the character described, an index hand having longitudinally co-extensive price-unit side-bars which converge as they extend outwardly.

2. The combination of a chart or table made up of concentric rows of computations each row based on a different unit of price increasing the further the row from the center from which all are struck, and an index hand extending radially over said chart and having side-bars converging as the arm extends away from said center and bearing price-unit inscriptions located to correspond with said rows of computations, said chart and said index hand being relatively movable about the center from which said rows are struck and the side-bars of said hand marking out an area on said chart in which the desired computation is to be found.

3. The combination of a chart or table made up of concentric rows of computations each row based on a different unit of price increasing the further the row from the center from which all are struck; an index hand extending radially over said chart and having side-bars converging as the arm extends away from said center and bearing price-unit inscriptions located to correspond with said rows of computations, said chart and said index hand be-

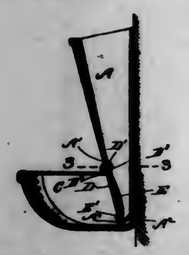
ing relatively movable about the center from which said rows are struck and the side-bars of said hand marking out an area on said chart in which the desired computation is to be found; and an intervening body supplying a reading line extending between the said bars spaced from the confronting edges thereof to intersect computations on the chart so that the latter may be read from either of the confronting edges of the said index-hand bars or strips while the index-hand stands in a single position.

4. The combination of a chart or table made up of concentric rows of computations each row based on a different unit of price increasing the further the row from the center from which all are struck; an index hand extending radially over said chart and having side-bars converging as the hand extends away from said center and bearing price-unit inscriptions located to correspond with said rows of computations, said chart and said index-hand being relatively movable about the center from which said rows are struck and the side-bars of said hand marking out an area on said chart in which the desired computation is to be found; and a wire stretched midway between said side-bars to intersect the computations.

5. The combination of a chart or table made up of concentric rows of computations each row based on a different unit of price increasing the further the row from the center from which all are struck, and also having concentric rows of weight numerals located outwardly beyond the computation rows; and an index hand extending radially over said chart and having side-bars converging as the arm extends away from said center and bearing price-unit inscriptions located to correspond with said rows of computations, said hand also having pointers extending towards each other at the lines of the said rows of weight numerals respectively, and the chart and index hand being relatively movable about the center from which the rows of computation and weight numerals are struck.

[Claims 6 to 9 not printed in the Gazette.]

878,621. FEED-REGULATOR. WILLIAM ENGELBRECHT, Cissna Park, Ill. Filed Oct. 31, 1904. Serial No. 230,742.



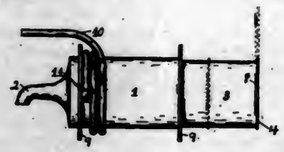
1. A device of the kind described comprising a hopper having a discharge opening, a plate arranged in said hopper, a spring secured to said plate within the hopper and projecting through the said opening, and means for regulating the said plate.

2. A device of the kind described comprising a hopper having a discharge opening, a plate slidably mounted in said hopper and a spring secured to said plate at one end in the hopper and having its free end curved and projected through the discharge opening.

3. A device of the kind described comprising a hopper having a discharge opening in its fron tface adjacent its lower end, a plate slidably mounted above said opening an elastic agitating member secured to said plate within the hopper above the opening and extending downwardly and projecting through the opening, and means for adjusting the slidable plate adapted to vary the size of the opening.

4. A device of the kind described comprising a hopper having downwardly converging side walls and triangular in cross section, said hopper having a forwardly inclined bottom, a discharge opening adjacent the bottom and a vertical slot above the opening, an adjustable plate adapted to slide vertically on the inner face of the front wall of the hopper and vary the size of the opening, a set screw working through the slot adapted to clamp the plate in its adjusted position, and a spring secured at one end to said plate in the hopper and projecting through the discharge opening, as and for the purpose set forth.

878,622. DEVICE FOR USE IN SOLDERING. LEONARD J. FERNER, Rochester, N. Y. Filed Mar. 13, 1907. Serial No. 362,184.

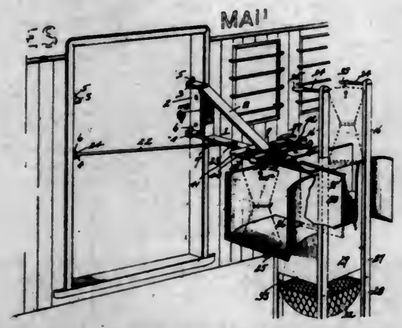


1. A device for use in soldering, having a hollow body for holding material, a discharge spout for the hollow body, a plunger for said body, and transverse flanges at the ends of the body giving the latter the form of a spool.

2. A device for use in soldering, having a hollow body oblong in cross section and with flat sides, a discharge spout for the body, a removable hollow plunger projecting into one end of the hollow body with its outer end open, a closure for said open end, and means on the body for holding wire solder.

3. A device for use in soldering, having a hollow flattened body with discharge spout, a plunger entering the hollow body, transverse flanges on said hollow body with space between for holding solder wire, and a holding lip for the wire formed by forcing back a part of a flange into the space between the flanges.

878,623. MAIL-BAG CATCHING AND DELIVERING MECHANISM. EDWARD W. FIX, Danville, Ill. Filed July 30, 1907. Serial No. 386,204.



1. In an apparatus of the class described, a supporting bracket, a swinging crane hinged to said bracket, and a bag supporting latch device mounted on the swinging end of the crane and consisting of a fixed keeper, a supporting bolt slidably working in said keeper, and a trigger pivotally mounted and having a pivotal connection at one end with said bolt.

2. In an apparatus of the class described, the combination with a crane carrying a tripping bag supporting device, of a station bag receiver comprising an upright trapping box, a horizontal receiving chute at the top of and in communication with said box, open entrance mouths at bith ends of the chute, and a pivotally suspended combined buffer and deflector hung transversely of the chute within the top portion of the trapping box.

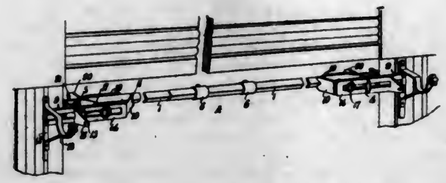
3. In an apparatus of the class described, the combination with a crane carrying a tripping bag supporting device, of a station bag receiver comprising a trapping box having a receiving chute at the top, a pivotal deflector mounted transversely within the receiving chute, and a rope net supported beneath said box.

4. In an apparatus of the class described, the combination with a station bag hanger and a fixed abutment, of a crane carrying a tripping bag supporting latch device cooperating with said abutment, and a reversible self-clutching catching fork coöperating with said bag hanger.

5. In an apparatus of the class described, the combination with a fixed abutment and a bag hanger at the station, of a crane carrying a tripping bag supporting device coöperating with said abutment, and a catching device detachably and reversibly mounted on the crane, said catching device comprising a carrying bar, a pair of oppositely arranged grasping horns pivoted to said bar, a toggle connection between the horns, and a self-acting locking device for said toggle connection.

[Claim 6 not printed in the Gazette.]

878,624. SHADE-ROLLER BRACKET. ALLISON H. FLEMING, Fairmont, W. Va. Filed Mar. 28, 1907. Serial No. 365,087.



1. The combination with a longitudinally channeled rod angular in cross section, an arm at one end of the rod, and a guide for the arm; of a longitudinally slotted base plate slidably engaging the guide, an extension upon the base plate having one end straddling the rod, a bracket movable with the base plate, and means engaging the rod and base plate for holding said plate against movement.

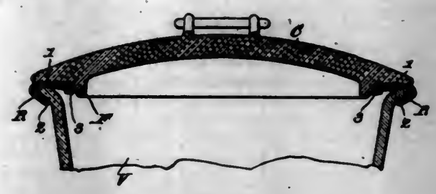
2. The combination with an extensible rod, an arm extending therefrom, and a bracket adjustably connected to the rod; of a shoe, oppositely bowed arms extending therefrom and loosely mounted within the arm of the rod, and a cam pivotally mounted upon the rod and projected into and disposed to actuate the arms of the shoe.

3. The combination with an extensible longitudinally channeled rod having flattened end portions, and arms extending from said portion; of a slide adjustably mounted upon the rod, said slide having a tapered extension movable within the rod, and an offset portion movable upon the flattened end portion, an arm extending from the offset portion, means for binding the slide to the rod, and means extending from the arms of the rod for securing the rod to a supporting structure.

4. The combination with a rod; of means thereon for engaging a supporting structure, said means comprising a shoe, an arm extending therefrom and loosely connected to the rod, and a cam pivotally mounted upon the rod and engaging and disposed to actuate the arm to shift the shoe in one direction.

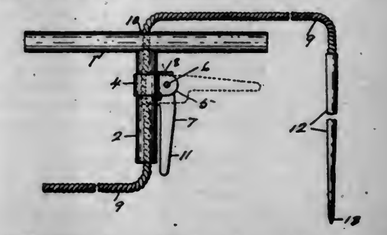
878,625. TOILET VESSEL. JOHN H. FREEMAN, Savanna, Ill. Filed Nov. 17, 1905. Serial No. 287,894.

A vessel comprising a body of inflexible material having at its upper edge an outstanding annular flange, a reversible cushion, seal, and dam for the same comprising a cylinder ring of elastic nonabsorbent material which is relatively thickest at its edges by being bent back upon itself, said ring resting at its thinner part over the edge of the flange of the body and being thereby distorted so that its upper portion is held in a horizontal plane extending in from the upper edge of the vessel and forming a cushion for the edge of the vessel and a seal and dam for the contents thereof, and a cover having a depending annular



flange between which and the inner side of the vessel, the inner thickened edge of the ring lies.

878,626. FISH STRINGER OR HOLDER. OLIVER C. GUILFORD, Fort Wayne, Ind. Filed July 24, 1907. Serial No. 385,243.



1. A fish-stringer consisting of a cord having a needle fixed on one end thereof, and a tubular holder for the other end of the string and slidably mounted thereon, and means for firmly securing the cord in any desired position in the holder, the said holder being adapted to contain the needle in a right-angular relation to that of the cord.

2. A fish stringer consisting of a holder formed to two tubular sections rigidly united in right angular relation, one section being fixed to the other in a lengthwise central opening therein; a cord or cable loosely mounted longitudinally in one section and passing diametrically through the other section; and means for firmly securing the said holder in any desired adjustment on said cord.

3. In a fish-stringer, a tubular holder formed of two sections in right angular relation, one section having a diametric opening in register with the adjacent end of the other section, which last mentioned section has a longitudinal slot therein, and is provided with apertured ears adjacent the corresponding sides of the said slot between which the holder securing means is pivotally mounted; a cord or cable loosely mounted in the last named section and passing through the said opening of the other section, and provided upon one end with a fixed needle; and a cam-lever pivotally mounted in the said slot and adapted to firmly secure the said holder in any desired adjustment on across said strip.

878,627. PANELING. HERMAN F. HECKER, Shakopee, Minn. Filed Mar. 4, 1907. Serial No. 360,454.

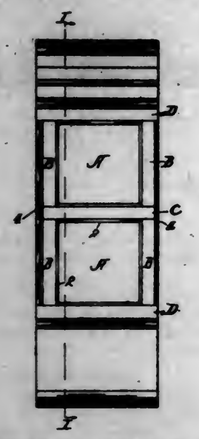
1. A panel strip having a longitudinal margin integral therewith and an insert forming a divisional panel margin across said strip.

2. As an improved article of manufacture, paneling having a strip formed with an integral panel margin, and an insert joined to said strip, and forming a divisional margin across said strip.

3. A paneling having longitudinal panel margins integral with a panel strip, and an insert across said strip, forming a transverse panel margin, for the purposes specified.

4. Paneling having a panel strip formed with integral longitudinal panel margins, and a transverse divisional

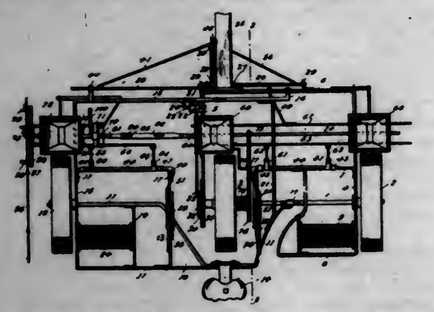
margin piece inserted in said strip, for the purposes specified.



5. Paneling comprising a longitudinal panel strip provided with an integral longitudinal panel margin, a transverse panel margin across said strip, and a joint connection between said parts.

[Claims 6 and 7 not printed in the Gazette.]

878,628. PLANTER. WILLIAM A. HEUBLEIN, Wilson, Minn. Filed Oct. 8, 1907. Serial No. 396,440.



1. In a planter, the combination with a frame, of a pair of wheels supporting the frame, a second frame pivoted to the first frame between the wheels thereof, a third wheel mounted upon said second frame, and seed feeding devices supported by said frames.

2. In a planter the combination with a frame, a pair of wheels supporting the frame, a second frame pivoted at one end to said first frame and between the wheels, a third wheel mounted on the other end of said second frame and seed feeding devices supported by said frames.

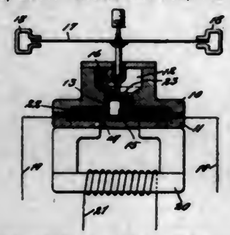
3. In a planter, the combination with a frame, of a pair of wheels supporting the frame, a second frame pivoted to the first frame between the wheels thereof, a third wheel mounted upon said second frame, seed feeding devices supported by said frames, and a shaft passing through all the seed feeding devices, said shaft being provided with means to permit the movement of the seed feeding devices in relation to each other.

4. In a planter, the combination with a frame, of a pair of wheels supporting the frame, a pair of seed feeding devices carried by said frame, means connecting said pair of seed feeding devices with the frame whereby they may be raised and lowered, a second frame pivoted to the first frame between the wheels thereof, a third wheel mounted upon said second frame, a third seeding device carried by said second frame, and means connecting said third seeding device with said second frame whereby it may be raised and lowered.

5. In a planter the combination with a frame, of a pair of wheels supporting the frame, a second frame pivoted to the first frame between the wheels thereof, a third wheel mounted upon said second frame, a pair of seed feeding devices, a supporting frame in which said seed feeding devices are mounted, connection between said first frame and said supporting frame for raising and lowering said seed feeding devices, a third seeding device, a second supporting frame in which said third seeding device is mounted, and connections between said second frame and said second supporting frame for raising and lowering said third seeding device.

[Claims 6 to 8 not printed in the Gazette.]

878,629. ELECTRIC MERCURY-MOTOR METER. JACOB H. HODDE, Springfield, Ill., assignor to Sangamo Electric Company, Springfield, Ill., a Corporation of Illinois. Filed Mar. 16, 1907. Serial No. 362,775.



1. The combination with a body of mercury and a spindle rotating therein, of a washer loosely surrounding said spindle at the point where the spindle enters the body of the mercury.

2. The combination with a body of mercury and a spindle rotating therein, of a washer floating on the surface of the mercury and loosely surrounding the spindle.

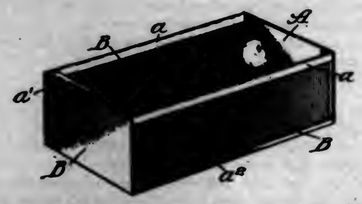
3. The combination with a body of mercury and a spindle rotating therein, of a washer loosely surrounding said spindle at the point where it enters the body of the mercury, said washer being amalgamated on its lower surface.

4. The combination with a body of mercury and a spindle rotating therein, of a washer of non-amalgamable material loosely surrounding said spindle at the point where it enters the body of the mercury.

5. The combination with a body of mercury and a spindle rotating therein, of a washer of non-amalgamable material loosely surrounding said spindle at the point where it enters the body of the mercury, said washer being provided with an amalgamated under surface.

[Claim 6 not printed in the Gazette.]

878,630. FILING-BOX. ELIAS C. HOLLAND, Benton Harbor, Mich., assignor to Metal Sectional Furniture Company, Portland, Me., a Corporation. Filed Mar. 27, 1906. Serial No. 308,335.



1. A filing box comprising a frame consisting of a rectangular plate parallel grooved members attached near the upper edge of the said plate, and extending at right angles from the same a rectangular angle iron frame attached to the lower edge of the said plate and extending at right angles thereto and lying in opposition to the said grooved members, and a lining adapted to removably engage said grooved members and said angle iron frame.

2. A filing box comprising a frame consisting of a rectangular plate, parallel grooved arms extending in the same direction and at right angles from the upper edge of the said plate a rectangular frame formed of angle irons attached to the lower edge of said rectangular plate and extending at right angles thereto and in opposition to the said grooved arms and a lining formed as a rectangular box with the top and one end removed and adapted to removably engage said grooved members and said angle irons.

878,631. MECHANISM FOR TURNING THE EDGES OF SHEET MATERIAL. THEODORE C. HOOK, Philadelphia, Pa. Filed Apr. 12, 1905. Serial No. 255,099.

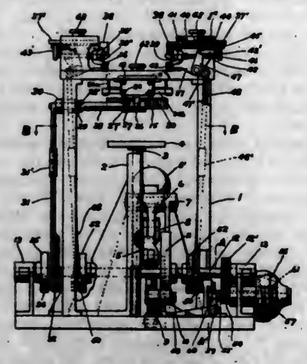


1. In apparatus of the class described, a form, a plurality of independently movable oppositely reciprocating holding devices adapted to press material against the same, and a plurality of turning devices one for each holding device and reciprocating in paths parallel to the paths of reciprocation of the respective holding devices and having limited movements of reciprocation independent of the movements of said holding devices respectively, each turning device being constructed to engage and be turned by its respective holding device.

2. In apparatus of the class described, a form, a reciprocating rod, a presser block on said rod, a second reciprocating rod, mechanism comprising a spring for connecting said rods, and a turning block pivoted on said second rod, said turning block being operated through contact with said presser block.

3. In apparatus of the class described, a bearing, a rod reciprocating in said bearing and having a device for holding material to be folded, a second bearing, a rod reciprocating in said second bearing, flexible mechanism for connecting said rods whereby one has a limited motion with reference to the other, and a device pivoted on said second rod and tilted by engaging a part with relation to which it moves to fold an edge of the material held by said first device.

878,632. MACHINE FOR TURNING THE EDGES OF SHEET MATERIAL. THEODORE C. HOOK, Philadelphia, Pa. Filed June 12, 1907. Serial No. 378,481.



1. In a machine of the class described, a reciprocating carrying device, a holding device reciprocating transversely thereto, a turning device having a motion of reciprocation relative to the movement of said holding device and a motion of oscillation, and mechanism for connecting said parts and operating them in synchronous relation.

2. In a machine of the class described, a reciprocating head, a plurality of reciprocating holding devices, a plurality of turning devices each having a motion of reciprocation parallel to the motion of reciprocation of one of said holders and a motion of oscillation on an axis transverse to its direction of reciprocation, means for connecting each of said turning devices with a corresponding holding device so that each turning device has a limited motion of reciprocation independent of the motion of the corresponding holding device, and mechanism whereby said head, holding devices and turning devices are operated in synchronous relation.

3. In a machine of the class described, a reciprocating head, a plurality of sets of stationary brushes placed along the line of movement of said head, means for giving a step by step movement to said head, a plurality of sets of holding devices adapted to reciprocate transversely to the path of said head, a plurality of sets of turning devices adapted to reciprocate transversely to the path of said head and to oscillate on an axis transverse to said line of movement, and mechanism for operating said head, holding devices and turning devices.

4. In a machine of the class described, a reciprocating carrying device, holding devices reciprocating transversely to the path of said carrying device, and pivoted devices reciprocating relatively to said holding devices and turned by contact therewith.

5. In a machine of the class described, a reciprocating carrying device, holding devices reciprocating transversely to the path of said carrying device, pivoted devices reciprocating relatively to said holding devices and turning while said holding devices are at rest, and means for operating said parts.

[Claims 6 to 15 not printed in the Gazette.]

878,633. KEY-SOCKET. HARVEY HUBBELL, Bridgeport, Conn. Filed Mar. 5, 1907. Serial No. 360,785.



1. A key socket comprising an insulating block having a recess with inclines at its base, a plate in the circuit covering one of said inclines, a shaft and a contact plate carried forward by the shaft and having contact springs engaging opposite inclines, so that each quarter turn of the shaft will alternately open and close the circuit, the connection between the shaft and contact plate having operative engaging means which coact to permit advance of the contact plate only when the shaft is in one of two diametrically opposite positions relatively to said plate.

2. A key socket comprising an insulating block having a recess with a plurality of inclines at its base, a plate in the circuit covering one of said inclines, a shaft, a contact plate through which the shaft passes and which is provided with two stops and two contact springs engaging opposite inclines and an operating plate carried by the shaft and having two lugs engaging the stops and carrying the contact plate when the shaft is turned forward, said lugs passing backward over the contact plate when the shaft is turned back.

3. A key socket comprising an insulating block having a recess with four inclines at its base, a plate in the circuit covering one of said inclines, a shaft, a contact plate through which the shaft passes and which is provided

with two contact springs engaging opposite inclines and with two stops, an operating plate having two lugs engaging the stops when the shaft is turned forward and moving backward over the contact plate and a spring acting to retain the operating plate in engagement with the contact plate and the contact springs in engagement with the inclines.

4. A key socket comprising an insulating block having a recess with inclines at its base each terminating in a shoulder, for the purpose set forth, a plate in the circuit covering one of said inclines, a shaft, a contact plate through which the shaft passes and which is provided with contact springs engaging opposite inclines and with stops, an operating plate carried by the shaft and having lugs engaging the stops when the shaft is turned forward and passing backward over the contact plate, means for retaining said plate in engagement and the contact springs in engagement with the inclines, and means for advancing the contact plate only when the shaft is in one of two diametrically opposite positions relatively to said plate.

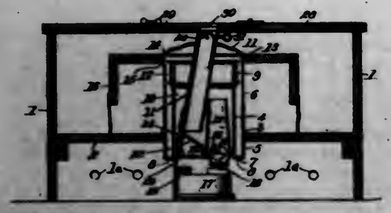
878,634. SOCKET-SHELL-CAP FASTENING. HARVEY HUBBELL, Bridgeport, Conn. Filed Sept. 5, 1907. Serial No. 391,454.



1. The combination with a socket shell having a plurality of external ribs in circumferential alinement and a locking lug, of a cap having an internal circumferential groove at its lower end, the lower wall of which is provided with recesses which receive the ribs freely, and a hole above the groove which is adapted to receive the locking lug with a snap engagement when the ribs are in the groove and the cap is rotated.

2. The combination with a socket shell having in one side a key recess, an outwardly projecting locking lug contiguous to the upper edge and to the key recess, and a plurality of circumferentially alined ribs, of a cap having at its lower end an internal circumferential groove, the lower wall of said groove being provided with recesses to receive the ribs freely, and a hole above the groove which receives the locking lug with a snap engagement.

878,635. BROODER. JOHN A. JOCOY, Wakefield, R. I. Filed June 7, 1906. Serial No. 320,617.



1. The combination with a heating drum, of a burner including a wick tube, a collar surrounding said wick tube, a flue arranged at one side of the burner, a lever connected to the collar, a rod mounted within the flue and connected at its lower end to said lever with its upper end extending to a point where it may be grasped from the outside of the drum, and a reflector carried by the burner and disposed in line with said flue whereby the condition of the flame of the burner may be determined by looking through the flue.

2. The combination with a heating drum, of a lamp burner including a wick tube, a chimney for the burner, a collar surrounding said wick tube, a flue arranged at one side of the burner, the lower end of the flue projecting below the top of the chimney, a lever connected to said collar, and a rod mounted within the flue and connected at its lower end to the lever with its upper end extending to a point where it may be grasped from the outside of the drum.

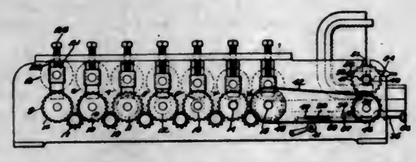
3. The combination with a heating drum, of a lamp burner including a wick tube, a chimney for the burner, a flue extending into the drum with its lower end below the top of said chimney and extending at its upper end through the drum, and means projecting into the flue whereby the flame of the burner may be regulated.

4. The combination with a heating drum and a lamp body having a burner, of a chimney for the burner, a flue extending into the heating drum and arranged at one side of the chimney above the drum, a detachable closure for the drum connected to said flue, a support for the lamp body extended at the upper end and connected to said flue, whereby the closure, flue and lamp are suspended from the drum.

5. The combination with a heating drum and the lamp body having a burner, of a chimney for the burner, a collar surrounding the wick tube of the burner, a flue extending from the heating drum and arranged at one side of the chimney, said flue terminating below the top of the chimney, a lever connected to said collar, a rod mounted within the flue and connected at its lower end to the lever and having its upper end extending to a point where it may be grasped from the outside of the drum, a support for the lamp body, and an arm connecting the flue and the support.

[Claims 6 to 9 not printed in the Gazette.]

878,636. APPARATUS FOR MAKING SEAT-BODIES FOR AUTOMOBILES. MINAS H. KASHIAN, Amesbury, Mass. Filed July 25, 1907. Serial No. 385,436.



1. The herein described apparatus for making metal seat bodies, consisting of a frame having at one end a series of drawing rolls arranged to receive a flat sheet and gradually shape it longitudinally, and at its other end a receiving bed, and means for automatically shaping transversely the longitudinally shaped sheet into a seat body.

2. The herein described apparatus for making metal seat bodies consisting of a frame provided with a series of upper and lower complemental shaping rolls, connected means for driving said rolls continuously, means at the outgoing end of said rolls for receiving a longitudinally shaped sheet, transverse shaping mechanism, and means for starting said transverse shaping mechanism in motion immediately upon the delivery thereto of a longitudinally shaped sheet.

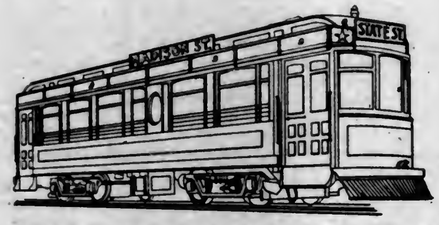
3. The herein described apparatus for making metal seat bodies, consisting of a frame having at one end means for longitudinally shaping a metal sheet, including means for drawing out one edge of the sheet longer than the other and curving the metal longitudinally between said longer edge and the shorter edge of the sheet, said frame having at its other end a seat body form, mechanism for positively rotating said body form in timed relation to the progress of the sheet through said drawing mechanism, said seat body form having one end peripherally smaller than the other end and an intermediate surface curved to correspond to the longitudinal curves and shaping of the sheet by said drawing mechanism, the above mentioned parts and the frame of the machine being constructed to guide the forward end of the sheet into accurate position on said seat body form, so that the various curves and shapes of the sheet come into accurate position on the corresponding curves and shapes provided therefor on the seat body form, means for clamping the forward end of the sheet in position as it arrives at the proper point with relation to the seat body form, and means coöperating with said rotating form for providing said longitudinally shaped sheet with transverse bends to correspond with the shape of said form as the latter rotates.

4. In an apparatus of the kind described, longitudinal shaping mechanism, including carrying means to move a sheet continuously forward, transverse shaping mechanism comprising a body-form, automatic means for clamping the forward end of the sheet to the forward portion of said form, said automatic means being set in operation by the forward travel of the sheet, means for rotating said form, and means coöperating therewith for transversely bending said sheet about said form as the latter rotates.

5. In an apparatus of the kind described, a body-form, means for automatically clamping the forward end of a sheet thereto to be shaped, means coöperating with said body-form in bending the sheet about said form, and operating means including an automatic trap for setting said apparatus in operation in timed relation to the clamping movement of the automatic clamping means.

[Claims 6 to 11 not printed in the Gazette.]

878,637. ADVERTISING STREET-CAR SIGN. ALPHONSE KING, San Antonio, Tex. Filed Mar. 5, 1907. Serial No. 360,719.

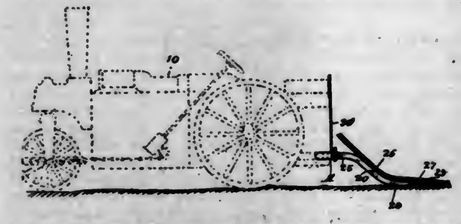


1. The combination with a street car, of socket plates secured to the sides thereof and an advertising sign device provided with spring catches, whereby it may be supported in said sockets.

2. The combination with an advertising plate having polygonal lugs upon its corners, of angular spring clips mounted upon a suitable support to receive said lugs.

3. The combination with an advertising sign support, of spring catches secured thereto and projecting downwardly therefrom, said catches having studs upon the spring members thereof, and sockets to receive said catches provided with openings for the reception of said studs, for the purpose set forth.

878,638. ASPHALT-RIPPER. ARTHUR KING, Chicago, Ill. Filed June 10, 1907. Serial No. 378,143.



1. In an asphalt ripper, a ripper bar constructed and arranged to be secured to a suitable power device said ripper bar having an unobstructed breaking surface from end to end.

2. In an asphalt ripper, a ripper bar having an inclined breaking portion, upon and by which the slabs of asphalt, that lie in the path of the bar, are bodily raised and broken away from the mass, a heel and an upwardly inclined point, riding upon the heel of the ripping bar.

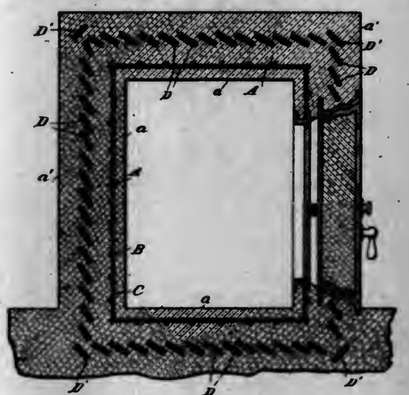
3. In an asphalt ripper, a ripper bar having a portion arranged to be coupled to a power device, a downwardly inclined reinforced breaking portion and a forwardly extending point.

4. In an asphalt ripper, a ripper bar comprising a channel iron bent into a reverse curve, one end of which is arranged to be connected to a steam roller, or other power device, and the other end of which is arranged to slide in between the asphalt layer and the bed of concrete.

5. In an asphalt ripper, a ripper bar having suitable ripping edges, which have between them an unobstructed portion, extending from end to end of the bar, and means for forcing said ripper bar through the material to be acted upon.

[Claims 6 to 10 not printed in the Gazette.]

878,639. CONCRETE VAULT. BOYDEN KINSEY, Wyoming, Ohio. Filed July 26, 1907. Serial No. 385,655.



1. A concrete vault having arranged within its walls a series of tool proof bars set at acute angles to the outer faces of the concrete walls.

2. In a concrete vault the combination of concrete walls with a series of tool proof bars within each wall placed parallel to each other at a slight distance apart and at an acute angle to the outer faces of the concrete.

3. In a vault the combination of a concrete wall, with a series of tool proof bars located therein and arranged at acute angles to its outer face and set at such a distance apart that planes perpendicular to the outer face of the wall would cut the ends of the adjacent bars.

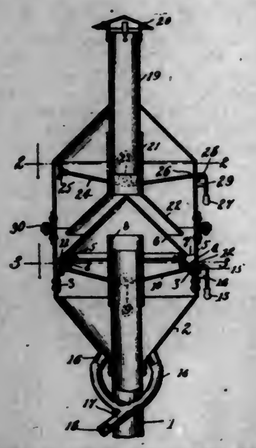
878,640. DUST SEPARATING AND COLLECTING APPARATUS. ALEXANDER KNAPPENBERGER, Siegfried, Pa. Filed June 12, 1907. Serial No. 378,499.

1. A collector and separator comprising the combination of a stack, a casing on the stack, brackets secured to the inner wall of the casing, a flanged bell secured on the brackets, means for varying the space between the stack and the bell, an exit pipe projecting into the casing from its upper end, means for varying the space between the exit pipe and the bell, and means for conducting separated matter from the casing.

2. A collector and separator comprising the combination of a stack, a casing on the stack, a sleeve movably disposed on the stack within the casing, means for raising the sleeve, a bell fixed above the sleeve, an exit pipe projecting into the casing above the bell, and means for varying the space between the exit pipe and the bell.

3. A collector and separator comprising the combination of a stack, a casing on the stack, a sleeve movably disposed on the stack within the casing, rollers on the sleeve, flexible members having one of their ends fixed and their op-

posite ends disposed through the wall of the casing so that intermediate of their ends the flexible members pass under the rollers, a bell fixed above the sleeve within the casing, an exit pipe projecting into the upper end of the casing, and means for varying the space between the exit pipe and the bell.

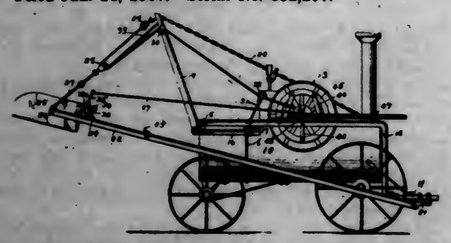


4. A collector and separator comprising the combination of a stack, a casing on the stack, a sleeve movably disposed on the stack within the casing, rollers on the sleeve, flexible members disposed under the rollers and having one of their ends disposed through openings provided in the wall of the casing, cleats secured on the inner wall of the casing, to which cleats are secured one of the ends of the flexible members, brackets secured on the outer wall of the casing, rollers on the brackets over which the outer ends of the flexible members are disposed, a bell fixed within the casing above the sleeve, an exit pipe extending within the upper end of the casing, and means for varying the space between the lower end of the exit pipe and the bell.

5. A collector and separator comprising the combination of a stack, a casing on the stack, a bell fixed above the stack within the casing, means for varying the space between the bell and the stack, an exit pipe arranged on the casing above the bell, a sleeve slidably disposed on the lower end of the exit pipe and provided with a downwardly inclined flange, and means for moving the sleeve on the exit pipe.

[Claims 6 and 7 not printed in the Gazette.]

878,641. LOADER. VICTOR LANDHOLM, Westpoint, Nebr. Filed Jan. 14, 1907. Serial No. 352,207.



1. The combination with a traction engine, of an arm pivotally and detachably connected therewith and extended longitudinally of the engine beyond the end thereof, a dumping scoop pivotally connected with the free end of said arm, a frame detachably connected with the body of the traction engine, a rope winding device mounted on the engine, and operated thereby, a pulley supporting upright on said frame, and a rope or cable wound upon the winding device, passed over said pulley on the supporting upright and connected with the free end of the pivoted arm.

2. The combination with a traction engine, having an operator's platform, of two arms pivotally and detachably connected with said platform extended longitudinally of the engine beyond the end thereof opposite the platform, a dumping scoop pivotally connected with the free ends of said arms, a frame detachably connected with the body of the traction engine and also detachably connected with the said platform, a rope winding device mounted on the engine and operated thereby, a pulley supporting upright on said frame and a rope or cable wound upon the winding device passed over said pulley supporting upright and connected with the free ends of said arms.

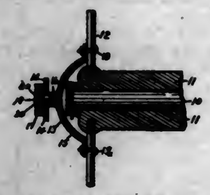
3. The combination of a traction engine, arms pivoted thereto, a dumping scoop carried by said arms, a pulley supporting frame mounted on the traction engine, a fly-wheel mounted on the traction engine and operated thereby, a friction rim on the fly-wheel, a drum rotatably and slidingly mounted adjacent to the fly-wheel, a friction rim carried by the drum and fixed thereto, means for moving the drum so that its friction wheel may be moved into or out of engagement with the friction rim on the fly-wheel, and a rope or cable wound upon the drum passed over the pulley supporting upright and connected with said arms.

4. The combination of a traction engine, arms pivoted thereto, a dumping scoop carried by said arms, a pulley supporting frame mounted on the traction engine, a fly-wheel mounted on the traction engine and operated thereby, a friction rim on the fly-wheel, a drum rotatably and slidingly mounted adjacent to the fly-wheel, a friction rim carried by the drum and fixed thereto, means for moving the drum so that its friction wheel may be moved into or out of engagement with the friction rim on the fly-wheel, a rope or cable wound upon the drum passed over the pulley supporting upright and connected with said arms and a stationary friction rim supported adjacent to the outer face of the friction rim carried by the drum, said drum being also capable of movement so that its friction rim may engage the stationary friction rim.

5. The combination of a traction engine, arms pivoted thereto, a dumping scoop carried by said arms and means for raising and lowering the dumping scoop, comprising a fly-wheel mounted on and operated by the traction engine, a friction rim thereon, a drum slidingly and rotatably mounted adjacent to the fly-wheel, a friction rim fixed to the drum, a stationary friction rim adjacent to the friction rim carried by the drum for moving it toward or from the fly-wheel and a rope or cable wound upon the drum and connected with the dumping scoop.

[Claims 6 to 8 not printed in the Gazette.]

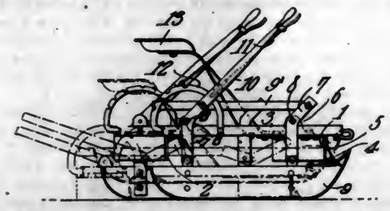
878,642. ATTACHMENT FOR TRACTION-ENGINES. VICTOR LANDHOLM, Westpoint, Nebr. Filed May 14, 1907. Serial No. 373,676.



1. A device of the class described, the combination of a body portion, means for detachably securing it to the wheel of a traction engine, a journal connected with said body portion to receive a supporting arm, and means for pivotally connecting the supporting arm with said journal.

2. A device of the class described, the combination of a body portion substantially concavo-convex in section, and circular in outline, a number of bolts passed through said body portion, and formed with hooks to engage the vehicle wheel spokes, a projection formed on the convex side of the body portion, and having a journal thereon, and a nut for said screw threaded portion.

878,643. ROAD-GRADER. ERNEST LEE, Springfield, Ill. Filed May 29, 1907. Serial No. 376,337.

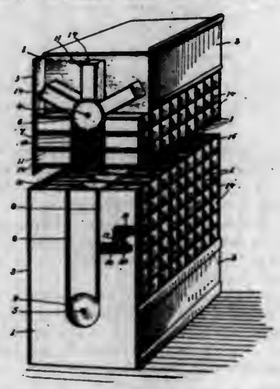


1. In a grader, a beam having a forwardly extending flange at its lower edge, a concaved plate attached to the beam and bearing against said flange and having its concaved side forwardly disposed.

2. A grader comprising beams, spaced bars connecting the same together, a set of levers fulcrumed upon each bar, a runner pivotally connecting with the levers of each set and means for swinging the levers of each set simultaneously.

3. A grader comprising beams, spaced bars connecting the beams together, a set of levers fulcrumed upon each bar, a runner pivotally connecting with the levers of each set, a rod pivotally connecting with the levers of each set, one lever of each set having a handle end and means for confining each set of levers in an adjusted position.

878,644. STORE-FIXTURE. GUSTAVE A. LINDKE, Detroit, Mich. Filed Apr. 1, 1907. Serial No. 365,647.

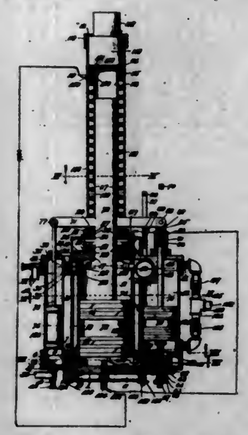


1. In a device of the character described, the combination of vertically extending endless carrier chains, rods connecting said chains, and a series of frames, each consisting of two side frames attached at their rear ends to said rods and formed with flanges to engage a box, and means connecting said side frames at their outer ends to hold the box between.

2. In a device of the character described, the combination with a series of partitions, of endless carrier chains between said partitions, means extending across the spaces between the partitions and connecting said chains, rectangular independent frames formed of sheet metal with inwardly projecting flanges and attached at their rear ends to said chains within said spaces, and means attached to the forward end of one of the frames in each space to detachably engage the other frame and clamp a box between.

878,645. RIVETING TOOL OR ENGINE. WALTER L. LINDSAY, Kansas City, Kans. Filed May 9, 1905. Serial No. 259,610.

1. The combination of a working cylinder, a fuel cylinder communicating directly with the working cylinder and arranged parallel therewith, pistons in the cylinders having their respective piston rods in parallel planes, an arm projecting laterally from the rod of the piston in the working cylinder, a pin in the end of the rod of the piston in the fuel cylinder, a tube secured to the end of the said lateral arm, fitting over the end of the fuel-cylinder piston-rod and arranged to impinge against the said pin, a spring coiled around the said piston-rod between the said pin and the lower end of said tube, means for admitting fuel to the fuel cylinder, and valves controlling the communication between the cylinders.



2. The combination of a working cylinder having an exhaust port at each end, inwardly-opening valves normally and automatically closing said ports, a working piston having its rod projecting through the end of its cylinder, slides upon the cylinder and bearing against said valves and means carried by the piston rod to actuate said slides and thereby operate the valves to open the ports.

3. The combination of a cylinder, a piston therein having its piston rod projecting through the end of the cylinder, a normally-closed exhaust-valve, a slide mounted on the cylinder and having an arm bearing against the stem of the valve, and an arm projecting from the piston rod and arranged to impinge upon said slide to actuate the same and open the valve.

4. The combination of a working cylinder, a fuel cylinder communicating with the working cylinder, pistons in the cylinders, exhaust valves for the working cylinder, slides mounted on the fuel cylinder and bearing upon said valves, an arm projecting from the rod of the working cylinder piston arranged to actuate said slides, and means controlled by the rod of the fuel cylinder piston for locking one of said slides.

5. The combination of a cylinder, a piston therein, a normally closed exhaust-valve therefor, a slotted slide bearing upon said valve, and an arm projecting from the rod of the piston and extending through the slot of the slide to impinge against the ends of the same whereby the movement of the piston will control the operation of the valve.

[Claims 6 and 7 not printed in the Gazette.]

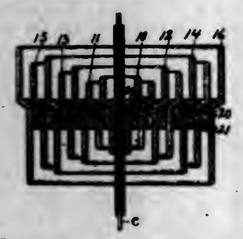
878,646. HIGH-POTENTIAL INSULATOR. FRED M. LOCKE, Victor, N. Y. Filed Apr. 18, 1904. Serial No. 203,767.

1. A wall insulator having at each end a series of flanges spaced apart forming a series of intervening spaces the center flanges projecting axially beyond the ones next to them.

2. A wall insulator comprising concentric tubes of unequal lengths, each of said tubes provided with an abutting offset, spacing rings between the intermediate portions of and of less length than the tubes.

3. A wall insulator comprising concentric tubes of in-

sulating material spaced apart, spacing rings between said tubes holding them apart, said tubes being of greater length than the spacing rings and the center tube being of greater length than the one surrounding it, and provided with a central lengthwise opening therethrough for receiving an electric conductor and each of said tubes provided with an abutting offset.

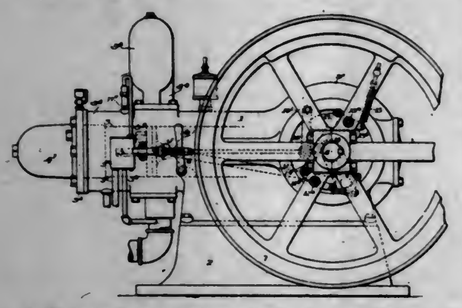


4. A wall insulator having at each end a series of annular flanges spaced apart forming intervening annular spaces and terminating at different distances from their junction one with the other, alternate flanges from the center outward being of greater length than the intervening flanges.

5. A wall insulator comprising concentric tubes of insulating material having their ends spaced apart at one end forming intervening annular spaces, the center tube projecting beyond the one next to it and the outer tube projecting beyond one end of the first named tubes, said center tube having a lengthwise opening therethrough for receiving an electric conductor.

[Claims 6 to 14 not printed in the Gazette.]

878,647. INTERNAL-COMBUSTION ENGINE. CHARLES I. LONGENECKER, Milwaukee, Wis. Filed Feb. 25, 1907. Serial No. 359,076.



1. In an oil engine, in combination, a cylinder, a reciprocating piston operating therein, an ignition chamber arranged at the end of said cylinder, an oil admission valve located in the cylinder wall, and a projecting ledge fixed to and movable with the piston and against which the oil impinges when introduced into the cylinder through the said admission valve, the said ledge being made to project into the ignition chamber when the piston has reached the end of its stroke.

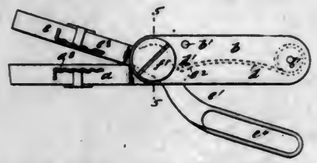
2. In an oil engine, in combination, a cylinder, a reciprocating piston operating therein, an ignition chamber arranged at the end of said cylinder, an oil admission valve located in the cylinder wall, and a projecting, upwardly-concave ledge fixed to said piston in a central position and movable therewith, against which the oil impinges when introduced into the cylinder through the said admission valve, said ledge being made to project into the ignition chamber when the piston has reached the end of its stroke.

3. In an oil engine, in combination, a cylinder, a reciprocating piston operating therein, an oil admission valve located in the cylinder wall and substantially midway of its length, whereby the said valve is protected by the piston from the deposits resulting from the excessive heat following the initial combustion of the charge, a ledge fixed to and movable with said piston, against which the oil impinges when introduced through said valve of the cylinder, and a secondary ledge formed on the upper side of the face of the piston for deflecting the incoming current of air toward the rear end of tne cylinder.

4. In an oil engine, in combination, a cylinder having an exhaust port and an air inlet port adapted to be uncovered by the piston as it approaches the forward end of its travel, a closed crank chamber communicating with tne air inlet port, a piston, a water jacket surrounding said cylinder, a steam dome connected with the upper part of said water jacket, and a connection leading from the upper part of the steam dome to the air inlet port, said connection lying within the walls of said steam dome.

5. In an oil engine, in combination, a cylinder having an exhaust port and an air inlet port adapted to be uncovered by the piston as it approaches the forward end of its travel, a closed crank chamber communicating with the air inlet port, a piston, a water jacket surrounding said cylinder, a steam dome connected with the upper part of said water jacket, and a connection leading from the upper part of the steam dome to the air inlet port, said connection lying within the walls of said dome and being formed integral therewith.

878,648. CUTTING IMPLEMENT. ABBOT A. LOW, Horseshoe, N. Y. Filed June 21, 1907. Serial No. 380,011.



1. In a cutting implement of the character designated, the combination of a stationary blade formed with a rigid handle set at an angle with relation to the plane of the blade, a movable cutting blade pivoted to the stationary blade and moving in a plane parallel thereto, and opposed elastic gripping jaws on said blades having bearing surfaces inclined obliquely with relation to the plane of cut, for the purpose described.

2. In a cutting implement of the character designated, the combination of a stationary blade formed with a rigid handle, a movable blade pivoted to the stationary blade and moving in a plane parallel thereto, and opposed elastic corrugated gripping jaws on said blades, for the purpose described.

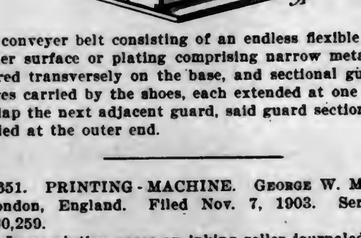
3. In a cutting implement of the character designated, the combination of a stationary blade formed with a rigid handle, a movable blade pivoted to the stationary blade and moving in a plane parallel thereto, and opposed elastic gripping jaws on said blades, said gripping jaws being formed with holes for the purpose described.

4. In a cutting implement of the character designated, the combination of a stationary blade formed with a rigid handle, a movable blade pivoted to the stationary blade and moving in a plane parallel thereto, and opposed elastic gripping jaws on said blades said gripping jaws being perforated and corrugated for the purpose described.

878,649. SANDING, ABRADING, OR POLISHING MACHINE. WILLIAM J. MADDOX, Jamestown, N. Y. Filed Aug. 19, 1907. Serial No. 389,269.

1. In an abrading machine of the type described, a rocker having a curved surface for pressing the abrading material against the work, and means for oscillating said rocker to shift the position of the area of contact with the work.

2. In an abrading machine of the type described a rocker having a curved surface for pressing the abrading material against the work, means for oscillating said rocker to shift the position of the area of contact with the work and means for varying the range of oscillation of the rocker.



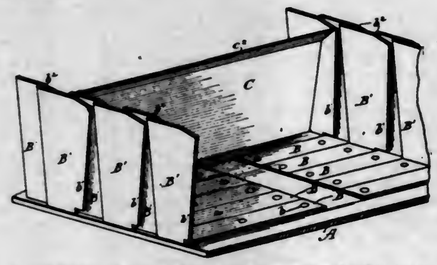
3. In an abrading machine of the type described, an oscillatory rocker having a curved surface for pressing the abrading material against the work, means for oscillating the rocker and means for shifting the center of the arc of oscillation of the rocker.

4. In an abrading machine of the type described, an oscillatory rocker having a curved surface for pressing the abrading material against the work, means for oscillating the rocker, means for varying the range of oscillation and means for shifting the center of the arc of oscillation of the rocker.

5. In an abrading machine the combination with the endless abrading belt and means for driving the same, of an oscillatory rocker having a curved surface for pressing the belt against the work and manually operated means controlling the movement of the rocker.

[Claims 6 to 14 not printed in the Gazette.]

878,650. ENDLESS CONVEYER-BELT. ISAAC F. MANNING, Ottawa, Ill. Filed May 27, 1907. Serial No. 376,007.



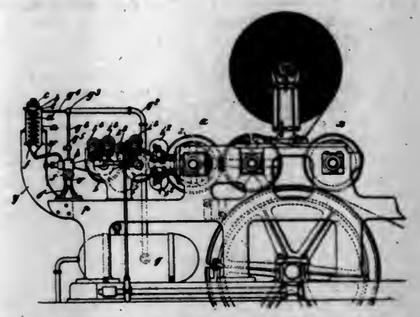
A conveyer belt consisting of an endless flexible base, a carrier surface or plating comprising narrow metal shoes secured transversely on the base, and sectional guards or flanges carried by the shoes, each extended at one edge to overlap the next adjacent guard, said guard sections being beveled at the outer end.

878,651. PRINTING-MACHINE. GEORGE W. MASCORD, London, England. Filed Nov. 7, 1903. Serial No. 180,259.

1. In a printing press an inking roller journaled in stationary bearings, a plurality of spray nozzles located in proximity to said roller, a closed ink containing tank having pipe connections to said nozzles, and means for applying air pressure upon the ink within the tank, substantially as described.

2. In a printing press, an inking roller, a plurality of spray nozzles located in proximity thereto, a closed ink containing tank having pipe connections to said nozzles, a heating coil in said tank for keeping the ink at the required degree of fluidity and means for creating fluid pressure in the tank to expel the ink therefrom, substantially as described.

3. In a printing press, an inking roller, standards in proximity to the ends of said roller, spray nozzle supporting means adjustably carried by said standards, a plurality of nozzles supported by said supporting means, a closed tank having pipe connections to said spray nozzles and means for producing air pressure within said tank, substantially as described.

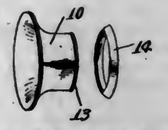


4. In a printing press an inking roller, standards in proximity to the ends thereof, having portions concentric with the roller, horizontally disposed nozzle carrying means adjustably carried by said standards, and means for supplying ink to said nozzles, substantially as described.

5. In a printing press, an inking roller, standards located in proximity to the ends thereof having portions concentric with the roller, horizontal rods having their ends adjustably supported by the standards, spray nozzles adjustably mounted on said rods, and means for supplying ink to said nozzles, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

878,652. BALL-BEARING. AMBROSE T. MATTHEWS, Worcester, Mass. Filed June 12, 1903. Serial No. 161,153.



1. As an article of manufacture, a bearing comprising a track, a cone having its small end projecting through to the rear of the track, a set of rolling bearing elements held between the adjacent bearing surfaces of the track and cone, a washer contracted on the projecting small end of the cone whereby it has equally applied compressional engagement entirely around the periphery of the end for holding it in position, said washer permanently serving to prevent the separation of the track and cone.

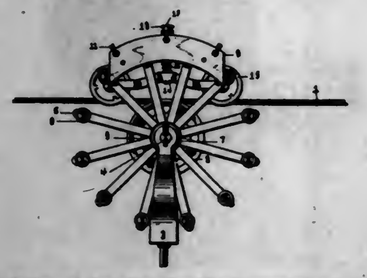
2. As an article of manufacture, a ball-bearing comprising a ball-track, a tubular ball-cone having a retaining bead at the end of its body portion which projects through to the rear of the ball-track, and a fastening washer encircling the body portion of the ball-track and having a central circular opening with compressional engagement applied equally around the entire periphery of the ball-cone and located in position to be held in place by the bead.

3. As an article of manufacture, a ball-bearing, comprising a ball track, a ball cone projecting through to the backside of the ball track, a set of bearing balls, and a fastening washer behind the end of the ball track and encircling the ball cone, said washer being held on the cone partly by frictional engagement with the smooth surface thereof, and the cone being provided with means for preventing the removal of the washer therefrom.

4. As an article of manufacture, a bearing, comprising a track, a cone projecting through to the backside of the track, a set of bearing elements held between the track and cone, and a washer contracted on the projecting end

of the cone whereby it has compressional engagement around the periphery of the cone for holding it in position, and means on said cone for permanently preventing the removal of the washer therefrom.

878,653. TROLLEY-PULLEY. EMANUEL J. MATTHEWS and ROBERT C. GRUWELL, Stockton, Cal. Filed Sept. 26, 1906. Serial No. 336,293.



1. A device of the class described comprising a holder and a shaft journaled in said holder, a pulley mounted on said shaft and adapted to travel beneath a trolley wire, a plurality of radiating arms mounted for rotation upon said shaft at each side of said pulley, a frame having guide pulleys spaced apart and adapted to travel above the trolley wire, a frame having spaced sides and between which the terminals of said radial arms are adapted to pass, and yieldable connecting means between said last mentioned frame and the pulley supporting frame.

2. A device of the character described comprising a holder, a shaft journaled therein, a pulley mounted on said shaft, a series of arms mounted on said shaft on each side of said pulley, a small roller journaled on the outer end of each of said arms, two metal plates joined together by cross bars, small flanges on the lower edges of said plates, said rollers bearing on said flanges, as set forth.

3. A device of the character described comprising a holder, a shaft journaled therein, a pulley mounted on said shaft, a series of arms rotatably mounted on said shaft, small rollers journaled on the ends of such arms, two metal plates secured together by cross pieces, flanges on the lower edges of said plates, said rollers being adapted to bear on said flanges, a threaded pin mounted in the center one of said crosspieces and provided with a wing nut on the upper end thereof and a frame on the lower end thereof, a spring coil encircling said pin, and two small pulleys rotatably mounted on said frame, as set forth.

878,654. CHUCK. WILHELM MAUSS, Brakpan, Transvaal. Filed Aug. 9, 1907. Serial No. 387,881.



1. A chuck comprising in combination, a chuck-body provided with tool socket and an opening extending from the periphery of said body to said socket, said body having on one side a laterally disposed lug provided with a rounded engaging portion and on the other side a flat lug, a tool seated in said socket, a yoke having a lip portion overlapping said rounded engaging portion and being of complemental formation with respect thereto and also provided with a concave bolt head seat extending throughout its length and apertured to receive the shank of a bolt, a T-bolt having its shank inserted through said aperture and provided with a T-head portion engaging said seat and extending substantially throughout the length thereof, a nut for said bolt engaging said flat lug, and a pad extending throughout the length of said yoke and projecting through said opening in said body portion into engagement with said tool.

2. A chuck comprising in combination, a chuck-body provided with a tool socket and an elongated opening extending from the periphery of said body to said socket, said body having on one side a laterally disposed lug provided with a rounded engaging portion and on the other side a flat lug, a tool seated in said socket, a yoke provided with a recessed pad-seat of greater width than said elongated opening, said yoke also having a lip portion overlapping said rounded engaging portion and being of complemental formation with respect thereto, said yoke also being provided with a concave bolt head seat extending throughout its length and apertured to receive the shank of a bolt, a T-bolt having its shank inserted through said aperture and provided with a T-head portion engaging said seat and extending substantially throughout the length thereof, a nut for said bolt engaging said flat lug, and a pad extending throughout the length of said yoke and projecting through said opening in said body portion into engagement with said tool, said pad having lateral extensions or shoulders adapted to seat in said pad-seat and serving to prevent insertion of said pad through said elongated opening beyond a predetermined point.

3. A chuck comprising in combination, a chuck body provided with a tool socket and an opening extending from the periphery of said body to said socket, said body having on one side a laterally disposed lug provided with an engaging portion and on the other side a flat lug, a tool seated in said socket, a yoke having a lip portion overlapping said engaging portion and also provided with a bolt head seat, a bolt provided with a T-head portion engaging said seat, a nut for said bolt engaging said flat lug, and a pad projecting through said opening into engagement with said tool.

4. A chuck comprising in combination, a chuck body provided with a tool socket and an elongated opening extending from the periphery of said body to said socket, said body having on one side a laterally disposed lug provided with a rounded engaging portion, a tool seated in said socket, a yoke provided with a recessed pad seat of greater width than said elongated portion, said yoke also having a lip portion overlapping said rounded engaging portion and being of complemental formation with respect thereto, a pad extending throughout the length of said yoke and projecting through said opening in said body portion into engagement with said tool, said pad having lateral extensions or shoulders adapted to seat in said pad seat and serving to prevent insertion of said pad through said elongated opening beyond a predetermined point, and means engaging said yoke and body to force said pad into engagement with said tool.

878,655. PACKING OF PIPE-JOINTS. GUSTAV F. MILLER, Frankfort-on-the-Main, Germany. Filed May 22, 1906. Serial No. 318,271.



1. A packing for pipe joints including in combination a packing ring surrounding the ends of the pipes and bridging the joint between the latter, and means for pressing the metal of such ring laterally against the outer surfaces of the pipes, such means including members fixed to the respective pipe ends.

2. A packing for pipe joints including in combination a packing ring of soft metal surrounding the ends of the pipes and bridging the joint between the latter, annular members fixed to the pipe ends on each side of said packing ring, and means for pressing such annular members toward each other whereby to force the metal of the packing ring laterally against the outer walls of the pipes.

3. A packing for pipe joints including in combination a packing ring surrounding the ends of the pipes and bridging the joint between the latter, a sleeve surrounding such packing ring, and means for pressing said packing ring between such sleeve and the outer walls of the pipes, such means including members fixed to the respective pipe ends.

4. A packing for pipe joints including in combination a packing ring of soft metal surrounding the ends of the pipes and bridging the joint between the latter, and annular members *c* and *g* fixed to the pipe ends and adapted to press against said packing ring and force the metal thereof against the outer surfaces of the pipes.

5. A packing for pipe joints including in combination a packing ring of soft metal surrounding the ends of the pipes and bridging the joint between the latter, and annular members *c* and *g* fixed to the pipe ends and adapted to press against said packing ring and force the metal thereof against the outer surfaces of the pipes, said members *c* and *g* being provided with angular edges which bear against the packing ring.

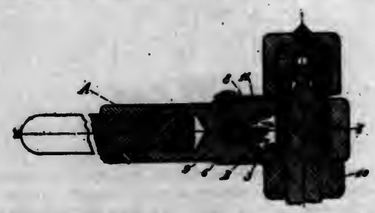
[Claims 6 to 8 not printed in the Gazette.]

878,656. TROLLEY-WHEEL. JOSEPH T. MISHLER, Johnstown, Pa. Filed Aug. 10, 1907. Serial No. 388,038.



The herein described trolley wheel formed with a central bore and recessed ends and having in its periphery a deep central groove extending continuously around the body of the wheel, side grooves of less depth than the central one on opposite sides of the latter and parallel therewith throughout their major portions, the inner end of the side grooves merging into the central groove at diametrically opposite points and integral rims formed at the ends of the wheel and extending continuously around the same, said rims having their inner sides inclined inwardly and adapted to form the outer side walls of said side grooves, said rims being of greater diameter than the walls between the central and side grooves whereby the trolley wire will be prevented from leaving the wheel when the latter is run in either a forward or backward direction, said rims also being adapted to close the outer ends of said side grooves and to project outwardly beyond said ends of the latter, substantially as shown and described.

878,657. RATCHET-WRENCH. ARTHUR MUNCH, St. Paul, Minn. Filed Jan. 2, 1906. Serial No. 294,145.



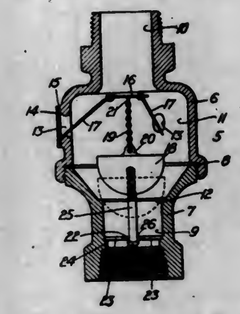
1. A device of the class described, consisting of a handle piece formed in one end with a transverse opening, jaw portions slidable across one side of said opening, said jaw portions having inwardly inclined serrated inner faces, and spring means interposed between said jaw portions and said handle piece, for the purpose set forth.

2. A device of the class described comprising in combination a handle piece formed in one end with a transverse opening, a pair of inwardly inclined jaws slidably supported in one side of said opening, restraining springs for said jaws, a slidable adjusting block, and means carried by said block engaging with said jaws.

3. A device of the class described comprising a handle piece formed in one end with a transverse opening, a pair of serrated jaws slidably supported in said opening, springs interposed between the outer ends of said jaws and the adjacent walls of the handle piece, a slidable block alongside said jaws, means carried by said block engaging with the inner ends of said jaws, and means for holding said block in adjusted positions.

4. A device of the class described comprising in combination a handle piece provided in one end with a transverse opening, serrated jaws slidably supported in said opening, spring means interposed between the outer ends of said jaws and the adjacent walls of the handle piece, a block slidably supported alongside said jaws, spring means holding said block in adjusted positions, and a pin carried by said block and projecting between said jaws, as and for the purpose set forth.

878,658. AUTOMATIC SAFETY-VALVE FOR GAS-SUPPLY PIPES. JAMES MURRAY, Jamaica Plain, Mass. Filed June 10, 1907. Serial No. 378,138.



1. In a device of the character described, a casing provided with an inlet passage, an outlet passage, and a plurality of holes in the lateral wall thereof, a plurality of plates normally covering said holes, respectively, fusible material interposed between said plates and said casing, a plurality of supporting members adapted to normally rest against said plates, respectively, a valve seat, and a valve normally supported by said members out of contact with said seat.

2. In a device of the character described, a casing provided with an inlet passage, an outlet passage, and a plurality of holes in the lateral wall thereof, a plurality of fusible plates normally covering said holes, respectively, a plurality of supporting members adapted to normally rest against said plates, respectively, a valve seat, and a valve normally supported by said members out of contact with said seat.

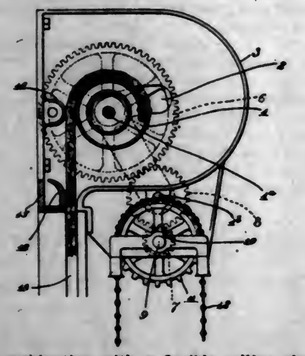
3. In a device of the character described, a casing provided with an inlet passage, and an outlet passage, a plurality of plates secured to the lateral wall of said casing by fusible material, a plurality of supporting members normally supported by said plates, a valve seat, and a valve normally supported by said members out of contact with said seat.

4. In a device of the character described, a casing provided with an inlet passage, an outlet passage, and a plurality of holes in the vertical wall thereof, a plurality of plates covering said holes and secured to said casing by fusible material, a plurality of supporting members adapted to normally rest against said plates, respectively, a plate supported by said members, a valve seat, a valve, and a flexible connection by which said valve is normally supported from said plate out of contact with said seat.

5. In a device of the character described, a casing provided with an inlet passage and an outlet passage, sup-

porting means, a plurality of fusible elements fused to the lateral wall of said casing and adapted to normally support said supporting means, a valve seat located between said inlet and outlet passages, and a valve normally supported by said members out of contact with said seat.

878,659. OPERATING DEVICE FOR FLEXIBLE ROLLER-SHUTTERS. EDWARD H. MCCLOUD, Columbus, Ohio. Filed June 9, 1906. Serial No. 320,995.



1. The combination with a flexible rolling shutter and channel therefor, of a roller for the shutter, an arm pivoted below said roller and engaging a bearing thereof, end brackets provided with slots to receive the bearings of the roller and in which said bearings move, said slots being inclined downwardly towards the channel and terminating at their upper ends in a plane substantially vertically above the pivot of said arm whereby the upward movement of the roller is limited to said vertical plane, and said roller and shutter thereon being free to move of their own weight toward said channel when the shutter unrolls, and means for rotating the roller.

2. In combination with the roller of a flexible rolling shutter, said roller being laterally movable, a pivoted arm engaging a bearing of the roller and movable therewith, a gear mounted on the end of said roller, a second gear having a fixed axis of rotation and engaging the first-mentioned gear, the axis of movement of said pivoted arm also coinciding with the axis of rotation of the second-mentioned gear.

3. In combination with the roller of a flexible rolling shutter, said roller being laterally movable, an arm pivoted below the horizontal plane of the axis of the roller and engaging a bearing of the roller and movable therewith, a gear mounted on the end of said roller, and a second gear having a fixed axis of rotation and engaging the first-mentioned gear.

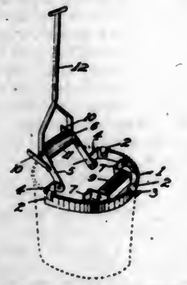
4. In combination with the roller of a flexible rolling shutter, said roller being laterally movable, a pivoted arm engaging a bearing of the roller and movable therewith, a spur gear mounted on the roller, a spur gear to engage the first-mentioned spur gear and having a fixed axis of rotation, a spur pinion to drive the second-mentioned gear, and a sprocket wheel carrying a chain mounted to operate the pinion.

5. In combination with the roller of a flexible rolling shutter, said roller being laterally movable, a pivoted arm engaging a bearing of the roller and movable therewith, a spur gear mounted on the roller, a spur gear to engage the first-mentioned spur gear and having a fixed axis of rotation, and means to operate the second-mentioned gear including a sprocket wheel and chain.

[Claims 6 to 9 not printed in the Gazette.]

878,660. MOP-WRINGER. JOHN J. MCDONALD, Port Madison, Wash. Filed Apr. 30, 1907. Serial No. 371,192.

1. A mop wringer comprising a frame having free end portions bent inwardly to form yielding supports, a roller frame pivoted to said inturned end portions of the first named frame, a second roller frame, means to yieldingly support said last named roller frame on said first named frame, and stops on said first named roller frame arranged to engage said means when said roller is in its lowered position.

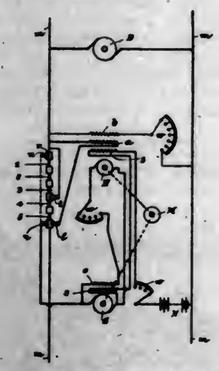


2. A mop wringer comprising a substantially U-shaped main frame, a roller frame having yielding end portions and being yieldingly connected thereby to the main frame within the latter, a swinging roller frame pivoted to the end portions of the main frame, and rollers journaled in said roller frames.

3. A mop wringer comprising a main frame conforming to the contour of the interior of the bucket and having yielding free end portions, a roller journaled in a frame connected to the main frame, and a roller frame provided with a roller and being pivoted to said yielding free end portions for swinging movement toward and away from said first mentioned roller.

4. A mop wringer comprising a main frame having yielding free end portions, a substantially U-shaped frame provided with a roller and having out-turned yielding ends and being yieldingly secured by said ends to said main frame within the latter, a swinging frame pivoted to said free end portions of the main frame, and rollers journaled in said U-shaped and said swinging frames.

878,661. SYSTEM OF ELECTRICAL DISTRIBUTION. ROBERT S. MCLEOD, Manchester, England. Filed July 11, 1904. Serial No. 216,132.



1. In apparatus such as herein described, in combination with a main generator and a storage battery:—a booster the armature of which is connected in series with the battery across the mains, an exciter, and means for driving the exciter and the booster, the said exciter field being magnetized by a magnetizing force proportional to the main current and to the main voltage, and the said booster field being magnetized by a magnetizing force proportional to the exciter voltage and to the difference of voltage between the mains and the battery; substantially as described.

2. In apparatus such as herein described, in combination with a main generator and a storage battery:—a booster the armature of which is connected in series with the battery across the mains, an exciter, and means for driving the exciter and the booster, the said exciter field being magnetized by a magnetizing force proportional to the main current and to the main voltage, and the said booster field being magnetized by a magnetizing force proportional to the exciter voltage, to the difference of voltage between the mains and the battery, and to the battery current; substantially as described.

3. In apparatus such as herein described, in combination with a main generator and a storage battery:—a booster the armature of which is connected in series with the battery across the mains, an exciter, and means for driving the exciter and the booster, the said exciter field being magnetized by a magnetizing force proportional to the main current, to the main voltage, and to the battery current, and the said booster field being magnetized by a magnetizing force proportional to the exciter voltage and to the difference of voltage between the mains and the battery; substantially as described.

4. In apparatus such as herein described, in combination with a main generator and a storage battery:—a booster the armature of which is connected in series with the battery across the mains, an exciter, and means for driving the exciter and the booster, the said exciter field being magnetized by a magnetizing force proportional to the main current, to the main voltage, and to the battery current, and the said booster field being magnetized by a magnetizing force proportional to the exciter voltage, to the difference of voltage between the mains and the battery, and to the battery current; substantially as described.

5. In apparatus such as herein described, in combination with a main generator and a storage battery:—a booster the armature of which is connected in series with the battery across the mains, an exciter, and means for driving the exciter and the booster, the said exciter field having a shunt winding across the mains and a series winding connected to the ends of a diverting resistance in the main circuit, and the said booster field having a winding connected to the exciter terminals and to the booster terminals; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

878,662. COMPOSITION OF MATTER. ROBERT F. NOWALK, Mount Vernon, N. Y., assignor to Edward G. Soltmann, New York, N. Y. Filed Mar. 30, 1907. Serial No. 365,512.

1. The herein described composition of matter, containing: an acid; and sweet spirits of niter, substantially as described and for the purpose specified.

2. The herein described composition of matter, consisting of: acetic acid; and sweet spirits of niter, substantially as described and for the purpose specified.

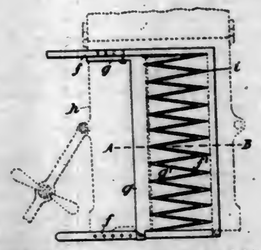
3. The herein described composition of matter, consisting of: acetic acid; sweet spirits of niter; and glycerin, substantially as described and for the purpose specified.

4. The herein described composition of matter, consisting of: acetic acid; sweet spirits of niter; glycerin; and carbon bisulfid, substantially as described and for the purpose specified.

5. The herein described composition of matter for removing ink from tracing cloth and the like, consisting of: 70 parts of acetic acid; 29 parts of sweet spirits of niter; ½ part of glycerin; and ½ part of carbon bisulfid, substantially as described and for the purpose specified.

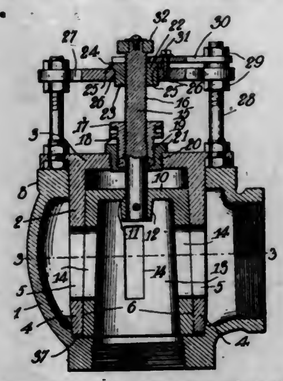
878,663. MOLD FOR THE PRODUCTION OF BASE-BLOCKS FOR MOUNTING PRINTING-BLOCKS. FRANCIS F. W. OLDFIELD, Brixton, London, England. Filed July 17, 1905. Serial No. 270,136.

1. An apparatus for the production of base blocks for mounting stereotype, electrotype and other printing blocks consisting in the combination of gages formed with intermeshing projections and a beveled underplate which is attached to one of the gages for the purpose substantially as described.



2. An apparatus for the production of base blocks for mounting printing blocks consisting in the combination of gages formed with intermeshing projections and an under plate attached to one of the gages terminating a distance over a second gage.

878,664. VALVE. WILLIAM ORD, Brooklyn Station, Ohio. Filed June 13, 1907. Serial No. 378,760.



1. In a stop valve, the combination of an elbow casing, an outer stationary valve member fitting in one end of said casing, an inner revoluble valve member working in said stationary valve member, a stem secured to said inner revoluble valve member, a lock nut screwed to the upper end of said stem, means carried by said outer valve member for adjusting said stem vertically, with means for locking said lock nut in position.

2. In a stop valve, the combination of an elbow casing, a valve member having a hollow cylindrical body with an inner slanting wall adapted to be secured in one end of said casing, an inner revoluble valve member having a hollow outwardly flared body of less length than the body of said outer valve member, a valve stem having a thread at its upper end secured to said inner valve member and working through said outer valve member, a lock nut screwed to the threaded end of said stem, and means for adjusting said stem vertically, with means for locking said lock nut against rotation.

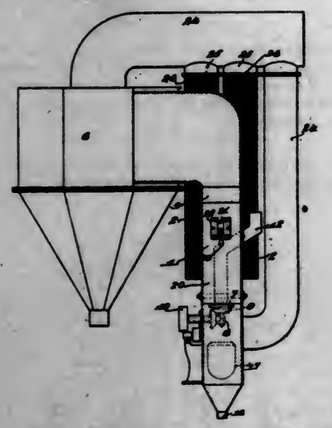
3. In a stop valve, the combination of an outer valve member, a stem having a thread at one end working vertically therethrough, a lock nut screwing on the threaded end of said stem, a clamping plate arranged horizontally above said valve member, a lock screw working through one end of said clamp and adapted to co-act therewith in locking said lock nut against rotation, and means for adjusting said stem vertically.

4. In a stop valve, the combination of an outer valve member, a yoke arranged horizontally above said member, a lock nut working in said yoke, a threaded stem working through said lock nut, a clamping plate arranged horizontally above said yoke, and a lock screw screwing through one end of said plate and adapted to co-act there-

with in locking said lock nut against rotation, with means carried by said valve for supporting said yoke.

5. In a stop valve, the combination of a horisontal yoke, a cylindrical lock nut having an annular bearing flange working through said yoke, a clamping plate arranged horisontally above said yoke and adapted to clamp one end of said lock nut and a lock screw working through one end of said clamping plate adapted to co-act therewith in locking said lock-nut.

878,665. PNEUMATIC SEPARATOR SYSTEM. WILLIAM S. OSBORNE, Hyde Park, Mass. Filed Apr. 9, 1906. Serial No. 310,734.



1. A pneumatic separator system, having in combination, a pneumatic separator provided with laterally adjustable side walls, a dust collector, and a blower connected in circuit and provided with an equalizing vent between the dust collector and the blower, and means for introducing material into the air after it is discharged from the blower substantially as described.

2. A pneumatic separator, having, in combination, a casing provided with an air inlet at the bottom and an air outlet at the top, and adjustable partitions pivoted at their lower ends in the casing and provided with means for holding them in adjusted relative positions, the casing being provided at the bottom outside of each adjustable partition with an outlet for material leaking around the edges of the partition, substantially as described.

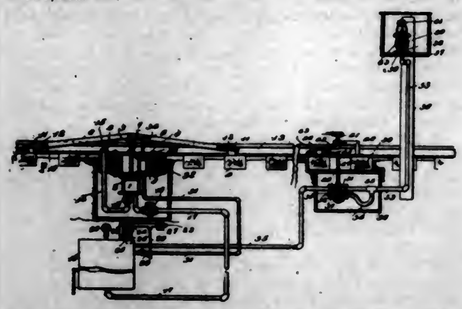
3. A pneumatic separator system having, in combination, a blower, a separating chamber connected with the outlet therefrom, means for introducing material between the blower and the separating chamber, and a dust collector connected with the separating chamber and provided with an air outlet connected with the inlet to the blower, the separating chamber being adjustable to vary the area of its cross section, substantially as described.

4. A pneumatic separator system having, in combination, a pneumatic separator through which the air passes upwardly, a dust collector, provided with laterally adjustable side walls, and a blower, connected in circuit, the separator having provision for admission of air under pressure at the bottom and the introduction of material to be sorted in a direction opposite to the direction of admission of the air, such separator acting to remove coarser particles of the material to be sorted, and the dust collector receiving the air from the outlet of the separator and operating to remove the finer particles of material, the air outlet of the dust separator being connected with the blower, the arrangement being such that only the fine impalpable powder is returned to the blower whereby the blower is preserved from the destructive wear of the material to be sorted.

5. A pneumatic separator having, in combination, a chamber provided with laterally-adjustable upright walls affording a vertical air passage of variable cross-section, a blower delivering air under pressure at the bottom of the chamber, and means for introducing material at a place in the air current so produced where it is completely surrounded by air and permitting it to fall against the annular upward current of air, substantially as described.

[Claim 6 not printed in the Gazette.]

878,666. RAILWAY SWITCH AND SIGNAL MECHANISM. JOHN S. PAYNE, Mulvane, Kans., assignor of one-eighth to Roy C. Moore and one-eighth to Otis L. Moore, Mulvane, Kans. Filed Sept. 21, 1907. Serial No. 393,926.



1. The combination with pneumatic switch or signal actuating mechanism, and a supply tank therefor, of an air pump operatively connected with the tank and arranged to feed air therein, pump actuating bars operatively connected to the plunger of said pump, and arranged to be moved downwardly by the passage of a train over the track to cause the traverse of the pump rod in one direction, and pneumatic means connected to the supply tank and bars, arranged to automatically move the bars in the opposite direction, as and for the purpose set forth.

2. The combination with pneumatic switch or signal mechanism, of an air supply tank therefor, an air pump arranged to feed air into the tank, bars operatively connected to the plunger of the pump and designed to be moved in one direction by the passage of a train over the track so as to actuate the pump, an air cylinder, a piston mounted therein operatively connected to one of said bars, a connection between said cylinder and the tank, and means for automatically opening said connection between the tank and cylinder upon the depletion of the compressed air within the tank.

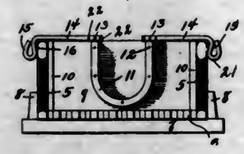
3. The combination with pneumatic switch and signal actuating mechanism, of an air supply tank therefor, an air pump arranged to feed air into the tank, bars operatively connected to the pump and arranged to move in one direction by the passage of a train over the track, a cylinder, a piston mounted within the cylinder and connected to one of said bars to raise the same, a pipe connection between said cylinder and the tank, a valve designed to open and close the said pipe connection, a cylinder connected to the tank and communicating with the interior thereof, a piston mounted in said last named cylinder, a lever to which said piston is operatively connected, and a connection between said lever and the valve of the said pipe connection, the parts being arranged so that the lever will open the valve when the piston of the tank cylinder moves inwardly and will close said valve when said piston is forced upwardly.

4. The combination with pneumatic switch and signal actuating mechanism, an air supply tank therefor, an air pump arranged to feed air into the tank, bars operatively connected to the pump to actuate the same and designed to be moved in one direction by the passage of a car over the track, a cylinder, a piston mounted in said cylinder and operatively connected to one of said bars to move the same upwardly, a pipe connection between said cylinder and the tank, a turning valve mounted in said pipe connection and adapted to open and close the latter, a handle secured to said valve, a rod connected to said handle at one end, a weighted lever mounted on the tank and connected to the other end of said rod, a cylinder mounted on the tank and in communication with the interior thereof, and a piston mounted within said cylinder and having a connection with the said lever.

5. In pneumatic switch or signal actuating mechanism, a source of supply of compressed air, a supply pipe connected thereto, a controlling valve formed with two passages to one of which the supply pipe is connected, a pipe leading to the switch or signal mechanism and adapted to convey compressed air thereto to actuate the switch or signal, said pipe being connected to the same passage of the valve as the air supply pipe so as to receive air from said supply pipe through said passage, a release branch pipe connected to the pipe leading to the switch or signal mechanism and also connected to the other passage of said valve, and a plug mounted in the body of said valve and provided with ports controlling the passages thereof, respectively, the ports of said plug being arranged to close one of said passages when it opens the other.

[Claims 6 to 9 not printed in the Gazette.]

878,667. WAGON-BED. FELTON R. PENN, West Jefferson, Ohio. Filed May 13, 1907. Serial No. 373,291.



1. The combination with a wagon body comprising a pair of side boards, of end gates, pivotally mounted levers carried by said end gates and having resilient outer ends, and members carried by the side boards over which said resilient ends of said levers are adapted to snap to thereby prevent spreading of the side boards.

2. A wagon body comprising a pair of removable side boards, cleats carried by the side boards, a tail gate slidably disposed between said cleats, pivotally mounted levers carried by the end gate and having resilient outer ends, and members carried by the side boards over which the resilient ends of the levers are adapted to snap to thereby prevent spreading of the side boards.

3. The combination with a wagon body comprising a pair of side boards, of a tail gate, a U-shaped bracket secured to said tail gate, levers pivoted to the ends of the U-shaped bracket, said levers having resilient outer ends, and members carried by the side boards over which the resilient ends of the levers are adapted to snap.

4. In a device of the character described, the combination with a wagon body comprising a pair of side boards, of a tail gate, cleats carried by the side boards between which the tail gate is adapted to vertically slide, a U-shaped bracket secured to the tail gate, levers adjustably pivoted to the outer ends of the U-shaped bracket, said levers having resilient outer ends, and short bars carried by the side boards over which the resilient ends of the levers are adapted to snap to thereby prevent spreading of the side boards.

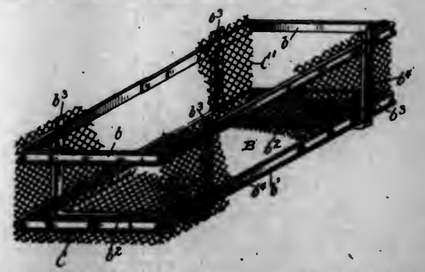
878,668. DROPPER. BURTON W. PHELPS and EARL C. GLINES, Providence, R. I., assignors of one-third to William Everitt, West Haven, Conn. Filed Oct. 14, 1907. Serial No. 397,374.

As an article of manufacture, a dropper comprising a cork, a vent tube mounted in said cork and extending beyond the inner end thereof, an outlet tube mounted in said cork and extending beyond the outer end thereof, and a plug located in the inner end of the outlet tube and



formed with a longitudinal groove, substantially as described.

878,669. BURIAL-CASE. CHARLES PIANTA, Chicago, Ill. Filed Feb. 5, 1906. Serial No. 299,406.



1. A coffin comprising channel iron side and end members, said side members provided with notches, channel iron bottom members having their ends upwardly directed and fitting in the notches in the side members, layers of reticulated material spaced a distance apart by the flanges of the channel irons, plastic material bonded between and around said reticulated material and a coating of impervious material on the structure formed.

2. A coffin comprising channel iron side and end members, said side members provided with notches, channel iron bottom members having their ends upwardly directed and fitting in the notches in the side members, layers of reticulated material spaced a distance apart by the flanges of the channel irons, plastic material bonded between and around said reticulated material, a coating of impervious material on the structure formed, bolts secured to the upturned ends of the bottom channel irons, a sleeve secured to the same extending outside the plastic material and handles secured to the sleeves.

3. In a device of the class described the combination with a metallic frame embracing side and end channel irons, channel iron members secured to the side members and affording bracing bottom members, layers of reticulated material spaced a distance apart by the flanges of the channel irons, plastic material bonded between and outside the reticulated material, a groove in the top of plastic material, a cover embracing channel irons, reticulated material spaced a distance apart thereby, plastic material bonded between the reticulated material and outside the same and a bead on the cover fitting in said groove.

878,670. SLIP-CLIP. SAMUEL W. REYNOLDS, West Toledo, Ohio. Filed Oct. 11, 1906. Serial No. 338,407.



1. A device of the class set forth, comprising in combination laps of a loop or strap, a slip member, and a resilient member coacting with said slip member to hold said laps.

2. A slip clip having a slip plate, laps of a strap, and an elastic band co-acting with said plate to hold said laps.

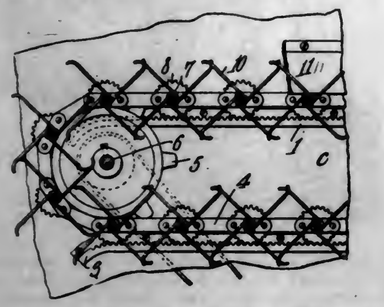
3. A device of the class set forth, comprising a pair of laps of a loop or strap, a pair of slip plates on the sides of said laps, and an elastic band around said plates, for the purposes specified.

4. A device of the class set forth, comprising a slip member, laps of a loop or strap, and an elastic band around said member and said laps.

5. A device of the class set forth, comprising in combination laps of a loop or strap, an elastic band around said laps, and a slip member between said band and laps to reduce the sliding friction of said band on said laps.

[Claims 6 and 7 not printed in the Gazette.]

878,671. CONVEYER. GEORGE E. RICHMOND, Houston, Tex. Filed Sept. 1, 1906. Serial No. 332,966.



1. A conveyer including endless chains, shafts supported for rotation in said chains, and spacing said chains apart, and supporting means for the chains; said shafts being provided with radial arms.

2. A conveyer comprising endless chains, means for actuating them, arms movably mounted upon and carried by the chains, and means for actuating the arms for directing material longitudinally along the conveyer during the movement of said conveyer.

3. A conveyer comprising endless flexible elements, means for actuating the same, revoluble series of arms carried by said elements, and means for actuating said arms during the movement of the flexible elements, said arms being disposed to pass material longitudinally upon said elements during the movement of the elements.

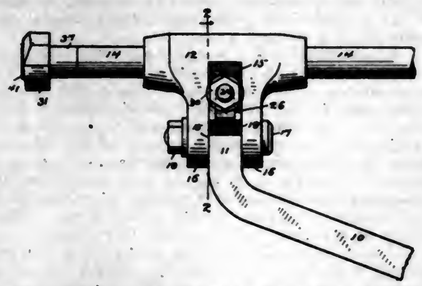
4. A conveyer comprising endless chains, means for actuating them, shafts carried by the chains, means for rotating the shaft during the movement of the chains, and radial devices upon the shafts for directing material longitudinally along the conveyer.

5. An endless conveyer having radial devices revolubly mounted thereon and movable therewith and disposed to direct material longitudinally along the conveyer.

878,672. TOOL-HOLDER. PEARL H. ROBINSON, Shelton, Conn., assignor to The O. K. Tool Holder Company, Shelton, Conn., a Corporation of New York. Filed Dec. 26, 1906. Serial No. 349,546.

1. The combination with a tool bar and a convex head, of a body through which the tool bar passes and which is provided with a slot to receive the head, a bolt passing through the body and the head, a block in said slot which engages the tool bar and is provided with an incline and a concave surface to engage the head, a sliding block and means for forcing said sliding block against the tool bar and the incline whereby the tool bar is locked in the body and the body is locked to the head.

2. The combination with a tool bar and a convex head having corrugations 19, of a body through which the tool bar passes and which is provided with a slot to receive the head, a bolt passing through the body and the head, a block in said slot which engages the tool bar and is provided with an incline and a corrugated concave surface to engage the head, a sliding block and means for forcing said sliding block against the tool bar and the incline, substantially as described, for the purposes specified.

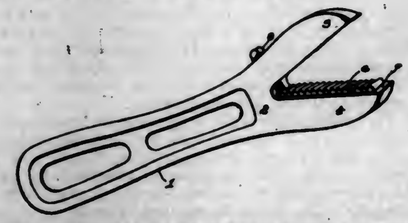


3. A tool holder comprising a body having an opening to receive a tool bar and a slot, a convex head in said slot, a triangular block in said slot having a concave surface which receives the head and an incline, a slotted sliding block also in said slot, a bolt passing through the body and the head, a bolt passing through the block and through the slot in the sliding block and a nut engaging said bolt and the sliding block whereby the sliding block is forced against the incline on the block and the latter is forced against the head.

4. A tool holder comprising a body having a slot, a convex head having corrugations, a bolt for securing the body to the head, a block in said slot having a corrugated concave surface to engage the head and an incline, a sliding block engaging the incline and means for forcing the sliding block against the incline and the block against the head, substantially as described, for the purposes specified.

5. A tool holder comprising a body having an opening to receive a tool bar and a slot, a head, means for loosely securing the body to the head, a block in said slot engaging the head, a sliding block engaging the block and means for forcing the sliding block forward, substantially as described, for the purposes specified.

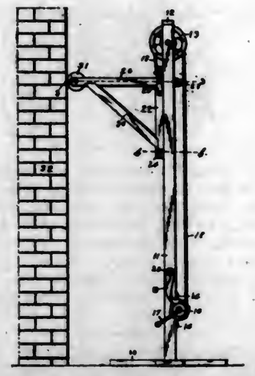
878,673. WRENCH. DAVID E. ROWLAND, Canton, Ohio. Filed Sept. 21, 1907. Serial No. 393,992.



1. As an improved article of manufacture, a wrench of the class described, consisting of a handle and a wrench-head, integral jaws extended from said head and located at an angle to each other, one of said jaws provided with a socket having a width less than the width of the jaw, said socket provided with an inclined shoulder at its outer end, a detachable tooth bar formed of a width to correspond with the width of the socket and provided with beveled ends, said toothed bar located in the socket and a screw located at an obtuse angle to the toothed bar and said screw adapted to bear against the inner beveled end of the detachable toothed bar, substantially as and for the purpose specified.

2. As an improved article of manufacture, a wrench of the alligator type consisting of a handle and a wrench-head, jaws located at an angle to each other, one of the jaws provided with a socket, said socket bounded at its outer end by an inclined ledge, a detachable toothed bar adapted to be located in the socket and provided with beveled ends, one of the beveled ends adapted to be seated under the inclined ledge, a screw located in the wrench-head and at an obtuse angle to the detachable toothed bar and said screw provided with an inner beveled end corresponding with the beveled end of the toothed bar adjacent the screw, said beveled end of the screw adapted to abut against the inner end of the toothed bar, substantially as and for the purpose specified.

878,674. ADJUSTABLE SCAFFOLD. EDWARD H. SAMUELSON, Boone, Iowa. Filed Apr. 1, 1907. Serial No. 365,792.

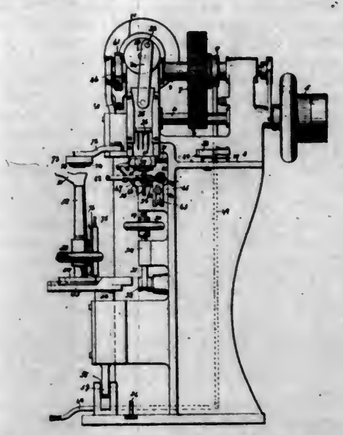


1. An improved scaffold comprising a base, two uprights spaced apart and fixed to the base, a pulley mounted between the uprights near the top thereof, a shaft, a drum on said shaft between the uprights, a toothed wheel on said shaft at the side of one of the uprights, a crank fixed to the shaft, a pawl to engage the toothed wheel, a bracket comprising a horizontal top piece, an upright and a brace, said top piece projected through between the uprights and having a bolt provided with rollers to engage the outer faces of said uprights, said upright pieces of the bracket having a block projected between the uprights, and a bolt provided with rollers to engage the inner faces of the uprights, said top pieces having a roller on its inner end and a rope or cable fixed to the bracket, passed over the pulley and fixed to the drum.

2. An improved scaffold comprising a base, two uprights spaced apart and fixed to the base, a pulley mounted between the uprights near the top thereof, two bearing plates fixed to the outer faces of the uprights near their lower ends, a shaft mounted therein, a drum on said shaft between the uprights, a toothed wheel on said shaft at the side of one of the uprights, a crank fixed to the shaft, a pawl pivoted to the side of one of the uprights, extended downwardly and then outwardly, and having a lateral extension thereon to engage the toothed wheel, and also one of said bearing plates, a bracket comprising a horizontal top piece, an upright and a brace, said top piece projected through between the uprights and having a bolt provided with rollers to engage the outer faces of said uprights, said upright pieces of the bracket having a block projected between the uprights, and a bolt provided with rollers to engage the inner faces of the uprights, said top piece having a roller on its inner end and a rope or cable fixed to the bracket, passed over the pulley and fixed to the drum.

878,675. MACHINE FOR ATTACHING HEELS TO BOOTS AND SHOES. VICTOR SANDAHL, New Haven, Conn., assignor to L. Wheeler Beecher, New Haven, Conn. Filed Dec. 6, 1906. Serial No. 346,642.

1. In a machine for attaching heels to boots and shoes, the combination with independently arranged awl mechanism and driving mechanism, of a nail-guide, means connected therewith for holding a heel blank, said nail-guide pivotally mounted on the frame whereby it may be turned to present the same successively beneath the awls and beneath the drivers, substantially as described.



2. In a machine for attaching heels to boots and shoes comprising independently arranged awl mechanism and driving mechanism, a nail guide arranged to swing from one to the other means connected therewith to carry a heel blank, and a nail-carrier adapted to swing over the nail-guide and deliver nails thereto, substantially as described.

3. In a machine for attaching heels to boots and shoes, comprising a single frame awl mechanism arranged therein, a vertically movable heel compressor arranged beneath the awls, means for adjusting said compressor to different lengths, independently arranged nail-driving mechanism, a vertically movable last beneath the same, and means for adjusting said last to different elevations, combined with a nail-guide adapted to support a heel blank and present the same beneath the awls and beneath the driver, and means for operating the awls and drivers, substantially as described.

4. In a machine for attaching heels to boots and shoes comprising a single frame, an awl head mounted therein and carrying downwardly projecting awls, a vertically movable heel compressor arranged beneath said awls, a nail-driver, a vertically movable last arranged beneath said driver, two shafts one operating the awls and heel compressor, and the other the driver, and a nail-guide adapted to support a heel blank and successively present the same beneath the awls and beneath the driver, substantially as described.

5. In a machine for attaching heels to boots and shoes comprising a single frame, an awl head mounted therein and carrying downwardly projecting awls, a vertically movable heel compressor arranged beneath the awls, a shaft, means carried thereby for operating the awl head, the compressor including clutch mechanism for coupling the shaft for movement, a nail driver, and a vertically movable last, a single shaft and means thereon for operating the driver and the last including clutch mechanism by which the mechanism is coupled to the shaft, and a nail-guide adapted to support a heel blank and successively present the same beneath the awls and beneath the drivers, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

878,676. VEGETABLE-SLICER. FRANK SCHARF, Devils Lake, N. D. Filed July 11, 1907. Serial No. 383,298.

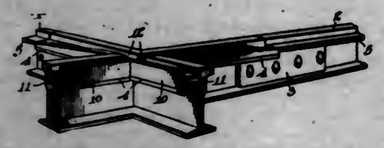
In a vegetable slicer, a frame, coacting slicing rolls therein, one of which is provided at one end with means for actuating a feeder, a hopper on the frame having an opening in one side, a shaft journaled adjacent to said opening and provided with curved feeder arms projecting

therethrough, an arm at one end of said shaft for engaging with said actuating means to oscillate the shaft, a projection on the other end of said shaft, a shaft below one of the rolls provided with fingers adapted to engage



with said roll, and a spring on one end of said last mentioned shaft, the free end of which engages with the projection on the feeder shaft to normally hold the feeder out of the hopper.

878,677. RAILWAY-CROSSING. GEORGE D. SHOOP, Rock Island, Ill. Filed Apr. 9, 1907. Serial No. 367,166.



1. In a railway crossing, the combination with removable plates arranged on the head flanges of the rails and gradually increasing in thickness toward the points of intersection, of a removable plate arranged on the head flanges of the rails inside the crossing and extending continuously between the points of intersection of said rails, substantially as described.

2. In a railway crossing, the combination with removable plates arranged on the head flanges of the rails and gradually increasing in thickness toward the points of intersection, of a removable plate arranged on the head flanges of the rails inside the crossing and extending continuously between the points of intersection of said rails, and guard rails formed on said plates, substantially as described.

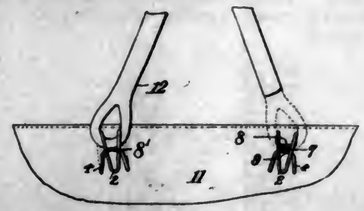
3. In a railway crossing, the combination with the crossing piece of removable plates arranged on the head flanges of the rails adjacent and leading to the crossing and gradually increasing in thickness toward the points of intersection of the rails, guide rails formed integral with said plates and increasing in height as said plates increase in thickness, and removable plates arranged on the head flanges of the rails between the points of intersection, said last named plates being of a uniform thickness and having guard rails integral therewith and of a uniform height substantially as described.

4. In a railway crossing, the combination with removable plates held adjacent the heads of the rails leading to the points of intersection, guard rails formed integral with said plates, and supporting means therefor, arranged upon the lower flange of the rails and connected to said rail, substantially as described.

5. In a railway crossing, the combination with a set of removable plates held adjacent the heads of the rails and gradually increasing in thickness toward the points of intersection, guard rails formed integral with said plates, a second set of removable plates held adjacent the heads of the rails between the points of intersection, guard rails formed integral with said plate, and support for said plates arranged on the lower flange of the rail and connected to said rails, substantially as described.

[Claim 6 not printed in the Gazette.]

878,678. FASTENING DEVICE FOR WEARING-APPAREL. LOUIS E. SMITH, Lock Haven, Pa., assignor of one-half to Patrick W. Gordon, Catawissa, Pa. Filed July 10, 1906. Serial No. 325,547.



A garment fastener comprising an approximately V-shaped hook, a pair of shank members disposed substantially parallel therewith and provided intermediate of their ends with inwardly projecting abutting loops that operate to prevent lateral yielding of the hook and also to provide a means of attaching the fastener to a garment, and attaching members forming continuations of the shank members and occupying a plane substantially parallel therewith.

878,679. SUPPORT FOR INSULATORS. WILLIAM N. SMITH, Yonkers, N. Y. Filed Apr. 28, 1906. Serial No. 314,130.



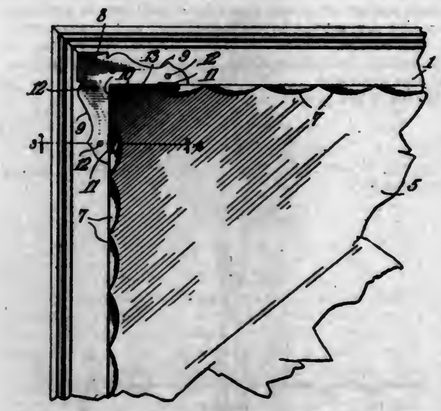
1. The combination with a one-piece insulator-support, comprising a pin and a transverse base formed integral with each other, and having a transverse perforation above the base, said base being adapted to seat on a cross arm; of a U-bolt extending through the perforation with its bend seated in the perforation, the bolt being adapted to straddle or embrace the cross arm; a strap or cross plate having apertures through which the ends of the bolt pass; and nuts on the ends of the bolt, whereby the whole may be firmly bound upon the cross arm; as set forth.

2. As a new article of manufacture, a one-piece insulator support, consisting of a pin having a transverse perforation near one end thereof, and a transverse base, formed integrally with the pin, on the end of the latter adjacent to the said perforation, as set forth.

3. As a new article of manufacture, a one-piece insulator support, consisting of a pin having an integral transverse base at one end and a transverse perforation above the base, and radially arranged strengthening webs between the pin and the base, as set forth.

4. As a new article of manufacture, a one-piece insulator support, consisting of a pin having a transverse base formed integrally at one end thereof, with integral strengthening webs arranged radially about the pin between the pin and the base, and having a transverse perforation above the base, the ends of the perforation being flaring, and the perforation constituting an arched seat, as set forth.

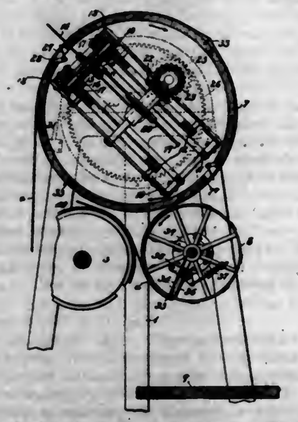
878,680. FASTENER FOR MIRRORS. JOHN B. SNELL, Butler, Pa. Filed Aug. 14, 1906. Serial No. 330,606.



1. A mirror comprising a frame, a mirror glass fitted within the frame and projecting beyond the face thereof, said glass having recessed edges, and clips secured to the corners of the frame and having integral projections seated in recesses in adjoining edges of the mirror glass, said projections conforming to the contour of the recesses in which they are seated.

2. A mirror comprising a frame having a rabbet, a mirror glass fitted into said rabbet and having edges formed with scallops, and clips secured to the corners of the frame and formed with straight inner edges terminating at the outer edges of the rabbet in parallelism with the corners of the mirror glass, each of said clips having inclined lugs fitted into the adjacent scallops of the mirror glass and conforming to the curve thereof.

878,681. CLOTH PRINTING AND CUTTING MACHINE. CHARLES F. SPARKS, Alton, Ill., assignor to Riegel Sack Company, Jersey City, N. J., a Corporation of New Jersey. Filed Sept. 4, 1906. Serial No. 333,192.

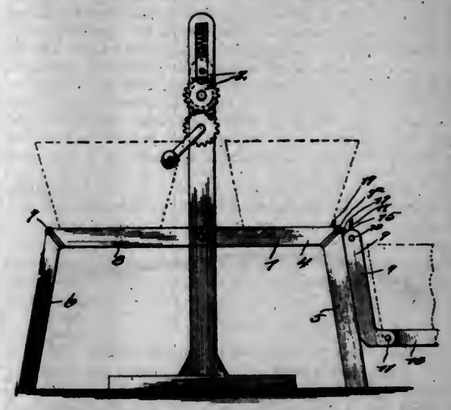


1. In a combined cloth-printing and cutting machine, the combination with web-printing mechanism, web-feeding mechanism, a cylinder over which the web passes, cutting mechanism consisting of a single cutting member carried by the cylinder for severing the web into lengths, and means operating after the cutting member for gripping the severed web at approximately its medial portion so as to crease, fold, and remove the severed portion of the web from the cutter cylinder; substantially as described.

2. In a combined cloth-printing and cutting machine, the combination with web-printing mechanism, web-feeding mechanism, a cutter cylinder, a cutting disk traveling longitudinally of said cutter cylinder and severing the web into lengths, creasing blades on the cutter cylinder, a pick-off cylinder, and means carried by said pick-off cylinder for taking hold of the severed portion of the cloth at a point opposite the creasing blade; substantially as described.

3. In a combined cloth-printing and cutting machine, the combination with web-printing mechanism, web-feeding mechanism, a cutter cylinder over which the web passes, a disk cutter traveling longitudinally of the cutter cylinder and severing the web into lengths, creasing blades over which the severed portion of the web is arranged, a pick-off cylinder, and yielding gripping devices carried by said pick-off cylinder and coöperating with the web at a point opposite the creasing blade; substantially as described.

878,682. WRINGER-STAND. NORA B. SPOONER, Warren, N. H. Filed Oct. 16, 1907. Serial No. 397,632.



1. In a device as set forth, a wringer frame having fixed thereto a wringer and provided with a pair of foldable members, one of said members having a non-rotatable rod, a coupling carried thereby, a foldable third tub supporting device supported by said coupling comprising foldable members, one of which being provided with means to prevent downward oscillatory movement of the other member thereof.

2. In a device as set forth, a wringer frame having a pair of foldable members, one of which being provided with a non-rotatable rod having a pair of slots, a coupling having a pair of extensions designed to engage said slots of said rod, means to prevent removal of said coupling and a third tub supporting device supported by said coupling.

3. In a device as set forth, a wringer frame, a wringer fixed thereto, said frame having a pair of foldable members, one of which being provided with a non-rotatable rod having a pair of slots, a coupling having a pair of extensions having openings designed to engage said slots of said rod, a U-shaped member to engage the openings of said extensions, a foldable third tub supporting device supported by said coupling comprising foldable members, one of which being provided with means to prevent downward movement of the other member thereof.

4. In a device as set forth, a wringer frame having a pair of foldable members, one of which being provided with a non-rotatable rod having a pair of slots, a coupling hav-

ing a pair of extensions having openings designed to engage said slots of said rod, a U-shaped member to engage the openings to prevent removal of the coupling, and a third tub supporting device supported by said coupling.

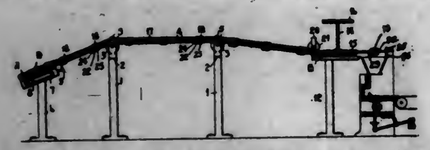
878,683. MECHANICAL BUTTON. FRANCIS STASHKO, New York, N. Y. Filed Jan. 23, 1906. Serial No. 297,417.



1. A mechanically secured button comprising a shank having at least one tooth, a circular retaining disk secured to its lower end in combination with a button top having a depending tubular standard with a central opening, a concentric portion surrounding said standard and provided with a depending disk of substantially the diameter of the retaining disk on the shank, a spring at the lower edge of the standard adapted to engage the notched shank and to hold the portion carrying the circular disk in place.

2. A mechanically secured button comprising a shank having at least one tooth, a circular retaining disk secured to its lower end in combination with a button top having a depending tubular standard with a central opening, a concentric portion surrounding said standard and provided with a depending disk of substantially the diameter of the retaining disk on the shank, a spring at the lower edge of the standard adapted to engage the notched shank and to hold the portion carrying the circular disk in place, a recess in the upper portion of the standard, a spring in said recess against which the upper end of the concentric portion may rest.

878,684. BOTTLE-CONVEYER. WILLIAM STENDER, Streator, Ill. Filed June 27, 1907. Serial No. 381,128.



1. A conveyer of the character described, comprising a suitably mounted endless conveying cable, a series of bottle holding cups connected to said cable, means whereby said cable is driven, and means whereby the bottoms of said cups are opened to drop the bottles substantially as described.

2. A conveyer of the character described, comprising a supporting frame, guide rollers mounted on said frame, an adjustable guide pulley arranged at one end of the frame, a drive pulley mounted at the opposite end thereof, an endless wire cable adapted to travel over and around said rollers and pulley, a series of bottle holding cups carried by said cable, and means whereby the bottle is discharged from said cups into an annealing furnace or the like, substantially as described.

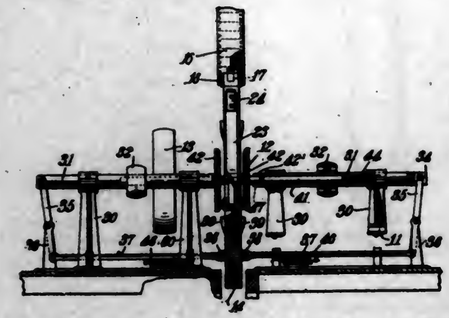
3. A bottle conveyer comprising a framework consisting of a series of standards, cross bars on the upper ends of said standards, guide rollers mounted on the opposite ends of said cross bars, a guide pulley standard at one end of said frame, a guide pulley block adjustably mounted on said standard, a guide pulley revolubly mounted on said block, a drive pulley mounted at the opposite end of said frame, a bottle conveying cable adapted to travel around said pulleys and over said guide rollers, means to hold said cable in position to engage said drive pulley, bottle holding cups arranged at intervals along said cable, clamps adapted to secure said cups to the cable, and means whereby the bottom of the cup is opened to discharge the bottles into an annealing furnace, or the like, substantially as described.

4. A bottle conveyer of the character described, comprising a suitably mounted endless conveying cable, a series of bottle holding cups connected to said cable, and means whereby the bottles are automatically discharged from the cups, through the bottom of said cups substantially as described.

5. A conveyer of the character described, comprising a suitably mounted endless conveying cable, a series of bottle-holding cups connected to said cable, a spring-retracted bottom section hinged to one side of said cup to partially close and support the bottle in said cup, and means whereby said bottom section is moved against the tension of said spring to discharge the bottle therefrom, substantially as described.

[Claim 6 not printed in the Gazette.]

878,685. PIPE-TOPPING MACHINE. CHARLES O. STRUTZ, Washington, Mo. Filed Oct. 23, 1907. Serial No. 398,848.



1. In combination, an endless pipe carrier, a pair of abrading disks, revoluble spring pressed shafts carrying the disks, hollow shafts in which the revoluble shafts are mounted, and cams projecting from the endless carrier and operatively connected to said hollow shafts to thereby separate the disks.

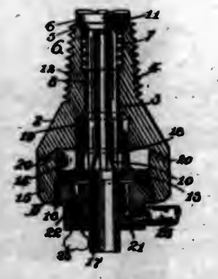
2. In combination, an endless pipe carrier, a pair of abrading disks, revoluble shafts carrying the same, hollow shafts in which said revoluble shafts are mounted, springs engaging said revoluble shafts and tending to move the disks toward each other, means for revolving the hollow shafts, cams on the endless carrier, rods arranged to be engaged by the cams, and means for connecting the rods to the hollow shafts.

3. In combination, an endless pipe carrier, a pair of abrading disks between which said carrier is arranged to move, revoluble shafts supporting said disks, hollow shafts receiving the revoluble shafts, and to which said revoluble shafts are feathered, springs tending to force the revoluble shafts toward each other, means for limiting the inward movement of said shafts, and disks, a series of cams on the endless carrier, rods having anti-friction rollers arranged to be engaged by said cam, and levers connecting said rods to the hollow shafts.

4. In a machine of the class described, a revoluble disk having peripheral notches, a plurality of spring fingers carried by said disk, said fingers being movable outward under the weight of the pipes to permit the latter to discharge, a reservoir slotted at the entrance side for the passage of the fingers and provided on the discharge side with a yieldable member, and a pair of abrading disks between which said disk is arranged to travel.

878,686. CYLINDER-COCK. AXEL SUNDBORG, St. Paul, Minn. Filed Apr. 17, 1907. Serial No. 368,782.

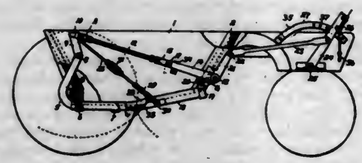
1. In combination with a locomotive having cylinders and a cab, a drain cock in the lower portion of each end of each cylinder, a source of air pressure, a system of piping leading from said source of air pressure and through said cab and a master valve contained in said piping and located near said cab; each of said drain cocks comprising a suitable casing, a drain valve seated in said casing, an air cylinder below said drain valve, an air piston freely disposed in said cylinder and adjacent to the lower end of said stem and adapted when in superior position to hold said drain valve open, a lap joint between said drain valve and air cylinder, and a drain port passageway passing through said casing and piston.



2. In combination with a locomotive and its cylinder, a drain cock in the lower portion of each end of said cylinder, a source of air pressure, a system of piping connected with said source of air pressure, and a master valve contained in said piping, said drain cock comprising a suitable casing, a drain valve seated in said casing, an air cylinder below said drain valve, an air piston in said cylinder and adjacent to the lower end of said stem and adapted when in superior position to hold said drain valve open, a lap joint between said drain valve and air cylinder, and a drain port passageway passing through said casing and piston.

3. A drain cock comprising a suitable casing, a drain valve seated in said casing, an air cylinder below said drain valve, an air piston freely disposed in said cylinder and adjacent to the lower end of said stem, a lap joint between said drain valve and air cylinder, and a drain port passageway passing through said casing and piston.

878,687. DUMPING-WAGON. EDGAR B. SYMONS, Fort Wayne, Ind., assignor to T. L. Smith, Milwaukee, Wis. Filed May 29, 1905. Serial No. 262,759.



1. In a dumping wagon, the combination of a wagon box, with a bottom section supported by elbow-irons pivoted to the box at the rear end and adapted to swing rearwardly.

2. In a dumping wagon, the combination of a wagon box supported partly by a rear axle, with a bottom section secured to elbow-irons pivoted at the rear end of the box above the bottom of the box.

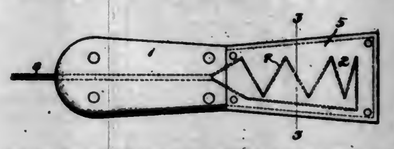
3. In a dumping wagon, the combination of a wagon box supported partly by a rear axle, with a bottom section secured to elbows swung on pivots supported in a position higher than the axle, and means for swinging said bottom section rearwardly and upwardly.

4. In a dumping wagon, the combination of a wagon box, with a bottom section secured to elbows provided with pivotal supports, said elbows adapted to swing in planes approximately parallel with the sides of the box and carrying the bottom section around the end of the box.

5. In a dumping wagon, the combination of a wagon box supported partly by a rear axle, with bottom sections dividing transversely relative to said box, rear one of said sections being swung on supports pivoted higher above the ground than the bottom of the box.

[Claims 6 to 16 not printed in the Gazette.]

878,688. ELECTRIC-HEATED HAND-MOLDER FOR FILLING SHOES. ANDREW THOMA, Cambridge, Mass., assignor to North American Chemical Company, New York, N. Y., a Corporation of Maine. Original application filed Mar. 5, 1906, Serial No. 304,225. Divided and this application filed June 11, 1907. Serial No. 378,345.



1. An electric hand molder, comprising a handle, a hollow heat-radiating molding portion carried thereby having a smoothing surface approximately as long as the width of a usual shoe cavity and having a substantially square front end, and heating means for localizing heat in said cavity.

2. An electric hand molder, comprising a handle, a hol- carried thereby having a smoothing surface approximately low square-ended flattened heat-radiating molding portion carried thereby having a smoothing surface approximately as long as the width of a usual shoe cavity, and heating means for localizing heat in said cavity.

3. In a shoe filler apparatus, an electrical hand molder, comprising a handle provided with a flat, hollow blade of heat-conductive material, having a curved under side for smoothing purposes, terminating in a projecting scraping edge, and a flat spoon-like top side for applying purposes, and electrical heating means in said blade between said two sides.

4. In a shoe filler apparatus, an electrical hand molder, comprising a handle provided with a flat, hollow blade of heat-conductive material, having a curved under side for smoothing purposes and a flat spoon-like top side for applying purposes, and electrical heating means in said blade between said two sides.

878,689. COMPOSITION OF MATTER FOR THE REMOVAL OF INK. BERTHA R. THOMAS, New York, N. Y., assignor, by mesne assignments, to Edward G. Soltmann, New York, N. Y. Filed Jan. 8, 1906. Serial No. 295,041.

1. A composition of matter containing oil, alcohol, glycerin and acid.

2. A composition of matter containing linseed oil, alcohol, glycerin and acid.

3. A composition of matter containing oil, alcohol, glycerin and oxalic acid.

4. A composition of matter containing linseed oil, alcohol, glycerin and oxalic acid.

5. A composition of matter consisting of oil one part, alcohol eight parts, glycerin two parts, acid one part, water three parts and creolin one fifteenth part.

[Claims 6 to 8 not printed in the Gazette.]

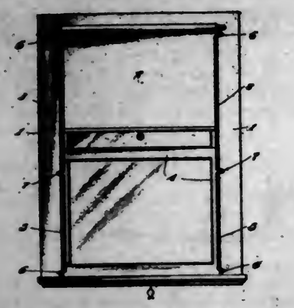
878,690. SHADE-EDGE-HOLDING DEVICE. FRANK J. THOMPSON, Los Angeles, Cal. Filed Feb. 11, 1907. Serial No. 356,731.

1. In a shade edge holder, a rod extending vertically along the shade near its edge, said rod being secured to the window casing, and means to secure said rod in its position against the shade.

2. In a shade edge holder adapted to be attached to a window frame, a vertical rod pivotally attached to the window frame and adapted to swing over the edge of the shade, and means to hold said rod in its position over the edge of the shade.

3. In a shade edge holder adapted to be attached to a

window frame, a vertical rod provided with ends bent horizontally, said horizontal ends being pivotally attached to the window frame, said rod also being provided with a centrally located horizontal U-shaped portion, and a lock adapted to swing over said U-shaped portion of the rod.



4. In a shade edge holder adapted to be attached to a window frame; a vertical rod provided with ends bent horizontally, said horizontal ends being pivotally attached to the window frame, said rod also being provided with a central horizontal U-shaped portion; and a lock adapted to wedge said U-shaped portion flatly against the window casing.

878,691. CAST METAL. ROBERT C. TOTTEN, Pittsburg, Pa. Filed June 4, 1906. Serial No. 320,163.

1. A new composition of casting metal comprising chilling cast iron and nickel, the nickel and the combined carbon of the iron being present in substantially equal proportions.

2. A new composition of casting metal comprising cast iron containing at least one-half per cent. of combined carbon, and substantially a similar proportion of nickel.

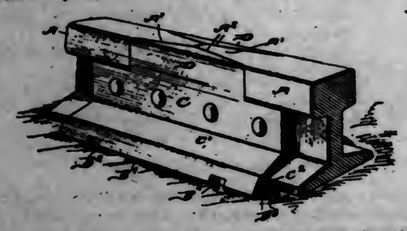
3. A new composition of casting metal comprising chilling cast iron, steel, and nickel.

4. A new article of manufacture comprising chilling cast iron and nickel, the nickel and combined carbon of the iron being present in substantially equal proportions, said article having a chilling surface.

5. A new article of manufacture comprising cast iron containing at least one-half per cent. of combined carbon, and a substantially similar proportion of nickel, and having a chilled surface.

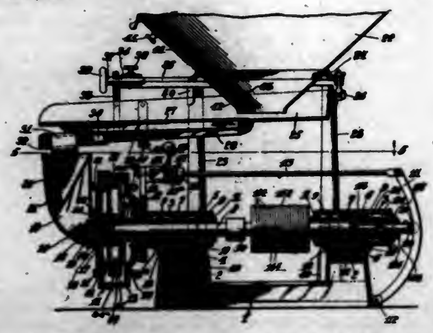
[Claims 6 to 8 not printed in the Gazette.]

878,692. RAIL-JOINT. JOSEPH URBANEK, Schuyler, Nebr. Filed May 23, 1904. Serial No. 209,355.



In a rail joint, the combination with a base-plate having upwardly and inwardly projecting edges provided with notches, of rails arranged on said plate having their heads cut away obliquely upon both sides at their meeting ends forming a V-shaped recess upon opposite sides of the head of the rail, said base plate being of a greater width than the base of the rails, fish-plates arranged upon opposite sides of the meeting ends of the rails, the lower outer ends being bent downwardly and the edges beveled adapted to fit between the base of the rails and the flanges of the plate, and an upwardly extending extension arranged centrally on the upper edge of the fish-plates, triangular in horizontal cross-section and of a size and shape to fit snugly in the V-shaped recesses, said fish-plates being secured together by bolts.

878,693. GRAIN-MILL. SAMUEL VESSOT, Joliette, Quebec, Canada. Filed May 16, 1904. Serial No. 208,185.



1. In a grain mill, in combination, grinding-plates, a frame, a bracket attached to said frame, a member rotatably mounted upon said bracket, said bracket and said member having the one an inclined slot and the other a handle lying therein, means for adjusting said grinding-plates, and mechanism connecting said last means with said member.

2. In a grain mill, in combination, a grinding-plate, a second grinding-plate slidably mounted to approach or recede from said first grinding-plate, an adjusting rod adapted to control said second grinding-plate, a rotatable member, a sleeve supporting the same, said member and said sleeve having the one an inclined slot and the other a projection lying in said slot whereby a relative rotation may move said adjusting rod.

3. In a grain mill, in combination, grinding-plates, a frame, a bracket attached to said frame and having a sleeve with an inclined slot therethrough, a bolt rotatably mounted in said sleeve and having a handle passing through said slot, a lever pivoted to said bracket and lying adjacent to said bolt to receive the longitudinal movement thereof, an adjusting rod connected with said lever, and mechanism connecting said adjusting rod with one of said grinding-plates.

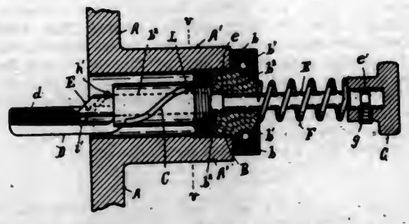
4. In a grain mill, the combination, a shaker, a shaft adapted to be continuously driven, a collar attached to said shaft and having a transverse slot, a bolt, means for attaching the same in said slot, a member rotatably mounted upon said bolt, and a resilient rod attached to said member and said shaker and adapted to vibrate said shaker laterally.

5. In a grain mill, in combination, a grinding-wheel, a shaft carrying the same, a sleeve surrounding said shaft and projecting beyond the extremity thereof, said shaft having a bore in the extremity thereof, a split sleeve carried in said bore, a thrust-pin received within said sleeve, a thimble carried within said first sleeve, a pair of rollers carried by said thimble the faces whereof abut against the extremity of said thrust-pin, a second thrust-pin abutting said rollers on the opposite side, means for guiding said thrust-pin longitudinally, an adjusting-lever controlling the position of said second thrust-pin, and means for adjusting said lever.

[Claims 6 to 8 not printed in the Gazette.]

878,694. IGNITER FOR GAS AND GASOLENE ENGINES. MAXIMILLIAN G. VOIGTLANDER, Harrison, Ohio. Filed Aug. 8, 1906. Serial No. 329,648.

1. In a mechanism of the character indicated, a plug detachably connected to the cylinder to permit the adjustment of a match to place when detached, a segmental finger having a roughened surface, said finger being carried by said plug and projecting into the cylinder gases, a plunger mounted in said plug, adapted to move endwise relative thereto, and provided at its inner end with means for holding a match at an angle to, and in position to contact with said roughened surface when the plunger is forced inward.



2. In a mechanism of the character indicated, a plug connected to the cylinder and adapted to be detached to adjust a match to place, a finger carried by said plug having an inclined roughened surface in contact with the gases of the cylinder, a plunger mounted in said plug adapted to move endwise relative thereto, and provided at its inner end with means for holding a match in position to contact with said inclined roughened surface when the plunger is forced inward, a spring mounted on said plunger outside the plug to normally hold the plunger retracted, and a knurl pivotally attached to the outer end of said plunger.

3. In a mechanism of the character indicated, a detachable plug having threaded engagemnet with the cylinder, a finger projecting from said plug in contact with the cylinder gases and provided with a roughened surface, a plunger mounted in said plug adapted to move endwise relative thereto, and provided at its inner end with means for holding a match in position to contact with said roughened surface when the plunger is forced inward, and interengaging surfaces carried by said plug and plunger to partially rotate said plunger when forced inward.

4. In a mechanism of the character indicated, a plug connected to the cylinder and adapted to be detached to adjust a match to place, a projecting finger having an inclined roughened surface, said finger being carried by said plug and in contact with the gases of the cylinder, a plunger mounted in said plug adapted to move endwise relative thereto, and provided at its inner end with means for holding a match in position to contact with said inclined roughened surface when the plunger is forced inward, and engaging offsets carried by said plug and plunger to prevent the plunger being forced outward by pressure within the cylinder.

5. In a mechanism of the character indicated, a plug detachably connected to the cylinder, a finger having an inclined roughened surface in contact with the cylinder gases, a plunger mounted in said plug adapted to move endwise relative thereto, and provided at its inner end with means for holding a match in position to contact with said inclined roughened surface when the plunger is forced inward, a spring to normally hold the plunger in the retracted position and means for holding the plunger in place against the pressure from within the cylinder, and the escape of gases between the plunger and plug.

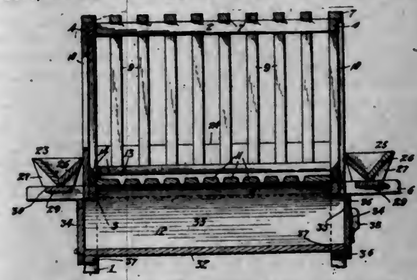
878,695. PORTABLE FIRE-ESCAPE. BERNHARD M. C. WALTER, Kansas City, Mo. Filed July 30, 1907. Serial No. 386,283.

A fire-escape consisting of two cables, fastening devices at the upper ends thereof, a series of couplings on each cable provided with tubular extensions projecting rearwardly therefrom, rearwardly-extending tubular stems adjustably engaging the couplings and the cables, transverse rungs uniting said couplings in pairs, and set-screws



adjustably engaging the couplings and the cables, substantially as shown and described.

878,696. POULTRY-COUP. VIRGIL S. WEEKLEY, Pennsboro, W. Va. Filed Mar. 30, 1907. Serial No. 365,501.



1. A portable poultry coop comprising a body having its bottom formed with openings, legs to support said body and a collecting receptacle arranged beneath said bottom and connected to the same and to said legs, substantially as described.

2. A portable poultry coup comprising a body having a bottom provided with openings, supporting legs for said body and a collecting receptacle arranged beneath said body and between said legs and having downwardly and inwardly inclined walls, substantially as described.

3. A portable poultry coop comprising a body having a bottom provided with openings, a collecting receptacle arranged beneath said bottom and carried by said body, said receptacle having an inclined bottom wall section, and a door arranged at one end of said receptacle, whereby the latter may be readily cleaned, substantially as described.

4. A portable poultry coop comprising a body having a bottom provided with openings, supporting legs for said body, a collecting receptacle arranged beneath said bottom and between said legs and having downwardly and inwardly inclined walls, and a door arranged at one end of said receptacle, whereby the latter may be readily cleaned, substantially as described.

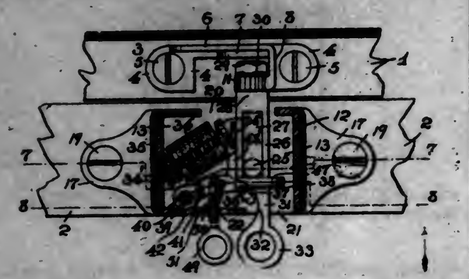
5. A portable poultry coop comprising a body having a bottom provided with openings, supporting legs for said body, a collecting receptacle arranged beneath said bottom and between said legs, and a sliding door arranged at one end of said receptacle whereby it may be readily cleaned, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

878,697. SASH-LOCK OR WINDOW-FASTENER. LEONARD VANDER WEEL, Jersey City, N. J. Filed Apr. 4, 1907. Serial No. 366,337.

1. A sash-lock or window-fastener comprising a main shell provided with openings in its opposite sides, a pivoted locking lever in said shell having a holding portion extending from one of said openings, and a finger-piece

portion extending from the other opening, all combined with a keeper, a guide in said main shell, said guide being open at both ends, and a normally compressed spring retained in said guide, said spring having its ends projecting from the open ends of the guide, and one end in contact with said lever for forcing the same in holding engagement with said keeper.



2. A sash-lock or window-fastener comprising a main shell provided with openings in its opposite sides, a pivoted locking lever in said shell having a holding portion extending from one of said openings, and a finger-piece portion extending from the other opening, combined with a keeper with which the holding portion of said lever is adapted to be brought in holding engagement, said lever being capable also of a sliding movement toward the front face of the shell, whereby the holding end-portion of the lever is drawn into the main shell, a guide in said main shell, said guide being open at both ends, and a normally compressed spring retained in said guide, said spring having its ends projecting from the open ends of the guide, and one end in contact with said lever for forcing the holding end-portion of the lever in engagement with said keeper when said lever is in its normal initial position.

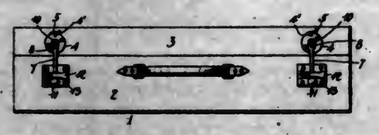
3. A sash-lock or window-fastener comprising a main shell provide dwith openings in its opposite sides, a pivoted locking lever in said shell having a holding portion extending from one of said openings, and a finger-piece portion extending from the other opening, combined with a keeper with which the holding portion of said lever is adapted to be brought in holding engagement, said lever being capable also of a sliding movement toward the front face of the shell, whereby the holding end-portion of the lever is drawn into the main shell, and means in said shell to prevent oscillation of said locking lever, consisting of a pivoted holding dog, a laterally extending finger projecting over said locking lever, a downwardly extending lug upon the free end of said finger, and a rib in said shell for the support thereon of said finger.

4. A sash-lock or window-fastener comprising a main shell provided with openings in its opposite sides, a pivoted locking lever in said shell having a holding portion extending from one of said openings, and a finger-piece portion extending from the other opening, combined with a keeper with which the holding portion of said lever is adapted to be brought in holding engagement, said lever being capable also of a sliding movement toward the front face of the shell, whereby the holding end-portion of the lever is drawn into the main shell, means in said shell to prevent oscillation of said locking lever, consisting of a pivoted holding dog, a laterally extending finger projecting over said locking lever, a downwardly exteading lug upon the free end of said finger, and a rib in said shell for the support thereon of said finger, and a spring in said shell, said spring having one end in contact with said lever for forcing the holding end-portion of the lever in engagement with the holding catch when said lever is in its normal initial position.

5. A sash-lock or window-fastener comprising a base-plate, a main shell thereon, means for securing said shell upon said base-plate, said main shell being provided with openings in its opposite sides, an upwardly extending post on said base-plate, a locking lever in said shell, said lever being formed with an elongated opening by means of which said lever is pivotally mounted upon said post, said lever having a holding portion extending from one of the said openings in said shell, and a finger-piece portion extending from the other opening in said shell, combined with a keeper with which the holding portion of said lever is adapted to be brought in holding engagement, said lever being capable also of a sliding movement upon said post, toward the front face of the shell, whereby the holding end-portion of the lever is drawn into the main shell, means in said shell to prevent oscillation of said locking lever, consisting of a pivoted holding dog, a laterally extending finger projecting over said locking lever, a downwardly extending lug upon the free end of said finger, and a rib in said shell for the support thereon of said finger, and a spring in said shell, said spring having one end in contact with said lever forcing the holding end-portion of the lever in engagement with the holding catch when said lever is in its normal initial position.

[Claims 6 to 9 not printed in the Gazette.]

878,698. LOCKING AND SUPPORTING MEANS FOR SUIT OR SAMPLE CASES. HJALMAR WENNERSTRÖM, Norway, Mich. Filed Apr. 29, 1907. Serial No. 370,908.



1. In a locking and supporting means for suit cases, two locking disks each having a recess in its periphery and a central vertical threaded perforation, two elongated supporting bars each having a longitudinal slot in one end and a pin extending from its under face, screws adapted to loosely secure the slotted ends of said supporting bars to said locking disks, knobs formed on the free ends of said supporting bars with means adapted to be secured to the outer side edge of a suit case body for engaging the free ends of said supporting bars, substantially as described.

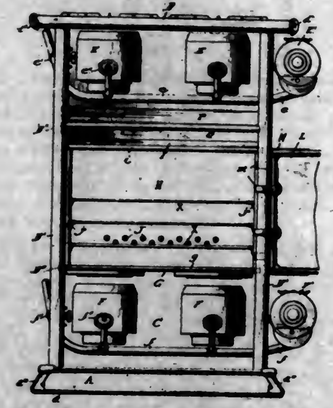
2. In a locking and supporting means for suit case covers, two locking disks each having a recess in its periphery, locking springs secured to the peripheries of said locking disks adapted to work over the recesses therein, elongated supporting bars having pins on their under faces and knobs at one of their ends, means formed in the ends of said supporting bars opposite the knobs thereof, and independent means co-acting with said means for loosely connecting said supporting bars to or near the centers of said locking disks, with means adapted to be secured to the outer side edge of the body of a suit case for engaging the free ends of said supporting bars.

3. In a locking and supporting means for suit case covers, two locking disks adapted to be secured to the outer side edge of a suit case cover, two elongated supporting bars each terminating in a knob at one end, means formed in the ends of said supporting bars opposite the knobs thereof, and independent means co-acting with said means for loosely connecting said supporting bars to said locking disks, means adapted to be secured to the outer side edge of a suit case body for engaging the free ends of said supporting bars, with means formed in the peripheries of said locking disks and independent means co-acting with said means for locking said supporting bars in position when their free ends are swung outward to complete a half circle.

4. In a locking and supporting means for suit case covers, the combination, of a locking disk having a recess in its periphery, a spring secured to the periphery of said disk and working over said recess, and supporting bar having a longitudinal slot in one end loosely secured to the center of said locking disk and having a pin formed on its under face adapted to work against the periphery of said locking disk and engage in the recess in said disk, substantially as described.

5. In a locking and supporting means for suit case covers, two locking disks adapted to be secured to the outer side edge of a suit case cover, two elongated supporting bars, means formed in one of the ends of said bars, independent means co-acting with said means for loosely connecting said supporting bars with the said locking disks, with means for locking said supporting bars in position when swung around to a certain position with reference to said disks, substantially as described.

878,699. OIL-STOVE. WILLIAM H. WILDER, Gardner, Mass. Filed Apr. 20, 1904. Serial No. 204,091.



1. An oil stove range comprising a suitable frame, an upper burner located directly beneath the top of the stove, a reservoir for supplying oil thereto, a lower burner with a reservoir independent of the first named reservoir for supplying oil to said lower burner, an oven located above the lower burner and a flue space provided between the oven and the upper burner for the purpose of deflecting the heat of the lower burner therefrom so as to prevent the abnormal heating of the oil in the burner, substantially as described.

2. In combination with an oil stove, an oven, burners above and below said oven and a flue space below and behind the upper burners, substantially as described.

3. In combination with an oil stove, an oven, burners above and below the same and a flue space between the oven and upper burners, having an upward pitch, substantially as described.

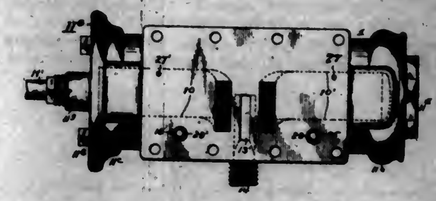
4. In combination with an oil stove, an oven, burners above and below said oven, and a flue space above and behind said oven, and extending behind the upper burners, substantially as described.

5. In combination with an oil stove, an oven, burners above and below said oven, a flue space above and behind said oven, the interior of the oven communicating with the flue space also, substantially as described.

[Claim 6 not printed in the Gazette.]

878,700. HYDRAULIC MOTOR. CHARLES L. WILKINS, Columbus, Ohio, assignor to The Ohio Pump & Brass Company, Columbus, Ohio. Filed May 13, 1907. Serial No. 373,355.

1. In a motor, the combination with a main cylinder and a piston therein, of two valve cylinders, main and auxiliary valves in said valve cylinders, the main valve cylinder having ports communicating with the ducts of the main cylinder, channels communicating with the main cylinder between the center and ends of the latter and with the auxiliary valve cylinder, these channels having ports or passageways intermediate of their ends communicating with the main valve cylinder to insure the completion of the stroke of the main valve channels communicating at one end with the auxiliary valve cylinder and at their other ends with the respective ends of the main valve cylinder, and exhaust ports communicating with both of said valve cylinders.



2. In a motor, the combination with a main cylinder, and a piston therein, said cylinder provided with ducts leading to respective ends thereof, of two valve cylinders, a main valve in one valve cylinder, an auxiliary valve in the other valve cylinder said main valve cylinder having ports communicating with the ducts of the main cylinder, channels or passageways communicating at one end with the main cylinder between the center and the respective ends thereof, and at their other ends with the auxiliary valve cylinder, check valves in these channels or passageways, channels or passageways communicating at one end with the auxiliary valve cylinder and at their other ends with the respective ends of the main valve cylinder, and exhaust ports communicating with both of said valve cylinders.

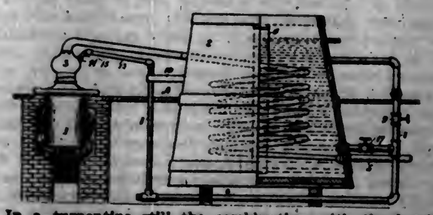
3. In a motor, the combination with a main cylinder and a piston therein, said cylinder having ducts communicating with the respective ends thereof, of a main valve cylinder having ports communicating with the ducts of the main cylinder, an auxiliary valve cylinder provided with ports communicating with the ducts of the main cylinder, a main valve, an auxiliary valve, means for conveying the pressure from the main cylinder to the respective ends of the main valve cylinder, said means controlled by the movements of the auxiliary valve, and means for connecting both valve chambers with an exhaust outlet.

4. In a motor, the combination with a main cylinder, a piston therein, of two valve cylinders, a main valve in one of said cylinders, an auxiliary valve in the other valve cylinder, the main valve cylinder having elongated diagonally disposed ports for the passage of fluid to and from the main cylinder.

5. In a motor, the combination with a main cylinder and a piston therein, of two valve cylinders, a main reciprocating valve in one valve cylinder and comprising a series of heads dividing said cylinder into five chambers, an auxiliary reciprocating valve in the other valve cylinder and having a series of heads dividing the auxiliary valve cylinder into four chambers, a channel or passageway communicating with the main cylinder at each side of the center thereof, each of said channels or passageways adapted to communicate with a chamber of the auxiliary valve cylinder, and other channels or passageways adapted to communicate with the same chambers of the auxiliary valve cylinder and connected respectively with the end chambers of the main valve cylinder.

[Claims 6 to 11 not printed in the Gazette.]

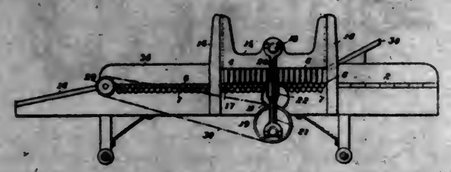
878,701. STILL FOR EXTRACTING TURPENTINE FROM GUM AND ROSIN. GILES F. WILLIAMSON, Savannah, Ga. Filed June 6, 1907. Serial No. 377,607.



In a turpentine still the combination with the kettle and tub, of a watering pipe connection leading from the

upper and lower ends of the tub to the kettle and valves for said connections located adjacent to the spirit pipe to control the flow of water to the kettle.

878,702. HEMP-BRAKE. GEORGE E. WORTH, Barnard, N. Y. Filed June 12, 1907. Serial No. 378,627.



1. In a machine for treating fibrous plants, the combination of a series of feed rollers, arranged horizontally and close together, means for rotating said rollers, a series of breaker teeth arranged above and extending parallel to a portion of said rollers, the lower edge of each of said teeth being adapted to extend into the space between the upper surfaces of adjacent rollers when in its lowest position, means for reciprocating said teeth to and from the rollers, and a plurality of beaters arranged to operate upon the material after it is moved from beneath said teeth by the feed rollers.

2. In a machine for treating fibrous plants, the combination of a series of horizontally arranged feed rollers, means for rotating said rollers, a breaker comprising two slides mounted upon guides arranged on opposite sides of the series of rollers, and a plurality of cross-bars connecting said slides and arranged to extend into the spaces separating the rollers beneath them, means for reciprocating the breaker to and from the rollers, and a series of beaters movable to and from the rollers beyond the breaker.

3. In a machine for treating fibrous plants, the combination of a series of horizontally arranged feed rollers, means for rotating said rollers, a breaker movable toward and from the rollers adjacent one end of the series, and a plurality of beaters adapted to be moved toward and from the rollers beyond the breaker, each of said beaters including a plate or bar adapted to extend over two adjacent rollers and the intermediate space.

4. In a machine for treating fibrous plants, the combination of a series of horizontally arranged feed rollers, means for rotating said rollers, a breaker, means for conveying the material away from between said feed rollers and breaker, a beater comprising a flat plate or bar extending throughout the width of said conveying means, and means for automatically moving said plate toward and from the conveyer.

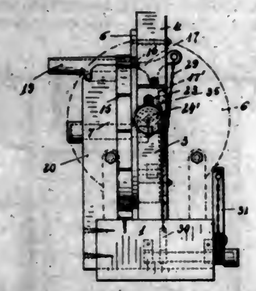
5. In a machine for treating fibrous plants, the combination of a series of horizontally arranged feed rollers, means for rotating said rollers, a breaker arranged above and movable to and from said rollers, a conveyer for removing material from between the breaker and its cooperating rollers, a rock shaft mounted at one side of said conveyer, a plurality of beaters connected with said shaft and extending throughout the width of the conveyer, and means for rocking said shaft connected with the devices for reciprocating the breaker.

[Claim 6 not printed in the Gazette.]

878,703. AMUSEMENT DEVICE. JOHN WUNNER, New York, N. Y. Filed Sept. 5, 1907. Serial No. 391,518.

1. An amusement device, comprising a rotary disk, having chambers arranged in a circle to receive cartridges, a spring actuated pivoted firing hammer, a swinging arm connected with the said hammer, a spring actuated catch to engage the said lever to cock the hammer, means for automatically releasing the catch by the firing of a bullet against it, and means for operating the swinging arm from the distance to simultaneously cock the hammer and feed the cartridge disk, substantially as set forth.

2. An amusement device, comprising a target having a central bore, a rotary disk having chambers arranged in a circle to receive cartridges and notches arranged radially therewith, a swinging pawl to engage in said notches and feed the rotary disk, a pivoted spring actuated firing hammer, a swinging arm connected with the said hammer and with the said swinging pawl, a spring actuated catch to engage the said arm and cock the hammer, means for operating said arm from the distance, and means for releasing the catch by the firing of a bullet against it through the central bore of the target, substantially as set forth.



3. An amusement device, comprising a target having a central bore, a rotary disk having chambers arranged in a circle to receive cartridges and notches arranged radially therewith, a spring stop for said rotary disk to control the arc of rotation of the latter, a swinging pawl to engage in said notches and feed the rotary disk, a pivoted spring actuated firing hammer, a swinging arm connected with the said hammer and with the said swinging pawl, a spring actuated catch to engage the said arm and cock the hammer, means for operating said arm from the distance, and means for releasing the catch by the firing of a bullet against it through the central bore of the target, substantially as set forth.

878,704. ROASTING-KILN. JOHN ZELLWEGER, St. Louis, Mo. Filed Apr. 22, 1907. Serial No. 369,630.



1. A roasting kiln provided with a hearth, a heating chamber located beneath said hearth, and means for returning the heat which escapes downwardly and laterally from said chamber back to the chamber; substantially as described.

2. A roasting kiln provided with a hearth, a heating chamber located directly beneath the hearth, and an air chamber covering the bottom of said heating chamber; substantially as described.

3. A roasting kiln provided with a hearth, fire flues located underneath said hearth, and air flues or ducts surrounding the bottom and sides of said fire flues, substantially as described.

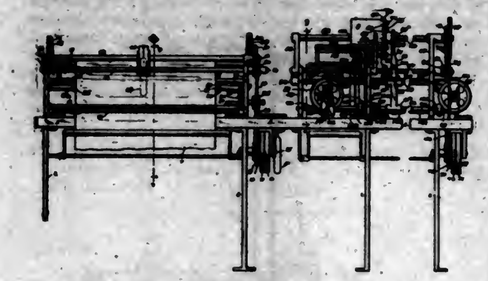
4. A roasting kiln provided with a hearth, and means for creating heat at several points underneath the length of said hearth; substantially as described.

5. A roasting kiln comprising a hearth, heat flues located underneath said hearth and extending longitudinally thereof, means for supplying said flues with heat, and air ducts surrounding said flues; substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

878,705. MACHINE FOR WINDING AND CUTTING CLOTH ROLLS. ABRAHAM L. ADAMS, Bridgeport, Conn. Filed Jan. 10, 1907. Serial No. 351,680.

1. In a machine of the character described, a rotatable winding arbor adapted to support a paper tube about which cloth is wound, and a removable prong carrying driver adapted to engage the tube and thus cause the same to rotate with said arbor, for the purpose set forth.



2. In a machine of the character described, a rotatable winding arbor adapted to support a paper tube to form the core for a cloth roll, means for rotating said tube and arbor together, combined feed and pressure rollers through which the cloth is fed, detachable weights for said rollers, one of said rollers adapted to engage the cloth roll as it is being formed and by means of the weights distribute the pressure thereon so as to secure uniform and even winding, for the purpose set forth.

3. In a machine of the character described, a rotatable winding arbor adapted to support a paper tube about which cloth is wound into a roll and to form a core therefor, means for temporarily securing the tube to the arbor, combined feed and pressure rollers through which the cloth is fed, detachable weights for said rollers adapted to distribute the pressure on the cloth roll so as to insure even winding of the same, means for rotating said feed and pressure rollers, for the purpose set forth.

4. In a machine of the character described, a rotatable winding arbor, adapted to support a paper tube about which cloth is wound into a roll and to form a core therefor, means for temporarily securing the tube to the arbor, arms, a support therefor, the free ends of said arms adapted to move through an arc of a circle, combined feed and pressure rollers journaled in bearings located in the free ends of said arms, means for rotating said rollers, one of said rollers adapted to bear against the cloth roll during the winding operation, detachable weights adapted to exert a pressure at the ends of said rollers, an intermediate detachable and shifting weight adapted to contact with the upper one of said rollers, a pressure roller adapted to engage the lower surface of the cloth roll during the winding of the same, for the purpose set forth.

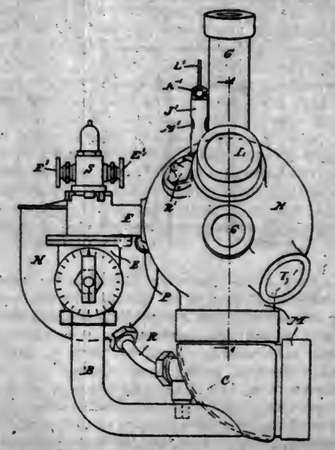
5. In a machine of the character described, a rotatable winding arbor adapted to support a paper tube about which cloth is wound into a roll and to form a core therefor, said arbor having a key way therein, a removable prong carrying driver adapted to engage the tube and thus cause the same to rotate with the arbor, rotatable and vertically operating feed and pressure rollers, one of which rollers is adapted to contact with the cloth roll while it is being wound, a movable support for said rollers, detachable weights therefor, for the purpose set forth.

[Claims 6 to 16 not printed in the Gazette.]

878,706. CARBURETER. LARS ANDERSON, New York, N. Y., assignor to Triplex Gas Engine Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 22, 1906. Serial No. 344,536.

1. In a device of the character described, a chamber in the form of a hollow sphere or globe, and having an unobstructed interior, a pipe for delivery thereinto of the mixture of oil and air, a delivery pipe communicating radially with said chamber, a spherical or globular inclosing casing for said chamber forming a jacket therefor, an exhaust pipe connection delivering from the engine to said jacket, and an exhaust connection to the outer air delivering from said jacket.

2. In a device of the character described, a chamber in the form of a hollow sphere or globe, and having an unobstructed interior, a jacket therefor, a pipe connection for the mixture of oil and air delivering into said chamber, a plurality of pipes delivering radially from said chamber to the engine cylinders, an exhaust pipe connection from the engine to said jacket, and a main exhaust pipe delivering from said jacket to the outer air.



3. In a device of the class described, a chamber, means for delivering a fuel and air mixture thereto, a jacket for said chamber, a pipe communicating from the engine to said jacket and a pipe connection from the jacket to the outer air, in combination with a jet extending through said jacket and into said chamber, and means for supplying water to said jet.

4. In a device of the class described, a chamber, means for delivering a fuel and air mixture thereto, a jacket for said chamber, a pipe connection from the engine to said jacket and a pipe connection from the jacket to the outer air, in combination with a chambered plug extending into said jacket, a jet delivering therefrom into said chamber, and means for supplying water to the chamber of the plug.

5. In a device of the class described, a chamber, means for delivering a fuel and air mixture thereto, an inclosing jacket for said chamber, a pipe connection from the engine to said jacket, and a pipe connection from the jacket to the outer air, in combination with a hollow plug extending into said jacket, said plug having a passage therethrough communicating freely at each end with said jacket, a jet delivering from the interior of the hollow plug into said chamber, and means for supplying water to said hollow plug.

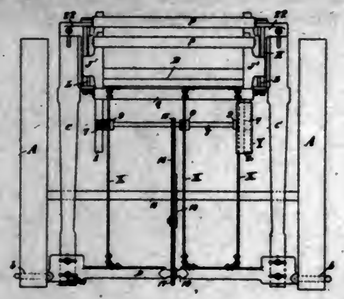
[Claims 6 and 7 not printed in the Gazette.]

878,707. LOOM FOR PRODUCING TEXTILE FABRICS. ROBERTS BEAUMONT, Leeds, and THOMAS HOLLIS, Shipley, England. Filed Jan. 29, 1906. Serial No. 298,455.

1. In the looms of the character described, the combination of the framework, a rocking shaft pivoted thereto, swords fixed to said rocking shaft, shuttle race fixed to said swords, bearers having one end fixed to the rocking shaft and the other end to the shuttle race, brackets fixed to the swords and "going part," each bracket having mounted therein two vertical eccentric guide pillars, reed carriers mounted to slide freely upon the said guide pillars during the oscillation of the swords, and means for causing the reed carriers to rise and fall, substantially as described.

2. In looms of the character described, the combination of a rocking shaft pivoted to the framework, two swords carrying the shuttle race, a number of bearers fixed thereto at suitable distances apart, means for oscillating the said

swords, brackets fixed to said swords and having vertical guides, reed frames provided with ends adapted to fit and slide upon said guides, and means for intermittently operating the reed frames during the oscillation of the swords, substantially as described.



3. In looms of the character described, the combination of a rocking shaft pivoted to the framework, two swords carrying the shuttle race, a number of bearers fixed to the shuttle race at suitable distances apart, means for oscillating the said swords, brackets fixed to said swords and having vertical guides, reed carriers provided with ends adapted to fit and slide upon the said guides, means for intermittently operating the reed frames during the oscillating of the swords, a number of reed strips mounted at distances apart upon bars, and having eyes formed therein for the passage of the warp threads, whereby the warp threads are separated as the said reed frames rise and fall for forming a passage for the shuttle, and for beating upon the weft yarn, substantially as described.

4. The combination in a loom of the character described, of the oscillating swords having brackets fixed thereto, and having vertical guides, a reed carrier composed of two end pieces provided with vertical grooves, two grooved horizontal caps fixed to said end pieces at distances apart, reeds adapted to fit the vertical grooves of the end pieces, reeds adapted to fit the horizontal grooves of the caps, having heald eyes formed in the reed strips, substantially as described.

5. The combination of the loom swords, means for oscillating them, a shuttle race fixed to said swords, on the top of which a number of the warp threads rest when the shed is formed, a shuttle supported by said race during its passage across the loom, a number of reeds as described mounted vertically side by side and adapted to slide on guides fixed upon said swords, the reed having a number of perforations for the passage of the warp threads through them, and means for automatically raising and lowering the reeds, whereby each warp thread is positively controlled and its position determined by the movement of the reeds, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

878,708. HEATED STEERING-WHEEL. CHARLES BERG, New York, N. Y. Filed Mar. 25, 1907. Serial No. 364,888.

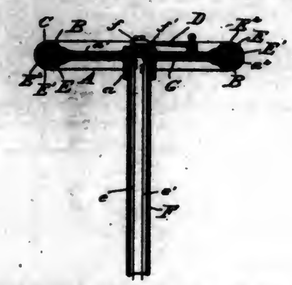
1. A steering wheel provided with a hollow rim, an insulating core therein, a heating coil on said core, another heating coil enveloping the first named coil, insulations for keeping the coils from contact with each other and with the wheel rim, and means whereby current may be supplied to both coils or one of said coils.

2. A hollow steering wheel provided with a hollow circular rim, and means interiorly of said rim for electrically heating the same.

3. A steering wheel provided with a hollow rim, means for electrically heating said rim, and means for controlling the current supplied to said electrical heating means.

4. A steering wheel, a plurality of concentric resistance coils coöperating therewith, and means for controlling the electric current individually and severally to said coils.

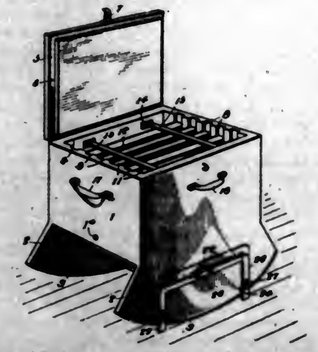
5. A steering wheel provided with a hollow rim, a core of insulating material therein, and a plurality of coils of



different resistances confined between the wall of the rim and said core.

[Claims 6 to 8 not printed in the Gazette.]

878,709. ICE-CREAM FREEZER. BENJAMIN G. BUTLER, Columbia, S. C. Filed Mar. 28, 1907. Serial No. 364,991.



1. A freezer of the character described, consisting of a box provided with recesses for the reception of freezing cans, freezing cans adapted to be slipped down into the recesses, a plate secured to the inner face of one side of the box and having an opening formed therein, another plate secured to the inner face of the opposite side of the box and formed with a bayonet slot, a locking bar, one end of which is adapted to be slipped down into the bayonet slot, and a latch mounted upon the plate with the bayonet slot and adapted to extend over the adjacent end of the locking bar.

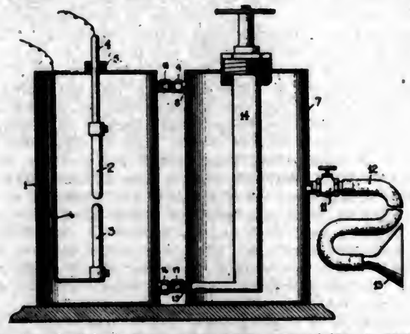
2. A freezer of the character described, embodying a box and a lid therefor, the box being provided with rockers, and a brace adapted to hold said box as against a rocking movement, said brace including a pair of downwardly extending legs formed with slots and oppositely facing notches, and a rocker of the box being provided with headed studs accommodated in said slots and adapted to rest in the respective notches thereof.

3. A freezer of the character described, comprising a box and a lid, the box being formed with rockers, and a brace adapted to hold said box as against a rocking movement, said brace embodying two downwardly projecting legs and a cross bar connecting the same, the legs being formed with vertical slots, and with upwardly and downwardly facing sockets communicating with said slots, and a rocker of the box being provided with headed studs accommodated in said slots and adapted to lodge in the said sockets whereby to hold the brace projected from the lower edge of the rocker or in a retracted position with respect to said edge.

4. A freezer of the character described, comprising a box

formed with oppositely facing recesses in its inner wall, said recesses being adapted to receive freezing cans, and a division block adapted to be slipped down into any pair of recesses whereby to divide the box into compartments, the said block being formed with a transverse slot and a locking bar adapted to extend through said slot and arranged for detachable engagement with opposite sides of the box, as and for the purpose set forth.

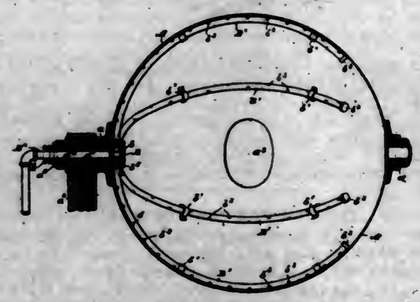
878,710. ELECTRICAL VAPOR APPARATUS. HUGH L. CAMPBELL and JAMES L. WATTS, Nashville, Tenn. Filed Feb. 18, 1907. Serial No. 358,055.



1. An electrical vapor apparatus comprising a vessel, means for creating an electric arc therein, a reservoir, a pump contained in the latter and operable for supplying air under compression to the vessel and to force air and vapor therefrom into the reservoir, and a discharge for the reservoir including the respirator.

2. The herein-described electrical vapor apparatus comprising a vessel, means including metallic electrodes to create an electric arc therein, a reservoir communicating with said vessel and having discharge means including the respirator, and a pump contained in the reservoir and connected with the vessel for forcing air into the vessel and from the latter to the reservoir.

878,711. STRAW-COOKER. JACOB J. DAUCH and WILLIAM F. HARBRECHT, Sandusky, Ohio. Filed July 26, 1906. Serial No. 327,812.

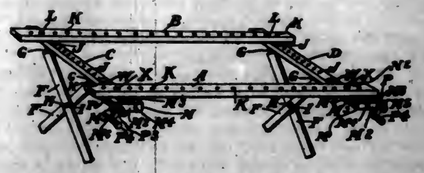


1. In a pulp-digester, the combination with a rotary boiler, of meridionally arranged steam-distributing pipes within said rotary boiler and disposed against the inside of the walls thereof, said pipes being respectively provided with apertures for the escape of steam on the side adjacent to the tank walls only.

2. In a pulp-digester, the combination of a rotary boiler, a steam supply pipe, a series of meridionally arranged steam-distributing pipes within said boiler, said pipes being connected with said supply pipe and being respectively provided with apertures for the escape of steam on the side adjacent to the walls only of said rotary boiler, and a valve controlling connection between said supply pipe and said distributing pipes, said valve being adapted to connect such supply pipe with a plurality of distributing pipes successively submerged in the course of said boiler's rotation.

3. In a pulp digester, the combination of a spherical boiler rotatably mounted upon trunnions, one of said trunnions being provided with an axial bore, a cylindrical valve-casing fitted in a recessed portion of one of the trunnions and having one end closed and mounted with the other open end over the inner end of such bore, a plurality of meridionally arranged steam-distributing pipes within said boiler, each pipe having apertures for the escape of steam on the side adjacent to the walls only of said rotary boiler, said pipes being connected with said valve-casing, a steam supply pipe mounted in the bore in said trunnion and extending within said valve-casing, and a cylindrical valve mounted within said casing and connected with said supply pipe, said valve being provided with a port disposed to connect said supply pipe with a plurality of distributing pipes successively submerged in the course of said boiler's rotation.

878,712. MACHINE FOR STRETCHING AND PRESSING LACE AND SIMILAR FABRICS. ANNA C. DEE, Cincinnati, Ohio. Filed Aug. 8, 1907. Serial No. 387,722.



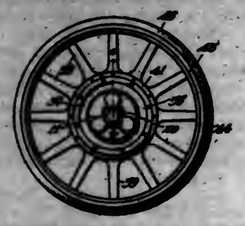
1. In a machine for stretching fabrics, the combination of the four bars A, B, C and D, each bar provided with holes, bolts L for adjustably connecting the bars B and C, by means of said holes, the lugs M^3 respectively connected to said bars C and D, and the plates N to the respective end portions of the bar A and the screw rods respectively fixedly journaled in plate N, and their screws respectively engaging screw threads in said lugs M^3, the bars C and D provided with slots, and the bolts X fixed in the bar A and respectively extending through said slots and through holes in the bar A, substantially as and for the purposes specified.

2. In a machine for stretching fabrics, the combination of four bars, one pair crossing the other at right angles, each pair provided with a longitudinal line of successive holes, and bolts adapted to connect the respective bars through the medium of the said holes, each bar combined with an envelop of textile fabric covering the top of the bar and its side edges, and adapted to enable the textile fabric to be stretched to be readily connected by pins or catches to this enveloping fabric, and at each end of the bar A combined with the following named device, to wit: the angulated arm M, M^2, M^3, with lug M^5 and screw threaded opening M^6, this arm connected to the end of the adjacent cross bar, and the clamp N connected to the adjacent bar, and the screw threaded rod P, P^2, extended through the lug M^5, and the nut P^3, P^4 engaging this screw threaded rod P, substantially as and for the purposes specified.

3. In a machine for stretching textile fabrics, the combination of four bars, one pair crossing the other at right angles, each pair provided with a longitudinal line of successive holes, and bolts adapted to connect the respective bars through the medium of the said holes, each bar combined with an envelop of textile fabric covering the top of the bar and its side edges, and adapted to enable the textile fabric to be stretched to be readily connected by pins or catches to this enveloping fabric, and at each end of the bar A combined with the following named device, to wit: the angulated arm M, M^2, M^3, with lug M^5 and screw threaded opening M^6, this arm connected to the

end of the adjacent cross bar, and the clamp N connected to the adjacent bar, and the screw threaded rod P, P^2, P^3, P^4, journaled in the clamp N, and engaging the screw threaded opening M^2, and the crossed legs, one pair for each of an opposing pair of bars, and hinged to their respective bars, and at their crossing united by a pin or bolt, the latter removable, substantially as and for the purposes specified.

878,713. VEHICLE-WHEEL. NATHANIEL DRYDEN, Los Angeles, Cal. Filed Nov. 19, 1906. Serial No. 344,050.



1. An interacting vehicle wheel, comprising a hub member having a resiliently supported felly and annular guide plates secured thereto, and an outer member comprising two annular rigid members connected together by spokes, and having a plurality of plates secured thereto so as to form annular grooves, said grooves adapted to engage the guide plates of the hub member, whereby the two members are held in engagement.

2. An interacting vehicle wheel, comprising a hub member having a resiliently supported felly and annular guide plates secured thereto, the inner faces of the outer guide plates having circular recesses formed therein; an outer member comprising two annular rigid members connected together by spokes, and having a plurality of plates secured thereto so as to form annular grooves, said grooves adapted to engage the guide plates of the hub member; and a plurality of engaging pins secured to the outer faces of the plates secured to the outer member adapted to engage the circular recesses formed on the inner faces of the outer guide plates secured to the hub member, whereby the two members are held in engagement.

878,714. SPRING-WHEEL. HARRIS T. DUNBAR, Buffalo, N. Y. Filed Feb. 11, 1907. Serial No. 356,724.



1. A spring wheel comprising a hub, a rim, yielding means operating to hold the rim concentric to said hub, and a frictional connection between said hub and rim independent of said yielding means, substantially as set forth.

2. A spring wheel comprising a hub having friction disks, a rim having webs arranged between said disks, means for pressing said disks and webs together, and yielding means operating to hold the rim concentric to said hub, substantially as set forth.

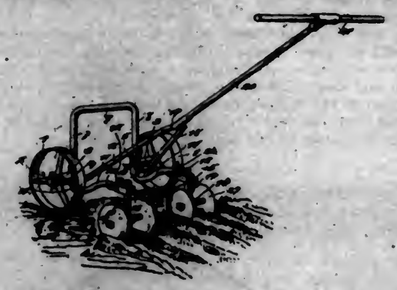
3. A spring wheel comprising a hub having friction disks, a rim having webs arranged between said disks, a spring operating to press said disks and webs together, and springs operating to hold the rim concentric to said hub, substantially as set forth.

4. A spring wheel comprising a hub composed of an inner section and an outer section, a fixed outer friction disk arranged at one end of the inner hub section, an axially movable outer friction disk arranged on the opposite end of the inner hub section, inner friction disks arranged at opposite ends of the outer hub section, a rim, friction webs connected with said rim and arranged between said disks, a spring operating to press said friction disks and webs together, and springs operating to hold said rim concentric to said hub, substantially as set forth.

5. A spring wheel comprising a hub composed of an inner section and an outer section, a fixed outer friction disk arranged at one end of the inner hub section, an axially movable outer friction disk arranged on the opposite end of the inner hub section, inner friction disks arranged at opposite ends of the outer hub section, a spline operating to cause said inner and outer hub sections and the movable outer disk to turn together, a rim, friction webs connected with said rim and arranged between said disks, a spring operating to press said friction disks and webs together, and springs operating to hold said rim concentric to said hub, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

878,715. HAND-PLOW. CHARLES S. EBENBRIGHT, Caney, Kans. Filed June 12, 1907. Serial No. 378,589.



A hand plow comprising a U-shaped member having its arms bent at right angles thereto and into a compound curve, four-way joint members mounted upon the side arms of the said U-shaped member, stub-axles carried by said four-way joint members, said axles having wheels journaled thereon and disks adjustably carried by the arms which extend at right angles to the U-shaped member.

878,716. WATCH-BARREL. LEWIS A. FALLER, Nashville, Tenn., assignor of one-fourth to The B. H. Steif Jewelry Co., Nashville, Tenn. Filed Apr. 1, 1907. Serial No. 365,749.

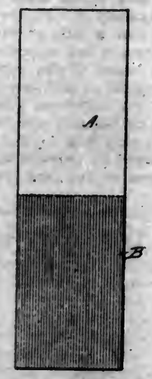


1. In a watch movement, top and bottom plates, a spring barrel seated and retained on the bottom plate and having an enlarged externally threaded tubular hub presenting an opening, a cover plate arranged over the upper end of the barrel and provided with an enlarged central opening in line with the opening in the hub, a toothed ratchet wheel threaded onto said hub, and an arbor extended through the openings in the hub and cover plate and terminally journaled in said upper and lower plates, said openings being of greater diameter than that of the arbor to permit relative movement of the latter and barrel for disposing of one of said parts eccentric with respect to the other.

2. In a watch movement, the combination with a plate, a spring barrel mounted upon said plate and having an integral flange near its lower edge and an exteriorly threaded hub at its bottom with a central opening, a retaining ring encircling said barrel and bearing upon its flange, and a cover having a central opening and fitting over the upper end of said barrel.

3. In a watch, the combination with a spring barrel, of a flange on or near the lower edge of said barrel, a retaining ring encircling said barrel and inclosing the flange, a plate fitting over the upper edge of said barrel, and a main arbor arranged to work through the center of said barrel, substantially as described.

878,717. PAPER FOR USE IN TYPE-WRITTEN WORK TO OBTAIN MANIFOLD COPIES. ARTHUR J. FARMER, Detroit, Mich. Filed May 4, 1904. Serial No. 206,801.



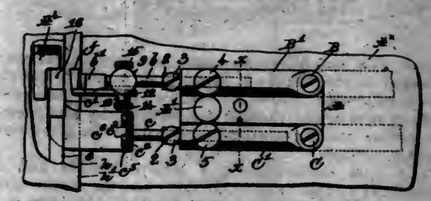
1. An integral sheet of paper consisting of a substantially opaque portion and a transparent portion, said sheet provided with a series of perforations by which the transparent portion may be readily separated from the opaque portion, substantially as described.

2. A doubled, integral sheet of paper, consisting of a substantially opaque portion, and a transparent portion, contacting with each other when folded, said paper provided with a series of perforations along the fold whereby the transparent portion may be readily separated from the opaque portion, substantially as described.

878,718. SEWING-MACHINE ATTACHMENT. BENJAMIN FLEIGEL, Chelsea, Mass., assignor to himself and John W. Nutter, Copartners doing business under the firm-name and style of B. Fleigel & Co., Chelsea, Mass. Filed July 11, 1907. Serial No. 383,182.

1. In a sewing machine attachment, an arm, a carrier having its shank longitudinally and slidably mounted on said arm, an attachment mounted at the end of said carrier, a positioning device applied to said shank loosely, means to secure said positioning device on said shank in any adjusted position, and means to secure said shank detachably in said arm with the positioning device against said arm whereby the adjusted position of the attachment may be maintained during the removal from and replacement of the carrier in the arm.

2. In a sewing machine attachment, an arm, an attachment carrier having its shank slidably connected with said arm and having a head, a plate flanged and provided with parallel vertical slots in said flange at one end to contact with said head and having at its other end a guideway, combined with means to connect said flange and head whereby said plate may be adjusted vertically and at various inclinations on said head.



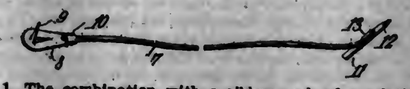
3. In a sewing machine attachment, an arm, an attachment carrier having a shank slidably connected with said arm and provided with an edge gage, combined with a sleeve applied to said shank, a set screw to secure said sleeve on said shank, a block, an auxiliary presser foot having its shank slidably mounted on said block and means to hold the shank of said foot in any position in which it may be adjusted, said foot being adapted to be put in position to act on the material close to the face of said edge gage or to be turned into its inoperative position.

4. In a sewing machine attachment, an arm, an edge gage sustained thereby, a second arm, an attachment carrier having its shank detachably sustained thereby, a plate adjustably connected with and sustained by said attachment carrier and provided with a guideway, the plate and its guideway being adjustable vertically to accommodate for the thickness of the material passing under said plate.

5. In a sewing machine attachment, a block, two arms, means to pivot both said arms on said block, means to retain said arms in their operative position, said arms being free to be turned for 180° about their pivots, attachment carriers having their shanks slidably connected with both said arms, each carrier having a collar, means to secure the collars in adjusted position on said shanks, means to connect said shanks to said arms, means to present a braid, piping, welt or cord to the material to be stitched, and an edge gage.

[Claim 6 not printed in the Gazette.]

878,719. RIBBON-FASTENER. ALMON H. GARDYNE, Barton Landing, Vt. Filed Feb. 25, 1907. Serial No. 359,136.



1. The combination with a ribbon reel, of a relatively stationary anchoring member piercing one side of the reel, a movable anchoring member comprising a plate having an integral upstruck attaching spur adapted to pierce the opposite side of the reel, and provided with a laterally extending lug and an elastic cord forming a connection between the stationary anchoring member and the lateral lug of the movable member and extended transversely across the reel for engagement with the adjacent surface of the ribbon, said movable member being adjustable to different positions on the adjacent side of the reel thereby to vary the tension of the cord.

2. A ribbon fastener including a plate provided with a flat bearing surface and having a portion thereof pressed laterally to form an up-struck piercing point, an elongated needle provided with a pointed terminal, an elastic cord connecting the plate and needle, a lug extending laterally from one end of the plate and engaging the adjacent end of the cord, and an attaching ear projecting from one longitudinal edge of the needle and spaced from the pointed terminal thereof for engagement with the opposite end of the cord.

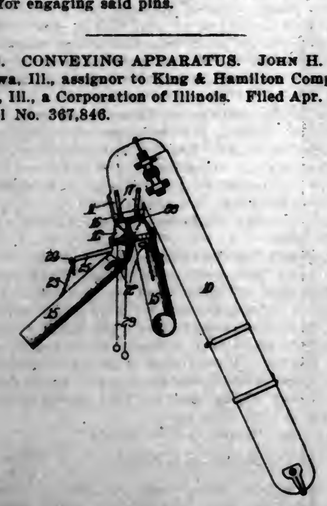
878,720. TENSION DEVICE FOR LOOM-SHUTTLES. ERNEST GERHARDTS, Westbrook, Me. Filed Feb. 18, 1907. Serial No. 358,068.



1. A loom shuttle having a bobbin chamber, a chamber arranged in the front end thereof and having a shuttle arm or tension device operable therein, a chamber arranged between said bobbin chamber and said shuttle arm chamber, and an auxiliary tension device mounted in said intermediate chamber.

2. A loom shuttle having a bobbin chamber and a chamber at its front end, a laterally swinging shuttle arm disposed in said last mentioned chamber, a chamber arranged at the rear of said shuttle arm chamber between it and the bobbin chamber and having pins extending transversely thereof, and a spring-pressed tension device mounted to swing in said last mentioned chamber and having means for engaging said pins.

878,721. CONVEYING APPARATUS. JOHN H. GILMAN, Ottawa, Ill., assignor to King & Hamilton Company, Ottawa, Ill., a Corporation of Illinois. Filed Apr. 12, 1907. Serial No. 367,846.



1. In a grain-discharging apparatus, the combination with the valve casing, of the pair of elbows fitted to the bottom of said casing, connections between the valve casing and each of the elbows permitting the latter to rotate on the casing independently of each other, and the single valve pivoted in the casing and movable to one position or another to deflect the grain into one or the other of the elbows.

2. In a grain-discharging apparatus, the combination with the valve casing, of the pair of elbows fitted to the bottom of said casing, connections between the valve casing and the elbows permitting the latter to rotate on the casing, the valve pivoted in the casing to deflect the grain into one or the other of the elbows, the spouts pivoted to the bottoms of the elbows, and means for holding the spouts at any angle to which they may be swung.

3. In a grain-discharging apparatus, the combination with the valve casing having the pair of annular grooves in the bottom thereof, of the flanged elbows fitted to turn in said grooves, and the valve pivoted in the casing to deflect the grain into one or the other of the elbows.

4. In a grain-discharging apparatus, the combination with the valve casing having the pair of annular grooves in the bottom thereof, of the flanged elbows fitted to turn in said grooves, the valve pivoted in the casing to deflect the grain into one or the other of the elbows, the spouts pivoted to the elbows, and means for holding the spouts at any angle to which they may be swung.

5. In a grain-discharging apparatus, the combination with the valve casing made up of the two symmetrical sections which when assembled form the pair of annular grooves in the bottom thereof, and means for securing the sections together, of the flanged elbows fitted to turn in said grooves, the valve pivoted in the casing to deflect the grain into one or the other of the elbows, and the spouts carried by the elbows.

[Claim 6 not printed in the Gazette.]

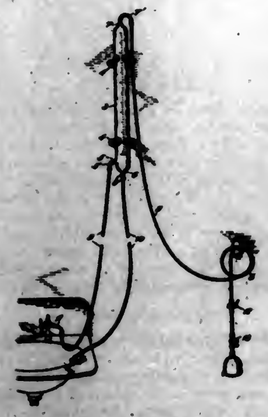
878,722. CORK-EXTRACTOR. GEORGE M. GODFREY, Carrollton, Miss. Filed July 25, 1907. Serial No. 385,407.



1. In combination with a cork, an extractor comprising a length of wire forming a loop engaging the periphery of the cork, a bight extending across the cork from diametrically opposite portions of said loop, and a pair of attachments diverging from the top of the cork and extending, respectively, beneath one end of said bight to said loop, and outside of said loop to the other end of said bight, substantially as described.

2. In combination with a cork, an extractor comprising a length of wire forming a loop engaging the periphery of the cork, a straight length of the wire forming a bight extending across the plane of said loop from diametrically opposite portions of the latter, an attachment extending beneath one end of said bight to said loop, an attachment extending outside of said loop to the other end of said bight, and an eye formed by twisting said attachments together beyond the end of the cord, substantially as described.

878,723. VACUUM APPARATUS. STEPHEN E. GRIGGS, Seattle, Wash. Filed Feb. 27, 1907. Serial No. 359,558.



1. In an exhausting apparatus, comprising in combination with a cup, of a closed vessel, a tube communicatively connecting said cup with the top of said vessel, a tube making communicative connection between the bottom of said vessel and a supply of water under sufficient head to fill said vessel, a liquid discharge opening in the bottom of said vessel, and a valve, or its equivalent, for each of said tubes.

2. In an exhausting apparatus, the combination with a cup, of a vessel having a water inlet tube at the bottom, a flexible tube leading from the vessel adjacent of its top to the cup to be exhausted, an outlet for said vessel, and means to control the inflow and discharge of the water from the respective tube and outlet.

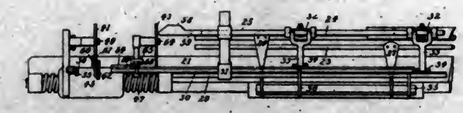
3. In an exhausting apparatus, the combination with a cup, of a vessel, an inlet for supplying water to drive the air out of the vessel prior to the exhausting operation, an outlet to said vessel, and means for controlling the evacuation of water from the vessel and whereby the air is exhausted from the cup.

4. In an exhausting apparatus, in combination with a cup, a vessel disposed at an elevation sufficient to maintain a barometric column of a liquid employed which when withdrawn will produce a desired vacuum in the cup, an inlet to supply said liquid to the vessel, a flexible tube connecting the vessel adjacent of its top with the cup from which the air is to be exhausted, and means open at all times to withdraw the liquid from the vessel whereby the exhaustion of the air from the cup is accomplished.

5. In an exhausting apparatus, a single vessel, means to dispose said vessel at a determined elevation, means for connecting said vessel with a source of fluid supply under pressure, means at the bottom of said vessel to enable the fluid to be withdrawn therefrom, a vacuum cup, and means connecting said cup with the top of said vessel.

[Claims 6 and 7 not printed in the Gazette.]

878,724. SECTIONAL PLAITING DEVICE FOR STRAIGHT-KNITTING MACHINES. PAUL GUENTHER, Dover, N. J. Filed Jan. 18, 1907. Serial No. 352,851.



1. In a device of the character described, a series of sinkers, combined with a main shogging bar, a main thread carrier secured thereto and movable along the sinkers, and with an auxiliary shogging bar, a lining thread carrier secured thereto and also movable along the sinkers, the auxiliary shogging bar being adapted to lag behind the main shogging bar, substantially as specified.

2. In a device of the character described, a main thread carrier, a lining thread carrier, first means for moving the main thread carrier, second means independent from the first means for moving the lining thread carrier, and means for starting the first means prior to the starting of the second means, substantially as specified.

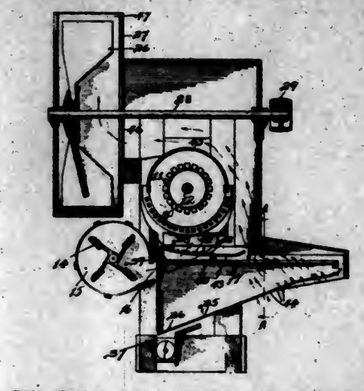
3. In a device of the character described, a series of sinkers, a main shogging bar, a main thread carrier secured thereto for placing a main thread into successive sinkers, an auxiliary shogging bar, a lining thread carrier secured thereto for placing a lining thread into said sinkers, and means for imparting movement to the main shogging bar in advance of imparting movement to the auxiliary shogging bar, substantially as specified.

4. In a device of the character described, a series of sinkers, a main thread carrier, a lining thread carrier disconnected from the main thread carrier, both movable along the sinkers, means for starting the main thread carrier in advance of starting the lining thread carrier, and means for arresting the main thread carrier prior to the arrest of the lining thread carrier, substantially as specified.

5. In a device of the character described, a main thread carrier, a pair of lining thread carriers disconnected from the main thread carrier, means for reciprocating the main thread carrier, and means independent from the first named means for reciprocating the lining thread carriers along opposite ends of the race of the main thread carrier, the lining thread carriers being adapted to lag at a uniform distance behind such main thread carrier, substantially as specified.

[Claims 6 to 14 not printed in the Gazette.]

878,725. CLEANING APPARATUS FOR CORN-SHELLERS. FRANK HALL, Fairbury, Ill., assignor to King & Hamilton Company, Ottawa, Ill., a Corporation of Illinois. Filed May 28, 1906. Serial No. 319,035.



1. In a device of the class described, the combination with a shelling concave, of the main screen extending beneath and beyond the concave to one side thereof, the shorter auxiliary screen extending beneath the shelling concave and above the receiving side of the main screen, a blast fan for forcing air transversely of the shelling concave and through the auxiliary screen and a portion of the main screen beneath said auxiliary screen, a suction fan for drawing air up through the main screen, beyond and past the edge of the auxiliary screen, and a casing surrounding the shelling concave and imperforate above said concave except for the fan opening.

2. In a device of the class described, the combination with the shelling concave, of the main screen extending beneath and beyond the concave to one side thereof, the shorter auxiliary screen extending beneath the shelling concave and above the receiving side of the main screen and terminating in the wires having their free ends directed upwardly, a blast fan for forcing air transversely of the shelling concave and through the auxiliary screen and the portion of the main screen beneath said auxiliary screen, a suction fan for drawing air up through the main screen, beyond and past the wires constituting the edge of the auxiliary screen, and a casing surrounding the shelling concave and imperforate above said concave except for the fan opening.

3. In a device of the class described, the combination with the shelling concave, of the main screen extending beneath and beyond the concave to one side thereof, the shorter auxiliary screen extending beneath the shelling concave and above the receiving side of the main screen, a blast fan for forcing air transversely of the shelling concave and through the auxiliary screen and the portion of the main screen beneath said auxiliary screen, a suction fan for drawing air up through the main screen, beyond and past the edge of the auxiliary screen, the plate beneath the main screen having the imperforate portion beneath the auxiliary screen and the perforate portion beneath the portion of the main screen extending beyond the shelling concave, and a casing surrounding the shelling concave and imperforate above said concave except for the fan opening, and including the hood extending out over the perforated portion of the plate.

4. In a device of the class described, the combination with the shelling concave having the upper portion thereof closed, of the main screen extending beneath and beyond the concave to one side thereof, the shorter auxiliary screen extending beneath the shelling concave and above the receiving side of the main screen, a blast fan for forcing air transversely of the shelling concave and through the auxiliary screen and the portion of the main screen beneath said auxiliary screen, a suction fan located above the concave for drawing air up through the main screen,

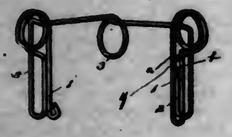
beyond and past the edge of the auxiliary screen and over the shelling concave, and a casing surrounding the shelling concave and imperforate above said concave except for the fan opening, and coöperating with the closed upper portion of the shelling concave to form an air passage.

5. In a device of the class described, the combination with the casing having its upper portion imperforate and containing the shelling concave having the upper portion thereof closed to form a passage between the concave and the top of the casing, of the main screen extending beneath and beyond the concave to one side thereof, the shorter auxiliary screen extending beneath the shelling concave and above the receiving side of the main screen, a blast fan for forcing air transversely of the shelling concave and through the auxiliary screen and the portion of the main screen beneath said auxiliary screen, a suction fan located above the concave for receiving the air from the blast fan and for drawing air up through the portion of the main screen not beneath the auxiliary screen, past the edge of the auxiliary screen and through the passage between the concave and the top of the casing, the plate beneath the main screen having the imperforate portion beneath the auxiliary screen and the perforated portion beneath so much of the main screen as extends beyond the shelling concave, and the hood constituting a part of the casing and extending out over the perforated portion of the plate.

878,726. SMOKELESS POWDER. FRANCIS A. HALSEY, Swanton, Vt. Filed Oct. 16, 1906. Serial No. 339,147.

The herein described granular explosive powder consisting of the following ingredients in about the proportions specified: ammonium picrate, 43%; barium nitrate, 34%; potassium picrate, 10%; ferrocyanid of potassium, 1%, potassium permanganate, 4%, and finely pulverized wood, 8%.

878,727. CLOTHES-PIN. ALBERT M. HARRIS and MILTON A. WILLIAMS, Floyd, Va. Filed Feb. 4, 1907. Serial No. 355,695

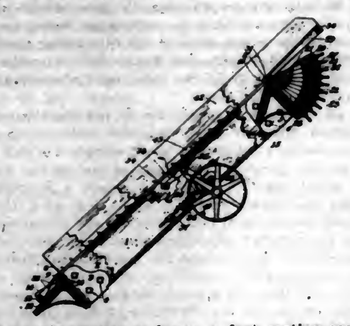


A device as described, consisting of a continuous piece of wire, having a yoke-like formation, with a central loop in its substantially horizontal portion, each vertical or pendent member thereof being formed into a reversely or upwardly extended portion having at its upper end a resilient coil which, in continuation, is extended downwardly and terminated in a loop, said reversely or upwardly extended portions of said pendent or vertical yoke-members being bent or extended laterally into contact with said downwardly extended portions.

878,728. WIRE SCREEN. CARL B. HARROP, Columbus, Ohio, assignor to The Richardson-Lovejoy Engineering Company, Columbus, Ohio, a Corporation of Ohio. Filed May 9, 1907. Serial No. 372,823.

1. In a wire screen, a frame, wires arranged thereon having both ends positioned at one end of said frame, removable spacing bars for said wires mounted on said frame, an anchor member at one end of said frame about which said wires are looped, and individual means for securing each end of said wires and tensioning the same at the end of said frame opposite that on which said anchor member is mounted.

2. In a wire screen, a frame, wires arranged longitudinally thereon having both ends positioned at one end of said frame, an anchor member at the opposite end of said frame, around which said wires are led without being secured thereto, means for maintaining said anchor member in place, and individual means for securing each end of a wire and tensioning the same.



3. In a wire screen, a frame, a foot casting secured to said frame, an anchor member mounted on said foot casting, a head casting secured to said frame and having radial slots therein, wires arranged on said frame, means positioned in said slots for independently securing and tensioning said wires, each wire having both its ends positioned in said head casting and forming a loop over said anchor member.

4. In a wire screen, a frame, wires arranged thereon having both ends positioned at one end of said frame, a head casting having a portion thereof forming an arc, a spacing bar positioned approximately at the center of curvature of said arc, anchor means for said wires at the foot end of said frame, and adjustable and removable means arranged radially in said arc shaped portion of said head casting for independently securing and tensioning said wires, whereby said wires may each be of substantially the same length.

5. In a wire screen, a frame, a head casting thereon having a segmental portion, a spacing bar arranged approximately at the center of curvature of said segmental portion, a second spacing bar arranged at the opposite end of said frame, an anchor member arranged at said opposite end of said frame, wires of substantially the same length arranged on said frame, each wire having an end secured in said segmental portion and passed over said spacing bars and around said anchor member, and returned over said spacing bars and having its other end also secured in said segmental portion.

[Claims 6 to 9 not printed in the Gazette.]

878,729. PENHOLDER. HOWARD C. HART, Russiaville, Ind. Filed Aug. 13, 1907. Serial No. 388,332.



A pen holder comprising a casing having a slot, a depending T-shaped arm mounted in said casing, a lever pivotally mounted thereon, said lever being adapted to engage a pen with its outer end, a locking pin pivotally connected with the inner end of said lever and adapted to operate in the slot, said locking pin being provided with a reduced portion for locking the same in its normal position, substantially as described.

878,730. HORSESHOE-PAD. FRANK A. JOHNSON and THOMAS A. SMITH, Hot Springs, S. D.; said Johnson assignor to said Smith. Filed Oct. 7, 1907. Serial No. 396,283.

In combination with a horseshoe with the usual countersunk grooves having nail holes therein, a rubber heel pad for the shoe comprising a thickened rear portion having on

opposite sides upwardly extended projections provided with a channel therebetween, the pad having a forward extension which is curved to conform to the curvature of the shoe and further constructed so as to decrease in thickness from its rear end to provide a reduced terminal to the extension, the heel end of the shoe serving to be inserted in



the channel so that the ends thereof will be flush with the rear thickened end of the pad, said extension serving to contact with the bottom surface of the shoe and arranged over the nail holes of the same, to receive nails inserted through the extension and through the nail holes and into the hoof of the animals, substantially as specified.

878,731. CURRYCOMB. EDWARD JOHNSON, Sandpoint, Idaho, assignor of two-fifths to Oscar Halvorsen and one-fifth to Anton Hanson. Filed Nov. 26, 1906. Serial No. 345,119.



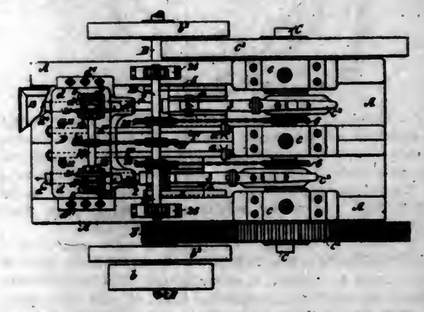
1. A curry comb comprising a base or top plate having spaced comb bars formed with alining transverse slots, scraper blades arranged between said toothed comb bars, and having alining openings therein, connecting rods passing through the alining openings in said scraper blades and the slots in said toothed comb bars, a handle bar secured upon the outer face of said top plate and having an offset end, a plate spring secured upon said handle bar and having its free end extending adjacent to the offset end of said handle bar to form a finger piece, said handle bar and top plate having alining openings therein and a rod connecting said spring and said scraper blades and working in the alining openings in said handle bar and said top plate.

2. A curry comb comprising a back carrying a series of parallel spaced comb bars having alining transverse slots therein, a handle secured to the rear end thereof, a plurality of scraper blades arranged on opposite sides of said comb bars, rods connecting said scraper blades and passing through the slots in said comb bars, a rod movable vertically in said back and secured to said scraper blades, and a plate spring secured at one end to the front portion of said back and connected with the vertically movable rod and extending to a point adjacent the handle in position to be operated by the thumb of the user to move said scraper blades relatively to the comb bars.

878,732. MACHINE FOR MANUFACTURING PEAT FUEL. ROBERT A. KELLOND, Winnipeg, Manitoba, Canada, assignor to Inter-West Peat Fuel Company, a Corporation of Arizona. Filed May 7, 1906. Serial No. 315,530.

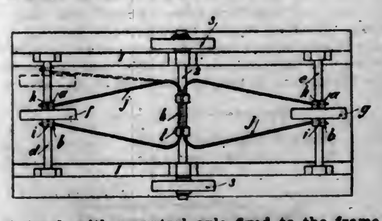
1. The die-block herein described, consisting, essentially, of a single casting embodying double barrels, as d, d, having horizontally and centrally-disposed therein female dies or forming tubes, as d^4, d^4,—connecting bridge, as d^2, said barrels and bridge having intercommunicating spaces between their walls, with inlets and outlets,—bearings as d^3, d^3, in alinement with said forming tubes, and vertically-disposed feed-throats, as d^3, d^3, located between said bearings and said forming-tubes and having side inlets, as 11,—in combination with male dies or punches working in said bearings and female dies or tubes, and pistons working in said feed-throats,—substantially as and for the purpose set forth.

2. The combination with the bed-frame having the lugs, as a, a, and with the die-block composed of barrels d, d, and connecting bridge d^2, and suitable supporting extensions resting upon said bed-frame, of the tie rods T, passing through the material of the die-block underneath the



connecting bridge, and through the lugs on the bed-frame, and heads and nuts at the ends of said tie-rods for adjustably-securing the die-block, substantially as set forth.

878,733. TRUCK OR TROLLEY WITH SLIDING STEERING-WHEELS. LÉON E. LACHAT, Lyon, France. Filed May 13, 1905. Serial No. 260,831.

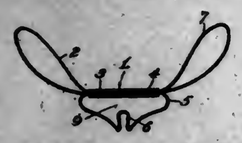


1. A truck with a central axle fixed to the frame, two bearing wheels turning freely on the ends of said axle, a front and a rear axle fixed both to the frame, two steering wheels mounted respectively on the middle part of each front and rear axle and capable of turning freely and sliding throughout the length of said axles, in combination with elastic means located outside the front and rear axle and adapted to return to the mid-position on its axis the steering wheels, substantially as described and for the purpose set forth.

2. A truck with a central axle fixed to the frame, two bearing wheels turning freely on the ends of said axle, a front and a rear axle fixed both to the frame, two steering wheels mounted respectively on the middle part of each front and rear axle and capable of turning freely and sliding throughout the length of said axles, in combination with two blade springs fixed on the central axle of the carrying wheels, two sliding sleeves placed on the front and on the rear axle at each side of the hub of the steering wheels, and loops mounted respectively on the sliding sleeves and into which are respectively engaged the free ends of the two blade springs, substantially as described and for the purpose set forth.

3. A truck with a central axle fixed to the frame, two bearing wheels turning freely on the ends of said axle, a front and a rear axle fixed both to the frame, two steering wheels mounted respectively on the middle part of each front and rear axle and capable of turning freely and sliding throughout the length of said axles, in combination with two blade springs bent back in the form of a triangle one side of which is fixed on the central axle of the carrying wheels, two sliding sleeves placed on the front and rear axle at each side of the hub of the steering wheels, and loops mounted respectively on the sliding sleeves and into which are respectively engaged the free ends of the two blade springs, substantially as described and for the purpose set forth.

878,734. NECKTIE-FASTENER. GIDEON LE SAGE, Los Angeles, Cal. Filed May 7, 1906. Serial No. 315,533.



1. A device of the character described formed by bending a strand of wire upon itself to form a loop incasing the end thereof in a tube; passing said wire through the tube, thereupon bending said wire upon itself to form a slot, thence passing said strand through said tube and out of said tube, and finally bending said strand upon itself to form a loop, and securing the respective ends.

2. A neck-tie fastener comprising a tube and a wire strand, the latter being bent midway between its ends to form a loop to engage a collar-button, and each of the members of the wire on opposite sides of said loop being bent and crossed upon each other and extending through the tube and bent at each end of the tube to form loops, and the ends of said strand being returned into and fastened in said tube.

3. A neck-tie fastener consisting of a strand of wire and a tube, said strand of wire being bent in the middle, forming a U to engage in the button holding the front of a turned-down collar, the limbs of said strand of wire being thence bent out and curved back toward each other, both passing and crossing each other through the tube, then extending out in opposite directions each forming a loop upon itself, returning to and the ends resting in said tube, the purpose of these last-named loops being to enable the neck-tie fastener to be held by the folds of the collar.

878,735. ERASING INSTRUMENT. IGNATIUS LUCAS, Passaic, N. J. Filed Feb. 26, 1907. Serial No. 359,441.



An erasing instrument consisting in a tube terminating at an end in an oblong base oblique to the longitudinal axis of the said tube.

878,736. AUTOMATIC FAN. JOHN MASON, Wilmington, Del., assignor of one-half to John F. Malloy, Wilmington, Del. Filed Mar. 6, 1907. Serial No. 360,887.



1. An automatic fan comprising a motor, a drum actuated thereby, a reciprocating fan-carrying member actuated by the revolutions of said drum, a stop normally out of engagement with said drum, and means for actuating said stop for arresting the rotation of said drum.

2. An automatic fan comprising a motor, a drum actuated thereby, a reciprocating fan-carrying arm, oscillating mechanism actuated by said drum and by which said arm is reciprocated, a stop normally out of engagement with said drum, and means for actuating said stop for arresting the rotation of said drum.

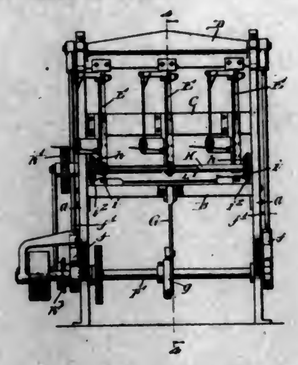
3. An automatic fan comprising a motor, a drum actuated thereby having a circumferential groove, a pivoted arm having a pin projecting into said groove, a segmental rack-bar carried by said arm, a shaft having a gear-pinion in mesh with said rack-bar, and a fan-carrying arm actuated by said shaft.

4. The combination with a motor, of a drum actuated thereby having a curcumferential groove, an oscillating arm having a pin projecting into said groove, a segmental rack-bar carried by said arm, a shaft having a gear-pinion in mesh with said rack-bar, a fan-carrying arm mounted on said shaft, a stop normally out of engagement with said drum, and means for actuating said stop for arresting the rotation of said drum.

5. The combination with a motor, of a drum actuated thereby, a fan-carrying arm, means actuated by said drum for oscillating said arm, a spring-held stop-bar for arresting said drum, and means for actuating said stop-bar to cause it to engage said drum.

[Claims 6 to 11 not printed in the Gazette.]

878,737. MACHINERY FOR USE IN MAKING WIRE-BOUND BOXES. JULIUS J. MILLER, St. Joseph, Mich., assignor to William P. Healy, Chicago, Ill. Filed May 31, 1907. Serial No. 376,488.



1. A box-blank machine comprising a flat table, a portable former or work-holder adapted to slide across said table, feed pinions adapted to operate and hold the said former or work-holder to a straight line of travel, and means for operating said pinions.

2. A box-blank machine comprising a table, a portable former or work-holder adapted to slide across said table, a pair of pinions disposed above the table and bearing down on the former or work-holder to feed the latter forward, and means for operating said pinions.

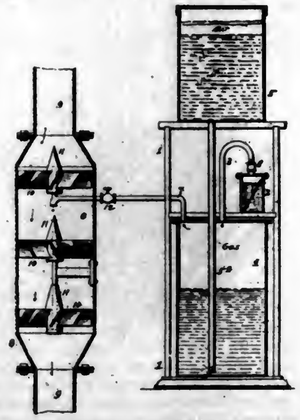
3. A box-blank machine comprising a traveling former or work-holder, pinions bearing down on said former or work-holder to feed the same forward, and means for operating said pinions.

4. A box-blank machine comprising a former or work-holder provided with means for spacing the cleats apart endwise, pinions engaging the former or work-holder to feed the same and prevent upward and sidewise displacement thereof, and means for operating said pinions, said work-holder being provided with means for engaging the pinions to prevent upward and lateral displacement of the work-holder.

5. A machine for making wire-bound and cleat reinforced box blanks, comprising a portable former or work-holder, instrumentalities for supplying the binding wires and securing the same to the cleats and veneering of each blank, and a feed mechanism constructed and adapted to both operate and hold the said former or work-holder to a straight line of travel.

[Claims 6 to 8 not printed in the Gazette.]

878,738. FLOUR-BLEACHING APPARATUS. GEORGE B. MCFARLAND, Columbus, Nebr., assignor of one-half to W. Irving Speice, Columbus, Nebr. Filed July 2, 1907. Serial No. 381,914.



1. In flour bleaching apparatus, the combination of a gas generator, a gas tank in communication with the generator, an elevated liquid-holding tank in communication with said gas tank into which liquid is forced by the pressure of gas from the generator entering the gas tank, and means for the delivery of gas leading from the gas tank to the flour to be treated.

2. In flour bleaching apparatus, the combination of a gas generator, a gas tank in communication with the generator, an elevated liquid-holding tank in communication with said gas tank into which liquid is forced by the pressure of gas from the generator entering the gas tank, a vertical chamber provided with agitating means, through which flour to be treated passes, and a pipe leading from the gas tank to said chute.

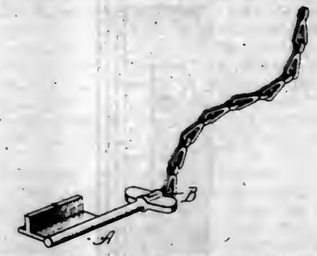
3. In flour bleaching apparatus, the combination of a gas generator, a gas and liquid-holding tank in communication with the generator, an elevated liquid-holding tank, a pipe leading from one tank to the other, so that liquid may be forced from the gas-holding tank, by the pressure of gas, into the elevated tank, and may descend from the latter into the gas-holding tank, to supply pressure to expel gas therefrom, and means for the delivery of gas from the gas tank to the flour to be treated.

4. In flour bleaching apparatus, the combination of a gas generator, a gas and liquid holding tank, to the upper part of which a pipe leads from the generator, an elevated liquid-holding pipe, a pipe leading from the gas and liquid holding tank to the bottom of the elevated tank, through which liquid passes from one tank to the other, and a pipe leading from the upper part of the gas and liquid holding tank to the flour to be treated.

5. In flour bleaching apparatus, the combination of a source of supply of gas, a chamber for the passage of flour, means for supplying gas to such chamber, and a series of oppositely rotatable flour-agitating devices in the path of flour passing from the chamber, alternate ones of said devices being oppositely rotatable.

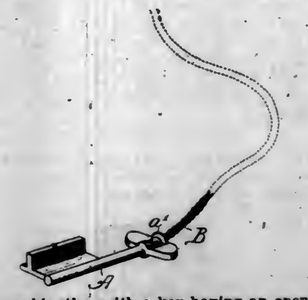
878,739. KEY FOR WATCHMEN'S CLOCKS AND SECURING DEVICE THEREFOR. ABRAHAM A. NEWMAN, Chicago, Ill. Filed Sept. 19, 1906. Serial No. 335,247.

The combination with a key provided with a recess in its handle, of securing means therefor comprising a section of safety chain and an open-ended link threaded through that portion of the end link of the chain formed by the adjacent openings of the free end of said link and having



its free ends inserted in the recess in the key and permanently secured therein.

878,740. KEY FOR WATCHMEN'S CLOCKS AND SECURING DEVICE THEREFOR. ABRAHAM A. NEWMAN, Chicago, Ill. Filed Sept. 19, 1906. Serial No. 335,248.



1. The combination with a key having an opening at its upper end, of a length of fox-tail chain having one end inserted in said opening and being permanently held in place by the metal of the key, whereby the removal of said key from the chain and its subsequent replacement without detection is prevented.

2. The combination with a key for a watchman's clock having an opening, of a length of fox-tail chain having one end inserted in said opening, the metal of the key being brought down upon said chain beyond its end, whereby the removal of said key from the chain and its subsequent replacement without detection is prevented.

3. The combination with a key for a watchman's clock having a flaring opening, of a length of fox-tail chain having one end inserted in such opening and permanently held in place therein, the flaring opening in which the chain is secured preventing it from sharp bends adjacent thereto.

4. The combination with a key for a watchman's clock having a flaring opening, of a length of fox-tail chain having one end inserted in said opening, the metal of the key being brought down adjacent to said end.

5. The combination with a key for a watchman's clock having an opening larger at its outer end than at its inner end, of a length of fox-tail chain having one end secured in the smaller end of said opening, whereby the chain is permitted to bend to a limited extent only within the opening.

878,741. MARKING DEVICE FOR WATCHMEN'S CLOCKS. ABRAHAM A. NEWMAN, Chicago, Ill. Filed Dec. 4, 1906. Serial No. 346,276.

1. The combination with a cylinder having a plurality of series of characters, of a key having a character adapted to coöperate with one of the characters on the cylinder, a cam upon the key and means carried by the cylinder and

adapted to engage with the cam on the key as the key is turned whereby the cylinder is rotated to secure proper engagement between the key and cylinder.



2. The combination with a cylinder carrying a plurality of characters arranged in different series, of a projection carried by the cylinder, a key having a character adapted to register with one of the characters of the cylinder and a cam carried by the key and adapted to engage the projection to rotate the cylinder as the key is turned.

3. The combination with a cylinder having different series of characters thereon, of a plate carried by the cylinder, a spring engaging the plate to hold the cylinder normally in one position, a projection on said plate, and a key having a cam adapted to engage the projection as the key is turned to rotate the same against the force of the spring to bring the proper series of characters into operative position.

878,742. MARKING DEVICE FOR WATCHMAN'S CLOCKS. ABRAHAM A. NEWMAN, Chicago, Ill. Filed Dec. 4, 1906. Serial No. 346,278.



1. The combination with a rotatable device, having different series of characters, of a key provided with an engagement device and adapted to be turned to rotate said rotatable device to bring the proper series of characters into operative position.

2. The combination with a rotatable device having different series of characters, of a key carrying a character adapted to coöperate with one of the characters on said rotatable device, and carrying also an engagement member and adapted to be turned to operate with said rotatable device to bring the proper character on said rotatable device into registration with the character on the key.

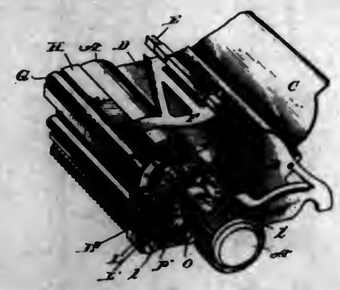
3. The combination with a cylinder having three series of characters, of a key carrying a character adapted to coöperate with a character on the cylinder, and mutually engaging devices on the key and cylinder adapted to rotate the cylinder in the turning of the key to bring the proper characters into registration.

4. The combination with a cylinder having different series of characters, of a cam plate carried by said cylinder and having cam slots adapted when engaged by suitable mechanism on a key when said key is turned to cause rotation of the cylinder to produce the proper engagement between the key and cylinder.

5. The combination with a cylinder having different series of characters, of a cam plate having slots carried by the cylinder, said slots being adapted to receive pins mounted upon suitable keys to produce proper registration between the characters on the key and cylinder as said key is turned.

[Claims 6 and 7 not printed in the Gazette.]

878,743. PAPER-MOVEMENT INDICATOR FOR TYPEWRITERS. CHARLES C. POOLE, Evanston, Ill., assignor to Oliver Typewriter Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 28, 1904. Serial No. 238,591.



1. The combination with a rotative platen, of two pointers which turn with and have rotative adjustment relatively to the platen and also have angular adjustment relatively to each other.

2. The combination with a carriage frame and rotative platen, of a pointer on the frame, and two pointers which turn with, and have rotative adjustment relative to, the platen, and which also have angular adjustment relatively to each other.

3. The combination with a rotative platen and its shaft, of two pointers adapted for rotative movement on the shaft and with respect to each other, means affording frictional engagement of one of said pointers with the shaft and means affording interlocking connection of the pointers with each other.

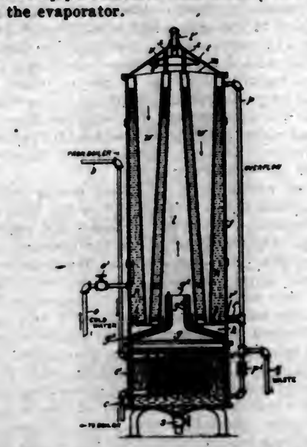
4. The combination with a rotative platen and its shaft, of a disk having rotative adjustment on the shaft, and two pointers carried by the disk and having angular adjustment relatively to each other.

5. The combination with a rotative platen and its shaft, of a disk having rotative frictional engagement with said shaft, and two pointers, one of which is fixed to the disk and the other of which has angular adjustment on said disk and interlocking connection with the same.

[Claims 6 to 9 not printed in the Gazette.]

878,744. MULTIPLE-CONDENSER WATER-STILL. JOHN A. POWER, New York, N. Y. Filed Feb. 16, 1907. Serial No. 357,651.

1. A water still comprising an evaporator, a steam coil located in the evaporator, pipes for connecting the steam coil with a steam boiler, a shell surmounting the evaporator, having a lower head spaced from the evaporator and an upper head, and providing a cold water chamber, a dome located above the upper head, providing an upper chamber, a double walled conical bottom located between the evaporator and the lower head of the shell, providing a distilled water chamber, and having an upright extension projecting through the lower head into the shell, an upwardly tapering central uptake surrounding the upright extension and connecting the distilled water chamber with the upper chamber, the downwardly tapering downtakes between the shell and the central uptake, and connecting the upper chamber with the distilled water chamber, a cold water supply pipe connected with the lower end of the cold water chamber, an overflow pipe, connecting the upper end of the cold water chamber with the evaporator, and a waste pipe connected with the overflow pipe near the top of the evaporator.



2. A water still comprising an evaporator, a steam coil located in the evaporator, pipes for connecting the steam coil with a steam boiler, a shell surmounting the evaporator, having a lower head spaced from the evaporator, and an upper head, and providing a cold water chamber, a dome located above the upper head providing an upper chamber, a double walled conical bottom located between the evaporator and the lower head of the shell, providing a distilled water chamber, and having an upright extension projecting through the lower head into the shell, an air pipe extending between the walls of the shell, through the double conical bottom and its extension and thereabove, an upwardly tapering central uptake surrounding the upright extension and connecting the distilled water chamber with the upper chamber, the downwardly tapering downtakes between the shell and the central uptake, and connecting the upper chamber with the distilled water chamber, a cold water supply connected with the lower end of the cold water chamber, an overflow pipe, connecting the upper end of the cold water chamber with the evaporator, and a waste pipe connected with the overflow pipe near the top of the evaporator.

3. A water still comprising an evaporator, a steam coil located in the evaporator, pipes for connecting the steam coil with a steam boiler, a shell surmounting the evaporator, having a lower dished head spaced from the evaporator, and an upper dished head, and providing a cold water chamber, a dome located above the upper dished head providing an upper chamber, a double walled conical bottom located between the evaporator and the lower dished head of the shell, providing a distilled water chamber, and having an upright extension projecting through the lower dished head into the shell, an upwardly tapering central uptake surrounding the upright extension and connecting the distilled water chamber with the upper chamber, the downwardly tapering downtakes between the shell and the central uptake, and connecting the upper chamber with the distilled water chamber, a cold water supply pipe connected with the lower end of the cold water chamber, an overflow pipe, connecting the upper end of the cold water chamber with the evaporator, and a waste pipe connected with the overflow pipe near the top of the evaporator.

4. A waterstill comprising an evaporator, a steam coil located in the evaporator, pipes for connecting the steam coil with a steam boiler, a shell surmounting the evaporator, having a lower head spaced from the evaporator, and an upper head, and providing a cold water chamber, a dome located above the upper head providing an upper chamber, a central flue extending through the dome, an apertured dished baffle plate located in the upper chamber between the upper head and the dome, a double walled conical bottom located between the evaporator and the lower head of the shell, providing a distilled water chamber, and having an upright extension projecting through the lower head into the shell, an upwardly tapering central uptake surrounding the upright extension and connecting the distilled water chamber with the upper chamber, the downwardly tapering downtakes between the shell and the central uptake, and connecting the upper chamber with the distilled water chamber, a cold water supply pipe connected with the lower end of the cold water chamber, an overflow pipe, connecting the upper end of the cold water chamber with the evaporator, and a waste pipe connected with the overflow pipe near the top of the evaporator.

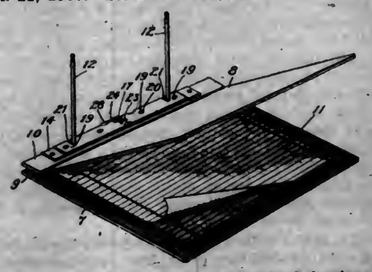
5. A water still comprising an evaporator, a steam coil located in the evaporator, pipes for connecting the steam coil with a steam boiler, a shell surmounting the evaporator, having a lower head spaced from the evaporator, and an upper head, and providing a cold water chamber, a dome located above the upper head providing an upper chamber, escape pipes extending from the cold water chamber, through the upper head, through the upper chamber and through the dome, a double walled conical bottom located between the evaporator, and the lower head of the shell, providing a distilled water chamber, and having an upright extension projecting through the lower head into the shell, an upwardly tapering central uptake surrounding the upright extension and connecting the distilled water chamber with the upper chamber, the downwardly tapering downtakes between the shell and the central uptake, connecting the upper chamber with the distilled water chamber, a cold water supply pipe connected with the lower end of the cold water chamber, an overflow pipe, connecting the upper end of the cold water chamber with the evaporator, and a waste pipe connected with the overflow pipe near the top of the evaporator.

878,745. AUTOMOBILE-DOOR HINGE. EDWARD T. ROBINSON, St. Louis, Mo., assignor to St. Louis Car Company, St. Louis, Mo., a Corporation. Filed July 29, 1907. Serial No 386,024.



A hinge for automobile doors, consisting of two members pivoted together and bent at an angle between their pivot and their point of attachment to the body and door of the car; the body member of the hinge being provided with a brace arm and a brace rib adapted to bear against the body of the car, subetantially as and for the purpose set forth.

878,746. BINDER. ISAAC F. RUBEL, Chicago, Ill. Filed Sept. 11, 1907. Serial No. 392,319.

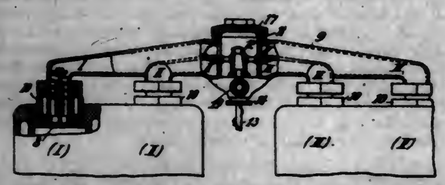


1. In a binder, the combination of a back having filing-posts upon it, a cover, and locking means therefor comprising a rigid bearing-plate adapted to seat removably over said posts, a slot-containing locking-plate having openings through which said posts extend and secured upon the bearing-plate and longitudinally movable thereon

in one direction to releasably bind it at said openings frictionally against said posts, bearing-forming arches on said movable plate between its ends and at opposite sides of the slot therein, a spindle journaled in said bearing and provided with a cam working in said slot to engage one end thereof for moving the locking-plate to so bind it, and a handle on the outer end of said spindle.

2. In a binder, the combination of a back having filing-posts upon it, a cover, and locking-means therefor comprising a rigid bearing-plate adapted to seat removably over said posts, a locking-plate having openings through which said posts extend and secured upon the bearing-plate and longitudinally movable thereon in one direction to releasably bind it at said openings frictionally against said posts, said plates containing between their ends slots with bearing-forming arches at opposite sides thereof, a spindle journaled in said bearing and provided with a cam working in the slot of said movable plate to engage one end thereof for moving the locking-plate to so bind it, and a handle on the outer end of said spindle normally extending below the outer surface of said cover.

878,747. STARTING DEVICE FOR EXPLOSION-ENGINES WITH FOUR CYLINDERS. HIPPOLYT SAURER, Arbon, Switzerland. Filed Oct. 6, 1906. Serial No. 337,707.



1. In a four stroke cycle explosion-engine with four cylinders, the combination with four spring-pressed inlet-valves in the four cylinders, of a connection on the four cylinders above said four spring-pressed inlet-valves and comprising a cylindrical bore in its middle with four openings and four separate channels leading from the four openings to the spring-pressed inlet-valves, and a rotary tubular distributing valve mounted to turn in the cylindrical bore of said connection and provided with two apertures and so driven as to make one revolution on every two revolutions of the crank-shaft, its two apertures being so disposed as to severally and each supply compressed air or gas through the respective channel to either of two cylinders during that stroke of its piston, during which in the normal work of the engine the expansion of the exploded gases would take place.

2. In a four stroke cycle explosion-engine with four juxtaposed cylinders, the combination with four spring-pressed inlet-valves in the four cylinders, of a connection fastened on the four cylinders above said four spring-pressed inlet-valves and comprising a cylindrical bore in its middle with two opposite pairs of superposed openings and four separate channels leading from the four openings to the four spring-pressed inlet-valves, and a rotary tubular distributing valve mounted to turn in the cylindrical bore of said connection and provided with two apertures in two parallel planes at right angles to its axis and so driven as to make one revolution on every two revolutions of the crank-shaft, its two apertures being so disposed as to severally and each supply compressed air or gas through the respective channel to either of two cylinders during that stroke of its piston, during which in the normal work of the engine the expansion of the exploded gases would take place.

3. In a four stroke cycle explosion-engine with four cylinders, the combination with four spring-pressed inlet-valves in the four cylinders and adapted to severally open into the latter under the pressure of compressed air or gas, of a connection on the four cylinders above said four spring-pressed inlet-valves and comprising a cylindrical bore in its middle with a connection for the supply of compressed air or gas, also with four openings and four separate channels leading from the four openings to the spring-pressed inlet-valves, a rotary tubular distributing valve mounted to turn in the cylindrical bore of said connection and provided with two apertures which are so disposed as to severally and each supply compressed air or gas through the respective channel to either of two cylinders during that stroke of its piston, during which in the normal work of the engine the expansion of the exploded gases would take place, and means for so driving said rotary tubular distributing valve that it makes one revolution on every two revolutions of the crank-shaft.

4. In a four stroke cycle explosion-engine with four juxtaposed cylinders, the combination with four spring-pressed inlet-valves in the four cylinders and adapted to severally open into the latter under the pressure of compressed air or gas, of a connection on the four cylinders above said four spring-pressed inlet-valves and comprising a cylindrical bore in its middle with a connection for the supply of compressed air or gas, also with two opposite pairs of superposed openings and four separate channels leading from the four openings to the four spring-pressed inlet-valves, a rotary tubular distributing valve mounted to turn in the cylindrical bore of said connection and provided with two apertures in two parallel planes at right angles to its axis, which apertures are so disposed as to severally and each supply compressed air or gas through the respective channel to either of two cylinders during that stroke of its piston, during which in the normal work of the engine the expansion of the exploded gases would take place, and means for so driving said rotary tubular distributing valve that it makes one revolution on every two revolutions of the crank-shaft.

878,748. BRUSH. JOSEPH F. SCANLAN, Brooklyn, N. Y. Filed Sept. 4, 1906. Serial No. 333,072.



1. A brush, comprising a suitable frame or support, two rollers mounted therein, an endless belt brush mounted on said rollers, a handle connected with one side of said frame or support, and a driving shaft passing through said handle and geared in connection with one of said rollers.

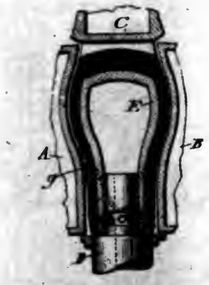
2. A brush, comprising a suitable frame or support, two rollers mounted therein, an endless belt brush mounted on said rollers, a handle connected with one side of said frame or support, and a driving shaft passing through said handle and geared in connection with one of said rollers, said rollers being provided with a corrugated covering.

3. A brush, comprising a suitable frame or support, two rollers mounted therein, an endless belt brush mounted on said rollers, a handle connected with one side of said frame or support, and a driving shaft passing through said handle and geared in connection with one of said rollers, said rollers being provided with a corrugated covering having longitudinally arranged grooves and corresponding ribs.

4. In a device of the class described, an endless belt brush, comprising a central flexible member, an inner flexible member secured thereto, transversely arranged flexible strips connected with the outer side of the central flexible member and brush tufts which are passed through the transversely arranged outer flexible strips and through the central flexible member and secured.

5. A brush of the class described, comprising a frame, a handle connected therewith, a driving shaft passing through said handle, rollers provided with outwardly extending flanges on either end mounted in said frame, an endless belt brush mounted on said rollers, means for driving the belt, and a comb transversely located to the brush and adapted to engage the same opposite the work engaging side.

878,749. MANUFACTURE OF INDIA-RUBBER BOOTS AND SHOES. ANDREW SCHULZE, Washington, D. C. Filed Oct. 10, 1904, Serial No. 227,907. Renewed Nov. 1, 1907. Serial No. 400,152.



1. In apparatus for vulcanizing india rubber boots and shoes, a last, provided with a flexible covering, and means for introducing compressed air between the covering and the last.

2. In an apparatus for vulcanizing india rubber boots and shoes, a last provided with a flexible covering, a sole plate, and means for introducing compressed air between the covering and the last, substantially as described.

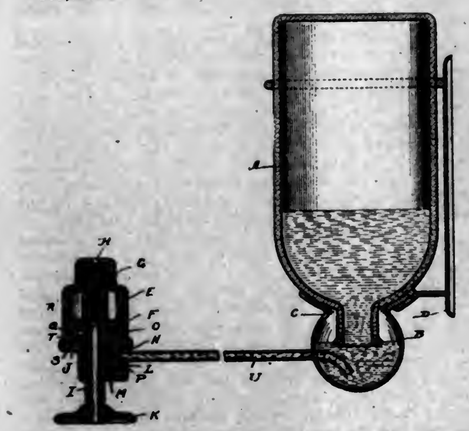
3. In apparatus for vulcanizing india rubber boots and shoes, a last, provided with a flexible covering, a mouth edge dam or former, and means for introducing compressed air between the covering and the last.

4. In apparatus for vulcanizing india rubber boots and shoes, a last, provided with a flexible covering, a mouth edge dam or former detachably secured to the flexible covering, and means for introducing compressed air between the covering and the last.

5. In apparatus for vulcanizing india rubber boots and shoes, a last, provided with a flexible covering consisting of an inner layer of rubber and an outer layer of fabric, and means for introducing compressed air between the covering and the last.

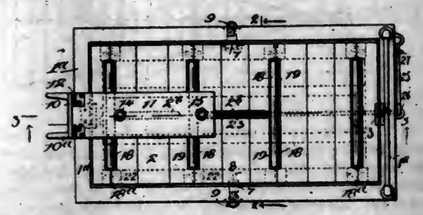
[Claims 6 to 8 not printed in the Gazette.]

878,750. LIQUID-SOAP DISPENSER. GEORGE A. SCHMIDT, Chicago, Ill. Filed Apr. 2, 1906. Serial No. 309,526.



A liquid soap dispensing means comprising in combination a reservoir sealed at its upper end and discharging at its lower end, a receptacle receiving said lower end of said reservoir, said reservoir having the flow therefrom automatically controlled by atmospheric pressure to maintain a substantially uniform level liquid in said receptacle, and a pump connected at its inlet end with said receptacle, the pump barrel of said pump disposed above the level of the liquid within the receptacle and a valve controlling the inlet to the pump barrel disposed substantially in horizontal alinement with the level of the liquid in said receptacle.

878,751. TRUCK. JOHN SCHREIBER, Jersey City, N. J. Filed Jan. 31, 1907. Serial No. 355,000.



1. The combination of a truck having a plurality of rollers journaled transversely of the platform thereof and projecting slightly above the surface of the platform, with a slide movably mounted thereon and adapted to bear on said rollers and provided with a package holder movably connected with the slide adapted to swing in an upward direction relatively to the slide at the margin of the truck to which said slide is moved and to overlie the truck when drawn back, said package holder having an upwardly extending projection at its outer end to pass under a package when swung down.

2. The combination of a truck having a plurality of rollers journaled transversely of the platform thereof and projecting slightly above the surface of the platform, with a slide, means for movably supporting the slide upon the truck, said slide being adapted to bear on said rollers and to extend near the margin of the truck, and a package holder pivotally connected with the slide and adapted to swing over the margin of the truck to which the slide is moved in an upward direction when the slide is pushed outwardly and arranged to overlie the truck when the slide is moved inwardly over the truck, said package holder having an upwardly extending projection at its outer end to pass under a package when swung down.

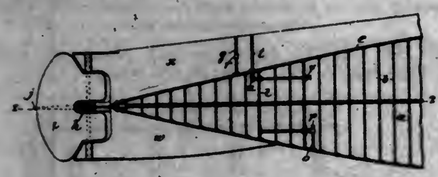
3. The combination of a truck having a platform provided with transversed recesses, rollers journaled at their ends and projecting through said recesses slightly above the surface of the platform, with a slide, means to guide the slide on the truck and prevent the slide from rising, said slide being adapted to travel on said rollers and to extend near the margin of the truck, and a package holder pivotally supported between its ends adjacent the end of said slide and adapted to extend in an upward direction at the margin of the truck to which the slide is moved to receive a package, said package holder being arranged to overlie the truck when the slide is moved inwardly along the truck, said package holder having an upwardly extending projection at its outer end to pass under a package when swung down.

4. The combination of a truck provided with a slot, with a slide mounted upon the truck and having a projection passing through said slot, means to permit said projection to slide through the slot and to prevent the projection from rising from the slot, and a package holder pivotally connected with the end of the slide and adapted to extend in an upward direction at the end of the truck when the slide is moved outwardly along the truck and arranged to overlie the truck when the slide is moved inwardly thereon.

5. The combination of a truck, with a slide mounted thereon, means to movably hold the slide upon the truck, a package holder pivotally connected with the slide to extend upwardly at the margin of the truck when the slide is moved outwardly, a rod connected with the slide and provided with a jointed extension and means for supporting said rod and extension upon the truck.

[Claims 6 to 13 not printed in the Gazette.]

878,752. TWIN-SCREW SUBMARINE BOAT. LAWRENCE Y. SPEAR, Quincy, Mass., assignor to Electric Boat Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 1, 1906. Serial No. 328,734.

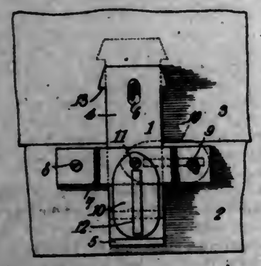


1. A submarine or submergible boat, having a hull of substantially circular cross section for the greater part of the length thereof, a stern section merging or diminishing from such substantially circular cross section through gradually flattening elliptical cross sections into a stern frame having substantially horizontal sides, a water-tight bulkhead in the forward part of said stern section, and means for admitting pressure to said stern section to counterbalance the external pressure of submergence.

2. A twin screw submarine or submergible boat, having a hull of substantially circular cross section for the greater part of the length thereof, and a stern section merging from said substantially circular cross section into a horizontal spectacle frame forming the bearings for the shaft of said twin screws, a water-tight bulkhead in the forward part of said stern section, and means for admitting pressure to said stern section to counterbalance the external pressure of submergence.

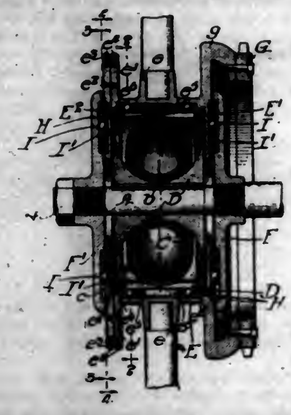
3. A twin screw submarine or submergible boat, having a hull of substantially circular cross section for the greater part of the length thereof, and a stern section merging from said substantially circular cross section into a horizontal spectacle frame forming the bearings for the shaft of said twin screws, a water-tight bulkhead in the forward part of the said stern section, and a valved inlet to said stern section to admit the water of submergence thereto to balance the internal and external pressures on said stern section.

878,753. FURNITURE-FASTENER. IRA W. SPROUT and RYLAND E. KESTER, Hanover, Pa. Filed Jan. 22, 1907. Serial No. 353,498.



A fastener of the class described comprising a keeper having a centrally arranged recess, a flat approximately rectangular cleat plate extending slidably through such recess and provided at its upper end with a key hole slot and being further provided with a pair of laterally extending shoulders for engagement with the upper surface of the keeper, the lower end of the cleat having an outwardly bent flange extending at a right angle to the face of the cleat, and a pivotally mounted locking cam carried by the keeper and arranged to engage said flange, said locking member having a projecting rib forming an operating handle.

878,754. VEHICLE-WHEEL. ALAN SULLIVAN, Toronto, Ontario, Canada, assignor to Grahame Jones, Chicago, Ill. Filed Apr. 17, 1907. Serial No. 368,632.



1. The combination with a non-rotative axle provided with an annular seat, of a non-rotative bearing ring surrounding said axle, an annular, resilient cushion member interposed between said seat and the said bearing ring, a wheel-hub surrounding and turning on said bearing ring, said wheel-hub being provided at its ends with annular, inwardly extending flange-rings, disks attached to and extending outwardly from the axle exterior to and in overlapping relation to the said flange-rings, the disk on the outer end of the axle and the flange-ring on the outer end of the hub being detachably secured to said axle and hub to permit the assembling and separation of the parts.

2. The combination with a non-rotative axle provided with a sleeve having an annular seat, of a non-rotative bearing ring surrounding said axle, an annular, resilient, cushion member interposed between said seat and the said bearing ring, a wheel-hub surrounding and turning on said bearing ring, anti-friction ball bearings between said hub and the said bearing ring comprising a plurality of sets of balls and a plurality of caging rings for said balls, and disks attached to the axle and extending outwardly therefrom into engagement with the ends of the wheel-hub.

3. The combination with a non-rotative axle provided with a sleeve having an annular seat, of a non-rotative bearing ring surrounding said axle, an annular, resilient, cushion member interposed between said seat and the said bearing ring, a wheel hub turning on said bearing ring and provided at its ends with flange-rings, disks attached to and extending outwardly from the axle in overlapping relation to the said flange-rings, anti-friction ball bearings between the said disks and flange-rings embracing balls interposed between flat, parallel bearing surfaces on the disks and flange-rings, and caging rings for said balls.

4. The combination with a non-rotative axle provided with a sleeve having an annular seat, of a non-rotative bearing ring surrounding said axle, an annular, resilient, cushion member interposed between said seat and said bearing ring, a wheel-hub adapted to turn on said bearing ring and provided at its ends with annular flange-rings, disks attached to and extending outwardly from the axle in overlapping relation to the said flange-rings, anti-friction ball-bearings between the said hub and bearing ring, comprising a plurality of balls located between outwardly facing annular bearing surfaces on the said bearing ring and the inwardly facing annular bearing surface on the hub, and caging rings for said balls, and anti-friction ball-bearings between the said disks and the flange-rings on the hub, comprising balls located between flat, parallel opposing faces on the said disks and flange-rings and caging rings for said balls.

5. The combination with a non-rotative axle provided with a sleeve having an annular seat, of a non-rotative bearing ring surrounding said axle, an annular, resilient, cushion member interposed between the said seat and the bearing ring, a wheel-hub surrounding and turning on said bearing ring, disks secured to the axle and extending outwardly therefrom into engagement with the ends of the wheel-hub to take the end thrust of the latter, and an annular sprocket ring secured to one end of said wheel-hub.

878,755. CAM. JAMES C. H. VAUGHT, Lead, S. D. Filed Nov. 21, 1903, Serial No. 182,177. Renewed Feb. 21, 1907. Serial No. 358,724.



1. In a device of the class described, the combination of a body provided with an eye, and reversely-disposed eccentrically-arranged curved wedges tapered from one side edge to the other and fitting within the eye and having an opening between them for a shaft, said wedges being provided with means for positively engaging the shaft and the body, and also with means for holding the wedges against endwise movement.

2. In a device of the class described, the combination of a body provided with an eye, and reversely-disposed eccentrically-arranged curved wedges tapered from one side edge to the other and spaced apart at their side edges and fitting within the eye and having an opening between them for a shaft, one of the wedges being provided at its inner face with means for positively engaging the shaft, and the other wedge being provided at its outer face with means for engaging the body.

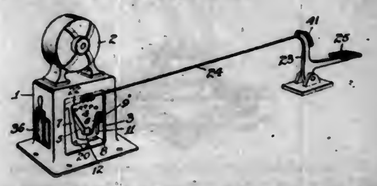
3. In a device of the class described, the combination of a body provided with an eye, reversely-disposed eccentrically-arranged curved wedges tapered from one side edge to the other and spaced apart at their side edges and fitting within the eye and having an opening between them for a shaft, one of the wedges being provided at its inner face with teeth for engaging the shaft, and a dowel pin arranged at the outer face of the other wedge and engaging the body.

4. In a device of the class described, the combination of a body having an eye, and reversely-disposed eccentrically-arranged curved wedges, spaced apart and tapered from one side edge to the other and fitting within the eye and having an opening between them to receive a shaft, said wedges being provided at their ends with exterior flanges located at both of the side faces of the body and engaging the same, whereby the wedges are held against movement laterally of the body.

5. In a device of the class described, the combination of a body provided with an eye adapted to receive a shaft, and reversely-disposed eccentrically-arranged curved wedges tapered from one side edge to the other and located within the eye and having an opening between them for the shaft and engaging the same and the walls of the eye, said wedges being extended entirely through the eye and provided at both ends with outwardly projecting flanges which engage the body, whereby the wedges are held against movement laterally of the said body.

878,756. CONTROLLER. WALTER J. WARDER, Jr., Chicago, Ill., assignor to Roth Bros., Chicago, Ill. Filed May 13, 1907. Serial No. 373,466.

1. In a starter or controller for electric motors, the combination of a movable controller member, a movable actuating member adapted to shift said controller member in one direction by its normal stroke and having a normal return stroke and being capable of extra movement at the end of its normal return stroke, means for holding said controller member in different positions, and means actuated through said extra movement for permitting the controller member to return to starting position.



2. In a device of the class described, the combination of a movable controller member, a movable actuating member adapted through a back and forth movement to advance said controller member to successive positions, an operating member located at a distance from the controller member and connected with said actuating member for moving it, and means actuated by said operating member for returning said controller member to its initial position.

3. The combination with a motor controller comprising a pivoted controller-arm, a movable actuating member adapted through a back and forth movement to advance the controller-arm to successive positions, of an operating member located at a distance from the controller, a connection between said operating member and said movable member, and means adapted to return said controller-arm to its initial position through a certain movement of said operating member.

4. In a starter or controller for electric motors, a pivoted controller-element, a swinging actuating-arm provided with means for moving the controller element when moved in one direction, said means being normally inoperative in the reverse direction, mechanical means for swinging the actuating-arm to and fro, and means for returning the controller element to a certain initial position through a certain movement of said actuating-arm.

5. In a starter or controller for electric motors, a pivoted controller-element, a swinging actuating-arm provided with means for moving the controller-element when moved in one direction, said means being normally inoperative in the reverse direction, mechanical means for holding the controller-element in different positions, mechanical means for swinging the actuating-arm to and fro, and means for returning the controller-element to a certain initial position through a certain movement of said actuating-arm.

[Claims 6 to 24 not printed in the Gazette.]

878,757. FISHING-ROD TRIMMING. WILLIAM R. WHEELER, Hartford, Conn. Filed May 18, 1907. Serial No. 374,340.

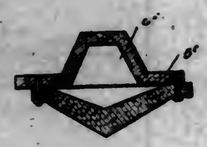


1. A fishing-rod trimming consisting of a shell having a reel-flange socket, a band movable upon the outside of the shell toward and from the socket, a nut inside of the shell, connections extending through each side of the shell from the band to the nut, a threaded spindle extending centrally through the rear end of the shell and engaging the nut in the interior, and a cap rotatable on the rear end of the shell and attached to the spindle, substantially as specified.

2. A fishing-rod trimming consisting of a shell having a reel-flange socket, and a band movable toward and from the socket upon the outside of the shell, nuts inside of the shell, connections extending through each side of the shell from the socket and band to the nuts, a threaded spindle extending centrally through the rear end of the shell and

engaging the nuts in the interior, a cap rotatable on the rear end of the shell and attached to the spindle, substantially as specified.

878,758. SIGN-LETTER. ROY R. WILEY, St. Catherines, Ontario, Canada. Filed Jan. 26, 1906. Serial No. 298,077.

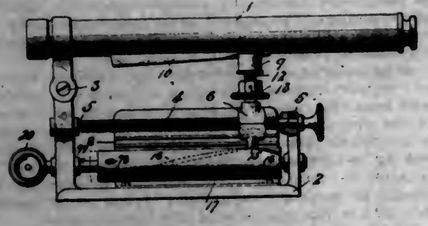


1. A sign character comprising translucent material having a front plane surface to form the configuration of a letter, and having a prismatic back surface of larger area than the front surface for concentrating incident rays which are perpendicular to the front plane surface upon said surface.

2. A sign character comprising translucent material whose back portion is in relief, and shaped for concentrating light rays and whose front portion is in relief and shaped for diverging said concentrated rays.

3. A sign character comprising translucent material, shaped for concentrating light rays incident thereon, into the shape of a letter, and for emitting said concentrated rays in the shape of the same letter in diverging lines.

878,759. COLLIMATING-SIGHT FOR HEAVY GUNS. EDMUND L. ZALINSKI, U. S. Army. Filed Jan. 4, 1906, Serial No. 294,517. Renewed Dec. 23, 1907. Serial No. 407,711.



1. In a sight for ordnance, a primary observation device, means for elevating or depressing the same, and a collimating sight correspondingly automatically depressed or elevated as to its sight line by such movement of the primary device.

2. In a sight for ordnance, a depressing observation telescope, a collimating sight arranged transversely thereto, and automatic means by which the collimating sight is raised or depressed in reverse direction to the movement of the depressing observation telescope.

3. In a sight for ordnance, a depressing observation telescope, a traveling nut by which said telescope is raised or depressed as to its visual line, a collimating sight at right angles to the telescope, and means by which the travel of the nut elevates the collimating sight as the observation telescope is depressed and vice versa.

4. In a sight for ordnance, a depression telescope, a traveling nut by which the same is elevated or depressed, a journaled cylinder having a cam surface with which said nut engages, and a collimating sight connected to said cylinder.

5. In a sight for ordnance, the combination of a depressing observation telescope, a collimating telescope, and means by which the depression of the observation telescope elevates the collimating telescope, and vice versa.

[Claims 6 to 15 not printed in the Gazette.]

878,760. APPARATUS FOR MASSAGING THE HEARING ORGANS. ADOLPHE ZUND, Paris, France. Filed Mar. 4, 1907. Serial No. 360,435.



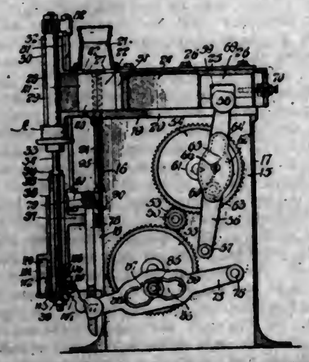
1. Apparatus for massaging the hearing organs consisting of an electric vibrator comprising an electro-magnet and non-adjustable sonorous blades in combination with contact breaking means, contact points, an adjustable carrying device for said points by which device the length of the vibrating portion of said blades may be regulated for purpose specified.

2. Apparatus for massaging the hearing organs consisting of an electric vibrator comprising an electro-magnet and non-adjustable sonorous blades in combination with contact breaking means, contact points, an adjustable carrying device for said points by which device the length of the vibrating portion of said blades may be regulated, and a diaphragm in proximity to said blades for reinforcing the sound produced thereby.

3. Apparatus for massaging the hearing organs consisting of an electric vibrator comprising an electro-magnet, vibratory blades having their free ends in proximity to the poles of said magnet, an adjustable lever in proximity to each of said blades, an adjustable contact screw in each lever, means for varying the position of the contact screws on the vibratory blades, and means for rendering one blade inoperative when desired, substantially as set forth.

4. Apparatus for massaging the hearing organs consisting of an electric vibrator comprising an electro-magnet, vibratory blades having their free ends in proximity to the poles of said magnet, an adjustable lever in proximity to each of said blades, an adjustable contact screw in each lever, means for varying the position of the contact screws on the vibratory blades, means for rendering one blade inoperative when desired, and a microphonic diaphragm in proximity to the vibratory blades, substantially as set forth.

878,761. STUFFING-MACHINE. JOHN L. ALLEN, Chicago, Ill. Filed Nov. 24, 1906. Serial No. 344,015.



1. A stuffing machine comprising a vertical stuffing chamber, a plunger reciprocating therethrough, a receiving chamber having side walls which are movable towards and from each other to compress the charge of material delivered thereto, a feed plunger reciprocating horizontally through the receiving chamber to deliver the compressed material to the stuffing chamber, the forward end of the plunger being transversely concave to constitute, when said plunger is at the forward limit of its throw, a portion of the wall of the stuffing chamber, and means for holding a can in position to receive material from the lower end of the stuffing chamber, the stuffing chamber being made of uniform diameter throughout its length and the parts being so arranged that the plunger reciprocates entirely to the lower end of said stuffing chamber to force each charge of material wholly from said chamber to a can held beneath the same.

2. A stuffing machine comprising a vertical stuffing chamber of uniform diameter throughout its length, means for holding a can thereunder in position to receive material from said chamber, a plunger reciprocating in said chamber, mechanism for operating said plunger constructed to reciprocate the plunger entirely through the discharge end of the chamber to force the material wholly from the chamber into a can held beneath the same, a horizontal receiving chamber, slides constituting the side walls of said receiving chamber and arranged to move inwardly to compress the material delivered thereto, and means for delivering the compressed material from the receiving to the stuffing chamber.

3. A stuffing machine comprising a stuffing chamber, a plunger reciprocating therethrough, a receiving chamber and a feed plunger reciprocating through the latter chamber to deliver the material to the stuffing chamber, the advance end of the feed plunger constituting, when at the forward limit of its throw, part of the plunger chamber, and means for actuating said feed plunger comprising a lever pivoted at one end, said lever being provided centrally with a cam recess provided with two opposing concentric cam surfaces and with two opposing eccentric surfaces, a swinging plate between said concentric surfaces, and a crank-pin extending into said recesses.

4. A stuffing machine comprising a stuffing chamber, a plunger reciprocating therethrough, a receiving chamber and a feed plunger reciprocating through the latter chamber to deliver the material to the stuffing chamber, the advance end of the feed plunger constituting, when at the forward limit of its throw, part of the plunger chamber, and means for actuating said feed plunger comprising a lever pivoted at its lower end, means engaging the lever between its ends to swing the same, the plunger being made hollow, a block located in the hollow plunger and provided with a downwardly opening recess to receive the upper end of the lever and an adjusting screw for adjusting said block in said plunger.

5. A stuffing machine comprising a vertical stuffing chamber, a plunger reciprocating therethrough, a receiving chamber, a feed plunger reciprocating horizontally through the feed chamber to deliver material to the stuffing chamber, the forward end of the plunger being transversely concave to constitute, when said plunger is at the forward limit of its throw, a portion of the wall of the stuffing chamber, means for compressing the material in the receiving chamber prior to the operation of the feed plunger, and means for holding a can in position to receive material from the lower end of the stuffing chamber, the stuffing chamber being made of uniform diameter throughout its length and the parts being so arranged that the plunger reciprocates entirely to the lower end of said stuffing chamber to force each charge of material wholly from said chamber to a can held beneath the same.

[Claims 6 to 19 not printed in the Gazette.]

878,762. MATCH-SAFE. HARRY L. BEACH, Coshocton, Ohio. Filed Oct. 16, 1906. Serial No. 339,247.

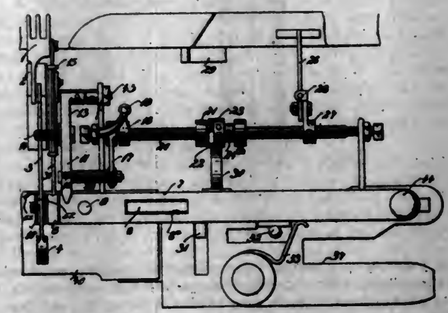
1. A match safe comprising a base having a centrally raised rectangular portion forming a shallow recess on the bottom of the base and provided in the side and end walls of the raised portion with slots, an upwardly tapered pedestal having an open rectangular bottom fitted over and snugly embracing the raised portion of the base and having inwardly extending tongues projecting through the slots into the bottom recess and held out of contact with the supporting surface on which the base may be placed, and a receptacle arranged on and secured to the pedestal.

2. A match receptacle comprising a base, a pedestal mounted on the base, a match box holder consisting of substantially vertical resilient clamping sides, and a connecting bottom fitted upon and projecting beyond the pedestal and provided with tongues piercing the top portion of the pedestal and engaging the lower face of the said top portion, the bottom of the match box holder being also provided in its projecting portions with slots, and an ejecting piece arranged between and spaced from the sides



of the match box holder and having a horizontal top and vertical sides provided at their lower edges with tongues passing through the slots of the projecting portions of the bottom of the match box holder and engaging the lower face of the same.

878,763. WEFT-REPLENISHING MECHANISM FOR LOOMS. JOSEF BIM, Vienna, Austria-Hungary, assignor to Union Bank, Vienna, Austria-Hungary. Filed Dec. 30, 1904. Serial No. 238,952.



1. Weft changing apparatus for looms, comprising a weft fork, a lever 6 actuated by said fork for operating bobbin-changing mechanism, a second lever 7 for operating loom-stopping mechanism, said levers being normally uncoupled, and means for coupling the levers upon return movement of the first-named lever.

2. Weft changing apparatus for looms, comprising a weft fork, a lever 6 actuated by said fork for operating bobbin-changing mechanism, a second lever 7 for operating loom-stopping mechanism, said levers being normally uncoupled, and means, including a latch on one lever for engaging a recess in the other lever, and a pivoted piece on one lever for operating said latch, for coupling the levers upon the return movement of the first-named lever.

3. Weft changing apparatus for looms, comprising a weft fork, a lever 6 actuated by said fork, for operating bobbin-changing mechanism, a second lever 7 and connections therefrom for operating a loom-stopping lever 32, said levers 6 and 7 being normally uncoupled, and means for coupling the levers 6 and 7 upon return movements of lever 6.

4. Weft changing apparatus for looms, comprising a weft fork 1, an oscillating part 2, a slide 34 coupled with part 2 by the weft fork, a lever 6 actuated by said slide for operating bobbin-changing mechanism, a second lever 7 for operating loom-stopping mechanism, said levers being normally uncoupled, and means for coupling the levers upon return movements of the first-named lever.

5. Weft changing apparatus for looms, comprising a weft fork 1, an oscillating part 2, a slide 34 coupled with part 2 by the weft fork, a lever for operating bobbin-changing mechanism, a second lever for operating loom-stopping mechanism, and connections whereby the slide 34 will operate the two levers in the succession named.

[Claims 6 to 9 not printed in the Gazette.]

878,764. BUCKLE. BERNADOTTE BIXBY, Los Angeles, Cal. Filed Aug. 7, 1906. Serial No. 329,610.



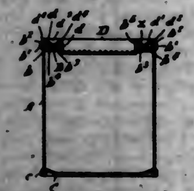
A buckle comprising a pronged bar and a frame to which said bar is pivoted and provided with turned-over guards for the pointed ends of the prongs, said guards having beveled edges to engage the edges of the said prongs when pressure is applied to said prongs to operate the buckle.

878,765. CONCRETE PILE. JAQUELIN M. BRAXTON, Key West, Fla. Filed Apr. 9, 1906. Serial No. 310,792.



A concrete pile provided at one end with a driving shoe having a projection embedded in the pile and a contacting face at the base of said projection extending beyond the sides of the pile, a driving shell spaced from the pile and of greater length, and a head for said shell.

878,766. FRICTION-TOP CAN. KARL S. BRECKENRIDGE, Chicago, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 31, 1906. Serial No. 309,049.



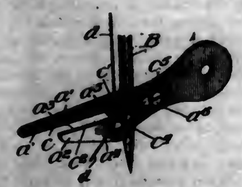
1. In a friction top can, the combination with an annular top B having an outer annular raised shoulder, and an inner annular depending friction seat wall surrounding the opening in the annular top of the can, and having an annular channel within said outer annular shoulder, of a friction cover having an annular friction seat wall fitting within the annular friction seat wall of the can top and provided with an outwardly projecting flange having an outer rim extending over and fitting against the said outer annular raised shoulder on the can top to serve as a stop and limit the extent to which the said friction cover may be forced into the annular top of the can and to exclude dirt or other materials from the upper surface of the can top, said annular top and cover contacting only at their interengaging friction seat walls and at their outer annular shoulders, substantially as specified.

2. In a friction top can, the combination with an annular top B having an outer annular raised shoulder, and an inner annular depending friction seat wall surrounding the opening in the annular top of the can, of a friction cover having an annular friction seat wall fitting within the annular friction seat wall of the can top and provided with an outwardly projecting flange having an outer folded rim extending over and fitting against the said outer annular raised shoulder on the can top to serve as a stop to limit the extent to which the said friction can or cover may be forced into the annular top of the can and to exclude dirt or other materials from the upper surface of the can top, said can top having also an inner annular shoulder flushed with its outer annular shoulder and an annular channel between said inner and outer annular shoulders, said annular top and cover contacting only at their interengaging friction seat walls and at their outer annular shoulders substantially as specified.

3. In a friction top can, the combination with an annular can top having inner and outer annular raised shoulders with an annular channel between said shoulders, and a depending friction seat wall surrounding the opening in said top, of a friction cover having an annular friction seat wall fitting within said friction seat wall of the can top and an outwardly projecting flange extending over and engaging the outer annular shoulder of the can top to limit the extent to which the cap or cover may be forced into the can top, said annular top and cover contacting only at their interengaging friction seat walls and at their outer annular shoulders substantially as specified.

4. In a friction top can, the combination with an annular can top having inner and outer raised annular shoulders and a depending friction seat wall surrounding the opening in said top, of a friction cover having an annular friction seat wall and an inner annular shoulder and an outwardly projecting rim provided with a marginal fold and extending over and engaging the outer annular shoulder of the can top to limit the extent to which the cap or cover may be forced into the can top, said can top having an annular channel between its inner and outer annular shoulders, and said friction cover having an annular channel between the outer marginal fold of its rim and its inner annular shoulder, said annular top and cover contacting only at their interengaging friction seat walls and at their outer annular shoulders substantially as specified.

878,767. NEEDLE-THREADER. JAMES H. BOYE, Chicago, Ill., assignor to The Boye Needle Company, Chicago, Ill., a Corporation of Illinois. Filed July 31, 1907. Serial No. 386,360.



1. A needle-threader, comprising a shank carrying an upper guide-prong and a lower guide-prong which lie in different planes to adapt them to embrace a needle, a thread-hook projecting into the crotch between said guide-prongs, and a rearwardly extending guard crossing the space between the horizontal planes of said guide prongs, whereby the thread may be passed beneath the upper guide-prong and above the lower guide-prong, then moved, while riding on said guard, to pass said thread-hook, and finally retracted and guided by said guard into operative engagement with said thread-hook.

2. A needle-threader, comprising a member equipped with upper and lower guide-prongs, one of said prongs carrying a rearwardly and upwardly pointed guard-arm, said guide-prongs lying on opposite sides of a needle-receiving space, and a thread-hook extending into said space and lying between the upper guide-prong and said guard-arm, for the purpose set forth.

3. A needle-threader, comprising a sheet-metal member having the metal split longitudinally at one end and the furcations struck in opposite directions to afford guide-prongs, one of said furcations having a rearwardly extending guard formed integrally therewith, and a thread-hook having its operative end lying between said guard-arm and the opposite guide-prong, for the purpose set forth.

4. A threader, comprising a handle having a relatively long upper furcation and a relatively short lower furcation projecting from one end thereof, a rearwardly and upwardly directed guard-arm carried by the lower furcation, and a thread-hook carried by said handle and having its operative end located bteween said guard-arm and said upper furcation.

5. A threader, comprising a sheet-metal member formed with oppositely struck upper and lower furcations and with a rearwardly-pointed guard-arm, and a separately formed thread-hook secured to the shank of said sheet-metal member and having its operative end lying between said guard-arm and the opposed furcation, for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

878,768. DEVICE FOR CLEANING HOLLOW ARTICLES. WILLIAM H. CALLAHAN, New York, N. Y. Filed June 13, 1906. Serial No. 321,459.



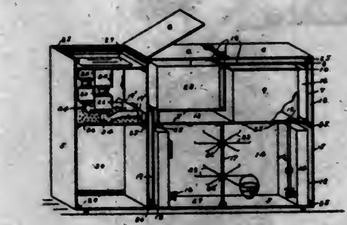
1. In a bottle cleaning device the combination of a stopper adapted to close the mouth of the article to be cleaned, a bag of fabric attached to base of said stopper, a cord having its upper end attached to said stopper and its lower end attached to the bottom of said bag, and a plurality of beads mounted upon said cord adapted to facilitate the introduction of said bag into said article and to cause it to impinge upon its inner surface when agitated.

2. In a bottle cleaning device the combination of a stopper provided with a handle, a fabric bag attached to the bottom of said stopper, a cord within said bag having one end fastened to the stopper and the other end fastened to the bottom of the bag, a plurality of beads mounted upon said cord and retaining stops therefor.

3. In a cleaning device the combination of a closure of suitable material, a bag of fabric depending from said closure, a cord lying within said bag and having one end secured to the closure and its other end secured to the bottom of the bag, and a plurality of beads loosely mounted upon said cord and means retaining said beads within certain limits.

878,769. KITCHEN-CABINET TABLE. WILLIAM A. CAMPBELL, Kenton, Ohio. Filed Apr. 4, 1907. Serial No. 366,422.

1. In a kitchen cabinet, a refrigerator compartment, an ice receptacle in said compartment surrounded by an air space, a stove burner, and a flue connection between said burner and said refrigerator compartment, whereby a draft of air may be set in motion throughout said compartment, said compartment having a vent opening to admit air thereto, as set forth.



2. In a kitchen cabinet, a refrigerator compartment, an ice receptacle in said compartment surrounded by an air space, a stove burner, and a flue connection between said burner and said refrigerator compartment whereby a draft of air may be set in motion throughout said compartment, said compartment having a vent opening to admit air thereto, and a regulating cover for said vent opening, as substantially set forth.

3. In a refrigerator cabinet having a storage compartment, an ice receptacle above said storage compartment, and a water tank or jacket surrounding said ice receptacle and having an extension thereof above said storage compartment, and a drip receptacle tank below at the ends and back of the storage compartment, whereby the refrigerative effect of the ice is distributed more evenly over the entire extent of said storage compartment, as substantially set forth.

4. In a refrigerator cabinet having a storage compartment, an ice receptacle above said storage compartment, and a water tank or jacket surrounding said ice receptacle and having an extension thereof above said storage compartment, whereby the refrigerative effect of the ice is distributed more evenly over the entire extent of said storage compartment, as substantially set forth.

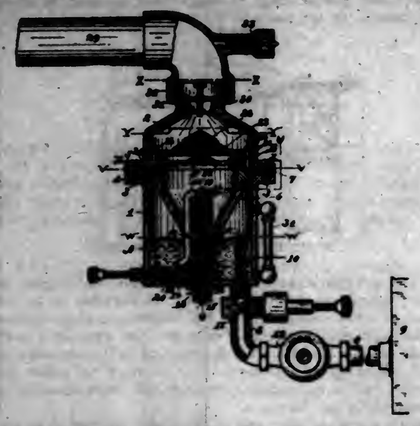
5. In a refrigerator cabinet having a storage compartment, an ice receptacle above said storage compartment in one end of the cabinet and extending nearly to the top thereof, a water tank or jacket surrounding said ice receptacle and having an extension thereof over said storage compartment at the other end, whereby the refrigerative effect of the ice is distributed more evenly over the entire extent of the storage compartment, said extension being of less height than that portion of the water tank which surrounds the ice receptacle, and a storage receptacle supported on said extension, as substantially set forth.

878,770. CARBURETER. WILLIAM A. CAHILL, Syracuse, N. Y. Filed Mar. 14, 1907. Serial No. 362,265.

1. In a carbureter, the combination of a casing provided with a liquid-containing chamber having a suitable source of supply, and a mixing-chamber having a suitable outlet-opening, a central vertical air-inlet pipe extending from the bottom of the casing into the mixing chamber, a sprayer affording communication between the liquid-chamber and mixing-chamber, and arranged above the air-inlet pipe, a perforated diaphragm disposed in the mixing-chamber, and a suction pipe connected to the mixing-chamber at the outlet-opening for the purpose set forth.

2. In a carbureter, the combination of a casing provided with a liquid-containing chamber having a suitable source of supply, and a mixing-chamber disposed above the liquid-containing chamber and having a suitable outlet-opening, a central vertical air-inlet passage extending from the bottom of the casing through the liquid-containing chamber and into the mixing-chamber, a passage for feeding the liquid from the lower chamber into the mixing-chamber, a sprayer at the upper end of the latter passage and disposed at an angle to the air-inlet passage, a drip-cup supported in the bottom of the mixing-chamber and communi-

cating with the liquid-containing chamber, and a screen mounted on the drip-cup and disposed above the air-inlet passage and sprayer as set forth.



3. In a carbureter, the combination of a casing provided with a liquid-containing chamber, and a mixing-chamber, a drip-cup in the bottom of the mixing-chamber, an air-inlet pipe extending through the bottom of the drip-cup into the mixing-chamber, means for feeding the liquid into the mixing-chamber including a sprayer disposed thansversely above the air-inlet pipe, a series of screens arranged one over another within the mixing-chamber and supported upon the drip-cup, and a suction-pipe connected to the said mixing-chamber above the screen for the purpose set forth.

4. In a carbureter, the combination of a mixing-chamber provided with an air-inlet pipe and a gasolene feed-pipe disposed at one side of the air-inlet pipe and parallel thereto, means for spraying the gasolene across the inner end of said air-inlet pipe, and a suction-pipe connected to said chamber as and for the purpose set forth.

5. In a carbureter, the combination of a casing, a drip cup dividing the casing into a lower liquid-containing-chamber and an upper mixing-chamber, a passage for supplying the mixing-chamber with air, means for spraying the liquid above the air-passage, a screening-device disposed above the air-supplying means and liquid-spraying means, and supported on the drip-cup and suction means communicating with the mixing-chamber above the screening-device as and for the purpose set forth.

[Claim 6 to 21 not printed in the Gazette.]

878,771. MAGAZINE-PENCIL. WALTER F. CUSHING, Bismarck, N. D. Filed July 2, 1906. Serial No. 324,427.



1. As an article of manufacture, a magazine pencil comprising a barrel having an open slot extending lengthwise thereof, said slot having one notched edge, a removable lead carrier fitting the bore of the barrel and adapted to be slid therein, a thin spring secured to the carrier at a point remote from the slot in the barrel, said spring set diagonally whereby normally to engage the notches on the edge of the slot, a thumb piece secured to the outer end of the spring, the spring being sufficiently yielding so that a lateral twist of the thumb piece will remove it from the notched edge of the slot, and a removable cap for closing the open end of the slot in the barrel.

2. As an article of manufacture, a magazine pencil comprising a barrel having an open slot extending lengthwise thereof, said slot having one notched edge, a removable lead carrier fitting the bore of the barrel and adapted to be slid therein, a thin spring secured to the carrier at a point remote from the slot in the barrel, said spring set diagonally whereby normally to engage the notches on the edge of the slot, a thumb piece secured to the outer end of the spring, the spring being sufficiently yielding so that a lateral twist of the thumb piece will remove it from the notched edge of the slot, and a removable cap for closing the open end of the slot in the barrel, said cap carrying a pencil sharpener at one end and an eraser at the other.

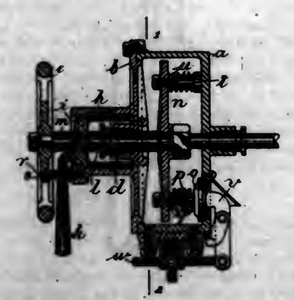
3. As an article of manufacture, a magazine pencil comprising a barrel having an open slot extending lengthwise thereof, said slot having one notched edge, a removable lead carrier fitting the bore of the barrel and adapted to be slid therein, a thin spring secured to the carrier at a point remote from the slot in the barrel, said spring set diagonally whereby normally to engage the notches on the edge of the slot, a thumb piece secured to the outer end of the spring, the spring being sufficiently yielding so that a lateral twist of the thumb piece will remove it from the notched edge of the slot, and a removable cap for closing the open end of the slot in the barrel, said cap carrying a pencil sharpener at one end and an eraser at the other.

4. As an article of manufacture, a magazine pencil having a tapering slot at one end to afford lateral support for the lead, and a rubber cone for clutching and holding the lead at its opposite end.

5. In a magazine pencil, the combination with a barrel, of a carrier fitted to slide therein and a cone of soft elastic material adapted to carry the lead attached to the carrier.

[Claims 6 to 8 not printed in the Gazette.]

878,772. MULTIPLE-WAY VALVE APPLICABLE TO DEVICES FOR GASEOUS FIRE EXTINCTION, &c. THOMAS A. CLAYTON, Paris, France. Filed Feb. 19, 1907. Serial No. 358,276.

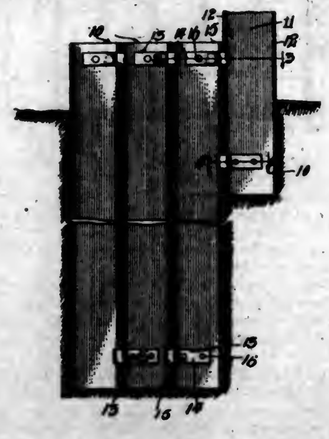


1. A multiple way valve consisting of a valve box having a number of valve seats arranged at the same distance from and around the center of said box, a series of spring pressed valves adapted to coact with the valve seats, a movable frame arranged within said valve box and adapted to coact with said valves and to be rotated about the center of said box, means for moving said frame in a direction parallel to or coincident with the axes of the valves and means for locating the position of the frame relative to the valve seats and locking same in position, substantially as described.

2. A multiple-way valve consisting of a valve box having a number of valve seats arranged at the same distance and around the center of said box, a series of spring pressed valves adapted to co-act with the valve seats, a movable frame arranged within said valve box and adapted to co-act with said valves and to be rotated about the center of said box, means for moving said frame in a direction parallel to or coincident with the axes of the valves, means for locating the position of the frame relative to the valve seats and locking same in position and an independent adjusting device fitted to the side of the said box adapted to open one valve to any desired amount, substantially as described.

3. A multiple-way valve consisting of a valve box having a number of valve seats arranged at the same distance and around the center of said box, a series of spring pressed valves adapted to co-act with the valve seats, a movable frame arranged within said valve box and adapted to co-act with said valves and to be rotated about the center of said box, means for moving said frame in a direction parallel to or coincident with the axes of the valves, means for locating the position of the frame relative to the valve seats and locking same in position and a valve external to the said valve box and means for actuating said valve from the movable frame of the multiple-way valve.

878,773. METAL SHEET-PILING. MANLEY W. CLUXTON, Chicago, Ill. Filed Sept. 10, 1907. Serial No. 392,151.



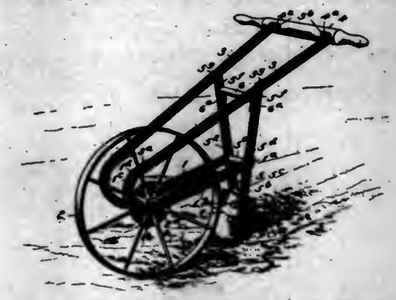
1. In metal sheet piling, the combination with adjacent sections or units composed of flat webs and marginal flanges, the flanges of adjacent units bearing flat one upon the other, of vertically narrow retaining and guiding clips attached to the webs of said sections at the upper and lower ends thereof, the clips of each section being formed to provide hooks that extend over and engage the flanges thereof and the flanges of adjacent sections.

2. In metal sheet piling, the combination with adjacent sections or units comprising flat webs and marginal flanges, the flanges of adjacent sections fitting flat one upon the other, of guiding and retaining clips at the upper and lower ends of said sections comprising narrow shanks which are fitted flat against and attached to the webs of the sections and hook portions which extend laterally over the webs of the sections to which they are attached and in interlocking engagement with flanges of adjacent sections.

3. In metal sheet piling, the combination with adjacent sections or units composed of flat webs and marginal flanges, the flanges of adjacent units bearing flat one upon the other, of vertically narrow retaining and guiding clips attached to the webs of said sections at the upper and lower ends thereof, the clips of each section being formed to provide hooks that extend over and engage the flanges thereof and the flanges of adjacent sections, the clips associated with two adjacent sections being attached, one to the web of one section near the bottom thereof and the other to the web of the other section near the top thereof.

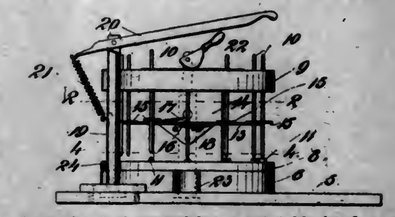
4. In metal sheet piling, the combination with adjacent sections formed of I-beams and arranged with their flanges fitting flat together, of guiding and retaining clips comprising narrow shank portions fitting flat upon and attached to the webs of said sections, and hook portions extending over the marginal flanges thereof and into interlocking engagement with the marginal flanges of adjacent sections, the clips of two adjacent sections being attached one to one section thereof near the bottom thereof and the other to the other adjacent section near the top thereof.

878,774. PLOW. CHARLES R. COFFMAN, Bridgewater, Va., assignor to D. Saylor Thomas, Bridgewater, Va. Filed May 24, 1907. Serial No. 375,381.



In a plow, the combination with a beam member comprising a pair of parallel side bars spaced apart, of a wheel journaled to and between said side bars, the front portion of said side bars being bent upwardly and divergingly into a semi-circular portion, the ends of which are provided with a series of apertures, handle bars pivoted to the apertured portions of said beam ends, a standard comprising a pair of bars spaced apart and parallel to one another at the bottom portion and diverging from the parallel portion upwardly, means for pivotally securing said bars to the rear ends of said beam bars and also serving to space said standard bars apart, means for adjustably securing said standard bars to the respective handle bars, said standard bars having a series of adjusting apertures in their upper ends, and a plow secured to the lower end of the standard, substantially as shown and described.

878,775. STAKING-TOOL. CHARLES W. COLBERT, Fulton, Okla. Filed Oct. 23, 1907. Serial No. 398,764.



1. A staking-tool comprising a rotatable head, a series of punches carried thereby, a work-support, a disk between the head and the work-support and having a recess in its edge, collars on the punches in sliding contact with the disk, and opposite inclines adjacent the recess and in the path of the disks.

2. A staking-tool comprising a rotatable die-carrier, a rotatable head, a series of punches carried thereby, a disk between the die-carrier and the head and having a recess in its edge, collars on the punches in sliding contact with the disk, and opposite inclines adjacent the recess and in the path of the disk.

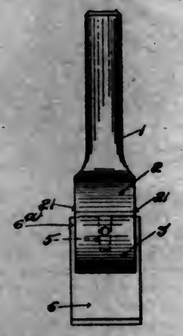
3. A staking-tool comprising a work-support, a rotatable head, a series of punches carried thereby, a disk between the head and the work-support and having a recess in its edge, collars on the punches in sliding contact with the disk, an incline leading to one side of the recess, and an incline leading from the other side of the recess to the disk, the recess in the disk and the inclines being in the path of the collars.

4. A staking-tool comprising a work-support, a rotatable head, a series of punches carried thereby, a disk between the head and the work-support and having a recess in its edge, collars on the punches, and a spring-tongue adjacent the recess and in the path of the collars.

5. A staking-tool comprising a base, a spindle rising

therefrom, a rotatable work-support on the spindle, a block on the spindle above the work-support, a rotatable punch-carrier on the spindle above the block, and means for locking the punch and the work-support against rotation.

878,776. SELF-TIGHTENING BUSHING-TOOL HOLDER AND TOOLS. ENOS S. COSTA, Quincy, Mass. Filed Nov. 1, 1907. Serial No. 400,305.



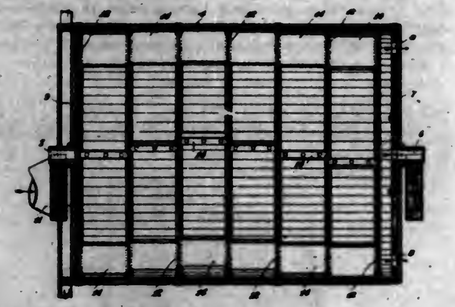
1. A tool holder having a bifurcated head formed with two downwardly extending cheeks or jaws whose inner faces are flat and flare downwardly, a tongue which projects downward from the bottom of the throat between the jaws and bridges the throat between them intermediate their sides, in combination with a plurality of working tools having shanks which are formed with a tapered slot corresponding in shape and depth to the tongue on the holder, whereby the work tools may be wedged onto the tongue with their butt ends bearing against the solid end of the head, the outer faces of the two outside tools being tapered to correspond with the tapered faces of the jaws, the groups of tools filling the space between the jaws.

2. A tool holder having a bifurcated head formed with two downwardly extending cheeks or jaws whose inner faces are flat and flare downwardly, a tongue which projects downward from the bottom of the throat between the jaws, and of somewhat less length than the jaws, and bridges the throat between them intermediate their sides, in combination with a plurality of working tools having shanks which are formed with a tapered slot corresponding in shape and depth to the tongue on the holder, whereby the work tools may be wedged onto the tongue with their butt ends bearing against the solid end of the head, the outer faces of the two outside tools being tapered to correspond with the tapered faces of the jaws, the group of tools filling the space between the jaws.

3. A tool holder having a bifurcated head formed with two downwardly extending cheeks or jaws whose inner faces are flat and flare downwardly, a tongue which projects downward from the bottom of the throat between the jaws and bridges the throat between them intermediate their sides, in combination with a plurality of working tools having shanks which are formed with a tapered slot corresponding in shape and depth to the tongue on the holder, whereby the work tools may be wedged onto the tongue with their butt ends bearing against the solid end of the head, the outer faces of the two outside tools being tapered to correspond with the tapered faces of the jaws, the groups of tools filling the space between the jaws, the shanks of the tools being of greater width than the width of the jaws.

878,777. CLOTHES-DRYING MACHINE. SIDNEY B. DANE, Lynn, Mass. Filed Dec. 6, 1906. Serial No. 346,533.

1. A clothes drying machine having, in combination, a drum mounted to rotate upon a horizontal axis having one of its ends open, a stationary head located adjacent to the open end of the drum, and means for introducing a blast of air through the stationary head located in such position with relation to the direction of rotation of the drum that the air enters on the rising side of the drum so as to cause the air to pass across the path of motion of the falling clothes lifted up by the drum, substantially as described.



2. A clothes drying machine having, in combination, a drum mounted to rotate upon a horizontal axis provided upon its interior with means for lifting the clothes introduced into the drum and permitting them to fall from the top to the bottom thereof, and means for introducing a blast of air into the drum opposite the falling clothes, substantially as described.

3. A clothes drying machine having, in combination, a drum supported to rotate upon a horizontal axis provided with a series of screen diaphragms arranged transversely of the drum and separating it into a plurality of compartments, means for introducing a blast of air at one end of the drum, the periphery of the drum being provided with doors permitting access to the compartments, substantially as described.

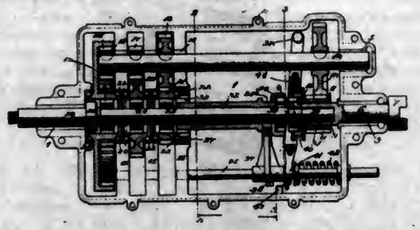
4. A clothes drying machine having, in combination, a drum supported to rotate upon a horizontal axis, a plurality of screen diaphragms each of the full size of the inside of the drum and dividing it into separate compartments arranged transversely of the drum, the inside of the peripheral walls of the drum being provided with a plurality of lifting boards for lifting the clothes from the bottom of the drum and permitting them to fall through the air therein, and means for introducing a blast of air at one end of the drum and on the rising side of the drum, so that the falling clothes pass through the incoming blast of air, substantially as described.

5. A clothes drying machine having, in combination, a drum supported to rotate upon a horizontal axis and provided with a series of screen diaphragms dividing it into a plurality of compartments, the inner wall of the drum being provided in each compartment with lifting boards for lifting clothes up from the bottom of the drum, such lifting boards in the different compartments being arranged in different angular positions so that each compartment drops its clothes at a different time from the adjacent compartment, and means for introducing a blast of air at one end of the drum on the rising side of the drum, substantially as described.

878,778. CHANGEABLE-GEAR TRANSMISSION MECHANISM. JAMES DAWSON, Rochester, N. Y. Filed Oct. 12, 1906. Serial No. 338,532.

1. In a power-transmitting mechanism, the combination with a driving shaft, a counter shaft operated thereby and a driven shaft, of a plurality of ring gears of uniform interior diameter arranged to encircle the driven shaft and operated by the countershaft, bearings for the gears independent of the driven shaft clutch devices on the inner circumferences of said gears, a sliding clutch member secured against rotation on the driven shaft and adapted to separately engage the clutch devices on the gears to interlock the latter and the driven shaft and means for operating said sliding member.

2. In a power-transmitting mechanism, the combination with a casing having transversely-extending webs or walls therein, and a driving shaft, a countershaft operated thereby and a driven shaft journaled in said casing, of a ring gear located between said webs and mounted in bearings in the latter to encircle the driven shaft and operated by the countershaft and means for interlocking said ring gear and the driven shaft.



3. In a power-transmitting mechanism, the combination with a casing having transversely-extending webs and a driven and driving shaft journaled therein, of a plurality of ring gears mounted in bearings between the webs encircling the driven shaft, a countershaft journaled in bearings in said webs and projecting beyond the outer one, gears on the countershaft meshing with said ring gears to rotate the driven shaft in an opposite direction from the countershaft when said ring gears are locked upon the latter, a ring gear mounted exteriorly of the webs and provided with interior teeth, a gear on the projecting end of the countershaft meshing with said teeth to rotate the last-mentioned ring gear in the direction of rotation of the countershaft and means for independently locking any of the ring gears to the driven shaft.

4. In a power-transmitting mechanism, the combination with a support, a driving shaft carried thereby and provided with a clutch member, a driven shaft journaled in alinement with the driving shaft and a countershaft, of a gear rotatably mounted on the driving shaft for operating the countershaft and forming a sliding sleeve, a clutch member on said sleeve adapted to operate in sliding engagement with the clutch member on the driving shaft and a clutch member on the driven shaft also movable into engagement with the clutch member on the driving shaft and abutting the clutch member on the sleeve to simultaneously disengage it from the latter.

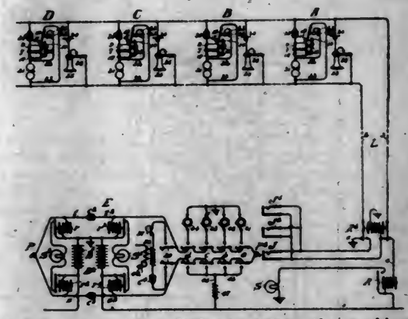
5. In a power-transmitting mechanism, the combination with a support, a driving and a driven shaft journaled in alinement therein, a fixed clutch member on one of said shafts, sliding clutch members on each adapted to cooperate therewith, a countershaft operated by the sliding member on the driving shaft and means for operating one of said sliding members into engagement with the fixed clutch member, of a lever operated by said means pivoted to the support and engaging the other to simultaneously move it longitudinally out of engagement with the fixed clutch member.

[Claims 6 to 9 not printed in the Gazette.]

878,779. PARTY-LINE TELEPHONE SYSTEM. WILLIAM W. DEAN, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 22, 1904. Serial No. 190,175.

1. In a party line telephone system, the combination with a telephone line, of a plurality of substations located on the line, a harmonic device at each substation adapted to respond to current of predetermined frequencies, a bell also at each substation, a shunt circuit of the bell adapted to be continuously broken during the actuation of the device, and a source of current at the central office for each substation adapted to impress current upon the line of the proper frequencies to operate said harmonic devices, substantially as described.

2. In a party line telephone system, the combination with a telephone line, of a plurality of substations located on the line, a harmonic device at each substation adapted to respond to current of predetermined frequencies, a signaling bell at each substation, a shunt of the bell continuously broken by the actuation of the device, a source of current at the central office adapted to impress upon the line ringing current of the proper frequencies to actuate said harmonic devices, and means whereby when the said shunt circuits are opened the said bells are operated by the current from the said source independently of intervening means at the central station, substantially as described.



3. In a party line telephone system, the combination with a telephone line, of a plurality of substations located on the line, a harmonic device and a bell connected in branches from the line conductors at the substations, the said harmonic devices controlling shunts of the said bells, means at the central office for impressing upon the line current of the proper frequencies to actuate the harmonic devices, and maintain a break in said shunt, the bells when the shunt circuits are opened being operated by the same current that actuates the harmonic devices, substantially as described.

4. In a party line telephone system, the combination with a telephone line, of a plurality of substations located on the line, a harmonic device and a signaling bell in a bridge of the line conductors at each substation, the said devices each controlling a shunt circuit of the associated bell, and adapted to maintain a break in said shunt during the actuation of the device, and means at the central office for impressing upon the line ringing current of frequencies corresponding to the rates of actuation of said devices, said bells being also actuated by said currents when the associated harmonic device opens the shunt, substantially as described.

5. In a party line telephone system, the combination with a telephone line, of a plurality of substations located on the line; a condenser, harmonic device and bell located in a bridge of the line conductors at each substation; said devices controlling shunts of the corresponding bells, and being adapted to maintain a break in said shunt during actuation, means at the central office for impressing upon the line ringing current of frequencies corresponding to the rates of actuation of said devices, the said bells responding to the same current flow when their shunts are opened by the said devices, substantially as described.

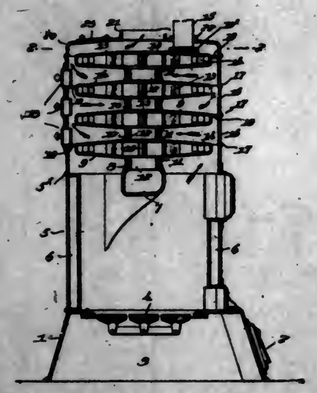
[Claims 6 and 7 not printed in the Gazette.]

878,780. HOT-WATER HEATER. EDWIN S. DECKER, Malden, and GEORGE H. GIBBY, Boston, Mass. Filed Sept. 13, 1906. Serial No. 334,387.

1. In a water heater, a plurality of detachably connected water sections, a casing comprising separable cylindrical members adapted to be superposed one upon the other around and wholly independent of the water sections, and segmental lateral partitions or flue plates carried by and extended inward from the casing members close to the perimeters of adjacent water sections, said segmental partitions being arranged in alternation.

2. In a water heater, a plurality of centrally and detachably connected like, circular water sections, an independent inclosing casing comprising a series of separable

cylindrical members adapted to be superposed one upon the other around and independent of the water sections, the height of a member being equal to the distance between the tops of two adjacent water sections, said members having clean-out openings opposite the spaces between the water sections, and segmental, lateral partitions or flue plates carried by and extended inward from the casing members close to the peripheries of adjacent water sections, said segmental partitions being staggered to cause the heat to pass in a tortuous path about the water sections.



3. In a water heater, a series of like, circular water sections each having a central threaded hub on its upper and lower side, and a threaded coupling member to engage the opposed hubs of and connect two adjacent sections, each section having a series of peripheral pockets or recesses to coöperate with a tool and facilitate rotative movement of the section when connecting it with or disconnecting it from another section, and a series of superposed cylindrical members forming an inclosing casing around and wholly independent of the water sections, leaving free spaces between the peripheries of the latter and the inclosing casing to permit the engagement of a tool with the peripheral pockets in the water sections.

878,781. WINDOW-SASH FASTENER. ELIAS B. DE LA MATTE, Los Angeles, Cal. Filed Feb. 11, 1907. Serial No. 356,931.

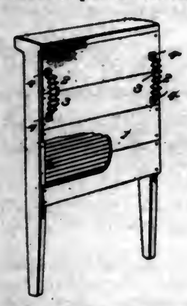


1. A window sash fastener comprising a plate bent intermediately and perforated vertically substantially as set forth at the bend, and a screw extending through the perforation to detachably fasten the plate to the window-sash.

2. A window sash fastener comprising a keeper bent intermediately and perforated vertically at the bend, a perforated loop over the bend, means to fasten the loop to the top of the lower sash, and a screw extending through the perforations of the loop and keeper to seat in the top of the lower sash.

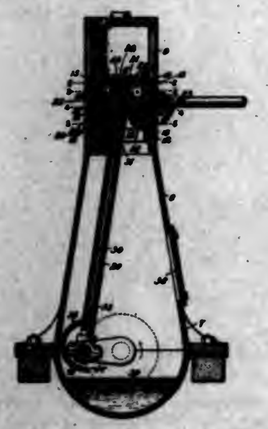
878,782. WASHBOARD. ALFONSO G. DE WALDO, Warren, Ohio. Filed Feb. 21, 1907. Serial No. 358,737.

1. A wash board provided at its back with a combined holding and cushioning device extending longitudinally of the wash board and provided with a tub-engaging portion spaced from and yieldably connected with the back of the wash board to space the same from the upper edge of a tub and to permit the wash board to vibrate during use to cushion the hands of the operator, said tub-engaging portion being provided at intervals with means for adjustably engaging the tub to hold the wash board at different angles or inclinations and to prevent the same from slipping.



2. A wash board provided with a combined holding and cushioning device consisting of a metallic strip secured at its ends to the wash board, and having an intermediate portion spaced from the back of the wash board and provided with crimps or bends forming a plurality of jaws for engaging the upper edge of a receptacle to retain the wash board in position, said intermediate portion being arranged to yieldably support the wash board in spaced relation with the upper edge of the receptacle to cushion the former.

878,783. ENGINE. ROBERT M. DOWNIE, Beaver Falls, Pa., assignor to Keystone Driller Co., Beaver Falls, Pa., a Corporation of Pennsylvania. Filed Aug. 13, 1907. Serial No. 388,333.



1. In an engine of the character described, the combination with a cylinder member, of a piston member operating therein, a pitman having a bearing in the piston member, said piston member having a chamber, and a channel leading to the bearing, and means for supplying fluid to the chamber.

2. In an engine of the character described, the combination with a cylinder member, of a piston member operating therein, a pitman having a bearing in the piston member, said piston member having a chamber surrounding the bearing and a plurality of channels leading to the bearing, and means for supplying fluid to the chamber.

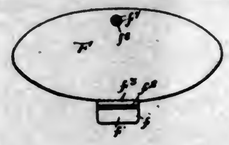
3. In an engine of the character described, the combination with a cylinder member, of a piston member operating therein and having a chamber and channels leading therefrom to the surface of the piston member, and means for supplying fluid to the chamber.

4. In an engine of the character described, the combination with a cylinder member, of a piston member operating therein and having an annular chamber, and radial channels leading therefrom to the surface of the piston member, and means for supplying liquid to the chamber.

5. In an engine of the character described, the combination with a cylinder member, of a piston member operating therein, and a pitman having a bearing in the piston member, said piston member having a chamber and channels leading therefrom to the bearing and to the surface of the piston member.

[Claims 6 to 18 not printed in the Gazette.]

878,784. SHEET-METAL DISPLAY-CAN. CHARLES T. DRAPER, Cleveland, Ohio, assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 15, 1906. Serial No. 334,807.



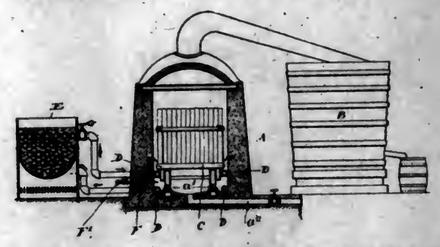
1. In a display can, the combination with the front plate having a display opening therein, of a removable inside fitting glass plate, and a removable outside fitting sign plate having a tongue on the lower part thereof which passes behind and engages the glass plate to hold it against the said front plate, and at the upper part of the sign plate separable fastener devices one surrounding and embracing the other and projecting from the sign plate and from the front plate respectively, and engageable and disengageable with and from each other only by movements in a direction perpendicular to the front plate and being rigid and unyielding in all directions parallel with the front plate, by which the upper part of the sign plate is removably united to the front plate, the said fastener devices, acting independently of the engagement of the tongue with the glass plate and to hold the sign plate and tongue from movement in any direction parallel with the front of the can or towards or from the glass plate which the tongue engages, substantially as set forth.

2. In a display can, the combination with the front plate having a display opening therein and a slot b^4, of a removable inside fitting glass plate, and a removable outside fitting sign plate having a tongue thereon passing through the said slot and behind the glass plate, the tongue having a shoulder which bears downward on the upper edge of the glass plate and a supplemental shoulder which bears upward against the edge of the slot, and separable fastener devices by which the upper part of the sign plate is removably held against the front of the front plate, substantially as set forth.

3. In a display can, the combination with the front plate having a display opening therein, of a removable inside fitting glass plate, and a removable outside fitting sign plate having an integral tongue thereon engaging the upper edge of the glass plate to hold it in place, said front plate having a slot through which said tongue on the sign plate projects, and said tongue on the sign plate having a shoulder fitting under and engaging the upper edge of the slot in the front plate, substantially as specified.

4. In a display can, the combination of the front plate having a display opening therein and having the inwardly bent seat b^2, a removable inside fitting glass plate, a removable outside fitting sign plate having a tongue which engages the inner side of the glass plate, a socket fastener on the sign plate, and a stud fastener attached to the front plate in the said seat, the said fasteners being engageable to hold the rear face of the sign plate in contact with the front face of the front plate and to hold the tongue from vertical movement relative to the glass plate, substantially as set forth.

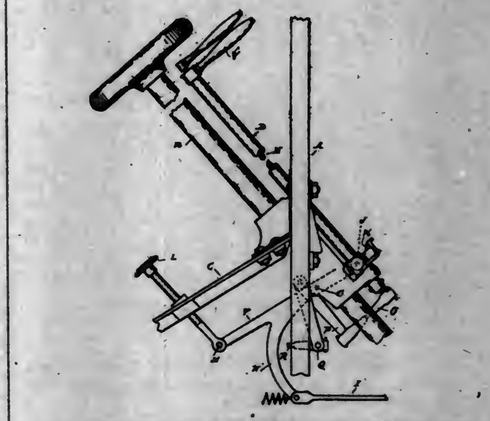
878,785. METHOD OF DISTILLATION. THOMAS A. DUNGAN, Chicago, Ill. Filed July 20, 1905. Serial No. 270,474.



1. The method of distilling by means of a medium circulating through a heating agent of such a nature that its superior possible temperature under atmospheric pressure is adapted to impart to the circulating medium the temperature required for distilling the desired fraction.

2. The method of distilling resinous wood by means of a medium circulating through a heating agent of such a nature that its superior possible temperature under atmospheric pressure is adapted to impart to the circulating medium the temperature required for distilling the desired fraction.

878,786. SPEED-CONTROLLING MECHANISM FOR MOTOR-VEHICLES. GEORGE W. DUNHAM, Lansing, Mich., assignor to Olds Motor Works, Lansing, Mich., a Corporation of Michigan. Filed Mar. 18, 1907. Serial No. 362,904.



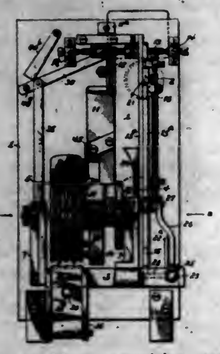
1. A controlling mechanism for motor vehicles, comprising a hand-operated rock shaft, a cam mounted thereon, a throttle-actuating lever having a bearing at one end thereof upon said cam, a foot operated device for independently actuating said lever to separate the same from said cam, and yieldable means for returning said lever and pressing the same against said cam.

2. A controlling mechanism for motor vehicles, comprising a hand-operated rock stem, the cam K mounted thereon, the lever F having one arm thereof bearing against said cam, and another arm connected for actuating the throttle and the foot push rod L connected to said lever, substantially as, and for the purpose set forth.

878,787. COIN FREED OR OPERATED MACHINE FOR VENDING POSTAGE-STAMPS, TICKETS, &c. KATRINE E. FAWNS and GEORGINE KERMODE, Ross, Tasmania, Australia. Filed Oct. 4, 1907. Serial No. 395,893.

1. A vending machine, comprising vending means, actuating mechanism therefor, devices operative directly by a

coin for energizing the actuating mechanism, and coin controlled means for releasing the actuating mechanism to effect the operation of the vending means.



2. A vending machine, comprising vending means, weighted actuating mechanism for actuating said means, means operative directly by a coin for raising said weighted devices into position to operate the vending means, and coin operated means for releasing said weighted actuating devices.

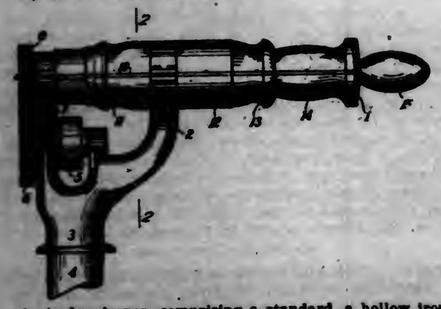
3. A vending machine, comprising vending means, actuating mechanism, connections between said actuating mechanism and vending means, coin engaging means also connected with said actuating mechanism for energizing the latter when a coin is introduced, and coin-controlled means for releasing the actuating mechanism.

4. A vending machine, comprising vending means, a shaft provided with an arm, actuating mechanism including a weight connected with said arm and means intermediate the weight and the vending means for actuating the latter, another arm on said shaft in position to be engaged directly by a coin to raise the weight, and coin-controlled means for releasing the weight.

5. A vending machine comprising vending means, actuating mechanism including an arm or segment, a dog or hook pivotally attached to said arm or segment, projections on the vending means to be engaged by said dog or hook, and a weight connected with said arm or segment, a shaft having an arm connected with said weight, said shaft also having an arm in position to be engaged directly by a coin to raise the weight, and coin controlled means for releasing said weight to actuate the feeding and discharging means.

[Claims 6 to 24 not printed in the Gazette.]

878,788. ROTARY SHOE-IRONER AND TREEING-MACHINE. IRA E. FLETCHER, Montello, Mass. Filed Sept. 26, 1906. Serial No. 336,278.

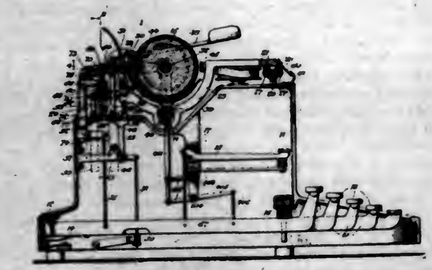


1. A shoe ironer, comprising a standard, a hollow ironing tool projecting freely at one side of and supported entirely by said standard, heating means entering at one end of said tool and terminating within the same, said ironing tool containing a convex ironing surface beyond said bearing and terminating at its forward end in a smooth, uniformly convex, oval hollow knob having a pointed end, for ironing the blank.

2. A shoe ironer, comprising a standard having projecting freely from one side thereof an ironing tool provided with a smooth, one-piece ironing surface having at one portion a concave toe-ironing surface containing a short steep toe-ironing peripheral curve at one end and a long sloping curve 13 at the other end and next thereto a long slightly convex shank-ironing surface 14 terminating in a smooth elongated oval shank-ironing knob having a slender oval point for entering extreme angles.

3. A shoe ironer, comprising a standard, and a hollow ironing tool projecting at one side of said standard and having a free uninterrupted space all around said entire projecting tool and beneath the same sufficiently to permit the shoe to be handled and moved freely in all directions adjacent the tool, said tool comprising a one-piece peripherally smooth iron having an approximately cylindrical ball-ironing surface verging into a concave toe-ironing surface having a comparatively abrupt outer curved end from which continues a long convex shank-ironing surface, next to which is a terminal knob in the form of an elongated oval reduced to a blunt point at its free exteremity and having a size sufficiently small to enter the shank angles of a usual shoe.

878,789. TYPE-WRITING MACHINE. CHARLES I. FORTIER, Milwaukee, Wis. Filed Mar. 26, 1906. Serial No. 307,993.



1. In typewriting machines, the combination of a main carriage, a supplemental carriage normally shifting therewith, releasable devices connecting said carriages and tabulating mechanism associated with said supplemental carriage for arresting its run when released from said main carriage.

2. In typewriting machines, the combination with the main and supplemental carriages and propelling means therefor, of releasable devices normally connecting said carriages, tabulating mechanism coöperating with said supplemental carriage to arrest its run when released from said main carriage and means for operating said releasing devices and tabulating mechanism.

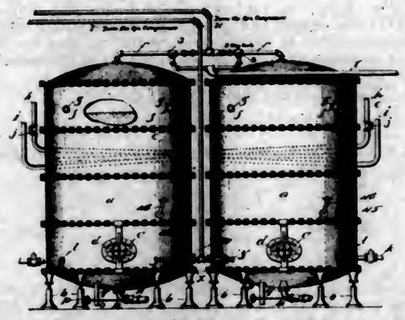
3. In typewriting machines, the combination with the main and supplemental carriages releasably connected to shift together, of tabulating mechanism coöperating with said supplemental carriage to arrest the same when released from said main carriage, said tabulating mechanism comprising a series of column-stops and coöperating dogging means and key mechanism for releasing said supplemental carriage and for projecting one of the members of said tabulating mechanism in line with the other.

4. In typewriting machines, the combination with the main and supplemental carriages, releasable devices normally connecting said carriages to shift together, a series of adjustable column-stops mounted on the supplemental carriage, dogging means for said stops mounted on the machine frame and finger-key mechanism for releasing said connecting devices and for projecting said dogging means in line with said column-stops.

5. In typewriting machines, the combination with the main and supplemental carriages, of a rack on one of said carriages, a dog on the other of said carriages engaging said rack, means for disengaging said dog and rack to release said supplemental carriage and tabulating mechanism coöperating with said supplemental carriage to arrest its run when released.

[Claims 6 to 33 not printed in the Gazette.]

878,790. PROCESS FOR FERMENTING BEER, ALE, AND OTHER FERMENTABLE LIQUIDS. HANS H. FREUND, New York, N. Y. Filed Feb. 6, 1904. Serial No. 192,397.



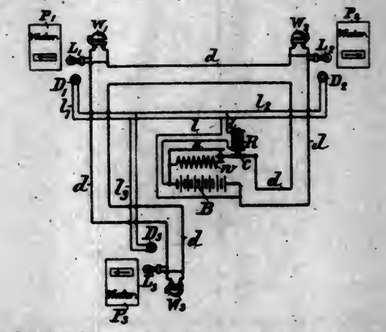
1. The herein described process of fermenting fermentable liquids which consists in partially filling the prepared wort into a closed tank provided with an escape orifice in its unfilled portion, strongly aerating the wort at intervals, for the purpose of agitating it, until its surface is covered with a white foam, then subjecting the wort to a fine aeration for the purpose of supplying oxygen to the wort, and incidentally agitating it, allowing the fermentation to quietly proceed for a considerable time, discharging the carbonic gas from the unfilled portion of the tank, cooling the fermenting liquid near the end of the fermentation, and allowing the carbonic acid gas to flow out by its own weight, and replacing said gas by sterilized air, substantially as described.

2. The herein described process of fermenting fermentable liquids entirely out of contact with the atmosphere which consists in partially filling the prepared wort into a closed receptacle provided with an escape orifice in its unfilled portion, in strongly aerating the wort at intervals with sterilized air for the purpose of agitating it for a period of about 20 hours or until a white foam forms on its surface, then subjecting the wort to a fine aeration with sterilized air for about 6 to 8 hours for the purpose of supplying oxygen to said wort, then allowing the liquid to ferment quietly for a considerable time, cooling the liquid during this period of quiet fermentation, allowing the carbonic acid gas generated to flow out by its own weight and replacing it by sterilized air, thereby clarifying the liquid, and racking it, substantially as described.

3. The herein described process of fermenting fermentable liquids, consisting in partially filling the prepared wort into a closed tank provided with an escape orifice in its unfilled portion, strongly aerating the wort with sterilized air at intervals until a white foam forms on its top, subjecting the wort to a fine aeration for the purpose of supplying oxygen thereto, then allowing the fermentation to proceed quietly for a time, discharging the carbonic acid gas from the unfilled portion of the tank, preventing the return of the carbonic acid gas into the tank, allowing the carbonic acid gas to flow out by its own weight and replacing it by sterilized air, and finally cooling the liquid, substantially as described.

878,791. SUPERVISORY APPARATUS. KONRAD FRIEDLAENDER, Berlin, Germany. Filed Jan. 31, 1906. Serial No. 298,877.

1. In signaling apparatus the combination with a source of electrical current of a resistance, a relay capable of shortcircuiting said resistance, and a plurality of alarm stations comprising each an alarm device, a glow lamp shunting said alarm device and a contact button controlling said relay.



2. In signaling apparatus the combination with a battery connected in series with a number of alarm devices each being shunted by a glowlamp and with a resistance, of a relay controlled by a number of contact buttons disposed in the vicinity of said alarm devices, and adapted to control said relay the relay being capable of short circuiting said resistance.

3. In signaling apparatus the combination with a battery, a resistance and a plurality of signaling devices located at separate signal stations and in series with the battery, each of said signaling devices being shunted by a glowlamp and all parts being dimensioned so as to normally cause the said lamps to be barely visible, of means for short-circuiting the resistance and thereby operating the signaling devices and simultaneously lighting up the said lamps to deliver a signal to and illuminate the several stations.

4. In signaling apparatus the combination with a plurality of electrically actuated signaling devices located at separate signal stations and connected in series to a common battery, of glowlamps shunting each of said signaling devices, and means for increasing the electromotive force in the common battery circuit at will to deliver a signal to and illuminate the several stations.

5. In an alarm system, the combination with an alarm device, of an emergency index, a glow-lamp in proximity to said emergency index, means for keeping said lamp at a dull red heat, means for causing the lamp to light up when the said alarm device is operated, and contact mechanism in an independent circuit for controlling the alarm device; whereby under normal conditions the lamp indicates that the alarm circuit is intact and when the alarm device is operated the lamp illuminates the emergency index; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

878,792. DIAL KNITTING-MACHINE. HENRY GARANT, Chattanooga, Tenn., assignor of one-half to W. B. Davis, Chattanooga, Tenn. Filed June 14, 1906. Serial No. 321,719.

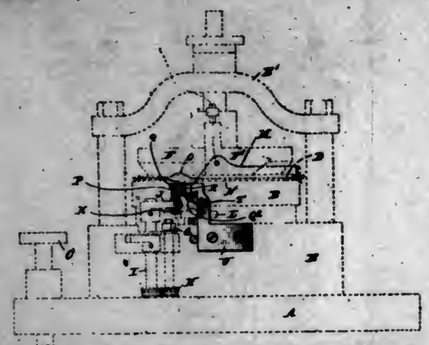
1. In combination with a knitting machine embodying a vertical series of needles a horizontal series of needles and means for automatically actuating the vertical series of needles to produce a slack course, devices for actuating the horizontal needles to assist in producing the slack course.

2. In combination with a knitting machine embodying a horizontal series of needles, means for elevating the thread-engaging ends of said needles to produce a slack course.

3. In combination with a knitting machine, embodying two series of needles, means for coincidently separating the needles to produce a slack course, these means embodying devices whereby both series of needles are actuated in opposite directions simultaneously.

4. The combination in a knitting machine of the char-

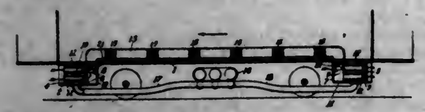
acter described, of a cylinder, cylinder needles, dial needles, with means for lifting the dial needles independently of the dial to form a slack course, substantially as described.



5. The combination in a knitting machine of the character described, of the cylinder needles, the dial needles, means for actuating both the cylinder needles and the dial needles to produce a slack course, substantially as described.

[Claims 6 to 23 not printed in the Gazette.]

878,793. CAR-HEATING SYSTEM. LUCIUS T. GIBBS, Hempstead, N. Y. Filed Aug. 2, 1905. Serial No. 272,295.



1. In a car-heating system, the combination of a chamber having air-receiving pipes, a compartment into which said pipes discharge, means for heating the air in its passage through said pipes, means for delivering the air from the said compartment into the interior of the car, and means for permitting more or less of the air to escape from the compartment into the atmosphere, thereby regulating the quantity of air discharged into the car, as set forth.

2. In a car-heating system, the combination of a chamber having air-receiving pipes, means for heating the air in its passage through said pipes, a compartment receiving air from the said pipes and having an escape aperture for the escape of heated air from the compartment into the atmosphere, means for delivering air from the compartment to the interior of the car, and a damper controlling said escape aperture, whereby more or less of the air in the compartment may be permitted to escape into the atmosphere, as set forth.

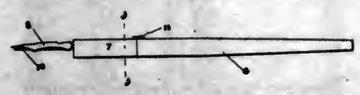
3. In a car-heating system, the combination of a chamber having air-receiving pipes extending rearwardly and open at their forward ends to the atmosphere, means for heating the said pipes whereby the air passing through the same will be heated, a compartment located to the rear of the chamber and receiving the air from the said pipes, the rear wall of said compartment having an aperture for the escape of air into the atmosphere, a conduit for delivering air from the compartment into the interior of the car, and a damper for regulating the escape of air into the atmosphere through the aperture in the rear wall of the compartment, whereby more or less air will escape instead of being delivered into the car, as set forth.

4. In a car-heating system, the combination of a chamber having air-receiving pipes, a compartment into which said pipes discharge, having an aperture for the escape of heated air from the compartment into the atmosphere, means for heating the air in its passage through the said pipes, a conduit for delivering air from the compartment into the interior of the car, a damper for the said escape aperture, and means for operating said damper, whereby more or less of the air may be permitted to escape into the atmosphere, as set forth.

5. In a car-heating system, the combination of a pair of chambers, one at each end of the car, air-receiving pipes extending through the chambers and open toward the adjacent end of the car, whereby one or the other set of pipes will receive air, according to the direction of the can's travel, means for heating the air in its passage through the pipes, compartments receiving air from the respective pipes, said compartments being in communication with the interior of the car and being provided also with openings into the atmosphere, and dampers for said openings, whereby the quantity of air delivered to the car may be regulated by permitting more or less of the air in the compartment to escape into the atmosphere, as set forth.

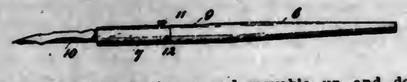
[Claims 6 to 8 not printed in the Gazette.]

878,794. PENHOLDER. THEODORE N. GOFFE, Springfield, Mo. Filed June 18, 1907. Serial No. 379,549.



A penholder having a barrel on the lower end thereof, a bored plug in the barrel, a body with a groove communicating with the bore in the plug, and a rod slidable up and down in said groove and bore, with its lower end beside the pen point and its upper end having a finger piece.

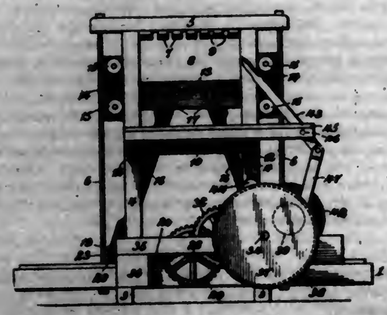
878,795. PENHOLDER. THEODORE N. GOFFE, Springfield, Mo. Filed Aug. 19, 1907. Serial No. 389,137.



1. A penholder having a rod movable up and down therein, with its lower end beside the pen point, to form a guide therefor, and an adjustable stop to limit the downward movement of the rod.

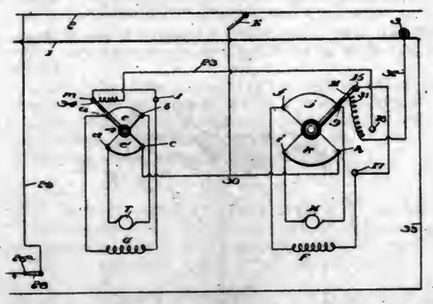
2. A penholder having a groove in the lower end thereof, a barrel on said end provided with a plurality of notches of different depths in its upper end, which notches may each be registered with the groove by turning the barrel, and a rod forming a guide for the pen point, slidable up and down in the groove and offset at the upper end to enter the notch so registered.

878,796. COTTON-COMPRESS. JOHN W. GREGORY, Coldwater, Tenn., assignor of one-half to Mattie F. Story, Coldwater, Tenn., and one-fourth to John W. Young, Jr., Elkton, Tenn. Filed Sept. 24, 1906. Serial No. 335,964.



In combination with a press box having the vertically disposed standards, and vertically disposed rods spaced from the sides of the standards, the press block or plunger extending between the standards, the vertically disposed blocks each secured at an intermediate point to the press block or plunger and extending above and below the same and working between the said standards and the said rods, and friction wheels mounted on the said vertically disposed blocks at the ends thereof and located above and below the press block or plunger, and means for moving the press block or plunger vertically.

878,797. TELPHER. HENRY M. HARDING, New York, N. Y., and CHARLES M. CLARK, South Orange, N. J. Filed Apr. 13, 1905. Serial No. 255,292.



1. In a telpher system, a telpher having a motor, a reversing switch for the telpher motor, stops in the path of the telpher for controlling said switch, a hoisting motor, a hoist operated thereby, a reversing switch for the hoisting motor, means in the path of the hoist for controlling its reversing switch, means operated by said latter switch for starting and stopping the telpher motor, and means in the path of the telpher for starting the hoisting motor.

2. In a telpher system, a telpher having a motor, a reversing switch for said motor, means for operating said reversing switch at the limits of travel of the telpher, a hoisting motor, a hoist operated thereby, a reversing switch therefor, and means for operating said last named switch at the limits of travel of the hoist, said last mentioned reversing switch having an arm for starting and stopping the telpher motor.

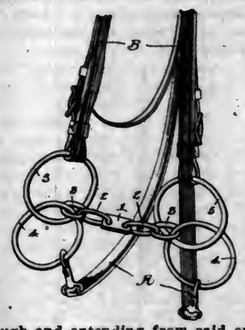
3. In a telpher system, a telpher having a motor, a reversing switch therefor, a hoisting motor, a reversing switch therefor, means for operating the switch for the hoisting motor by the movement of the telpher on its track, and means controlled by the switch for the hoisting motor for starting and stopping the telpher motor.

4. In a telpher system, a telpher having a motor, a hoisting apparatus also including a motor, a switch adapted to control the telpher motor in either direction, an additional switch for controlling the hoisting motor, and a switch arm on said last mentioned switch for closing the circuit of the telpher motor.

878,798. BIT. GEORGE HARRIS, Los Angeles, Cal. Filed Oct. 4, 1907. Serial No. 395,960.

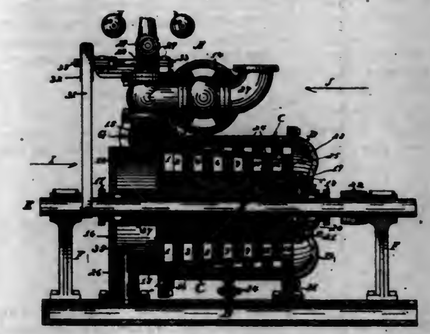
1. The combination in a bit of the character described, of a central tongue plate, bit links secured through openings in said plate and extending outwardly from the ends thereof, outer bit links secured through and extending from said first named bit links on a plane at substantially right angles to the plane of said first named links, rein rings secured through said last named links, and bridle rings secured loosely about said links between said rein rings, substantially as described.

2. The combination in a bit of the character described, of a central tongue plate, inner bit links secured through openings adjacent the ends of said plate extending therefrom, outer bit links secured through and extending from said inner links on a plane at substantially right angles to the plane of said inner link, the combined length of said plate and said inner and outer links being substantially greater than the width of a horse's jaw, rein rings



secured through and extending from said outer links, and bridle rings loosely associated with said links between said rein rings, substantially as described.

878,799. TURBINE. FRANK E. HAVEN, Salt Lake City, Utah. Filed Jan. 12, 1907. Serial No. 352,037.



1. The combination of a cylindrically shaped casing, a revoluble shaft passing axially therethrough, that is supported with bearings and carrying thereon a pulley, and also within the casing, perforated rings whose perforations are coincident in area and position, but opposed in direction to stationary deflectors, the deflectors having one more perforation than in the revoluble ring following, and packing rings that are placed between one end of the casing and the perforated rings.

2. The combination of a cylindrically shaped casing having an ingress and egress at the same end, a revoluble shaft placed axially through said casing and supported by bearings, and also within the casing and fitted on the said shaft rings having ports coincident in area and position but opposed in direction to stationary deflectors that are placed alternately with the said rings, the area of each succeeding port increasing in proportion to and commensurate with the expansion of the steam in use, with adjustable packing rings that are placed between one end of the said casing and the adjacent deflector.

878,800. WATCH-FOB. CHARLES L. HILLS, Boston, Mass. Filed June 16, 1906, Serial No. 322,115. Renewed Oct. 4, 1907. Serial No. 395,965.

1. A fob, comprising a strap having reduced portions, strap suspending means, said reduced portions being adapted to accommodate said strap suspending means and charm suspending means, a clasp for securing the fob in its folded position, and means encircling one of said reduced portions for suspending the fob.

2. A fob, comprising a strap formed with a plurality or reduced portions, a charm suspended from one of said reduced portions, fob securing means encircling the other of said reduced portions, a band surrounding the fob for assisting in holding the fob in its folded position, and fastening means for securing the fob together positioned beneath said band.



3. A fob, comprising a strap, a socket thereon, a stud secured on one end of said strap and adapted to engage said socket when the strap is in its folded position, means surrounding said strap when in its folded position for covering said stud and socket and for assisting the same in holding the fob in its folded position, and means for suspending said fob.

878,801. SUPPORTING DEVICE. CORNELIA A. HOPKINS, New York, N. Y. Filed Dec. 7, 1900. Serial No. 39,002.



1. A supporting or fastening device comprising two plates A and B each formed at one end with an eye 3 and at the other end with keepers 4 having outwardly flaring guides *a* and having a double pin 2 pivoted in the eye 3, and each of said plates being provided with a member of a device for securing the plates together, substantially as described.

2. A supporting or fastening device comprising two separable parts each provided with double pins and keepers having outwardly flaring guides *a*, and each provided with a member of a device for securing the parts together, substantially as described.

3. A supporting or fastening device comprising two plates A, B each formed at one end with an eye 3 and at the other end with keepers 4 having outwardly flaring guides *a*, and having a double pin 2 pivoted in the eye 3, and each of said plates being provided with a member of a device for securing the plates together, and one of said plates having a hook 12, substantially as described.

4. A supporting or fastening device comprising two plates A and B each formed at one end with an eye 3 and having at the other end tongues bent first inward to form keepers 4 and then outward to form outwardly flaring guides *a*, and having a double pin 2 pivoted in the eye 3, and each of said plates being provided with a member of a device for securing the plates together, substantially as described.

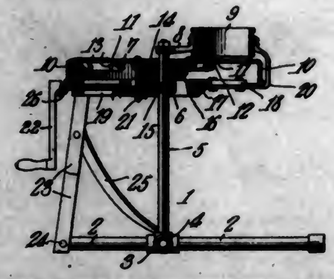
878,802. GARMENT-SUPPORTER. JAMES M. JOHNSON, Bloomer, Wis. Filed Sept. 17, 1907. Serial No. 393,282.

A garment supporter comprising a stirrup-shaped link having at one end means for engaging with a garment, and having at its other end a bar and a T-shaped projection provided with a stem which projects from the middle part



of the said bar and which forms slots for engaging with another garment.

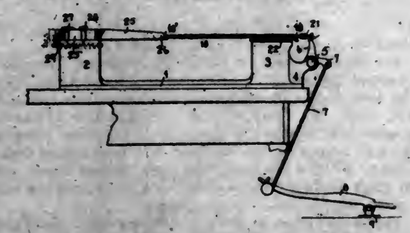
878,803. FRUIT-SLICER. MARSHALL B. JOLLY, Trenton, Mo. Filed Mar. 12, 1907. Serial No. 361,954.



1. A fruit slicing machine comprising a fixed central vertical standard supported at its lower end by a base frame and having an upright spindle at the top of said standard, a rotatable table mounted on said spindle which projects through and above the table, a frame beneath said table supported by the base frame, means for rotating said table carried partly by said frame, a plurality of non-radial knives secured to the table and projecting upwardly through slots formed in the top of said table, a hopper disposed above one side of said table, and brackets secured to said hopper, one of which is fastened to said spindle and another to the frame below the table.

2. A slicing machine, comprising a base frame, a vertical standard rising therefrom, a fixed collar on said standard, a table rotatable on the standard and upheld by said collar, a horizontal frame below the table and supported by braces from the base frame, a driving shaft mounted in said horizontal frame and provided with a bevel gear which meshes with a similar gear wheel on said table, and a hopper above said table but in close proximity thereto supported in place by brackets connected respectively to the upper end of the standards and to the horizontal frame.

878,804. STRAP TURNING AND STRETCHING MACHINE. PAUL T. JONES, Sr., Corinth, Miss. Filed May 16, 1906. Serial No. 317,205.



1. In a strap turning and shaping machine, the combination of a supporting frame, a turning member and a stretching member arranged oppositely on said frame, said stretcher member having means for engaging one end of the strap while it is being turned from the turning to the stretching member.

2. In a strap turning and stretching machine, the combination of a supporting frame, a turning member mounted thereon, a stretching member also mounted thereon and arranged opposite said turning member and means for holding the opposing ends of said members normally in contact.

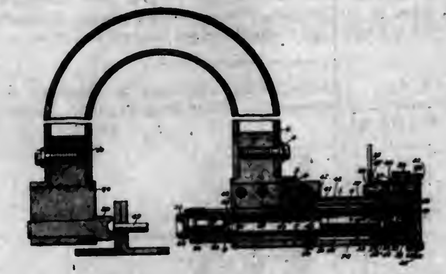
3. In a strap turning and shaping machine, the combination of a supporting frame, a form mounted on said frame and shaped to fit the strap to be turned, and spring retracted means for stretching said strap arranged adjacent said form.

4. In a strap turning and shaping machine, the combination of a supporting frame, a form mounted on said frame and shaped to fit the strap to be turned, means for stretching said strap arranged adjacent said form, and spring retracted means for laterally expanding said stretching member.

5. In a strap turning and shaping machine, the combination of a turning member and a stretching member arranged oppositely on said frame and means for laterally expanding said stretching member.

[Claims 6 to 9 not printed in the Gazette.]

878,805. PNEUMATIC RIVETER. JULIUS KELLER, Philadelphia, Pa., assignor, by mesne assignments, to Chicago Pneumatic Tool Company, a Corporation of New Jersey. Filed Dec. 11, 1900. Serial No. 39,570.



1. In a pneumatic tool, the combination of the inner tool cylinder, the casing and the outer tool cylinder having a shoulder, of a piston movable in the inner cylinder, a hollow distributing valve, the interior surface of which is open to fluid pressue upon opening the throttle valve, said valve movable in the same direction as the piston but independently thereof, ports controlled by said valve, a pressure chamber at the rear of the inner tool cylinder, a throttle valve connected with said cylinder for controlling the admission of motive fluid, a passage controlled by said throttle valve through the casing for the motive fluid to exert pressure against said shoulder, a removable end for said casing having a port therein controlled by said throttle valve, opening into the casing at the end, and a stop valve acting in conjunction with said distributing valve, exhaust ports in communication with said pressure chamber and controlled by the throttle valve, a pressure area in said pressure chamber greater than that of said shoulder, said stop valve movable parallel with the distributing valve and controlling ports common to both of said valves, and means wherby said stop valve is positively operated in one direction mechanically and in the opposite direction by fluid pressure.

2. In a pneumatic tool, the combination of the inner tool cylinder, the casing, and the outer tool cylinder having a shoulder, of a piston movable in the inner cylinder, a hollow distributing valve, the interior surface of which is open to fluid pressure upon opening the throttle valve, said valve movable in the same direction as the piston but independently thereof, ports controlled by said valve, a pressure chamber at the rear of the inner tool cylinder, a throttle valve parallel with said cylinder for controlling the admission of motive fluid, a passage controlled by said throttle valve through the casing for the motive fluid to exert a pressure against said shoulder, and a stop valve acting in conjunction with said distributing valve, exhaust ports in communication with said pressure chamber and controlled by the throttle valve, a pressure area in said pressure chamber greater than that of said shoulder, said stop valve movable parallel with the distributing valve and controlling ports common to both of said valves, and means whereby said stop valve is positively operated in one direction mechanically and in the opposite direction by fluid pressure.

3. In a pneumatic tool, the combination of the inner tool cylinder, the casing, and the outer tool cylinder having a shoulder, of a piston movable in the inner cylinder, a hollow distributing valve the interior surface of which is open to fluid pressure upon opening the throttle valve, said valve movable in the same direction as the piston but independently thereof, ports controlled by said valve, a pressure chamber at the rear of the inner tool cylinder, a throttle valve for controlling the admission of motive fluid, a passage controlled by said throttle valve through the casing for the motive fluid to exert a pressure against said shoulder, and a stop valve acting in conjunction with said distributing valve, exhaust ports in communication with said pressure chamber and controlled by the throttle valve, a pressure area in said pressure chamber greater than that of said shoulder, said stop valve movable parallel with the distributing valve and controlling ports common to both of said valves, and means whereby said stop valve is positively operated in one direction mechanically and in the opposite direction by fluid pressure, said throttle valve being parallel with the cylinder and a longitudinal passage therein, and the end wall of the cylinder having a port therein extending between the throttle valve and the cylinder parallel with the throttle valve and thence transversely, and opening into the cylinder at the end, being all confined within the walls of the cylinder and controlled by said throttle valve.
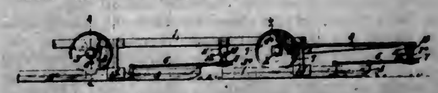
878,806. BAKING-OVEN. FRITZ KEMPTER, Stuttgart, Germany. Filed Dec. 1, 1904. Serial No. 234,999.



1. A baker's oven provided with a baking chamber, a superposed top chamber, a furnace, heating tubes in the top chamber communicating with the furnace, a partition having an opening between baking chamber and top chamber, and means for controlling the flow of heat through said opening, substantially as specified.

2. A baker's oven provided with a baking chamber, a door controlling the same, a top chamber above the baking chamber, a furnace, heating tubes in the top chamber communicating with the furnace, a partition between baking chamber and top chamber, said partition having an opening near the door of the baking chamber, and means for controlling the flow of heat through said opening, substantially as specified.

878,807. VEHICLE PROVIDED WITH MOVABLE RAILS. FRITZ KOCH, St. Paul, Minn. Filed Oct. 2, 1907. Serial No. 395,646.



1. A vehicle or similar device provided with a wheel which consists of two approximately segmental-shaped sections arranged in different vertical planes, rails arranged in alinement with each section of said wheel, a guide carried by the vehicle, and a flexible member connected to said rails and passing over said guide so that

one rail will be moved in advance of the wheel while the other section of the wheel is traveling on its coöperating rail; substantially as described.

2. A vehicle provided with a wheel comprising two approximately segmental-shaped sections arranged side by side and in such a manner that they form a circular wheel, rails over which the sections of said wheel travel, a flexible member connected to said rails, and means moving with the vehicle and engaging said flexible member so that the rail for one section will be drawn forwardly while the other rail is held at rest by the section that is traveling over same; substantially as described.

3. A vehicle provided with a pair of wheels, each of which comprises two approximately segmental-shaped sections arranged in different vertical planes, a separate rail arranged in alinement with each section of each wheel, and a flexible member connected to the rails for each wheel and passing over a guide located in front of the wheel whereby the rail for one section is drawn forwardly while the other section of the wheel is traveling on its coöperating rail; substantially described.

4. A vehicle provided with a pair of wheels, each of which comprises two approximately segmental-shaped sections arranged in different vertical planes, a coöperating rail for each section of said wheels, a flexible member connected to the rails for each wheel and passing over a guide so that the rail for one section will be drawn forwardly while the other section of the wheel is traveling over its coöperating rail, and guides for holding the rails for each wheel parallel; substantially as described.

5. A vehicle provided with a pair of wheels, the rim of each of which is composed of a plurality of sections that are located in different vertical planes, a plurality of parallel rails for each wheel, a yielding guide arranged in front of each wheel, and a flexible member passing over each of said guides and connected at its opposite ends to the rails; substantially as described.

[Claim 6 not printed in the Gazette.]

878,808. OIL-CUP. JOSEPH W. KYLE, Chicago, Ill. Filed Apr. 20, 1907. Serial No. 369,233.



1. In a device of the class described the combination with a rotatable member of an oil cup, a nipple adapted for connection with the rotatable member, resilient means adapted to detachably connect said cup and nipple, said means acting oppositely from centrifugal force.

2. In a device of the class described the combination with a loose pulley oil cup, of a nipple threaded for engagement with the part to be lubricated, and resilient locking arms adapted to detachably secure said cup and nipple together.

3. A centrifugally acting oil cup having a permanent bottom therein, a tube extending therethrough, means adapted to deflect the oil into said tube, detachable means engaging said cup to the object to be lubricated and resilient connection between the same and oil cup.

4. In a device of the class described the combination with an oil cup of a closed bottom therein having a vent aperture therethrough, a feed tube extending through said bottom, a deflector engaged in the top of the cup and extending into said feed tube, a nipple cored to receive the outer end of said tube and adapted to abut against said bottom to close the air vent and resilient means acting against centrifugal force and adapted to detachably secure said cup on said nipple.

5. An oil cup wholly closed except for a vent aperture in its bottom for the displacement of air in filling and a filling and feed tube connected through the bottom, a deflector in said cup, a nipple bored to conduct the oil from said tube to the journal and adapted to engage the cup to the object lubricated and normally to close the air vent and resilient means on said nipple to detachably engage said cup thereto.

[Claims 6 to 12 not printed in the Gazette.]

878,809. VALVE. WILLIAM J. LARNED, Syracuse, N. Y. Filed Sept. 12, 1906. Serial No. 334,204.



A valve provided with a flat working face composed of mica in combination with a correspondingly flat and broad valve-seat substantially as set forth and shown.

878,810. EXERCISING APPARATUS. EDWARD A. LETZKUS, Allegheny, Pa. Filed May 31, 1907. Serial No. 376,618.



1. In exercising apparatus, the combination of a box or chute with upper and lower openings, and means for varying the height of the upper opening, whereby the inserting of a ball or like object into the upper opening and the labor of lifting said ball as it emerges from the lower opening and again inserting it in the upper opening furnishes exercise.

2. In exercising apparatus, the combination of a box or chute with upper and lower openings, and a vertically movable shutter in said opening, whereby the inserting of a ball or like object into the upper opening and the labor of lifting said ball as it emerges from the lower opening and again inserting it in the upper opening furnishes exercise.

878,811. CHIMNEY-CAP. WARD LINCOLN, Rock Falls, Ill., assignor to Edwin J. Cochran, Sterling, Ill. Filed May 21, 1906. Serial No. 318,071.

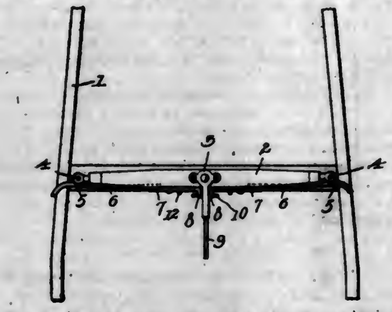
1. A chimney cap, comprising a plurality of legs adapted to engage the corners of the chimney flue, at the top thereof; a plurality of plates 4 integral with said legs, and provided with rectangular slots 6; a cap-plate 3, provided with a central opening, and supporting the plates 4 so as to permit adjustment thereof along the line of said slots; a rim 8, surrounding said central opening; and a recess between the plate 3 and chimney-top to accommodate the plates 4, substantially as shown and described.



2. In a device of the class named, the combination with a chimney cap 2 and plate 3 thereof, of a plate 4, provided with a rectangular slot 6; a leg 7, fixed to the lower face of the plate 4, at a point opposite the angle of said slot, and equi-distant from the arms thereof; and a bolt 5, passing through the slot 6, and secured in the plate 3, substantially as and for the purpose mentioned.

3. In a device of the class named, the combination of a plate 4, provided with a rectangular slot 6, one arm of said slot being disposed longitudinally, and the other one thereof transversely of the chimney-cap; a leg 7, fixed to the lower face of said plate, at a point opposite the angle of said slot; and a bolt 5, passing through the slot 6 and adapted to be secured in the cap-plate, substantially as set forth.

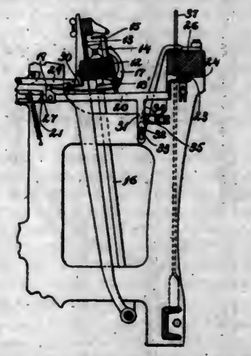
878,812. HORSE-DETACHER. ZELOTES A. LIVELY, Roseville, W. Va. Filed Aug. 30, 1907. Serial No. 390,760.



1. A horse detacher comprising trace-engaging hooks adapted to be pivotally mounted on the ends of the swingletree, fastening bars formed on the inner ends of said hooks, pivotally mounted catches adapted to be engaged with the inner ends of said fastening bars, a releasing lever pivotally mounted on the clevis of the swingletree, an integrally formed cross bar on the outer end of said lever adapted to be simultaneously engaged with the inner ends of the catches, whereby the outer ends thereof are disengaged from the fastening bars of the trace hooks, a flexible operating element connected to said lever and extending to the vehicle, a shaft supporting bar pivotally connected at one end to the vehicle and having a sliding connection at its opposite ends with the shafts, whereby the latter will be supported when the horse leaves the same, substantially as described.

2. A horse detacher comprising trace-engaging hooks adapted to be pivotally mounted on the ends of the swingletree, fastening bars formed on the ends of the said hooks, pivoted catches adapted to be engaged with the inner ends of said bars, a releasing lever pivotally mounted on the clevis of the swingletree, a cross bar on the outer end of said lever adapted to be simultaneously engaged with the inner end of said catches whereby the outer ends of the same are disengaged from the fastening bars of the trace hooks, a flexible element connected to said lever and extending to the vehicle, and a foot-operated treadle connected to said flexible element whereby said lever is operated, substantially as described.

878,813. AUTOMATIC STOP MECHANISM FOR LOOMS. ELMER E. LOVERING, Dracut, and JOSEPH A. PELLETIER, Lowell, Mass. Filed Nov. 23, 1906. Serial No. 344,716.



1. In a loom, a lay, an operating member adjustably mounted on the lay, and adapted to be held in its operative position by the presence of a shuttle in the shuttle-box, said operating member being inoperative when the shuttle-box is empty, and means actuated by said operating member for throwing off the driving power of the loom and automatically and positively locking the lay at the end of its backward movement.

2. In a loom, a lay, an operating member adjustably mounted on the lay, and adapted to be held in its operative position by the presence of a shuttle in the shuttle-box, said operating member being inoperative when the shuttle-box is empty, and means actuated by said operating member for positively locking the lay at the end of its backward movement.

3. In a loom, a lay, an operating member adjustably mounted on the lay, and adapted to be held in its operative position by the presence of a shuttle in the shuttle-box, said operating member being inoperative when the shuttle-box is empty, and means actuated by said operating member for simultaneously stopping the loom, and positively locking the lay at the end of its backward movement.

4. In a loom, a lay, an operating member comprising a binder finger pivoted to the lay, and adapted to be displaced from its normal position by the shuttle binder, and an extension of said finger projecting from the lay, a slide movable in fixed guides, and having a lug which is arranged to be encountered by said extension at the end of the backward movement of the lay when the operating member is displaced from its normal position, and a knock-off lever directly engaged with said slide.

5. In a loom, a lay, an operating member comprising an arm pivoted to the lay, and adapted to be displaced from its normal position by the shuttle binder, and an extension of said arm projecting from the lay, a slide movable in fixed guides, and having a lug which is arranged to be encountered by said extension when the operating member is displaced from its normal position, said slide having means for permitting its depression when the slide is moved by the operating member, a detent member or latch supported by the slide, and adapted to be depressed therewith and a complemental detent member on the lay to be engaged by the first mentioned detent member to lock the lay.

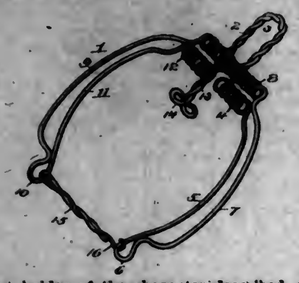
[Claims 6 to 9 not printed in the Gazette.]

878,814. HAT-HOLDER. MATO F. MALONEY, Chicago, Ill. Filed May 27, 1907. Serial No. 375,951.

1. A hat holder made from one continuous piece of resilient wire having inner and outer horizontal side wires, a horizontal supporting member and a number of transverse coils extending at right angles to said side wires and adapted to normally hold them apart and means for detachably connecting the free ends of said wires.

2. A hat holder made from one continuous piece of

wire having side wires, a horizontal supporting member, and a number of coils extending at right angles to said side wires and adapted to exert a pull on their inner ends, and a fastening member adapted to connect the opposite ends of said side wires.

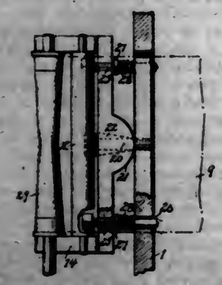


3. A hat holder of the character described, made from a resilient element having outer side wires, a coil between and extending at right angles with the inner ends of said outer side wires, inner side wires running approximately parallel with said outer side wires, oppositely disposed coils between the inner ends of said inner side wires, and a horizontal supporting member.

4. A hat holder made from one continuous piece of wire having horizontal side wires, coils between and exerting a pull on the inner ends of said side wires, and a supporting member extending from two of said coils.

5. A hat holder made from one continuous piece of wire having horizontal side wires, coils between and exerting a pull on the inner ends of said wires, a supporting member extending from two of said coils, and a fastening member adapted to connect the outer ends of said side wires.

878,815. CONVEYER-BELT EVENER. FERDINAND MARTIN, Woonsocket, R. I., assignor, by mesne assignments, to Batten-Hayes Company, Lewiston, Me., a Corporation of Maine. Filed Feb. 15, 1907. Serial No. 357,439.



1. The combination of a pulley or roll around which a belt is adapted to travel, a bracket supported by a fixed stud on a suitable frame, said roll having a bearing in said bracket, and adjusting screws carried by said bracket and engaging openings in said frame.

2. The combination of a pulley or roll around which a belt is adapted to travel, a bracket supported by a fixed stud on a suitable frame, said roll having a bearing in said bracket, adjusting screws carried by said bracket and passing through openings in said frame, and springs surrounding said screws and bearing between the bracket and frame.

878,816. SLEEVE FOR JOINING WIRE ENDS. FRANCIS W. MAXSTADT, Los Angeles, Cal., assignor, by mesne assignments, to Frank B. Cook, Chicago, Ill. Filed Nov. 7, 1904. Serial No. 231,768.

1. A wire connector of the character described, comprising a rectangular piece of sheet metal having its longer edges rolled toward each other into contact with each other so as to form two hollow cylinders opening into each other and separated from one another by the thickness of the two edges of the sheet metal which extend approximately to the plane of the longitudinal axes of the cylinders to hold the wires to be connected apart, the said edges being brazed or soldered together to securely hold them in this position, and the longitudinal center of the piece of sheet metal being approximately flat to compel the material of the connector to stretch tightly clear around each wire and form in between the wires to meet the said edge portions, when the joint is twisted as described, and thereby completely fill all of the space around each wire so as to form a cold-weld between the connector and the wires, clear around the latter.



2. A wire connector adapted to hold a pair of wires, consisting of a piece of sheet metal having its side edges bent toward each other and turned inwardly toward the longitudinal axis of the connector, said edges being brazed together and forming a longitudinal rib for holding separate the contained wires.

3. A wire connector of the character described comprising a tube adapted to receive a pair of wires side by side therein, said tube having a solid continuous metallic wall, and means connected to said wall and adapted to hold the wires apart withing the tube, whereby, upon twisting, the connector forms two completely closed tubes fitting the respective wires.

4. A wire connector of the character described comprising a tube adapted to receive a pair of wires side by side therein, said tube having a solid continuous wall and a rigid inwardly extending longitudinal rib adapted to hold the wires apart within the tube, whereby, upon twisting, the connector forms two completely closed tubes around the respective wires.

5. A wire joint of the character described comprising a tube having a solid continuous wall and a rigid inwardly extending longitudinal rib; and a pair of wires placed side by side in the tube on opposite sides of the said rib which holds the wires apart, the whole being twisted whereby the said tube forms two completely closed tubes fitting the respective wires.

[Claims 6 and 7 not printed in the Gazette.]

878,817. COMPOSITION OF MATTER FOR THE REMOVAL OF INK. ALBERT R. MAYER, New York, N. Y., assignor to Edward G. Soltmann, New York, N. Y. Filed Nov. 15, 1907. Serial No. 402,228.

1. The herein described composition of matter, consisting of a mixture of sweet spirit of niter and peroxid of hydrogen, substantially as described and for the purpose specified.

2. The herein described composition of matter for removing ink from tracing cloth and the like, consisting of a mixture of sweet spirit of niter—three parts, and hydrogen peroxid—one part, substantially as described.

3. The herein described composition of matter for removing ink from tracing cloth and the like, consisting of a mixture of sweet spirit of niter, hydrogen peroxid, and a coloring material of substantially the color of said tracing cloth.

4. The herein described composition of matter for removing ink from tracing cloth, consisting of a mixture of sweet spirit of niter, hydrogen peroxid, and methyl blue, substantially as described.

878,818. PAPER-CARTRIDGE. JACOB J. MILLER and JOHN DREISTADT, Jr., Old Forge, Pa. Filed Sept. 6, 1907. Serial No. 391,671.

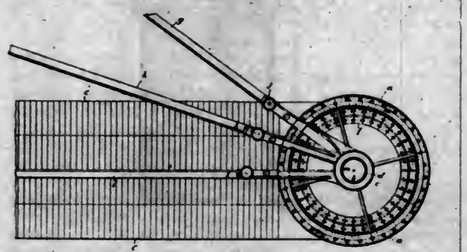
1. As an article of manufacture, a cartridge formed of a strip of material, the seam of which is directed spirally from end to end of the cartridge, and the cartridge then flattened to form ridges, whereby the seams at the opposite sides of the ridges will form brace members.

2. The herein-described cartridge comprising a tubular casing formed from a strip of material, the seams formed by securing the strip of material in the form of a tube being spirally disposed from end to end of the cartridge, said cartridge being compressed to form ridges, whereby the seams will form oppositely disposed braces.



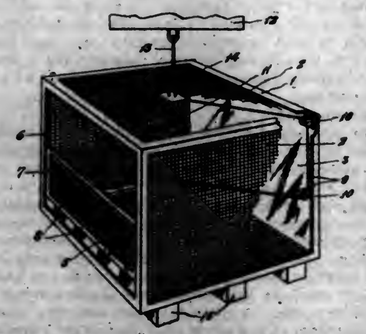
3. A cartridge of the class described comprising an inner and outer casing, the seams of which extend spirally from end to end of the casing, the seams of the inner casing being at a phase difference of substantially one-half the distance between the seams of the outer casing, and means to form the seams into oppositely disposed brace sections.

878,819. INSTRUMENT FOR USE IN NAVIGATION. HERBERT E. MOONEY, Hastings, England. Filed Sept. 19, 1907. Serial No. 393,611.



An instrument by means of which bearings and the like may be laid off on a chart without the aid of calculations or subsidiary instruments, the said instrument comprising a compass ring, pointers, means for supporting the pointers pivotally and centrally on the ring, means for separately clamping the pointers to the ring, lines marked on one of the said pointers and a second compass ring adjustable in a rotary direction with regard to the first ring simultaneously with the marked pointer.

878,820. FISH-TRAP. ANDREW MURDOCH, Montreal, Quebec, Canada. Filed Oct. 4, 1906. Serial No. 337,351.



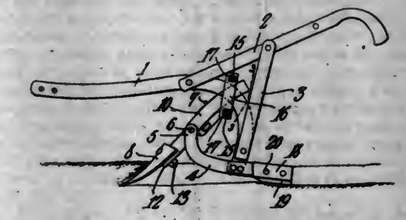
1. In a fish trap, a meshed cage, a mirror at the back thereof, an opening in the upper half of the front, a meshed sliding door adapted to close said opening, springs actuating said door, and a pivoted latch within the cage for maintaining said door in open position.

2. In a fish trap, a meshed cage having the upper half of its front open, a mirror opposite said opening, a slidable spring actuated door adapted to close said opening, a latch normally maintaining said door in open position, and a cord and pulley system actuated by the fish for withdrawing said latch and releasing said door.

3. In a fish trap, a meshed cage, a mirror at the back thereof, a sliding door opposite said mirror, springs adapted to close said door, a pivoted latch within the cage normally maintaining said door open, a cord and pulley system operated by the fish for withdrawing said latch, sinkers on the bottom of said cage, and a float attached to the top of said cage.

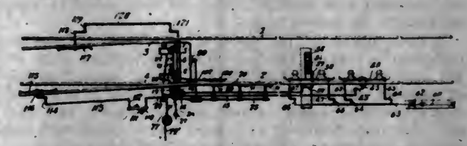
4. In a fish trap, a meshed cage, a mirror at the back thereof, a sliding door opposite said mirror, springs adapted to close said door, a latch pivoted to the bottom of said cage for normally maintaining said door open, a plurality of pulleys within said cage, a cord attached at one end to the latch and passing over said pulleys, a bait clamp attached to the other end of said cord, a plurality of sinkers fixed to the bottom of the cage, and a float connected to the top of said cage.

878,821. PLOW. CHARLES K. MCCASLAND, Alvarado, Tex. Filed May 17, 1907. Serial No. 374,183.



A plow comprising a beam having a downwardly curved rear extremity, an arm rigidly bolted to the lower end of said plow beam and extending forwardly and upwardly in a curve, a mold board standard pivoted to the free end of said arm and extending rearwardly across the plow beam, an adjustable clamp for holding said standard in any position on said beam to which it may be moved, a limb fixed to the lower end of the beam and extending rearwardly in line with the bottom of said arm, and a cutter pivoted on said limb and having a slot for a fastening bolt.

878,822. AUTOMATIC RAILWAY-SWITCH. RICHMOND M. MCGEE and WILLIAM M. JONES, Dallas, Tex. Filed July 1, 1907. Serial No. 371,728.



1. In an automatic railway switch, the combination with a movable switch member, of a shifting bar therefor, means coöperating with said bar for positively locking the switch in open or closed position, normally retracted sliding rails for operating the locking mechanism and shifting the switch, respectively, and a car actuated trip for moving the sliding rails into position to be engaged by the car wheels.

2. In an automatic railway switch, the combination with a movable switch member, of a shifting bar therefor, means coöperating with said bar for positively locking the switch in open or closed position, normally retracted laterally sliding rails for operating the locking mechanism and shifting the switch, respectively, and a car actuated trip for moving the sliding rails into position to be engaged by the car wheels.

3. In an automatic railway switch, the combination with

a movable switch member, of a shifting bar therefor, locking pins for positively holding the switch in open and closed position, laterally sliding rails for operating the locking pins and shifting the switch, respectively, a car actuated trip for moving said sliding rails into position to be engaged by the car wheels, and means for automatically connecting the sliding rails with the bolt operating and switch actuating mechanism, respectively, when said sliding rails are moved to position by the trip and for disconnecting said parts after said sliding rails have been moved by the wheels.

4. In an automatic railway switch, the combination with a movable switch member, of a shifting bar therefor, locking pins for positively holding said bar in both positions of said switch, a normally inoperative sliding rail for operating said locking pins, a normally inoperative sliding rail for actuating the shifting bar, a track trip operated by a detent on a car for moving said sliding rails into operative relation to be engaged by the wheels, and means for automatically connecting and disconnecting said sliding rails and the locking pin operating and switch bar actuating devices.

5. In an automatic railway switch, the combination with a movable switch member, of a sliding bar therefor, locking pins for positively holding said bar in both positions of said switch, a normally inoperative sliding rail for operating said locking pins, a normally inoperative sliding rail for actuating the shifting bar, a track-trip operated by a detent on a car for moving said sliding rails into operative relation to be engaged by the wheels, means for automatically connecting and disconnecting said sliding rails and the locking pin operating and switch bar actuating devices, and a detector bar connected with the locking pin actuating means and adapted to be elevated above the rail head when either of said pins are out of position.

[Claims 6 to 9 not printed in the Gazette.]

878,823. STATIONERY NOVELTY. WILLIAM W. McNAUGHTON, Newark, N. J. Filed July 5, 1907. Serial No. 382,161.



1. In a device of the character described, the combination of a tubular spindle with open ends, end caps having stems adapted to enter the opposite open ends of said spindle and detachably connect therewith by turning in opposite directions and having heads enlarged radially beyond the said spindle, and a split tubular casing inclosing said spindle, having its ends closed by said caps and being free to turn.

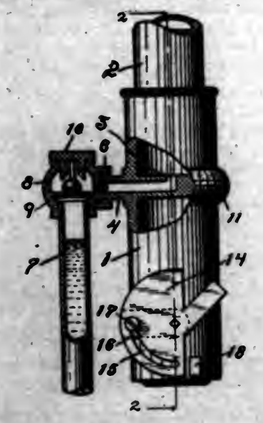
2. In a device of the character described, the combination of a central spindle, radially projecting caps on the opposite ends of said spindle, and a tubular casing of resilient sheet metal with open ends and split for its entire length arranged on said spindle between said end caps and free therefrom to expand and contract with respect to the spindle, its ends being closed by said caps.

3. In a device of the character described, the combination of a central spindle, radially projecting caps on the opposite ends of said spindle, and a cylindrical casing on said spindle between said end caps having at its end edges lugs turned radially inward and adapted to engage the spindle and hold said casing in axial coincidence therewith.

4. In a device of the character described, the combination of a central spindle, radially projecting caps on the opposite ends of said spindle, and a split cylindrical casing of resilient sheet material on said spindle between said ends caps and separate therefrom, said casing having at its ends integral lugs bent radially inward and adapted to engage the spindle.

5. A device of the character described, comprising a hollow spindle having one end interiorly threaded, end caps at the opposite ends of said spindle one having an engraved outer end surface and the other a reduced extension threaded to screw into said threaded end of the spindle, a stick of sealing wax mounted on said last-mentioned cap in endwise alinement with its said reduced extension and adapted to enter the hollow spindle or be removed therefrom with its end-cap, and a cylindrical casing on said spindle between said end caps held thereby against movement longitudinally but free to move otherwise with respect thereto.

878,824. CARBURETER FOR EXPLOSION-ENGINES. WILLIAM H. NEWBROUGH, Lansing, Mich., assignor to The "New Way" Motor Company, Lansing, Mich. Filed Sept. 12, 1907. Serial No. 392,419.



1. In a carbureter, the combination of a carbureter chamber having an air inlet at its lower end and adapted to be connected at its upper end to an explosion engine cylinder; a fuel delivery pipe, provided with an upwardly directed delivery opening, arranged in a horizontal position, through the wall of said carbureter chamber, such delivery pipe having a reducing-plug at its outer end; a fuel supply pipe arranged in a vertical position, a valve casing connecting said fuel supply and delivery pipes; a ball check valve arranged in said valve casing; a butterfly valve arranged in said carbureter chamber below said fuel delivery pipe; a stem for said butterfly valve, arranged through the wall of said carbureter chamber; a hand-piece for said stem, having a curved slot therein; a stop pivotally mounted on said valve stem, a set screw carried by said stop, arranged through said slot in said hand-piece, whereby said stop may be secured in its adjusted position thereon; and a stop on said carbureter chamber, arranged to co-act with said adjustable stop of said hand-piece, all co-acting for the purpose specified.

2. In a carbureter, the combination of a carbureter chamber having an air inlet at its lower end and adapted to be connected at its upper end to an explosion engine cylinder; a fuel delivery pipe, provided with an upwardly directed delivery opening, arranged in a horizontal position through the wall of said carbureter chamber; a fuel supply pipe arranged in a vertical position; a valve casing connecting said fuel supply and delivery pipes; a ball check valve arranged in said valve casing; a butterfly valve arranged in said carbureter chamber below said fuel delivery pipe; a stem for said butterfly valve, arranged through the wall of said carbureter chamber; a hand-piece for said stem, having a curved slot therein; a stop pivotally mounted on said valve stem; a set screw carried by said stop, arranged through said slot in said hand-piece, whereby said stop may be secured in its adjusted position thereon; and a stop on said carbureter chamber, arranged to co-act with said adjustable stop of said hand-piece, all co-acting for the purpose specified.

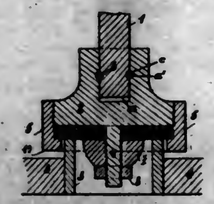
3. In a carbureter, the combination of a carbureter chamber having an air inlet at its lower end and adapted to be connected at its upper end to an explosion engine cylinder; a fuel delivery pipe, provided with an upwardly directed delivery opening, arranged through the wall of said carbureter chamber, such delivery pipe having a reducing-plug at its outer end; a butterfly valve arranged in said carbureter chamber below said fuel delivery pipe; a stem for said butterfly valve, arranged through the wall of said carbureter chamber; a hand-piece for said stem, having a curved slot therein; a stop pivotally mounted on said valve stem; a set screw carried by said stop, arranged through said slot in said hand-piece, whereby said stop may be secured in its adjusted position thereon; and a stop on said carbureter chamber, arranged to co-act with said adjustable stop of said hand-piece, all co-acting substantially as described and for the purpose specified.

4. In a carbureter, the combination of a carbureter chamber having an air inlet at its lower end and adapted to be connected at its upper end to an explosion engine cylinder; a fuel delivery pipe, provided with an upwardly directed delivery opening, arranged through the wall of said carbureter chamber; a butterfly valve arranged in said carbureter chamber below said fuel delivery pipe; a stem for said butterfly valve, arranged through the wall of said carbureter chamber; a hand-piece for said stem, having a curved slot therein; a stop pivotally mounted on said valve stem; a set screw carried by said stop, arranged through said slot in said hand-piece, whereby said stop may be secured in its adjusted position thereon; and a stop on said carbureter chamber, arranged to co-act with said adjustable stop of said hand-piece, all co-acting for the purpose specified.

5. In a carbureter, the combination of a carbureter chamber having an air inlet at its lower end and adapted to be connected at its upper end to an explosion engine cylinder; a fuel delivery pipe, provided with an upwardly directed delivery opening, arranged in a horizontal position through the wall of said carbureter chamber, such delivery pipe having a reducing-plug at its outer end; a fuel supply pipe arranged in a vertical position; a valve casing connecting said fuel supply and delivery pipes; a ball check valve arranged in said valve casing; a butterfly valve arranged in said carbureter chamber below said fuel delivery pipe; and an adjustable stop for said valve, all co-acting for the purpose specified.

[Claim 6 not printed in the Gazette.]

878,825. VALVE. JEAN G. RANDAXHE, Liege, Belgium. Filed Jan. 2, 1906. Serial No. 294,832.

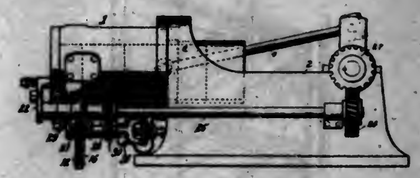


In a valve, the combination with a seat, of a valve head, a flanged socket adjustably mounted thereon, and a plurality of thin flat metal disks supported by the flange of the socket and of smaller diameter than the valve head thereby affording an annular space between their periphery and the inner periphery of the socket to allow free expansion of the disks under all conditions of working, and means to centrally secure the disks to the valve head.

878,826. GAS-ENGINE GOVERNOR. JOHN V. RICE, Jr., Bordentown, N. J. Filed June 12, 1906. Serial No. 321,309.

1. In a gas engine, the combination with the exhaust valve and its stem, of a lever provided with a perforation,

one arm of which lever bears against said stem, a shaft, a cam thereon which acts upon and vibrates said lever, and a governor device having a pin for engaging the perforation in said lever and holding it temporarily stationary, substantially as described.



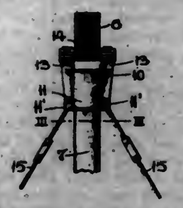
2. In a gas engine, the combination with an exhaust valve and its stem, of the valve opening lever, provided with a perforation and supported on a bearing likewise having a perforation that coincides at times with the lever perforation, one arm of which lever bears against the end of said stem, a cam for vibrating said lever, and a governor device having a sliding pin adapted to enter the perforation in the bearing and also the perforation in the lever and hold the latter temporarily stationary.

3. In a gas engine, the combination with the exhaust valve, of a valve opening lever provided with a perforation and the governor device consisting of a movable pin, centrifugally acting arms and a yielding connection between the said arms and the pin.

4. In a gas engine, the combination with the exhaust valve, of a valve opening lever provided with a perforation and a governor device for controlling said lever, consisting of a sliding pin adapted to enter a perforation in the lever, centrifugal arms, and a double spring device between the said arms and the pin.

5. In a gas engine, the combination with the exhaust valve, of a valve opening lever, and a governor device the same consisting of a pin adapted to enter a perforation in the lever, a hollow stud containing springs of different tension acting on said pin, centrifugal arms, and a rod actuated by said arms and bearing on the springs, substantially as described.

878,827. WELL-DRILLING MACHINE. LEROY K. ROBBINS, St. Louis, Mo. Filed Nov. 9, 1907. Serial No. 401,391.

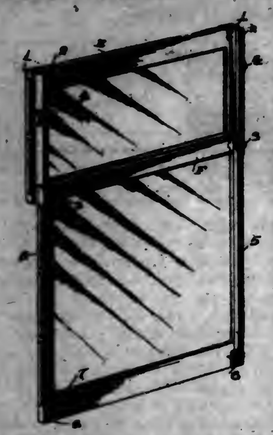


1. In a well drilling machine, the combination of a running gear, a samson post mounted upon said running gear, a head fitted to the upper end of said post and having integral therewith gudgeon bearing posts, and a walking beam journaled to said gudgeon bearing posts, substantially as set forth.

2. In a well drilling machine, the combination of a running gear, a post mounted upon said running gear, a head having a sleeve fitted to said post and provided with brace lugs formed integral therewith, braces connected to said lugs securing said head to said running gear, and a walking beam supported by said head, substantially as set forth.

3. In a well drilling machine, the combination of a running gear, a samson post mounted upon said running gear, a head having a sleeve fitted to the upper end of said post and provided internally with a rib arranged to rest upon the upper end of said post, and a walking beam supported by said head, substantially as set forth.

878,828. SEMICONVERTIBLE CAR. EDWARD T. ROBINSON, St. Louis, Mo., assignor to St. Louis Car Company, St. Louis, Mo., a Corporation. Filed July 29, 1907. Serial No. 386,022.



1. In a semi-convertible car, the combination of window posts provided with runways, an upper sash, runners fixed to said upper sash adapted to operate in the runways in said posts and having flanged wings parallel with the runners and providing channels, and a lower sash arranged to operate in the runways of said posts and movable into the channels formed by the flanged wings of said upper sash runners, substantially as set forth.

2. In a semi-convertible car, the combination of window posts provided with runways, an upper sash, runners fixed to said upper sash adapted to operate in the runways in said posts and having flanged wings, a lower sash, and runners fixed to said lower sash and adapted to operate in the runways in said posts and movable into the flanged wings of said upper sash runners, substantially as set forth.

3. In a semi-convertible car, the combination of window posts provided with runways, runners fixed to said upper sash and having flanged wings provided with stop lips, a lower sash, runners operable in the runways of said posts and movable into the flanged wings of said upper sash runners, and latches carried by said lower sash arranged for engagement with the stop lips of said upper sash runners when the lower sash is elevated into the flanged wings of said runners, substantially as set forth.

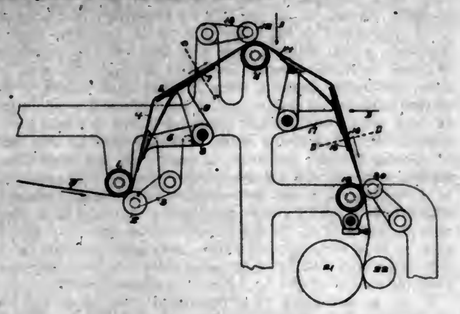
4. In a semi-convertible car, the combination of window posts provided with runways, an upper sash, runners fixed to said upper sash and having flanged wings provided with keepers, a lower sash runners fixed to said lower sash and operable in the runways in said posts and movable into the flanged wings of said upper sash runners, and latches carried by said lower sash and arranged for engagement with the keepers of said upper sash runners, substantially as set forth.

5. In a semi-convertible car, the combination of window posts provided with runways, a sash situated between said posts, and runners fixed to said sash and having apertured rear walls through which the stiles of said sash project, substantially as set forth.

[Claim 6 not printed in the Gazette.]

878,829. FOLDER. OSCAR ROSSEN, New York, N. Y., assignor to Robert Hoe, New York, N. Y. Filed May 22, 1905. Serial No. 261,517.

1. The combination with a folder operating to form a side fold in a web running thereover one ply of the folded product thus formed remaining undeflected during the folding operation and the fold being parallel with the run of the web, of a second folder operating to form a second side fold by turning over the already folded side of the web, a ply of the folded product thus formed remaining undeflected during the folding operation and the fold being also parallel to the run of the web.



2. The combination with a folder operating to form a side fold in a web running thereover, one ply of the folded product thus formed remaining undeflected during the folding operation, of folders for forming side folds by turning over the sides of the web, a ply of the folded product thus formed remaining undeflected during the folding operation and the folds formed being parallel to the run of the web.

3. The combination with folders operating to form side folds in a web running thereover, said folds being parallel to the run of the web, of a folder forming a second fold in the web, said fold being also parallel to the run of the web.

4. The combination with folders operating to form side folds in a web running thereover, said folds being parallel to the run of the web, of a folder operating to form second side folds in the web, said folds being also parallel to the run of the web.

878,830. METAL WINDOW-SASH. ALBERT H. SISSON, St. Louis, Mo., assignor to St. Louis Car Company, St. Louis, Mo., a Corporation. Filed Nov. 15, 1906, Serial No. 343,493. Renewed July 22, 1907. Serial No. 384,918. rial No. 384,918.



1. A metal window sash consisting of stiles and rails of U-shape in cross section, connecting blocks seated in said stiles and rails and having recesses in their sides adapted to receive portions of said stiles and rails, and means for uniting said stiles and rails to said blocks, substantially as set forth.

2. A metal window sash consisting of stiles and rails of U-shape in cross section, connecting blocks seated in said stiles and rails and having recesses in their sides adapted to receive portions of said stiles and rails, and binding bolts extending through said stiles and rails and said connecting blocks, substantially as set forth.

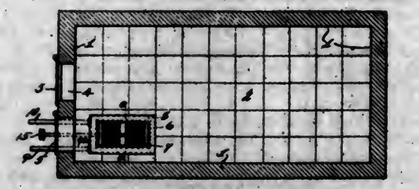
3. In a metal window sash, the combination of stiles and rails of U-shape in cross section, connecting blocks seated in said stiles and rails and having recesses in their sides and bolt holes extending therethrough in line with said recesses, said recesses being adapted to receive portions of said stiles and rails, and binding bolts extending through said stiles and rails and said connecting blocks; said binding bolts being each provided at one end with a head and having a nut at the other end adapted to bear against indented portions of the stiles and rails at opposite sides of said connecting blocks, substantially as set forth.

4. In a metal window sash, the combination of sheet metal stiles and rails of U-shape in cross section, the wings of which terminate at their inner ends in clamping arms, cushion strips seated between said clamping arms, and means for binding said arms to said cushion strips, substantially as set forth.

5. In a metal window sash, the combination of sheet metal stiles and rails of U-shape in cross section, the wings of which terminate at their inner ends in clamping arms, cushion strips seated between said clamping arms, clamping strips seated against said clamping arms and against said cushion strips, and means for connecting said clamping strips to each other, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

878,831. OVEN-GRATE. ISAAC SLAPO, New York, N. Y. Filed Aug. 9, 1907. Serial No. 387,926.



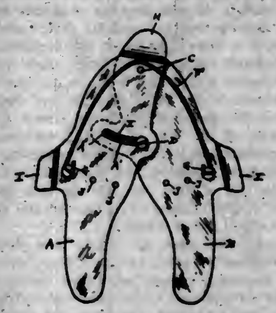
1. In combination with a hollow grate frame and a grate fitting therein and provided with trunnions, sockets having seats on their under faces integral with said frame and disposed on the inner faces of the sides thereof and receiving said grate trunnions, L-shaped brackets constituting combined supports for the grate trunnions and abutments engaging the grate and the frame sides and limiting the movement of the grate, the bases of said brackets engaging the under face of the frame, and bolts for securing said bases to said frame.

2. In combination with a hollow grate frame and a grate fitting therein and provided with trunnions, sockets having seats on their under faces integral with the inner faces of the frame sides and receiving the grate trunnions, and elements for supporting the grate trunnions and at the same time serving as abutments which engage the grate sides and limit the movement of the grate, said elements having seats on their top ends engaging said grate trunnions and each having a part which extends below the under side of the grate, and means for securing each of said parts to the grate frame.

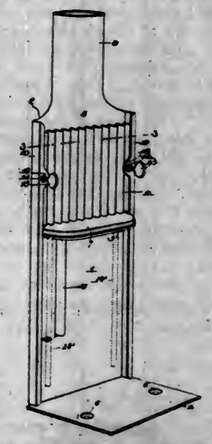
878,832. HOOF-PAD HOLDER. ADAM M. SMITH, Whitewater, Wis. Filed May 1, 1907. Serial No. 371,382.

1. A hoof pad holder of the class described comprising two members provided with laterally projecting lugs and means for pivotally connecting together said members at one end, one of said members being provided with a plurality of apertures for the reception of a connecting screw, a screw rigidly affixed at one end in one of said apertures the opposite member being provided with an elongated slot for the reception of said screw, and a bow spring connected at its respective ends with said pivotally connected members.

2. A hoof pad holder of the class described comprising two members provided with laterally projecting lugs and means for pivotally connecting together said members at one end, one of said members being provided with a plurality of apertures for the reception of a connecting screw, a screw rigidly affixed at one end in one of said apertures, the opposite member being provided with an elongated slot for the reception of said screw, and a bow spring adjustably connected at its respective ends with said pivotally connected members.

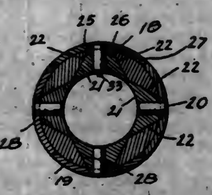


878,833. FRUIT AND VEGETABLE CUTTER. SAMUEL D. SMITHWICK, Washington, D. C. Filed May 22, 1907. Serial No. 375,062.



In a vegetable cutter, the combination with a base having a longitudinal slot formed therein, of a knife carrier having a back plate provided with flanges, a knife held between the flanges, fillers interposed between the knife and the back plate of the carrier, a guiding rib secured to the back plate and slidably mounted in said slot, and securing devices carried by the flanges to hold the knife in adjusted position.

878,834. PISTON-VALVE. WILLIAM A. STAMM, Macon, Ohio. Filed May 8, 1907. Serial No. 372,546.



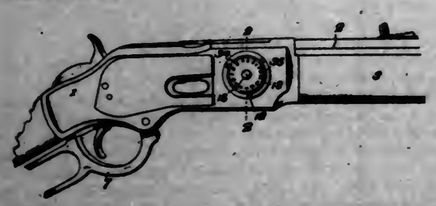
1. A piston valve comprising a core, annular shoulders formed upon the core at opposite sides of the middle thereof, a split resilient ring embracing the core at each end thereof and outwardly of the shoulders, and packings em-

bracing the rings, said packings being built up of packing segments which are disposed alternately with respect to each other, certain of said packing segments being wedge-shaped and having wear extensions which are concentric with the outer or convex faces of the segments, the other of said segments being provided on their convex faces with ribs between which the wear extensions of the first mentioned segments are received, the last mentioned segments having two-sided under faces which contact with the wear faces of the first mentioned segments, whereby the last mentioned segments will be expanded due to the action of the split resilient ring upon the first mentioned segments, the end of said ring at one side thereof being notched, and a lug formed upon one of the packing segments and seated in said notches.

2. A packing ring made up of two sets of packing segments, the segments of the two sets being disposed alternately, the segments of one set being wedge-shaped and having wear extensions which are concentric with the outer convex faces thereof, the segments of the other set being provided upon their convex faces with ribs between which the wear extensions of the first mentioned segments are received, the last mentioned segments having two-sided under faces which contact with the wedge-shaped faces of the first mentioned segments.

3. A piston valve comprising a core, annular shoulders formed upon the core at opposite sides of the middle thereof, a split resilient ring embracing the core at each end thereof and outwardly of the shoulders, and packings embracing the rings, said packings being built up of packing segments which are disposed alternately with respect to each other, certain of said packing segments being wedge-shaped and having wear extensions which are concentric with the outer or convex faces of the segments, the other of said segments being provided upon their convex faces with ribs between which the wear extensions of the first mentioned segments are received, the last mentioned segments having two-sided under faces which contact with the wedge faces of the first mentioned segments whereby the last mentioned segments will be expanded due to the action of the split resilient ring upon the first mentioned segments.

878,835. AUTOMATIC REGISTERING DEVICE. RICHARD TANNER, Lincoln, Nebr. Filed Mar. 23, 1907. Serial No. 364,120.



1. The combination with a fire arm, having a magazine, a loading block and means to raise and lower said loading block; of a dial, means to mount said dial on the fire arm and a movable connection extending from said dial and in the path of said loading block, whereby the dial will be rotated a pre-determined distance with each upward movement of the loading block.

2. The combination with a firearm, having a magazine, loading block and means to operate said loading block; of a dial, means to mount said dial on the firearm, a plunger, one end of which is in the path of said loading block and means engaged by the opposite end of said plunger to rotate said dial a predetermined distance in one direction.

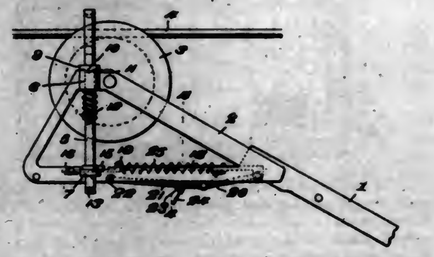
3. The combination with a firearm having a loading block and means to raise and lower said block; of a dial having a plurality of indicating characters on the face thereof, a housing for said dial, means to rotatably secure said dial to the firearm, a ratchet wheel integral with said dial and means interposed between said ratchet wheel and loading block to rotate said dial a predetermined distance when the loading block is raised.

4. The combination with a firearm having a loading block, and means to operate the same; of a dial having a plurality of designating characters thereon, a casing for said dial, means to rotatably mount the dial upon the firearm, a ratchet wheel integral with said dial, a plunger, one end of which is disposed in the path of the loading block, a pitman slidably mounted in said casing and adapted to be engaged by the opposite end of said plunger and means between the free end of said pitman and the ratchet wheel to rotate said dial a predetermined distance when the plunger is directed into engagement with the pitman.

5. The combination with a firearm; of a dial, a casing for said dial, means to rotatably mount the dial in the casing, a ratchet wheel on said dial, a plunger, means between one end of said plunger and the ratchet wheel to rotate said ratchet wheel and dial a predetermined distance and means carried by the firearm to engage said plunger and move the same longitudinally whereby the means between the plunger and ratchet wheel will be operated and the dial rotated.

[Claims 6 and 7 not printed in the Gazette.]

878,836. SECURING DEVICE FOR TROLLEYS. EBERLE D. TRICKEY, Blanchester, Ohio. Filed Apr. 17, 1907. Serial No. 368,661.



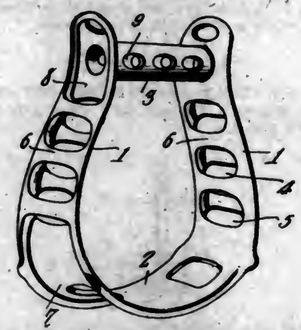
1. The herein described securing device for trolleys, comprising the combination with a trolley wheel and a frame therefor; of a pair of shafts rotatably and longitudinally movably mounted on said frame, horizontally disposed arms at the upper ends of the shafts, means on said shafts to engage notches in the frame to normally hold the shafts in a fixed position, fingers adjacent the lower ends of said shafts, and means to engage said fingers and cause the shafts to partially rotate, whereby the arms on the shafts will be separated.

2. The herein described securing means for trolleys, comprising a frame, bearings on said frame, a pair of shafts rotatably mounted in said bearings, horizontally disposed arms at the upper ends of said shafts, means to hold said arms normally suspended over the trolley, fingers adjacent the lower ends of said shafts, bolts extending through said shafts, a tension spring connecting said bolts, whereby the shafts will be returned to their initial positions, and means carried by the frame to engage said fingers and rotate the shafts.

3. The herein described means for securing a trolley wheel to a feed wire, comprising the combination with a frame, having shafts thereon, arms at the upper ends of said shafts adapted to normally extend over the trolley and fingers adjacent the lower ends of said shafts; of a plunger, a shoulder on said plunger adapted to engage said fingers, a pitman secured to one end of said plunger, links at the opposite end of said pitman, and means to direct a downward pull on said links and pitman, whereby the plunger will be moved longitudinally and the shoulder into engagement with said fingers.

4. The herein described means for securing a trolley to a feed wire, comprising a pair of shafts, horizontally disposed fingers at the upper ends of said shafts and normally extending towards each other, a supporting frame for said shafts, said frame having notches therein, a collar for each of said shafts, a lug on said collar adapted to normally rest in said notches, means to normally hold said lugs seated in said notches, and additional means to rotate said shafts, whereby the arms will be separated.

878,837. SADDLE-STIRRUP. EPHRAIM M. TURNER, Okawville, Ill. Filed May 28, 1907. Serial No. 376,156.

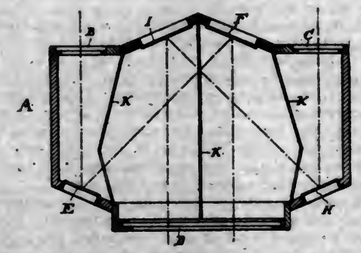


1. A stirrup having sides provided with internal lace-receiving passages, and spaced internal and external lace-holding bars extending from edge to edge of the sides.

2. A stirrup having sides provided with internal lace-receiving passages, and lateral orifices opening into the passages and forming internal and external lace-holding bars.

3. A stirrup having sides provided with internal and external lace-receiving passages and lateral orifices opening into the passages, a tread provided with a lace-receiving channel, and a longitudinally channeled supporting bar connected with the sides.

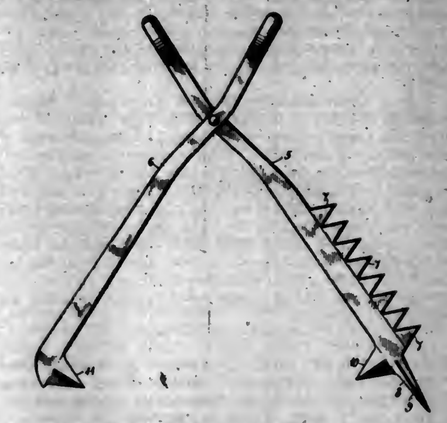
878,838. STEREOSCOPIC CAMERA. MAURICE VINCENT, Geneva, Switzerland. Filed July 15, 1905. Serial No. 269,871.



1. In a stereoscopic camera, the combination with the box and object glasses, of reflectors and means for adjusting said reflectors to change the planes at which they lie in said box, comprising springs and adjusting screws opposed to said springs, said springs holding said reflectors against the inner ends of said plate.

2. In a stereoscopic camera, the combination with the camera box, the sides of the box being formed of bellows, interior screens in the box and having light openings at the front, of a pair of oppositely inclined reflectors adapted to direct the light rays from one reflector across those from the other reflector, means for tilting the reflectors, a pair of reflectors at the front of said box adapted to receive the light rays from the first said reflectors and direct them in parallel lines to the back of said box, means to hold a sensitive plate at said back of the box, in position to receive the transposed light rays, the interior screens having rigid portions with openings disposed to allow the passage of light rays when the bellows are extended, and the remaining portions of the screens being flexible to allow collapsing of the camera box.

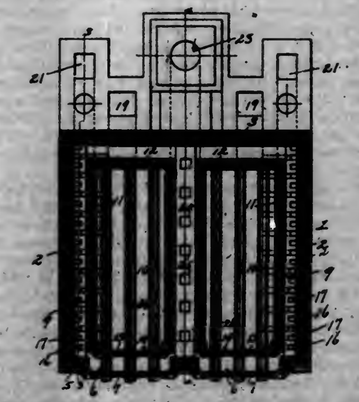
878,839. ICE-TONGS. GEORGE A. WALKER, Jet, Okla. Filed Sept. 21, 1907. Serial No. 393,088.



1. The combination, in an ice implement of a pair of pivoted arms, a series of saw-teeth formed upon the outer edge of one of said arms, a longitudinally-extending tapered spike formed on the outer end of said arm, a laterally-extending tooth formed on the inner edge of said arm adjacent the base of said spike, and a laterally-projecting tooth formed on the inner edge of the other arm directly opposite the last-mentioned tooth and extending towards the same.

2. The combination, in an ice implement, of a pair of pivoted arms, the operating portion of each arm lying in a straight line, a longitudinally extending spike formed on the outer end of one of said arms and provided with a series of longitudinal cutting edges, a series of saw teeth formed upon the outer edge of said arm, a laterally extending tooth formed on the inner edge of said arm adjacent the base of said spike, and a laterally-projecting tooth formed on the inner edge of the other arm directly opposite the last-mentioned tooth and extending towards the same.

878,840. METAL-ANNEALING FURNACE. RICHARD H. WARD, Youngstown, Ohio. Filed Jan. 29, 1907. Serial No. 354,652.



1. In a furnace for annealing metal, a main outer furnace casing closed upon all sides and provided with a pair of front door covered openings, a pair of inner closed annealing ovens having their walls built directly on the main inside floor of the outer casing and spaced on all sides from the top, sides, and ends of the latter, said ovens

being also arranged in spaced relation to each other with a clear unobstructed space therebetween, and means for supplying heat to the outer side of the two ovens from the floor of the casing and circulating the heat over the tops of the ovens and downward through the unobstructed space between the ovens to the center of the main outer casing.

2. In a metal annealing furnace, a main outer furnace casing provided with a single interior heat chamber, and along the opposite inner sides thereof having side rows of alternating air and burner holes respectively communicating with separate flues, said furnace casing being further provided longitudinally and centrally thereof at the floor line with draft outlets, and a pair of inner closed ovens built permanently within the outer casing directly on the floor thereof and spaced from each other with an unobstructed space therebetween, and also spaced from the top and walls of the outer casing, the outer wall of each oven arranged along side of a side row of said alternating air and burner holes.

878,841. SAFETY-RAZOR. ALONZO A. WARNER, New Britain, Conn., assignor to Landers, Frary and Clark, New Britain, Conn., a Corporation of Connecticut. Filed Aug. 1, 1907. Serial No. 386,548.



1. In a razor, the combination of a flat sided blade having at its upper outer corner a recess with an inwardly and downwardly slanting shoulder and at about the middle of its width on its opposite end, an outwardly facing shoulder 20, and an upwardly inclined end face above the said shoulder, with a slotted back having near its upper outer end an upwardly and inwardly extended holding shoulder fixed therein, and a spring actuated latch pivoted by its upper end within the upper part of the said slotted back, and having an upwardly facing holding shoulder 19 near the lower outer end of the said latch and below its pivot, the said shoulders at the upper outer corner of the said blade and back being fitted to engage each other, and the said latch being fitted to engage the holding shoulder 20 and upwardly inclined end face at the opposite end of the said blade.

2. In a razor, the combination of a back and tang, with the back in the form of a slotted tube, a plug having a beveled end fixed within the outer end of the said tube, a latch pivoted within the tang near its junction with the back, the said latch having a holding shoulder and a projecting handle, a spring fixed within the tang and pressing upon the said latch for holding it in engagement, and a blade fitted to the said slotted tube and having at its outer end a holding shoulder for engaging the beveled end of the said plug and having at its heel end a holding shoulder for being engaged by the holding shoulder of the said latch.

3. In a razor, the combination of the blade and back with a guard having on one broad side a flat face for resting upon one broad side of the blade, and on its opposite broad side a series of longitudinal grooves, and a guard holder in the form of a spring clamp having a longitudinal rib engaging one of the grooves in the said series, for adjustably holding the guard on the blade.

4. In a razor, the combination of the blade and a ribbed back with a flat guard adapted to rest upon one of the broad sides of the blade, and a separately formed guard holder having a tubular back for fitting snugly the ribbed back of the blade and definitely locating the guard holder relatively to the width of the blade and two clamping members extending from the tubular back of the said guard holder, one of which members presses upon one broad side of the blade and the other of which presses upon the guard and in turn presses the guard upon the other broad side of the blade.

5. In a razor, the combination of a blade and a ribbed back with a flat guard adapted to rest upon one of the broad sides of the blade, a resilient guard holder having a tubular back for fitting snugly the ribbed back of the razor, the said guard holder having two clamping members one of which presses upon one broad side of the blade and the other of which presses upon the guard and in turn presses the guard upon the other broad side of the blade, and means for holding the said guard at varying positions relatively to the said two clamping members.

878,842. PRINTER'S REGISTERING DEVICE. WALLACE S. WARNOCK, Chicago, Ill. Filed July 20, 1907. Serial No. 384,809.



1. A registering device including a block separably contained in the plate formation, a traveling hook structure movable back and forth therein, a rack, and operating gearing carried by the traveling hook structure in gear with the rack, the point of engagement of the gearing with the rack being separated longitudinally of the block with respect to the jaw of the traveling hook structure, said jaw engaging the top of the block.

2. A registering device including a block separably contained in the plate foundation, a traveling hook structure movable back and forth therein, a rack, and operating gearing carried by the traveling hook structure in gear with the rack, the point of engagement of the gearing with the rack being separated longitudinally of the block with respect to the jaw of the traveling hook structure, said jaw engaging the top of the block, the rack being interposed between that portion of the gearing engaging the same and the jaw.

3. A registering device including a block separably contained in the plate foundation, a traveling hook structure movable back and forth therein, a rack, and operating gearing carried by the traveling hook structure in gear with the rack, the point of engagement of the gearing with the rack being separated longitudinally of the block with respect to the jaw of the traveling hook structure, said jaw engaging the top of the block, the rack being at the top of the block and interposed between that portion of the gearing engaging the same and the jaw.

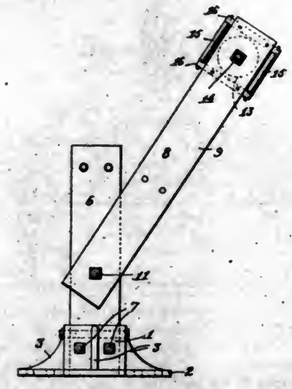
4. A registering device including a block separably contained in the plate foundation, a traveling hook structure movable back and forth therein, two racks, one upon each longitudinal side of the block and at the top thereof, and operating gearing carried by the traveling hook structure and in engagement with said racks, the point of engagement of the gearing with the racks being separated longitudinally of the block with respect to the jaw of the traveling hook structure, said jaw engaging the top of the block.

5. A registering device including a block separably contained in the plate foundation, a traveling hook structure movable back and forth therein, two racks, one upon each longitudinal side of the block and at the top thereof, and operating gearing carried by the traveling hook structure and in engagement with said racks, the point of engagement of the gearing with the racks being separated longitudinally of the block with respect to the jaw of the traveling hook structure, said jaw engaging the top of the block, the racks being interposed between that portion of the gearing engaging the same and the jaw.

[Claims 6 to 20 not printed in the Gazette.]

878,843. [WITHDRAWN.]

878,844. HOISTING APPARATUS. THOMAS B. WEBSTER, Baltimore, Md. Filed Aug. 9, 1907. Serial No. 387,883.



1. In a rope support for hoisting apparatus, a fixed post, a movable member of sheet metal shaped to form parallel legs with a recess at their upper ends and mounted astride of said post, a bolt pivoting said legs to said post, removable means for securing said legs to said post when the movable member is upright, and a sheave journaled in the recess of said movable member.

2. In a rope support for hoisting apparatus, a base comprising a rectangular body part and flanges projecting from the same and having a rectangular socket, a fixed member secured in said socket, a movable member comprising parallel legs straddling said fixed member and pivoted at their lower ends to the lower part of said fixed member, means for securing said movable member when in an upright position to the upper part of said fixed member, and a sheave journaled in the upper end of said movable member.

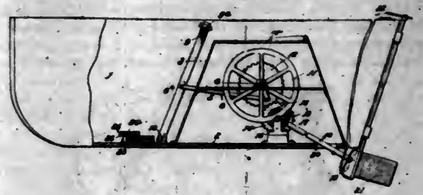
3. In a rope support for hoisting apparatus, a fixed member, a movable member comprising parallel legs straddling said fixed member and pivoted at their lower ends to the lower part of said fixed member, means for securing said movable member in an upright position on said fixed member, a sheave journaled in the upper end of said movable member, and antifriction rolls mounted on said movable member at the ends and on opposite sides of said sheave.

4. In a rope support for hoisting apparatus, a fixed post, a movable member of sheet metal shaped to form parallel legs with a recess at their upper ends and mounted to straddle said post, a bolt pivoting the lower ends of said legs to the lower part of said post, removable means for securing said legs to the upper part of said post when the movable member is upright, and a sheave journaled in the recess of said movable member.

5. In a rope support for hoisting apparatus, a fixed post, a movable member of sheet metal shaped to form parallel legs with a recess at their upper ends and mounted to straddle said post, a bolt pivoting the lower ends of said legs to the lower part of said post, a removable bolt for securing said legs to the upper part of said post when the movable member is upright, a sheave journaled in the recess of said movable member, and an antifriction roll mounted on said movable member adjacent to an end of said sheave.

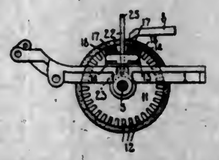
878,845. HAND-POWER PROPELLER. JOHN C. WEIR, Vidalia, La. Filed May 31, 1907. Serial No. 376,519.

Hand propelling mechanism for boats, consisting of a platform adapted to be supported within the boat, side frames mounted on the rear end of said platform, a seat supported on said frames, longitudinal braces secured to the frames and provided with journal bearings, a transversely extending crank shaft journaled in said bearings, a lever socket secured to the platform in front of the seat, a hand lever fulcrumed at its lower end in said socket to rock in a vertical plane to and from said seat, a pitman connecting said crank with the hand lever, a transversely extending counter-shaft journaled on the platform in the rear of the crank shaft, and provided with a spur pinion, a spur gear wheel on the crank shaft meshing with said



pinion, and a beveled pinion on said counter shaft in combination with the propeller shaft, of the boat, said shaft being provided with a beveled pinion meshing with the bevel pinion of the counter shaft, the platform being formed on its rear end with an opening adapted to permit of the passage of the said propeller shaft, substantially as shown and described.

878,846. TYPE-WRITING MACHINE. HERBERT R. WHITE, Lowell, Mass., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y., a Corporation of New York. Filed Nov. 1, 1906. Serial No. 341,595.



1. In a typewriting machine, the combination of a platen, line spacing mechanism, and means for writing above and below a line determined by said line spacing mechanism, said means comprising a toothed wheel connected with the platen, and a hand actuated pawl cooperative with said toothed wheel to turn it in either direction a predetermined extent.

2. In a typewriting machine, the combination of a platen, line spacing mechanism, means for writing above and below a line determined by said line spacing mechanism, said means comprising a toothed wheel connected with the platen, and a hand actuated pawl coöperative with said toothed wheel to turn it in either direction a predetermined extent; and means for centering said pawl when it is out of engagement with said toothed wheel.

3. In a typewriting machine, the combination of a platen, line spacing mechanism, and means for writing above or below a line determined by said line spacing mechanism, said means comprising a toothed wheel connected with the platen, a hand actuated pawl coöperative with said toothed wheel to turn it a predetermined extent, and adjustable means for determining the extent to which the wheel may be turned by said pawl.

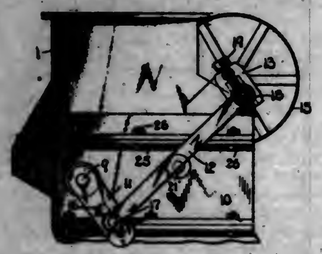
4. In a typewriting machine, the combination of a platen, line spacing mechanism, and means for writing above and below a line determined by said line spacing mechanism, said means comprising a toothed wheel connected with the platen, a hand actuated pawl coöperative with said toothed wheel to turn it in either direction a predetermined extent, and adjustable means for determining the extent to which the wheel may be turned by said pawl.

5. In a typewriting machine, the combination of a platen, line spacing mechanism, and means for writing above and below a line determined by said line spacing mechanism, said means comprising a toothed wheel connected with the platen, a carrier pivoted to turn around

the axis of the platen a predetermined extent, and a pawl pivoted to said carrier and adapted to be thrown into and out of engagement with said toothed wheel and to turn the carrier, toothed wheel and platen a predetermined extent in either direction.

[Claims 6 to 16 not printed in the Gazette.]

878,847. FEED-REGULATOR. MILTON F. WILLIAMS, St. Louis, Mo., assignor to Williams Patent Crusher & Pulverizer Company, St. Louis, Mo., a Corporation of Missouri. Filed July 15, 1907. Serial No. 383,782.



1. A feeder comprising a hopper, a reciprocating member forming the bottom of said hopper, an inclined slide forming a portion of one wall of the hopper and having its lower edge separated from the reciprocating member to form a discharge opening, means for adjusting said slide, oscillating toothed segments that mesh with racks on the reciprocating member, a rock shaft to which said segments are secured, a driven shaft, arms on the rock shaft and on the driven shaft, and a link having its opposite ends adjustably connected to said arms; substantially as described.

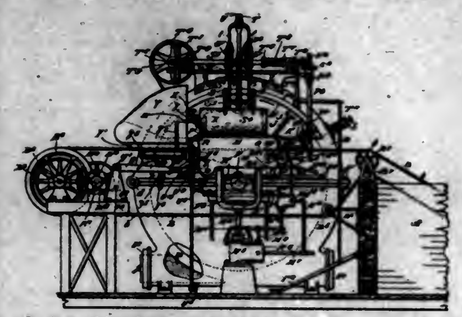
2. A feeder comprising a hopper, a reciprocating member forming the bottom of said hopper, angle irons secured to said member and having their vertical legs projecting upwardly outside of the side walls of the hopper, supporting rollers on which the horizontal legs of said angles bear, and flanges on the rollers for engaging the vertical legs of said angles to prevent lateral movement of the reciprocating member; substantially as described.

3. A feeder comprising a hopper provided at the lower edge portions of its side walls with laterally extending Z-shaped members, a rectangular-shaped casting to which said Z-shaped members are secured, a reciprocating member forming the bottom of the hopper and provided at its side edges with flanges which project upwardly into guideways formed by the Z-shaped members and the side walls of the hopper, an adjustable inclined slide forming the lower portion of the rear wall of the hopper, a rock shaft mounted in the walls of the casting and provided with toothed segments that mesh with racks on the underneath side of the reciprocating member, means for actuating said rock shaft, and means for varying the degree of movement imparted to said shaft; substantially as described.

878,848. MACHINE FOR REMOVING BARK FROM LOGS. GEORGE S. WITHAM, Jr., Sandy Hill, N. Y., assignor of one-half to Geo. S. Witham, Sr., Sandy Hill, N. Y. Filed July 27, 1907. Serial No. 385,856.

1. A machine for removing bark from logs comprising a cutter, a carrier for conveying the bark covered logs toward the cutter, a table for automatically removing a log from the carrier and for supporting it while being cut, and means for automatically bringing into operation mechanism for pressing the log against the cutter and for turning it while being so supported and pressed.

2. A machine for removing bark from logs, comprising a cutter, a carrier for conveying bark covered logs toward the cutter, a table for removing a log from the carrier, power operated mechanism for raising and lowering the table, power operated mechanism which yieldingly presses the log against the cutter while being cut and which turns it during the cutting operation, and means for bringing into operation said log pressing and turning means after the log has been removed from the carrier.



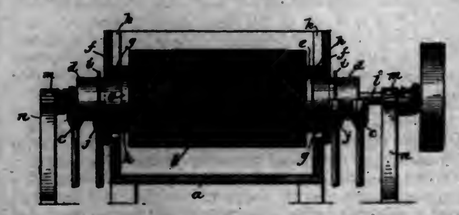
3. A machine for removing bark from logs, comprising a cutter, a carrier for conveying bark covered logs toward the cutter, a table for removing a log from the carrier, means for moving the log into engagement with the cutter, for pressing it against the cutter and for turning it while being cut, power driven means for bringing into operation said log moving pressing and turning means, means for causing the barked log to be delivered to the carrier and for causing the latter to resume its movement and carry the barked log away, and means under the control of the attendant for regulating the pressure of the log turning means on the log during the progress of the cutting operation.

4. A machine for removing bark from logs comprising a vertically arranged rotary disk armed with radial knives, a carrier for moving logs toward the cutter, a table for lifting a log from the carrier, means for pressing the log against the cutter during the cutting operation and for turning it while being cut, a stop for preventing endwise movement of the log during the cutting operation, power driven mechanism for elevating and lowering the table, power driven mechanism for elevating and lowering the log-pressing and turning means and devices under the control of the attendant for regulating the action of the power driven mechanisms.

5. A machine for removing bark from logs comprising a cutter, a carrier for conveying logs toward the cutter, a table which supports a log while being cut, power operated mechanism for lifting the table to elevate the log above the carrier, means for throwing such mechanism into and out of operation, means for holding the log on the table for pressing it against the cutter and for turning it while being cut, power operated mechanism for moving such holding, pressing and turning means into and out of engagement with the log and devices for throwing such last-mentioned operating mechanism into and out of operation.

[Claims 6 to 29 not printed in the Gazette.]

878,849. PAPER-MAKING MACHINERY. ROBERT B. WOLF and HARRY E. TIDMARSH, Sandy Hill, N. Y. Filed July 14, 1906. Serial No. 326,209.



1. The combination of a stock vat, a cylinder mold having an axial sleeve, a white-water receptacle in communication with the interior of the cylinder mold by way of said sleeve, a spout or receptacle for collecting the leakage from said vat, and means for directing any leakage which follows along the sleeve into said spout or receptacle.

2. The combination of a stock vat, a cylinder mold having an axial sleeve, a white-water receptacle in communication with the interior of the cylinder mold by way of said sleeve, and means on said sleeve for preventing the leakage from said vat following the sleeve past said means, means.

3. The combination of a stock vat, a cylinder mold having an axial sleeve, a white-water receptacle communicating with the interior of the cylinder mold by way of said sleeve, means on said sleeve for preventing leakage between said vat and white-water receptacle, and packing between the wall of the stock vat and the sleeve.

4. The combination of a stock vat, a cylinder mold therein having an axial sleeve and a shoulder between the sleeve and the cylinder end, a white-water receptacle in communication with the interior of the cylinder mold by way of said sleeve, means on said sleeve for preventing leakage between the stock vat and said white-water receptacle, and a packing collar or washer surrounding said sleeve and engaging the wall of the stock vat and the shoulder of the cylinder respectively.

5. The combination of a stock vat, a cylinder mold therein having an axial sleeve and a shoulder between the sleeve and the cylinder end, a white-water receptacle communicating with the interior of the cylinder mold by way of said sleeve, means on said sleeve for preventing leakage between the stock vat and said white-water receptacle, a packing collar or washer surrounding said sleeve and engaging the wall of the stock vat and the shoulder of the cylinder respectively, and a packing sleeve engaging the packing collar and shoulder of the cylinder respectively and overlying the joint between the two.

[Claims 6 to 8 not printed in the Gazette.]

878,850. COMBINED CUT-OFF AND STRAINER FOR WATER-PIPES. JOSEPH A. YOUNG, Bellevue, Iowa. Filed Feb. 3, 1906. Serial No. 299,271.



1. In a cut off, a main pipe formed with an opening in its front wall, a tubular waste pipe secured at one of its ends to the main pipe surrounding the lower portion of the opening therein, integral side walls bent up from the upper wall of the waste pipe thereby forming an intermediate opening in the upper portion of the waste pipe, a screen secured to the rear wall of the main pipe and extending through the upper portion of the opening therein between said side walls and covering the opening in the upper portion of the waste pipe.

2. In a cut off, a main pipe formed with an opening in its front wall, a tubular waste pipe secured at one of its ends around the lower portion of the opening in the main pipe, and being provided with an opening in its upper wall communicating with the opening in the main pipe, and integral side walls for the opening in the waste pipe extending above the top wall of said waste pipe and formed of bent up portions of the top wall of the said waste pipe.

3. In a cut off, a casing, a valve therein and an operating lever therefor, said valve being formed with a flanged opening, said lever being bent to form a doubled portion, said doubled portion being inserted in said opening and secured by said flanges.

4. In a cut off, a casing, a valve therein and an operating lever therefor, said valve being formed with a flanged opening, said lever being doubled upon itself to form a bent portion, said bent portion being inserted in said opening and secured by said flanges, said flanges being disposed between the doubled portion of the lever.

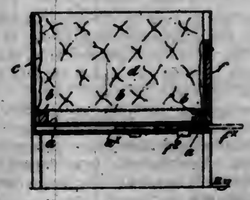
5. In a cut off, a main pipe, a waste pipe secured to the main pipe, a valve provided with three openings one flanged substantially at the center, said valve being set at the junction of the main pipe and waste pipe and being adapted to be oscillated to open or close the main pipe and waste pipe, a lever having its ends passed through two of said openings and through one of said pipes, the central portion of the lever being formed with a bent portion and secured by closing the said flanges upon the same.

878,851. HORSE-RELEASING MEANS FOR VEHICLES. JOHN H. ZOLDOWSKI and PETER F. BARANEK, Toledo, Ohio. Filed Oct. 23, 1907. Serial No. 398,814.



In combination, a whiffletree having its end portions longitudinally recessed, sleeves incasing the ends and recessed portions of the whiffletree and having transversely recessed ends, retainer-members slidingly carried by each sleeve, said members each having two lateral parts which encircle the sleeves and an outer end tongue, the end portion of which is transversely bent in spaced relation to the contiguous one of said parts and adapted to seat in the sleeve end recess when said member is at its limit of inward movement on the sleeve, catches mounted in the whiffletree recesses and spring-actuated to normally cause their catch ends to protrude through the sleeve in position to engage the outer of said parts when the member is at its limit of inward movement to prevent an outward movement thereof, a collar fixed to each sleeve between said parts, a coiled compression-spring carried by each sleeve and acting on said collar and the outer of said parts to influence an outward movement of the member, angled trip-levers carried by the whiffletree ends with their inner ends projecting through the sleeve into the incased recess in releasing engagement with the catch, a bell-crank lever carried by the whiffletree in association with each trip-lever, connection between the trip and bell-levers, and a V-shaped member having an end in connection with each bell-lever whereby a pull on the former effects a rocking of both bell-levers and a consequent movement of the trip-levers to release the catches to permit the retainer-members to move outwardly on the sleeves under the influence of their springs, substantially as described.

878,582. BERTH FOR SHIPS. FELIX L. AMES, Eastbourne, England. Filed Jan. 4, 1906. Serial No. 294,510.



1. In a bunk or berth, a mattress-supporting frame having an upwardly extended side and head piece, a sectional side flap foldable beneath the mattress frame and uprights for supporting said flap and between which it is retained in vertical position.

2. In a bunk or berth, a mattress-supporting frame hav-

ing an upwardly extended side and head piece, a sectional side flap foldable beneath the mattress frame, uprights for supporting said flap and between which it is retained in vertical position and locking means for said flap when in its vertical position.

3. A bunk or berth having a hinged side slidably foldable beneath the berth and a hinged end, said side being in movably united sections.

4. In a bunk or berth, a frame having guides beneath the same, a movable flap in hinged sections adapted to slide within said guides and to be concealed beneath said frame and uprights between which said flap is held when in distended vertical position.

5. In a bunk or berth, a mattress-supporting frame having guides beneath the same, a movable flap in hinged sections adapted to slide within said guides and to be concealed beneath said frame, and a stop to prevent complete withdrawal of said flap from the guides.

[Claim 6 not printed in the Gazette.]

878,853. STORE FURNITURE. WILLIAM E. BAILEY and WOODFORD A. KELSEY, Paragould, Ark. Filed July 19, 1907. Serial No. 384,549.



A wire cloth cabinet having arranged along each of the forward edges of its shelves, a fixed plate-like guide, a slide with its rear edges taking in behind said guide, and a knife pivoted to said guide and adapted while being actuated to provide for the simultaneous and independent movement of said knife, and yet prevent possible accidental displacement of said slide and knife.

878,854. LASTING AND TACKING MACHINE FOR SHOES. HARRIS A. BALLARD, Ashland, Mass., assignor, by mesne assignments, to The Boylston Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed Apr. 13, 1903. Serial No. 152,327.

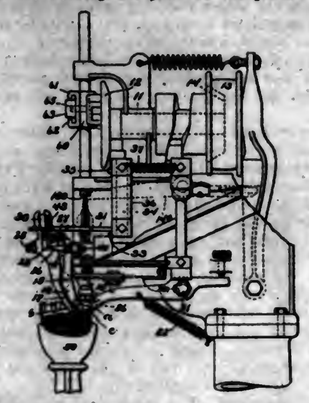
1. A machine for lasting boots and shoes comprising a movable pincer, and means for causing said pincer to automatically grip the upper on the movement of said pincer by a shoe.

2. A machine for lasting boots and shoes comprising a movable pincer, and means rendered active by the moving of the pincer due to the engagement of a shoe therewith for automatically causing the pincer to grip the upper of a shoe presented thereto.

3. In a shoe-tacking machine, automatic tack-driving mechanism, and a pincer movable toward and away from said driving mechanism and having means rendered active by the movement of said pincer toward said tack-driving mechanism whereby it automatically grips the upper of a shoe presented thereto.

4. In a shoe-tacking machine, a movable, normally open pincer adapted to be moved by a shoe having means rendered active by the movement of said pincer to close the jaws of the pincer upon the upper of a shoe presented thereto and by which shoe the pincer is moved, and means for automatically opening the jaws of the pincer.

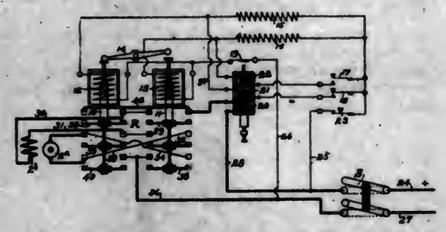
5. In a shoe-tacking machine, a movable pincer, a latch and catch for holding the jaws of the pincer open, and



means rendered active by the movement of the pincer for tripping said latch and catch.

[Claims 6 to 8 not printed in the Gazette.]

878,855. SYSTEM FOR CONTROLLING THE OPERATION OF ELECTRIC MOTORS. THOMAS E. BARNUM, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed July 10, 1905. Serial No. 268,974.



1. In a system for controlling the operation of electric motors, in combination, a motor, electro magnetic means for closing the motor circuit to start the motor, an electro responsive overload device for opening the motor circuit to stop the motor, and means temporarily in operative relation with said overload device for preventing the same from responding during the period of starting the motor.

2. In a system for controlling the operation of electric motors, in combination, a motor, means for closing the motor circuit to start the motor, means for stalling the motor after the same operates for a prearranged period, an electro responsive device for opening the motor circuit after the motor becomes stalled, and means for preventing said overload device from responding during the period of starting the motor.

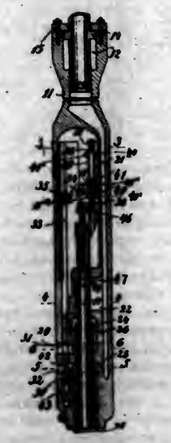
3. In a system for controlling the operation of electric motors, in combination, a motor, a magnetically operated switch for closing the motor circuit to start the motor, means for controlling the operation of said switch from a distant point, means adapted to stall said motor after it operates for a prearranged period, an electro responsive overload device adapted to open the motor circuit, and means for preventing said device from responding during the period of starting the motor.

4. In a system for controlling the operation of electric motors, in combination, a motor, a magnetically operated reversing switch for closing the motor circuit to start the motor, means for controlling the operation of said switch from a distant point, means adapted to stall said motor after it operates for a prearranged period, an electro responsive device adapted to open the motor circuit, and means for preventing said device from responding during the period of starting the motor.

5. In a system for controlling the operation of electric motors, in combination, a motor, electro magnetic means for closing the motor circuit to start the motor, an electro responsive overload device for opening the motor circuit, an electro magnetic winding adapted to prevent said device from responding during the period of starting the motor.

[Claims 6 to 28 not printed in the Gazette.]

878,856. EARTH-BORING TOOL. ALEXANDER BELDIMAN, Berlin, Germany. Filed Dec. 13, 1906. Serial No. 347,673.



1. An earth boring tool comprising a body provided with a channel for water under pressure, a motor in said body having communication with the channel, a chisel driven by the motor and provided with squirt holes, and a hollow rod connecting the aforesaid channel with the squirt holes in the chisel.

2. An earth boring tool comprising a body provided with a channel, a reciprocating piston arranged in said body and having its opposite faces adapted to receive from the channel water under pressure, a self acting reversing device for the piston, and a chisel provided with squirt holes having communication with the channel.

3. An earth boring tool comprising a body provided with a channel, a reciprocating piston arranged in said body, driven by water received from the channel, and provided with a hollow piston rod communicating at one end with the channel, and a hollow chisel communicating with the other end of the piston rod and provided with squirt holes.

4. An earth boring tool comprising a body provided with a channel and two chambers in communication with said channel, a reciprocatory piston working in the body and provided with a piston rod, two tubes surrounding the piston rod, each of which opens at one end into one of the chambers in the body and at its other end to opposite sides of the piston.

5. An earth boring tool comprising a body provided with a channel, two chambers in communication with the channel, and two outlet channels for the chambers, a motor in the body having communication with the two chambers, and a reversing device placing the chambers alternately into and out of communication with the outlet channels.

[Claims 6 to 9 not printed in the Gazette.]

878,857. ADJUSTABLE SIGHT FOR GUNS. LOUIS C. BEVIER, Logan, Mont. Filed July 19, 1907. Serial No. 384,573.

1. A sight for a gun consisting of a recessed plate adapted to be fastened to the tang of a gun barrel, a sight jacket having sliding pivotal connection with said plate, a spring bearing yieldingly against said jacket and designed to hold the latter either in a raised or lowered position, and an adjustable sight carried by said jacket, as set forth.



2. A sight for a gun consisting of a recessed plate adapted to be fastened to the tang of a gun barrel, a sight jacket having sliding pivotal connection with said plate, a spring bearing yieldingly against said jacket and designed to hold the latter either in a raised or lowered position, a sight stem having rack teeth thereon mounted to have a longitudinal movement within said jacket, a pinion wheel meshing with the teeth of said stem, means for rotating the pinion and means for holding the stem in an adjusted position, as set forth.

3. A sight for a gun consisting of a recessed plate adapted to be fastened to the tang of a gun barrel, a sight jacket having sliding pivotal connection with said plate, a spring bearing yieldingly against said jacket and designed to hold the latter either in a raised or lowered position, a sight stem having rack teeth thereon mounted to have a longitudinal movement within said jacket, a pinion wheel meshing with the teeth of said stem, an operating wheel for turning said pinion, a ratchet wheel and pawl for holding said wheel and pinion in a fixed position, as set forth.

4. A sight for a gun consisting of a recessed plate adapted to be fastened to the tang of a gun barrel, a sight jacket having sliding pivotal connection with said plate, a spring bearing yieldingly against said jacket and designed to hold the latter either in a raised or lowered position, a sight stem having rack teeth thereon mounted to have a longitudinal movement within said jacket, a stub shaft journaled in said jacket, a pinion wheel fixed to said stub shaft and engaging the teeth of said stem, an operating wheel fixed to the shaft, a ratchet wheel also mounted upon and adapted to rotate with said shaft, a resilient pawl carried by the jacket and adapted to engage said ratchet wheel, as set forth.

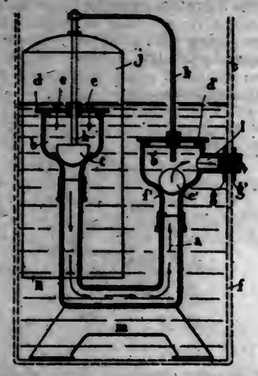
5. A sight for a gun consisting of a recessed plate adapted to be fastened to the tang of a gun barrel, a sight jacket having sliding pivotal connection with said plate, a spring bearing yieldingly against said jacket and designed to hold the latter either in a raised or lowered position, an adjustable sight carried by said jacket, and peep-slides adjustably mounted upon said sight, as set forth.

[Claims 6 and 7 not printed in the Gazette.]

878,858. AUTOMATIC WATER-LEVEL CONTROLLER FOR WATER-SEPARATORS OF GAS-CONDUITS, AUBERT BILLOUEZ, Anderlecht, near Brussels, Belgium. Filed May 4, 1907. Serial No. 371,815.

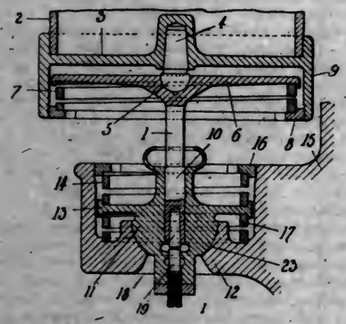
1. A device for automatically controlling the water level in water separators of gas conduits comprising a casing, a U-shaped tube vertically arranged within the same, valves at each end of said tube, and a float within said casing and connected to one of said valves.

2. A device for automatically controlling the water level in water separators of gas conduits comprising a casing, a U-shaped tube vertically arranged within the same, valves



at each end of said tube, one valve being higher than the other, and a float within said casing and connected to one of said valves.

878,859. ELASTICALLY-ARTICULATED SHAFT AND JOURNALING DEVICE. NILS S. BÖK, Stockholm, Sweden. Filed July 11, 1907. Serial No. 383,286.



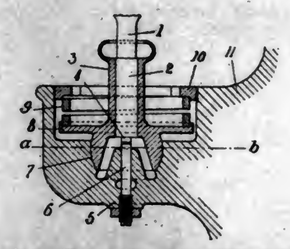
1. In an elastically articulated shaft and journaling device for fast rotating bodies, the combination of a bearing body having a fixed rocking center, a shaft in said bearing body, springs arranged to counteract the rocking movements of the bearing body, a rotating body, a pin rigidly secured to said rotating body and having a fixed rocking center in said shaft, and a spring arranged to counteract the rocking movements of the rotating body.

2. In an elastically articulated shaft- and journaling-device for fast rotating bodies the combination, of a bearing-body having a fixed rocking center, a shaft in said bearing-body, springs adapted to counteract the rocking movements of said bearing-body, a rotating body, a pin rigidly secured to said rotating body and having a fixed rocking center in said shaft, a spring adapted to counteract the rocking movements of said rotating body, and means for controlling the tension of said springs, substantially as and for the purpose set forth.

3. In an elastically articulated shaft and journaling device for fast rotating bodies, the combination of a frame, a member mounted to rock in said frame, coiled springs surrounding the rocking member and arranged to counteract the rocking movements thereof; one of said springs being also arranged to support a part of the pressure on the rocking surfaces, and a ring surrounding the rocking member and adjustable in the frame and affording a bearing for one of the springs.

4. In an elastically articulated shaft and journaling device for fast rotating bodies, the combination of a frame, a member mounted to rock in said frame and having a flange, a coiled spring surrounding the rocking member and interposed between the frame and one side of the said flange, a tension regulating ring surrounding the rocking member, and a coiled spring surrounding the rocking member and interposed between the said ring and the opposite side of the said flange.

878,860. JOURNALING DEVICE. NILS S. BÖK, Stockholm, Sweden. Filed July 11, 1907. Serial No. 383,287.



1. In a journaling device for rotating and rocking shafts, the combination of a non-rocking supporting member, a body bearing and arranged to rock in said member, a shaft disposed in and arranged to rock with said bearing body, and means independent of the bearing body, for supporting said shaft in the bearing body; said means being arranged within the bearing body and in the center of the rocking movement thereof.

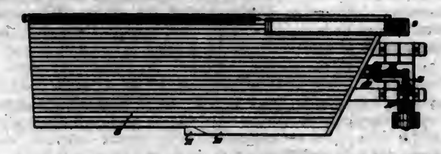
2. In a journaling device for rotating and rocking shafts, the combination of a non-rocking supporting member, a body bearing and arranged to rock in said member, a shaft disposed in and arranged to rock with said bearing body, means independent of the bearing body, for supporting said shaft in the bearing body; said means being arranged within the bearing body and in the center of the rocking movement thereof, and a spring arranged between an abutment on the bearing body and an abutment on the non-rocking member, disposed above the first mentioned abutment.

3. In a journaling device for rotating and rocking shafts, the combination of a non-rocking supporting member, a body bearing and arranged to rock in said member, a shaft disposed in and arranged to rock with said bearing body, means supporting said shaft, arranged within the bearing body and in the center of the rocking movement thereof, a ring adjustable vertically in the non-rocking supporting member, and a spring arranged between said ring and an abutment on the bearing body, located below the ring.

4. In a journaling device for rotating and rocking shafts, the combination of a non-rocking supporting member, a body bearing and arranged to rock in said member and having an exterior flange, a shaft disposed in and arranged to rock with said bearing body, means supporting said shaft, arranged within the bearing body and in the center of the rocking movement thereof, a ring adjustable vertically in the non-rocking supporting member at a point above the flange on the bearing body, and a spring surrounding the bearing body and interposed between the flange thereof and the said ring.

878,861. CONCENTRATOR. MARTIN P. BOSS, San Francisco, Cal. Filed May 21, 1906. Serial No. 317,936.

1. In a concentrator, a longitudinally and transversely adjustable table, with means for producing an abrupt longitudinal movement of the table, means for supplying pulp at the receiving or forward end of the table, said table having longitudinal channels forming settling and skimming zones, the first portion of which channels have substantially level bottoms, and the bottoms of the remainder gradually rising to the terminals of the channels, and a shelf projecting from the lower side of the table, said shelf inclining toward the table and having an elevated rib or riffle.



2. A concentrator having a plane surface with settling and skimming zones formed of longitudinal grooves or channels, the first portion of which have substantially level bottoms, and the remainder having bottoms gradually inclining upward from the ends of the first portion to the terminals of the channels, means for reciprocating the table, means for adjusting the inclination of the table, means for supplying pulp at the upper forward angle of the table, and a shelf projecting from the opposite side of the table and inclining toward the table, said shelf having an elevated rib or riffle at its lower end.

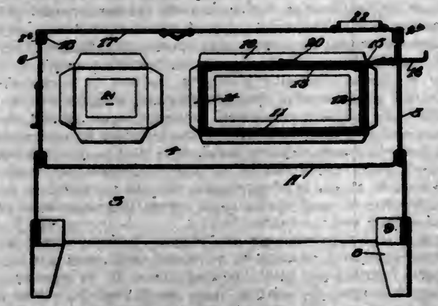
3. A concentrator table inclined transversely and having a head-end arranged obliquely to the sides, said table having a true plane surface, and longitudinal and transverse adjusting means, said table having, also, longitudinal grooves forming settling and skimming zones, the first portion of which grooves, have level bottoms, and the remainder having the bottoms inclining upwardly to the termination of the grooves, means for producing an abrupt longitudinal movement of the table, means for supplying pulp at the upper and head angle of the table, a shelf projecting from the opposite side of the forward end, said shelf having an inclination opposite to that of the table, and elevated ribs or riffles at its terminal end.

4. In a concentrator, a longitudinally and transversely adjustable table, with means for producing an abrupt longitudinal movement of the table, said table having longitudinal grooves or channels formed in its surface, with successive level and upwardly inclined bottoms, a shelf projecting from the opposite side of the forward end, said shelf having an inclination opposite to the transverse inclination of the table, and a riffle or obstruction whereby material is returned from the shelf to the lowermost of the grooves or channels of the table.

5. In a concentrator, an adjustable table in combination with means for inclining and adjusting the table transversely, a support upon which the table is carried, and means for producing a variable longitudinal reciprocation of the table, said means including a rod connected with the table, an anchored rod having its outer end connected with the outer end of the table rod, and a revoluble crank with which the outer ends of said rods are connected.

[Claims 6 to 12 not printed in the Gazette.]

878,862. CAMP-STOVE. FRANK M. BOUGHTON, Reno, Nev. Filed June 15, 1905. Serial No. 265,397.



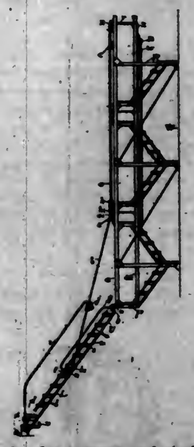
1. In a stove of the character described, a horizontal rectangular base plate having upwardly presented channels formed by double-seaming, the plate in planes corresponding with the sides and ends of the structure, and having the portion exterior to the channels turned downwardly, and angle iron legs having the upper ends double-seamed or channeled to fit the angles of said downwardly turned portions of the base plate.

2. In a stove of the character described, a horizontal rectangular base plate having an upwardly turned peripheral channel formed by double-seaming the plate and having the outward fold of said channel extended downwardly, angle iron legs having the upper ends double-seamed or channeled to fit the angles of the downwardly turned portion, side and end plates of the stove proper having the lower edges fitting the upwardly presented channels of the base-plate, and a top consisting of a rectangular plate having its periphery double-seamed or channeled to correspond with the channels of the base plate, said channeled top fitting the upper edges of the side and end plates.

3. In a stove of the character described, a rectangular base plate having its periphery double-seamed to form upwardly presented channels, a top plate having its periphery double-seamed to form similar channels corresponding with those of the base plate, side plates having the lower and upper edges fitting said channels of the base and top, said side plates having intermediate end portions bent at right angles and double seamed or channeled, end plates having their upper edges fitting the channels of the base and top plate, and their vertical edges fitting the channels formed at the ends of the side plates.

4. In a stove of the character described, a base and top formed of rectangular plates having the peripheries bent and double-seamed to form channels opening toward each other, side and end plates having their edges fitting said base and top channels respectively and having interlocking means at their meeting angles, said side plates having rectangularly formed openings with peripheral inwardly presented channels formed by inwardly bent flanges around the openings and angle iron plates parallel therewith, oven top, bottom and sides formed of rectangular plates having their ends fitting said channels and hooks and eyes to retain the parts in interlocked condition.

878,863. STAIRWAY FOR FIRE-ESCAPES, &c. JAMES M. BRAZILL, Rochester, N. Y. Filed June 8, 1907. Serial No. 377,113.



1. A stairway for fire escapes and similar purposes comprising; an upper section and a pivotal support therefor; a lower section arranged to slide over on to and practically parallel with such upper section and means for holding such upper section in a vertical position on such pivotal support with such lower stairway adjacent thereto and parallel therewith.

2. A stairway for fire escapes and similar purposes comprising; an upper section and a pivotal support therefor; a lower section arranged to slide over on to and practically parallel with such upper section; connecting links articulating with such upper stairway at its lower end; suitable guiding mechanism for the upper ends of such links and means connected to such links for holding such upper stairway in a vertical position resting on such pivotal support and with such lower stairway adjacent thereto and parallel therewith.

3. A stairway comprising; two sections, one arranged to slide upon the other and the lower section arranged to slide downwardly upon the upper section so as to permit its lower end to reach a suitable platform and means for lessening the impact of such lower section against such platform comprising means for moving the lower end thereof outwardly and upwardly just before reaching such platform.

4. A stairway for fire escapes and other similar purposes comprising; an upper section; a pivotal support therefor at its upper end; a lower section arranged to slide longitudinally upon such upper section and means for lessening the impact of the lower end of such lower section against its support when in operative position comprising means for moving such lower end of such lower section outwardly and upwardly just prior to its reaching such support.

5. A stairway; comprising two sections the one arranged to slide upon the other, the lower section arranged to slide downwardly upon the upper section so as to permit its lower end to reach a suitable platform and means for moving the lower end of such lower section outwardly and upwardly just before reaching such platform, such means comprising guide rods connected to such upper stairway and arranged to deflect the upper end of such lower stairway downwardly into alinement with the lower end of such upper stairway.

[Claims 6 to 10 not printed in the Gazette.]

878,864. DOOR-HOLDER. GEORGE BUSCHUR, Coldwater, Ohio. Filed Aug. 5, 1907. Serial No. 387,200.



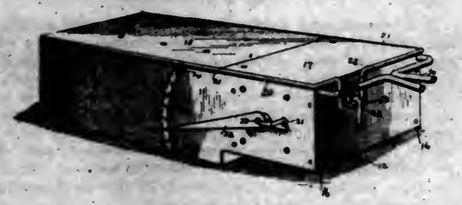
A wall member for door holders comprising a stem including a transversely rectangular portion, resilient arms disposed against the upper and lower faces of said portion respectively, a pivot bolt engaged through the stem and the rearward portions of said arms, said arms having threaded openings therein forwardly of the pivot bolt, and being movable to bring said openings laterally beyond the stem, thumb screws engaged in said threaded openings, and a buffing pad carried by the outer end of the stem, said pad being located to lie between the spring arms when the latter are in position to extend longitudinally of the stem.

878,865. CHECK-HOOK. ELLIS L. BURK, Goodell, Iowa. Filed June 28, 1907. Serial No. 381,298.



In a check hook the combination of a pair of parallel bars having corresponding ends connected by a cross bar, a roller journaled between the parallel frame bars, overlapping spring guard arms projecting laterally from the opposite ends of the frame bars, the said spring arms being tapered and one of them terminating in a lateral extension projecting along one of the frame bars, and means carried by one of the frame bars for securing the check hook in position.

878,866. EGG-BOILER. HORACE H. CHESBROUGH, Southpark, Wash. Filed Sept. 21, 1907. Serial No. 393,965.



1. In an egg-boiler, an egg boiling chamber, a pivoted closure therefor adapted to carry the eggs, tension mechanism, for normally retaining said closure in its open position, a normal inoperative clock mechanism, including a balance wheel, said wheel in operative position being free from tension, and means for operatively connecting said closure and said clock mechanism to retain said closure in a closed position, said connecting means including a clock-movement starting and stopping mechanism normally held by the closure-engaging means in position to render the balance wheel inactive, said starting and stopping mechanism being released only upon the engagement of the closure and said connecting means, the releasing movement of the starting and stopping mechanism placing the balance wheel under a starting tension.

2. In an egg-boiler, an egg-boiling chamber, a pivoted closure therefor adapted to carry the eggs, tension mechanism, for normally retaining said closure in its open position, a normal inoperative clock mechanism including a balance wheel, said wheel in operative position being free from tension, and means for operatively connecting said closure and said clock mechanism to retain said closure in a closed position, said connecting means including a clock-movement starting and stopping mechanism normally held by the closure-engaging means in position to render the balance wheel inactive, said starting and stopping mechanism being released only upon the engagement of the closure and said connecting means, the releasing movement of the starting and stopping mechanism placing the balance wheel under a starting tension, means being provided for controlling the length of time said operative connection is had.

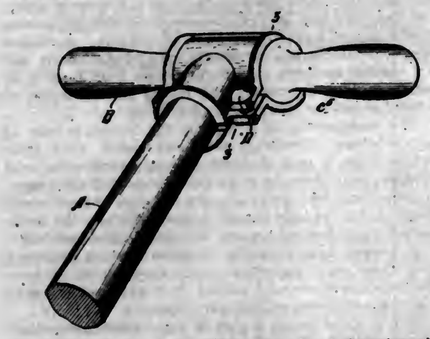
3. In an egg-boiler, an egg-boiling chamber, a pivoted closure therefor adapted to carry the eggs, tension mechanism for normally retaining said closure in its open position, a normal inoperative clock mechanism including a balance wheel, said wheel in operative position being free from tension, means for operatively connecting said closure and said clock mechanism to retain said closure in a closed position, said connecting means including a clock-movement starting and stopping mechanism normally held by the closure-engaging means in position to render the balance wheel inactive, said starting and stopping mechanism being released only upon the engagement of the closure and said connecting means, the releasing movement of the starting and stopping mechanism placing the balance wheel under a starting tension, and independent means located in the path of movement of said connections, for controlling the period of time the operative engagement of the closure and mechanism is had.

4. In an egg-boiler, an egg-boiling chamber, a pivoted closure therefor adapted to carry the eggs, tension mechanism for normally retaining said closure in its open position, a normal inoperative clock mechanism including a balance wheel, said wheel in operative position being free from tension, means for operatively connecting said closure and said clock mechanism to retain said closure in a closed position, said connecting means including a clock-movement starting and stopping mechanism normally held by the closure-engaging means in position to render the balance wheel inactive, said starting and stopping mechanism being released only upon the engagement of the closure and said connecting means, the releasing movement of the starting and stopping mechanism placing the balance wheel under a starting tension, and independent means located in the path of movement of said connections, for controlling the period of time the operative engagement of the closure and mechanism is had, said latter means being movable into and out of said path, and mounted to be movable with said clock mechanism.

5. In an egg boiler, an egg-boiling chamber, a pivoted closure therefor adapted to carry the eggs, tension mechanism for normally retaining said closure in its open position, a clock mechanism including a balance wheel, said wheel in operative position being free from tension, means for starting and stopping said clock mechanism, said means normally retaining said balance wheel inoperative, and independent connections lying in the path of movement of said closure for controlling the movement of said means, said connections being operative to release said means only when under the tension of the closure, the releasing movement of said means placing the balance wheel under a starting tension.

[Claims 6 and 7 not printed in the Gazette.]

878,867. HANDLE-BRACE. WILLIAM H. COLDWELL, Newburgh, N. Y. Filed May 11, 1907. Serial No. 373,103.

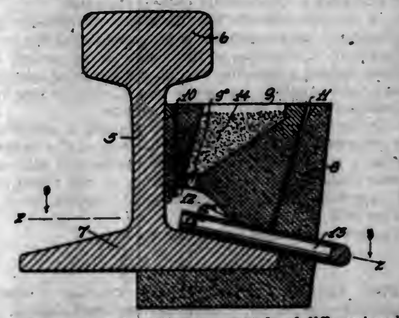


1. A handle brace comprising a pair of clamping plates each having curved portions arranged transversely to each other for engaging the main handle bar and a transversely disposed bar at their intersection, said curved portions of said plates being less than semi-circular in cross section, and adapted to fit upon the said bars without bringing their edges together, said plates having the inner faces of said curved portions provided with projections adapted to be forced into said bars, and clamping devices, engaging said plates laterally of said curved portions, whereby said plates may be clamped upon said bars without previous preparation of the bars, substantially as described.

2. A handle brace comprising a pair of clamping plates, each having curved portions disposed transversely to each other, one of said curved portions having a longitudinal rib on its inner face, and the other curved portion having projections on its inner face on opposite sides of its center, and securing devices for connecting said plates, engaging the same laterally of the said curved portions, substantially as described.

3. The combination with a handle comprising a main bar, and a transverse bar of circular cross section connected thereto by a mortise and tenon, the portion of the main bar adjacent to the transverse bar being also circular in cross section, of a brace comprising two metal plates each having curved portions arranged transversely to each other for frictionally engaging the adjacent portions of the main bar and transverse bar, said curved portions being less than semi-circular in cross section, and having interior projections adapted to be embedded in the said bars, and clamping devices connecting said plates laterally of said bars, and forming the sole connections between said plates and bars, substantially as described.

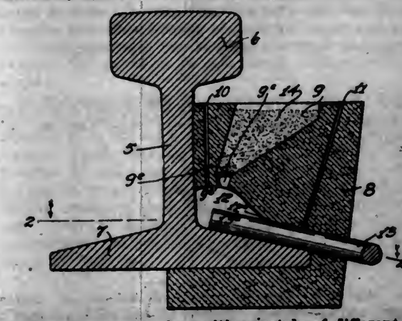
878,868. PROCESS FOR UNITING METALS. WILLIAM H. COLE, New York, N. Y., assignor to Eloc Company, New York, N. Y. Continuation of application Serial No. 235,707, filed Dec. 6, 1904. This application filed May 6, 1905. Serial No. 259,100.



1. The process of welding two metals of different melting points, which consists in placing the two metals in the positions in which they are desired to be welded; surrounding the same with a fusing agent adapted to fuse both metals and so controlling the action of the heat units of the fusing agent on the two metals that a portion of the metal of lower melting point will be converted into an alloy with a portion of the metal having the higher melting point and prevent any material distribution of the remaining portion of the metal having the lower melting point.

2. The process of welding two metals of different melting points, that consists in placing the two metals in the positions in which they are desired to be welded, surrounding portions of both metals with a fusing agent in sufficient quantity to fuse both metals, and other portions thereof with a quantity less than sufficient to fuse the metal having the lower melting point.

878,869. APPARATUS FOR UNITING METALS. WILLIAM H. COLE, New York, N. Y., assignor to Eloc Company, New York, N. Y. Original application filed Dec. 6, 1904, Serial No. 235,707. Divided and this application filed May 6, 1905. Serial No. 259,101.



1. In an apparatus for uniting metals of different melting points, a mold having a mold chamber adapted to receive within its portions of the metals to be united and an inlet for the admission of a fusing agent to the chamber,

said mold chamber constructed to permit varying quantities of the fusing agent to surround different portions of the metal whereby the heating effect of the fusing agent is decreased on certain portions of the metal having the lower melting point.

2. In an apparatus for uniting metals of different melting points, a mold provided with a mold chamber to receive within it portions of the metals to be united, said chamber having a tapering portion for receiving the metal having the lower melting point.

3. In an apparatus for uniting metals, a mold comprising a crucible, a mold chamber, a passage connecting said crucible and said mold chamber, a plug for temporarily closing said passage, and a refractory material arranged over said plug to temporarily protect the same.

4. In an apparatus for uniting metals of different melting points, a mold provided with a mold chamber to receive within it portions of the metals to be united, said chamber having a tapering portion for receiving the metal having the lower melting point, and a vent leading from the smallest end of said tapering portion.

5. In an apparatus for uniting metals, a crucible, a mold chamber comprising a main portion and a tapering portion, a passage connecting said crucible and said mold chamber outside the tapering portion of the latter, and said tapering portion having a vent leading from its smallest end.

[Claim 6 not printed in the Gazette.]

878,870. INSULATOR-SUPPORT. THOMAS J. CREAGHEAD, Covington, Ky. Filed May 19, 1902. Serial No. 108,057.



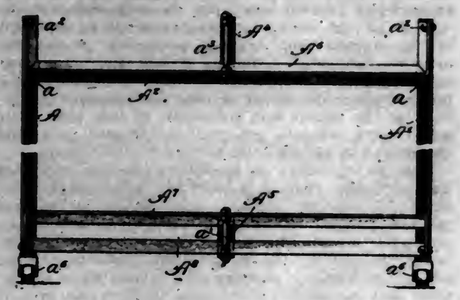
A metal insulator support comprising a stem provided with longitudinal strengthening ribs and a transverse web or cap-piece to which said ribs extend, a thimble of soft metal or other material molded about said web and portions of the ribs, whereby said thimble is secured against rotary movement and vertical displacement, and means for securing said stem to a cross-arm or other support.

878,871. METHOD OF MAKING WROUGHT ARTICLES. JOHN H. DODS, Cherryvale, Kans. Filed Aug. 26, 1907. Serial No. 390,131.



The improved method herein described of making wrought articles which consists of casting an ingot of larger cross section than is necessary for the finished article, then splitting the ingot longitudinally through its pipe portion to expose the pipe of the ingot, and finally reducing the parts.

878,872. DISPLAY-RACK. FLOYD DOW, Princeton, Ill., assignor of one-half to Harry P. Phelps, Princeton, Ill. Filed May 9, 1907. Serial No. 372,762.



1. In a display-rack, the combination of a pair of rectangular end-frames, side-bars connecting said end-frames, upper and lower U-shaped cross-members connecting said side-bars intermediately, and longitudinally disposed upper and lower spacing-members connected with said end-frames and with the webs of said U-shaped cross-members, for the purpose set forth.

2. The combination of a pair of rectangular end-frames, a pair of upper side-bars connecting said end-frames near their upper ends, a pair of lower side-bars connecting said end-frames near their lower ends, U-shaped cross-members connecting said side-bars, the upper cross-member having its ends turned downwardly and the lower cross-member having its ends turned upwardly, and longitudinally disposed spacing-members within the frame thus formed secured to said cross-members and to the cross-members of the end frames, for the purpose set forth.

3. The combination of a pair of end-frames, a pair of upper side-bars connecting said end-frames near their upper portions, a pair of lower side-bars connecting said end-frames near their lower portions, U-shaped cross-members connecting said side-bars, the upper U-shaped cross-member having its ends turned downwardly and the lower U-shaped cross-member having its ends turned upwardly, and U-shaped longitudinally-disposed spacing-members having their webs connected with the webs of said U-shaped cross-members and having their extremities joined to the cross-members of the end frames.

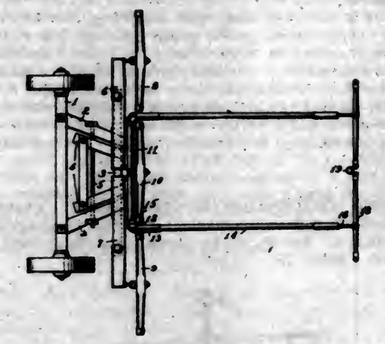
4. The combination of a pair of end-frames, connecting-members joining said end-frames, and longitudinally-disposed laterally-adjustable spacing-members connected with the upper and lower cross-members of the end frames and dividing the interior into longitudinal vertical spaces, for the purpose set forth.

5. The combination of a pair of end-frames, side-members connecting said end-frames, U-shaped cross-members connecting said side-members, upper and lower spacing members connected with said cross-members and with the cross-members of said end-frames, and floor-members between the lower spacing-members and supported by the lower U-shaped cross-member and the lower cross-members of the end-frames.

878,873. DRAFT-EQUALIZER. CHARLES P. DYAR, Marietta, Ohio. Filed Sept. 15, 1906. Serial No. 334,806.

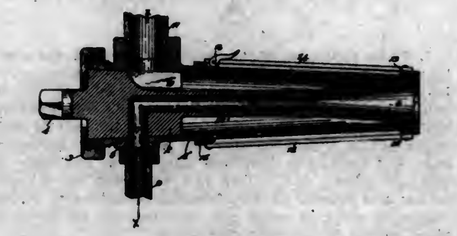
1. The combination of the hounds, the draft beam, resting upon the hounds, a frame fitting said hounds, and supported therein, at its rear end, by a bolt, and connected at its forward end beneath the draft beam, equalizer bars having their weight supported by the draft beam, and the steering or guiding means pivoted to the draft beam.

2. The combination of an equalizer draft beam having a frame adapted to fit within the hounds of a vehicle while the beam rests upon the hounds so that its weight is supported by the vehicle, equalizer bars pivotally secured to and lying upon said beam, shafts pivotally connected to



the draft beam of the equalizer, and swingletrees connected to the equalizer bars.

878,874. OIL-BURNER. CLARK S. EVANS, Oakland, Cal. Filed July 24, 1907. Serial No. 385,310.



1. In an oil burner, the combination of a casing, a unitary plug turnable in the casing, said plug having an oil inlet port and a separate steam inlet port, said plug having a longitudinally extending steam passage and said casing having a longitudinally extending oil passage concentric with said steam passage, and said plug being turnable to regulate the admission of both the steam and oil to the burner.

2. In an oil burner, the combination of a shell open at both ends, said shell having a conical bore, a single plug seating in and turnable in the bore, said plug having separate oil and steam ports registerable with corresponding ports in the casing, said plug having a longitudinally extending steam passage and said shell having a longitudinally extending oil passage concentric with said steam passage, said plug being turnable to regulate the admission of both the steam and oil.

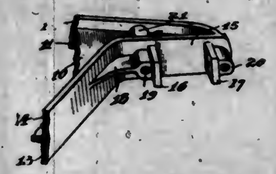
3. In an oil burner, the combination of a casing having a conical bore, a plug turnable in the bore, a cap for retaining the plug in position, said plug having separate steam and oil ports registerable with corresponding ports in the casing, said plug having a forward hollow extension within the casing and concentric therewith and in continuation with said steam port, said extension having a flared end terminating approximate to the front end of the casing and coöperating therewith to form an annular oil outlet.

4. In an oil burner, the combination of a casing having a conical bore, a plug turnable in the bore, a cap for retaining the plug in position, said plug having separate steam and oil ports registerable with corresponding ports in the casing, said plug having a forward hollow extension within the casing and concentric therewith and in continuation with said steam port, said extension having a flared end terminating proximate to the front end of the casing and coöperating therewith to form an annular oil outlet, and means including a rotatably mounted segmental flange overlapping the end of the burner to regulate the oil discharge.

5. In an oil burner, the combination of a casing having a conical bore, a plug turnable in the bore, a cap for retaining the plug in position, said plug having separate steam and oil ports registerable with corresponding ports in the casing, said plug having a forward hollow extension within the casing and concentric therewith and in continuation with said steam port, the front of the extension being flared outwardly and terminating proximate to the front end of the casing said steam port in the plug arranged upon turning the plug to admit steam into the burner prior to the entry of the oil therein.

[Claim 6 not printed in the Gazette.]

878,875. SIDE FRAME AND JOURNAL-BOX. GEORGE G. FLOYD, Granite, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Apr. 15, 1907. Serial No. 368,338.



1. The combination of a car truck side frame having one or more lugs or projections integral therewith, a journal box having one or more apertures through which said lugs or projections are adapted to extend into the interior of said box; a U-bolt passing around said box to fasten the same to said side frame, and nuts for the ends of said bolt, substantially as described.

2. The combination of a car truck side frame having lugs or projections integral therewith, a journal box having apertures through which said lugs or projections are adapted to extend into the interior of said box, said box also having a groove on its external surface, a U-bolt adapted to lie in said groove and secure said box to said side frame, and nuts for the ends of said bolt, substantially as described.

3. The combination of a car truck side frame having apertured bosses, a journal box or casing adapted to be fastened to said side frame and having recesses or pockets to house the said bosses, and a bolt and nuts to secure said journal box to said side frame, said bolt passing through the apertures of said bosses, substantially as described.

4. The combination of a car truck side frame having apertured bosses and integral lugs, a journal box or casing having holes through which said lugs are adapted to extend into the interior of the box, said box being adapted to be fastened to said side frame and having recesses or pockets to house said bosses, and a bolt and nuts to secure said journal box to said side frame, said bolt passing through the apertures of said bosses, substantially as described.

5. The combination of a car truck side frame having apertured bosses and integral lugs, a journal box or casing adapted to be fastened to said side frame and having holes through which said lugs are adapted to extend into the interior of said box, said box also having recesses or pockets to house said bosses, a journal, a journal bearing having shoulders co-acting with said lugs, and a bolt and nuts to secure said journal box to said side frame, said bolt passing through the apertures of said bosses, substantially as described.

878,876. METALLIC DOOR. JOHN E. FOX, Courtenay, N. D. Filed Apr. 30, 1907. Serial No. 371,044.

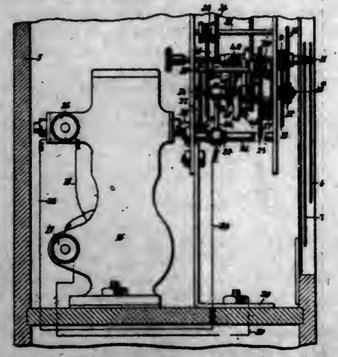
A door of the type set forth comprising sections provided along opposite parallel edges with bent portions forming projecting hollow annular beads, the edges of said

bent portions being spaced away from the material adjacent thereto, and clamps, each comprising a pair of inter-



rupted annular loops conforming to said beads and surrounding the same in juxtaposed pairs.

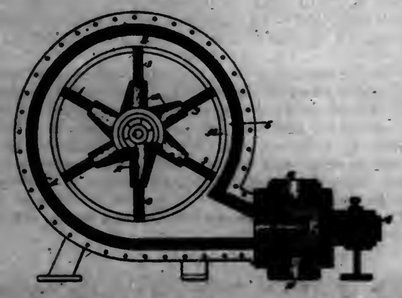
878,877. ELECTRIC CLOCK. NATHAN FRIEDMAN, New York, N. Y. Filed Nov. 2, 1906. Serial No. 341,783.



1. In an electric clock, the combination of a winding shaft, a clock gear wheel loosely mounted thereon, a main spring attached to the shaft and clock gear wheel, a contact member fixedly mounted on the winding shaft, a cam fixedly mounted on the winding shaft and provided with a guiding surface disposed adjacent to said contact member, a brush mounted to rotate with the clock gear wheel and electric connections for said brush and contact member.

2. In an electric clock, the combination of an electric motor provided with a large armature shaft, a pinion mounted on said shaft, the shaft being larger in diameter than the pinion for preventing backward rotation of said shaft by power applied to the pinion, a winding shaft and gearing connecting said winding shaft to said pinion.

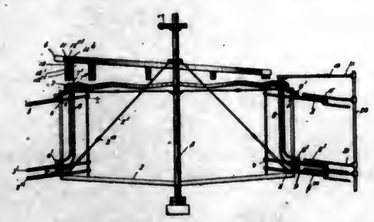
878,878. CENTRIFUGAL-IMPACT DRY PULVERIZER. LOUIS C. GRAUPNER, San Francisco, Cal. Filed Apr. 1, 1907. Serial No. 365,784.



1. In a centrifugal pulverizer, a central revoluble hub, radial arms converging outwardly, guide tubes extending radially from the ends of said arms, a ring die against which the material is discharged by the momentum of revolution, a discharge nozzle, and a die in line with said nozzle against which the material is delivered by its final momentum.

2. In a dry pulverizing and classifying machine, revoluble tubular radial guides, means for supplying material centrally and to the inner ends of the tubes, a stationary ring die against the inner periphery of which the material is thrown by centrifugal force, said die having a tangential opening and a guide nozzle, a chamber with an inclosed die in line with the nozzle and co-acting devices by which the chamber is constantly cleaned of pulverized material.

878,879. CONCENTRATING APPARATUS. PERLE T. HAMBRIC, Sutter Creek, Cal., assignor of one-half to Wilton E. Darrow, Sutter Creek, Cal. Filed Sept. 30, 1907. Serial No. 395,236.



1. In an apparatus of the character described, the combination of a rotatable frame, a horizontal launder, revoluble with said frame, an annular series of tables arranged below the launder and revoluble therewith, said series of tables being disposed one above the other, and each of said tables having a distributing plate proximate to its inner edge, and adapted to distribute material for each pair of adjacent tables, and a feed box delivering on to said plates, said launder having divisions corresponding to the respective series of tables and said divisions having feed pipes leading to respective feed boxes.

2. In an apparatus of the character described, the combination of a rotatable frame, a horizontal launder revoluble with said frame, an annular series of tables arranged below the launder and revoluble therewith, said series of tables being disposed one above the other and each of said tables having a distributing plate proximate to its inner edge and adapted to distribute material for each pair of adjacent tables, a feed box delivering on to said plates, said launder having divisions corresponding to the respective series of tables and said divisions having feed pipes leading to respective feed boxes, and means for varying the inclination of the several tables.

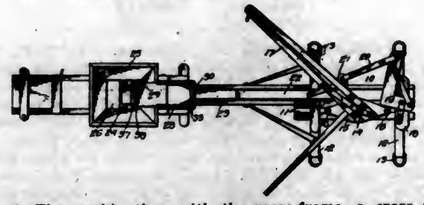
3. In an apparatus of the character described, the combination of a rotatable frame, a horizontal launder revoluble with said frame, an annular series of tables arranged below the launder and revoluble therewith, said series of tables being disposed one above the other and each of said tables having a distributing plate proximate to its inner edge and adapted to distribute material for each pair of adjacent tables, a feed box delivering on to said tables, said launder having an undulating bottom and one of the feed boxes being arranged beneath each of said undulations.

4. In an apparatus of the character described, the combination of a rotatable frame, a horizontal launder revoluble therewith, an annular series of tables below the launder and revoluble with the same, said series of tables being disposed one above the other, and each of said tables having a distributing plate proximate to its inner edge and adapted to distribute material for each pair of adjacent tables, a feed box delivering on to said plates, said launder having an undulating bottom and one of the feed boxes being disposed beneath each undulation of the launder, a stationary feed trough delivering into a portion of the length of the launder, and means for removing the concentrated values on the tables during the rotation of the frame.

5. In an apparatus of the character described, the combination of a rotatable frame, a horizontal launder revoluble therewith, an annular series of tables below the launder and revoluble with the same, and each of said tables having a distributing plate proximate to its inner edge and adapted to distribute material for each pair of adjacent tables, a feed box delivering on to said plates, said launder having an undulating bottom and one of the feed boxes being disposed beneath each undulation of the launder, a stationary feed trough delivering into a portion of the length of the launder, and means for removing the concentrated values on the tables during the rotation of the frame, said last named means comprising a spraying device arranged to act upon the tables during the time that they are practically free from the receipt of any fresh accretions of pulp.

[Claim 6 not printed in the Gazette.]

878,880. HAY-PRESS. JOSEPH M. HOLDERFIELD and EDDY C. HOLDERFIELD, Fogg, Tenn. Filed Sept. 28, 1906. Serial No. 336,604.



1. The combination, with the press-frame, a cross rod supported in the same and the traverse rod, the baling chamber of the curved arms provided on their rear ends with the feeder-block, a loop-bar 30, pivoted at its ends on the said cross-rod and extending up and across the curved bars embracing the same, and operative means connecting the traverse rod with the forward ends of the curved arms.

2. The combination, with the press-frame a cross-rod supported in the same, the baling chamber and the traverse rod, of the curved arms provided on their rear ends with the feeder-block, a loop-bar, 30, pivoted at its ends on the said cross-rod and extending up and across the curved bars, embracing the same, brace-bars connected with the loop-bar and curved bars to strengthen and support the latter, and operative means connecting the traverse-rod with the forward ends of the curved arms.

3. The combination, with the press-frame a cross-rod supported in the same, the baling chamber and the traverse rod, of the curved arms provided on their rear ends with the feeder-block, a loop-bar, 30, pivoted at its ends on the said cross-rod and extending up and across the curved bars, embracing the same, brace-bars connected with the loop-bar and curved bars to strengthen and support the latter, and operative means connecting the traverse rod with the forward ends of the curved arms, said feeder-block being provided with a face-strip and springs immediately interposed between the face-strip and the end of the feeder-block, whereby the pressure of face of the presser-block may be cushioned.

4. The combination, with the press-frame, a cross rod supported in the same and a traverse rod, the baling chamber of the curved arms provided on their rear ends with the feeder-block, a loop-bar 30, pivoted at its ends on the said cross-rod and extending up and across the curved bars embracing the same, and operative means connecting the traverse rod with the forward ends of the curved arms, the said feeder-block being provided with a face-strip separate from the block and springs immediately interposed between the face-strip and the end of the feeder-block.

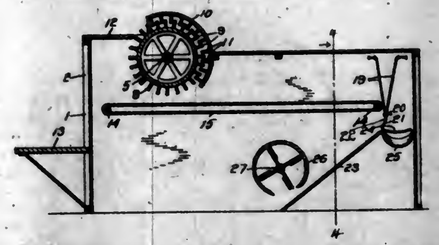
878,881. NAIL-POLISHER. GEORGE E. HOPKINS, Alton, Ill. Filed Oct. 10, 1906. Serial No. 338,311.

A nail polisher provided with a handle on its back, having outwardly and downwardly extending ends curved to fit the fingers and a recess formed in the central portion of the top of the handle adapted to receive the middle fingers



whereby the handle can be securely held between the fingers and the polishing operation facilitated.

878,882. PEA-THRESHER. EMMETT W. JONES, Burts, Va. Filed Mar. 25, 1907. Serial No. 364,445.



1. A machine of the type set forth, comprising threshing mechanism, an endless apron leading therefrom, a screening mechanism located adjacent the discharge end of said conveyer and comprising a vibratory rod provided with closely associated parallel fingers having perpendicular portions and horizontal portions projecting outwardly from the lower ends of said perpendicular portions, means for vibrating said rod, an inclined plate disposed inwardly of said perpendicular portions to receive the material working through the spaces therebetween and an angularly disposed transverse inclined spout arranged beneath said horizontal portions to receive the material working through the spaces therebetween.

2. A machine of the type set forth, comprising threshing mechanism, an endless apron leading therefrom, a screening mechanism located adjacent the discharge end of said conveyer and comprising a vibratory rod provided with closely associated fingers having perpendicular portions and horizontal portions, an inclined stationary plate disposed to receive the material working through the spaces between said perpendicular portions, an angularly disposed stationary spout arranged to receive the material working through the spaces between said horizontal portions, and means for vibrating said rod comprising a vertical rock shaft having upper and lower angularly disposed arms, the lower arm being connected to said vibratory rod, and operating mechanism connected to the upper arm of said shaft.

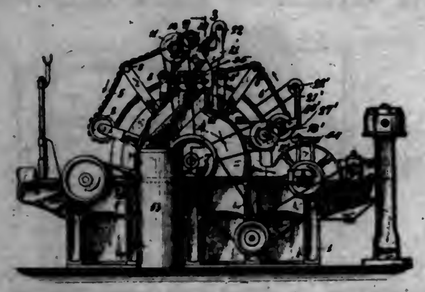
878,883. SASH-LOCK. JOHN G. KEITH, Chicago, Ill. Filed Oct. 28, 1905. Serial No. 284,860.



In a sash lock, the combination of a locking bar pivotally secured in a mortise in a window sash, spring means

tending to press the free end of said bar out of said mortise, and a block or seat mounted on the other sash in cooperative relation with the free end of said locking bar, the end surface of said bar and the coacting face of said block being eccentric to the pivot of said bar in the closed position of the sashes, substantially as described.

878,884. TRAVELING-FLAT CARDING-ENGINE. FREDERIC E. KIP, Montclair, N. J., and EDWIN C. SMITH, Seekonk, Mass., assignors to Batten-Hayes Company, Lewiston, Me., a Corporation of Maine. Filed May 28, 1906. Serial No. 319,017.



1. In a traveling flat carding engine the combination of a cylinder, a plurality of sets of flats, means to cause said flats to travel in working relation with the cylinder, a stripping or cleaning device for each set of flats, and conveyers adapted to receive and remove the strippings located below the respective cleaning devices.

2. In a traveling flat carding engine the combination of a cylinder, two sets of flats, means to cause said flats to travel in working relation with the cylinder, a stripping or cleaning device for each set of flats, conveyers adapted to receive the strippings from the sets of flats located at the points where said flats leave the cylinder, and means for moving said conveyer.

3. In a traveling flat carding engine the combination of a cylinder, a plurality of sets of flats, means to cause said flats to travel in working relation with the cylinder, stripping or cleaning devices for each set of flats, a conveyer located so as to take the strippings from two contiguous sets of flats, and means for moving said conveyer.

4. In a traveling flat carding engine the combination of a cylinder, a plurality of sets of flats, means to cause said flats to travel in working relation with the cylinder, stripping or cleaning devices for each set of flats, a conveyer located so as to take the strippings from two contiguous sets of flats, said conveyer running transversely of the direction of travel of the flats, and means for moving said conveyer.

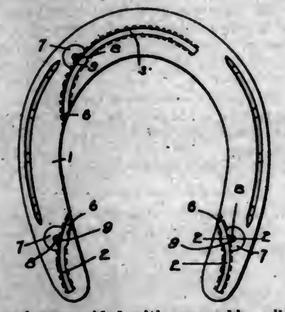
878,885. SCARF-PIN. ELMER G. KNOOP, Columbus, Ohio. Filed June 5, 1907. Serial No. 377,412.



1. A pin of the type set forth, comprising a shank having pointed upper and lower ends, and formed with spaced protuberances and a head slidably engaged on said shank between said protuberances.

2. A pin of the type set forth, comprising a shank formed with spaced protuberances, and with a groove between said protuberances and a head including a member surrounding said shank between said protuberances and a spring finger formed to engage said groove and to hold said head against movement.

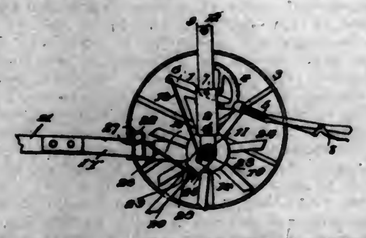
878,886. HORSESHOE. PORTER G. LOVE, Denver, Colo. Filed Apr. 11, 1907. Serial No. 367,626.



1. A horseshoe provided with removable calks, having a dovetail tongue-and-groove connection with the shoe, said tongues and grooves being formed on circular lines eccentric to but in the same plane with the circular outline of the shoe, and means to maintain the calks in the grooves.

2. A horseshoe provided with removable calks, having a dovetail tongue-and-groove connection with the shoe, said tongues and grooves being formed on circular lines eccentric to the circular outline of the shoe, and washers and screw-rivets to secure the washers to the shoe against the ends of the calks to hold them in place on the shoe, said washers being cut away on one side on a circular line concentric with the line of the tongue-and-groove connection of the calk with the shoe.

878,887. CLOD-CRUSHER. DAVID LUMSDEN, Cisco, Ill. Filed Aug. 27, 1907. Serial No. 390,405.

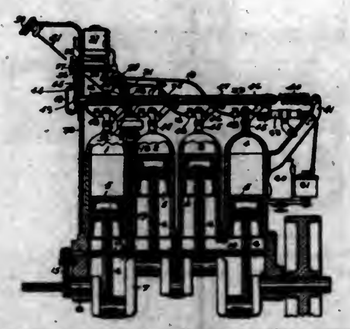


1. In a clod crusher, the combination of a main frame comprising approximately vertical guides, standards mounted for vertical movement in said guides, means for adjusting the standards vertically and holding the same in an adjusted position, a rod supported by said standards, means carried by the said rod for lifting clods, and rotary crusher members mounted upon said rod and adapted to coöperate with the clod lifting means for crushing the clods.

2. In a clod crusher, the combination of a rod 22, a rod 11, supporting means for said rods, a series of teeth mounted upon the rod 11, braces between said teeth and the rod 22, and rotary crusher members mounted upon the rod 11 and arranged to operate between the said teeth.

3. In combination, side guides, standards movable vertically in said guides, ground wheels supporting the said guides, a rod mounted in the lower ends of said standards, transversely spaced lifting teeth mounted upon the said rod, rotary crusher members mounted upon the rod and arranged to operate between the said lifting teeth, a pole, connecting means between said pole and the aforementioned rod, a rod 22 having connection with the said pole, and braces between the aforesaid lifting teeth and the rod 22.

878,888. GAS-ENGINE. WILLIAM T. MAXWELL, Pittsburg, Pa., assignor of three-eighths to George W. Eberhardt, Pittsburg, Pa. Filed Mar. 21, 1906. Serial No. 307,157.



1. A starting arrangement for gas engines comprising in combination a plurality of cylinders, a spark plug in each cylinder, a circuit changer for directing the current to said plugs in succession, an indicator to show the active plug, a fuel supply connected to each cylinder, and valve mechanism and indicator therefor arranged to establish connections from the fuel supply to the cylinder having the active spark plug.

2. A starting arrangement for gas engines comprising in combination a plurality of cylinders, an igniter in each cylinder, means for rendering said igniters active in succession, an indicator to show the active igniter, a fuel supply connected to said cylinders, hand operated means for forcing a charge into the cylinders, valve mechanism arranged to establish connection between the fuel supply and the cylinder having the active spark plug, means for locking said valve mechanism open, and means controlled by the hand operated forcing means for automatically closing said valve mechanism.

3. A starting arrangement for gas engines comprising in combination a plurality of cylinders, an igniter for each cylinder, mechanism for rendering said igniters active in succession, a fuel supply, connections therefrom to each of said cylinders, valve mechanism arranged to establish connections from the fuel supply to all of said cylinders, an operating member for said valve mechanism arranged to open connection to only one of said cylinders at a time, and means for automatically closing said valve mechanism.

4. A starting arrangement for gas engines comprising in combination a plurality of cylinders, an igniter for each cylinder, mechanism for rendering said igniters active in succession, a fuel supply, valve mechanism arranged to establish connections between the fuel supply and all of said cylinders, and a shiftable operating member for said valve mechanism provided with a separate connector to the valve mechanism for each of said cylinders and arranged to operate the valve mechanism to open connection to only one cylinder at a time.

5. A starting arrangement for gas engines comprising in combination a plurality of cylinders, an igniter for each cylinder, means for rendering said igniters active in succession, a fuel supply, valve mechanism arranged to establish connection from the fuel supply to each of the cylinders but only one at a time, means for locking said valve mechanism with the valve open, means for forcing a charge of fuel through the valve mechanism, connections therefrom for releasing the lock, and means for automatically closing the valve mechanism.

[Claims 6 to 16 not printed in the Gazette.]

878,889. FOLDING SEAT. JOHN Z. MILLER, Indianapolis, Ind. Filed June 13, 1907. Serial No. 378,704.

1. The combination of a seat-bottom, laterally projecting round members rigidly secured thereto, a seat-back carried by rods extending downwardly from each side thereof and coiled around said circular members, stops for engaging the ends of said coils when the seat-back is upright for limiting the backward movement thereof, and rigid stops above said coils for engaging said rods and stopping the same when the seat-back is subjected to strain.



2. The combination of a seat-bottom, a seat-back supporting frame resting loosely upon said seat-bottom having two rearwardly extending arms with a lug extending downwardly from the rear end of each arm so as to lie against the rear edge of said seat-bottom for loosely engaging the forward end of said frame, a round member extending laterally from each arm of said frame, a seat-back provided with a downwardly extending rod at each side thereof that is coiled about said round member and the extreme end of said coil is turned laterally to engage the rear end of the arm of said seat-back supporting frame for providing a yielding stop for the seat-back when upright, and laterally extending stop bars secured to the rear end of said frame and above said coils and adapted to engage said seat-back rods and stop the same when the seat-back is subjected to strain, substantially as set forth.

3. The combination of a seat-bottom, laterally projecting round members rigidly secured thereto, a spring metal rod coiled about each of said round members extending upward to form the border and frame of the back, upholstering material secured to the upper part of said spring metal rod, and a stop for limiting the backward movement of the seat-back.

4. The combination of a seat-bottom, a back-supporting frame resting loosely upon said seat-bottom with lugs at the rear end thereof extending down behind the seat-bottom, a loop secured to the seat-bottom for loosely engaging the forward end of said frame, and a seat-back pivotally connected with the rear part of said seat-frame, whereby the seat-back may be removed from the seat-bottom by merely lifting the seat back, substantially as set forth.

878,890. SELF-LOADING CART. ELLIS S. PEARSON, Bradford, Ohio. Filed May 18, 1907. Serial No. 374,382.



1. In a machine of the class described, in combination, a wheeled frame; a plowing mechanism connected to the front axle of the frame; means for moving said plowing mechanism bodily into or out of operative position; a crank-shaft carried by the frame; a series of shovels carried by said crank-shaft; means for driving said crank-shaft; a forwardly extending scoop pivoted to the frame; a single means for adjusting the position of said scoop and said crank-shaft; a rearwardly-extending elevator having its lower end disposed adjacent the blade of said scoop; means for driving said elevator; and a receptacle carried by said frame at its rear end, said receptacle being adapted to receive from the elevator the dirt shoveled thereunto.

2. In a machine of the class described, in combination, a wheeled frame; a plowing mechanism connected to the

front axle of the frame; means for moving said plowing mechanism bodily into or out of operative position; a crank-shaft carried by the frame; a series of shovels carried by said crank-shaft; means for driving said crank-shaft; means for throwing said driving means into and out of action; a forwardly-extending scoop pivoted to the frame; a single means for adjusting the position of said scoop and said crank-shaft; a rearwardly-extending elevator having its lower end disposed adjacent the blade of said scoop; means for driving said elevator; vertically movable means for moving said last-mentioned driving means into and out of action; and a receptacle carried by said frame at its rear end, said receptacle being adapted to receive from the elevator the dirt shoveled thereonto.

3. In a machine of the class described, in combination, a wheeled frame; a plowing mechanism connected to the front axle of the frame; means for moving said plowing mechanism bodily into or out of operative position; a crank-shaft carried by the frame; a series of shovels carried by said crank-shaft; means for driving said crank-shaft; a forwardly extending scoop pivoted to the frame; a single means for adjusting the position of said scoop and said crank-shaft; a rearwardly extending elevator having its lower end disposed adjacent the blade of said scoop; means for driving said elevator; a receptacle carried by said frame at its rear end, said receptacle being adapted to receive from the elevator the dirt shoveled thereonto, said receptacle including a bottom formed of a pair of sections movable vertically towards and from each other; means for raising said sections to discharge the contents of the receptacle; and means for throwing said last-mentioned means out of action, to permit said sections to move downwardly towards each other, to close the bottom of said receptacle.

4. In a machine of the class described, in combination, a wheeled frame; a plowing mechanism connected to the front axle of the frame; means for moving said plowing mechanism bodily into or out of operative position; a crank-shaft carried by the frame; a series of shovels carried by said crank-shaft; means for driving said crank-shaft; a forwardly extending scoop pivoted to the frame; a single means for adjusting the position of said scoop and said crank-shaft; a rearwardly extending elevator having its lower end disposed adjacent the blade of said scoop; means for driving said elevator; a receptacle carried by said frame at its rear end, said receptacle being adapted to receive from the elevator the dirt shoveled thereonto, said receptacle including a bottom formed of a pair of sections movable vertically toward and from each other; positive means operatively connected with the rear axle of the machine for raising said sections simultaneously, to discharge the contents of the receptacle; and means for automatically throwing said last-mentioned means out of operation upon the completion of the discharging operation, to permit said sections to move downwardly towards each other, to close the bottom of said receptacle.

5. In a machine of the class described, in combination, a wheeled frame; a platform disposed at the front end of the frame and provided with a slot; a plowing mechanism connected with the front axle and including a series of cutting disks and a rod connected thereto, said rod having a threaded opening formed therethrough; a rearwardly extending bracket connected with said front axle and provided with an opening; a shaft extending upwardly through said slot and bracket opening and having a threaded lower end fitted in the opening in said rod; a hand-wheel secured to the upper end of said shaft for rotating the latter in one direction or the other, to raise or lower said plowing mechanism bodily; a crank shaft carried by the frame; a series of shovels carried by said crank-shaft; means for driving said crank-shaft; a forwardly extending scoop pivoted to the frame; a single means for adjusting the position of said scoop and said crank-shaft; a rearwardly-extending elevator having its lower end disposed adjacent the blade of said scoop; means for driving said elevator; and a receptacle carried by said frame at its rear end, said receptacle being adapted to receive from the elevator the dirt shoveled thereonto.

[Claims 6 to 14 not printed in the Gazette.]

878,891. NAILING OR PEGGING MACHINE. FRANK M. PETERS and ALEXANDER DER ANANIAN, Milford, Mass. Filed Feb. 14, 1907. Serial No. 357,335.



1. The combination in a nailing machine, of movable means arranged to receive and hold nails, nail-driving means movable independent of the nail receiving and holding means, means on the nail receiving and holding means for engaging the nail-driving means and moving the same with the nail receiving and holding means, and means for automatically releasing the said nail-driving means from said nail receiving and holding means.

2. The combination in a nailing machine, of movable nail-holding means, nail-driving means movable independent of the nail-holding means, means on the nail-holding means for engaging the nail-driving means and moving the same with the nail-holding means, means for automatically releasing the said nail-driving means from said nail-holding means, and nail-feeding means operated by said nail-holding means.

3. The combination in a nailing machine, of a frame, a movable nail-holder, a hammer movable independent of the nail-holder, means on the nail-holder for engaging the hammer and moving the same with the holder, means on the frame for automatically releasing the said hammer from said means on the holder, and a spring for forcibly impelling the hammer subsequent to its release.

4. The combination in a nailing machine, of a frame; a movable tube for receiving and holding nails, a hammer movable in and independent of the tube, means on the tube for engaging the hammer and moving the same with the tube, means on the frame for automatically releasing the hammer from said means on the tube, and a spring for forcibly impelling the hammer subsequent to its release.

5. The combination in a nailing machine, of a frame, a tube movable rectilinearly in said frame and arranged to receive and hold nails, a spring for moving said tube in one direction, a hammer movable rectilinearly in the tube and having a head, a spring for moving the hammer forcibly in one direction, a catch carried by the tube and arranged to engage the hammer head and move the hammer with the tube so as to place the hammer spring under tension, and means on the frame for disengaging the catch from the hammer head.

[Claims 6 to 12 not printed in the Gazette.]

878,892. STEAM-BOILER. WILLIAM C. PFEIFFER, Chicago, Ill. Filed June 4, 1906. Serial No. 319,981.

1. In a steam boiler, in combination, a shell comprising two alined cylindrical sections, the forward section being of smaller diameter than the rear section and projecting into said rear section, said rear section being provided with a rear tube sheet; and stays engaging said rear tube sheet and the inwardly-projecting rear end of said forward section.

2. In a steam boiler, in combination, a shell comprising two alined cylindrical sections, the forward section being of smaller diameter than the rear section and projecting into said rear section, said inwardly-projecting rear



end being notched to provide tongues; a tube sheet for the rear end of said rear shell-section; and stays secured to said tube sheet and said tongues.

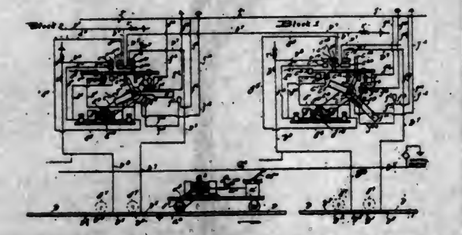
878,893. HARNESS-ROSETTE. ERNEST A. PFLUEGER, Akron, Ohio, assignor to The E. A. Pflueger Company, Akron, Ohio, a Corporation of Ohio. Filed Oct. 2, 1907. Serial No. 395,552.



1. An article of the character described, embodying an outer shell formed with an annular inturned rim, a ring located within the rim of said shell and carrying a loop, and a disk resting on said ring and apertured to permit the projection therethrough of said loop, said outer shell rim being turned over and crimped onto the edge of said disk.

2. An article of the character described, embodying an outer shell formed with an annular inturned rim, a ring located within the rim of said shell and carrying a loop, and a dished disk resting on said ring and apertured to permit the projection therethrough of said loop, said disk being at its center in substantial contact with the inner surface of said outer shell and at its edge in contact with said rim at a distance from said ring, and said rim being turned over and crimped onto said disk.

878,894. SIGNAL SYSTEM FOR ELECTRIC RAILWAYS. CHARLES F. PIKE, Philadelphia, Pa., assignor, by direct and mesne assignments, to Charles F. Van Horn, Philadelphia, Pa. Filed Oct. 19, 1901. Serial No. 79,206.



1. In an electric railway divided into blocks, insulated contact portions separating the blocks, and grounded through resistances, translating devices adapted to work on the drop in potential around said resistances, and having partial circuit connections with said contact portions together with means for completing the circuits upon the passage of a car or vehicle, substantially as described.

2. In an electric railway controlling system, block divisions, track conductors having insulated contact portions between blocks, signal setting devices for each block, magnetic signal operating means therefor, return connections for operating current through car motors from the insulated sections through suitable resistances, and branch connections around said resistances including said signal operating mechanism whereby the latter may be worked upon a drop in potential around the resistances, substantially as described.

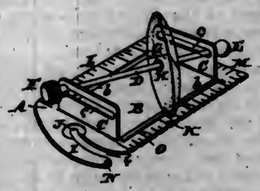
3. In an electric railway divided into blocks, a return conductor, insulated contacts between the blocks, connections therefor to the return conductor through low resistances, translating devices having partial circuit connections with said contacts, and means carried by a car or vehicle adapted in passing over the rail to complete the circuit of said translating devices around said resistances, substantially as described.

4. In an electric railway a return conductor having contact portions insulated from the body of the conductor but electrically connected to said conductor through resistances, and signal or safety devices electrically connected with said insulated portions and arranged to be operated on the drop around said resistances by current from the motor or return conductor or a passing car, substantially as described.

5. In an electric railway system insulated rail sections having safety connections between blocks, car and a brake device on said car, a magnet controlling said device, an insulated contact on the car connected to said magnet and adapted to make contact with said insulated sections in passing, partial circuits completed and safety devices set in front or in rear by current from a car passing into a block, means whereby current supply will be cut off through said connections to any other cars attempting to enter the block, and means whereby said braking devices will be set by auxiliary current through said circuit during said cut-off of the motor operating current, substantially as described.

[Claim 6 not printed in the Gazette.]

878,895. ERASING DEVICE. JOHN S. RAPSON, Elkins Park, Pa. Filed July 18, 1907. Serial No. 384,311.



1. An eraser device consisting of a plate having an aperture formed therein, combined with an eraser, and a mechanical support for the eraser for connecting it to the plate above the aperture therein and permitting its free movement for operation upon the paper exposed through the aperture of the plate.

2. In an eraser device, the combination of a plate having an aperture therein and slotted supports extending upward from the plate at each end of the aperture, with a rod extending through the slotted supports and above the aperture, and an eraser carried by the rod intermediate of the supports and above the aperture.

3. In an eraser device, the combination of a plate having an aperture therein and slotted supports extending upward from the plate at each end of the aperture, with a rod extending through the slotted supports and above the aperture, and an eraser loosely sleeved upon the rod so as to be capable of rocking and sliding thereupon.

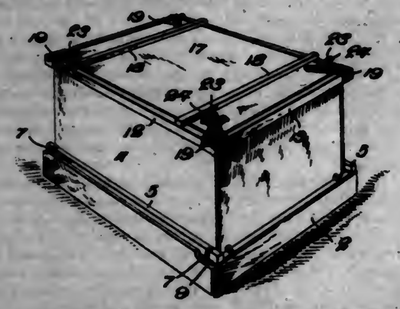
4. In an eraser device, the combination of a plate having an aperture therein and slotted supports extending upward from the plate at each end of the aperture, with a rod extending through the slotted supports and above the aperture, an eraser carried by the rod intermediate of the supports and above the aperture, and means for detachably holding the rod in the slotted supports.

5. In an eraser device, the combination of a plate having an aperture therein and slotted supports extending upward from the plate at each end of the aperture, with a

rod extending through the slotted supports and above the aperture, an eraser carried by the rod intermediate of the supports and above the aperture, and means for detachably holding the rod in the slotted supports consisting of enlarged parts upon each end of the rod beyond the supports one of which is provided with a knurled portion to form a perforating device.

[Claim 6 not printed in the Gazette.]

878,896. BOX. AMBROSE S. RAY, Bellefonte, Pa. Filed July 19, 1907. Serial No. 384,597.



1. In a box of the class described, the combination with a base; of side and end walls for said base, bars at the lower edge of said side and end walls, the bars at the lower edge of the side walls extending beyond the ends thereof, means extending between said base and bars to pivotally secure said walls to the base, cleats at the upper ends of said walls, a cover for said box, clips carried by said cover, having an elongated slot at one end and a pocket at the opposite end, bolts carried by said cover, and extending through said slots and means to adjustably secure said pockets over the ends of said cleats, when the box is in its assembled position and over the projecting ends of the bars on the side walls when the box is in its folded position, whereby the parts of the box will be held in their assembled or folded positions.

2. In a box of the class described, the combination with a base, having a flange around the edges thereof; of side and end walls for said base, bars at the lower edges of said side and end walls, bolts fixed to said base, straps at the upper ends of said bolts adapted to engage the bars on the side and end walls and hingedly secure the same to the base, cleats at the upper edges of said side and end walls, a cover adapted to fit between the upper edges of said walls and means carried by said cover adapted to engage said cleats and lock the cover in position over the box.

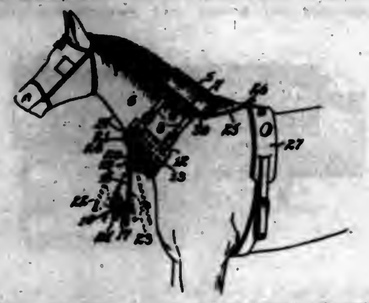
3. In a box of the class described, the combination with a base, side and end walls pivotally secured to said base, and cleats at the upper edges of said side and end walls; of a cover for said box, clips on said cover adapted to extend over said walls and cleats, pockets at one end of said clips adapted to engage the ends of said cleats, the opposite ends of said clips having elongated slots, bolts extending through said slots and means on the bolts to lock said clips in their adjusted position, whereby the cover will be firmly held in engagement with said walls and the walls reinforced.

878,897. BELT. HENRY J. REYNOLDS, Bettie, Tex. Filed Sept. 10, 1907. Serial No. 392,242.



The combination with a flexible belt body of an attachment comprising parallel upper and lower wires adapted for connection with said body and resilient wire rings connecting said wires and secured thereto.

878,898. HEADLIGHT FOR HORSES. EUGENE L. RICHARDS, Litchfield, Conn. Filed Apr. 17, 1906. Serial No. 312,136.



1. The combination of means adapted to closely embrace the neck of a horse, and a swingingly adjustable light pendent therefrom but rigidly connected thereto.

2. The combination of means adapted to closely embrace the neck of a horse and comprising a rigid member and a flexible member detachably connected one to the other, and a light pendent from the flexible member but rigidly connected thereto.

3. The combination of a pair of separable strap connected neck embracing members, one to embrace the upper and the other the underside of a horse's neck in such a manner as not to partake of the movement of the shoulders of the horse, and a light pendent from but rigidly connected to the lower of said members.

4. The combination of a pair of separable strap connected neck embracing members, one to embrace the upper and the other the under side of a horse's neck in such a manner as not to partake of the movement of the shoulders of the horse, and an adjustable light pendent from but rigidly connected to the lower of said members.

5. The combination with a sheet metal plate for engaging the upper side of a horse's neck, a flexible plate for engaging the lower side of the horse's neck, flexible connection between these, and a lamp bracket carried by the lower plate.

[Claim 6 not printed in the Gazette.]

878,899. CONVERTIBLE CAR. EDWARD T. ROBINSON, St. Louis, Mo. Filed Apr. 20, 1906. Serial No. 312,017.



1. In a convertible car, the combination of wall posts provided with runways, and movable wall members arranged to operate in said runways, one of said wall members being provided with pocket members closed at one end and into which another of said members is adapted to enter, substantially as set forth.

2. In a convertible car, the combination of wall posts provided with runways, movable wall members arranged to operate in said runways, and channel pocket strips closed at one end and carried by one of said wall members and adapted to receive another of said members, substantially as set forth.

3. In a convertible car, the combination of wall posts provided with runways, movable wall members arranged to operate in said runways, and channel pocket strips carried by one of said wall members adapted to receive another of said members; said pocket strips being provided with stops for limiting the movement of the wall member entering thereinto, substantially as set forth.

4. In a convertible car, the combination of wall posts provided with runways, upper, intermediate and lower movable wall members arranged to operate in said runways, and pocket members carried by said upper and runways, and pocket members carried by said upper and intermediate members adapted to receive respectively said intermediate and lower members; said pocket members being closed at their upper end, substantially as set forth.

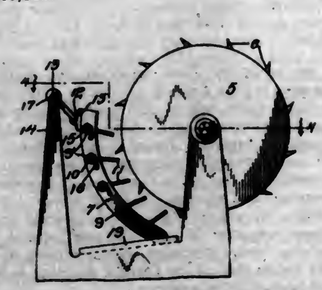
5. In a convertible car, the combination of wall posts provided with runways, upper, intermediate and lower movable wall members arranged to operate in said runways, and pocket members carried by said upper and intermediate members adapted to receive respectively said intermediate and lower members; said pocket members being provided with stops, substantially as set forth.

[Claim 6 not printed in the Gazette.]

878,900. PROCESS OF PRODUCING VINACEOUS BEVERAGES FROM PURE HEMOGLOBIN AND FERMENTABLE SUGAR. FRIEDRICH G. SAUER, Berlin, Germany, assignor to Paul Höpfner, Schöneberg-Berlin, Germany. Filed Jan. 7, 1907. Serial No. 351,176.

The process of producing a palatable vinaceous beverage from pure hemoglobin and fermentable sugar consisting in dissolving pure hemoglobin in water, adding the fermentable sugar, introducing yeast, allowing the saccharine liquid to ferment, and adding a small quantity of tartaric acid during the third part of the period of fermentation.

878,901. THRESHING MECHANISM. JOHN W. SHELBOURN, Grand Island, Nebr. Filed Feb. 28, 1906. Serial No. 303,420.



In an adjustable threshing mechanism, the combination with a revolubly mounted cylinder, of a concave disposed in operative relation to the cylinder, said concave including arcuate end plates, tooth bars revolubly engaged in the end plates and extending longitudinally of the cylinder, said tooth bars being arranged for independent movement, teeth carried by the bars and extending toward the cylinder, means for holding the bars at different points of their movement, brackets, a shaft mounted at its ends in the brackets and having a crank portion, sleeves carried by the arcuate plates and in which the crank portion of the shaft is revolubly engaged, said shaft being movable to move the concave toward and away from the cylinder, and guides for the lower ends of the plate.

878,902. PROCESS OF TREATING SILK. EDOUARD P. L. SISLEY, Lyon, France, assignor to Societa Anonima Cooperativa per la Stagionatura e l'Assaggiodelle Sete ed Affini, Milan, Italy, a Corporation of Italy. Filed Jan. 16, 1906. Serial No. 296,426.

1. Process of increasing the tensile strength and elasticity of silks weighted with metallic salts consisting in immersing the silks in a slightly acidulated bath of thio-urea compounds, and drying same on the fiber.

2. Process of increasing the tensile strength and elasticity of silks weighted with tin salts consisting in immersing the silks in a slightly acidulated bath of thio-urea and drying same on the fiber.

3. Process of increasing the tensile strength and elasticity of silks weighted with tin salts consisting in immersing the silks in a dilute solution of thio-urea slightly acidulated with citric acid, and drying same on the fiber.

4. Process of increasing the tensile strength and elasticity of silks weighted with tin salts consisting in immersing the silks in a dilute bath of thio-urea slightly acidulated with citric acid and containing sizes, and drying same on the fiber.

878,903. HOOK AND EYE. FRANKLIN S. SLAUTER, Derby, Conn. Filed May 16, 1907. Serial No. 374,080.



1. In a hook and eye, the combination of an M-shaped hook having locking shoulders, and an eye consisting of a strip the width of which is substantially equal to the distance between said locking shoulders and the ends of said hook, said locking shoulders facing in a direction opposite to that by which the hook is placed in engagement with the eye, whereby the eye fills the space between the locking shoulders and the ends of the hook and is held against rocking on either a longitudinal or transverse axis.

2. In a hook and eye, the combination of an M-shaped hook having locking shoulders formed in the outer arms thereof, and an eye consisting of a strip the width of which is substantially equal to the distance between said locking shoulders and the ends of said hook, said locking shoulders facing in a direction opposite to that by which the hook is placed in engagement with the eye, whereby the eye fills the space between the locking shoulders and the ends of the hook, and is held against rocking on either a longitudinal or transverse axis.

3. In a hook and eye, the combination of an M-shaped hook and an eye consisting of a flat strip formed with a central bend and having one or both of its side edges formed with a sloping surface to facilitate its engagement with the hook.

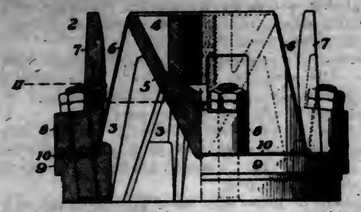
4. In a hook and eye, the combination of an M-shaped hook having locking shoulders, and an eye consisting of a flat strip formed with a central bend, and having one or both of its side edges formed with notches adjacent said shoulders to facilitate its engagement with the hook.

878,904. VALVE. EDWIN E. SLICK, Pittsburg, Pa. Filed Apr. 12, 1907. Serial No. 367,856.

1. In a pump, a pump cylinder having a head or wall with an opening therethrough, a projecting cage secured over the opening and having at least three sides provided with side ports, and valves controlling said side ports, said valves having free outer ends arranged to move away from the cage walls in the opening; substantially as described.

2. In a pump, a pump cylinder having a head or wall with an opening therethrough, a projecting cage secured over the opening and having at least three sides provided with side ports, and valves controlling said side ports, said valves comprising flexible sheets with free outer ends ar-

ranged to move away from the cage walls in opening; substantially as described.



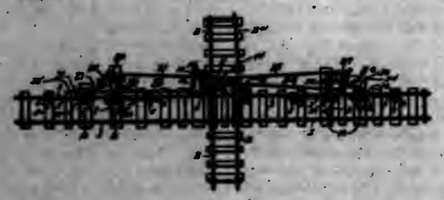
3. In a pump, a pump cylinder having a head or wall with an opening therethrough, a projecting cage secured over the opening and having at least three sides provided with side ports, and valves controlling said side ports, said valves having free outer ends arranged to move away from the cage walls in opening, and back stops arranged to limit the opening movements of the valves; substantially as described.

4. In a pump, a cylinder head or wall having an opening therethrough, a hollow cage secured over the opening and having side ports, a valve controlling said ports and comprising flexible plates secured at their inner ends with free outer ends coöperating with the side ports, and stops arranged to limit the backward movement of said sheets in opening; substantially as described.

5. In a pump, a cylinder head or wall having an opening therethrough, a hollow cage secured over the opening and having side ports, a valve controlling said ports and comprising flexible plates secured at their inner ends with free outer ends coöperating with the side ports, and curved stops arranged to limit the backward movement of said sheets in opening; substantially as described.

[Claim 6 not printed in the Gazette.]

878,905. AUTOMATIC RAILWAY-SIGNAL. NOAH E. SPITLER, Salem, Ohio. Filed Aug. 6, 1907. Serial No. 387,291.



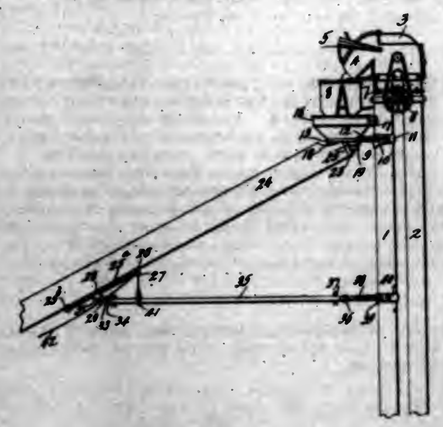
1. In an automatic railway signal, an auxiliary rail adjacent to a track rail, a lever extended below said auxiliary rail and adapted to be actuated by pressure upon said auxiliary rail, a semaphore signal apparatus adjacent to a track crossing a main track, an oscillating arm connected with the lever actuated by the auxiliary rail, and connecting rods between said oscillating arm and the semaphore devices, substantially as specified.

2. In an automatic railway signal, semaphore devices arranged at the intersection of two cross tracks, two auxiliary rails on each side of the semaphore devices, said auxiliary rails having ends pivoted to the rails of one of the track and the ends opposite the pivotal ends provided with lever connections which support them at such ends, rod and lever connections extending from below each of the auxiliary rails to the semaphore devices, the auxiliary rails each being adapted to transmit movement to the semaphore devices when weight is placed upon said auxiliary rails.

3. In an automatic railway signal, a semaphore signal comprising a horizontal and upright shaft with intermeshing gears, an arm extended from the horizontal shaft and adapted to extend over a cross track, an oscillating arm connected to the upright shaft, a cross rail having one end adapted to receive lateral movement, a connection between said cross rail and the oscillating arm on the upright shaft whereby said cross rail may be shifted laterally in and out of alinement with an adjacent end or portion of the cross rail, two series of levers arranged adjacent to one side of a main track, two auxiliary rails arranged on the inner side of the rails on one side of said main track, said auxiliary rails being pivotally connected to the rails of the main track, means for maintaining said auxiliary rails in parallel position with the rails of the main track, and lever connections extending below each of the auxiliary rails and connecting with the series of levers adjacent to the main track.

4. In an automatic railway signal, a semaphore signal located at the intersection of two cross tracks, said semaphore signal being connected with a rail of one of the cross tracks which is adapted to receive lateral movement from the semaphore devices, two auxiliary rails located on each side of the semaphore devices, and lever and link connections extending from said semaphore devices to said auxiliary rails, substantially as specified.

878,906. SPOUT-SUPPORT. BENJAMIN M. STEELE, Peoria, Ill., assignor to Ben Steele Weigher Manufacturing Company, Peoria, Ill., a Corporation of Illinois. Filed May 26, 1905, Serial No. 262,331. Renewed July 15, 1907. Serial No. 383,926.



1. In a device of the class described, the combination with an elevator tube, a bracket consisting of two sections clamped to said tube, one of said sections supporting a ring having an annular flange, a hopper supported in said ring, a spout-head revolubly mounted on the flange of the ring, and a spout pivotally connected to said spout-head.

2. In a device of the class described, the combination with an elevator tube, a bracket secured to said tube, having an annular tapered ring removed outwardly from the tube, a hopper supported on said ring and tapered to conform to the ring, and a discharge spout swiveled in a suitable manner to the ring of the bracket to adapt it to have vertical and horizontal movement.

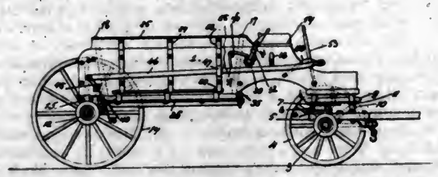
3. In a device of the class described, the combination with an elevator tube, a bracket secured to said tube, having an annular tapered ring removed outwardly from the tube, a hopper supported on said ring and tapered to conform to the ring, a bracket for bracing the upper part of the hopper from the tube, a hinged spout-head revolubly mounted on the ring, and a spout pivotally connected to the spout-head.

4. In a device of the class described, the combination with an elevator tube, a bracket secured to said tube, and provided with an annular ring connected with the bracket by arm extensions, a hopper supported on the ring, a discharge spout swiveled in a suitable manner to the ring of the bracket to adapt it to have vertical and horizontal movement, a rod for supporting the outer end of the spout; a locking device between the outer end of said rod and spout, and means for supporting the inner end of the rod from the elevator tube.

5. In a spout support, the combination of a spout, a bar connected to the spout, a yoke slidable on the bar, a member pivotally connected to the yoke and adapted to have a cam engagement with the face of said bar, and means for holding the member in cam engagement with and releasing the same from such engagement with said bar.

[Claims 6 to 16 not printed in the Gazette.]

878,907. DUMP-WAGON. JOSEPH STIFTER, Pittsburg, Pa. Filed Aug. 15, 1907. Serial No. 388,604.



1. In a dump wagon, the combination with trucks, of hopper sides carried thereby, hopper end walls arranged between said hopper sides, hinged doors carried by said hopper sides, angle bars carried by the confronting edges of said doors, a shaft journaled in bearings carried by one of said walls and protruding through one of said hopper sides, a ratchet wheel carried by said shaft, a bifurcated lever loosely mounted upon said shaft and having a pawl to engage said ratchet, chains fastened to said shaft and connecting with the forward ends of said angle bars, a pivoted locking block for engaging the rear ends of said angle bars, a crank shaft carried by one of said hopper end walls for moving said locking block, a rod connecting with said shaft and extending forwardly along one of said hopper sides, a pivoted lever connecting with the forward end of said rod, a latch carried by one of said hopper sides for engaging said ratchet wheel, and a lug carried by said rod for moving said latch and releasing said ratchet wheel.

2. In a dumping wagon the combination with a forward and rear truck, hopper sides carried thereby, front and rear end walls carried by said hopper sides, hinged doors carried by said hopper sides, angle bars carried by the meeting edges of said doors, a shaft journaled in bearings carried by said forward end wall, chains connecting with said shaft and with the forward ends of said angle bars, a locking block pivotally supported by said rear truck for engaging the rear ends of said angle bars, a crank shaft for moving said locking block, a rod connecting with said shaft and extending forwardly at the side of one of the hopper sides, means for winding the first mentioned shaft, and means actuated by the movement of said rod for releasing the first mentioned means.

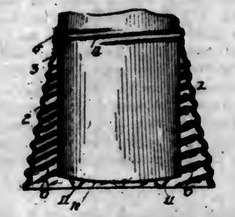
3. A dumping wagon comprising hopper sides, front and rear end walls, doors hinged to said hopper sides, angle bars carried by the meeting edges of said doors, a locking block for engaging the rear ends of said angle bars, a crank shaft for moving said locking block, a rod connecting with said crank shaft and extending forwardly at the side of one of said hopper sides, movable chains connecting with the forward ends of said angle bars, means for moving said chains, and means actuated by the movement of said rod for releasing said shaft.

4. A dumping wagon comprising hopper sides, front and rear end walls, doors hinged to said hopper sides, angle bars carried by the meeting edges of said doors, a locking block for engaging the rear ends of said angle bars, chains connecting with the forward ends of said angle bars, a shaft carried by one of said end walls for winding said chains, a rod arranged at the side of one of said hopper sides for moving said locking block, and means actuated by said rod for releasing said shaft.

5. A dumping wagon comprising a hopper, hinged doors carried thereby, chains connecting with the forward edges of said doors for raising the same, a locking block engaging the rear edges of said doors for holding said doors in a closed position, a rod arranged at one side of said hopper for moving said locking block, means for moving said chains, and means actuated by the movement of said rod for releasing said chains.

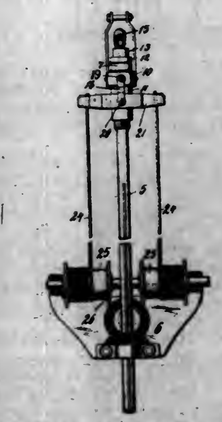
[Claim 6 not printed in the Gazette.]

878,908. CULINARY VESSEL. GEORGE W. TERHORST and JOSEPH A. TERHORST, Pittsburg, Pa. Filed Dec. 9, 1904. Serial No. 236,253.



A receptacle having spaced supports upon its bottom, and with external screw-threaded projections intermediate its ends, a flaring member having screw-threads at its upper smaller end adapted to engage the threads of the receptacle, and with its lower edge in transverse alinement with the terminals of said bottom support, and with a plurality of transverse apertures near its upper edge.

878,909. CORE-DRILLING APPARATUS. COLEMAN A. TERRY, New York, N. Y. Filed May 29, 1907. Serial No. 376,300.



1. In core drilling apparatus, the combination with a drill rod and rope feed therefor comprising winding means and ropes arranged to be wound thereon, of an equalizing yoke to which the upper ends of said ropes are attached, said equalizing yoke having a pivotal connection with said drill rod.

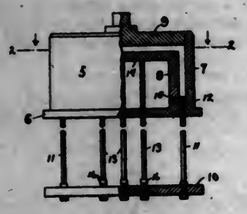
2. In core drilling apparatus, the combination with a drill rod and rope feed therefor comprising winding means and ropes arranged to be wound thereon, of an equalizing yoke to which the upper ends of said ropes are attached, a collar for transmitting feeding movements to said drill rod, and links connecting said collar with said yoke.

3. In core drilling apparatus, the combination with a drill rod and a water swivel having a journal secured to the upper end of said drill rod, of a bushing mounted on said journal, an anti-friction bearing beneath said bushing and forming a thrust bearing between said bushing and the said journal in a longitudinal direction, an equalizing yoke concentric with said collar and located beneath

same, links pivotally connected to said yoke and said collar, whereby said yoke is suspended from said collar, said yoke permitted free lateral movement, winding means for imparting longitudinal movements to the yoke, and parts connected thereto, and ropes upon said winding means connected at their outer ends to said yoke.

4. In core drilling apparatus, the combination with a drill rod and a water swivel at the upper end thereof comprising a journal 8, a connecting sleeve 9 for connecting the said journal with said drill rod, and a nut 13 upon said journal, of a bushing 10 mounted upon said journal, anti-friction bearings 11 and 12 mounted above and below the said bushing, links 18 pivoted at their upper ends to said bushing, a yoke 21 pivoted to the said links at their lower end, said yoke surrounding the said journal but permitted lateral movement with respect thereto, and having arms 22 extending in the line of said lateral movement, winding drums 25 having their peripheries in line with the said yoke arms 22, and ropes 24 upon said winding drums having their upper ends connected to the arms 22 of said yoke 21, substantially as set forth.

878,910. DIE FOR SAGGARS AND THE LIKE. GEORGE W. THOMAS, East Liverpool, Ohio, assignor to R. Thomas and Sons Company, East Liverpool, Ohio, a Corporation of Ohio. Filed Sept. 24, 1907. Serial No. 394,308.



1. In combination with a die for saggars and the like, a lifting mechanism for the saggar comprising a lifting ring and an independent drum head, and means for actuating both the ring and the drum head to lift the saggar from the die.

2. In combination with a die for saggars and the like, a lifting mechanism for the saggar comprising a lifting ring and an independent drum head of less diameter than the drum, and means for actuating both the ring and the drum head to lift the saggar from the die.

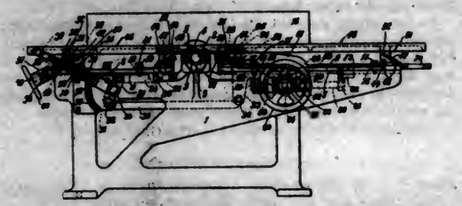
3. In combination with a die for saggars and the like, a lifting mechanism for the saggar comprising a lifting ring and an independent drum head, and means for actuating the same successively, the ring first, the head afterward, substantially as described.

4. In combination with a die for saggars and the like, a lifting mechanism for the saggar comprising a lifting ring and an independent drum head in combination with a lifting plate, rods rigidly attached thereto and extending to the lifting ring and a second set of rods attached thereto with lost motion and extending to said drum head, substantially as described.

5. In combination with a die for saggars and the like having stationary outer shell and inner drum, a lifting mechanism for the saggar comprising a lifting ring interposed between said drum and shell, an independent drum head for the drum, a lifting lever and an operative connection therefrom to said ring and drum head.

878,911. HAND PLANING-MACHINE. JOHN R. THOMAS, Cincinnati, Ohio, assignor to J. A. Fay & Egan Company, Cincinnati, Ohio, a Corporation of West Virginia. Filed Aug. 24, 1907. Serial No. 389,935.

1. In a hand planing machine, the combination, with the main frame, and cutter-head of a pair of saddles slidable with relation thereto, a table on each of said saddles, and a double-throw lever having connection with each of said saddles for simultaneously moving the same in opposite directions, and moving said tables thereon toward and from said cutter-head substantially as described.



2. In a hand planing machine, the combination, with the main frame, and cutter-head, of a pair of saddles slidable with relation therto, a table on each of said saddles, a double-throw lever having connection with each of said saddles for simultaneously moving the same in opposite directions, and moving said table thereon toward and from said cutter-head and a detent-lever and rack therefor for positioning said saddles, substantially as described.

3. In a hand planing machine, the combination, with the main frame and cutter-head, of a saddle at each side of said cutter-head, the said saddles and frame having horizontal guide-ways between them, a table on each saddle adjustable to elevation thereon, a double-throw lever, a link for each of said saddles, said links respectively connected with said saddles and said lever at opposite sides of the rocking axis of the latter, substantially as described.

4. In a hand planing machine, the combination, with the frame and cutter-head, of a saddle at each side of said cutter-head and slidable with relation to said frame, a table on each saddle, means for adjusting each table to elevation on its saddle, a double-throw lever having link connection with said respective saddles, a segment on the frame, and a detent on said lever arranged to engage the notches of said segment, substantially as described.

5. In a hand planing machine, the combination, with the main frame, and cutter-head, of a pair of saddles, and tables adjustable thereon, said saddles and frame having horizontal slide-ways between them, a detent-lever and a rack therefor, said lever having connection with said saddles for moving said saddles and the tables thereon in parallel lines toward and from said cutter-head, and means for adjusting said tables independently on said saddles, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

878,912. FIREPROOF BUILDING-CEMENT. PAUL TIMOFEEFF, St. Petersburg, Russia. Filed Aug. 14, 1906. Serial No. 330,590.

1. The composition for a refractory building cement consisting of dehydrated finely powdered anhydrous sulfate of calcium, finely powdered corbornate of calcium, and silicious volcanic tuff imparting hydraulic properties.

2. A composition for refractory building cement consisting of 24 parts of finely powdered anhydrous sulfate of calcium and 6 parts of dehydrated calcium carbonate in powdered form, and some silicious volcanic tuff imparting hydraulic properties.

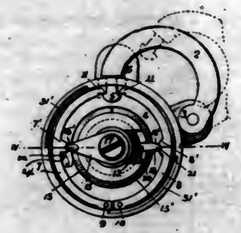
3. The composition for a refractory building cement consisting of dehydrated finely powdered anhydrous sulfate of calcium, finely powdered carbonate of calcium, volcanic substances imparting hydraulic properties, and mineral colors.

4. As a refractory building cement a composition derived from dehydrated finely powdered anhydrous sulfate of calcium, finely powdered carbonate of calcium, and silicious volcanic substances in powdered form imparting hydraulic properties.

5. As a refractory building cement a composition derived from 24 parts of finely powdered sulfate of calcium, 6 parts dehydrated finely powdered carbonate of calcium, one part of silicious volcanic substance, and one part of dextrin.

[Claim 6 not printed in the Gazette.]

878,913. COMBINATION-PADLOCK. NEUMAN TOBIAS, Kingston, Jamaica. Filed Aug. 13, 1907. Serial No. 388,294.



1. In a combination padlock having a shackle, a plurality of levers separately engaging the shackle, a plurality of devices all rotatable on a single axis for impelling said levers to release the shackle, and a single dial movable to position all of said devices whereby the shackle can be released.

2. In a combination padlock having a shackle, means engaging the shackle to hold it in locking relation, a member having a dial, and a detent and a swinging arm both supported by said member and adapted to engage said means to release the shackle.

3. In a combination padlock having a shackle, levers having grooved protuberances and constructed to engage the shackle, and a member carrying separately movable means to engage said protuberances, said means being so positioned by successive movements of the member.

4. In a combination padlock having a shackle, levers having lugs or protuberances and adapted to engage the shackle, a member rotatable within the padlock and having a dial, a detent carried by said member and adapted to engage one of said lugs, and an arm freely pivoted on said member and adapted to engage the other lug, whereby the shackle is released.

5. In a combination padlock having a shackle, levers adapted to engage the shackle, a rotatable member, a ring angularly adjustable thereon, a detent pivoted to said ring to swing either side of a radial position thereon, and an arm shorter than the radial distance of the extremity of said detent from the axis of its supporting member, and pivoted on said member co-axially therewith.

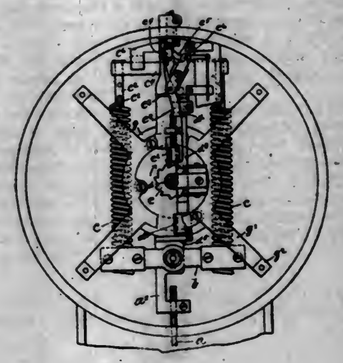
[Claim 6 not printed in the Gazette.]

878,914. STYLOGRAPHIC PEN. JACOB ULLRICH, Hoboken, N. J. Filed Oct. 15, 1907. Serial No. 397,581.



A stylographic pen provided with an ink barrel, an inclosed air tube having an expanded lower bore to form an integral housing and a shoulder at the upper end of said housing, a nozzle communicating with the ink barrel, a perforated bushing in the bottom of the housing, a needle passing through the bushing and having a head within the housing, and a spring within the housing that engages said shoulder and head, substantially as specified.

878,915. WEIGHING-MACHINE. FREDERICK VERPLAST, Boston, Mass. Filed Jan. 21, 1907. Serial No. 353,226.



1. In a weighing machine, the combination of a spirally formed weighing-spring, means for supporting its upper end, a bar having a divided end formed with a spirally threaded hole through it for engaging the lower end portion of said spring at any part thereof and means for adjusting one part of said divided end with relation to the other to firmly engage or to release the spring and a platform-rod connected with said bar, substantially as described.

2. In a weighing machine, a pair of weighing-springs, a pair of hooks at their upper ends, a cross-bar having rotatable pins projecting through it provided each with a series of holes adapted to receive said hooks and means for supporting said cross-bar, substantially as described.

3. In a weighing machine, a pair of weighing-springs, a cross-bar to which the upper ends of said springs are connected, a headed screw on which said cross-bar is swiveled a removable frame bearing said screw adapted to be attached to the case and indicating mechanism supported by said frame, substantially as described.

4. In a weighing machine, the combination of a shaft bearing an indicating hand, a pinion thereon, a weighted rack engaging said pinion, an adjusting-screw against which the upper end of said rack strikes, which limits its upward movement, and an anvil borne by means to which the weighing-springs and platform-rod are connected upon which the weighted rack normally rests, substantially as described.

5. In a weighing machine, a main frame supporting the shaft bearing the indicating-hand and also the means for operating said shaft, having a frame-plate secured to it comprising a plurality of radially extended arms formed with bosses at their extremities and a dial-plate attached thereto, substantially as described.

878,916. WELL-DRILLING APPARATUS. JAMES C. WALLY, Kittanning, Pa. Filed Dec. 2, 1907. Serial No. 404,815.

1. The combination with a wire cable, and a manila cable, of bindings placed upon the ends of said wire cable, strands of manila rope inserted through said wire cable and wound upon the end of said wire cable to produce enlargements, said manila cable having its end wound over said wire cable, a plurality of bands or sleeves embracing said manila cable, said bands or sleeves being arranged above said enlargements.

2. The combination of a wire cable, strands of manila rope inserted in said cable and wound around the end

thereof to produce enlargements, a manila cable wrapped over the enlargements at the end of said wire cable, and



bands or sleeves embracing said manila cable and having inner rounded surfaces for gripping said manila cable.

878,917. ENDOSCOPE OR OTHER OPTICAL INSTRUMENT. REINHOLD H. WAPPLER, New York, N. Y. Filed May 13, 1907. Serial No. 373,471.



1. An optical instrument comprising a tube, lenses therein, an end-piece, a lens set in the extremity of the said end-piece and means within the end-piece for securing the said lens in position and connecting the said end-piece to the extremity of the said telescopic tube.

2. An optical instrument comprising a tube, lenses therein, an end-piece, a lens set in the extremity of the said end-piece, means within the end-piece for securing the said lens in position and connecting the said end-piece to the extremity of the said telescopic tube and an objective glass set in the said means adjacent to the said lens.

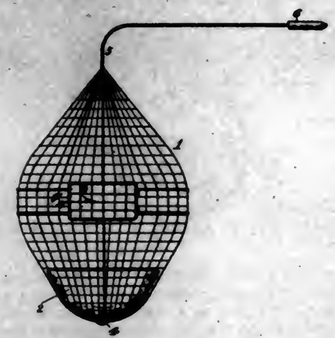
3. An optical instrument comprising a tube, lenses therein, an end-piece provided with an opening in the extremity and the adjacent portion thereof, a lens support set at an acute angle to the longitudinal axis of the said end-piece, a plano-convex lens set on the said support and within the said opening at the extremity of the end piece and means within the said end-piece for connecting the same to the extremity of the said tube.

4. An optical instrument comprising a tube, lenses therein, an end-piece provided with an opening in the extremity and the adjacent portion thereof, a lens support set at an acute angle to the longitudinal axis of the said end-piece, a plano-convex lens set on the said support, means within the said end-piece for connecting the same to the extremity of the said tube and an objective glass set in the said means adjacent to the said lens.

5. An optical instrument comprising a tube, lenses therein, an end-piece provided with an opening in the extremity and adjacent portion thereof, a lens support set at an acute angle to the longitudinal axis of the said end-piece, a plano-convex lens set on the said support and extending into the said opening and a coupling fitting into the said end-piece and adapted to connect the same to the extremity of the said tube.

[Claims 6 and 7 not printed in the Gazette.]

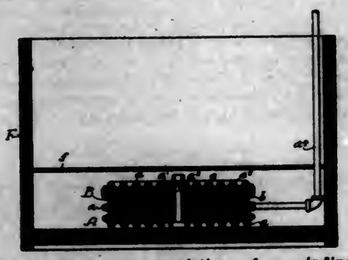
878,918. CORN-POPPING MACHINE. LURA M. WEBNER, Seymour, and ELLA M. DIXON, Sparksville, Ind. Filed Mar. 9, 1907. Serial No. 361,553.



1. A device of the character described, comprising a holding shaft-equipped receptacle, a "seasoning"-containing pan fixed in the bottom of said receptacle and having centrally thereof an upward tubular extension receiving the lower end of the receptacle shaft, and a bottom-plate covering the lower end of said tubular extension and having said end of said shaft fixed thereto, said plate in turn being fixed to said pan and to said receptacle.

2. A device of the character described, comprising a holding receptacle equipped with a "seasoning"-containing pan, an upright shaft fixed centrally within said receptacle and adapted for suitable manipulation, said shaft being provided with numerous bell-equipped outstanding arms.

878,919. ELECTRIC HEATER. WILLIAM R. WHITEHORNE, Brooklyn, N. Y., assignor to Edward F. Clements and M. Brook Jacobs, trustees, Philadelphia, Pa. Filed Apr. 22, 1907. Serial No. 369,678.



1. An electric heater, consisting of a winding connected to a source of alternating current, and a metallic casing placed in inductive relation to said winding so as to form the short circuited secondary of a transformer of which said winding is the primary, said casing forming a liquid tight envelop completely inclosing said winding, substantially as described.

2. An electric heater consisting of a winding connected to a source of alternating current, a core for said winding, with a liquid tight casing completely inclosing said winding and forming the short circuited secondary of a transformer of which said winding is the primary, substantially as described.

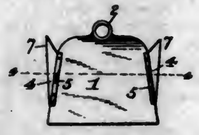
3. An electric heater consisting of a liquid tight metallic casing having a central core connecting its top and bottom, with a winding in the space between said core and the outside walls of the casing arranged to be completely inclosed by said casing, said winding being connected to a source of alternating current, substantially as described.

4. An electric heater consisting of a liquid tight metallic casing forming the secondary of a transformer, a winding therein, having a metallic core and connected to a source of alternating current, and a body of insulating liquid contained within the casing, substantially as described.

5. An electric heater, consisting of a liquid tight metallic casing having its exterior provided with projecting portions forming a relatively extended surface, a central core completely inclosed within the casing, and a winding in the casing having a core and connected to a source of alternating current supply, substantially as described.

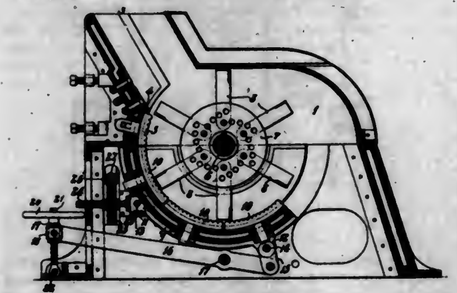
[Claims 6 to 10 not printed in the Gazette.]

878,920. HOE. BENJAMIN R. WILLIAMS, English, Ark. Filed Apr. 29, 1907. Serial No. 370,893.



The combination with a hoe blade 1, of an auxiliary blade 4, having one edge secured to the side edge of the hoe blade and turned back at an obtuse angle to the face of the hoe blade, forming wings 7, substantially as shown and described and for the purposes set forth.

878,921. CRUSHER AND PULVERIZER. MILTON F. WILLIAMS, St. Louis, Mo., assignor to Williams Patent Crusher & Pulverizer Company, St. Louis, Mo., a Corporation of Missouri. Filed Mar. 18, 1907. Serial No. 363,139.



1. In a machine of the character described, the combination of the following elements, a rigid support for a grinding surface, a rod arranged adjacent each end of said support, said support being pivotally mounted on said rods, and independently operable adjusting means for bodily shifting said rods, whereby when the rod at one end of the support is being shifted by the means coöperating therewith the other rod serves as a fulcrum about which the support moves; substantially as described.

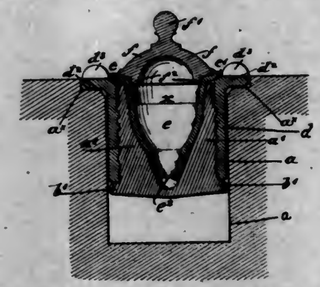
2. A machine of the character described provided with a rigid support for a grinding surface, a member on which the forward end of said support is pivotally mounted, means for bodily shifting said member, a pivotal support for the rear or inner end of said grinding surface support, and independent means for bodily shifting said rear pivotal support; substantially as described.

3. In a machine of the character described, the combination with a support for a rigid grinding surface, links connected to the inner end of said support, a pair of levers connected to said links, the free ends of said levers being bent toward each other, a single swivel block to which the free ends of said levers are connected, a nut arranged on said swivel block, a hand wheel on said nut, and a threaded rod for engaging said nut and pivotally connected at its lower end to a stationary support; substantially as described.

4. In a machine of the character described, the combination with a rigid support for a grinding surface, horizontally movable blocks upon which the forward end of said support is pivotally mounted, threaded rods connected to said blocks, nuts on said threaded rods, gears connected to said nuts, and a shaft provided with worms that mesh with said gears so as to rotate them in unison simultaneously and uniformly move said blocks, a pivotal support for the opposite end of said grinding surface, and independent means for bodily shifting said support; substantially as described.

5. In a machine of the character described, the combination with a dead plate and a stationarily mounted grinding surface, of means for adjusting said dead plate and grinding surface horizontally, a rigid grinding surface having two pivotal supports at opposite ends thereof, and means for bodily shifting said pivotal supports at angles to each other, whereby said rigid grinding surface may be adjusted vertically or horizontally or obliquely; substantially as described.

878,922. INKSTAND. ANTON WOLZ, St. Luzi, Chur, Switzerland. Filed Sept. 12, 1906. Serial No. 334,250.



1. The combination, with a part having a socket, of an ink-receiving body movable vertically therein, a rotary adjusting sleeve supported in said socket, and a well supported on said sleeve and extending downwardly into said body.

2. The combination, with a desk having a mortise or socket, of a threaded ink-receiving body guided vertically in said socket, a threaded adjusting sleeve having a flange at its upper end by which it is supported in said socket, and an ink-well fitting within said ink-receiving body and supported by said sleeve.

3. The combination, with a part having a socket, of a threaded ink-receiving body in said socket, means whereby said body is guided vertically in said socket and prevented from rotation therein, an adjusting sleeve rotatable in said socket and threaded on said body, and means supported on said sleeve to contain a supply of ink.

4. The combination, with a desk having a socket of square cross-section, of an exteriorly threaded ink-receiving body having a square base fitting within said socket, an adjusting sleeve embracing said body and threaded thereon and mounted to rotate in said socket, and an ink-well supported by said sleeve.

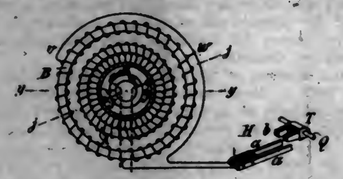
5. The combination, with a desk having a socket and a rabbet about the upper edge of said socket, of an ink-receiving body guided vertically in said socket, an adjusting sleeve threaded on said body and having a flange resting in said rabbet, and an ink-well supported by said adjusting sleeve and fitting within said ink-receiving body.

[Claim 6 not printed in the Gazette.]

878,923. SINGLE-PHASE MOTOR. JAMES J. WOOD, Fort Wayne, Ind. Filed Apr. 26, 1906. Serial No. 313,790.

1. In a single-phase motor, a rotor winding provided with both commutator and collector rings, connections for supplying current from an external source to said commutator and collector rings alternatively, and a stator winding short-circuited upon itself on a definite line.

2. In a single-phase motor, a rotor winding provided with both commutator and collector rings, connections for supplying current from an external source to said commutator and collector rings alternatively, a stator winding short-circuited upon itself on a definite line, and a switch in circuit with said stator winding arranged to short-circuit said winding on a second line at an angle to the first.



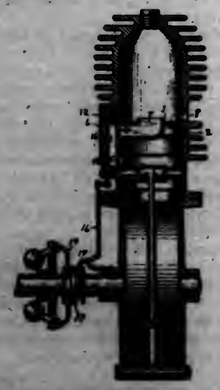
3. In a single-phase motor, a rotor winding provided with both commutator and collector rings, a set of commutator brushes, a set of collector brushes, connections for supplying current to said brushes from an external source, controlling means adapted to bring said brushes alternatively into operation, and a stator winding short-circuited upon itself on a definite line.

4. In a single-phase motor, a rotor winding provided with both commutator and collector rings, a set of commutator brushes, a set of collector brushes, connections for supplying current to said brushes from an external source, controlling means adapted to bring said brushes alternatively into operation, a stator winding short-circuited upon itself on a definite line and a switch in circuit with said stator winding arranged to short-circuit said winding on a second line at an angle to the first.

5. In a single-phase motor, a rotor winding provided with both commutator and collector rings, two sets of brushes adapted to engage said commutator and collector rings respectively, connections from both sets of brushes to an external source of current, means mechanically connected to said brushes for bringing them alternatively into engagement with said commutator and collector rings respectively, and a stator winding short-circuited on itself on a definite line.

[Claims 6 to 21 not printed in the Gazette.]

878,924. EXTERNAL VALVE-CHAMBER. GEORGE H. WOODWARD, San Francisco, Cal. Filed Jan. 11, 1907. Serial No. 351,895.

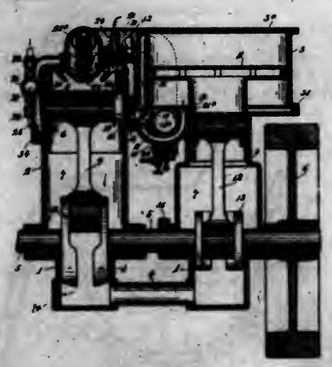


1. A gas engine of the two cycle type comprising a cylinder, a piston therein, said piston having a central opening in its upper end and a passage leading from one side near the top to said opening, an external valve chamber secured to the cylinder, the cylinder wall having ports connecting said valve chamber with the said passage, when the piston is at or near the end of its outward or working stroke a valve in said valve chamber controlling said ports, a governor, means for actuating the valve from the governor, the cylinder wall and said piston having ports connecting said valve chamber with the interior of the cylinder below the piston when said piston is at or near the limit of its working stroke, said cylinder wall having on the side opposite said valve chamber an inlet port below the piston adapted to be uncovered by the piston at or near the limit of its compression stroke and an exhaust port adapted to be uncovered by the piston at or near the limit of its working stroke.

2. In a gas engine of the two cycle type, the combination with the inlet port to the combustion space for supplying the combustible mixture, of a valve coöperating with said port and normally located above the same, and means for moving said valve downwardly to close the upper part of said port as the speed of the engine increases, substantially as described.

3. A two cycle engine having a fuel inlet port comprising a plurality of perforations and a slide valve normally located above said port and means for moving said valve downwardly, whereby the upper perforations may be closed first, substantially as described.

878,925. REVERSIBLE EXPLOSIVE COMPOUND ENGINE. ELLIS J. WOOLF, Minneapolis, Minn., assignor to The Woolf Valve Gear Company, Minneapolis, Minn., a Corporation of Minnesota. Filed Apr. 5, 1907. Serial No. 366,480.



1. An explosive compound engine provided with a reversing valve controlling the low pressure admission ports, and which valve is movable, at will, for shifting the admission to opposite sides of the low pressure piston, for reversing the engine, substantially as described.

2. An explosive compound engine provided with a reversing valve controlling both the charging port and the low pressure admission port, and which valve is movable, at will, for shifting the deliveries through said ports to opposite sides of the low pressure piston, for reversing the engine, substantially as described.

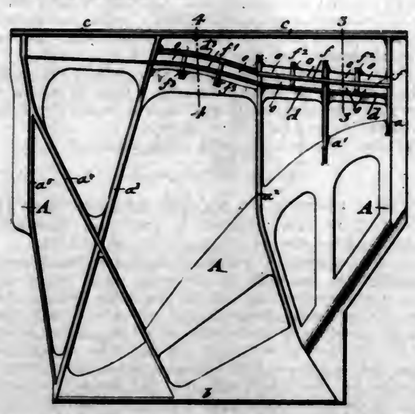
3. An explosive compound engine provided with a reversing valve controlling both the charging port and the low pressure admission port, and which valve is movable, at will, for throttling the charging port and for shifting the deliveries through said ports to the opposite sides of the low pressure piston, for reversing the engine, substantially as described.

4. An explosive compound engine having its high pressure piston connected to travel in advance of the coöperating low pressure piston and controlling the low pressure admission port, and a reversing valve in said port movable, at will, for shifting the delivery to opposite sides of the low pressure piston, for reversing the engine, substantially as described.

5. An explosive compound engine having its high pressure piston connected to travel in advance of the coöperating low pressure piston and controlling the low pressure admission port, a charging port, and a reversing valve controlling the deliveries through both of said ports and movable, at will, for shifting the said deliveries to opposite sides of the low pressure piston, for reversing the engine, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

878,926. STRING-FRAME FOR UPRIGHT PIANOS. HENRY ZIEGLER, New York, N. Y. Filed July 24, 1906. Serial No. 327,517.



1. A string-frame for upright pianos provided with a capo d'astro bar for the treble strings and an inverted scale-rib for the middle strings, both made integral with the string-frame, openings at each side of the capo d'astro bar and inverted scale-rib, short transverse braces for the capo d'astro bar and the inverted scale-rib extending across the openings formed at each side of the same, a scale-rib located below the capo d'astro bar in the treble portion, and an edge-rib located above the inverted scale-rib in the middle portion of the string-frame.

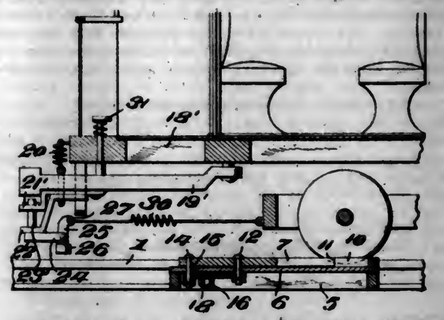
2. A string-frame for upright pianos provided with an integral capo d'astro bar in the treble portion and an inverted scale-rib in the middle portion of the string-frame, openings at each side of the capo d'astro bar and inverted scale-rib, a scale-rib located below the capo d'astro bar in the treble portion, an edge-rib located above the inverted scale-rib of the middle strings, transverse braces extending across the capo d'astro bar of the treble and the inverted scale-rib of the middle strings and across the openings at both sides of the same, a strengthening flange back of the scale-rib of the treble strings, and a strengthening flange extending along the upper edge of the middle-string portion at the rear of the string-frame.

3. A string-frame for upright pianos provided with brace-ribs, a capo d'astro bar for the treble strings, openings at each side of the capo d'astro bar, and short transverse braces made integral with the string-frame and extending across the openings at each side of said capo d'astro bar intermediately between said brace-ribs.

4. A string-frame for upright pianos provided with brace-ribs, an inverted scale-rib for the middle strings made integral with the string-frame, openings at each side of said scale-rib, and short transverse braces made integral with the inverted scale-rib and extending across the openings at each side of the scale-rib intermediately between said brace-ribs.

878,927. SWITCH-OPERATING MECHANISM. AARON B. ALLEN, Pueblo, Colo. Filed June 21, 1907. Serial No. 380,123.

1. In a device of the class described, the combination with track rails and switch rails coöperating therewith; of an operating lever, pivotally mounted between the track rails, a head at one end of said lever, a bolt extending through said head, a pitman secured to said bolt and extending laterally from the operating lever, a crank shaft secured to the outer end of said pitman, an auxiliary pitman at the opposite end of said crank shaft, and means to secure the auxiliary pitman to one end of the switch rails, whereby when the operating lever is swung upon its pivot point, the switch will be opened or closed.



2. In a device of the class described, the combination with track rails and switch rails coöperating therewith, one of said switch rails having a movable end; of an operating lever pivotally mounted between the track rails, a pivot pin for said operating lever, a bolt extending through one end of said lever, a locking bar carried by said pivot pin and bolt, a roller bearing on said locking bar, a pivotally mounted latch below said locking bar, a projection on said latch, yielding means to hold said projection in the path of said bearing, whereby when the operating lever is swung upon its pivot pin, the latch will yield to allow the roller bearing to pass said projection, and means to operatively secure the operating lever to the movable end of the switch rail.

3. In a device of the class described, the combination with track rails and switch rails coöperating therewith, one of said switch rails having a movable end; of a housing between said track rails, a cover for said housing, an operating lever on said cover, a pivot pin extending through said operating lever and cover, a head at one end of said operating lever, the edge surfaces of which are curved, a bolt extending through said head, and through a slot in said cover, a pitman on the lower end of said bolt, said pitman having a hinge portion, a crank shaft secured to the outer end of said pitman, an auxiliary pitman at the opposite end of said crank shaft, means to pivotally secure said pitman to the movable portion of the switch rail, whereby when the operating lever is swung upon its pivot pin, the crank shaft will be operated to open or close the switch, and means in the housing to normally hold the operating lever in its adjusted position.

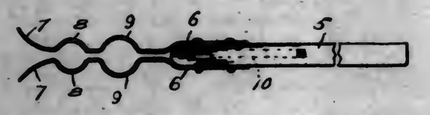
4. In a device of the class described, the combination with the movable portion of a switch rail; of a housing, a cover for said housing, flanges on said housing, the inner edges of which are curved, notches on the curved surfaces of said flanges, an operating lever pivotally secured to said cover and between the flanges a pivot pin extending through said lever, and cover, a tapered finger at one end of said lever, the extreme end of which is adapted to enter said notches, a head at the opposite end of said lever, the engaging edges of which are curved, a bolt extending through said head and through a slot in the cover, a pitman carried by the lower end of said bolt, said pitman having a hinge portion, means to secure said pitman to the movable portion of the switch rail, a locking bar carried by said pivot pin and bolt, and means to yieldingly engage said locking bar and normally hold the operating lever in its adjusted position.

5. In a device of the class described, the combination with a movable portion of a switch rail; of a housing, a cover for said housing and operating lever pivotally mounted upon said cover, a pivot pin extending through said operating lever, and cover, a head at one end of said lever, a bolt extending through said head, and through a slot in the cover, a locking bar carried by said pivot pin

and bolt, a roller bearing depending from said locking bar, a latch pivotally secured at one end to the lower surface of the cover, a projection on said latch adapted to normally rest in the path of said roller bearing, a spring secured at one end to the cover and at its opposite end to the free end of the latch, whereby said latch and projection will be held into engagement with said roller bearing under tension and the operating lever held in its adjusted position, and means extending between said bolt and movable portion of the switch rail to open and close the switch when the operating lever is swung upon its pivot pin.

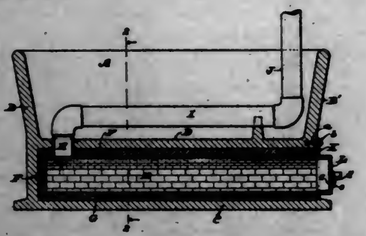
[Claims 6 and 7 not printed in the Gazette.]

878,928. CANE-STRIPPER. BERANA E. BAGLEY, Gantt, Ala. Filed May 2, 1907. Serial No. 371,505.



A cane stripper comprising a handle provided at its rear end with a slot; a pair of oppositely-disposed forwardly-projecting resilient plates secured to the forward end of said handle, said plates having their forward ends curved outwardly and being provided intermediate their ends with a pair of spaced, bowed, portions, arranged opposite each other and having sharpened edges, the curvature of the forward bowed portion of each plate being less than that of the rear portion, to adapt the stripper for use in connection with stalks of varying thicknesses; a rearwardly-extending hook secured to the under face of said handle adjacent the forward end thereof; and a strap engaged in said slot and adapted to be buckled around the arm of the operator, for holding the stripper in place.

878,929. STOCK WATER-TANK. EDWARD BERGEN, Glenbeulah, Wis. Filed May 23, 1907. Serial No. 375,258.



A stock water-tank comprising a cement basin having an apertured bottom, side and end-walls, the side-wall and rear end-wall being extended below the bottom to form a fire-box, a longitudinal metallic pipe-section disposed above the bottom and in water-tight connection with the aperture therein adjacent to said rear end-wall, a vertically disposed pipe-section extending from the longitudinal section adjacent to the front end-wall of the basin and terminating above the same, and a vented metallic closure for the front end of the fire-box secured to walls of the basin at the front of same.

878,930. PROCESS OF EXTRACTING FATS, OILS, AND THE LIKE. EUGEN BERLINER, Moscow, Russia. Filed Nov. 19, 1907. Serial No. 402,815.

1. In the manufacture of fats and oils, the process which comprises heating moist oleaginous material in a bath of like fatty matter to that contained in said material until the moisture is removed, aqueous vapors being removed as fast as formed.

2. In the manufacture of fats and oils, the process which comprises heating moist oleaginous material in a bath of like fatty matter to that contained in said material, said heating being done under less than atmospheric pressure and continued until the moisture is removed.

3. In the manufacture of fat from bones, the process which consists in heating bones in a bath of fatty matter until the moisture of the bones is expelled and then withdrawing said bath from the bones.

4. In the manufacture of fat from bones, the process which consists in heating bones in a bath of fatty matter under reduced atmospheric pressure until the moisture of the bones is expelled and then withdrawing said bath from the bones.

5. In the manufacture of fat from bones, the process which consists in heating bones in a bath of molten tallow until the moisture of the bones is expelled and then withdrawing said bath from the bones.

[Claims 6 to 12 not printed in the Gazette.]

878,931. METHOD OF MAKING GRAMOPHONE-RECORD TABLETS. HERBERT S. BERLINER, Washington, D. C. Filed Nov. 11, 1907. Serial No. 401,725.

1. The method of making gramophone sound-records, consisting in kneading the materials which are to form the record surface, one of the materials being a fiber, the mixture being effected in the presence of heat, grinding the resulting mixture when cooled into a fine powder, mixing the powder with a proper liquid for changing the same into a viscous fluid, applying one or more coats of such fluid to one or both sides of a disk, drying the surface, and impressing a sound-record into said surface-coated-disk under heat and pressure.

2. The herein described method of making sound-record tablet surfaces for gramophones, which consists in kneading under heat the materials, including a fiber, which ultimately form the record-surface, grinding the resultant mass after cooling to a fine powder, reducing the powder to a viscous fluid by mixing the same with a liquid, applying one or more coats of said fluid to a base or sub-base, to form when dried and subsequently softened by heat a surface in which the sound-grooves are impressed.

3. The herein described method of making a sound-record surface for gramophone tablets consisting in incorporating by heating and kneading an earthy base, shellac, and fiber, to form when cool a solid mass, reducing such mass by grinding to a fine powder, mixing the powder with alcohol to form a viscous fluid, covering a base or sub-base with the mixture and when dry softening the applied mixture by heat preparatory to impressing the sound-grooves therein.

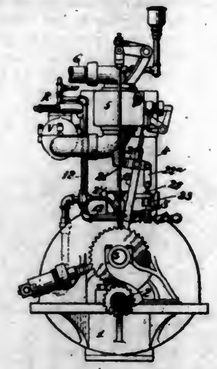
4. The method for making a surface for sound-record tablets, which consists in incorporating by kneading under heat an earthy granular base, fiber and shellac, with or without a pigment, cooling the same to form a solid mass, grinding the mass to a fine powder, mixing such powder with a fluid to reduce the same to fluidity, applying such mixture to a suitable base or sub-base to form when dried and subsequently softened by heat a surface in which the sound-grooves are impressed.

878,932. VAPORIZING DEVICE FOR INTERNAL-COMBUSTION ENGINES. FRANCIS W. BRADY, Englewood, N. J. Filed Aug. 22, 1904. Serial No. 221,651.

1. In a vaporizer for internal combustion engines, a fuel port, means for feeding fuel through the port into the vaporizer at intervals, and means for creating a back-draft through the port after the fuel feed.

2. In a vaporizing apparatus for internal combustion engines, a fuel port, a fuel supply pipe communicating with said port, means for feeding fuel through said pipe and port at intervals, and means for withdrawing the fuel in the pipe from proximity to the port after the fuel feed.

3. In a vaporizer for internal combustion engines, a heated vaporizing surface, a fuel port, means for feeding through the port and onto said surface at intervals, a quantity of liquid hydrocarbon and means for creating a back draft through said port after each fuel feed.

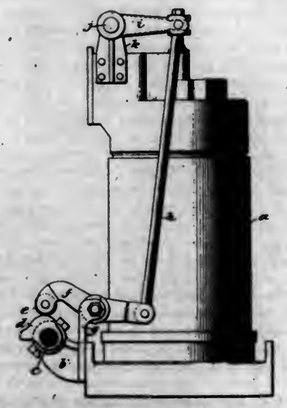


4. In a vaporizing apparatus for internal combustion engines, a vaporizing chamber, a fuel inlet port therein and a fuel pump having an eduction port communicating with the fuel inlet port in the vaporizing chamber, a fuel induction port in the pump and means for relieving the suction through said fuel induction port during part of the suction period of the pump.

5. In a vaporizing apparatus for internal combustion engines, a vaporizing chamber, a fuel inlet port therein, and a fuel pump having a pump chamber, a plunger moving therein, an eduction port in said pump chamber communicating with the inlet port in the vaporizing chamber, an induction port in said pump chamber for the admission of fuel, a second induction port in said chamber and means for opening the second induction port during the outward movement of the pump plunger to relieve the suction through the fuel induction port.

[Claims 6 to 10 not printed in the Gazette.]

878,933. FUEL-FEEDING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. FRANCIS W. BRADY, Englewood, N. J. Filed Apr. 14, 1906. Serial No. 311,765.



1. In an internal combustion engine, a valve provided with a vaporizing surface across which the air entering the combustion chamber passes, a stem for said valve, a series of ducts arranged about said stem in the form of a cone, a distributing recess communicating with said ducts, and means for feeding a liquid fuel to said distributing recess under pressure and thence through the ducts onto the vaporizing surface.

2. In an internal combustion engine, a valve provided with a vaporizing surface across which the air entering the combustion chamber passes, a stem for said valve, a series of ducts arranged about said stem in the form of a cone, a distributing recess communicating with said ducts, a means for feeding liquid fuel to said distributing recess under pressure, and thence through the ducts onto the valve surface, and means for creating a back-draft through said ducts after the fuel feed.

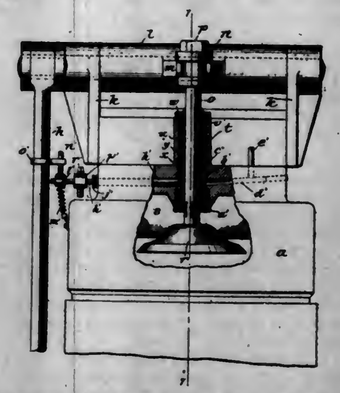
3. In an internal combustion engine, a combustion chamber, a valve across which the air entering the combustion chamber passes, a stem on said valve, oil ducts spaced about and directed downwardly toward said stem, and means for feeding oil under pressure through the ducts against said stem, and thence onto the valve surface at intervals.

4. In an internal combustion engine, a combustion chamber, a valve across which the air entering the combustion chamber passes, a stem on said valve, oil ducts spaced about and directed downwardly toward said stem and means for feeding oil under pressure through the ducts against said stem, and thence onto the valve surface at intervals, and means for creating a back-draft through said ducts after the oil feed.

5. In an internal combustion engine, a combustion chamber, an air inlet valve communicating with the combustion chamber and provided with a vaporizing surface, means for feeding a liquid fuel directly onto the vaporizing surface of said valve during part only of the suction stroke, and means for creating a back draft through said port after the fuel feed.

[Claims 6 to 17 not printed in the Gazette.]

878,934. FUEL-FEEDING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. FRANCIS W. BRADY, Englewood, N. J. Filed Apr. 14, 1906. Serial No. 311,766.



1. In an internal combustion engine, a valve having a vaporizing surface, a stem on said valve, an oil chamber surrounding said stem, a partition between the chamber and the stem, a plurality of ducts through said partition and spaced about said stem, and a valve in the oil chamber controlling said ducts, whereby when the valve is open oil flows from the chamber through the ducts and down the stem onto the vaporizing surface.

2. In an internal combustion engine, a valve having a vaporizing surface, a stem on said valve, a series of ports about said stem, a distribution chamber communicating with said ports, an oil chamber, an eduction port in said chamber, an oil duct leading from said port to the distribution chamber, a plunger in the oil chamber adapted to close the eduction port, means for withdrawing the plunger to open the port, and means for feeding oil into the chamber between the plunger and the eduction port when the plunger is withdrawn.

3. In an internal combustion engine, a valve having a

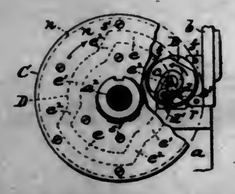
vaporizing surface, a stem on said valve, a series of ports about said stem, a distribution chamber communicating with said ports, an oil chamber, an eduction port in said chamber, an oil duct leading from said port to the distribution chamber, means for feeding oil through the oil chamber while the eduction port is open, and means for abruptly forcing the oil in the chamber through the eduction port and closing said port to shut off the oil feed.

4. In an internal combustion engine a valve having a vaporizing surface, a stem on said valve, an oil chamber surrounding said stem, a partition between the chamber and the stem, a plurality of ducts through said partition and spaced about said stem, a plunger in the oil chamber adapted to close the ducts, a spring for moving the plunger into a position to close the ducts, a cam for lifting the plunger against the action of the spring, and means for operating said cam.

5. In an internal combustion engine, a valve having a vaporizing surface, a stem on said valve, ports about said stem, a distribution chamber communicating with said ports, an oil chamber communicating with the distribution chamber, means for supplying oil to said oil chamber under pressure, a plunger in said oil chamber, means for raising said plunger to open communication between the oil and distribution chambers against the pressure of the oil, and means for depressing the plunger to force the oil in the oil chamber onto the surface of the valve and close the communication between the oil and distribution chambers.

[Claims 6 to 12 not printed in the Gazette.]

878,935. MAGNETO-ELECTRIC IGNITER DEVICE FOR EXPLOSIVE-ENGINES. OTTO CARLBORG, Providence, R. I. Filed Mar. 11, 1907. Serial No. 361,636.

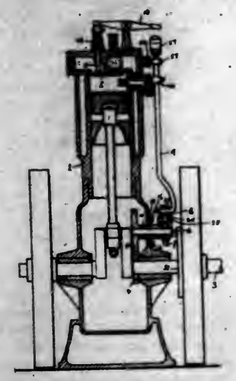


1. In a magneto-electric igniter device or magneto for explosive engines, the combination with permanent magnets and field-pieces, and an armature operatively located with respect thereto, of a continuously revoluble driving member having a continuous cam-shaped groove or path, and a crank secured to the armature and coöperating with said grooved member for imparting a plurality of intermittent oscillatory movements to the armature to produce a corresponding number of ignition sparks during each revolution of the driving member.

2. In a magneto device of the character described, the combination with the movable armature thereof and a crank member secured thereto, of a continuously revoluble driving disk having a plurality of evenly spaced divisions or members adapted to be operatively engaged by said crank in a successive manner, constructed and arranged so that when in use the armature will be vibrated quickly and intermittingly a short angular distance a corresponding number of times during each revolution of said disk, the armature remaining in an idle or stationary position immediately succeeding each vibratory movement.

878,936. INTERNAL-COMBUSTION ENGINE. FRANCISCK P. CARRIER, Edgerton, Wis. Filed Jan. 26, 1907. Serial No. 354,191.

1. In an internal combustion engine having an exhaust valve operated through a cam driven from the crank shaft by speed reducing gearing, the combination with the cam supporting shaft and a valve operating cam rigidly affixed thereon, of an independent bearing member for such shaft, mounted in an elongated aperture in the engine casing and connected with the gearing within the casing, and means for rigidly securing the bearing member to the casing, said bearing member being adapted to be lifted to disengage the gearing without removing it from the casing, when the securing means are adjusted to release the member.



2. In an internal combustion engine having an exhaust valve operated through a cam driven from the crank shaft by speed reducing gearing, the combination with the cam supporting shaft and a valve operating cam rigidly affixed thereon, of an independent bearing member for such shaft mounted in an elongated aperture in the engine casing and provided with a flanged connecting piece provided with slots for the reception of connecting bolts or screws, adapted to permit the bearing member to be lifted sufficiently to disengage the gears when the bolts or screws are loosened.

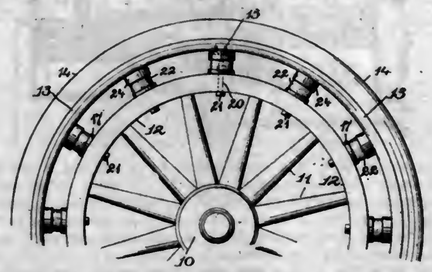
3. In an internal combustion engine having an exhaust valve operated through a cam driven from the crank shaft by speed reducing gearing, the combination with the cam supporting shaft extended through the engine casing,—said gearing being located within the casing and said cam exterior thereto;—of a valve actuating rod connected with the exhaust valve, a cam actuated foot piece pivoted to the engine casing and connected with said rod, a controlling lever pivoted to the casing, with one arm adapted to engage the foot piece, and the other arm positioned to hold the lever by gravity normally out of engagement with the foot piece, and a governing weight connected with the crank shaft and pivoted to swing centrifugally against a portion of said lever;—said lever being so positioned that when struck by the governing weight, its upper end will swing into the path of the foot piece and hold it in raised position; together with an igniter trip carried by the valve actuating rod, and comprising a bracket on the rod, a bell crank trip connected therewith, a spring connecting one arm of the trip with the bracket, and an adjusting screw on the bracket limiting the movement of the trip arm.

4. In an internal combustion engine having an exhaust valve provided with a spring actuated stem adapted to hold the valve normally in closed position, the combination of a valve actuating lever, a rod provided with an adjustable cap and adapted to move axially into contact with said lever, one end of said rod being linked to a supporting foot piece pivotally connected with the engine casing and the other end of said rod having a bearing member swiveled to the engine casing and a cam driven from the engine shaft and arranged to actuate said foot piece vertically.

5. In an internal combustion engine having an exhaust valve provided with a spring actuated stem adapted to hold the valve normally in closed position, the combination of a valve actuating lever, a rod provided with an adjustable cap and adapted to move axially into contact with said lever, one end of said rod being linked to a supporting foot piece pivotally connected with the engine casing and the other end of said rod having a bearing member swiveled to the engine casing and a cam driven from the engine shaft and arranged to actuate said foot piece vertically, together with a stop adapted to positively limit the outward movement of the governing weight.

[Claims 6 and 7 not printed in the Gazette.]

878,937. SPRING-WHEEL. SAMUEL S. CHILDS, Bernardsville, N. J. Filed Feb. 15, 1907. Serial No. 357,515.

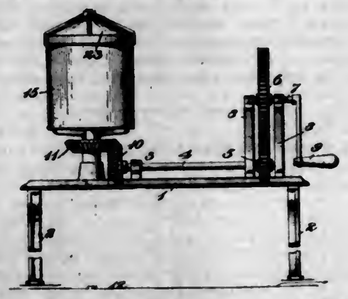


1. In a spring wheel, a resilient block, a cup on one end of the block having a marginal flange to embrace the block, means for securing the block to the felly of a wheel, a screw-threaded plate, a ring sliding on the block and having an internal screw-thread on one end to engage the plate, and means for attaching the plate to the rim of a vehicle.

2. In a spring wheel, a resilient block, a cup embracing the block and secured to the felly of a wheel, a plate adapted to be secured to the rim of a wheel, and a ring sliding on the block and adapted to be detachably secured to the plate, whereby when the ring is detached from the plate the block can be removed between the felly and the rim.

3. In a spring wheel, a body portion having a felly, a rim surrounding the felly at a distance therefrom, a cup secured to the felly having a marginal flange and a central boss, a resilient block having a central perforation, a plate secured to the rim, a sleeve sliding on the block, and means for detachably securing the sleeve to the plate.

878,938. CHURN. ERIK A. COLLIN, Turner, Nebr. Filed May 13, 1907. Serial No. 373,396.



1. In churn operating mechanism of the class described, and in combination, a stand, a horizontal shaft journaled upon said stand, a pinion at one end of the shaft, an operating gear in mesh with said pinion, a bevel pinion at the opposite end of said shaft, a vertical stem projecting upwardly from the stand adjacent to said bevel pinion, a cup located at the lower end of said stem and surrounding the latter, ball bearings received in said cup, a horizontal bevel pinion journaled upon the stem and having its lower hub portion resting upon the ball bearings aforesaid, a churn body having a centrally upwardly projecting tubular extension at its central portion and through which the stem above mentioned passes, whereby the churn body is supported for revolution on the stem, the bottom of the churn body being formed with an opening coincident with the tubular area of the extension aforesaid, lugs projecting from the bottom of the churn body on opposite sides of the opening therein, the top of the horizontal bevel pinion aforesaid being formed with recesses receiving the lugs and establishing a detachable interlocking connection between the churn body and said pinion, a collar applied to the upper end portion of the stem, paddles attached to said collar and about which the churn body is adapted to rotate, and a cover for the upper end of the churn body.

2. In churn operating mechanism of the class described, and in combination, a stand, a horizontal shaft journaled upon said stand, a pinion at one end of the shaft, an operating gear in mesh with said pinion, a bevel pinion at the opposite end of said shaft, a vertical stem projecting upwardly from the stand adjacent to said bevel pinion, a cup located at the lower end of said stem and surrounding the latter, ball bearings received in said cup, a horizontal bevel pinion journaled upon the stem and having its lower hub portion resting upon the ball bearings aforesaid, a churn body having a centrally upwardly projecting tubular extension at its central portion and through which the stem above mentioned passes, whereby the churn body is supported for revolution on the stem, the bottom of the churn body being formed with an opening coincident with the tubular area of the extension aforesaid, lugs projecting from the bottom of the churn body on opposite sides of the opening therein, the top of the horizontal bevel pinion aforesaid being formed with recesses receiving the lugs and establishing a detachable interlocking connection between the churn body and said pinion, the upper end portion of the stem projecting some distance above the upper extremity of the tubular extension, a collar disposed upon and receiving the upper extremity of the stem, horizontally threaded members screwed into said collar and adapted to engage the stem to fix the position of the collar thereon, said threaded members being provided with internal threaded openings, paddles arranged in the churn body and having lateral arms at the upper ends thereof formed with threaded extremities received in the threaded openings of the threaded members applied to the collar, and a cover for the churn body.

878,939. REINFORCED BAR FOR VEHICLE RUNNING-GEARS. DAVID P. COOPER, Struthers, Ohio. Filed Apr. 8, 1907. Serial No. 366,893.



1. As a new article of manufacture, a wooden bar of uniform cross section having a longitudinal groove in one face at one side of the longitudinal center thereof, a metal sheath bent around the bar with its opposite edges bent into the groove, and a fastening piercing the bar and the sheath at one side of the groove, substantially as described.

2. As a new article of manufacture, a wooden bar of uniform cross section having a longitudinal groove in one face at one side of the longitudinal center thereof, a metal sheath bent around the bar with its opposite edges bent into the groove, cap pieces embracing the ends of the bar and sheath, and fastenings piercing the cap pieces, the sheath and the bar at one side of the groove, substantially as described.

3. A reach bar comprising a wooden bar of uniform cross section having a longitudinal groove in one face at one side of the longitudinal center thereof, a metallic sheath bent around the bar with its opposite edges bent into the groove, a gear iron fitted to one end of the bar, a perch iron fitted to the opposite end of the bar, and fastenings centrally piercing the respective irons, sheath and the bar at one side of the groove, substantially as described.

878,940. VESSEL-CLOSURE. RALPH W. CROCKER, Chicago, Ill. Filed Feb. 11, 1907. Serial No. 356,800.

1. A vessel having an internal annular horizontal shoulder adjacent its top, and an annular groove inclos-

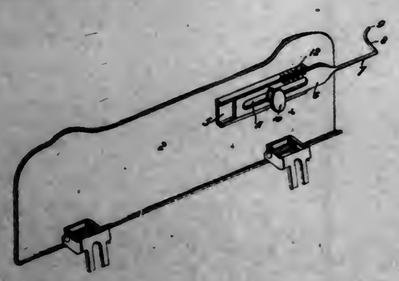
ing said shoulder and extending below the surface thereof, together with a cover adapted to seat on said shoulder but of insufficient diameter to cover said groove, there being thus provided between the edges of the cover and the walls of the vessel a space, which, with the groove, constitutes an annular recess adapted to receive sealing material and extending above and below the junction between cover and shoulder and a retaining closure adapted to seat upon the top of the cover and to close the top of said recess.



2. A vessel having an internal annular horisontal shoulder adjacent its top, and an annular groove inclosing said shoulder and extending below the surface thereof, the inner wall of said groove being inclined, together with a cover adapted to seat on said shoulder but of insufficient diameter to cover said groove, the edges of said cover being beveled to form a continuation of the inclined wall of the groove, there being thus provided between the edges of the cover and the walls of the vessel a space, which, with the groove, constitutes an annular triangular recess adapted to receive sealing material and extending above and below the junction between cover and shoulder, and a retaining closure adapted to seat upon the top of the cover and to close the top of said recess.

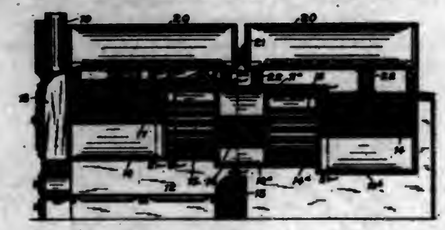
3. A vessel having an internal annular horisontal shoulder adjacent its top, and an annular groove inclosing said shoulder and extending below the surface thereof, together with a cover having a rabbet in its under side forming a depending body portion adapted to fit within the walls of the vessel below the shoulder and a projecting flange rim adapted to seat on said shoulder but of insufficient diameter to cover said groove, there thus being provided between the edges of said rim and walls of the vessel a space, which, with the groove, constitutes an annular recess adapted to receive sealing material and extending above and below the junction between rim and shoulder, and a retaining closure adapted to seat upon the top of the cover and to close the top of said recess.

878,941. ATTACHMENT FOR TYPE-WRITERS. ALLEN W. CROUSHORE, Lincoln Place, Pa. Filed July 12, 1907. Serial No. 383,451.



An attachment for typewriters comprising the combination with a rearwardly-extending paper table, of a flanged graduated guide secured to one side thereof, a slotted plate mounted between the flanges of said guide and having one end provided with an extension, a forwardly projecting arm integral with said extension and having the end thereof bent upwardly, and a set-screw extending through the plate and engaging the guide for securing the plate in various fixed positions.

878,942. STEAM-GENERATOR. HARRY DEL MAR, New York, N. Y., assignor to Boilers and Engineering Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 14, 1907. Serial No. 362,806.



1. A boiler of the kind described, comprising a series of water containing shells connected by water tubes and separated by combustion chambers, and fire flues extending through the several water containing shells, the said fire flues in each section being out of alinement with the fire flues of the next section.

2. A boiler of the kind described having a plurality of water containing shells with fire flues therethrough, with the fire flues of adjacent shells out of alinement each shell being on a different plane from the one next to it, and with the rear shell the lowest, to provide for settling at this point, and water tubes connecting the several shells.

3. A boiler of the kind described, having a plurality of shells, with the fire box and combustion chamber under the shell series, each shell having a series of fire flues approximately filling one-half the shell, with the tube series arranged alternately so as to direct the gases of combustion in an indirect course through the different tube series.

4. A boiler of the kind described, having a plurality of shells with a fire box and combustion chamber under the shell series, each shell having a series of fire flues approximately filling one-half the shell, with the tube series arranged alternately so as to direct the gases of combustion in an indirect course through the different tube series, combustion chambers separating the several shells, and water tubes connecting the shells and leading through the combustion chambers.

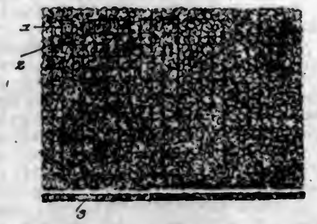
5. A steam generator comprising a series of water containing shells, each shell having a series of fire flues approximately filling one-half the shell, with the tube series arranged alternately so as to direct the gases of combustion in an indirect course through the several tube series, and water tubes connecting the several shells.

878,943. CLOTHES-POLE. DAVID G. DE MILT, Toledo, Ohio. Filed Sept. 28, 1906. Serial No. 336,533.



In a device of the described character, a pair of bars, a hinged connection between said bars which permits their swing either into parallel or alined relation, a plate secured to and projecting beyond the end of one of said bars and having an opening therethrough, and a swiveled button upon the other of said bars adapted to enter and to engage the margins of said opening.

878,944. FABRIC. ROBERT A. DUNNING, Yarmouth, Me. Filed Nov. 16, 1905. Serial No. 287,701.

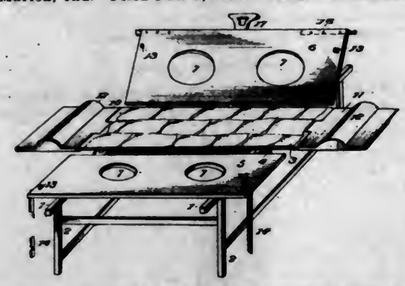


1. A fabric consisting of interwoven threads and having particles of cut sponge upon certain of the threads.

2. A fabric comprising interwoven threads and particles of cut sponge supported thereby.

3. A woven fabric made up of threads having particles of cut sponge supported by the threads.

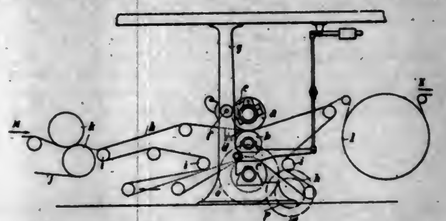
878,945. CEMENT-BLOCK MACHINE. ROSS ENDSLEY, Marion, Ind., assignor of one-half to Milton F. Horst, Marion, Ind. Filed Feb. 9, 1907. Serial No. 356,616.



A mold, comprising a face plate, a support upon which said face plate is mounted, said support extending on both sides of the face plate, straps extending across and secured to the lower face of said face plate, side board straps hinged at one end to the first named straps, and provided at their outer ends with laterally extending arms formed with hooks, a side board connected to the last named straps and adapted to be let down outwardly and rest upon the support extension at one side of the base plate, other side board straps hinged to the opposite ends of the first named straps, a cross bar connecting the outer ends of the last named side straps together and projecting outwardly at both ends beyond said last named side board straps, pivoted latches carried by the ends of said cross bar, and designed for engagement with the hooks, end boards hinged to the ends of the face plate and adapted to be swung upwardly to a vertical position and prevented from swinging outwardly by said hooks, and another side board interposed between said last named side board straps and the adjacent edges of the side boards in vertical position, said last named side board being devoid of permanent connection to its straps.

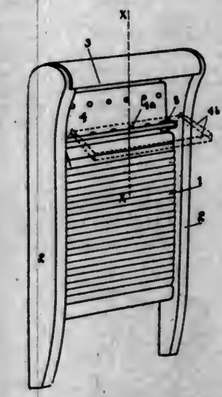
878,946. ROLLER-PRESS FOR PAPER-MAKING MACHINES. PIERRE ESCARFAIL, Pontcharra sur Bréda, France. Filed Mar. 22, 1907. Serial No. 363,874.

In a paper making machine the combination with press rolls between which wet stock is carried, of a driving roll in fixed bearings below said press rolls adapted to transfer motion to the press rolls, of weights, rods and levers acting on the lower press roll to lift it against the upper roll and of a felt apron passing with the paper between



the press rolls and freed of the paper between the lower press roll and driving roll substantially as described.

878,947. WASHBOARD. HENRY J. GILBERT, Saginaw, Mich., assignor to National Wash Board Company, Chicago, Ill., a Corporation of West Virginia. Filed May 12, 1905. Serial No. 260,142.



1. The combination with the back and side rails of a wash board, of a soap-holder, comprising a pivotally mounted plate extending first rearwardly toward the back in a plane approximately perpendicular thereto and thence upwardly in a plane approximately parallel with the back, the plate provided with perforations in the upwardly extending portion.

2. The combination with the back and side rails of a wash board, of a soap-holder comprising a pivotally-mounted plate extending rearwardly toward the back and thence upwardly in a plane approximately parallel with the back.

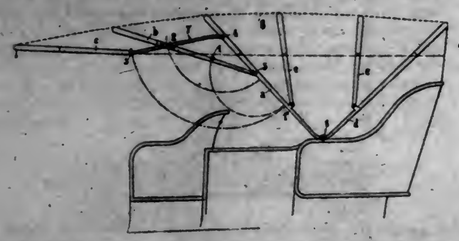
3. The combination with the back and side rails of a wash board, of a soap-holder, comprising a pivotally mounted yieldingly pressed plate, extending first rearwardly toward the back in a plane substantially perpendicular thereto, and thence upwardly substantially parallel with the back, the plate provided with perforations, said upwardly extending part being normally spaced apart from the back.

4. The combination with a wash board, of a soap-holder comprising an angular plate, one edge of which is pivotally secured to the wash board, the body portion of the plate normally lying parallel with the board, the longitudinally extending free end of the plate normally adapted to engage the back of the wash board.

5. The combination with a wash board, of a soap-holder comprising an angular plate, one end of which is pivotally secured to the wash board, the body portion of the plate normally lying parallel with the board, the free end of the plate being inwardly flanged, the flange normally adapted to engage the back of the wash board to retain the body portion of the plate apart therefrom.

[Claims 6 to 8 not printed in the Gazette.]

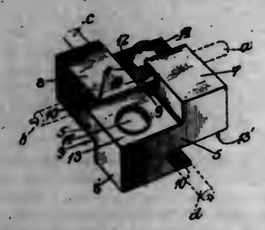
878,948. CARRIAGE-HOOD. TRAUGOTT GOLDE, Gera-Reuss, Germany. Filed Feb. 11, 1907. Serial No. 356,909.



1. A folding top comprising main hoops and auxiliary hoops pivoted thereto, and outrigger hoops one of which is pivoted at its ends to the forward main hoop and has break-joints in its side arms, supporting arms pivoted to said forward main hoop, and at their outer ends having the other of said outrigger hoops pivoted thereto, and being pivotally connected between their ends to the first mentioned outrigger hoop.

2. In a folding top for vehicles, a main front hoop and main rear hoop pivoted to the body of the vehicle, an outrigger hoop pivoted at its ends to the front main hoop and having breakable joints in its side arms, supporting arms pivoted to the front main hoop and to said outrigger hoop, and a second outrigger hoop pivoted to the forward ends of said supporting arms.

878,949. ELECTRIC-WIRE INSULATOR. JOHN H. HANSON, Chicago, Ill. Filed Jan. 12, 1907. Serial No. 351,952.



1. In a cross-over insulator, a body of insulating material comprising a central separating portion provided on opposite faces with overhanging heads, the heads on each face being disposed in and covering only diagonally opposite areas of said respective faces, the pair of heads protruding from one face being located at substantially right angles to the pair of heads of the other face, the heads of each face separated along an intervening line by an entrance groove, and along a line at an angle to such entrance groove, providing complementary portions of a wire receptacle vertically restricted by an overhanging head portion to retain the wire, such reception portions respectively opening toward opposite ends of the entrance groove.

2. In a cross-over insulator, a body of insulating material comprising in a central plane a solid separating portion, and on opposite faces thereof separated overhanging heads located on and covering only diagonally opposite areas of the respective faces, the heads of each face being along one separating line disposed to leave therebetween a substantially straight entrance groove, and along the other separating line shaped to constitute a wire receptacle vertically closed against egress of the wire, and laterally opened toward the plane areas of the separating portion, said grooves and receptacles on opposite faces of the separating portion being disposed at an angle relative to each other.

3. In a cross-over insulator, a body of insulating material comprising in a central plane a separating portion, on each of the opposite faces thereof, separated heads located in and covering only diagonally opposite areas of the face, the heads on each face being disposed along one separating line to leave therebetween an entrance groove, and along the other separating line shaped to constitute a wire receptacle vertically overlain by portions of the head, and laterally open toward the plane areas of the separating portion, such lateral opening being partially obstructed, and the grooves and receptacles, on opposite faces of the separating portion of the body being disposed at an angle relative to each other.

4. In a wire holding device, a body of insulating material, providing on one face two diagonally opposite heads, each head covering substantially one fourth of the area thereof the heads being separated along one line by a straight entrance groove, and along a line at an angle to such entrance groove providing complementary portions of a wire receptacle vertically restricted, and laterally opening toward the plane portions of the body adjacent opposite ends of the entrance groove, and obstructions for resisting the lateral egress of the wire from such receptacle portions.

5. In a cross-over insulator, a central separating portion having on each face thereof two heads, the heads on each face being located on and covering only diagonally opposite areas of such face, and along one separating line disposed to leave therebetween a substantially straight entrance groove, and along the other separating line providing oppositely opening lateral channels constituting complementary parts of a wire receptacle, the heads on one face of the insulator being disposed in the diagonal areas, which are plane upon the other face, and all of the laterally open channels opening in the same direction with respect to an imaginary vertical axis of rotation.

[Claims 6 and 7 not printed in the Gazette.]

878,950. BELT-FASTENER. GEORGE M. HARRISON, Lake Bluff, Ill. Filed Apr. 8, 1907. Serial No. 367,026.

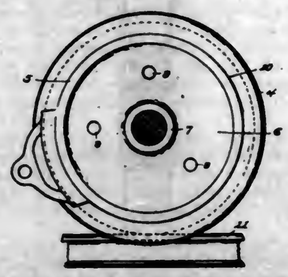


A belt fastener comprising a bar having a belt-engaging head formed on one end and a laterally-elongated head on the other end, the body of said bar being substantially square in cross section for a short distance inward from the laterally-elongated head and then round in cross-section, and a separable locking cap provided with a slotted opening proportioned to slip over the laterally-elongated head and the square portion of the bar to the round portion thereof, there permitting the cap to be rotated a quarter turn and slipped back on the square portion, where it is held against rotation and against removal over the laterally-elongated head.

878,951. CAR-WHEEL. MURRAY HENDRICKS, Benwood, W. Va. Filed Oct. 5, 1906. Serial No. 337,508.

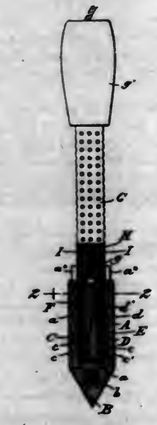
1. A homogeneous car wheel comprising a hub, a tread portion, a web connecting said hub and said tread portion, the median line of said web being substantially coincident with the central line of pressure on the bearing face of the rail, a guard flange, an annular rim on the side of the flange opposite to the tread portion, said rim having an annular face adapted for receiving the pressure of the brake-shoe, and a web connecting said rim and said hub.

2. A homogeneous one-piece hollow car wheel, comprising a hub, a tread portion, a vertical web connecting said hub and said tread portion, the median line of said web being substantially coincident with the central line of pressure on the bearing-face of the rail, a guard flange, an annular rim on the side of the flange opposite to the tread



portion, said rim being smaller than, but approximating, the tread portion in diameter, an integral extension carried by said hub, and a second vertical web connecting said rim and said extension, said second web being located centrally with respect to said rim.

878,952. ELECTRICALLY-HEATED SOLDERING AND BRANDING IRON. HARRY HERTZBERG and MAURICE J. WOHL, New York, N. Y., assignors to Abbot Augustus Low, Horseshoe, N. Y. Filed Apr. 5, 1907. Serial No. 366,530.



1. In a device of the class described, a chambered body or mass of metal, a heating element comprising a core of insulating material and a winding on said core, said heating element being within said body or mass of metal, wedging means for clamping the heating element into mechanical contact with said body or mass of metal, and means for electrically insulating the heating element from the body or mass of metal and the wedging means.

2. In a device of the class described, a chambered body or mass of metal, a plurality of electrical heating elements therein, a wedging means for clamping the individual heating elements into contact with opposite walls of the chamber in said body or mass of metal.

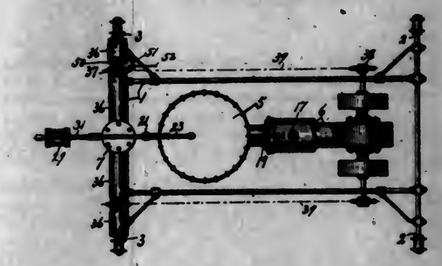
3. In a device of the class described, a chambered body or mass of metal, a plurality of spaced electrical heating elements therein, each heating element having a coil independent of the coil of the other heating element, and interposed wedging means between the heating elements for clamping the latter into close mechanical contact with opposite walls of the chamber in said body or mass of metal.

4. In a device of the class described, a hollow body or mass of metal, a plurality of electrical heating elements therein, and interposed coöperating wedges for clamping said heating elements at one operation into close mechanical contact with said body or mass of metal.

5. In a device of the class described, a hollow body or mass of metal, a plurality of electrically-operated heating elements therein, and wedges for clamping said heating elements into close engagement with said body or mass of metal.

[Claims 6 to 19 not printed in the Gazette.]

878,953. MOTIVE POWER. HENRY K. HESS, Philadelphia, Pa. Filed Mar. 23, 1903. Serial No. 149,118.



1. A steam engine and a boiler connected thereto in combination with a gas engine, means to conduct the exhaust from the gas engine to the boiler to generate steam therein, a normally closed valve in the connection between the boiler and steam engine, and means actuated by the steam pressure for opening said valve.

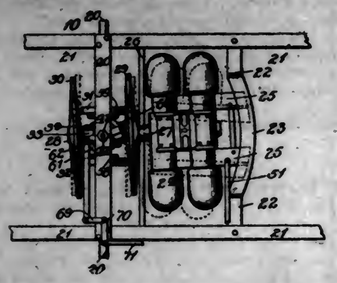
2. In combination with a steam generator, a steam engine, a valved conduit leading from the boiler to the engine, a second valved conduit connected to the former conduit at opposite sides of its valve, a steam receiving cylinder connected to the boiler, a piston in the cylinder connected to the valve in the second conduit and actuated in one direction by the steam pressure to operate the valve and yielding means partially counteracting the pressure of steam on the piston.

3. In combination with a steam generator having a combustion chamber, a gas engine exhausting into the combustion chamber, a steam engine receiving steam from the boiler, and automatic means controlled by the steam pressure from the boiler for regulating the speed of the steam engine.

4. In combination with a steam generator having a combustion chamber, a gas engine exhausting into the combustion chamber, a water jacket surrounding the cylinder of the gas engine, a water supply pipe leading to the water jacket, a water circulating pipe leading from the water jacket to water chamber of the boiler, an additional pipe leading from said water jacket to the steam chamber of the boiler whereby the water pressure of the jacket is equalized and the steam generated in said water jacket is diverted to the steam chamber of the boiler, a steam engine receiving steam from the boiler, and automatic means controlled by the steam pressure of the boiler for regulating the passage of steam from the cylinder of the steam engine.

5. In combination with a steam generator, a gas engine having a water jacket surounding its explosion chamber and provided with a water inlet, a conduit leading from the water jacket to the water chamber of the boiler, a second conduit leading from said water jacket to the steam chamber of the boiler, the last named pipe serving to conduct steam generated in the water jacket to the steam chamber of the boiler, a steam engine receiving steam from the boiler, and automatic means controlled by the steam pressure of the boiler for regulating the speed of the steam engine.

878,954. DRIVING MECHANISM FOR AUTOMOBILES, &c. HENRY K. HOLSMAN, Chicago, Ill. Filed Apr. 20, 1907. Serial No. 369,198.



1. In a device of the class described, the combination with the driving shaft and the pair of disks with their driving surfaces facing each other secured thereto, of the driven shaft and the driven disk carried thereby located between the driving disks, and means for translating said driving shaft to engage one or the other of the driving disks with the driven disk.

2. In a device of the class described, the combination with the driving shaft and the pair of oppositely-facing disks secured thereto, of the driven shaft journaled in suitable bearings, the driven disk splined hereon between the driving disks, means for moving the driven disk lengthwise of its shaft to vary the speed, and means for translating said driving shaft to engage one or the other of the driving disks with the driven disk.

3. In a device of the class described, the combination with the driving shaft and the pair of oppositely-facing beveled disks secured thereto, of the driven shaft journaled in suitable bearings, the driven disk splined thereon between the driving disks, means for moving the driven disk lengthwise of its shaft to vary the speed, and means for translating said driving shaft to engage one or the other of the driving disks with the driven disk.

4. In a device of the class described, the combination with the driving shaft and the pair of disks with their driving surfaces facing each other secured thereto, of the driven shaft, a pair of driven disks carried thereby located between the driving disks and on either side of the center thereof, and means for translating said driving shaft to engage one or the other of the driving disks with the driven disks.

5. In a device of the class described, the combination with the driving shaft and the pair of disks with their driving surfaces facing each other secured thereto, of the two-part driven shaft, a pair of driven disks carried thereby located between the driving disks and on either side of the center thereof, and means for translating said driving shaft to engage one or the other of the driving disks with the driven disk.

[Claims 6 to 30 not printed in the Gazette.]

878,955. DRIVING MECHANISM FOR AUTOMOBILES. HENRY K. HOLSMAN, Chicago, Ill. Filed Apr. 20, 1907. Serial No. 369,199.

1. In a device of the class described, the combination with a traction wheel having a tread surface and carrying a tire rim, of a driving disk having a deep groove whose sides set at an acute angle to each other are adapted to engage the outer edges of the rim, which edges have a corresponding angle, and means for rotating the disk.

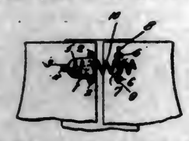
2. In a device of the class described, the combination with the traction wheel carrying a tire rim, and a tire centrally disposed on said rim and of less width than the rim, of a driving disk having a deep groove whose sides set at an acute angle to each other are adapted to engage the outer edges of the rim, which edges have a corresponding angle, and means for rotating the disk.

3. In a device of the class described, the combination with the traction wheel carrying the flanged tire rim, and a tire centrally disposed on said rim between the flanges, of a driving disk having the deep groove whose sides set



at an acute angle to each other are adapted to engage the outer sides of the flanges, which sides have a corresponding angle, and means for rotating the disk.

878,956. SHOE-FASTENER. JOSEPH HULIN, Pittsburg, Pa. Filed Sept. 16, 1907. Serial No. 393,096.



1. A shoe fastener comprising a concavo-convex plate formed with a plurality of apertures, a coil spring having one end received in said plate and a coil thereof engaged in said apertures, and a pin adapted to engage the free end of said spring.

2. The combination with a shoe top, of a concavo-convex plate secured to one side of the shoe top and formed with apertures, a coil spring having one end received in said plate and some of the convolutions thereof engaged in said apertures, and a vertically-disposed pin secured to the other side of the shoe top adapted to engage the free end of said spring.

3. The combination with a shoe top, of a concavo-convex plate secured to one side of the shoe top and formed with apertures, a pin carried by said plate, a coil spring partially inclosed by said plate, said spring having some of the coils thereof engaged in said apertures and one end thereof secured to said pin, keepers secured to the other side of the shoe top, and a pin pivotally connected to one of said keepers and adapted to engage the free end of said spring.

878,957. SIDE-GUIDE FOR PRINTING-PRESSES. WINFIELD S. HUSON, Taunton, Mass., assignor to The Campbell Printing Press & M'f'g Co., New York, N. Y., a Corporation of New York. Filed Apr. 28, 1892, Serial No. 431,023. Renewed July 5, 1907. Serial No. 382,349.



1. The combination of a feed-board, a transverse slot cut therein, the lower edge of said slot being beveled or cut away outwardly to allow the free passage of sheets, and an adjustable side-guide fitting within and guided by said slot.

2. The combination of a feed-board, a transverse slot cut therein, the lower edge of said slot being beveled or cut away outwardly to allow for the free passage of sheets, a metallic strip secured to said board, and extending partially over said slot, a side-guide mounted to slide on the projecting part of said strip, and means whereby said side-guide can be clamped on to said strip in any adjusted position.

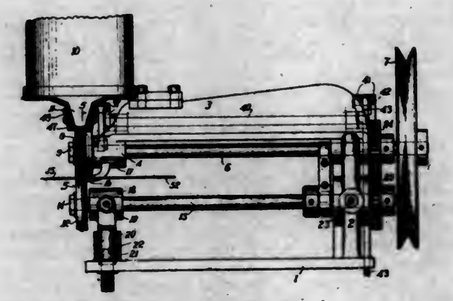
3. The combination of a feed-board having a transverse slot extending across the same, the lower edge of said slot being beveled or inclined outwardly, a metallic strip extending over the upper edge of the slot, an adjustable side-guide fitted on said metallic strip, and means whereby said side-guide can be clamped transversely at any point on the feed-board.

4. The combination of a feed-board having a transverse slot, the lower edge of which is inclined outwardly, a metallic strip fitting over the upper edge of said slot, an adjustable block mounted on said strip, a gage carried by said block, and means for adjusting said gage on said block.

5. The combination of a slotted feed-board, a metallic strip projecting over the slot, an adjustable block mounted on said strip, a clamping-screw for securing the block in its adjusted position, a gage having a slot for receiving the clamping-screw, and a nut threaded on to the clamping-screw for securing the gage in its adjusted position.

[Claims 6 to 12 not printed in the Gazette.]

878,958. VAMP CEMENTING AND SNIPPING MACHINE. HARRY I. ILLINGWORTH, Swampscott, Mass., assignor to Boston Machine Works Company, Lynn, Mass., a Corporation of Massachusetts. Filed Dec. 20, 1906. Serial No. 348,677.



1. The combination with feeding mechanism, including means operating in a direction parallel to the edge of the stock for applying cement to a leather piece, of means to snip said piece at the same time and place that the cement is being applied.

2. The combination with cement-applying mechanism, of snipping mechanism coöperating with said applying mechanism to snip and positively feed the stock operable at the will of the operator.

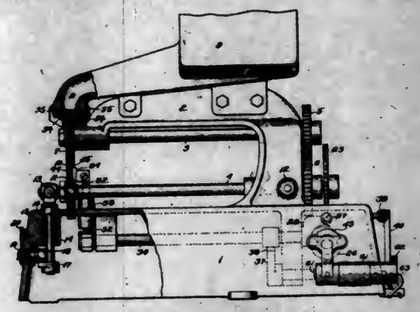
3. The combination with continuously operating cement-applying mechanism, of intermittingly operating manually controlled snipping means constructed and arranged to cooperate with the cement-applying means to snip the edge at curves.

4. A machine, comprising a cement-applier, constructed and arranged to apply a continuous line of cement in a direction parallel to the edge of the stock, snipping mechanism, and operating mechanisms therefor constructed and arranged to coöperate with the cement-applier in feeding the work for receiving a narrow deposit of cement and to snip the work at a curved place as it is being fed.

5. A machine, comprising self-feeding mechanism for feeding a piece of stock, said feeding mechanism including cement-applying means and snipping means.

[Claims 6 to 16 not printed in the Gazette.]

878,959. ROTARY CEMENTING AND SNIPPING MACHINE. HARRY I. ILLINGWORTH, Swampscott, Mass., assignor to Boston Machine Works Company, Lynn, Mass., a Corporation of Massachusetts. Filed Dec. 20, 1906. Serial No. 348,678.



1. The combination with cement-applying means and snipping means, of step-by-step operating mechanisms therefor, including means for actuating the snipping means in the intervals of rest of the cement-applying means.

2. The combination with cement-applying means, means uniting therewith to constitute mechanism for feeding the stock to be cemented, and snipping means, of operating mechanisms, including means for positively halting and locking the feeding of the stock during the snipping operation and means for actuating the snipping means during the halting of the stock.

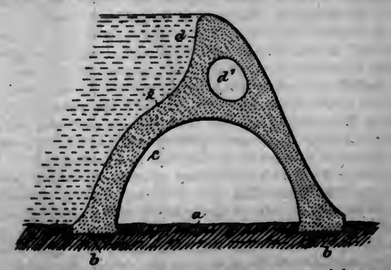
3. The combination with cement-applying means, means coöperating therewith in feeding the stock, and step-by-step operating mechanism for said two means, of snipping mechanism arranged to engage the stock on the opposite side to that receiving the cement.

4. The combination with a cement applier and a work feeder, of snipping mechanism arranged to move through said work feeder toward said cement applier for snipping the work, and operating means for actuating said snipping mechanism.

5. A machine, comprising a cement-applying wheel, provided with a series of knife grooves, means for supporting the work, a snipping knife, and operating mechanism for the latter constructed and arranged to move said snipping knife through the stock in coöperation with said knife grooves.

[Claims 6 to 12 not printed in the Gazette.]

878,960. SHELL-DAM. EDWIN B. JENNINGS, New York, N. Y. Filed Oct. 21, 1907. Serial No. 398,356.



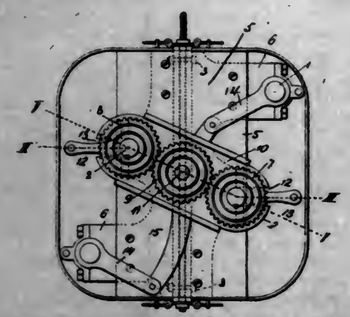
1. A hollow or shell-dam of concrete comprising a semi-elliptical wall, resting by independent footing upon a suitable foundation and a rising portion or extension from the upper part thereof.

2. A hollow or shell dam of concrete comprising a semi-elliptical wall, suitable foundations therefor, a rising portion or extension from the upper part thereof, said extension being of hollow construction and the up-stream surface of the hollow dam being an ogee curve.

3. A hollow or shell dam of concrete comprising a semi-elliptical wall, suitable foundations therefor, a rising portion or extension from the upper part thereof, said extension being of hollow construction and the up-stream surface of the hollow dam being an ogee curve and the down-stream wall or apron forming a strut having a direct thrust strain applied thereto by the impounded water.

4. A hollow or shell dam of concrete comprising a semi-elliptical wall, suitable foundations therefor, a rising portion or extension from the upper part thereof and which extension is formed integrally with the semi-elliptical wall and mainly to one side of the vertical center of said wall on the down-stream side so that the weight of an appreciable depth of the impounded water rests upon the semi-elliptical wall.

878,961. CONTROLLER FOR ELECTRIC MOTORS. PEARL N. JONES, Pittsburg, Pa. Filed Aug. 12, 1907. Serial No. 388,240.



1. A controller having in combination a plurality of current regulating members each having a handle and driving connections between said members, comprising a gear wheel for each regulating member, and an idler disposed between the gear wheels of the members and removably-mounted whereby said members may be operated independently when the idler is removed.

2. A controller having in combination a plurality of current regulating members, an idler removably-mounted between the members and normally connecting them, and means for operating the members independently when the idler is removed.

3. The combination of a car, a plurality of motors, a controller having a plurality of current regulating members, means for simultaneously operating said members, connections from one of the regulating members to motors controlled thereby, arranged on one side of the car and connections from the other regulating member to the other motors arranged on the opposite side of the car.

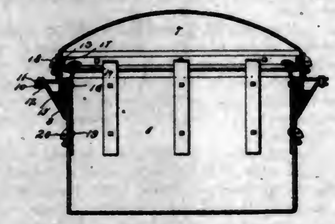
4. A current controller comprising a plurality of current regulating members each operative independently and each having a current regulating shaft, a gear on the shaft of each member, an idler gear mounted between and meshing with the gears on said shafts to effect simultaneous operation of the shafts, the said idler being removably-mounted whereby when disconnected from the gears on the shafts said members may each be operated independently.

5. A current controller having in combination, a plurality of current regulating members each having a current regulating shaft, means for gearing the shafts together whereby the actuation of one shaft of one of said members operates the shaft of the other member, the said means being so mounted as to be shifted out of geared connection to permit independent operation of the members.

[Claim 6 not printed in the Gazette.]

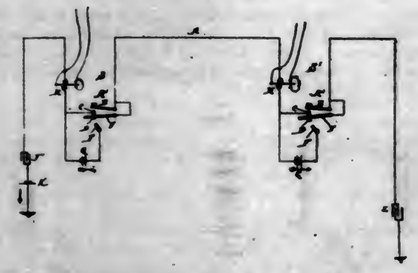
878,962. BURIAL-VAULT. THOMAS F. KELLY, Galion, Ohio. Filed Apr. 29, 1907. Serial No. 370,888.

1. A burial vault comprising a case, a trough extending around the upper edge thereof, the inner side of the trough being bent up and having fastenings to the wall of the case above the bottom of the trough, so that the fastenings are inaccessible from the outside, a cover the edge of which projects into the trough, and interior fastening devices between the cover and the case.



2. A burial vault comprising a case having spring hooks projecting above its edge on the inside, a cover having on the inside a flange engageable by the hooks, handles on the outside of the case and cover respectively, said handles having bolts extending through the case or cover and engaging the hooks and flange respectively and fastening the same in place.

878,963. TELEGRAPHY. ISIDOR KITSEE, Philadelphia, Pa., assignor of one-half to William J. Latta, Philadelphia, Pa. Filed Feb. 3, 1906. Serial No. 299,330.



1. In telegraphy, a line of transmission, a source of current for said line, intermediate stations for said line, each station equipped with a source of current, a transmitting key, a polarized receiving instrument and means to connect the line either directly or with the interposition of said source to said key, the two sources in opposition as to each other.

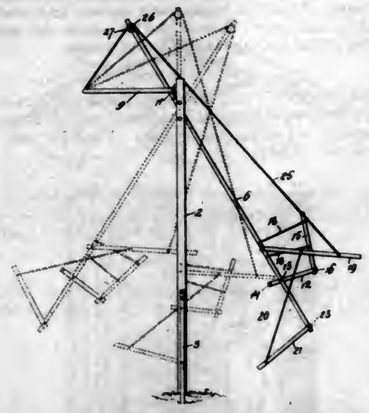
2. In telegraphy, a line of transmission, a source of current at one terminal of said line, a series of stations distributed along said line, each station provided with a second source of current, said second source of different strength from the first source, a transmitting key and means to connect said line either directly or with the interposition of said second source.

3. In telegraphing with true reversals, a line of transmission provided with a series of stations, a main battery for one terminal of said line, intermediate batteries for each station, the intermediate batteries of an electro-motive force greater than the main battery, receiving and transmitting device for each station, the transmitting device provided with means to connect the line either directly or with the interposition of said intermediate battery.

878,964. RED COLOR-LAKE. KARL KÖNIG, Höchst-on-the-Main, Germany, assignor to Farbwerke, vorm. Meister, Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Nov. 6, 1906. Serial No. 342,181. (Specimens.)

As products, the color lakes derived from the azo-dyestuff obtained by combining ortho-aminobensoic acid with beta-naphthol, being of a brilliant red pure tint, remarkable covering power when applied with oil, insoluble in water and alcohol and fast to light and lime.

878,965. SWING. GEORGE KUHN, Meadville, Pa. Filed Oct. 21, 1907. Serial No. 398,429.



1. A swing comprising vertical supports, brackets secured thereto, and provided with pivot pins, side bars mounted upon said pins, a frame or yoke projecting from said supports, a seat secured between said side-bars, levers, pivotally secured to said side-bars on opposite sides of said seat, ropes secured at one end to said frame or yoke and at their opposite ends to said levers, pulleys on said side-bars for said ropes, foot-rest bars pivotally secured to said side bars, and connections between said foot-rest bars and levers.

2. A swing comprising vertical supports, braces for said supports, brackets secured to said supports and provided with threaded pins, side bars mounted on said pins, nuts for securing said side bars upon said pins, a rod connecting the upper ends of said side-bars, pulleys mounted upon the projecting ends of said rod, a seat secured between said side-bars, levers pivotally secured to the side bars, a frame or yoke secured to said supports, ropes secured at one end to said frame or yoke and at the opposite ends to said levers, and passing over said pulleys, foot-rest bars pivotally secured to said side bars, and rods connecting said foot-rest bars and levers.

3. A swing comprising vertical supports, brackets secured thereto and provided with threaded pins, side bars mounted upon said pins, nuts for securing said side bars in position, a rod connecting the upper ends of said side-bars, pulleys mounted on said rod, a seat secured between the side-bars, and comprising bottom-bars pivotally secured to the side-bars, back-bars pivotally secured to the seat-bars, and foot-rest bars pivotally secured to the side-bars, connections between said back-bars and side-bars, levers pivoted to said side bars, connections between said levers and foot-rest bars, a frame secured to said supports, ropes connected at one end to said frame, and at their opposite ends to said levers, and passing over said pulleys.

878,966. METALLURGICAL PROCESS. FRANZ VON KÜGELGEN and GEORGE O. SEWARD, Holcombs Rock, Va., assignors, by mesne assignments, to Electro Metallurgical Company, a Corporation of West Virginia. Filed Jan. 30, 1905. Serial No. 243,413.

1. The herein described process of reduction of an ore or metallic compound reducible by phosphorus, which consists in effecting substantially the sole reduction of such ore or compound by causing a metallic phosphid to react therewith.

2. The described process of reducing metallic compounds reducible by phosphorous, which consists in bringing into contact therewith a phosphid in such proportion as to effect the entire reduction, and raising the temperature sufficiently to institute a reaction whereby the metal of said compound is separated.

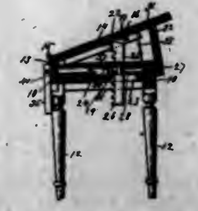
3. The described process of reducing metallic compounds reducible by phosphorus, which consists in subdividing the same and commingling therewith at normal temperature a metallic phosphid in such proportion as to effect the entire reduction, and raising the temperature of the mixture to ignition.

4. The described process of reducing metallic compounds, which consists in heating together the compound to be reduced and a phosphid of a metal which in its phosphid is chemically inert, whereby the phosphorus of the phosphid acts as a reducing agent and the inert metal combines with the reduced metal.

5. The described process of reducing chromium oxid which consists in causing a metallic phosphid to react therewith.

[Claims 6 to 8 not printed in the Gazette.]

878,967. ADJUSTABLE TABLE. JESSE C. LEWIS, Milford, N. H. Filed Sept. 18, 1907. Serial No. 393,425.



1. In an adjustable table, a stationary supporting frame, a table-top hinged at its front edge to the front portion of said frame, mechanism for supporting said table-top when raised in an inclined position, and a longitudinal guard-board pivotally connected at its upper edge with the under side of the table-top at an appreciable distance in front of the rear edge of said table-top and hanging substantially vertically therefrom behind and near the frame, and adapted when the table-top is raised to provide a finish between said table-top and frame and to hang snugly against the latter.

2. In an adjustable table, a stationary supporting frame, a table-top hinged at its front edge to the front portion of said frame, a jointed ratchet-bar hinged at its upper end to the under surface of the table-top and hanging vertically therefrom, a locking-rod supported by the frame of the table, and a spring holding the ratchet-bar normally in engagement with the locking-rod, whereby when the table-top is level the lower end of the ratchet-bar may be swung up into a substantially horizontal position.

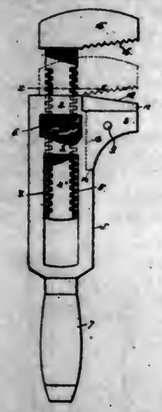
3. In an adjustable table, a stationary supporting frame, a table-top hinged at its front edge to the front portion of said frame and provided with a horizontal longitudinal groove in its upper surface said groove being intersected by passages in the table-top which extend downward through said table-top, mechanism for supporting said table-top in an inclined position, a horizontal resting-bar in said groove, vertically disposed adjusting screws extending upward through said passages into engagement with said resting-bar, and screw-threaded plates secured to the under side of the table-top at the lower ends of said passages and adapted to receive the threaded portions of said screws, whereby the resting bar may be raised and lowered in a vertical line with relation to the surface of the table-top, for the purpose set forth.

4. In an adjustable table, a supporting frame, a table-top supported by the frame, arm-rests pivotally secured at their rear edges to the front edge of the table-top, and telescopically arranged rods horizontally supported by the frame and with their forward tubular portions extending slidingly through the front wall of said frame and adapted to be drawn forward and act as supports for the arm-rests.

5. In an adjustable table, a supporting frame, a table-top, arm-rests hinged to the front edge of the table-top

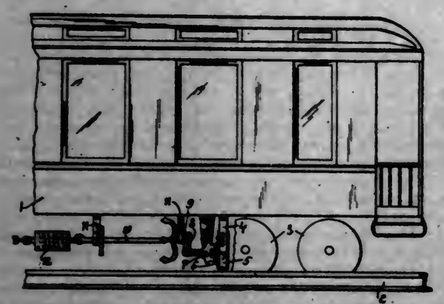
near its opposite ends and with their inner edges hollowed out to receive between them the form of the person sitting at the table when said arm-rests are raised, and means for sustaining the arm-rests in a raised horizontal position.

878,968. WRENCH. FRANK LINDSAY, Etna, Pa. Filed Aug. 1, 1907. Serial No. 386,502.



In combination, a wrench frame having as a part thereof a body portion, a handle, and a pair of laterally extending arms formed integral with said body portion at a point removed from the top edge thereof thereby providing a vertically extending shoulder, said arms constituting a removable jaw support and suitably spaced apart to form a web receiving opening and further having formed therebetween at the inner ends a vertically disposed recess forming a continuation of the web receiving opening and with the bottom wall of said recess constituting a ledge, a jaw mounted upon said arms and abutting against said shoulder, a web formed integral with the jaw approximately centrally of its lower face and positioned within said opening and recess and mounted upon the ledge, means extending through the arms of the web for connecting them together, a shank mounted in said frame and carrying a rigid jaw arranged in suitable relation with respect to the movable jaw, and means for vertically adjusting the shank.

878,969. SAFETY DEVICE. LUDWIG LIPTAI, New York, N. Y. Filed Apr. 27, 1907. Serial No. 370,642.

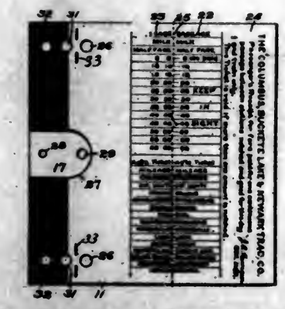


1. A railroad car having a safety device, comprising an anchor resiliently connected to the car, and means adapted to release said anchor in case the car leaves the track.

2. A railroad car having a safety device, comprising an anchor resiliently connected to the car, a slidable frame having a rack, a geared segment in mesh with said rack, and holding means for said anchor and controlled by said segment.

3. A railroad car driven by a source of power and having suitable brakes, a safety device, comprising an anchor resiliently connected to the car, a slidable frame, means on said frame adapted to release said anchor, and means operated by said frame in case the car leaves the track for shutting off said source of power and brakes.

878,970. TICKET-PAD. MURDOCH MACDONALD, Cleveland, Ohio, assignor to The Macdonald Ticket & Ticket Box Company, a Corporation of Ohio. Filed Dec. 29, 1905. Serial No. 293,854.



1. A plurality of sheets of the same size assembled into a pad with beveled sides, means fastening said sheets together to form such a pad, each of said sheets being perforated to receive a retaining pin, the said perforations being arranged in such a way that when so assembled they will register.

2. A ticket- or check-pad comprising a plurality of sheets with means for fastening them together, the said pad having beveled sides, the sheets being provided with perforations at different distances from a side, whereby partly used pads can be assembled and the proper beveled arrangement of the sides preserved.

3. A ticket- or check-pad adapted to be inserted in a holder in a bent position and comprising sheets of identical shape and size, each provided with data thereon arranged in parallel columns, the columns on one sheet being advanced slightly with respect to those on another, a means for fastening the sheets together with beveled sides, the amount of bevel being such that when the pad is bent for use the said columns on the sheets will register.

4. A plurality of sheets of the same size assembled into a pad with beveled sides each of said sheets comprising a stub portion having a column of data thereon, and a portion that is exposed when the pad is mounted in its holder, which also has a column of data thereon, and means fastening said sheets together which pass through the stub portions of the sheets, each of said sheets being perforated to receive retaining pins.

5. A ticket- or check-pad composed of a plurality of sheets of the same size, the said pad having beveled sides, means which pass through said sheets and fasten them together to form such a pad, and a flexible base or backing sheet for the bottom only of the pad which offers a greater resistance to bending than the other sheets and has spaces thereon appropriately designated for the entrance of data.

[Claims 6 and 7 not printed in the Gazette.]

878,971. WAGON. ALVIN MAIN, Pittsfield, Ill. Filed June 29, 1906. Serial No. 324,094.

1. A wagon body provided with bars pivotally connected at one end to the front of said body and adapted to swing thereover to provide for the sliding of the doubletree of a scraper thereover.

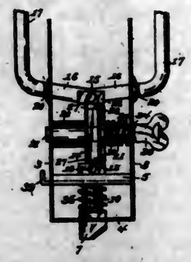
2. A wagon body having the rear ends of its side boards beveled to provide for the easy riding thereover of a loading scraper, and means pivotally mounted to swing over the front of said body to permit the sliding of the doubletree of a scraper thereover.

3. A wagon body provided with bars pivotally connected at one end to the front ends of the side boards thereof on the outer faces of said boards.



4. A wagon body having bars arranged on opposite sides thereof, and a bolt pivotally connecting one end of said bars to said body.

878,972. DOOR-LOCK. WILLIAM A. MARKEY, Moundsville, W. Va. Filed Feb. 9, 1907. Serial No. 356,574.



1. In a door-lock, face-plates, a movable bolt interposed between said plates, means for normally holding said bolt forced outward, a yoke carried by said bolt, a key-operated locking-plate having inturned ends adapted for interlocking with said yoke when in one position, means for normally holding said locking-plate in engagement with said yoke, said locking-plate being adapted for locking said bolt against retraction when the former occupies one position and for admitting of free movement of the bolt when it occupies another position.

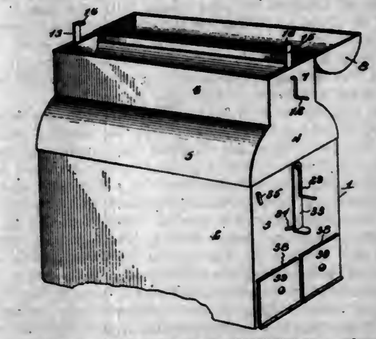
2. In a door-lock, face-plates and a connecting end-plate, a movable bolt comprising a head, a stem and a yoke, said bolt interposed between said plates, means for normally holding said bolt forced outward with respect to said plates, a revoluble spindle extending transversely between the members of said yoke and having its ends mounted in said face-plates, said spindle being slotted at one end for the reception of a key, a locking-plate having inturned ends revoluble upon said spindle, a spring interposed between said locking-plate and one of said face-plates for holding the former against the yoke-members, levers pivotally attached to the rear end of said yoke and projecting outward through said face-plates, and means whereby the retraction of said bolt is prevented when the inturned ends of the locking-plate stand between the yoke-members.

878,973. SIFTER. CLARENCE D. MARLOW, Dunellen, N. J. Filed Jan. 11, 1907. Serial No. 351,781.

1. A sifter including a sifting cylinder, a cradle mounted above the cylinder, said cradle being adapted for dumping movement in either direction, a carrier arranged to be supported within the cradle, and means for locking the carrier in place therein, said locking means coöperating with the carrier at the ends thereof.

2. A sifter comprising a box-like body, a screening cylinder revolubly mounted within the body, a cradle movably supported above the cylinder and adapted for dumping movement in either direction, means for operating the cradle, a refuse carrier designed to be inserted within the cradle and means carried by the cradle for engaging the carrier and securing the same in fixed relation to the cradle.

3. A sifter comprising a box-like body, a cover section therefor, said section being formed with a rectangular extension arranged above the body and open at the top, a screening cylinder revolubly mounted within the body, a cradle mounted within the extension and adapted for dumping movement in either direction, a carrier removably inserted within the cradle, means carried by the cradle for engaging the carrier to secure the same in fixed relation to the cradle, and a cover for the extension.

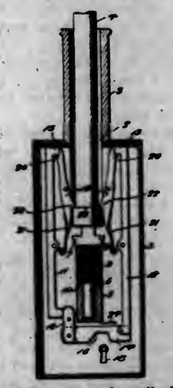


4. A sifter comprising a body divided into a plurality of chambers, a screening cylinder formed with an opening revolubly mounted within the body, a pin carried by the body, and a directing plate operable to close either chamber, one edge of said plate forming a stop for the movement of the pin in either position of the plate.

5. A sifter comprising a body divided into a plurality of chambers, a screening cylinder formed with an opening revolubly mounted within the body, and a directing plate operable to close either chamber, a pin projecting from the cylinder, and means carried by the directing plate to limit the movement of the pin.

[Claims 6 and 7 not printed in the Gazette.]

878,974. WHIP-SOCKET. THOMAS MARTIN, Pineville, La. Filed June 18, 1907. Serial No. 379,585.

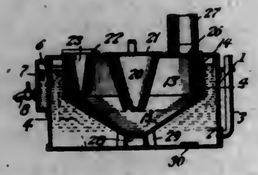


1. In a device of the class described, a housing having an aperture surrounded by a flange, a pair of levers pivoted within the housing and having terminal hooks, a pair of dogs pivoted intermediate the levers and having terminal notches engaging the hooks of the levers, said dogs being provided with lugs or projections near their lower ends, and springs engaging the dogs to hold them in engagement with the levers, a spring actuated follower disposed intermediate the levers and dogs and having a flange or shoulder adapted for engagement with the lugs or off-sets of the dogs, and means for operating the levers to actuate the dogs.

2. In a device of the class described, a housing having an aperture surrounded by a flange, a pair of levers pivoted within the housing and having terminal hooks, a pair of dogs pivoted intermediate the levers and having terminal notches engaging the hooks of the levers, said dogs being provided with lugs or projections near their lower ends, and springs engaging the dogs to hold them in engagement with the levers, a spring actuated follower disposed intermediate the levers and dogs and having a flange or shoulder adapted for engagement with the lugs or offsets of the dogs, a tumbler connected pivotally with one of the levers, and a pivotally supported link or lever connected pivotally at one end with the free end of the tumbler and having its opposite end disposed in the path of the lower extremity of the other lever.

3. In a device of the class described, a housing having an aperture and a flange surrounding the same, a pair of levers pivoted within the housing and having terminal hooks at their upper ends, a pair of spring actuated dogs supported pivotally intermediate the levers and having notches engaging the terminal hooks of the latter, said dogs being provided with lugs or projections, a spring actuated follower having a head provided with a flange or shoulder adapted for engagement with the lugs or offsets of the dogs, means for simultaneously operating the levers to actuate the spring actuated dogs, and a whip having an annular flange of less diameter than the shoulder or flange upon the head of the spring actuated follower.

878,975. WATER-HEATER. JAMES P. MAUZEY, Seattle, Wash. Filed June 13, 1906. Serial No. 321,481.

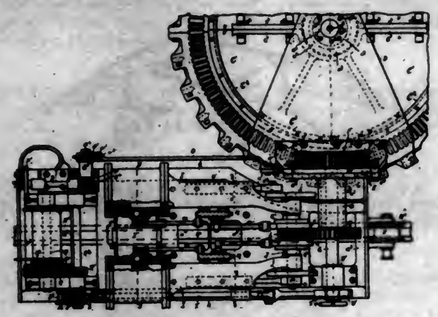


1. A water heater comprising a tank having an inlet and an outlet, a cover removably secured on the tank, and a fire pot removably connected to the cover and depending within the tank, said fire pot having a cylindrical wall extending at the upper end in parallel relation to the wall of the tank and inclined inwardly relative to the tank wall at the lower portion, and spacing blocks carried by the tank and bearing against the parallel portion of the vertical wall of the fire pot.

2. A water heater comprising a tank having an inlet and an outlet, a cover removably secured to the tank, a fire pot adapted for insertion within the tank, a plurality of brackets secured to the inner surface of the fire pot wall, said brackets having portions projecting at right angles to the plane of the wall, and means for securing the cover to said projected portions of the brackets.

3. A water heater comprising a casing having an inlet and an outlet, a receptacle in open communication with the outlet, a cover for the tank, a fire pot comprising a cylindrical wall extended in parallel relation to the wall of the tank for a portion of the length of said fire pot and inclined inwardly relative to the tank wall for the remainder of its length, brackets secured to the inner surface of the fire pot wall and having an upper extended portion in alinement with the upper edge of the fire pot wall, means for removably securing the cover to said extended portion of the brackets, the free edge of the cover being formed with a downwardly projecting flange adapted to snugly fit within the wall of the casing, means for removably securing the cover to said casing wall, a feed pipe supported by the cover and depending within the fire pot, the lower end of said feed pipe projecting below the upper edge of the inclined portion of the wall of the fire pot, and a draft tube carried by the cover and depending within the fire pot, said draft tube terminating at the lower end above the lower end of the feed pipe.

878,976. MINING-MACHINE. EDWIN R. MERRILL, Columbus, Ohio, assignor to Joseph A. Jeffrey, Columbus, Ohio. Filed Jan. 15, 1901. Serial No. 43,319.



1. The combination with a main frame or bed, of means for supporting and guiding the bed along the ground, a laterally projecting cutter wheel, an adjustable support for said wheel, an arm connected to said support for adjusting it and the wheel, a bodily adjustable gear plate adapted to impart motion to the arm in opposite directions, springs interposed between the gear plate and the arm, and means for adjusting and locking the gear plate.

2. In a mining machine, the combination with a main frame or bed, of means for supporting and guiding the bed along the ground, a laterally projecting cutter wheel, an adjustable wheel carrier for the said wheel, a swingable arm rigidly connected to said wheel carrier, a train of power transmitting devices for actuating said arm in either direction about the axis of the said cutter wheel carrier and having in said train an adjustable gear plate, and oppositely acting springs interposed between said gear plate and said arm.

3. The combination with a main frame or bed, of means for supporting and guiding the bed, a laterally projecting cutter wheel, an adjustable support for the cutter wheel, an arm rigidly secured to the wheel support, an adjustable gear plate yieldingly connected to the said arm on opposite sides thereof, and gearing engaging with the said plate for adjusting the arm.

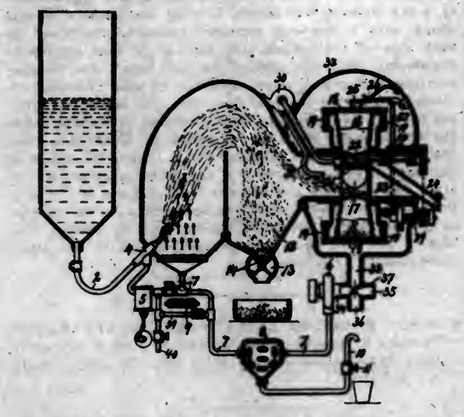
4. The combination with a main frame or bed, of means for supporting and guiding the bed along the ground, a laterally projecting cutter wheel, an adjustable rocking support for said wheel, an arm connected to said support for adjusting it, a gear plate yieldingly connected to the opposite end of the arm, springs arranged on opposite sides of said arm and interposed between it and said gear plate, and means for adjusting the gear plate.

5. In a mining machine, the combination of a laterally projecting horizontally disposed cutter wheel, a motor, gearing connecting the motor with the cutting apparatus, feeding mechanism for advancing the machine along the face of the coal, and a bed frame constructed substantially as described and supporting all of the aforesaid parts, said bed frame being laterally recessed at points adjacent to the cutter wheel and formed with a laterally projecting sleeve B at the said recessed or narrowed part having a vertical flange C for supporting the cutter wheel in its working position.

[Claim 6 not printed in the Gazette.]

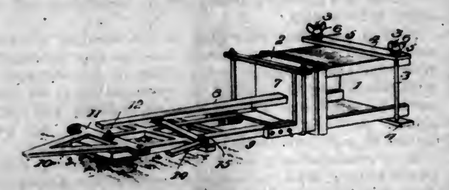
878,977. PROCESS FOR SEPARATING THE MOISTURE FROM THE CONSTITUENT SOLIDS OF LIQUIDS. LEWIS C. MERRELL, IRVING S. MERRELL, and WILLIAM B. GERE, Syracuse, N. Y., assignors to Merrell-Soule Company, Syracuse, N. Y., a Corporation of New York. Filed July 15, 1907. Serial No. 383,740.

1. The process of obtaining the solid constituents of liquids and semi-liquids in the form of powder, which process consists in rendering said liquids viscous by the addition of a compatible material, then converting the mixture into a fine spray, bringing such spray into a current of dry air or gas having an avidity for moisture so that substantially all the remaining liquid constituents are separated thereby, conveying the dry powder into a suitable collecting space away from the air or gas current, and discharging the air or gas separately from the dry powder.



2. The process of obtaining the solid constituents of liquids and semi-liquids in the form of a dry powder, which process consists in rendering said liquids viscous by the addition of a compatible material, then converting the liquid material into a spray, bringing such spray into a current of heated air or gas having an avidity for the moisture of the substance treated, retaining the atoms momentarily in said current so that substantially all of the remaining moisture is converted into vapor and the product is prevented by the cooling effect of such evaporation from undergoing chemical change, conveying the dry powder into a suitable collecting space away from the vaporizing current and discharging the air or gas separately from the dry powder.

878,978. BALING-PRESS. LEONARD B. METCALF, Spartanburg, S. C. Filed July 12, 1906. Serial No. 325,953.



In combination, a baling chamber, a plunger mounted to reciprocate therein, a rod projecting from the plunger and movable therewith in and out of the baling chamber, a cross head mounted to revolve, a support upon which the cross head is mounted, the arms of the cross head being adapted to successively engage the outer end of the plunger rod to press the same inwardly, and an elbow lever fulcrumed at its elbow at a point on the said support one side of the rod, when the latter is in true longitudinal alinement with the baling chamber, one end of said lever being pivotally connected to the plunger rod and extending laterally therefrom, the other arm of said lever extending laterally towards the cross head and terminating with its extremity in the path of movement of the cross head arms, said extremity also terminating flush with the end of one of said cross head arms when the latter stands in contact with the outer end of the plunger rod and is about to leave the latter, the fulcrum of the elbow lever being spaced from the cross head arm a distance fully equal to the length of the last named arm of the elbow lever, whereby the cross head will engage the extremity of said last named arm of the lever as soon as it leaves the outer end of the plunger rod.

878,979. BLIND-TENON. CHARLES MILLER, Del Rio, Tex. Filed Aug. 9, 1907. Serial No. 387,945.



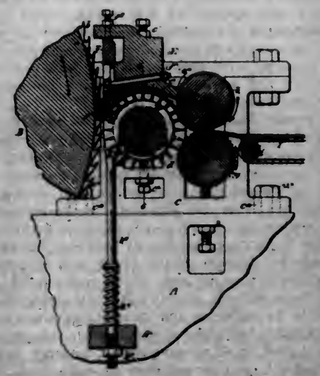
1. In a blind slat, a tenon or journal comprising a base having a laterally extending bend providing spaced sides, and a tubular journal having its inner portion on said bend of the base and provided with crimps engaging the sides of said bend.

2. A device of the class described comprising a base to bear on the end of a slat, and having a laterally extending projection provided with an opening extending transversely thereof, and a tubular journal having its inner portion on said projection and provided with crimps engaging the sides of the opening thereof.

3. A device of the class described comprising a base to bear on the end of a slat and having a laterally extending projection provided with a transverse wedge-shaped opening the sides of which converge outwardly, and a tubular journal having its inner portion on said projection and provided with crimps engaging the sides of the opening thereof.

4. A device of the class described comprising a base to bear on the end of a slat formed with points at its ends to enter the slat and formed at its center with a laterally extending bend provided with spaced sides and a tubular journal having its inner portion on said bend of the base and provided with crimps engaging the sides of the opening or space between the sides of said bend.

878,980. RAVELING-MACHINE. STANLEY G. MILLER, Philadelphia, Pa., assignor, by mesne assignments, to Smith & Furbush Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 9, 1904. Serial No. 202,411.



1. The combination in a machine for raveling woven fabric, of a plate, a toothed roll for positively feeding the fabric past the edge of said plate and at a given speed, a toothed cylinder so arranged in respect to the plate that

the teeth of the said cylinder will travel close to the plate, the surface speed of the cylinder being greater than the speed of the feeding mechanism so that as the fabric is fed past the edge of the plate the teeth of the cylinder will engage the transverse threads of the fabric and will ravel them from the fabric, substantially as described.

2. The combination in a raveling machine, of a plate having a series of grooves at the back, a toothed feed roll, the teeth of said roll entering the grooves in the plate, a toothed cylinder situated in front of the plate, the teeth of the cylinder being so shaped as to engage the transverse threads of the fabric and to ravel them from the body of the fabric, substantially as described.

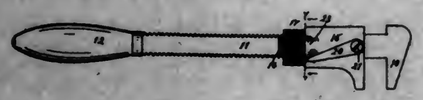
3. The combination in a raveling machine, of a cross head, a grooved plate carried by the cross head, a feed roll mounted under the cross head and having spiked teeth in close proximity to the cross head and entering the grooves in the plate, with a cylinder having overhung teeth arranged in close proximity to the plate so as to engage the transverse threads and separate them from the body of the fabric, substantially as described.

4. The combination in a raveling machine, of a cross head having a curved surface, a plate mounted on the cross head and also having a curved surface, a toothed feed roll, the teeth of the said roll being arranged in close proximity to the curved surface of the cross head and the plate, with a cylinder having overhung teeth so arranged in respect to the plate as to engage the transverse threads of the fabric, substantially as described.

5. The combination in a raveling machine, of a cross head having a curved surface, a plate mounted on the cross head and also having a curved surface, means for adjusting the plate, a toothed feed roll, the teeth of the said roll being arranged in close proximity to the curved surface of the cross head and the plate, with a cylinder having overhung teeth so arranged in respect to the plate as to engage the transverse threads of the fabric, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

878,981. WRENCH. HENRY E. MOBLEY, Trafalgar, Ind., assignor of one-third to L. Ert Slack, Franklin, Ind., and one-third to Claude E. Ragsdale, Trafalgar, Ind. Filed Feb. 14, 1907. Serial No. 357,365.



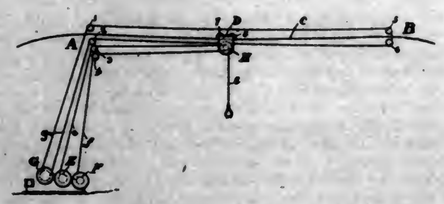
1. A wrench including a threaded shank with a fixed jaw thereon, a jaw slidable on said shank, a nut mounted in connection with the slidable jaw adapted to engage the threads on said shank for holding the movable jaw in the desired position with relation to the fixed jaw and means actuated by the movement of said nut for stopping and holding said nut in position.

2. A wrench including a shank with mutilated threads thereon, a jaw fixed to said shank, another jaw slidable on said shank, a nut mounted in connection with said movable jaw that is provided internally with mutilated threads to engage the threads on said shank, whereby when said nut is in one position, its threads will engage the threads on the shank and hold the movable jaw fixed, and when in another position of said nut, its threads will not engage the threads of the shank and said jaw will be freely slidable thereon and means engaged by and actuated by the movement of said nut for stopping and holding said nut in its engaging and disengaging positions.

3. A wrench including a shank with mutilated threads thereon, a jaw fixed to said shank, another jaw slidable on said shank, a nut mounted in connection with said movable jaw that is provided internally with mutilated threads to engage the threads on said shank, whereby when said nut is in one position, its threads will engage the threads on the shank and hold the movable jaw fixed, and in another position of said nut, its threads will not engage the threads of the shank and said jaw will be freely slidable thereon, and means mounted on said slidable jaw and actuated by the movement of said nut for locking said nut in its two positions.

4. A wrench including a shank flattened on two opposite sides and threaded on the top and bottom edges thereof, a jaw fixed to said shank, another jaw slidable on said shank with a rearward threaded extension therefrom on each side of said shank, the threads of said extensions registering with the threads on the shank and complementing each other, a nut mounted on said threaded extensions from the movable jaw that has mutilated internal threads which engage the threads on said shank when the nut is in one position and disengage the threads when the nut is in another position, and a spring fulcrumed at one end to said movable jaw and in engagement at the other end with said nut so as to hold said nut in the positions of engagement and disengagement with the threads of the shank and yet be swung laterally by partial rotation of the nut from one locking position to the other, substantially as set forth.

878,982. HOISTING AND CONVEYING APPARATUS. THOMAS S. MILLER, South Orange, N. J., and JOSEPH H. DICKINSON, Atlanta, Ga. Filed Oct. 18, 1902. Serial No. 127,788.



1. In a conveying apparatus, in combination, a trackway, a traveling carriage thereon, an outhaul traction rope having its outer free end connected to the frame of the carriage, a plurality of traveling drum parts connected in axial alinement, two stationary drums, a rope connecting each of said stationary drums with one of said traveling drum parts to operate inversely, and a rope operated by one of said traveling drum parts for connection with an object to be hauled.

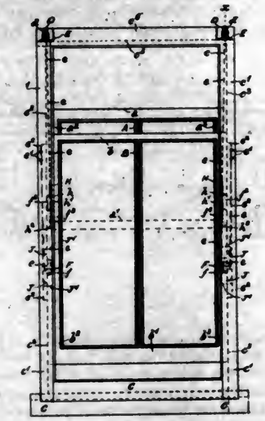
2. In a conveying apparatus, in combination, a trackway, a load carriage, an outhaul traction rope having its outer free end connected to the frame of the carriage, a drum containing a plurality of connected parts on said carriage, a fall rope from said drum, hoisting and slack pulling ropes extending respectively from the top and bottom of said drum toward the end of the trackway.

3. In combination a traveling carriage embracing a triplex traveling drum, an outhaul traction rope having its outer free end connected to the frame of the carriage, a rope for connecting the middle part thereof with the object to be moved, two stationary drums, and ropes connecting them with the outer parts respectively of said traveling drum.

4. In combination, a triplex traveling drum, three stationary drums, ropes connecting two of them respectively with the outer parts of said traveling drum, a rope connecting the third drum with the frame of said traveling drum, and a rope connecting the middle part of said traveling drum with the object to be moved.

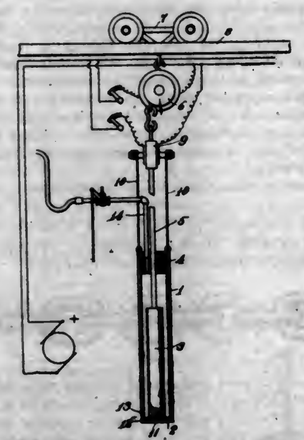
878,983. DEVICE FOR BALANCING SASHES. ALFRED MOLE, Fordsburg, Transvaal. Filed July 24, 1906. Serial No. 327,474.

In combination, upper and lower sashes, pulleys fixed to the lower sashes, pulleys fixed to the window frame, cords each fixed at one end to the window frame, passing around said pulleys, and each fixed to the upper sash, and



means carried by the upper sash for adjusting each of said cords.

878,984. APPARATUS FOR PRODUCING COMPOUND METAL BODIES. JOHN F. MONNOT, New York, N. Y., assignor to Duplex Metals Company, New York, N. Y., a Corporation of New York. Filed Nov. 17, 1906. Serial No. 343,810.



1. Coating apparatus comprising in combination an open-ended casing for containing fluid metal and an end plate therefor, one of said parts having a recess and the other a rib adapted to enter said recess, and a packing material within said recess, consisting principally of a material which is solid at ordinary temperatures but plastic at the temperature of molten metal.

2. Coating apparatus comprising in combination an open-ended casing for containing fluid metal and an end plate therefor, one of said parts having a recess and the other a rib adapted to enter said recess, and packing material within said recess comprising fluorspar.

3. Coating apparatus comprising in combination an open-ended casing, an end plate therefor, and a washer covering said end plate, and arranged to extend substantially to the side of the casing when said casing and end plate are together.

4. Coating apparatus comprising in combination an open-ended casing for containing fluid metal and an end plate therefor, said casing provided with a separate opening for the admission of molten metal, with a shield for such opening, and with means for making a fluid-tight joint with said end plate through the intermediacy of plastic packing material.

878,985. BURIAL-CASKET CARRIER. LEVI H. MONTROSS, Camden, N. J. Filed Dec. 27, 1906. Serial No. 349,637.



1. In a removable carrier for caskets, a base, panels secured thereto and handles secured to said panels.

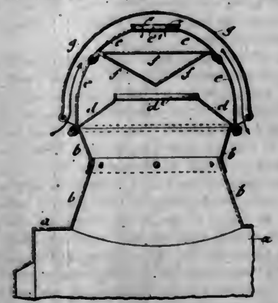
2. In a removable carrier for caskets, a base, a plurality of panels secured thereto and handles uniting the panels.

3. In a removable carrier for caskets, a base frame, supports secured to said base frame and adapted to engage at their upper ends with a flange upon the casket and handles upon said supports.

4. In a carrier for caskets, a base, and a plurality of side members therefor unattached at their upper ends and of which one is movably connected with said base at its lower end.

5. In a carrier for caskets, a base, a plurality of side members connected therewith, decorations removably secured to said side members, and handles upon said side members.

878,986. RAILWAY-LAMP. JOHN F. MCCANN, New York, N. Y. Filed Dec. 7, 1907. Serial No. 405,552.

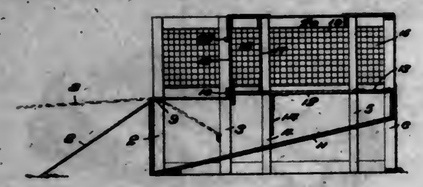


1. In a railway-lamp, the combination, with a lamp-casing, of a ventilating top comprising a chimney-portion at the top of the lamp-casing, an interior conical portion provided with an opening, a semi-cylindrical shell extending over said conical portion and provided with an outlet-opening, a conical deflector within said shell, and a cover extending over said semi-cylindrical shell, said shell and cover being provided with transverse openings at the front- and rear-ends for taking up a current of air at one end and carrying off the products of combustion at the opposite end.

2. The combination, with the casing of a railway-lamp, of a chimney-portion attached to the top of the same, a conical portion attached to said chimney-portion and provided with an opening at its upper end, an interior semi-cylindrical shell attached to the base of the conical portion, and provided with an outlet opening, a deflector of inverted conical shape attached to the inside of the shell, and a semi-cylindrical cover extending over the shell, said

shell and cover being provided at their lower ends with transverse front and rear-openings so as to take up a current of cold air at one end and conduct it through the space between the shell and cover to the opposite end and carry off the products of combustion of the lamp.

878,987. TRAP. JOHN W. MCEACHERN, Eula, Tex. Filed July 5, 1907. Serial No. 382,308.



1. A trap of the class described, comprising a plurality of uprights, a wall surrounding the lower portion of said uprights, a platform pivotally mounted between said uprights adjacent the upper edge of said wall, a portion of said platform being inclined, an inclined floor section in the lower portion of the trap, an auxiliary floor section above said inclined floor section, a screen surrounding the uprights above the auxiliary floor section to form a compartment and a swinging closure between said inclined and auxiliary floor sections and at the rear end of the auxiliary section.

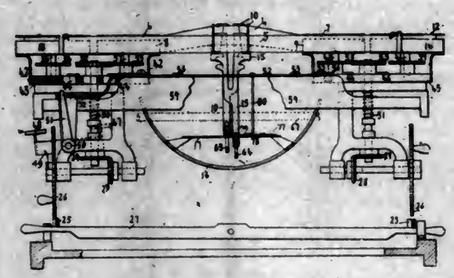
2. A trap of the class described, comprising a plurality of uprights, a wall surrounding the lower ends of said uprights, a platform pivotally mounted between two of said uprights, the outer end of said platform being inclined, an inclined floor section between the lower ends of said uprights, and extending from the front to the rear end of the trap, an auxiliary floor section above said inclined floor section, a swinging door at the rear end of said auxiliary section, screen wire surrounding the upper ends of the uprights, a partition in the upper portion of the trap forming compartments, one of which is employed as a bait compartment, a cover for said compartments and movable sections on said cover, whereby access may be had to the compartments.

3. A trap of the class described, comprising a plurality of uprights, a wall surrounding the lower ends of said uprights and screen wire at the upper ends of said uprights, a platform pivotally mounted between the uprights at the forward end of said trap, one end of said platform being inclined and extended forwardly from the trap, said platform being adapted to tilt when weight is placed on the inner end thereof, an inclined floor section in the lower end of said trap, an auxiliary floor section above said inclined floor section, a vertically disposed door hingedly secured to the lower face of said auxiliary floor section, a horizontally disposed door at the rear end of said auxiliary floor, a screen wire forming compartments above said auxiliary floor, one of which is adapted to receive bait, a cover for said compartments, movable sections on said cover, and a hook extending over the inner end of said platform.

878,988. TYPE-WRITING MACHINE. JOHN C. MCLAUGHLIN, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 6, 1905. Serial No. 281,660.

1. In a typewriting machine, the combination with two pairs of ribbon spools all placed with their respective flanges edge toward edge, so that the ribbon extending between the spools are superposed, of adjustable means operable by all the keys for causing the ribbon upon either pair of spools to cover the printing point at every type stroke.

2. In a front strike writing machine having a type-operating mechanism, the combination with a platen, of two pairs of ribbon spools all mounted with their respective flanges placed edge toward edge in front of the platen so that the ribbons extending between the spools are superposed, one pair of spools mounted between the spools of the other pair, means for winding either spool of either pair, and means for enabling the type-operating mechanism to cause the ribbon upon either pair of spools to cover and uncover the printing point at the type strokes.



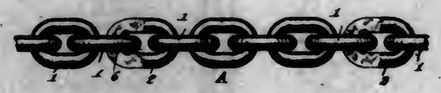
3. In a typewriting machine having a type-operating mechanism, the combination with two pairs of spools, of means for winding either spool of either pair while the spools in the other pair remain stationary, and means for enabling the type-keys to cause the ribbon upon either pair of spools to vibrate during the type strokes to cover and uncover the printing point.

4. In a typewriting machine, the combination with a platen and types mounted to strike upon the front side thereof, of two pairs of spools mounted with their respective flanges edge toward edge in front of the platen, one pair between the spools of the other pair, means for causing the ribbon upon either pair to vibrate to cover and uncover the printing point during the type strokes, and means for winding the ribbon back and forth upon either pair of spools while the spools in the other pair remain stationary.

5. In a typewriting machine having a type-operating mechanism including type keys, the combination with two pairs of spools, of a spool-winding mechanism, means for causing either pair of spools to be operated by said winding mechanism while the other pair remains stationary; and means for enabling the type-keys to cause the ribbon upon either pair of spools to cover the printing point at the type strokes.

[Claims 6 to 61 not printed in the Gazette.]

878,989. CHAIN. HENRY B. NEWHALL, Plainfield, N. J. Filed June 8, 1906. Serial No. 320,688.



1. A welded chain comprising regular links and one or more identifying welded links having a body of special configuration different from the regular links of said chain, said identifying link or links having the same resisting capacity as the other links of the chain.

2. A welded loading chain having identical links and at intervals an identifying welded link of different contour, the same forming a link of the chain, said identifying link or links having the same resisting capacity as the other links of the chain.

3. A welded chain comprising regular links, an identifying welded link having a body of special configuration different from the regular links of said chain, said identifying link being of substantially the same length of the other links of the chain and having substantially the same resisting capacity as the other links of the chain making a homogeneous chain and one which can be readily identified even though subjected to extreme wear and tear and covered with a thick coat of rust.

4. A chain having regular links made of round stock and at intervals an identifying link, a portion of which is round in cross-section and another portion is substantially rectangular in cross-section, said identifying link being of the same resisting capacity as the other links of the chain making a homogeneous chain and one which can be readily identified even though subjected to extreme wear and tear and covered with a thick coat of rust.

5. A coil loading chain made of a series of welded links, certain of which located at intervals along the length of the chain have a configuration different from the other links of the chain but all the links being of substantially the same resisting capacity resulting in a homogeneous chain which can be readily identified even after severe wear and tear.

[Claims 6 to 11 not printed in the Gazette.]

878,990. CHAIN. HENRY B. NEWHALL, Plainfield, N. J. Filed Mar. 9, 1907. Serial No. 361,475.



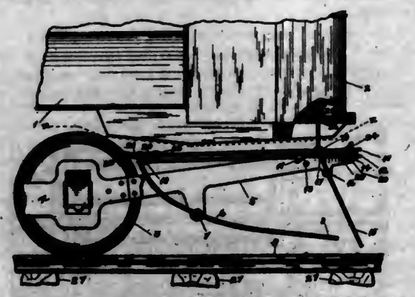
1. A chain having a series of welded links a portion of each link being substantially square in cross section, the welded end of each link being round in cross-section and of greater diameter than the corresponding portion of the squared end of the link to make all portions of the links of the chain of the same resisting capacity.

2. A chain having a series of welded links a portion of each link being substantially square in cross section, the welded end of each link being round in cross-section and of greater diameter than the corresponding portion of the square end of the link, the rounded end of the link tapering from its center towards each side of the link to make all portions of the links of the chain of the same resisting capacity.

3. A welded link for a chain, one portion of said link being substantially square in cross-section, the other portion of the link being substantially round in cross-section and of greater diameter than the corresponding portion of the non-circular part of the link, to make all portions of the link of the same resisting capacity.

4. A welded link for a chain, a portion of the link being substantially rectangular in cross-section, the other portion of the link being substantially round in cross section, and a part of the rounded portion being of greater diameter than the non-circular part of the link, to make all portions of the link of the same resisting capacity.

878,991. CAR-FENDER. EDWARD F. NORMANDIN, Grand Rapids, Mich. Filed Mar. 4, 1907. Serial No. 360,492.



1. In a car fender and in combination with the truck body of the car a main supporting frame, a primary fender hinged thereto, a supplemental fender and connecting means between the primary and supplemental fender and adjustable for limiting the upward and downward tilting motion of the primary fender.

2. In a car fender and in combination with the truck body of a car, a main supporting frame, a primary fender hinged thereto, a supplemental fender hinged to the supporting frame, a connection between the primary and supplemental fenders, and a device operable from the car for detaching the connection between the primary and supplemental fenders and providing means for independently operating the primary fender.

3. In a car fender, the combination with a main supporting frame, of a primary fender hinged thereto, a supplemental fender also hinged to the supporting frame, a connecting rod operatively connected to the primary fender and having a detachable connection with the supplemental fender, and an arm on the connecting rod and operable from the body of the car for detaching the connecting rod from the supplemental fender, and providing means for independently lowering the primary fender.

4. In a car fender, the combination with a main supporting frame, of primary and supplemental fenders hinged thereto and provided with an operative connection, and a device connected to the primary fender and having a pair of adjustable stops thereon to coöperate with the main frame for limiting the upward and downward movement of the primary fender.

5. In a car fender, the combination with a main supporting frame having a vertical slot therein provided with a lateral off-set portion, of primary and supplemental fenders pivotally mounted on the frame and provided with an operative connection between them, a bar pivotally attached to the primary fender and having a locking projection thereon for retaining the primary fender in lowered position, a portion of the said bar projecting through the slot in the frame and being adapted to engage in the laterally off-set portion thereof to prevent operation of the locking projection.

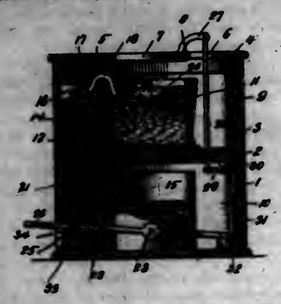
[Claims 6 to 8 not printed in the Gazette.]

878,992. WATER-GAGE. JOHN O'CONNOR, Clifton, Staten Island, N. Y. Filed Dec. 2, 1907. Serial No. 404,701.



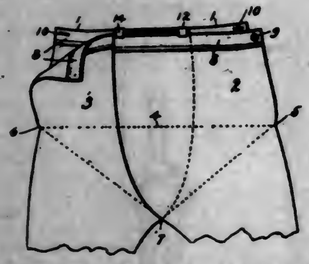
In a water gage, the combination of a transparent tube, an intermediate frame member having a longitudinal bore, of less length than the tube, snugly receiving said tube and also having interiorly threaded, end enlargements, interior shoulders at the ends of said bore and upright, diametrically-opposite sight openings tapered or gradually reduced in width from the inside of the member to the outside thereof, end frame members each having a bore in line with the transparent tube and an enlargement at the inner end of said bore snugly receiving an end portion of the tube and also having an exteriorly threaded end portion screwed into a threaded end of the intermediate frame member, and gaskets surrounding the end portions of the transparent tube and interposed between the interior shoulders of the intermediate member and the inner ends of the end members.

878,993. CUSPIDOR. LEE O'DELL, JACOB W. NOBLE, and JESSE F. SANDROCK, Tylersburg, Pa. Filed Feb. 26, 1907. Serial No. 359,434.



In a cuspidor, an outer receptacle, a removable cover therefor, a horizontal flange located around the inner side of said receptacle at a considerable distance from both top and bottom thereof, a horizontal partition removably supported on said flange, an upper fluid receptacle removably mounted on said partition and beneath the cover, an overflow receptacle removably-mounted in said outer receptacle beneath said partition, and an overflow pipe extending from near the top of said upper receptacle through said partition and discharging into said overflow receptacle.

878,994. LADY'S UNDERGARMENT. JESSE V. PALMER, Greenwich, N. Y. Filed Dec. 26, 1906. Serial No. 349,446.



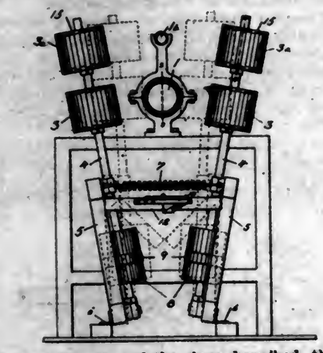
A garment of the character described having its body portion divided into a plurality of overlapping flaps, and a flap-connecting means positioned at one end of each of said flaps and adapted to detachably and directly engage the top of the opposing flap at a point immediately opposite said ends for adjustably and detachably connecting the tops of the flaps together, whereby the overlapping portions of the flaps at their tops will lie smooth when the garment is worn.

878,995. APPARATUS FOR INVERTING TUBULAR FABRICS. WILLIAM B. PALMER, Greenwich, N. Y. Filed Dec. 5, 1905. Serial No. 290,381.

1. In an apparatus of the class described, the combination with the fabric supporting tube; of a pair of feed rolls adapted to engage the opposite sides of said tube; and yielding means for forcing said feed-rolls against said tube.

2. In an apparatus of the class described, the combination with a fabric-supporting tube; of a pair of feed-rolls disposed on opposite sides of said tube; yielding means for forcing said feed-rolls toward each other; and locking mechanism for maintaining said rolls withdrawn from said tube at certain times.

3. In an apparatus of the class described, the combination with a fabric-supporting tube; of a pair of bearing frames pivotally mounted at one side of said tube; yielding mechanism for drawing said frames toward each other; a pair of shafts rotatively mounted in bearings in the respective bearing frames; feed-rolls fixed upon said shafts respectively adapted to engage opposite sides of said tube; and means for transmitting power to said shafts.



4. In an apparatus of the class described, the combination with a pair of fabric supporting tubes, one of said tubes formed of a plurality of telescopic sections, of a set of feed rolls coöperating with each of said tubes, and yielding supporting means for forcing said feed rolls against the tubes.

5. In a machine of the character described, the combination with a fabric-supporting tube, of a pair of bearing frames, one mounted at each side of the tube, a resilient connection between the two frames whereby the frames are drawn towards each other, and a rotatable feed roll carried by each of said frames, said feed rolls adapted to engage opposite sides of the tube.

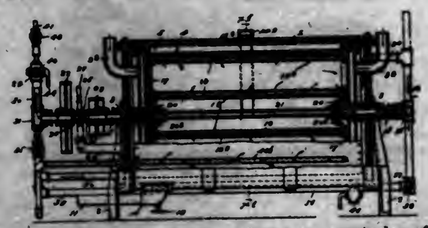
[Claims 6 to 12 not printed in the Gazette.]

878,996. HARNESS-BUCKLE. DECATUR C. PASLEY, Dolliver, Iowa. Filed Mar. 4, 1907. Serial No. 360,373.



A buckle comprising a rectangular sleeve having alining openings formed through its front and rear faces, and a spring tongue secured at one end to the rear face of said sleeve and having its opposite end bent laterally at right angles thereto and passed through said openings, said tongue being bent away from said sleeve face adjacent said lateral portion to provide an outwardly extending hand-hold.

878,997. APPARATUS FOR TEMPERING CREAM AND OTHER LIQUIDS. DARIUS W. PAYNE, Minneapolis, Minn. Filed Apr. 5, 1907. Serial No. 366,531.



1. The combination with a drum or receptacle, of a reel rotatively mounted therein and having hollow flat, radially disposed paddle blades, and connections for circulating a tempering fluid through the hollow blades of said reel, while the said reel is being rotated, substantially as described.

2. The combination with a drum or receptacle, of a reel rotatively mounted upon an approximately horizontal axis within said drum, and provided with hollow heads and hollow, flat, radially disposed paddle blades, and means for circulating a tempering fluid through said reel while under rotation, comprising hollow shafts or sleeves extended axially into the heads of said reel, substantially as described.

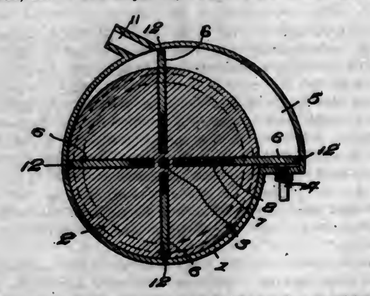
3. The combination with an approximately horizontal drum with inlet and outlet passages for the liquid to be tempered, of a reel having hollow heads and paddle blades mounted on an approximately horizontal axis within said drum, hollow pipes or sleeves extending through the heads of said drum into the heads of said reel, one thereof being secured to the adjacent head of said reel and having means for rotating it, and steam and water supply pipes with connections for circulating hot water through said reel, substantially as described.

4. The combination with approximately concentric inner and outer drums and means for circulating water through the chamber formed between the same, of a reel having hollow heads and paddle blades rotatively mounted within the inner of said drums, and means for circulating water through said reel while it is under rotation, substantially as described.

5. The combination with approximately concentric inner and outer drums and means for circulating water through the chamber formed between the same, of a reel having hollow heads and radially disposed hollow paddle blades, rotatively mounted within said inner drum and having axial sleeves or hollow shafts extended outward through the heads of said drums, and connections for circulating water through said reel shafts, heads and blades, while said reel is under rotation, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

878,998. ROTARY ENGINE. FRANK E. PENINGTON, Toledo, Ill. Filed Sept. 13, 1907. Serial No. 392,709.



In an engine of the class described, the combination with a casing, having an expansion chamber formed by disposing a portion of the peripheral wall eccentrically to the axial plane of the casing, one end wall of the expansion chamber being horizontally disposed and means to direct the propelling medium into said expansion chamber; of a piston rotatably mounted in said casing, said piston having channels in the faces thereof and slots in its peripheral edge, rings on the walls of said casing adapted to enter said channels and prevent vibration of the piston, blades adapted to be seated in said slots and moved longitudinally therein, springs interposed between the inner ends of said slots and the blades, whereby said blades will be moved outwardly and into engagement with the peripheral wall of the expansion chamber, whereby the propelling medium will engage the extended blades and cause the piston to rotate.

878,999. SHEET-METAL GAUZE OR GRATING. MARION W. PITNER, Chicago, Ill. Filed May 29, 1907. Serial No. 376,315.

1. A screen fabric formed from a blank of sheet metal provided with rows of slits, the slits of each row being separated by intervening necks of materially less length than the lengths of the slits, said blank being corrugated on intersecting lines at right angles to each other to bend and spread the walls of the slits to produce rows of angular cells or meshes, said slits, necks and corrugations being so relatively arranged and adapted through the materially different relative lengths of the slits and necks to dispose the cells or meshes with their angles abutting and connected alternately at the top and bottom of the corrugations by the short necks.



2. A screen fabric formed from a blank of sheet metal having parallel rows of slits arranged to break joint with each other, the slits of each row being separated by short intervening necks with the necks of one row arranged intermediately between the ends of the slits of the adjacent row or rows, said blank being corrugated by folding it alternately in opposite directions along the lines of the slits and also corrugated by folding it alternately in opposite directions at right angles to the lines of the slits, centrally across certain of said rows of slits and along the lines of the necks between the other rows of slits, whereby the blank is contracted in both directions and the walls of the slits spread to provide rows of angular cells or meshes, the lengths of the necks being materially less than the lengths of the slits, whereby in the formation of the cells by the spreading of the slits the corner angles of the rows of cells are brought into abutting relation and connected alternately at the top and bottom of the corrugations by the short bent necks.

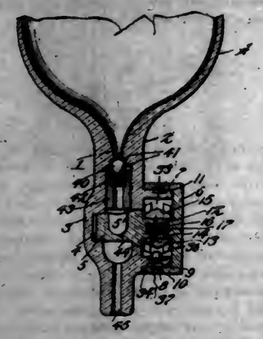
3. A screen fabric formed from a blank of sheet metal having parallel rows of slits separated by intervening necks, the necks of each row being disposed on lines between the necks of adjacent rows, said slits being provided at their ends with cross-slits, the blank being bent on lines transversely of the first-named rows of slits to spread the walls thereof and folded along the lines of said slits, whereby the spread walls of the slits upon the adjacent walls of the corrugations formed by so bending and folding the blank abut and provide rows of angular cells or passages having their angles abutting and connected, alternately at the top and bottom of the corrugations, by the bent necks, the cross-slits permitting the necks to lie above and below the opposite faces of the fabric.

4. A screen fabric formed from a single piece of sheet material having rows of parallel slits with the ends of the slits of each row approximating and separated by intervening necks of a length materially less than the lengths of the slits, the slits of the respective rows being arranged in determined break-joint relation so that the necks of one row lie centrally between the ends of the slits of the adjacent row or rows, said blank being corrugated in one direction along the lines of the slits and corrugated in the reverse direction centrally across certain of the rows of slits and along the lines of the necks between other rows of slits, whereby the walls of the slits are spread to provide angular cells or openings arranged by the relatively short length of the necks to abut at their angles and having the latter alternately connected at the points and bases of the corrugations by said necks.

5. A gauze fabric formed from a blank of sheet material having a body portion and tapering end portions, said body portion and end portions being provided with transverse parallel rows of slits separated by intervening necks of a length materially less than the lengths of the slits, the slits of one row being arranged on lines between the slits of adjacent rows, and the blank being transversely corrugated along the lines of the slits and longitudinally corrugated along the central lines of certain of the rows of slits and along the lines of the necks between the other rows of slits, whereby the blank is contracted in both directions and the walls of the slits spread to provide angular cells arranged by the relatively short lengths of the necks to abut at their angles and to

be connected at the points of the corrugations by the necks, thus producing a screen of maximum strength and of a different edge outline from the blank.

879,000. NON-REFILLABLE BOTTLE. MARION W. PITNER, Chicago, Ill. Filed June 5, 1907. Serial No. 377,394.



1. A container having a passage which communicates with the interior and exterior of the container, a closing member closing the passage and having one or more indentures or cups, said indentures being adapted to communicate with either the outer or inner portions of the passage by moving the closing member, and a device which automatically locks the closing member when the container is in predetermined position.

2. A container having a passage which communicates with the interior and exterior of the container, a closing member closing the passage and having one or more indentures or cups, said indentures being adapted to communicate with either the outer or inner portion of the passage by moving the closing member; an automatically actuated locking device dependent upon gravity for locking and unlocking the stopper, and an actuating means for the closing member.

3. A container having a passage which communicates with the interior and exterior of the container, a closing member closing the passage and having one or more indentures or cups, said indentures being adapted to communicate with either the outer or inner portion of the passage by moving the closing member, an actuating device for the closing member, and a device which automatically locks the closing member when the container is in predetermined position.

4. A container having a passage, a closing member for the passage, a locking device which prevents movement of the closing member except when the container is in predetermined position, and a part attached to the container for preventing removal of the closing member, said part being removable only by breakage.

5. A container having a passage, a closing member for the passage and provided with one or more liquid containing cups, and actuating means for the closing member, said actuating means being removable only by breakage.

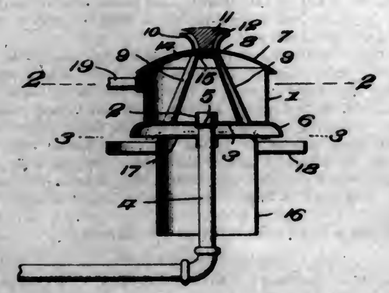
[Claims 6 to 28 not printed in the Gazette.]

879,001. DRAFT-EQUALIZER. LEO W. RAUCH, Avon, S. D. Filed Jan. 26, 1907. Serial No. 354,324.



A draft equalizer, comprising a main equaliser bar, a supplemental equaliser bar pivoted intermediate its ends, in one end of the main equalizer bar, a second supplemental equalizer bar, a clevis pivotally connected to the inner end of the first-named supplemental equalizer bar and to the second-named equalizer bar, intermediate the ends of the latter, the said main equalizer bar having an elongated recess, said recess having a projecting flange, two angled members forming a clevis pivoted to the inner end of the second main supplemental equalizer bar and to the flange of the said recess, said angled members being received by the said recess and a clevis pivoted to said members and adapted to be attached to the object to be drawn, a notch formed between the end of said flange and the end of the said recess to receive the pivot of the said angled members and the clevis, and draft means attached to the free ends of the equalizer bars, substantially as described and for the purpose specified.

879,002. OIL-BURNER. PEARL B. REED, Topeka, Kans. Filed July 5, 1907. Serial No. 382,374.



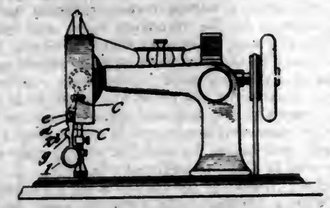
1. In a burner of the class described, the combination with a tank having a bottom therein and a dome-like cover at the upper end of said tank, said cover having a passage in its apex; of a curved flange extending through and above said passage, a distributer surrounded by said flange and of less diameter than the diameter of the flange, whereby an air space is formed between the flange and distributer, a plurality of air tubes extending through said tank and communicating at their upper ends with the air passage, a deflector surrounding the lower end of said tank, means to direct the air into said deflector and through the air tubes and means to convey oil into said tank.

2. In a burner of the class described, the combination with a tank having a bottom section, a dome-like cover at the upper end of said tank, said cover having a passage through the center thereof; of an upwardly and outwardly curved flange extending through said passage, a distributer surrounded by said flange, the peripheral wall of which is curved to conform to the contour of the flange, said distributer being of less diameter than the flange to form a space between the flange and distributer, a plurality of air tubes extending through the bottom section and communicating at their upper ends with the air space between the distributer and the flange, a deflector surrounding the lower end of said tank, a feed pipe entering said tank through the bottom section, an air drum below said bottom section and a drip pan below said tank.

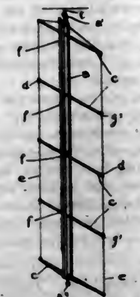
879,003. NEEDLE-THREADER. LUTHER V. RHODES, Altoona, Pa. Filed Jan. 12, 1907. Serial No. 351,991.

A needle threader comprising a sewing machine frame, a magnifying glass having a twisted arm with a hinged connection therewith pivoted to said frame, a lug on the arm a keeper on the frame, said arm serving to be thrown upwardly by means of its hinged connection to permit of its having a lateral movement by means of its pivotal

connection to engage the keeper, and said lug serving to move the magnifier toward or from a needle so as to obtain the required focus for threading the same, substantially as specified.



879,004. CURTAIN-STRETCHER AND CLOTHES-DRIER. CHARLES E. RICE, Livermore, Ky. Filed Feb. 16, 1907. Serial No. 357,740.

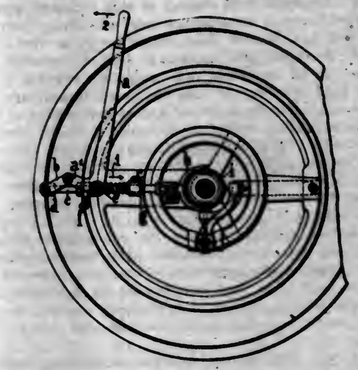


1. A clothes drier and curtain stretcher combined, including a center bar having a suspension device at its upper end, a series of radial arms having fixed connection with the center bar and extending upon opposite sides thereof, a series of radial arms having hinged connection with the center bar, adapted to fold closely thereto and extending upon opposite sides thereof at right angles to the fixed radial arms, the hinged arms having lengths less than the distances separating the same a binding string connecting the outer ends of the fixed radial arms, and means for retaining the hinged radial arms in folded position.

2. In a clothes drier and curtain stretcher combined, a center bar having a suspension device at its upper end, a series of radial arms having fixed connection with the center bar, and extending upon opposite sides thereof, a series of radial arms having hinged connection with the center bar, extending upon opposite sides thereof at right angles to the fixed arms and having a location upon the center bar intermediately of the fixed arms, such hinged arms having lengths less than the distances separating the same, the uppermost fixed arms being located above the uppermost hinged arms, and the uppermost hinged arms having a length less than the portion of the center bar and the suspension device above the same, and a binding string connecting the outer ends of the fixed series of radial arms.

879,005. CLUTCH-OPERATING DEVICE. MAX ROCKSTROH, Klein-Sedlitz, near Pirna, Germany. Filed Nov. 14, 1906. Serial No. 343,428.

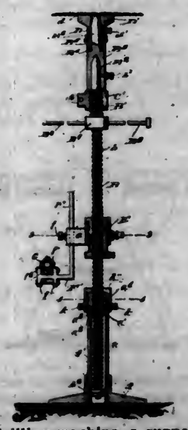
1. A clutch-operating device comprising a rod for shifting one member of a clutch to and from clutching engagement with the other member of the clutch, an expansible spring for shifting said rod in a direction to separate the clutch members, and a rod-shifting means for moving the rod in a direction to cause the clutching engagement of the clutch members and adapted when actuated to shift the rod and compress the spring and assume a position of unstable equilibrium and while in such condition maintaining the spring under compression.



2. A clutch operating device comprising a clutch-operating rod, a handle pivoted at its lower end and having an angular extension, a lever arm pivoted at one end to said angular extension and at its other end connected to said rod, an abutment carried by the rod, a bearing for the rod, and a spring surrounding the rod and interposed between the abutment and the bearing.

3. A clutching device comprising a clutch operating rod, a toggle connected therewith for shifting the rod in one direction to move the clutch to operative position, a shifting mechanism when moved in one direction adapted to shift the toggle to a position of unstable equilibrium, thereby moving the rod, whereby the clutch is brought into operative position, and means for shifting the rod in the opposite direction when said shifting mechanism is started to move in the opposite direction, said toggle when moved to a position of unstable equilibrium locking said means until the shifting mechanism starts to move in the opposite direction.

879,006. COAL-MINING DRILL-POST. PAUL ROMMES. Pittsburg, Kans. Filed Apr. 20, 1907. Serial No. 369,239.



1. In a coal drilling machine, a supporting post, means for anchoring the same at its upper and lower ends, a separable coupling member carried by said post, a bar vertically adjustable with respect to said coupling member and carried thereby, a horizontal arm projecting from said bar, and means carried by said bar for pivotally connecting a threaded box thereon.

2. In a coal drilling machine a supporting post, means

for anchoring the same at its upper and lower ends, a separable coupling member carried by said post, a bar vertically adjustable with respect to said coupling member and carried thereby, a horizontal arm extending from the end of said bar, spaced lugs projecting from the upper and lower faces of said horisontal arm, a threaded box having a lug on its lower face, said lug adapted to be pivotally held between the lugs on the horisontal arm.

3. In a coal drilling machine a post comprising a base standard internally threaded, a threaded shaft working therein and having at its upper end an enlarged threaded head, an extension member consisting of a threaded sleeve engaging said enlarged threaded head and an upwardly projecting tapered point, and means for rotating the threaded sleeve.

4. In a coal drilling machine the combination with a standard and base and a threaded post, working therein having a longitudinal groove, a locking cap mounted on the top of said base, said cap having an inwardly projecting gib fitting in the longitudinal groove of the threaded shaft, and means for locking said cap to the standard.

5. In a coal drilling machine the combination with a standard and base and a threaded post working therein its upper end, a threaded shaft working therein and having a longitudinal groove, a cap fitting over the top of said base standard and provided with an inwardly projecting gib fitting said longitudinal groove, the upper end of the base having an annular toothed groove, and a pawl carried by the cap and adapted to engage in the toothed groove and serving to lock the cap against rotation.

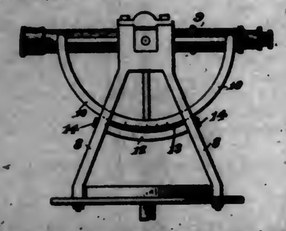
[Claims 6 to 13 not printed in the Gazette.]

879,007. PAPER-CLIP. JOHN S. ROOT, Chicago, Ill. Filed Oct. 29, 1906. Serial No. 341,016.



A paper clip comprising a single piece of wire coiled upon itself to form a gripping contact between approximately one half of the circumference of said coils, the half of the coil forming the gripping contact adapted to be reversed from one side to the other of the main coil, and one end of the wire extending diametrically to the opposite end thereof, substantially as described.

879,008. ADJUSTABLE VERNIER. GEORGE N. SAEGMULLER, Rochester, N. Y., assignor to Bausch, Lomb, Saegmuller Co., Rochester, N. Y. Filed June 14, 1907. Serial No. 379,005.



1. In an instrument of the character set forth, the combination with a support, of a scale rotatably mounted on the support, and a vernier adjustably mounted on the support separately from the scale mounting, said support and vernier being provided one with a curved slot concentric to the axis of rotation of the scale, the other with a guiding portion engaged in the slot and maintaining the vernier in a path of movement concentric to the axis of rotation of the scale, and means for securing the vernier against movement and in different adjusted relations.

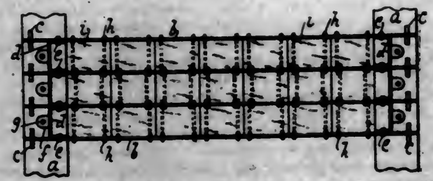
2. In an instrument of the character set forth, the combination with spaced supporting standards, of a rotatable scale journaled on the upper ends of and movable alongside the standards, a curved vernier carrying device adjustably mounted on the standards below and independently of the rotatable scale, said device having a longitudinal movement on the standards, said standards and support being provided one with curved slots concentric to the axis of rotation of the scale, the other with guiding portions engaged in the slots and maintaining the vernier in a path of movement concentric to the axis of rotation of the scale, and means for securing the vernier against movement and in different adjusted relations.

3. In an instrument of the character set forth, the combination with a support, of a swinging scale associated therewith, a vernier carrying device adjustably mounted on the support, and screws threaded into the support and having heads rotatably engaged with the ends of the vernier carrying device.

4. In an instrument of the character set forth, the combination with a support, of a movable scale associated therewith, a vernier carrying device adjustably mounted on the support and associated with the scale, said support having curved slots in its ends, and adjusting and retaining screws threaded into the support and having flanged heads, the flanges of said heads engaging in the slots of the vernier carrying device.

5. In an instrument of the character set forth, the combination with spaced standards, of a swinging scale mounted thereon, said standards having curved slots that are concentric to the axis of movement of the scale, a curved vernier carrying bar having its ends engaged in the slots, and adjusting and holding screws threaded into the standards and having heads rotatably engaged with the ends of the vernier carrying bar and constituting means for retaining the bar on the standards.

879,009. FLOOR SYSTEM. THEODORE SCHILLINGER, New York, N. Y. Filed Mar. 14, 1907. Serial No. 362,324.



1. A building comprising walls, beams placed on edge and supported on the walls, yoke-shaped closing pieces anchored to the walls and secured between the beams adjacent the extremities thereof, and a plaster plate to form a bottom between the bands.

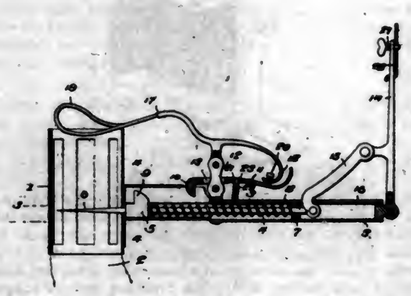
2. A building comprising walls, beams placed on edge and anchored to the walls, yoke-shaped closing pieces secured between and inclosed wholly within beams adjacent the terminals thereof, rods for securing the closing pieces to the walls, suspenders on the bands, and plaster plates on the suspenders.

3. The combination with walls, of beams, yoke-shaped closing pieces interposed between and inclosed wholly within the beams, the said beams and closing pieces being secured to one another and to the walls, and plaster plates suspended between the bands so as to form a receptacle for a filling.

4. A building construction comprising suitably spaced beams placed on edge, yoke-shaped closing pieces interposed between adjacent terminals of said beams; suspenders along the beams, and plaster plates on the suspenders, said plaster plates having means for supporting floor pieces above the top thereof to admit of the introduction of a filling.

5. A building comprising walls, a plurality of beams supported by said walls, yoke-shaped closing pieces anchored to the walls and secured between the beams adjacent the extremities thereof, and suspending means carried by the beams.

879,010. TRAP. BASILIUS SCHMITT, Brazil, N. D. Filed Nov. 25, 1907. Serial No. 403,795.



1. The herein described trap, comprising a body, an arm on said body, a plunger longitudinally movable in said arm, a head at one end of the plunger, prongs on said head, means to move said prongs into the body portion, a standard pivotally secured to one end of said arm, a link between said standard and plunger, whereby the prongs may be moved into the arm by lowering said standard, a trigger adapted to hold the prongs within the arm until released and means coöperating with said trigger and extended over one end of the body to operate said trigger when pressure is directed thereon.

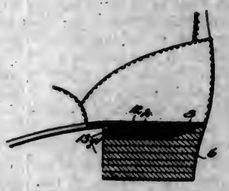
2. In a trap of the class described, the combination with a body, having an opening therethrough; of an arm on said body and preferably at right angles thereto, prongs adapted to enter said body, a plunger in said arm, a head between said plunger and prongs, a latch adapted to engage said head and normally hold the prongs within the arm, means whereby the prongs may be moved into the head, a lever adapted to engage said latch and release the same from the head and a frame on said lever adapted to extend over one end of the body, whereby when an animal engages said frame, the trigger will be released from the head and means to move the prongs into the body under pressure.

3. In a trap of the class described, the combination with a body, having a tubular arm thereon; of a plunger in said arm, a head on said plunger, prongs on said head adapted to be moved into or out of said body, means to engage said head and hold the prongs within the body, additional means whereby the head may be released, a spring adapted to move the prongs into the body, a standard pivotally secured to one end of the arm, a link between said standard and plunger adapted to move the prongs into the arm when the standard is lowered and a signal at the upper end of said standard.

4. A trap of the class described, comprising the combination with a body, an arm on said body, a plunger in said arm, prongs on said plunger, means to normally hold the prongs in the arm and additional means whereby said prongs may be released; of a standard pivotally secured to said arm, means to connect said standard with the plunger, a signal pivotally secured to the upper end of said standard and means whereby said signal may be adjusted.

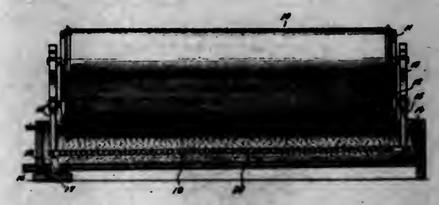
5. A trap of the class described, comprising the combination with a body and a tubular arm on said body; of a plunger slidably mounted in said arm, a head on said plunger, prongs fixed to said head, a spring adapted to move said prongs into the body, a latch pivotally secured to said arm, one end of which is adapted to engage said head and normally hold the prongs in the arm, means to hold the latch in the path of said head, a lever pivotally mounted above said latch, a curved finger at one end of said lever, means to increase or decrease the stroke of the finger required to release the latch, a frame at the opposite end of said lever, adapted to extend over one end of the body and means whereby said head may be moved into engagement with the latch.

879,011. DETACHABLE SHOE-HEEL. LADISLAV SEDIVI, Nashville, Tenn. Filed July 11, 1906. Serial No. 325,624.



The combination with a shoe having a plate of even thickness secured to the heel portion thereof, said plate being formed with a notch in its forward edge, of a heel provided with a U-shaped plate adapted to engage the shoe plate, the contacting edges of said plate being formed on complementary inclines to provide an interlocking juncture, and a spring clip secured to the rear portion of the U-shaped plate and having its free end bent back upon itself to form a shoulder to engage the notch in the heel plate, said clip terminating on a line with the forward edge of the heel, and its shouldered end adapted to be within the confines of the notch in the heel plate.

879,012. BOX-CLEANING DEVICE FOR CONCENTRATING-TABLES. EDWARD H. SHACKELFORD, Salt Lake City, Utah. Filed Aug. 7, 1907. Serial No. 387,489.



1. The combination with a concentrate box having an outlet for the concentrates, and a vibrating frame carrying concentrating devices which discharge into said box, of means carried by the frame and vibrated thereby to positively impel the concentrates in the box toward the outlet.

2. The combination with a vibrating concentrating device, and a concentrate box into which it discharges, said box having an outlet, of means carried by the said device and vibrating therewith to agitate the material in the box and positively impel the concentrates toward the outlet.

3. The combination with a concentrate box having an outlet at one end, and a laterally vibrating concentrating device discharging into said box, of a device extending lengthwise in said box and connected to and vibrating with the concentrating device and constructed to agitate the material in the box and positively impel it toward the outlet.

879,013. ADHESIVE COMPOSITION. MAX SMETANA, Philadelphia, Pa. Filed Mar. 20, 1907. Serial No. 363,482.

1. An adhesive composition capable of adhering to the surface of a part that is to be connected to another part and comprising an adhesive substance, and fibrous material commingled with the adhesive substance for taking up moisture from the same and giving off such moisture to the atmosphere to accelerate drying of the composition; the proportion of adhesive substance being sufficient to saturate all of the fibers of the fibrous material.

2. An adhesive composition capable of adhering to the surface of a part that is to be connected to another part and comprising an adhesive substance and a fibrous material combined therewith; the proportions of the ingredients being such as to assure the provision on the adhesive

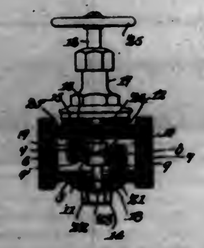
substance of a layer of fibers sufficient for the proper binding of the part to another part.

3. An adhesive composition capable of adhering to the surface of a part that is to be connected to another part and comprising glue and a fibrous material combined therewith; the proportions of the ingredients being such as to assure the provision on the glue of a layer of fibers sufficient for the proper binding of the part to another part.

4. An adhesive composition capable of adhering to the surface of a part that is to be connected to another part and comprising an adhesive substance and fibrous material commingled with the adhesive substance for taking up moisture from the same and giving off such moisture to the atmosphere to accelerate drying of the composition; the proportion of adhesive substance being sufficient to saturate all of the fibers of the fibrous material and such as to assure the provision on the adhesive substance of a layer of fibers sufficient for the proper binding of the part to another part.

5. An adhesive composition capable of adhering to the surface of the part that is to be connected to another part and comprising glue and fibrous material possessed of capillarity and insolubility, commingled with the glue; the proportion of glue being sufficient to saturate all the fibers of the fibrous material and such as to assure the provision on the glue of a layer of fibers sufficient for the proper binding of the part to another part.

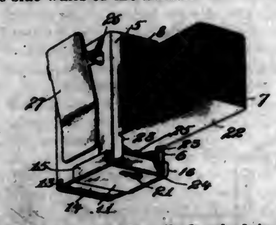
879,014. DOUBLE-SEATED VALVE. FRANCIS M. SMITH, Coquille, Oreg. Filed Aug. 27, 1906. Serial No. 332,266.



In a valve, a casing provided with oppositely disposed threaded openings of different sizes, a diaphragm disposed within the casing and provided with a square shoulder extending inwardly from one wall of the large opening, said diaphragm being provided with communicating valve seats having their walls inclined in opposite directions and intersecting at the center of the diaphragm, a removable cap threaded in the small opening in the casing and having a square recess formed therein, a conical-shaped main valve mounted for reciprocation within the casing and provided with a tubular stem the interior walls of which are threaded, an inverted conical-shaped auxiliary valve threaded in the stem of the main valve and provided with an angular extension seated in the recess of the removable cap, a plug threaded in the large opening in the casing and bearing against the square shoulder of the diaphragm, said plug being provided with a terminal recess for the reception of the main valve when the latter is moved to open position, the tubular stem of the main valve being extended beyond the threaded plug and provided with a hand operated device.

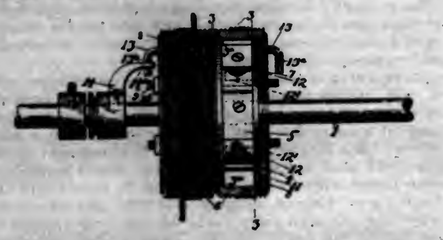
879,015. HOLDER FOR TICKETS, CHECKS, &c. PHILIP C. SNOW, Swarthmore, Pa., assignor to Globe Ticket Company, Philadelphia, Pa. Filed Dec. 13, 1907. Serial No. 406,894.

1. A holder of the class described embodying a body portion having an open front, a closed top, a detachable hinged bottom, the forward portions of the side walls inturned to constitute a retaining means for tickets or checks and their stubs, and a plate mounted in and projecting from the open front of said holder, said plate provided with V-shaped notches to receive the inturned portions of the side walls of the holder.



2. A holder of the class described embodying a body portion having an open front, a closed top, a detachable hinged bottom, the forward portions of the side walls inturned to constitute a retaining means for tickets or checks, a plate mounted in and projecting from the open front of said holder, said plate provided with V-shaped notches to receive the inturned portions of the side walls of the holder, means carried by the bottom of the holder for detachably connecting said bottom to the side walls, and a spring interposed between said means and the rear portion of said plate.

879,016. CLUTCH. FRED STARR, San Francisco, Cal. Filed Oct. 26, 1907. Serial No. 399,364.



1. In a clutch, a driven shaft, an inner clutch member fast thereon and having peripheral pockets and having a rigid web or flange at one side of the pockets, an outer casing loose on the clutch member and supported at one side by said web, a removable retaining plate detachably connected to the inner clutch member and supporting the other side, and gripping devices in said pockets, substantially as described.

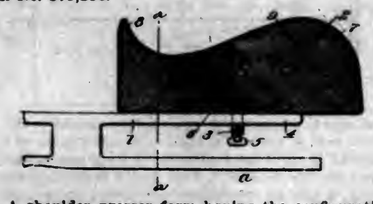
2. In a clutch, a driven shaft, an inner clutch member fast thereon and having peripheral pockets, and a rigid web at one side of said pockets provided with an annular rabbet, a retaining member removably secured to said inner clutch member and having an annular rabbet, an outer casing encircling said inner clutch member and having its edges resting in said rabbets and gripping devices in the pockets, substantially as described.

3. In a clutch, a driven shaft, an inner clutch member fast thereon, having pockets, an outer casing loose on said member, loose gripping devices in the pockets, a ring carrying a plurality of pins projecting into the pockets, an arm on said ring and a member longitudinally movable on the shaft and having a portion in proximity to the arm, said arm and said portion having an inclined slot and the other a projection engaging the slot, substantially as described.

4. In a clutch, a driven shaft, an inner clutch member fast thereon having pockets and a side web, an outer casing encircling said member and having one edge rotatably supported by said web, a removable retaining member supporting the opposite edge with means for holding it in place, a ring seated between the inner clutch member and retaining member and having pins projecting into the pockets, gripping devices in the pockets, an arm on the ring projecting through a slot in the retaining device, and means cooperating with said arm for rotating the ring, substantially as described.

5. In a clutch, a driven shaft, a pair of inner clutch members fast thereon having oppositely inclined pockets and an intermediate web, outer casings loose on said inner clutch members and separated by said web, gripping devices in said pockets and removable retaining plates secured to the outer faces of said inner clutch members and retaining the outer casings of the rings in place, substantially as described.

879,017. PRESSER-FORM FOR GARMENTS. JACOB M. STEIN, Washington, D. C. Filed May 23, 1907. Serial No. 375,254.

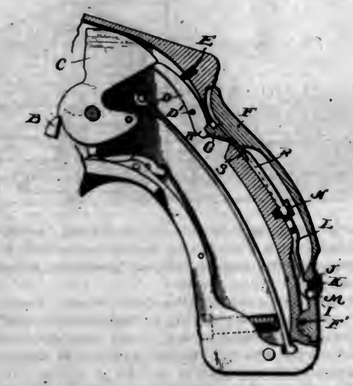


1. A shoulder presser form having the configuration of a shoulder, a bracket fixedly secured to the bottom of the form intermediate the ends of the latter and projecting upon opposite sides thereof, one portion of the bracket having a screwthreaded opening, and a thumb screw operating in said opening for coöperation with the bracket.

2. The combination with a support having a flat surface, of a shoulder presser form having the configuration of a shoulder, the under face of the form being flat for flush engagement with the said flat surface of the support, and means for securing the form in immovable position upon the support.

3. A form of the character described comprising a block having its inner end terminating in a flaring portion to provide a collar ironing surface and having its outer end terminating in a flaring portion to provide a pronounced shoulder ironing surface, the portion of the block between the collar and shoulder ends having its top concaved to correspond with the depression in the garment between the collar and shoulder of the garment.

879,018. SAFETY DEVICE FOR PISTOLS. UNO STONE, Lead, S. D. Filed Oct. 12, 1907. Serial No. 397,183.



1. In a fire arm, the combination of a trigger, a hammer, a locking lever normally locking said hammer, a safety lever normally adapted to move said locking lever from its locking position behind the hammer, means to lock said safety lever, and sliding means to remove said last-mentioned locking means out of their locking position, substantially as described.

2. In a fire arm, the combination of a trigger, a sear, a hammer, a locking lever D adapted to normally lock said hammer, a spring E adapted to normally force said locking lever D into its locking position behind said hammer, a safety lever F, provided with an extension G, adapted to normally contact with said locking lever D, and provided with a slot I, a button J sliding over said slot, and means connected with said button adapted to lock said safety lever F, substantially as described.

3. In a self-acting revolver, the combination of a trigger A, a sear B, a hammer C, a locking lever D, a safety lever F, provided with an extension G adapted to contact with said locking lever D, and provided with a slot I near its lower end, a locking device L provided with an extension M extending through said slot I, and a thumb button J for operating said extension M, substantially as described.

4. In a self-acting revolver, the combination of the trigger A, a sear B, a hammer C, a locking lever D, a safety lever F, provided with a slot I, a locking device L provided with the slot I, the locking device L provided adapted to lock said safety lever F when the said jaws are spread apart, and a thumb button J extending over said slot I adapted to operate said locking device L, substantially as described.

5. In a self-acting revolver, the combination of the trigger A, the sear B, the hammer C, the locking lever D pivoted at D', the spring E adapted to hold said locking lever in its locking position, and said locking lever provided with the notch H, the safety lever F, provided with the extension G, adapted to enter said notch H, and also provided with the slot I, the locking device L provided with the openings P and Q, the spring jaws R, the flanges S, the extension M passing through said slot I, the thumb button J secured to said extension M, and the screw N, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

879,019. WRENCH. WILLIAM C. SWEAT, Carlton, Wash. Filed Aug. 30, 1907. Serial No. 390,822.



1. A wrench comprising a rigid jaw having a transverse recess therein, a pivoted jaw provided with a knuckle fitted in said recess, means for holding said jaws in relative position, said pivoted jaw having an inclined face, a sliding wedge provided with a head to engage said face, said sliding wedge carrying a spring pawl provided with teeth, and teeth formed upon the shank of the rigid jaw for engagement by the teeth of the pawl.

2. In a wrench the combination of a rigid jaw, a jaw pivoted thereto, said pivoted jaw having an inclined wall, a sliding wedge having a head to engage said wall, a pawl pivoted to said sliding wedge, said pawl provided with teeth, and a projecting finger portion, a spring secured to the sliding wedge and bearing upon the pawl, a series of teeth formed in a recess in the rigid jaw member, and a dovetailed shank on the sliding wedge fitting a dovetailed recess in the shank of the rigid jaw member.

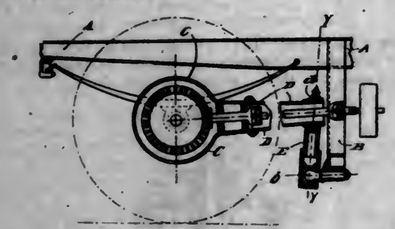
879,020. PLOW. PATRICK SWEENEY, Ericson, Nebr. Filed Oct. 1, 1907. Serial No. 395,415.

1. In a plow, the combination of a mold board comprising a series of elements, an upwardly arranged brace hav-

face of the cap, whereby by the turning of the stem, it may be raised or lowered for regulating the flow of lubricant, and means for maintaining the stem in raised position.

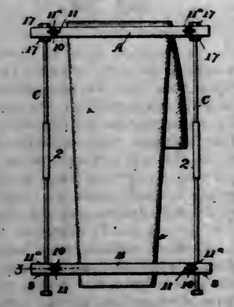
4. A grease cup having an uninterrupted substantially cone-shaped bottom for the purposes set forth, and a central outlet opening, a central guiding sleeve threaded at its upper end and extending above the top of the cup, a threaded cap adjustably held upon said sleeve above the cup and provided with a cam surface, and a notch located at the highest point of said surface, a spring-pressed regulating stem movable vertically in the sleeve and carrying a pin adapted to engage the cam surface on the cap, whereby, by the turning of the stem it is raised or lowered for regulating the flow of the lubricant said pin being adapted to enter said notch on the cam surface for maintaining the stem in raised position, substantially as described.

879,027. AUTOMOBILE. LOUIS M. G. DELAUNAY-BELLEVILLE, Paris, France, assignor to Société Anonyme des Automobiles Delaunay-Belleville, St. Denis, Seine, France, a Corporation of France. Filed Sept. 30, 1907. Serial No. 395,206.



A device of the class described comprising a tube forming a forward extension of the differential box and surrounding the cardan shaft but not touching it, the front part of this tube ending in a socket and being supported in a bearing arranged at the extremity of a single connecting rod, the other extremity of which is able to rock around a ball fixed rigidly to the chassis.

879,028. STRETCHER FOR TROUSERS, BELTS, &c. JAMES M. BLACKBURN, Baltimore, Md. Filed Sept. 14, 1907. Serial No. 392,880.



1. A stretcher for flat articles comprising a pair of clamps adapted to hold the article to be stretched, and a pair of metal rods connecting the respective ends of said clamps, the rods being rigidly connected with one of said clamps and being adjustably connected with the other clamp, and gripping devices upon the latter clamp for engaging said rods, the gripping devices each consisting in a metal disk through which the rod passes, a spring for canting said disk upon the rod, and means for compressing the spring to release the rod from the disk.

2. A stretcher for flat articles comprising a pair of clamps adapted to hold the article to be stretched, and a pair of metal rods connecting the respective ends of said clamps, the rods being rigidly connected with one of said clamps and being adjustably connected with the other clamp, and gripping devices upon the latter clamp for engaging said rods, the gripping devices each consisting in a metal disk through which the rod passes, a spring for canting said disk upon the rod, and a push pin mounted in the clamp and arranged to bear upon the disk to compress the spring and release the rod from the disk.

3. A stretcher for flat articles comprising a pair of clamps adapted to hold the article to be stretched, and a pair of flexible metal rods connecting the respective ends of said clamps, the rods being rigidly connected with one of said clamps and being adjustably connected with the other clamp, and gripping devices upon the latter clamp for engaging said rods.

4. A stretcher for flat articles comprising a pair of clamps adapted to hold the article to be stretched, and a pair of metal rods connecting the respective ends of said clamps, the rods being rigidly connected with one of said clamps, and being adjustably connected with the other clamp, and gripping devices upon the latter clamp for engaging said rods, the said rods being jointed and adapted to be folded and provided with sleeves for holding the sections of the rods in alinement.

5. In a stretcher for flat articles, the combination with the clamps and the side rods connecting the ends of said clamps, of the gripping devices for preventing backward movement of one of the clamps on the rods, said gripping devices each comprising a perforated disk surrounding a rod, a shoulder on the clamp forming a fulcrum for said disk, a spring for canting said disk about the fulcrum, and a push pin for releasing the disk.

879,029. REGULATOR. JAMES M. BLACKBURN, Baltimore, Md. Filed Dec. 2, 1907. Serial No. 404,720.



1. In a gas regulating device, the combination with a casing, of an inflow tube, an outflow tube, and an intermediate baffle, one of said tubes being adjustable in the casing increasing sectional area, and a floating valve in said outflow tube.

2. In a gas regulating device, the combination with a casing, of an inlet tube, an outflow tube, and an intermediate baffle, one of said tubes being adjustable in the casing toward and from the baffle, and one of said tubes being provided with internal grooves of varying cross-section, and with a floating cylindrical valve.

3. In a gas regulating device, the combination with a casing having an inlet opening, of a baffle in line with said opening and an outflow tube said outflow tube having a cylindrical floating valve therein, stops to limit the movement of said valve, and tapering grooves in the inner wall of the tube to permit more or less gas to pass around said valve.

4. In a gas regulating device, the combination with a casing having an inlet opening, of a baffle within the casing in line with said opening, a valve plate pivotally supported on said baffle, a spring for holding the valve plate and baffle in normal position, and an outflow tube mounted in the casing and adjustable therein toward and from the valve plate, said outflow tube being provided with means for varying the opening therein to regulate the discharge of gas from the casing.

5. In a gas regulating device, the combination with the casing having an inlet opening, of a baffle in line with said opening, and an outflow tube having tapering grooves in its inner wall, said outflow tube having a contracted inlet and a floating valve arranged above said inlet.

879,030. PRODUCTION OF BARIUM CYANID. KARL BOSCH and ALWIN MITTASCH, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Jan. 4, 1907. Serial No. 350,845.

1. The conversion of barium cyanamid into barium cyanid by heating the barium cyanamid at a temperature below 1200° C. in the presence of a hereinbefore defined gas containing carbon.

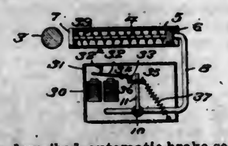
2. The production of barium cyanid by heating to a comparatively high temperature in the presence of nitrogen a mixture containing barium carbonate, and carbonaceous material and then treating the resulting product while it is cooling with a hereinbefore defined gas containing carbon, substantially as described.

879,031. CARBONATED LIQUID. HARRY B. BREHAUT, Cottage Grove, Oreg. Filed Apr. 23, 1906. Serial No. 313,326.

1. The process of making a carbonated liquid which consists in adding a bicarbonate to a mixture of simple syrup, glycerin, fruit acid and albumen and sealing the same in a container after the carbon dioxid has been sufficiently liberated to drive atmospheric air out of the container, whereby the bottled liquid will be in condition to liberate a creamy mass when a restricted outlet is formed in the container.

2. A carbonated liquid composed of the following ingredients, viz.: simple syrup, glycerin, fruit acid, bicarbonate of soda, and albumen in substantially the proportions specified, being a liquid when confined under the pressure of the evolved gas and transforming into a creamy consistency when the gas is liberated and air admitted.

879,032. AUTOMATIC BRAKE-SETTING MECHANISM. WILLIAM P. BYRD, Baltimore, Md. Filed Aug. 1, 1907. Serial No. 386,563.



1. The herein described automatic brake-setting mechanism, comprising the combination with an air valve, having a lever therefor; of a curved plunger adapted to engage and follow in the path of said lever, and means to introduce air into engagement with said plunger, whereby the same will be moved longitudinally and the valve lever operated.

2. In an automatic brake-setting mechanism, the combination with an air valve having a lever to operate the same; of a curved plunger adapted to move in the path of said lever, a curved cylinder for said plunger, means to convey compressed air into the cylinder, whereby the piston will be moved longitudinally and the air valve operated and means to control the admission of air into said cylinder.

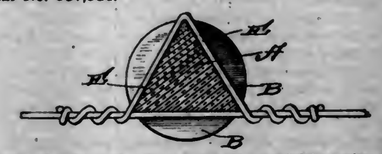
3. In a brake-setting mechanism of the class described, the combination with an air valve, an operating lever therefor and an air pipe, connected to said valve; of a curved plunger adapted to extend into and follow the path of the lever, a curved cylinder for said plunger, a piston head at one end of said plunger, a pipe section extending from the end of said cylinder to the air pipe, a cock in said section, means to normally hold said cock in its closed position and additional means to release said cock, where the same may be rotated.

4. In a brake-setting mechanism, the combination with an air valve, a lever for said valve and an air pipe connected to said valve; of a plunger adapted to engage and operate said lever, a cylinder for said plunger, a pipe section extending from said cylinder to the air pipe, a cock intersecting said section, an operating lever for said cock, a striking arm carried by the upper end of said lever, an armature adapted to engage said striking arm and normally hold the cock in its closed position, a spring secured to said striking arm and means to release said armature from the striking arm, whereby the operating lever will be rotated and a blow delivered thereto.

5. In a brake-setting mechanism, the combination with an air valve, having an air pipe, a plunger to operate said valve, a pipe section adapted to convey air from the air pipe to said plunger and a controlling cock for said section; of means to operate said controlling cock, comprising an operating lever having a socket in one end thereof, a striking arm extending loosely through said socket, a latch at one end of said arm, a spring secured to the opposite end of said arm, an armature adapted to engage said latch and hold the cock against operation, magnets adapted to attract said armature and release the latch, whereby a blow will be delivered to the operating lever and the cock rotated, depending fingers operatively connected to said magnets, magnetized contact plates in the path of said fingers, and means to raise said contact plates into engagement with said fingers, whereby said magnets will be energized and the brake-setting mechanism operated.

[Claim 6 not printed in the Gazette.]

879,033. INSULATOR FOR ELECTRIC WIRES. JOHN CALDWELL, Philadelphia, Pa. Filed Aug. 7, 1907. Serial No. 387,516.



1. An insulator having a groove at right angles to its length, the bottom of said groove forming the three faces of the triangle, a line wire held against one of the straight faces of the bottom of the groove, and a tie wire engaging the other two faces and fastened about the line wire, as set forth.

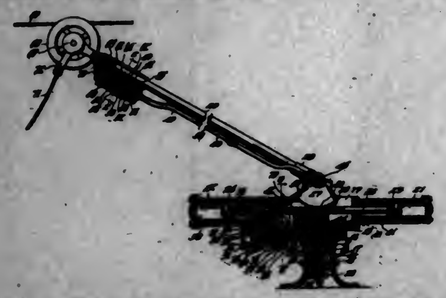
2. An insulator having a groove at right angles to its length, the bottom of said groove forming the three faces of the triangle, a line wire held against one of the straight faces of the bottom of the groove, a tie wire engaging the other two faces and fastened about the line wire, said groove having widened portions at the angles formed by the straight faces forming the bottom of the groove, as set forth.

879,034. TROLLEY-POLE CONTROLLER. JOHN J. COIT, Venice, Cal. Filed Oct. 20, 1906. Serial No. 339,781.

1. In a pneumatic trolley controller, a trolley pole; pneumatically operated means secured thereto to elevate the free end thereof; pneumatically operated means secured to the trolley pole to depress the free end thereof; a valve controlled connection between said pneumatically operated means to connect one of said means to pressure and the other to exhaust; and controlling means operable by the trolley to hold the elevating means to pressure and the depressing means to exhaust when the wheel is on the feed wire, and to permit the reversal of pressure and exhaust when the wheel accidentally leaves the feed wire.

2. A trolley controller, consisting of oppositely disposed

cylinders; pistons in said cylinders; a trolley pole; a connection between said trolley pole and said pistons; pneumatically operated mechanism for alternately admitting compressed air to the outer end of one cylinder and for throwing the outer end of the other cylinder to exhaust; and pneumatically operated mechanism controlled by the harp for controlling the mechanism which controls the direction of the air to said cylinders.



3. A trolley pole controller, comprising a trolley base; oppositely disposed cylinders secured to said base; pistons in said cylinders; a stem extending from one piston to the other, said stem having a rack in the face thereof; a trolley pole pivotally connected to the trolley base and having a depending toothed sector engaging the rack on said stem; pneumatically operated mechanism for alternately admitting compressed air to the outer end of one cylinder and for throwing the outer end of the other cylinder to exhaust; and pneumatically operated mechanism controlled by the harp for controlling the mechanism which controls the direction of the air to said cylinders.

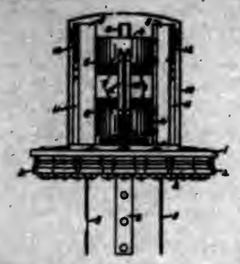
4. In a pneumatic trolley controller, a trolley pole having the harp thereof pivotally connected thereto; pneumatically operated means secured thereto to elevate the free end thereof; pneumatically operated means secured to the trolley pole to depress the free end thereof; a connection between said elevating and depressing mechanism; a slide valve mechanism on said trolley pole, said slide valve controlling said connection and said slide valve having a stem projecting through the valve chamber casing toward the harp; and an arm secured to said harp engaging said stem to hold the valve to connect the elevating mechanism to pressure and the depressing mechanism to exhaust when the wheel is on the feed wire and to permit the reversal of pressure and exhaust when the wheel leaves the feed wire.

5. A trolley pole controller, comprising a trolley base; oppositely disposed cylinders secured to said base; pistons in said cylinders; a stem extending from one piston to the other, said stem having a rack in the face thereof; a spring surrounding said stem in one of said chambers; a trolley pole pivotally connected to the trolley base and having a depending toothed sector engaging the rack on said stem; pneumatically operated mechanism for alternately admitting compressed air to the outer end of one cylinder and for throwing the outer end of the other cylinder to exhaust; and mechanism pneumatically operated and controlled by the harp for controlling the mechanism which controls the direction of the air to said cylinders.

879,035. CABLE-TERMINAL. FRANK B. COOK, Chicago, Ill. Filed May 28, 1906. Serial No. 319,186.

1. A cable terminal comprising a sheet metal distributing plate, sheet metal channel portions secured to the said plate in a vertical position, sheet metal rings mounted to the said channel portions between same, and protective apparatus suitably mounted around the said sheet metal rings.

2. A cable terminal comprising metallic rings suitably mounted one above another, protective apparatus mounted around the said rings, rings of insulating material associated with the said metallic rings and provided with holes to accommodate conductors leading to the protective apparatus, and suitable means for accommodating conductors leading to the terminal.



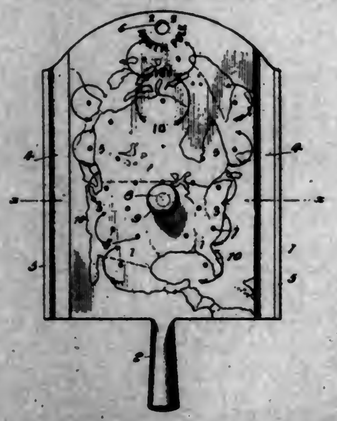
3. A cable terminal comprising a sheet metal distributing plate, sheet metal channel portions mounted thereon in a vertical position, sheet metal rings suitably secured between the said channel portions, protective apparatus mounted to the sheet metal rings on the exterior thereof, the said distributing plate having openings therein near the center thereof adapted to permit electrical conductors to enter the terminal from the bottom of the said plate inside the said sheet metal rings, and suitable means for connecting the said electrical conductors to the protective apparatus.

4. The cable terminal comprising a horizontal base portion, a plurality of standards carried by the base portion above same and arranged substantially vertically, protector mounting rings carried by the said standards and arranged substantially horizontally one above another, individual protector units each comprising a pair of fuses and lightning arresters mounted around the said rings and arranged substantially vertically, means for accommodating electrical conductors leading to the protector units through the base portion, and a suitable cover placed over the whole so as to inclose same.

5. A cable terminal comprising a horizontal base portion, a plurality of standards carried by the base portion and arranged substantially vertically, means carried by the said standards for mounting protective devices in a cylindrical arrangement therearound, protective devices comprising fuses and lightning arresters mounted around the said protector mounting means substantially vertically, means for accommodating electrical conductors leading to the protective devices, and a suitable cover placed over the whole so as to inclose same.

[Claim 6 not printed in the Gazette.]

879,036. GAME APPARATUS. FRANCIS H. COOK, Spokane, Wash. Filed Mar. 12, 1907. Serial No. 362,000.

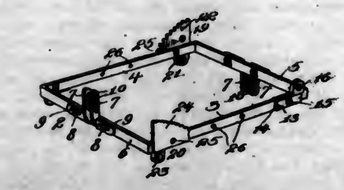


1. Game apparatus comprising a board provided at one end with a handle and having a pivot at or near the opposite end upon which the board is adapted to tilt in every direction, said board having a depression in its top side near one end and having grooves along opposite edges, and a ball movable upon the board by tilting the same upon its pivot.

2. Game apparatus comprising a board provided at one end with a handle and at its opposite end with a centrally disposed pivot and having a depression in its upper side at the pivot end, and having grooves along opposite edges of the board, guards exterior to the grooves, pins studding the surface of the board and a ball movable on the board by tilting the same upon its pivot.

3. Game apparatus comprising a board having a handle at one end and a centrally disposed pivot at the opposite end, a depression in the upper side of the board at the pivot end, and having longitudinal grooves and guards along the edges of the board, said board having delineated upon its surface a map of North America, pins studding the upper surface of the board and constituting barriers, and a ball movable upon the board by tilting the same upon its pivot.

879,037. RIDING ATTACHMENT FOR PLOWS, HARROWS, AND THE LIKE. HARRY P. CURTRIGHT, Holliday, Mo. Filed Oct. 12, 1907. Serial No. 397,199.



1. In an attachment of the class described, an open frame, bearings detachably supported by the sides of said frame, each bearing being adapted for connection with the sides of the frame at different points in the length thereof, means for holding the bearings fixedly in their adjusted positions, and clamps carried by the forward and rear ends of the frame.

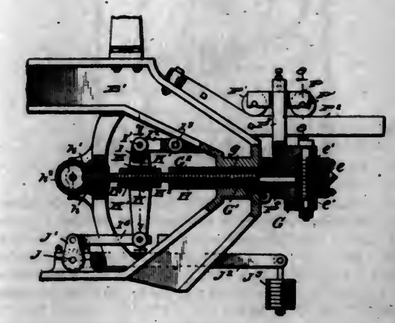
2. In an attachment of the class described, an open frame, bearings detachably supported by the sides of said frame, each bearing being adapted for connection with the sides of the frame at different points in the length thereof, means for holding the bearings fixedly in their adjusted positions, and clamps carried by the forward and rear ends of the frame, and each of said clamps comprising two members adjustable toward and from each other.

3. In an attachment of the class described, a frame having side portions and a transverse portion, bearings detachably supported by the side portions of said frame, each bearing being adapted for connection with said side portions at different points in the length thereof, means for holding the bearings in their adjusted positions, and certain of the bearings having toothed segments forming respectively parts thereof, clamping means carried by the transverse portion of said frame, axles supported by said bearings, each axle having a cranked portion provided with a wheel, and means for independently turning the axles.

4. An attachment of the class described comprising a frame having side-bars and front and rear cross-bars, and clamps connected with said cross-bars, each clamp comprising two substantially right-angular sections, one branch of each of which is fitted against a cross-bar and is longitudinally slotted, and bolts passing through the slots of said branches, the other branches of the said clamps also having longitudinal slots.

5. An attachment of the class described comprising a frame having side-bars and front and rear cross-bars and clamps connected with said cross-bars, each clamp comprising two substantially right-angular sections, one branch of each of which is fitted against a cross-bar and is longitudinally slotted, bolts passing through the slots of said branches, the other branches of the said clamps also having longitudinal slots, and perforated bearings carried by the side bars, said bearings being removably mounted and two of them being provided with toothed segments.

879,038. SAWING APPARATUS. EVAN T. DAVIES, Portland, Oreg. Filed Nov. 16, 1906. Serial No. 343,701.



1. The combination of a supporting frame, a saw frame movable vertically upon the supporting frame, means for moving the saw vertically, wheels for supporting a band saw, a band saw on said wheels, an arbor supporting one of said pulleys, and straining devices for said arbor, comprising hollow shanks movable longitudinally in the saw frame and provided at their inner ends with threaded bearings means at the outer ends of said shanks for supporting the arbor, a screw shaft screwed in the threaded bearing at the inner end of said tubular shanks, levers having openings receiving the screw shaft, nuts turning loosely within the said openings in the levers and threaded on the screw shaft and provided with heads abutting the opposite edges of the levers, swinging links connecting the upper ends of the levers with the saw frame, a shaft having cranks connected with the lower ends of the levers, and operating devices in connection with said shaft.

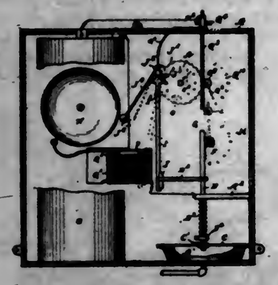
2. In a sawing apparatus a straining gear comprising a shank provided with arbor supporting means, a screw shaft connected with said shank, a lever having an opening receiving said screw shaft, and nuts turning loosely within said opening in the lever and threaded on the screw shaft.

3. The combination with a saw frame, a band saw, pulleys supporting said saw, and arbors for said pulleys, of a straining gear in connection with one of said arbors, and comprising shanks movable longitudinally in the saw frame, tension devices in connection with said shanks for forcing the same inwardly or outwardly to strain the band saw, carriages supporting the outer end of said shanks and tracks on which said carriages operate.

4. The combination of a saw frame, a band saw, means supporting the band saw including arbors, a straining device in connection with one of said arbors, and including tubular shanks movable longitudinally in the saw frame and provided at their outer ends with means for supporting said arbor, means for sustaining the weight of the outer ends of said shanks when extended, levers and connections between the same and their respective shanks, and means for operating the levers whereby to put a strain upon the band saw.

5. The combination substantially as described of the shanks provided at their outer ends with means for supporting an arbor, and having threaded bearings at their inner ends, screw shafts threaded in said bearings, levers having openings through which the screw shafts extend, nuts threaded on the screw shafts and turning loosely within the openings in the levers, and means for operating the levers.

879,039. PRESSURE-INDICATING DEVICE AND ALARM-SIGNAL. JOHN H. DIXON, Pittsburg, Pa. Filed Apr. 7, 1906. Serial No. 310,565.



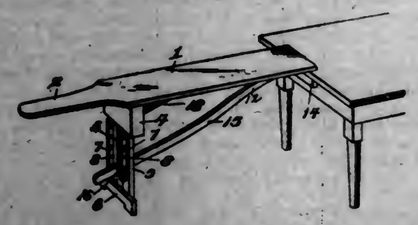
1. In pressure alarm signals having a bellows and a member involved with said bellows and having a spring wound alarm mechanism normally restrained by said member and having an electrical adjustable contact mounted within the reach of said member and an electrical alarm connected between said member and said contact, substantially as described.

2. In pressure alarm signals having a bellows propelled member and having a spring wound alarm mechanism and having means of restraining said mechanism arranged between said member and said mechanism and having a time indicating wheel driven by said mechanism and having a stop pin carried on said wheel, substantially as described.

3. In a pressure gage and alarm signals having a bellows and a bellows controlled member and having an indicator co-acting with said member and having an adjustable contact extendible within the reach of said member and having a normally inactive electrical circuit connected between said contact and said member, substantially as described.

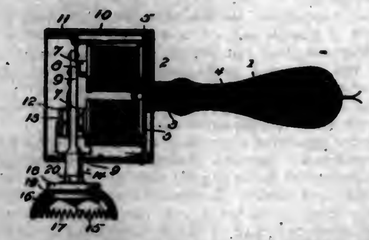
4. In pressure alarm signals having a bellows propelled member and having a spring wound alarm mechanism normally held in restraint by attachments integral of said member and having an electrical alarm mechanism arranged to close when said spring wound mechanism is in an unwound condition or to close when said member is contacted with a separate adjustable contact member, substantially as described.

879,040. IRONING-BOARD. LAFAYETTE EDGINGTON, Stout, Ohio. Filed May 3, 1907. Serial No. 371,613.



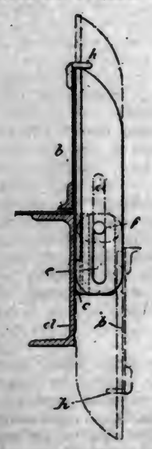
An ironing board comprising a board proper, a vertically slotted leg hinged to the outer end of the board, a clamping lever hinged to the inner end of the board and extending at its free end through the slot in the leg, fastening means for attaching the lever to the leg, and a spring attached to the board and adapted to engage and hold the leg in supporting position, said spring being arranged to extend through the slot in the leg when the latter is folded and to bear upon and hold the leg in folded position.

879,041. MASSAGE APPARATUS. CHARLES E. EGAN, Petersburg, Ill., assignor, by direct and mesne assignments, to Egan Electric Massage Vibrator Company. Filed Jan. 26, 1906. Serial No. 297,973.



In an electric massage vibrator, the combination with an inclosing casing, of a base therein, electromagnets mounted upon said base, a post projecting up from said base adjacent said electromagnets and in line therewith, an armature pivoted at one end to the post and overlying the electromagnet, a massaging device interchangeably connected to one end of the armature, a spring at the opposite end of the armature adapted to hold it against the cores of said electromagnets, a frame overhanging the armature above the core of one of the electromagnets, a contact on said frame, a contact spring carried by said armature adapted to engage the contact of the frame but normally held away from the contact by the resilience of the spring which holds the armature against the cores of the electromagnets, said contact spring adapted to engage the contact on the frame upon operation of the massage device so as to complete the circuit of the electromagnet and start vibration of the armature, an operating handle attached to the casing at right angles to the armature and parallel to the axes of the magnets, and a channel running through said operating handle adapted to receive the circuit wires of said electromagnet.

879,042. RAILWAY WAGON-STANCHION AND THE LIKE. CHARLES H. FOX, London, England. Filed May 13, 1907. Serial No. 373,454.



1. The combination of a railway wagon stanchion, a socket therefor adapted to be secured to a wagon, and a pivotal connection directly connecting the stanchion and socket and itself adapted to permit both vertical movement of the stanchion in relation to the socket and turning movement about said connection in a plane at an angle to the face of the socket that lies against the wagon.

2. The combination of a railway wagon stanchion, a socket therefor adapted to be secured to a wagon, and a pin and slot connection between them adapted to permit both vertical movement of the stanchion in relation to the socket and turning movement of the stanchion about said connection in a plane at an angle to the face of the socket that lies against the wagon, as set forth.

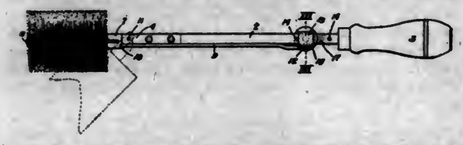
3. The combination of a railway wagon stanchion, a socket therefor adapted to be secured to a wagon, and a pin and slot connection between them adapted to permit both vertical movement of the stanchion in relation to the socket and turning movement of the stanchion about said connection in a plane at an angle to the face of the socket that lies against the wagon, the pin being fixed in the socket and the slot being formed in the stanchion, as set forth.

4. The combination of a railway wagon stanchion, a socket therefor adapted to be secured to a wagon, and a pivotal connection directly connecting the stanchion and socket and itself adapted to permit both vertical movement of the stanchion in relation to the socket and turning movement about said connection through one hundred and eighty degrees.

5. The combination of a railway wagon stanchion, a socket therefor adapted to be secured to a wagon, and a pivotal connection directly connecting the stanchion and socket and itself adapted to permit both vertical movement of the stanchion in relation to the socket and turning movement about said connection outwardly from an upwardly extending operative position to a depending inoperative position.

[Claims 6 to 8 not printed in the Gazette.]

879,043. CLEANING-BRUSH. ROBERT T. GILLESPIE, Bloomfield, N. J. Filed Feb. 11, 1907. Serial No. 356,697.



1. In a cleaning brush, the combination with a main stem having a pivotally mounted brush portion, an operating rod pivotally connected to the brush portion, a sliding box embracing the stem also connected to said rod, and an adjusting set screw mounted in the box and adapted to engage the stem, substantially as set forth.

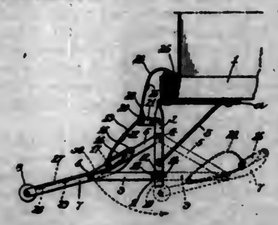
2. In a device of the class described, the combination with the main stem having a roughened or corrugated surface and a pivotally mounted brush, of a sliding box having a pivotally connected adjusting rod attached at its other end to the brush, and provided with an adjusting set screw adapted to bear upon the roughened surface of the stem, substantially as set forth.

3. In a cleaning brush, the combination with the main shank provided with limiting projections and a pivotally mounted brush portion, of a slidingly mounted adjusting block connected with said brush portion and provided with a securing set screw, substantially as set forth.

4. The combination with the main shank having limiting projections, the sliding adjusting block provided with a set screw, and an adjusting rod, of a brush portion consisting of a bristle-holding and pivoting stem made of a single strand of wire twisted together and provided at its rear end with a pivoting terminal eye hinged to said shank, a laterally arranged eye engaging said adjusting rod, and forwardly extending bristle holding wires spirally twisted together, bristles held thereby, an operating rod pivotally connected to said laterally arranged eye, and means for adjusting and positioning the operating rod to hold the brush stem in varying positions, substantially as set forth.

879,044. CAR-FENDER. FOREST HALM, Sherman, Cal. Filed Apr. 30, 1907. Serial No. 371,191.

1. A fender comprising brackets attached to the car, links pivoted to the brackets, a front leaf hinged to said links, and arms connected with said leaf with their rear ends adapted to detachably engage said brackets when the leaf is projected in front of the brackets or swung back behind said brackets.



2. A fender comprising supporting brackets attached to the car, links pivoted to said brackets, a leaf hinged at an intermediate point to said links, arms connected with the leaf, and means for detachably connecting the rear ends of said arms with said brackets.

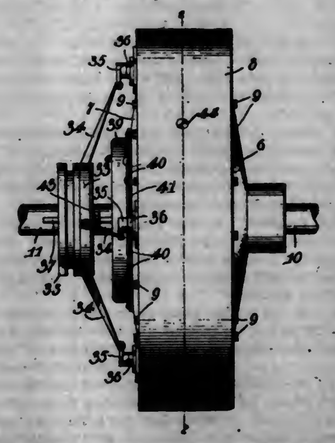
3. A fender comprising supporting brackets, each bracket having a pair of opposite notches near its lower end, a link pivoted to each bracket, a shaft connecting the front end of said links, a leaf pivoted on said shaft, an arm connected to each end of said shaft, the rear end of each arm being rounded and adapted to fit either of the notches in the associated bracket, and means for detachably holding the rounded ends of the arms in position.

4. A fender comprising supporting brackets, links pivoted to said brackets, a leaf pivoted to the front ends of said links, arms connected with the leaf, the rear ends of each of said arms having a stud and being curved concentric with the stud, the associated bracket having a rounded notch forming a seat for the end of the arm, and a hook pivoted to the bracket for engaging said stud.

5. A fender comprising supporting brackets, links pivoted to the supporting brackets, a leaf having a curved rear portion and pivoted to said links, arms extending rearwardly from the pivotal connection between said links and leaf, and means for detachably engaging the rear ends of said arms with said supporting brackets.

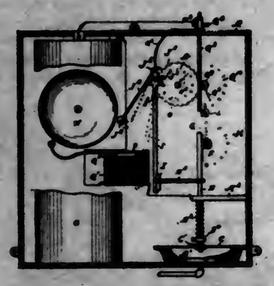
[Claims 6 to 10 not printed in the Gazette.]

879,045. FLUID-CLUTCH. WILLIAM W. HENDERSON, Washington, D. C., assignor of one-half to Hugh A. Thrift and William Hinds, Washington, D. C. Filed June 11, 1907. Serial No. 378,415.



1. In a fluid clutch, the combination of a driving member, a driven member, a casing upon one of said members, having therein a fluid chamber and a passage in the casing connecting opposite ends of said chamber, a rolling

879,039. PRESSURE-INDICATING DEVICE AND ALARM-SIGNAL. JOHN H. DIXON, Pittsburg, Pa. Filed Apr. 7, 1906. Serial No. 310,565.



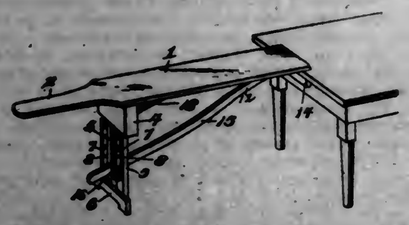
1. In pressure alarm signals having a bellows and a member involved with said bellows and having a spring wound alarm mechanism normally restrained by said member and having an electrical adjustable contact mounted within the reach of said member and an electrical alarm connected between said member and said contact, substantially as described.

2. In pressure alarm signals having a bellows propelled member and having a spring wound alarm mechanism and having means of restraining said mechanism arranged between said member and said mechanism and having a time indicating wheel driven by said mechanism and having a stop pin carried on said wheel, substantially as described.

3. In a pressure gage and alarm signals having a bellows and a bellows controlled member and having an indicator co-acting with said member and having an adjustable contact extendible within the reach of said member and having a normally inactive electrical circuit connected between said contact and said member, substantially as described.

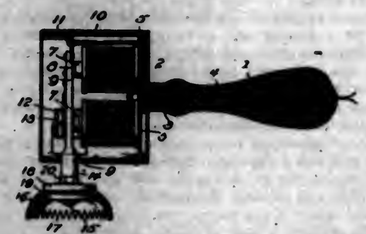
4. In pressure alarm signals having a bellows propelled member and having a spring wound alarm mechanism normally held in restraint by attachments integral of said member and having an electrical alarm mechanism arranged to close when said spring wound mechanism is in an unwound condition or to close when said member is contacted with a separate adjustable contact member, substantially as described.

879,040. IRONING-BOARD. LAFAYETTE EDGINGTON, Stout, Ohio. Filed May 3, 1907. Serial No. 371,613.



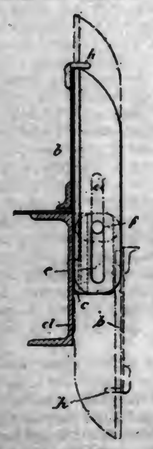
An ironing board comprising a board proper, a vertically slotted leg hinged to the outer end of the board, a clamping lever hinged to the inner end of the board and extending at its free end through the slot in the leg, fastening means for attaching the lever to the leg, and a spring attached to the board and adapted to engage and hold the leg in supporting position, said spring being arranged to extend through the slot in the leg when the latter is folded and to bear upon and hold the leg in folded position.

879,041. MASSAGE APPARATUS. CHARLES E. EGAN, Petersburg, Ill., assignor, by direct and mesne assignments, to Egan Electric Massage Vibrator Company. Filed Jan. 26, 1906. Serial No. 297,973.



In an electric massage vibrator, the combination with an inclosing casing, of a base therein, electromagnets mounted upon said base, a post projecting up from said base adjacent said electromagnets and in line therewith, an armature pivoted at one end to the post and overlying the electromagnet, a massaging device interchangeably connected to one end of the armature, a spring at the opposite end of the armature adapted to hold it against the cores of said electromagnets, a frame overhanging the armature above the core of one of the electromagnets, a contact on said frame, a contact spring carried by said armature adapted to engage the contact of the frame but normally held away from the contact by the resilience of the spring which holds the armature against the cores of the electromagnets, said contact spring adapted to engage the contact on the frame upon operation of the massage device so as to complete the circuit of the electromagnet and start vibration of the armature, an operating handle attached to the casing at right angles to the armature and parallel to the axes of the magnets, and a channel running through said operating handle adapted to receive the circuit wires of said electromagnet.

879,042. RAILWAY WAGON-STANCHION AND THE LIKE. CHARLES H. FOX, London, England. Filed May 13, 1907. Serial No. 373,454.



1. The combination of a railway wagon stanchion, a socket therefor adapted to be secured to a wagon, and a pivotal connection directly connecting the stanchion and socket and itself adapted to permit both vertical movement of the stanchion in relation to the socket and turning movement about said connection in a plane at an angle to the face of the socket that lies against the wagon.

2. The combination of a railway wagon stanchion, a socket therefor adapted to be secured to a wagon, and a pin and slot connection between them adapted to permit both vertical movement of the stanchion in relation to the socket and turning movement of the stanchion about said connection in a plane at an angle to the face of the socket that lies against the wagon, as set forth.

3. The combination of a railway wagon stanchion, a socket therefor adapted to be secured to a wagon, and a pin and slot connection between them adapted to permit both vertical movement of the stanchion in relation to the socket and turning movement of the stanchion about said connection in a plane at an angle to the face of the socket that lies against the wagon, the pin being fixed in the socket and the slot being formed in the stanchion, as set forth.

4. The combination of a railway wagon stanchion, a socket therefor adapted to be secured to a wagon, and a pivotal connection directly connecting the stanchion and socket and itself adapted to permit both vertical movement of the stanchion in relation to the socket and turning movement about said connection through one hundred and eighty degrees.

5. The combination of a railway wagon stanchion, a socket therefor adapted to be secured to a wagon, and a pivotal connection directly connecting the stanchion and socket and itself adapted to permit both vertical movement of the stanchion in relation to the socket and turning movement about said connection outwardly from an upwardly extending operative position to a depending inoperative position.

[Claims 6 to 8 not printed in the Gazette.]

879,043. CLEANING-BRUSH. ROBERT T. GILLESPIE, Bloomfield, N. J. Filed Feb. 11, 1907. Serial No. 356,697.



1. In a cleaning brush, the combination with a main stem having a pivotally mounted brush portion, an operating rod pivotally connected to the brush portion, a sliding box embracing the stem also connected to said rod, and an adjusting set screw mounted in the box and adapted to engage the stem, substantially as set forth.

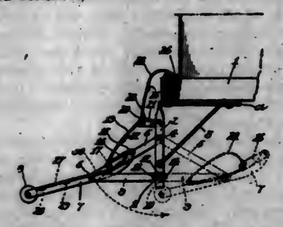
2. In a device of the class described, the combination with the main stem having a roughened or corrugated surface and a pivotally mounted brush, of a sliding box having a pivotally connected adjusting rod attached at its other end to the brush, and provided with an adjusting set screw adapted to bear upon the roughened surface of the stem, substantially as set forth.

3. In a cleaning brush, the combination with the main shank provided with limiting projections and a pivotally mounted brush portion, of a slidingly mounted adjusting block connected with said brush portion and provided with a securing set screw, substantially as set forth.

4. The combination with the main shank having limiting projections, the sliding adjusting block provided with a set screw, and an adjusting rod, of a brush portion consisting of a bristle-holding and pivoting stem made of a single strand of wire twisted together and provided at its rear end with a pivoting terminal eye hinged to said shank, a laterally arranged eye engaging said adjusting rod, and forwardly extending bristle holding wires spirally twisted together, bristles held thereby, an operating rod pivotally connected to said laterally arranged eye, and means for adjusting and positioning the operating rod to hold the brush stem in varying positions, substantially as set forth.

879,044. CAR-FENDER. FORREST HALM, Sherman, Cal. Filed Apr. 30, 1907. Serial No. 371,191.

1. A fender comprising brackets attached to the car, links pivoted to the brackets, a front leaf hinged to said links, and arms connected with said leaf with their rear ends adapted to detachably engage said brackets when the leaf is projected in front of the brackets or swung back behind said brackets.



2. A fender comprising supporting brackets attached to the car, links pivoted to said brackets, a leaf hinged at an intermediate point to said links, arms connected with the leaf, and means for detachably connecting the rear ends of said arms with said brackets.

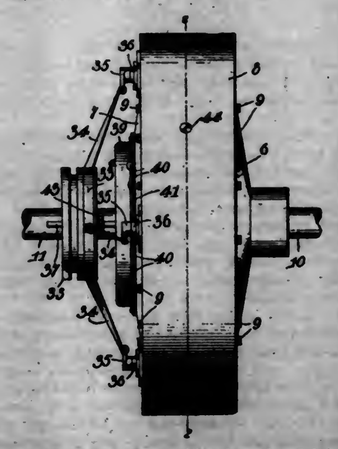
3. A fender comprising supporting brackets, each bracket having a pair of opposite notches near its lower end, a link pivoted to each bracket, a shaft connecting the front end of said links, a leaf pivoted on said shaft, an arm connected to each end of said shaft, the rear end of each arm being rounded and adapted to fit either of the notches in the associated bracket, and means for detachably holding the rounded ends of the arms in position.

4. A fender comprising supporting brackets, links pivoted to said brackets, a leaf pivoted to the front ends of said links, arms connected with the leaf, the rear ends of each of said arms having a stud and being curved concentric with the stud, the associated bracket having a rounded notch forming a seat for the end of the arm, and a hook pivoted to the bracket for engaging said stud.

5. A fender comprising supporting brackets, links pivoted to the supporting brackets, a leaf having a curved rear portion and pivoted to said links, arms extending rearwardly from the pivotal connection between said links and leaf, and means for detachably engaging the rear ends of said arms with said supporting brackets.

[Claims 6 to 10 not printed in the Gazette.]

879,045. FLUID-CLUTCH. WILLIAM W. HENDERSON, Washington, D. C., assignor of one-half to Hugh A. Thrift and William Hinds, Washington, D. C. Filed June 11, 1907. Serial No. 378,415.



1. In a fluid clutch, the combination of a driving member, a driven member, a casing upon one of said members, having therein a fluid chamber and a passage in the casing connecting opposite ends of said chamber, a rolling

piston carried upon the other member, and adapted to travel in said chamber and force fluid through said passage when it is open, and a valve in said passage.

2. In a fluid clutch, the combination of a driving member, a driven member, a casing upon one of said members, having fluid chambers extending around within the same and abutments separating said chambers, rolling pistons adapted to travel in said chambers and connected to the other member, means to cause the pistons to pass the abutments, and valve-controlled passages connecting opposite ends of the chambers.

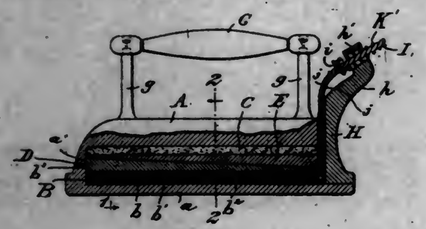
3. In a fluid clutch, the combination of a driving member, a driven member, a casing connected to one member and having fluid chambers therein and valved passages in the casing connecting opposite ends of said chambers, and pistons operatively connected to the other member and arranged to travel in said chambers and force the fluid through said passages when the valves are open.

4. In a fluid clutch, the combination of a driving member, a driven member, a casing connected to one member and having a series of fluid chambers extending around the other member and valved passages in the casing connecting opposite ends of said chambers, and pistons adapted to travel in said chambers and force the fluid through said passages when the valves are open, the number of chambers being unequal to the number of pistons.

5. The combination with a variable speed fluid clutch, and means for the gradual operation thereof, said clutch having a casing inclosing the fluid, of a positive clutch exterior to and coöperating with said casing, and operated by said means after the fluid clutch is fully engaged.

[Claims 6 to 9 not printed in the Gazette.]

879,046. ELECTRICALLY-HEATED SAD-IRON. HARRY HERTZBERG and MAURICE J. WOHL, New York, N. Y. Filed Apr. 5, 1907. Serial No. 366,529.



1. In a device of the class described, a chambered metallic body having a bottom member, an electrically operated heater in said body, and coöperating wedges for confining said heater in close contact with said bottom member.

2. In a device of the class described, a chambered metallic body having a bottom member, a plurality of electrically operated heating elements in said body, and means within the body for clamping said heating elements into close contact with said bottom member.

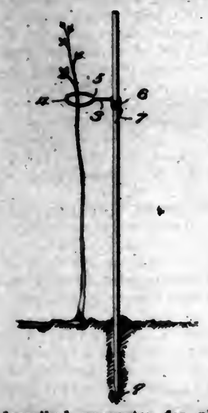
3. In a device of the class described, a chambered metallic body having a bottom member, a plurality of electrically operated heating elements in said body, and wedges for clamping said heating elements into close contact with said bottom member.

4. In a device of the class described, a chambered body or mass of metal, an electrical heater therein, and a plurality of coöperating wedges for clamping said heater into close contact with said body, certain of the wedges being spaced to provide for the circulation of air between them.

5. In a device of the class described, a chambered body or mass of metal, an electrical heater therein, and upper and lower wedges for clamping said heater into close contact with said body or mass of metal, certain of said wedges being spaced and providing air circulation spaces through the chamber of said body or mass.

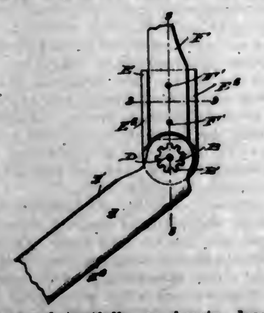
[Claims 6 to 9 not printed in the Gazette.]

879,047. ADJUSTABLE SUPPORTING-STICK FOR PLANTS. HENRY HEUBNER and ADAM HEUBNER, Brooklyn, N. Y. Filed Apr. 30, 1907. Serial No. 371,156.



The herein described supporter for plants comprising the combination with a stick having a point at the lower end thereof, of a holder on said stick, said holder being formed from one section of material, a loop formed at one end of said holder by bending the material in circular form, a space being left between the free end of the loop and the body of the holder through which a plant is adapted to be introduced into the loop, a socket at the opposite end of the body portion of the holder formed by twisting a portion of the holder around the stick and a finger formed at the lower end of said socket by extending the free end of the holder downwardly and at a tangent to the axial plane of the stick whereby pressure will be directed against the stick and the socket canted on the stick.

879,048. CANE-CUTTER. ELDRED M. HIBBLER, Lyon, Miss. Filed Oct. 1, 1907. Serial No. 395,356.



1. A cutter, substantially as herein described, comprising a blade provided at its shank end on its opposite sides with projections having a series of teeth, holder plates recessed at one end to receive a handle and flanged at said end to overlap said handle and provided at their other ends in their inner faces with recesses to receive the toothed projections on the blade shank, and having in said recesses means coöperating with the toothed portions of the blade, and means for holding the sections together, substantially as set forth.

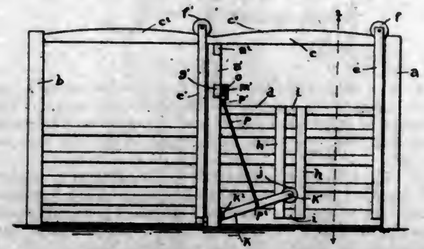
2. The combination of a cutter blade provided at its shank end with a lateral projection having radiating teeth, and a holder plate or section recessed laterally in conformity with the toothed projection of the cutter blade, substantially as set forth.

3. The combination with holder sections and a handle in connection therewith, the holder sections being provided in their inner faces with recesses having notches, and a cutter blade provided at its shank end with toothed projections fitting the notched recesses of the holder plates, substantially as set forth.

4. A cutter blade provided at its shank end with lateral projections having at their edges radial teeth, and holder plates overlapping the shank end of the cutter blade and having means coöperating with the toothed projections thereof whereby to secure the blade in different positions, substantially as set forth.

5. The combination with the opposite holder plates recessed in their inner faces at one end to receive a handle and in their inner faces at their other end to receive a toothed projection on a cutter blade, a handle, a blade having on the opposite faces of the shank end projections corresponding to the recesses in the holder plates, and bolts securing said holder plates in connection with the handle and the cutter blade, substantially as set forth.

879,049. GATE. THOMAS J. HIGHTOWER, Murfreesboro, Tenn. Filed Nov. 26, 1907. Serial No. 403,890.

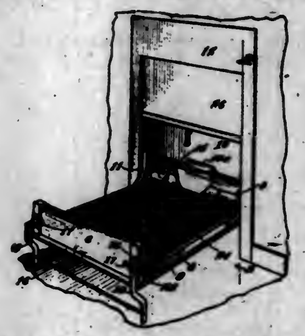


In a lever operated gate, three posts in line, the middle post being of double character composed of two upright sections having a transverse top bar connection, a horizontal track supported by said posts and composed of two alined sections each having a low upward arch, a gate having end uprights carrying grooved rollers engaging said track, said middle post having an intermediate transverse bar connection located above the gate and provided with end extensions beyond the post sections, operating levers arranged and having movement in the same plane and having an intermediate fulcrum connection with said end extensions, said levers extending at right angles to the gate and having a link pivotally connected thereto at their inner end portions, one of said levers having an end extension beyond the pivotal connection thereof with such link, said gate having a trackway including two parallel vertical separated bars, a grooved roller engaging said trackway, a lever arm having pivotal connection at one end thereof with the journal pin of said roller, and at its opposite end having a fulcrum connection with one of the upright sections of the middle post, and a connecting rod having at one end thereof a pivotal connection with said lever arm intermediately thereof and at its opposite end having a pivotal connection with said end extension of one of the operating levers.

879,050. WARDROBE BEDSTEAD. WALTER E. INGRAM, and CHARLES W. HINTON, Los Angeles, Cal. Filed Jan. 4, 1907. Serial No. 350,861.

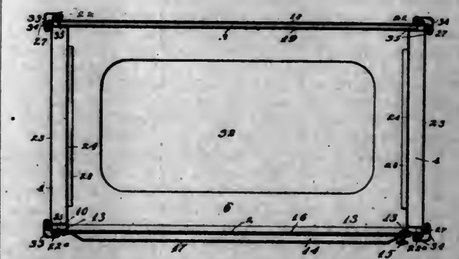
1. In a recess bed, a bed frame, supporting bars for the head of said frame pivotally attached to the walls of the recess and to the bed frame near the head thereof, pins upon the sides of said frame, and a counterbalancing frame pivoted upon said pins to move within the recess, said pins extending beyond the pivotal connection with said counterbalancing frame, to engage vertical grooves in the side walls of the recess.

2. In a cabinet bedstead, automatic means for closing the front of the recess above the head of the bedstead, comprising a spring operated roller; a curtain mounted thereon; direction changing pulleys secured to the floor within the recess; a roller secured to the head board of the bedstead; and a cord having one end secured to the



curtain and the other end to the floor, said cord passing over said rollers.

879,051. KNOCKDOWN OVEN. WILLIAM R. JEAVONS, Cleveland, Ohio. Filed Aug. 14, 1907. Serial No. 388,545.



1. An oven comprising a top, back and ends, the ends being each provided with a lining spaced therefrom and each provided at its upper end with a longitudinally extending groove whereof the lining forms the bottom, the edges of the top being fitted in said grooves, substantially as specified.

2. An oven comprising a top, back and ends, each end and the back being provided with a lining and having at the top thereof a longitudinally extending groove or recess, the bottom whereof is formed by the top of the lining, the said oven top being fitted in said grooves and resting on top of said linings, substantially as specified.

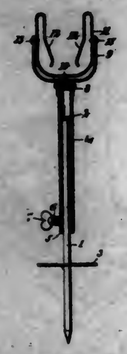
3. An oven comprising a top, back and ends, the back and ends being each provided with a lining and having at their upper ends each a longitudinally extending groove or recess, whereof the top of the lining forms the bottom, said top being provided with a lining and being fitted in said grooves with said lining engaging the tops of the linings of the back and ends, substantially as specified.

4. In a knock-down oven, the combination of a side and an end, each having a vertically extending outwardly projecting flange forming with the body thereof a substantially U-shaped groove, and a corner clamp adapted to embrace said flanges and having inwardly projecting flanges adapted to engage the bottoms of the grooves, the ends of the side and end flanges terminating short of the bottoms of the recesses formed between the body of the corner clamp and each inwardly projecting flange thereof, substantially as specified.

5. In a knock-down oven, the combination of a side and an end, each provided with an out-turned vertically extending flange, and a clamp therefor, said clamp having a body portion provided with inturned flanges adapted to embrace said out-turned flanges, the lower portions of the inner edges of the inturned flanges being beveled outwardly.

[Claims 6 to 15 not printed in the Gazette.]

879,052. GUN-REST. JOSEPH JERANEK, New York, N. Y. Filed Oct. 18, 1907. Serial No. 397,978.



1. A device of the character described, comprising a standard, a support having a telescopic engagement with said standard, a bracket rotatably mounted on the upper end of said standard, and a stirrup pivotally secured to the ends of said bracket and provided with inverted free ends of resilient material.

2. A device of the class described, comprising a standard provided on one end with a head, a tubular support having a telescopic engagement with said standard and provided with a contracted lower end to engage the head of said standard, and serve as a stop, a bracket rotatable horizontally on said support, and a stirrup pivotally attached at its sides to the ends of said bracket and provided with inverted free ends of resilient material.

3. A device of the class described, comprising a standard, provided on one end with a head, a bearing plate attached to said standard, a support having a telescopic engagement with said standard and provided with means for holding said support and standard in engagement, means attached to said support for locking the support and standard fixedly in position, a bracket rotatable horizontally on the upper end of said support, and a stirrup having its central portion shaped to conform to said bracket, its sides pivotally connected with the ends of said bracket, and inverted free ends of resilient material extending inwardly of the sides of said stirrup.

4. A device of the character described, comprising a standard, a support having a telescopic engagement with said standard, a bracket rotatable horizontally on the upper end of said support, a stirrup having its sides pivoted to the ends of said bracket and provided with inverted free ends of resilient material extending inwardly of the sides of said stirrup, and a spring clip adapted to be detachably secured to said support.

879,053. AZO DYE AND PROCESS OF MAKING SAME. PAUL JULIUS and ERNST FUSSENEGGER, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Oct. 3, 1907. Serial No. 395,761.

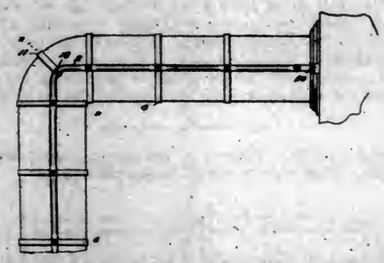
1. The process of producing azo coloring matter by combining a hereinbefore defined diazo compound with diamido-phenyl-amido-tetra-alkyl-diamido-triphenyl-methane-disulfonic acid.

2. The process of producing azo coloring matter by combining diazotised 2.5-dichloranilin with diamido-phenyl-amido-tetra-methyl-diamido-triphenyl-methane-disulfonic acid.

3. As new articles of manufacture the azo coloring matters which can be obtained by combining a hereinbefore defined diazo compound with diamido-phenyl-amido-tetra-alkyl-diamido-triphenyl-methane-disulfonic acid, which coloring matters are soluble in water and dye unmordanted wool a shade between yellow and brown which is changed into a shade between blue and yellowish green upon treating the material with bichromate.

4. As a new article of manufacture the azo coloring matter which can be obtained by combining diazotised 2.5 dichlor-anilin with diamido-phenyl-amido-tetra-methyl-diamido-triphenyl-methane-disulfonic acid, which coloring matter is soluble in water and dyes unmordanted wool yellow, which shade is changed into green upon treating the material with bichromate.

879,054. STOVEPIPE HANGER AND SUPPORT. HERMAN KLING, Larned, Kans. Filed May 7, 1907. Serial No. 372,388.

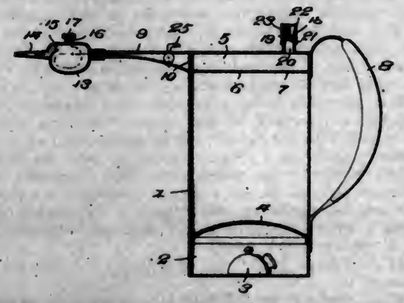


1. In a hanger for stovepipe, the combination of a sectional support, set screws for connecting the sections and adapted to effect clamping of the stovepipe, and stovepipe engaging means secured to the support by the said set screws.

2. In a stovepipe hanger, the combination of a support composed of sections or lengths having coupling terminals which are adapted to overlap, fastenings connecting said overlapped terminals and stovepipe engaging means connected to the support by the said fastenings.

3. A stovepipe hanger comprising sections or lengths having coupling terminals adapted to be overlapped, a wedge-shaped washer interposed between the overlapped terminals of adjacent lengths or sections to admit of giving a slant to the support, and means for connecting the overlapped terminals and clamping the washer therebetween.

879,055. VERMIN-ERADICATOR. CHARLES KUHNERT, Chicago, Ill. Filed Oct. 26, 1907. Serial No. 399,317.

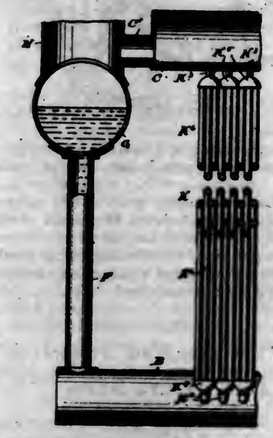


1. In a device of the class described, the combination with a body having a compartment in one end and a steam chamber at the opposite end, a heating device in said compartment, said steam chamber and body having a communicating port, a spout extending from said steam chamber, said spout and steam chamber communicating through an auxiliary port, a cup adapted to fit over the end of said spout and contain disinfectants, a nozzle on said cup and means to direct the steam from the spout in a circuitous path in the cup before entering said nozzle.

2. In a device of the class described, the combination with a body having a compartment in one end thereof, and a steam chamber in the opposite end thereof, communication between said steam chamber and body being through a port, a spout extending from said steam chamber, and communicating with said steam chamber through an auxiliary port, a cup on said spout, adapted to hold disinfectants, a nozzle on said cup, a shield between said nozzle and spout, whereby the steam will be directed through the disinfectant before entering the nozzle.

3. In a device of the class described, the combination with a body; of a partition in said body, adapted to form a compartment, an auxiliary partition in the opposite end of said body, adapted to form a steam chamber, said auxiliary partition having a port communicating with said body and steam chamber, said port being adjacent one edge of the partition, a spout extending from said steam chamber, and communicating therewith through a port, a handle for said body and a pop valve on said steam chamber.

879,056. BOILER. ERVIN E. LARRABEE, Williamston, Mich. Filed July 26, 1907. Serial No. 385,601.

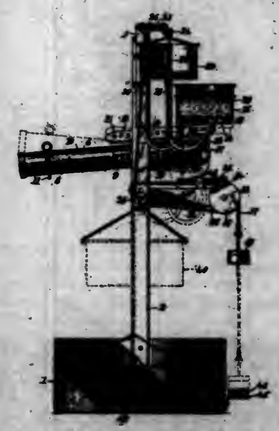


1. A boiler comprising a pair of lower longitudinal drums, an upper longitudinal drum, sets of water tubes connecting the upper drum with the lower drums, the said sets of water tubes extending along the sides and top of the fire box of the boiler, and each set of water tubes having single connections with the said drums, a plurality of tubes between the connections, a transversely extending steam drum arranged somewhat below the said upper drum and connected with one end thereof, a steam dome on the top of said steam drum, pipes connecting the said steam drum with the said lower drums, a feed water pipe connecting the said lower drums with each other, and a branch pipe leading from the said feed water pipe to the said upper drum.

2. A steam boiler comprising spaced parallel mud drums, a feed water tube connecting the drums, an upper drum arranged between and above the mud drums and substantially parallel therewith, a branch pipe connecting the feed water tube with the upper drum, sets of water tubes connecting the upper drum with the mud drums, the said sets of water tubes being arranged along the sides and top of the fire box of the boiler, a transverse steam drum in front of and at a lower level than the upper drum, pipes connecting the steam drum with the mud drums, a steam dome on the steam drum, and a connection between the steam dome and the upper drum.

3. A steam boiler comprising spaced parallel mud drums, a feed water tube connecting the drums, an upper drum arranged between and above the mud drums and substantially parallel therewith, a branch pipe connecting the feed water tube with the upper drum, a plurality of water tubes connecting the upper drum with the mud drums, a transverse steam drum above and below the level of the upper drum, pipes connecting the steam drum with the mud drums, a steam dome on the steam drum, and a connection between the steam dome and the upper drum.

879,057. AUTOMATIC EGG-BOILER. LOUIS LECLERC, New York, N. Y. Filed July 6, 1907. Serial No. 382,529.



1. In an automatic egg boiler, in combination, an egg basket, a main cup, a feed cup adapted to drain into said main cup, means for normally supporting said feed cup above the level of said main cup, means controlled by the weight of said main cup to withdraw said basket, and automatic means for depressing said feed cup to return the water thereto when said basket is withdrawn.

2. In an automatic egg boiler, in combination, a main cup, a feed cup, hose connecting said cups, means for changing the relative position of said cups to permit a liquid to flow in either direction therebetween, and means for withdrawing the eggs, controlled by said main cup.

3. In an automatic egg boiler, in combination, a main cup, a feed cup, means for changing the elevation of said cups, means permitting a free flow of liquid from said main cup to said feed cup, means for permitting a restricted flow of liquid from said feed cup to said main cup, and means for withdrawing the eggs, actuated by said main cup.

4. In an automatic egg boiler, in combination, a teeter, an adjustable weight thereupon, a cup counterbalancing said weight, means for supplying a material to said cup to weight the same, mechanism for withdrawing the eggs, normally held in check, and means for releasing said last mechanism by said cup.

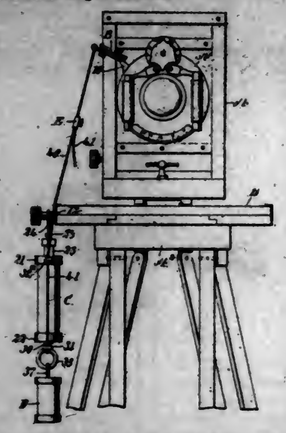
5. In an automatic egg boiler, in combination, a frame, a teeter adjustably supported upon said frame, a weight adjustably supported on said teeter, a cup normally held in an elevated position and adapted to overbalance said weight when loaded, means for supplying a material to said cup to weight the same, and mechanism for withdrawing the eggs, actuated by said teeter.

[Claims 6 to 9 not printed in the Gazette.]

879,058. CAMERA-SHUTTER RELEASE. CHARLES C. LITTLE, San Jose, Cal. Filed Feb. 27, 1907. Serial No. 359,628.

1. An automatic release for camera shutters, consisting of a cylinder, a suspension device for the cylinder adapted to be supported by the camera structure, a piston for the cylinder, a rod for the piston, a tension device carried by the rod and acting to draw the same downward, a needle valve at the upper end of the cylinder for admitting air to the cylinder above the piston, and for regulating the air supply, means connected with the piston rod and adapted for attachment to the finger release of

the shutter, and means for connecting the first named means to the said finger release.



2. An automatic release for camera shutters, consisting of a cylinder, means for supporting the cylinder from a camera structure, a valve at one end of the cylinder adapted to control the admission of air thereto, a piston within the said cylinder and means for connecting the piston with the finger release of a camera shutter, and an adjustable weight exerting pulling power on the piston in the direction from the source of air supply.

3. In a release for camera shutters, a cylinder, means for supporting the said cylinder from the camera structure, an adjustable needle valve penetrating one head of the cylinder, a piston within the cylinder, a rod extending from the piston out through a head of the cylinder, means connected with the piston rod for connecting it with the finger release of a camera shutter, and an adjustable weight applied to the projecting end of the piston rod.

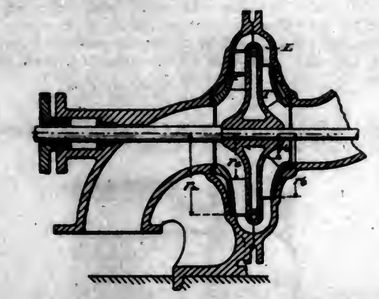
4. In a release device for camera shutters, the combination with a cylinder, means for attaching the cylinder to a camera structure, a needle valve at one end of the cylinder, a piston within the cylinder, a rod attached to the piston and extending out beyond the opposite end of the cylinder, and means for connecting the piston rod with the finger release of a shutter, of a second cylinder, weights located in the said second cylinder, and means for connecting the weighted cylinder with the piston rod of the first named cylinder.

5. In a release device for camera shutters, the combination with the body of a cylinder, a piston therefor, a rod attached to the piston and extending out through the lower end of the said cylinder, a flexible element adapted to connect the piston rod with the finger release of the shutter, and a needle valve at the upper end of the said body of the cylinder, of a weight removably connected with the outer end portion of the piston rod, and means for attaching the said flexible connecting element of said camera finger release.

879,059. ROTARY OR CENTRIFUGAL PUMP OPERATING WITH AUXILIARY TURBINES. HEINRICH LUDEWIG, Charlottenburg, Germany. Filed Apr. 24, 1905. Serial No. 257,253.

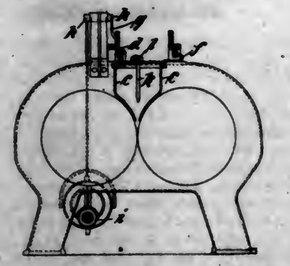
1. In an apparatus of the class set forth, a centrifugal pump, with an auxiliary turbine operating as motor mounted on the same shaft and revolving at the same speed as the pump, and a fixed guide ring interposed between the outlet of the pump and the inlet of the turbine, the radius of the outlet of the pump and inlet of said guide ring being greater than the radius of the outlet of the guide ring and inlet of the turbine, substantially as described.

2. In an apparatus of the class set forth, a centrifugal pump, with an auxiliary turbine operating as motor mounted on the same shaft and revolving at the same speed as the pump, and a fixed guide ring interposed between the outlet of the pump and the inlet of the turbine, the radius of the outlet of the pump and inlet of said guide ring being greater than the radius of the outlet of the guide ring and inlet of the turbine, and the outlet of the turbine being arranged to immediately surround the pump shaft so that the liquid issues therefrom in the axial direction substantially as and for the purpose described.



3. In an apparatus of the class set forth, a centrifugal pump, an auxiliary turbine operating as motor with drop of pressure (reaction turbine) mounted on the same shaft and revolving at the same speed as the pump, and a fixed guide ring interposed between the outlet of the pump and the inlet of the turbine, the radius of the outlet of the pump and inlet of said guide ring being greater than the radius of the outlet of the guide ring and inlet of the turbine, substantially as described.

879,060. DESICCATING APPARATUS. HERMANN PAUCKSCH, Landsberg-on-the-Warthe, Germany. Filed Mar. 18, 1907. Serial No. 363,030.

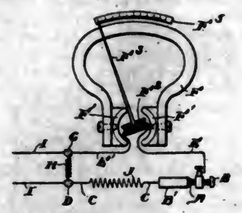


1. In a desiccating apparatus, the combination with a pair of rollers, of a reciprocating frame arranged above the rollers and of a width to extend partially over said rollers, a set of spaced and downwardly projecting arms secured to each longitudinal side of the frame, the arms of each set being curved to conform to the curvature of a roller and engaging the same, and means for reciprocating the frame.

2. A desiccating apparatus with heated rollers, comprising in combination, agitating arms disposed in the top space between, and having a form adapted to the circumference of, the rollers, means to move said agitating arms and stationary arms in the top space between the rollers, substantially as, and for the purpose, set forth.

3. A desiccating apparatus with heated rollers, comprising in combination, agitating arms disposed in the top space between, and having a form adapted to the circumference of, the rollers and beveled from the center to their edges on the side facing the rollers, and means to move said arms, substantially as, and for the purpose, set forth.

879,061. RECTIFIER FOR ALTERNATING CURRENTS. GEORGE W. PIERCE, Cambridge, Mass., assignor to Massachusetts Wireless Equipment Company, Boston, Mass., a Corporation of New York. Filed Jan. 11, 1907. Serial No. 351,773.



1. In an electrical apparatus, a rectifier for alternating currents consisting of carborundum.

2. An electrical measuring instrument comprising a unilaterally conductive solid, calibrated indicating devices operable by small direct currents in electrical connection therewith, and means for electrically connecting a source of alternating current therewith, substantially as described.

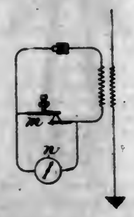
3. An electrical measuring instrument comprising a unilaterally conductive solid, calibrated indicating devices operable by small direct currents connected in series therewith, and means for electrically connecting a source of alternating current therewith, substantially as described.

4. An electrical measuring instrument comprising a mass of carborundum, calibrated indicating devices operable by small direct currents in circuit therewith, and devices for making electrical connection between said circuit and a source of alternating current, substantially as described.

5. An electrical measuring instrument comprising calibrated indicating devices operable by small direct currents, a rectifying device in circuit therewith, and a resistance shunted with the rectifying device, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

879,062. RECTIFIER AND DETECTOR. GEORGE W. PIERCE, Cambridge, Mass., assignor to Massachusetts Wireless Equipment Company, Boston, Mass., a Corporation of New York. Filed Apr. 5, 1907. Serial No. 366,566.



1. A rectifier for oscillatory currents consisting of a conductive oxid of titanium.

2. A rectifier for oscillatory currents consisting of a conductive crystalline oxid of titanium.

3. A rectifier for oscillatory currents consisting of octahedrite or anatase.

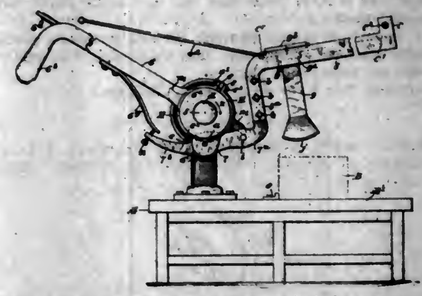
4. A receiver for wireless telegraphy systems consisting of a conductive oxid of titanium in contact with two electrodes.

5. A rectifier for oscillating currents consisting of a conductive oxid of titanium in contact with two electrodes.

[Claims 6 and 7 not printed in the Gazette.]

879,063. ROCK-CLEAVING MACHINE. JOHN PIERSON, Pigeon Cove, Mass. Filed Oct. 1, 1907. Serial No. 395,348.

1. A rock cleaving machine, embodying a horizontally supported rotatable shaft, a strike bar supported rockably below the shaft and therefrom, a chisel slidable on the strike bar, and means for converting the rotary motion of the shaft into vertical rocking movement of the strike bar and chisel.



2. A rock cleaving machine, embodying a horizontally supported rotatable shaft, a spring pressed strike bar rockably supported from the shaft and having a longitudinal channel therein, and a chisel that slidably engages said channel in the strike bar.

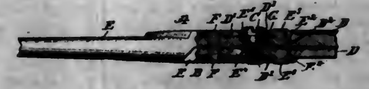
3. A rock cleaving machine, embodying the horizontally supported rotatable shaft, the spring pressed strike bar rockably supported in a vertical plane from the shaft and below it, the strike bar having a longitudinal channel therein, the chisel having a head block on one end that is slidable in the longitudinal slot, and means for sliding the block and chisel.

4. A rock cleaving machine, embodying a horizontally supported rotatable shaft, a spring pressed strike bar rockably supported from the shaft, said bar having a longitudinal slot therein, a chisel wedge-shaped at its cutting end and provided with a slide block fitted in the slot so as to be slid therethrough, and a pusher rod loosely secured by one end on the slide block and extended rearward therefrom.

5. A rock cleaving machine, embodying a rotatable shaft, a lever laterally adjustable and rockably mounted upon said shaft, a strike bar controlled by said lever, and a chisel carried by the strike bar.

[Claims 6 to 18 not printed in the Gazette.]

879,064. SHEARS OR SCISSORS. ANTONY PROHASKA, Philadelphia, Pa. Filed Sept. 20, 1907. Serial No. 393,811.



1. Shears or scissors comprising blades and handles for the same, each handle having a recess and a projecting tongue, and each blade having a shank and a recess, in which fits the said handle tongue, the said blade shank fitting the said handle recess to interlock the blade and handle, and means for fastening the interlocked parts together.

2. Shears or scissors comprising blades and handles for the same, each handle having a recess and a projecting tongue, and each blade having a shank and a recess in which fits the said handle tongue, the said blade shank fitting the said handle recess to interlock the blade and handle, and a rivet connecting the said tongue with the said blade.

3. Shears or scissors comprising blades and handles for the same, each handle having a recess and a projecting tongue, and each blade having a shank and a recess in which fits the said handle tongue, the said blade shank fitting the said handle recess to interlock the blade and handle, and a rivet connecting the said tongue with the said blade and forming an integral part of the said tongue.

4. Shears or scissors comprising blades and handles for the same, each handle having a recess and a projecting

tongue, and each blade having a shank and a recess in which fits the said handle tongue, the said blade shank fitting the said handle recess to interlock the blade and handle, a rivet connecting the said tongue with the said blade, and a rivet connecting the said blade shank with the said handle.

5. Shears or scissors having a blade, a handle permanently interlocked with the said blade, and a spring between the interlocked parts.

[Claims 6 to 8 not printed in the Gazette.]

879,065. BEET-PULLER. LEWIS PRUE and WILLIAM CHARLTON, Wabeno, Wis. Filed Aug. 3, 1906. Serial No. 329,028.



In a machine for digging beets, curved bifurcated digging blades, the members of said blades having angular offsets at their outer edges between their ends, for the purpose specified.

879,066. CORE FOR BUILDING-BLOCKS. EDWARD RHODES, Dresden, Ohio, assignor of one-half to John W. P. Reid, Dresden, Ohio. Filed July 25, 1906. Serial No. 327,646.



1. A core for forming the opening in building blocks, comprising a hollow metallic body having each side wall formed with a V-shaped depression, and walls connecting the transversely-alined edges of both said depressions, said depressions opening through one edge of the body walls and being of less depth than the depth of the body.

2. A core for forming the opening in building blocks, comprising a hollow metallic body having each side wall formed with a V-shaped depression, and walls connecting the transversely-alined edges of both of said depressions, said depressions opening through one edge of the body walls and being of less depth than the depth of the body, and removing lugs projecting inwardly from the body walls in alinement with the depressions.

3. A core for building blocks comprising a metallic wall arranged in rounded configuration, and a V-shaped section bridging the space inclosed by the wall.

4. A core for building blocks comprising a hollow body of oval configuration, and a V-shaped section bridging the opening in said body, said section opening through the wall of the body to form V-shaped recesses therein.

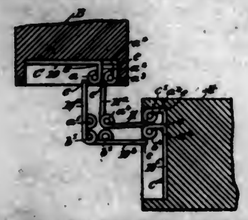
5. A core for building blocks comprising a hollow body of oval configuration, a V-shaped section bridging the space included within the body and comprising relatively inclined walls terminating at their spaced edges in alinement with one edge of the body wall, said wall being cut away to form recesses to register with the space included between the inclined walls.

879,067. HINGE. WILLIAM B. RODMAN, Charleston, S. C. Filed Aug. 31, 1907. Serial No. 390,903.

1. A hinge, comprising four leaf sections, arms on adjacent edges of certain leaves, pintle-sleeves on said arms, and pintles engaging said sleeves.

2. A hinge, comprising four leaf sections, arms on certain of said sections at adjacent side edges thereof, said arms projecting at right angles from the leaves, pintle-sleeves on the arms, and pintles engaging said sleeves.

3. A hinge, comprising four leaf sections, and offset pintle-sleeves on said leaf sections at the side edges thereof, corresponding sleeves that are alined in sequence being pivoted together by a pintle, thus adapting the hinge sections for folding flat one upon the other.

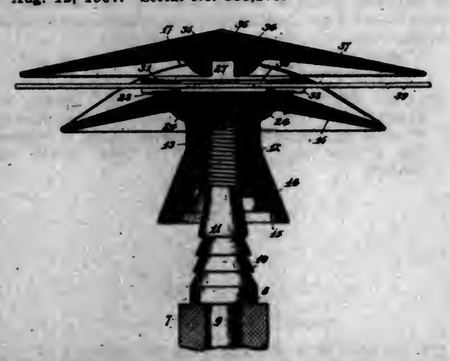


4. A hinge, comprising four leaf sections, a plurality of spaced arms disposed at an angle in the same plane on the side edge of each leaf section, pintle sleeves formed on the ends of the arms and adapted for arrangement in sequence on adjacent leaf sections, and pintles engaging alined sleeves.

5. A hinge, comprising four flat leaves, two leaves that are outermost having screw-holes therein, a series of spaced short arms projected at a right angle from like side edges on said perforated sections, pintle-sleeves formed on the ends of the arms on each leaf section, and alined with each other, the remaining intermediate pair of leaf sections having laterally-offset spaced pintle-sleeves thereon that are alternated and alined with each other, and pintle-rods connecting said alined sleeves.

[Claim 6 not printed in the Gazette.]

879,068. INSULATOR FOR HIGH-TENSION CURRENTS. LOUIS STEINBERGER, New York, N. Y. Filed Aug. 12, 1907. Serial No. 388,175.



1. An insulator comprising a body portion, a plate mounted thereupon and provided with a tubular portion for receiving a conductor, and clamps fitted into said tubular portion and provided with apertures through which a conductor may be threaded.

2. An insulator comprising a body portion, a metallic member mounted thereupon and provided with a slot, and plugs connected with said metallic member and provided with slots adapted to register with said slot of said metallic member for the purpose of receiving a conductor.

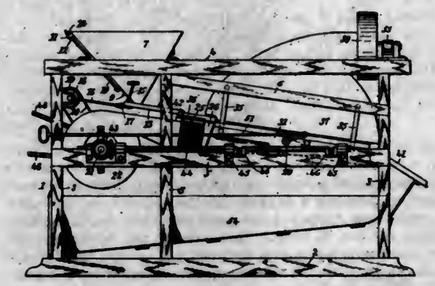
3. An insulator comprising a body portion of insulating material, a metallic member connected therewith and provided with a central core and with a slot, and plugs screwed into the ends of said metallic member and provided with apertures registering with said core and further provided with slots adapted to register with said slot of said metallic member, said plugs being adapted to support a conductor and being revoluble for the purpose of bringing said slots of said plugs into registry with said slot of said metallic member.

4. An insulator member adapted to receive a conductor and having a greater length than breadth, said member being provided with longitudinally disposed barriers between the point that receives the conductor and the side edges so as to produce a striking distance at the sides approximately equal to the striking distance from the conductor to the base at the ends of the insulator.

5. An insulator, comprising a body portion of insulating material, a hollow slotted member having a portion embedded within said insulating material, said member being provided with a shank also having a slot, and a protecting hood mounted upon said shank.

[Claims 6 to 12 not printed in the Gazette.]

879,069. DRY ORE-CONCENTRATOR. GEORGE TOLMIE, Ogden, Utah, assignor of one-fourth to Dennis E. Gleason, Ogden, Utah. Filed Nov. 20, 1906. Serial No. 344,232.



1. In an ore-concentrator, in combination, a frame, a rocking frame mounted therein and adapted to reciprocate, said rocking frame having a ring formed at the end thereof, a connection from a blower to said ring whereby an air current may be delivered through said ring, a shoe rotatably mounted in said rocking frame and closing upon said ring whereby an air current may pass from said ring to said shoe, said shoe having a screen in the upper portion thereof through which an air current may pass, and means for feeding an ore-bearing material across said screen.

2. In an ore concentrator, in combination, a frame, a rocking frame, a shoe mounted to swing on transverse pivots in said rocking frame, a blast connection leading to said shoe and having an inclined face against which said shoe seats by a swinging movement, and a screen over said shoe and through which the blast passes upwardly.

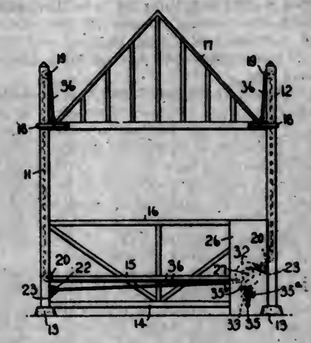
3. In an ore concentrator, in combination, a frame, a rocking frame mounted thereupon, a shoe mounted to swing on transverse pivots in said rocking frame, a trunk leading a blast to said shoe, a flexible connection on said trunk, a ring attached to said flexible connection and having an inclined face disposed toward said shoe, said shoe having an inclined end adapted to seat against said inclined face by a swinging movement of said shoe, a screen above said shoe and through which the blast passes upwardly, means for advancing a material across said screen, and means for dumping said shoe.

879,070. MEDICATED STOCK-SALT AND PROCESS OF MAKING THE SAME. MARTIN VON DUYKE, Wellington, Ohio, assignor to Sidney R. Auble, Lodi, Ohio. Filed Aug. 31, 1905. Serial No. 276,621.

1. A medicated stock salt, comprising granulated salt the grains of which carry adhering particles of medicament comprising sulfate of iron, nitrate of potash, charcoal, sulfur, senna and salts of tartar in substantially the proportions specified.
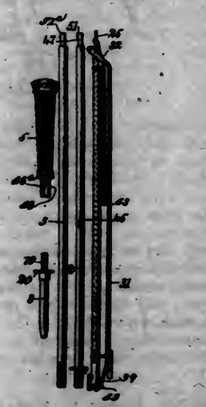
2. The process of making medicated stock salt, consisting in thoroughly incorporating (1) 50 lbs. sulfate of iron, 50 lbs. sulfur, and 20 lbs. salts of tartar with 100 lbs. of dry salt; (2nd) thoroughly mixing 20 lbs. nitrate of potash, 10 lbs. of senna, and 40 lbs. of charcoal; (3rd) thoroughly mixing the results of 1, and 2; (4th) dampen the remaining or 1900 lbs. of salt, thoroughly incorporate all the above, and reduce the salt to a granular condition.

879,071. HAY-BARRACK. GEORGE A. WALKER, Jet, Okla., assignor to Jet Manufacturing Company, Jet, Okla. Filed Sept. 19, 1907. Serial No. 393,745.



A hay barrack comprising hollow corner uprights, a roof connected at its corners with the uprights for vertical sliding movement, pulleys journaled at the upper ends of the uprights, pulleys journaled vertically adjacent the lower ends of the uprights, a windlass journaled vertically adjacent one of the uprights, the said windlass being comprised of spools equal in number to the number of uprights, pulleys journaled for horizontal rotation adjacent the lower ends of two of the uprights other than the one adjacent which the windlass is journaled, and cables connected each at each of its ends to one corner of the roof and engaged over the pulleys upon the respective uprights, certain of the cables being led around the horizontal pulleys last mentioned and all of the cables being connected at their opposite ends to the respective spools of the windlass, and means whereby the windlass may be rotated to wind the cables thereon.

879,072. FOLDING UMBRELLA. WILLARD C. WALLAR, Byesville, Ohio, assignor of three-twelfths to Willard Marple, Zanesville, Ohio, and one-twelfth to James G. Morris and one-twelfth to Hayden B. Pearce, Byesville, Ohio. Filed Mar. 17, 1906. Serial No. 306,567.



1. In an umbrella of the class described, in combination, a rod, a crown carried thereby, a plurality of ribs jointed to said crown, a runner moving on said rod and adapted to be disengaged therefrom, and a plurality of stretchers

connected with said runner and pivotally attached to said ribs, said ribs having extensible sections and said stretchers having forks at the point of attachment to said ribs whereby they may be folded outwardly so as to lie against the outer side of said ribs.

2. In an umbrella of the class described, in combination, a rod, a removable, segmental sleeve attached to said rod, a plurality of ribs pivotally attached to said sleeve, a runner having a split body adapted to be disengaged from said rod, said ribs having tubular rib sections and extensible rib sections telescoping therein, and stretchers connected to said runner and having forks pivotally attached to said ribs.

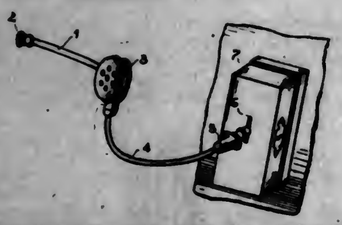
3. In an umbrella of the class described, in combination, a rod, a removable segmental sleeve attached to said rod, a plurality of tubular rib sections pivotally attached to said sleeve, a plurality of stretchers pivotally attached to said tubular rib sections near the free extremities thereof, a runner having a split body adapted to be detached from said rod and pivotally attached to said stretchers, and extensible rib sections telescoping in said tubular rod sections, said stretchers having forks at their extremities which attach to said tubular rib sections.

4. In an umbrella of the class described, in combination, a rod, a removable segmental sleeve, means for fixing said sleeve to said rod, a plurality of extensible ribs pivotally attached to said sleeve, a runner having a split body detachably mounted on said rod, and stretchers connecting said runner with said ribs and adapted to fold outwardly upon said ribs.

5. In an umbrella of the class described, in combination, a rod having a collar formed near the extremity thereof, a removable, segmental sleeve engaging said collar, a removable split runner mounted on said rod, tubular rib sections pivoted to said sleeve, stretchers connected to said runner and pivotally attached to said tubular rib sections at the free extremities thereof, said stretchers having forks at the point of connection with said rib sections, and extensible rib sections telescoping in said tubular rib sections.

[Claims 6 to 10 not printed in the Gazette.]

879,073. TELEPHONE AND STATION APPARATUS. NUCHIM L. WEINGOTT, Warsaw, Russia. Filed Dec. 30, 1907. Serial No. 408,690.

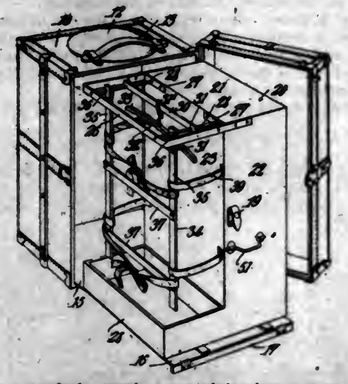


1. The combination with a telephone and a key connected thereto and carrying the conductor terminals of said telephone, of station contact apparatus comprising movable contact parts operable by said key and stationary contact parts, said last named contact parts being connected to the wires of the telephone system.

2. The combination with a telephone and a key connected thereto and carrying conductor terminals, of telephone station apparatus having contact pieces, which in their position of repose lie out of the reach of the key and devices movable only by the key to put said contact pieces in communication with the latter, for the purpose of protecting the contact pieces against damage caused by misuse of the stationary junction apparatus.

879,074. TRUNK. GEORGE H. WEHRLY, Racine, Wis., assignor to The Hartmann Trunk Company, Racine, Wis. Filed Aug. 7, 1907. Serial No. 387,526.

1. In a wardrobe trunk, a box or casing, a lid or cover connected thereto, a supporting plate secured to one end of the casing, an extension track pivoted to the forward end of the plate, an auxiliary means for supporting the outer end of the track in a horizontal position, and a movable casing or wardrobe support on said plate and track and movable into and from the box.



2. In a wardrobe trunk, a containing box, a cover therefor, a wheeled clothes carrier mounted within the box, a pivoted extension track way adjustable to horisontal position and forming a support for the carrier as the latter is withdrawn from the box, said trackway being foldable within the box to permit the cover of the latter to close, and interengaging guides between the clothes carrier and track-way to prevent lateral displacement of said carrier.

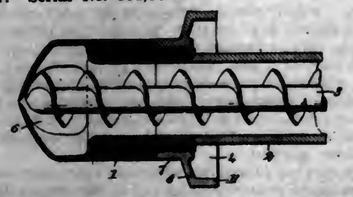
3. In a wardrobe trunk, a containing box, a lid or cover therefor, a wheeled casing mounted within the box, a pivoted extension track way adjustable to horisontal position and forming a support for the casing as the latter is withdrawn from the box, an auxiliary flap carried by the extension and serving to support the latter in horisontal position, and interengaging guides between the casing and the track way to prevent lateral displacement of said casing.

4. In a wardrobe trunk, a containing box, a lid or cover therefor, an extension trackway pivoted and movable from an approximately vertical to approximately horisontal position, a pivoted flap on said track extension, springs tending to move the flap to supporting position, a casing movable into and from the containing box, and supported by the extension track during such movement, and means on the casing for holding the flap in alinement with the track extension when the latter is folded to vertical position.

5. In a wardrobe trunk, a containing box, a lid or cover therefor, an extension trackway pivoted to one end of the box, a casing mounted within the box and provided with flanged guides, a pair of flanged bars on the track extension coacting with said flanged guides to prevent shifting of the casing, and supporting rollers for said casing.

[Claim 6 not printed in the Gazette.]

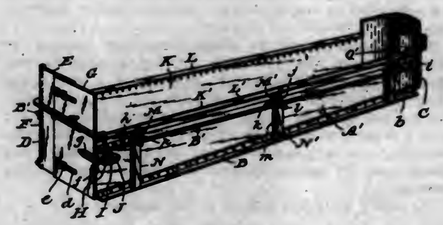
879,075. COMBINED AUGER-HEAD AND REAMER. EUGENE J. WHEELER, Bryson City, N. C. Filed Sept. 5, 1907. Serial No. 391,504.



1. In combination, a hollow auger head having a cylindrical body portion and having a cutting edge and openings into the interior thereof and at one end thereof, whereby the material removed by said cutting edge passes to the interior of said head, said auger head having the end thereof opposite to said cutting edge of reduced diameter and exteriorly and interiorly threaded, a reamer having a cylindrical portion threaded to said reduced portion of the auger head and with its outer surface flush with the outer surface of said head, said reamer presenting a cutting edge extending outwardly from said surface, a barrel threaded into the outer end of said head and having the interior surface thereof flush with the interior surface of said head, and a worm extending through said barrel and terminating in said head adjacent said cutting edge and rotatable independently of said head.

2. In combination, a hollow auger head having a cylindrical body portion and having a cutting edge and openings into the interior thereof and at one end thereof, whereby the material removed by said cutting edge passes to the interior of said head, said auger head having the end thereof opposite to said cutting edge of reduced diameter and exteriorly and interiorly threaded, a reamer having a cylindrical portion threaded to said reduced portion of the auger head and with its outer surface flush with the outer surface of said head, said reamer presenting a cutting edge extending outwardly from said surface, and a barrel threaded into the outer end of said head and having the interior surface thereof flush with the interior surface of said head.

879,076. POST-MOLD. JONAS H. WIEST, Indianapolis, Ind., assignor of one-half to Leonidas R. O'Haver, Indianapolis, Ind. Filed Jan. 31, 1907. Serial No. 354,961.



1. A post mold comprising a pair of side forms each consisting of a plate and angle iron bars secured to edge portions of the plate, an elastic head form attached to ends of the bars and abutting the plates of the side forms, and a foot form to coöperate with the side forms.

2. A post mold comprising two straight sheet metal plates, a curved plate, four angle-bars secured to the curved plate, two of the angle-bars being secured to one of the straight plates and the other two angle-bars secured to the other straight plate, and a foot form hinged to one of the straight plates and attachable to the other one of the straight plates.

3. A post mold comprising a pair of side forms having adjustable extensions for varying the height thereof, a curved elastic head form attached to the side forms, and an extensible foot form hinged to one of the side forms and attachable to the other one of the side forms.

4. A post mold comprising a pair of side forms each consisting of a plate and angle-iron bars secured to edge portions of the plate, one of the bars having finger-holes therein at both ends thereof, a curved elastic head form attached to ends of the angle-iron bars and abutting the plates of the side forms, and a foot form hinged to one of the side forms at opposite ends of the bars and attachable to the other one of the side forms at opposite ends of the bars thereof.

5. A post mold comprising a pair of side forms having extension plates connected thereto, a curved elastic head form attached to the side forms, a foot form hinged to one of the side forms and attachable to the other one of the side forms, and a pair of braces attachable to the extension plates of the side forms at the head and foot forms respectively.

[Claims 6 to 8 not printed in the Gazette.]

879,077. HARNESS-BUCKLE. DANIEL H. YOUNG, Manchester, Iowa, assignor to Samuel Ross Young, Manchester, Iowa. Filed Mar. 12, 1907. Serial No. 361,944.



1. A harness buckle adapted to be pivotally attached to a strap and having a fastening head thereon adapted to coöperate with an aperture in the strap, and keepers arranged to engage the same longitudinal edge of the strap permitting a relative turning movement between the latter and the buckle, and serving to retain the apertured portion of the strap in coöperative relation with the fastening head.

2. A buckle adapted to be pivotally attached to a strap and having a fastening head thereon capable of engaging and disengaging an apertured portion of the strap, when the buckle is turned relatively thereto, and keepers both opening toward the same side of the buckle and coöperating with the same longitudinal edge of the strap for preventing turning movement of the buckle.

3. A buckle adapted to be attached pivotally to a strap having a fastening head thereon provided with a laterally turned projection capable of being engaged and disengaged relative to a slotted portion of a strap when the buckle is turned into a position out of alinement with the strap, said projection coöperating with the slotted portion of the strap to prevent its disengagement from the strap when the buckle is in alinement therewith, and keepers arranged on opposite sides of the pivotal center of the buckle and arranged to coöperate with the edge of the strap to lock the buckle in alinement therewith.

4. A buckle embodying a pair of plates arranged in parallelism and adapted to lie on opposite sides of a strap, a pivot for connecting the plates to the strap for permitting relative movement of the latter and the strap in the plane of the sides thereof, a fastening head on the outside of one of said plates adapted to coöperate with an apertured portion of the strap, a keeper on each plate at opposite sides of said pivot, and opening toward the same side of the buckle and adapted to receive the strap between them and their respective plates for preventing relative turning movement of the buckle and strap.

5. A buckle comprising a body portion composed of sheet material embodying a pair of plates arranged substantially in parallelism and connected at one side, a fastening head on one of the plates adapted to coöperate with an apertured portion of the strap, a keeper arranged on the plate carrying the fastening head and attached to said plate at the same side that is attached to the coöperating plate, and a second keeper arranged on the coöperating plate and closed or attached thereto at the same side at which the latter is connected to the plate having the fastening head.

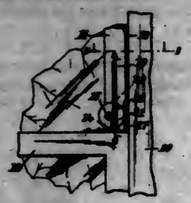
[Claims 6 and 7 not printed in the Gazette.]

879,078. SASH-LOCK. JESSE H. BARTON, Brownsville, Tenn. Filed Aug. 7, 1907. Serial No. 387,440.

1. In combination with an upper and lower window sash separated by a parting bead, a sash lock comprising a bracket secured to the top of the lower sash, a cam journaled on the bracket, a rod attached to the upper sash between the cam and parting bead, a binding-plate carried by the lower sash and interposed between the rod and cam, and a lever for operating the cam to bind said rod against the parting bead.

2. In combination with a window frame having sashes slidable therein, a device carried by one of said sashes, and means carried by the other sash for binding said de-

vice against said frame, whereby both of said sashes are frictionally locked within the frame.



3. In combination with a frame having sashes slidable therein, a cam carried by one sash, means carried by the other sash arranged between the cam and window frame, and means for revolving the cam to bind said first-named means to the frame and lock both of said sashes.

4. In combination with a frame having sashes slidable therein, a cam carried by one sash, means carried by the other sash arranged between the cam and window frame, and a lever detachably connected to the cam for revolving it to bind said means to the frame and lock both of said sashes.

5. In combination with a frame having sashes slidable therein, a cam carried by one sash, a rod carried by the other sash between the cam and frame, and displaceable means for operating the cam to bind said rod against the frame for the purpose described.

879,079. PROJECTILE. JULES A. BON, Vincennes, France. Filed Dec. 26, 1906. Serial No. 349,432.



1. A projectile, comprising a head having a pointed end, and a directing piece or tail of the same diameter as the head and having longitudinal grooves forming a plurality of ribs, the walls of the grooves at their inner ends being inclined to correspond with the incline of the point of the head.

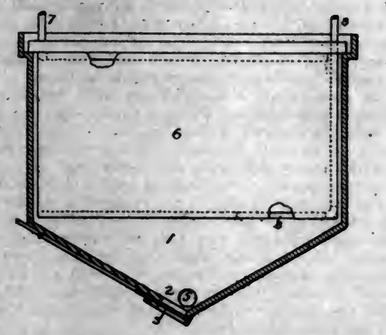
2. A projectile, comprising a head hexagonal in cross section with a pyramidal point, and a directing piece or tail of the same diameter as the head and provided with grooves forming three ribs, the walls of the grooves at their inner ends being inclined to correspond with the incline of the point of the head.

879,080. PROCESS OF TREATING SLIMES. CHARLES BUTTERS, Berkeley, Cal. Filed Sept. 7, 1906. Serial No. 333,731.

1. A process of treating slimes comprising filling a vat therewith, said vat having a filtering surface therein, creating and maintaining a maximum vacuum until a cake of the slimes is formed upon said surface, diminishing said vacuum, discharging the non-adhering slimes from the vat, filling the vat with a re-agent, increasing the vacuum until said re-agent is drawn through said cake, removing said re-agent, and discharging said cake by fluid pressure behind said surface.

2. A process of treating slimes comprising filling a vat therewith, said vat having a filtering surface therein, creating and maintaining a maximum vacuum until a cake of the slimes is formed upon said surface, diminishing said vacuum, discharging the non-adhering slimes from the vat, filling the vat with a re-agent allowing the re-agent to permeate the cake, removing said re-agent, and discharging said cake by water and air pressure behind said surface.

3. A process of treating slimes comprising filling a vat therewith, said vat having a filtering surface therein, creating and maintaining a maximum vacuum until a cake of the slimes is formed upon said surface, diminishing said vacuum, discharging the non-adhering slimes from the vat, filling the vat with a re-agent, increasing the vacuum until said re-agent is drawn through said cake, removing said re-agent, and discharging said cake by water and air pressure behind said surface.

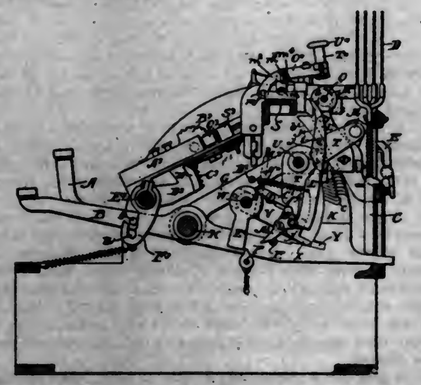


4. A process of treating slimes comprising filling a vat therewith, said vat having a filtering surface therein, creating and maintaining a maximum vacuum until a cake of the slimes is formed upon said surface, diminishing said vacuum, discharging the non-adhering slimes from the vat, filling the vat with a re-agent allowing the re-agent to permeate the cake, removing said re-agent, and discharging said cake by water and air pressure behind said surface.

5. A process of treating slimes comprising filling a vat therewith, said vat having a filtering surface therein, creating a vacuum behind said surface until a cake of the slimes is deposited thereon, reducing the vacuum, removing the non-adhering slimes from said vat, filling said vat with a re-agent allowing the re-agent to permeate the cake, removing said re-agent, filling the vat with a solvent and discharging the cake by fluid pressure behind said filtering surface.

[Claims 6 to 10 not printed in the Gazette.]

879,081. CASH-REGISTER. THOMAS CARROLL, Dayton, Ohio, assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Sept. 30, 1898. Serial No. 692,298.



1. In a cash register the combination with a series of keys, of a counter, a rock frame, a series of movable register operating elements journaled in the rock frame, means connecting the keys to said elements and devices for actuating the rock frame from the keys; the construction being such that the frame is first moved to bring the operating elements into connection with the counter and said elements subsequently actuated.

2. In a cash register the combination with a series of keys, of a counter, a rock frame, a series of counter operating racks mounted in the rock frame, means connecting the keys to said racks, and devices connecting the keys to the rock frame; the construction being such that the rock frame is first actuated to bring the racks into connection with the counter and said racks subsequently moved.

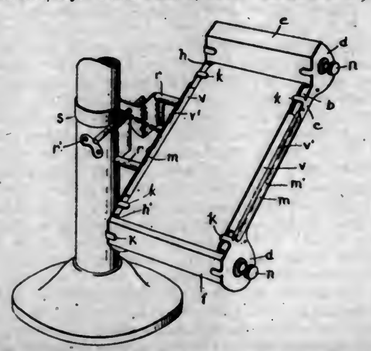
3. In a cash register, the combination with a register comprising a plurality of independently operable elements, of a plurality of oscillatory operating racks therefor, a rocking pivot on which said racks are journaled, and means for oscillating said racks and rocking said pivot to carry said racks into and out of mesh with the register elements.

4. In a cash register, the combination of a train of registering wheels mounted in a fixed frame, a rocking frame carrying a series of racks a plurality of sets of keys, one set coöperating with each rack to cause the latter to be given different degrees of movement proportionate to the operated key, and means for rocking the frame carrying the racks to simultaneously gear them with and ungear them from the registering wheels.

5. In a cash register, the combination of a train of registering wheels mounted in a fixed frame, a rocking frame carrying a series of racks a plurality of sets of keys, one set coöperating with each rack to cause the latter to be given different degrees of movement proportionate to the operated key and means actuated by said keys for rocking the frame carrying the racks to simultaneously gear the latter with and ungear them from the registering wheels.

[Claims 6 to 84 not printed in the Gazette.]

879,082. MEMORANDUM AND RECORDING DEVICE FOR USE WITH TELEPHONES. ULYSSES G. CAVE, Louisville, Ky. Filed June 3, 1907. Serial No. 377,008.



1. In a device of the class described, a frame provided with a platform plate, side frame bars separated from said platform plate by an interval at each side, and having end enlargements, rotary shafts having seats in the end enlargements of said side frame bars, each such shaft having a hollow end portion provided with a transverse pin and a removable handle knob having a bifurcated stem engaging said pin, and carbon sheet clamp devices hinged to the side frame bars and having parallel bars embracing said side frame bars and extending in the intervals between the platform plate and side frame bars.

2. In a device of the class described, a frame provided with a platform plate, side frame bars separated from said platform plate by an interval at each side, and having end enlargements, rotary shafts having seats in the end enlargements of said side frame bars, each such shaft having a hollow end portion provided with a transverse pin and a removable handle knob having a bifurcated stem engaging said pin, and carbon sheet clamp devices hinged to the side frame bars and having parallel bars embracing said side frame bars and extending in the intervals between the platform plate and side frame bars, said frame having transverse tubular seats below the same and a supporting clamp device having transverse bars engaging such tubular seats.

3. In a device of the class described, a frame provided with a platform plate, side frame bars separated from said platform plate by an interval at each side, and having end enlargements extending at one end of the frame above and below the platform plate and at the other end of the frame below the platform plate, rotary shafts having seats in said end enlargements and located one in line with the side frame bars and the other below the same, each such shaft having a hollow end provided with a transverse pin and a removable handle knob having a bifurcated stem engaging such pin, said platform plate having a slot at each end portion thereof, an upward projecting cover extension at one end overlying the rotary shaft at such end and a downward projecting guard extension at the other end for the rotary shaft at such end, and carbon sheet clamp devices having parallel side bars extending in the intervals between the platform plate and side frame bars.

879,083. ELECTRIC-INCANDESCENT-LAMP LUMINANT AND THE PROCESS OF MANUFACTURING IT. FRANCIS M. F. CAZIN, Hoboken, N. J. Filed Nov. 30, 1903. Serial No. 183,270.



1. The process of manufacturing the filament-shaped luminant of an electric incandescent lamp, which process consists in the following serial actions,—namely: to plate electrolytically on a core and electrode a metal-alloy, which includes some of the practicably infusible and oxygenatable class of metals

2. The process of manufacturing the filament-shaped luminant of an electric incandescent lamp, which process consists in the following serial action,—namely: to electrolytically plate and metallize a carbon core and electrode with a metal-alloy and then use the thus metallized core as electrode and plate electrolytically thereon a metal-alloy of less affinity for oxygen than the metals of the alloy-core.

3. The process of manufacturing the filament-shaped luminant of an electric incandescent lamp, which process consists in the following serial actions, namely: to metallize a carbon-fillet by plating the same with a metal-alloy being practically infusible and having affinity for oxygen, and then using such metallized fillet as core and electrode to electrolytically plate thereon a layer of metal alloy, having less affinity for oxygen than the alloy of the metallized core, such as rare metals and then oxidizing the surface of such rare-metals.

4. In an electric incandescent lamp a filament-shaped luminant, which consists of a primary core-fillet, plated electrolytically with metal-alloy.

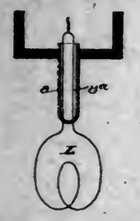
5. In an electric incandescent lamp a filament-shaped luminant, which consists of a primary core-fillet, coated with an electrolytic deposit of layers of metal-alloys.

[Claim 6 not printed in the Gazette.]

879,084. MANUFACTURE OF FILAMENTS IN ELECTRIC INCANDESCENT LAMPS, PROCESS, AND PRODUCT. FRANCIS M. F. CAZIN, Hoboken, N. J. Filed May 31, 1904. Serial No. 210,759.

1. A glower-filament in an electric incandescent lamp, which glower-filament consists of a metallized carbon-fillet in the form, selected for the glower in operation,—the metallization consisting in an electrolytic deposit of different metals, of which those in contact primarily with the carbon are partly inter-impregnated with the carbon—and those on the surface coated with oxid, all of which metals have a high point of fusion, the inner-ones having more and the outer-ones less affinity for oxygen.

2. A glower-filament in an electric incandescent lamp, which glower-filament, including terminals, consist of a carbon-fillet primarily bent longitudinally in the shape of the completed glower and its metallization by means of electrolytic-metal-alloy-deposits of different classes of metal, of which the deposit in immediate contact with the carbon-fillet consists of metals of the ruthenium-osmium class and is in part inter-impregnated with the carbon, and of which the outer deposit consists of metal of the rare class and is coated on the exposed surface with oxid.



3. A glower-filament in an electric incandescent lamp, which glower-filament consists of a metallized carbon-fillet,—the metallization of which fillet consists of electrolytic alloy-deposits in concentrical layers, the inner layer consisting of metals of the ruthenium-osmium class and being on its contact with the carbon inter-impregnated therewith, and the outer layer of which consists of rare metals, the surface of which is covered with oxids.

4. A metallized glower-filament in an electric incandescent lamp, which consists of a carbon-fillet, primarily in the final longitudinally bent shape of the glower filament in the lamp—and of its metallization, which primarily consists of electrolytic alloy-deposits in concentrical layers, the inner layer consisting primarily of metals of the ruthenium-osmium class and being on its contact with the carbon interpregnated therewith,—and the outer layer of which consists or rare metals and is coated on its exposed surface with oxids.

5. A metallized glower-filament in an electric incandescent lamp, which consists of a carbon-fillet primarily in the longitudinally bent shape of the glower-filament of the lamp in operation,—and of its metallization, which consists primarily of electrolytic alloy-deposits in concentrical layers, the inner layer of which consists of metals of high point of fusion and of affinity for oxygen of the platinum group of metals, which metals on their contact with the carbon of the fillet have become inter-impregnated therewith,—and the outer layer of which consists of rare metals and is coated on its exposed surface with oxids.

[Claims 6 and 7 not printed in the Gazette.]

879,085. FILAMENT IN ELECTRIC INCANDESCENT LAMPS AND ITS MANUFACTURE. FRANCIS M. F. CAZIN, Hoboken, N. J. Filed June 2, 1904. Serial No. 210,870.



1. A filament in an electric incandescent lamp which filament consists of a core, which is an electrolytically metallized carbon-fillet, and of concentrical layers thereon, the transverse section of the two ends of which filament increase to a thickness at the extreme ends, which thickness increases the conductivity of the filament to the effect, that the terminals do not become heated under current.

2. A filament in an electric incandescent lamp, which consists of a central core and of adhesive concentrical layers thereon, the layers consisting of electrolytical deposits, and the ends of which filament increase in thickness towards the terminals.

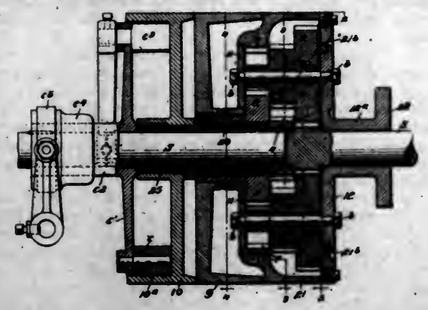
3. A filament in an electric incandescent lamp which consists of a central core and of adhesive concentrical layers, the layers consisting of electrolytical deposits, being thicker at the ends of the filament than along its central main part.

4. The method of manufacturing filament in electric incandescent lamps, which method consists in electrolytically plating on a core an adhesive concentrical coating of metal.

5. The method of manufacturing filaments in electric incandescent lamps, which method consists in electrolytically plating on a central core an adhesive coat, which consists of layers of metal.

[Claims 6 to 8 not printed in the Gazette.]

879,086. VARIABLE-SPEED GEARING. BASSETT M. COFFEE, Richmond, Va., assignor of one-fourth to William J. Whitehurst, Richmond, Va. Filed Mar. 7, 1905. Serial No. 248,860.



1. In a variable speed gear, a driving shaft; a driving pinion fast thereon, a pair of pinions loosely mounted on the shaft for independent movement, a brake drum having an internal rack, a brake shoe for the drum, independent sets of planetary gears that connect the brake drum with both of the loosely mounted pinions and means for locking either of the said loose pinions from revolving, and other planetary gears connecting the first mentioned sets of planetary gears with the driving pinion.

2. In a variable speed gear, a driving shaft, a driving pinion fast thereon, a pinion loosely mounted on the shaft, another loose pinion directly mounted on the other loose pinion, each of said pinions having a brake drum and brake coöperatively combined therewith, a drum freely rotatable on the shaft having an internal rack, a brake for the said drum, and independent sets of planetary gears that join both of the loosely mounted pinions with the said drum rack and other planetary gears that join the last named sets of planetary gears with the driving pinion, as set forth.

3. A variable speed gearing, comprising in combination; a driving shaft, a driving pinion fixedly held thereon, a pinion loosely held on the shaft, another pinion loosely mounted on the loose pinion, a brake mechanism for each of said loose pinions, independent sets of planetary gears that connect the driving pinion with the loose pinions, a support for the said gears rotatably mounted on the shaft whereby to revolve the said gears about the driving shaft, a drive sprocket fixedly attached to said revolving support, a drum having an internal rack held in mesh with the planetary gears, and a brake for the said drum, all being arranged substantially as shown and described.

4. In a variable speed gear of the character stated, the combination of the driving shaft *s*, the pinion fast thereon, the pinion 4 with the sleeve loosely mounted on the shaft, the gear 8 loosely mounted on the sleeve of pinion 4, the head member 12, a fixedly attached sprocket wheel thereon and loosely mounted on the shaft *s*, the opposite head 11 loosely connected with gear 8 to move independently thereof, the drum 21 rotatably mounted on the heads 11 and 12 and having an internal gear 7, the drum 10 fixedly connected to the sleeve of pinion 4 to turn therewith, the train of planetary gears mounted, shafts for the planetary gears supported in the heads 11 and 12, said gears connecting the fast pinion 1 with the loose pinions or gears 4 and 8 and with the rack 7, and means for locking the rack drum and the loose pinions or gears 4 and 8 from rotation, as set forth.

5. The combination with the driving shaft *s*, the pinion 1 fast thereon, the supporting head 12, a fixedly held sprocket wheel, loosely mounted on the shaft *s*, the pinion 4 having a sleeve loosely mounted on the shaft *s*, the gear 8 having a hub loosely mounted on the sleeve of the pinion 4, the drum 10 fixedly connected to the sleeve of pinion 4, the drum 9 fixedly connected to the sleeve in the gear 8, the head member 11 loosely connected to the gear 8, the shafts 30 and 31 mounted in the heads 11 and 12, the double gear 2—3 on shaft 30, one member 2 of which meshes with the pinion 1, the double gear 5—6, one member 5 of which, meshes with pinion 4, the other 6 of which meshes with gear 8, the drum 21 loosely mounted on the heads 11 and 12, said drum having an internal annular rack that meshes with the gear portion 6, and means for holding each of the drums 10—9 and 21 from movement, for the purposes specified.

879,087. WIRE-ROPE CLAMP. FRANK B. COOK, Chicago, Ill. Filed Jan. 30, 1905. Serial No. 243,342.



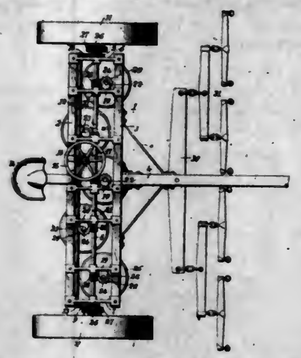
A clamp of the character described comprising a base portion having a recess thereacross for receiving a pair of strands side by side therein in a plane substantially parallel with the body of the base portion, the said recess being deeper at the inner portion of the base portion than at the edges of the latter, the side walls of the recess at the said edge portions of the base portion converging toward the bottom of the recess whereby when the strands are forced side by side into the recess they are squeezed together by the said converging side walls, a U-bolt the legs of which are extended through the base portion on opposite sides of the recess so that the U-bolt straddles the recess, the curved portion of the U-bolt being adapted to help squeeze the strands together when same are forced into the said recess, and means for drawing the U-bolt down across the strands and against each strand, between the said edges of the base portion to draw each strand down into the said recess at the inner portion of the base portion and bend each over the said edge portions of the base portion, whereby the strands are squeezed together by the said converging walls of the said edge portions of the base portion, to tightly clamp the said strands in place.

879,088. [WITHDRAWN.]

879,089. WEED-CUTTER. CHARLES A. DESPAIN, GEORGE A. KITT, and EDSIL R. GORDON, Harrington, Wash. Filed May 28, 1907. Serial No. 376,089.

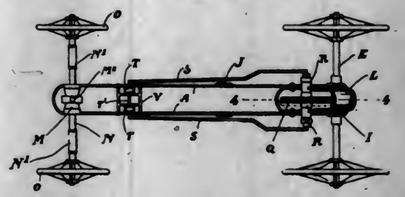
1. In an implement of the class described, in combination, a frame, an axle rotatably mounted therein, segments rigidly attached at their centers to said axle, an adjusting shaft, means for rotating the same, pinions carried by said shaft meshing with said segments, wheels attached to said segments to be raised or lowered with respect to said frame when said segments are adjusted, gear-wheels carried respectively by said wheels, pinions carried by said axle, and driven by said last gear-wheels, a plurality of cutters carried near the ground level, and means for driving said cutters from said axle.

2. In an implement of the class described, in combination, a frame having a pair of transversely disposed beams brackets connecting the same, an axle rotatably mounted in said brackets, cutters carried by said brackets arranged alternately on opposite sides thereof, means for driving said cutters alternately in opposite directions, said cutters being disposed with their adjacent edges projecting beyond



each other, wheels, means for driving said wheels, and means for raising and lowering said frame on said wheels.

879,090. HAND-CAR. JAMES E. DURHAM, Muncie, Ind. Filed July 28, 1906. Serial No. 328,206.



1. In a hand car of the kind described comprising front and rear axles, wheels on the axles, a frame connecting the axles, a seat mounted on said frame between and above the axles, a gear wheel secured rigidly to the rear axle meshing with a secondary gear wheel journaled on the frame, the combination of a shaft secured in said secondary gear wheel having on its one end a crank secured and its opposite end provided with a crank detachably secured thereon and adapted to be adjusted to predetermined positions with reference to the opposite crank, said cranks being pivotally connected by connecting rods to a pair of hand levers, substantially as and for the purposes specified.

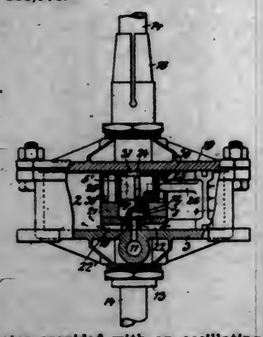
2. In a hand car of the kind described, the combination with a frame composed of parallel bars, of a gear housing composed of a continuous open member having vertical ends and sides with transversely extending journals formed integral thereon on the upper and lower sides thereof and having transversely extending lugs on the opposite sides at one end thereof, substantially as and for the purposes specified.

3. In a hand car of the kind described, the combination with the front and rear axles, wheels on said axles, a frame connecting the axles, a pair of oscillating levers and connections for driving the car, of means whereby the motion of the oscillating bars may be varied with reference to the relative positions occupied each to the other, said means composed of a pair of cranks secured to the opposite ends of the gearing shaft, one of said cranks being detachable and having the inner face of its hub provided with radially extending channels adapted to inclose the protruding ends of a pin passed through the end of the shaft and secured therein, said shaft having a shoulder thereon adapted to fit within a corresponding recess provided in the hub of the said crank, and a screw and nut connection on the end of said shaft, substantially as and for the purposes specified.

4. In a hand car of the kind described, the combination with a frame therefor composed of parallel bars, of a hand-lever housing consisting of the opposite walls V joined together parallel by the oppositely disposed walls V^3 at a

right angle thereto, the walls V having at their upper corners the projections V^1 and the walls V^2 having therein the apertures V^3, the walls V^2 projecting upwardly beyond the plane of the top of the walls V, substantially as and for the purposes specified.

879,091. OSCILLATING MOTOR. HEINRICH F. W. FALKENBERG, Dortmund, Germany. Filed Oct. 12, 1906. Serial No. 338,578.

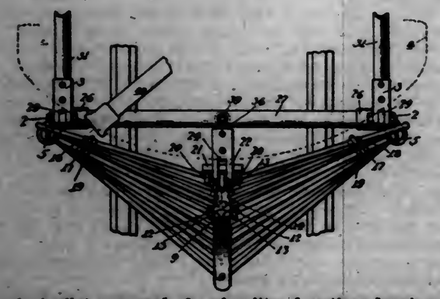


1. In a motor provided with an oscillating piston, and a slide valve for controlling the motive fluid, of means in connection with the piston for slightly displacing said valve toward reversing position near the end of the oscillatory movement of the piston, and means whereby said displacement will admit the motive fluid behind the valve to complete the reversing movement of the valve.

2. In a motor provided with an oscillating piston, a slide valve for controlling the motive fluid, a hollow abutment in which the slide valve moves, a piston moving with the slide valve in the abutment, the ends of the piston being adapted to contact with the end walls of the abutment, said end walls being provided with openings, projections on the motor piston adapted to extend through said openings whereby to slightly displace said valve piston near the end of each oscillation of the piston, and means whereby said displacement will admit the motive fluid behind the valve piston to complete the reversing movement of the valve.

3. In a motor provided with an oscillating piston, and a slide valve for controlling the motive fluid, means in connection with the piston for slightly displacing said valve towards reversing position near the end of each oscillation of the piston, and means whereby said displacement will cause the motive fluid to complete the reversing movement of the valve.

879,092. PILOT. HUGH W. FELLOWS, Cahuenga, and IRA A. CAMMETT, Hollywood, Cal. Filed Dec. 28, 1906. Serial No. 349,925.



1. A pilot composed of a plurality of sections forming a wedge, and means for swinging the sections into substantial parallelism with each other.

2. A pilot composed of a plurality of sections forming a wedge, and means for opening the upper part of the wedge to permit extensions of the draw-bar of the car.

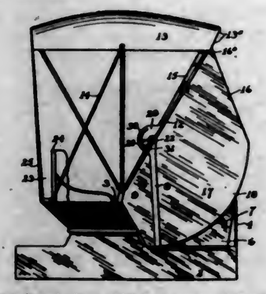
3. A pilot composed of a plurality of sections forming a wedge, and means for swinging down upper sections into parallelism with lower sections to form an opening for the draw-bar of the car.

4. A pilot composed of sections normally forming a wedge, and means for collapsing the sections.

5. A pilot comprising a wedge, and means for changing the planes of the wedge into substantial parallelism perpendicular to the deck of the car or parallel to the deck.

[Claims 6 to 14 not printed in the Gazette.]

879,093. STORM-FRONT FOR VEHICLES. ANTHONY K. FELTON, Smithville, Ohio, assignor of one-half to O. A. Rhodes, Smithville, Ohio. Filed July 24, 1907. Serial No. 385,397.



1. A storm-front for vehicles, comprising a stationary section carrying a pivotally movable section each having a front and side walls adapted to meet and form conjointly a cab-front when said movable section is in its normal position.

2. A storm-front, for vehicles comprising a stationary section having a front and side walls provided with arms carrying a movable section provided with a front and side walls adapted to form rear and side walls, respectively, within the vehicle-top when in its open position and to meet and form conjointly with said front and side walls of said stationary section, respectively, a cab-front when in its closed or normal position.

3. A storm-front for vehicles, comprising a stationary supporting-frame with an auxiliary dash-board, and a pivotally-mounted swinging section carried by said supporting-frame and adapted to be swung outwardly and downwardly from within the carriage-top to meet said auxiliary dash-board and normally close the front of said carriage-top.

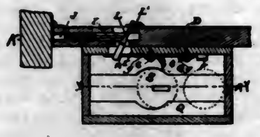
4. A storm-front for vehicles, comprising a stationary supporting-frame provided with an auxiliary dash-board and upwardly-extending side supporting-arms, and a swinging section pivotally-secured to said side supporting-arms and provided at its front with a recess-opening adapted to receive and take over said auxiliary dash-board when said section is swung forward to its normal or closed position.

5. A storm-front for vehicles, comprising a supporting-frame provided with an auxiliary dash-board and side walls having curved upper edges and side supporting-arms, and a movable section pivotally-secured to said supporting-arms and comprising a storm-front provided with wings normally meeting with said dash-board and side walls, respectively, and forming conjointly therewith a closed or cab-front.

[Claims 6 to 11 not printed in the Gazette.]

879,094. AUTOMATICALLY-LOCKING BOX. FREDERICK C. FEW, Albany, N. Y., assignor of one-half to Pelatiah J. March, Troy, N. Y. Filed May 7, 1906. Serial No. 315,473.

1. In an automatically locking box, adapted to be secured to a swinging door, the combination of a reciprocating locking latch; a catch on the cover of said box; a bolt adapted, when the cover is closed, to move said reciprocating latch in contact with said catch by the closing of the door.



2. In a box, a reciprocating latch; a catch on the cover of the box; a spring arranged to move said latch in one direction; a bolt adapted when the cover is closed to move said latch in the opposite direction, substantially as described.

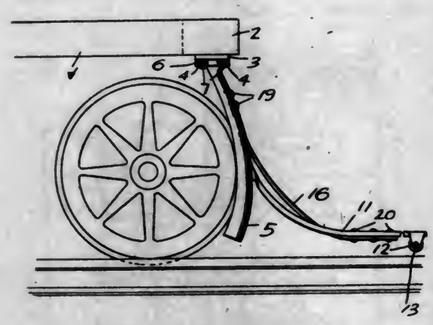
3. In an automatically locking box, adapted to be secured to a swinging door, the combination of a reciprocating locking latch; a catch on the cover of said box; a bolt adapted, when the cover is closed, to move said reciprocating latch in contact with said catch by the closing of the door and a means on the inside of the door for preventing the unlocking of the box when the door is opened.

4. In a box adapted to be secured to a door; a means for automatically locking said box by the action of the closing of the door; a means for retaining within the box one or more bottles; a swinging cover adapted to be placed over the mouth of one of said bottles; with a means for locking said bottles within the box, substantially as described.

5. In a box; a means for supporting bottles; covers within said box adapted to be placed over the mouths of said bottles; a lock by the operation of which said bottles may be retained in position and displacement of said covers prevented.

[Claim 6 not printed in the Gazette.]

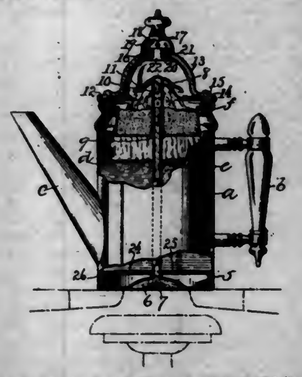
879,095. CAR-FENDER. WILSON S. FISTER, Hamburg, Pa., assignor of one-half to Solomon E. Bear, Hamburg, Pa. Filed Apr. 17, 1907. Serial No. 368,674.



1. A fender of the type set forth comprising wheel guards suspended from the car and curved in a vertical plane, said wheel guards being formed adjacent their lower ends with upper and lower vertical slots, a fender frame having rearward extensions projected through and working in said lower slots, pivot pins fixed in said wheel guards and projected through said extensions, leaf springs projected through said upper slots and having their upper ends fixed to said wheel guards and their lower ends fixed to said fender frame.

2. A fender comprising fixed wheel guards, a fender frame pivotally suspended therefrom, and leaf springs having their upper ends fixed to said wheel guards and their lower ends fixed to said fender frame.

879,096. PERCOLATOR. JOHN GAUNT, Meriden, Conn., assignor of one-half to William M. Prisk, Yalesville, Conn. Filed Jan. 7, 1907. Serial No. 351,073.



1. A receptacle, an insulating shell located in the bottom of the receptacle and forming a heating chamber at the center of the shell, passages partially formed by the walls of the shell and extending along the surface thereof from the periphery to said heating chamber, a tube extending upward from said chamber, and a basket supported on said tube.

2. A receptacle, an insulating shell located at the bottom of the receptacle and forming a chamber at the center of said shell, passages partially formed by indentations extending along the surface of the walls of said shell to said chamber, a tube extending from said chamber upward, and a basket supported by said tube.

3. A receptacle, an insulating shell located at the bottom of the receptacle and forming a heating chamber at the center of the shell, shallow passages formed partially by the walls of the shell and partially by said receptacle and extending along the surface of the walls to said heating chamber, a tube extending upward from said chamber, and a basket supported on said tube.

4. A receptacle, an insulating shell located in the bottom of the receptacle and forming a heating chamber at the center of said shell, passages partially formed by the walls of said shell and extending radially along the surface of the wall into said heating chamber, a tube extending upward from said chamber, and a basket supported on said tube.

5. A receptacle, an insulating shell located in the bottom of the receptacle and forming a heating chamber at the center thereof, passages partially formed by said shell and extending along the surface of the bottom wall of the shell to said heating chamber, a tube extending upward from said heating chamber, a sleeve telescoped on the upper end of the tube, a basket supported by said sleeve, a mush-room shaped hood at the end of the sleeve, and perforations through the wall of the sleeve underneath said hood.

[Claims 6 to 9 not printed in the Gazette.]

879,097. JOINT-BINDER. EDOUARD C. GLARDON, Hamburg, Germany. Filed May 24, 1907. Serial No. 375,530.

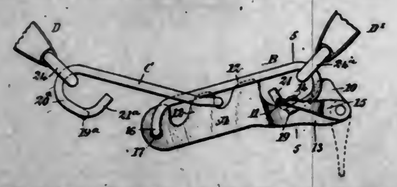


1. In an improved binding clamp of the nature set forth consisting of a pair of perforated shanks a, a connected

together by a web or bridge *b*, the rim *c* arranged at each end of the connecting web, said rims *c* lengthening the web *b* and extending at both extremities of the latter beyond the shanks *a*, substantially as described and shown and for the purposes set forth.

2. In an improved binding clamp of the nature set forth consisting of a pair of perforated shanks *a*, *a* connected together by a web or bridge *b*, the rim *c* arranged at each end of the connecting web, said rims *c* being produced by bending and doubling back the metal blanks of the clamp at the web portion and by subsequently bending off the shanks *a* at a distance from the external edges of the rim *c*, substantially as described and shown and for the purposes set forth.

879,098. HAME-FASTENER. JOHN W. GONCE, Kinderhook, Ala. Filed Dec. 5, 1906. Serial No. 346,385.



1. In a hame fastener, a toothed lever, and a keeper pivoted to one end of the lever and having spaced members terminating in hooks adapted for engagement with an eye of the hames, said hooks closely approaching each other to engage opposite sides of the free end of the lever and having a direct interlocking engagement with said free end.

2. In a hame fastener, a toothed lever having a lateral bend or curve at one end, and a keeper pivoted to the end of the lever opposite that having the curve and having spaced members terminating in hooks adapted for engagement with an eye of the hames, said hooks closely approaching each other to respectively engage the convex and concave sides of the curved end of the lever and having a direct interlocking engagement with said curved end.

3. In a hame fastener, a toothed lever having a lateral bend or curve at one end and a lug on said curved end, and a keeper pivoted to the end of the lever opposite that having the bend or curve and having spaced members terminating in hooks adapted for engagement with an eye of the hames, said hooks receiving the curved end of the lever between them and one of them engaging the said lug.

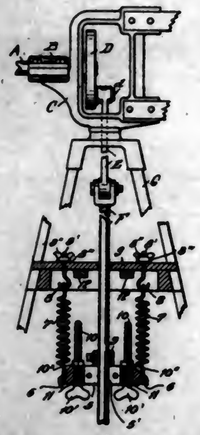
4. In a hame fastener, a toothed lever having one of its ends longitudinally curved and provided with an outwardly-extending spur at the upper portion of its curved end, a snap link pivoted to the end of the lever opposite that which is curved, and a second snap link having adjustable relation to the said lever below the link pivoted thereto, each link at its outer or open end being provided with a diagonal spring terminal, forming a partial closure at the outer end af each of said links, the lever and link carried thereby being free to turn in the adjustable link.

5. In a hame fastener, a toothed lever having a reduced and laterally curved neck and an upwardly and outwardly extending lug on the upper edge of said neck, and a keeper pivoted to one end of the lever and having spaced members terminating in hooks adapted for engagement with an eye of the hames, one of the hooks having an upwardly extending diagonal member, the hooks receiving the neck of lever between them and the one without the diagonal member engaging the said lug.

[Claims 6 to 8 not printed in the Gazette.]

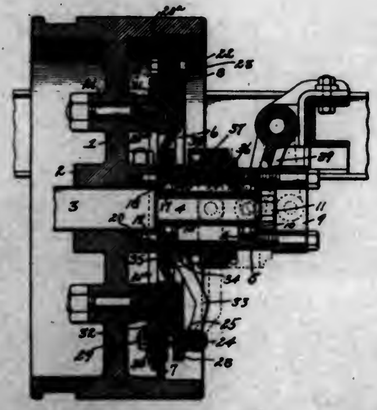
879,099. WINDMILL ATTACHMENT. ELMER E. GOODWIN, Cle Elum, Wash. Filed Feb. 18, 1907. Serial No. 357,903.

1. The combination with a supporting structure, of a vertical rod, means carried by said structure for reciprocating said rod, a head member through which said rod is movably disposed, a stop carried by said rod and adapted to engage said head, springs connecting said head yieldably to said supporting structure, and threaded adjusting rods carried by said head and adapted to bear against said supporting structure when said springs are fully collapsed.



2. In apparatus of the class described, the combination with a wind-mill arbor, a tower, a vertically arranged rod, a collar upon said rod, and operative connection between said arbor and rod whereby the latter is reciprocated, of a head slidably mounted upon said rod, springs connecting the head with said tower and tending to exert an upward pressure of the head against said collar, means to adjust the tension of said springs, bolts adjustably connected with said head, and bumpers adapted to be impinged by said bolts and release the collar from the pressure exerted thereupon from said head.

879,100. FRICTION-CLUTCH. CHARLES R. GREUTER, Holyoke, Mass., assignor to Matheson Motor Car Company, Wilkes-Barre, Pa., a Corporation. Filed Feb. 7, 1906. Serial No. 299,970.



1. In a clutch, the combination with the wheel member, of a fixed clutch shoe consisting of a ring bolted to the wheel member and seated against its rim portion, a spring released movable clutch shoe loosely supported at one side of the fixed shoe, a rotatable hub arranged at one side of the wheel member and carrying a friction disk located between the two shoes, and a plurality of suitably-actuated rocker cams supported at one side of the movable shoe and operating against the same.

2. The combination with a wheel member carrying a fixed clutch shoe, a spring actuated movable clutch shoe loosely supported at one side of the fixed shoe, a rotatable hub carrying a friction disk located between the two shoes, centrally arranged spring releasing means for the friction disk, and operating cams working against the movable shoe.

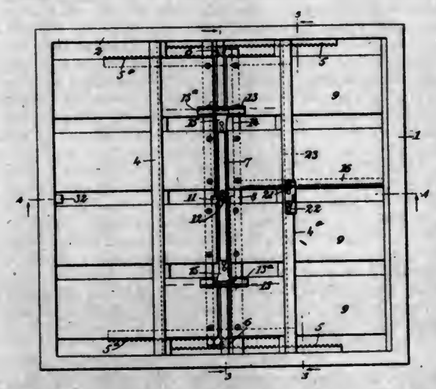
3. In a clutch, a wheel member carrying a fixed shoe, a spring-released movable shoe arranged at one side of and loosely supported from the fixed shoe, a supporting journal extending beyond one side of the wheel member, a rotatable hub sleeve mounted on said journal and carrying a frictional disk arranged between the two shoes and a plurality of suitably supported cams operating against the movable shoe and having lever arms pivotally connected with said hub sleeve.

4. In a clutch, a wheel member carrying a fixed shoe, a movable shoe arranged at one side of the fixed shoe, a rotary clutch member having a friction disk arranged between the two shoes, releasing means for the friction disk, a plurality of rocker cams arranged to operate against the outer side of the movable shoe, and each provided with a lever and with journal spindles, adjustable carrying bolts extending through the shoes and provided with bearings for the journal spindles of the roller cams, adjusting nuts mounted on the threaded ends of said bolts and carrying pinions, and an adjustment rack common to all the adjusting nuts and arranged to mesh with the pinions thereof.

5. In a clutch, a wheel member carrying a fixed shoe, a movable shoe arranged at one side of the fixed shoe, a rotary hub having internal supporting bearings and provided with a friction disk arranged between the two shoes, adjusting means for the movable shoe, a guard ring secured fast to the hub and overlapping one of the bearings thereof, and a plurality of spring projected plungers mounted in the hub of the wheel member and bearing at one end against said ring.

[Claim 6 not printed in the Gazette.]

879,101. PLATE-HOLDER. GEORGE B. HALL, Yarmouth, Nova Scotia, Canada. Filed May 1, 1906. Serial No. 314,638.



1. In a plate holder, in combination, a body, a pair of transversely disposed bars mounted in said body, said bars having openings therein, backing slats attached to said body and extending through said openings, a center rail disposed between said bars, and clips slidably mounted on said rail and adapted to engage the edges of the plate held between said bars.

2. In a plate holder, in combination, a body, a center rail, clips slidably mounted on said center rail, means for maintaining said clips equidistant from a central axis of said body, a pair of transversely disposed bars substantially parallel with said center rail and having longitudinally disposed slots therein, strips disposed parallel with said center rail and on each side thereof, backing slats attached to said strips and passing through said slots, means for maintaining said bars equidistant from a central axis of said body, and means for locking said bars to said body.

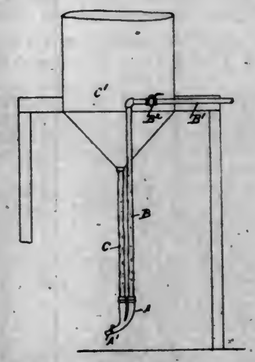
3. In a plate holder, in combination, a body, a pair of transversely disposed bars, means for guiding said bars to slide transversely of said frame, means for maintaining said bars equidistant from a central axis of said body, a pair of clips mounted on said body to slide longitudinally with respect to said bars, means for maintaining said clips equidistant from a second central axis of said body, a rack fixed to said body and disposed transversely of said bars, and locking means carried by one of said bars and engaging said rack.

4. In a plate holder, in combination, a body, a pair of transversely disposed bars having grooves adapted to clamp the edges of a photographic plate set therebetween, and clips mounted to move transversely between said bars and having projecting lips adapted to engage over the edges of the said plate.

5. In a plate holder, in combination, a body, a pair of transversely disposed bars having grooves adapted to clamp the edges of a photographic plate set therebetween, and clips mounted to move transversely between said bars and having projecting lips adapted to engage over the edges of the said plate, said clips having plates inclining upwardly at their outer edges supporting the edges of said plate, and lips on the inner faces of said clips adapted to engage over the edges of said photographic plate.

[Claim 6 not printed in the Gazette.]

879,102. SAND-BLAST APPARATUS. JOHN F. HAY, Erie, Pa., assignor to Erie Malleable Iron Company, Erie, Pa., a Corporation. Filed Oct. 17, 1904. Serial No. 228,896.



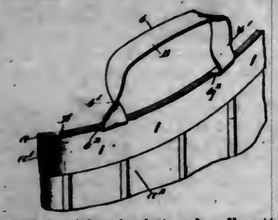
1. In a sand blast apparatus the combination of a mixer comprising a sand passage for delivering sand to the nozzle by gravity the end of the passage being deflected from the general direction of the sand passage to form a support for the sand with the passage arranged in a vertical direction and an air passage arranged beneath the deflected end of the sand passage with the sand passage back of the end in a vertical position; and a nozzle with which the mixer communicates, said nozzle being deflected to a direction more nearly 45 degrees to the sand passage back of the deflected end than to a direction in alinement therewith.

2. In a sand blast apparatus the combination of a vertically disposed flexible sand connection; a mixer secured to the flexible connection comprising a sand passage for delivering sand to the nozzle by gravity the end of the passage being deflected from the general direction of the sand passage to form a support for the sand with the passage arranged in a vertical direction and an air passage arranged beneath the deflected end of the sand passage with the sand passage back of the end in a vertical position; and a nozzle with which the mixer communicates,

said nozzle being deflected to a direction more nearly 45 degrees to the sand passage back of the deflected end than to a direction in alinement therewith.

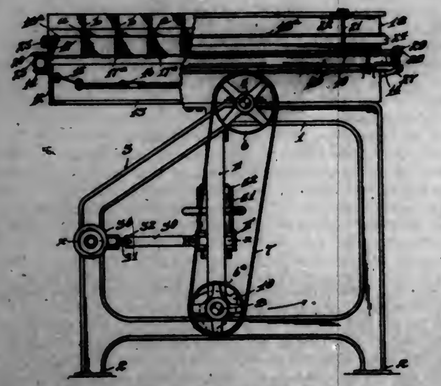
3. In a sand blast apparatus the combination of a mixer comprising the sand passage *c* and air passage *b* with the interposed partition *a* extending entirely across the nozzle and forming the deflected end of the passage *c*, the air passage being beneath the deflected end with the passage *c* in a vertical position and extending upwardly from the end; and the nozzle A' having a direction more nearly 45 degrees to the passage *c* than in alinement therewith.

879,103. BASKET-HANDLE. JOHN HIGMAN, St. Joseph, Mich. Filed Apr. 29, 1907. Serial No. 370,787.



In combination with a basket, a handle attached to the rim thereof and consisting of a strap of sheet metal bent into substantially U-shape to provide a grasping portion and depending portions, these depending portions being twisted so as to face toward the basket and to be passed down between the rim hoops, the lower extremity of each of these portions being bent upwardly to engage the lower edge of one of the hoops, and the upper portion thereof being bent outwardly to engage upon the upper edge of the basket, for the purposes set forth.

879,104. ORE-CONCENTRATOR. EDWIN M. JAHRAUS, Dayton, Ohio. Filed Nov. 22, 1906. Serial No. 344,652.



1. An ore concentrator, comprising a main frame, a tilting frame movably supported thereby, a separating box carried by the tilting frame, blast mechanism for the box, and an operating shaft for said mechanism arranged below the support for the tilting frame.

2. An ore concentrator, comprising a main frame, a tilting frame movably supported thereon, a separating box carried by the tilting frame, an operating shaft mounted in and arranged below the support for the tilting frame, and means for adjusting the tilting frame relative to the main frame.

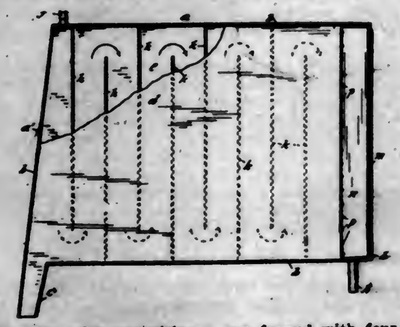
3. An ore concentrator comprising a main frame, an axial shaft supported thereby, a tilting frame mounted upon said shaft, a separating box carried by the tilting frame, blast mechanism for said box, an operating shaft for said blast mechanism, said shaft being mounted in and arranged below the support for the tilting frame, and means for adjusting the frame.

4. An ore concentrator comprising a main frame, an axial shaft mounted on the main frame, a tilting frame mounted on said shaft and having a depending section arranged within the main frame, a separating box supported by the tilting frame, blast mechanism for said box, and an operating shaft for said blast mechanism, said shaft being mounted in the depending section of the tilting frame.

5. An ore concentrator comprising a main frame, an axial shaft mounted thereon, a tilting frame mounted on the axial shaft and having a depending section movable within the main frame, a separator box carried by the tilting frame, blast mechanism for said box, an operating shaft for said mechanism mounted in and movable with the depending section of the tilting frame, power means carried by the axial shaft, and a connection between said power means and the operating shaft.

[Claims 6 to 20 not printed in the Gazette.]

879,105. MILK-COOLER. JOHN W. JONES, Auburn, Wash. Filed July 5, 1906. Serial No. 324,874.



A milk cooler comprising a pan formed with four upwardly extending walls, two side walls and an end wall of said walls being disposed at right angles to one another, the other end wall of said walls being arranged obliquely to the first end wall and being of greater length than the same and extending beyond one of the side walls to form one side of a spout, the bottom of said spout being formed of a continuation of the top of said pan, the other side of said spout being formed of a continuation of one of the said side walls, a milk trough rectangular in cross section fitting between said side walls, an independent strip secured at its upper end to the outer side of said trough and at its lower end being offset and receiving the end wall opposite to the spout, said strip extending substantially the length of said trough, said trough at its front side and in alinement with its bottom having a series of perforations therein, and feet secured to the bottom of said trough and engaging the top of said pan, the height of said feet determining the inclination of the bottom of said trough with respect to the pan top.

879,106. PNEUMATIC HAMMER. JULIUS KELLER, Philadelphia, Pa., assignor, by mesne assignments, to Chicago Pneumatic Tool Company, a Corporation of New Jersey. Filed Dec. 8, 1902. Serial No. 134,272.



1. In a pneumatic tool, a cylinder, a piston and a single valve controlling admission of fluid to both ends of said piston, having a port for the fluid control of said valve opening into the cylinder at a greater distance from either end of the cylinder than the length of the piston.

2. In a pneumatic tool, a cylinder, a piston, a valve controlling admission of fluid to both ends of said cylinder and means for moving said valve operated through a port in the cylinder farther from either end of said cylinder than the length of the piston.

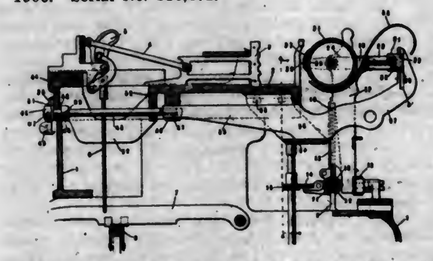
3. A pneumatic tool comprising a cylinder, a single valve located wholly at one end of said cylinder and controlling fluid admission to both ends of said cylinder, the latter having a port for fluid control of movement of said valve and a hammering piston in said cylinder completely passing said port in each direction of its travel.

4. A pneumatic tool comprising a cylinder, a hammering piston therein having a stroke in excess of its length, and a single valve for admitting fluid to both ends of said cylinder and itself controlled by fluid from the cylinder through a single port therein, and said piston passing beyond and uncovering said port when in each of its extreme positions.

5. In a pneumatic tool, a cylinder, a hammering piston whose largest diameter and major portion comprises one unbroken surface, and suitable valve mechanism located wholly at one end of said cylinder and exterior thereto for controlling the inlet of the motive fluid to opposite ends of the piston chamber to reciprocate the piston.

[Claims 6 to 24 not printed in the Gazette.]

879,107. TYPE-WRITING MACHINE. WELLINGTON P. KIDDER, Boston, Mass., and CHARLES W. SPONSEL, Hartford, Conn., assignors to Parker Machine Company, Buffalo, N. Y., a Corporation of New York. Filed May 12, 1906. Serial No. 316,471.



1. The combination, in a typewriting machine, of a platen tied against pressure of the type bars by means anchored in the framing of the machine intermediate its ends and extending rearwardly to a point behind the platen.

2. The combination, in a typewriting machine, of a platen tied against pressure of the type bars by means anchored in the framing of the machine and extending transversely thereof intermediate its ends, the pressure resisting portion thereof being in line with the printing point.

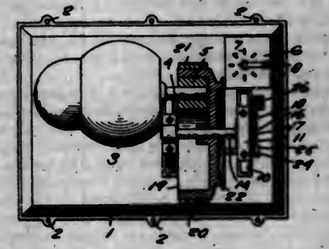
3. The combination with the platen of a typewriting machine, of means which extends transversely of the machine in the central portion thereof for tying the platen to the front of the framework of the machine so that movement thereof is prevented while the printing characters are being impressed against the platen.

4. The combination with the platen of a typewriting machine, of means extending from behind the printing point on the platen and then through the central portion of the machine to the front portion thereof, said means being anchored in the framing of the machine whereby thrusts of the type bars are effectively resisted.

5. In a typewriting machine, the combination of a platen, and pressure-resisting means located directly behind the printing point thereof, said means extending transversely through the central portion of the machine and being anchored to the front portion of the frame of the machine whereby the platen is rendered immovable in the direction of the thrusts of the printing devices.

[Claims 6 to 88 not printed in the Gazette.]

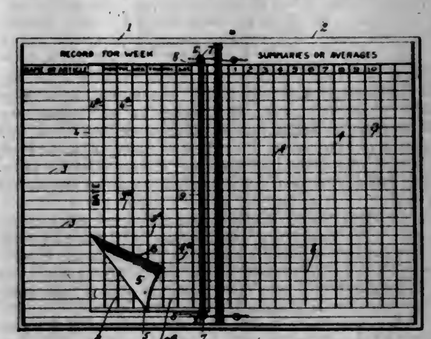
879,108. GEARING. BERNARD A. KING, Birmingham, Ala., assignor to William E. Davis, Birmingham, Ala. Filed May 21, 1907. Serial No. 374,811.



1. The combination with a driving shaft, and a friction wheel carried by said driving shaft, of bracket bearings, disks journaled therein, a lever carried by one of said disks, a shaft journaled eccentrically in said disks, a wheel on said shaft having a dished face for engagement with said friction wheel, said last-named wheel being constructed with a sheave at one side thereof; a band brake for engagement with the periphery of said wheel and means for operating said band brake.

2. The combination with a driving shaft and a friction wheel carried by said driving shaft, of bracket bearings, disks journaled therein, a lever carried by one of said disks, a shaft journaled eccentrically in said disks and a wheel on said shaft having its face dished to afford an inner peripheral surface for engagement with said friction wheel.

879,109. RECORD-BOOK. FREDERICK O. KING, Aitkin, Minn. Filed Dec. 11, 1906. Serial No. 347,253.



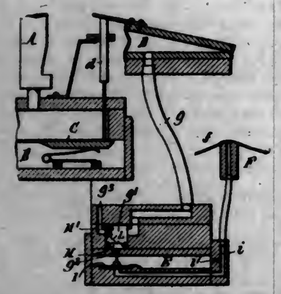
1. A record book having oppositely disposed pages, one of which is provided with a marginal main column and minor columns arranged parallel therewith, divided by horizontal rulings, the opposite page being provided with a series of vertical minor columns parallel with the minor columns of the first page, and divided by horizontal rulings registering with the corresponding rulings of the first page, insert leaves having a gummed edge adapted to be attached to the first page, and provided with minor columns, and horizontal rulings registering with the horizontal rulings of the second page, and means for clamping the free edge of said insert leaves, substantially as shown and described.

2. A record book having oppositely disposed pages, one of which is provided with a marginal main column and minor columns parallel therewith, divided by horizontal rulings, the opposite page having a series of minor columns arranged parallel with the corresponding columns of the first page, and divided by horizontal rulings regis-

tering with the corresponding rulings of the first page, insert leaves provided with an adhesive edge adapted to be attached to the first page at the right of the main column, and provided with minor columns corresponding with those of the first page and divided by horizontal rulings registering with the corresponding rulings of the second page, and an elastic band secured to the first page and adapted to overlap the edges of the leaves, substantially as shown and described.

3. A record book having oppositely disposed leaves, one of which is provided with a main column and a series of minor columns arranged parallel therewith, divided by horizontal rulings, the opposite page having a series of minor columns arranged parallel with the corresponding columns of the first page, and insert leaves provided with an adhesive edge adapted to be attached to the first page at the right of the marginal column and provided with minor columns having horizontal rulings corresponding with the minor columns and rulings of the first page, substantially as shown and described.

879,110. PNEUMATIC ACTION FOR MUSICAL INSTRUMENTS. CHRISTIAN MAERTEN, Jr., Martinsville, N. Y. Filed Apr. 3, 1907. Serial No. 366,145.



1. In a pneumatic action, the combination of a pneumatic, valves controlling the passage of air to and from said pneumatic, means for operating one of said valves, and a lever arm fixed to one of said valves for transmitting the motion of one valve to the other valve, whereby a leverage is created in favor of one valve, substantially as set forth.

2. In a pneumatic action, the combination of a pneumatic, valves controlling the passage of air to and from said pneumatic, means for operating one valve, and a lever arm secured to one of said valves and bearing against the other valve whereby one valve is moved upon a movement of the other valve, substantially as set forth.

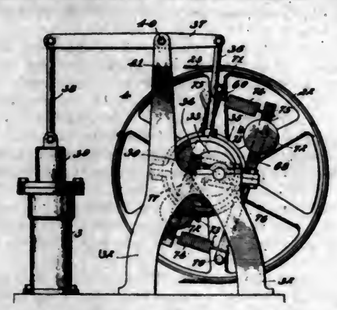
3. In a pneumatic action, the combination of a pneumatic, valves controlling the passage of air to and from said pneumatic, one of said valves being hinged, means for operating one of said valves, and a lever arm which is secured to said hinged valve for transmitting motion from one valve to the other to cause said valves to move together, substantially as set forth.

4. In a pneumatic action, the combination of a pneumatic, valves controlling the passage of air to and from said pneumatic, one of said valves being hinged, means for operating one of said valves, and a lever arm which is secured to said hinged valve and bears against said other valve to be operated thereby, substantially as set forth.

5. In a pneumatic action, the combination of a pneumatic, valves controlling the passage of air to and from said pneumatic, one of said valves being hinged, means for operating one of said valves, a lever arm which is secured to said hinged valve and bears against said other valve to be operated thereby, and means for angularly adjusting said lever arm on the valve to which it is secured, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

879,111. AUTOMATICALLY-CONTROLLED OR SELF-REGULATING PUMPING MECHANISM. MARSHALL MILLER, St. Louis, Mo. Original application filed July 2, 1906, Serial No. 324,441. Divided and this application filed Nov. 12, 1906. Serial No. 343,045.



1. In an apparatus of the class described, the combination of a motor having an outlet pipe provided with a discharge opening above the level of said motor, a pump connected with said motor and adapted to be driven thereby and provided with an outlet pipe leading from said pump to an elevation above the level of the motor, and means for automatically maintaining the pump delivery proportional to the current through the motor.

2. In an apparatus of the class described, the combination of a motor having an outlet pipe provided with a discharge opening above the level of said motor, a pump provided with piston mechanism operatively connected with said motor and adapted to be driven thereby, and means for automatically maintaining the pump delivery proportional to the current through the motor.

3. In an apparatus of the class described, the combination of a motor having an outlet pipe provided with a discharge opening above the level of said motor, a pump provided with piston mechanism operatively connected with the motor and having a discharge pipe provided with a discharge opening above the level of said pump, and means for automatically shortening the pump stroke when the speed increases.

4. In an apparatus of the class described, the combination of a motor, a supply pipe connected with such motor and communicating with a source of water supply, a pump connected with the motor and adapted to be driven thereby, outlet pipes connected with such motor and pump respectively each having a discharge opening above the level of the motor, a supply pipe connected with said pump and communicating with a source of liquid supply, and means for automatically decreasing the speed of delivery of the pump with relation to the speed of the motor, when the speed of the motor increases.

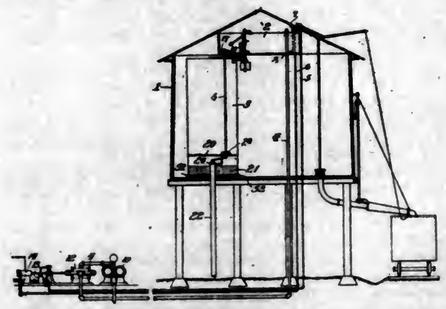
5. In an apparatus of the class described, the combination of a motor, a pump provided with a motor supply pipe connected with the motor, a pump provided with piston mechanism connected with the motor and adapted to be driven thereby, outlet pipes connected with the motor and driven pump and having discharge openings above the level of the motor, automatic means for increasing the length of the stroke of the driven pump without increasing the speed of the motor, and automatic means for decreasing the length of stroke of the driven pump without decreasing the speed of the motor.

[Claims 6 to 14 not printed in the Gazette.]

879,112. WATER-PURIFYING APPARATUS. MARSHALL MILLER, St. Louis, Mo. Filed Mar. 26, 1907. Serial No. 364,643.

1. A water purifying apparatus comprising a mixing tank, a precipitation tank below the mixing tank, a filter, and means operative when the filter becomes clogged to stop the flow of water from the mixing tank to the precipitation tank.

2. A water purifying apparatus comprising a mixing tank, a precipitation tank below the mixing tank, a filter, and means operative when the filter becomes clogged to stop the flow of water from the mixing tank to the precipitation tank and from the precipitation tank to the filter.



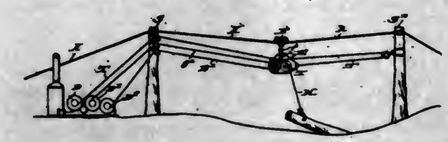
3. A water purifying apparatus comprising a mixing tank, a precipitation tank below the mixing tank, a filter, and means operative when the filter becomes clogged to stop the flow of water from the mixing tank to the precipitation tank and to reverse the flow of water through the filter and discharge from the apparatus such water together with the sludge washed from the filter.

4. A water purifying apparatus comprising a mixing tank, a precipitation tank below the mixing tank, a filter, and means operative when the filter becomes clogged to stop the flow of water from the mixing tank to the precipitation tank and from the precipitation tank to the filter, and to reverse the flow of water through the filter and discharge from the apparatus such water together with the sludge washed from the filter.

5. A water purifying apparatus comprising a mixing tank, a precipitation tank and a filter, a valve between the mixing tank and the precipitation tank, a valve between the precipitation tank and the filter, a pipe leading from the inner side of the filter to a point outside of the apparatus and a drain valve in said pipe, and means operated by the clogging of the filter to close the valves between the mixing tank and precipitation tank and between the precipitation tank and the filter and to open the drain valve.

[Claims 6 to 18 not printed in the Gazette.]

879,113. HOISTING AND CONVEYING DEVICE. THOMAS S. MILLER, South Orange, and JOSEPH H. DICKINSON, Montclair, N. J. Original application filed June 12, 1902, Serial No. 111,331. Divided and this application filed Nov. 28, 1906. Serial No. 345,533.



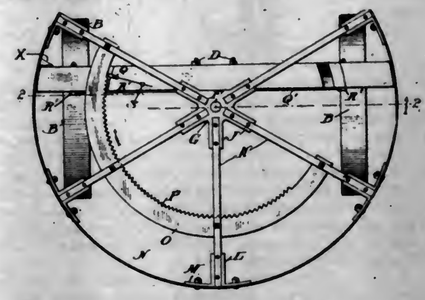
1. In a hoist conveyer, a track, a trolley on said track, a wheel carried by said trolley, hoisting mechanism actuated by said wheel, a cable passing over said wheel, independent winding drums receiving the ends of said cable, and a separate back-haul cable connected to said trolley, substantially as described.

2. In a hoist conveyer, a track, a trolley on said track, a wheel carried by said trolley, hoisting mechanism geared with said wheel, a cable passing over said wheel, independent winding drums receiving the ends of said cable, and a separate back-haul cable connected to said trolley, substantially as described.

3. In a hoisting and conveying device the combination with a trackway, a carriage thereon, means for traversing the carriage, a fall rope drum upon said carriage, and a fall rope upon said drum, of a hoist-operating drum upon the carriage, gear driving connections between the two drums, two distant stationary drums, and a rope extending from one of the distant drums to and about the hoist-operating drum and then back in the direction from which it came to the other distant drum, and means for turning said distant drums at the same or different rates of speed.

4. In a conveying apparatus, in combination, a trackway, a load carriage, a traction rope, a drum for operating the same, a hoist on the load carriage, a rope-drum-engine containing a hoisting-drum and a separate slack-pulling-drum, and a rope extending from one of said drums to and wrapped around a member of said hoist and back again to the other of said drums.

879,114. VOTING-MACHINE. JOHN H. MCELROY, Chicago, Ill. Original application filed Sept. 2, 1899, Serial No. 729,274. Divided and this application filed May 18, 1904, Serial No. 208,513. Renewed July 8, 1907. Serial No. 382,720.



1. In a voting machine, a face plate, a movable curtain support, and a curtain movable with the support, the closed curtain and face plate together constituting the booth to inclose the voter.

2. In a voting machine, a face plate, a curtain support having a curtain thereon and adapted to be moved in the arc of a circle to cover or uncover the face plate, the closed curtain and the face plate together constituting the booth to inclose the voter.

3. In a voting machine, a face plate, and a movable curtain support and a curtain adapted to be opened and closed by a voter, the closed curtain and the face plate together constituting the booth to inclose the voter, which curtain support when restored to normal position causes a movement of selected indicators and their registers.

4. In a voting machine, a curtain, part of which is normally in the rear of the machine, a curtain support and means for moving the support and curtain simultaneously to cover the face of the machine.

5. In a voting machine, a face plate and a curtain support carrying a curtain in a fixed position on the support at all times and adapted to be moved to constitute a booth bounded by the curtain and the face plate and inclosing the voter on all sides.

[Claims 6 to 19 not printed in the Gazette.]

879,115. JOURNAL-SUPPORT FOR CENTRIFUGAL MACHINES. KENNETH K. MCLEOD, White Bear Lake, Minn. Original application filed Aug. 7, 1905, Serial No. 272,936. Divided and this application filed June 7, 1907. Serial No. 377,830.

1. In a machine of the class set forth, supports having openings therethrough, a sleeve passing vertically through said openings, its lower end having a shoulder resting freely upon the lower support, and its upper end threaded and provided with a stationary cone, an adjusting cone on the upper end of said sleeve, means for locking said adjusting cone in place, a resilient collar impinged between said cones and resting in the upper opening to laterally support

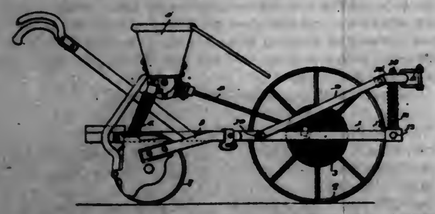
the upper end of said sleeve, bearings in the upper and lower ends of said sleeve, and an upright shaft in said bearings.



2. In a machine of the class set forth, a sleeve having a shoulder on its lower end, a frame below said shoulder and supporting the upper end of said sleeve, a step bearing in the lower end of said sleeve, a journal bearing in the upper end of said sleeve, a lock nut below said frame and holding said step bearing in said sleeve, a vertical shaft revolving upon said step bearing and in said journal bearing, and a spring between the upper end of the sleeve and frame, permitting said upper end to move laterally upon said shoulder and the shaft to assume that position in which it will revolve without vibration.

3. A device of the class set forth, consisting of a pair of supports having vertical openings 4 and 17 passing therethrough, a substantially vertical sleeve passing freely through said openings and provided with a shoulder 6 above its lower end and resting upon the lower support and with a cone 12 upon its upper end, another cone 14 threaded below the upper cone on said sleeve, a lock nut 20 adapted to tighten against the lower cone, an expansible collar in the opening 17 impinging against the surface of said cones and permitting the upper end of said sleeve to move laterally, a bearing 11 supported on the upper end of said sleeve, and a vertical shaft C in said bearing, for the purposes specified.

879,116. DRAFT MECHANISM FOR SEEDING-MACHINES. CHARLES H. PELTON, Springfield, Ohio, assignor to The Thomas Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Original application filed Mar. 4, 1907, Serial No. 360,458. Divided and this application filed June 24, 1907. Serial No. 380,395.



1. In a device of the character described, the combination, with a frame, and a traction wheel mounted therein, of a draft bar pivotally connected to said frame, and resilient means controlled by the draft on said draft bar for exerting pressure on said traction wheel.

2. In a device of the character described, the combination, with a frame, and a traction wheel mounted therein, of a pressure device comprising a draft bar pivotally connected to said frame, and a spring interposed between said draft bar and said frame and adapted to exert pressure on said traction wheel, said pressure being controlled by the draft on said draft bar.

3. In a device of the character described, the combination, with a frame, and a traction wheel journaled therein, of a draft bar pivotally connected to said frame in the rear of the axle of said traction wheel and extending in front of said axle and above said frame, and a spring interposed between said draft bar and said frame.

4. In a device of the character described, the combination, with a frame, and a traction wheel journaled therein, of a draft bar pivotally connected to said frame, a rod secured to said frame at one end and loosely connected at its opposite end to said draft bar, and a spring coiled about said rod between said draft bar and said frame.

5. In a device of the character described, the combination, with a frame, and a traction wheel journaled therein, of a draft bar pivotally connected to said frame and having an aperture near the forward end thereof, a rod connected to said frame in front of the point at which said draft bar is connected thereto and extending through the aperture in said draft bar, and a spring coiled about said rod between said draft bar and said frame.

[Claim 6 not printed in the Gazette.]

879,117. RECTIFIER AND DETECTOR. GEORGE W. PIERCE, Cambridge, Mass., assignor to Massachusetts Wireless Equipment Company, Boston, Mass., a Corporation of New York. Filed Apr. 5, 1907. Serial No. 366,568.



1. A rectifier for oscillatory currents consisting of a compound of silver and tellurium.

2. A rectifier for oscillatory currents consisting of crystalline telluride of silver.

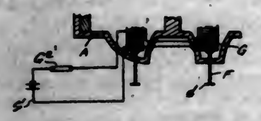
3. A rectifier for oscillatory currents consisting of hessite.

4. A receiver for wireless telegraphy systems consisting of a compound of silver and tellurium in contact with two electrodes.

5. A rectifier for oscillatory currents consisting of hessite in contact with two electrodes.

[Claim 6 not printed in the Gazette.]

879,118. MOLDING-MACHINE. JOHN A. RATHBONE and JOHN T. CROSSLEY, Utica, N. Y.; said Crossley assignor to said Rathbone. Filed Mar. 5, 1906. Serial No. 304,363.



1. The combination with a supporting head for the mold flask, a superposed pattern and means for relatively moving the same to compact the sand against the pattern face, of means for holding a member in fixed relation to said pattern face during the operation of compacting the sand, whereby the said member is embedded in the sand.

2. The combination with a mold flask supporting head, a superposed pattern and means for relatively moving the same to compact the sand, of means for holding a member depending from said pattern face during the operation of compacting the sand, and for releasing said member to permit the withdrawal of the pattern.

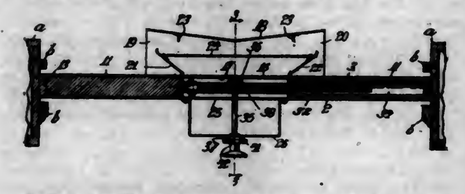
3. In a molding machine the combination with a downfacing pattern, of means for detachably securing a pendent member thereto to embed the same within the sand.

4. In a molding machine the combination with a downfacing pattern and means for compacting the sand thereagainst, of means for holding a pendent member in fixed relation to said pattern face during the compacting operation, and for then releasing the same.

5. In a molding machine the combination with a downfacing pattern, of means for holding a pendent chaplet in fixed relation to said pattern face during the operation of compacting the sand, and for subsequently releasing the same to permit the withdrawal of the pattern.

[Claims 6 to 10 not printed in the Gazette.]

879,119. VENTILATOR. ALVIN B. REDELL and JOHN A. PANTER, Chicago, Ill., assignors to National Ventilator and Mfg. Co., Chicago, Ill., a Corporation of Illinois. Filed Jan. 27, 1906. Serial No. 298,175.



1. In a ventilator, in combination, a body portion comprising two plates spaced apart; extension members slidably mounted between and guided and supported by said plates; packing members carried by said extension members and extending through the space between said plates; and a ventilator device carried by said body portion.

2. In a ventilator, in combination, a body portion comprising two plates spaced apart, open spaces being provided between the upper and lower edges of said plates; extension members slidably mounted between and guided and supported by said plates; parts on said extension members extending through said open spaces; and a ventilator device carried by said body portion.

3. A ventilator structure comprising two metal plates secured together near their middle portions, open spaces being provided between the upper and lower edges of the outer portions of said plates; guiding means on said plates; extension members slidably mounted upon said guiding means; and parts on said extension member extending through said open spaces.

4. A ventilator structure comprising two metal plates secured together near their middle portions; packing strips at the edges of said plates; extension members slidably mounted between and guided and supported by said plates; and packing strips carried by said extension members.

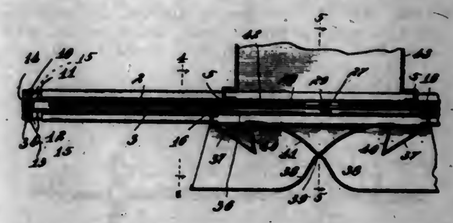
5. In a ventilator, in combination, a body portion comprising two side plates; extension members slidable between said side plates; a rack bar pivoted at one end to each of said extension members; a pinion adapted to mesh with each of said racks; and means for rotating said pinion.

[Claims 6 to 10 not printed in the Gazette.]

879,120. VENTILATOR. ALVIN B. REDELL and JOHN A. PANTER, Chicago, Ill., assignors to National Ventilator and Mfg. Co., Chicago, Ill., a Corporation of Illinois. Filed Apr. 11, 1907. Serial No. 367,634.

1. A ventilator structure comprising two metal plates secured together near their middle portions and spaced apart, said plates being bent to provide guide ways therein; and an extension member slidably mounted upon said ways between said plates at each end thereof, said ways being adapted to hold said plates in proper relation to said extension members.

2. A ventilator structure comprising two plates secured together near their middle portions and spaced apart; oppositely-facing, grooved guide-ways on said plates; and an extension member having portions slidably mounted upon and extending into the grooves of said guide-ways.



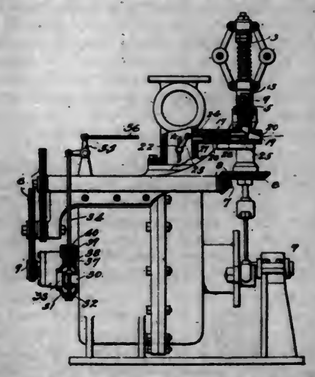
3. A ventilator comprising two metal plates secured together near their middle portions and spaced apart, each of said plates being bent to provide two oppositely-facing, grooved guide-ways upon its inner side; and an extension member having portions slidably mounted upon and extending into the grooves of said guide-ways.

4. A ventilator structure comprising two metal plates secured together, the lower edges of said plates being bent to form guide flanges, a guide flange at the upper end of one of said plates, a closing flange at the upper end of the other plate, and extension members slidably mounted between said plates.

5. A ventilator structure comprising a body portion having guiding means, and an extension member slidably mounted in said body portion, said extension member comprising two plates bent to provide members adapted to slide upon said guiding means, said guiding means and the members sliding thereon being adapted to hold the sides of said body from spreading.

[Claims 6 to 14 not printed in the Gazette.]

879,121. SAFETY-STOP FOR STEAM-TURBINES. HALE G. ROBINSON, Sandusky, Ohio. Original application filed Dec. 5, 1906, Serial No. 346,246. Divided and this application filed Sept. 30, 1907. Serial No. 395,055.

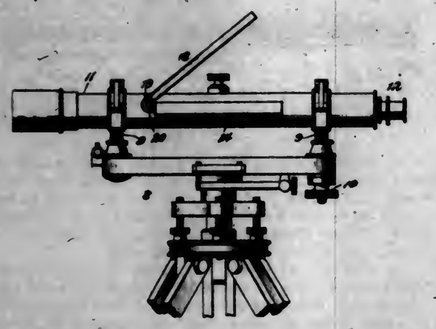


1. The combination of a centrifugal governor, a main steam valve, a vacuum breaker, a latch adapted to be raised by the governor when a certain speed is exceeded, means normally urging the steam valve to close and the vacuum breaker to open, and separate bolts one connected with the valve and one with the breaker and both engaged by the latch.

2. In a turbine, the combination of a centrifugal governor, a collar carried by the governor, a latch, a hook carried by the latch adapted to be engaged by the collar, two bolts engaged by the latch, a steam main, a valve therein, means urging the valve to close, a passage connecting the exhaust with a condenser, a vacuum valve for connecting

the exhaust with atmosphere, means normally urging the valve to open, and a bolt connected with the vacuum valve and engaging the latch.

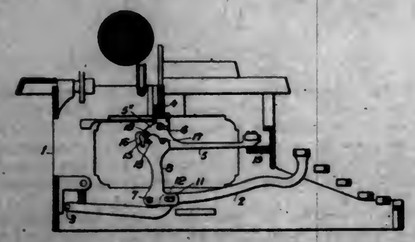
879,122. LEVEL. GEORGE N. SAEGMULLER, Rochester, N. Y., assignor to Bausch, Lomb, Saegmuller Co., Rochester, N. Y. Filed Aug. 26, 1907. Serial No. 390,194.



1. In an instrument of the character set forth, the combination with a telescope having cross hairs therein, of a support for the telescope including means for tilting it in a vertical direction, a level mounted at one side of the telescope out of vertical alinement therewith and adjustable with said telescope, and a reflector associated with the level and disposed out of vertical alinement with the telescope, said level being located in the range of vision of one eye of the user of said telescope when the other eye is employed in sighting through the telescope.

2. In an instrument of the character set forth, the combination with a telescope, of a support for the telescope including means for tilting it in a vertical direction, a casing connected to one side of the telescope and adjustable therewith, said casing having an open top and being disposed out of vertical alinement with the telescope, a spirit level located in the casing, and having a bubble visible through said open top, a scale with which the bubble is movably associated, and a swinging mirror located over the casing and level, out of vertical alinement with the telescope and in the direct range of vision of one eye of the user of said telescope when the other eye is applied to the eye-piece of said telescope.

879,123. TYPE-BAR MECHANISM FOR TYPE-WRITERS. GEORGE A. SMITH, New York, N. Y., assignor of sixteen one-hundred-and-fourths to James W. Hennessey, New York, N. Y., forty-six one-hundred-and-fourths to Arthur Letts, Los Angeles, Cal., and twenty-one one-hundred-and-fourths to Frederick H. Ward, Brooklyn, N. Y. Filed Dec. 17, 1906. Serial No. 348,297.



1. In a typewriter, the combination of a finger-lever, a pivoted angle-lever directly connected thereto and movable thereby, said angle-lever having its upper end formed with a nose and with a claw at the rear of the nose and with a recess at the front of the nose, a pivoted type-bar having a pin projecting therefrom to be engaged by the said claw and having a second pin which is engaged by the recess in front of the nose of the angle-lever.

2. In a typewriter, the combination of a pivoted type-bar having a pin projecting laterally therefrom at the rear of its pivot and a second pin below said pivot, a pivoted angle-lever shaped at its upper end with a nose and with a claw at the rear of the nose to engage the said two projecting pins, and a finger-lever operatively connected with the lower end of said angle-lever.

3. In a typewriter, the combination of a pivoted type-bar having an enlargement at its pivoted end, pins formed on said enlargement, a lever formed with a nose and with a claw at the rear of said nose to engage one of the pins and thereby pivotally move said type-bar and being formed also at the front of the nose with a recess to serve at times as a seat for the second pin, and means for actuating said lever.

4. In a typewriter, the combination of a pivoted type-bar having a pin extending laterally therefrom at the rear of its pivot and a second pin below said pivot, of a pivoted angle-lever having its upper end formed with a nose and with a claw at the rear of said nose to engage said first-named pin and thereby pivotally move said type-bar, there being at the front of said nose a recess which serves as a seat for said second pin when the type-bar is in position of rest, and a finger-lever operatively connected with the lower end of said angle-lever.

879,124. BIB. MILTON S. THOMPSON, Boston, Mass., assignor to The Stork Company, Boston, Mass., a Corporation of Maine. Filed Mar. 29, 1905. Serial No. 252,679.



1. As an improved article of manufacture, a bib made up of light pliable waterproof material that is folded to provide a pocket, a line of stitches adjacent to the upper edge of the pocket, a non-corrosive malleable metal bar located within a tuck formed by the line of stitches, for the purpose set forth.

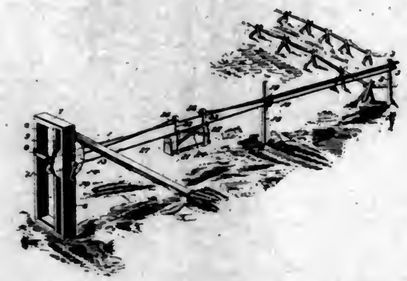
2. A child's bib having a pocket formed by folding the lower edge of the bib forward and upward and detachably securing the same at the corners to the body or upper part of the bib, then bending the lower corners of the fold backward and likewise detachably securing them to the back of the body of the bib and forming a loop along the upper front edge of the pocket, and a stay consisting of a cylindrical bar or rod of non corrosive malleable metal located in the loop, such rod or bar being of less length than the looped upper edge of the pocket, substantially as shown.

3. In combination with a bib having a pocket, a malleable and non corrosive metal rod attached adjacent to the upper edge of the front portion of the pocket, such rod when bent retaining its curvature to hold the pocket open, for the purpose set forth.

4. A child's bib provided with a pocket of flexible material, a tuck in the upper edge of the pocket, and a non-

resilient and pliable metal bar inclosed within the tuck, such bar being of less length than the upper edge of the pocket, for the purpose set forth.

879,125. MAIL-CARRIER. RANDLE P. YOCOM, Chebanse, Ill. Filed July 25, 1907. Serial No. 385,564.



1. In a device of the character described, the combination of a track, standards, brackets carried by the standards and provided with upwardly extending end portions supporting the track, a car mounted upon the track, a guide wheel mounted upon the upwardly extending portion of the bracket, an operating cable for the car designed to engage the guide wheel, and a guide carried by the bracket for leading the cable into engagement with the guide wheel.

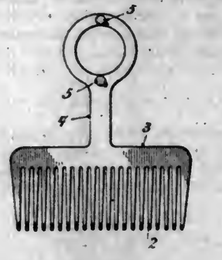
2. In a device of the character described, the combination of a track, standards, brackets carried by the standards and provided with upwardly extending end portions engaging the track, the said end portions being formed with inclined offset portions, a car mounted upon the track, a guide wheel mounted upon the upturned end of the bracket, an operating cable for moving the car, the said cable being designed to engage the guide wheel, and a guide member coöperating with the inclined offset of the bracket to lead the cable into engagement with the guide wheel.

3. In a device of the character described, the combination of a track, standards, brackets carried by the standards and provided with upturned ends engaging the track, the said upturned ends being formed with inclined offsets, a car mounted upon the track, a guide wheel mounted upon the upturned end of the bracket, an endless operating cable for moving the car, a guide member coöperating with the inclined offset of the bracket to hold the upper portion of the cable in engagement with the guide wheel, and a pulley pendent from the bracket for engaging the lower portion of the cable.

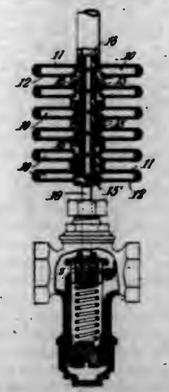
4. In a device of the character described, the combination of a track, means for supporting the track, a car mounted upon the track, a frame at one end of the track comprising side pieces, a bar spaced from one of the side pieces, a shaft journaled between the said bar and opposite side piece and projecting into the space between the bar and adjacent side piece, a pulley rigid with the shaft, a pinion rigid with the shaft and located in the space between the bar and the adjacent side piece of the frame, a gear wheel meshing with the pinion and also mounted between the bar and adjacent side piece of the frame, means for operating the gear wheel, and an endless operating cable for the car, the said cable passing around the pulley.

879,126. COMB. ANNA A. ANGUS, New York, N. Y., assignor of one-half to Helen D. Elwell, New York, N. Y. Filed Mar. 3, 1906. Serial No. 303,946.

A head-dress device consisting of a comb having an extension extending upwardly from its rim approximately midway the ends of the comb, said extension having a ring at its upper end and said ring being provided with a lug extending forwardly from the face of the ring.



879,127. PRESSURE-REGULATOR. ADOLF BELER, Pittsburg, Pa., assignor to Beler Water Heater Co., Pittsburg, Pa. Filed Oct. 31, 1907. Serial No. 400,013.



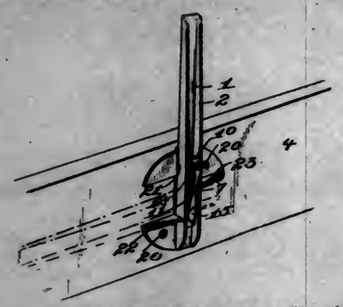
A fluid pressure regulator consisting of a series of superposed diaphragms arranged in pairs, the diaphragms of each pair being connected at their peripheries to form an expansion compartment, each of said diaphragms having a central orifice, a hub secured within and extending through each orifice, the inner or adjoining ends of the hubs constituting outlet slits opening into the compartments, each of said hubs having a threaded bore extending therethrough, and adjustable pipe connections between the hubs and extending into the bore thereof, said connections being disposed in alinement, a supply pipe adjustably connected to and opening through the diaphragm at one end of the series, and a valve fixedly connected to the diaphragm at the outer end of the series.

879,128. CAR-STANCHION. ROBERT P. DE REMER, Houma, La., assignor of one-half to Alfred T. Gerrans, Houma, La. Filed Nov. 4, 1907. Serial No. 400,571.

1. A car stanchion comprising a bar pivoted at its lower end to the side of a car and capable of being shifted from a horizontal to a vertical position, an arresting plate interposed between the bar and the side of the car and mounted upon the pivotal connection between the bar and the car, said plate provided with means for limiting the movement of the bar in either direction and further having a shoulder for maintaining the bar in a vertical position, a locking member bearing against the bar, and a locking lever carried by said member, bearing against it and the said bar for maintaining the latter in close contact with said plate.

2. A car stanchion comprising an arresting plate provided with a pair of wings and a vertically extending shoulder, a pivoted bar arranged against the outer face of

said plate and adapted to be maintained in a vertical position by said shoulders and wings and further having its movement limited in either direction by said wings, a locking member, and a locking lever carried by said member engaging it and the said bar for maintaining the latter in close contact with said plate.



3. A car stanchion comprising an arresting plate provided with a pair of wings and a vertically extending shoulder, a pivoted bar arranged against the outer face of said plate and adapted to be maintained in a vertical position by said shoulder and said wings and further having its movement limited in either direction by said wings, and a lever and a locking member bearing against the lower portion of the bar for keeping it in close contact with said plate.

4. A car stanchion comprising an arresting plate, a shiftable bar, a pivot for the bar, a locking plate mounted upon the pivot and engaging the lower portion of the bar for maintaining it in its shifted position, and a lever carried by said locking member and adapted to engage the plate and the bar for maintaining the bar in close contact with the plate.

5. A car stanchion comprising a fixed plate provided with a shoulder and a pair of wings, a pivot extended through said plate, a locking member mounted upon the pivot, a bar mounted upon said pivot and interposed between the locking member and the plate, and a cam lever carried by the locking member and adapted when shifted to locking position to maintain said bar in close contact with said plate.

[Claim 6 not printed in the Gazette.]

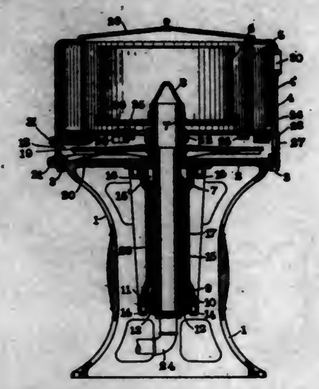
879,129. SEPARATION OF GASES. JAMES DEWAR, Cambridge, England. Original application filed Apr. 25, 1905, Serial No. 257,352. Divided and this application filed Jan. 4, 1906. Serial No. 294,669.

1. The method of separating gases of vapors which boil at temperatures below 0° C. by absorbing some of the constituents of the mixture, which method consists in exposing the mixture to charcoal cooled to a temperature below 0° C. approximately equal to the boiling point of the gas to be absorbed, and removing the gases that remain unabsorbed.

2. The method of separating gases or vapors which boil at temperatures below 0° C. by absorbing some of the constituents of the mixture, which method consists in exposing the mixture to charcoal cooled to a temperature below 0° C. approximately equal to the boiling point of that gas among the gases to be absorbed which has the lowest boiling point, then slowly raising the temperature of the charcoal and collecting separately the gases expelled therefrom as the temperature rises.

879,130. CENTRIFUGAL MACHINE. WILLIAM L. D'OLIER, Philadelphia, Pa. Filed Mar. 26, 1906. Serial No. 308,073.

1. In combination, a rotatable hollow shaft, a centrifugal basket secured thereto, a perforated cap within the basket and secured upon said shaft, means for admitting a heating agent to said basket, and a pipe extending into said hollow shaft, whereby said heating agent may pass out through said cap, hollow shaft and pipe.



2. In combination, a rotatable hollow shaft, a centrifugal basket secured thereto, a perforated cap secured upon said shaft within said basket, an exhaust pipe communicating with said hollow shaft, a steam motor driving said hollow shaft, and means for admitting exhaust steam from said motor to said basket, said steam adapted to heat the contents of the basket and to pass out through said cap, hollow shaft and exhaust pipe.

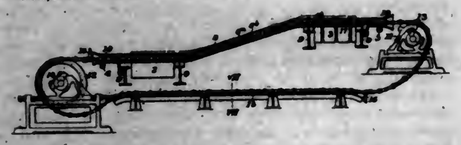
3. In combination, a rotatable shaft, a centrifugal basket secured thereto within a curb chamber, the rotatable element of a fluid motor secured upon said shaft in a chamber independent of said curb chamber, and means for permitting escape of exhaust fluid from said motor after passing through said basket.

4. In combination, a hollow rotatable shaft, a centrifugal basket secured thereto within a chamber, the rotatable element of a fluid motor secured upon said shaft in a chamber independent of said chamber surrounding said basket, means for admitting a heating agent to the basket chamber, and means permitting the exit of said heating agent through said hollow shaft.

5. In combination, a rotatable hollow shaft, a centrifugal basket secured thereon, the rotatable element of a fluid motor secured upon said shaft, and means for directing exhaust fluid from said motor through said basket and through said hollow shaft.

[Claims 6 to 14 not printed in the Gazette.]

879,131. TRANSFER SYSTEM. KIRTLAND C. GARDNER, Pittsburg, Pa., assignor of one-half to United Engineering & Foundry Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Apr. 4, 1907. Serial No. 366,375.



1. In metal transfer apparatus, a continuous flexible carrier, dog pivoted thereto, means for normally holding the dog in its operative position, and means at different points in the path of movement of the dog whereby it may be caused to swing at any one of said points to stop the metal; substantially as described.

2. In metal transfer apparatus, a carrier chain, a dog pivoted thereon, means for normally holding the dog in its operative position, and means at different points in the path of movement of the dog whereby it may be caused to swing at any one of said points to stop the metal, substantially as described.

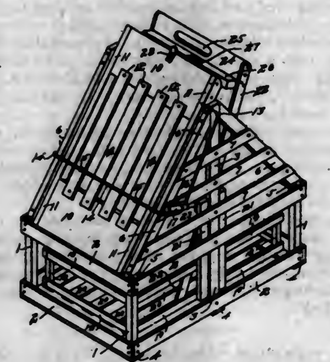
3. In metal transfer apparatus, a chain, a dog pivoted thereon, and a dog-support having removable sections arranged to change the point where the dog tilts to release the metal, substantially as described.

4. In metal transfer mechanism, a continuous chain having dogs pivoted thereto, hinged supports for the dogs at different points in the travel of the chain, and means for dropping any one of said supports to cause the dogs to tilt; substantially as described.

5. In metal transfer mechanism, a continuous carrier chain having dogs pivoted thereto, a bottom support for said dogs having hinged sections or doors, supports for said sections or doors, and means for disengaging the sections or doors from their supports; substantially as described.

[Claim 6 not printed in the Gazette.]

879,132. POULTRY-TRAP. BERTHA M. HANNES, St. Louis, Mo., assignor to J. E. Richards, Dayton, Ohio. Filed Nov. 13, 1907. Serial No. 401,911.



1. In a poultry trap, a stationary lattice structure forming the inclosure for the nest and consisting of corner posts united to side and end panels, and a super structure joining the same and consisting of converging strips extending from the corner posts, upright posts extending from the lower structure to the apex of the super structure, parallel panels uniting the converging strips with said upright posts, a trap door on one side of the super structure, a resilient frame, the upper ends of which form the pivots of the trap door and the lower portion of which is united to the outer side of said trap door, means on the super structure to maintain the trap door in its closed position, the lower portion of said trap door being adapted to interlock with the means for maintaining the trap door closed, a nest frame on the interior of the lattice structure, guide strips on each side of the nest frame, said guide strips inclosing opposite sides of the upright posts which extend from the lower structure to the super structure, an inclined frame secured to the opposite sides of the nest frame and extending through the top of the super structure, and interlocking detents on the upper portion of the trap door and the inclined frame adapted to engage each other to hold the nest frame in a suspended position and the trap door in an open position, substantially as and for the purposes specified.

2. A poultry trap comprising an outer lattice frame-work with a converging super structure of lattice work, upright posts extending centrally on each side of said outer lattice frame-work and the super structure, a trap door hinged to one side of the super structure and provided with pivots, a locking lug on each side of the super structure, a resilient frame extending from the pivots of the trap door across the lower portion of the trap door and coöperating with said lugs to maintain the trap door in a closed position, a nest frame on the inner side of the lattice structure, an inclined frame attached to the nest frame and extending through the rear side of the super structure, and detents on the upper portion of said inclined frame and the trap door adapted to interlock to maintain the nest frame in a suspended position and the trap door in an open position, substantially as and for the purposes specified.

879,133. BOTTLE-FILLING APPARATUS. DANIEL J. DAVIS, Chicago, Ill., assignor of one-third to Stephen J. Davis and one-third to Albert J. Davis, both of Chicago, Ill. Filed May 15, 1905. Serial No. 260,452.



1. In a bottle-filling apparatus, a filling-tube adapted to be connected with a source of supply and having lateral openings through its lower portion, the tube being closed below said openings, a valve secured rigidly to said tube below said openings, a sleeve inclosing and having a vertical movement relative to said tube, being spaced laterally therefrom in the region of and beneath said openings, there being thus formed an annular discharge-chamber between the tube and sleeve, and the lower end of the sleeve being disposed a suitable distance beneath said openings and constituted as a seat for closing against said valve, and an air-tube adapted to permit escape of air within the bottle.

2. In a bottle-filling apparatus, a filling-tube adapted to be connected with a source of supply and having lateral openings through its lower portion, an air-tube secured within said filling-tube and the closing the same below said openings, an outward-projecting valve secured to the filling-tube below said openings, and a sleeve inclosing and having a vertical movement relative to said filling-tube, being spaced laterally therefrom in the region of said openings, there being thus formed an annular discharge-chamber between the filling-tube and sleeve, and the lower end of the sleeve being disposed a suitable distance beneath said openings and constituted as a seat for closing against said valve.

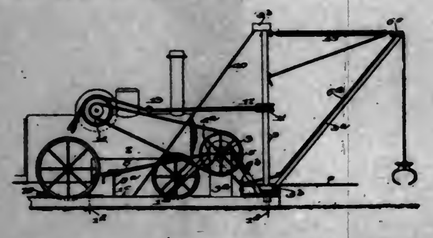
3. In a bottle-filling apparatus, a filling-tube adapted to be connected with a source of supply, and having lateral openings through its lower portion, the tube being closed below said openings, a valve secured rigidly to said tube below said openings, a sleeve inclosing said tube, being slidably fitted on the upper portion thereof and of enlarged bore at its lower portion, thus forming an annular discharge chamber between the tube and sleeve in the region of said openings, and the lower end of the sleeve being disposed a suitable distance beneath said openings and constituted as a seat for closing against said valve, and an air-tube adapted to permit escape of air within the bottle.

4. In a bottle-filling apparatus, a filling-tube adapted to be removably connected with a source of supply and having lateral openings through its lower portion, an air-tube

within the filling-tube, having its lower end screwed into the interior thereof below said openings, an outward-projecting valve secured to said filling-tube below said openings, and a sleeve inclosing and having a vertical movement relative to said filling-tube, being spaced laterally therefrom in the region of said openings, there being thus formed an annular discharge-chamber between the filling-tube and sleeve, and the lower end of the sleeve being disposed a suitable distance beneath said openings and constituted as a seat for closing against said valve.

REISSUES.

12,749. LAND-CLEARING MACHINE. WILLIAM M. SEYMOUR, Marshfield, Wis., assignor of one-half to John P. Hume, Marshfield, Wis. Filed Aug. 15, 1907. Serial No. 388,747. Original No. 758,480, dated Apr. 26, 1904, Serial No. 187,975.



1. In a machine of the character described, a base having longitudinal wheel-receiving channels or grooves and equipped with rods or guards secured to said base at their ends, parallel with said grooves.

2. In a machine of the character described, a base having lateral hinged or folding sections provided with anchoring-stakes adapted to be driven into the surface or ground.

3. In a machine of the character described, a suitably mounted and actuated shaft carrying a fixed pulley, winding-drums loose upon said shaft and equipped with clutches adapted to laterally engage said fixed pulley, manually-actuated means for effecting such engagement of said clutches, a motor suitably arranged with relation to said shaft, cables connected to and coiled upon said winding-drums, an upright shaft, with its swinging beam, pivotally mounted in position and carrying a horizontal pulley, additional cables oppositely actuating said horizontal pulley and connected to additional actuating drums or pulleys of said motor, with their drum-actuated end portions adapted to be manually tightened around said drums or pulleys.

4. In a machine for pulling and piling stumps, a skidding-frame, a shaft on the frame carrying a fixed pulley, a motor on the frame connected to the shaft, winding drums loosely mounted on the shaft, clutches to connect the drums to the fixed pulley, manually-actuated means to operate the clutches, cables connected to the drums, an upright shaft with its swinging beam pivotally mounted on the frame, one of the cables running from its drum to the field, and the other running from its drum over a pulley on the beam, the frame and associated parts being adapted to be skidded over the ground.

5. In a machine for pulling and piling stumps, a skidding-frame, a shaft on the frame, a motor on the frame connected to the shaft, winding drums mounted on the frame, means to connect the drums to the shaft, cables connected to the drums, an upright shaft with its swinging beam pivotally mounted on the frame, one of the cables running from its drum to the field, and the other from its drum over a pulley on the beam, the frame and associated parts being adapted to be skidded over the ground.

[Claim 6 not printed in the Gazette.]

12,750. FACE-PLATE FOR BURIAL-CASKETS. NATIONAL CASKET COMPANY, Oneida, N. Y., a Corporation of New York, assignee of William Hamilton, deceased. Filed Dec. 18, 1907. Serial No. 407,092. Original No. 619,567, dated Feb. 14, 1899, Serial No. 661,782.



1. The combination with a burial casket cover portion, of a relatively movable face-plate comprising a supporting member, and a stretched sheet of transparent, non-brittle gauze mounted upon said supporting member.

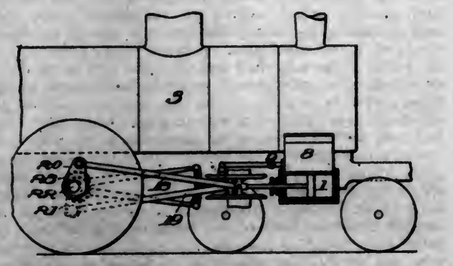
2. The combination with a burial casket cover portion, of a face-plate which comprises a frame and a sheet of transparent, non-brittle gauze evenly stretched to said frame and held thereby along each edge, whereby it is uniformly supported and may be handled as a unit.

3. The combination with a burial casket cover portion, of a face-plate slidably mounted thereon which comprises a frame and a sheet of transparent, non-brittle gauze evenly stretched to said frame and held thereby along each edge, whereby it is uniformly supported and may be handled as a unit.

4. In constructions of the class described, in combination, a casket cover, a frame movably mounted upon said casket cover, and a sheet of gauze evenly stretched over and secured to said frame, whereby it is supported and held in position throughout each edge.

5. In constructions of the class described, in combination, a casket cover provided with guiding slots, and a face-plate slidably mounted within said slots, said face-plate comprising a frame and a sheet of transparent gauze evenly stretched over said frame along each edge and secured thereto.

12,751. COMPOUND LOCOMOTIVE. THOMAS W. WORSDELL, Carnforth, RICHARD H. LAPAGE, Walmer, and JOHN C. TAITE, London, England, assignees of Friedrich Wilhelm August von Borries, deceased. Filed Dec. 13, 1906. Serial No. 347,739. Original No. 803,981, dated Nov. 7, 1905, Serial No. 621,831.



1. In four-cylinder compound locomotives, the combination with a driving-shaft and a steam-generator, of one high-pressure and one low-pressure cylinder and reciprocating pistons in each of the cylinders and cranks on the driving-shaft including an angle differing somewhat from one hundred and eighty degrees, all arranged on each side of the engine, and operating connections of the cranks with the pistons, each crank on either side of the engine being arranged at right angle relatively to the corresponding crank of the opposite side of the engine, a steam-distributing device between each high-pressure and the corresponding low-pressure cylinder, and means for producing a reciprocating movement of the steam-distributing device,

steam-passages, and overlapping means on each steam-distributing device, the laps for each high-pressure cylinder being larger than those for each low-pressure cylinder.

2. In four-cylinder compound locomotives in combination, a high-pressure and a low-pressure cylinder of different diameters and pistons movable in said cylinders, connections of the high-pressure piston and of the low-pressure piston of either side of the engine with the engine-shaft and cranks connected to the high-pressure and to the low-pressure pistons and rigidly mounted on the engine-shaft, the crank of one of the pistons including an angle differing somewhat from one hundred and eighty degrees with the crank of the other piston of the same side of the engine, means to connect said cranks with the pistons, a steam-chest intermediate between each high-pressure and the corresponding low-pressure cylinder, connecting-passages between the steam-chest and the high and low pressure cylinders, steam-escape passages in the low-pressure cylinders, a piston-valve in common for each high-pressure and the corresponding low-pressure cylinder and movable in the interior of the steam-chest, rings arranged steam-tight, in the steam-chest and surrounding the said piston-valve, the middle ring having a larger outer surface than the other rings, a steam-entrance passage for live steam in the walls of the high-pressure cylinder, connecting-passages between the high-pressure cylinder and the lower end of the low-pressure cylinder and opening out a small distance from the steam-entrance opening, connecting-passages between the steam-chest and the low-pressure cylinder opening out into an aperture provided in the walls of the low pressure cylinder and situated in the proximity of the upper and lower ends of the low-pressure cylinder, exhaust-openings near the ends, of the steam-chest and means for imparting a reciprocating movement to the piston-valve and the entrance-shaft.

3. In a compound locomotive, the combination with a high pressure cylinder and a low pressure cylinder, of reciprocating pistons in said cylinder, driving cranks with which said pistons are operatively connected, the angle between the driving cranks differing slightly from 180 degrees, a distributing device controlling the supply of motor fluid to and from said cylinders, and means for actuating said distributing device.

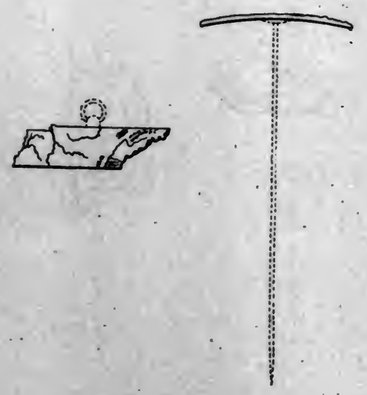
4. In a compound locomitive, the combination with a high pressure cylinder and a low pressure cylinder, of reciprocating pistons in said cylinder, driving cranks with which said pistons are operatively connected, the angle between the driving cranks differing somewhat from 180 degrees, a distributing device controlling the supply of motor fluid to and from said cylinders, means for actuating said distributing device, and overlapping means on said distributing device, the lap for the high pressure cylinder being larger than that for the low pressure cylinder.

5. In a 4-cylinder compound locomotive, the combination with the high pressure cylinder and a low pressure cylinder arranged on each side of the locomotive, of reciprocating pistons in said cylinders, driving cranks with which said pistons are operatively connected, the angle between the driving cranks on each side of the locomotive differing slightly from 180 degrees, each crank on either side of the engine being arranged at right angles relatively to the corresponding crank on the opposite side of the engine, a distributing device between each high pressure and the corresponding low pressure cylinder, and means for actuating said distributing device.

[Claim 6 not printed in the Gazette.]

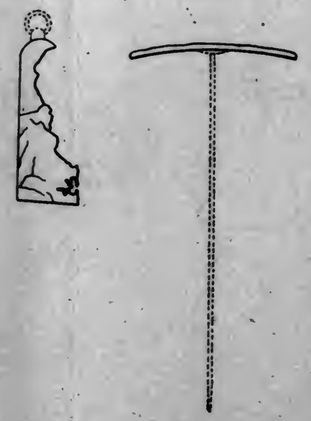
DESIGNS.

39,084. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,281. Term of patent 7 years.



The ornamental design for a charm, pin, or similar article, as shown.

39,085. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,282. Term of patent 7 years.



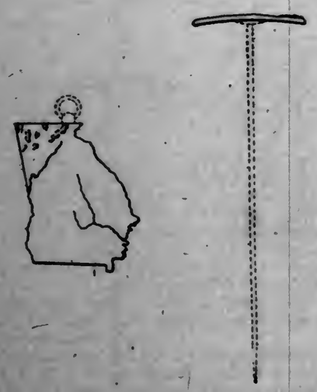
The ornamental design for a charm, pin, or similar article, as shown.

39,086. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,283. Term of patent 7 years.



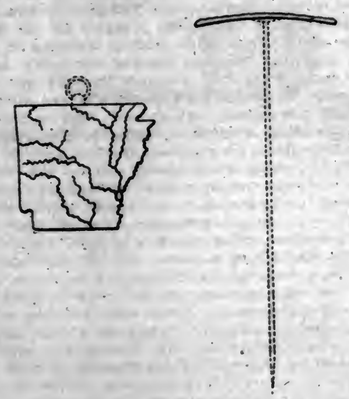
The ornamental design for a charm, pin, or similar article, as shown.

39,087. CHARM, PIN OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,284. Term of patent 7 years.



The ornamental design for a charm, pin, or similar article, as shown.

39,088. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,285. Term of patent 7 years.



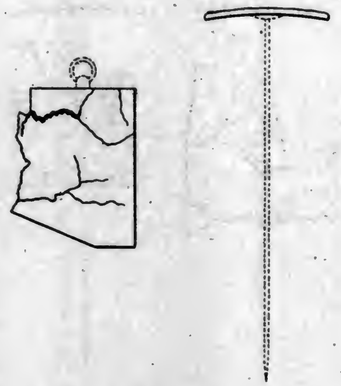
The ornamental design for a charm, pin, or similar article, as shown.

39,089. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,286. Term of patent 7 years.



The ornamental design for a charm, pin, or similar article, as shown.

39,090. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,287. Term of patent 7 years.



The ornamental design for a charm, pin, or similar article, as shown.

39,091. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,288. Term of patent 7 years.



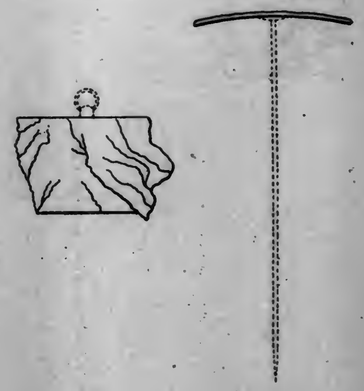
The ornamental design for a charm, pin, or similar article, as shown.

39,092. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,289. Term of patent 7 years.



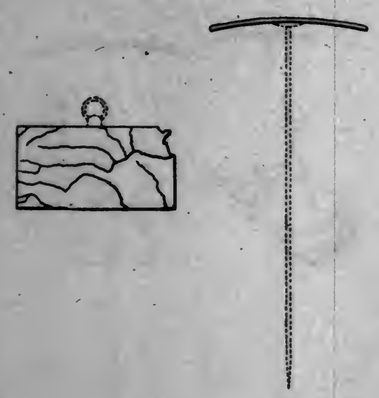
The ornamental design for a charm, pin, or similar article, as shown.

39,093. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,290. Term of patent 7 years.



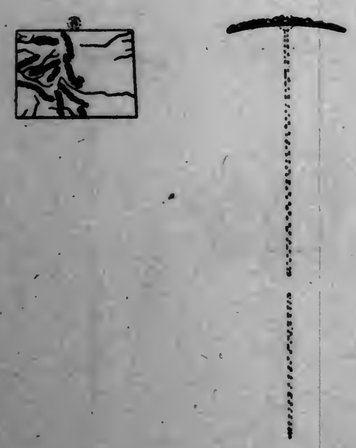
The ornamental design for a charm, pin, or similar article, as shown.

39,094. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,291. Term of patent 7 years.



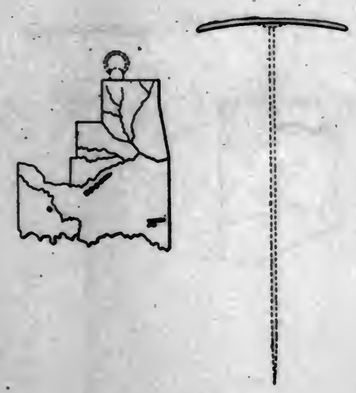
The ornamental design for a charm, pin, or similar article, as shown.

39,095. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,292. Term of patent 7 years.



The ornamental design for a charm, pin, or similar article, as shown.

39,096. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,293. Term of patent 7 years.



The ornamental design for a charm, pin, or similar article, as shown.

39,097. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,294. Term of patent 7 years.



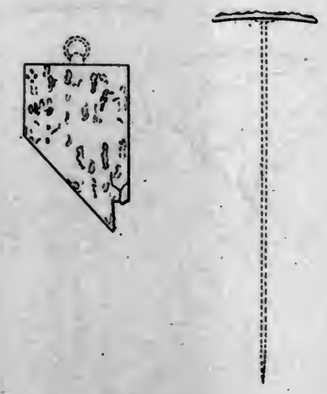
The ornamental design for a charm, pin, or similar article, as shown.

39,098. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,295. Term of patent 7 years.



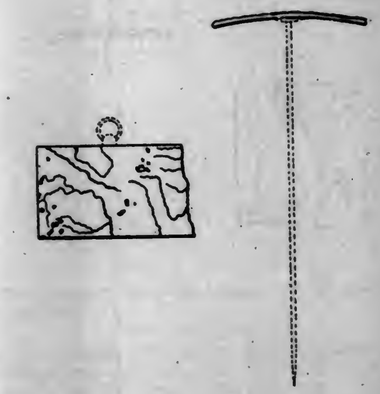
The ornamental design for a charm, pin, or similar article, as shown.

39,099. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,296. Term of patent 7 years.



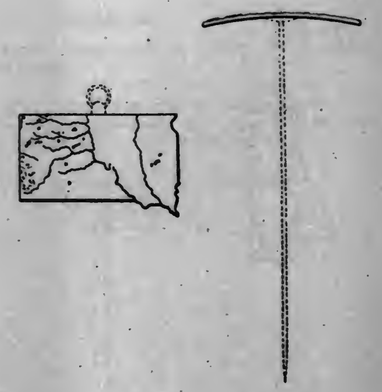
The ornamental design for a charm, pin, or similar article, as shown.

39,100. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,297. Term of patent 7 years.



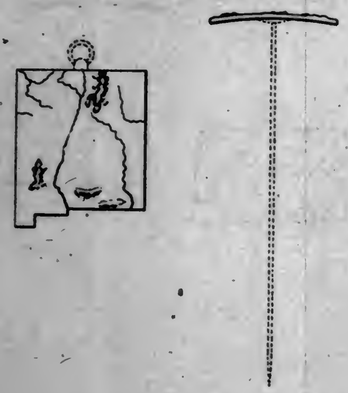
The ornamental design for a charm, pin, or similar article as shown.

39,101. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,298. Term of patent 7 years.



The ornamental design for a charm, pin, or similar article, as shown.

39,102. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,299. Term of patent 7 years.



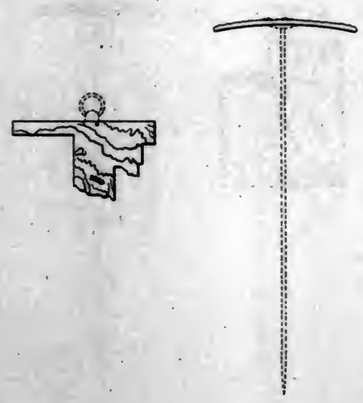
The ornamental design for a charm, pin, or similar article, as shown.

39,103. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,300. Term of patent 7 years.



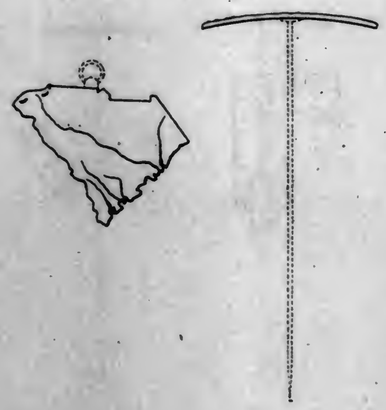
The ornamental design for a charm, pin, or similar article, as shown.

39,104. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,301. Term of patent 7 years.



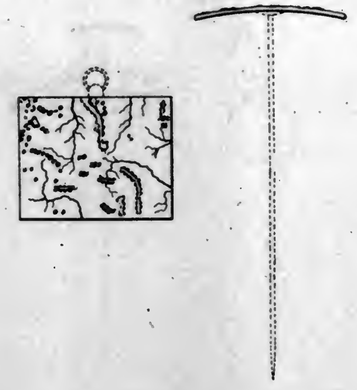
The ornamental design for a charm, pin, or similar article, as shown.

39,105. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,302. Term of patent 7 years.



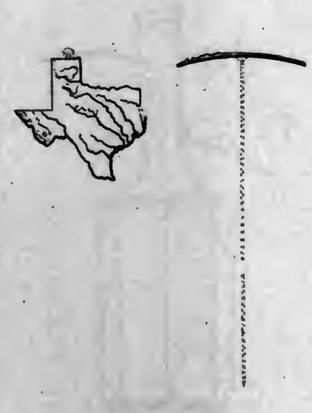
The ornamental design for a charm, pin, or similar article, as shown.

39,106. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,303. Term of patent 7 years.



The ornamental design for a charm, pin, or similar article, as shown.

39,107. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,304. Term of patent 7 years.



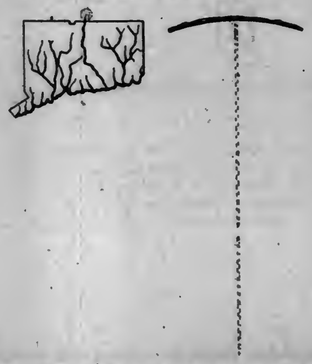
The ornamental design for a charm, pin, or similar article, as shown.

39,108. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,305. Term of patent 7 years.



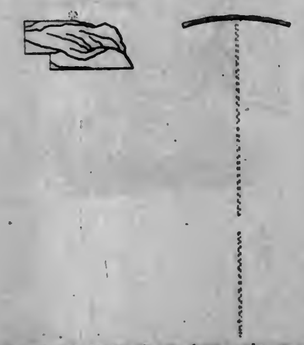
The ornamental design for a charm, pin, or similar article, as shown.

39,109. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,306. Term of patent 7 years.



The ornamental design for a charm, pin or similar article, as shown.

39,110. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,307. Term of patent 7 years.



The ornamental design for a charm, pin, or similar article, as shown.

39,111. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,308. Term of patent 7 years.



The ornamental design for a charm, pin, or similar article, as shown.

39,112. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,309. Term of patent 7 years.



The ornamental design for a charm, pin, or similar article, as shown.

39,113. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,310. Term of patent 7 years.



The ornamental design for a charm, pin, or similar article, as shown.

39,114. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,311. Term of patent 7 years.



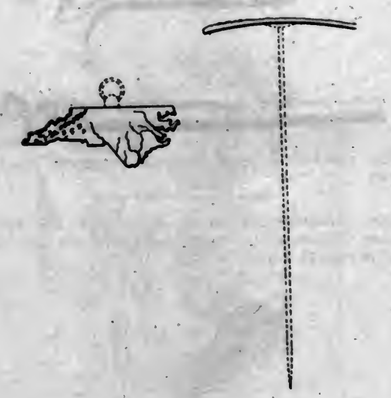
The ornamental design for a charm, pin, or similar article, as shown.

39,115. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,312. Term of patent 7 years.



The ornamental design for a charm, pin or similar article as shown.

39,116. CHARM, PIN, OR SIMILAR ARTICLE. SAUL ROBERT JACOBS, Alameda, Cal. Filed Jan. 10, 1908. Serial No. 410,313. Term of patent 7 years.



The ornamental design for a charm, pin, or similar article, as shown.

39,117. BOTTLE. FRANCOIS X. DE BEUKELAER, Antwerp, Belgium. Filed Oct 18, 1907. Serial No. 398,133. Term of patent 14 years.



The ornamental design for a bottle as shown.

39,118. GLASS BOWL. RICHARD MUHR, Chicago, Ill. Filed Dec. 16, 1907. Serial No. 406,786. Term of patent 7 years.



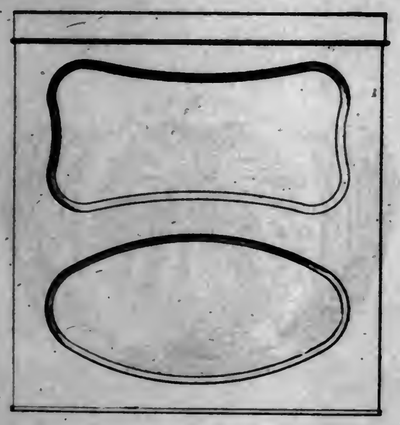
The ornamental design for a glass bowl, as shown.

39,119. TEA-KETTLE, STAND, AND LAMP. SIGMUND STERNAU and CHARLES NELSON, New York and Brooklyn, N. Y., assignors to S. Sternau & Company, New York, N. Y., a Copartnership. Filed Dec. 3, 1907. Serial No. 404,966. Term of patent 7 years.



The ornamental design for a tea-kettle, stand and lamp, as shown.

39,120. SHEET-METAL DISPLAY-CAN. FRANK RUDOLPH, Chicago, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed May 31, 1907. Serial No. 376,740. Term of patent 14 years.



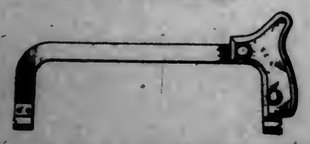
The ornamental design for a sheet metal display can, as shown.

39,121. ELECTROLIER. HOMER A. SMITH, Oakland, Cal. Filed Sept. 20, 1907. Serial No. 393,866. Term of patent 3½ years.



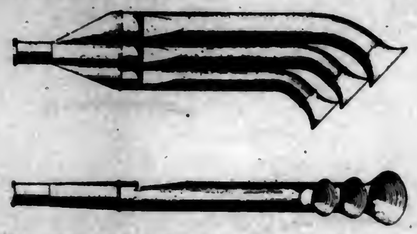
The ornamental design for an electrolier as shown.

39,122. HACKSAW-FRAME. LLOYD ALONZO KIMBALL, New York, N. Y. Filed Dec. 3, 1907. Serial No. 405,294. Term of patent 14 years.



The ornamental design for a hack saw frame, as shown.

39,123. AUTOMOBILE-HORN. JACOB GREULOCH, Cleveland, Ohio. Filed Dec. 3, 1907. Serial No. 404,968. Term of patent 3½ years.



The ornamental design for an automobile horn, as shown.

39,124. HINGE-BUTT. WILLIAM J. NEIDL, New Britain, Conn. Filed Dec. 2, 1907. Serial No. 404,860. Term of patent 14 years.



The ornamental design for a hinge butt, as shown.

39,125. FONT OF TYPE. WILLIAM A. SCHRAUBSTADTER, St. Louis, Mo., assignor to Inland Type Foundry, St. Louis, Mo., a Corporation of Missouri. Filed Jan. 19, 1905. Serial No. 241,897. Term of patent 7 years.

ABCDEFGHIJKLMNOPQ
RSTUVWXYZ&.,;-'!?
$12345678908

The ornamental design for a font of type as herein shown and described.

39,126. TEXTILE FABRIC. PIERRE SCHNEIDESCH, Paris, France, assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Jan. 7, 1908. Serial No. 409,718. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

39,127. TEXTILE FABRIC. PIERRE SCHNEIDESCH, Paris, France, assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Jan. 7, 1908. Serial No. 409,719. Term of patent 3½ years.



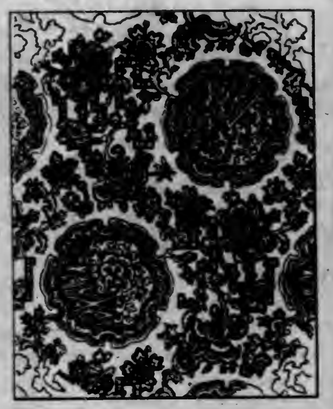
The ornamental design for a textile fabric, as shown.

39,128. TEXTILE FABRIC. PAUL MOUTON, Paris, France, assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Jan. 7, 1908. Serial No. 409,723. Term of patent 3½ years.



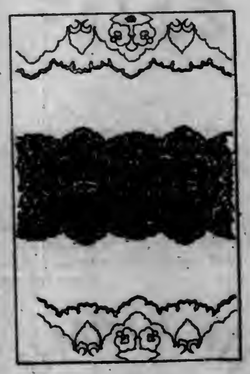
The ornamental design for a textile fabric, as shown.

39,129. TEXTILE FABRIC. PAUL MOUTON, Paris, France, assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Jan. 7, 1908. Serial No. 409,724. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

39,130. TEXTILE FABRIC. PAUL MOUTON, Paris, France, assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Jan. 7, 1908. Serial No. 409,725. Term of patent 3½ years.



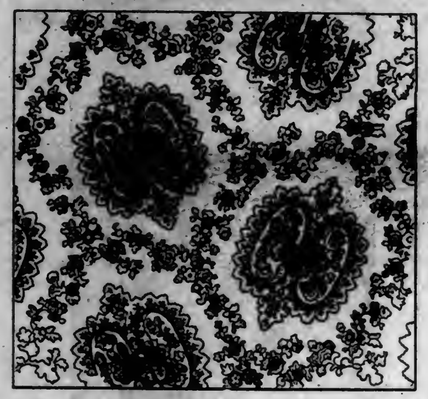
The ornamental design for a textile fabric, as shown.

39,131. TEXTILE FABRIC. PAUL MOUTON, Paris, France, assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Jan. 7, 1908. Serial No. 409,726. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

39,132. TEXTILE FABRIC. PAUL MOUTON, Paris, France, assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Jan. 7, 1908. Serial No. 409,727. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

TRADE-MARKS

PUBLISHED FEBRUARY 11, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 5,061. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) L. WOLFF MFG. CO., Chicago, Ill. Filed May 11, 1905.

DURO

Particular description of goods.—Cocks, Faucets, Plumbers' Valves other than Blow-Off Valves, and Chain-Stays.

Ser. No. 7,589. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) THE THOMSON WOOD FINISHING CO., Philadelphia, Pa. Filed June 7, 1905. Used ten years.

THOMSON'S

Particular description of goods.—Prepared and Mixed Paints, Varnishes, Colors, Fillers, Surfacers, Stains, and Enamels.

Ser. No. 8,968. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) RENNOUS KLEINLE & Co. of Baltimore City, Baltimore, Md. Filed June 24, 1905.

TYCOON

Particular description of goods.—Paint and Varnish Brushes.

Ser. No. 9,856. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE GEO. F. EBERHARD COMPANY, San Francisco, Cal. Filed July 6, 1905.

FALLS

Particular description of goods.—Chisels, Calking-Tools, Drills, Punches, Wrenches, Hammers, Crowbars, Picks, Knives, Ship-Scrapers, Nail-Sets, and Box-Hooks.

Ser. No. 10,500. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MOUNT VERNON-WOODBERRY COTTON DUCK COMPANY, Baltimore, Md. Filed July 18, 1905. Used ten years.

COLUMBIA MILLS

Particular description of goods.—Cotton Duck.

Ser. No. 10,526. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) UNION STARCH CO., Edinburg, Ind. Filed July 18, 1905.



Particular description of goods.—Laundry Starch.

Ser. No. 11,989. (CLASS 38. PUBLICATIONS.) SIR ISAAC PITMAN & SONS LTD., Bath, England. Filed Aug. 25, 1905.



Particular description of goods.—Books Relating to Stenography and for Teaching Stenography.

Ser. No. 12,441. (CLASS 39. CLOTHING.) CARL BERIDING & SOHN, Soltau, Germany, and Newark, N. J. Filed Sept. 25, 1905.



Particular description of goods.—Leather Boots and Leather Shoes.

Ser. No. 12,579. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS AND PARTS THEREOF.) SAML OSBORN & Co., Sheffield, England, assignor to Samuel Osborn & Co., Limited, Sheffield, England, a Corporation. Filed Sept. 14, 1905. Used ten years.



Particular description of goods.—Certain Cutting-Tools—to wit, Saws, Files, Reamers, Taps and Dies, Hand-Drills, Rasps, Chisels, Shears, and Hand Lathe-Tools.

Ser. No. 12,582. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) SAML OSBORN & Co., Sheffield, England, assignor to Samuel Osborn & Co., Limited, Sheffield, England, a Corporation. Filed Sept. 14, 1905. Used ten years.

R. MUSHET'S TITANIC STEEL

Particular description of goods.—Steel and Partly-Wrought Castings of Iron, and Steel Unwrought and Partly Wrought.

Ser. No. 13,273. (CLASS 39. CLOTHING.) CARL BERIDING & SOHN, Soltau, Germany, and Newark, N. J. Filed Oct. 4, 1905.



Particular description of goods.—Rubber Boots and Rubber Shoes.

Ser. No. 15,762. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PATRICK AHEARN, St. Louis, Mo. Filed Dec. 29, 1905.

SALVATOR

Particular description of goods.—Salve.

Ser. No. 19,740. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) WILLIAM SCRIMGEOUR, Jr., Portsmouth, Va. Filed May 21, 1906.

Micco

Particular description of goods.—Heating-Furnaces, Forge-Furnaces, and Hydrocarbon-Burners for Heating Purposes.

Ser. No. 19,936. (CLASS 39. CLOTHING.) JEANNE VICTORINE MARGAINE-LACROIX, Paris, France. Filed May 29, 1906.

CORSET

Particular description of goods.—Corsets and Corslets.

Ser. No. 20,358. (CLASS 38. PUBLICATIONS.) FLORENCE PUBLISHING COMPANY, Northampton and Florence, Mass. Filed June 16, 1906.

Home Needlework

Particular description of goods.—A Magazine.

Ser. No. 22,105. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) CARL ZEISS, Jena, Germany. Filed Sept. 14, 1906.

Planar

Particular description of goods.—Optical Instruments and Parts Thereof.

Ser. No. 22,106. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) CARL ZEISS, Jena, Germany. Filed Sept. 14, 1906.

Protar

Particular description of goods.—Optical Instruments and Parts Thereof.

Ser. No. 22,108. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) CARL ZEISS, Jena, Germany. Filed Sept. 14, 1906.

Tessar

Particular description of goods.—Optical Instruments and Parts Thereof.

Ser. No. 22,109. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) CARL ZEISS, Jena, Germany. Filed Sept. 14, 1906.

Verant

Particular description of goods.—Optical Instruments and Parts Thereof.

Ser. No. 24,019. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) BOSTON INCANDESCENT LAMP COMPANY, Danvers, Mass. Filed Dec. 14, 1906.



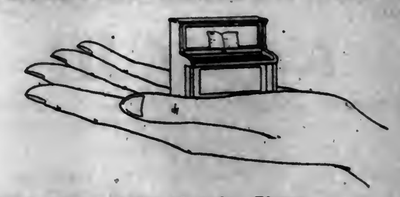
Particular description of goods.—Incandescent Electric Lamps.

Ser. No. 24,055. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE AMERICAN WRINGER COMPANY, New York, N. Y. Filed Dec. 15, 1906. Used ten years.

AMERICAN W.CO. SUPERIOR NEW YORK, U.S.A.

Particular description of goods.—Clothes-Wringers.

Ser. No. 24,074. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE PALMER PIANO COMPANY, White Plains and New York, N. Y. Filed Dec. 15, 1906.



Particular description of goods.—Pianos.

Ser. No. 24,089. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) F. E. JOHNSON COMPANY, South Berwick, Me., and Boston, Mass. Filed Dec. 17, 1906.

KLENZINE

Particular description of goods.—A Germicide and Disinfectant.

Ser. No. 24,439. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) JONAS & COLVER, LIMITED, Sheffield, England. Filed Jan. 4, 1907.

INTRA

Particular description of goods.—Steel.

Ser. No. 24,557. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) RICHARD P. ELLIOTT, Boston, Mass. Filed Jan. 10, 1907.

ECO
2 IN 1

Particular description of goods.—Acetylene-Gas Generators.

Ser. No. 24,618. (CLASS 37. PAPER AND STATIONERY.) JAMES F. FITZPATRICK, New York, N. Y. Filed Jan. 14, 1907. Used ten years.

NONPAREIL

Particular description of goods.—Loose-Leaf Binders.

Ser. No. 25,012. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JULIAN LOPEZ Y ARECHAVALA, Bilbao, Spain. Filed Jan. 30, 1907.



Particular description of goods.—Knives, Pruning-Knives, Scissors, Planers, Chisels, Scythes, Hatchets, Axes, Cutlasses, Saws, Awls, Boring-Bits, Drills, and Swords.

Ser. No. 25,925. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE CHENEY CHEMICAL COMPANY, South Manchester, Conn. Filed Mar. 12, 1907.



Particular description of goods.—Cleaning and Polishing Powder Containing Abrasive and Detergent Substances, Except Stove-Polish Containing Black Lead, Plumbago, or Graphite.

Ser. No. 27,276. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HARRY W. DE FOREST, St. John, New Brunswick, Canada. Filed May 10, 1907. Used ten years.



The background of the trade-mark is red, and the words "Union Blend" are printed in gold.

Particular description of goods.—Teas.

Ser. No. 27,322. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SYDNEY B. LEONARDI, Tampa, Fla. Filed May 13, 1907. Used ten years.

New Health

WOMAN'S SALVATION.



Particular description of goods.—A Remedy for Diseases Peculiar to Women.

Ser. No. 27,568. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) THE CHAS. H. MOORE OIL COMPANY, Cincinnati, Ohio. Filed May 22, 1907.

NU-TURPS

Particular description of goods.—Substitutes for Spirits of Turpentine for Use in Mixing Paints, Varnishes, Japans, Enamels, and the Like and as a Solvent for Industrial Purposes.

Ser. No. 27,637. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CAMMELL LAIRD & CO. LIMITED, Sheffield, England. Filed May 25, 1907.

COLPIK

Particular description of goods.—Twist-Drills, Mining-Drills, Rock-Boring Drills, Wood-Boring Drills, Milling-Cutters, Slotting-Cutters, Shaping-Cutters, Turning-Cutters, Wood-Cutters, Bone-Cutters, Wheel-Cutters, Dividing-Cutters, Fluting-Cutters, Grooving-Cutters, Machine-Knives, and Shear-Blades, All Being Parts of Machinery.

Ser. No. 27,638. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CAMMELL LAIRD & CO. LIMITED, Sheffield, England. Filed May 25, 1907.

CYCLONE

Particular description of goods.—Twist-Drills, Mining-Drills, Rock-Boring Drills, Wood-Boring Drills, Milling-Cutters, Slotting-Cutters, Shaping-Cutters, Turning-Cutters, Wood-Cutters, Bone-Cutters, Wheel-Cutters, Dividing-Cutters, Fluting-Cutters, Grooving-Cutters, Machine-Knives, and Shear-Blades, All Being Parts of Machinery.

Ser. No. 27,640. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) CAMMELL LAIRD & CO., LIMITED, Sheffield, England. Filed May 25, 1907.

CYCLONE

Particular description of goods.—Tool-Steel and Steel in Bar, Rod, Sheet, and other Unwrought and Partly-Wrought Forms.

Ser. No. 27,780. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PACIFIC COAST BORAX CO., Oakland, Cal.; New York, N. Y., and Chicago, Ill. Filed May 31, 1907. Used ten years.

20 MULE TEAM

Particular description of goods.—Borax, Boric, Boric-Acid Spangles, and Borax Compounds Used for Antiseptic Purposes.

Ser. No. 27,781. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PACIFIC COAST BORAX CO., Oakland, Cal.; New York, N. Y., and Chicago, Ill. Filed May 31, 1907. Used ten years.



Particular description of goods.—Borax, Boric, Boric-Acid Spangles, and Borax Compounds Used for Antiseptic Purposes.

Ser. No. 27,783. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE RALPH BROWN CO., San Francisco, Cal. Filed May 31, 1907.



Particular description of goods.—Pocket-Knives, Butcher-Knives, Carving Sets, Razors, Hatchets, Chisels with a Cutting Edge, Edged Tools, Auger-Bits, Cutting-Pliers, Saws, Ticket-Punchers with a Cutting Edge, Revolving Punches with a Cutting Edge, and Pincers with a Cutting Edge.

Ser. No. 29,097. (CLASS 39. CLOTHING.) THE GOODYEAR'S METALLIC RUBBER SHOE CO., Naugatuck, Conn. Filed July 27, 1907.



Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 29,171. (CLASS 39. CLOTHING.) THE UNITED CLOTHING STORES CO., Cleveland, Ohio. Filed Aug. 1, 1907.



Particular description of goods.—Coats, Vests, Trousers, Overcoats, and Hats of Cloth, Felt, Fur, and Straw.

Ser. No. 29,189. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) HANNOVERSCHE GUMMI-KAMM-COMPAGNIE ACTIEN-GESELLSCHAFT, Hanover-Limmer, Germany. Filed Aug. 3, 1907.

SHAMROCK

Particular description of goods.—Rubber Tires for Vehicles of All Kinds.

Ser. No. 29,191. (CLASS 40. FANCY GOODS, FURNISHINGS AND NOTIONS.) HANNOVERSCHE GUMMI-KAMM-COMPAGNIE ACTIEN-GESELLSCHAFT, Hanover-Limmer, Germany. Filed Aug. 3, 1907.

SHAMROCK

Particular description of goods.—Combs and Hair Ornaments.

Ser. No. 29,261. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) HANNOVERSCHE GUMMI-KAMM-COMPAGNIE ACTIEN-GESELLSCHAFT, Hanover-Limmer, Germany. Filed Aug. 6, 1907.



Particular description of goods.—Rubber Tires for Vehicles of All Kinds.

Ser. No. 29,330. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) LAUTER CO., Newark, N. J. Filed Aug. 10, 1907.

HUMANA

Particular description of goods.—Pianos, Player-Pianos, and Player-Piano Actions.

Ser. No. 29,371. (CLASS 37. PAPER AND STATIONERY.) J. J. REHBACH, Regensburg, Germany. Filed Aug. 13, 1907.



Particular description of goods.—Lead-Pencils with and without Mountings, Colored Pencils with and without Mountings, Copying-Pencils with and without Mountings, Artists' Pencils and Refills Therefor, Mechanical Pencils and Refills Therefor, Natural-Red-Chalk Pencils with and without Mountings, Slate-Pencils with and without Mountings, Colored Leads, Carbon Leads, Graphite Leads, Copying-Leads, Bronze Leads, Slate Leads, Drawing-Crayons, Parcel-Crayons, Bronze Crayons with and without Mountings, Pastel-Crayons with and without Mountings, Soapstone Crayons with and without Mountings, Dermatographic Drawing-Chalk, Billiard-Chalk, Tailors' Chalk, Marking-Chalk, Lithographic Chalk, Chalk for School Use, Steel Pens, Gold Pens, Stylographic Pens with and without Mountings, Drawing-Pens, Artists Stumps, Drawing-Charcoal, Lead-Holders, Pencil-Holders, Pencil Protectors and Tips, Penholders, Fountain-Pen Holders, Stylographic-Pen Holders, Chalk-Holders, Crayon-Holders, Pen-Trays, Inkstands, Paper-Cutters, and Rubber Erasers.

Ser. No. 29,390. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN BRAADLAND, Stavanger, Norway. Filed Aug. 14, 1907.



Particular description of goods.—Sardines.

Ser. No. 29,605. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM COOPER & NEPHEWS, Berkhamsted, England. Filed Aug. 26, 1907.

VETOL

Particular description of goods.—A Disinfectant, a Sheep-Dip, and a Cattle-Wash.

Ser. No. 29,633. CLASS 45.) BEVERAGES, NON-ALCOHOLIC.) BENNETT F. SMITH, Temple, Tex. Filed Aug. 28, 1907.

Bo-Ka

Particular description of goods.—Carbonated Non-Alcoholic Beverage and Syrup for Making the Same.

Ser. 29,777. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) WILLIAM J. PRADUE, Claremore, Okla. Filed Sept. 6, 1907.



Particular description of goods.—A Mineral Water.

Ser. No. 29,907. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BRADFIELD REGULATOR CO., Atlanta, Ga. Filed Sept. 12, 1907.



Particular description of goods.—Remedies for Female Use, the Remedies Being for the Treatment of Female Disorders.

Ser. No. 29,978. (CLASS 12. MASONRY MATERIALS.) EMPIRE GYPSUM COMPANY, Garbutt, N. Y. Filed Sept. 16, 1907.



Particular description of goods.—Calcined Gypsum.

Ser. No. 30,087. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EASTMAN KODAK CO., Rochester, N. Y. Filed Sept. 19, 1907.



Particular description of goods.—Chemical Solutions and Compounds and Preparations for Use in the Treatment of Photographic Plates, Films, and Papers.

Ser. No. 30,274. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) JOSEPH NEWCOMB BLACKMAN, East Orange, N. J. Filed Sept. 28, 1907.



Particular description of goods.—Lubricants.

Ser. No. 30,282. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) UNITED PAPER CO., Atlanta, Ga. Filed Sept. 28, 1907.



Particular description of goods.—Cotton and Woolen Blankets, Bedspreads, Quilts, Portières, Comforts, Couch, Lounge, and Table Covers, Lamrequins, Curtains of Woven Fabric and of Lace, Carpets, Tapestry, Rugs, Bureau and Washstand Scarfs, Sheets, and Pillow-Cases.

Ser. No. 30,393. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) HAZARD PAINT AND CHEMICAL COMPANY, Providence, R. I. Filed Oct. 3, 1907.

SAVALL

Particular description of goods.—Paint and Varnish Cleaner and Solvent.

Ser. No. 30,644. (CLASS 17. TOBACCO PRODUCTS.) PHILIP MORRIS & CO., LTD., New York, N. Y. Filed Oct. 17, 1907.

BLUES

Particular description of goods.—Cigarettes.

Ser. No. 30,646. (CLASS 17. TOBACCO PRODUCTS.) PHILIP MORRIS & CO., LTD., New York, N. Y. Filed Oct. 17, 1907. Used ten years.

MARLBORO

Particular description of goods.—Cigarettes.

Ser. No. 30,649. (CLASS 17. TOBACCO PRODUCTS.) PHILIP MORRIS & CO., LTD., New York, N. Y. Filed Oct. 17, 1907.



Particular description of goods.—Cigarettes.

Ser. No. 30,651. (CLASS 17. TOBACCO PRODUCTS.) PHILIP MORRIS & CO., LTD., New York, N. Y. Filed Oct. 17, 1907. Used ten years.



The body of the box being brown.
Particular description of goods.—Cigarettes.

Ser. No. 30,851. (CLASS 39. CLOTHING.) RICE-STIX DRY GOODS COMPANY, St. Louis, Mo. Filed Oct. 29, 1907.

Zarina

Particular description of goods.—Petticoats Made of Textile Materials.

Ser. No. 30,901. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. W. WERTZ, Wernersville, Pa. Filed Oct. 31, 1907.



Particular description of goods.—Wheat and Rye Flour.

Ser, No. 30,997. (CLASS 16. PAINTS AND PAINTERS' MATERIALS, NOT INCLUDING OILS AND POLISHES.) MURPHY VARNISH COMPANY, Newark, N. J. Filed Nov. 4, 1907.



Particular description of goods.—Varnish.

Ser. No. 31,018. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CONTINENTAL CAOUTCHOUC COMPANY, New York, N. Y. Filed Nov. 5, 1907.

"Keep Your Eye On CONTINENTALS"

Particular description of goods.—Solid and Pneumatic Non-Metallic Tires, and Repair-Sheets, Cover-Bandages, Plasters, and Patches Therefor.

Ser. No. 31,078. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) OXFORD LINEN MILLS, Boston, Mass. Filed Nov. 8, 1907.

OXOLINT

Particular description of goods.—Absorbent Linen and Gauze.

Ser. No. 31,089. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN IGNACIUS VERBINA, Houston, Tex. Filed Nov. 8, 1907.

Kafrakan

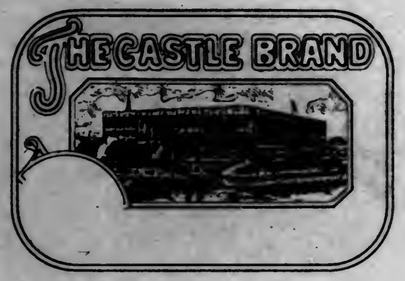
Particular description of goods.—A Remedy for Chills and Fever, an Antiseptic Healing-Oil, a Healing-Ointment, Diuretic Drops, and Liver-Pills.

Ser. No. 31,121. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE PAX MANUFACTURING COMPANY, Boston, Mass. Filed Nov. 11, 1907.

PAX

Particular description of goods.—Baby-Comforters in the Form of Rubber Nipples.

Ser. No. 31,136. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AKTIEBOLAGET SVERIGES FÖRENADE KONSERVFABRIKER, Gothenburg, Sweden. Filed Nov. 12, 1907.



Particular description of goods.—Preserved Fish.

Ser. No. 31,138. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AKTIEBOLAGET SVERIGES FÖRENADE KONSERVFABRIKER, Gothenburg, Sweden. Filed Nov. 12, 1907.



Particular description of goods.—Anchovies and Fish Preserves.

Ser. No. 31,172. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN M. CHAPMAN, Montclair, N. J. Filed Nov. 14, 1907.

Silver Cord

Particular description of goods.—Pure Sugar-Syrup.

Ser. No. 31,247. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) F. G. STEWART & COMPANY, Chicago, Ill. Filed Nov. 18, 1907.

MARVELLA

Particular description of goods.—A Medicinal Tonic in Tablet Form.

Ser. No. 31,251. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SAGE BRUSH TONIC CO. LTD., Shoshone, Idaho. Filed Nov. 19, 1907.



Particular description of goods.—Hair-Tonics.

Ser. No. 31,257. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) TOMPKINS C. DELAVAN, New Brighton, N. Y. Filed Nov. 19, 1907.

OXYGENTINE

Particular description of goods.—A Tooth-Powder for Cleaning and Preserving the Teeth and Gums.

Ser. No. 31,301. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE WAUKESHA ARCADIAN CO., Waukesha, Wis. Filed Nov. 22, 1907.



Particular description of goods.—Ginger-Ale and Mineral Water.

Ser. No. 31,351. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MARDEN & BULL, Leominster, Mass. Filed Nov. 25, 1907.



Particular description of goods.—Flavoring Extracts.

Ser. No. 31,359. (CLASS 11. INKS AND INKING MATERIALS.) THE AULT & WIBORG COMPANY, Cincinnati, Ohio. Filed Nov. 25, 1907.

Particular description of goods.—Printing-Ink.

Ser. No. 31,382. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) SING FAT CO. INC., San Francisco, Cal. Filed Nov. 26, 1907. Used ten years.

DRAGON



Particular description of goods.—Chinese and Japanese Bronzes, Ivory, and Carved Objects of Art and Ornaments.

Ser. No. 31,410. (CLASS 17. TOBACCO PRODUCTS.) SIDNEY S. SPEIER, Louisville, Ky. Filed Nov. 27, 1907.



Particular description of goods.—Cigars.

Ser. No. 31,443. (CLASS 43. THREAD AND YARN.) THE LINEN THREAD CO., New York, N. Y. Filed Nov. 29, 1907.

L.T.Co.

Particular description of goods.—Linen Thread and Flax Yarn.

Ser. No. 31,448. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EDWARD D. LEWIS, Chicago, Ill. Filed Nov. 29, 1907.



Particular description of goods.—Coffee.

Ser. No. 31,467. (CLASS 12. MASONRY MATERIALS.) CAVATORTA CLEMENTE, Cleveland, Ohio. Filed Nov. 29, 1907.



Particular description of goods.—Concrete Flooring.

Ser. No. 31,509. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WAYNE COUNTY CONDENSED MILK CO., Ontario Center, N. Y. Filed Dec. 2, 1907.

PRIDE OF WAYNE

Particular description of goods.—Condensed Milk.

Ser. No. 31,510. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WAYNE COUNTY CONDENSED MILK CO., Ontario Center, N. Y. Filed Dec. 2, 1907.

LAKESIDE

Particular description of goods.—Condensed Milk.

Ser. No. 31,547. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) JOHN S. HOY, Albany, N. Y. Filed Dec. 4, 1907. Used ten years.

HANDCO

Particular description of goods.—Tin Roofing.

Ser. No. 31,548. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) JOHN S. HOY, Albany, N. Y. Filed Dec. 4, 1907. Used ten years.

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Particular description of goods.—Tin Roofing.

Ser. No. 31,563. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARNOLD & ABORN, New York, N. Y. Filed Dec. 4, 1907.

FAIRPLAY

Particular description of goods.—Coffee.

Ser. No. 31,575. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN BRAADLAND, Stavanger, Norway. Filed Dec. 5, 1907.



Particular description of goods.—Sardines.

Ser. No. 31,577. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN BRAADLAND, Stavanger, Norway. Filed Dec. 5, 1907.



Particular description of goods.—Sardines.

Ser. No. 31,580. (CLASS 12. MASONRY MATERIALS.) H. W. JOHNS-MANVILLE COMPANY, New York, N. Y. Filed Dec. 5, 1907.

J-M-OID

Particular description of goods.—Felt and Paper Roofing.

Ser. No. 31,584. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE MICHIGAN COPPER AND BRASS CO., Detroit, Mich. Filed Dec. 5, 1907.



Particular description of goods.—Sheets of Copper or Brass and Wire of Copper or Brass.

Ser. No. 31,606. (CLASS 17. TOBACCO PRODUCTS.) ARTHUR J. FORMAN, Fremont, Nebr. Filed Dec. 7, 1907.



Particular description of goods.—Cigars, Cheroots, and Little Cigars.

Ser. No. 31,646. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN GOVATOS, Wilmington, Del. Filed Dec. 10, 1907.

QUEEN

Particular description of goods.—Candies of All Kinds, Including Chocolate Candies.

Ser. No. 31,648. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GERHARD MENNEN CHEMICAL CO., Newark, N. J. Filed Dec. 10, 1907.

SEN-YANG

Particular description of goods.—Toilet Powder.

Ser. No. 31,652. (CLASS 39. CLOTHING.) ACTUAL KNITTING MILLS, Philadelphia, Pa. Filed Dec. 10, 1907.

ACTUAL

Particular description of goods.—Soles for Slippers and Shoes and other Footwear.

Ser. No. 31,653. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KATHERINE CULVER, West Jordan, Utah. Filed Dec. 10, 1907.



Particular description of goods.—Hair-Tonic.

Ser. No. 31,669. (CLASS 32. FURNITURE AND UPHOLSTERY.) LOUIS B. RIDENOUR, Washington, D. C. Filed Dec. 11, 1907.



Particular description of goods.—Mission Furniture of All Kinds.

Ser. No. 31,679. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. L. HOPKINS & COMPANY, New York, N. Y. Filed Dec. 12, 1907.



Particular description of goods.—Insect-Powder.

Ser. No. 31,683. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NATIONAL STARCH COMPANY, Jersey City, N. J. Filed Dec. 12, 1907. Used ten years.

FLEXIBLE

Particular description of goods.—Laundry Starch.

Ser. No. 31,702. (CLASS 39. CLOTHING.) SAMUEL STERNBERGER & CO., Philadelphia, Pa. Filed Dec. 13, 1907. Used ten years.

Eclipse

Particular description of goods.—Men's and Boys' White and Colored Bosom and Negligée Shirts and Night-Shirts, Shirt-Fronts, Drawers, and Overalls.

Ser. No. 31,703. (CLASS 39. CLOTHING.) SAMUEL STERNBERGER & CO., Philadelphia, Pa. Filed Dec. 13, 1907. Used ten years.

Pearl

Particular description of goods.—Men's and Boys' White and Colored Bosom and Negligée Shirts and Night-Shirts, Shirt-Fronts, Drawers, and Overalls.

Ser. No. 31,711. (CLASS 17. TOBACCO PRODUCTS.) GORDON CIGAR AND CHEROOT CO., INC., Richmond, Va. Filed Dec. 13, 1907.



Particular description of goods.—Cigars and Cheroots.

Ser. No. 31,722. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH F. C. LUHAN, New York, N. Y. Filed Dec. 14, 1907.

MANGASOL



Particular description of goods.—A Disinfectant and Deodorizer.

Ser. No. 31,743. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE C. S. MOREY MERCANTILE COMPANY, Denver, Colo. Filed Dec. 16, 1907.

SOLITAIRE

Particular description of goods.—Tea.

Ser. No. 31,751. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PEPPERELL MANUFACTURING CO., Biddeford, Me. Filed Dec. 16, 1907.



Particular description of goods.—Bleached and Unbleached Cotton Piece Goods.

Ser. No. 31,754. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PEPPERELL MANUFACTURING CO., Biddeford, Me. Filed Dec. 16, 1907. Used ten years.

LACONIA MILLS

Particular description of goods.—Bleached and Unbleached Cotton Piece Goods.

Ser. No. 31,755. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PEPPERELL MANUFACTURING CO., Biddeford, Me. Filed Dec. 16, 1907. Used ten years.

PEPPERELL MILLS

Particular description of goods.—Bleached and Unbleached Cotton Piece Goods.

Ser. No. 31,761. (CLASS 17. TOBACCO PRODUCTS.) WARE-KRAMER TOBACCO COMPANY, Norfolk, Va. Filed Dec. 16, 1907.

ZONA CIGARETTES

Particular description of goods.—Cigarettes.

Ser. No. 31,762. (CLASS 17. TOBACCO PRODUCTS.) WARE-KRAMER TOBACCO COMPANY, Norfolk, Va. Filed Dec. 16, 1907.

Lynnhaven Cigarettes

Particular description of goods.—Cigarettes.

Ser. No. 31,769. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) THE POTTS POWDER COMPANY, Reynolds, Pa., and New York, N. Y. Filed Dec. 17, 1907.

RENDITE

Particular description of goods.—Gelatin Dynamite.

Ser. No. 31,770. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) THE POTTS POWDER COMPANY, Reynolds, Pa., and New York, N. Y. Filed Dec. 17, 1907.

COALITE

Particular description of goods.—Nitroglycerin Dynamite.

Ser. No. 31,776. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHEMISCHE FABRIKEN WERKE GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Vienna, Austria. Filed Dec. 17, 1907.

DESODEROL

Particular description of goods.—Disinfectants.

Ser. No. 31,783. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ROLKA & KLEIN, New York, N. Y. Filed Dec. 17, 1907.

"The Blacky"

Particular description of goods.—Razors and Razor-Blades.

Ser. No. 31,784. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) VAN RIPER & CO., INCORPORATED, Passaic, N. J. Filed Dec. 17, 1907.

VAN RIPER VR REMEDIES

Particular description of goods.—Remedies for Specific Infectious Diseases, Constitutional Diseases, Diseases of the Digestive System, Diseases of the Respiratory System, Diseases of the Circulatory System, Diseases of the Nervous System, Diseases of the Muscles, Diseases of the Kidneys, Diseases of the Blood and Ductless Glands, Diseases Due to Animal Parasites, Sunstroke, Obesity, and the Intoxications.

Ser. No. 31,815. (CLASS 12. MASONRY MATERIALS.) OHIO BUILDERS' SUPPLY COMPANY, Toledo, Ohio. Filed Dec. 18, 1907.

ECONOMY HARD WALL PLASTER

Particular description of goods.—Pulp-Plaster, Calcined Plaster, Wall-Plaster, Hydrated Lime, and Lime.

Ser. No. 31,837. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WARREN AXE AND TOOL COMPANY, Warren, Pa. Filed Dec. 19, 1907. Used ten years.

WARREN SPECIAL CHEMICAL PROCESS AXE

Particular description of goods.—Axes.

Ser. No. 31,849. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ROCKY MOUNTAIN SAGE TONIC COMPANY, Denver, Colo. Filed Dec. 19, 1907.



Particular description of goods.—A Tonic Remedy for Hay-Fever, Malaria, Mountain-Fever, Coughs, Colds, Throat and Bronchial Troubles and Disorders, Asthma, Pneumonia, Consumption, Catarrh, Dyspepsia and all Stomach Troubles and Disorders, Colic, Rheumatism, Insomnia, Nervousness, Female Weaknesses, and a Debilitated Condition of the System.

Ser. No. 31,864. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PEPPERELL MANUFACTURING CO., Biddeford, Me. Filed Dec. 21, 1907.

CONSTITUTION

Particular description of goods.—Bleached and Unbleached Cotton Piece Goods.

Ser. No. 31,865. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) FRANK R. MUENSENBERGER, New York, N. Y. Filed Dec. 21, 1907.

"VIBRO-LIFE"

Particular description of goods.—Mechanical Vibrators.

Ser. No. 31,888. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH B. DAVENPORT, Augusta, Ga. Filed Dec. 23, 1907.

FROG POND



Particular description of goods.—A Remedy for Fever and Ague and Malarial Affections.

Ser. No. 31,890. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MAGGIE C. SIEBOLD, Keokuk, Iowa. Filed Dec. 23, 1907.



Particular description of goods.—A Remedy for Roup and other Poultry Diseases.

Ser. No. 31,987. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ECSO PHARMACAL CO., Mobile, Ala. Filed Dec. 31, 1907.

ECSO

Particular description of goods.—An Emulsion, a Remedy for Pulmonary Diseases and Affections, and a Tonic in Cases of Debility.

Ser. No. 32,010. (CLASS 37. PAPER AND STATIONERY.) CAREW MANUFACTURING COMPANY, South Hadley Falls, Mass. Filed Jan. 2, 1908.

EMPIRE USA BOND

Particular description of goods.—Fine Writing-Paper and Envelops.

TRADE-MARKS

REGISTERED FEBRUARY 11, 1908.

67,540. UTERINE TONIC. The Davis Chemical Company, Denver, Colo.
Filed October 19, 1907. Serial No. 30,669. PUBLISHED DECEMBER 10, 1907.

67,541. CERTAIN REMEDY. The Davis Chemical Company, Denver, Colo.
Filed October 24, 1907. Serial No. 30,760. PUBLISHED DECEMBER 10, 1907.

67,542. SPECIAL PREPARED BITUMINOUS COAL. John Wyatt Dawson, Ward, W. Va.
Filed July 27, 1907. Serial No. 29,060. PUBLISHED DECEMBER 10, 1907.

67,543. FEATHERS. Frank A. Hall, New York, N. Y.
Filed September 16, 1907. Serial No. 30,003. PUBLISHED DECEMBER 10, 1907.

67,544. ABRASIVE AND POLISHING MATERIALS AND ARTICLES MADE THEREFROM. Norton Company, Worcester, Mass.
Filed April 1, 1907. Serial No. 26,393. PUBLISHED DECEMBER 10, 1907.

67 545. LEATHER AND SHOE BLACKINGS AND DRESSINGS. The American Shoe Polish Company, Chicago, Ill.
Filed September 11, 1905. Serial No. 12,453. PUBLISHED SEPTEMBER 11, 1906.

67,546. CARAMELS AND CHOCOLATES. Borden's Condensed Milk Company, Jersey City, N. J., and New York, N. Y.
Filed October, 11, 1907. Serial No. 30,550. PUBLISHED DECEMBER 10, 1907.

67,547. CERTAIN CHEMICALS. Emile Bellmor, New York, N. Y.
Filed June 22, 1906. Serial No. 20,494. PUBLISHED NOVEMBER 12, 1907.

67,548. COFFEES AND TEAS. Dannemiller Coffee Co., Brooklyn, N. Y.
Filed October 19, 1907. Serial No. 30,673. PUBLISHED DECEMBER 10, 1907.

67,549. COFFEE. J. S. Elliott, Newville, Pa.
Filed October 12, 1907. Serial No. 30,562. PUBLISHED DECEMBER 10, 1907.

67,550. COFFEE AND TEA. George Liss & Co., New York, N. Y.
Filed November 4, 1907. Serial No. 30,988. PUBLISHED DECEMBER 10, 1907.

67,551. CANNED FISH. Haas, Baruch & Co., Los Angeles, Cal.
Filed November 1, 1907. Serial No. 30,908. PUBLISHED DECEMBER 10, 1907.

67,552. CHEWING-GUM. The Indianapolis Warehouse Company, Indianapolis, Ind.
Filed October 24, 1907. Serial No. 30,773. PUBLISHED DECEMBER 10, 1907.

67,553. SALT, DRIED, SMOKED, AND FRESH FISH International Fisheries Co., Tacoma, Wash.
Filed October 28, 1907. Serial No. 30,836. PUBLISHED DECEMBER 10, 1907.

67,554. SMOKED HALIBUT. International Fisheries Co., Tacoma, Wash.
Filed October 31, 1907. Serial No. 30,899. PUBLISHED DECEMBER 10, 1907.

67,555. SMOKED HALIBUT. International Fisheries Co. Tacoma, Wash.
Filed October 31, 1907. Serial No. 30,902. PUBLISHED DECEMBER 10 1907.

67,556. BONELESS CODFISH. Lord Brothers Company, Portland, Me.
Filed October 2, 1907. Serial No. 30,364. PUBLISHED DECEMBER 10, 1907.

67,557. CANDIES. National Candy Company, St. Louis, Mo.
Filed November 4, 1907. Serial No. 30,999. PUBLISHED DECEMBER 10, 1907.

67,558. CANNED FISH. Schwabacher Bros. & Co., Inc., Seattle, Wash.
Filed November 7, 1907. Serial No. 31,062. PUBLISHED DECEMBER 10, 1907.

67,559. CHOCOLATES. Touraine Confectionery Co., Boston, Mass.
Filed November 5, 1907. Serial No. 31,026. PUBLISHED DECEMBER 10, 1907.

67,560. CANDY. The Aughinbaugh Caramel Company, Indianapolis, Ind.
Filed September 9, 1907. Serial No. 29,838. PUBLISHED DECEMBER 10, 1907.

67,561. COFFEE. Black Hawk Coffee & Spice Company, Waterloo, Iowa.
Filed October 28, 1907. Serial No. 30,823. PUBLISHED DECEMBER 10, 1907.

67,562. COFFEE. Black Hawk Coffee & Spice Company, Waterloo, Iowa.
Filed October 28, 1907. Serial No. 30,824. PUBLISHED DECEMBER 10, 1907.

67,563. COFFEE. Climax Coffee & Baking Powder Company, Indianapolis, Ind.
Filed September 13, 1907. Serial No. 29,952. PUBLISHED DECEMBER 10, 1907.

67,564. CHEESE. Willis J. Eldridge, Aurora, Ohio.
Filed July 13, 1907. Serial No. 28,775. PUBLISHED OCTOBER 8, 1907

67,565. CHEESE. Willis J. Eldridge, Aurora, Ohio.
Filed July 13, 1907. Serial No. 28,777. PUBLISHED SEPTEMBER 24, 1907.

67,566. LADIES' DRESS-WAISTS AND SHIRT-WAISTS The Guggenheim Company, Cleveland, Ohio.
Filed September 9, 1907. Serial No. 29,834. PUBLISHED DECEMBER 10, 1907.

67,567. GLOVES OF TEXTILE FABRICS. Marshall Field & Company, Chicago, Ill.
Filed October 21, 1907. Serial No. 30,708. PUBLISHED DECEMBER 10, 1907.

67,568. BUTTER. The McElroy Bros. Co., Bridgeport, Conn.
Filed October 18, 1907. Serial No. 30,656. PUBLISHED DECEMBER 10, 1907.

67,569. WHEAT-FLOUR. Nevada Milling Co., Nevada, Mo.
Filed February 19, 1906. Serial No. 17,176. PUBLISHED JUNE 19, 1906.

67,570. LADIES' MUSLIN UNDERGARMENTS. Rice-Stix Dry Goods Company, St. Louis, Mo.
Filed October 29, 1907. Serial No. 30,880. PUBLISHED DECEMBER 10, 1907.

67,571. TROUSERS. GEORGE SICHERT, New York, N. Y.
Filed November 4, 1907. Serial No. 30,901. PUBLISHED DECEMBER 10, 1907.

67,572. CHOCOLATE. SOCIÉTÉ GENERALE SUISSE DE CHOCOLATS, Vevey, Switzerland.
Filed October 26, 1907. Serial No. 30,815. PUBLISHED DECEMBER 10, 1907.

67,573. PIES AND CAKES. WATSON & MACDONALD, Dayton, Ohio.
Filed May 20, 1907. Serial No. 27,526. PUBLISHED DECEMBER 10, 1907.

67,574. COFFEE AND TEA. ROSS W. WEIR & COMPANY, New York, N. Y.
Filed October 31, 1907. Serial No. 30,891. PUBLISHED DECEMBER 10, 1907.

67,575. CANNED CLAMS AND CANNED SARDINES. JASPER WYMAN & SON, Millbridge, Me.
Filed May 16, 1905. Serial No. 5,837. PUBLISHED DECEMBER 10, 1907.

67,576. REMEDIES FOR HEADACHES AND FEVERS. WILLIAM E. ALLEN, Monroe, La.
Filed July 30, 1906. Serial No. 21,249. PUBLISHED DECEMBER 10, 1907.

67,577. HAIR-TONICS. HERBERT L. HERRING, Atlanta, Ga.
Filed November 2, 1907. Serial No. 30,969. PUBLISHED DECEMBER 10 1907.

67,578. PEANUT-BUTTER. FRANK M. HOYT, Amesbury, Mass.
Filed November 30, 1906. Serial No. 23,686. PUBLISHED DECEMBER 10, 1907.

67,579. CERTAIN MACHINERY AND PARTS THEREOF. JOSEPH F. MCCOY, Co., New York, N. Y.
Filed August 30, 1907. Serial No. 29,679. PUBLISHED DECEMBER 10, 1907.

67 580. CERTAIN FOODS. THE KUNER PICKLE COMPANY, Denver, Colo.
Filed September 4, 1907. Serial No. 29,749. PUBLISHED DECEMBER 10, 1907.

67,581. BOOT AND SHOE HEELS MADE OF WOOD. MARKHAM AND ROBERTS, LIMITED, Stafford, England.
Filed October 19, 1907. Serial No. 30,680. PUBLISHED DECEMBER 10, 1907.

67,582. CERTAIN METALS, UNWROUGHT AND PARTLY WROUGHT. MERCHANT & EVANS COMPANY, Philadelphia, Pa.
Filed November 3, 1906. Serial No. 28,084. PUBLISHED DECEMBER 10, 1907.

67,583. LAXATIVE AND CATHARTIC MEDICINES. THE MUTUAL DRUG COMPANY, Cleveland, Ohio.
Filed November 2, 1907. Serial No. 30,961. PUBLISHED DECEMBER 10, 1907.

67,584. PREPARATION FOR AUTOMATICALLY STOPPING PUNCTURES IN RUBBER TIRES. NEW MIRACULUM CORPORATION LD., Melbourne, Victoria, Australia.
Filed August 27, 1907. Serial No. 29,617. PUBLISHED DECEMBER 10, 1907.

67,585. GLASS GLOBES AND CHIMNEYS FOR LAMPS AND LANTERNS. R. E. DIETZ COMPANY, New York, N. Y.
Filed October 12, 1907. Serial No. 30,657. PUBLISHED DECEMBER 10, 1907.

67,586. GUANO AND BONE FERTILIZER. STANDARD CHEMICAL & OIL COMPANY, Troy, Ala.
Filed October 30, 1903. Serial No. 23,006. PUBLISHED MARCH 26, 1907.

67,587. CERTAIN MEDICINE. THE AGRICULTURAL REMEDY CO., Topeka, Kans.
Filed September 9, 1907. Serial No 29,831. PUBLISHED DECEMBER 10, 1907.

67,588. CERTAIN FOODS. A. F. BECKMANN & Co., New York, N. Y.
Filed September 30, 1907. Serial No. 30,204. PUBLISHED NOVEMBER 12, 1907.

67,589. MEDICINE FOR PURIFYING THE BLOOD. ARTHUR M. DOWSLEY, Cando, N. D.
Filed October 26, 1907 Serial No. 30,802. PUBLISHED DECEMBER 10, 1907.

67,590. CERTAIN MEDICINAL POWDERS. THE J. W. JAMES COMPANY, Wheeling, W. Va.
Filed October 28, 1907. Serial No. 30,777. PUBLISHED DECEMBER 10, 1907.

67,591. CHOKE-COILS. LOUIS O. LANGWORTHY, Bradford, Pa.
Filed November 2, 1907 Serial No. 30,970. PUBLISHED DECEMBER 10, 1907.

67,592. CERTAIN MEDICINE. ELIAS MOLLOFF, St. Louis, Mo.
Filed October 30, 1907. Serial No. 30,884. PUBLISHED DECEMBER 10, 1907.

67,593. REMEDIES FOR DISEASES OF LIVE STOCK, HOGS, AND POULTRY. OLD KENTUCKY MFG. CO., Paducah, Ky.
Filed October 18, 1907. Serial No. 30,654. PUBLISHED DECEMBER 10, 1907.

67,594. METAL CLOSURES FOR CONTAINING VESSELS. CHELLIS-HILLMAN COMPANY, Portland, Me.
Filed October 9, 1907. Serial No. 30,509. PUBLISHED DECEMBER 10, 1907.

67,595. CERTAIN MEDICINES. THE DAVIS CHEMICAL COMPANY, Denver, Colo.
Filed October 24, 1907. Serial No. 30,759. PUBLISHED DECEMBER 3, 1907.

67,596. CERTAIN MEDICINES. THE DIX MANUFACTURING COMPANY, Lewistown, Pa.
Filed October 16, 1907. Serial No. 30,627. PUBLISHED DECEMBER 10, 1907.

67,597. CERTAIN MEDICINE. REBECCA S. GLOVER. Dorchester, Mass.
Filed October 1, 1907. Serial No. 30,330. PUBLISHED DECEMBER 10, 1907.

67,598. SPRING-BEDS. M. A. HUNT & Co., Cincinnati, Ohio; Chattanooga, Tenn.; Louisville, Ky., and Evansville, Ind.
Filed November 4, 1907. Serial No. 30,900. PUBLISHED DECEMBER 10, 1907.

67,599. BROOMS. LEE BROOM & DUSTER COMPANY, Lincoln, Nebr.
Filed November 5, 1907. Serial No. 31,014. PUBLISHED DECEMBER 10, 1907.

67,600. BROOMS. LEE BROOM & DUSTER COMPANY, Lincoln, Nebr.
Filed November 5, 1907. Serial No. 31,015. PUBLISHED DECEMBER 10, 1907.

67,601. REMEDY FOR INDIGESTION AND DISEASES OF THE STOMACH. WILLIAM B. MOORE, St. Louis, Mo.
Filed June 26, 1907. Serial No. 25,406. PUBLISHED DECEMBER 10, 1907.

67,602. WIRE BRUSHES. THE OSBORN MFG. CO., Cleveland, Ohio.
Filed October 31, 1907. Serial No. 30,895. PUBLISHED DECEMBER 10, 1907.

67,603. BLOOD-PURIFIERS AND MEDICINAL TONICS. THE PECK JOHNSON COMPANY, Grand Rapids, Mich.
Filed September 9, 1907. Serial No. 29,801. PUBLISHED DECEMBER 10, 1907.

67,604. CAR-TRUCK BOLSTERS. PRESSED STEEL CAR COMPANY, Pittsburg, Pa.
Filed November 5, 1907. Serial No. 31,023. PUBLISHED DECEMBER 10, 1907.

67,605. REMEDY FOR GALL-STONES. HUGO ROSENBERG, Charlottenburg, Germany.
Filed February 23, 1907. Serial No. 25,563. PUBLISHED APRIL 30, 1907.

67,606. FARM AND TRUCK WAGONS. THE TURNBULL WAGON COMPANY, Defiance, Ohio.
Filed October 19, 1907. Serial No. 30,667. PUBLISHED DECEMBER 10 1907.

67 607. MEDICINAL SUPPOSITORIES, PESSARIES, AND BOUGIES. HENRY SOLOMON WELLCOME, London, England.
Filed September 18, 1907. Serial No. 30,089. PUBLISHED DECEMBER 10, 1907.

67,608. MEDICINE FOR CERTAIN DISEASES. WENDELL PHARMACAL CO., Syracuse, N. Y.
Filed November 7, 1906. Serial No. 23,164. PUBLISHED DECEMBER 10 1907

67,609. CERTAIN EXTRACTS. BLACK DRUG AND CHEMICAL COMPANY, Akron, Ohio.
Filed October 25, 1907. Serial No. 30,780. PUBLISHED DECEMBER 10, 1907

67,610. ADHESIVE CEMENTS. SAMUEL B. BOWEN, Philadelphia, Pa.
Filed November 2, 1907. Serial No. 30,972. PUBLISHED DECEMBER 10, 1907.

67,611. RAZORS AND POCKET-KNIVES. JOHN REDMOND BOYD, Corpus Christi, Tex.
Filed July 27, 1907. Serial No. 29,076. PUBLISHED DECEMBER 10, 1907.

67,612. STOCK FOOD. CORN PRODUCTS MANUFACTURING COMPANY, Chicago, Ill.
Filed October 29, 1907. Serial No. 30,855. PUBLISHED DECEMBER 10, 1907.

67,613. STOCK FOOD. CORN PRODUCTS MANUFACTURING COMPANY, Chicago, Ill.
Filed October 29, 1907. Serial No. 30,856. PUBLISHED DECEMBER 10, 1907.

67,614. HEADACHE-TABLETS. DELMAR DRUG CO., Baltimore, Md.
Filed October 28, 1907. Serial No. 30,833. PUBLISHED DECEMBER 10, 1907.

67,615. SCALP FOOD. MARY J. DODSON, Houston, Tex.
Filed October 25, 1907. Serial No. 30,784. PUBLISHED DECEMBER 10, 1907.

67,616. FLAVORING COMPOUNDS. HABICHT, BRAUN & Co., Chicago, Ill., and New York, N. Y.
Filed October 26, 1907. Serial No. 30,806. PUBLISHED DECEMBER 10, 1907.

67,617. BITTERS. JOHN BARTH COMPANY, Milwaukee, Wis.
Filed November 1, 1907. Serial No. 30,910. PUBLISHED DECEMBER 10, 1907.

67,618. COMPOSITION ROOFING AND SIDING. ALBERT E. KIRK, Hoopeston, Ill.
Filed September 11, 1907. Serial No. 29,865. PUBLISHED DECEMBER 10, 1907.

67,619. SOLUTION OF HYDROGEN PEROXID IN WATER. E. MERCK, Darmstadt, Germany.
Filed September 13, 1907 Serial No. 29,955. PUBLISHED DECEMBER 10, 1907.

67,620. LINIMENT. MINARD'S LINIMENT MANUFACTURING COMPANY, Framingham and Boston, Mass.
Filed June 23, 1906. Serial No. 20,512. PUBLISHED DECEMBER 10, 1907.

67,621. GAS, GASOLENE, AND OIL ENGINES. SAMSON IRON WORKS, Stockton, Cal.
Filed August 10, 1907. Serial No. 29,343. PUBLISHED DECEMBER 10, 1907.

67,622. ALLOY OF METAL. THE SMITH & EGGE MFG. CO., Bridgeport, Conn.
Filed September 18, 1907. Serial No. 30,052. PUBLISHED DECEMBER 10, 1907.

67,623. AUTOMOBILES. THE VIQUEOT COMPANY, Long Island City, N. Y.
Filed September 21, 1905. Serial No. 12,878. PUBLISHED DECEMBER 10, 1907.

67,624. AROMATIC SCHIEDAM SCHNAPPS. UDOLPHO WOLFE COMPANY, New York, N. Y.
Filed September 18, 1907. Serial No. 30,047. PUBLISHED DECEMBER 10, 1907.

67,625. METALLIC GARMENT-HANGERS. ROBERT P. BEATTY, Cleveland, Ohio, assignor to The Beatty Stamping Company, Cleveland, Ohio, a Corporation of Ohio.
Filed September 30, 1907. Serial No. 30,209. PUBLISHED DECEMBER 10, 1907.

67,626. WHISKY. ELIAS BLOCK & SONS, Cincinnati, Ohio.
Filed May 4, 1907. Serial No. 27,109. PUBLISHED DECEMBER 10, 1907.

67,627. WHISKY, BRANDY, GIN, AND CORDIALS. JACOB CARTUN, Philadelphia, Pa.
Filed June 26, 1905. Serial No. 9,237. PUBLISHED DECEMBER 10, 1907.

67,628. LIQUEURS. ENRICO CIABURRI & FIL., Naples, Italy
Filed June 26, 1907. Serial No. 26,286. PUBLISHED DECEMBER 10, 1907.

67,629. FEED-BAGS. WILLIAM I. EWART, Seattle, Wash.
Filed September 23, 1907. Serial No. 30,164. PUBLISHED DECEMBER 10, 1907.

67,630. LINIMENT. PAUL HAASE, Boone, Iowa.
Filed October 28, 1907. Serial No. 30,841. PUBLISHED DECEMBER 10, 1907.

67,631. SOAP. JOHN S. HARRIS, New York, N. Y.
Filed November 4, 1907. Serial No. 30,976. PUBLISHED DECEMBER 10, 1907.

67,632. RECORDS FOR TALKING MACHINES. HAWTHORNE & SHEBLE MANUFACTURING COMPANY, Philadelphia, Pa.
Filed October 23, 1907. Serial No. 30,734. PUBLISHED DECEMBER 10, 1907.

67,633. TALKING-MACHINES. HAWTHORNE & SHEBLE MANUFACTURING COMPANY, Philadelphia, Pa.
Filed October 23, 1907. Serial No. 30,735. PUBLISHED DECEMBER 10, 1907.

67,634. DETERGENT COMPOSITION RESEMBLING SOAP. THOMAS WILLIAM HENRY, Des Moines, Iowa.
Filed November 6, 1907. Serial No. 31,032. PUBLISHED DECEMBER 10, 1907.

67,635. HAMES. HOCH HAMES CO. INC., Freeland and Hazleton, Pa.
Filed October 10, 1907. Serial No. 30,535. PUBLISHED DECEMBER 10, 1907.

67,636. WHISKY. THE JACOB DUDENHOEFER CO., Milwaukee, Wis.
Filed August 28, 1907. Serial No. 29,647. PUBLISHED OCTOBER 29, 1907.

67,637. LEATHER-DRESSING. R-N LEATHER DRESSING CO., Saylesville, R. I.
Filed November 9, 1907. Serial No. 31,105. PUBLISHED DECEMBER 10, 1907.

67,638. FIRE-BRICK. OLIVE HILL FIRE BRICK COMPANY, Olive Hill, Ky.
Filed August 16, 1907. Serial No. 29,433. PUBLISHED DECEMBER 10, 1907.

67,639. ABSINTHE. JULES PERNOD, Avignon, France.
Filed October 8, 1907 Serial No. 30,486. PUBLISHED DECEMBER 10, 1907.

67,640. WHISKY. THE THOS. MOORE DISTILLING COMPANY McKeesport, Pa.
Filed October 2 1907. Serial No. 30,360. PUBLISHED DECEMBER 10, 1907.

67,641. ADVERTISING-SIGNS. WHITE CROSS TONSORIAL CO., New York, N. Y.
Filed December 13, 1905. Serial No. 15,391. PUBLISHED DECEMBER 10, 1907.

67,642. PIANOS, GUITARS, AND MANDOLINS. ALONZO WOOKEY, Peoria, Ill.
Filed July 5, 1907. Serial No. 28,607. PUBLISHED DECEMBER 10, 1907.

67,643. OPTICAL INSTRUMENTS. CARL ZEISS, Jena, Germany.
Filed September 14, 1906 Serial No. 22,110. PUBLISHED DECEMBER 10, 1907.

67,644. LEATHER BOOTS AND SHOES. GEO. D. WITT SHOE CO., Lynchburg, Va.
Filed December 6, 1906. Serial No. 23,708. PUBLISHED DECEMBER 10, 1907.

67,645. SHIRTINGS, CAMBRICS, AND LONG-CLOTH WHEN BLEACHED, FINISHED, OR CONVERTED. GRINNELL WILLIS & CO., New York, N. Y.
Filed November 16, 1905. Serial No. 14,703. PUBLISHED DECEMBER 10, 1907.

67,646. AUTOMOBILE-LAMPS. JOHN LUBIN, New York, N. Y.
Filed March 5, 1907. Serial No. 25,773. PUBLISHED DECEMBER 10, 1907.

67,647. KNITTED HOSIERY. MARYVILLE HOSIERY MILLS, Maryville, Tenn.
Filed October 25, 1907. Serial No. 30,782 PUBLISHED DECEMBER 10, 1907.

67,648. HOT-WATER HEATERS AND STEAM-BOILERS FOR HEATING PURPOSES. MODEL HEATING COMPANY, Philadelphia, Pa.
Filed October 27, 1906. Serial No. 22,947. PUBLISHED DECEMBER 10, 1907.

67,649. STITCHED CANVAS MACHINE-BELTING. MOUNT VERNON BELTING COMPANY, Baltimore, Md.
Filed September 13, 1907. Serial No. 29,953. PUBLISHED DECEMBER 10, 1907.

67,650. HAND-WOVEN RUGS, PORTIÈRES, AND CUSHION-COVERS. NYE & WAIT, Auburn, N. Y.
Filed July 17, 1905. Serial No. 10,455. PUBLISHED DECEMBER 10, 1907.

67,651. STOVES AND RANGES. ORSON STOVE AND RANGE CO., Belleville, Ill.
Filed October 31, 1907. Serial No. 30,892. PUBLISHED DECEMBER 10, 1907.

67,652. BOOTS AND SHOES OF LEATHER. THE PALACE CLOTHING COMPANY, Topeka, Kans.
Filed July 12, 1906. Serial No. 20,893. PUBLISHED JULY 2, 1907.

67,653. LACES. JOHN W. SMITH, Chester, Pa.
Filed November 1, 1907. Serial No. 30,907. PUBLISHED DECEMBER 10, 1907.

67,654. BEER. THE STANDARD BREWERY, Chicago, Ill.
Filed September 21, 1907. Serial No. 30,128. PUBLISHED DECEMBER 10, 1907.

67,655. STENCILING-MACHINES AND WAXED STENCIL-SHEETS. UNDERWOOD TYPEWRITER COMPANY, New York, N. Y.
Filed October 7, 1907. Serial No. 30,476. PUBLISHED DECEMBER 10, 1907.

67,656. BOND-PAPER AND LINEN ENVELOPS AND BRISTOL-BOARDS. UNION CARD & PAPER CO., New York, N. Y.
Filed September 26, 1907. Serial No. 30,228. PUBLISHED DECEMBER 10, 1907.

67,657. BOND-PAPER AND BRISTOL-BOARDS. UNION CARD & PAPER CO., New York, N. Y.
Filed September 26, 1907. Serial No. 30,229. PUBLISHED DECEMBER 10, 1907.

67,658. CARBONATED BEVERAGES AND SYRUPS FOR CARBONATED BEVERAGES. HIRAM WHEATON & SONS, New Bedford, Mass.
Filed January 8, 1906. Serial No. 16,016. PUBLISHED DECEMBER 10, 1907.

67,659. SYRUP FOR CARBONATED BEVERAGES. HIRAM WHEATON & SONS, New Bedford, Mass.
Filed January 8, 1906. Serial No. 16,017. PUBLISHED DECEMBER 10, 1907.

67,660. ADJUSTABLE EYE-SHADES. WILLIAM B. WHITE, Quincy, Mass.
Filed October 18, 1907. Serial No. 30,682. PUBLISHED DECEMBER 10, 1907.

67,661. ALE. WILLIAM YOUNGER & CO., LIMITED, Edinburgh, Scotland.
Filed August 26, 1905. Serial No. 12,064. PUBLISHED OCTOBER 30, 1906.

67,662. BEER, ALE, PORTER, AND STOUT. BEADLESTON & WOERZ, New York, N. Y.
Filed November 2, 1907. Serial No. 30,969. PUBLISHED DECEMBER 10, 1907.

67,663. BEER, ALE, PORTER, AND STOUT. BEADLESTON & WOERZ, New York, N. Y.
Filed November 2, 1907. Serial No. 30,968. PUBLISHED DECEMBER 10, 1907.

67,664. LEATHER AND CANVAS BOOTS AND SHOES. TIMOTHY A. BRESNAHAN, Lynn, Mass.
Filed November 1, 1907. Serial No. 30,906. PUBLISHED DECEMBER 10, 1907.

67,665. SUNDAY NEWSPAPER. CHICAGO HERALD COMPANY, Chicago, Ill.
Filed October 10, 1907. Serial No. 30 523. PUBLISHED DECEMBER 10, 1907.

67,666. LEATHER BOOTS AND SHOES. THE CRAWFORD McGREGOR & CANBY CO., Dayton, Ohio.
Filed July 16, 1907. Serial No. 28,823. PUBLISHED DECEMBER 10, 1907.

67,667. INFANTS' AND CHILDREN'S LEATHER SHOES. EBY SHOE CO., INC., Lititz, Pa.
Filed November 2, 1907. Serial No. 30,962. PUBLISHED DECEMBER 10, 1907.

67,668. LEATHER BOOTS, SHOES, AND LEGGINGS. ELLET-KENDALL SHOE COMPANY, Kansas City, Mo.
Filed November 2, 1907. Serial No. 30,953. PUBLISHED DECEMBER 10, 1907.

67,669. SUBSTITUTE FOR SHELLAC FOR THE PREPARATION OF FURNITURE-POLISH AND SPIRIT LAKES. FARBENFABRIKEN VORM. FRIEDR. BAYER & CO., Elberfeld, Germany.
Filed August 30, 1907. Serial No. 29,681. PUBLISHED DECEMBER 10, 1907.

67,670. RUBBER COMBS. GEO. BORGFELDT & CO., New York, N. Y.
Filed October 3, 1907. Serial No. 30,403. PUBLISHED DECEMBER 10, 1907.

67,671. PERIODICAL MAGAZINES. GOOD HOUSEKEEPING CO., New York, N. Y.
Filed December 28, 1905. Serial No. 15,728. PUBLISHED DECEMBER 10, 1907.

67,672. RUBBER BOOTS AND SHOES. GOODYEAR'S INDIA RUBBER GLOVE M'F'G CO., Naugatuck, Conn.
Filed September 13, 1907. Serial No. 29,937. PUBLISHED DECEMBER 10, 1907.

67,673. LAXATIVE MINERAL WATERS. IGMANDI IMPORT COMPANY, New York, N. Y.
Filed October 28, 1907. Serial No. 30,837. PUBLISHED DECEMBER 10, 1907.

67,674. LEATHER BOOTS AND SHOES. LYNCHBURG SHOE CO., Lynchburg, Va.
Filed April 1, 1907. Serial No. 26,381. PUBLISHED DECEMBER 10, 1907.

67,675. RUBBER BOOTS AND SHOES. NATIONAL INDIA RUBBER COMPANY, Bristol, R. I.
Filed October 26, 1907. Serial No. 30,809. PUBLISHED DECEMBER 10, 1907.

67,676. LADIES' HAIR-COMBS MADE OF PYROXYLIN AND METAL. PACIFIC NOVELTY COMPANY, New York, N. Y.
Filed October 12, 1907. Serial No. 30,584. PUBLISHED DECEMBER 10, 1907.

67,677. NEWSPAPER, PUBLISHED DAILY. POST PUBLISHING COMPANY, Boston, Mass.
Filed November 4, 1907. Serial No. 30,978. PUBLISHED DECEMBER 10, 1907.

67,678. NEWSPAPER, PUBLISHED ON SUNDAY. POST PUBLISHING COMPANY, Boston, Mass.
Filed November 4, 1907. Serial No. 30,979. PUBLISHED DECEMBER 10, 1907.

67,679. LEATHER SHOES. THE STARNER-COPELAND COMPANY, Columbus, Ohio.
Filed August 5, 1907. Serial No. 29,224. PUBLISHED DECEMBER 10, 1907.

67,680. RUBBER BOOTS AND SHOES. UNITED STATES RUBBER COMPANY, New Brunswick, N. J.
Filed November 4, 1907. Serial No. 31,006. PUBLISHED DECEMBER 10, 1907.

67,681. NEWSPAPER PUBLISHED TRIDAILY. THE UNITED PUBLISHING CO., Washington, D. C.
Filed November 5, 1907. Serial No. 31,010. PUBLISHED DECEMBER 10, 1907.

67,682. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed March 22, 1906. Serial No. 18,114. PUBLISHED OCTOBER 30, 1906.

67,683. LEATHER SHOES, SLIPPERS, AND SANDALS. J. L. WALKER & CO., Lynn, Mass.
Filed October 28, 1907. Serial No. 30,821. PUBLISHED DECEMBER 10, 1907.

67,684. NECKTIES. BENJAMIN WEISBERG, Philadelphia, Pa.
Filed August 12, 1907. Serial No. 29,366. PUBLISHED DECEMBER 10, 1907.

67,685. MAGAZINE OR TRADE JOURNAL. EDWARD WESTON, Newark, N. J.
Filed June 12, 1906. Serial No. 20,228. PUBLISHED DECEMBER 10, 1907.

67,686. INDELIBLE INK. A. LYMAN WILLISTON, Northampton, Mass.
Filed December 22, 1906. Serial No. 24,236. PUBLISHED DECEMBER 10, 1907.

67,687. RUBBER BOOTS AND SHOES. WOONSOCKET RUBBER COMPANY, Woonsocket, R. I.
Filed September 16, 1907. Serial No. 30,015. PUBLISHED DECEMBER 10, 1907.

67,688. AGRICULTURAL FORKS, RAKES, AND HOES AMERICAN FORK & HOE COMPANY, Cleveland, Ohio.
Filed October 28, 1907. Serial No. 30,819. PUBLISHED DECEMBER 10, 1907.

67,689. MEDICATED LOTION ALEX. ROBERTSON, Roseneath, Scotland, and Manchester, England.
Filed October 26, 1907. Serial No. 30,816. PUBLISHED DECEMBER 10, 1907.

LABELS

REGISTERED FEBRUARY 11, 1908.

14,036.—*Title:* "GENCO." (For Cigars.) MAX GAFFNER, Philadelphia, Pa. Filed January 10, 1908.

14,037.—*Title:* "FLOR FINA." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed December 27, 1907.

14,038.—*Title:* "WHITTLE EPSOM LITHIA." (For Mineral-Water Beverages.) WHITTLE SPRINGS Co., near Knoxville, Knox county, Tenn. Filed January 13, 1908.

14,039.—*Title:* "PURA SEMOLA." (For Macaroni.) FRANK RICCIARDELLI, McAdoo, Pa. Filed December 26, 1907.

14,040.—*Title:* "HIGHLAND CHIEF RHEUMATIC REMEDY." (For a Rheumatic Remedy.) JOHN E. DUNLAP, Boston, Mass. Filed January 8, 1908.

14,041.—*Title:* "ALMOND WHITENER." (For Ointment for Use After Washing.) HENNIE HATTEN LEPPER, Chicago, Ill. Filed January 13, 1908.

14,042.—*Title:* "SKIN-CLEAN-O." (For a Toilet Powder to be Used in Place of Soap.) HENNIE HATTEN LEPPER, Chicago, Ill. Filed January 13, 1908.

14,043.—*Title:* "SKIN NOURISHER." (For a Pharmaceutical Preparation for Building Depleted Physical Tissues, &c.) HENNIE HATTEN LEPPER, Chicago, Ill. Filed January 13, 1908.

14,044.—*Title:* "PRINCESS COLD CREAM." (For a Salve for Cleansing the Face and Removing Impurities from the Skin.) HENNIE HATTEN LEPPER, Chicago, Ill. Filed January 13, 1908.

14,045.—*Title:* "UNCLE SAM'S CROWN." (For a Game.) ALVIN C. HOWES, Middleboro, Mass. Filed December 30, 1907.

PRINTS

REGISTERED FEBRUARY 11, 1908.

2,211.—*Title:* "PARISIAN TREE CAKE KNOWN IN GERMANY AS 'BAUMKUCHEN.'" (For Tree-Cakes.) PAUL FULLERBORN, Philadelphia, Pa. Filed January 2, 1908.

2,212.—*Title:* "COLGATE'S COLLAPSIBLE TUBE FOR TOILET CREAMS & PASTES." (For Toilet Creams and Pastes.) COLGATE & Co., New York, N. Y. Filed January 11, 1908.

2,213.—*Title:* "COLGATE'S COLLAPSIBLE TUBE FOR TOILET CREAMS & PASTES." (For Toilet Creams and Pastes.) COLGATE & Co., New York, N. Y. Filed January 11, 1908.

2,214.—*Title:* "COLGATE'S COLLAPSIBLE TUBE FOR TOILET CREAMS & PASTES." (For Toilet Creams and Pastes.) COLGATE & Co., New York, N. Y. Filed January 11, 1908.

2,215.—*Title:* "MEN'S AND BOYS' APPAREL." (For Men's and Boys' Apparel.) H. C. LYTTON, Chicago, Ill. Filed January 9, 1908.

2,216.—*Title:* "MENS APPAREL." (For Men's Apparel.) L. ADLER, BROS. & Co., Rochester, N. Y. Filed January 13, 1908.

2,217.—*Title:* "MENS APPAREL." (For Men's Apparel.) THE ROSENWALD & WEIL Co., Chicago, Ill. Filed January 13, 1908.

2,218.—*Title:* "'BEST' DAMP PROOF SHOES." (For Shoes.) BEST & Co., New York, N. Y. Filed December 21, 1907.

REPORT

OF THE

COMMISSIONER OF PATENTS

TO CONGRESS

FOR THE YEAR ENDED DECEMBER 31, 1907.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 31, 1908.

To the Senate and House of Representatives of the United States of America in Congress assembled:

In compliance with section 494 of the Revised Statutes I have the honor to submit the following report of the business of the Patent Office for the year ended December 31, 1907:

RECEIPTS.

Detailed statement of all moneys received for patents, for copies of records or drawings, or from any source whatever.

Applications:		
Cash received	$1,674,237.00	
Cash refunded	5,967.00	
Net cash	1,668,270.00	
Certificates of deposit	47,410.00	
Total cash and certificates		1,715,680.00
Copies:		
Cash received	162,178.08	
Cash refunded	12,409.57	
Net cash	149,768.51	
Certificates of deposit	738.10	
Total cash and certificates		150,506.61
Recording assignments:		
Cash received	28,147.02	
Cash refunded	1,520.28	
Net cash	26,626.74	
Certificates of deposit	136.00	
Total cash and certificates		26,762.74
Subscriptions to Official Gazette:		
Cash received	11,235.36	
Cash refunded	136.57	
Net cash	11,098.79	
Certificates of deposit	30.00	
Total cash and certificates		11,128.79
Registration of prints and labels:		
Cash received	8,503.00	
Cash refunded	2,041.00	
Net cash	6,462.00	
Certificates of deposit	78.00	
Total cash and certificates		6,540.00
Aggregates.		
Cash received	1,884,300.46	
Cash refunded	22,074.42	
Net cash	1,862,226.04	
Certificates of deposit	48,392.10	
Total cash and certificates		1,910,618.14

EXPENDITURES.

Amounts expended under the several appropriations from January 1, 1907, to December 31, 1907.

Salaries	$948,391.02
Scientific library	2,273.19
International Union for Protection of Industrial Property	676.65
Stationery	13,164.97
Postage on foreign matter	1,617.00
Furniture, carpets, matting, linoleum, ice, telephones, washing towels, and sundries	15,861.11
Law library	478.05
Photolithographing, paid contractor	147,007.08
Printing and binding, paid Public Printer for Official Gazette, indexes, printing specifications, and miscellaneous work	486,316.03
Rent for storage of models	15,583.36
Total	1,631,468.36

RECEIPTS AND EXPENDITURES.

Receipts from all sources	$1,910,618.14
Expenditures	1,631,468.36
Surplus	279,149.78

Statement of balance in the Treasury of the United States on account of the Patent Fund.

Amount to the credit of the fund January 1, 1907	$6,427,021.86
Amount of receipts during the year 1907	1,910,618.14
Total	8,337,640.00
Deduct expenditures for the year 1907	1,631,468.36
Balance January 1, 1908	6,706,181.64

SUMMARY OF THE BUSINESS OF THE PATENT OFFICE.

Applications for patents for inventions	57,679
Applications for patents for designs	896
Applications for reissues of patents	187
Total	58,762
Caveats filed	1,987
Applications for registration of trade-marks	7,722
Applications for registration of labels	1,027
Applications for registration of prints	403
Disclaimers filed	5
Appeals on the merits	1,443
Total	12,867
Applications requiring investigation and action	18,540
Patents issued, including designs	36,469
Patents reissued	151
Total	36,620
Trade-marks registered	7,578
Labels registered	987
Prints registered	315
Total	8,880
Patents expired during the year	25,329
Patents withheld for non-payment of final fees	5,541
Applications allowed awaiting final fees	11,102
Trade-mark applications passed for publication	7,561

PATENTS ISSUED.

Patents issued to citizens of the United States, with the ratio of population to each patent granted.

States and Territories.	Patents and designs.	One to every—	States and Territories.	Patents and designs.	One to every—
Alabama	156	11,722	New Hampshire	121	3,401
Alaska	7	9,063	New Jersey	1,504	1,323
Arizona	38	3,235	New Mexico	27	7,333
Arkansas	150	8,743	New York	5,231	1,399
California	1,209	1,128	North Carolina	153	12,377
Colorado	460	1,173	North Dakota	134	2,331
Connecticut	920	967	Ohio	2,493	1,667
Delaware	44	4,196	Oklahoma	148	2,990
District of Columbia	296	941	Oregon	219	1,888
Florida	111	4,761	Panama	4	.....
Georgia	264	8,305	Pennsylvania	3,471	1,815
Hawaii	16	9,625	Philippine Islands	7	.....
Idaho	76	2,128	Porto Rico	10	.....
Illinois	3,470	1,388	Rhode Island	271	1,581
Indiana	921	2,732	South Carolina	72	26,302
Indian Territory	61	6,589	South Dakota	127	3,161
Iowa	679	3,285	Tennessee	232	8,709
Kansas	472	3,113	Texas	544	5,604
Kentucky	304	8,063	Utah	101	2,740
Louisiana	160	8,635	Vermont	94	3,656
Maine	178	3,901	Virginia	274	6,767
Maryland	353	3,107	Washington	410	1,263
Massachusetts	2,113	1,327	West Virginia	237	4,045
Michigan	1,110	2,190	Wisconsin	758	2,729
Minnesota	598	2,928	Wyoming	22	4,206
Mississippi	108	14,363	United States Army	6	.....
Missouri	1,130	2,749	United States Navy	15	.....
Montana	118	2,062			
Nebraska	327	3,267	Total	32,603	
Nevada	39	1,085			

Comparative statement showing percentage of increase and decrease of patents granted to citizens of the various States and Territories during a period of twenty-five years, from 1883 to 1907.

States and Territories.	Patents granted in 1883.	Patents granted in 1907.	Increase.	Decrease.	Percentage of increase.	Percentage of decrease.
Alabama	77	156	79	.....	102.5	.....
Alaska	[a]1	7	6	.....	600.	.....
Arizona	14	38	24	.....	171.4	.....
Arkansas	59	150	91	.....	154.2	.....
California	596	1,209	613	.....	102.8	.....
Colorado	119	460	341	.....	286.5	.....
Connecticut	883	920	37	.....	4.1	.....
Delaware	36	44	8	.....	22.2	.....
District of Columbia	217	296	79	.....	36.4	.....
Florida	24	111	87	.....	362.5	.....
Georgia	115	264	149	.....	127.8	.....
Hawaii	[b]7	16	9	.....	128.5	.....
Idaho	6	76	70	.....	1166.6	.....
Illinois	1,792	3,470	1,678	.....	93.6	.....
Indiana	712	921	209	.....	29.3	.....
Indian Territory	[c]3	61	58	.....	1,933.3	.....
Iowa	445	679	234	.....	52.5	.....
Kansas	189	472	283	.....	149.7	.....
Kentucky	228	304	76	.....	33.3	.....
Louisiana	80	160	80	.....	100.	.....
Maine	183	178	.....	5	.....	2.8
Maryland	260	383	123	.....	47.3	.....
Massachusetts	2,173	2,113	.....	60	.....	2.8
Michigan	727	1,110	383	.....	52.6	.....
Minnesota	210	598	388	.....	184.7	.....
Mississippi	51	108	57	.....	111.7	.....
Missouri	625	1,130	505	.....	80.8	.....
Montana	17	118	101	.....	594.1	.....
Nebraska	87	327	240	.....	275.8	.....
Nevada	23	39	16	.....	69.5	.....
New Hampshire	139	121	.....	18	.....	14.8
New Jersey	1,066	1,504	438	.....	41.1	.....
New Mexico	11	27	16	.....	145.4	.....
New York	4,359	5,231	872	.....	20.	.....
North Carolina	87	153	66	.....	75.8	.....
North Dakota	15	134	119	.....	793.3	.....
Ohio	1,604	2,493	889	.....	55.4	.....
Oklahoma	[d]4	148	144	.....	3600.	.....
Oregon	76	219	143	.....	188.1	.....
Pennsylvania	2,108	3,471	1,363	.....	60.1	.....
Rhode Island	327	271	.....	56	.....	20.6
South Carolina	47	72	25	.....	53.1	.....
South Dakota	15	127	112	.....	746.6	.....
Tennessee	124	232	108	.....	87.	.....
Texas	208	544	336	.....	161.5	.....
Utah	21	101	80	.....	380.	.....
Vermont	109	94	.....	15	.....	15.9
Virginia	122	274	152	.....	124.5	.....
Washington	21	410	389	.....	1852.3	.....
West Virginia	82	237	155	.....	189.	.....
Wisconsin	304	758	454	.....	92.3	.....
Wyoming	5	22	17	.....	340.	.....

[a] First patent granted 1869. [b] First patent granted 1898. [c] First patent granted 1894. [d] First patent granted 1890.

Patents granted to citizens of foreign countries.

Algeria	1	France	334	Newfoundland	6
Argentina	12	Germany	1,182	New South Wales	34
Austria-Hungary	127	Guatemala	1	New Zealand	45
Belgium	58	Haiti	2	Nicaragua	1
Brazil	6	India	5	Norway	15
Canada	536	Ireland	22	Peru	2
Cape Colony	7	Italy	48	Portugal	2
Colombia	1	Jamaica	2	Queensland	6
Costa Rica	1	Japan	9	Rhodesia	1
Cuba	21	Java	1	Roumania	2
Denmark	40	Luxemburg	4	Russia	33
England	868	Mexico	26	Scotland	62
Ecuador	1	Netherlands	23	South Australia	4
Spain	11				
Sweden	77				
Switzerland	121				
Tasmania	7				
Transvaal	33				
Turkey	3				
Venezuela	5				
Victoria	51				
Western Australia	7				
Total	3,866				

The following tables present a comparative statement of the business of the Patent Office since the enactment of the statute of 1836 and exhibit in detail the business of the Office during the last calendar year:

Comparative statement of the business of the Office from 1837 to 1907, inclusive.

Year.	Applications.	Caveats filed.	Patents and reissues.	Cash received.	Cash expended.	Surplus.
1837	.....	.....	435	$29,289 08	$33,506 98	.....
1838	.....	.....	520	42,123 54	37,338 92	$4,784 62
1839	.....	.....	625	38,019 97	34,543 51	3,476 46
1840	765	228	473	38,056 51	30,020 67	.....
1841	847	312	495	40,413 01	52,666 87	.....
1842	761	291	517	36,505 63	31,241 43	5,264 20
1843	819	315	519	35,315 81	30,776 96	4,538 85
1844	1,045	380	497	42,509 26	36,344 53	6,164 73
1845	1,246	452	503	51,076 14	39,395 65	11,680 49
1846	1,272	448	638	50,264 16	46,158 71	4,105 45
1847	1,531	533	569	63,111 19	41,878 35	21,232 84
1848	1,628	607	653	67,576 69	58,905 84	8,670 85
1849	1,955	595	1,077	80,762 78	77,716 44	3,036 34
1850	2,193	602	993	86,927 05	80,100 95	6,826 10
1851	2,258	760	872	95,738 61	86,916 93	8,821 68
1852	2,639	996	1,019	112,056 34	95,916 91	16,139 43
1853	2,673	901	961	121,527 45	132,869 83	.....
1854	3,324	868	1,844	163,789 84	167,146 32	.....
1855	4,435	906	2,013	216,459 35	179,540 33	36,919 02
1856	4,900	1,024	2,505	192,588 02	199,931 02	.....
1857	4,771	1,010	2,906	196,132 01	211,582 09	.....
1858	5,364	943	3,710	203,716 16	193,193 74	10,522 42
1859	6,225	1,079	4,538	245,942 15	210,278 41	35,663 74
1860	7,653	1,084	4,819	256,352 59	252,820 80	3,531 79
1861	4,643	700	3,340	137,354 44	221,491 91	.....
1862	5,038	824	3,521	215,754 99	182,810 39	32,944 06
1863	6,014	787	4,170	195,593 29	189,414 14	6,179 15
1864	6,972	1,063	5,020	240,919 98	229,868 00	11,051 98
1865	10,664	1,932	6,616	348,791 84	274,199 34	74,592 50
1866	15,269	2,723	9,450	495,665 38	361,724 28	133,941 10
1867	21,276	3,597	13,015	646,581 92	639,263 32	7,318 60
1868	20,445	3,705	13,378	681,565 86	628,679 77	52,886 09
1869	19,271	3,624	13,986	693,145 81	496,430 74	206,715 07
1870	19,171	3,273	13,321	669,456 76	557,147 19	112,309 57
1871	19,472	3,366	13,033	678,716 46	562,091 64	116,624 82
1872	18,246	3,090	13,590	699,726 39	665,595 00	34,131 39
1873	20,414	3,248	12,864	703,191 77	691,178 98	12,012 79
1874	21,602	3,181	13,599	738,278 17	679,288 41	58,959 76
1875	21,638	3,094	14,837	743,453 36	721,657 71	21,795 65
1876	21,425	2,997	15,595	757,987 65	652,542 60	105,445 05
1877	20,308	2,809	14,187	722,342 85	613,152 62	119,190 23
1878	20,260	2,755	13,444	725,375 55	593,082 89	132,292 66
1879	20,059	2,620	13,213	703,931 47	529,638 97	174,292 50
1880	23,012	2,490	13,947	745,685 32	538,865 17	210,820 15
1881	26,059	2,406	16,584	853,665 89	605,173 28	248,492 61
1882	31,522	2,553	19,267	1,009,219 45	683,867 67	325,351 78
1883	34,576	2,741	22,383	1,146,240 00	675,234 86	471,005 14
1884	35,600	2,582	20,413	1,075,798 80	970,579 76	105,219 04
1885	35,717	2,552	24,233	1,188,089 15	1,024,378 85	163,710 30
1886	35,968	2,513	22,508	1,154,551 40	992,503 45	162,047 95
1887	35,613	2,622	21,477	1,144,509 60	994,472 22	150,037 38
1888	35,797	2,251	20,506	1,118,516 10	973,108 78	145,407 32
1889	40,575	2,481	24,158	1,281,728 05	1,052,955 96	228,772 09
1890	41,048	2,311	26,292	1,340,372 66	1,099,297 74	241,074 92
1891	40,552	2,408	23,244	1,271,285 78	1,139,713 35	131,572 43
1892	40,753	2,290	23,559	1,286,331 88	1,110,739 24	175,592 59
1893	38,473	2,247	23,709	1,242,871 64	1,141,038 45	101,833 19
1894	38,439	2,295	20,867	1,187,439 58	1,100,047 12	87,392 46
1895	40,680	2,415	22,057	1,245,246 93	1,106,389 49	138,857 44
1896	43,962	2,271	23,373	1,324,059 83	1,113,413 71	210,646 12
1897	47,905	2,176	23,794	1,375,641 72	1,122,843 13	252,798 59
1898	35,842	1,659	22,267	1,137,734 48	1,136,196 20	1,538 28
1899	41,443	1,716	25,627	1,325,457 03	1,211,783 73	113,673 30
1900	41,060	1,731	26,499	1,380,528 53	1,290,010 62	90,508 91
1901	46,449	1,942	27,372	1,440,208 16	1,297,335 54	152,012 62
1902	49,641	1,851	27,896	1,552,859 08	1,393,345 54	159,513 54
1903	50,213	1,771	21,699	1,642,201 31	1,448,645 31	193,556 00
1904	52,143	1,808	30,934	1,657,326 53	1,476,000 38	181,326 15
1905	54,971	1,896	30,309	1,806,758 14	1,479,633 22	327,124 92
1906	56,482	1,885	31,965	1,790,921 38	1,554,891 20	236,030 18
1907	58,762	1,967	36,620	1,910,618 14	1,631,458 36	279,159 78

Statement showing the number of the first patent, design patent, and reissued patent, and the number of the first certificate of registration of a trade-mark, label, and print issued in each calendar year since July 28, 1836, when the present series of numbers of letters patent commenced, together with the total number of each issued during the year.

[The number of patents granted prior to the commencement of this series of numbering (July 28, 1836) was 9,957.]

Calendar year.	Number of first patent and certificate issued in each calendar year.						Number of patents and certificates of registration issued during each calendar year.							
	Patents.	Designs.	Reissues.	Trade-Marks.	Labels.	Prints.	Patents.	Designs.	Reissues.	Total patents.	Trade-Marks.	Labels.	Prints.	Total certificates.
1836 (July 28)	1						109							
1837	110						436							
1838	546		1				516		6					
1839	1,051		7				404		13					
1840	1,485		20				455		10					
1841	1,923		30				490		6					
1842	2,413		36				488		13					
1843	2,901	1	49				494	14	11	519				
1844	3,395	15	60				478	12	7	497				
1845	3,873	27	67				475	17	11	503				
1846	4,348	44	78				505	89	13	638				
1847	4,914	103	91				495	60	14	569				
1848	5,409	163	105				524	46	23	653				
1849	5,903	209	128				955	49	30	1,067				
1850	6,961	258	185				884	83	26	993				
1851	7,805	341	184				767	90	25	872				
1852	8,622	451	209				850	109	20	1,019				
1853	9,512	540	220				849	85	29	961				
1854	10,358	626	238				1,730	57	28	1,844				
1855	12,117	683	286				1,902	70	81	2,013				
1856	14,009	753	337				2,315	107	83	2,505				
1857	16,324	880	420				2,696	113	97	2,906				
1858	19,010	973	517				3,497	102	128	3,727				
1859	22,477	1,075	643				4,165	106	231	4,504				
1860	26,642	1,153	674				4,363	133	232	4,778				
1861	31,005	1,308	1,106				3,940	142	147	3,329				
1862	34,045	1,808	1,253				3,221	195	116	3,532				
1863	37,288	1,708	1,369				3,781	176	227	4,184				
1864	41,047	1,879	1,396				4,638	139	248	5,025				
1865	45,085	2,013	1,944				6,099	221	396	6,616				
1866	51,784	2,239	2,140				8,574	294	260	9,458				
1867	60,686	2,533	2,420				12,301	325	400	13,026				
1868	72,989	2,958	2,930				12,544	446	420	13,410				
1869	85,803	3,304	3,280				12,967	506	534	13,997				
1870	96,490	3,810	3,784	1			12,157	737	439	13,333	121			121
1871	110,617	4,547	4,228	122			11,957	905	464	13,056	486			486
1872	122,304	5,452	4,667	608			12,200	854	520	13,613	491			491
1873	134,804	6,336	5,216	1,090			11,616	747	501	12,864	462			462
1874	146,120	7,083	5,717	1,291	1		12,230	808	453	13,909	550	232		791
1875	158,380	7,999	6,200	2,150	233		13,201	915	631	14,837	1,138	232		1,370
1876	171,641	8,824	6,631	3,283	495		14,172	852	621	15,896	930	472		1,431
1877	186,813	9,698	7,462	4,247	957		12,920	999	888	14,157	1,216	392		1,608
1878	198,733	10,385	8,020	5,463	1,320		12,345	820	809	13,444	1,455	492		1,947
1879	211,078	10,975	8,529	6,918	1,821		12,133	802	488	13,213	872	355		1,227
1880	225,211	11,557	9,017	7,780	2,176		12,926	515	806	13,947	349	203		552
1881	336,137	12,082	9,528	8,139	2,379		15,548	895	671	16,884	834	202		1,036
1882	251,685	12,647	9,994	8,973	2,861		18,135	891	271	19,267	947	304		1,251
1883	269,820	13,508	10,265	9,920	2,885		21,198	1,020	167	22,383	902	906		1,808
1884	291,016	14,528	10,432	10,822	3,791		19,147	1,180	116	20,413	1,021	513		1,534
1885	310,163	15,678	10,548	11,843	4,304		20,331	773	120	24,233	1,067	301		1,488
1886	333,494	16,461	10,677	12,910	4,695		21,797	805	116	22,808	1,020	378		1,497
1887	355,291	17,046	10,798	13,939	5,073		20,439	949	99	21,477	1,133	380		1,513
1888	375,720	17,995	10,902	15,072	5,453		19,585	835	86	20,508	1,069	327		1,396
1889	395,305	18,830	10,978	16,131	5,780		23,360	723	75	24,158	1,220	319		1,539
1890	415,665	19,551	11,053	17,300	6,089		25,323	898	84	26,202	1,415	304		1,719
1891	443,267	20,429	11,137	18,775	6,403		22,328	838	80	23,244	1,762	137		1,899
1892	466,315	21,275	11,217	20,537	6,540		22,661	617	81	23,359	1,737	46		1,783
1893	488,976	22,092	11,288	22,274	None.	1	22,703	922	89	23,709	1,677	None.	2	1,679
1894	511,744	22,894	11,367	23,951	Do.	2	19,878	908	94	20,857	1,805	Do.	4	1,810
1895	531,619	23,622	11,451	25,757	Do.	7	20,253	1,115	89	22,057	1,220	Do.	3	1,832
1896	552,932	25,057	11,520	27,895	6,549	10	21,267	1,445	61	23,273	1,513	1	32	1,846
1897	574,369	26,482	11,551	29,309	6,547	42	22,008	1,631	65	23,704	1,671	14	16	1,701
1898	596,457	28,113	11,646	31,070	6,861	88	20,404	1,803	60	22,267	1,238	200	35	1,473
1899	618,871	29,916	11,708	32,308	6,761	93	21,396	2,139	92	25,627	1,640	511	100	2,280
1900	640,167	32,065	11,798	33,957	7,272	198	24,660	1,788	81	26,499	1,721	737	93	2,551
1901	664,627	33,813	11,879	35,676	8,039	265	25,588	1,734	81	27,373	1,928	878	159	2,965
1902	689,386	35,547	11,980	37,606	8,357	445	27,126	640	110	27,886	2,006	767	188	2,961
1903	717,521	36,157	12,070	39,612	9,054	608	31,049	826	117	31,990	2,196	900	270	3,446
1904	748,867	36,723	12,189	41,766	10,044	873	30,267	857	110	30,934	2,158	1,114	207	3,589
1905	778,884	37,280	12,299	43,966	11,788	1,170	29,784	486	129	30,399	4,400	830	389	5,679
1906	808,618	37,788	12,426	46,446	12,888	1,339	31,181	625	189	31,995	10,668	709	636	11,933
1907	838,799	38,391	12,557	49,014	13,297	1,574	35,980	899	151	36,620	7,878	667	315	8,860

First Print registered Mar. 7, 1905.

• Registration of labels practically suspended May 27, 1891, under decision of the United States Supreme Court in *Higgins et al.* v. *Keuffel et al.*, (35 O. G., 1139,) with the registration of No. 6,545, June 14, 1892. Resumed June 9, 1896, with the registration of No. 6,548.

Expenditures for photolithographic and photographic work since 1884–85.

Fiscal year.	Contractor.	Price per page. Current issue.	Reproduction of exhausted copies.	Library edition.	Photographic copies.	Total.	Official Gazette.	Grand total.
1884–85	Norris Peters	a $1 61	‡ $1 58 / ‡ 1 00	† $2 90		$78,671 99	$39,614 40	$118,286 39
1885–86	do	a 1 61	‡ 1 58 / ‡ 1 00	† 2 80		84,940 19	44,351 00	129,291 19
1886–87	do	a 1 61	‡ 1 55 / ‡ 1 00	† 2 80		79,509 57	41,869 00	121,378 57
1887–88	do	a 1 61	‡ 1 55 / ‡ 1 00	† 2 80		77,907 96	41,183 60	119,091 56
1888–89	do	a 1 61	‡ 1 55 / ‡ 1 00	† 2 80		83,284 54	43,999 70	127,284 24
1889–90	do	a 1 61	‡ 1 55 / ‡ 1 00	† 2 80		101,292 67	58,992 40	160,285 07
1890–91	do	a 1 61	‡ 1 55 / ‡ 1 00	† 2 80		110,998 97	65,966 10	176,965 07
1891–92	Norris Peters Co	b 1 57	‡ 1 55 / ‡ 1 00	† 2 80		99,992 58	82,969 50	182,962 08
1892–93	do	b 1 55 / c 1 49	‡ 1 55 / ‡ 1 00	† 2 80		99,788 92	54,998 30	154,787 22
1893–94	National Lithographic Co	b 1 55 / c 1 47	‡ 1 55 / ‡ 1 00	† 2 70		94,911 33	49,997 70	144,909 03
1894–95	Norris Peters Co	b 1 01 / c 96	‡ 1 14 / ‡ 94	† 1 95		60,482 04	38,297 88	98,779 92
1895–96	A. B. Graham	d 1 0025 / e 9775	k 735 / l 93	m 1 10		58,866 60	42,326 30	101,192 90
1896–97	Norris Peters Co	f 84 / e 655	m 65 / n 60	n 1 00		58,960 78	35,712 00	94,672 78
1897–98	do	d 92 / e 83	m 75 / n 75	n 1 80		68,999 28	39,749 40	108,748 68
1898–99	do	d 1 005	o 72	n 1 60	*$0 07 / w 095 / y 125 / z 05	75,999 85	46,065 60	122,065 45
	*Annie C. Bell	e 885	n 78					
1899–1900	Norris Peters Co	g 905	p 70	n 1 60	w 12 / y 18 / z 05	98,999 90	55,092 80	154,092 70
	*Henry C. Yates & Co	e 885	n 78					
1900–1901	do	g 1 08 / h 1 03	q 80	n 1 75	w 12 / y 20 / z 05	108,999 54	62,100 00	171,099 54
1901–1902	do	g 1 08 / h 1 03	q 80	n 1 75	w 12 / y 20 / z 05	108,999 55	66,600 00	175,599 55
1902–1903	Norris Peters Co	g 1 08 / h 1 03	q 80	n 1 75	w 14 / y 20	123,842 76	75,112 50	198,955 26
	*Charles Parker							
1903–1904	Norris Peters Co	g 1 08 / h 1 03	q 80	n 1 75	w 10 / y 15	129,999 97	84,162 50	214,162 47
	*W. E. Oliver							
1904–1905	Sackett & Wilhelms Lithographing & Printing Co	d 1 30 / k 95	q 80 / r 1 10	n 1 65	w 10 / y 15	140,000 00	75,020 00	215,020 00
	*C. Parker		s 1 25					
	‡A. B. Graham Co	d 0 995	q 0 60					
	‡Norris Peters Co	aa 725	r 80	n 1 38	w 0 08 / y 13	129,999 99	71,736 00	201,735 99
1905–1906	*Columbia Planograph Co	bb 705	s 90					
	*W. E. Oliver	cc 60						
	'Sackett & Wilhelms Lithographing & Printing Co							
	‡Norris Peters Co	f 80	q 57					
	‡Norris Peters Co	dd 65	s 85					
1906–1907	*A. B. Graham Co			ee 1 22		140,000 00	f	140,000 00
	*E. L. Parker				w 08 / y 13			
	‡Norris Peters Co							
	‡J. A. Eckert	f 77	q 50	ee 1 15	z 00 / y 13	• 140,000 00	f	• 140,000 00
1907–1908	*Columbia Planograph Co	dd 64	s 67					
	*H. A. Farnham							

‡ For current issue.
‡ For reproduction of exhausted copies.
† For the library edition.
* For photographic work.
' For Official Gazette.
a For 152 thin, 2 thick, and 1 bond copies.
b For 102 thin, 2 thick, and 1 bond copies.
c For 24 thin, 2 thick, and 1 bond copies of design patents and trade-marks.
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f For 100 thin, 2 thick, and 1 bond copies.
g For 75 thin, 2 proof, 2 thick, and 1 bond copies.
h For 50 thin, 4 thick, and 1 bond copies of designs and trade-marks.
i For 152 thin, and 2 thick copies of mechanical patents.
j For 12 copies of design patents and trade-marks.
k For 150 thin and 2 thick copies of mechanical patents.
l For 24 thin and 2 thick copies of designs and trade-marks.
m For 150 copies of mechanical patents.
n For 24 copies of design patents and trade-marks
o For 100 copies of mechanical patents.
p For 50 copies of mechanical patents.
q For 50 copies each, mechanical and design patents and trade-marks.
r For 75 copies each, mechanical and design patents and trade-marks.
s For 100 copies each, mechanical and design patents and trade-marks.
t For 200 copies.
u For 235 copies.
v Size, 5 x 8 in.
w Size, 7 x 11 in.
x Size, 8 x 12½ in.
y Size, 10 x 15 in.
z Estimated.
aa For 50 thin, 2 proof, 2 thick, and 1 bond copies of designs.
bb For 50 thin, 2 thick, and 1 bond copies of trade-marks.
cc For 2 copies of trade-marks for publication.
dd For 50 thin, 2 thick, and 1 bond copies of trade-marks and designs.
ee For 150 copies.
ff No contract made with photolithographer for illustrations for Official Gazette.

Number of patents issued by the United States and foreign countries from the earliest period to December 31, 1907.

[Foreign figures for 1907 estimated.]

Country.	To 1870, inclusive.	1871 to 1907.	Total.	Country.	To 1870, inclusive.	1871 to 1907.	Total.
Argentina	83	6,704	6,787	Malta	.....	67	67
Australia	.....	4,172	4,172	Mauritius	113	265	378
Austria	.....	50,350	50,350	Mexico	22	7,251	7,273
Austria-Hungary	15,350	67,583	82,933	Netherlands	4,535	.....	4,535
Bahamas	.....	2	2	Newfoundland	40	364	404
Barbadoes	.....	137	137	New South Wales	236	11,740	11,976
Belgium	35,044	176,217	211,261	New Zealand	109	11,319	11,428
Bolivia	42	65	107	Norway	737	17,922	18,659
Brazil	185	5,622	5,807	Paraguay	.....	75	75
British Guiana	32	94	126	Peru	.....	160	160
British Honduras	1	19	20	Portugal	245	5,326	5,571
Canada	4,061	108,576	112,657	Queensland	67	6,368	6,435
Ceylon	58	639	697	Russia	1,464	17,796	19,260
Chile	266	1,557	1,823	St. Helena	.....	4	4
Colombia	.....	973	973	South African Republic	.....	1,262	1,262
Congo Free State	.....	184	184	South Australia	123	6,221	6,344
Costa Rica	.....	52	52	Spain	.....	38,348	38,348
Denmark	464	17,368	17,832	Straits Settlements	.....	184	184
Ecuador	.....	10	10	Sweden	1,629	25,186	26,815
Fiji Islands	.....	33	33	Switzerland	.....	39,473	39,473
Finland	112	2,877	2,989	Tasmania	43	2,426	2,469
France	103,934	291,338	395,272	Transvaal	.....	1,581	1,581
Germany	9,996	202,084	212,080	Trinidad	6	176	182
Great Britain	53,408	329,709	383,117	Tunis	.....	639	639
Guatemala	.....	57	57	Turkey	.....	1,640	1,640
Hawaii (prior to Aug. 12, 1898)	.....	148	148	Uruguay	.....	320	320
Hongkong	.....	159	159	Venezuela	.....	216	216
Hungary	.....	36,409	36,409	Victoria	822	12,463	13,285
India	445	9,118	9,563	West Australia	.....	3,524	3,524
Italy and Sardinia	4,723	80,195	84,918	Total foreign	238,437	1,625,399	1,863,836
Jamaica	22	192	214	United States	120,573	765,062	*885,635
Japan	.....	13,235	13,235	Grand total	359,010	2,390,461	2,740,471
Leeward Islands	.....	20	20				
Liberia	.....	2	2				
Luxemburg	.....	7,183	7,183				

* Including 9,957 patents issued prior to July 1, 1836.

The following comparison between the receipts, expenditures, applications filed, issues of the Office, the printed copies sold, copies of records furnished, and the number of employees for the years ended, respectively, December 31, 1899, and December 31, 1907, illustrates the growth of the business of the Patent Office:

Class.	1899.	1907.	Increase.	Percentage of increase.
Receipts	$1,325,457.03	$1,910,618.14	$585,161.11	44.1
Expenditures	$1,211,783.73	$1,631,458.36	$419,674.63	34.6
Applications and caveats filed	45,900	69,881	23,891	51.9
Letters patent, design and reissue patents granted, and trade-marks, labels, and prints registered	27,787	45,490	17,603	63.6
Printed copies of patents furnished	1,451,519	2,317,838	866,319	59.6
Price received	$50,201.11	$88,028.47	$37,825.36	75.3
Words written in copies of records furnished	13,575,660	24,182,900	10,607,250	78.1
Number of employees	663	821	158	23.8

SUMMARY OF TABLES.

In 1907 there were received 57,679 applications for mechanical patents, 896 applications for design patents, 187 applications for reissues of patents, 7,722 applications for registration of trade-marks, 1,027 applications for registration of labels, and 403 applications for registration of prints. There were 36,469 patents issued, including designs, 151 patents reissued, and 7,878 trade-marks, 667 labels, and 315 prints registered. The number of patents that expired was 25,322. The number of allowed applications awaiting the payment of final fees was 11,102, and the number forfeited for non-payment of the final fees 5,541. The total receipts were $1,910,618.14, the expenditures $1,631,458.36, and the surplus of receipts over expenditures $279,159.78. The total balance to the credit of the Patent Office in the Treasury of the United States on January 1, 1908, was $6,706,161.64.

In proportion to population more patents were issued to citizens of the District of Columbia than to those of any State—1 to every 941. Next in order are the following: Connecticut, 1 to every 987; Nevada, 1 to every 1,085; California, 1 to every 1,128; Colorado, 1 to every 1,173; New Jersey, 1 to every 1,252; Washington, 1 to every 1,263; Massachusetts, 1 to every 1,327; Illinois, 1 to every 1,388; New York, 1 to every 1,389; Rhode Island, 1 to every 1,581; Ohio, 1 to every 1,667; Pennsylvania, 1 to every 1,815; Oregon, 1 to every 1,888; Montana, 1 to every 2,062; Idaho, 1 to every 2,128; Michigan, 1 to every 2,190; North Dakota, 1 to every 2,381; Oklahoma, 1 to every 2,690; Wisconsin, 1 to every 2,729; Indiana, 1 to every 2,732; Utah, 1 to every 2,740; Missouri, 1 to every 2,749; Minnesota, 1 to every 2,928; Maryland, 1 to every 3,107; Kansas, 1 to every 3,113; South Dakota, 1 to every 3,161; Arizona, 1 to every 3,235; Nebraska, 1 to every 3,267; Iowa, 1 to every 3,285; New Hampshire, 1 to every 3,401; Vermont, 1 to every 3,656; Maine, 1 to every 3,901; West Virginia, 1 to every 4,045; Delaware, 1 to every 4,198; Wyoming, 1 to every 4,206; Florida, 1 to every 4,761; Texas, 1 to every 5,604; Indian Territory, 1 to every 6,589; Virginia, 1 to every 6,767; New Mexico, 1 to every 7,233; Kentucky, 1 to every 8,063; Georgia, 1 to every 8,395; Louisiana, 1 to every 8,635; Tennessee, 1 to every 8,709; Arkansas, 1 to every 8,743; Alaska, 1 to every 9,063; Hawaii, 1 to every 9,625. The fewest patents granted in proportion to the number of inhabitants were in the following States: South Carolina, 1 to every 26,302; Mississippi, 1 to every 14,363; North Carolina, 1 to every 12,377, and Alabama, 1 to every 11,722.

As to foreign patents, 1,182 were granted to citizens of Germany; 868 to those of England; 536 to those of Canada; 334 to those of France; 127 to those of Austria-Hungary; 121 to those of Switzerland; 77 to those of Sweden; 62 to those of Scotland; 58 to those of Belgium; 51 to those of Victoria; 48 to those of Italy; 45 to those of New Zealand; 40 to those of Denmark; 34 to those of New South Wales; 33 each to those of Russia and Transvaal; 26 to those of Mexico; 23 to those of the Netherlands; 22 to those of Ireland; 21 to those of Cuba; 15 to those of Norway; 12 to those of Argentina; 11 to those of Spain; 9 to those of Japan; 7 each to those of Cape Colony, Tasmania, and Western Australia; 6 each to those of Brazil, Newfoundland, and Queensland; 5 each to those of India and Venezuela; 4 each to those of Luxemburg and South Australia; 3 to those of Turkey; 2 each to those of Haiti, Jamaica, Peru, Portugal, and Roumania; 1 each to those of Algeria, Colombia, Costa Rica, Ecuador, Guatemala, Java, Nicaragua, and Rhodesia.

THE PRESENT CONDITION OF THE PATENT OFFICE.

Since assuming the duties of Commissioner of Patents on June 1, 1907, and in the seven months of my incumbency, I have carefully studied the conditions existing in the various branches of the Bureau with a view to ascertaining what changes were necessary to better the conditions thereof generally in the interests of the inventors, manufacturers, and all those having business before it.

I have learned that very material changes are called for in the internal administration thereof, and much needed relief should be granted by Congress in certain respects. I will recite in part in this report the recommendations for relief that I have already made to Hon. James Rudolph Garfield, Secretary of the Interior. The Secretary has granted all my requests for assistance and relief, so far as was within his power, except matters requiring additional legislation by Congress, in order to bring this Bureau up to a high standard of working efficiency.

ADDITIONAL ROOM.

The additional room assigned this Office by the Secretary in June last has resulted in a vast improvement of the Office in that respect. I have been able to utilize this additional space in expanding the various divisions, and thereby relieving the very congested conditions of nearly the whole Bureau. The administrative and judicial tribunals have been brought together in one corridor of the same floor, the Commissioner, Assistant Commissioner, Chief Clerk, Examiner of Interferences, and Board of Examiners-in-Chief, all being so located that they are accessible and convenient to all persons having business before them. This has made it possible to dispense with one docket clerk and his force and to establish a docket room common to all appellate tribunals. It has been possible also by this change to furnish two anterooms for the use of attorneys whose causes are on call before the Commissioner, Assistant Commissioner, and the Board of Examiners-in-Chief, and to afford them means to consult clients and examine the records in their cases before hearings. The use of these two ante or waiting rooms for inventors and attorneys also prevents inventors and attorneys from hearing the secret inventions being disclosed by attorneys presenting their particular cases before these tribunals, and thereby guards against the possibility of inventions being imparted to others before patents issue. This change in the manner of hearings has given great satisfaction to all having cases on appeal before the various tribunals of the Office. The additional room furnished, however, will not be sufficient for the needs of this Office for more than a short period. Additional space will be required in the near future, probably in about a year, and I would suggest that some action be taken during the present session to meet the needs as to more space. Permit me to recommend, therefore, that the branch printing office in the basement of the Ninth street wing be moved to the Government Printing Office. That would result in making available a tier of rooms from F to G streets that would furnish a proper housing for about fifty clerks. The basement of the other three sides of the building should be remodeled to harmonize with the Ninth street front. This could be accomplished by lowering the floors of the other three corridors of the building, cutting down the court to the corridor levels, and sinking the outside plots and terraces below the level of the street. This would afford ample light and ventilation to all the basement rooms. By this change the great dampness, which is caused by the water in the earth of the court and terraces percolating through the retaining walls, would be obviated. Modern granolithic sidewalks should be provided around the entire building, which would furnish storage room beneath for copies of patents for a great many years, and this space beneath the sidewalks would be dry, light, and well ventilated by reason of the sunken plots of ground between the main building and the walks. The question of storage room for copies of patents is a serious one at this time; and as about two hundred linear feet of space is required weekly to house the weekly issue of patents, which consists of one hundred copies each of eight hundred patents, it is imperative that some relief be afforded as soon as practicable. The present third floor and galleries should be relieved of the great weight of copies of patents and other records now placed thereon by changing them to the basement floor or under the suggested new sidewalks. The upper northwest corner wall of the building is already cracked, caused by former excessive weight of material having been placed there. I would suggest, also, that additional rooms be constructed between the third-story floors, known as the model halls, and the ceilings of said halls, as those halls since the removal of the models therefrom no longer need such high ceilings, and a great amount of valuable space is wasted. These changes would furnish excellent light and commodious space without great cost, compared with the expense of erecting a new building. If these changes are not deemed desirable, I would respectfully recom-

mend that a new building be provided in which the Patent Office may be housed. This new building could be paid for entirely out of the surplus in the Treasury to the credit of the Patent Office, which on January 1, 1908, was $6,706,181.64. This surplus of the net receipts over all expenditures has been derived entirely from the fees paid by the inventors of the country, directly or indirectly.

CONDITION OF THE WORK.

The work has been for years very much in arrears and is in the same condition at this time. This has been found to be caused, first, mainly by the insufficient force of examiners and clerks to meet the great volume of work coming in, a large increase yearly, which yearly increase is not always capable of being estimated in advance, so that the same arrearage of work has existed each year for many years. The examining corps of the Office has repeatedly worked until 5 o'clock, even when the official day closed at 4 o'clock, for many years, and they have been called upon several times to work later than this hour and have frequently forfeited a part or all of their annual leaves for the purpose of bringing up their work in order that a good showing might be made before Congress met. Their efforts under these conditions were at best spasmodic, and simply resulted in thousands of actions being made which were nothing more than frivolous. After one of these annual efforts it was necessary to do a great portion of that work all over again, and it really had the effect of throwing the business of examination of applications further back than ever. This resulted not only in vexatious delays to the inventors, but it caused hundreds of complaints to be filed, and, what was still more embarrassing and serious, a great many applications were passed to issue that were not ready for patent, with the result that the inventors and owners of meritorious inventions forfeited valuable rights by these careless, ill-considered, and hasty actions on the part of the Office. The inventors are entitled to be protected as well as the public, and they should always be helped by the Office in all legitimate ways. The inventors pay the Government for the work to be done in the examination and issue of their patents, even though they appeal their cases in regular order to all the tribunals of this Office and finally to the United States Court of Appeals of the District of Columbia, for a fee is charged for each appeal in addition to the Government fee of $35. Complaints against the conduct of affairs in this Office have been numerous, and many have been based upon good and sufficient grounds. The affairs of the Office should be so conducted that very few, if any, just complaints could be lodged. In view, therefore, of the great amount of accumulated work and the great volume of work that is constantly coming in, increasing each year and keeping pace with the growth of the country and the activities of manufactures and commerce, I am most decidedly of the opinion that the present force cannot cope with it. I have, therefore, after a most careful investigation of the Office needs in this respect, asked for a sufficient number of examiners and clerks to bring the arrearages up to date and to dispose of the great amount of incoming work material. If the force asked for be granted and made immediately available, I believe that the accumulated work can be disposed of, and that it will be possible in the future for the average inventor's application to be acted upon, either rejected or a patent allowed, within thirty days of its receipt. The inventors are entitled to prompt action, and they should be accorded it.

CLASSIFICATION OF PATENTS.

An increase of force is also badly needed for carrying forward the work of classification, which was commenced by the organization of the Classification Division in November, 1898. A force was appropriated for by Congress for this purpose; but the work of the examining divisions increased at such a rate that only a small part of it was ever assigned to the work of classification, and even that was transferred so frequently and lost so soon by resignations that the work has only been carried on slowly and with great difficulty.

The number of United States patents issued to December 31, 1907, is 875,678; reissues of patents, 12,737; design patents, 38,979; trade-marks registered, 66,891; labels registered, 13,963, and prints 2,188. There are also about 3,000,000 foreign patents of all countries, which are obtained by exchange with the countries belonging to the International Union for the Protection of Industrial Property. The number of patents, both domestic and foreign, is now so vast and is growing so rapidly, and the field of search to determine novelty and validity by the examiners, attorneys, and inventors is so extensive, that the classification of this material should be rapidly pushed to completion. A complete classification of these 3,875,000 patents would result in lessening the time of search about 50 per cent., and the future increase in the Office force would be very slight compared with the subsequent volume of work received, owing to this complete classification. The salvation of the search system, which is the distinguishing feature of the United States patent laws, lies in the carrying out of a proper plan of classification. Without it, it has been frequently predicted that the system will soon fall of its own weight. This work should be pushed as rapidly as possible on account of the constant changes in the lines of development and the frequent losses of force, which result in a great waste of time and labor. To illustrate this fact, reference is made to the class of telegraphy, which was taken into the Classification Division for reclassification. The patents in this class are largely diagrammatic, and most of them must be read in order to understand them. A second assistant examiner at $1,000 a year was assigned to this work and spent about one year in reading them and then resigned. He was succeeded by another man of the same grade, who worked about the same length of time and also resigned. A third man was then set to work, but remained only a month before handing in his resignation, after which the class was returned to the attorneys' room, as there was no one left to attempt it. Here was $3,200 paid for the acquirement of the necessary knowledge of this art, which knowledge was lost to the Office by the resignation of the men, due to insufficient salaries to retain them. This is only one example of what is occurring to a greater or less extent in all the forty-one examining

divisions. I purpose assigning a portion of the examining force asked for in the estimates to the work of classification, and also to establish a complete third set of foreign patents for the use of attorneys, inventors, and manufacturers, as well as to perfect the present search classes of patents, both in the attorneys' search room and the examining divisions. By a system of numbering each copy of the patents consecutively the absence of any patent will be at once known and the classes may be kept complete.

ESTIMATES FOR FORCE AND SALARIES.

In the estimates furnished for appropriations for the Patent Office for the fiscal year ending June 30, 1909, and in my letter accompanying the same, I have stated in part that I recommend that the salary of the Commissioner of Patents be raised to $6,000 a year, the salary of the Assistant Commissioner to $4,500 a year, the salary of the Examiners-in-Chief to $4,000 a year each. I desire to say in connection with these positions that the salary of the Commissioner has been changed but once since 1836. The position of Assistant Commissioner of Patents was established in 1870 with a salary of $3,000 a year. This salary has never been raised. This is the poorest paid Assistant Commissioner in the service of the Government. His duties, like those of the Commissioner, are largely judicial. The Board of Examiners-in-Chief was established in 1861, with salaries fixed at $3,000 a year, the same that they are now receiving. These men are required by statute to possess sufficient legal and technical knowledge to perform the duties of the position, which are wholly judicial. They are appointed by the President and confirmed by the Senate. From the decisions of the Commissioner and of the Assistant Commissioner appeal lies to the United States Court of Appeals of the District of Columbia. I may say here, to show in part the importance of these positions, that one-half, or fifty per cent., of the business of that court is now taken up with appeals, both *ex parte* and *inter partes*, from the Commissioner of Patents.

I have asked for forty-five Principal Examiners (one of whom shall act as Chief Clerk, another as Examiner of Interferences, another as Examiner of Classification, and another as Examiner of Trade-Marks and Designs, and while so acting each shall receive $600 additional compensation) at $3,000 a year each. In my opinion all these positions, including that of Chief Clerk, should be interchangeable in the interests of good administration. The Chief Clerk should be detailed from the Principal Examiners, and he should be a graduate of law, (as nearly all the Principal Examiners are,) for a greater portion of the duties of this position calls for a man of very extended experience in this Office. A great many legal questions arise in the correspondence of the Office which the Chief Clerk is called upon to answer, and almost all of the correspondence can be attended to by him without reference to the examining divisions of the Office, thereby saving a great deal of time, not only for himself, but for the examiners. This arrangement would banish the friction between the Chief Clerk and the examining corps, which has existed for a long time.

I have asked for two Law Examiners at $3,000 a year each, in place of two law clerks at $2,500 a year each, an increase of $500 a year each. The Law Examiners have been educated in the examining corps, and the present incumbents are, and their successors should be, law graduates both in general and patent law.

I have asked for sixty Examiners at $2,700 a year each, seventy Examiners at $2,400 a year each, eighty Examiners at $2,100 a year each, sixty Examiners at $1,800 a year each, and fifty Examiners at $1,500 a year each, a total increase of forty-nine Examiners, including one Principal Examiner.

I have asked for an increase of three clerks of class four and three clerks of class three.

I have asked for an increase of thirty clerks of class one. These are needed for examining divisions where the duties are of a somewhat technical nature. The incompetency of a portion of the clerks in the examining and other divisions is in a measure responsible for the backward condition of the work. Although this is a small salary for this class of work, I think a sufficient number of clerks could be obtained at this salary to fill these positions.

I have asked for one hundred clerks at $1,000 a year each, in lieu of sixty-two clerks at $1,000 and ten clerks at $800 a year each. This is an increase of twenty-eight clerks at $1,000 a year each. I make this recommendation for the reason that the Office is much hampered in its work by resignations and transfers, owing to the low salaries paid a large part of its clerical force. The clerical work is of much higher order than that of most bureaus under the Government. It takes a clerk a long time to become efficient, as a high order of ability and technical knowledge is required of the clerical force throughout the Office, owing to the peculiar duties to be performed in all branches of the work in the Bureau, which includes, among other things, knowledge of technical terms and knowledge of the law of assignments, as all assignments of patents are recorded in this Office.

These increases recommended in the salaries are found to be necessary in order to retain the men already in the examining corps and to induce other competent men to enter the service and fill vacancies now existing and that may occur. The Civil Service Commission has been unable to fill the vacancies that have existed from time to time from 1902 down to date, and I quote their letter of September 5, 1907:

> In response to your request of August 31, there is submitted herewith a statement showing the number of eligibles secured annually for the position of patent examiner since the year 1902, and years in which all these eligibles were used by your Office.
>
> By direction of the Commission.
>
> Very respectfully,
>
> HENRY F. GREENE,
> *Commissioner.*
>
> Assistant examiner, Patent Office: Eligibles entered during 1902, on register, 72; 1903, 10; 1904, 34; 1905, 32; 1906, 24.

These eligibles were all appointed and the registers in every case became exhausted, and the Commissioner of Patents was called upon to go into the "open market," as it were, and get the best material he could find to fill the vacancies. Several examinations were held during all these years. In 1906 there were six examinations held, which did not produce men enough to fill the vacancies, and at this date there are no eligibles on the register of the Civil Service Commission, and I doubt if any could be had if a special examination for Fourth Assistant Examiners should be held. The

standard of the examinations has been much lowered, as it was thought that possibly they had been too difficult; but this did not improve the situation, and even many of those that passed declined appointments when they learned that the entrance and other salaries were so low. In order to obtain competent men, these examinations must be and are highly technical in character, but not more difficult than is necessary to secure men of ability to perform the technical work connected with the examination of applications which relate to all of the known arts. The subjects covered by the examinations are higher mathematics, physics, technics, chemistry, (organic and inorganic,) reading and describing mechanical drawings, and French and German. The last two subjects are necessary in order to secure men who can read specifications of foreign patents. The examiners are all graduates of colleges, mostly polytechnic colleges, and ninety per cent. have been graduated in general and patent law, and with office experience are invaluable to the service; but after about three years' service in this Office and when they are fully experienced and valuable in the work thereof they are also fully equipped to go out, and do go out to accept positions that pay all the way from $2,000 a year up. The Office has become merely a post graduate school for the technical and legal education of young college men who enter the service. The General Electric Company has in its patent department twelve or more men who were formerly Examiners in this Office, and other corporations have taken hundreds from this Office, and this company also, like many others, takes men from the graduating classes of polytechnic colleges at higher salaries than are provided on entrance to this Office, so that we are now competing with outside institutions for men to do the technical work of the Office. One hundred and thirty-five examiners out of a corps of three hundred have resigned in a period of less than five years. The salaries paid Principal Examiners in the Patent Office are the same that were fixed by the act of 1848 and are the same salaries that were provided for United States district judges and members of Congress at that date.

I most strongly urge that all the estimates submitted be allowed. They have been very carefully prepared, and I can say, after an experience of twenty-four years in this Bureau, that all that has been asked is badly needed. I think that with this increase of force of forty-nine examiners and forty-seven clerks I shall be fully able to bring the work up to date and to put this Bureau on a business basis within twelve months, provided the additional force and salaries be made immediately available, for the present condition is such that relief should be furnished before July 1, 1908. The fees of inventors support the Bureau, and out of the receipts every item of expense for its maintenance is paid, including salaries of the force employed.

The total number of primary examiners and assistants in 1907 was		313
Primary examiners	41	
Assistants in Law Clerks' room	2	
Assistants in Classification Division	2	
Assistants in Interference Division	6	
Assistants in Trade-Mark Division	4	
		55
Assistants examining applications for patents		258
Number of days in year		365
Legal holidays	7	
Annual leave	30	
Average sick leave	5	
Sundays	52	
Half holidays, 16 (during July, August, and September)	8	
		102
Number of working days		263
Number of new applications for year		59,873
Average per working day		228
Average number of old applications per working day (calculated for ten weeks)		617
Each man must do on an average, new		.8
old		2.3
Cases pending on examiners' desks		17,976
Cases pending		91,263
Examiner of Interferences	1	
Examiner of Trade-Marks	1	
Primary Examiners	41	
First Assistant Examiners	53	
Second Assistant Examiners	63	
Third Assistant Examiners	73	
Fourth Assistant Examiners	83	
		315

At the last session of Congress the Committee on Patents of the House of Representatives gave hearings to the Inventors' Congress, the Manufacturers' Association of the United States, and the Patent Bar Association in the interest of bettering the conditions that have existed for years in the Patent Office. As a result of these hearings, the Committee on Patents unanimously reported House Bill 22678, with accompanying report and the printed hearings, which provided salaries larger than are recommended in my present estimates. This bill did not come up for passage, owing to lack of time, occasioned by a short session.

EXHAUSTED COPIES OF PATENTS.

A large number of copies of patents has been exhausted for some time, and this condition has been the cause of numerous complaints from inventors, attorneys, the courts, and persons generally having business with this Office. I have had many hundreds reproduced and have given directions that all exhausted copies of patents be reproduced as speedily as possible. This has had the effect of lessening the number of complaints arising from this cause. Some delay has been occasioned by the inability of the present contractor to get out the reproductions of patents as promptly as desired, but this condition will be removed in a short time.

I have caused to be shipped to the office of the Public Printer from the basement storerooms 9,498 sacks of old reports and records of various kinds that have been stored in those rooms for a great many years, and it is my intention to empty the remaining rooms of the material of this kind. The additional space thus gained is being used to house the copies of the current issues as they come out, but all of these rooms will not be suitable for the storage of these copies by reason of the dampness existing there, which, as above indicated in this report, is caused by the damp earth of the court which these rooms abut.

APPEALS.

Accompanying this report I submit for the consideration of Congress proposed amendments to the law relating to appeals in this Office.

Under the present patent law appeal lies in *ex parte* cases from a Primary Examiner to the Board of Examiners-in-Chief, thence to the Commissioner, (or Assistant Commissioner,) and from his decision to the

Court of Appeals of the District of Columbia, and in interference cases the course of appeals from decisions of the Examiner of Interferences is the same, there being three appeals in each case.

The purpose of the proposed amendment to the statute is to shorten the course of prosecution by the elimination of one of the appeals within the Office. This is designed to be accomplished by combining the Commissioner, Assistant Commissioner, and Examiners-in-Chief into a single appellate tribunal, any three of whom shall constitute a quorum, to which all appeals shall lie, whether from a Primary Examiner or from the Examiner of Interferences, and from which appeals would lie to the Court of Appeals of the District of Columbia.

The present course of appeals is not well adapted to the volume of business which the Office is now called upon to handle, for the following reasons:

1. It imposes on applicants an unnecessary amount of delay and expense. The very purpose of the patent system is to place at the service of the public at as early a date as practicable inventions as they are made, and unnecessary delays affect not only applicants, but all interested in the industries to which the inventions relate. One appeal within the Office, together with the appeal to the Court of Appeals of the District of Columbia, would seem to be ample, especially in view of the fact that in a suit on a patent a single appeal takes the case from the trial court to the Court of Appeals. The elimination of one appeal would materially shorten the time required for the ultimate disposal of appealed cases and effect a considerable saving of expense to applicants.

2. Section 4910 provides for an appeal to the Commissioner *in person* from the Board of Examiners-in-Chief. The work of the Office and the consequent number of appeals have increased to such an extent that it has become difficult, and will soon be impossible, for the Commissioner to give to each case the amount of personal attention proper to its disposal.

3. The Board of Examiners-in-Chief as at present constituted consists of three members, and no provision is made under the present law to supply a temporary vacancy caused by the sickness or absence from other cause of any of the members. The absence of one member often results in an evenly divided Board, with the consequent necessity for a rehearing, and the absence of two members causes an entire suspension of business. With the proposed membership of five, the presence of a quorum of three would be practically assured at all times, which has not been the case in numerous instances in the past, owing to frequent absences of a member of the Board on account of periods of illness of greater or less duration and also by reason of annual leave and other causes.

JUDICIAL MATTERS DURING 1907.

Decisions of the Examiner of Interferences on priority in interference cases		308
Appeals to Examiners-in-Chief in interference cases	154	
Ex parte appeals to Examiners-in-Chief	752	
		906
Appeals to Commissioner in interference cases		123
" " " " opposition "		32
" " " " cancellation "		4
Ex parte appeals to Commissioner		231
Interlocutory appeals to Commissioner		229
Ex parte appeals in trade-mark cases		50
		669
Petitions to Commissioner		2,261
		2,930
Appeals to Court of Appeals, District of Columbia:		
Ex parte cases		19
Interference cases		51
Opposition cases		14
		84

I also submit a proposed amendment to the laws relating to appeals in cases relating to trade-marks.

The existing trade-mark law provides for appeals from the Examiner of Trade-Marks and from the Examiner of Interferences in trade-mark cases directly to the Commissioner (or Assistant Commissioner). From these tribunals appeal lies to the Court of Appeals of the District of Columbia, as in patent cases. The amendment submitted merely substitutes the proposed Board of Appeals for the Commissioner as the appellate tribunal of the Office in cases relating to trade-marks, making the course of appeals in this class of cases conform to the course of appeals recommended above in cases involving applications for patents.

These changes in the course of appeals would not only have the effect of expediting the prosecution of applications on appeal, but would be a saving to the inventors of one appeal fee, the attorneys' fees, and other expenses incident thereto. Furthermore, having but one appeal within the Office in lieu of two would result in giving greater stability to the decisions of the Office tribunals, and would also obviate any want of comity that has existed in the past between the decisions of the Commissioner of Patents and the Assistant Commissioner. These proposed changes in the law in no wise affect the present legal status of the Commissioner of Patents, the Assistant Commissioner of Patents, or the Examiners-in-Chief.

THE BUSINESS OF THE PATENT OFFICE FROM 1836 TO 1907, INCLUSIVE.

I submit herein tables which show a comparative statement of the business of the Patent Office since the enactment of the statute of 1836 down to and including the year 1907. These tables show the number of applications, caveats, reissues, cash receipts and expenditures, and the surplus of each year for said period. It may be interesting to note that during the year of the so-called panic of 1837 and the years following down to 1841 there was in three years of that period no surplus, and in two years of that time the surplus was very slight. During the general business depression of 1856–7 there was no surplus, and during the year 1860, immediately preceding the civil war, the surplus dropped from $35,663.74 of the preceding year to $3,531.79. In the year 1861, from the time of the breaking out of hostilities, the business fell off nearly one-half, and there was no surplus that year. During the year 1862 the business increased quite largely owing to inventions in the various arts which were demanded by the needs of said war. The surplus that year was $32,944.06. At the conclusion of this war in 1865 and 1866 the business of this Office was more than doubled, and the latter year showed a surplus of receipts over expenditures of $133,941.10. Coming down to the business depres-

sion of 1873, the business of the Office materially fell off, with the result that the surplus was only $12,000. The year following, 1874, by reason of the recovery somewhat from the depression, the surplus shown is $58,979.76. The surplus during the year of the depression of 1884 was $105,000, while the surplus of the preceding year of 1883 was $471,000. Owing to the unsettled commercial conditions of 1893 there was a surplus during that year of only $101,000, while the preceding year of 1892 shows a surplus of $175,592.

During the year 1906 the number of applications for patents was 55,471, and for 1907, 57,679, showing an increase of 2,208 applications. The number of applications for reissues of patents in 1906 was 205, in 1907, 187, a decrease of 18. The number of applications for patents for designs in 1906 was 806, in 1907, 896, an increase of 90. The total number of applications for patents, reissues, and designs in the year 1906 was 56,482 and for 1907 was 58,762, showing an increase of 2,190. The number of caveats filed in 1906 was 1,885, and in 1907, 1,967, an increase of 82. The number of applications for trade-marks filed in 1906 was 8,493, in 1907, 7,722, a decrease of 771. This decrease is owing to the fact that the new trade-mark law went into effect in April, 1905, during which year there were 16,224 marks filed for registration, the registrants taking advantage of the liberal provisions of the new law to reregister a great many of the old marks. Trade-mark applications fell off in 1906 about one-half, for 8,193 were filed in that year. In the year 1907 there was a falling off of about 600 marks, the total being 7,722. Between six and seven thousand applications for the registration of trade-marks each year will probably be about the normal number received. Applications for registrations of labels in 1906 numbered 844, in 1907, 1,027, an increase of 183. The total number of patents granted in 1906 was 31,965, in 1907, 36,620, being a gain over 1906 of 4,655 patents. This is the largest increase in any one year from 1836 to date.

The cash receipts from all sources in 1906 were $1,790,921.38; cash expended, $1,554,891.20, showing a net surplus of receipts over expenditures of $236,030.18. The cash receipts from all sources in 1907 were $1,910,618.14, an increase over the preceding year of $119,696.76. The total amount of expenditures for all purposes for the calendar year ending December 31, 1907, is $1,631,458.36, which deducted from the total cash receipts of the Office for that period leaves a net surplus of $279,159.78. The increase of the surplus of 1907 over 1906 is $43,129.60. The total amount of surplus or net earnings of the Patent Office over all expenditures for the maintenance of this Bureau and covered into the Treasury of the United States is now $6,706,181.64.

It will be seen, therefore, from the foregoing statement of the money receipts for the year 1907 that the alleged financial depression has had no effect whatever on the business of the Patent Office. In fact, the total volume of business of all descriptions is much larger than that of the preceding year. The business of the Patent Office has always been very sensitive to any disruption or embarrassment in the commercial world, as has always been evidenced by a great falling off of the business of the Office, as above indicated in this report. There is nothing in the past year to indicate so far as the affairs of this Office are concerned that any real depression in business or financial disquietude has existed.

Respectfully submitted.

EDWARD B. MOORE,
Commissioner of Patents.

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE JACKSON.

APPLICATION FOR PATENT.

Decided January 24, 1908.

FINAL REJECTION—PREMATURE.

Where an Examiner finds it necessary to give reasons explaining the applicability of a reference, a final rejection should not be entered in the letter in which these reasons are stated for the first time.

ON PETITION.

ELECTRICAL MEASURING INSTRUMENT.

Mr. Charles A. Brown and *Mr. Marcellus Bailey* for the applicant.

BILLINGS, *Assistant Commissioner:*

This is a petition that the final rejection in this case be set aside as premature.

It appears from the record that the Examiner rejected three claims on a certain patent and in his letter of rejection did not explain the applicability of this patent to the claims against which it was cited. The applicant responded with quite a full statement, setting forth his reasons why in his opinion the patent cited should not be insisted upon as a reference. It is clear from the record that this case is not one of those simple cases in which the requirements are merely satisfied by a citation of the references without further explanation, for in response to the appellant's argument the Examiner gave quite fully his reasons for the citation of the patent as a reference. In this second letter, in which the reasons of the Examiner were stated for the first time, the claims were finally rejected. The only course that the applicant could pursue, should this final rejection stand, would be to cancel these claims or to appeal to the Examiners-in-Chief. Such a state of affairs should not exist, for it is very clear that the applicant should not be forced to eliminate the claims of the case, neither should he be forced to take an appeal upon claims which, considered in the light

of the statement of the Examiner, require further amendment, for the record shows that the applicant did amend his claims in the next action. This amendment was not entered, because the Examiner held the case to be under final rejection. Where an Examiner finds it necessary to give reasons explaining the applicability of a reference, a final rejection should not be entered in the same letter where those reasons have been stated for the first time.

The petition is granted.

Amended Rule.

(ORDER No. 1,751.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 5, 1908.

Acting under the provisions of section 483 of the Revised Statutes and with the approval of the Secretary of the Interior, Rule 22 of the Rules of Practice of the United States Patent Office is amended by inserting after section (*c*) thereof the following paragraph:

(*d*) The Secretary of the Interior may after notice and opportunity for a hearing, suspend or exclude from further practice before the Patent Office any person, firm, corporation, or association shown to be incompetent, disreputable or who refuses to comply with the rules and regulations thereof, or who shall with intent to defraud, in any manner deceive, mislead or threaten any claimant or prospective claimant, by word, circular, letter or by advertisement, or by guaranteeing therein the successful prosecution of any application for patent or the procurement of any patent, or which word, circular, letter or advertisement shall contain therein any false promise or misleading representation. (Sec. 5, act approved July 4, 1884.)

So that the rule as amended shall read as follows:

22. (*a*) Applicants and attorneys will be required to conduct their business with the Office with decorum and courtesy. Papers presented in violation of this requirement will be returned. But all such papers will first be submitted to the Commissioner, and only returned by his direct order.

(*b*) Complaints against Examiners and other officers must be made in separate communications, and will be promptly investigated.

(*c*) For gross misconduct the Commissioner may refuse to recognize any person as a patent agent, either generally or in any particular case; but the reasons for such refusal will be duly recorded and be subject to the approval of the Secretary of the Interior.

(*d*) The Secretary of the Interior may after notice and opportunity for a hearing, suspend or exclude from further practice before the Patent Office any person, firm, corporation, or association shown to be incompetent, disreputable, or who refuses to comply with the rules and regulations thereof, or who shall with intent to defraud, in any manner deceive, mislead or threaten any claimant or prospective claimant, by word, circular, letter or by advertisement, or by guaranteeing therein the successful prosecution of any application for patent or the procurement of any patent, or which word, circular, letter or advertisement shall contain therein any false promise or misleading representation. (Sec. 5, act approved July 4, 1884.)

EDWARD B. MOORE,
Commissioner.

Classification Bulletin.

Classification Bulletin No. 20, July–December, 1907, has been published and is now for sale in Room 345. Price, 10 cents.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., Jan. 29, 1908.

Helen Ryan & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The A. Spiegal Company, of Milwaukee, Wis., for registration of a trade-mark and a trade-mark registered to Helen Ryan & Company, of 12 South Elliott place, borough of Brooklyn, New York, N. Y., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Helen Ryan & Company having been returned undelivered, notice is hereby given to the said Helen Ryan & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 29, 1908.

Weber & Schillinger, their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The George Wiedemann Brewing Company, of Newport, Ky., for registration of a trade-mark and a trade-mark registered to Weber & Schillinger, of Louisville, Ky., and it appears from the record of the case that the registrant, Weber & Schillinger, cannot be located.

Notice is therefore hereby given to said Weber & Schillinger, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 29, 1908.

D. L. Wing & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of J. F. Meyer & Sons' Milling Company, of 172–174 Laclede Bldg., St. Louis, Mo., for registration of a trade-mark and a trade-mark registered March 14, 1882, to D. L. Wing & Company, of St. Louis, Mo., and the notice of said declaration mailed by the Patent Office in the usual manner to the said D. L. Wing & Company having been returned undelivered, notice is hereby given to the said D. L. Wing & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 26, 1907.

Meade-Van Bokkelen Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Barton Vineyard Company, Limited, of Fresno, Cal., for registration of a trade-mark and a trade-mark registered to the Meade-Van Bokkelen Company, of Chicago, Ill., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Meade-Van Bokkelen Company having been returned undelivered, notice is hereby given to the said Meade-Van Bokkelen Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 26, 1907.

Noble and Streeter, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Joseph C. Allen, of Plainfield, N. J., for registration of a trade-mark and a trade-mark registered to Noble and Streeter, of New York, N. Y., and it appearing upon a showing made by the junior party that said Noble and Streeter have not been located, notice is hereby given to the said Noble and Streeter, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE

OFFICIAL GAZETTE

OF THE

United States Patent Office.

[BY AUTHORITY OF CONGRESS.]

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Patents	711	No. 879,134 to No. 879,844, inclusive.
Designs	22	No. 39,133 to No. 39,154, inclusive.
Trade-Marks	158	No. 67,690 to No. 67,847, inclusive.
Labels	9	No. 14,046 to No. 14,054, inclusive.
Prints	7	No. 2,219 to No. 2,225, inclusive.
Reissues	2	No. 12,752 to No. 12,753, inclusive.
Total	909	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	1	1	New Hampshire	4	1
Alaska, District of			New Jersey	20	3
Arizona Territory	3		New Mexico Ter'y		
Arkansas	5	2	New York	112	45
California	21	2	North Carolina	3	
Colorado	9		North Dakota	3	
Connecticut	20	1	Ohio	33	4
Delaware	3	1	Oklahoma	7	
District of Columbia	9	1	Oregon	9	1
Florida	3	1	Panama		
Georgia	4		Pennsylvania	64	13
Hawaii Territory			Philippine Islands		
Idaho	1		Rhode Island	8	1
Illinois	73	12	South Carolina	2	1
Indiana	24	3	South Dakota	2	1
Iowa	14	2	Tennessee	3	2
Kansas	9		Texas	19	
Kentucky	10		Utah	1	
Louisiana	5	1	Vermont	2	
Maine			Virginia	4	1
Maryland	6	1	Washington	3	
Massachusetts	35	42	West Virginia	3	
Michigan	25	4	Wisconsin	16	3
Minnesota	17		Wyoming		
Mississippi	1		U. S. Army		
Missouri	18	10	U. S. Navy		
Montana	2				
Nebraska	6	2	Total to citizens of the United States	656	162
Nevada					

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina			Natal		
Austria-Hungary	1		Netherlands		
Belgium	3		Newfoundland		
Brazil			New South Wales		
British West Indies			New Zealand		
Canada	14		Norway	1	
Cape Colony			Persia		
Chile			Queensland		
China			Roumania		
Costa Rica			Russia		
Cuba			Scotland	4	
Denmark			South Australia		
Ecuador			Sweden		
England	16	6	Switzerland	4	
France	8	1	Tasmania	1	
Germany	17	4	Transvaal, South Africa		
Haiti			Victoria	5	
Ireland	1	1	Western Australia	1	
Italy	1				
Japan			Total to citizens of foreign countries	77	12
Java					
Mexico					

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 8, 1908.

Robert G. McCorkle & Company, their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of Charles Shaffner & Company, of Chicago, Ill., for registration of a trade-mark and a trade-mark registered to Robert G. McCorkle & Company, of Louisville, Ky., and it appears from the record of the case that the registrant, Robert G. McCorkle & Company, cannot be located.

Notice is therefore hereby given to said Robert G. McCorkle & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

Attorneys.

This Office has been advised by the Secretary of the Interior of the disbarment of the following attorneys from practice before the Department or any Bureau thereof: Benjamin F. Dozier, Kansas City, Mo., December 12, 1907; Richard Dobson, Lansing, Mich., January 20, 1908; J. Thomas Turner, Washington, D. C. February 3, 1908.

W. F. WOOLARD,
Chief Clerk.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business February 11, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
303	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Jan. 28	Jan. 13	164
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Jan. 27	Nov. 16	620
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Jan. 16	Dec. 12	344
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Jan. 14	Dec. 28	231
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	Jan. 14	Dec. 8	304
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Jan. 13	Oct. 29	375
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Jan. 11	Jan. 4	306
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Jan. 10	Jan. 2	219
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Iron Structures; Loading and Unloading; Towers.	Jan. 8	Jan. 15	261
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Jan. 7	Jan. 6	202
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	Jan. 6	Dec. 23	452
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Jan. 6	Dec. 23	279
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	Jan. 4	Jan. 11	251
308	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Appartus; Plastic Compositions; Plastics.	Jan. 3	Dec. 23	604
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Jan. 2	Nov. 9	345
147	V. Bookbinding; Harvesters; Jewelry; Music.	Dec. 30	Dec. 11	313
327	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Dec. 26	Dec. 14	226
128	II. Bee Culture; Dairy; Label-Affixers; Paper-Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	Dec. 26	Dec. 2	353
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Dec. 24	Dec. 5	344
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas, and Canes.	Dec. 21	Dec. 26	277
275	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Dec. 18	Dec. 18	364

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	Dec. 17	Nov. 14	519
332	X. Carriages and Wagons	Dec. 16	Nov. 5	463
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Dec. 14	Dec. 9	259
322	XII. Elevators; Journal-Boxes; Lubrication; Machine Elements; Pulleys and Shafting.	Dec. 14	Nov. 22	633
280	XL. Baggage; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Dec. 14	Oct. 19	683
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Dec. 14	Oct. 14	306
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Dec. 11	Dec. 2	605
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Dec. 11	Oct. 15	514
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	Dec. 10	Oct. 2	389
238	XIX. Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel; Stoves and Furnaces.	Dec. 3	Oct. 30	471
112	XXI. Brakes and Gins: Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Dec. 3	Sept. 27	528
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Nov. 29	Nov. 15	396
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	Nov. 25	Oct. 10	562
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	Nov. 22	Dec. 7	237
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	Nov. 21	Oct. 1	627
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	Nov. 20	Oct. 1	323
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Nov. 4	Oct. 5	571
321	XXXIX. Baths and Closets; Water Distribution.	Oct. 23	Aug. 22	911
109	XVI. Telegraphy; Telephony	Oct. 23	Aug. 3	627
332	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	Oct. 15	Sept. 2	329
	Total number of applications awaiting action			17,267
161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.			
	Trade-Marks	Feb. 7	Jan. 15	203
	Designs	Feb. 6	Jan. 2	54
	Labels and Prints			

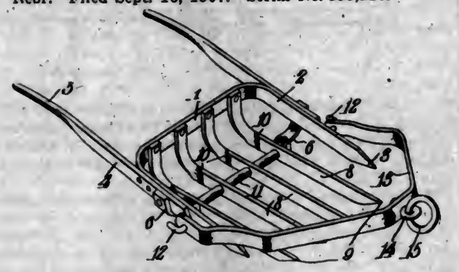
Notice.

Coupons unless properly filled out will not be accepted in payment of copies of publications.

PATENTS

GRANTED FEBRUARY 18, 1908.

879,134. FORK-SCRAPER. WILLIAM H. ABTS, Belden, Nebr. Filed Sept. 16, 1907. Serial No. 393,218.



1. A fork scraper comprising a cross strip having integral guard fingers, tines interposed between and below the guard fingers and placed on edge, one end of each tine being twisted to present its broad face to the front, said tines being secured to the cross strip and having said broad faces extending downward therefrom.

2. A fork scraper comprising a cross strip having integral guard fingers, tines interposed between and below the guard fingers and placed on edge, one end of each tine being twisted to present its broad face to the front, said tines being secured to the cross strip and having said broad faces extending downward therefrom, and combined spacing and connecting means extending through the tines and disposed below their upper edges.

3. A fork scraper comprising a cross strip having guard fingers at the ends thereof, tines secured to the cross strip and interposed between and below the guard fingers, bars secured to said fingers and extending rearwardly therefrom to constitute handles, a yoke, means upon the front ends of the bars for connecting the yoke thereto.

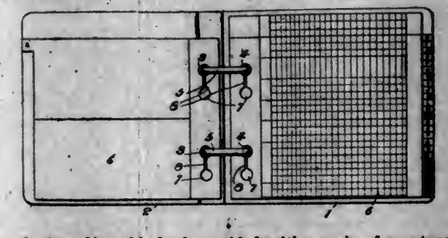
4. A fork scraper comprising a cross strip, integral guard fingers at the ends thereof, strips secured to and extending downward from the cross strip, said strips being twisted and extended edge downward between and below the guard fingers to constitute tines, hangers depending from the guard fingers, and combined connecting and spacing means secured to the hangers and extending through the tines below the upper edges thereof.

5. A fork scraper comprising a cross strip, integral guard fingers at the ends thereof, strips secured to and extending downward from the cross strip, said strips being twisted and extended edge downward between and below the guard fingers to constitute tines, hangers depending from the guard fingers, combined connecting and spacing means secured to the hangers and extending through the tines below the upper edges thereof, bars secured to the guard fingers and extending rearwardly therefrom to form handles, a yoke, and means upon the front ends of the bars for engaging the yoke.

[Claims 6 and 7 not printed in the Gazette.]

879,135. ADJUSTABLE LEAF AND BINDER. DON C. ANDERSON, St. Louis, Mo. Filed May 18, 1907. Serial No. 374,330.

1. An adjustable leaf provided near one edge with an aperture formed by a pair of holes spaced apart, and connected by a relatively narrow slit the difference between the width of the slit and the diameter of the holes being such that shoulders are formed at the entrances to the slit from the holes.

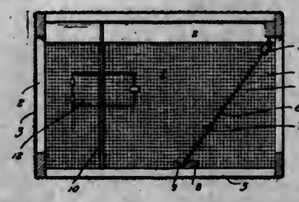


2. An adjustable leaf provided with a pair of apertures located at equal distances from one edge of the leaf, each aperture comprising a pair of holes spaced apart and connected by a relatively narrow slit the difference between the width of the slit and the diameter of the holes being such that shoulders are formed at the entrances to the slit from the holes.

3. A leaf binder comprising a base, two posts extending from said base, a loop connecting the upper ends of said posts, said loop between its ends being reduced in cross-section so that at its reduced portion it is comparatively wide and thin.

4. A loose leaf binder structure comprising a base, a binder post extending therefrom, one portion of said post having a reduced cross section, leaves provided with openings threaded on said post, the opening in each leaf comprising a pair of holes spaced apart and connected by a relatively narrow slit, the holes being of a size to accommodate the post, while the relatively narrow slit will only accommodate the reduced portion of the post.

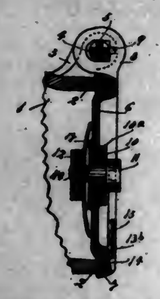
879,136. FISH-TRAP. JOHN W. ANGEL, Rising Star, Tex. Filed June 27, 1907. Serial No. 381,107.



In a fish trap, a frame consisting of substantially square end pieces and connecting side pieces, a wire covering for the same, covering the sides and one end the other end being left open, a door for the open end consisting of a plurality of sections each section comprising an upper cross bar and a plurality of downwardly and inwardly inclined wire rods with their ends rigidly fastened in said cross bar and rigidly held in parallelism by said cross bar and a supporting bar connecting said rods near their ends, staples fastened under an upper cross piece of the frame of said open end, staples in said cross bars hingedly connecting said door sections to said cross-piece, a grooved bar lying transversely across the bottom of the trap, the groove thereof being adapted to

receive the lower ends of said rods, and diagonally disposed bait holding rods connecting diagonally opposite side pieces.

879,137. CAR-AXLE-BOX LID. CHARLES C. BARCLAY, and FREDERICK HACHMANN, St. Paul, Minn., assignors to Barclay Manufacturing Co., St. Paul, Minn., a Corporation of Minnesota. Filed Apr. 24, 1907. Serial No. 370,022.



1. The combination with a box and a lid hinged thereto, of a lock bar intermediately pivoted to said lid on the inner side thereof and engageable with coöperating parts on the interior of the box, a clamping bolt extending through said lid and having threaded engagement with said lock bar and provided at its outer end with a handpiece by means of which it may be oscillated, substantially as described.

2. The combination with a box and a lid hinged thereto, of a lock carried by said lid at the inner side thereof and engageable with coöperating parts on the interior of the box, a lock operating connection extending through said lid to the exterior of the box, and a latch for holding said lock actuating connection against movement and the said lock in an operative position, substantially as described.

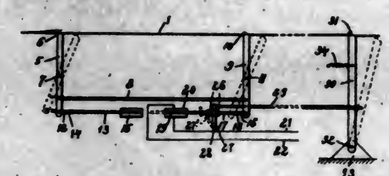
3. The combination with a box and a lid, of a hub rotatively mounted in said lid, a clamping bolt rotatively mounted in said hub and extending through said lid, said bolt having a threaded inner end and a hand-piece at its outer end, a lock bar engaged by the threaded end of said clamping bolt and engageable with coöperating parts on the interior of the box, a connection causing said lock bar to rotate with said hub permitting the same to move laterally with respect thereto, and a connection between said clamping bolt and said hub permitting limited movement of said bolt with respect to said hub, but causing the two to rotate together under extreme movement of said bolt, substantially as described.

4. The combination with a box and a lid, of a hub rotatively mounted in said lid, a clamping bolt rotatively mounted in said hub and extending through said lid, said bolt having a threaded inner end, a lock bar, the intermediate portion of which is engaged by the threaded end of said clamping bolt, and the free ends of which are engageable with coöperating parts on the interior of the box under oscillatory movement of said lock bar, a connection causing said lock bar to rotate with said hub but permitting the same to move laterally with respect thereto, a connection between said bolt and hub permitting limited rotary movement of said bolt with respect to said hub, but causing the two to rotate together under extreme movement of the bolt, and a combined handpiece and latch mounted for oscillatory and sliding movements in the outer end of said clamping bolt and engageable with coöperating parts on the exterior of said lid for locking said clamping bolt against rotation, substantially as described.

5. The combination with a box having a lid seat and internal lock lugs, of a lid hinged to said box, an oscillatory lock bar, the ends of which are engageable with said lock lugs, a clamping bolt carried by and extended through said lid and having a threaded end engaging the intermediate portion of said lock bar, and a combined handpiece and latch rotatively and slidably mounted in the outer end of said clamping bolt, and having a flattened depending end engageable with seats on the exterior lower portion of said lid, substantially as described.

[Claim 6 not printed in the Gazette.]

879,138. RAILWAY SIGNALING DEVICE. FREDERICK BAUER, New York, N. Y. Filed Oct. 18, 1907. Serial No. 398,063.



1. In a railway signaling device, the combination with a track, of a normally open circuit containing signaling devices, and a single switch inserted into said circuit and adapted to close and open said circuit from predetermined points of the track.

2. In a railway signaling device, the combination with a track, of a normally open circuit independent of said track and containing signaling devices, and a single switch inserted into said circuit and adapted to close and open said circuit from predetermined points of the track.

3. In a railway signaling device, comprising a normally open electric circuit containing signaling devices, a single electric switch in said circuit operated by the train and adapted to close the circuit when the train passes over the same, and mechanical means operatively connected to said switch and adapted to open the same from a distant point, when the train is passing over said opening means.

879,139. CHECK-CONTROLLED DISPLAY MECHANISM. WALTER R. BENJAMIN, Granite City, Ill. Filed Nov. 15, 1906. Serial No. 343,627.



1. In mechanism of the class described, the combination with a movable actuating member having a projection, of a detent pivotally mounted between its ends, said detent having a shoulder located on one side of the pivot and normally engaging the projection to prevent movement of the actuating member, and said detent having a finger located on the opposite side of its pivot and movable into the path of movement of the projection when the shoulder is disengaged therefrom, said projection on its movement engaging the finger to return the detent and shoulder to a position to again engage said projection, and means for directing a check against the detent to move it and thereby move the shoulder out of coaction with the projection.

2. In mechanism of the class described, the combination with a rotatable actuating member having a projection, of a detent pivotally mounted between its ends alongside the member, said detent having a shoulder located on one side of the pivot and normally engaging the projection to prevent movement of the member, said detent furthermore having a finger located on the opposite side of the pivot and movable into the path of movement of the projection when the shoulder is disengaged therefrom, said projection engaging the finger to return the detent and shoulder to a position to again engage said projection, and means for directing a check against the arm of the detent that has the shoulder in order to move the same out of coaction with the projection.

3. In mechanism of the class described, the combination with a movable actuating member having a projection, of a detent pivotally mounted between its ends, said detent having a shoulder located on one side of the pivot and normally engaging the projection to prevent movement of the actuating member, and furthermore having a finger located on the opposite side of the pivot and movable into the path of movement of the projection when the shoulder is disengaged therefrom to return the detent and shoulder to a position to again engage said projection, said detent furthermore having a cam portion between the shoulder and pivot, said cam portion being disposed in the path of movement of the projection when the shoulder is disengaged therefrom, and means for directing a check against the detent to move it and thereby move the shoulder out of coaction with the projection.

4. In mechanism of the character described, the combination with a rotary wheel having a projection on one side, of a detent lever fulcrumed between its ends and located alongside the wheel, said lever having a shoulder on one arm that normally engages the projection of the wheel and having a cam portion disposed between the shoulder and the lever, a finger projecting from the lever on the opposite side of the pivot and movable into the path of movement of the projection when the shoulder moves out of said path, and means for directing a check against the arm of the lever having the shoulder and the cam portion.

5. In mechanism of the class described, the combination with movable article displaying means, of mechanism for moving the same, a movable detent for normally preventing the movement of the displaying means, and movable to an inoperative position with respect thereto, a friction device located in the path of movement of the detent to hold it in its inoperative position, means movable with the displaying mechanism to disengage the detent from said friction device and return it to its operative position, and means for directing a check against the detent to cause it to move into engagement with said holding device.

[Claims 6 and 7 not printed in the Gazette.]

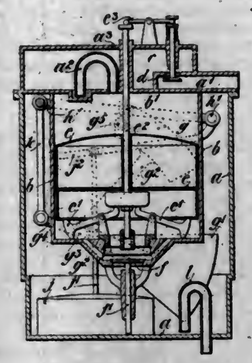
879,140. WINDOW-SHADE FIXTURE. GEORGE E. BERRY, De Land, Fla. Filed July 10, 1907. Serial No. 383,073.



1. A shade fixture consisting of lapping body members, one of said members being slotted longitudinally, coöperating means upon said members for engaging opposite faces of a supporting structure, a pivot device extending from one of the members and through the slot, a lever fulcrumed upon said device, said lever and pivot device constituting the sole connection between the members, a link pivotally connected to the lever and adjustably connected to the slotted member, and means carried by the lever for embracing the two body members to bind them together.

2. A shade fixture consisting of lapping body members, a lever pivotally connected to one of said members, a link connection between said lever and the other member, said connection being adjustably secured to said member, means carried by the lever for embracing the two body members to bind them together, and coöperating means upon the body members for engaging a supporting structure.

879,141. LIQUID-METER. SWINFEN BRAMLEY-MOORE, Bloomsbury, England. Filed May 10, 1907. Serial No. 372,901.



1. A liquid meter comprising a suitable case, a rising and falling measuring vessel in said case, an inlet to said case, a valve controlling said inlet, a float in the measuring vessel, means for connecting the float with the inlet valve whereby the rise and fall of said float operates to close and open the inlet valve, an outlet valve in the bottom of the measuring vessel leading into the case, an arm pivoted to the case, a counterweight carried by said arm, means for connecting the counterweight with the measuring vessel, a locking device for holding the counterweights in their highest positions and thereby retaining the measuring vessel in its lowest position, a float in the case, means for connecting the float with the said locking device, and an outlet from the said case, as set forth.

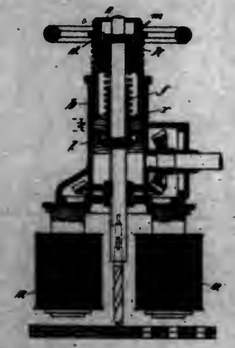
2. A liquid meter comprising a rising and falling measuring vessel in a suitable case, a chamber located above said case, an inlet to said chamber, a valve in said inlet, an outlet from said chamber into the case above the measuring vessel, a float in the measuring vessel, means for connecting the float with the inlet valve so that when the predetermined quantity of liquid has passed into the measuring vessel the valve is closed, an outlet valve in the bottom of the measuring vessel adapted to be operated by contact with the case, arms pivoted to the case, counterweights carried by said arms, means including the arms for connecting the counterweight with the measuring vessel, a locking device for holding the counterweights in their highest positions and thereby retain the measuring vessel in its lowest position, a float in the case, means for connecting said float with said locking device, and an outlet from the said case, as set forth.

3. A liquid meter comprising a suitable receptacle, a rising and falling measuring vessel in said receptacle, a chamber located above said receptacle, an inlet to said chamber, a valve in said inlet, an outlet from said chamber into the receptacle above the measuring vessel, a float in the measuring vessel, means for connecting the float with the inlet valve whereby the rise and fall of said float operates to close and open the inlet valve, an outlet valve in the bottom of the measuring vessel leading into the

receptacle adapted to be opened by contact with the said receptacle, an arm pivoted to the case, a counterweight carried by said arm, means including the arm for connecting the counterweight with the measuring vessel so that said counterweight is lifted by the measuring vessel as it descends, means for locking the counterweight in its highest position and retaining the measuring vessel in its lowest position for a predetermined period, and an outlet pipe from the said case, as set forth.

4. A liquid meter comprising a rising and falling measuring vessel in a suitable case, a chamber located above said case, an inlet to said chamber, a valve in said inlet, a siphon pipe leading from said chamber to said case, a float in the measuring vessel, means for connecting the float with the inlet valve, an outlet valve in the bottom of the measuring vessel adapted to be operated by the descent of the vessel, an arm pivoted to the case, a counterweight carried by said arm, means including the arms for connecting the counterweight with the measuring vessel, a float in the case connected with the counterweight and operating to prevent the counterweight from falling and therefore the measuring vessel from rising before the measuring vessel is empty, and a siphon outlet pipe from said case, as set forth.

879,142. CENTERING APPARATUS FOR PORTABLE DRILLING-MACHINES AND THE LIKE. ERNST BUSCKHARDT, Mannheim, Germany. Filed June 13, 1907. Serial No. 378,851.



1. A portable drill comprising a casing, a feed member movable vertically in the casing, a spindle bearing the working tool and adapted to turn within the member, two thrust bearings fixed on the spindle above and underneath said member at such a distance, that the spindle can be displaced in axial direction to a certain extent within said member.

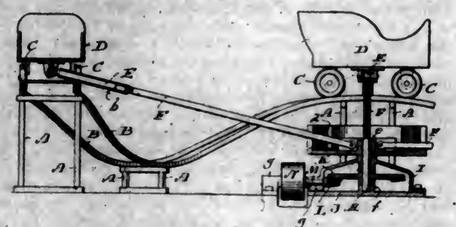
2. A portable drill comprising a casing, a feed member movable vertically in the casing, a spindle bearing the working tool and adapted to turn within the member, two thrust bearings fixed on the spindle above and underneath said member at such a distance, that the spindle can be displaced in axial direction to a certain extent within said member, and a spiral spring, the ends of which are respectively connected to the thrust bearing underneath the member and to the member, adapted to push the spindle forward out of the member.

879,143. ROUNDABOUT. HARRY S. CANTROVITZ, Milwaukee, Wis. Filed July 29, 1907. Serial No. 386,047.

1. A roundabout comprising a circular undulating track, a rotary center disk, radial sweeps in pivotal connection with the disk, stems having sliding connection with the outer ends of the sweeps, and carriers on the tracks in universal-joint connection with the stems.

2. A roundabout comprising a circular undulating track, a rotary center disk, radial sweeps in pivotal connection with the disk and having outer end sockets, stems in loose engagement with said sockets of the sweeps, and carriers on the track in universal-joint connection with the stems.

3. A roundabout comprising a circular undulating track, a rotary center disk having a vertically slotted rim, radial sweeps in pivotal connection with the disk and engaging the rim-slots of same, stems having sliding connection with the outer ends of the sweeps, and carriers in universal-joint connection with the stems.

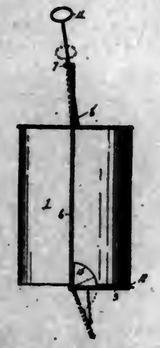


4. A roundabout comprising a circular undulating track, a center disk having a hub, a spindle fast in the hub, bearings for the spindle, and drive-gear in connection with said spindle, radial sweeps in pivotal connection with said disk, stems having sliding connection with the outer ends of the sweeps and carriers in universal-joint connection with the stems.

5. A roundabout comprising a circular undulating track, a center disk having a hub, a spindle fast in the hub, bearings for the spindle, inclosed drive-gear in connection with said spindle, radial sweeps in pivotal connection with said disk, stems having sliding connection with the outer ends of the sweeps, and carriers on the track in universal-joint connection with the stems.

[Claim 6 not printed in the Gazette.]

879,144. BUCKET. JOHN CHAMBERLIN, Flat Rock, Mich. Filed Apr. 2, 1906. Serial No. 309,568.



1. A bucket having a bottom comprising a fixed part and a movable part, the movable part of the bottom being hinged to swing downwardly, a single actuating rod rigid throughout its entire length jointedly attached directly to the movable part of the bottom at its lower end and provided at its upper end with a handle rigidly connected thereto, and means for guiding said rod.

2. A bucket having a bottom, comprising a fixed part and a movable part, a bail secured to the bucket having a guiding eye therein, disposed centrally of the bucket, a single actuating rod rigid throughout its entire length passing freely through said eye and jointedly attached at its lower end directly to the movable part of the bottom, said rod having at its upper end a handle by means of which the bucket may be carried.

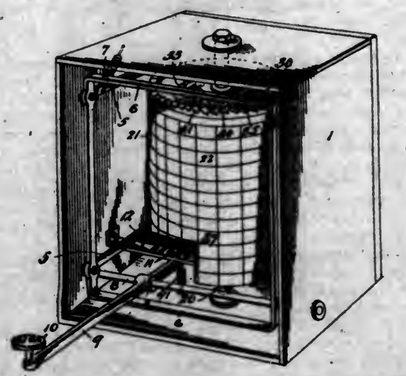
3. The combination of a bucket having a bottom comprising a fixed part and a movable part hinged to the fixed part, a bail attached to the bucket forming the pintle of said hinge and having a guide formed in its upper portion, a stiff actuating rod passing through said guide and jointedly attached at its lower end to the hinged portion of the bottom, the upper end of said rod having a handle for carrying the bucket.

4. The combination of a bucket having a bottom comprising a fixed portion and a hinged portion, said hinged portion having a gasket to engage the lower end of the bucket when closed to prevent escape of the fluid contents of the bucket the lower edge of the bucket being sharpened where engaged by said gasket and a stiff actuating rod jointedly attached to the hinged part of the bottom and passing upwardly through the bucket.

5. The combination of a bucket having a bottom comprising a fixed part and a hinged part, a stiff actuating rod jointedly attached to the hinged part and passing upwardly through the bucket, said rod having a handle at its upper end, means for supporting said rod and fenders to prevent a sidewise escape of the contents of the bucket when hinged portion of the bottom is opened.

[Claim 6 not printed in the Gazette.]

879,145. CALCULATOR. ERNEST E. CLARK, Colorado Springs, Colo. Filed July 13, 1907. Serial No. 383,577.



1. In a key-operated calculator, the combination with a casing having an upright slot in its front with figures adjacent, a rotary device mounted therein and carrying columns of figures adapted to be exposed singly through said slot, and a brake for checking its rotation with any column opposite the slot; of a series of key levers each having a key and a stop, a frame mounted on swinging supports within the casing and depressed by the depression of any key, a spring actuated trigger depressed and released by the descent of said frame, a pawl on the trigger, ratchet teeth on said rotary device engaged by the pawl whereby said spring rotates or spins said device when the frame disengages the trigger, and a series of studs depending from said device and standing each in one of a series of concentric circles and so located that when it engages its respective key-stop the proper columns of figures will be exposed.

2. In a key operated calculator, the combination with a casing having an upright slot in its front with figures adjacent, a rotary device mounted therein and carrying columns of figures adapted to be exposed singly through said slot, and a brake for checking its rotation with any column opposite the slot; of a series of key levers each having a key and a stop, a guide strip having holes through which the stops are guided, a frame mounted on swinging supports within the casing and depressed by the depression of any key, a spring actuated trigger depressed and released by the descent of said frame, a pawl on the trigger, ratchet teeth on said rotary device engaged by the pawl whereby said spring rotates or spins said device when the frame disengages the trigger, and a series of studs depending from said device and standing each in one of a series of concentric circles and so located that when it engages its respective key stop the proper column of figures will be exposed.

3. In a key operated calculator, the combination with a casing having an upright slot in its front with figures adjacent, a rotary device mounted therein and carrying columns of figures adapted to be exposed singly through said slot, and a brake for checking its rotation with any column opposite the slot; of a series of key levers each having a key and a stop, a frame mounted on swinging supports within the casing and depressed by the depression of any key, a spring actuated trigger depressed and released by the descent of said frame, a pawl on the trigger, ratchet teeth on said rotary device engaged by the pawl whereby said spring rotates or spins said device when the frame disengages the trigger, other springs for counterbalancing the weight of the frame, and a series of studs depending from said device and standing each in one of a series of concentric circles and so located that when it engages its respective key stop the proper column of figures will be exposed

4. In a key operated calculator, the combination with a casing having an upright slot in its front with figures adjacent, a cylinder mounted therein and carrying columns of figures adapted to be exposed singly through said slot, and a brake for checking its rotation with any column opposite the slot; of a series of key levers each having a key and a stop, a guide strip having holes through which the stops are guided, a frame mounted on swinging supports within the casing and depressed by the depression of any key, a spring actuated trigger depressed and released by the descent of said frame, a pawl on the trigger, ratchet teeth on said cylinder engaged by the pawl whereby said spring rotates or spins said cylinder when the frame disengages the trigger, other springs for counterbalancing the weight of the frame, and a series of studs depending from said device and standing each in one of a series of concentric circles and so located that when it engages its respective key-stop the proper column of figures will be exposed.

5. In a key-operated calculator, the combination with a casing having an upright slot in its front with figures adjacent, a cylinder mounted therein and having upright pairs of flanges on its exterior, and cards or sheets removably inserted in said pairs of flanges and having columns of figures registering with those on the casing; of a series of key levers having interchangeable keys at their front ends and stops at their rear ends, studs on the cylinder engaging individual stops when raised and arranged to each respectively expose a certain column of figures through said slot, means for rotating the cylinder in one direction, and mechanism whereby said means is actuated by the depression of any key.

[Claim 6 not printed in the Gazette.]

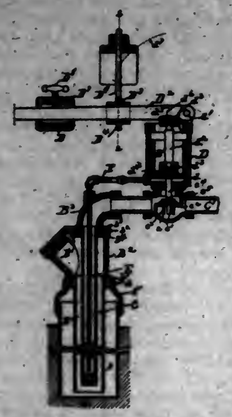
879,146. APPARATUS FOR ACTUATING LIQUIDS. RUDOLPH CONRADER, Erie, Pa. Filed Jan. 14, 1905. Serial No. 241,100.

1. In an apparatus for actuating liquids, the combination of the lift in which liquids are raised, means for delivering air to the column in the lift, and devices subjected to a pressure varying with the head in the lift and acting under the influence of said pressure to turn in a supply of air to the column in the lift when the devices are subjected to the pressure from a predetermined head.

2. In an apparatus for actuating liquids, the combination of the lift in which liquids are raised, means for delivering air to the column in the lift, and devices subjected to a pressure varying with the head in the lift and acting under the influence of said pressure to automatically cut off the supply of air to the column in the lift when the devices are subjected to the pressure incident to a predetermined head.

3. In an apparatus for actuating liquids, the combination of the lift in which liquids are raised, means for delivering air to the column in the lift, and devices subjected to a pressure varying with the head in the lift and acting under the influence of said pressure to automatically turn in a supply of air to the column in the lift when the devices are subjected to the pressure incident to a predetermined head and to cut off said supply when said de-

vices are subjected to the pressure incident to a predetermined lower head.



4. In an apparatus for actuating liquids, the combination of an eduction tube; a fluid tube for conducting actuating fluid to a point of application to the liquid; means for maintaining the air pressure in the fluid tube equal to the head of liquid in the eduction tube above the point of application; and means operated by said actuating fluid for opening a connection in the fluid tube.

5. In an apparatus for actuating liquids by the direct application of the actuating fluid, the combination of an eduction tube; a tube for conducting actuating fluid to a point of application to the liquid; means for delivering continuously a minute supply of actuating fluid, said means and actuating fluid tube being arranged to trap the fluid so delivered and thus raise its pressure with a rise of level of liquid; and mechanism subjected to the action of said fluid and arranged to be operated at a predetermined pressure to turn in a supply of actuating fluid.

[Claims 6 to 15 not printed in the Gazette.]

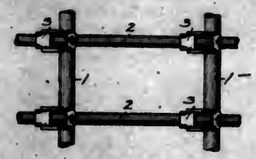
879,147. STAND-VALVE-EXTRACTING MEANS FOR OIL-WELL PUMPS. EVELYN A. COPELAND, Tionesta, Pa. Filed Nov. 25, 1907. Serial No. 403,739.



1. In means of the class described, the combination with an oil well pump including a plunger, and a stand valve having a threaded portion at its upper end, of an attachment applied to the lower end of the plunger and consisting of a supporting member secured to the plunger, and an extracting member mounted for rotation with said supporting member but movable into a position in which it does not project from said supporting member, said extracting member having a threaded portion at its lower end for connection with that of the stand valve.

2. In means of the class described, the combination with an oil well pump including a plunger and a stand valve, extracting means for the stand valve consisting of a tubular supporting member detachably secured to the plunger, and an extracting member the lower end of which has means for connection with the stand valve, said extracting member embodying a head normally supporting it in a position in which its lower end projects from the lower end of the supporting member, said extracting member furthermore interlocking with the supporting member for rotation therewith and being freely movable vertically thereon so as to be entirely received in the supporting member under certain conditions of service.

879,148. CONNECTING AND SPACING CLIP FOR METAL REINFORCEMENT, &c. ROBERT A. CUMMINGS, Beaver, Pa. Filed Mar. 8, 1907. Serial No. 361,308.



1. A connector for crossing metal members, comprising a clip provided with a loop to embrace one of said crossing members and having a limb arranged to engage and retain the other crossing member, the loop portion of the clip having a severed portion arranged to be bent after the clip is applied to the crossing members and thereby forced against one of said members to bind them together.

2. A connector for crossing metal members, comprising a clip provided with a loop to embrace one of said crossing members and having limbs provided with openings at a right angle to the loop to receive and retain the other crossing member, the loop portion of said clip having a severed portion arranged to be bent after the clip is applied to the crossing members and thereby forced against one of said members to bind them together.

3. A connector for crossing metal members, comprising a clip provided with a loop to embrace one of said crossing members and having two limbs provided with alining openings to receive and retain the other crossing member, the loop portion of said clip being provided with a band severed from the body of the loop and arranged to be twisted and thereby forced against one of the crossing members to bind them together.

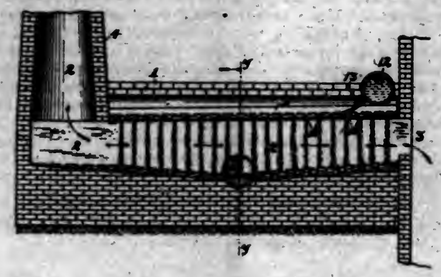
4. A connector for crossing metal members, comprising a clip provided with a loop to embrace one of the crossing members and having two limbs provided with edge notches for receiving and retaining the other crossing member, a portion of the loop being arranged to be bent and thereby forced against one of the crossing members to bind them together.

5. A connector for crossing metal members, comprising a substantially U shaped clip formed of resilient metal to provide a loop to embrace one of the crossing members and having limbs provided with edge notches at right angles to the central loop for receiving and retaining the other crossing member, said loop having a portion arranged to be bent and thereby forced against one of the crossing members.

[Claims 6 to 11 not printed in the Gazette.]

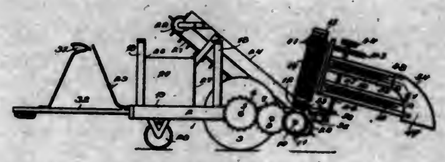
879,149. DEVICE FOR PURIFYING PRODUCTS OF COMBUSTION AND OXIDATION. ALEXANDER A. CUNNINGHAM, San Francisco, Cal., assignor of forty-five one-hundredths to Eric Maxwell Francis, San Francisco, Cal. Filed Dec. 15, 1906. Serial No. 348,080.

1. In a device of the character described, the combination of walls inclosing a purification chamber, means for causing the products of combustion and oxidation to pass through the purification chamber, a series of distributing troughs arranged in the upper portion of the chamber, and provided with discharge openings, a supply pipe extending transversely across the distributing troughs, and provided with means for supplying the various troughs with a liquid, and means for discharging the liquid from the bottom of the chamber.



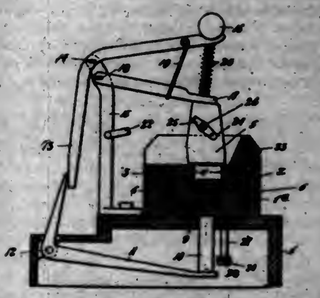
2. In a device of the character described, the combination of walls inclosing a chamber, the bottom of which slopes in opposite directions to form an inclined channel leading to one side of the chamber, a discharge pipe communicating with the lower end of the channel, means for causing the products of combustion to pass through the chamber, a distributing trough located in the upper portion of the chamber and provided with a series of discharge openings, and means for delivering a liquid to the distributing trough.

879,150. CORN-HUSKER. LOUIS CUTTER, Bladen, Nebr. Filed June 26, 1906. Serial No. 323,429.



A combined harvesting and husking machine comprising a frame composed of three horizontal parallel beams, arched braces for two of said beams forming a channel, a driving wheel journaled between the middle beam and one of the outer beams, a pair of standards, each one of which projects vertically from one of the outer beams and a vertically disposed frame mounted between said standards, a pair of upwardly extending snapping and husking rolls having shafts journaled within said frame, said rolls being provided upon their upper ends with gear wheels adapted to mesh with one another, the upper end of one of the shafts of one of said rolls being provided with a beveled gear, a shaft mounted within suitable bearings of the inclined frame and one of the standards and having a bevel pinion to mesh with said beveled gear, a fly wheel carried by said shaft, a flaring entrance mouth comprising a plurality of parallel pieces having guide plates secured thereto, said entrance mouth being provided with vertical shafts having suitable gearing at the upper end thereof which also meshes with one of the gears of the upper end of the rolls for transmitting motion thereto, said shafts of the entrance mouth having sprocket wheels thereon, sprocket wheels journaled in the outer end of said pieces forming the entrance mouth, gathering chains having teeth or other suitable means for gathering the stalks operated by the sprockets of the entrance mouth, a horizontally disposed trough, a conveyer adapted to move within said trough, an elevator conveyer to coöperate with said horizontal trough and having a gear at the lower end thereof, a train of gears adapted to coöperate between the driving wheel and one of the snapping and husking rolls for transmitting motion thereto, and a gear operated by said train of gears adapted to engage the gear carried at the lower end of the elevator conveyer, substantially as specified.

879,151. STAMP-AFFIXING MACHINE. ROY P. DETHMERS, Madella, Minn. Filed May 18, 1906. Serial No. 317,568.



1. In a device of the kind described, the combination with a block having a stamp receiving pocket that is open at its top and bottom, of a platen overlying said pocket, a plunger underlying said pocket, and lever connections involving a yielding element for pressing said platen downward and raising said lifting plunger to apply the stamps to the envelops, substantially as described.

2. In a device of the kind described, the combination with a block having a stamp receiving pocket that is open at its top and bottom, of a pivoted lever provided with a platen that overlies said pocket, a plunger underlying said pocket, a lifting lever operative on said lifting plunger, and an operating lever operative on said lifting lever and having a yielding connection to said platen equipped lever, substantially as described.

3. In a device of the kind described, the combination with a block having a stamp receiving pocket, of a platen overlying said pocket, a lifting plunger underlying said pocket, an operating lever having connections for moving said plunger upward and for moving said platen downward, to apply the stamps to the envelops, a water containing receptacle, a moistening pad normally submerged therein and means for moving said pad upward into an operative position, when the said platen is raised, substantially as described.

4. In a device of the kind described, the combination with a rotary block having a plurality of stamp receiving pockets, of a platen overlying said block, a lifting plunger underlying said block, and lever connections for forcing said platen downward and said plunger upward, to apply the stamps to the envelops, substantially as described.

5. In a device of the kind described, the combination with a base and a cylindrical block rotatively mounted therein and having a plurality of stamp receiving pockets that are open at their bottoms and tops, of a lever provided with a platen that overlies said rotary block, a lifting plunger underlying said block and said platen, a lifting lever for lifting said plunger, and an operating lever operative on said lifting lever, and having a yielding connection to said platen equipped lever, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

879,152. TOY. ALEXANDER S. DIACK, Detroit, Mich. Filed July 9, 1906. Serial No. 325,284.



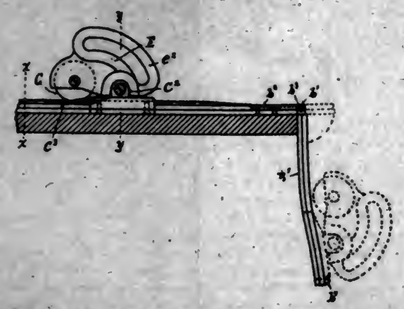
1. A toy consisting of a continuous annular tread section transversely recessed at two diametrically opposite points and means engaging said recesses for laterally projecting the toy.

2. A toy comprising a disk shaped reinforcing member, an inclosing relatively heavy tread section recessed at

diametrically opposite points in its periphery, and a looped cord adapted to engage the recessed tread.

3. A toy consisting of a metallic annular tread member circular in cross section and having slight oppositely disposed notches or indentations formed transversely in its periphery, a relatively light reinforcing disk for and integral with the tread, and a looped cord adapted to encircle the reinforced tread and engage the notches therein.

879,153. CLOTH-CUTTER FOR COUNTERS. JOHN DIRR and OTTO BERGMANN, Cincinnati, Ohio. Filed Mar. 11, 1907. Serial No. 361,667.



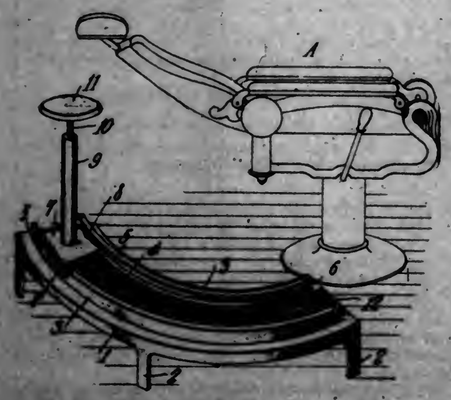
1. The combination of a counter, a horizontal way for a sliding casing secured to the counter top, a vertical knife blade mounted in the way, a casing to slide upon the way and a roller journaled in the casing and contacting the knife blade.

2. The combination of a counter, a way secured to the counter, an auxiliary way secured to the rear of the way so as to be dropped behind the counter, a knife blade secured in the way, a casing mounted to slide upon the way, and a roller journaled in the casing to contact the knife blade.

3. The combination of a counter, a transverse T-way secured to its top, a knife blade mounted in the T-way, a casing sliding upon the T-way, a housing pivoted to the casing, a roller journaled in the housing and bearing upon the knife blade.

4. The combination of a counter, a way for a sliding casing secured to the counter-top, a knife blade mounted in the way, a casing to slide upon the way, a housing journaled upon the casing and a roller journaled in the housing and bearing upon the knife-blade.

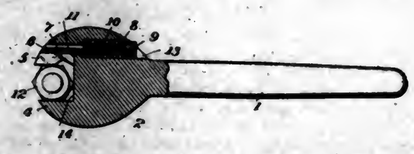
879,154. BARBER'S STOOL. JOHN R. DRAPER and THOMAS L. HUGHES, Hennessey, Okla. Filed Apr. 26, 1907. Serial No. 370,425.



1. A stool comprising a body, supports therefor, oppositely disposed curved channel irons concentrically arranged upon the body, a carriage interposed between said irons, supporting rollers connected to the carriage and moved within the iron, and a seat adjustably connected to the carriage, that portion of the body between the channel irons constituting a foot rest for the occupant of the seat.

2. The combination with a barber's chair having a curved body supported adjacent thereto and partly surrounding the same; of oppositely disposed concentric channel irons upon the body, a carriage interposed between the irons, supporting rollers connected to the carriage and movable within the channel irons, and a seat adjustably connected to and supported by the carriage, that portion of the body between the irons constituting a foot rest for the occupant of the seat.

879,155. WRENCH. FRED ELLIS, Fourche, Ark. Filed May 27, 1907. Serial No. 375,885.



1. In a ratchet wrench, a bifurcated head forming a pair of jaws, a sliding block fitted to one jaw, and provided with a transverse notch, and means for retracting said block when displaced from normal position.

2. In a ratchet wrench, a head having square faced jaws for the reception of a nut, one jaw carrying a sliding block having a transverse notch adapted to coöperate with a corner of said nut, said block being provided with a square shoulder arranged to abut against the rear wall of the jaw opening, and means urging said block against said rear wall.

3. In a ratchet wrench, a head having jaws, a sliding block fitted to one jaw, and having a spline secured thereto, terminating behind in a shank, a cylindrical chamber, open at the rear, formed in said head, and into which said shank extends, a spring lying in said chamber and surrounding said shank, and a nut carried by the end of said shank, and adapted to slide within said chamber.

879,156. PROCESS OF MAKING DIALKYLBARBITURIC ACID. MAX ENGELMANN, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed July 20, 1906. Serial No. 327,084.

1. The process for the production of dialkyl barbituric acids, having the above given general formula, which process consists in first heating dialkyl malonyl diurethanes and isolating from the thus obtained melt the resulting 5-dialkyl-2.4.6-trioxypyrimidins, substantially as described.

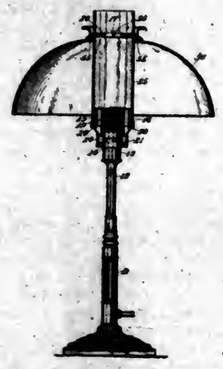
2. The process for the production of dialkyl barbituric acids, which process consists in first heating dialkyl malonyl diurethanes, dissolving the thus obtained melt in ammonia, filtering the liquid, boiling the filtrate to drive off the ammonia, and crystallising the resulting 5-dialkyl-2.4.6-trioxypyrimidins therefrom, substantially as described.

3. The process for the production of diethyl barbituric acid, having the above given general formula, which process consists in first heating diethyl malonyl diurethanes and isolating from the thus obtained melt the resulting 5-diethyl-2.4.6-trioxypyrimidin, substantially as described.

4. The process for the production of diethyl barbituric acid, which process consists in first heating diethyl malonyl diurethanes, dissolving the thus obtained melt in ammonia, filtering the liquid, boiling the filtrate to drive off the ammonia, and crystallising the resulting 5-diethyl-2.4.6-trioxypyrimidin therefrom, substantially as described.

879,157. INCANDESCENT LAMP. AMBROSE G. FELL, New York, N. Y. Filed May 18, 1907. Serial No. 374,440.

1. In a lamp for incandescent mantles, the combination of a burner member, a mantle support carried by the burner, and a chimney carried solely by the mantle support.



2. In a lamp for incandescent mantles, the combination of a burner member; a mantle support carried by the burner, and a chimney carried solely by the mantle support at its upper portion.

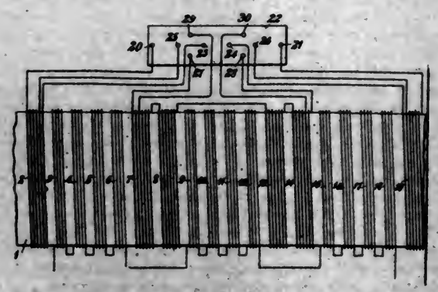
3. In an incandescent lamp, the combination of a burner, a mantle member comprising a support carried by the burner, a chimney having a transverse member at its upper portion and engaging the mantle support whereby the chimney is solely supported.

4. In an incandescent lamp, the combination of a burner, a mantle member comprising a support carried by the burner and having a bent portion at its upper part, a chimney having a transverse member extending diametrically across its upper portion and engaging the bent portion of the mantle support whereby the chimney is solely supported.

5. In an incandescent lamp, the combination of a burner, a mantle member comprising a support carried by the burner and having a bent portion at its upper part, a chimney having a transverse member extending diametrically across its upper portion and engaging the bent portion of the mantle support whereby the chimney is solely supported, the chimney having means at its lower part to prevent its lateral displacement.

[Claims 6 to 27 not printed in the Gazette.]

879,158. TRANSFORMER. CHARLES LE G. FORTESCUE, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed June 8, 1907. Serial No. 378,013.



1. In a transformer, the combination with primary and secondary windings at least one of which comprises a plurality of sections with which the other winding is interpolated to form a symmetrical arrangement, of means for connecting different pairs of points of the said sections to adjust the voltage ratio of the transformer.

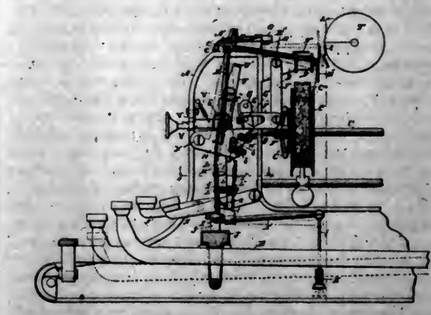
2. In a transformer, the combination with primary and secondary windings, each comprising a plurality of sections, the sections of the windings being interpolated in a symmetrical arrangement, of means for connecting a plurality of different pairs of points in the sections of one winding between which a section of the other winding is located.

3. In a transformer, the combination with primary and secondary windings each comprising a plurality of sections, the sections of the windings being interpolated in a symmetrical arrangement, of means for connecting a plurality of different pairs of points in the sections of one winding that are symmetrically located with respect to a section of the other winding.

4. In a transformer, the combination with primary and secondary windings, each comprising a plurality of sections, the sections of the windings being interpolated in a symmetrical arrangement, of means for removing from the circuit portions of the sections of one winding between which a section of the other winding is located.

5. In a transformer, the combination with primary and secondary windings, each comprising a plurality of sections, the sections of the windings being interpolated in a symmetrical arrangement, of means for removing from the circuit portions of the sections of one winding that are symmetrically located with respect to the other winding.

879,159. RIBBON MECHANISM FOR TYPE-WRITING MACHINES. WILLIAM R. FOX, Grand Rapids, Mich. Filed Apr. 23, 1906. Serial No. 313,295.



1. In a ribbon mechanism of a front-strike typewriter, the combination of suitable ribbon spools C' with means for actuating the same; a cam plate C'' on the face of one of the said spools, with its face adapted to actuate a moving part in the direction of the ribbon spool shaft; a ribbon vibrator E''' slotted from the upper side to receive the ribbon; a rock shaft E, horizontally arranged in the upper front part of the machine, with an arm E'' connected to said ribbon vibrator; downwardly projecting arms E' from the rock shaft E; a transverse rock shaft I, arranged in the lower front part of the machine; arms I' projecting rearwardly therefrom; a common bar K under the key levers of the machine; links i connecting the said bar K to the arms I', whereby the said arms will be deflected on the depression of a key of the machine; an upwardly projecting plate I'' carried by the rock shaft studs l l, between which is a longer stud L' projecting through perforations in the plate I''; a coiled spring L'' embracing the stud L', and a nut L''' for applying the tension of the spring L'', whereby the plate L is held yieldingly in position on the plate I'', the upper end of said plate L being offset and perforated and embracing the downwardly-projecting rock shaft arm E' whereby there is a yielding connection between the key levers and the ribbon mechanism; a stop plate H with stops H' H'' arranged at different distances from the pivot thereof, to be adjustably thrown up in position to engage the arm E' for the purpose of controlling the movement of the ribbon vibrator to enable the use of a double colored ribbon; a spring h'' connected to a stud h at one end and engaging the plate H at the opposite end, whereby the plate is automatically and yieldingly

retained in its adjusted positions; a downwardly depending link M secured to the plate H and connected by the pivot *n* to the levers N and N', the levers N and N' projecting toward the front of the machine with suitable push buttons thereon, the lever N' being fulcrumed in front of the pivot *n'* and the lever N being fulcrumed in the rear of the pivot *n*, whereby the depressing of the levers shifts and adjusts the plate H up and down; a downwardly-depending arm F pivotally supported on the upper part of the machine, the lower end of which is provided with a round projection F' to rest in contact with the cam C''; a link F''' secured to the lower end of the arm F, having an adjustable stop on its opposite end, adapted and arranged to limit the movement of the arm E, whereby the gradual shifting of the ribbon and the ribbon vibrator is secured to utilize the full face of the ribbon; an arm G' with a rounded end on the pivot G having a knurled end G'' for controlling the link F'' to throw the ribbon-shifting mechanism into and out of engagement and control the ribbon stops; and a lever U with stops U' thereon, with means for adjusting the same to throw the ribbon and ribbon vibrator out of use for stenciling, all co-acting substantially as described and for the purpose specified.

2. In a ribbon mechanism of a front-strike typewriter, the combination of suitable ribbon spools C' with means for actuating the same; a cam plate C'' on the face of one of the said spools, with its face adapted to actuate a moving part in the direction of the ribbon spool shaft; a ribbon vibrator E''' slotted from the upper side to receive the ribbon; a rock shaft E, horizontally arranged in the upper front part of the machine, with an arm E'' connected to said ribbon vibrator; downwardly-projecting arms E' from the rock shaft E; a transverse rock-shaft I, arranged in the lower front part of the machine; arms I' projecting rearwardly therefrom; a common bar K under the key levers of the machine; links *i* connecting the said bar K to the arms I', whereby the said arms will be deflected on the depression of a key of the machine; an upwardly-projecting plate I'' carried by the rock shaft studs *l l*, between which is a longer stud L' projecting through perforations in the plate I''; a coiled spring L'' embracing the stud L', and a nut L''' for applying the tension of the spring L'', whereby the plate L is held yieldingly in position on the plate I'', the upper end of said plate L being offset and perforated and embracing the downwardly-projecting rock shaft arm E' whereby there is a yielding connection between the key levers and the ribbon mechanism; a stop plate H with stops H' H'' arranged at different distances from the pivot thereof, to be adjustably thrown up in position to engage the arm E' for the purpose of controlling the movement of the ribbon vibrator to enable the use of a double colored ribbon; a spring *h''* connected to a stud *h* at one end and engaging the plate H at the opposite end, whereby the plate is automatically and yieldingly retained in its adjusted positions; a downwardly depending link M secured to the plate H and connected by the pivot *n* to the levers N and N', the levers N and N' projecting toward the front of the machine with suitable push buttons thereon, the lever N' being fulcrumed in front of the pivot *n'*, and the lever N being fulcrumed in the rear of the pivot *n*, whereby the depressing of the levers shifts and adjusts the plate H up and down; a downwardly-depending arm F pivotally supported on the upper part of the machine, the lower end of which is provided with a round projection F' to rest in contact with the cam C''; a link F''' secured to the lower end of the arm F, having an adjustable stop on its opposite end, adapted and arranged to limit the movement of the arm E, whereby the gradual shifting of the ribbon and the ribbon vibrator is secured to utilize the full face of the ribbon; an arm G' with a rounded end on the pivot G having a knurled end G'' for controlling the link F''' to throw the ribbon-shifting mechanism into and out of engagement and control the ribbon stops, all co-acting substantially as described and for the purpose specified.

3. In a ribbon mechanism of a front-strike typewriter, the combination of suitable ribbon spools C' with means for actuating the same; a cam plate C'' on the face of one of the said spools, with its face adapted to actuate a moving part in the direction of the ribbon spool shaft; a ribbon vibrator E''' slotted from the upper side to receive the ribbon; a rock-shaft E, horizontally arranged in the upper front part of the machine, with an arm E'' connected to said ribbon vibrator; downwardly-projecting arms E' from the rock shaft E; a transverse rock-shaft I, arranged in the lower front part of the machine; arms I' projecting rearwardly therefrom; a common bar K under the key levers of the machine; links *i* connecting the said bar K to the arms I', whereby the said arms will be deflected on the depression of a key of the machine; an upwardly-projecting plate I'' carried by the rock shaft studs *l l*, between which is a longer stud L' projecting through perforations in the plate I''; a coiled spring L'' embracing the stud L', and a nut L''' for applying the tension of the spring L'', whereby the plate L is held yieldingly in position on the plate I'', the upper end of said plate L being offset and perforated and embracing the downwardly-projecting rock shaft arm E' whereby there is a yielding connection between the key levers and the ribbon mechanism; a downwardly-depending arm F pivotally supported on the upper part of the machine, the lower end of which is provided with a round projection F' to rest in contact with the cam C''; a link F''' secured to the lower end of the arm F, having an adjustable stop on its opposite end, adapted and arranged to limit the movement of the arm E, whereby the gradual shifting of the ribbon and the ribbon vibrator is secured to utilize the full face of the ribbon; an arm G' with a rounded end on the pivot G having a knurled end G'' for controlling the link F''' to throw the ribbon-shifting mechanism into and out of engagement and control the ribbon stops, all co-acting substantially as described and for the purpose specified.

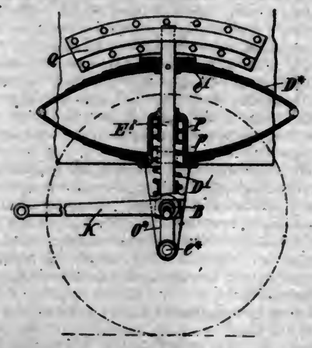
4. In a ribbon mechanism of a front-strike typewriter, the combination of suitable ribbon spools C' with means for actuating the same; a cam plate C'' on the face of one of the said spools, with its face adapted to actuate a moving part in the direction of the ribbon spool shaft; a ribbon vibrator E''' slotted from the upper side to receive the ribbon; a rock-shaft E, horizontally arranged in the upper front part of the machine, with an arm E'' connected to said ribbon vibrator; downwardly-projecting arms E' from the rock shaft E; a transverse rock shaft I arranged in the lower front part of the machine; arms I' projecting rearwardly therefrom; a common bar K under the key levers of the machine; links *i* connecting the said bar K to the arms I', whereby the said arms will be deflected on the depression of a key of the machine; an upwardly-projecting plate I'' carried by the rock shaft studs *l l*, between which is a longer stud L' projecting through perforations in the plate I''; a coiled spring L'' embracing the stud L', and a nut L''' for applying the tension of the spring L'', whereby the plate L is held yieldingly in position on the plate I'', the upper end of said plate L being offset and perforated and embracing the downwardly-projecting rock shaft arm E' whereby there is a yielding connection between the key levers and the ribbon mechanism; a downwardly-depending arm F pivotally supported on the upper part of the machine, the lower end of which is provided with a round projection F' to rest in contact with the cam C''; a link F''' secured to the lower end of the arm F, having an adjustable stop on its opposite end adapted and arranged to limit the movement of the arm E, whereby the gradual shifting of the ribbon and the ribbon vibrator is secured to utilise the full face of the ribbon; an arm G' with a rounded end G'' for controlling the link F''' to throw the ribbon-shifting mechanism into and out of engagement and control the ribbon stops, all co-acting substantially as described and for the purpose specified.

5. In a ribbon mechanism of a front-strike typewriter, the combination of suitable ribbon spools C' with means for actuating the same; a ribbon vibrator E''' slotted from the upper side to receive the ribbon; a rock shaft E, horizontally arranged in the upper front part of the machine, with an arm E'' connected to said ribbon vibrator; downwardly-projecting arms E' from the rock shaft E; a transverse rock shaft I arranged in the lower front part of the machine; arms I' projecting rearwardly therefrom; a common bar K under the key levers of the machine; links *i* connecting the said bar K to the arms I', whereby the said arms will be deflected on the depression of a key of the machine; an upwardly-projecting plate I'' carried by the rock shaft studs *l l*, between which is a longer stud L' projecting through perforations in the plate I''; a coiled spring L'' embracing the stud L', and a nut L''' for applying the tension of the spring L'', whereby the plate L is held yieldingly in position on the plate I'', the upper end of said plate L being offset and perforated and embracing the downwardly-projecting rock shaft arm E' whereby there is a yielding connection between the key levers and the ribbon mechanism; a downwardly-depending arm F pivotally supported on the upper part of the machine, the lower end of which is provided with a round projection F' to rest in contact with the cam C''; a link F''' secured to the lower end of the arm F, having an adjustable stop on its opposite end adapted and arranged to limit the movement of the arm E, whereby the gradual shifting of the ribbon and the ribbon vibrator is secured to utilise the full face of the ribbon; an arm G' with a rounded end G'' for controlling the link F''' to throw the ribbon-shifting mechanism into and out of engagement and control the ribbon stops, all co-acting substantially as described and for the purpose specified.

machine; arms I' projecting rearwardly therefrom; a common bar K under the key levers of the machine; links *i* connecting the said bar K to the arms I', whereby the said arms will be deflected on the depression of a key of the machine; an upwardly-projecting plate I'' carried by the rock-shaft studs *l l*, between which is a longer stud L' projecting through perforations in the plate I''; a coiled spring L'' embracing the stud L', and a nut L''' for applying the tension of the spring L'', whereby the plate L is held yieldingly in position on the plate I'', the upper end of said plate L being offset and perforated and embracing the downwardly-projecting rock shaft arm E' whereby there is a yielding connection between the key levers and the ribbon mechanism; a stop plate H with stops H' H'' arranged at different distances from the pivot thereof, to be adjustably thrown up in position to engage the arm E' for the purpose of controlling the movement of the ribbon vibrator to enable the use of a double colored ribbon; a spring *h''* connected to a stud *h* at one end and engaging the plate H at the opposite end, whereby the plate is automatically and yieldingly retained in its adjusted positions; a downwardly-depending link M secured to the plate H and connected by the pivot *n* to the levers N and N', the levers N and N' projecting toward the front of the machine with suitable push buttons thereon, the lever N' being fulcrumed in front of the pivot *n'*, and the lever N being fulcrumed in the rear of the pivot *n*, whereby the depressing of the levers shifts and adjusts the plate H up and down; and a lever U with stops U' thereon, with means for adjusting the same to throw the ribbon and ribbon vibrator out of use for stenciling, all co-acting substantially as described and for the purpose specified.

[Claims 6 to 55 not printed in the Gazette.]

879,160. MOUNTING OF ROAD-WHEELS FOR VEHICLES. CHARLES W. FULTON, Paisley, Scotland. Filed May 15, 1905. Serial No. 360,572.



1. In a mounting or suspension for vehicle wheels the combination with a short axle for the wheel and a bracket in which the wheel axle can move vertically, of a cross axle carrying the brackets and non-synchronous springs located between the wheel axle and the bracket and between the bracket and its supporting cross axle to which latter one of the springs is connected and means permitting the wheel axle to move laterally relatively to the vehicle.

2. In a mounting or suspension for vehicle wheels the combination with a short independent axle for each wheel and a bracket in which each wheel axle can move vertically of a spring located between the wheel axle and the bracket a cross axle and springs non-synchronous with the first-mentioned spring connecting the bracket to the vehicle frame and means whereby the wheel axle and the bracket can move laterally relatively to the vehicle.

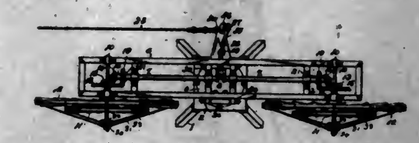
3. In a mounting or suspension for a vehicle wheel the combination with a spring-supported wheel axle and a bracket supporting the wheel axle of a compressible radius rod whereby the wheel axle is permitted to move fore and aft relatively to the vehicle.

4. In a mounting or suspension for a vehicle wheel the combination with a wheel rotated by toothed gearing of a bracket in which the wheel axle is suspended by a spring, means whereby the bracket can move fore and aft relatively to the vehicle and a radius rod connected to a cross axle carrying the bracket and to the driving shaft for the toothed pinion.

5. In a mounting or suspension for a vehicle wheel the combination with a bracket and a wheel axle spring-supported in the bracket of mechanism permitting the fore and aft movement of the bracket relatively to the vehicle frame substantially as and for the purpose described.

[Claims 6 to 11 not printed in the Gazette.]

879,161. WINDMILL. ALBERT F. GEORGE, Bisbee, Ariz., assignor, by direct and mesne assignments, to The George Combination Windmill Company, Bisbee, Ariz. Filed Feb. 24, 1905. Serial No. 247,111.



1. The combination with a suitable support, of a driving shaft rotatively mounted on the support, a pitman connected with the driving shaft, two wind wheels rotatively mounted independently of each other on the support, and separate driving means operative independently of each other for imparting rotation from said wheels respectively to the driving shaft.

2. The combination with a suitable tower, of a support pivoted to swing in a horizontal plane thereon, a driving shaft rotatively mounted on the support, two wind wheels rotatively mounted independently of each other on the support, and separate driving means operative independently of each other for imparting rotation from the wind wheels to the driving shaft.

3. The combination with a suitable tower, of a support pivoted to swing in a horizontal plane thereon, a vane carried by and adapted to swing the support, a driving shaft rotatively mounted on the support, two wind wheels rotatively mounted independently of each other on the support, and separate driving means operative independently of each other for imparting rotation from said wheels respectively to the driving shaft.

4. The combination with a suitable tower, of a support pivoted to swing in a horizontal plane thereon, a driving shaft rotatively mounted on the support, two wind wheels carried by the support and revoluble independently of each other around the same axis, and separate driving means operative independently of each other for imparting rotation from said wheels respectively to the driving shaft.

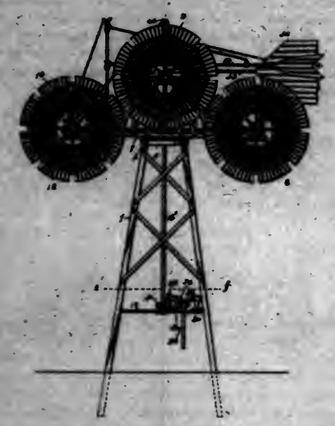
5. The combination with a suitable tower, of a support pivoted to swing in a horizontal plane thereon, a driving shaft rotatively mounted on the support, two concentrically disposed wind wheels of different diameters rotatively mounted on the support, independent means for imparting rotation from the wind wheels to the driving shaft, and a pitman connected to and reciprocated by the driving shaft.

[Claims 6 to 17 not printed in the Gazette.]

879,162. WINDMILL. ALBERT F. GEORGE, Bisbee, Ariz., assignor to The George Combination Windmill Company, Bisbee, Ariz., a Corporation of Arizona. Filed Oct. 28, 1905. Serial No. 284,780.

1. The combination with the tower, of a truss pivoted to swing horizontally thereon, a vertical oscillatory shaft mounted on the truss and having a crank arm, a main vane secured to and oscillatable with the said shaft, a stop for limiting the oscillation of the vane relative to the truss in one direction, yielding means for normally forcing the truss

to a position in which the vane will rest against said stop, an auxiliary vane pivoted to said truss and disposed at an angle to the main vane when the main vane is against said stop, and a link pivoted to the auxiliary vane and to said crank arm by which, under sufficient wind pressure, the auxiliary vane will swing the truss relative to the main vane in a direction opposite the direction in which the truss is forced by said yielding means.



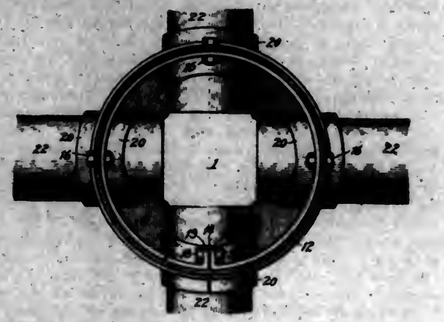
2. The combination with the tower, of a truss pivoted to swing horisontally thereon, a vertical shaft pivoted to said truss and having a crank arm, a main vane secured to and movable with said shaft, a lever pivotally mounted on said truss, a weight for moving said lever in one direction, means for swinging said truss relative to said vane when the lever is moved by the weight, an auxiliary vane pivoted to the truss and disposed normally at an angle to the main vane, and a link pivoted to the auxiliary vane and to said crank arm by which, under sufficient wind pressure, the truss is swung relative to the main vane in a direction opposite that in which the truss is swung by the weight.

3. The combination with the tower, of a truss pivoted to swing horisontally thereon, a vertical shaft pivoted to the truss and having a crank arm, a main vane secured to and movable with the shaft, a lever pivoted to the truss, a weight for forcing said lever in one direction, a link connecting said lever and said vane, an auxiliary vane pivotally mounted on said truss and disposed normally at an angle to the main vane, and a link pivoted to the auxiliary vane and to said crank arm for swinging said vertical shaft in a direction opposite that in which it is swung by said weight when the auxiliary vane is swung under sufficient wind pressure.

4. The combination with the tower, of a truss pivoted to swing horizontally thereon, a vertical shaft pivoted to the truss and provided with a crank arm, a main vane secured to and movable with said shaft, an auxiliary vane pivoted to said truss and disposed normally at an angle to the main vane, a link pivoted to said auxiliary vane, and to said crank arm, a lever pivotally mounted on the truss, means for swinging said lever in a certain direction, and means by which, when said lever is swung in said direction, the truss will be swung relative to the main vane.

5. The combination with the tower, of a truss pivoted to swing horisontally thereon, a vertical shaft pivoted to the truss and having a crank arm, a main vane secured to said shaft, an auxiliary vane pivoted to the truss, a link pivotally connected with said crank arm and to the auxiliary vane, a lever pivoted to the truss, a link connecting the main vane and said lever, and a weight adjustable lengthwise of said lever and forcing said lever to swing in a direction such that the truss will be swung relative to the main vane away from a position in which the vanes will be parallel with each other.

879,163. FITTING FOR REINFORCED CONCRETE STRUCTURES. GEORGE M. GRAHAM, Chicago, Ill., assignor to G. A. Edward Kohler, Chicago, Ill. Filed Oct. 17, 1907. Serial No. 397,848.



1. A fitting for reinforced concrete structures, comprising in combination, upper and lower sections provided with necks adapted to fit the interior of tubular frame members and formed with radial slits, and means for effecting an expansion of said sections.

2. A fitting for reinforced concrete structures, comprising in combination, upper and lower sections, each consisting of a pair of horizontal flanges a series of semi-circular webs connecting said flanges together and annular necks projecting from one flange of each section, and means for securing said sections together.

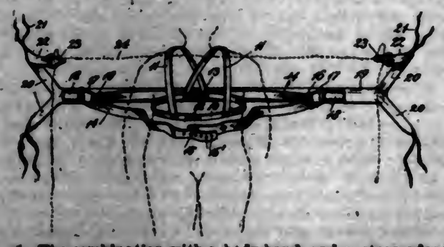
3. A fitting for reinforced concrete structures, comprising in combination, upper and lower sections, each consisting of a pair of horizontal flanges a series of semi-circular webs connecting said flanges together and annular necks projecting from one flange of each section, and bolts passing through adjacent flanges of the sections to secure the same together.

4. A fitting for reinforced concrete structures, comprising in combination, upper and lower sections, each consisting of a pair of horizontal flanges a series of semi-circular webs connecting said flanges together and annular necks projecting from one flange of each section, said sections being formed with radial slits, means for effecting an expansion of said sections, and means for securing the sections together.

5. A fitting for reinforced concrete structures, comprising in combination, upper and lower sections, each consisting of a pair of horisontal flanges a series of semi-circular webs connecting said flanges together and annular necks projecting from one flange of each section, said sections being formed with radial slits, means for effecting an initial contraction of the sections, and means for securing the sections together.

[Claims 6 to 12 not printed in the Gazette.]

879,164. SECURITY ATTACHMENT FOR BEDS. IRENE M. HAMILTON, Simsbury, Conn., assignor to herself and James E. Hamilton, Simsbury, Conn. Filed Jan. 23, 1907. Serial No. 353,679.

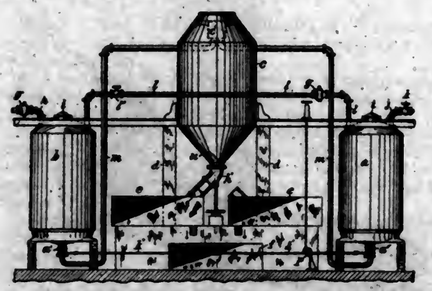


1. The combination with a body-band, and a strap adapted to be secured to a bed, of a belt secured to said band, and a pair of devices stationary on said strap at points remote from each other for movably holding said belt on the strap.

2. The combination with a body-band, and a strap adapted to be secured to a bed, of a belt secured to said band, and a pair of rollers stationary on said strap and for movably holding said belt on the strap.

3. The combination with a body-band, and a strap adapted to be secured to a bed, of a belt secured to said band, a pair of devices stationary on said strap for holding said belt for movement in parallelism with said strap, and means for varying the length of said belt.

879,165. APPARATUS FOR MAKING MIXED FIBERS. PULASKI M. HAMLIN, Catawissa, Pa., assignor of one-half to Charles H. Unverzagt, New York, N. Y. Filed May 25, 1907. Serial No. 375,568.



1. The combination, with high and low pressure digesters operated simultaneously to cook at diverse pressures fibers which require materially different temperatures for their reduction to cellulose, of a pipe supplying steam under high pressure to the high pressure digester, and means for connecting the tops of the two digesters and venting a regulated amount of steam from the high pressure digester into the low pressure digester, to maintain therein the lower temperature required to cook the fiber therein.

2. The combination, with high and low pressure digesters operated simultaneously to cook at diverse pressures fibers which require materially different temperatures for their reduction to cellulose, of a pipe supplying steam under high pressure to the high pressure digesters, and a pipe connecting the tops of the two digesters with a valve in such pipe having a vent passage for venting a regulated amount of steam from the high pressure digester into the low pressure digester to maintain therein the lower temperature required to cook the fiber therein.

3. The combination, with high and low pressure digesters *a* and *b* operated simultaneously for cooking fibers at diverse pressures, of a pipe *f* supplying steam to the high pressure digester for cooking the material in the same, the pipe *i* connecting the two digesters with the valve *g* in such pipe having a vent-passage for venting a limited amount of steam from the digester *a* to the digester *b*, and the low pressure digester *b* having a pipe *h* and valve *g* for discharging the steam from such digester, the valve having a main passage for discharging the steam freely when required, and a smaller vent passage for venting the steam from the lower pressure digester during the cooking operation.

4. The apparatus for making a composite fiber comprising two digesters with steam connections arranged and operated for cooking two materials in the two digesters, a blow-tank to receive and disintegrate the two materials when cooked in the two digesters, the blow-off valves *a'* upon the digesters with pipes connecting such valves to the blow-tank, and means for simultaneously opening such blow-off valves and discharging the materials from both the digesters into the tank simultaneously in contact with one another, for disintegrating and mingling the two materials into a composite fiber.

5. The apparatus for making a composite fiber, comprising the digesters *a* and *b* for operating at different pressures, the pipe *f* and valve *k* for supplying steam to the high pressure digester, steam connections for delivering a regulated amount of steam from the digester *a* to the digester *b* for maintaining a lower temperature in the digester *b* than in the digester *a*, the blow-off valves *a'* one upon each of the digesters, the blow-tank *c* with pipes connecting the blow-off valves *a'* with the said tank, and a shaft connecting such blow-off valves with means for operating it to open both blow-off valves simultaneously and discharge the contents of both digesters into the blow-tank simultaneously.

[Claim 6 not printed in the Gazette.]

879,166. PUMPING DEVICE FOR OIL-WELLS. HENRY D. HAVEN, Chicago, Ill. Filed June 21, 1907. Serial No. 380,042.



1. In a device of the class described, the casing and casing head, in combination with the oil tubing depending from said head, and having an enlarged upper end, a tube of smaller diameter than said enlarged end and depending concentrically therein, and a stuffing box arranged at the lower end of said tube, substantially as described.

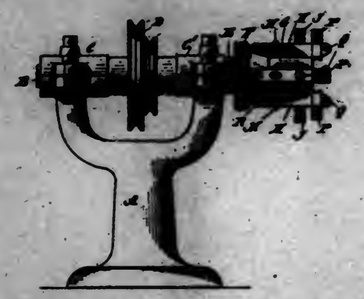
2. In a device of the class described, the casing and casing head, in combination with the oil tubing, depending from said head within said casing and having an enlarged upper end, a tee connected to said tubing above said casing head, and a flange plate arranged above said tee, a tube of smaller diameter than said enlarged end, and depending concentrically therein, a flange plate secured to the upper end of said tube, and resting upon the aforementioned flange plate, and closing the top of said oil tube, and a stuffing box arranged at the lower end of said tube, substantially as described.

3. In a device of the class described, a casing and casing head, in combination with the oil tubing depending from said head, said oil tube comprising an upper section of slightly less diameter than said casing, and a reduced lower portion, a tee arranged at the upper end of said enlarged portion above said casing head, and a flange plate, secured to the upper end thereof, a tube of smaller diameter than the enlarged portion of said tubing and depending concentrically therein, a two part stuffing box, arranged at the lower end of said tube, means for turning said tube and one portion of said stuffing box, and means for holding the other part of said stuffing box against rotation, substantially as and for the purpose described.

4. In a device of the class described, a casing and casing head, in combination with the oil tubing depending from said head, and having an enlarged upper end, a stuffing box tube of smaller diameter than said enlarged end, and depending concentrically therein, a stuffing box arranged at the lower end of said tube, a long stroke pol-

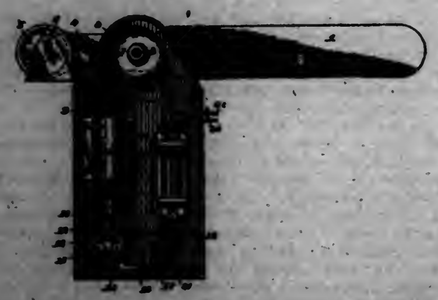
ished rod extending through said stuffing box, and an operating cable connected to the upper end of said rod, said stuffing box tube being substantially the same, or of slightly greater length than said rod, substantially as described.

879,167. APPARATUS FOR REMOVING GLAZE FROM GLASS VESSELS. JOHN A. HICKS, Summit, N. J., assignor to Anto Stopper Company, New York, N. Y. Filed May 22, 1907. Serial No. 375,168.



An apparatus for abrading the natural glaze on the outer surfaces of vessel necks, consisting of a supporting frame; a spindle in said frame revolved by power; jaws elastically and adjustably held upon the end of the said spindle; abrading pieces adjustably held in said jaws, all arranged to operate to press upon and abrade the glaze upon the outer surface of vessel necks substantially as specified.

879,168. ELECTRIC RAILWAY-SIGNAL. FREDERIC M. HILL and WILLIAM C. DAVIS, Columbus, Ohio. Filed Apr. 6, 1907. Serial No. 366,719.

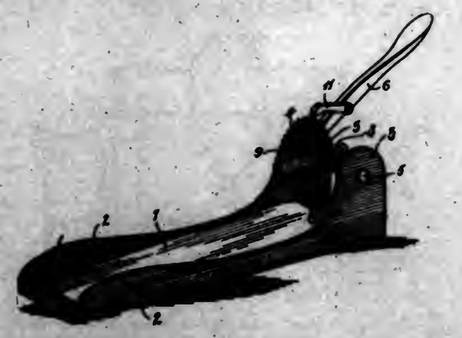


1. An electric railway signal comprising a pivoted indicating device, a disk rotatable therewith, a hook member depending from said disk formed of harder material in its lower portion, a second hook member pivotally mounted and overbalanced, electric means for engaging said hook members, and electric means for disengaging said hook members.

2. An electric railway signal comprising a pivoted indicating device, a disk rotatable therewith, a flexible element adapted to be wound upon said disk, a hook member depending from said flexible element formed of softer material in its upper portion and harder material in its lower portion, a second hook member pivotally mounted and overbalanced, said hook members adapted to be engaged and disengaged by electric means under the control of a moving car.

3. An electrical railway signal comprising a shaft rotatably mounted, an overbalanced indicating device mounted on said shaft, a disk carried by said shaft, a flexible member secured to said disk and adapted to be wound thereon, a hook member suspended from said flexible member and adapted to be elevated by rotation of said disk and to be lowered by electric means, a second hook member pivotally mounted and overbalanced adapted to maintain said signal in its indicating position, and electric means adapted to disengage said hook members to permit the rotation of said signal member away from its indicating position, all said electric means being under the control of a moving car, and adapted to raise the indicating device to its signal position when the car is at one point and to release said indicating device when the car passes a second point.

879,169. DOOR-HOLDER. ELMER HODGSON, Bonesteel, S. D. Filed Aug. 19, 1907. Serial No. 389,213.



1. In a door holder, the combination of a base, a door-engaging plate mounted thereon, a shaft supported above the base and connected with said door-engaging member, and means for operating the shaft to effect engagement of the door-engaging member with the door, substantially as described.

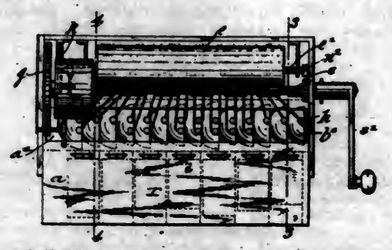
2. In a door holder, the combination of a base embodying spaced flanges, a shaft mounted on said flanges, a lever connected for operation of the attaching means for holding the lever at a desired adjustment, and a door-engaging member arranged upon the base and connected with the shaft to be elevated by the latter when it is actuated.

3. In a door holder, the combination of a base, a door-engaging plate mounted thereon and having one end movable freely along said base, a shaft and operating means therefor, being mounted upon the base, and a flexible connection between the opposite end of the door-engaging member and the shaft for the purpose described.

4. In a door holder, the combination of a base comprising spaced longitudinal flanges, a door-engaging plate mounted therein, and having one end movable freely along the upper surface of the base, the aforesaid flanges being formed at one end with vertical extensions, a shaft mounted in said vertical extensions, one of the extensions being formed with teeth arranged on the arc of a circle generated from the axis of the shaft as a center, a lever connected with the shaft to operate the same, a pawl carried by the lever to engage the teeth aforesaid, and a connection between the shaft and that end of the door-engaging plate adjacent thereto.

5. In a door holder, the combination of a base consisting of a plate having its edge portions bent upwardly to form spaced flanges provided with extensions at one end, one of the extensions being formed with ratchet teeth arcuately arranged, a lever mounted upon the base and having a lateral arm constituting a shaft, said shaft being journaled in the extensions of the flanges, a sleeve mounted between the extensions and upon the shaft, an attaching member connecting the sleeve with the shaft, a door-engaging plate arranged between the flanges of the base, and a chain connecting one end of said plate with the member which attaches the sleeve to the shaft.

879,170. BELL-CHIME FOR CLOCKS AND OTHER DEVICES. WILLIAM H. HOSCHKE, New York, N. Y., assignor to Sonora Chime Co., New York, N. Y., a Corporation of New York. Filed Apr. 16, 1907. Serial No. 368,562.



1. A bell-chime comprising a plurality of bells arranged in one row, and resonators for said bells arranged in rows adjacent the latter.

2. A bell-chime comprising a plurality of bells arranged in one row, and resonators, one for each bell, arranged in rows at opposite sides of said row of bells.

3. A bell-chime for clocks, comprising a plurality of bells arranged in a row, resonators arranged alternately for every bell in groups at opposite sides of said row of bells, hammers for striking the bells, and means for actuating the hammers.

4. A bell-chime for clocks, comprising a plurality of bells arranged in a row, resonators for each bell grouped at opposite sides of the row of bells, hammers for striking the bells, and means for actuating the striking-hammers.

5. In a bell-chime for clocks, a plurality of bells, a rod for supporting said bells in a row, a casing inclosing the bells and open above the bells, and two groups of resonators in said casing at opposite sides of the row of bells, the resonators of each group corresponding alternately with the bells.

[Claims 6 to 10 not printed in the Gazette.]

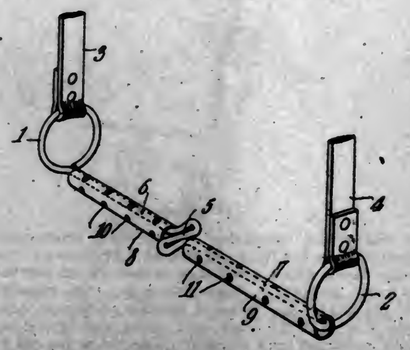
879,171. FIRE-EXTINGUISHING COMPOUND. CHARLES HOWARD, Brooklyn, N. Y. Filed Apr. 10, 1905, Serial No. 254,810. Renewed June 25, 1907. Serial No. 380,751.

1. A fire extinguishing compound consisting of hyposulfite of soda and an alkaline carbonate.

2. A fire extinguishing compound consisting of hyposulfite of soda and ammonia carbonate.

3. A fire extinguishing compound consisting of three parts by weight of hyposulfite of soda and one part by weight of ammonia carbonate.

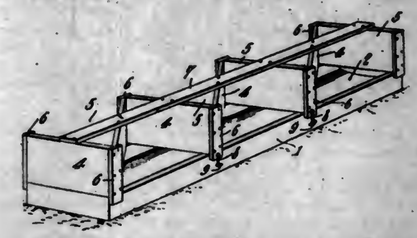
879,172. ANIMAL-WEANER. JAMES A. HUFF, Memphis, Tenn. Filed July 8, 1907. Serial No. 382,697.



1. A device of the character described embodying a bit adapted to fit the animal's mouth, perforated air tubes mounted loosely on the bit, and means for separating the proximate ends of the tubes.

2. A device of the character described embodying a bit composed of a strip of material having a pair of attaching loops formed on its opposite ends and provided with an intermediate doubled portion forming a pair of separated journals on the bit, and a pair of air tubes loosely mounted on the journals and separated by the said doubled portion, the outer ends of the tubes opening at the sides of the animal's mouth, and the tubes being provided with perforations for discharging air into the animal's mouth.

879,173. FEEDING-TROUGH. LYMAN L. HUGHES and ROBERT G. BROWNING, Mercer, Mo.; said Browning assignor to said Hughes. Filed May 14, 1907. Serial No. 373,542.



A device of the character described comprising a trough, a frame hingedly connected to one side thereof and consisting of angularly disposed connected partitions arranged in zigzag relation and extending across the trough to form angular compartments arranged alternately at opposite sides of the trough, and a combined brace and guard disposed flat upon and secured to the upper portions of all of the partitions, said brace connecting the partitions and extending over the middle portion of each of the angular compartments.

879,174. SCREEN-DOOR CATCH AND LOCK. HOMER HUNTER, Prescott, Ariz., assignor of forty one-hundredths to Alfred L. Little, Prescott, Ariz. Filed Oct. 25, 1906. Serial No. 340,520.



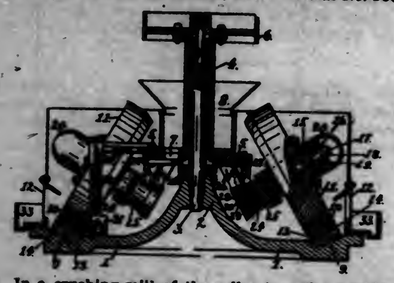
1. A screen door catch comprising a flat member having a perforation in its lower edge and provided with a base for securing it in position, a clamping member having an eye at one end and flaring plates at the other adapted to engage with said flat member above said perforation, a fastening screw through said eye, and a hook on the screw between its head and the eye, the free end of the hook being adapted to enter said perforation and hold said plates from being withdrawn from said flat member.

2. A screen door catch comprising a plate of resilient material folded upon itself to form an eye at one end and having its free ends flared or bent away from each other, a screw through said eye to hold the catch in position, and a flat tongue adapted to be forced between said free ends and provided with a perforated base for securing it in position.

3. In a screen door catch and lock, a metallic plate folded upon itself to form an eye and having its free ends in yielding contact, a wire coil in said eye, the ends of which are bent in opposite directions and engage with said free ends to assist in holding them together, a screw

through said coil, a hook on the screw between its head and the coil, and a member constructed to be attached to the door and having a tongue adapted to enter between and be engaged by said free ends, said tongue being provided with a perforation for the reception of said hook.

879,175. CRUSHING-MILL. FRANK A. HUNTINGTON, San Francisco, Cal. Filed Mar. 6, 1907. Serial No. 360,845.



1. In a crushing mill of the roller type the combination of a pan, screens in the pan-rim, a crushing roller in the pan inwardly inclined from the bottom upwardly, said roller having the inner side of its crushing surfaces inclined to its axis of rotation to form a straight horizontal portion at the bottom, and having the remainder of its crushing surface parallel with the axis of rotation to form a straight upwardly inclined outer portion; a ring die in the pan against which the crushing roller acts, said die having its crushing surface formed with a straight horizontal inner portion and a straight upwardly inclined outer portion, to correspond with the crushing surface of the roller and a driving means for effecting the orbital travel of the roller in the pan, said driving means including pivotal connections to enable the roller to swing centrifugally.

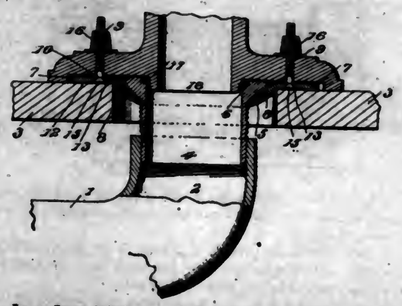
2. In a crushing mill of the roller type, a crushing roller, a driver including a horizontally disposed plate, and a connection between the roller and its driver comprising a crank having a hub at each extremity, a pin seated in the axis of the roller and secured at its end to one of the crank hubs, and a hanger, depending from the horizontally disposed plate, having at its lower end a sleeve in which the other hub of the crank is pivotally mounted.

3. In a crushing mill of the roller type, a crushing roller, a driver including a horizontally disposed plate provided with feed passages therethrough and a connection between the roller and its driver to support the roller wholly from its inner side, said connection comprising a crank having a hub at each extremity, a pin seated in the axis of the roller and secured at one end to one of the crank hubs and a hanger depending from the horizontally disposed plate having at its lower end a sleeve lying to the outer side of the vertical plane of the feed passages in the horizontally disposed plate to pivotally support the other hub of the crank.

4. In a crushing mill of the roller type, the connection between the roller and its driver comprising a crank having a hub at each extremity, one of said hubs being fitted to the inner side of the roller, a pin secured to said hub and passing through the axis of the roller, a nut fitted to the outer end of the pin, and a washer against which the nut acts to set up the bearing of the roller to the hub, and a hanger secured to the driver and having at its lower end a sleeve, in which is pivotally mounted the other hub of the crank.

5. In a crushing mill of the roller type, the connection between the roller and its driver comprising a crank having a hub at each extremity, one of said hubs being fitted to the inner side of the roller, a pin secured to said hub and passing through the axis of the roller, a nut fitted to the outer end of the pin, and a washer against which the nut acts to set up the bearing of the roller to the hub, a hanger secured at its upper end to the driver, and having at its lower end a sleeve, in which is pivotally fitted the other hub of the crank, a pin fitted to said hub, a nut on the pin end, and a washer seated in the sleeve and against which the nut bears to hold said sleeve to the hub.

879,176. FLOOR-JOINT FOR SOIL-PIPES. FREDERICK JACKSON, New York, N. Y. Filed Apr. 12, 1907. Serial No. 367,759.

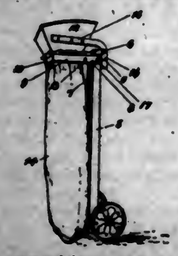


1. In a floor joint or coupling, a soil pipe having a vertical portion, a pipe section extending vertically from said soil pipe and threaded therein, said pipe section having the outer face of its upper extremity flared and its inner surface uniform, and a floor flange having an aperture to receive said pipe section and a wall surrounding said aperture beveled to correspond to the flared face of said pipe section.

2. In a floor joint or coupling, a soil pipe having a vertical portion, a pipe section extending vertically from said soil pipe and having its upper extremity flared, and a gasket seat on its inner face, a floor flange designed to receive said pipe section and beveled to correspond to the extremity of said pipe section, said pipe section and said flange having their upper surfaces in alinement to provide a uniform supporting surface for the base of a bowl, and means for securing the base to said flange.

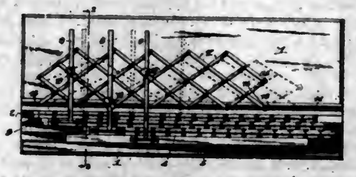
3. In a floor joint or coupling, a bowl having a base, a soil pipe having a vertical portion, a pipe section vertically adjustable therein and having an enlarged upper extremity in contact with said base and outwardly flared beneath said contacting surface, a floor flange having an aperture to receive said pipe section and having the walls surrounding said aperture beveled to accommodate the flared portion of said pipe section, and bolts passed through said base and said flange for binding said base to said flange and said pipe section.

879,177. BAG-HOLDER. ALBERT R. JOHNSON, Kuler, Mich. Filed Aug. 5, 1907. Serial No. 387,115.



A bag-holder comprising a supporting-frame, stems projecting from the front end thereof, a bag-holding frame seating on the stems, a rod passing through the bag-holding frame behind the supporting-frame, lugs projecting from the bag-holding frame in advance of the rod, and a hopper seating in the bag-holding frame, and having rearwardly presented arms pivotally connected to the rod and engageable with the lug to limit the rearward swing of the hopper.

879,178. PROPORTIONAL-CALCULATING MACHINE. CHARLES R. KELLY, Louisville, Ky. Filed June 20, 1907. Serial No. 379,899.



1. In a proportional calculator, the combination of a plurality of movable scale bars, a lazy tongs for simultaneously moving said scale bars while maintaining their same relative distance, and means for adjustably, slidably connecting said scale bars to said lazy tongs.

2. In the proportional calculator, the combination of a plurality of movable scale-bars, mechanism for simultaneously moving said scale-bars while maintaining their same relative distance, and means for adjustably connecting said scale-bars to said mechanism, substantially as described.

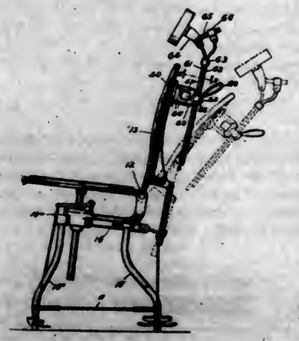
3. In a proportional calculator, the combination of a plurality of movable scale bars, mechanism for simultaneously moving said scale bars while maintaining their same relative distance, and clips adjustable within said lazy tongs for the reception of a portion of said scale bars slidably therein.

4. In the proportional calculator, the combination of a stationary scale, a plurality of movable scales arranged adjacent said stationary scale and provided with indicator arms extending thereupon across the face of said stationary scale and a lazy tongs to which said arms are attachable, for moving said arms and their respective scale-bars, while maintaining the same relative position to the arms to each other and to the beginning of the scale, substantially as described.

5. In the proportional calculator, the combination of a stationary scale, a plurality of movable scales indicator arms extending from said movable scales across said stationary scale, a lazy tongs for moving said movable scales, and clamping members for connections within said lazy tongs and arranged to slidably receive said indicator arms, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

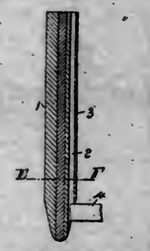
879,179. SPECIALIST'S CHAIR. WILLIAM H. KERSEY, Indianapolis, Ind., assignor to Clark & Roberts Company, Indianapolis, Ind., a Corporation of Indiana. Filed Mar. 18, 1907. Serial No. 362,962.



1. The combination, with a supporting member, of a pin journaled therein, a collar on said pin adapted to engage the support, a pair of mating stem members passing freely through said pin diametrically and adapted to lie in notches formed in the collar, a hook member through which a threaded end of the pin is passed, said hooked member having a portion adapted to engage the bracket and an opposed portion adapted to engage the collar, a clamping member mounted on the threaded end of the pin in position to engage the hook member, a head rest pivoted upon one of the stem members, a guide pivoted upon the other of said stem members, and a finger carried by the head rest and projected through the pivoted guide, substantially as and for the purpose set forth.

2. The combination, with a supporting member, of a pin journaled therein, a collar on said pin adapted to engage the support, a pair of mating stem members passing freely through said pin diametrically and adapted to lie in notches formed in the collar, a hook member through which a threaded end of the pin is passed, said hooked member having a portion adapted to engage the bracket and an opposed portion adapted to engage the collar, a clamping member mounted on the threaded end of the pin in position to engage the hook member, a head rest pivoted upon one of the stem members, and a connection between the head rest and the other stem member whereby relative longitudinal movement of the stem members will cause a swinging of the head rest upon its immediate stem member.

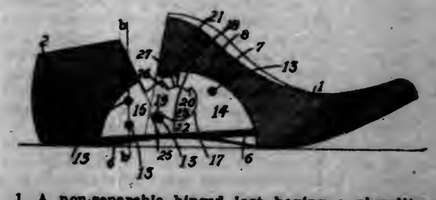
879,180. ARC-LAMP. OSKAR KÖNITZER, Munich, Germany. Filed Jan. 19, 1906. Serial No. 296,819.



1. In an electric arc, the combination of an eccentrically perforated carbon and a feed stop engaged by the thin disintegrating wall at the side of said carbon opposite from the major portion of its mass which is involved in the arc.

2. An arc lamp electrode provided with an eccentric longitudinal passage close to one side thereof, and a supporting piece upon which the thin wall of the electrode formed by said channel rests substantially as described.

879,181. NON-DETACHABLE HINGED LAST. CLEMENTS B. KOSTERS, Buffalo, N. Y. Filed Feb. 25, 1903. Serial No. 145,022.



1. A non-separable hinged last having a plurality of members and a longitudinal slot and hinged plates in said slot comprising a plate fitting in the slot of one member and having a recess with a portion of its edge wall curved continuously throughout to the greater portion of a circle and terminating at one end in an inwardly extending shoulder and at the other end in an outwardly extending shoulder and a plate fitting in the slot of another member and having an extension pivoting and locking in the recess with an edge conforming throughout in curve to curve of the recess and adapted to be in contact through-

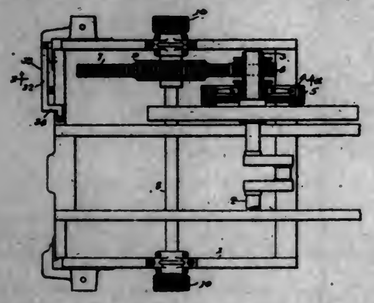
out with the under edge of the recess, and shoulders adapted to abut against the shoulders of the recess.

2. A hinged last having a longitudinal slot cut in its bottom surface and provided with a curved wall constituting a shoulder and hinge plates in the slot having a correspondingly curved top edge contacting with the shoulder, substantially as set forth.

3. A hinged last having a bottom longitudinal slot, the top wall of which is curved continuously throughout to an arc of a circle and a hinge fitting in the slot and having a corresponding continuously curved top edge adapted to abut at all points against the top wall of the slot and means for rigidly clamping said hinge in said slot, substantially as set forth.

4. A hinged last comprising a plurality of members and having a longitudinal bottom slot cut partly in each member, the top wall of said slot being curved continuously throughout to an arc of a circle, and a hinge comprising a like plurality of hinge plates fitted in the slot and provided with a corresponding curved top edge fitting throughout against the top wall of the slot, whereby the top edge of the hinge at each point rests against a different portion of the grain of the wood in the last to strengthen the same against splitting, substantially as set forth.

879,182. REVERSING MECHANISM. MOSES W. KOUNS, Columbus, Ohio, assignor to The Ohio Manufacturing Company, Upper Sandusky, Ohio, a Corporation of Ohio. Filed June 10, 1907. Serial No. 378,066.



1. In a traction engine, the combination, with a driven shaft, a driven gear, a compensating gearing connecting said gear to said shaft, a crank shaft and a pinion slidably mounted thereon and adapted to be moved into and out of engagement with said gear, of an intermediate pinion adapted to be moved into engagement with both said gear and said pinion when said gear and said pinion are out of engagement one with the other.

2. In a traction engine, the combination, with a frame, a driven shaft mounted on said frame, a driven gear, a compensating gearing connecting said gear to said shaft, a crank shaft and a pinion slidably mounted on said crank shaft and adapted to be moved into and out of engagement with said gear, of a bracket carried by said frame, a shaft mounted on said bracket, a pinion carried by said shaft, and means for moving said pinion into engagement with both said gear and said pinion when said gear and said pinion are out of engagement one with the other.

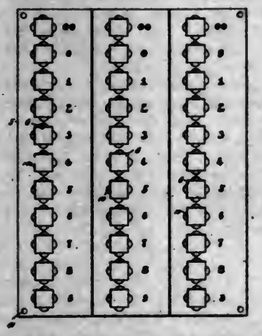
3. In a traction engine, the combination, with a frame, a driven shaft mounted on said frame, a driven gear, a compensating gearing connecting said gear to said shaft, a crank shaft, a sleeve loosely mounted on said crank shaft, a clutch for connecting said sleeve to said crank shaft, and a pinion slidably mounted on said sleeve and adapted to be moved into and out of engagement with said gear, of an intermediated pinion supported on said frame and adapted to be moved into engagement with both said gear and said pinion when said gear and said pinion are out of engagement one with the other.

4. In a reversing mechanism, the combination, with a driving shaft, a pinion slidably mounted thereon, a driven shaft, a gear connected thereto, a lever having one end connected to said pinion, and an operating member connected to the opposite end of said lever, of an intermediate pinion, a second lever having one end connected to said intermediate pinion and its opposite end connected to said operating member, whereby the operation of said member will shift both of said pinions.

5. In a reversing mechanism, the combination, with a driving shaft, a pinion slidably mounted thereon, a driven shaft, a gear connected thereto, a lever having one end connected to the opposite end of said lever, of an intermediate pinion, a second lever having one end connected to said intermediate pinion and its opposite end connected to said operating member, whereby the operation of said member will shift both of said pinions.

[Claims 6 to 8 not printed in the Gazette.]

879,183. GAME-COUNTER. JASON C. LEWIS, Eldred, Ill. Filed Oct. 10, 1907. Serial No. 396,824.



1. A game-counter comprising a board having a row of holes therein, and numerical characters adjacent the holes, said holes and characters representing different orders, and a block having numerical characters on its faces, and adapted to be placed in said holes with one of its faces exposed.

2. A game-counter comprising a board having a plurality of numerals thereon, a block having numerals on its faces, and means for supporting said block on the board adjacent the numerals thereon, with one of the faces of the block exposed and the numeral thereon coöperating with the adjacent numeral on the board to indicate the score, the numerals of the block and those of the board representing different orders.

879,184. TENSION DEVICE FOR LOOM-SHUTTLES. HAMILTON LINDSAY, Cleveland, Ohio, assignor to The Lindsay Wire Weaving Company, Cleveland, Ohio, a Corporation of Ohio. Original application filed Mar. 15, 1906, Serial No. 306,147. Divided and this application filed July 30, 1906. Serial No. 328,306.



The combination with the shuttle and its spindle, of a metallic tension member adapted to pass diagonally across the spindle in the shuttle, and a pair of tension fastenings for said member secured to diagonally opposite points of the shuttle and pulling on said metallic member to not only put the same under tension but allow it to shift bodily to accommodate itself to the changing conditions of material on the spindle.

879,185. TRIGGER. JAMES C. LODOR, Wilmington, N. C. Filed Nov. 3, 1906. Serial No. 341,920.

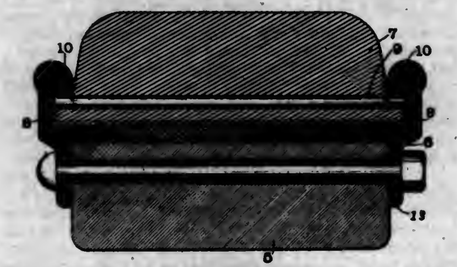


1. The combination with a fire arm, of a stud projecting therefrom, a laterally movable trigger pivotally connected with said stud, means on said trigger for operating different firing means, and a spring secured to the stud and bearing laterally against the trigger.

2. The combination with a fire arm, of a stud projecting therefrom, a laterally movable trigger having a pivotal connection with said stud, two springs attached to the stud, one of said springs operating to move the trigger and maintain it in its normal position, and the other of said springs bearing laterally against the trigger, and means on the trigger for operating the firing means of the fire arm.

3. The combination with a fire arm plate having three openings therein, the outside openings located below the firing means, of a trigger pivotally secured to swing laterally on the plate, two pins on the trigger to enter the openings in the plate, one pin to engage the firing means and the other serving as a guide in the central opening.

879,186. CUSHION-TIRE WHEEL. CHARLES A. MARIEN, St. Louis, Mo. Filed Feb. 21, 1907. Serial No. 358,535.



1. In a vehicle wheel, the combination with a rim, of a tire of resilient material seated thereon, crossbars passing through said tire, retaining members of rigid material engaging the ends of said rods but allowing inward radial movement thereof when the tire is compressed, and retaining plates engaging the outer edges of said members whereby the outward radial movement of said rods is limited.

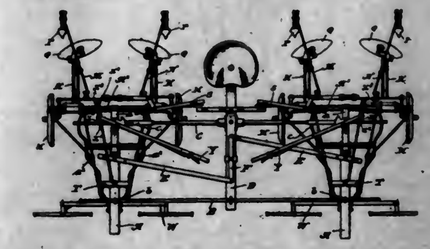
2. In a vehicle wheel, the combination with a rim, of a tire of resilient material seated thereon, cross bars passing through said tire, annular members of rigid material engaging the ends of said rods and limiting their outward radial movement but allowing inward radial movement when the tire is compressed, and retaining plates engaging the peripheries of said annular members.

3. In a vehicle wheel, the combination with a rim, of a tire of resilient material seated thereon, cross bars passing through said tire, annular members of rigid material engaging the ends of said rods and surrounding a portion of the tire, said members limiting the outward radial movement of said bars but allowing inward radial movement when the tire is compressed and retaining plates engaging the peripheries of said annular members.

4. In a vehicle wheel, the combination with a rim, of a tire of resilient material seated thereon, cross bars passing through said tire, portions of said tire extending beyond the body of the tire and forming seats for the ends of said cross bars, annular members engaging the ends of said bars and surrounding the projecting portions of said tire and retaining plates engaging the peripheries of said annular members.

5. In a vehicle wheel, the combination with a rim, of a tire of resilient material seated on said rim and provided with portions projecting laterally beyond said rim, cross bars passing through said tire with their ends resting on said projections, annular members of rigid material engaging the ends of said bars and retaining plates provided with grooves to receive said annular members and the projecting portions of said tire.

879,187. LISTER-CULTIVATOR. CHARLES H. MELVIN, Moline, Ill., assignor to Deere & Company, Moline, Ill., a Corporation of Illinois. Filed July 17, 1907. Serial No. 384,194.



1. In a cultivator, the combination of a pair of cultivator-rigs for working on opposite sides of a row, an associated pair of supporting and guiding wheels adapted to straddle the row, said wheels and rigs together being laterally adjustable for widening or narrowing the space between them, the rigs being carried with the wheels said wheels having independent pivot bearings, an extensible connection between said wheels, and operative means independent of the draft means for turning or castering both wheels in unison, whereby the course of the implement can be deflected without disturbing the alinement of the cultivating devices to the row.

2. In a cultivator, the combination of a frame having laterally-adjustable members adapting said frame to be widened or narrowed, pivotal supporting-wheels on which said frame is mounted, said wheels adapted to straddle a row and respectively attached to said adjustable members, cultivator-rigs for working on opposite sides of the row respectively carried by said adjustable members and attached thereto independently of the wheels, and means independent of the draft means adjustably connected with both wheels for castering them in unison, whereby the course of the implement can be deflected without disturbing the alinement of the cultivating devices to the row.

3. In a cultivator, the combination of a wheel-supported frame, cultivating devices carried thereby arranged for working on opposite sides of the row, pivot-standards carrying the wheels, separate laterally adjusted members respectively carrying the opposite rigs and corresponding pivot-standards, crank-arms on said pivot-standards, adjustable united connecting rods respectively connected with said crank-arms, and a lever mounted on said frame connected with said rods for shifting the same to caster the wheels.

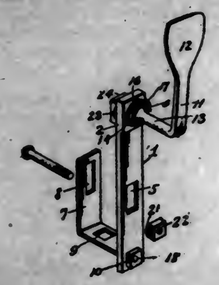
4. In a cultivator, the combination of a wheel-supported frame, the supporting-wheels having pivot-bearings swung from the frame, and trailing cultivating devices swung with the wheel-bearings, means holding the implement in balance, means for throwing back said wheels and thereby lifting said cultivating devices, and means connected with said wheels for castering them in unison.

5. In a cultivator, the combination of a wheel-supported frame, laterally-adjustable members swung from said frame, cultivator-rigs for working on opposite sides of a row carried by said members, supporting-wheels for straddling the row having pivot-bearings carried by said mem-

bers, means adjustably connected with both wheels for castering them in unison, means holding the implement in balance, and means for throwing back the wheels relative to the frame and thereby lifting the rigs.

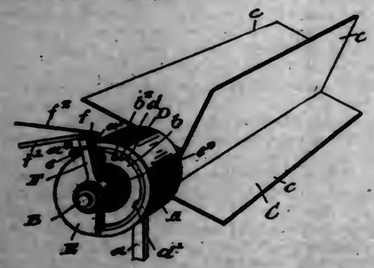
[Claims 6 to 13 not printed in the Gazette.]

879,188. SUPPORT FOR VEHICLE-SHAFTS. JAMES T. MINYARD, Mulberry, Ark. Filed Apr. 11, 1907. Serial No. 367,717.



The combination of the main bar 1, provided at its upper end with a square enlargement 2, a perforation 3 and stop pin 4, and near its middle a longitudinal rectangular opening 5, and near its lower end with a perforation 6; elbow-shaped bar 7, provided near its upper end with an oblong rectangular opening 8 in its vertical part, and with a square opening 9, in its horizontal part, said horizontal part terminating in a threaded neck 10; a swinging arm 11, provided with a wrist 13, at right angles to said arm; a shoulder 14, on said wrist, said wrist terminating in a threaded bolt 15; a washer 16, rigidly secured to said shoulder and around said bolt provided with a stop shoulder 17, said bolt 15, pivoted and secured in said opening 3, by washer 23, and nut 24, said stop shoulder adapted to rest against said stop pin 4; part 1 and 7 adapted to be secured around the upper spring and bolster of a vehicle by means of bolts and nuts, substantially as shown and described and for the purposes set forth.

879,189. AUTOMATIC COUNTER. JOHN MUNRO and ADAM GERARD, Ottawa, Ontario, Canada. Filed Nov. 29, 1905. Serial No. 289,675.



1. In an automatic counter the combination with a spring actuated shaft, receiving pockets carried thereby, of means normally restraining the rotation of said shaft, and means for periodically releasing said restraining means and allowing the shaft to rotate a predetermined amount as and for the purpose specified.

2. In an automatic counter in combination a shaft, receiving pockets carried thereby, an operating spring secured thereto, means operated from the movement of the producing machine for winding said spring, means for normally preventing the rotation of the shaft by the spring and means for releasing said means and allowing the shaft to be rotated by the spring a predetermined amount as and for the purpose specified.

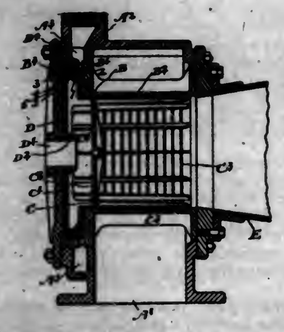
3. In an automatic counter in combination a rotatably supported shaft, receiving pockets carried thereby, a ratchet wheel loosely supported thereon, an arm freely supported on said shaft, a pawl pivoted to said arm engaging said ratchet teeth, a second independently pivoted pawl also engaging the teeth of said ratchet wheel, means operated by the producing machine for moving said arm at each operation thereof, a spring secured to said shaft, a ratchet wheel which is wound by the movement of the latter, means for normally preventing the rotation of the shaft by the spring and means for releasing said means and allowing the shaft to be rotated by the spring for a predetermined amount as and for the purpose specified.

4. In an automatic counter in combination a rotatably supported shaft, receiving pockets carried thereby, a ratchet wheel loosely supported thereon, an arm freely supported on said shaft, a pawl pivoted to said arm engaging said ratchet teeth, a second independently pivoted pawl also engaging the teeth of said ratchet wheel, means operated by the producing machine for moving said arm at each operation thereof, a spring secured to said shaft, a ratchet wheel which is wound by the movement of the latter, means for normally preventing the rotation of the shaft by the spring, means for releasing said means and allowing the shaft to be rotated by the spring for a predetermined amount, and means for withdrawing the first pawl from in contact with the teeth of the ratchet wheel whenever the printing press fails to print as and for the purpose specified.

5. In an automatic counter in combination a shaft receiving pockets carried thereby, a ratchet wheel loosely supported thereon, a spring extending between said shaft and ratchet wheel adapted to be wound up by the rotation of the latter, means operated by the operation of the producing machine for rotating said ratchet wheel, means for normally preventing the rotation of said shaft, and means for withdrawing said means and allowing the shaft to rotate under the action of the spring for a portion of its revolution as and for the purpose specified.

[Claims 6 to 14 not printed in the Gazette.]

879,190. SOUND-PRODUCING DEVICE. JOHN P. NORTHEY, Toronto, Ontario, Canada. Filed Dec. 2, 1905. Serial No. 290,037.



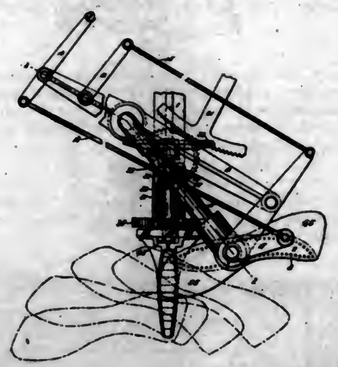
A sound producing device for sirens and like instruments comprising a cylinder with sound producing orifices and an annular enlargement, a cover for the cylinder, and a reciprocating piston having sound producing orifices, said cylinder and piston having coöperating ports for admitting and exhausting the air which effects the reciprocation of the piston, and means for separating said ports from the orifices which admit the air that produces the sound whereby the latter is unaffected in its quality, substantially as described.

879,191. HAIR-TONIC. FREDERICK J. PIEPER, Salt Lake City, Utah. Filed Oct. 19, 1907. Serial No. 398,176.

1. A hair tonic including tincture of colocynth, quinin sulfate, resorcinal, sulfur, tincture of cantharides, tincture of nux-vomica, salicylic acid, acetic acid, glycerin, chloroform, alcohol, water, and a perfume, substantially in the proportions specified.

2. A hair tonic including tincture of colocynth, quinin sulfate, resorcinal, sulfur, tincture of cantharides, tincture of nux-vomica, salicylic acid, acetic acid, glycerin, chloroform, alcohol, water, and a perfume including vanillin, oil rose geranium, oil bitter almonds, oil bigarade, and extract heliotrope, substantially in the proportions specified.

879,192. CIGAR-MACHINE. SYDNEY I. PRESCOTT, New York, N. Y., assignor to Rufus L. Patterson and George Arents, Jr., New York, N. Y. Filed Aug. 9, 1902. Serial No. 119,044.



1. In a wrapping mechanism, the combination with a bunch receiver comprising a pair of cradles, of means for holding the bunch thereagainst, and means for producing a movement between the cradles and the holding means to wind the wrapper about the bunch, substantially as described.

2. In a wrapping mechanism, the combination with a bunch receiver comprising a pair of cradles, of means for holding the bunch thereagainst, and means for alternately operating the cradles to rotate the bunch and thereby wind the wrapper about it, substantially as described.

3. In a wrapping mechanism, the combination with a wrapper support, of a receiver comprising a pair of cradles against which the bunch is held by the support, means for operating the cradles to rotate the bunch, and means for giving the support a movement to deliver the wrapper, substantially as described.

4. In a wrapping mechanism, the combination with a wrapper support having a plane face, of a receiver comprising a pair of cradles against which the bunch is held by the support, means for operating the cradles to rotate the bunch, and means for giving the support a movement to deliver the wrapper, substantially as described.

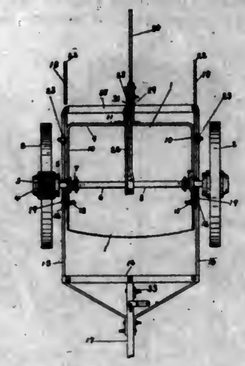
5. In a wrapping mechanism, the combination with a bunch receiver comprising a pair of cradles, of means for holding the bunch thereagainst, and means for alternately rocking the cradles about the center of the bunch as a center during the wrapping operation, substantially as described.

[Claims 6 to 38 not printed in the Gazette.]

879,193. PROCESS FOR SOLIDIFYING MINERAL OILS. EMILE RAYNAUD, Brussels, Belgium. Filed Mar. 3, 1903. Serial No. 146,005.

The herein described process of solidifying liquid mineral oils, hydrocarbons and alcohols, which consists in adding to the liquid to be solidified a suitable quantity of soda soap charged with several times its weight of silicate of soda, heating the mixture to at least 40° centigrade, and then cooling the mixture until solidified.

879,194. SCOOP. CARL G. ROLLENHAGEN, Memphis, Tenn., assignor of one-half to William Bates, Memphis, Tenn. Filed May 2, 1907. Serial No. 371,509.



1. A wheeled scoop having a scoop-pan, draft means and a continuous rectangular frame fixed to the draft means and entirely surrounding the scoop-pan and forming a guard for the pan and a support therefor, said pan being pivoted to said frame, substantially as described.

2. A wheeled scoop having draft means, a continuous rigid frame, said frame having side arms, a scoop-pan pivoted to said side arms, said frame having a cross-arm passing across the rear of the scoop-pan, and having a front cross-arm secured to the draft means and means on said scoop-pan to contact with said frame to limit the downward movement of the frame, substantially as described.

3. A wheeled scoop having a scoop-pan, a rigid frame surrounding the pan, said frame fixed to the draft means, said scoop-pan being pivotally hung to and within said frame, an axle-bar, and a pivotal connection between the pan and bar, substantially as described.

4. A wheeled scoop having a scoop-pan, a rigid rectangular frame surrounding the scoop-pan and to which said pan is pivoted, and releasable means on said frame to hold the scoop-pan in locked engagement therewith.

5. A wheeled scoop having a scoop-pan, a pivotal connection between the scoop-pan and frame an axle-bar, a pivotal connection between the scoop-pan and axle-bar, means on the frame to hold the scoop-pan in engagement therewith and means connected with the axle-bar to release said means, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

879,195. WIND-SHIELD OR WEATHER-SCREEN FOR MOTOR AND SIMILAR VEHICLES. HENRI S. SAMUEL, Perth, Scotland. Filed Dec. 21, 1905. Serial No. 292,781.

1. A wind guard for vehicles consisting of a lower rigid flat portion permanently secured to the vehicle and extending transversely thereof and inclined rearwardly in proximity to the steering wheel or handle and an upper portion extending upwardly from the lower portion in front of the driver's face.

2. A wind guard for vehicles consisting of a lower stationary flat portion extending transversely of the vehicle and inclined rearwardly in proximity to the steering wheel or handle, and an upper flat portion adjustably mounted upon the lower portion.

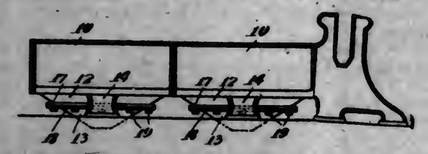
3. In a wind shield for a motor or similar vehicle, the combination with the dash or front part of the vehicle of a lower member fixed to the dash and extending inwardly and upwardly to a level near that of the steering wheel or handle and a second flat member extending vertically upwards from the lower member in front of the driver's face and means for adjusting the upper member relatively to the lower member.

4. In a wind shield for a motor or similar vehicle, the combination with the dash or front part of the vehicle of a lower fixed member extending inwardly and upwardly from the dash to a level near that of the steering wheel or handle, a flat upper movable member extending up in



front of the driver's face hinged or pivoted to the lower member, a slotted quadrant fixed to one member, and a clamping device on the other member coöperating with the slotted quadrant for the purpose described.

879,196. WOOL-WASHING BOWL. FREDERICK G. SARGENT, Westford, Mass., assignor to C. G. Sargent's Sons Corporation, Westford Mass., a Corporation of Massachusetts. Filed June 10, 1907. Serial No. 378,190.



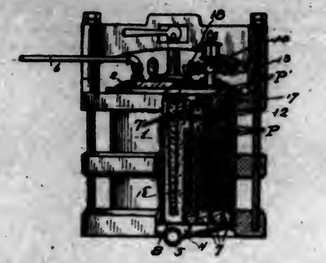
1. A wool washing machine having a bowl provided with a bottom in two parts, the upper part having a flange around its lower end, and the other part a flange around its upper end, said flanges being secured together, whereby the upper part supports the lower part, and the lower part may be removed when the machine is to be shipped or moved.

2. A wool washing machine having a bowl consisting of sections, each provided with a bottom comprising an upper part constituting a support, and a lower removable part depending therefrom, the inner walls of said upper and lower parts being continuous with respect to each other.

3. A wool washing machine having a bowl provided with a bottom consisting of two parts, an upper part constituting a support, and a lower part depending therefrom, said upper and lower parts having registering flanges secured together, the upper part being formed of metal having a greater cross section than the lower part, whereby the lower part is of lighter character, the walls of the upper and lower part being continuous with respect to each other and on substantially the same inclination, said upper part being secured to the walls of the bowl of the washer.

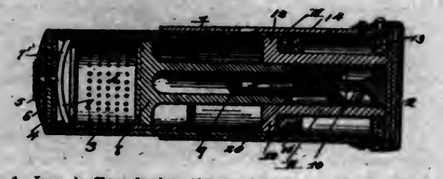
879,197. FILTER. BALDWIN F. SCHIRMER, Cleveland, Ohio. Filed Sept. 18, 1905. Serial No. 278,893.

In a filter for the purpose described, a receptacle, a perforated inner bottom therefor, an inlet pipe for filter mass or other substance to be treated, an inlet pipe for fluid under pressure, a concentric series of perforated filter plates, secured to said perforated bottom plate and projecting longitudinally into said mass, each pair forming a longitudinal passage between its members, similar pairs of plates alternating with the aforesaid pairs of plates, and loosely inserted in said mass with their extremities at a higher level than the extremities of the fixed plates, a transverse perforated removable plate above said loose filter plates, having upwardly turned sides, a concentric series of pairs of perforated filter plates thereon adapted



to extend into the said filter mass, and concentric pairs of loose filter plates inserted in said mass and having their extremities arranged at a higher level than the extremities of the filter plates on said transverse plate, substantially as described.

879,198. BUFFING DEVICE. BALDWIN F. SCHIRMER, Indianapolis, Ind. Filed Apr. 19, 1906. Serial No. 312,659.



1. In a buffing device, the combination of two cylinders closed each at one end, and the open end of one cylinder inserted into the open end of the other cylinder, a head of hard metal for one cylinder and a composite head for the other cylinder, comprising an inner wall of hard metal and outer contact plates of soft metals, substantially as described.

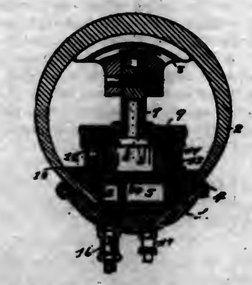
2. In a buffing device, the combination with cylinders, provided each with one head, and the open end of one cylinder inserted within the open end of the other cylinder, of a multiple number of pistons having reduced and hollow stems, housed within the telescoping cylinders, the stem of one piston being inserted within the stem of another cylinder, and air passages in the walls of the telescoping cylinders arranged substantially as and for the purpose set forth.

3. In a buffing device, a pair of telescoping cylinders, each having a closed head, and the open end of one cylinder inserted in the open end of the other cylinder, and a series of pistons housed within the cylinders, one of said pistons being fixed, hollow stems for said pistons, the stem of one piston being inserted in the stem of another piston, the said cylinders and pistons being movable upon each other.

4. In a buffer, the combination with a pair of cylinders each closed at one end, and the open end of one cylinder inserted within the open end of the other cylinder, of a piston, having a reduced stem abutting against the closed end of the larger cylinder, a flange upon the inner end of the smaller cylinder, against which the inner face of the piston abuts, whereby a vacuum or suction chamber is formed when the flange and piston are separated, and whereby compression chambers are formed between the flanges and heads of the cylinders, when the cylinders are forced together, and air passages in the pair of cylinders, arranged intermediate between said flanges and closed cylinder ends.

5. The combination with a pair of cylinders having each a closed head, and having the open end of one cylinder inserted in the other, of a fixed piston and reduced hollow stem therefor, said stem abutting against the head of the larger cylinder, an annular flange in the open end of the smaller cylinder, adapted to engage the inner face of said piston, a loose piston in the smaller cylinder having also a hollow stem inserted in the hollow stem of the fixed piston, a second loose piston inserted in the stem of the fixed piston, and provided with a hollow stem inserted in the stem of the first mentioned loose piston, and a second fixed piston within the said fixed piston, and a stem therefor inserted in the stem of the second loose piston, and air passages in the sides of the pair of telescoping cylinders, substantially as and for the purpose set forth.

879,199. PNEUMATIC TIRE. BALDWIN F. SCHIRMER, Indianapolis, Ind. Filed Apr. 15, 1907. Serial No. 368,221.



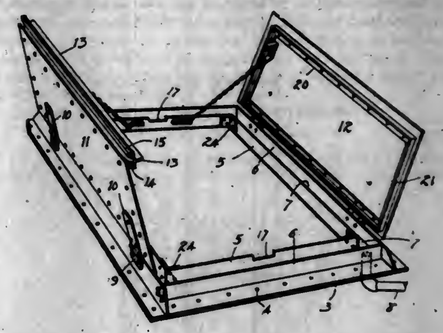
1. The combination, with a rim and tire casing, of a ring upon said rim, a series of cylinders set therein at frequent intervals, a common chamber inclosed in said ring for all said cylinders and communicating with the inner ends of said cylinders, a piston in each cylinder, a stem and broadened shoe therefor, a casing against which said shoes are adapted to exert pressure, an annular chamber in said ring, communicating with the outer ends of said cylinders, and having an inlet valve, passages leading from the outer ends of said cylinders to the said aforesaid common chambers and valves in said passages.

2. The combination in a pneumatic tire, of a casing and rim therefor, a ring encircling the said rim, cylinders mounted at intervals in said ring, pistons and piston stems in said cylinders, broadened shoes for said stems, adapted to engage said casing, a common annular compressed air chamber in said ring, communicating with each of said cylinders at their lower ends, an air inlet chamber communicating with each of said cylinders at their outer ends, an inlet valve for said inlet chamber and passages connecting the outer ends of said cylinders with the common compressed air passage, and valves in said passages.

879,200. SIDEWALK-DOOR. OTTO R. SCHRADER, San Francisco, Cal. Filed Nov. 15, 1907. Serial No. 402,264.

1. A frame for sidewalk doors comprising plates arranged in a plane to form a rectangular frame, and inner and outer angle irons resting on, and secured to, said plates, the horizontal member of each angle iron extending outwards from the vertical member thereof, and the horizontal member of the inner angle iron terminating in close contact with the vertical member of the outer angle iron, substantially as described.

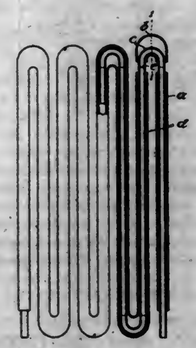
2. In a frame for side walk doors, the combination of plates arranged in the same plane to form a rectangular frame, and inner and outer angle irons for each side of the frame, the horizontal member of the inner angle iron extending outward from the vertical member and secured to the base plate to form with the vertical member of the outer angle iron a trough, and the horizontal member of the outer angle iron resting on and being secured to the base plate, to form upwardly opening corners, or angular spaces around the frame, arranged to be readily filled with concrete to the level of the vertical members of the outer angle irons, substantially as described.



3. In a frame for sidewalk doors, the combination of base plates arranged in the same plane to form a rectangular frame, and inner and outer angle irons for each side frame, the horizontal members of the angle irons resting on the base plate and being secured thereto and directed outwards from the vertical members, and the horizontal members of the angle irons being extended at the corner of the frame over the joints between the base plates, substantially as described.

4. In sidewalk doors, the combination of a frame having a trough or channel beneath the edges of the doors, and doors hinged thereto, each having an angle iron secured on the under side thereof adjacent to the hinged side of the door, the horizontal member of said iron resting upon the inner side of the trough and the vertical member depending into said trough, substantially as described.

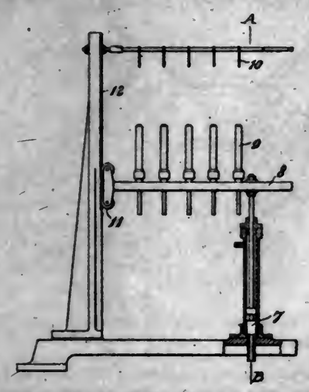
879,201. CONCENTRIC-PIPE COIL. CARL SENSSENBRENNER, Obercassel, near Dusseldorf, Germany. Filed Nov. 28, 1905. Serial No. 289,512.



1. A return-bend coil, comprising an inner convoluted pipe with welded-on bends, and an outer convoluted pipe containing the same and having welded-on bends of such bore that prior to welding they admit of ample outward play of the inner-pipe bends within them, for the purpose of enabling welding of the latter to the abutting pipe-lengths, substantially as described.

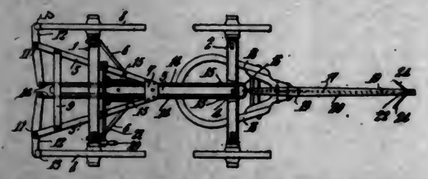
2. A return-bend coil, comprising an inner convoluted pipe with welded-on bends, and an outer convoluted pipe containing the same and having welded-on junction-pieces of oval section at the actual bend, so that prior to welding they admit of ample outward play of the inner pipe bends within them, for the purpose of enabling welding of the latter to the abutting pipe lengths, substantially as described.

879,202. APPARATUS FOR HARDENING INCANDESCENT BODIES FOR INCANDESCENT LIGHTS. MAX SENSENSCHMIDT, Frankfort-on-the-Main, Germany, Filed Mar. 12, 1906. Serial No. 305,660.



An apparatus for hardening incandescent bodies comprising in combination a rod supporting the burners, a piston rod to which said supporting rod is connected, a piston connected to said piston rod, a cylinder within which said piston moves, means for alternately admitting liquid above and below said piston for raising or lowering said burners and means for preventing lateral displacement of said burners comprising rollers attached to said supporting rod and guides over which said rollers move.

879,203. VEHICLE-BRAKE. PETER H. SHOWALTER, North River, Va. Filed Aug. 17, 1907. Serial No. 389,043.



In a brake for vehicles, a brake lever for each rear wheel pivotally attached at an intermediate point to the rear end of each rear hound, a longitudinal rod attached to the inner end of each brake lever, said rods extending forwardly beyond the front axle and joined by a curved loop, and a slidable rod attached to said loop and extending near the forward end of the pole and having means thereon for attaching said rod to the collars of the pole horses.

879,204. CALCULATING-MACHINE. CHESTER J. SMITH, Jamestown, N. Y. Filed Apr. 1, 1907. Serial No. 365,734.

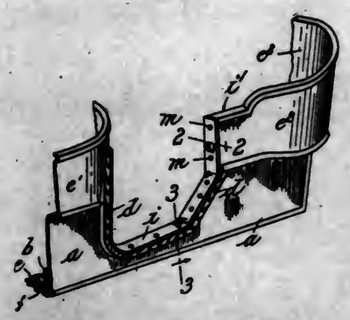


1. In a calculating machine, a case having parallel slots therein, cylinders revolubly mounted in said case opposite said slots, computations arranged in annular and horizontal lines on said cylinders, an index slidably mounted in said case having openings opposite said slot, gear teeth on said cylinders, said cylinders resiliently held apart to be pressed into gear when desired.

2. In a calculating machine, a case having lengthwise parallel slots, cylinders revolubly mounted in said case opposite said slots, gears on said cylinders and a spring to hold said gears out of mesh, computations arranged on said cylinders in series corresponding to said slots, a rod on said case between and parallel to said slot, a price holder on said case between and parallel to said slots, an index slidably mounted on said rod and extending over said price holder and slots, said index having openings opposite said slots and price holder, substantially as and for the purpose specified.

3. In a calculating machine, a case 10 having slots 21 and 23, cylinders 14 and 15 revolubly mounted in said case, knobs 16 and 17 for turning said cylinders, hour computations on the large wheel and minute computations on the small wheel in annular and horizontal lines, price holder 22 on said case, an index 25 slidably mounted on rod 24 in said case, said index having openings 26 27 and 28 opposite said slots and price holder, gears 18 and 19 on said cylinders, a slot 30 in said case, and a spring 31 on said case to hold said gears out of mesh, substantially as and for the purpose specified.

879,205. METAL VEHICLE-BODY. HINSDALE SMITH and ARTHUR P. SMITH, Springfield, Mass. Filed May 8, 1907. Serial No. 372,631.



1. In an improvement of the class described in combination with the side-plates of a vehicle body and the door-sill, a sill facing plate extending from the forward seat to the forward upper edge of the rear seat.

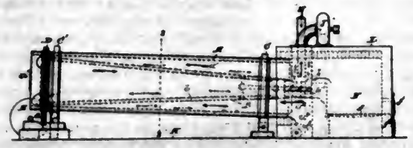
2. As an improvement in vehicle bodies of the class referred to, in combination with the side plates of the body and gear seat, said plates being bent in the same direction and at right angles to the outer side of said plates, a facing plate secured to the bent portions of said plates, said facing plate extending from the lower rear side of the forward seat to the forward edge of the rear seat, as described.

3. A metal body of the class described consisting of a body portion and rear seat portion thereon, the edge of the side plate of the rear seat portion being turned inward at the edge of the door, and a stiffening plate secured to said in-turned edge and extending downwardly from the upper forward edge of the rear seat to the sill and secured to the body.

879,206. DRIER. KARL F. SNOW, Cleveland, Ohio, assignor to The C. O. Bartlett & Snow Co., Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 15, 1907. Serial No. 368,213.

1. In a drier, the combination of a rotary drum; annular rings disposed adjacently thereto; and means adapted to connect said drum and rings, said means permitting relative movement of the latter and said drum during their contraction and expansion.

2. In a drier, the combination of a rotary drum; annular rings disposed interiorly of the latter; and means connected to said rings and normally abutting said drum, so that relative movement of the latter and said rings is permitted during their contraction and expansion.



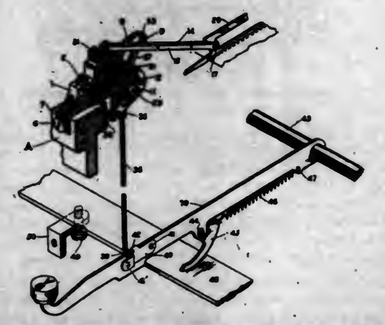
3. In a drier, the combination of a rotary drum; annular rings disposed interiorly of the latter; and angle irons adapted to lift the material, said angle irons being connected to said rings and normally abutting said drum, so that relative movement of the latter and said rings is permitted during their contraction and expansion.

4. In a drier, the combination of a rotary drum; means disposed adjacently to the inner periphery of said drum and adapted to elevate the material; and a plurality of annular rings to which said elevating means are attached.

5. In a drier, the combination of two rotary drums inclined in opposite directions; elevators disposed within each of said drums; means secured to said drums respectively and supporting said elevators; and longitudinally disposed partitions dividing the space intermediate of said two drums into compartments.

[Claims 6 to 11 not printed in the Gazette.]

879,207. TYPE-WRITER. CHARLES W. SPONSEL, Hartford, Conn., assignor to Parker Machine Company, Buffalo, N. Y., a Corporation of New York. Filed Aug. 18, 1905. Serial No. 274,650.



1. In a typewriting machine, in combination, a typebar, means adapted to carry a typebar, means for adjusting said means to or from the platen, and means acting on the first-named means to clamp the second-mentioned means in position after adjustment.

2. In a typewriting machine, in combination, a typebar, means adapted to carry a typebar, screw-threaded means for adjusting the first-mentioned means toward or from the platen, and means acting on said first-mentioned means to clamp said screw-threaded means in position after adjustment.

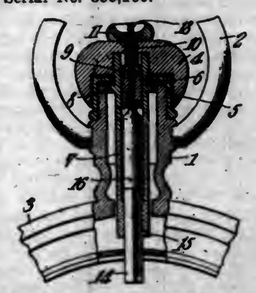
3. In a typewriting machine, in combination, a typebar, a bracket adapted to carry a typebar, means adapted to adjust said bracket toward or from the platen, and means acting on the bracket to cause the same to clamp said adjusting means in position after movement.

4. In a typewriting machine, in combination, with the frame of a typewriter, a bracket, means carrying type devices positioned upon the bracket, means engaging the frame and also engaging the bracket to adjust the same toward or from said platen, and means engaging the bracket to cause the same to clamp said adjusting means after adjustment.

5. In a typewriting machine, in combination with the frame thereof, a bracket, means carrying a type device positioned upon the bracket, a screw operating in the frame and having a head adapted to engage the bracket and also adapted when the screw is rotated to adjust the bracket with respect to the platen, and means extending through the bracket, and engaging in an opening in the frame adapted to cause the bracket to clamp said screw in position after rotation.

[Claims 6 to 35 not printed in the Gazette.]

879,208. SETTING MECHANISM FOR WATCHES. MICHAEL SPORLEDER, Colorado, City, Colo. Filed Oct. 25, 1907. Serial No. 399,160.



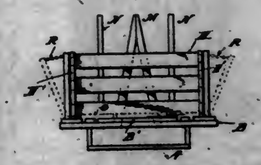
1. The combination with a pendant, of a sleeve arranged therein, a set screw carried by the upper end of the sleeve and provided on its inner end with a seat, a winding square having a reduced terminal to engage the seat, and means for moving the terminal into engagement with the seat.

2. The combination with a pendant of a sleeve mounted therein, a crown connected with the sleeve to rotate the same, a set screw carried by the sleeve and provided in its inner end with a seat, a winding square having a reduced terminal to engage the seat, and an extension constituting a push rod, carried by the winding square and projecting beyond the crown.

3. The combination with a pendant, of a sleeve to rotate the same, a set screw carried by the sleeve and having a threaded extension projecting beyond the crown and provided in its inner end with a seat, a winding square having a reduced portion to engage the seat, and an extension constituting a push rod projecting through the set screw and beyond the outer end of the same, and a sub-crown threaded on the threaded end of the set screw.

4. The combination with a pendant, of a sleeve mounted therein, a crown threaded on the sleeve, a crown carried by the pendant and coacting with the flange on the sleeve to limit the outward movement of the latter relatively to the pendant, a set screw threaded into the upper end of the sleeve and provided in its inner end wth a seat, and a winding square having a reduced portion to engage the seat and an extension, constituting a push rod projecting through the set screw and beyond its upper end.

879,209. HAY AND HOG RACK. CHESTER O. STRUBHAR, Washington, Ill. Filed May 18, 1907. Serial No. 374,504.



1. In a combination hay rack and hog rack, a wagon box, a framing mounted on the top thereof and projecting beyond each side of the same and provided with slats extending parallel to the sides of the box, the box being open

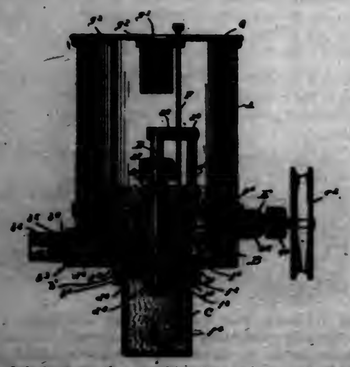
at its top, the sides mounted upon the said slats outside the position of the wagon box, the ends also mounted upon the slats and forming, together with the sides, an inclosure, and a removably inserted bottom for the rack, the same occupying a position upon the said slats and framing and forming a tight bottom for said rack and entirely covering the open top of the wagon box substantially as shown.

2. In a combination hay rack and hog rack, a wagon box, a framing mounted on the top thereof and projecting beyond each side of the same and provided with slats extending parallel to the sides of the box, the box being open at its top, the sides mounted upon the said slats outside the position of the wagon box, the ends also mounted upon the slats and forming, together with the sides, an inclosure and a removably inserted bottom for the rack, the same occupying a position upon the said slats and framing and forming a tight bottom for said rack and entirely covering the open top of the wagon box substantially as shown, and a space dividing member insertible in the rack and held by the sides when in their vertical position.

3. In a combination hay rack and hog rack, a wagon box, a framing mounted on the top thereof and projecting beyond each side of the same and provided with slats extending parallel to the sides of the box, the box being open at its top, the sides mounted upon the said slats outside the position of the wagon box, and adapted to occupy either a vertical or an outwardly inclined position, end portions for the rack, means for holding the sides in their vertical position to form a closed box, means for sustaining the sides when in the open or slanting position and a removable bottom for closing the open top of the wagon box, the same lying upon the slats described and entirely covering the space inclosed by the sides and ends substantially as set forth and described.

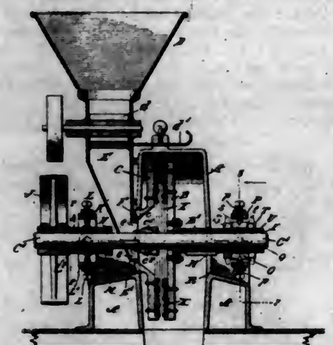
4. In a combination hay rack and hog rack, a wagon box, a framing mounted on the top thereof and projecting beyond each side of the same and provided with slats extending parallel to the sides of the box, the box being open at its top, the sides mounted upon the said slats outside the position of the sides of the wagon box, and adapted to occupy either a vertical or an outwardly inclined position there being holes in the slats, and bottom projections on the sides for entering the same to hold said sides in position at their bottoms, end portions for the rack, means for holding the sides in their vertical position to form a closed box, means for sustaining the sides when in the open or slanting position, a removable bottom for closing the open top of the wagon box, the same lying upon the slats described and entirely covering the space inclosed by the sides and ends, and a space dividing member insertible in the rack and held by the sides when vertically positioned.

879,210. FORCE-FEED LUBRICATOR. EDWARD L. STUCK, Plover, Wis. Filed June 2, 1906. Serial No. 319,941.



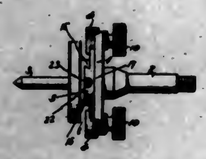
In a lubricator, the combination of an oil-supply receptacle having a sight-feed cup removably secured thereto, a casing arranged in said receptacle and projecting into said feed-cup, said casing having inlet and outlet ports, a plunger arranged in said casing and adapted to alternately cover and uncover the inlet port, a laterally extending extension for the casing having an outlet duct, a valve yieldingly held in said outlet duct, there being a groove in the side of said plunger arranged to afford a constant communication between said outlet port and the space below said plunger, a piston and a cylinder arranged in said receptacle, the casing for the bottom of said cylinder extending through said receptacle, a link having fixed connection with said plunger, a crank shaft, a drive-rod pivoted to said link, a piston rod for said piston adjustably secured to said link, a conduit for conducting oil from said cylinder to said sight-feed cup, and a valve yieldingly held in said conduit.

879,211. COFFEE-SHELLER. JOSÉ P. TEBYRICÁ, San Paulo, Brasil, and WILLARD HALSTEAD, Syracuse, N. Y.; said Tebyrica assignor to The Engelberg Huller Company, Syracuse, N. Y., a Corporation of West Virginia. Filed Aug. 10, 1906. Serial No. 330,037.



The combination of a stationary head, a sleeve to which it is secured, a rotary head, a shaft to which it is secured and which extends through and has its bearings in the sleeve of the stationary head, a self-adjusting bearing for the rotary shaft, a self-adjusting bearing for the sleeve and adjusting nuts on opposite sides of said sleeve bearing which engage a thread on the sleeve for adjusting the stationary head towards and from the rotary head.

879,212. CHUCK. FRANK J. TESSMER, St. Louis, Mo. Filed May 6, 1907. Serial No. 372,107.



1. In a chuck, a centrally perforated face plate, a slotted chuck block thereon in position to be moved in all directions at right-angles to the axis of the chuck, jaws upon said block, and oppositely located clamps for holding said block against the face plate.

2. In a chuck, a face plate having two diametrically oppositely located perforations, two clamps, each of which is provided with a screw threaded stem which projects through one of said perforations, a nut on said stem, and a chuck block having its edges adapted to be engaged by said clamps, and oppositely located jaws movably mounted upon said block.

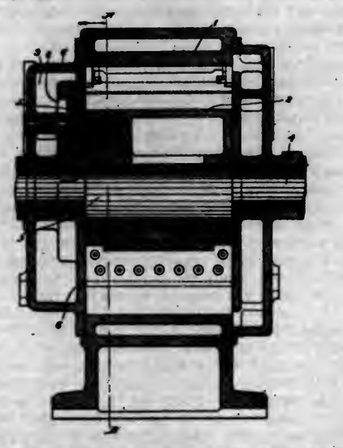
3. In a chuck, a face plate provided with diametrically oppositely located perforations, the outer portion of each

of which is counter-bored, two clamps, each of which is provided with a screw threaded stem which is adapted to project through one of said openings, a spring upon said stem and adapted to be seated in said bore, a nut on each stem adapted to engage with the spring, a chuck block adapted to be engaged by said clamps, and oppositely located jaws movably secured upon said block.

4. In a chuck, a face plate provided with two oppositely located perforations, two clamps, the inner face of each of which is provided with a screw-threaded stem, a segmental flange and an inwardly extending lip, said stems being adapted to project through said openings and each provided with a nut, a chuck block having its edges adapted to be engaged by said lips, and oppositely located jaws movably mounted upon the ends of said block.

5. In a chuck, a centrally perforated face plate, a slotted chuck block adapted to be adjustably secured upon the face plate, and oppositely located jaws movably mounted upon said chuck block, the inner face of said jaws being provided with segmental shoulders arranged in step-like order from their inner ends outward, the inner end of each jaw being provided with a slot-like recess.

879,213. AIR COMPRESSOR OR PUMP. WILLIAM H. TEW, Glasgow, Scotland. Filed Aug. 16, 1907. Serial No. 388,842.



1. In an air compressor, the combination of a stationary outer casing, an inner drum linked thereto, radial vanes operatively mounted in said outer casing and inner drum, a discharge valve or valves in said outer casing, means for imparting a rolling motion to the said inner drum, and inlet valves connected to said drum and adapted to be operated by the movement thereof.

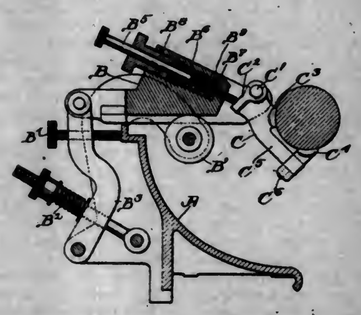
2. In an air compressor, the combination of a stationary outer casing, an inner drum, radial vanes operatively mounted in said inner drum and outer casing, means for imparting a rolling motion to the said inner drum, a discharge valve or valves in said outer casing, eccentric or crank pins linking said inner drum and outer casing together to maintain them in their correct relative positions, and ports in said pins adapted to be put into registration with inlet ports in the outer casing by the movement of the inner drum to admit atmospheric air to the compressor.

3. In an air compressor, the combination of a stationary outer casing, an inner drum linked thereto, radial vanes operatively mounted in said outer casing and inner drum, inlet and discharge valves, means for imparting a rolling motion to said inner drum, and a packing strip or strips adapted at certain times in the operation of the apparatus to form an air tight joint at the point of contact of the inner drum and outer casing.

4. In an air compressor, the combination of a stationary outer casing, an inner drum linked thereto, radial vanes operatively mounted in said outer casing and inner drum, a discharge valve or valves in said outer casing, means for imparting a rolling motion to the said inner drum, inlet valves connected to said drum and adapted to be operated by the movement thereof, and a packing strip or strips adapted at certain times in the operation of the apparatus to form an air tight joint at the point of contact of the inner drum and outer casing.

5. In an air compressor, the combination of a stationary outer casing, an inner drum, radial vanes operatively mounted in said inner drum and outer casing, means for imparting a rolling motion to the said inner drum, a discharge valve or valves in said outer casing, eccentric or crank pins linking said inner drum and outer casing together to maintain them in their correct relative positions, ports in said pins adapted to be put into registration with inlet ports in the outer casing by the movement of the inner drum to admit atmospheric air to the compressor, and a packing strip or strips adapted at certain times in the operation of the apparatus to form an air tight joint at the point of contact of the inner drum and the outer casing.

879,214. WORK-REST FOR GRINDING-MACHINES. JOHN J. THACHER, Attleboro, Mass., assignor to Brown and Sharpe Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Sept. 25, 1905. Serial No. 279,901.



1. A work rest for grinding machines comprising a support, an inclined arm connected thereon, a fixed bearing block on said arm, and a second bearing block thereon mounted for adjustment on an inclined arm toward and away from the fixed bearing block.

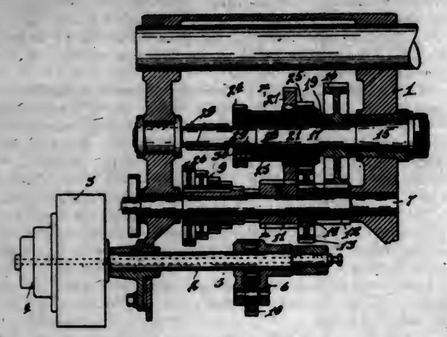
2. A work rest for grinding machines comprising a support, an inclined bearing block arm pivoted thereon, a fixed bearing block on the arm arranged to bear against the rear of the work, a second bearing block arranged to bear against the under side of the work and adjustable on said inclined arm toward and away from the fixed bearing block.

3. An inclined bearing block arm for grinding machine work rests provided with a fixed bearing block for bearing against the rear of the work, and with a bearing block for bearing against the under side of the work adjustable on said inclined arm towards and away from the fixed bearing block.

4. A bearing block arm for grinding machine work rests provided with a fixed bearing block for bearing against the rear of the work, a guiding support extending forward in an inclined direction from the rear bearing block, and an under bearing block adjustably connected with said support.

5. A bearing block arm for grinding machine work rests constructed to be pivotally supported and provided with a fixed rear bearing block and, a bar formed integral therewith, said bar projecting in an inclined direction below the rear block and an under bearing block adjustably secured to the bar.

879,215. VARIABLE-SPEED MECHANISM. LOUIS THIEL, Cincinnati, Ohio. Filed June 3, 1907. Serial No. 377,071.



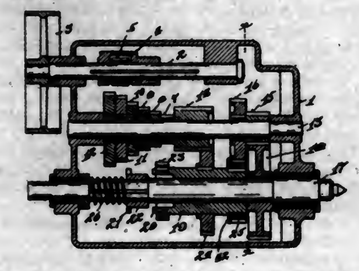
1. In a variable speed device, first and second shafts, a series of fixed and loose gears upon the first shaft, a pair of sleeves slidably mounted upon said second shaft, one of said sleeves being keyed to said shaft, the second sleeve adapted to be loose upon said second shaft in one position and fixed to said second shaft in a second position, a system of gearing loose upon said first sleeve and fixed to said second sleeve, a gear loose upon said second shaft adapted to be clutched with said first sleeve and in mesh with one of the gears upon said first shaft, the remainder of gears upon the second shaft being adapted to be thrown into selected engagement with respective gears on the first shaft for producing three changes of speeds to the second shaft, substantially as described.

2. In a variable speed device, first and second shafts, a series of fixed and loose gears upon said first shaft, a series of loose gears upon said second shaft slidably mounted, a loose gear mounted upon said second shaft in a fixed position, a sleeve keyed to said second shaft and movable with said slidable gears, adapted to be brought into driving relation with said fixed positioned gear, whereby one ratio of speed may be imparted from said first shaft to said second shaft with the slidable gears on the second shaft and the loose gears on the first shaft acting as intermediates, and means for fixing said slidable gears to said second shaft for producing other ranges of speed after they have been moved into selected position of engagement with the respective gears on the first shaft, substantially as described.

3. In a variable device, first and second shafts, a series of fixed and loose gears on said first shaft, a series of loose gears upon said second shaft slidably mounted, a loose gear mounted upon said second shaft in a fixed position, clutch mechanism for clutching said fixed positioned gear to the second shaft, said sliding gears remaining loose upon said second shaft when said fixed positioned gear is clutched to its shaft for imparting one ratio of speed, and means for fixing said slidable gears to said second shaft for producing other ranges of speed after they have been moved into selected position of engagement with the respective gears on the first shaft and after the fixed positioned gear has been unclutched from the second shaft, and means for shifting said sliding gears, substantially as described.

4. In a variable speed device, first and second shafts, a series of fixed and loose gears on said first shaft, a series of loose gears slidably mounted on said second shaft, adapted to be simultaneously shifted and brought into selective engagement with their respective gears of intermesh upon the first shaft, a loose gear mounted upon said second shaft in a fixed position, and clutching means carried by said sliding gears for clutching said fixed positioned gear to its shaft when the sliding gears are unclutched from said second shaft, and vice versa, substantially as described.

879,216. VARIABLE-SPEED MECHANISM. LOUIS THIEL, Cincinnati, Ohio. Filed Sept. 16, 1907. Serial No. 393,032.



1. In a variable speed device, first and second shafts, a series of loose and fixed gears upon said first shaft, said loose gears being slidably mounted, a series of loose gears slidably mounted on said second shaft adapted to be simultaneously shifted and brought into selected engagement with the respective gears upon the first shaft, a gear fixed upon said second shaft adapted to be intermeshed with one of said sliding gears on the first shaft, clutching means carried by said second shaft for clutching said sliding gears to said shaft, and means for simultaneously shifting said sliding gears on both shafts, substantially as described.

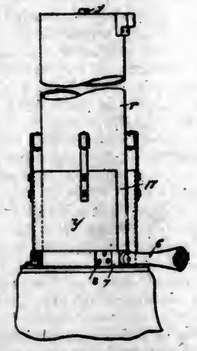
2. In a variable speed device, first and second shafts, a series of loose and fixed gears upon said first shaft, said loose gears being slidably mounted, a series of loose gears slidably mounted on said second shaft adapted to be simultaneously shifted and brought into selected engagement with the respective gears upon the first shaft, a gear fixed upon said second shaft adapted to be intermeshed with one of said sliding gears on the first shaft, clutching means carried by said second shaft for clutching said sliding gears to said shaft, means for simultaneously shifting said sliding gears on both shafts, and means for locking the sliding gears on said first shaft in their released position, substantially as described.

3. In a variable speed device, first and second shafts, a series of loose and fixed gears upon said first shaft, said loose gears being slidably mounted a series of loose gears slidably mounted on said second shaft adapted to be simultaneously shifted and brought into selected engagement with the respective gears upon the first shaft, a gear fixed upon said second shaft adapted to be intermeshed with one of said sliding gears on the first shaft, and means for clutching said sliding gears to their shaft after the sliding gear on the first shaft is thrown out of intermesh with its respective gear on the second shaft, substantially as described.

4. In a variable speed device, first and second shafts, a series of loose and fixed gears upon said first shaft, said loose gears being slidably mounted, a series of loose gears slidably mounted on said second shaft adapted to be simultaneously shifted and brought into selected engagement with the respective gears upon the first shaft, a gear fixed upon said second shaft adapted to be intermeshed with one of said sliding gears on the first shaft, means for clutching said sliding gears to their shaft after the sliding gear on the first shaft is thrown out of intermesh with its respective gear on the second shaft, and means for locking said sliding gears on said first shaft in their released position, substantially as described.

5. In a variable speed device, first and second shafts, a series of loose and fixed gears upon said first shaft, said loose gears being slidably mounted, a series of loose gears slidably mounted on said second shaft adapted to be simultaneously shifted and brought into selected engagement with the respective gears upon the first shaft, a gear fixed upon said second shaft adapted to be intermeshed with one of said sliding gears on the first shaft, clutching means carried by said second shaft for clutching said sliding gears to said shaft, and means for shifting said sliding gears positively on one shaft and intermittently on the other, substantially as described.

879,217. TICKET DELIVERING AND REGISTERING MECHANISM. SAMUEL P. THRASHER, Manchester, Conn. Filed Sept. 17, 1906. Serial No. 334,831. Renewed Sept. 17, 1907. Serial No. 393,327.



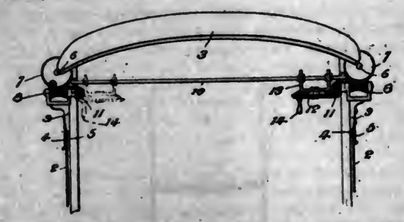
1. In a ticket delivering mechanism, a ticket-cage for receiving tickets in vertical alinement and in overlapping positions at right angles to each other, a casing for receiving the ticket cage, means for locking the two together, and means for operating the same in union, as described.

2. In a ticket delivering mechanism, a ticket cage, a casing to receive the same, means for locking the casing and cage together, means for moving the same in unison, a second lock operatively located relative to the first and operable to permit the cage to be separated from the casing, as described.

3. In a ticket delivering mechanism, a receptacle for receiving the tickets in staggered relation, a casing for receiving said receptacle, means for maintaining the casing in a vertical position, said means comprising a cylindrical member carrying spring arms, said arms being provided with rollers at their upper ends, means for locking the receptacle and casing together, means for operating the same for bringing the receptacle so that the tickets can be discharged at each movement of said operating means as described.

4. In a ticket delivering mechanism, a receptacle for receiving the tickets in staggered relation, a casing for receiving said receptacle, means for maintaining the casing in a vertical position, said means comprising a cylindrical member carrying spring arms, said arms being provided with rollers at their upper ends, means for locking the receptacle and casing together, means for operating the same for bringing the receptacle so that the tickets can be discharged at each movement of said operating means, as described, means for locking the receptacle after the last ticket has been discharged.

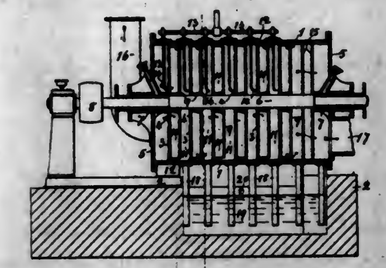
879,218. CURTAIN-OPERATING MEANS FOR VEHICLE-TOPS. JOHN H. TICKENHOOF, Portage, Pa. Filed Feb. 2, 1907. Serial No. 355,483.



1. The combination of a vehicle top, its side bows and side curtains, of rollers upon which the curtains are adapted to wind, supports for said rollers, a rod extending across the top, a bracket slidingly mounted on said rod, a gear wheel journaled on said bracket and adapted to be carried thereby from one side of the top to the other, and gearing operatively connected to the respective rollers and with which said gear wheel is adapted for engagement to raise or lower the curtain at either side of the vehicle.

2. The combination with a vehicle top and its curtains, of rollers upon which the respective side curtains are adapted to wind, each of said rollers being provided with a worm gear, a worm meshing with the respective worm gears, pinions mounted to turn with the respective worms, supports for said worms and pinions, a supporting rod extending transversely of the top at the front thereof, a bracket slidingly mounted on said rod, and a manually operable gear wheel journaled on said bracket and adapted to be carried thereby into engagement with either of said pinions, as and for the purpose set forth.

879,219. PURIFIER FOR GASES. WILLIAM TOWNS, Liverpool, England. Filed June 26, 1905. Serial No. 267,006.



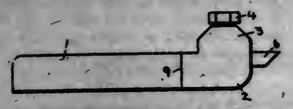
1. A purifier for gases consisting of a chamber divided into several compartments by diaphragms such diaphragms having approximately central openings, a rotating disperser in each compartment carried on a central shaft and formed of a solid disk with free-ended and free edged blades on one side only and arranged with the free edges of the blades close to the diaphragm on one side of a compartment and facing the entering gas, and discharge pipes from the compartments, substantially as described.

2. A purifier for gases consisting of a chamber divided into several compartments by diaphragms such diaphragms having approximately central openings, a rotating disperser in each compartment carried on a central shaft and formed of a solid disk with blades on one side and arranged close to the diaphragm on one side of a compartment with the blades facing the entering gas, and discharge pipes from the compartments, and at least one perforated diaphragm arranged in the chamber between the last disperser and the outlet, substantially as described.

3. A purifier for gases consisting of a chamber divided into several compartments by diaphragms such diaphragms having approximately central openings, a rotating disperser in each compartment carried on a central shaft and formed of a solid disk with free ended and free edged blades on one side only and arranged with the free edges of the blades close to the diaphragm on one side of a compartment and facing the entering gas, and discharge pipes from the compartments, and pipes for supplying liquid near the centers of the dispersers, substantially as described.

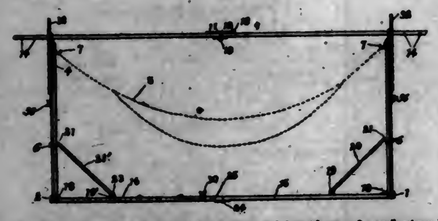
4. A purifier for gases consisting of a chamber divided into several compartments by diaphragms such diaphragms having approximately central openings, a rotating disperser in each compartment carried on a central shaft and formed of a solid disk with blades on one side and arranged close to the diaphragm on one side of a compartment with the blades facing the entering gas, and discharge pipes from the compartments, and at least one perforated diaphragm arranged in the chamber between the last disperser and the outlet, and pipes for supplying liquid near the centers of the dispersers, substantially as described.

879,220. TOOL-HOLDER. WILBUR F. TRACY, Warren, Mass. Filed June 15, 1905. Serial No. 265,430.



A tool holder consisting of a stem adapted to be held in a tool post, and provided with a groove in the center of its upper edge extending rearwardly a short distance from its forward end and having an end wall to receive the contact of the tool held therein, said groove being open at its rear end and having the side walls of the groove reinforced by a lateral increase in the thickness of the stem, a lug uniting said side walls and extending over the forward end of said groove, and a tightening screw held in said lug.

879,221. HAMMOCK-STAND. HARLON M. UNDERWOOD, Unionville, Iowa. Filed Sept. 12, 1907. Serial No. 392,416.



1. In a hammock stand, the combination of end-standards, each standard comprising a horizontal base, a pair of sections fixedly secured at their lower end to said base and converging towards their upper ends, a vertical post integrally secured near its lower end to the upper ends of the sections, a triangular filling block positioned between the sections and beneath and in engagement with the post, the upper end of the post provided with a notch formed in its center, means positioned in the notches of the post of the end-standards and connecting the upper ends of said standards, said connecting means comprising members hinged together upon their under faces at their inner ends, pivoted locking means positioned upon the upper faces of said members and normally preventing hinging thereof, a horizontal brace connecting the sections of each standard, an eye-bolt secured to each brace near its center, members hinged at their outer ends to the center of the horizontal bases of the end-standards, and inclined braces pivotally connected at their lower ends to said members and provided at their upper ends with hooks, the hooks normally positioned in the eye-bolts.

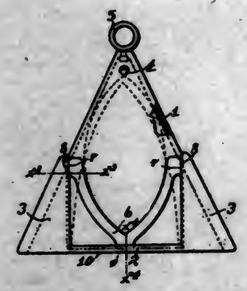
2. In a hammock stand, the combination of end-standards, each end-standard comprising a horizontal base, sections fixedly secured at their lower ends to the base intermediate its ends, said sections converging towards their upper ends, a vertical post integral with the upper ends of the sections, filling means positioned between the extreme upper ends of the sections and integral with the sections and the bottom of the post, said post provided with a notch formed in its upper end, means positioned in the notches of the posts for securing the upper ends of the end-sections together, a horizontal brace connecting the sections of each end-standard, an eye-bolt secured to the brace intermediate its ends, means connecting the bases of the end-standards, and bracing means pivotally secured to the connecting means between the end-standards and provided with hooks, the hooks normally positioned in the eye-bolts carried by the braces.

3. In a hammock stand, the combination with end-standard provided with horizontal braces, of an eye-bolt secured to each brace intermediate its ends, and each eye-bolt extending inwardly in a horizontal plane, horizontal members hinged at their outer ends to the inner faces of and near the center of the end-standards, braces pivotally secured to the horizontal members between the end-standards, each pivoted brace provided at its upper end with a hook, and the hooks adapted to engage the horizontal eye-bolts for preventing the end-standards being hinged upon the members.

4. In a hammock stand, the combination with end-standards, of members pivotally connected at their outer ends to the inner faces of the end-standards, one of said members provided with a channel or way, and the other member provided with a tongue upon its inner end, the tongue extending into said channel, an inverted U-shaped bracket secured to said member provided with the channel and positioned above said channel, a thumb-bolt threaded into said bracket and adapted to engage the upper portion of said tongue for securing the same in an adjusted position within said channel.

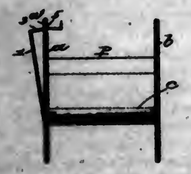
5. In a hammock stand, the combination of end-standards, each end-standard comprising an angle-iron base provided with a vertical web, sections fixedly secured at their lower ends to the vertical web of the base and having their lower ends resting upon the horizontal web of said base, said sections converging towards their upper end, a vertical post secured at its lower end to the upper ends of said sections, filling means positioned between the inner webs of the sections and engaging the lower portion of the post, means hinged at its outer ends to the end-standards and connecting said standards, bracing means positioned between said end-standards and pivotally connected to said connecting means, and means detachably securing said bracing means to the center of the end-standards.

879,222. SAD-IRON HEATER. JOHN A. WALKER, Minneapolis, Minn. Filed July 17, 1907. Serial No. 384,258.



The combination with a heater of the kind described having sloping sides forming a hollow pyramid, supporting flanges projecting from the base of said sides, stop lugs on said sides, said flanges and stop lugs having beveled surfaces, of crotch pieces having beveled surfaces for interlocking engagement with the beveled surfaces of said supporting flanges and stop lugs for detachably supporting said crotch pieces, substantially as described.

879,223. CUTTING AND STRIPPING DEVICE FOR SPOOL ADHESIVE PLASTERS. WILLIAM J. WALSH, Boston, Mass. Filed Sept. 11, 1907. Serial No. 392,316.



1. As an article of manufacture, a spool comprising a cylindrical core and connected circular heads one of which has an aperture near its periphery, a plaster roll mounted on the core, a cutting blade movable through the aperture

in the spool head, and a resilient blade-carrier fixedly secured to the exterior of the apertured head of the spool, pressure upon the carrier forcing the blade inward to cut the edge of the plaster when drawn across the blade.

2. As an article of manufacture, a spool having connected heads one of which is apertured near its periphery, a resilient blade-carrier fixedly secured at one end to the exterior of said apertured head and having its free end opposite the aperture, a blade mounted on the free end of the blade-carrier and extended into the aperture, and a plaster roll mounted between the heads of the spool, the blade-carrier normally retracting the blade, pressure upon said blade-carrier positioning the blade at the inner side of the head to cut the edge of the plaster when drawn across it.

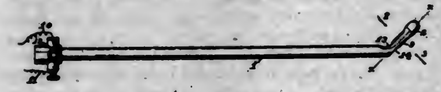
3. As an article of manufacture, a spool having connected heads one of which is apertured near its periphery, a plaster roll mounted on the spool between its heads, and a manually controlled blade movable through the aperture into position at the inner side of the head to cut the edge of the plaster when drawn across the blade.

4. As an article of manufacture, a spool having connected heads one of which is apertured near its periphery, a plaster roll mounted on the spool between its heads, and a manually controlled combined cutting blade and stripper, movable through the aperture into position to cut the edge of the plaster transversely or to strip the plaster longitudinally, as desired.

5. As an article of manufacture, a spool having connected heads one of which is apertured near its periphery, a plaster roll mounted on the spool between its heads, a resilient arm fixedly secured at one end on the exterior of the apertured head and having its free end bent to pass through the aperture and sharpened to form a blade, and an out-turned stripper on the blade transverse thereto, the arm normally maintaining the blade retracted and the stripper adjacent the inner side of the head.

[Claims 6 and 7 not printed in the Gazette.]

879,224. CYSTOSCOPE. REINHOLD H. WAPPLER, New York, N. Y. Filed Aug. 28, 1906. Serial No. 332,372.



1. A tubular surgical instrument adapted to permit interior portions of the body to be viewed through its bore and having an observation opening at its forward end leading from said bore, and a lamp held in said end and positioned to cast its rays through said opening without barring the view of the operator therethrough.

2. A tubular surgical instrument adapted to permit interior portions of the body to be viewed through its bore and having a lateral observation opening at its forward end leading from said bore and having its rear portion unobstructed as to the view of the operator, and illuminating appliances held in said end and occupying the forward portion of said opening to illuminate therethrough the parts to be viewed.

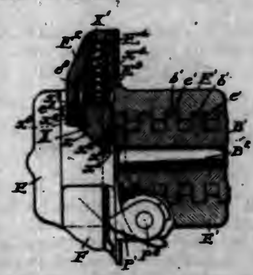
3. A tubular surgical instrument adapted to permit interior portions of the body to be viewed through its bore and having an observation opening at its forward end leading from said bore and having a portion unobstructed as to the view of the operator and the passage of liquids from the interior of the instrument, and illuminating appliances held in said end and occupying another portion of said opening to illuminate therethrough the parts to be viewed.

4. In a surgical instrument adapted to permit interior portions of the body to be viewed and treated, the combination of a tubular sheath having a lateral elongated observation opening formed longitudinally in its forward end, the rear portion of said opening being entirely unobstructed, a transparent shield tube fitting the bore of the sheath at said end and occupying the forward portion only of said opening, the rear end of said tube being closed and the forward end open, an electric lamp fitting into the forward open end of said tube and facing rearward, being positioned to shine through the forward portion of the opening, electrical connections for the lamp, and a removable rounded cap mounted on the forward extremity of the sheath and covering the forward ends of the tube and lamp.

5. In a surgical instrument adapted to enable interior portions of the body to be viewed, the combination of a tubular sheath having a lateral observation opening formed in its forward end, a transparent shield tube fitting the bore of said sheath at said forward end and underlying said opening, the rear end of said tube being closed and the forward end open, an electric lamp fitting into the forward open end of said tube and facing rearward, being positioned to shine through said opening, electrical connections for the lamp, and a removable rounded cap mounted on the forward extremity of the sheath and covering the forward ends of the tube and lamp.

[Claims 6 to 8 not printed in the Gazette.]

879,225. FIRING MECHANISM FOR ORDNANCE. HARRY T. WHEELER, Washington, D. C. Filed Aug. 28, 1907. Serial No. 390,512.



1. In a firing mechanism for breech loading guns, the combination with a housing, a mushroom stem provided with a primer chamber, an extractor pivoted in said housing having an arm adapted to engage the rim of the primer case and provided with bearing faces, a wedge sliding in said housing, and operating said extractor, a sliding latch normally screening a portion of the primer chamber, having oppositely inclined wedge faces automatically engaging the said bearing faces on the extractor arm, a spring normally pressing said latch downward, guide grooves on said latch and guide ribs on the gun for engaging said grooves, substantially as described.

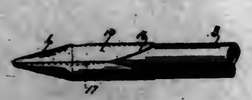
2. In a firing mechanism for breech loading guns, the combination with a housing, a mushroom stem provided with a primer chamber, an extractor pivoted in said housing having an arm adapted to engage the rim of the primer case and provided with bearing faces, a wedge sliding in said housing and operating said extractor, a sliding spring pressed latch normally screening a portion of the primer chamber having oppositely inclined wedge faces adapted to automatically engage the said bearing faces of the extractor arm, a bridge secured to the said housing and provided with a recess to accommodate said spring and latch, said latch provided with guide grooves, and a guide slot, and said bridge provided with guide ribs engaging said grooves, and a holding pin engaging said slot, substantially as described.

3. In a firing mechanism for breech loading guns, the combination with a housing, a mushroom stem provided with a primer chamber, an extractor pivoted in said housing, having an arm adapted to engage the rim of the primer case, and provided with bearing faces, a wedge sliding in said housing and operating said extractor, a bridge secured to said housing and provided with a recess, a latch having a hollow stem, sliding in said recess, a spring partly in said recess and partly in said hollow stem

for forcing said latch downward, said latch provided with guide grooves and said bridge provided with guide ribs engaging said grooves, and said latch also provided with a guide slot, and said bridge provided with a holding pin engaging said slot, substantially as described.

4. In a firing mechanism for breech loading guns, the combination of a housing E, a mushroom stem B', revolubly mounted in said housing, and provided with a primer chamber, an extractor pivoted in said housing and having an arm engaging the rim of the primer case, and provided with bearing faces, a wedge sliding in said housing and operating said extractor, a latch X, normally screening a portion of the primer chamber, and provided with the inclined wedge faces e and e', adapted to be struck by the bearing faces of said extractor, guide grooves e^2, and a guide slot e^3 also on said latch, a bridge E^2 secured to the housing by bolts e^4 and, provided with a recess for receiving said latch, a hollow stem integral with said latch, a spring X', partly in said recess and partly in said hollow stem, for forcing said latch downward, guide ribs e^5 on said bridge for engaging said guide grooves e^2, a holding pin e^6 for engaging said guide slot and holding said latch in position, an edge e^7 at the juncture of said wedge faces e and e', and a curved portion e^8, provided with a shoulder e^9 projecting beyond said edge e^8, substantially as described.

879,226. WINDOW-CURTAIN APPLIANCE. LENA H. WHITE, Chicago, Ill. Filed Oct. 16, 1905. Serial No. 282,935.



1. A tapered threading-point provided with an expansible body constructed to cover the end of a curtain rod and to be held thereupon by yielding frictional engagement.

2. A tapered threading-point adapted to cover the end of a curtain rod and provided with a clamping device for fastening said point removably to said rod.

3. The combination, with a curtain-rod, of a device which comprises a threading-point an enlarged body-portion adapted to expand the hem of a curtain after said threading-point has served to make the initial opening in the hem, and elastic means for fastening said head against the end of said rod.

4. The combination with a curtain-rod of a threading-point which comprises a substantially conical head having a base of larger circumference than the circumference of said rod and having a flexible and expansible body portion the circumference of which is normally less than the circumference of said rod.

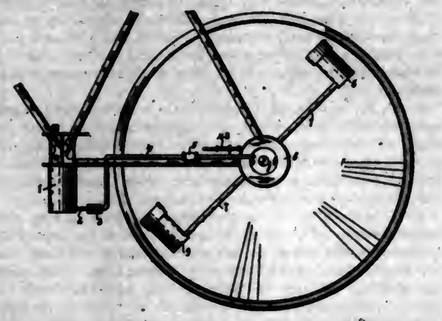
5. A threading-point for curtain-rods that consists of a substantially conical head provided with an elastic and expansible body portion adapted to confine said head upon the ends of rods of different cross-sections.

[Claims 6 to 9 not printed in the Gazette.]

879,227. PNEUMATIC MOTOR. CHARLES G. WIELAND, Hoboken, N. J. Filed Aug. 27, 1906. Serial No. 331,478.

1. The combination with a vehicle, of a plurality of air compressors, a common valve chamber, a conduit leading from each of said compressors to said valve chamber, a collecting chamber, a conduit leading from said valve chamber to said collecting chamber, a plurality of operating chambers, each of them comprising a casing open at one end, a spring controlled cover for the open end of said casing and a hood surrounding said cover and having one or more outlets, and a conduit leading from said collecting chamber to each of said operating chambers.

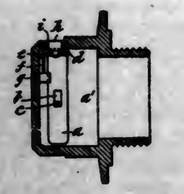
2. The combination with a vehicle, of a plurality of air compressors, a common valve chamber, a conduit leading from each of said compressors to said valve chamber, a collecting chamber, a conduit leading from said valve chamber to said collecting chamber, a plurality of operating chambers located near the rim of the vehicle-wheel, each of them comprising a casing open at one end and a spring controlled cover for the open end of said casing and a hood surrounding said cover and having one or more outlets, and a conduit leading from said collecting chamber to each of said operating chambers.



3. The combination with a vehicle, of a plurality of air compressors, a common valve chamber, a conduit leading from each of said compressors to said valve chamber, a collecting chamber, a conduit leading from said valve chamber to said collecting chamber, a check-valve in said conduit, a plurality of operating chambers located near to the rim of the vehicle wheel, each of them comprising a casing open at one end and a spring controlled cover for the open end of said casing and a hood surrounding said cover and having one or more outlets, and a conduit leading from said collecting chamber to each of said operating chambers.

4. An operating chamber, comprising a casing open at one end, a conduit leading into said casing, a spring-controlled cover for the open end of the casing, a hood surrounding said cover, and one or more outlets in said hood.

879,228. DEVICE FOR LUBRICATING THE WHEELS OF VEHICLES. TOM C. WILD, Pimlico, London, England. Filed Sept. 11, 1903. Serial No. 172,838.

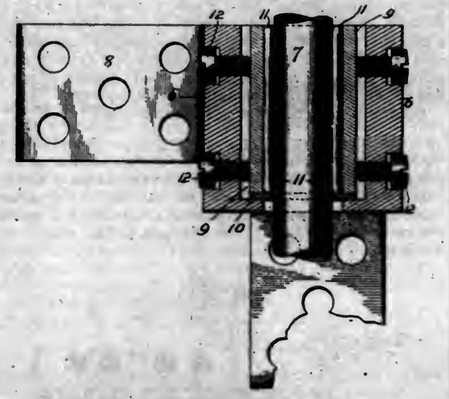


1. In combination with an oil-box having an inlet-hole, a valve fitting said hole, an arched spring supporting said valve, fitting the inside of said box and slotted at its sides to permit play and a pair of fixed guide rods received in said slots substantially as set forth.

2. In combination with an oil-box having an inlet-hole in its top, a valve fitting in said hole, a clip under the said valve, a spring acting upwardly against said clip to lift said valve and a vertical rod extending up through a part of said clip to guide the latter as it rises and falls substantially as set forth.

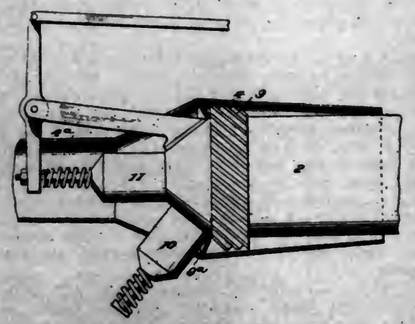
3. In combination with an oil-box having an inlet hole in its top, a valve fitting said hole, an arched and slotted spring supporting said valve, a clip interposed between said valve and said spring and attached to the latter, a fixed rod extending up through a part of the said clip and fixed studs entering the slots of said spring, the said studs and rods preventing the inward tilting of said spring and guiding said spring and clip in their upward and downwardly play substantially as set forth.

879,229. ADJUSTABLE HINGE CONSTRUCTION FOR SAFE AND VAULT DOORS. JAMES H. WILLIAMS, Philadelphia, Pa., assignor to Remington and Sherman Company, Philadelphia, Pa. Filed June 29, 1904. Serial No. 214,657.



In an adjustable hinge construction for safe or vault doors, the combination with a box provided with means for rigidly securing it to a door frame, said box having a bottom provided with an opening, of a sleeve disposed within said box, spaced from the wall of the box and sustained by the bottom of the box, a pin or journal adapted for attachment to a door and passing through said box, a washer supported by the bottom of the box, rollers surrounding the pin or journal and supported by said washer, and screws passing through the wall of the box and engaging said sleeve for adjusting the same.

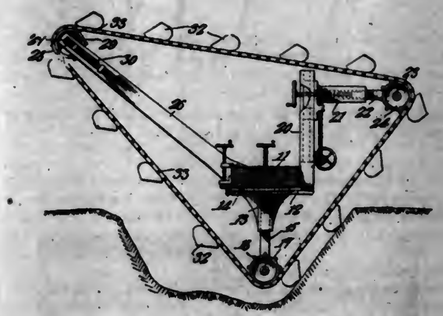
879,230. COOLING MEANS FOR ENGINES. KIRKE R. WILSON, Arcade, N. Y. Filed Feb. 6, 1907. Serial No. 356,108.



1. In cooling means for engines, the combination with the engine cylinder, of a hood surrounding the same, means for supporting said hood in spaced relation to the cylinder, means for forcing air through said hood, a series of blades supported within the hood and arranged aslant and adapted to cause the air passing therethrough to set up a swirling motion, and a deflector 9^a carried by the hood and interposed between the air forcing means and the said blades, the inner edge of said deflector 9^a being spaced slightly from the cylinder, as and for the purpose set forth.

2. In cooling means for engines, the combination with the engine cylinder, of a hood surrounding same, means for supporting the hood in spaced relation to the cylinder, means for forcing air through said hood, a series of blades supported within the hood and arranged aslant and adapted to cause the air passing therethrough to set up a swirling motion, and a deflector interposed between the air forcing means and said blades, the inner edge of said deflector being spaced slightly from the cylinder.

879,231. EXCAVATING-MACHINE. FRANK M. WEABER, Lesueur Center, Minn. Filed Nov. 5, 1907. Serial No. 400,870.



1. In a machine of the class described, a support, a plurality of sprocket wheels, an endless belt excavator guided around said sprocket wheels, and bearings carrying said sprocket wheels, each of said bearings being adjustable independent of each of the other bearings.

2. In a machine of the class described, a support, a pair of double carriages carried by the support, the primary and secondary members of each carriage being adjustable at an angle to each other, sprocket wheels supported by the secondary members of the carriage, a third sprocket wheel adjustable independently of the other two, and an endless belt excavator extending around said sprocket wheels.

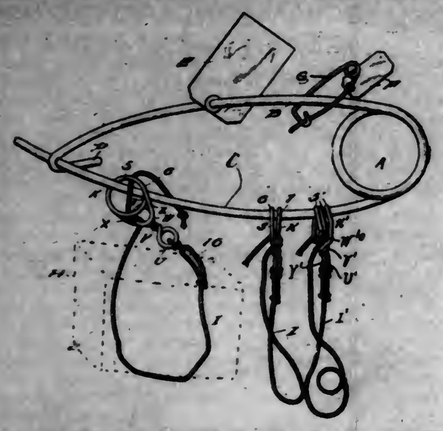
3. In a machine of the class described, a support, a beam projecting therefrom, vertical and horizontal guides on said beam, primary carriages mounted in said guides, secondary carriages in the primary carriages and adjustable at a right angle to the direction of adjustment of the primary carriages, sprocket wheels carried by said secondary carriages, and an endless belt conveyer supported by said sprocket wheels.

4. In a machine of the class described, a support, a beam projecting therefrom, guides on the beam, primary carriages adjustable in the guides, secondary carriages adjustable on the primary carriages, shafts mounted in the secondary carriages, sprocket wheels on said shafts, a slotted arm projecting from the beam, a bearing block mounted therein, means for adjusting the bearing block, a shaft carried by said bearing block, a sprocket wheel on said shaft, link belts connecting the sprocket wheels, and excavating buckets carried by said link belts.

879,232. BALE-TIE FASTENER. EDWARD YOUNG and JOHN J. SCHLICHTER, Portsmouth, Ohio. Filed Apr. 27, 1905. Serial No. 257,610.

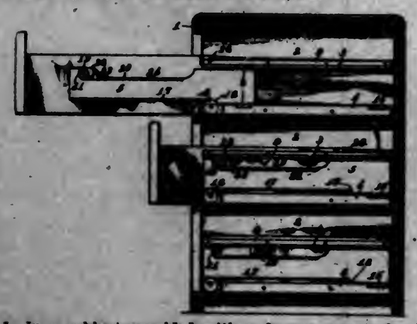
The combination with a tie, of a fastener formed of a single piece of wire bent upon itself adjacent its middle to form the helix 5 having the two convolutions 6 and 7 and having one of its arms beyond the helix bent upon itself

to form the loop W which lies adjacent the helix, the said arms beyond the loop being twisted in opposite directions



and in position to lie against each other to mutually form an eye, substantially as described.

879,233. CABINET. CHARLES ZIMMERLI, Rochester, N. Y., assignor to Vetter Desk Works, Rochester, N. Y. Filed May 22, 1907. Serial No. 375,044.



1. In a cabinet provided with a drawer receptacle, the combination of a drawer and supporting slides, coöperating bearing rollers and ways carried by said respective elements, said ways being provided with curved stops for engagement with said bearing rollers, and tracks in said receptacle guidingly engaging the tops and bottoms of said slides, substantially as described.

2. In a cabinet provided with a drawer receptacle, the combination of a drawer and supporting slides, coöperating bearing rollers and ways carried by said respective elements, said ways being provided with curved stops for engagement with said bearing rollers, tracks in said receptacle guidingly engaging the tops and bottoms of said slides, and means engaging said drawer for guiding the latter in a plane parallel to said tracks, substantially as described.

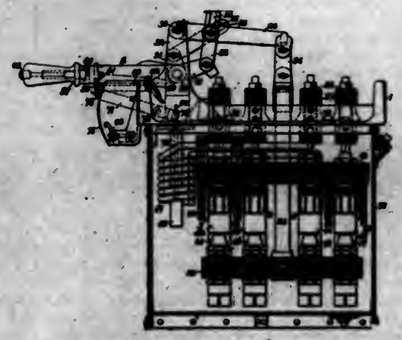
3. In a cabinet provided with a drawer receptacle, the combination of a drawer and supporting slides, and upper and lower tracks in said receptacle guidingly engaging the rear portions of said slides for confining the latter against lateral movement, said lower tracks being provided with recesses in their rear ends, whereby said slides can be swung laterally from engagement with said lower tracks to position permitting their withdrawal from engagement with said upper tracks, substantially as described.

4. In a cabinet provided with a drawer receptacle, the combination with a drawer and supporting slides, upper and lower tracks in said receptacle guidingly engaging the tops and bottoms of said slides, bearing rollers extending above the forward portions of said lower tracks, and ways on said slides above the bottoms thereof for engaging said rollers, said ways formed to provide curved stops at their rear ends for engaging the peripheries of said rollers upon extension of the slides, substantially as described.

5. In a cabinet provided with a drawer receptacle, the combination of a drawer and supporting slides, coöperating bearing rollers and ways carried by said respective elements, said ways formed to provide curved stops for engagement with said bearing rollers, upper and lower tracks in said receptacle guidingly engaging the tops and bottoms of said slides, bearing rollers extending above the forward portions of said lower tracks, and ways on said slides above the bottom thereof for engaging said rollers, said ways formed to provide curved stops at their rear ends for engaging the peripheries of said rollers upon extension of the slides, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

879,234. ELECTRIC-CIRCUIT CONTROLLER. CHRISTIAN AALBORG, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 4, 1906. Serial No. 309,929.



1. In a circuit controller, the combination with stationary terminals, flexible conductors connected thereto, groups of stationary contact members, corresponding groups of movable contact members which may engage said stationary members and which are connected to the extremities of said flexible conductors, of means for selecting and actuating one group of the movable members into and out of engagement with the corresponding stationary members.

2. In a circuit controller, the combination with stationary terminal members, stationary contact members, movable contact members which are adapted to engage said stationary contact members and which are connected to said terminal members by flexible conductors, of an operating lever which is so connected to the movable contact members that movement of the lever through a relatively small angle in one direction moves certain of the contact members into engagement with their complementary stationary members, and a similar movement in the reverse direction moves the other movable members into engagement with their complementary stationary members.

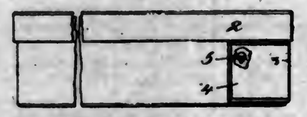
3. In a circuit controller, the combination with stationary terminals, flexible conductors connected thereto, stationary contact members, movable contact members which may engage said stationary members and which are connected to the extremities of said flexible conductors, of a pair of similar levers which are connected to a pair of insulating strips upon which the movable contact members are mounted and an operating lever which is so connected to the pair of similar levers that movement thereof through a relatively small angle in one direction operates one of said levers while movement thereof through a similar angle in a reverse direction operates the other of said levers.

4. In a circuit controller, the combination with a plurality of stationary contact members, two groups of movable contact members which are adapted to engage the stationary members, of operating means for said movable groups that comprises a pair of similar operating levers that are fulcrumed near their extremities, insulating rods connecting said levers to the movable groups, a crank shaft that is substantially parallel to the fulcrum shaft of the levers, two cranks attached thereto substantially at right angles to each other, links connecting the extremities of the cranks to intermediate points on the levers, and means for rotating the crank shaft to operate the levers.

5. In a circuit controller, the combination with a plurality of stationary contact members, two groups of movable contact members which are adapted to engage the stationary members, of operating means for said movable groups comprising a pair of similar operating levers that are fulcrumed near their extremities, insulating rods connecting said levers with the movable groups, a crank shaft that is substantially parallel to the fulcrum shaft of the levers, two cranks attached thereto substantially at right angles to each other, links connecting the extremities of the cranks to intermediate points on the levers, and an operating handle lever which may effect the rotation of the crank shaft to operate the levers, and means for automatically disconnecting the crank shafts from the handle lever under predetermined conditions.

[Claims 6 to 11 not printed in the Gazette.]

879,235. DISPLAY-BOX. SAMUEL L. BACHRACH, New York, N. Y. Filed Oct. 4, 1907. Serial No. 395,838.



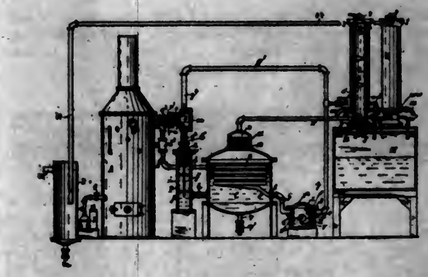
1. In an article of the class described, the combination of a box having an open end, a flap adapted to open and close the end comprising ears pivoted to the side walls and a cross-piece connecting the ears, and a removable cover for the box, the cover being adapted to fit over the cross-piece and lock the flap in its open or closed position.

2. In an article of the class described, the combination of a box body having an open end, and a flap adapted to open and close said end, comprising ears pivoted to the side walls of the box adjacent the open end, a cross-piece connecting said ears and an extension from said cross piece, and a cover adapted to fit over the box and engage the side walls and ears when the flap is raised, and the extension when the flap is lowered.

3. In an article of the class described, the combination of a box having side walls and an open end, a flap for closing said open end comprising a cross piece and pendent ears, a slot formed in the side walls, a connection between the ears and said slot whereby the flap is movably supported, the cross-piece being adapted to be moved into a perpendicular or horizontal position to open or close box, and a cover adapted to engage both the side walls of the box and the cross-piece of the flap to lock the flap in its open or closed position.

879,236. DISTILLING APPARATUS. WALTER H. BARTHOLOMEW, East Orange, N. J., assignor to Charles B. Hill, trustee, Montgomery, N. Y. Filed Feb. 3, 1906. Serial No. 299,315.

1. An apparatus for distilling water, comprising a boiler, means for charging the boiler with a supply of water, an evaporator, a steam coil in the evaporator; a conduit connecting the coil with the boiler, and a second conduit connecting the coil with the evaporator, means for holding the steam in the coil and for withdrawing only the condensed water from the coil, and for feeding it into the evaporator, and means for diverting the excess of the water from the feed water conduit; a condenser, a vapor conduit connecting the evaporator with the condenser, and means for withdrawing the product of condensation from the condenser.



2. An apparatus for distilling water, comprising a boiler, means for charging the boiler with a supply of water, an evaporator, a feed water receptacle and a conduit connecting it with the evaporator; a steam coil in the evaporator, a conduit connecting the coil with the boiler and a second conduit connecting it with the feed water receptacle for the evaporator, means for feeding the water from the receptacle into the evaporator and means for maintaining the feed water in the evaporator at a predetermined level by automatically diverting the flow of the feed water; a condenser, a vapor conduit connecting the evaporator with the condenser, and means for withdrawing the products of condensation from the condenser.

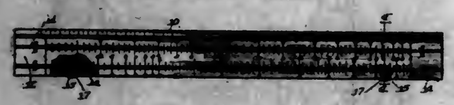
3. An apparatus for distilling water, comprising a boiler, an evaporator, a feed water receptacle and a conduit connecting it with the evaporator, a steam coil in the evaporator, a conduit connecting it with the boiler and a second conduit connecting it with the feed water receptacle for the evaporator; means for feeding the water from the receptacle into the evaporator and means for maintaining the feed water in the evaporator at a predetermined level by automatically diverting the flow of the feed water; a condenser, a vapor conduit connecting the evaporator with the condenser and means for withdrawing the products of condensation from the condenser; a water jacket surrounding the condenser, a water conduit connecting with the jacket and means for supplying water under pressure to the conduit; a second water conduit, from the water jacket to the boiler, and means for forcing the water from the conduit to the boiler.

4. An apparatus for distilling water, comprising a boiler, a feed water apparatus and a conduit connecting it with the boiler; an evaporator, a feed water receptacle and a conduit connecting it with the evaporator; a steam coil in the evaporator, a conduit connecting it with the boiler and a second conduit connecting it with the feed water receptacle for the evaporator; means for feeding the water from the receptacle into the evaporator and means for maintaining the feed water in the evaporator at a predetermined level by automatically diverting the flow of the feed water; a condenser, a vapor conduit, connecting the evaporator with the condenser, and means for withdrawing the products of condensation from the condenser; a water jacket surrounding the condenser, a water conduit connecting with the jacket and means for supplying water under pressure to the conduit; a second water conduit, from the water jacket to the feed water receptacle for the boiler, and means for forcing the feed water from the receptacle into the boiler.

5. An apparatus for feeding the evaporator of a water distilling apparatus, with water derived from condensation of the steam used for evaporating the water in the evaporator, the apparatus comprising a steam coil set in the evaporator, a conduit connecting the steam coil with a steam generator; a second conduit connecting the steam coil with the evaporator, a steam trap, a valve chamber with an outlet, and a receptacle, all connected with the second conduit, intermediate between the steam coil and

the evaporator, a valve in the outlet of the valve chamber and another valve between the valve chamber and the receptacle, a float in the receptacle and means for operatively connecting the float with the valves.

879,237. SLIDE-RULE. OSCAR L. BAUMBACH and AMANDUS KLITSCHE, Chicago, Ill., assignors to Eugene Dietzgen Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 2, 1907. Serial No. 355,436.



1. In a device of the class described, the combination of a rule body, a slide longitudinally movable therein, a rack on the edge of said slide, said rule body having a groove for receiving said rack, a pinion mounted upon the rule body in position to engage said rack and a thumb wheel for operating said pinion, said thumb wheel having a greater diameter than said pinion and being countersunk within said rule body and having an edge projecting beyond the edge of the rule body for the purpose described.

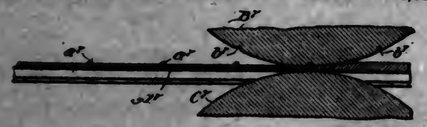
2. In a slide rule, in combination, a substantially flat rule body, a slide longitudinally movable therein, a rack upon said slide, a pinion for operating said rack, and a thumb wheel for rotating said pinion, said thumb wheel rotating in a plane parallel to the plane of the rule body, and being counter sunk into said rule body to admit of the rule being laid flat upon a table or other surface.

3. In a device of the class described, a rule body having a longitudinal space with a longitudinal groove opening thereinto, a slide having a tongue on its lateral edge adapted to enter said groove to hold the slide in position in the rule body, rack teeth formed on said tongue, a pinion located within said rule body in position to engage said toothed rack, and a thumb wheel having a portion projecting from the rule body to facilitate manipulation.

4. In a slide rule the combination of a slide, and a tongue arranged along the edge thereof with rack teeth formed therein, a rule wherein said slide is longitudinally movable, said slide having a groove for receiving said toothed tongue, a pinion rotatably mounted upon said rule in position to engage the teeth upon said tongue and an operating wheel for rotating said pinion, the diameter of said operating wheel being greater than the diameter of said pinion for the purposes described.

5. In a slide rule the combination of a slide having longitudinally arranged tongues on the opposite edges thereof, rack teeth formed in said tongues, a rule recessed to receive said slide, and having symmetrical longitudinal grooves for receiving the aforesaid tongues whereby said slide is reversible in the rule; an operating wheel and reducing gear-connections between said wheel and one of said toothed tongues.

879,238. PROCESS OF MANUFACTURING TIE-PLATES. EDWIN H. BELL, Chicago, Ill., assignor to The Railroad Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 8, 1907. Serial No. 351,314.

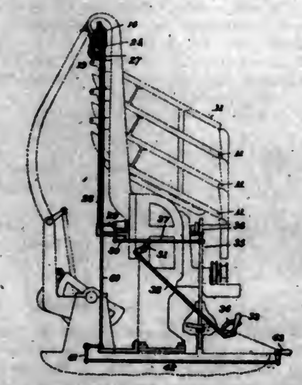


1. The process of manufacturing a tie plate blank which consists in first rolling a billet of metal into a continuous strip having longitudinal grooves in one surface and longitudinal ribs on the other surface opposite the grooves, and then rolling the strip so as to displace the metal intermediate the grooves sufficiently longitudinally to produce transverse shoulders on the upper surface of said strip at certain distances apart.

2. The process of manufacturing a tie plate blank, which consists in first rolling a billet of metal into a continuous blank having a plain under surface provided with longitudinal ribs and an upper surface divided into a plurality of longitudinal bead-like sections arranged opposite the spaces between the ribs on the other surface and forming grooves above said ribs and then passing said strip through rolls arranged to displace longitudinally enough of the material of said bead-like sections to produce transverse shoulders on said strip arranged at certain distances apart.

3. The process of manufacturing a tie plate blank, which consists in first rolling a billet of metal into a continuous strip having longitudinal ribs on its under surface and an upper surface divided into a plurality of longitudinal bead-like sections, and then passing the strip through rolls arranged to displace a portion of the material of said bead-like sections longitudinally and to leave transverse shoulders projecting above said bead-like sections at certain distances apart.

879,239. LINOTYPE-MACHINE. JEROME B. BELL, Wilmington, Del. Filed May 4, 1907. Serial No. 371,912.



1. In a linotype machine, the combination with a plurality of distributing mechanisms, of a plurality of fonts of matrices, and means for directing at will any font of matrices to any one of said distributing mechanisms, the portions of the matrices coöperating with said directing means being alike in the several fonts.

2. In a linotype machine, the combination with a plurality of distributing mechanisms, of a plurality of fonts of matrices, and means for directing at will any font of matrices to any one of said distributing mechanisms, said directing means comprising an adjustable device adapted to carry the matrices different distances and means for adjusting said device.

3. In a linotype machine, the combination with a plurality of distributing mechanisms, of a plurality of fonts of matrices, and means for directing at will any font of matrices to any one of said distributing mechanisms, said directing means comprising an adjustable bridge, means for moving the matrices over said device, and conduits adapted to receive the matrices from the device and direct them to the several distributing mechanisms.

4. In a linotype machine, the combination with a plurality of distributing mechanisms, of a plurality of fonts of matrices, means for directing at will any font of matrices to any one of said distributing mechanisms, said directing means comprising a pair of rails adapted to hold matrices in suspension, means for adjusting said rails, and conduits leading from beneath the rails to the several distributing mechanisms.

5. In a linotype machine, the combination with a plurality of distributing mechanisms, of rails movably mounted and coöperating with the distributing box, a series of conduits leading to several distributing mechanisms, and means for adjusting said rails to deliver matrices directly to the upper distributing mechanism or into any one of said conduits, as desired.

[Claims 6 to 13 not printed in the Gazette.]

879,240. SWITCH-SIGNAL. PAUL E. BOLAN, Cloquet, Minn. Filed June 25, 1907. Serial No. 380,695.



1. In an apparatus of the character described, the combination with switch rails and their switch bar, of a switch actuating rod provided with a crank connected to said switch bar and with a secondary crank relatively larger than the first named crank, a switch stand supporting said switch rod, a signal actuating cable connected at one end to the larger crank, a signal tower, a vertical signal shaft secured to said tower and provided with a radially extending arm to which the other end of said cable is secured, a semaphore carried by said signal shaft, another cable connected to said arm, and a counteracting weight connected with said last named cable.

2. An apparatus of the character described, comprising, in combination with switch rails and their switch bar, a switch actuating rod formed with two cranks, one of which is connected to the switch bar, a switch stand supporting said switch rod, a signal tower, a signal shaft journaled alongside of said tower, a semaphore carried by said shaft, and an operative connection between said signal shaft and the second crank of the switch rod.

3. In an apparatus of the character described, the combination with switch rails and their switch bar, of a switch rod provided with a crank connected to one end of the switch bar, a stand for said switch rod, the switch rod being provided with a second crank off-set and registering with the first named crank, a cable connected at one end to said off-set crank, a signal tower at a distance from the switch stand, a signal shaft journaled on said switch tower and provided with a radially extending arm to which the other end of said cable is connected, guiding rollers over which the cable extends, a semaphore carried by said signal shaft, and a counterbalancing weight and cable also connected to the arm of said shaft.

879,241. CEMENT. MAX BROWN, Brockton, Mass., assignor to Hazen-Brown Company, Brockton, Mass., a Corporation of Massachusetts. Filed Sept. 13, 1907. Serial No. 392,769.

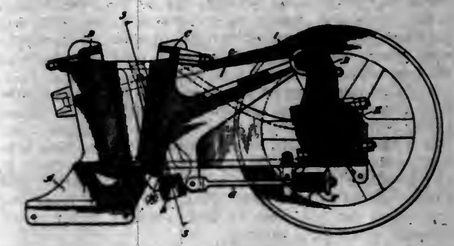
1. A shoe cement, containing coloring matter, giving it, when applied in a thin layer, a conspicuous distinguishing color changeable upon setting, and permitting the cement to change radically in color when it sets.

2. A compound, consisting of liquid shoe cement and coloring matter mixed together in such proportions as to give a thin layer of the wet compound a thin but readily perceptible color characteristic capable of radically changing in color upon the setting of the cement.

3. A shoe cement, containing a volatile solvent, having a coloring ingredient characterized by being changeable upon setting.

4. A shoe cement, containing a volatile solvent, having a coloring ingredient of aniiin capable of being changeable upon setting.

879,242. CRUSHER. MORTON G. BUNNELL, Porter, Ind., assignor to Austin Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed May 29, 1907. Serial No. 376,293.



1. In a crusher, a bed or body, a movable jaw, means for actuating said jaw, and flexible hangers depending from said bed or body for supporting said jaw, said hangers attached rigidly and only at their upper and lower ends.

2. In a crusher, a movable jaw, means for actuating said jaw, and steel wire cable hangers for said jaw, as set forth.

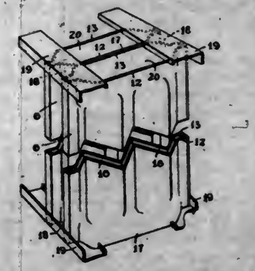
3. In a crusher, an operating member, a bed or body, a movable jaw operated by the said member, and flexible yoke-members connecting the said member with said bed or body, said yoke-members attached rigidly and only at their forward and rear ends.

4. In a crusher, an operating member, a bed or body, a movable jaw operated by the said member, and steel wire cables connecting the said member with the said bed or body, as set forth.

5. A crusher comprising a movable jaw, a bed or body, a stationary jaw opposed to the movable jaw, flexible hangers constituting the sole means of support for the movable jaw, a lever having a jointed connection with the movable jaw, and a swinging yoke connecting the lever with the said bed or body.

[Claims 6 to 9 not printed in the Gazette.]

879,243. REFRIGERATING APPARATUS. PHILIP M. BUSH, Hartford, Conn., assignor to Whitlock Coil Pipe Company, West Hartford, Conn., a Corporation of Connecticut. Filed Sept. 22, 1906. Serial No. 335,766.



1. In an apparatus of the class described, the combination with a pair of water chambers placed one above the other, of an interposed refrigerating section comprising a series of vertical pipes placed side by side and communicating with said water chambers, said pipes having a series of corresponding vertical longitudinal bends or corrugations, and inclosing between them a series of zigzag air spaces extending transversely across said pipes.

2. In an apparatus of the class described, the combination with a pair of water chambers placed one above the other, of an interposed series of vertical water passages communicating with said water chambers, each of said water passages being inclosed by a pair of sheet metal plates attached at their edges and having a series of vertical longitudinal bends or corrugations, with a vertical air space between each of said water passages and extending

transversely in a zigzag direction across said water passages.

3. In an apparatus of the class described, the combination with a pair of water chambers one placed above the other, of an interposed refrigerating section comprising a series of vertical water pipes communicating with said chambers, and having vertical longitudinal corrugations with spaces between said water pipes open to the air at the front and rear edges of said pipes.

4. In an apparatus of the class described, the combination of a pair of water chambers, a refrigerating section placed between said water chambers and comprising a series of thin sheet metal pipes communicating at their ends with said water chambers, said pipes having a series of corresponding longitudinal bends or corrugations, and having spaces between said pipes open at the front and rear edges for the pipes to free passages of air therethrough in a zigzag path.

5. In an apparatus of the class described, the combination of a pair of water chambers, a series of thin sheet metal refrigerating pipes connecting said chambers, said pipes having longitudinal bends or corrugations and having between said pipes open air spaces extending transversely across said pipes, and said pipes having their ends expanded to provide transverse contacting surfaces.

[Claims 6 to 8 not printed in the Gazette.]

879,244. EYEGLASSES. GEORGE H. CHAPEL, Howell, Mich. Filed July 16, 1906. Serial No. 326,303.



1. In eyeglasses, the combination of a rigid bridge, lens clamps connected to the ends of the bridge by means of hinged joints, springs at said hinged joints for returning the lenses into alinement, nose guards rigidly secured upon and movable with the lens clamps, said nose guards being formed of thin, spring metal, and each having a freely projecting upwardly curved resilient end portion with a flat bearing face, said upwardly curved portions of the guards being so thin and of such resultant flexibility as to conform to the contour of the sides of the nose and to yield against the action of the springs at said hinged joints.

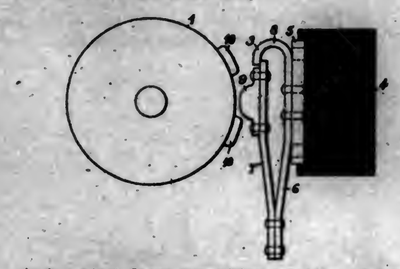
2. The combination of the lens clamps having horizontally projecting brackets, the bridge having brackets at its ends provided with horizontal ears which lie between the brackets of the lens clamps, a vertical spring lying between the horizontal ears of each of the bridge brackets, one end of each spring secured to its respective bracket, and the other end of each spring engaging its respective lens clamp, threaded pintles passing through the brackets of the lens clamps, the ears of the bridge brackets and said springs, and nose guards of thin, resilient material having horizontal stems which also receive said threaded pintles, and which are each provided with a shoulder that engages its respective lens clamp, whereby said guards are rigidly locked to said clamps.

879,245. CONTACT-FINGER. WILLIAM COOPER, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed May 21, 1906. Serial No. 318,007.

1. A contact finger comprising a resilient member having a hook at one end, a resilient contact-carrying member that is attached to one end of the hooked member and is limited in its motion in one direction by the hook.

2. A contact finger comprising a base of conducting material, a resilient strap bent at one end into a hook and attached to the base near its hooked extremity, and a contact strap which is attached to one end of the hooked strap and the free end of which engages the hook.

3. A contact finger comprising a resilient strap having a hook at one end so supported adjacent thereto that its other end constitutes a spring, and a second strap having one end attached to the spring end of the hooked strap and its other end engaged by the hook, and a contact member attached to the second strap.



4. A contact finger comprising a stationary supporting block, a V-shaped resilient member one leg of which has a hook at one end and is attached to the stationary support and the other leg of which tends to separate itself from the first and is restrained by the hook.

5. The combination with a contact-carrying drum, of an engaging finger therefor that comprises a resilient member having a hook at one end, a resilient contact-carrying member attached to one end of the hooked member and limited in its motion by the hook, and an insulating support to which the finger is attached in the line of the force exerted between the finger and the drum.

[Claims 6 to 8 not printed in the Gazette.]

879,246. COMMUTATOR FOR ELECTRIC APPARATUS. FREDERICK W. COX, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 4, 1906. Serial No. 309,902.



1. In a commutator, the combination with a single set of unitary segments, and a support therefor having an integral clamping ring at one end, of a main adjustable clamping ring and a supplemental adjustable clamping ring mounted upon the main adjustable ring.

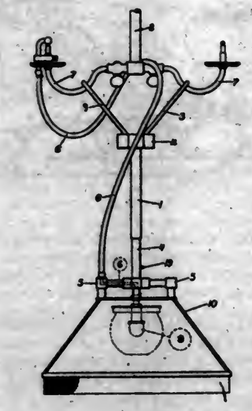
2. In a commutator, the combination with a single set of unitary segments having beveled outer ends, and a support therefor, of an adjustable clamping sleeve which engages a notch near the middle of the segments, and a clamping ring adjustably mounted on the sleeve to engage the beveled ends of the segments.

3. In a commutator, the combination wtih a single set of unitary segments having beveled outer ends, and a support therefor having an integral clamping ring, of an adjustable clamping sleeve which engages notches near the middle of the segments, and a clamping ring adjustably mounted on the sleeve to engage the beveled ends of the segments.

4. In a commutator, the combination with a single set of unitary segments having beveled ends, and a support having an integral clamping ring near its inner end which engages notches in the segments, of an adjustable clamping sleeve mounted on the support, and an adjustable clamping ring mounted on the sleeve to engage the beveled ends of the segments.

879,247. DROP-LIGHT FIXTURE AND THE LIKE. ARTHUR C. DAVIDSON, Chicago, Ill. Filed Mar. 18, 1907. Serial No. 362,128.

1. A drop light fixture of the kind described, comprising a supporting member, a plurality of chandelier engaging hooks secured to the upper end of the supporting member, arranged to equally distribute the weight thereof, and means for conducting gas, electricity or the like to the lower end of the supporting member, substantially as described.



2. A drop light fixture of the kind described, comprising a supporting member, a plurality of chandelier engaging hooks pivotally secured to the upper end of said supporting member on axes transverse to the vertical axis of the supporting member arranged to distribute and equalize the weight thereof, and means for conducting gas or the like to the lower end of the supporting member.

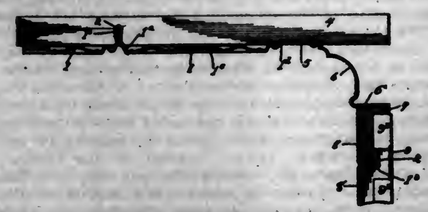
3. A drop light fixture of the kind described, comprising a supporting member, a head pivotally secured to said supporting member on a vertical axis, a plurality of chandelier engaging hooks pivotally secured to said head on longitudinal axes, and means for conducting gas or the like to the lower end of the supporting member.

4. A drop light fixture of the kind described, comprising an adjustable supporting member, hooks pivotally secured to the upper end of said supporting member adapted to engage a chandelier and centrally distribute the weight thereon, and means for conducting an illuminant to a lamp at the lower end of said supporting member.

5. A drop light fixture of the kind described, comprising an adjustable telescoping supporting member, chandelier engaging hooks secured to said supporting member, and conducting means for conducting gas or the like from a chandelier to a lamp at the lower end of said supporting member.

[Claims 6 and 7 not printed in the Gazette.]

879,248. METALLIC CEILING OR SHEATHING. PETER EBNER, Columbus, Ohio. Filed Dec. 7, 1907. Serial No. 405,492.



1. In a metallic ceiling and sheathing construction, the combination with interlocked ceiling panels, and means for attaching said panels to a ceiling framework, of a corner or "cove" member, vertical side wall furring strips, the upper ends of which meet and support the lower portion of said cove member, and ceiling filling strips which connect the outer ceiling panels with said cove member.

2. In a metal ceiling and sheathing construction, the combination with metal ceiling beams having flanged bases, and furring strips intersecting said ceiling beams at right angles, of metal clamping members comprising channel shaped bodies formed with end recesses in their side portions, said end recesses being adapted to receive the base flanges of said metal beams, and the sides of the clamping bodies being adapted to be secured to the sides of the furring strips.

879,249. INCANDESCENT BURNER. AMBROSE G. FELL, New York, N. Y. Filed May 7, 1907. Serial No. 372,439.



1. A burner for an incandescing mantle comprising a mixing tube, a tubular mantle supporting member having the mixing tube transversely connected therewith by which the supporting member is supported in a vertical position, means for securing a mantle at one end of the vertical tubular member, and a transparent diaphragm supported at the other end of the vertical member whereby the light rays from the mantle at one end of the member are projected through the other end of the member.

2. In a burner for incandescing mantles, a mixing tube, a tubular member having the mixing tube transversely connected therewith by which the member is supported in a vertical position, each end of the member being provided with means for supporting a mantle, and a diaphragm of transparent material, each end of the member being arranged to have the diaphragm removably secured thereto.

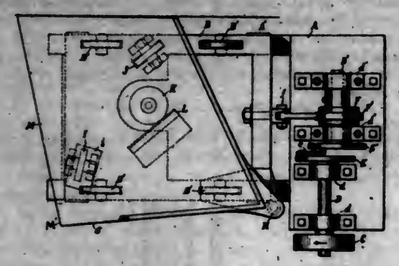
3. A burner for an incandescing mantle comprising a mixing tube, a tubular member having the mixing tube transversely connected therewith by which the member is supported in a vertical position, means for securing a mantle at one end of the vertical tubular member, and a transparent diaphragm supported at the other end of the vertical member whereby the light rays from the mantle at one end of the member are projected through the other end of the member.

4. In a burner for incandescing mantles, a mixing tube, a tubular member having the mixing tube transversely connected therewith by which the member is supported in a vertical position, each end of the member being provided with means for supporting a mantle, and a diaphragm of transparent material, each end of the member being arranged to have the diaphragm removably secured thereto.

5. A burner for incandescing mantles comprising a mixing tube, a tubular member having the mixing tube transversely connected therewith by which the member is supported in a vertical position, each end of the member being provided with means for supporting a mantle, and a valve of transparent material in the member in proximity to the transverse tube and organized to direct the gas mixture to either end of the tube or to both ends according to its position of adjustment.

[Claims 6 to 10 not printed in the Gazette.]

879,260. CONCENTRATING-TABLE. JOHN C. FISHER, Houghton, Mich., assignor of one-fourth to Frank L. Van Orden, Houghton, Mich., and one-fourth to Henry Fisher, Lake Linden, Mich. Filed May 18, 1906. Serial No. 317,440.



1. In a concentrating table, a base, a carriage thereon, means for reciprocating said carriage and at the same time raising and lowering one end thereof, in combination with a table mounted on said carriage and means for oscillating said table with each reciprocation of said carriage and at the same time raising and lowering one corner thereof, substantially as described.

2. In a concentrating table, a base, a carriage thereon, means for reciprocating said carriage, the forward stroke being slow and the return stroke fast, means for raising the front end of said carriage on the forward stroke and lowering it on the return stroke, in combination with a table mounted on said carriage and means for oscillating said table with each reciprocation of said carriage and at the same time raising and lowering one corner thereof, substantially as described.

3. In a concentrating table, a carriage thereon, driving mechanism adapted to reciprocate said carriage, means for raising the front end of said carriage on the forward stroke and lowering it on the return stroke, in combination with a table mounted on said carriage and means for oscillating said table with each reciprocation of said carriage and at the same time raising and lowering one corner thereof, substantially as described.

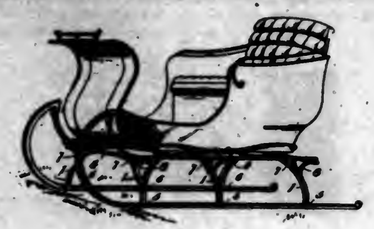
4. In a concentrating table, a base, a carriage thereon, driving mechanism adapted to reciprocate said carriage, with a slow forward stroke and quick return stroke, means for raising the front end of said carriage on the forward stroke and lowering it on the return stroke, in combination with a table mounted on said carriage and means for oscillating said table with each reciprocation of said carriage and at the same time raising and lowering one corner thereof, substantially as described.

5. In a concentrating table, a base, a carriage thereon said carriage being mounted on wheels, driving mechanism adapted to reciprocate said carriage, inclines on said base on which the front wheels of said carriage travel, in combination with a table mounted on said carriage and means for oscillating said table with each reciprocation of said carriage and at the same time raising and lowering one corner thereof, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

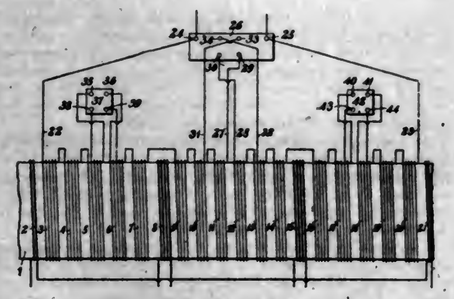
879,251. SLEIGH-KNEE. ALMON H. FLINT, Moira, N. Y. Filed June 9, 1906. Serial No. 321,043.

The herein described metallic knee for sleighs comprising a bar of approximately ogee form provided at its upper extremity with spaced extensions designed to embrace the cross bar of the sleigh and also provided at its lower extremity with spaced extensions arranged at approximately right angles to the before mentioned extensions and designed to embrace the sleigh runner, the inner extension at the lower end of the knee being provided with lateral wings which project along the runner upon opposite sides of the knee to obtain an extended bearing against the same, oppositely extending integral branches being provided at the upper portion of the knee for engaging the



cross bar of the sleigh, said branches being in the same plane with each other and with the knee.

879,252. MULTIPLE-RATIO TRANSFORMER. CHARLES LE G. FORTESCUE, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed June 8, 1907. Serial No. 378,014.



1. In a transformer, the combination with primary and secondary windings comprising a plurality of sections, the sections of each winding being interpolated with those of the other in a symmetrical arrangement, of means for removing portions of the sections of one winding that are located in the weakest leakage magnetic field of the other winding.

2. In a transformer, the combination with primary and secondary windings comprising a plurality of sections, the sections of each winding being interpolated with those of the other in a symmetrical arrangement, of means for removing from the circuit portions of the sections of one of the windings that are located approximately midway between the sections of the other windings.

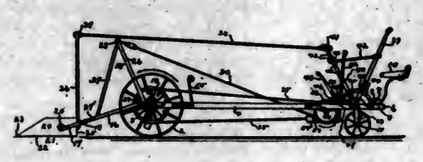
3. In a transformer, the combination with primary and secondary windings, of means for varying the active length of a portion of one of the windings that is located in the weakest leakage magnetic field of the other winding.

4. In a transformer, the combination with a winding comprising a plurality of sections, and another winding located between the sections thereof, of means for adjusting the active length of that portion of the latter winding which is located approximately midway between the sections of the former.

5. In a transformer, the combination with a winding comprising a plurality of sections, and another winding located between the sections thereof, of a plurality of leads connected to that portion of the latter winding which is located approximately midway between the sections of the former, and means for connecting different pairs of said leads to adjust the voltage ratio of the transformer.

[Claims 6 and 7 not printed in the Gazette.]

879,253. MANURE SCRAPER AND LOADER. SAMUEL R. FRENCH, Farmington, Iowa. Filed Aug. 28, 1907. Serial No. 390,443.



1. A machine as described, in combination, comprising an axle provided with a first gear wheel and formed with supporting wheels thereon; a supporting guide-wheel, an idler-wheel, a ratchet-wheel and a resiliently-mounted pawl adapted to make operative contact with said ratchet-wheel; side-pieces extending rearwardly from said axle to said supporting guide-wheel and having an operating-shaft mounted transversely therebetween; a tilting-lever mounted upon one of said side-pieces and provided with a sustaining-guide; a scraper-box having a flat bottom with a front cutting-edge and having a controlling-arm extending upwardly from its rear end; a link having end-connections upon said controlling-arm and upon said tilting-lever; sustaining-arms extending forwardly from said axle and provided with a transversely-disposed brace and having pivotal mountings at their rear terminals upon said axle, their front ends having pivotal mountings upon the sides of said scraper-box; said winding-drum, second gear-wheel and ratchet-wheel mounted rigidly upon said operating-shaft; said idler-wheel mounted upon said operating shaft; a cable having one of its ends connected with the transversely-disposed brace of said sustaining arms, its opposite end connected with said winding-drum; a flexible member connecting said first gear-wheel and second gear-wheel; and means to transfer said flexible member from the second gear-wheel to said idler-wheel.

2. In combination, a machine as described, consisting of supporting mechanism comprising an axle with forwardly-movable bearing-wheels, a rear guide-wheel, side-pieces connecting the axle and said rear guide-wheel; a scoop-receptacle formed with a front cutting edge and having an upwardly-extending controlling-bar; an operating-frame comprising sustaining-arms pivotally mounted upon said axle between said forwardly-movable bearing-wheels and extended forwardly to a pivotal mounting upon said scoop-receptacle, said sustaining-arms having transversely and convergingly disposed brace members secured between its terminals; hoisting mechanism comprising a sprocket upon the axle, an operating-shaft transversely supported between said side-pieces and having thereon a sprocket, a winding-drum, an idler-wheel, and a ratchet with a pawl connection; means for lowering said scoop-receptacle comprising a hand-lever having a link connection with said controlling-bar of the scoop-receptacle; a flexible member extended between the sprocket of said axle and the sprocket upon said operating-shaft, and a flexible member extended between the brace-members of the sustaining-arms and said winding-drum; a second flexible member extended between the sprocket of said axle and the sprocket upon said operating-shaft; means to control the movements of said pawl, and means to control a sidewise shifting movement of said second flexible member.

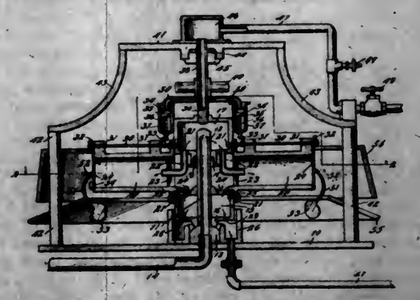
879,254. MANUALLY-CONTROLLED DENTAL ENGINE. JEAN L. GAUTHIER, Washington, D. C. Filed May 18, 1907. Serial No. 374,364.



1. In an engine of the class described, the combination with a drill shaft, a balance wheel on said shaft and a pinion fixed to said shaft; of a driving gear adapted to mesh with said pinion, a ratchet wheel, a pawl pivotally secured to said driving gear one end of which is adapted to engage the ratchet wheel, whereby the driving gear will be given a rotating movement, while the rotation of the ratchet wheel is intermittent, a pinion fixed to said ratchet and means to intermittingly rotate said pinion and ratchet, whereby the drill shaft will be operated.

2. In a dental engine of the class described, the combination with a drill shaft, a pinion fixed to said shaft and a balance wheel fast on said shaft, of a driving gear adapted to mesh with said pinion, a lever pivotally mounted below said driving gear, said lever having an elongated opening above its pivot point, a stop pin extending through said opening, adapted to limit the swinging movement of the lever, means coöperating with the upper end of said lever and driving gear to rotate said driving gear and an arm integral with the lower end of said lever and extending laterally therefrom, whereby pressure may be applied to the lever and the same rocked on its pivot point.

879,255. CENTRIFUGAL SEPARATING-MACHINE. HENRY M. GOODMAN, Louisville, Ky. Filed June 14, 1907. Serial No. 378,939.



1. A centrifugal separating machine including a rotatable open chamber, a closure for one end of the chamber,

means for feeding the material into the chamber at the open end thereof, means for permitting the liquid to escape, means for moving the closure to permit the separated material to be discharged by centrifugal force, and means for automatically returning the closure to its normal position to close the chamber and for holding the closure in said position.

2. A centrifugal separating machine including a rotatable open chamber, a closure for one end of the chamber, means for feeding the material into the chamber at the open end thereof, means for permitting the liquid to escape, and fluid controlled means supported by the chamber for moving the closure to permit the separated material to be discharged by centrifugal force.

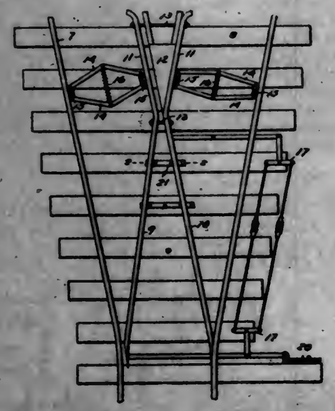
3. A centrifugal separating machine including a rotatable open chamber, a closure for one end of the chamber, means for feeding the material into the chamber at the open end thereof, means for permitting the liquid to escape, fluid controlled means supported by the chamber for moving the closure to permit the separated material to be discharged by centrifugal force, and means for automatically returning the closures to close the chamber.

4. A centrifugal separating machine including a rotatable open chamber, a closure for one end of the chamber, means for feeding the material into the chamber at the open end thereof, means for permitting the liquid to escape, means for moving the closure to permit the material to be discharged, and means operatively related to the closure and influenced by the resistance of the atmosphere for automatically returning the closure to close the chamber.

5. A centrifugal separating machine including a rotatable open chamber, a closure for one end of the chamber, means for feeding the material into the chamber at the open end thereof, means for permitting the liquid to escape, means for moving the closure to permit the material to be discharged, means operatively related to the closure and influenced by the resistance of the atmosphere for automatically returning the closure to close the chamber, and a stop for limiting the return movement of the closure.

[Claims 6 to 25 not printed in the Gazette.]

879,256. RAILWAY-SWITCH. DAVID I. GRIFFITH, Frostburg, Md. Filed Aug. 13, 1907. Serial No. 388,371.

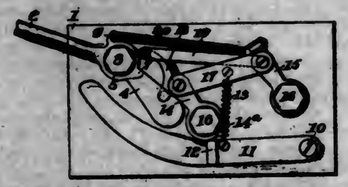


1. The combination, with the main and side tracks and the frog formed by the meeting inner rails thereof, of a pair of movable switch rails converging towards the frog and connected together adjacent thereto, the ends of said rails opposite the frog being deflected; means disposed between each switch rail and the corresponding track rail for normally holding the deflected ends of the switch rails out of contact with the sides of the frog; rods mounted upon the ties beneath the switch rails and provided with upstanding ends adapted to contact with and limit the outward movement of the switch rails under the action of said first-mentioned means, the switch rails being movable directly across the upper face of said rods; and means for operating the switch rails simultaneously, to force the deflected end of one switch rail into contact with the adjacent sides of the frog against the action of the first-mentioned means, and the diagonally opposite end of the other switch rail away from the adjacent track rail, to open or close the switch.

2. The combination, with the main and side tracks and the frog formed by the meeting inner rails thereof, of a pair of movable switch rails converging towards the frog and connected together adjacent thereto, the ends of said rails opposite the frog being deflected a pair of oppositely-acting spring-actuated toggles disposed between each switch rail and the corresponding track rail, said toggles having their opposite ends connected with said rails, for normally holding the deflected ends of the switch rails out of contact with the sides of the frog; and means for operating the switch rails simultaneously, to force the deflected end of one switch rail, against the action of the corresponding pair of toggles, into contact with the adjacent side of the frog, and the diagonally opposite end of the other switch rail away from the adjacent track rail, to open or close the switch.

3. The combination, with the main and side tracks and a frog formed by the meeting inner rails thereof, of a pair of movable switch rails converging towards the frog and connected together adjacent thereto, the ends of said rails opposite the frog being deflected; a pair of oppositely-acting spring-actuated toggles disposed between each switch rail and the corresponding track rail, said toggles having their opposite ends connected with said rails, for normally holding the deflected ends of the switch rail out of contact with the sides of the frog; rods mounted upon the ties beneath the switch rail and provided with upstanding ends adapted to contact with and limit the outward movement of the switch rails under the action of said toggles, said switch rails being movable directly across the upper face of said rods; and means for operating the switch rails simultaneously, to force the deflected end of one switch rail, against the action of the corresponding pair of toggles, into contact with the adjacent side of the frog, and the diagonally opposite end of the other switch rail away from the adjacent track rail, to open or close the switch.

879,257. TROLLEY CATCHER AND RETRIEVER. FRANKLIN J. GUSTINE, New Orleans, La. Filed July 5, 1906. Serial No. 324,851.



1. In a trolley catcher and retriever, the combination with a trolley pole, of an oscillating arm, a spring interposed between said arm and pole, a pivoted detent adapted to engage a notch formed on said pole, a link bar pivoted at its ends to and connecting said detent with said oscillating arm, means for locking said oscillating arm against movement, and automatic means for tripping said arm for releasing the tension on said spring and forcing said detent into interlocked engagement with said trolley pole, substantially as described.

2. In a trolley catcher and retriever, the combination with a trolley pole, of an oscillating arm, a spring interposed between said pole and arm, a tripping bar extending adjacent the base of said trolley pole, means disposed between said tripping bar and oscillating arm and coöperating to lock said arm against movement, the base of said trolley pole being adapted to engage said tripping bar and release said oscillating arm upon the trolley pole jumping a trolley wire, substantially as described.

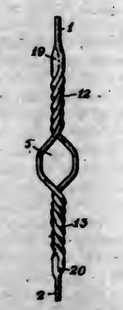
3. In a trolley catcher and retriever, the combination with a trolley pole, of an oscillating arm, a spring interposed between said pole and arm, a tripping bar pivoted at one end to a rigid support and at its other end extending adjacent the base of said trolley pole, means disposed between said tripping bar and oscillating arm and coöperating to lock said arm against movement, the base of said trolley pole being adapted to engage and depress the free end of said tripping bar for releasing said oscillating arm upon the trolley pole jumping a trolley wire, substantially as described.

4. In a trolley catcher and retriever, the combination with a trolley pole, of a pair of oscillating arms, a spring interposed between said trolley pole and one of said arms, a link connection between said arms, a trip bar coöperating with said arms to lock said arms against movement, and means for automatically tripping said trip bar, substantially as described.

5. In a trolley catcher and retriever, the combination with a pivoted trolley pole provided with a tail-piece projecting beyond the pivotal axis of said pole, an oscillating arm, a spring interposed between said arm and trolley pole, means for holding said arm locked against movement, and means for tripping said arm to release the tension on said spring, said tail-piece being adapted to engage said oscillating arm upon a downward pull on the trolley pole and return said oscillating arm to its normal position, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

879,258. HEDDLE FOR LOOMS. HUDSON W. HAKES, Millbury, Mass. Filed Apr. 29, 1907. Serial No. 370,801.



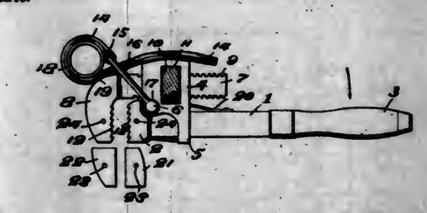
1. As an article of manufacture, a heddle composed of two pieces of wire with their ends overlapping in the central part of the heddle, and having said overlapping ends bent to form a yarn eye and twisted together on opposite sides of and adjacent to said eye, with the opposite ends of said wires bent to form loops to receive the heald shafts.

2. As an article of manufacture, a heddle formed of duplicate sections of wire overlapping each other at the center of the heddle, each bent to form one half of an eye and twisted together above and below the eye, and each of said sections having an offset adjacent to said eye soldered to the end of the other section.

3. A heddle composed of two single wires forming the body of the heddle with their ends overlapping at the central portion of the heddle, with each of the overlapping portions oppositely bent to form an eye, and each of said wires offset at the ends of the overlapping portions to bring the center of the eye substantially in alinement with the axis of the heddle, and means for uniting said overlapping portions.

879,259. WRENCH. THOMAS J. HAND, New York, N. Y. Filed Apr. 13, 1907. Serial No. 367,953.

1. In a gripping device of the class described, the combination with a wrench having a yielding keeper and a movable jaw carried by said keeper said jaw having a cammed end; of a clevis pivotally secured to said yielding keeper, a flexible device fixed at one end to said clevis, and having its opposite end inserted through the clevis and over the cammed end of said jaw, whereby when said flexible device is surrounding an article and leverage applied to the wrench, said cammed end of the jaw will bind the flexible device on the object and cause said object to rotate.



2. In a device of the class described, the combination with a wrench, a yielding keeper on said wrench, a bolt adapted to secure said keeper to the wrench and a movable jaw carried by said keeper said jaw having a cammed end; of a clevis pivotally secured to said bolt, a flexible device fixed at one end to the clevis, the opposite end thereof being adapted to pass through the clevis when surrounding an object, whereby when leverage is applied to the wrench, the cam will clamp the flexible device around and over the cammed end and the object and cause said object to turn.

3. In a device of the class described, the combination with a wrench having a yielding keeper, a bolt to secure said keeper to the wrench and a movable jaw carried by said keeper said jaw having a cammed end; of a clevis pivotally mounted on said bolt and adapted to extend over the cammed end of said movable jaw and a flexible device secured to said clevis adapted to be disposed into engagement with the cammed end of the jaw, whereby said jaw will be positively engaged with an object.

879,260. CATTLE-GUARD. JOHN J. HARRISON and WILLIAM A. OWINGS, Pryor Creek, Okla. Filed Apr. 29, 1907. Serial No. 370,910.



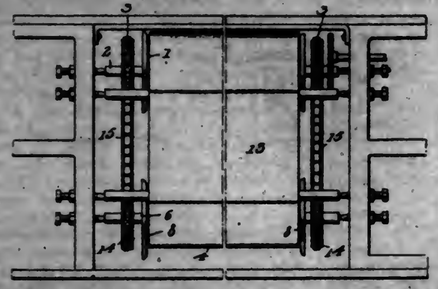
1. A cattle guard comprising a vertically movable platform, a vertically swinging picket gate arranged at one end of said platform and adapted to lie normally in lowered position, means arranged to extend between the pickets of the gate when in lowered position to cause an animal stepping thereon to slip down onto the gate pickets and hold the gate in lowered position until the animal passes onto said movable platform.

2. A cattle guard comprising a vertically movable platform, a stationary platform disposed at one end thereof, a vertically swinging picket gate adapted to lie normally on said fixed platform, means carried by said fixed platform and projecting through the pickets of the gate when in lowered position to cause an animal stepping thereon to slip onto the gate pickets and hold the gate in lowered position, and means connecting said gate and vertically movable platform to swing said gate upward when said platform is depressed.

3. A cattle guard comprising a vertically movable platform, a stationary platform disposed at one end thereof and having sharp edged bars projected upwardly therefrom, a vertically swinging picket gate adapted to lie on said fixed platform with the sharp edged bars of the plat-

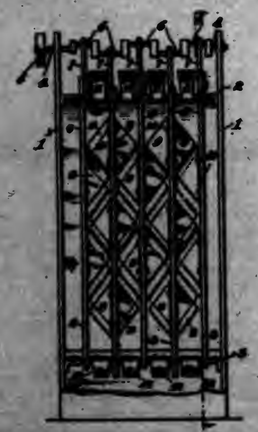
form projecting through the pickets of the gate and means connecting said gate and vertically movable platform to swing said gate upward when said platform is depressed.

879,261. TENSION DEVICE FOR WINDING ROLLS. CLARENCE J. HARTER, Ilion, N. Y. Filed May 20, 1907. Serial No. 374,627.



A tension device of the character described, comprising a lower winding roll having formed therein a central longitudinally disposed bore, apertured bearing disks secured to the opposite ends of said roll, bearing sleeves arranged on the inner sides of said disks to project into the bore of said roll, an operating shaft arranged through said bearing sleeves and the bore of the roll, stop collars on said shaft, a coiled spring arranged on said shaft within the bore of the roll, one end of said spring being secured to the shaft and its opposite end to the bearing sleeve of one of said disks, an upper winding roll shaft, a winding roll fixedly mounted on said shaft, sprocket gears fixedly mounted on the opposite ends of said operating shafts, and sprocket chains connecting said sprocket gears to simultaneously turn said shafts, substantially as described.

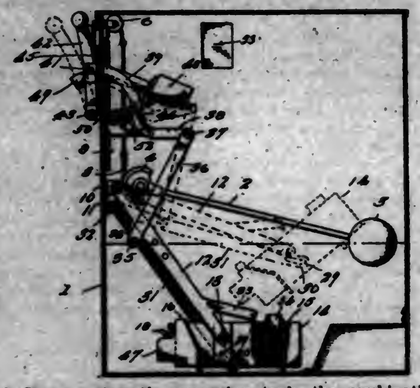
879,262. REDUCTION-MILL. HENRY B. HEBERT, New York, N. Y. Filed May 6, 1907. Serial No. 372,262.



1. A reduction mill comprising a plurality of vertically reciprocable carriers, crusher heads provided with inclined crusher faces secured to said carriers, said crusher heads being arranged one above the other and adjacent crusher heads being arranged on adjacent carriers to form a zigzag conduit from top to bottom of mill and means for reciprocating adjacent carriers in opposite directions.

2. A reduction mill comprising a plurality of vertically reciprocable carriers, a series of crusher heads having inclined crusher faces alternately secured to adjacent carriers one above the other, the crusher faces of adjacent crusher heads being parallel, and the distance between said adjacent crusher faces decreasing from the top to bottom of mill and means for reciprocating adjacent carriers in opposite directions.

879,263. SELF-MEASURING TANK. JOHN HEISSENBERGER, New York, N. Y., assignor to Automatic Utilities Company, New York, N. Y., a Corporation of New York. Filed Apr. 19, 1907. Serial No. 369,155.



1. In an automatic measuring tank, the combination with a tank, a measuring receptacle adapted to be raised and lowered in said tank, means for raising and lowering the measuring receptacle, a discharge scoop adapted to be engaged by the receptacle and brought into position for discharging, and means for discharging the desired quantity from the measuring receptacle into the discharge scoop.

2. In an automatic or self measuring tank, the combination with a supply tank, a measuring receptacle divided into compartments for containing various quantities of liquid, a discharge scoop having means for discharging the desired amount of liquid from the compartments of the receptacle, and means for bringing the measuring vessel into position for discharging.

3. In an automatic or self measuring tank, the combination with a tank, a swinging measuring receptacle mounted therein, a discharge mechanism normally held out of discharge position adapted to be brought into position for discharge by engagement with the measuring receptacle, a series of compartments in the measuring receptacle provided each with an outlet, spring controlled valves for said outlets, and hand operated levers for acting upon the desired valve to discharge the liquid from the proper compartment of the receptacle.

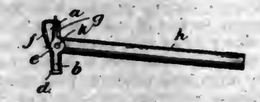
4. In combination with a supply tank, a pivoted scoop normally held out of discharge position carrying a discharge spout, and a measuring receptacle adapted to contact the scoop and bring the scoop into discharging position.

5. In combination with a supply tank, a pivoted scoop normally held out of discharge position having a discharge spout, a measuring receptacle adapted to engage the scoop and bring the spout into discharging position, and means for returning the scoop to normal position.

[Claims 6 to 14 not printed in the Gazette.]

879,264. SAFETY-RAZOR. JOHN HEISSENBERGER, New York, N. Y., assignor to Automatic Utilities Company, New York, N. Y., a Corporation of New York. Filed Aug. 22, 1907. Serial No. 389,601.

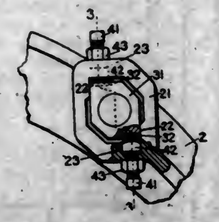
1. The combination in a safety razor, of a blade, a base therefor, and means to secure the blade to the base including a resilient finger adapted to bear yieldingly substantially upon the middle of the blade and bent back over the top of the blade and base whereby said finger holds the blade flatwise upon the base and against upward movement, means to pivot said finger upon the base whereby it may be moved to permit the insertion and withdrawal of the blade, and a spring to hold the finger normally in position for securing the blade to the base.



2. The combination in a safety razor, of a blade, a base therefor, and means to secure the blade to the base including a resilient finger adapted to bear yieldingly substantially upon the middle of the blade and bent back over the top of the blade and base whereby said finger holds the blade flatwise upon the base and against upward movement, means upon the underside of the base to pivot said finger thereto, and a spring upon the underside of the base coöperating with said finger to hold it normally in position for securing the blade upon the base.

3. The combination in a safety razor, of a blade, a base therefor, and means to secure the blade to the base including lugs to limit the forward and sidewise movements of the blade and a resilient finger adapted to bear substantially upon the middle of the blade and bent back over the top of the blade and base to hold the blade flatwise upon the base and limit its upward movement, means upon the underside of the base for pivoting said finger thereto, and a spring upon the underside of the base, said finger having a toe adapted to engage said spring, whereby said finger is normally held in position for securing the blade upon the base but may be moved against the action of said spring to permit the blade to be withdrawn.

879,265. ADJUSTABLE BOX OR BEARING. GEORGE M. HINKLEY, Milwaukee, Wis., assignor of one-half to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey; Elizabeth J. Hinkley and Edgar L. Wood executors of said George M. Hinkley, deceased. Filed Mar. 6, 1905. Serial No. 248,506.



1. The combination with an adjustable box provided with an aperture adapted to receive a shaft, of means providing a mechanical couple adapted to subject the box to stress in one direction of rotation about the axis of a shaft, and means providing a second mechanical couple adapted to resist such stress and to prevent rotation of said box.

2. The combination with an adjustable box provided with an aperture adapted to receive a shaft, of means applied thereto affording a mechanical couple about the axis of said shaft, and a second means affording a mechanical couple of opposite direction and resisting the first couple.

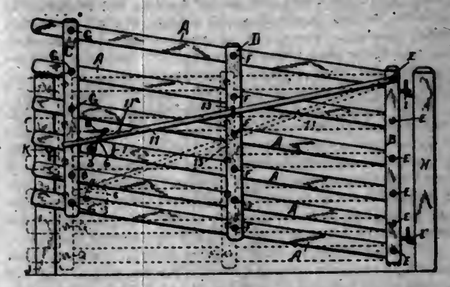
3. The combination of a box, means affording parallel ways therefor on opposite sides thereof, and means for adjusting the box on the ways and subjecting the box on opposite sides of its journal to forces opposed in direction and constituting a rotary stress resisted by the ways.

4. The combination of a box, a frame having internal parallel ways therefor on opposite sides of said box, and means on the frame for adjusting the box on the ways and subjecting the box on opposite sides of its journal to forces opposed in direction and constituting a rotary stress resisted by the ways.

5. The combination of a box, a frame having internal parallel ways therefor on opposite sides of said box, and bolts on the frame subjecting the box to rotary stress resisted by the ways for adjusting the box on the ways.

[Claims 6 to 13 not printed in the Gazette.]

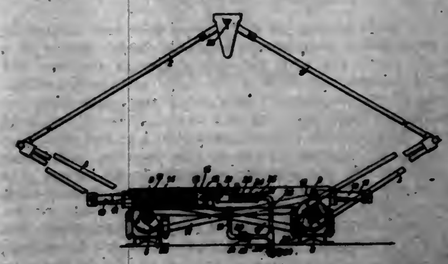
879,266. FARM-GATE. OSCAR M. HURST, Centerville, Ind. Filed Sept. 6, 1907. Serial No. 391,585.



1. In a farm-gate, the combination with a gate formed of rails and stiles pivoted together with means for hinging the gate, a pair of ratchets located on the sides of the gate near its free end and below its center vertically, a metal bar located on each side of the gate and pivoted at one end to the upper end of the hinged portion of the gate and extending downwardly and forward through their respective ratchets and each having a series of notches on their upper edges to engage with said ratchets, means for normally retaining said ratchets in engagement with said notches, and means for releasing both of said ratchets at one time, all substantially as shown and described and for the purposes set forth.

2. In combination with a gate formed of a plurality of rails pivotally connected to end and center stiles and means for hinging one end of the gate to a post, two independent ratchets located on opposite sides of the lower forward portion of the gate, a bolt on which both of the ratchets are pivoted, the upper portion of said ratchets being flattened transversely with a vertical slot formed through said flattened portions, a flat metal bar pivoted on both sides of the gate to the upper hinged portion thereof and extending downward and forward and passing through the slot of the respective ratchets, a series of notches formed in the upper edges of said bars to engage with said ratchets, pins for retaining the ratchets in position, and a staple secured in the center stile for each of said bars to form guides and supports therefor, all substantially as shown and described.

879,267. CONTROLLING MEANS FOR PNEUMATICALLY-OPERATED DEVICES. RAY P. JACKSON, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 3, 1906. Serial No. 304,025.



1. The combination with a trolley that is normally raised, fluid-pressure-actuated means for depressing the

same, a catch for retaining the trolley in its depressed position and fluid-pressure-actuated means for causing the catch to release the trolley, of a pipe or conduit having branch passages whereby fluid-pressure may be applied to the respective means, the passage to the former means being provided with a constricted portion.

2. The combination with a trolley that is normally raised, fluid-pressure-actuated means for depressing the same, a catch for retaining the trolley in its depressed position and fluid-pressure-actuated means for causing the catch to release the trolley, of a pipe or conduit having branch passages whereby fluid-pressure may be applied to the respective means, the passage to the former means being provided with a constricted portion and a valve in the unbranched portion of the supply pipe or conduit.

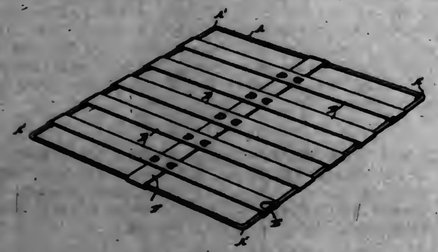
3. The combination with a device having a normal position, fluid-pressure-actuated means for causing the device to occupy an abnormal position, a catch for retaining the device in the abnormal position and fluid-pressure-actuated means for causing the catch to release the device, of a pipe or conduit having branch passages whereby fluid-pressure may be applied to the respective means, the passage to the former means being provided with a constricted portion.

4. The combination with a device having a normal position, fluid-pressure-actuated means for causing the device to occupy an abnormal position, a catch for retaining the device in the abnormal position and fluid-pressure-actuated means for causing the catch to release the device, of a pipe or conduit having branch passages whereby fluid-pressure may be applied to the respective means, the passage to the former means being provided with a constricted portion, and means for governing the supply of fluid that is located in the unbranched portion of the pipe or conduit.

5. The combination with a device having a normal position, fluid-pressure-actuated means for causing the device to occupy an abnormal position, a catch for retaining the device in the abnormal position, and fluid-pressure-actuated means for causing the catch to release the device, of a pipe or conduit provided with a valve and having branch passages whereby fluid-pressure may be applied to the respective means, the branch passage to the former means being provided with a pressure-retarding or reducing means.

[Claims 6 and 7 not printed in the Gazette.]

879,268. SHELF-GRATING FOR STOVES, &c. JAMES JAMIESON, Hamilton, Ontario, Canada. Filed Oct. 4, 1907. Serial No. 395,936.



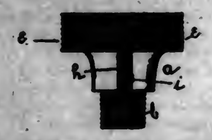
1. A shelf grating for the purpose described, embodying a substantially rectangular peripheral frame formed of a single metal rod with the ends connected together, flat metal bridging strips with the ends encircling opposite sides of the peripheral frame and a transverse strip engaging the bridging strips and having its ends connected with the peripheral frame; substantially as described.

2. A shelf grating for the purpose described, embodying a substantially rectangular peripheral frame formed of a metal rod with its ends located in one of the straight sides and a series of flat strip metal bridging strips with the ends encircling opposite sides of the peripheral frame, one of said strips encircling both ends of the rod to connect the same.

3. A shelf grating for the purpose described, embodying a substantially rectangular peripheral frame formed of a metal rod with its ends located in one of the straight sides and having notches in proximity to said ends, and a series of flat strip metal bridging strips with their ends encircling opposite sides of the peripheral frame, one of said strips encircling both ends of the rod and being swaged into the notches therein to connect the said ends.

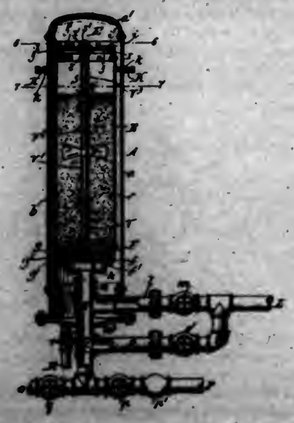
4. A shelf grating for the purpose described embodying a peripheral frame formed of a metal rod, a series of flat strip metal bridging strips with their ends encircling opposite sides of the peripheral frame, a transverse flat metal strip connected with the peripheral frame and lugs connecting the bridging and transverse strips.

879,269. LUBRICATOR. FLOYD F. JOHNSON, Rockton, Ill. Filed Sept. 3, 1907. Serial No. 391,017.



In a lubricator, the combination with a cap having a threaded interior, of a cup the outer top portion of which is formed with continuous threads adapted to engage said threaded interior; the portion of said cup below said top portion being formed with wings separated at their outer ends from each other by open spaces and having their outer end faces threaded to engage said threaded interior; the edges of said threaded end faces serving to scrape the dirt from the threads of said interior into said open spaces.

879,270. FILTER. JOHN R. JUDGE, Buffalo, N. Y. Filed Nov. 5, 1906. Serial No. 341,974.



1. A filter comprising an outer inclosing shell, an imperforate inner shell arranged within the outer shell and separated therefrom by an annular space, said inner shell being adapted to contain a body of filtering material, screens arranged at the upper and lower ends of said inner shell, a water delivery chamber arranged wthin the lower part of the outer shell and connected with the inner shell below its lower screen, an upright water delivery pipe connected at its upper end with said chamber and at its lower end with the bottom of the outer shell, and a water supply pipe arranged concentrically around the delivery pipe and communicating with the space between the shells, substantially as set forth.

2. A filter comprising an outer inclosing shell, an imperforate inner shell arranged within the outer shell and separated therefrom by an annular space, said inner shell being adapted to contain a body of filtering material, screens arranged at the upper and lower ends of said inner shell, a water delivery chamber arranged within the lower part of the outer shell and connected with the inner shell below its lower screen, an upright water delivery pipe connected at its upper end with said chamber and at its lower end with the bottom of the outer shell, and a water supply pipe, arranged concentrically around the delivery pipe and opening upwardly into the space between said shells, substantially as set forth.

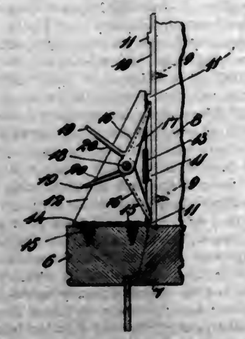
3. A filter comprising an outer inclosing shell, an imperforate inner shell arranged within the outer shell and separated therefrom by an annular space, said inner shell being adapted to contain a body of filtering material, screens arranged at the upper and lower ends of said inner shell, a water delivery chamber arranged within the lower part of the outer shell and connected with the inner shell below its screen, an upright water delivery pipe connected at its upper end with said chamber and at its lower end with the bottom of the outer shell, and a water supply pipe extending transversely through the side of the outer shell at the lower end thereof and having an upwardly extending part which is arranged concentrically around the delivery pipe and opens upwardly into the space between said shells at the bottom thereof, substantially as set forth.

4. A filter comprising an outer imperforate inclosing shell, an inner imperforate shell arranged within the outer shell and separated at its underside from the bottom of the outer shell by a sediment precipitating space while its side is separated from the side of the inclosing chamber by an annular water passage, screens arranged at the upper and lower ends of the inner shell, a body of granular filter material arranged only within the lower part of the inner shell while the upper part thereof is unoccupied by filtering material, a water supply pipe connected with the outer shell, a delivery chamber connected with the inner shell below its lower screen, a water delivery pipe connected with said chamber, and an agitator arranged within the inner shell and comprising an upright non-rotatable rod connected at its upper and lower ends with said upper and lower screens, and blades mounted at different heights on said rod, substantially as set forth.

5. A filter comprising an upright receptacle for holding a body of granular filtering material a screen arranged at the lower end of said receptacle, an upright rod secured at its lower end to said screen, and a plurality of fixed agitating blades mounted at different elevations on said rod, spacing sleeves arranged on said rod and alternating with said blades, and means for interlocking said rod spacing sleeves and blades, substantially as set forth.

[Claim 6 not printed in the Gazette.]

879,271. SASH-FASTENER. JOHN B. KELLEY, Chicago, Ill. Filed Nov. 14, 1907. Serial No. 402,135.



1. A sash fastener comprising a rack secured to the stile of one sash and having lugs with shoulders presented both upwardly and downwardly, a frame having upright side plates secured to the other sash, and a pair of spring catches pivoted together between said side plates and presented oppositely, upwardly and downwardly, and arranged to engage between separate lugs on the rack.

2. A sash fastener comprising a rack secured to the stile of the upper sash, a frame secured upon the top rail of the lower sash and having side plates connected by a pivot bolt, a pair of catches located between the plates and having flanges at the side edges through which the pivot bolt extends the points of the catches being presented respectively upwardly and downwardly to engage the rack, and a spring coiled around the bolt and bearing against the catches to cause the same to engage the rack.

879,272. COMBINED SHOE LACING AND TONGUE HOLDER. CALVIN J. KEY, Macon, Ga., assignor of one-half to Jesse B. Key, Augusta, Ga. Filed July 26, 1907. Serial No. 385,742.



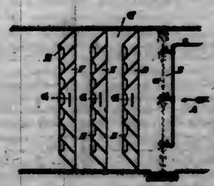
1. A shoe attachment comprising a lacing clamping member provided with a crotched terminal and a knot-engaging member having a hook terminal disposed over the clamping member.

2. A shoe attachment comprising a lacing clamping member having an out-turned upper terminal formed with a crotch, and a knot engaging member having a hook disposed over the terminal and provided with an intermediate reduced portion.

3. The combination with a shoe tongue, of a lacing clamping member comprising a resilient plate provided with a crotched upper terminal, a knot engaging member having a hook disposed over the terminal, and means for securing the two members to the tongue.

4. The combination with a shoe tongue, of a lacing clamping member provided with a crotched terminal, a knot-engaging member having an intermediately reduced hook terminal disposed over the crotched portion of the clamping member, a plate disposed on the rear side of the tongue, and rivets passing through the two members and the plate to hold the parts assembled.

879,273. AIR-PURIFYING APPARATUS. JOHN H. KINEALY, Ferguson, Mo. Filed Sept. 5, 1905. Serial No. 277,016.



1. In combination in an air purifying apparatus, a thoroughfare for the air, a washer, and a water eliminator consisting of tubes larger at one end than the other, said tubes being provided each with a lip at the end farthest from the washer and arranged in sections, and the tubes of each section being concentric, substantially as described.

2. In combination in an air purifying apparatus, a thoroughfare for the air, a washer, and a water eliminator consisting of tubes of the shape of a frustum of a cone, having each a lip at the end farthest from the washer and arranged in sections, and the tubes of each section being concentric, substantially as described.

3. In combination in an air purifying apparatus, a thoroughfare for the air, means for forming a transverse wall of downward falling water in a sprayed or finely divided condition, and a water eliminator consisting of tubes larger at one end than the other, said tubes being provided each with a lip at the end farthest from the wall of water and arranged in sections, and the tubes of each section being concentric, substantially as described.

4. In combination in an air purifying apparatus, a thoroughfare for the air, means for forming a transverse wall of downward falling water in a sprayed or finely divided condition, and a water eliminator consisting of tubes of the shape of a frustum of a cone provided each with a lip at the end farthest from the wall of water and arranged in sections, and the tubes of each section being concentric, substantially as described.

5. In combination in an air purifying apparatus, a thoroughfare for the air, means for forming a transverse wall of downward falling water in a sprayed or finely divided condition, and a water eliminator consisting of tubes of the shape of a frustum of a cone provided each with a lip at the end farthest from the wall of water and arranged in sections, the tubes of each section being concentric, and the middle tube having a center plate, substantially as described.

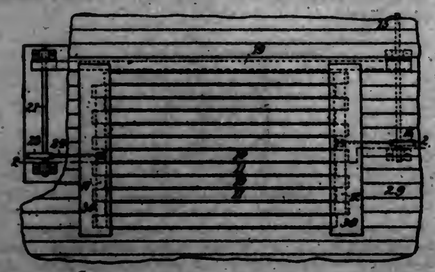
[Claims 6 and 7 not printed in the Gazette.]

879,274. FRICTION COUPLING OR CLUTCH. CHRISTIAN KRÄMER, Frankfort-on-the-Main, Germany, assignor to Fulten & Guilleaume-Lahmeyerwerke Actien-Gesellschaft, Frankfort-on-the-Main, Germany. Filed Jan. 25, 1907. Serial No. 354,107.



In a friction clutch, the combination with a metal driving surface and a metal driven surface, of a non-metallic body loosely mounted between and adapted to contact with both said driving and driven surfaces, substantially as and for the purpose described.

879,275. AMUSEMENT-WALK. GASTON LACOMME, New York, N. Y., assignor of one-half to Edward C. Eustace, New York, N. Y. Filed Oct. 11, 1907. Serial No. 396,903.



1. An amusement walk comprising a series of parallel members arranged side by side, and means for imparting different reciprocating sliding movements within a common plane to said members, substantially as specified.

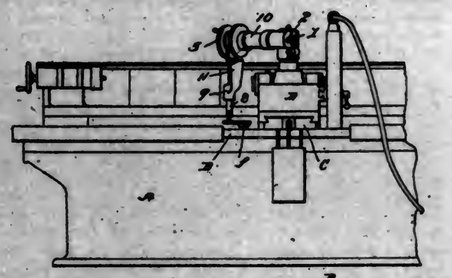
2. An amusement walk comprising a series of parallel members arranged side by side, and means for slidably reciprocating adjoining members in opposite directions, within a common plane substantially as specified.

3. An amusement walk comprising a first set of connected members, a second set of connected members intervening between the members of the first set, and arranged side by side therewith and means for slidably reciprocating said sets in opposite directions, within a common plane substantially as specified.

4. An amusement walk comprising a first set of connected members, a second set of connected members intervening between the members of the first set, means for simultaneously reciprocating said sets in opposite directions, a floor having a well accommodating the walk, and foot plates projecting from the floor over the ends of the members, substantially as specified.

5. An amusement walk comprising a series of parallel members, means for reciprocating the members in opposite directions, guide-rods secured to the members, and perforated bearings accommodating said rods, substantially as specified.

879,276. GRINDING-MACHINE. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed Dec. 1, 1906. Serial No. 345,882.



1. In a grinding machine, the combination with the automatic feed mechanism, of means for operating the same comprising a vertically movable table carried by the carriage, a double faced cam for operating said movable table adapted to move with said carriage during the greater extent of its movement, and means for locking said cam momentarily at each reversal of the movement of said carriage, substantially as set forth.

2. In a grinding machine, the combination of the automatic feed mechanism, means for operating the same at the reversal of the carriage comprising a part mounted upon a movable plunger carried by the carriage, a cam for operating said plunger, and means for locking said cam from movement with said carriage at each reversal of said carriage, substantially as set forth.

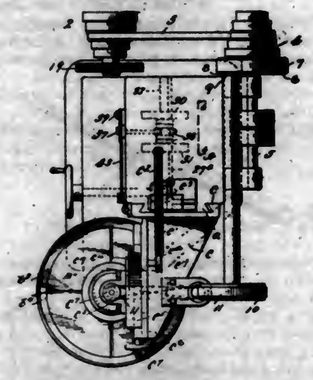
3. In a grinding machine, the combination of the automatic feed mechanism, means for operating the same, comprising a part carried by a plunger mounted to slide in suitable bearings in the carriage, a cam adapted to operate said plunger and mounted to move with said carriage, and means for locking said cam at each reversal of the movement of said carriage, substantially as set forth.

4. In a grinding machine, the combination with the automatic mechanism for feeding the grinding wheel to the work, means for operating said mechanism at each reversal of the movement of the carriage, comprising a part carried by a plunger mounted to slide in a bearing in said carriage, a roller in one end of said plunger, a cam mounted to move with the carriage and adapted to be locked to the bed of the machine momentarily at each reversal of said carriage, whereby said roller will pass over said cam and operate said plunger, substantially as set forth.

5. In a grinding machine, the combination of the mechanism for feeding the grinding wheel automatically to the work, means for operating said mechanism comprising a part carried on a plunger mounted in a bearing in the carriage, said plunger having a roller journaled thereon, said bearing having another roller journaled therein a short distance from said first roller, a bar having a double faced cam on each edge mounted between said rollers, said bar being mounted to move with said carriage throughout the extent of its traverse back and forth, and means for locking said bar to the bed of the machine momentarily at each reversal of the traverse of the carriage, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

879,277. GRINDING-MACHINE. ABRAHAM B. LANDIS, Waynesboro, Pa. Filed July 5, 1906. Serial No. 324,858.



1. A grinding wheel comprising a supporting frame having a vertical way or track thereon, a grinding wheel carriage mounted to slide vertically on said way or track, a slider on said grinding wheel carriage mounted to slide transversely thereof, a grinding wheel spindle mounted in bearings on said slider, a rotary table for supporting the work, and the various operating mechanisms, substantially as set forth.

2. In a grinding machine, the combination of the supporting frame, the grinding wheel carriage mounted to slide vertically on said frame, means for traversing said carriage up and down, the slider mounted on said carriage to slide transversely thereof, means for sliding said slider, the grinding wheel spindle mounted in bearings on said slider, the grinding wheel on said spindle, means for driving the same, the work supporting table, and means for rotating said table, substantially as set forth.

3. In a grinding machine, the combination, of the supporting frame, the grinding wheel carriage mounted to slide vertically on one side of said frame, the slider mounted to slide transversely on said carriage, the grinding wheel spindle journaled in bearings on said slider, the grinding-wheel on said spindle, and means for traversing said carriage, adjusting said slider and driving said grinding-wheel, substantially as set forth.

4. In a grinding machine, the combination, of the supporting frame, the grinding wheel carriage mounted to slide vertically on one side of said frame, traversing mechanisms for said carriage, the slider mounted to slide transversely on said carriage, means for adjusting said slider, the grinding wheel carried by said slider, means for driving said grinding wheel, the work support, and means for rotating said work support, substantially as set forth.

5. In a grinding machine, the combination, of the supporting frame, the work-holding table mounted on a hollow-spindle in bearings on one side of said frame, the top of said table having slots inclined toward its center and having a perforation leading to the hollow spindle, a gear on said table, a driving shaft having a gear meshing with said gear, work holding clamps on the top of said table, the carriage, the mechanism for traversing said carriage up and down, the slider, means for sliding said slider transversely, the grinding-wheel on said slider, and means for driving said grinding wheel, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

879,278. BOBBIN FOR COTTON-LOOMS. JOSEPH E. LEMYRE, Manchester, N. H. Filed Mar. 9, 1907. Serial No. 361,490.

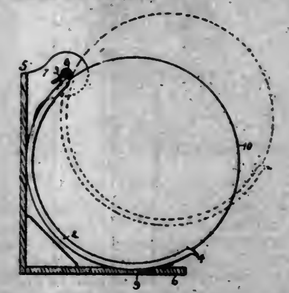
1. A bobbin of the character described comprising, a spindle provided with a suitable head and with a longitudinal slot near said head; a sleeve on said spindle between the slot and the head; and an ear or projection extending from the inner end of the sleeve in a straight longitudinal line for an appreciable distance from the said end of the sleeve and thence bending inward into the slot, for the purpose set forth.



2. A bobbin of the character described comprising, a spindle provided with a suitable head and with a longitudinal slot near said head; a sleeve and said spindle between the slot and the head; and an ear or projection extending from the inner end of the sleeve in a straight longitudinal line for an appreciable distance from the said end of the sleeve and thence bending inward at substantially right angles into the slot, whereby a shoulder is provided at a distance from the sleeve for keeping the thread when it is nearly unwound from contact therewith.

3. A bobbin of the character described comprising, a spindle provided with a suitable head and with a longitudinal slot near said head; a sleeve on said spindle between the slot and the head; and an ear or projection extending from the inner end of the sleeve in a straight longitudinal line for an appreciable distance from the said end of the sleeve and thence bending inward into the slot, the longitudinal portion of the ear connecting the inturned ends with the sleeve being comparatively broad, for the purpose set forth.

879,279. MUSICAL-RECORD HOLDER. GUNNAR G. LINDSTROM and JOSEPH WALLIN, Rockford, Ill. Filed Sept. 9, 1907. Serial No. 392,042.



1. An individual musical record holder in groove form and comprising a segment of a circle and provided with suspending means.

2. An individual musical record holder in groove form comprising a segment of a circle and formed with a hook at one end.

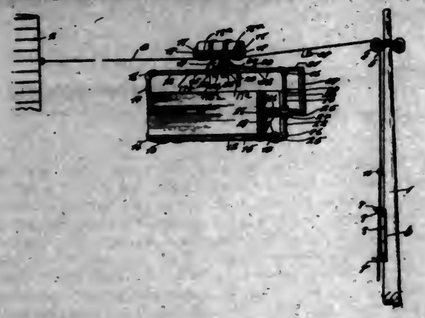
3. The combination of a support, a rod held by the support, and a plurality of individual musical record holders, each provided with a hook at one end and adapted to engage the rod, the support provided with a recess within which the holders are located to prevent lateral movement of the holders.

4. An individual musical record holder in groove form comprising a segment of a circle and formed with a hook at one end and a projection at its other end.

879,280. TRAMWAY. PETER M. LOBERG, Homestead, N. D. Filed Oct. 16, 1907. Serial No. 397,628.

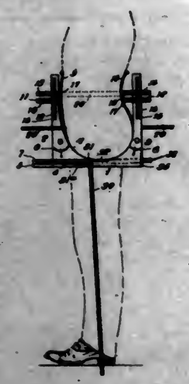
A device of the character described, comprising a tram wire or cable suitably supported in stretched position, a trolley mounted to travel upon said wire or cable, a frame having a fixed suspended connection with said trolley, a conveying receptacle having pivotal connection with the lower horizontal member of said frame, said frame having one of its vertical members provided with a tubular part or

sleeve intermediate its ends, a trip lever fulcrumed upon the connection between said trolley and said frame, a retaining bolt for said conveying receptacle arranged to have a sliding movement in said tubular part or sleeve, and



means effecting connection between said bolt and said trip-lever adapted to hold said bolt in effective position, said cable or wire being equipped with a cam stop for engagement with said trip-lever.

879,281. MEASURING DEVICE FOR TAILORS' USE. MICHAEL LO CELSO, Chicago, Ill. Filed Mar. 14, 1907. Serial No. 362,383.



1. A device of the character described, comprising a frame embodying a base plate and front and rear beams, spring tapes secured to the respective beams and adapted to be sprung inwardly towards each other, arms mounted on said beams and adapted to press said tapes inwardly, and means for holding said arms at different positions with respect to the beams, both longitudinally and laterally considered.

2. A device of the character described, comprising a frame embodying a base plate and front and rear beams, spring tapes connected to said beams, means for pressing said tapes towards each other, each tape being provided with a longitudinal slot, and tape measures provided at one end with studs slidingly mounted in said slots.

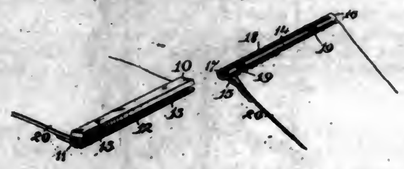
3. A device of the character described, comprising a frame embodying a base plate and beams connected thereto, spring tapes connected to said beams, arms adapted to press said tapes inwardly, hooks formed on said arms, and a waist-belt adapted to be engaged by said hooks.

4. A device of the character described, comprising a frame embodying a base plate and front and rear beams connected thereto, hooked arms mounted upon the respective beams, and a waist belt adapted to be engaged by said hooks.

5. A device of the character described, comprising a frame embodying a base plate and front and rear beams connected thereto, and a spirit level pivotally mounted upon said base plate, the latter being provided with a scale with which the spirit level is adapted to coact.

[Claims 6 to 8 not printed in the Gazette.]

879,282. CLASP. IRVING MANDEVILLE, Newark, N. J., assignor to Durand & Co., Newark, N. J., a Corporation of New Jersey. Filed Jan. 7, 1907. Serial No. 351,092.



1. A clasp comprising a member having inwardly inclined ribs on the back thereof whereby the member hides the ribs, a bar secured to the ribs, and a second member comprising a tubular portion having a longitudinal slot and having transverse recesses opening into the slot, the recess being adapted to receive the ribs of the first member, the clasp when assembled having the first member disposed to cover the second member and the bar.

2. A clasp comprising a member, as 10, having inwardly inclined ribs on the back thereof, a bar secured to the ribs, a second member comprising a tubular portion having a longitudinal slot and having recesses opening into the slot, the recesses being adapted to receive the ribs of the first member, and wings on the members for securing them to the elements to be joined, the members being locked when the wings are in line, the first member acting as a cover for the clasp when it is locked.

879,283. PLEASURE-RAILWAY. THOMAS G. MAYBERRY and WILLIAM H. MAYBERRY, Reading, Pa. Filed Oct. 10, 1907. Serial No. 396,705.



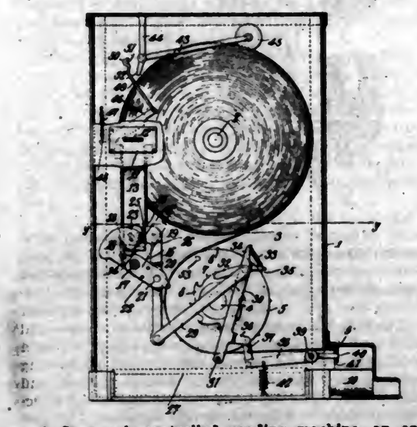
1. A pleasure railway comprising approximately parallel lines of track connected by a return bend, a car on said track provided with a depending belt-contacting arm, separate reversely-driven link-belts arranged to loosely engage said depending arm and thereby drive the car in opposite directions upon the parallel track portion, and a coöperating drive wheel having a series of peripheral arms swinging clear of the inner rail of the return bend and arranged to loosely engage an inner-side member on the car to drive the latter around the return bend substantially as set forth.

2. In a pleasure railway comprising a suitably supported submerged track with relatively elevated portions and inclines, and car propelling mechanism, a submergible car having a normally water-tight movable roof portion adapted to provide ingress and egress thereto when opened, and means for automatically moving said roof-portion to respectively close the same in descending an incline and open the same in ascending an incline.

3. In a pleasure railway comprising a suitably supported submerged track with relatively elevated portions and inclines, and car propelling mechanism, a submergible car having a normally water-tight movable roof portion adapted to provide ingress and egress thereto when opened, a lever pivoted to the car and adapted to control the opening and closing of said movable roof-portion, and a supplementary track having portions thereof out of parallel with the main track, the free end of said lever being arranged to ride upon said supplementary track and to be swung thereby so as to automatically open and close the movable roof portion as desired.

4. In a pleasure railway comprising a suitably supported submerged track, a car traveling on said track provided with an upwardly extending spouting-tube the lower end of which is arranged in communication with a submerged pump chamber on the car, a spring-pressed piston in said chamber having a projecting piston rod, and suitably located track projections adapted to engage said rod and automatically operate said pump during the passage of the car substantially as set forth.

879,284. TICKET-VENDING MACHINE. WILLIAM C. MAYO and JOHN HOULEHAN, El Paso, Tex., assignors of one-third to George E. Briggs, El Paso, Tex. Filed Feb. 2, 1907. Serial No. 355,458.



1. In a coin-controlled vending machine, an operating lever, a dog carried thereby and provided with a cam-face cheek terminating in a nose, and a lever connected to the vending mechanism and provided with a cheek coacting with the cheek on the dog to constitute a receptacle for a coin, said lever being also provided with a lug and arranged to be moved by the said dog through the intermediary of an inserted coin to bring the cam face into engagement with the lug to accelerate the speed of the lever and thereby release the coin.

2. In a coin-controlled vending machine, a coin conduit, a pivoted dog having a cheek terminating in a cam face and arranged to traverse the coin conduit, an operating means exterior to the machine and connected to said dog, and a pivoted member connected to the vending mechanism and having a head provided with a cheek normally overlapping the cheek on the dog but spaced therefrom to form a receptacle between the two cheeks, for a coin, said pivoted member also being provided with a lug in the path of the cam face on the dog.

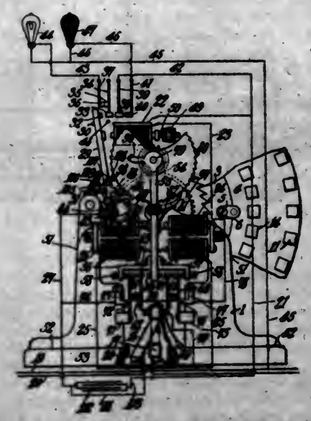
3. In a coin-controlled vending machine, a pivoted dog normally within a coin conduit and having a cheek formed on one side, with the body of the dog adjacent to the cheek curved to constitute a pocket to receive the edge of a coin, and a pivoted member connected to the vending mechanism and also having a cheek normally overlapping the cheek on the dog but spaced therefrom, said space constituting a pocket for the reception of the coin between the dog and the pivoted member.

4. In a vending machine, a coin conduit, a pivoted dog having formed on one side a cheek normally extending into the coin conduit, said dog having its edge adjacent to the cheek curved to constitute a pocket to receive the edge of a coin and terminating at its upper end in a sharp edge and said dog being arranged to traverse the coin conduit, and a pivoted member connected to the vending mechanism and provided with a head between which and the dog an inserted coin is grasped.

5. In a coin controlled vending machine provided with a coin chute and containing the material to be vended in the form of a roll, a follower having a slow progressive movement caused by the reduction in diameter of the roll, a shutter for the coin slot at the entrance of the coin chute, normally out of engagement therewith and locked against movement, actuating means for the shutter individual thereto for causing a quick traverse of the shutter across the coin slot, and means on the follower active at the completion of its movement when the roll is exhausted to then unlock the shutter to the control of the individual actuating means therefor.

[Claim 6 not printed in the Gazette.]

879,285. AUTOMATIC MULTIPLE FUSE-BLOCK. WILLIAM C. MAYO and JOHN HOULEHAN, El Paso, Tex., assignors of one-third to George E. Briggs, Barstow, Tex. Filed May 2, 1907. Serial No. 371,498.



1. In an automatic fusible cut-out system for electric power circuits, a series of fuses interposable in succession into the power circuit, a shunt circuit around the fuse in the power circuit for maintaining the latter intact when a fuse is blown and during the introduction of a fresh fuse, and means operated by the current diverted into the shunt circuit by the blowing of a fuse to automatically cut in a fresh fuse.

2. In an automatic fusible cut-out system for electric circuits, a series of fusible cut-outs arranged for successive introduction into the power circuit, a shunt circuit around the fusible cut-outs, and means included in said shunt circuit for introducing a new fuse, said means being responsive to and operated by the current diverted into the shunt circuit by the blowing out of the fuse.

3. In an automatic fusible cut-out system for electric circuits, a main power circuit, a series of fuses introduceable in succession into said power circuit, a shunt circuit around the active fuse included in the power circuit, means for introducing a new fuse into the power circuit in place of a burned out fuse and operated by current diverted into the shunt circuit by the burning out of a fuse, and means for indicating the condition of the circuits also operated by the current in the shunt circuit.

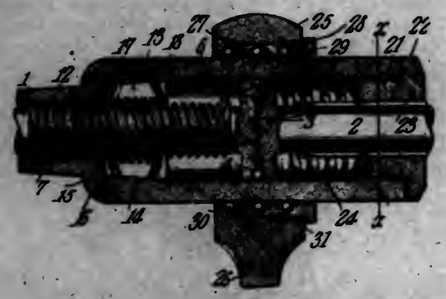
4. In an automatic fusible cut-out system for electric circuits, a main power circuit, a series of fuses introduceable in succession in the main power circuit, a shunt circuit around the active fuse and carrying a very small part of the power current when the fuse is blown, means for introducing fresh fuses into the power circuit operated by the current in the shunt circuit, indicating devices in said

shunt circuit, and means operated by the current in said shunt circuit and sensitive to variations therein to operate the indicating devices.

5. A multiple fuse block comprising a circular series of fuse-carriers, electric circuit terminals in the path thereof, and means for rotating the fuse-carriers to bring the fuses in succession to bridge the electric circuit terminals, comprising a pivoted armature, electro-magnets arranged to pull the armature in opposite directions, circuit terminals under the control of the armature for diverting the current in succession to the magnets in proper sequence to oscillate the said armature between the magnets, gearing operated by said armature, and a timed escapement between said gearing and the fuse-carrier for holding the latter against a rotative force and then releasing the said fuse-carrier.

[Claims 6 to 16 not printed in the Gazette.]

879,286. YIELDING POWER-COUPLING. WILLIAM C. MAYO and JOHN HOULEHAN, El Paso, Tex., assignors of one-third to George E. Briggs, Barstow, Tex. Filed May 7, 1907. Serial No. 372,337.



1. A power transmission device comprising a drive shaft, a driven shaft in alinement therewith, a member connected for rotation to and slidable on the driven shaft, a spring interposed between the driven shaft and the slidable member and inclosed by the latter, and a screw connection between the drive shaft and the slidable member.

2. A power transmission device comprising a drive shaft; a driven shaft having one end contiguous to the corresponding end of the drive shaft, anti-friction bearings between the meeting ends of the two shafts, a member connected for rotation to and slidable on the driven shaft, a spring interposed between the driven shaft and the slidable member and inclosed by the latter, and a screw connection between the drive shaft and the slidable member, having threads coupled by anti-friction balls.

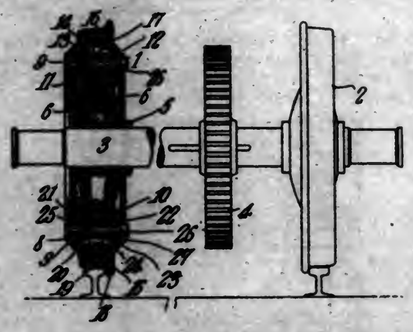
3. A power transmission device comprising a drive shaft having screw-threads formed thereon, a driven shaft in line with the drive shaft, a cylinder or sleeve surrounding the meeting ends of the two shafts and connected for rotation with and slidable on the driven shaft and also having a tapered interior portion adjacent to the drive shaft, a spring interposed between the driven shaft and the cylinder, and a nut surrounding the threaded portion of the drive shaft and tapered to seat in the tapered portion of the cylinder.

4. A power transmission device comprising a drive shaft threaded at one end, a driven shaft in line therewith and having one end contiguous to the drive shaft and there provided with an expanded head, a cylindrical member fast for rotation with but slidable on the driven shaft, a spring interposed between the expanded head of the driven shaft and the corresponding end of the slidable member, and a nut surrounding the threaded end of the drive shaft and contained in and acting on said slidable member to move it longitudinally with relation to the shafts in opposition to the action of the spring.

5. A power transmission device comprising a drive shaft having a threaded end, a driven shaft in line therewith, a cylindrical member connected to the driven shaft for rotation therewith but slidable longitudinally thereon, a spring interposed between the end of the driven shaft and the corresponding end of the cylindrical member, and a nut carried by the threaded end of the drive shaft, the said slidable member and nut coacting for frictional engagement one with the other to impart motion from the drive shaft to the said slidable member.

[Claims 6 to 9 not printed in the Gazette.]

879,287. CAR-WHEEL. WILLIAM C. MAYO and JOHN HOULEHAN, El Paso, Tex., assignors of one-third to George E. Briggs, Barstow, Tex. Filed May 7, 1907. Serial No. 372,338.



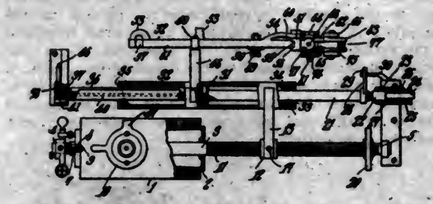
1. In a car wheel, a body portion, a rim portion rotatable circumferentially around the body portion, the contiguous faces of the body and rim portions being provided with circumferential seats having central portions concentric with the axis of the wheel and tapered edges of greater area than the concentric portion, rollers interposed between the rim and body portions, each roller having a cylindrical center bearing portion and conical end bearing portions of greater area than the cylindrical portion, and means for adjusting the seats for the rollers in the direction of the axis of the latter to take up wear.

2. A car wheel composed of a body portion, removable wearing rings applied thereto and having their outer faces formed with grooves coacting to constitute a circumferential seat having a cylindrical center portion and tapered side portions, rollers seated in the wearing rings, each roller having a cylindrical central bearing face and conical end bearing faces of greater area than the cylindrical face, a rim section applied to the rollers and having an interior circumferential seat for the rollers, said seat having a cylindrical center portion and tapered side portions of greater area than the center portion, and a cheek plate removably secured to the body portion of the wheel for holding the wearing rings and rim section thereto.

3. A car wheel comprising a body portion, wearing rings seated on the periphery thereof, thin, removable washers interposed between the meeting faces of the wearing rings, a removable check plate for holding the wearing rings in place, thin, removable washers interposed between the cheek plate and the body portion, a rim portion circumferentially movable about the body portion and held thereto by the cheek plate, and rollers interposed between the rim portion and the wearing plates on the body portion.

4. A car wheel comprising a body portion, wearing rings seated on the periphery of the body portion, thin, removable washers between the meeting faces of the wearing rings, rollers on said wearing rings, a rim section carried by said rollers, a cheek plate applied to the body portion and retaining the wearing rings and rim section in place, other thin, removable washers between the cheek plate and the body portion, bolts extending through the body portion and the cheek plate, a locking ring engaging the nuts of all the bolts, and means for securing said locking ring to the body portion of the wheel.

879,288. ANNUNCIATOR. WILLIAM C. MAYO and JOHN HOULEHAN, El Paso, Tex., assignors of one-third to George E. Briggs, Barstow, Tex. Filed May 22, 1907. Serial No. 375,090.



1. In an annunciator, a phonographic reproducer, a motor for driving the same, an escapement for releasing the motor to cause the phonographic reproducer to reproduce a portion only of the record, means for operating said escapement at predetermined intervals, and means independent of the driving motor for the reproducer for automatically returning the producer mechanism to the initial position after having completed the entire reproduction from the record tablet.

2. An annunciator comprising a phonographic reproducer, a compressed air motor therefor, a train of gear driven by the compressed air motor and in turn driving the phonographic reproducer mechanism, a toothed member actuated by said gear train, a brake mechanism controlling the gear train, and an escapement mechanism coacting with the toothed member and the brake for releasing the motor to a predetermined limited extent of movement.

3. An annunciator comprising a phonographic reproducer, a reciprocating, compressed-air motive element, a gear train between the motive element and the phonographic reproducer mechanism, and connections between the motive element and the gear train for imparting motion thereto in one direction only.

4. An annunciator comprising a phonographic reproducer, a reciprocating, compressed-air motive element, a gear train between the motive element and the phonographic reproducer mechanism, connections between the motive element and the gear train for imparting motion thereto in one direction only, and means for automatically returning the motive element to its initial position.

5. In an annunciator, a phonographic reproducer, a gear train connected thereto, a compressed-air motive element having an active movement in one direction for impelling the gear train and an inactive movement in the other direction, means for automatically directing compressed air to cause the active movement of the motive element and inactive movement thereof in sequence, and an escapement for the gear train releasing the same to move at any one time for a portion only of the extent of travel of the power stroke of the motive element.

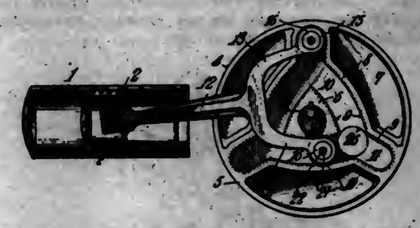
[Claims 6 to 20 not printed in the Gazette.]

879,289. MEANS FOR CONVERTING RECIPROCATORY MOTION INTO ROTARY MOTION. WILLIAM C. MAYO and JOHN HOULEHAN, El Paso, Tex., assignors of one-third to George E. Briggs, Barstow, Tex. Filed June 26, 1907. Serial No. 380,985.

1. A means for converting reciprocatory motion into rotary motion, or the reverse, comprising a shaft, a rotative member fast thereon and having a triarcal groove formed therein and entirely surrounding the shaft, a reciprocating member, and connections therefrom to the groove, engaging the latter on both sides of the shaft.

2. A means for converting reciprocatory motion into rotary motion, or the reverse, comprising a shaft, a rotative member fast thereon and having a triarcal groove entirely surrounding the shaft and formed at its meeting points with radial extensions, a reciprocating member, and connections therefrom to the groove, engaging the latter on both sides of the shaft.

3. A means for converting reciprocatory motion into rotary motion, or the reverse, comprising a shaft, a rotative member fast thereon and having a triarcal groove entirely surrounding the shaft and formed with facing tongues at its upper edge, rollers in the groove and provided with peripheral grooves engaged by the tongues, a reciprocating member, and connections therefrom to the rollers in the groove.



4. A means for converting reciprocatory motion into rotary motion, or the reverse, comprising a shaft, a rotative member fast thereon and provided with a triarcal groove surrounding the shaft, a reciprocating member, and a forked connection having arms of sufficient length to straddle the shaft at the extreme limit of movement of the reciprocating member toward the shaft, such arms having connections engaging the groove on opposite sides of the shaft.

5. A means for converting reciprocatory motion into rotary motion, or the reverse, comprising a shaft, and a rotative member fast thereon and provided with a triarcal groove surrounding the shaft and having radial extensions at its meeting angles.

[Claims 6 to 12 not printed in the Gazette.]

879,290. NUT-LOCK. WILLIAM C. MAYO, El Paso, Tex., assignor of one-third to George E. Briggs, Barstow, Tex., and one-third to John Houlehan, El Paso, Tex. Filed Sept. 12, 1907. Serial No. 392,589.



1. A nut lock comprising a split ring and an outer peripheral seat for the ring formed on the member held by the nuts, the ring, when in the seat, having its inner edge in close relation to the nuts.

2. A nut lock comprising an element engaged by a series of nuts, an incomplete ring on said element having its ends spaced apart and its inner face in close relation to the nuts, and means on the element for preventing the expansion of the ring when in operative relation to the nuts.

3. A nut lock comprising a split ring having its inner edge in close relation to the nuts and its ends contiguous but sufficiently spaced to permit the nuts to be turned, and means for preventing the radial expansion of the ring when in operative relation to the nuts.

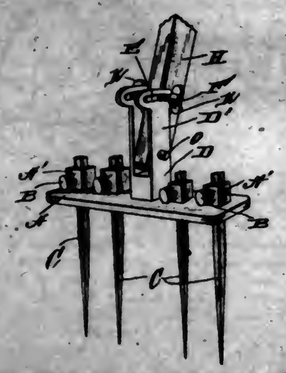
4. A nut lock comprising a split ring having its inner edge in close relation to the nuts and its ends contiguous but sufficiently spaced to permit the nuts to be turned, and means for preventing the ring from expanding radially outward and from moving in a plane at right angles to the radii of the ring.

5. A nut lock comprising a split ring and an outer pe-

ripheral seat for the ring formed on the member held by the nuts and in which seat the ring is rotatable, said ring, when in the seat, having its inner edge in close relation to the nuts.

[Claims 6 to 10 not printed in the Gazette.]

879,291. IMPLEMENT FOR CRUSHING CLODS OF EARTH, &c. DIEDRICH MEINEN, Walhalla, Tex. Filed Oct. 12, 1907. Serial No. 397,207.



1. A clod crushing device comprising a plate having teeth adjustably held thereon, a shank adjustably fixed to said plate, and a handle pivoted to said shank, as set forth.

2. A clod crushing device comprising a plate having an angular outline opening therein, a shank having a shoulder of angular outline conforming to the angular outline in which it is held, teeth adjustably fixed to said plate, and a handle pivoted to said shank, as set forth.

3. A clod crushing device comprising a plate having an angular outline opening therein, a shank having a shoulder of angular outline conforming to the angular outline in which it is held, teeth adjustably fixed to said plate, said shank being forked, a handle having lugs journaled in the arms of said forked member, and means for holding the handle at different angles to the shank, as set forth.

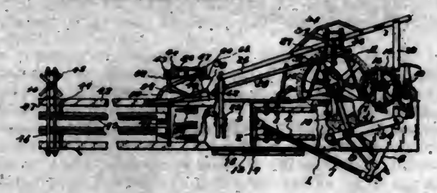
4. A clod crushing device comprising a plate having an angular outline opening therein, a shank having a shoulder of angular outline conforming to the angular outline in which it is held, teeth adjustably fixed to said plate, said shank being forked, a handle having lugs journaled in the arms of said forked member, the free ends of the arms of the forked member having curved slots, a screw passing through said slots, and an aperture in the handle, and adjusting nuts upon the threaded ends of said screw adapted to hold the handle in an adjusted position, as set forth.

5. A device for crushing clods comprising a plate having integral bosses with apertures therein, adjusting screws held in said bosses, spikes engaging the bosses and held by said screws, a shank on said plate having an angular outline shoulder and a screw projecting therefrom, said shoulder adapted to engage an angular outline opening in said plate, a bar fitted to said screw, and a handle pivotally and adjustably connected to said shank, as set forth.

879,292. BAILING-PRESS. WARD G. MERRALL, Onondaga, Ontario, Canada. Filed Mar. 5, 1907. Serial No. 360,727.

1. In a baling press the combination of a compression chamber having a feed opening in its upper side; a plunger movable in said chamber; a retainer located at the forward side of the opening, and adapted to lift to allow a charge to be forced past it; and spring actuated holding dogs located at each side of the chamber forward of the retainer a distance substantially equal to the thickness of a charge, substantially as described.

2. In a baling press the combination of a compression chamber; a plunger movable therein; a toggle-lever pivoted at one end on the frame of the machine and at the other to the plunger; a connecting rod pivoted on the toggle-lever at or near its center; a crank shaft journaled on the frame of the machine, the other end of the connecting rod being journaled on the crank of this shaft; a feeder-lever journaled on the frame; a feeder connected to the said lever; a cam on the crank shaft; and connections operable by the cam for rocking the feeder-lever, substantially as described.



3. In a baling press the combination of a compression chamber having an opening in its upper side; a feeder vertically movable through said opening; a feeder-lever pivoted on the frame of the machine and to which the feeder is connected; a rock arm pivoted on the frame; a link pivotally connected to the rock arm and feeder-lever; a slide-rod suitably guided and pivoted on the rock-arm; a shaft; and a cam on said shaft adapted to operate said slide-rod, substantially as described.

4. In a baling press the combination of a compression chamber having an opening in its upper side; a feeder vertically movable through said opening; a feeder-lever pivoted on the frame of the machine and to which the feeder is connected; a rock arm pivoted on the frame; a link pivotally connected to the rock arm and feeder-lever; a slide-rod suitably guided and pivoted on the rock-arm; a shaft; a cam on said shaft adapted to operate said slide-rod; a plunger movable in said compression chamber; a toggle-lever pivoted at one end on the frame of the machine and at the other on the plunger; a crank on the aforesaid shaft; and a connecting rod pivotally connected to the crank and to the toggle-lever at or near its center, substantially as described.

5. In a baling press the combination of a compression chamber having an opening in its upper side; a feeder vertically movable through said opening; a feeder-lever to which the feeder is connected; a fulcrum for the feeder-lever vertically movable against spring pressure; a rock arm pivoted on the frame; a link pivotally connected to the rock arm and feeder-lever; a slide-rod suitably guided and pivoted on the rock-arm; a shaft; and a cam on said shaft adapted to operate said slide-rod, substantially as described.

[Claim 6 not printed in the Gazette.]

879,293. RING TRAVELER. EDGAR L. MERROW, Providence, R. I., assignor to National Ring Traveler Company, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 27, 1905. Serial No. 252,218.

1. A ring traveler having a top provided with an inward bend, and relatively short sides terminating in inwardly bent horns, substantially as described.

2. A ring traveler having a top provided with an inward bend, with the inner portion of said bend at a relatively short distance from the plane of the horns, substantially as described.

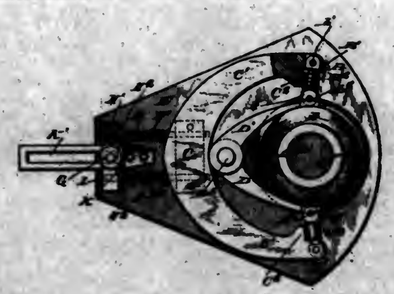
3. A reversible ring traveler, having a top provided with an inward bend substantially midway of its length and relatively short sides terminating in inwardly bent horns, with the inner portion of said bend at a relatively short distance from the plane of its horns, substantially as described.

4. The combination with a spinning ring, of a traveler having an inward bend in its top and relatively short sides whereby when the traveler tips the inner portion of



its bend will come in contact with the upper surface of the ring.

879,294. MOLD. WILLIAM J. MILLER, Coffeyville, Kans. Filed Feb. 4, 1907. Serial No. 355,570.



1. The combination of a base, a mold having detachable sections, a hinge for said mold having a pintle connected with the base and arms secured to their respective sections of the mold, a yoke having its arms rigid with each other and embracing the mold, links connecting the mold sections with the yoke arms and pivoted to such parts, said links being made in sections adjustably connected and the yoke being provided with shoulders to engage said links whereby to limit the advancing movement of the yoke, a reciprocating carrier for moving the yoke, and springs between the said carrier and yoke, substantially as set forth.

2. A mold made in detachable sections combined with a yoke movable bodily in a direction radial to the mold and having its arms rigid with each other and embracing the mold and arranged at the extremities of said arms to extend adjacent to or past the dead center of the mold and lock the sections thereof in closed position, substantially as set forth.

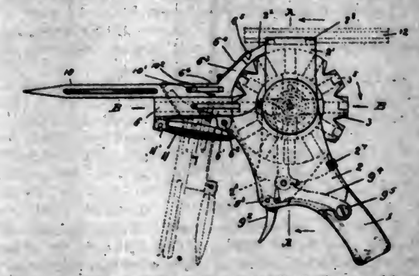
3. The combination with separable mold sections, of a yoke open at the end for opening and closing said sections and with the extremities of its open end movable in the closed position of the sections to a point adjacent to or past the dead center thereof whereby to lock the sections from opening until the yoke is retracted, substantially as set forth.

4. The combination of separable mold sections, and a yoke connected therewith to operate the same and open at one end and having its arms rigidly connected, and arranged at their extremities to operate the mold sections and means for moving the yoke in a direction radial to the mold, substantially as set forth.

5. The combination with separable mold sections, of a yoke open at one end and having its arms rigid with each other and free at one end and embracing the mold and connections between the free ends of the yoke arms and mold sections and pivotally connected with such parts, substantially as set forth.

[Claims 6 to 15 not printed in the Gazette.]

879,295. MAGAZINE-REVOLVER. AUGUST MOELLER, Chicago, Ill. Filed Mar. 18, 1907. Serial No. 362,831.



1. In a device of the class described the combination with a magazine chamber of a barrel hinged thereto, a revoluble magazine in said chamber and means operated by the passage of the ball through the barrel adapted to release the magazine and permit it to rotate.

2. In a device of the class described the combination with a magazine chamber, of a barrel hinged thereto, a spring operated magazine in said chamber, a spring detent adapted to hold the magazine in operative position and means thereon projecting through the side of the barrel and adapted to be acted on by the bullet in its passage through the barrel to release the detent from the magazine.

3. In a device of the class described the combination with a magazine chamber, of a barrel connected therewith, a magazine journaled in said chamber at right angles to said barrel and provided with a plurality of shoulders thereon, a coiled spring adapted to propel said magazine, a spring detent engaged at one end on the barrel and adapted to engage said shoulders at its other end, and a lug on said detent extending through the side of the barrel into its bore.

4. In a revolver the combination with a magazine chamber of a barrel thereon, a magazine journaled in said chamber at right angles to the barrel, a coiled spring connected therewith and with the wall of the chamber, a plurality of shoulders on said magazine, a spring detent carried on the barrel and adapted to engage said shoulders and hold the magazine from rotation, and a lug on said detent projecting into the side of the barrel and adapted to be forced outwardly by the exit of the ball.

5. In a device of the class described the combination with a magazine chamber of a barrel hinged thereto, a magazine journaled in said chamber and provided with a plurality of radial bores therein, means for locking the magazine from rotation in one direction and a lug extending into the bore of the barrel adapted to release said locking means.

[Claim 6 not printed in the Gazette.]

879,296. SELF-FILLING FOUNTAIN-PEN. FRANK H. MOONEY, Chicago, Ill. Filed Aug. 19, 1907. Serial No. 389,223.

1. A pen of the kind described, consisting of the barrel having a side aperture and interior tapering end; the penholder adapted to be rotatably supported in said end of said barrel, and to support a tube and ink chamber; the tube supported on said penholder, said tube being insertible in said barrel and rotatable therein, and having a side aperture adapted to register with said aperture in said barrel; and a collapsible ink chamber supported in said penholder and said tube; and the pressure bar affixed on

said ink chamber adapted to be actuated by pressure applied through said apertures in said barrel and tube.



2. In a pen of the kind described, the combination with the barrel, said barrel having a side aperture; of a pen holder rotatably supported in the end of said barrel, said penholder supporting a tube insertible and rotatable in said barrel, and having a side aperture, and a collapsible ink chamber inclosed in said tube and compressible by means insertible through said apertures in said barrel and tube.

3. In a pen of the kind described, the combination with a barrel having a side aperture, a pen holder movably supported in said barrel, a collapsible ink chamber attached to said pen holder and inclosed in said barrel, said chamber being compressible by means insertible through said aperture in said barrel; of a member movably supported in said barrel intermediate of said chamber and barrel, said member being in contact with said pen holder and movable with it and adapted when moved by said pen holder to close said aperture.

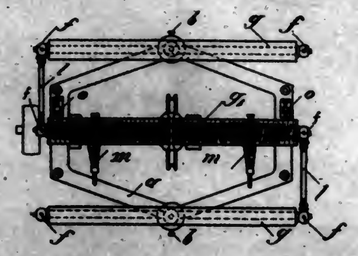
879,297. UTERINE CURETTE. FRANK T. M. MOORMEISTER, La Grande, Oreg. Filed Apr. 3, 1907. Serial No. 366,239.



1. An instrument of the character specified, comprising a tube having a handle at one end, a rod slidable within the tube and handle and provided at its outer end with a scraper or like blade and toggle levers arranged lengthwise of the tube and having connection at their ends with respectively the said rod and the handle portion of the tube, whereby upon exerting pressure on said toggle levers at a right angle to the length of the tube, the rod may be moved within the said tube to operate the scraper or blade to a greater or less extent.

2. An instrument of the character specified, comprising a tube having a handle at one end, a rod slidable within the tube, an expansible scraper or uterotome at the other end of said rod, a slide at the inner end of said rod and directed in its movements by a guide portion of said handle, and toggle levers connecting the slide and a portion of the handle whereby pressure upon the toggle levers effects movement of the rod within the tube to vary the size of the aforesaid uterotome.

879,298. CONTRIVANCE FOR FEEDING MOVING FABRICS INTO CALENDERING-MACHINES. WILHELM MÜLLER, Affoltern, Switzerland. Filed Nov. 15, 1906. Serial No. 343,615.



1. An apparatus for feeding webs of textile fabric to calenders and the like, comprising a main support, a plurality of frames pivoted upon vertical axes upon said support and having upwardly extending end portions, a single roller having its ends journaled in the upwardly extending arms of the outer supports, a single spreading member supported by the upwardly extending ends of the intermediate support, means interposed between said frames for maintaining the rollers in parallel position, and yielding means tending to hold said frames in neutral position, substantially as described.

2. An apparatus for feeding webs of textile fabric to calenders and the like, comprising a main support, a plurality of frames pivoted upon vertical axes upon said support and having upwardly extending end portions, a single roller having its ends journaled in the upwardly extending arms of the outer supports, a single spreading member supported by the upwardly extending ends of the intermediate support, said member having inclined grooves on each side of its center, the grooves of one side inclining in a direction opposite to the inclination of the grooves on the other side, means interposed between said frames for maintaining the rollers in parallel position, and yielding means tending to hold said frames in neutral position, substantially as described.

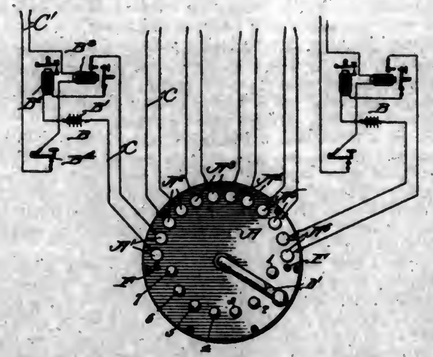
3. In combination, a main support, center and side U-shaped members pivotally carried thereby, a single spreading roller journaled in the central member and having inclined grooves, the grooves on one end inclining in the opposite direction from the grooves on the other end, means for driving said spreading roller, guide rollers journaled in the frames on the opposite side of the spreading roller, connections between the spreading and guide rollers for maintaining them parallel, and means for yieldingly holding said U-shaped members in neutral position, substantially as described.

879,299. SYRINGE. WILLIAM B. MURPHY, New York, N. Y. Filed Feb. 2, 1905. Serial No. 243,843.



A syringe comprising a nozzle having parallel passages for the injected and waste fluids, and having apertures in its walls for the discharge and admission of said fluids to such passages, the discharge apertures leading from the fluid injection passage being arranged to radiate therefrom at angles to each other at opposite sides of the waste passage.

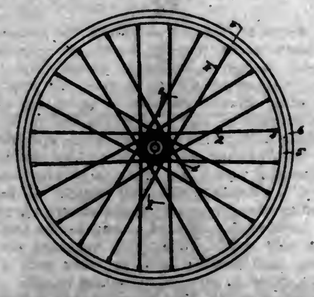
879,300. TELEGRAPH-SWITCHBOARD. ALBERT T. NEWMAN, Greeley, Kans. Filed Mar. 6, 1907. Serial No. 360,886.



1. A switch-board of the kind described comprising a fixed front portion, a plurality of binding posts carried thereby, said binding posts being arranged in the form of an arc, a shaft mounted in the switch-board, a handle secured thereto, a disk fixed to the shaft upon the rear side of the switch-board, contact wires carried by the rear face of the switch-board, and arranged in pairs corresponding to the pairs of the binding post, contact plates carried by the disk and arranged in an irregular curve upon the disk, said contact plates equaling in number the pairs of contact wires, and a radially extending contact strip also carried by the disk as and for the purpose set forth.

2. A device of the kind described comprising a switch-board having a plurality of binding posts arranged in pairs carried thereby, contact wires secured at one end to said switch-board, each wire being in circuit with one binding post, the free end portions of the wires being bent to form spring shoulders, a disk rotatably mounted adjacent said wires, a plurality of contact plates carried by the disk and adapted to simultaneously engage all of said shoulders when the disk is in one position and to be disengaged from said shoulders during all other positions of the disk, and a contact strip carried by the disk and adapted to successively engage the shoulders of each pair of wires as the disk is rotated step by step.

879,301. VEHICLE-WHEEL. NELSON A. NEWTON, Kalamazoo, Mich. Filed Aug. 16, 1906. Serial No. 330,890.



1. In a vehicle wheel, the combination of a rim or felly; a hub comprising a metal shell having a central raised portion and annular ribs or raised portions towards each end thereof, said rib portions having holes therein, the holes of each rib being arranged in a zigzag manner; a suitable boxing; a wood bushing, said boxing forced into said shell; inwardly projecting lugs in said shell adapted to engage said bushing; metal spokes threaded at their outer ends and having hooks at their inner ends, adapted to be inserted in the holes in said hub shell, the inner ends of said spokes adjacent to the hooks thereof being curved to conform to the hub, said spokes being arranged substantially tangential, those at one end of the hub being arranged tangentially opposite to those at the other; and nipples arranged through said rim threaded upon the outer ends of the spokes, for the purpose specified.

2. In a vehicle wheel, the combination of a rim or felly; a hub comprising a metal shell and annular ribs or raised portions towards each end thereof, said rib portions having holes therein, the holes of each rib being arranged in a zigzag manner; a suitable boxing; a wood bushing, said boxing forced into said shell; metal spokes threaded at their outer ends and having hooks at their inner ends, adapted to be inserted in the holes in said hub shell, the inner ends of said spokes adjacent to the hooks thereof being curved to conform to the hub, said spokes being arranged substantially tangential, those at one end of the hub being arranged tangentially opposite to those at the other; and nipples arranged through said rim threaded upon the outer ends of the spokes, for the purpose specified.

3. In a vehicle wheel, the combination of a rim or felly; a hub comprising a metal shell having a central raised portion and annular ribs or raised portions towards each end thereof, said rib portions having holes therein, the holes of each rib being arranged in a zigzag manner; a suitable boxing; a wood bushing, said boxing forced into said shell; inwardly projecting lugs in said shell adapted to engage said bushings; metal spokes threaded at their outer ends and having hooks at their inner ends, adapted to be inserted in the holes in said hub shell, said spokes being arranged substantially tangential, those at one end of the hub being arranged tangentially opposite to those at the other; and nipples arranged through said rim threaded upon the outer ends of the spokes, for the purpose specified.

4. In a vehicle wheel, the combination of a rim or felly; a hub comprising a metal shell and annular ribs or raised portions towards each end thereof, said rib portions having holes therein, the holes of each rib being arranged in a zigzag manner; a suitable boxing; a wood bushing, said boxing forced into said shell; metal spokes threaded at their outer ends and having hooks at their inner ends, adapted to be inserted in the holes in said hub shell, said spokes being arranged substantially tangential, those at one end of the hub being arranged tangentially opposite to those at the other; and nipples arranged through said rim threaded upon the outer ends of the spokes, for the purpose specified.

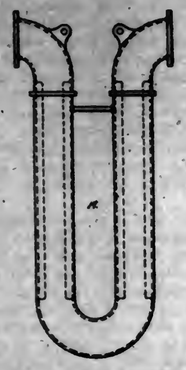
5. In a vehicle wheel, a combination of a rim or felly; a hub having a double series of holes therein, the holes of each series being arranged in a zigzag manner; metal spokes threaded at their outer ends and having hooks at their inner ends, adapted to be inserted in the holes in said hub, the inner ends of said spokes adjacent to the hooks thereof being curved to conform to the hub, said spokes being arranged substantially tangential, those at one end of the hub being arranged tangentially opposite to those at the other; and nipples arranged through said rim threaded upon the outer ends of the spokes, for the purpose specified.

[Claim 6 not printed in the Gazette.]

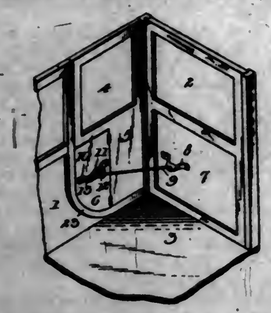
879,302. BLAST-HEATING APPARATUS. JOHN W. NESMITH, Denver, Colo., assignor to Colorado Iron Works Company, Denver, Colo. Filed Apr. 3, 1905. Serial No. 253,612.

A blast heating conduit composed of U-shaped members, the parallel portions of each U-shaped member being pro-

vided with radially disposed ribs projecting into the interior only thereof, and the curved portions having both the exterior and interior surfaces thereof smooth.



879,303. AUTOMATIC FOLDING VEHICLE-DOOR. EDWARD D. O'BRIEN and MARTIN E. O'CONNELL, Terre Haute, Ind. Filed Apr. 10, 1907. Serial No. 367,325.



1. A vehicle door having a hinged section, a bracket secured to the said section, a second bracket secured to the vehicle, and a slidable means connecting said brackets adapted to be locked to said first named bracket.

2. A vehicle door having a hinged section, a bracket secured to the inner face of said section, a second bracket secured to one of the inner walls of the vehicle, and pivotal and slidable means connecting said brackets, said slidable means adapted to be engaged and held by said first named bracket for operating said section.

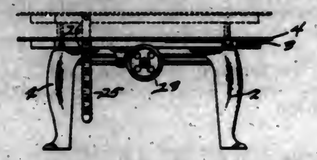
3. A vehicle door having a hinged section, a bracket secured to the inner face of said section, lugs formed on said bracket, a block adapted to slide between said lugs and carrying a projection, a second bracket secured to one of the inner walls of the vehicle, and means connecting said block and said second bracket for operating said section said means adapted to engage said projection.

4. A vehicle door having a hinged section, a bracket secured to the inner face of the section, lugs formed on said bracket, a block adapted to slide between said lugs, a perforated lug formed on said block, a second bracket secured to the inner side of the vehicle and having a perforated lug formed thereon, and a rod having hooked ends said ends adapted to enter the perforated lugs.

5. A vehicle door having a hinged section, a bracket, having integral lugs, secured to said section, a block adapted to slide between said lugs, a pin formed integral with said block, a slot in said bracket adapted to receive said pin, a spring secured to said bracket and having a perforation therein, and means for engaging and disengaging said pin and perforation.

[Claim 6 not printed in the Gazette.]

879,304. HEM-FINDER. GEORGE F. OLDHAM, Toledo, Ohio, assignor to Jesse D. Butterfield, Toledo, Ohio. Filed July 27, 1907. Serial No. 385,800.

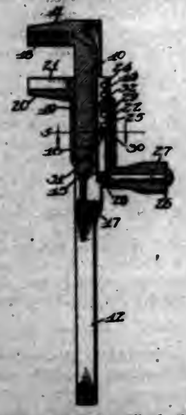


1. In a hem-finder, a stationary table, a ring movable relatively thereto, racks carried by the ring, a rotatable shaft supported from the table, pinions upon the shaft to engage the racks, and a friction bearing for the shaft to maintain the ring elevated above the table.

2. In a hem-finder, a stationary table, a ring movable relatively thereto, two pairs of racks carried by the ring, a rotatable shaft supported from the table and carrying pinions to engage one pair of said racks, and a second shaft supported from the table and rotatable independently of the first shaft, and pinions on the second shaft to engage the other pair of racks.

3. In a hem finder, a stationary table, a ring movable relatively thereto, two pairs of racks carried by the ring, a rotatable shaft supported from the table and carrying pinions at the ends to engage one pair of said racks, a bevel gear at an intermediate point on said shaft, an operating shaft rotatable from the table, a bevel gear on the operating shaft, to engage the bevel gear on the other shaft, and a second shaft supported from the table and rotatable independently of the first shaft, said second shaft carrying pinions to engage the other pair of racks.

879,305. WRENCH OR NUT-JACK. WILLIAM H. OLIVER, Chicago, Ill. Filed Sept. 22, 1906. Serial No. 335,705.



1. In a device of the class described, the combination of a shank, teeth carried thereby, a slide, an operating member rotatably carried by the slide, means carried by said member for engaging the teeth to move the slide and lock the same in its adjusted position, an operating handle for rotating the member, and a stop adapted to be engaged by the handle to limit the rotation of the said member.

2. In a device of the class described, the combination of a shank provided with a jaw, teeth carried by the shank, a sliding jaw, a rotatable operating member housed within and carried by the sliding jaw, a cam shaped rib projecting from the member and adapted to engage the teeth, and a journal on said member removably engaging the wall of the housing, said member being provided with a radially projecting portion to form an operating handle.

3. In a device of the class described, the combination of a shank having a jaw, spaced ribs on said shank, one of said ribs being provided with teeth, a slide slidable on the shank and provided with a bearing, a jaw on the slide, a rotatable adjusting and securing member, said member being provided with a projecting trunnion adapted to enter the bearing, means on the member adapted to engage the teeth to adjust the slide, and means also on the said member adapted to stand between the ribs to prevent lateral displacement of said member.

4. In a device of the class described, the combination of a shank having a jaw, spaced ribs on said shank, one of said ribs being provided with teeth, a sleeve or collar slidable on the shank and provided with a bearing, a jaw on the sleeve, a rotatable adjusting and securing member, said member being provided with a projecting trunnion adapted to enter the bearing, means on the member adapted to engage the teeth to adjust the sleeve or collar, and a projection also on said member adapted to move between the ribs to prevent lateral displacement of said member.

5. In a device of the class described, the combination of a shank having a jaw, spaced ribs on said shank, one of said ribs being provided with teeth, a sleeve or collar slidable on the shank and provided with a bearing, a jaw on the sleeve, a rotatable adjusting and securing member, said member being provided with a projecting trunnion adapted to enter the bearing, means on the member adapted to engage the teeth to adjust the sleeve or collar, means also on the said member adapted to stand between the ribs to prevent lateral displacement of said member, and an operating handle for rotating the member.

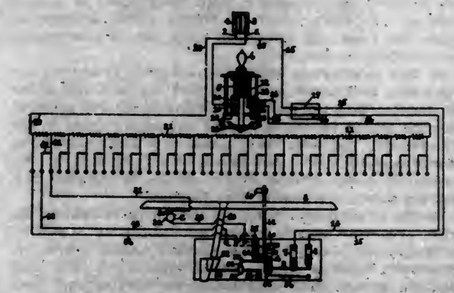
[Claims 6 to 10 not printed in the Gazette.]

879,306. RUBBER. HUMPHREY O'SULLIVAN, Haverhill, Mass. Filed May 15, 1900. Serial No. 16,786.



A rubber overshoe having one or more interior solid rubber projections from the breast of the heel portion, the said projections being substantially equal in thickness from base to edge, and of a width greater than their thickness, so as to be bent downward principally at the base by the heel of the shoe upon which the overshoe is used, and to resist withdrawal of the heel by a downward thrust increasing as the force exerted by the heel is increased, substantially as described.

879,307. SYSTEM OF ELECTRICAL DISTRIBUTION. RODERICK M. PALMER, Cambridge Mass., assignor to Palmer Electrical Company, Bangor, Me. Filed Mar. 17, 1906. Serial No. 306,518.



1. In a system of the class described, in combination, a circuit of relatively high voltage, a second circuit provided with a plurality of resistances, a circuit controller governing said second circuit, an electromagnet included in the high voltage circuit to operate said circuit controller when said magnet is energized and connect said second circuit in shunt with said high voltage circuit, a plurality of branch circuits leading from said shunt circuit, electric motors in said branch circuits, resistances, one for each motor coöperating with the latter and the shunt circuit to be connected with said shunt circuit when said motors are disconnected therefrom, and circuit controllers for controlling the connection of said motors and said resistance with said shunt circuit, substantially as described.

2. In a system of the class described, in combination, a circuit of relatively high voltage, a second circuit provided with a resistance, a circuit controller governing said second circuit, an electromagnet included in the high voltage circuit to operate said circuit controller when said electromagnet is energized and connect said second circuit in shunt with said high voltage circuit, a branch circuit leading from said shunt circuit, an electric motor in said branch circuit, a resistance coöperating with said motor to be connected with said shunt circuit when said motor is disconnected therefrom, a circuit controller for the circuit containing the electromagnet, and circuit controllers for governing the connection of said motor and said resistance with said shunt circuit, substantially as described.

3. In a system of the class described, in combination, a cabinet, an electric motor supported by said cabinet, a circuit controller within said cabinet governing the operation of said electric motor, an electromagnet external to said cabinet, an electric circuit external to said cabinet and controlled by said electromagnet, a resistance in said external circuit, a branch circuit connected with said external circuit and in which said motor is included, a main line circuit in which said electromagnet is located, a circuit controller within said cabinet governing said main line circuit, and means within said cabinet for operating the circuit controllers therein, said means being operated from outside of the cabinet, substantially as described.

4. In a system of the class described, in combination, a cabinet, an electric motor supported by said cabinet, a circuit controller within said cabinet governing the operation of said electric motor, an electromagnet external to said cabinet, an electric circuit external to said cabinet and controlled by said electromagnet, a resistance in said external circuit, a branch circuit connected with said external circuit and in which said motor is included, a second branch circuit connected with said external circuit, a resistance in said second branch circuit substantially equal to that of said motor, a circuit controller governing said second branch circuit, a main line circuit in which said electro-magnet is located, a circuit controller within the cabinet governing said main line circuit, and means within the cabinet for operating the circuit controllers therein to open the second branch containing the resistance when the branch containing the motor is closed, substantially as described.

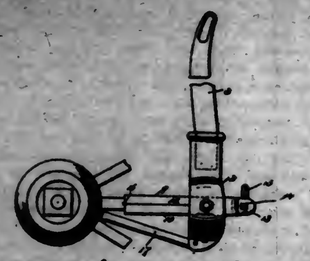
5. In a system of the class described, in combination, a circuit of relatively high voltage, an electromagnet in said circuit, a circuit controller governing said circuit, a second circuit connected in shunt with said high voltage circuit, a circuit controller operated by said electromagnet and governing said shunt circuit, a plurality of branch circuits connected with said shunt circuit, translating devices in said branch circuits, circuit controllers for said branch circuits, and means to operate said branch circuit controllers, substantially as described.

[Claim 6 not printed in the Gazette.]

879,308. SPOKE-EXTRACTOR. LOUIS P. PARENT, Waterbury, Conn., assignor of one-half to Peter R. Larocque, Waterbury, Conn. Filed Oct. 14, 1907. Serial No. 397,379.

1. The herein described spoke extractor comprising a head, an operating handle therefor, carriers swiveled in opposite sides of said head, sliding jaws mounted in said

carriers, and a fulcrum brace pivoted to the lower end of said head.



2. The herein described spoke extractor comprising a head having a central opening, carriers swiveled in opposite sides thereof, jaws longitudinally movable in said carriers, a yoke with which the outer ends of the jaws are engaged, and a fulcrum brace pivoted to the lower end of said head.

3. The herein described spoke extractor comprising a head having a central opening, carriers swiveled in opposite sides thereof, said carriers formed with gripping fingers, a pair of tapered clamping jaws having edges engaged by said fingers whereby the jaws are longitudinally movable in the carriers, a yoke with which the outer ends of the jaws are engaged, and a fulcrum brace is pivoted to the lower end of the head, substantially as described.

879,309. EXPANSIBLE BIT. ERNEST PASTORE, New Haven, Conn. Filed June 10, 1907. Serial No. 378,193.

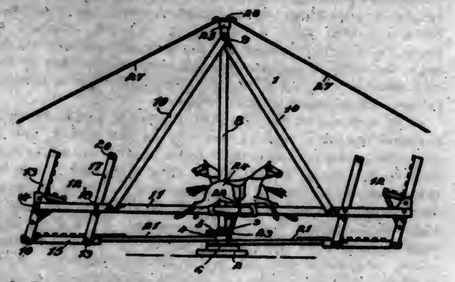


1. The herein described expansible bit comprising a head having a transversely arranged inclined hole, a cutter adapted to be entered into said hole and formed with oppositely inclined surfaces, and screws entered into opposite sides of the head and adapted to bear against said cutter.

2. The herein described expansible bit comprising a solid head, a transversely arranged hole extending through it, a cutter arranged in said hole and formed at its rear with an inclined grooved surface, and with an oppositely inclined surface opposite said grooved surface, a screw entering the rear of the head and engaging said cutter, and a screw entering the face of the head and having a beveled surface to engage with the cutter.

879,310. ROTARY SWING. RANSOM D. PATTERSON, Fort Smith, Ark. Filed May 9, 1907. Serial No. 372,706.

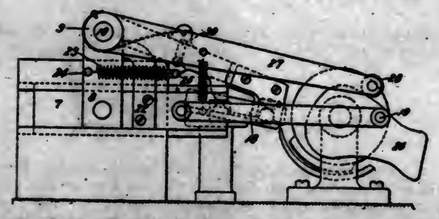
1. In a device of the character described, the combination with a stationary crank, of a supporting post supported by and rotating on said crank, rotary swings supported by said supporting post, a connecting rod connecting each of said swings to the said stationary crank, a rocking rod, means for connecting the same to one of said connecting rods, and a seat or form at each end of said rocking rod, substantially as described.



2. In a device of the character described, the combination with a stationary crank, of a supporting post carried and rotating on said crank, rotary swings connected to said crank, and means for supporting the said supporting post in an upright position, substantially as described.

3. In a device of the character described, the combination of rotary swings, a supporting post therefor, means for connecting said swings to the said supporting post, a stationary crank under said supporting post to support the same, and means for connecting said swings to the said stationary crank, substantially as described.

879,311. TUBE-TRANSFERRING MECHANISM. RUFUS L. PATTERSON, New York, N. Y., assignor to The American Tobacco Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 5, 1902. Serial No 134,006.



1. The combination with a mouth-piece presenting device, of a tube transferrer provided with means for maintaining the tube lengths in fixed relation to said transferrer, a source of tube supply having means for presenting tubes to the transferrer with their seams in a fixed relation, and means for moving the transferrer between the presenting device and the source of tube supply, substantially as described.

2. The combination with a mouth-piece presenting device, of a tube transferrer provided with means for maintaining the tube lengths in fixed relation to said transferrer, a source of tube supply having means for presenting tubes to the transferrer with their seams in a fixed relation, and means for reciprocating the transferrer between the presenting device and the source of tube supply, substantially as described.

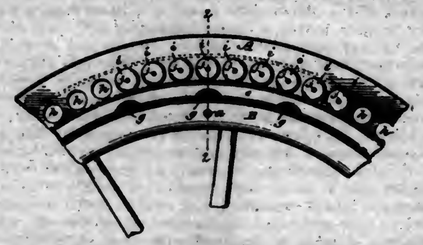
3. The combination with a mouth-piece presenting device, of a tube transferring jaw provided with means for holding the tube lengths in fixed relation thereto, a source of tube supply having means for presenting tubes to the transferring jaw with their seams in a fixed relation to said transferring jaw, and means for moving said jaw between the source of tube supply and the mouth-piece presenting device, substantially as described.

4. The combination with a mouth-piece presenting device, of a tube length transferrer comprising a pair of gripper jaws, a source of tube supply having means for presenting tubes to the jaws with their seams in a fixed relation to said jaws, and means for moving said jaws between the source of tube supply and the mouth-piece presenting device, substantially as described.

5. The combination with a mouth-piece presenting device, of a tube length transferrer comprising a pair of gripper jaws, one of which is provided with means for maintaining the tube lengths in fixed relation thereto, a source of tube supply having means for presenting tubes to the jaws with their seams in a fixed relation to said jaws, and means for moving said jaws between the source of tube supply and the mouth-piece presenting device, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

879,312. ELASTIC VEHICLE-TIRE. EDWARD L. PERRY, Paterson, N. J. Filed June 15, 1907. Serial No. 379,241.

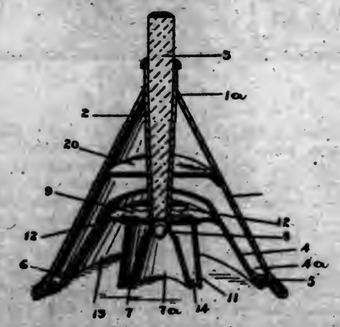


1. An elastic vehicle-tire having a plurality of transverse perforations or openings therethrough, and plugs having air vents and adapted to engage said perforations or openings, substantially as and for the purpose set forth.

2. An elastic vehicle-tire having a plurality of transverse perforations or openings, and removable headed vent-plugs adapted to fit in the perforations or openings, substantially as and for the purpose specified.

3. An elastic hollow plug for vehicle-tires closed at its ends and having perforations therethrough to form air vents, substantially as and for the purpose specified.

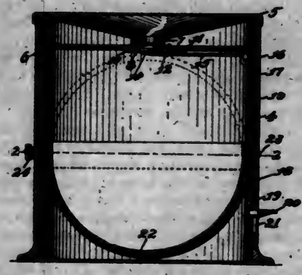
879,313. CLOTHES-POUNDER. WILLIAM C. PERRY and JOSEPH W. PERRY, Toronto, Ontario, Canada. Filed Oct. 29, 1907. Serial No. 399,725.



1. A clothes washer comprising an external wall, an inner wall within the external wall converging towards the lower edge thereof but not extending to the top of the external wall, an apertured means connecting the lower part of the internal wall to the external wall, an apertured transverse plate within the inner wall, a tapering wall suspended from the transverse plate, and a cone shaped wall within the tapering wall having apertures near its upper end, but below the plane of the transverse plate.

2. A clothes washer comprising an external wall, an inner wall within the external wall converging towards the lower edge thereof but not extending to the top of the external wall, an apertured means connecting the lower part of the internal wall to the external wall, an apertured transverse plate within the inner wall, a tapering wall suspended from the transverse plate, a cone shaped wall within the tapering wall having apertures near its upper end, but below the plane of the transverse plate, and a transverse plate secured to the inner surface of the external wall above the top of the inner wall.

879,314. CUSPIDOR. CHARLES PETER, St. Louis, Mo. Filed Apr. 23, 1907. Serial No. 369,866.



1. A cuspidor of the class described, comprising a cylindrical shell, a bowl pivotally mounted in said shell, an inclined cover provided with a central opening located upon the top of said shell, a reinforcing top piece provided with a central opening located in the shell beneath the cover; a horizontal valve located beneath the opening of the inclined cover and top piece, and a cord and operating rod for opening the valve when desiring to use the cuspidor, substantially as specified.

2. A device of the class described, comprising a shell, a bowl pivotally mounted in said shell, a horizontal reinforcing top piece provided with a central opening located in said shell, an inclined cover provided with a corresponding central opening located upon the shell, a horizontal valve pivotally secured to the reinforcing top piece and located beneath the opening, and a treadle mechanism for operating the valve, substantially as specified.

3. A device of the class described comprising a cylindrical shell open at its bottom; a reinforcing top piece located in the shell near the top and provided with a central opening; an inclined cover loosely mounted on the top of the shell and provided with a central opening to communicate with the central opening in the reinforcing top piece; a horizontal valve pivotally mounted on the reinforcing top piece and arranged to slide horizontally on its pivot to open and close the opening; an operating rod; a treadle attached to the operating rod; a cord connected to the valve and to the operating rod for controlling the valve when the treadle is operated, and a bowl pivotally located in the shell and arranged to be inverted to remove the contents, substantially as specified.

879,315. CLOCK. WILSON E. PORTER, New Haven, Conn., assignor to New Haven Clock Co., New Haven, Conn., a Corporation of Connecticut. Filed Nov. 11, 1907. Serial No. 401,699.



1. In a variable signal clock, the combination with the center arbor thereof, of a notched signal wheel connected with the said arbor for rotation thereby, a bearing-ring carried by the said signal-wheel with a space between the two wheels, a cut-out wheel provided with arms and differential notches, entered into the said space between the signal-wheel and bearing-ring, a count hook coacting with

the signal and cut-out wheels, and a setting-wheel connected with the cut-out wheel for rotating the same and bearing upon the bearing-ring upon which it is rotated to position the said cut-out wheel.

2. In a variable signal clock, the combination with the center-arbor thereof, of a signal-wheel connected with the rear end of the said arbor for rotation thereby, a bearing-ring connected with the signal-wheel, rotating therewith and separated therefrom by a space, a cut-out wheel adapted to be entered through the said ring into the said space and formed with arms and differential clearance spaces, a setting-wheel bearing upon the said ring, a sleeve carrying the said cut-out wheel and setting wheel whereby they are rotated independently of the signal-wheel and ring, a spring for holding the setting and cut-out wheels against rotation, and a finger-button connected with the arbor for rotating the same.

3. In a variable signal clock, the combination with the center-arbor thereof, of a hub mounted upon the projecting rear end of the same, a signal-wheel mounted upon the said hub, a bearing-ring supported by the signal wheel from which it is separated by a space, a cut-out wheel entered into the said space through the said bearing-ring, a sleeve carrying the said cut-out wheel, a setting-wheel carried by the said sleeve and bearing upon the outer face of the said ring, a spring located within the sleeve for frictionally holding the setting-wheel against rotation with respect to the bearing-ring and signal-wheel, and a finger-button formed with a stem entering the outer end of the said hub for turning the central arbor, the said spring being placed under tension by the said finger-button.

879,316. PUZZLE. JOHN H. PRENTICE, Glendive, Mont. Filed Aug. 14, 1906. Serial No. 330,576.



A puzzle of the character described, comprising a base, circular strips mounted upon the base, and forming open-topped ball-containing pens or compartments, said strips having ports facing at right angles to one another, a figure 8-shaped strip surrounding the pens and forming therewith, annular passages, communicating at the exact center of said figure-8-shaped strip, balls in said passages, and a cover for the annular passages to obscure the balls from view.

879,317. PLATEN SHIFT-KEY FOR TYPE-WRITING MACHINES. SPENCER B. PRENTISS, Washington, D. C. Filed Mar. 10, 1904. Serial No. 197,525.



1. In a typewriting machine, the combination with a platen and a platen shift lever provided with a shift key, of a shift key member wholly mounted upon and carried by said lever for contact with a fixed portion of the machine upon a partial movement of said lever, but constructed to permit the full shift of said platen when the first mentioned shift key is depressed.

2. In a typewriting machine, the combination with a platen and a platen shift lever, of a fixed stop, a shift key member having a hinged connection with said lever for upward motion with relation thereto and projecting over said fixed stop, the parts being so arranged that when pressure is applied to the key member said stop limits the platen shift, but when the shift lever is given its full movement said key member engages said stop and moves idly upon its hinge.

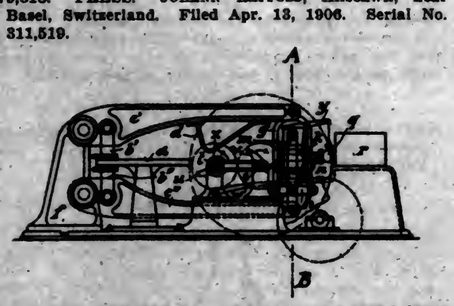
3. In a typewriting machine, the combination with a platen and a platen shift lever, of a fixed stop, a shift key member adjustably mounted upon and having a hinged connection with said lever for upward motion with relation thereto and projecting over said fixed stop, the parts being so arranged that when pressure is applied to the key member said stop limits the platen shift, but when the shift lever is given its full movement said key member engages said stop and moves idly upon its hinge.

4. In a typewriting machine, the combination with a platen and a platen shift lever, of a fixed stop, a shift key member having a hinged connection with said lever, for upward motion with relation thereto and projecting over said fixed stop, and a key piece upon said key member directly over said stop, the parts being so arranged that when pressure is applied to said key piece said stop limits the platen shift a predetermined amount, but when the shift lever is given its full movement said key member engages said stop and moves idly upon its hinge.

5. In a typewriting machine, the combination with a platen and a platen shift lever, of a shift key member having a hinged connection with said lever and projecting over a fixed portion of the machine frame, whereby when the key member is depressed said frame forms a stop to limit the platen shift, but when the shift lever is given its full movement said key member moves upon its hinge.

[Claims 6 to 8 not printed in the Gazette.]

879,318. PRESS. JOHANN RAPPOLD, Allschwil, near Basel, Switzerland. Filed Apr. 13, 1906. Serial No. 311,519.



1. A press comprising a mold table, upper and lower press-heads, arms for supporting said press-heads, means for raising the upper press-head independently of the lower press-head, pistons operated by fluid under pressure, and means connecting the pistons to the press-head arms to force the press-heads towards each other when the pistons are driven outwards substantially as set forth.

2. A press comprising a mold table, upper and lower press heads, arms for supporting said press-heads, a cam for raising the upper press-head independently of the lower press-head, pistons operated by fluid under pressure, and means connecting the pistons to the press-head arms to force the press-heads towards each other when the pistons are driven outwards substantially as set forth.

3. A press comprising a mold table, upper and lower press-heads, arms for supporting said press-heads, a hydraulic cylinder, two pistons mounted therein, an operative connection between the upper piston and the lower press-head arm, an operative connection between the lower piston and the upper press-head arm, an inlet branch on the cylinder intermediate the two pistons and means for controlling the supply of fluid under pressure to said cylinder, substantially as set forth.

4. A press comprising a mold table, press-heads on opposite sides of said mold table, means for operating one of said press-head arms independently of the other, a hydraulic cylinder for operating both said press-head arms together, means for controlling the supply of fluid under pressure to the cylinder and means for intermittently relieving the pressure in the cylinder simultaneously with the raising of the upper press-head substantially as described.

5. In a press of the kind described a rotary mold table, upper and lower press-heads, arms carrying said press-heads, a hydraulic cylinder, a valve therefor, pistons movable in said cylinder, operative connections between the upper piston and the lower press-head arm, operative connections between the lower piston and the upper press-head arm, a cam for raising the upper press-head arm, a cam for operating the cylinder valve, a cam for operating the cylinder pump and gearing for intermittently rotating the table and operating the said cams, substantially as set forth.

879,319. COMPOUND FOR USE WITH RAZOR-STROPS. JOHN M. RENO, Kewanna, Ind. Filed Sept. 20, 1907. Serial No. 393,812. (Specimens.)

A compound for use with razor strops consisting of,

Iron oxid	10%
Rouge	10%
Crocus	10%
Glycerin	5%
Petrolatum	15%
Spermaceti	5%
Tallow	45%
	100%

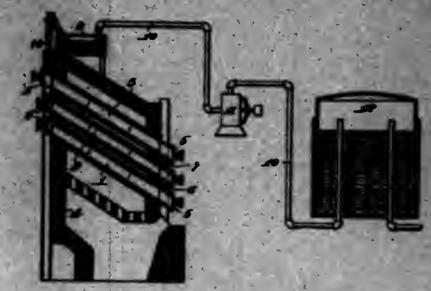
879,320. APPARATUS FOR MANUFACTURING FUEL-GAS. CHARLES H. RIDER, St. Louis, Mo. Filed May 25, 1907. Serial No. 375,730.



An apparatus of the class described, comprising a furnace, a pair of inclined retorts arranged therein and which retorts are filled with mineral carbonates, air tight fittings arranged on the ends of the retorts, there being a tubular connection between the air tight fittings at the lower ends of the retorts, a third inclined retort arranged in the furnace adjacent the first mentioned retorts, and which third retort receives carbonaceous material, air tight fittings arranged on the ends of the third retort, there being a tubular connection between the air tight fitting on the lower end of the third retort and the air tight fitting on the upper one of the first mentioned pair of retorts, a pipe leading from the air tight fitting on the upper end of the third retort, a water seal arranged in said pipe, and a suction device arranged in said pipe.

879,321. PROCESS OF MANUFACTURING GAS. CHARLES H. RIDER, St. Louis, Mo. Filed July 12, 1907. Serial No. 383,430.

1. The herein described process of producing a fuel gas, which consists in decomposing a mixture consisting of a mineral carbonate and an organic substance in an air tight retort by heat.



2. The herein described process of generating fuel gas from mineral carbonates, which consists first in placing a mixture consisting of a mineral carbonate and an organic substance in an air tight retort and then applying a sufficient amount of heat to said retort to decompose said organic substance.

3. The herein described process of generating fuel gas from mineral carbonates which consists first in placing a mixture consisting of a mineral carbonate and an organic substance in an air tight retort and then applying a sufficient amount of heat to said retort to decompose said mineral carbonates.

4. The herein described process of producing a fuel gas from mineral carbonates and an organic substance, which consists in first taking a mixture consisting of a mineral carbonate and an organic substance, placing said mixture in a series of air tight retorts, applying heat to said retorts, and causing the gases containing the greatest amount of heat to come in contact with the gases containing a lesser amount of heat, thereby causing a complete mixture of the gases and a uniformity of heat in the said series of retorts.

5. The herein described process of generating fuel gas from mineral carbonates, which consists first in placing a mixture consisting of mineral carbonates and an organic substance in an air tight retort, and then applying a sufficient amount of heat to said retort to decompose said organic substance.

[Claim 6 not printed in the Gazette.]

879,322. MUSICAL VALVE INSTRUMENT. ADALBERT RIEDL, Chicago, Ill. Filed Aug. 11, 1906. Serial No. 330,104.



1. A valved wind instrument having a mouth pipe leading to the valves thereof, a tuning crook branching off from the mouth pipe before its entry to the valves, a rotary pitch-changing valve to control the passage to the tuning crook, slides in connection with each of the valves, two of said slides being arranged longitudinally of the instrument and the other slide arranged transversely

thereto, eccentric pins on the back of the rotary valve, links connected with the longitudinal slides and the eccentric pins to force the slides outward upon a partial rotation of the valve, one of said links having an offset inclined portion passing beneath the transverse slide, said inclined portion causing the slide to ride upward on the same when the link is shifted longitudinally.

2. In a musical valve instrument, the combination with a mouth pipe, a rotary valve located in the mouth pipe, of an extra slide arranged in conjunction with the mouth pipe so that the air passage of said slide may be added to that of the mouth pipe by means of the rotary valve, eccentric pins on the back of said rotary valve, a plurality of tuning slides, connecting rods connected between the eccentric pins and tuning slides, a slide movable in a plane at right angles to the movement of the tuning slides, one of the connecting rods having an inclined portion adapted to engage the said movable slide and force the same outward when the rotary valve is operated, and a stop within the rotary valve for limiting the turning movement of the same.

3. A valved wind instrument provided with a mouth pipe, a tuning crook branching off therefrom, a rotary valve located in said crook to control passage through the crook, eccentric pins on the back of said rotary valve, a plurality of tuning slides, connecting rods connected between the eccentric pins and tuning slides, a slide movable in a plane at right angles to the movement of the tuning slides, one of the connecting rods having an angular bent portion adapted to engage the said movable slide and force the same outward when the rotary valve is operated, and a stop for limiting the movement of the parts.

879,323. MEANS FOR RELEASING AND LEADING ANIMALS FROM STABLES. JAMES W. ROSS, Spencer, Nebr. Filed May 15, 1907. Serial No. 373,794.



1. In mechanism of the character set forth, the combination with a halter, of a locking device therefor, a leading device for the halter having a limited sliding engagement therewith and constituting operating means for the locking device, and a detachable connection between the end of the leading device and the locking device that automatically releases the leading device from such locking device after the latter has been operated by the former.

2. In mechanism of the character set forth, the combination with a halter having a ring, of a locking device detachably engaging the ring, a leading cable slidably passing through the ring and constituting operating means for the locking device, and a detachable connection between the end of the cable and the locking device that automatically releases the cable from said locking device after the latter has been operated by the former to release the halter ring.

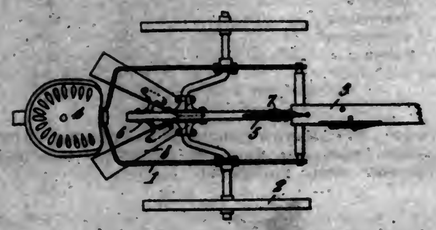
3. In mechanism of the character set forth, the combination with a halter locking device, of a device for operating the locking device, and a detachable connection between the devices, said connection comprising a link carried by one device, a swinging hook carried by the other device and detachably engaging in the link, and a stationary keeper in which the hook is slidably engaged and from which it disengages to permit the swinging movement thereof and the consequent detachment of the hook from the link on the operation of the locking device by the operating device.

4. In mechanism of the character set forth, the combination with a halter locking device, of a device for operating the locking device, a link carried by the operating device, a swinging hook connected to the locking device and detachably engaging in the link, and a stationary keeper in which the hook is slidably engaged and from which its free end disengages to permit the swinging movement thereof and the consequent detachment of the hook from the link.

5. In mechanism of the character set forth, the combination with a halter having a ring, of a locking device for the halter detachably engaging in the ring, a leading cable slidably passing through the ring, a cable connected to the locking device, a ring carried by one of the cables, a swinging hook connected to the other cable and detachably engaging in the ring, and a stationary keeper in which the end of the hook is normally engaged and from which it detaches upon the movement of the leading cable to permit the swinging movement of the hook and the consequent disengagement of the same from the ring.

[Claims 6 to 31 not printed in the Gazette.]

879,324. COW-PEA CUTTER. ROBERT ROUNDS, Hennessey, Okla. Filed May 29, 1907. Serial No. 376,328.



1. In an implement for cutting crawling vines, a blade having a cutting edge lying in one plane and another edge lying in an intersecting plane, the point of intersection of the two planes occurring at the end portions of the blade.

2. In an implement for cutting crawling vines, a V-shaped blade having a cutting edge lying in one plane and another edge lying in an intersecting plane, the point of intersection of the two planes occurring at the end portions of the blade.

3. In an implement for cutting crawling vines, a V-shaped blade having its end portions horizontal with its intermediate portions gradually formed into anticlinal relation.

4. In an implement for cutting crawling vines, a V-shaped blade, a standard supporting the blade and being located in the rear of the apex thereof, said blade having its end portions horizontal and its intermediate portions gradually formed into anticlinal relation and a vertically disposed cutter located in advance of the apex of the blade.

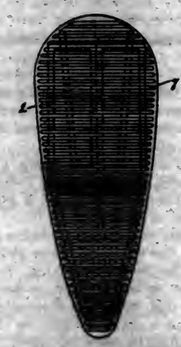
879,326. SLIDING-DOOR FASTENER. HANS L. RUBO, Butterfield, Minn. Filed Feb. 15, 1907. Serial No. 357,406.



1. A sliding door fastener including a spring bar having a plurality of latch bolts fixed thereto, means for operating said bar from opposite sides of the door, and a keeper fixed to each side of the doorway and adapted to engage one of said latch bolts.

2. A fastening device for sliding doors, including a spring latch bar secured to one face of the door, handles fixed to said latch bar and projecting upon opposite sides of the door, one of said handles being formed integral with said bar and a plurality of latch bolts secured to said bar and adapted to engage keepers fixed upon opposite sides of the doorway.

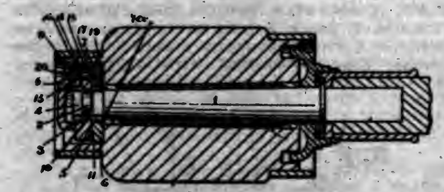
879,326. PROCESS OF AND APPARATUS FOR PREPARING EFFERVESCING BATHS. LEOPOLD SARASON, Hirschgarten, near Berlin, Germany. Filed Aug. 12, 1907. Serial No. 388,261.



1. The process of preparing effervescing gas-water baths, consisting in rendering water electrically conducting, and in electrolytically decomposing the same by means of electrodes distributed over the bottom of the water, substantially as described.

2. An apparatus for preparing effervescing gas-water baths, comprising a bath vessel, an assemblage of elements distributed over the bottom thereof, each element consisting of sets of anodes and cathodes which project into each other without actually contacting, and means located above said elements for protecting the body of the bather from direct contact with said electrodes, substantially as described.

879,327. AXLE. FRANK SCANLAN, Brantford, Ontario, Canada. Filed Sept. 3, 1907. Serial No. 391,218.



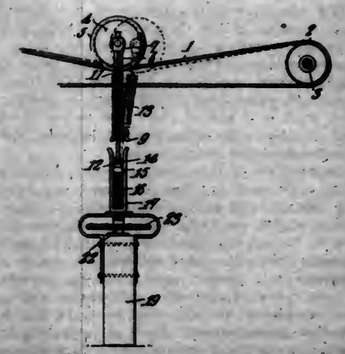
1. The hereinbefore described construction comprising an axle arm having a hub seat, and an axle projection having flattened sides, and a recess between its ends flush with the axle projection at the flattened sides thereof, a washer having a bore of corresponding shape to, and fitting on, that part of the axle projection adjacent to the outer end of the hub seat, an axle nut having a central aperture with side flanges extending inwardly within the aperture to pass over the flattened sides of the axle projection and engage in the recess, and releasable means carried by the axle nut and engaging with the washer to prevent rotation of the axle nut on the axle projection.

2. The hereinbefore described construction comprising an axle arm having a hub seat, an axle projection, with flattened sides, and a recess between its ends flush with the axle projection at the flattened sides thereof, a washer having a central aperture of corresponding shape to, and fitting the axle projection and an annular peripheral flange extending from its outer face, an axle nut having a disk shaped projection on its inner face and having a central aperture, with side flanges extending inwardly within the aperture to pass over the flattened sides of the axle projection and engage in the recess, the disk shaped projection of the axle nut engaging the outer face of the washer within the annular flange, and a releasable means for preventing rotation of the axle nut on the axle projection.

3. The hereinbefore described construction comprising an axle arm having a hub seat, an axle projection, with flattened sides, and a recess between its ends flush with the axle projection at the flattened sides thereof, a washer, having a central aperture of corresponding shape to the axle projection and having a bolt hole in its outer surface, fitting on that part of the axle projection adjacent to the outer end of the hub seat, an axle nut having a central aperture of slightly greater diameter than the greatest width of the axle projection with side flanges extending inwardly within the aperture to pass over the flattened sides of the axle projection and engage in the recess, the axle nut having a bolt hole with a reduced outer end formed therethrough at such a position as to register with the bolt hole of the washer when the axle nut is in its turned position in the recess, and a manually operable spring bolt contained in the bolt hole of the axle nut and engaging the bolt hole of the washer for preventing rotation of the axle nut on the axle projection.

4. The hereinbefore described construction comprising an axle arm having a hub seat and an axle projection, at its outer end beyond the hub seat, the axle projection being of elliptical shape in cross section and having a substantially annular recess between its ends flush with the axle projection at the minor axis of the same, a washer having a central aperture of corresponding shape to and fitted on the axle projection adjacent to the hub seat, an axle nut having a central aperture of a diameter slightly greater than the length of the major axis of the axle projection, with flanges extending inwardly within the aperture to pass over the outer end of the axle projection and engage in the recess the inner face of the axle nut engaging the outer face of the washer, and means carried by the axle nut and engaging with the washer to prevent rotation of the axle nut relatively to the axle projection.

879,328. BELT-TIGHTENER. JOSEPH M. SCHINNER, Marshfield, Wis. Filed Aug. 5, 1907. Serial No. 387,123.



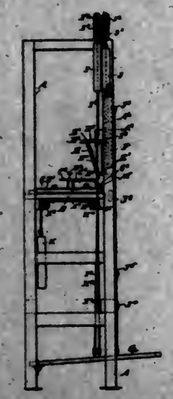
1. A belt tightener comprising a pulley arranged to engage the belt, a tensioning means, and connections between the tensioning means and the pulley, said tensioning means and connections together constituting the sole means for holding the pulley against the action of the belt, and said connections yielding in one direction under the pull of the belt and in another direction under the drag of the belt.

2. A belt tightener comprising a pulley arranged to engage the belt, a tensioning means, connections between the tensioning means and the pulley comprising two relatively movable parts sliding one on the other, a spring interposed

between and engaged by both parts, and a hinge connection between the tensioning means and the relatively movable parts carrying the pulley permitting the pulley to move under the drag of the belt in the direction at right angles to the pull of the belt.

3. A belt tightener comprising a pulley arranged to engage the belt, journal boxes for the pulley, double rods on each journal box and having out-turned ends, other double rods one for each of the first-named rods and also having out-turned ends, springs surrounding both rods and confined between the out-turned ends thereof, a cross head, hinge connections between the cross head and second-named double rods, a screw rod carrying the cross head, a hand wheel engaging the screw rod, and means for holding the hand wheel from movement except about its axis of rotation.

879,329. PASTING-MACHINE. NICHOLAS SCHROEDER, New York, N. Y. Filed May 28, 1907. Serial No. 376,119.



1. In a machine of the character set forth, a horizontally movable bed carrying a number of superposed sheets, a paste-trough above said sheets arranged to deliver paste through the bottom thereof, and means for lowering said trough into contact with the uppermost of said sheets.

2. In a machine of the character set forth, a slidable bed carrying a number of superposed sheets, a paste-trough above said sheets arranged to deliver paste through the bottom thereof, means for lowering said trough into contact with the uppermost of said sheets, means for pressing a box upon said pasted sheet and means for moving said bed and sheets from the pasting position into operative relation to said pressing means.

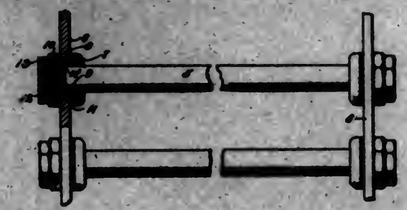
3. In a machine of the character set forth, a bed arranged to slide and carrying a number of superposed sheets, a paste-trough above said sheets, a presser adjacent to said trough, means for lowering said trough to supply paste to the uppermost of said sheets and again raising it, means for moving said bed and its sheets into position beneath said presser, and means for lowering said presser upon a box applied upon said pasted sheet.

4. In a machine of the character set forth, a bed carrying a number of superposed sheets, a paste-trough above said sheets, means for lowering said trough into contact with the uppermost of said sheets and again raising it, a follower arranged to press upon said sheets and maintain its pressure after said trough has begun its upward movement.

5. In a machine of the character set forth, a bed carrying a number of superposed sheets, a paste-trough above said sheets, means for lowering said trough into contact with the uppermost of said sheets and again raising it, a follower carried by said trough and arranged to press upon said sheets and maintain its pressure after said trough has begun its upward movement.

[Claims 6 to 12 not printed in the Gazette.]

879,330. FASTENING MEANS FOR STEAM-BOILER FLUES OR TUBES. LEONIDAS M. SEAWARD, Ontario, Oreg. Filed May 24, 1907. Serial No. 375,543.



1. A boiler-flue fastening comprising a stuffing-box secured to the flue-sheet, a flue passing through the stuffing-box, and a gland fastened to the flue and having means for holding the flue in place.

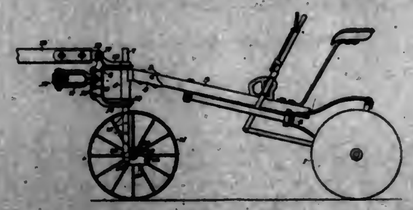
2. A boiler-flue fastening comprising a stuffing-box secured to the flue-sheet, a flue passing through the stuffing-box and having a threaded end, and a gland-nut screwed on the threaded end of the flue.

3. A boiler-flue fastening comprising a flue, a collar on the flue inside the flue-sheet, a sleeve projecting from the collar and fitting in the flue-opening, the inside of the sleeve being spaced from the flue, a packing inside the sleeve around the flue, means for securing the sleeve in the flue-opening, and a gland secured to the flue, and having means for holding the same in place.

4. A boiler-flue fastening comprising a flue, a collar on the flue inside the flue-sheet, a gasket between the collar and the flue-sheet, a stuffing-box carried by the collar and passing through the flue-opening, through which stuffing-box the flue passes, and a gland fastened to the flue and having means for holding the same in place.

5. A boiler-flue fastening comprising a flue, a collar on the flue inside the flue-sheet, a sleeve projecting from the collar through the flue-opening and to the outside of the flue-sheet, the projecting end of the sleeve being threaded, and its inside being spaced from the flue, a ring screwed on the threaded end of the sleeve and bearing on the flue-sheet, a packing inside the sleeve around the flue, and a gland secured to the flue and engageable with the end of the sleeve for holding the flue in place.

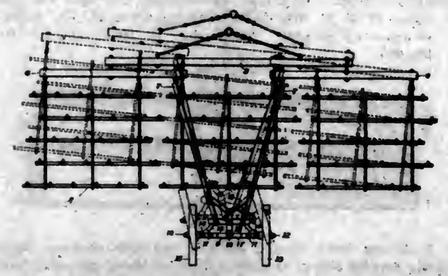
879,331. POLE-TRUCK FOR TILLAGE IMPLEMENTS. CHARLES S. SHARP, Auburn, N. Y., assignor to International Harvester Company, a Corporation of New Jersey. Filed July 29, 1907. Serial No. 385,954.



1. In a pole-truck for tillage implements, the combination of a stub tongue forming part of the implement, a vertically arranged bearing secured to the forward end of said stub tongue, a bar rotatably mounted in said bearing, a draft device secured to said bar, a truck axle, a sleeve secured to said axle, said sleeve having a bearing arranged horizontally and at substantially right angles with said axle, said bar having a horizontally disposed portion received by said bearing in a manner permitting said axle to rock about the axis of said bearing, said sleeve having lugs extending at right angles therefrom upon opposite sides of said bearing, said lugs being adapted to contact with the vertical portion of said bar in a manner to limit a rocking movement of said axle.

2. In a pole-truck for tillage implements, the combination of a stub tongue forming part of the implement, a vertically arranged bearing secured to the forward end of said stub tongue, a bar rotatably mounted in said bearing, a draft device secured to said bar, said draft device comprising a vertically arranged member having a series of openings whereby a draft clevis may be attached thereto, and rearwardly extending arms having vertically arranged openings that receive said bar at opposite ends of said vertical bearing, means for adjustably securing one of said arms to said bar, a tongue, said tongue having its rear end pivotally connected with the upper end of said vertical member by means of a pin arranged transversely thereof, a truck axle, a sleeve secured to said axle, said sleeve having a bearing arranged horizontally and at substantially right angles with said axle and said bar having a horizontally disposed portion received by said bearing in a manner permitting said axle to rock about the axis of said bearing.

879,332. RIDING ATTACHMENT FOR HARROWS. CHARLES S. SHARP, Auburn, N. Y., assignor to International Harvester Company, a Corporation of New Jersey. Filed Sept. 16, 1907. Serial No. 392,966.

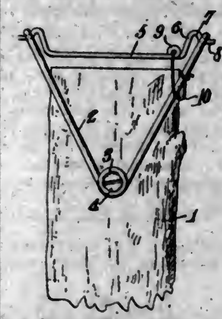


1. In a riding attachment for harrows, the combination of a harrow and draft members connected therewith, a truck axle, journals connected with opposite ends of said axle by means of vertically arranged hinge joints, carrying wheels mounted on said journals, forwardly projecting arms forming part of said journals, reach bars overhanging the harrow, said bars having their forward ends connected with said draft members and their rear ends pivotally connected with opposite ends of a bar arranged substantially parallel with said draft members, said forwardly projecting arms being pivotally connected with opposite ends of said bar, a supplemental bar pivotally connected with said first mentioned bar intermediate the pivotal connections of said reach bars therewith, said supplemental bar having its rear end pivotally connected directly with said axle and its front end pivotally connected with said reach bars by means of oppositely arranged links.

2. In a riding attachment for harrows, the combination of a harrow and draft members connected therewith, a truck axle, journals connected with opposite ends of said axle by means of vertically arranged hinge joints, carrying wheels mounted on said journals, forwardly projecting arms forming part of said journals, reach bars overhanging the harrow, said bars having their forward ends connected with said draft members and their rear ends pivotally connected with a bar arranged substantially parallel with said draft members, said forwardly projecting arms being pivotally connected with opposite ends of said bar coaxially with said reach bars, a supplemental bar pivotally connected with said first mentioned bar intermediate the pivotal connections of said reach bars therewith, said supplemental bar having its rear end pivotally connected directly with said axle and its front end pivotally connected with said reach bars by means of oppositely arranged links.

3. In a riding attachment for harrows, the combination of a harrow and draft members connected therewith, a truck axle, journals connected with opposite ends of said axle by means of vertically arranged hinge joints, carrying wheels mounted on said journals, forwardly projecting arms forming part of said journals, reach bars overhanging the harrow, said bars having their forward ends connected with said draft members and their rear ends pivotally connected with opposite ends of a bar arranged substantially parallel with said draft members, said forwardly projecting arms being pivotally connected with opposite ends of said bar coaxially with said reach bars, a supplemental bar pivotally connected with said first mentioned bar intermediate the pivotal connections of said reach bars therewith, said supplemental bar having its rear end pivotally and slidably connected directly with said axle and its front end pivotally connected with said reach bars by means of oppositely arranged links.

879,333. BIRD-TRAP. LAWRENCE SIMS, Berryton, Kans. Filed Nov. 25, 1907. Serial No. 403,778.



1. A trap comprising oppositely disposed integral spring jaws having coils integral with the adjoining ends thereof, said coils being disposed to receive securing means, and a trigger insertible between the jaws and having upstanding arms forming stop shoulders for the jaws, and extensions insertible under the jaws.

2. A trap comprising oppositely disposed spring jaws and a trigger separate from and insertible between the jaws, said trigger comprising an intermediate portion having upstanding crooked arms constituting shoulders for the jaws, and extensions upon the arms and insertible below the jaws.

3. A trap comprising oppositely disposed spring jaws and a trigger separate from and insertible between the jaws, said trigger comprising an intermediate portion having upstanding crooked arms constituting shoulders for the jaws, extensions upon the arms and insertible below the jaws, and a flexible connection between the trigger and one of the jaws.

4. In a trap the combination with an upstanding support; of oppositely disposed spring jaws straddling the end of the support and connected to opposite portions thereof, and a trigger separate from and insertible between the jaws, said trigger having upstanding crooked arms constituting stop shoulders for the jaws, and extensions upon the arms and insertible beneath the jaws.

5. In a trap the combination with an upstanding support; of oppositely disposed spring jaws straddling the end of the support and connected to opposite portions thereof and a trigger separate from and insertible between the jaws, said trigger having upstanding crooked arms constituting stop shoulders for the jaws, extensions upon the arms and insertible beneath the jaws, said trigger being supported by frictional contact with the opposed jaws, and a flexible connection between the trigger and one of the jaws.

879,334. SPRING CONSTRUCTION. WATSON R. SMITH, Jackson, Mich. Filed Sept. 26, 1907. Serial No. 394,755.

1. In a spring construction, a supporting wire having a bend therein, and a spring having its lowermost convolution mounted upon the supporting wire over said bend and

between and engaged by both parts, and a hinge connection between the tensioning means and the relatively movable parts carrying the pulley permitting the pulley to move under the drag of the belt in the direction at right angles to the pull of the belt.

3. A belt tightener comprising a pulley arranged to engage the belt, journal boxes for the pulley, double rods on each journal box and having out-turned ends, other double rods one for each of the first-named rods and also having out-turned ends, springs surrounding both rods and confined between the out-turned ends thereof, a cross head, hinge connections between the cross head and second-named double rods, a screw rod carrying the cross head, a hand wheel engaging the screw rod, and means for holding the hand wheel from movement except about its axis of rotation.

879,329. PASTING-MACHINE. NICHOLAS SCHRODER, New York, N. Y. Filed May 28, 1907. Serial No. 376,119.



1. In a machine of the character set forth, a horizontally movable bed carrying a number of superposed sheets, a paste-trough above said sheets arranged to deliver paste through the bottom thereof, and means for lowering said trough into contact with the uppermost of said sheets.

2. In a machine of the character set forth, a slidable bed carrying a number of superposed sheets, a paste-trough above said sheets arranged to deliver paste through the bottom thereof, means for lowering said trough into contact with the uppermost of said sheets, means for pressing a box upon said pasted sheet and means for moving said bed and sheets from the pasting position into operative relation to said pressing means.

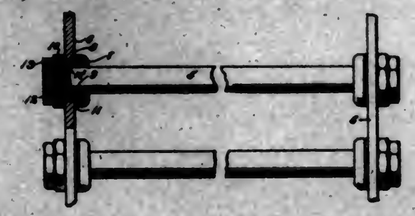
3. In a machine of the character set forth, a bed arranged to slide and carrying a number of superposed sheets, a paste-trough above said sheets, a presser adjacent to said trough, means for lowering said trough to supply paste to the uppermost of said sheets and again raising it, means for moving said bed and its sheets into position beneath said presser, and means for lowering said presser upon a box applied upon said pasted sheet.

4. In a machine of the character set forth, a bed carrying a number of superposed sheets, a paste-trough above said sheets, means for lowering said trough into contact with the uppermost of said sheets and again raising it, a follower arranged to press upon said sheets and maintain its pressure after said trough has begun its upward movement.

5. In a machine of the character set forth, a bed carrying a number of superposed sheets, a paste-trough above said sheets, means for lowering said trough into contact with the uppermost of said sheets and again raising it, a follower carried by said trough and arranged to press upon said sheets and maintain its pressure after said trough has begun its upward movement.

[Claims 6 to 12 not printed in the Gazette.]

879,330. FASTENING MEANS FOR STEAM-BOILER FLUES OR TUBES. LEONIDAS M. SEAWEARD, Ontario, Oreg. Filed May 24, 1907. Serial No. 375,543.



1. A boiler-flue fastening comprising a stuffing-box secured to the flue-sheet, a flue passing through the stuffing-box, and a gland fastened to the flue and having means for holding the flue in place.

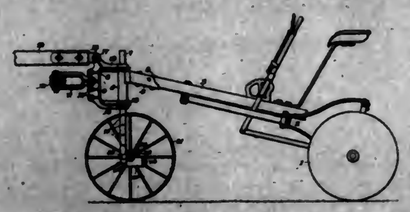
2. A boiler-flue fastening comprising a stuffing-box secured to the flue-sheet, a flue passing through the stuffing-box and having a threaded end, and a gland-nut screwed on the threaded end of the flue.

3. A boiler-flue fastening comprising a flue, a collar on the flue inside the flue-sheet, a sleeve projecting from the collar and fitting in the flue-opening, the inside of the sleeve being spaced from the flue, a packing inside the sleeve around the flue, means for securing the sleeve in the flue-opening, and a gland secured to the flue, and having means for holding the same in place.

4. A boiler-flue fastening comprising a flue, a collar on the flue inside the flue-sheet, a gasket between the collar and the flue-sheet, a stuffing-box carried by the collar and passing through the flue-opening, through which stuffing-box the flue passes, and a gland fastened to the flue and having means for holding the same in place.

5. A boiler-flue fastening comprising a flue, a collar on the flue inside the flue-sheet, a sleeve projecting from the collar through the flue-opening and to the outside of the flue-sheet, the projecting end of the sleeve being threaded, and its inside being spaced from the flue, a ring screwed on the threaded end of the sleeve and bearing on the flue-sheet, a packing inside the sleeve around the flue, and a gland secured to the flue and engageable with the end of the sleeve for holding the flue in place.

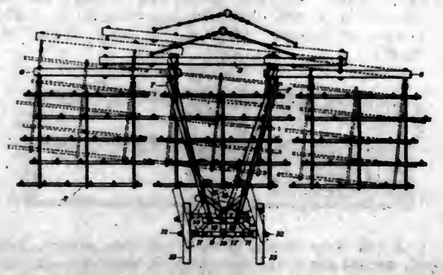
879,331. POLE-TRUCK FOR TILLAGE IMPLEMENTS. CHARLES S. SHARP, Auburn, N. Y., assignor to International Harvester Company, a Corporation of New Jersey. Filed July 29, 1907. Serial No. 385,954.



1. In a pole-truck for tillage implements, the combination of a stub tongue forming part of the implement, a vertically arranged bearing secured to the forward end of said stub tongue, a bar rotatably mounted in said bearing, a draft device secured to said bar, a truck axle, a sleeve secured to said axle, said sleeve having a bearing arranged horizontally and at substantially right angles with said axle, said bar having a horizontally disposed portion received by said bearing in a manner permitting said axle to rock about the axis of said bearing, said sleeve having lugs extending at right angles therefrom upon opposite sides of said bearing, said lugs being adapted to contact with the vertical portion of said bar in a manner to limit a rocking movement of said axle.

2. In a pole-truck for tillage implements, the combination of a stub tongue forming part of the implement, a vertically arranged bearing secured to the forward end of said stub tongue, a bar rotatably mounted in said bearing, a draft device secured to said bar, said draft device comprising a vertically arranged member having a series of openings whereby a draft clevis may be attached thereto, and rearwardly extending arms having vertically arranged openings that receive said bar at opposite ends of said vertical bearing, means for adjustably securing one of said arms to said bar, a tongue, said tongue having its rear end pivotally connected with the upper end of said vertical member by means of a pin arranged transversely thereof, a truck axle, a sleeve secured to said axle, said sleeve having a bearing arranged horizontally and at substantially right angles with said axle and said bar having a horizontally disposed portion received by said bearing in a manner permitting said axle to rock about the axis of said bearing.

879,332. RIDING ATTACHMENT FOR HARROWS. CHARLES S. SHARP, Auburn, N. Y., assignor to International Harvester Company, a Corporation of New Jersey. Filed Sept. 16, 1907. Serial No. 392,966.

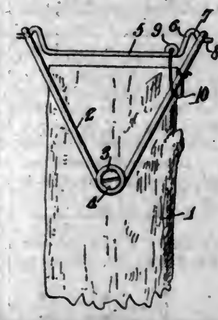


1. In a riding attachment for harrows, the combination of a harrow and draft members connected therewith, a truck axle, journals connected with opposite ends of said axle by means of vertically arranged hinge joints, carrying wheels mounted on said journals, forwardly projecting arms forming part of said journals, reach bars overhanging the harrow, said bars having their forward ends connected with said draft members and their rear ends pivotally connected with opposite ends of a bar arranged substantially parallel with said draft members, said forwardly projecting arms being pivotally connected with opposite ends of said bar, a supplemental bar pivotally connected with said first mentioned bar intermediate the pivotal connections of said reach bars therewith, said supplemental bar having its rear end pivotally connected directly with said axle and its front end pivotally connected with said reach bars by means of oppositely arranged links.

2. In a riding attachment for harrows, the combination of a harrow and draft members connected therewith, a truck axle, journals connected with opposite ends of said axle by means of vertically arranged hinge joints, carrying wheels mounted on said journals, forwardly projecting arms forming part of said journals, reach bars overhanging the harrow, said bars having their forward ends connected with said draft members and their rear ends pivotally connected with a bar arranged substantially parallel with said draft members, said forwardly projecting arms being pivotally connected with opposite ends of said bar coaxially with said reach bars, a supplemental bar pivotally connected with said first mentioned bar intermediate the pivotal connections of said reach bars therewith, said supplemental bar having its rear end pivotally connected directly with said axle and its front end pivotally connected with said reach bars by means of oppositely arranged links.

3. In a riding attachment for harrows, the combination of a harrow and draft members connected therewith, a truck axle, journals connected with opposite ends of said axle by means of vertically arranged hinge joints, carrying wheels mounted on said journals, forwardly projecting arms forming part of said journals, reach bars overhanging the harrow, said bars having their forward ends connected with said draft members and their rear ends pivotally connected with opposite ends of a bar arranged substantially parallel with said draft members, said forwardly projecting arms being pivotally connected with opposite ends of said bar coaxially with said reach bars, a supplemental bar pivotally connected with said first mentioned bar intermediate the pivotal connections of said reach bars therewith, said supplemental bar having its rear end pivotally and slidably connected directly with said axle and its front end pivotally connected with said reach bars by means of oppositely arranged links.

879,333. BIRD-TRAP. LAWRENCE SIMS, Berryton, Kans. Filed Nov. 25, 1907. Serial No. 403,778.



1. A trap comprising oppositely disposed integral spring jaws having coils integral with the adjoining ends thereof, said coils being disposed to receive securing means, and a trigger insertible between the jaws and having upstanding arms forming stop shoulders for the jaws, and extensions insertible under the jaws.

2. A trap comprising oppositely disposed spring jaws and a trigger separate from and insertible between the jaws, said trigger comprising an intermediate portion having upstanding crooked arms constituting shoulders for the jaws, and extensions upon the arms and insertible below the jaws.

3. A trap comprising oppositely disposed spring jaws and a trigger separate from and insertible between the jaws, said trigger comprising an intermediate portion having upstanding crooked arms constituting shoulders for the jaws, extensions upon the arms and insertible below the jaws, and a flexible connection between the trigger and one of the jaws.
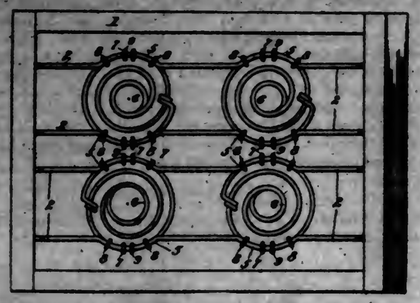
4. In a trap the combination with an upstanding support; of oppositely disposed spring jaws straddling the end of the support and connected to opposite portions thereof, and a trigger separate from and insertible between the jaws, said trigger having upstanding crooked arms constituting stop shoulders for the jaws, and extensions upon the arms and insertible beneath the jaws.

5. In a trap the combination with an upstanding support; of oppositely disposed spring jaws straddling the end of the support and connected to opposite portions thereof and a trigger separate from and insertible between the jaws, said trigger having upstanding crooked arms constituting stop shoulders for the jaws, extensions upon the arms and insertible beneath the jaws, said trigger being supported by frictional contact with the opposed jaws, and a flexible connection between the trigger and one of the jaws.

879,334. SPRING CONSTRUCTION. WATSON R. SMITH, Jackson, Mich. Filed Sept. 26, 1907. Serial No. 394,755.

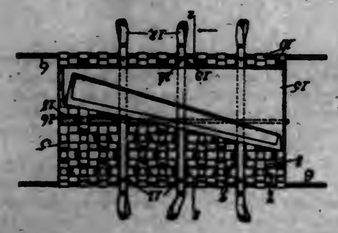
1. In a spring construction, a supporting wire having a bend therein, and a spring having its lowermost convolution mounted upon the supporting wire over said bend and

contacting with the bend throughout the length of the latter, said bend lying substantially in vertical alinement with the lowermost convolution of the spring.



2. In a spring construction, supporting wires arranged in pairs, the supporting wires of each pair having oppositely disposed bends, springs mounted upon the supporting wires over said bends and contacting with the bends throughout the length of the latter, said bends lying substantially in vertical planes with the lowermost convolutions of the corresponding springs, and means for fastening the springs to the supporting wires over said bends.

879,335. STRETCHER. A LINCOLN SOUTHMAYD, Middletown, Conn. Filed Sept. 17, 1906. Serial No. 334,883.



1. A bed composed of lengthwise and crosswise extending strips, loops formed at the ends of the crosswise strips, and rigid supports extending through and removably located within said loops.

2. A bed composed of lengthwise and crosswise extending strips secured together at the points of crossing, loops formed in the ends of the crosswise strips, and rigid supports located within said loops.

3. In a stretcher, a bed, rigid carrying supports arranged for removable attachment to the edges of said bed, and flexible supports removably attached to the upper surface of said bed.

4. In a stretcher, a bed, rigid supports arranged for attachment to the edges of said bed, and flexible supports removably attached to the upper surface of said bed and arranged to receive said rigid supports.

5. A bed composed of a plural number of crosswise and a plural number of lengthwise extending strips, each strip crossing a plural number of strips extending in the opposite direction, loops formed at the ends of the crosswise strips, a rigid support arranged to be passed through said loops, and flexible supports removably attached to said bed.

[Claims 6 to 12 not printed in the Gazette.]

879,336. AUTOMATIC WEIGHING-SCALE. WILLIAM STRENKEN, Brooklyn, N. Y., assignor to E. & T. Fairbanks & Company, St. Johnsbury, Vt., a Corporation of Vermont. Filed Dec. 8, 1906. Serial No. 346,878.

1. In an automatic weighing device, the combination of a movable weighing lever, a swinging cut off gate, a hinged finger thereon, a pivoted abutment against which the finger rests in the open position of the gate, a pin or lug on the pivoted abutment, and an arm on a moving part of the scale adapted to strike the pin to lift the abutment.



2. In an automatic weighing device, the combination of a movable weighing lever, an adjustable arm thereon, a cut off gate, a finger thereon, a pivoted abutment against which the finger rests in the open position of the gate, the parts being combined so that the movement of the lever as the scale is loaded causes the arm to move the abutment and permit the gate to close.

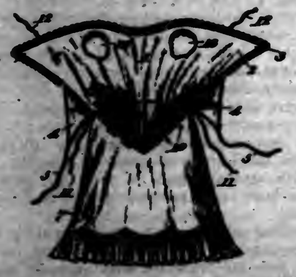
879,337. BOX. STEPHAN J. STUKER, Chicago, Ill., assignor to W. C. Ritchie & Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 6, 1907. Serial No. 360,927.



1. A box body having bottom and side portions integrally formed out of the same piece of sheet material, said side portions of the box body being folded into S-shapes, the loops of the S-shaped folds being side by side, so that the flange of the box has a triple thickness of sheet material, two of the layers of each S-shape fold which are most adjacent to the bottom of the box being shorter than the remaining layer of the S-shape fold, which latter layer is extended to constitute a neck portion of the box body.

2. A box body having its bottom and side portions integrally formed out of the same piece of sheet material, all of the side portions of the box body being folded into S-shapes, the loops of the S-shaped folds being side by side, so that the flange of the box has a triple thickness of sheet material, two of the layers of each S-shape fold which are most adjacent to the bottom of the box being shorter than the remaining layer of the S-shape fold, which latter layer is extended to constitute a neck portion of the box body, and means for uniting the sides of the box body.

879,338. GARMENT. JOHN M. VAN ORDEN, Cedargrove, N. J., assignor to Van Orden Corset Company, Newark, N. J., a Corporation of New Jersey. Filed Feb 25, 1907. Serial No. 359,816.

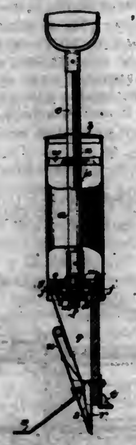


1. A garment of the class described, comprising a waist portion, a pair of adjustable bust supporting tie members, and an independently adjustable pair of midwaist tie members, coöperating substantially in the manner and for the purpose set forth.

2. A garment of the class described, comprising a waist portion, and formed as a unitary structure therewith a pair of adjustable bust supporting members and a pair of midwaist supporting members adjustable independently of said bust members, and arranged to be secured in close conformity with the contour of the abdomen from the waist upward, throughout the region of their contact therewith, substantially as described.

3. A garment of the class described comprising integrally formed waist, bust supporting, and midwaist supporting members, said members being adjustable independently of each other, substantially as described.

879,339. SEED-PLANTER. HENRY H. WARERS, Racine, Wis. Filed June 22, 1906. Serial No. 322,818.



1. In a seed planter the combination of a seed hopper or receptacle having a feed opening in the bottom, a feed wheel rotatably held in the lower part of said receptacle and having a number of seed pockets, and a reciprocating actuating rod working axially in a central opening in said wheel, one of said parts having a circular series of intersecting cam grooves and the other part a projection engaging said grooves and adapted as said rod is reciprocated to turn said wheel intermittently in one direction and bring said pockets one after another into register with said feed opening, substantially as described.

2. In a seed planter the combination of a seed receptacle having a feed opening in the bottom, a feed wheel rotatably held in the lower part of said receptacle and having a number of seed pockets and a series of intersecting cam grooves in the bore of its hub, and a reciprocating actuating rod having a projection adapted by engagement with said grooves to turn said wheel intermittently in one direction and to bring said pockets one after another into register with said feed opening, substantially as described.

3. In a seed planter the combination of a seed hopper or receptacle having a feed opening in the bottom, a feed wheel rotatably held in the lower part of said hopper or receptacle over said feed opening and composed of adjustably connected disks each having a circular series of openings therein, one disk having depending U-shaped flanges around the openings therein and the other disk having at one end of the openings therein depending flanges forming with said U-shaped flanges, adjustable seed pockets, and means comprising a reciprocating rod for turning said wheel intermittently in one direction to bring said pockets one after another into register with said feed opening, substantially as described.

4. In a seed planter the combination of a seed hopper or receptacle having an upwardly projecting hub and a feed opening in the bottom, a feed wheel having a circular series of seed pockets arranged to register with said feed opening, a shield covering the rim and central portion of said wheel and having a recess in the under side which receives said hub and forms a bearing therefor and a curved opening through which all the seed pockets except that in register with the feed opening communicate with said hopper or receptacle, a cut-off attached to said shield opposite the feed opening, and means for intermittently turning said wheel so as to bring said pockets one after another into register with the feed opening under the cut-off, substantially as described.

5. In a seed planter the combination of a seed hopper or receptacle having a feed opening and a central recess in the bottom, a shield secured in said hopper or receptacle and having a central recess on the under side, and a feed wheel the hub of which is rotatably confined in the recesses of said hopper or receptacle and shield, said wheel having a circular series of seed pockets, and a reciprocating rod working in the bore of said hub, one of the parts having intersecting cam grooves and the other a projection engaging therewith and adapted to turn said wheel intermittently to bring said seed pockets one after another into register with said feed opening, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

879,340. CORE FOR MAKING CONCRETE CULVERTS. WILLIAM E. WALLACE, West Middlesex, Pa. Filed Sept. 17, 1907. Serial No. 393,370.



A core apparatus for making concrete culverts comprising a cylindrical section, an apertured ear fixed to the inner surface thereof, funnel-shaped shells within which the ends of the said cylindrical section project, apertured ears fixed to the inner circumference of said funnel-shaped shells, oppositely disposed grooved flanges fixed to the outer circumferences of the funnel-shaped shells at the end thereof, an apertured plate adapted to engage said grooves and be held thereby against the end of the funnel-shaped shell, as shown and described.

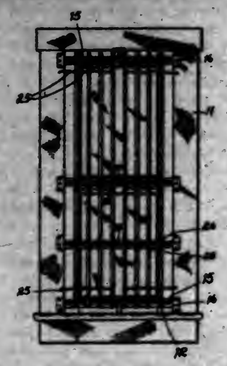
879,341. EXTENSION-BRACKET FOR GARMENT-DISPLAY CASES. LYMAN W. WELCH, Grand Rapids, Mich. Filed July 5, 1907. Serial No. 382,220.



1. In combination in a garment supporting rod, extensible members and a tongue or rib associated with one member and moving in a slot in the other member and having its upper surface flush with the intact portion of the latter member, substantially as described.

2. In combination in a garment supporting rod, two members, one of which telescopes in relation to the other, a rib or tongue associated with the inner member and working in a slot in the outer member, said slot having a contracted end and the said rib having an enlarged head to form a stop with said contracted end of the slot, substantially as described.

879,342. WINDOW-GUARD. SAMUEL R. WELLS, Greenfield, Ind., assignor to Jess. L. Wells, Greenfield, Ind. Filed June 14, 1907. Serial No. 379,059.



1. In an apparatus of the class described, the combination of a plurality of guard bars, and transverse supporting rods therefor, upon which said guard bars may be transversely shifted, of means for locking said guard bars in separated positions.

2. In an apparatus of the class described, the combination of a plurality of guard bars, and transverse supporting rods therefor upon which said guard bars may be transversely shifted, of means carried by said transverse supporting rods for locking said guard bars in separated positions.

3. In an apparatus of the class described, a plurality of transverse rods provided with separated locking lugs, a plurality of guard bars movable on said transverse rods, both longitudinally and transversely thereof, and means for holding said guard bars in engagement with the transverse rods to prevent transverse displacement of the guard bars.

4. In an apparatus of the class described, a plurality of transverse rods provided with separated locking lugs, a plurality of guard bars movable on said transverse bars, both longitudinally and transversely thereof, and an eccentrically mounted transverse shaft engaging said guard bars, said guard bars being adapted to be shifted transversely of the transverse rods to produce an interengagement between the transverse rods and the guard bars, for the purpose set forth.

5. In an apparatus of the class described, a plurality of transverse rods provided with separated locking lugs, a plurality of guard bars movable on said transverse bars, both longitudinally and transversely thereof, and an eccentrically mounted transverse shaft having spaced locking lugs engaging said guard bars, said guard bars being adapted to be shifted transversely of the transverse rods to produce an interengagement between the transverse rods and the guard bars, for the purpose set forth.

[Claims 6 to 9 not printed in the Gazette.]

879,343. FOLLOWER FOR PAPER-FILING DEVICES. ALBERT T. WEISS, Rochester, N. Y., assignor to Yawman & Erbe Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed June 20, 1907. Serial No. 379,381.



1. The combination with a support provided with a track or guide, of a follower movable relatively to the support and engaging the track upon one side and a resilient arm on the follower extending laterally of the track and engaging the latter upon the opposite side.

2. The combination with a support provided with a track or guide, of a follower movable relatively to the support and resilient arms on the follower engaging the track upon opposite sides and extending laterally thereof in both directions.

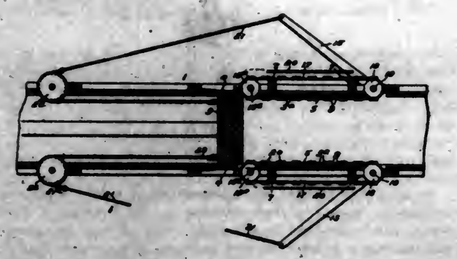
3. The combination with a support provided with a track or guide, of a follower movable relatively to the support and comprising a strip of resilient material formed into a loop extending laterally from the track in both directions and engaging upon opposite sides of the latter.

4. The combination with a support and a track or guide thereon having parallel edges, of a follower movable relatively to the support and comprising a strip of resilient material formed into a loop extending laterally of the track in both directions and having flanges upon its ends engaging over the edges of the latter.

5. The combination with a support provided with a track or guide having parallel edges, of a follower movable relatively to the support having resilient arms provided with flanges engaging over the edges of the track and means for preventing the disengagement of the flanges when the arms are moved relatively.

[Claims 6 to 11 not printed in the Gazette.]

879,344. HAY-PRESS. MYRON I. WILSON, Ohlman, Ill. Filed May 24, 1906. Serial No. 318,566.

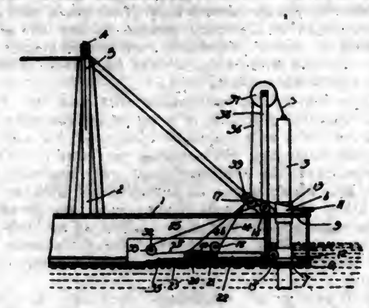


1. In a baling press, a baling chamber having guide rolls on its inner sides, endless belts traveling over the rollers, shafts for the belts, ratchet and pawl devices for actuating the shafts, the beater or plunger, and a connection between the plunger and ratchet and pawl devices for actuating said latter devices when the beater is thrust forward.

2. The combination with the beater, the steel sides, the tension devices for said sides, the sprocket carrying shafts, the sprocket chains, the slat carrying webs mounted on said chains, a hold back detent and means controlled by the movement of the beater for actuating the said detent and the slatted web carrying rollers at predetermined times, as described.

3. In a baling press of the character described, the combination with the baling box having a feed throat midway its ends, the hold back dogs located beyond the feed throat, and the plunger operable across the feed throat and the hold back dogs, of movable sides that form a part of the baling box, said sides consisting of endless flat belts, guide and drive shafts and pulleys for the said belts, the belts being located in advance of the hold back dogs, one set of shafts having ratchets, levers loosely mounted on the ratchet carrying shaft, pawls on the levers for engaging the ratchets, automatic means for moving the levers in one direction, and means connecting the levers with the plunger whereby to move said levers in the other direction under the thrust movement of the plunger, as set forth.

879,345. MEANS FOR ADVANCING DREDGERS. ROBERT M. WILSON, San Francisco, Cal. Filed May 21, 1907. Serial No. 374,958.



1. In combination with the hull of a dredger, side spuds therefor, a stern spud, means for raising and lowering said stern spud, an extension from the stern past said stern spud, and means supported on the rear end of said extension for advancing said hull relatively to said stern spud, substantially as described.

2. In combination with the hull of a dredger, side spuds therefor, a stern spud, a guideway extending rearwardly from the stern, a sleeve for the stern spud in which it slides vertically, said sleeves being arranged to move longitudinally in said guideway, means for moving said sleeve in said guideway, and means for raising and lowering said stern spud, substantially as described.

3. In combination with the hull of a dredger, a stern spud, a guideway extending rearwardly from the stern, a sleeve for the stern spud in which it slides vertically, said sleeve being arranged to move longitudinally in said guideway, means for moving said sleeve in said guideway, and means for raising and lowering said stern spud, substantially as described.

4. In combination with the hull of a dredger, a frame extending rearwardly from the center of the stern of the hull and bearing upper and lower guideways, upper and lower sleeves movable in said guideways, a spud sliding vertically in said sleeves, means for raising and lowering said spud, sheaves in the rear of the guide frame, ropes passing around said sheaves and secured to the respective sleeves, and means carried on the hull for pulling said ropes, substantially as described.

5. In combination with the hull of a dredger, a frame extending rearwardly from the stern of the dredger, and having upper and lower guideways, sleeves movable longitudinally on said guideways, a spud movable vertically in said sleeves, means supported by said hull for raising said spud in said sleeves, and means also supported thereby for sliding said sleeves in said guideways, substantially as described.

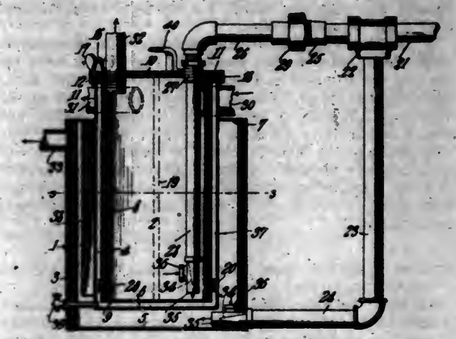
879,346. MILK PASTEURIZER AND COOLER. WALTER WILSON, Yeadon, Pa. Filed Aug. 21, 1907. Serial No. 389,509.

1. A milk pasteurizer embodying spaced inner and outer water chambers defining a heating chamber, and vertically disposed baffles for causing the liquid being treated to pursue a tortuous passage before escape.

2. A milk pasteurizer comprising inner and outer water chambers defining a heating chamber, and vertically disposed baffles carried by the inner chamber and extending from its upper end to a point near its lower end.

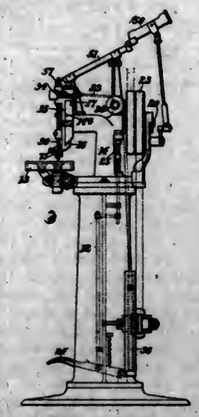
3. A pasteurizer comprising inner and outer water chambers defining a heating chamber, vertically disposed baffles arranged within the latter chamber and constituting means for holding the two chambers properly spaced.

4. A milk pasteurizer embodying spaced inner and outer water chambers defining a heating chamber, pipes for supplying steam to the water chambers, and mixers on the pipes for agitating the water within the said chambers, one of which mixers discharges downward against the floor of the inner chamber and the other of which discharges horizontally of the outer chamber.



5. A milk pasteurizer embodying spaced inner and outer water chambers defining a heating chamber, and a space reducer arranged between the two chambers.

879,347. DRILLING AND NAILING MACHINE. HERMANN WINTER, New York, N. Y., assignor, by mesne assignments, to F. Wesel Manufacturing Company, Brooklyn, N. Y., a Corporation of New York. (Incorporated 1906.) Filed Apr. 10, 1905. Serial No. 254,699.



1. In a drilling and nailing machine, the combination with a drill, of a driving member directly connected to drive said drill, mechanism to move said drill laterally, and a clutch to operate said moving mechanism, said clutch including means substantially as described to operate said moving mechanism to bring the drill into position for drilling to allow it to remain in such operative position a predetermined time and permit it to return to its normal position.

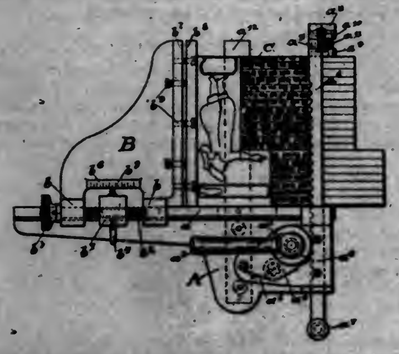
2. In a drilling and nailing machine, the combination with a drill, of a driving member, directly connected to drive said drill, a carrier for said drill, a lever for moving the drill into and out of operative position, and a clutch to operate said carrier and lever, said clutch including means substantially as described to operate said carrier and lever to bring the drill laterally into position for drilling, allowing it to remain in such operative position a predetermined time and to return it to its normal position.

3. In a drilling and nailing machine the combination with a drill, of a driving member, directly connected to drive said drill, mechanism for supporting and operating said drill, a clutch to operate said mechanism, said clutch including means substantially as described to operate mechanism to bring the drill laterally into position for

drilling, allowing it to remain in such operative position a predetermined time and to permit it to return to its normal position, and means for initially engaging said clutch and driving member.

4. In a drilling and nailing machine, the combination with a drill, of a driving member, a carrier and lever for moving the drill into and out of operative position, and a clutch to operate said carrier and lever, said clutch having two keys adapted to engage the driving member, and means for initially engaging the clutch with the driving member, whereby when a clutch is once engaged it will automatically operate to bring the drill laterally into position for drilling, allowing it to remain a predetermined time and restore it to its normal position in a single cycle of operation.

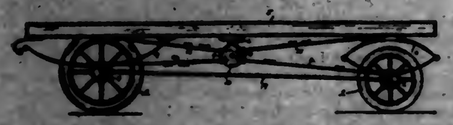
879,348. DEVICE FOR MEASURING AND CLAMPING PRINTING-FORMS. HERMAN WINTER, New York, N. Y., assignor, by mesne assignments, to F. Wesel Manufacturing Company, Brooklyn, N. Y., a Corporation of New York, (incorporated 1906.) Filed Sept. 9, 1905. Serial No. 277,758.



1. In a device for holding printing forms such as linotype slugs and the like preparatory to cutting them to size, the combination with a base, of a vise comprising a rod mounted to have a free longitudinal movement upon the base, means upon the rod to engage the forms, means upon the base adapted to engage the rod but normally held from engagement therewith, and a handle operatively connected with said means to effect the engagement of said means and rod to fasten the rod against the forms.

2. In a device for holding printing forms such as linotype slugs and the like preparatory to cutting them to size, the combination with a base, of a vise comprising a rod freely slidable on the base, yielding means at one end of the rod to engage the forms, a rack upon the rod, a pawl upon the base adapted to engage the rack, and a cam upon the base for moving the pawl into engagement with the rack and effecting the clamping of the forms.

879,349. STRAIN-DISTRIBUTING DEVICE FOR VEHICLES. JAMES WORTHINGTON, Manitowoc, Wis. Filed Apr. 24, 1907. Serial No. 369,924.



1. In a vehicle, the combination of the axle bars and a spring supported platform, of a set of intermeshing gear wheels connected with the central portion of the platform, and strut rods each pivotally connected with one of the gears at a point vertically offset from the axis of gear rotation, said gears being arranged to distribute strains from any one of the strut rods to each of the others, some of said strut rods being connected with the platform.

2. In a vehicle, the combination of the axle bars and a spring supported platform, of a set of intermeshing gear wheels connected with the central portion of the platform, and strut rods connected with some of the gears, said gears being arranged to distribute strains on any one of the strut rods to each of the others,—some of said strut rods being connected with the axle bars and others with the spring supported platform.

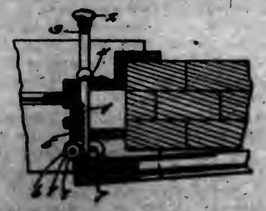
3. In a vehicle, the combination with axle bars and a spring supported platform, of a set of intermeshing gear wheels connected with the central portion of the platform, strut rods connecting two opposing gear wheels with the respective axle bars, and other strut rods connecting each of such gear wheels in the opposite direction with the platform, all of the strut rods having crank pin connection with the gear wheels, and those leading to the axle bars being connected with the gear wheels on the opposite side of the horizontal axial plane from those leading to the platform.

4. In a vehicle, the combination with axle bars and a spring supported platform, of a set of intermeshing gear wheels connected with the central portion of the platform, strut rods connecting two of opposing gear wheels with the respective axle bars, and other strut rods connecting each of such gear wheels in the opposite direction with the platform, all of the strut rods having crank pin connection with the gear wheels, and those leading to the axle bars being connected with the gear wheels on the opposite side of the horisontal axial plane from those leading to the platform and in radial lines normally extending at an angle to such plane.

5. In a vehicle, the combination with axle bars and a spring supported platform, of a set of strut rods leading from the axle bars and the end portions of the platform inwardly and convergingly toward a central space underneath the platform, and motion transmitting gearing, supported by the platform, for distributing the energy exerted through one of the rods to all the others.

[Claim 6 not printed in the Gazette.]

879,350. SHUTTER-WORKER. JOHN W. WOOLEY, Norfolk, Va. Filed Sept. 25, 1907. Serial No. 394,474.

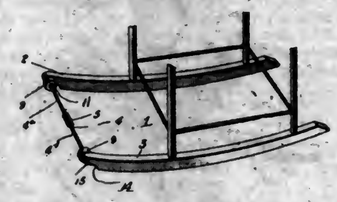


A device as described, embracing a hinge one of whose members or leaves, is formed from a blank, rectangular in general outline with apertured lateral extensions or wings at or near one end, said blank also having transverse slots in its longitudinal center and rolled upon itself in cylinder form, with said slots forming cog-like members therein, said wings being bent upon, and forming apertured heads for the resulting cylinder, and a rack bar adapted to engage said cog-like members or slots of said cylinder of said hinge member.

879,351. CHAIR-ROLLER. WILLIAM M. ARCHIBALD, Jacksonville, Fla. Filed Aug. 10, 1907. Serial No. 388,080.

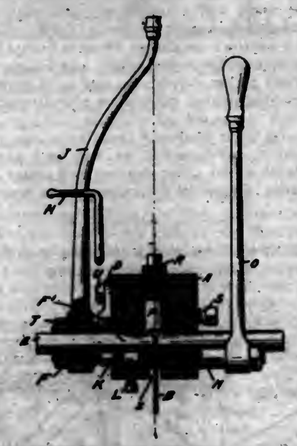
1. The combination with the rockers of a chair or the like, said rockers having transversely alined apertures or seats, of an axle composed of detachably connected sections and having its outer ends projecting into the apertures or seats in the rockers, said outer ends being formed in annular grooves, split elastic rings arranged in said grooves, rollers loosely mounted upon the ends of the axle between said rings and the rockers, and washers arranged upon the axle on opposite sides of said rollers, substantially as and for the purpose set forth.

2. The combination with the rockers of a chair or the like, said rockers having transversely alined apertures or seats, of an axle composed of two sections and having the outer ends of its sections engaged with the openings or seats in said rockers, a sleeve to receive and slide upon the inner ends of the sections of the axle, means for retaining said sleeve upon said sections and rollers journaled upon said axle, substantially as and for the purpose set forth.



3. The combination with the rockers of a chair or the like, said rockers having transversely alined apertures or seats, of an axle composed of two sections and having the outer ends of its sections engaged with the openings or seats in said rockers, a sleeve to receive and slide upon the inner ends of said sections and formed with a bayonet slot, a pin upon one of the axle sections to enter the slot in the sleeve, and rollers arranged upon said axle adjacent to its end, substantially as and for the purpose set forth.

879,352. SAW-SWAGE. EDWARD P. ARMSTRONG, Portland, Oreg. Filed July 18, 1904. Serial No. 217,146.



1. A saw swage comprising a block A, having a recess Z and a die E mounted in said block and adjustable lengthwise therein, a bushing divided longitudinally into sections and adapted to fit on one end of said die E, said bushing having a tapered surface, an operating handle J having a socket to receive the tapered surface of said bushing, and means for securing said handle on said bushing, and whereby said handle has a rotary adjustment on said bushing to adapt the tool for use on different kinds of saws.

2. A saw swage comprising a block A having a recess Z and a die mounted in said block, a bushing divided longitudinally into sections and adapted to fit on one end of said die E, and said bushing having a tapered outer surface at one end, an operating handle J having a correspondingly shaped socket to receive the tapered end of said bushing and said bushing having a threaded end projecting through the socket in said handle and provided with a binding nut T, whereby the said bushing, the handle and said die E may all be secured firmly together.

3. A saw swage comprising a block A having recess Z and an eccentric die E mounted in said block and a die locking device comprising a segmental clasp D mounted on said block, a bushing F mounted on said die and having a segmental flange F' to engage said clasp, said locking device being released by rotating the die E a part of a revolution beyond its normal working position.

4. A saw swage comprising a block A having a clamping screw K fitting within a threaded socket in said block, a portion of the threads of said screw intermediate to its ends being cut away forming an annular recess or groove extending around the screw, and a locking screw L mounted in said block A and adapted to engage the said screw K in said annular recess and said recess being of sufficient width to allow the adjustment of said clamping screw toward or from the tooth to be swaged.

879,353. ARM-REST FOR PENMANSHIP PUPILS. ALBERT ASPER, South Seattle, Wash. Filed July 3, 1905. Serial No. 268,278.



1. As a new and useful article of manufacture, an arm rest for teaching the fore-arm movement style of penmanship, comprising a pad conforming on its upper side to the contour of the muscle of the arm, in combination with means for attaching the pad to the arm of the user, and means for preventing the movement of the pad by the longitudinal movement of the arm when in use.

2. As a new and useful article of manufacture, an arm rest comprising a pad having a curved upper surface for conforming to the muscle of the arm, in combination with means for attaching the pad to the arm of the user, and means for preventing movement of the pad by the longitudinal movement of the arm when in use.

3. As a new and useful article of manufacture, an arm rest comprising a pad for supporting the arm, and impaling devices at the sides of said pad for attaching the same to the sleeve of the user, and means for locking said device against movement by the longitudinal movement of the arm.

4. As a new and useful article of manufacture, an arm rest comprising a pad for supporting the arm, provided with keepers at the sides thereof for attaching the pins, in combination with impaling pins passing through said keepers and means on said keepers for preventing rotation of the pins.

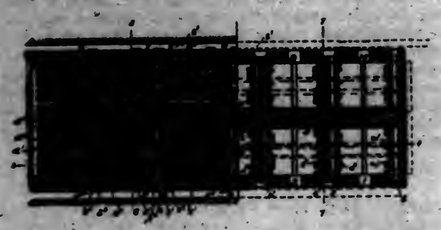
5. As a new and useful article of manufacture, an arm rest comprising a pad for supporting the arm, having keepers at the sides thereof for impaling pins, in combination with impaling pins adapted to be inserted into said keepers, means for holding said impaling pins against accidental withdrawal and means for preventing rotation of the pins.

[Claims 6 to 9 not printed in the Gazette.]

879,354. CONTINUOUS BRICK-KILN. SAMUEL BARNETT, Tipton, and RICHARD J. HADLINGTON and SAMUEL HINTON, West Bromwich, England. Filed Mar. 1, 1907. Serial No. 359,950.

1. A continuous brick kiln comprising two rows of kiln chambers with furnaces for each kiln chamber, a center flue extending longitudinally of the kiln between the rows of kiln chambers, side flues extending longitudinally of

the kiln at the outer sides of the kiln chambers, transverse flues for the kiln chambers connected with the center and side flues, dampers for the transverse flues, a cross flue for each kiln chamber opening, at one end, into the transverse flue of the kiln chamber, and, at the other end, directly into the succeeding kiln chamber of the series, and a damper for each cross flue.



2. A continuous brick kiln comprising two rows of kiln chambers with furnaces for each kiln chamber, a center flue extending longitudinally of the kiln between the rows of kiln chambers, side flues extending longitudinally of the kiln at the outer sides of the kiln chambers, central transverse flues for the kiln chambers connected with the center and side flues, dampers for the central transverse flues, a cross flue for each kiln chamber opening, at one end, into the central transverse flue of the kiln chamber, and, at the other end, directly into the succeeding kiln chamber of the series, and a damper for each cross fire.

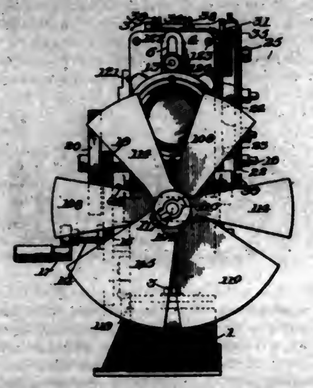
3. A continuous brick kiln comprising two rows of kiln chambers with furnaces for each kiln chamber, a center flue extending longitudinally of the kiln between the rows of kiln chambers, side flues extending longitudinally of the kiln at the outer sides of the kiln chambers, central transverse flues for the kiln chambers connected with the center and side flues, dampers for the central transverse flues, a cross flue for each kiln chamber opening, at one end, into the central transverse flue of the kiln chamber, and, at the other end, directly into the succeeding kiln chamber of the series at one side thereof, a damper for each cross flue, a second set of cross flues opening, at one end, into one kiln chamber at the opposite side to the openings of the first mentioned cross flue from the preceding kiln chamber, and, at the other end, into the succeeding kiln chamber of the series at the same side thereof as the openings of the first mentioned cross flues, dampers for the second mentioned cross flues, outlet flues connecting the second mentioned cross flues with the center and side flues, and dampers for the outlet flues.

4. A continuous brick kiln comprising two rows of kiln chambers with furnaces for each kiln chamber, a center flue extending longitudinally of the kiln between the rows of kiln chambers, side flues extending longitudinally of the kiln at the outer sides of the kiln chambers transverse flues for the kiln chambers connected with the center and side flues, dampers for the transverse flues, a cross flue for each kiln chamber opening, at one end, into the transverse flue of the kiln chamber, and, at the other end, directly into the succeeding kiln chamber of the series, a damper for each cross flue, a hot air flue, a damper controlled furnace flue connecting the hot air flue with the furnaces below the grates thereof.

5. A continuous brick kiln comprising two rows of kiln chambers with furnaces for each kiln chamber, a center flue extending longitudinally of the kiln between the rows of kiln chambers, side flues extending longitudinally of the kiln at the outer sides of the kiln chambers, transverse flues for the kiln chambers connected with the center and side flues, dampers for the transverse flues, a cross flue for each kiln chamber opening, at one end, into the transverse flue of the kiln chamber, and, at the other end, directly into the succeeding kiln chamber of the series, a damper for each cross flue, a hot air flue, a damper controlled furnace flue connecting the hot air flue with the furnaces above the grates thereof.

[Claims 6 to 9 not printed in the Gazette.]

879,355. MOVING-PICTURE MACHINE. DONALD J. BELL, Chicago, Ill. Filed Apr. 23, 1906. Serial No. 313,183.

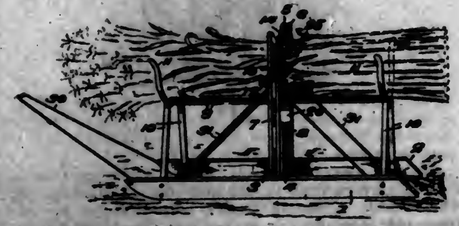


1. In a moving picture machine, two rotatable shutters, each composed of a plurality of radial blades arranged at equi-distant points and said shutters so mounted that the blades of one will be equi-distant from the blades of the other shutter, shafts carrying said shutters, and means for rotating said shafts.

2. In a moving picture machine, a solid shaft and a hollow shaft carried by said solid shaft, a beveled pinion arranged on said solid shaft, a beveled pinion arranged on said hollow shaft, and a third pinion meshing with said pinions, shutters mounted on said shafts respectively, each of said shutters consisting of three radial blades arranged equi-distant from each other, and means, including the first named pinion, for driving said solid shaft.

3. In a moving picture machine, a plurality of rotatable shutters, each composed of a single blade of relatively large area and other blades of small area, and the blades of one shutter corresponding in size and arrangement with the blades of the other shutter, and means for rotating said blades in opposite directions at the same speed.

879,356. BINDER. NATHAN F. BOURNE, Ferryville, Wis. Filed July 5, 1907. Serial No. 382,294.

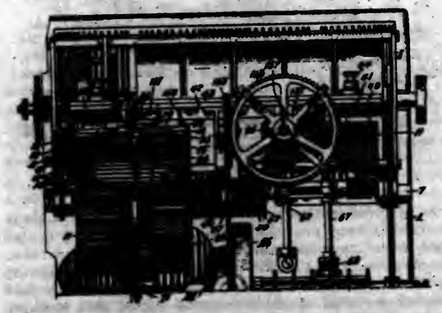


1. In a binder of the class described, the combination with standards arranged in pairs and each pair diametrically opposite each other and spaced apart, runners to support said standards and semi-circular bands connecting said standards; of a lever pivotally mounted between one pair of said standards and adapted to extend between and beyond the opposite pair of standards, a latch on said lever, a rack bar with which said latch is adapted to engage and hold the lever in its lowered position, a shank at the opposite end of said lever and a latch on one of said standards adapted to engage the shank and hold the lever in its elevated position.

2. In a binder of the class described, the combination with runners; of a pair of standards secured to each of said runners and placed diametrically opposite each other, a beam connecting said standards, rails carried by said beam, a rack at each end of said rails and means to compress fodder between said standards to form bundles.

3. In a binder of the class described, the combination with a pair of runners; of a pair of standards for each of said runners, a beam connecting said pairs of standards, rails carried by said beam, a rack at each end of said rails, a lever pivotally mounted between one pair of standards and adapted to extend between and beyond the opposite pair of standards, said lever having a bowed portion, means to hold said lever in its lowered position, a shank at the pivoted end of said lever, a latch adapted to engage said shank and hold the lever in its elevated position and means carried by the standards to form the fodder into bundles when the lever is depressed.

879,357. TELEGRAPHIC TRANSMITTER. CLARENCE BRAIN, Parsons, Kans. Filed May 15, 1907. Serial No. 373,770.



1. In a telegraphic transmitter, a series of spaced contact brushes, means for moving the brushes into operative relation with series of contacts representing telegraphic code characters, and means for adjusting the space between successive active brushes to correspond to the time space of a telegraphic code character plus the separating time space between two characters.

2. In a telegraphic transmitter, series of circuit terminals representing telegraphic code characters, contact brushes therefor, means for moving the contact brushes into operative relation each with a series of contacts representing a code character, and means for adjusting each succeeding active brush to a position with relation to the preceding brush to come into contact with a series of code-character circuit terminals after a time lapse equal to the time period for the transmission of a character plus a separating time space between it and the next succeeding character.

3. In a telegraphic transmitter, series of electrical circuit terminals representing telegraphic code characters, other circuit terminals arranged to make contact in succession with the circuit terminals representing the code characters, and means for determining the time order of contact of the second set of circuit terminals with those circuit terminals which represent code characters to include a predetermined time space between each series of impulses representing a telegraphic code character.

4. In a telegraphic transmitter, a number of series of circuit terminals each of which series represents a telegraphic code character, a series of spaced contact brushes held normally out of alinement with the series of circuit terminals representing code characters, manually operated keys, one for each character, and connections between the keys and the contact brushes for moving any one of the latter into alinement with that series of circuit terminals representing the character corresponding to a key.

5. In a telegraphic transmitter, a number of series of circuit terminals representing telegraphic code characters, a number of spaced contact brushes movable into alinement with any one of the series of circuit terminals and arranged to make contact therewith, key-operated means for moving any of the brushes into alinement with a predetermined one of the series of circuit terminals corresponding to the key operated, and means for holding said brush in its adjusted position until contact has been established between it and the series of circuit terminals.

[Claims 6 to 28 not printed in the Gazette.]

879,358. PIERCELESS EAR-DROP. JOHN S. BRANT, Providence, R. I., assignor to Cory & Reynolds Company, Providence, R. I., a Corporation of Rhode Island. Filed Sept. 13, 1907. Serial No. 392,655.

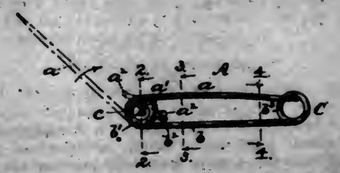


1. As an improved article of manufacture the pierceless ear-drop herein described, the same consisting of a substantially U-shaped frame or yoke having one arm or member thereof provided with a setting arranged to carry a gem or ornament, an endwise movable spring-pressed retaining-bar carried by the other arm of said frame, said bar being disposed at the rear of and in substantial alinement with the said setting, and means for locking the bar when in its retracted or open position.

2. In a pierceless ear-drop, the combination of an integral U-shaped yoke having its front end enlarged and adapted to carry a gem or ornament the other or rear end of the yoke being bent to form a hollow horisontal cylinder, and a spring-pressed retaining-bar longitudinally and axially movable therein having its rear portion extending through the back end of the cylinder and adapted to engage therewith for holding the bar in the normally open or retracted position, substantially as described.

3. In a pierceless ear-drop, a U-shaped yoke or frame, a head member having its free end enlarged and convex-shaped on its rear face and adapted to bear directly against the adjacent surface of the ear-lobe of the wearer, an endwise movable spring-pressed retaining-bar supported by the other or rear member of the frame having its forward end enlarged and convex-shaped and adapted to yieldingly contact with the rear surface of the ear-lobe whereby the ear-drop is adapted to be readily attached to the ear, and means for temporarily securing the bar in the open or retracted position, substantially as hereinbefore described and for the purpose set forth.

879,359. CUFF-PIN AND OTHER ANALOGOUS ARTICLE OF JEWELRY. JOHN S. BRANT, Providence, R. I., assignor to Cory & Reynolds Company, Providence, R. I., a Corporation of Rhode Island. Filed Sept. 13, 1907. Serial No. 392,656.



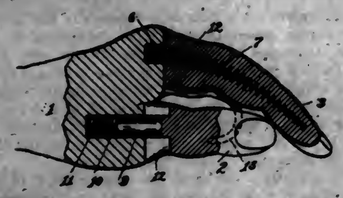
1. In a hinged cuff-pin or other analogous article of jewelry, the combination of front and tongue members having the joint end portion of each of said members substantially alike and being disposed flatwise laterally against each other in different planes, a joint-pin engaging and supporting said end portions, and having the latter provided with integral lugs constructed and arranged so that when the pin is clasped the lugs yieldingly engage each other and impart a degree of resiliency to the pin, substantially as described.

2. In a solderless hinged pin made of wire, the combination of the front and tongued members having the joint-end portions thereof bent to an eye-form and terminating in short lateral extensions or lugs arranged to yieldingly

contact with each other, and a joint-pin passing transversely through said eyes for maintaining the parts in the normal relation.

3. In a hinged cuff-pin made of wire, front and tongue members each having the joint end thereof bent to an eye-form and superposed upon each other in parallel planes, a central eyelet or tubular rivet passing transversely through said eyes for supporting the pin members, and having the inner or free ends of the latter bent and oppositely disposed at points contiguous to the joint so as to form stops or lugs adapted to yieldingly engage each other when the pin is clasped.

879,360. ARTIFICIAL HAND. CLAUDE M. BROADY, South Bend, Ind. Filed Sept. 9, 1907. Serial No. 392,010.



1. An artificial hand, comprising a body portion, flexible fingers, a thumb, coiled springs connecting the fingers and body portion, and a covering inclosing the fingers and body portion.

2. An artificial hand comprising a body portion and fingers elastically connected thereto, a thumb spring pressed and movable longitudinally of the body portion, and a flexible covering inclosing the fingers, thumb and body portion.

3. An artificial hand comprising a body portion and fingers connected thereto, a thumb, a plunger on said thumb having reciprocating mounting in a socket in the body portion, a spring in said socket exerting outward pressure on the thumb plunger, and a covering inclosing the spaced juncture between the inner end of the thumb and the body portion.

4. An artificial hand, comprising a rigid body portion, rubber fingers, coiled springs connecting the fingers and body portion, a thumb having longitudinal movement in the body portion, and a glove or covering inclosing said fingers, thumb and body portion.

879,361. BATTERY-PLATE. WILLIAM M. BRODIE, West Orange, N. J., assignor to Edison Manufacturing Company, West Orange, N. J., a Corporation of New Jersey. Filed Feb. 15, 1905. Serial No. 245,652.



1. As a new article of manufacture, a strongly coherent, pressed copper oxid plate having corrugations formed therein of such depth as to materially increase the superficial area thereof, substantially as set forth.

2. As a new article of manufacture, a strongly coherent, pressed copper oxid plate having corrugations formed in both faces thereof of such depth as to materially increase the superficial area thereof, substantially as set forth.

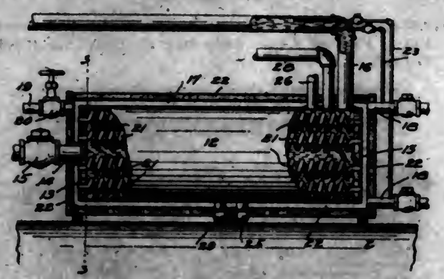
3. As a new article of manufacture, a strongly coherent, pressed copper oxid plate having corrugations formed in both faces thereof of such depth as to materially increase the superficial area thereof, the elevations of one set of corrugations being directly opposite the depressions of the other set, substantially as set forth.

4. As a new article of manufacture, a strongly coherent, pressed copper oxid plate having corrugations formed therein of such depth as to materially increase the superficial area thereof, the tops and bottoms of said corrugations being well rounded, substantially as set forth.

5. As a new article of manufacture, a strongly coherent, pressed copper oxid plate having corrugations formed in both faces thereof of such depth as to materially increase the superficial area thereof, the tops and bottoms of said corrugations being well rounded and the elevations of one set of corrugations being directly opposite the depressions of the other set, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

879,362. FEED-WATER HEATER. WILLIAM H. BROWN, Minneapolis, Minn. Filed Mar. 17, 1906. Serial No. 306,620.



1. The combination, with a locomotive boiler, of a drum mounted thereon near the smoke stack and having double walls with a non-heat-conducting material between them, a chamber arranged within said drum and spaced from the walls thereof, a water supply pipe connected with said chamber, a series of pipes arranged within said chamber having their ends opening through the ends of said chamber into the space between it and the walls of said drum, pipes leading from the exhaust cylinders of the locomotive and opening into the space between said chamber and drum and whereby the exhaust steam will be admitted to said space and to said spirally coiled pipes in said chamber, and a pipe leading from said chamber to the boiler, substantially as described.

2. The combination, with a boiler, of a drum mounted thereon, a chamber provided within said drum and spaced from the walls thereof, a series of pipes provided within said chamber and having their ends projecting through the heads of said chamber and communicating with the space between said chamber and the walls of said drum, a water inlet pipe communicating with the interior of said chamber, an outlet pipe leading from said chamber to the boiler, and exhaust steam pipes leading from the engine cylinders and through the walls of said drum into the space between it and said chamber, substantially as described.

3. The combination, with a boiler, of a drum mounted thereon, a chamber provided within said drum and spaced from the wall thereof, a water inlet pipe for said chamber, an outlet pipe leading upward from the top of said chamber, exhaust steam pipes leading from the engine cylinder and communicating with the space between said drum and chamber, and steam pipes having suitable valves leading from said exhaust pipes and projecting into said water outlet pipe.

4. The combination, with a locomotive boiler having a stack and an exhaust nozzle arranged below the stack, of a drum mounted on said boiler, a chamber arranged within said drum and spaced from the walls thereof, pipes leading from said exhaust and communicating with the space between said drum and chamber, a water supply pipe leading into said chamber, an outlet pipe leading from said chamber to the boiler, a coil located between said stack and said exhaust nozzle, and pipes leading from the ends of said coil, and one pipe extending through the lower wall of said chamber and the other pipe through the upper wall thereof, substantially as described.

5. The combination, with a boiler having a fire box, of a chamber located on said boiler, a water supply pipe for said chamber, a pipe leading from the top of said chamber to said boiler, a drum inclosing said chamber, pipes leading from the exhaust into the space between said drum and chamber, a coil arranged in the upper part of said fire box, and pipes leading from said coil to said chamber, one of said pipes entering the lower walls of said chamber and the other pipe entering the upper wall of said chamber whereby the circulation of water from said chamber will be established through the coil in said fire box.

[Claims 6 to 8 not printed in the Gazette.]

879,363. DIE-PLATE FOR STAMPING UP SOUND-RECORDS. GEORGE K. CHENEY, New York, N. Y., assignor, by mesne assignments, to Victor Talking Machine Company, a Corporation of New Jersey. Filed June 6, 1903. Serial No. 160,436.



1. In an apparatus for molding sound records, the combination with a recessed die plate having its surface adjacent to the recess depressed to provide a clearance for the over-flow, a second die plate, a plunger with vertical walls adapted to telescope with the recess in the first mentioned die plate, and to allow the escape of surplus material, said plunger being further provided with an opening, enlarged at its upper end, through the central portion thereof, and a pin or projection located in the recess of the first mentioned die plate and adapted to coöperate with said opening.

2. In an apparatus for molding disk sound records, a recessed die plate, a matrix located in the recess of said plate, the thickness of said matrix being less than the depth of said recess, a second die plate having a disk-like projection with vertical walls adapted to telescope with said recess, one of said die plates being provided with a centering opening, and a pin or projection located on the other of said die plates and adapted to coöperate with the said centering opening in the first mentioned die plate, to form a centering hole in the record blank.

3. In apparatus for stamping up sound records, the combination of a matrix, a die-plate recessed to contain the matrix and a record blank, said die-plate being provided with a pin projecting through a central aperture of the matrix, and a coöperating die-plate having a central aperture to receive the projecting end of said pin, such aperture being enlarged at its upper end.

4. An apparatus for molding sound records, comprising a die plate, having a cylindrical recess therein, surrounded by an annular channel, the said channel having outlets at one or more of the sides of the die plate, in combination with a second die plate, having a plunger, telescoping the said recess.

5. An apparatus for molding sound records comprising a die plate having a cylindrical recess therein surrounded by an annular channel, the said channel having outlets at one or more sides of the die plate, in combination with a second die plate, covering said channel and outlets, and having a plunger telescoping said recess, the last mentioned die plate having its inner face cut away to form with the said outlet an enlarged outlet.

[Claims 6 and 7 not printed in the Gazette.]

879,364. SOUP-PLATE. ALBERT COHEN, New York, N. Y. Filed Sept. 6, 1907. Serial No. 391,560.



1. A soup-plate having a bowl and an integral inwardly-sloping circumferential dike partially covering the bowl and serving to retain the contents or to shed them into the bowl.

2. A soup-plate having a bowl, an integral outwardly-projecting and inwardly-shedding rim and an integral inwardly-projecting and shedding circumferential dike depressed slightly below the rim.

879,365. HOLDER FOR CLEANING-CLOTHS AND THE LIKE. EMILY A. COMPTON, Washington, D. C., administratrix of Edmund Compton, deceased. Filed July 6, 1907. Serial No. 382,557.



1. A device of the character described, comprising an integral length of resilient wire bent upon itself to form two legs normally tending to separate, one of said legs being provided intermediate its ends with a locking projection extending substantially at right angles to the plane of the two legs, substantially as set forth.

2. A device of the character described, comprising an integral length of resilient wire bent upon itself to form two legs normally tending to separate, one of said legs being provided intermediate its ends with an integral locking projection extending substantially at right angles to the plane of the two legs, substantially as set forth.

3. A device of the character described, comprising an integral length of resilient wire bent upon itself to form two legs normally tending to separate, one of said legs being provided intermediate its ends with a locking projection extending substantially at right angles to the plane of the two legs, the free end of one leg having a hook and the free end of the other leg being bent to form a loop for the reception of said hook, substantially as set forth.

4. A device of the character described, comprising an integral length of resilient wire bent upon itself to form two legs normally tending to separate, the end of one of said legs being provided with a hook extending at right angles to the plane of the legs, and the end of the other leg having a loop in the plane of the legs, and a locking lug on one leg extending at right angles to the plane of the legs, substantially as set forth.

879,366. FEED DEVICE OR FEED-HOPPER. HENRY D. CONWAY, Jackson, Mich. Filed May 14, 1906. Serial No. 316,765.



1. The combination of a hopper, the bottom of which is curved in cross-section, having a delivery opening at one end; a spiral or screw conveyer having a break in the blade thereof, at its delivery end; a vertically adjustable guard or shield arranged at the delivery end of said hopper,

extending inwardly to a point above the break in the said screw or conveyer blade said shield being conformed to said screw and having its inner end flared upwardly at D'; a shield arranged over the inner end of said screw and curved to conform thereto; and a vertically adjustable longitudinal guard or shield toward which said screw revolves, arranged between said end guard or shields and extending inwardly from the wall of said hopper curved to conform to said screw and arranged in close proximity thereto, for the purpose specified.

2. The combination of a hopper, the bottom of which is curved in cross-section, having a delivery opening at one end; a spiral or screw conveyer having a break in the blade thereof, at its delivery end; a guard or shield arranged at the delivery end of said hopper, extending inwardly to a point above the break in said screw or conveyer blade said shield being conformed to said screw and having its inner end flared upwardly at D'; a shield arranged over the inner end of said screw and curved to conform thereto; and a longitudinal guard or shield toward which said screw revolves, arranged between said end guards or shields and extending inwardly from the wall of said hopper, curved to conform to said screw and arranged in close proximity thereto, for the purpose specified.

3. The combination of a hopper, the bottom of which is curved in cross-section, having a delivery opening at one end; a spiral or screw conveyer having a break in the blade thereof, at its delivery end; a guard or shield arranged at the delivery end of said hopper, extending inwardly to a point above the break in the said screw or conveyer blade said shield being conformed to said screw and having its inner end flared upwardly at D'; and a longitudinal guard or shield toward which said screw revolves, extending inwardly from the wall of said hopper, curved to conform to said screw and arranged in close proximity thereto, for the purpose specified.

4. The combination of a hopper, the bottom of which is curved in cross-section, having a delivery opening at one end; a spiral or screw conveyer having a break in the blade thereof, at its delivery end; a guard or shield arranged at the delivery end of said hopper, extending inwardly to a point above the break in the said screw or conveyer blade; a shield arranged over the inner end of said screw and curved to conform thereto; and a longitudinal guard or shield toward which said screw revolves, arranged between said end guards or shields and extending inwardly from the wall of said hopper, curved to conform to said screw and arranged in close proximity thereto, for the purpose specified.

5. The combination of a hopper, the bottom of which is curved in cross-section, having a delivery opening at one end; a spiral or screw conveyer having a break in the blade thereof, at its delivery end; a guard or shield arranged at the delivery end of said hopper, extending inwardly to a point above the break in said screw or conveyer blade; and a longitudinal guard or shield toward which said screw revolves, arranged between said end guards or shields and extending inwardly from the wall of said hopper curved to conform to said screw and arranged in close proximity thereto, for the purpose specified.

[Claims 6 to 9 not printed in the Gazette.]

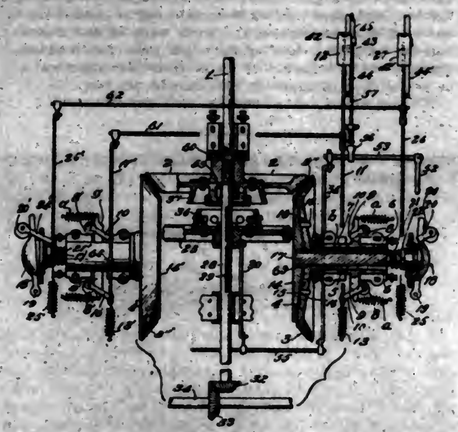
879,367. FRICTION TRANSMISSION MECHANISM FOR POWER-DRIVEN VEHICLES. JAMES H. COOK, Homer, Mich. Filed Apr. 4, 1907. Serial No. 366,450.

1. Friction transmission mechanism comprising a friction disk constructed in two sections, each of said sections being movable independently of the other at right angles to its plane of rotation.

2. Friction transmission mechanism comprising a driving wheel, a driven wheel, a friction disk composed of two sections connected to rotate together and means for moving said sections independently of each other at right angles to the planes of their rotation.

3. A friction transmission disk comprising two independently shiftable sections.

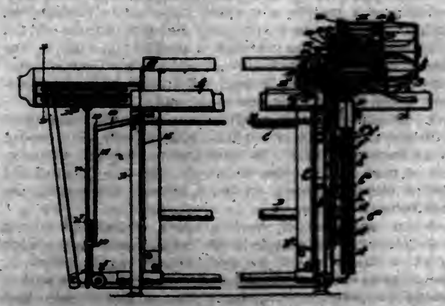
4. A driving wheel, a driven wheel, a disk comprising two independently shiftable sections connected to rotate together and lever and cam means for shifting said sections independently of each other into engagement with said wheels respectively, and spring means to retract said sections.



5. A flat faced wheel, a bevel wheel, an annular disk section having a bevel rim to engage the bevel wheel and also having a hollow shaft, a disk section having a flat face to engage the flat faced wheel and also having a shaft slidable in and rotatable with said hollow shaft, means to shift one of said shafts endwise, and means to shift the other shaft endwise.

[Claims 6 to 15 not printed in the Gazette.]

879,368. WEFT-REPLENISHING LOOM. RANDOLPH CROMPTON, Worcester, Mass., assignor, by mesne assignments, to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed May 1, 1905. Serial No. 258,150.



1. In a filling-changing loom, a series of shifting or drop shuttle-boxes, combined with an unconnected filling-feeder containing filling-carriers, means to restrain the movement of said filling-feeder while the shifting shuttle-boxes are operated and their shuttles are being actuated to lay filling in the shed, and means for supplying filling to said shuttles.

2. In a filling-changing loom, shifting or drop shuttle-boxes, a normally stationary filling-feeder containing filling-carriers, and filling-changing means to effect a change of filling in an active shuttle controlled by said shuttle-boxes.

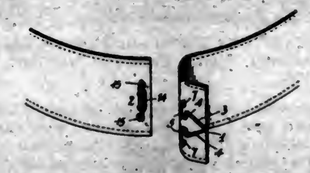
3. In a loom, shifting shuttle-boxes, a normally stationary filling-feeder provided with filling-carriers, transferring mechanism to transfer a carrier from said feeder into a shuttle prior to substantial exhaustion of the filling therein, and devices for suspending the operation of said transferring mechanism until a subsequent arrival of the nearly exhausted shuttle into the shuttle-box adjacent said filling-feeder.

4. In a loom, shifting or drop shuttle-boxes, a filling-feeder unconnected with said drop shuttle-boxes and occupying normally a stationary position, filling-changing mechanism including a transferrer, a dagger connected to the latter, an indicator carrying a series of lifters, and connections between said indicator and drop shuttle-boxes to move the former in unison with the latter, an actuator, and means to move the same prior to complete exhaustion of the filling in an active shuttle to raise said lifter to place the dagger in position to be actuated.

5. In a loom, a filling-feeder to sustain a series of filling-carriers, transferring mechanism, means to lock and release the filling-feeder, a spring acting normally to move said feeder in one direction when released, and an arresting device to arrest the filling-feeder with a filling-carrier in the path of movement of the arm of the transferring mechanism.

[Claims 6 to 33 not printed in the Gazette.]

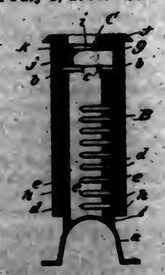
879,369. GARMENT-FASTENER. GEORGE W. CUMMINGS, Jr., Cohoes, N. Y. Filed July 11, 1907. Serial No. 383,294.



1. A garment fastener comprising a tongue member and an eye member, said tongue member being constructed from a single piece of wire bent to form a tapered loop or tongue, the inner ends of which are bent inwardly and thence outwardly to form eye engaging recesses, securing eyes formed on the inner ends of said wire, said eye member being constructed from a single piece of wire bent midway between its ends to form a tongue engaging loop or eye and bent at its opposite ends to form fastening or securing eyes, substantially as described.

2. A garment fastener comprising a tongue member and an eye member, said tongue member being constructed from a single piece of wire bent to form a tapered or substantially V-shaped loop or tongue, the inner ends of which are bent inwardly, thence outwardly to form rectangular eye engaging recesses, a spring coil formed in the outer end of said tongue, fastening eyes formed on the inner ends of said tongue, said eye member being constructed from a single piece of wire bent midway between its ends before the tongue engaging loop or eye, and rectangularly formed fastening eyes on the outer ends of said wire, substantially as described.

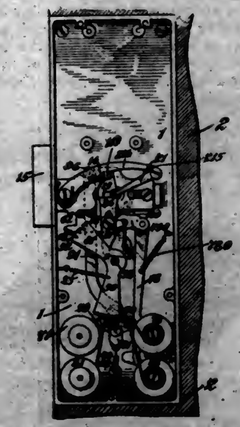
879,370. SERVICE-BOX. WILLIAM DENNISON, New Orleans, La. Filed July 8, 1907. Serial No. 382,660.



1. In a service box, the combination with a lower or interior member having a base and upper circumferential projections separated by vertical spaces and also having vertical series of circumferential projections separated by vertical spaces in vertical alinement with the upper projections and further having the upper projections and the vertical series of projections disposed at right angles to its length; of an upper or exterior member arranged to receive the lower or interior member and having on the inner side of its lower portion projections separated by spaces and extending at right angle to its length and arranged when the upper or exterior member is turned through a part of a revolution to assume positions between projections on the lower or interior member.

2. In a service box, the combination with a lower or interior member having a base and upper circumferential projections b separated by vertical spaces and also having vertical series of circumferential projections d separated by vertical spaces in vertical alinement with the upper projections b and further having the projections b and d disposed at right angles to its length; of an upper or exterior member arranged to receive the lower or interior member and having an exterior beveled flange at its upper end and an interior flange adjacent to said end and also having on the inner side of its lower portion projections h separated by spaces of the width described and extending at a right angle to its length and arranged when the upper or exterior member is turned through a part of a revolution to assume positions between projections on the lower or interior member, and a closure plug loosely connected with the upper or exterior member and arranged to rest on the interior flange thereof and having a lower reduced portion adapted to rest snugly within the said flange.

879,371. VERTICAL LOCK. ALLEN DE VILBISS, Jr., Toledo, Ohio, assignor, by direct and mesne assignments, of two-sixths to John F. Pixley, one-third to Alice S. Wells, and one-sixth to Martha S. Park, Columbus, Ohio. Filed Sept. 13, 1904. Serial No. 224,281.



1. In a recording-lock, the combination with a slide adapted to be borne inward to various extents by the insertion of keys of different lengths, a portion of the slide being tapered; of the bolt, a key-indicator, and means for actuating both by the rotation of the slide in either direction.

2. In a recording-lock, the combination with keys of different lengths, a main tumbler having a non-circular hole, and a slide shaped to fit said hole and adapted to be pressed inward to different extents by various keys, its inner end being tapered; of the bolt moved in either direction by the rotation of said tumbler, and a key-indicator controlled by the extent to which the slide is borne inward.

3. In a recording-lock, the combination with a slide adapted to be borne inward to various extents by the insertion of keys of different lengths, its inner end being

tapered and one side cut away, and a bolt actuated by the rotation of the slide; of a key-indicator, and a controlling bar connected therewith and standing adjacent said cut-away portion of the slide when the bolt is at either extreme of its movement.

4. In a recording-lock, the combination with a slide adapted to be borne inward to various extents by the insertion of keys of different lengths, its inner end being tapered and its tip being reduced, a spring engaging this tip to press the slide normally outward, a tumbler through which the slide moves, and means for rotating the tumbler and slide in unison; of the bolt actuated by the rotation of the tumbler, and a key-indicator controlled by the extent to which the slide is borne inward and operated by its rotation.

5. In a recording-lock, the combination with a slide adapted to be borne inward to various extents, and an indicator controlled by the extent to which the slide is borne inward; of a bolt, and means for actuating both the indicator and bolt by the rotation of the slide in either direction.

[Claims 6 to 48 not printed in the Gazette.]

879,372. ROOF-COVERING. CLAY C. DILL, Denver, Colo. Filed Apr. 30, 1907. Serial No. 371,174.



1. A roof covering comprising a layer of oil proof paper, a layer of mortar formed of oil and a mineral substance, and a layer of cloth covered by an impervious material.

2. A roof covering comprising a layer of fibrous material treated with sizing to render it impervious to oil, a layer of oil mixed with a mineral, a layer of cloth, a second layer of oil and mineral, and a layer of cement.

3. A roof covering comprising a layer of paper coated with glue, a layer of mortar containing oil and sesqui-oxid of iron, a layer of canvas, a second layer of oil and sesqui-oxid of iron, and a layer formed of cement sprinkled upon the last mentioned layer.

879,373. PROCESS OF MAKING SOUNDING-BOARDS FOR PIANOS. ALFRED DOLGE, Los Angeles, Cal. Filed Oct. 29, 1903. Serial No. 179,073.



1. The process of manufacturing sounding boards for pianos and other musical instruments consisting in cutting the stripe of lumber; cutting at an angle the opposite ends of the stripe along parallel lines gluing and assembling the said stripe in numbers sufficient to form the width of the sounding boards to be made along the angular ends to form a rhomboid; pressing the glued and assembled stripe together; cutting the rhomboid on the short diagonal line connecting the opposite corners thereof; and gluing and pressing together the outer opposite edges of the assembled stripe.

2. The process of manufacturing sounding boards consisting of mitering the opposite ends of stripe of lumber along parallel lines; gluing and assembling the said stripe to form a rhomboid, pressing the adjacent edges of the stripe together and drying the same; cutting diagonally across the assembled stripe; and gluing, assembling and pressing together the outer parallel edges of the stripe along parallel lines, and drying the same.

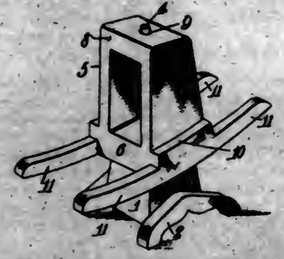
3. The process of manufacturing sounding boards, consisting in mitering the ends of stripe of lumber along parallel lines; gluing, assembling and pressing the edges of the stripe together to form a rhomboid; cutting diagonally across the assembled stripe; and gluing and pressing together the two outer parallel edges of the assembled stripe.

4. The process of manufacturing sounding boards consisting in cutting stripe into the length required; mitering the opposite ends of the strips along parallel lines; gluing, assembling in parallel lines the said strips to form a rhomboid, pressing and drying the assembled adjacent edges of the stripe; cutting diagonally across the assembled stripe; and gluing and pressing together the outer parallel edges of the stripe.

5. The process of manufacturing sounding boards consisting in cutting strips into lengths, cutting at an angle the opposite ends of the strips along parallel lines; gluing, assembling and adjusting in alinement to each other the cut angular ends of the strips and pressing together the adjacent edges of the strips parallel to each other to form a rhomboid; cutting diagonally the assembled strips; and gluing and pressing together the outside parallel edges of the assembled strips.

[Claim 6 not printed in the Gazette.]

879,374. STAND FOR TYING SHOOKS. GEORGE EIKENBURG, Anacortes, Wash. Filed Sept. 26, 1907. Serial No. 394,775.



1. A shook tying stand comprising a suitable base, and a member supported by said base and provided with substantially horizontally projecting carrying arms below its upper end, said member being rotatable in a horizontal plane upon said base about a vertical axis, and its upper end coacting with the arms to hold shooks while being tied.

2. A shook tying stand comprising a base or support having an upright pivot post thereon, a frame mounted on said post and supported on the top of the base for rotation in a horizontal plane, and parallel shook-supporting arms projecting in a substantially horizontal plane from said frame, below its upper end, the frame and arms coacting to hold shooks while being tied.

3. A shook tying stand comprising a base or support provided with an upwardly-extending centrally-located pivot post, a frame mounted on the top of said base and receiving said pivot post and rotatable in a horizontal plane about the latter, said frame being provided with pairs of oppositely projecting horizontal spaced arms.

4. A shook tying stand comprising a suitable base or support, a pivot post rising therefrom, a frame supported by said base and rotatable about the pivot post, said frame being provided with pairs of curved spaced arms projecting from opposite sides of the frame and lying in a substantially horizontal plane.

879,375. COMPOSITION OF MATTER. CARLETON ELLIS, Larchmont, N. Y. Filed Oct. 5, 1907. Serial No. 396,103.

1. Composition of matter comprising a neutral sulfonated oil, water and a volatile aromatic hydrocarbon miscible therewith.

2. Composition of matter comprising a sulfonated oil, water and a volatile aromatic hydrocarbon; said composition being clear and transparent, fluent and flowable.

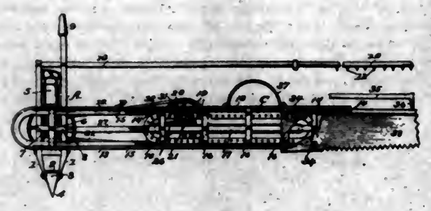
3. Composition of matter comprising a substantially neutral sulfonated oil and a volatile hydrocarbon miscible therewith.

4. Composition of matter comprising a substantially neutral sulfonated oil, and a terpene body.

5. Composition for cleaning finish comprising sulfonated oleaginous matter and a hydrocarbon; said composition being free from disagreeable odor.

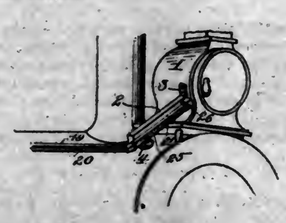
[Claims 6 to 16 not printed in the Gazette.]

879,376. WOOD-SAWING MACHINE. ALLAN FAIRCHILD, Helmer, Mich. Filed Jan. 16, 1907. Serial No. 352,558.



A wood sawing machine comprising a base strip having converging faces and a bottom edge, a yoke embracing and pivotally connected to the base strip, a frame secured to and upon the yoke, a motor carried thereby, a drive shaft extending from the motor, a guide frame pivotally mounted upon the shaft, a saw mounted to reciprocate upon said frame, and mechanism upon the frame and disposed to be actuated by the shaft for reciprocating the saw.

879,377. LOCOMOTIVE-HEADLIGHT BLIND. FREDERICK J. FEWINGS, Duluth, Minn. Filed July 12, 1905. Serial No. 269,415.



1. A casing containing a foldable blind, a fluid-pressure operated means for expanding and projecting the blind, and a fluid-pressure operated means for retracting the blind.

2. An expandible and retractable locomotive headlight blind having means for increasing or diminishing the diameter thereof when expanded.

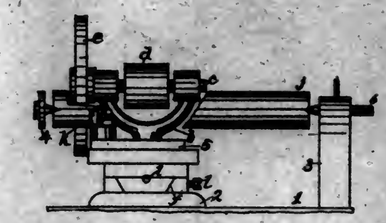
3. An expandible and retractable locomotive headlight blind having means for increasing or diminishing the diameter thereof when expanded, combined with means forming a part of said blind for indicating the number of a train.

4. An expandible and retractable locomotive headlight blind having means for increasing or diminishing the diameter thereof when expanded, combined with a fluid-pressure operated means for expanding and retracting the blind.

5. An expandible and retractable locomotive headlight blind having means for increasing or diminishing the diameter thereof when expanded, combined with means forming a part of said blind for indicating the number of a train, and fluid-pressure operated means for expanding and retracting the blind.

[Claims 6 to 12 not printed in the Gazette.]

879,378. MACHINE FOR TURNING RUBBER SHELLS OF PLATENS. DAVID W. FILSTEAD, Chicago, Ill., assignor of one-half to Arthur R. Ames, Chicago, Ill. Filed July 20, 1906. Serial No. 327,024.

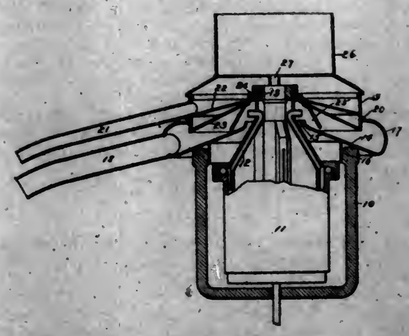


1. A lathe-carriage provided with opposite tool-bases, a screw-adjustment between one of said bases and its carriage and releasable connecting mechanism between said base and its opposite base.

2. A lathe-carriage provided with opposite and reciprocable tool-bases whereof one of said bases has a transverse screw-adjustment, of means to connect and disconnect said base with its said opposite base.

3. A lathe-carriage provided with two tool-bases transversely adjustable thereon, a screw and nut connection between one of the bases and carriage and hinged releasable connection between said tool-bases.

879,379. CREAM-SEPARATOR. JOSEPH W. FOWLER, CHARLES S. BARNES, and HENRY G. PETERS, Grinnell, Iowa. Filed Dec. 4, 1905, Serial No. 290,117. Renewed Oct. 18, 1907. Serial No. 398,032.



1. In a centrifugal cream separator, the combination of a skimmed milk pan having an enlarged chamber at its periphery, a detachable cover therefor, formed with a double bottom having its lower layer inclined downwardly and outwardly and terminating at a point below the top of the enlarged chamber, the upper layer of said bottom inclined downwardly and outwardly and terminating above the enlarged chamber, a cream pan having said double bottom fixed thereto and a number of rods fixed to the lower layer of said double bottom near its center and inclined downwardly and outwardly to points near the bottom of the skimmed milk pan.

2. In a centrifugal cream separator, the combination of a skimmed milk pan having an enlarged chamber at its periphery, a detachable cover therefor, formed with a double bottom having its lower layer inclined downwardly and outwardly and terminating at a point below the top of the enlarged chamber, the upper layer of said bottom inclined downwardly and outwardly and terminating above the enlarged chamber and a cream pan having said double bottom fixed thereto.

879,380. MULTIPLE CARBURETER. CHARLES R. GARDNER, Wilkes-Barre, Pa. Filed Feb. 25, 1907. Serial No. 359,279.



1. A carbureter comprising a plurality of vaporizers, a single throttle common to the several vaporizers, and separate cut-offs for the oil feed for certain of the vaporizers, said cut-offs being operated by the throttle.

2. A carbureter comprising a plurality of vaporizers each consisting of a mixing tube and an oil spray tube entering the latter, a single throttle, cut-offs arranged to stopper certain of the oil spray tubes, and means for operating said cut-offs from the throttle.

3. A carbureter comprising a plurality of vaporisers, a throttle common to the several vaporizers, and cut-off devices for the oil feed for certain of the vaporizers and arranged to cut off the oil flow when the vaporizers are throttled.

4. A carbureter comprising a plurality of vaporizers each consisting of a mixing tube and an oil spray tube in the latter, a rotary throttle valve common to the several vaporisers, and cut-off devices coöperating with certain of the vaporisers, each of said cut-off devices having a stopper movable over the orifice of the spray tube and an operating lever movable in one direction by the throttle valve.

5. A carbureter comprising a plurality of vaporizers each consisting of a mixing tube and an oil spray tube in the latter, a rotary throttle valve common to the several vaporizers, and cut-off devices for certain of the vaporizers, each of said cut-off devices consisting of a reciprocating stopper movable over the orifice of a spray tube, and a spring retracted operating lever connected at one end with the stopper and at its other end having a cam engagement with the throttle valve.

[Claim 6 not printed in the Gazette.]

879,381. ANTIRATTLING DEVICE FOR WINDOWS AND DOORS. JOHN J. HALLADAY, Brooklyn, N. Y. Filed Dec. 4, 1907. Serial No. 405,029.



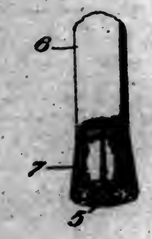
1. In a device of the character described, the combination with a housing having perforated end ears and containing interior shoulders presented by a wall, contiguous to said ears, a wall opposite said shouldered wall, containing an opening, a laterally removable leaf spring within said housing with its ends bearing against the shoulders and carrying perforated ears, and a roller revolubly and yieldingly supported in said ears and having a portion projecting through said wall opening.

2. In a device of the character described, a housing comprising a folded blank with lateral edge-tabs and having a tab and slot engagement at the ends, said housing presenting an arched wall shouldered at the ends, and an opposite wall containing an opening, a laterally removable leaf spring within said housing with its ends bearing against the shoulders and carrying perforated ears, a roller revolubly and yieldingly supported in said ears and having a portion projecting through said wall opening, and slotted front and back plates secured by the riveted edge tabs, one of said plates presenting perforated securing ears at the ends.

3. In a device of the character described, the combination with a housing having perforated ears and containing interior shoulders presented by a wall, contiguous to said ears, a wall opposite to said shouldered wall, containing an opening, a laterally removable leaf spring within said housing with its ends bearing against the shoulders, said spring having integral perforated ears, and a roller revolubly and yieldingly supported in said ears and having a portion projecting through said wall opening.

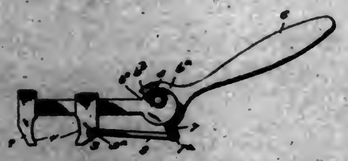
4. In a device of the character described, a housing comprising a folded blank with lateral edge-tabs and having a tab and slot engagement at the ends and an opposite wall containing an opening, a laterally removable leaf spring within said housing with its ends bearing against said shoulders, said spring having integral perforated ears, a roller revolubly and yieldingly supported in said ears and having a portion projecting through said opening, and slotted front and back plates secured by the riveted edge tabs, one of said plates presenting pivoted securing ears at the ends.

879,382. MORTISE AND TENON. LAWRENCE P. HARRIS, Terrell, Tex. Filed Sept. 1, 1906, Serial No. 333,016. Renewed July 26, 1907. Serial No. 385,708.



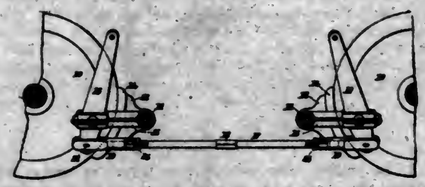
The combination with a frame having a mortise therein, the walls of which are tapered; of a tenon adapted to enter said mortise, a tubular wedge having an edge at one end thereof and split from end to end whereby the same may yield, said wedge being concentrically disposed in the mortise and adapted to enter the tenon and force the outer portion thereof into engagement with the tapered walls of the mortise.

879,383. WRENCH. PETER HAWKINS, Kokomo, Ind. Filed Sept. 29, 1906. Serial No. 336,722.



A wrench comprising a shank having at one end, a fixed jaw-member and at its opposite end a circular bifurcated enlargement, a movable jaw-member, slidably mounted upon said shank, a handle or lever having an inner-end enlargement formed between cheek pieces formed by said bifurcated shank enlargement, and a link connection between said movable jaw and an outstanding extension of said inner-end enlargement of said lever, said lever having pivotal connection with said circular enlargement of said shank member, said pivotal connection being eccentrically effected with said circular end enlargement.

879,384. RAILWAY-CAR BRAKE AND OTHER MECHANISM. EDWARD D. HILLMAN, Larchmont Manor, N. Y., assignor to Benjamin A. Hegeman, Jr., North Plainfield, N. J. Filed Sept. 21, 1907. Serial No. 393,890.



1. In railway car brake mechanism, brake operating levers pivotally connected with the brake-beams, and a rod connecting and pivotally secured to said levers and comprising a body-portion threaded at its ends, internally threaded jaw-members on the ends of said body-portion, and means for locking said jaw-members on said body-portion, said locking means comprising for each jaw-member an internally threaded split-nut having a conical stem applied on the rod and a conical recess in the end of the jaw-member to receive said stem; substantially as set forth.

2. In railway car-brake mechanism, brake-operating levers pivotally connected with the brake-beams, and a rod connecting and pivotally secured to said levers and comprising a body-portion having a threaded end, an internally threaded jaw-member on said threaded end and having in its inner end a conical recess, and an internally threaded split locking-nut on said body-portion and having a conical stem adapted to be wedged into said conical recess; substantially as set forth.

3. The connecting rod for use in mechanisms connected with railway work, said rod comprising a body-portion having a threaded end, an internally threaded jaw-member on said threaded end and having in its inner end a conical recess, and an internally threaded split locking-nut on said body-portion and having a conical stem adapted to be wedged into said conical recess; substantially as set forth.

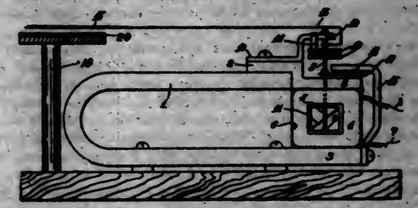
4. The connecting rod for use in mechanisms connected with railway work, said rod comprising a body-portion having threaded ends, internally threaded members on said threaded ends and each having in its inner end a conical recess and being transversely apertured at its outer end, and an internally threaded split locking-nut on said body-portion and having conical stems adapted to be wedged into said conical recesses; substantially as set forth.

5. The connecting-rod for use in mechanisms connected with railway work, said rod comprising a body-portion having a threaded end, an internally threaded member on said threaded end and having in its inner end a conical recess and at its other end being transversely apertured for pivotal connection with the part intended to coöperate with said rod, and an internally threaded split locking-nut on said body-portion and having a conical stem adapted to be wedged into said conical recess; substantially as set forth.

879,385. ELECTRICAL MEASURING INSTRUMENT. ADRIAN H. HOYT, Penacook, N. H., assignor to Whitney Electrical Instrument Company, a Corporation of New York. Filed July 9, 1904. Serial No. 215,865.

1. In an electrical measuring instrument, the combination of a magnet, a pivoted shaft, an element mounted upon said shaft in the field of force of the magnet in such manner as not to be moved thereby, a coil carrying current adapted to rotate said element, springs opposing the movement of the element, and a mass of dampening material carried by said shaft and moving in a magnetic field, substantially as described.

2. In an electrical measuring instrument, the combination of a pivoted inclined element, means for polarizing said element, mechanical means tending to hold said element in a fixed position, a coil for causing deflection of said element upon the passage of a current, and means for indicating the amount of said deflection.



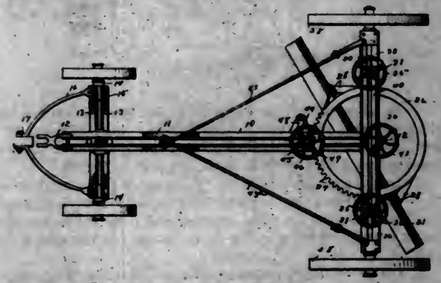
3. In an electrical measuring instrument, the combination of a movable polarized element, stationary means for polarising said element, a coil adapted to receive the current to be measured, and resilient means tending to hold said element in a position such that its magnetization opposes that of the coil when said current flows.

4. In an electrical measuring instrument, the combination of a pivoted polarised element, stationary means for polarising said element, a fixed coil adapted to receive the current to be measured, and resilient means tending to hold said element in a position such that its magnetisation opposes that of the coil when said current flows.

5. The combination of a pivoted element, stationary means for polarising said element, a fixed coil adapted to receive the current to be measured, resilient means tending to hold said element in a position such that its magnetisation opposes that of the coil when said current flows, and means for dampening the movement of said element.

[Claims 6 to 11 not printed in the Gazette.]

879,386. ROAD-GRADER. FRANK HUMMEL, Newton, Iowa. Filed May 14, 1907. Serial No. 373,671.



1. In a device of the class described, the combination of a main frame member, a scraper blade connected to the rear end thereof, means for attaching draft animals to the forward end thereof, a forward truck pivotally connected to the main frame member and a tongue connected with said truck.

2. In a device of the class described, the combination of a forward truck, a tongue connected therewith, a straight frame member pivotally mounted on the forward truck, means for attaching draft animals to its forward end, a rear axle, brace beams connected to said main frame member and extended outwardly and rearwardly and attached to the ends of the rear axle, supporting wheels mounted on the rear axle, and a scraper blade supported by the rear axle.

3. In a device of the class described, the combination of a rear axle, supporting wheels thereon, a scraper blade pivoted at its central portion, means for adjusting either end of the scraper blade forwardly or rearwardly, and means for moving the scraper blade longitudinally relative to the axle, so that either end thereof may be adjusted to position in front of and projecting beyond either of said supporting wheels.

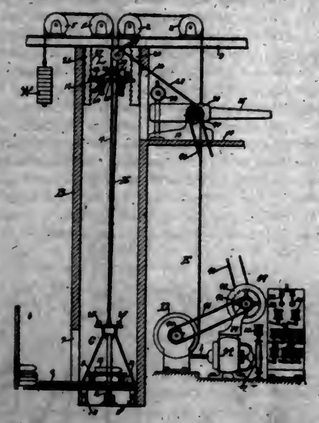
4. In a device of the class described, the combination of a rear axle, supporting wheels thereon, a scraper blade piv-

otally supported beneath the rear axle, means for adjusting the scraper blade so that either end may be moved forwardly or rearwardly, and means carried by the rear axle for moving the scraper blade longitudinally relative to the axle.

5. In a device of the class described, the combination of a rear axle, supporting wheels thereon, a scraper blade pivotally supported beneath the rear axle, means for adjusting the scraper blade so that either end may be moved forwardly or rearwardly, and means carried by the rear axle for moving the scraper blade longitudinally relative to the axle, and means carried by the rear axle for raising and lowering the scraper blade.

[Claims 6 to 9 not printed in the Gazette.]

879,387. AMMUNITION-HOIST CONTROL. JOHN D. IHLDER, New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 30, 1907. Serial No. 390,845.



1. In an ammunition hoist, the combination with a carrier, a motor and driving connections therebetween, of a gun, and means for stopping the carrier automatically at different positions varying with the gun elevation.

2. In an ammunition hoist, the combination with a carrier, and driving mechanism therefor, of a gun, and means for stopping the carrier automatically at different positions varying in proportion to variations in the gun elevation.

3. In an ammunition hoist, the combination with a carrier, and means for raising and lowering the carrier, of a gun, and means for stopping the carrier automatically at different elevations corresponding to different gun elevations.

4. In an ammunition hoist, the combination with a carrier, means for elevating the carrier, and means for stopping the carrier in an elevated position, of a gun adjustable to different elevations, and connections between the gun and said stopping means operable to change the position in which the carrier is stopped to correspond with changes in the gun elevation.

5. In an ammunition hoist, the combination with a carrier, means for elevating the carrier, and an upper limit stop, of a gun adjustable to different elevations, and means for adjusting the limit stop to positions corresponding with the gun elevation.

[Claims 6 to 23 not printed in the Gazette.]

879,388. ARTICLE OF RUBBER COMPOUND. WILLIAM KIRK, Butler, N. J., assignor to American Hard Rubber Co., New York, N. Y., a Corporation of New York. Filed June 26, 1906. Serial No. 323,488.

1. An article comprising three cohering layers of which the outer layers are composed of relatively hard rubber compound and the intermediate layer is of relatively soft superficially vulcanized material united to the outer layers and substantially completely covered and protected thereby.
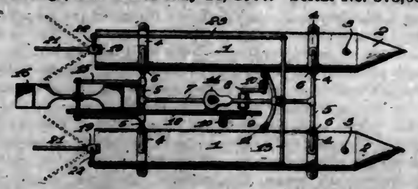


2. An article composed of three layers of rubber compound, the outer and exposed layers being of relatively hard vulcanized material and the intermediate layer of relatively soft superficially vulcanized material united to said outer layers and substantially completely covered and protected thereby.

3. A hollow article of rubber compound having inner and outer layers of relatively hard vulcanized material and another layer intermediate said inner and outer layers of relatively soft superficially vulcanized material, said intermediate layer being united to the other layers and substantially completely covered and protected against exposure thereby.

4. A receptacle for chemicals having on its inner and outer surfaces layers of relatively hard, resistant rubber material and intermediate said layers and substantially completely covered and protected against exposure thereby, another layer of relatively soft rubber compound superficially vulcanized and united to said other layers.

879,389. WATER-VELOCIPEDE. ROBERT W. KREIS, Jennings, Mo. Filed May 14, 1907. Serial No. 373,686.

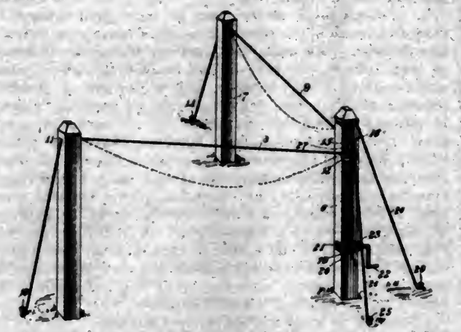


A water velocipede, comprising a pair of hollow cylinders, of the same diameter throughout their length and provided with pointed forward ends, a pair of bands encircling each cylinder adjacent its ends, a tubular frame having its lower ends detachably seated in the bands at the tops of the cylinders, the transverse members of which frame are separable to permit the insertion of extra frame members, a paddle wheel arranged for rotation between the rear ends of the cylinders, pedally operated means for driving said wheel, a rudder arranged at the rear of each cylinder, and means whereby the rudders are simultaneously shifted.

879,390. CLOTHES-LINE. DANIEL L. LASH and CHARLES P. MOCK, Alva, Okla. Filed Apr. 28, 1906. Serial No. 314,253.

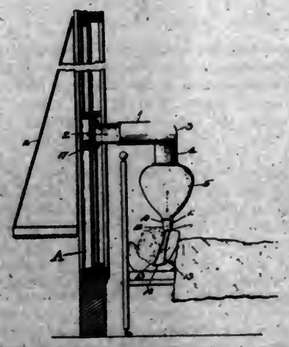
1. The combination with a plurality of spaced standards arranged in substantially tri-angular form two of which constitute line anchoring standards and the third a reel supporting standard, of a winding drum mounted for rotation on the reel standard and provided with an operating handle, clothes lines secured to the anchoring standards and having their free ends extended through the reel standard and provided with terminal loops, and a flexible medium secured to the winding reel and provided with a hook for detachable engagement with the terminal loops of both lines.

2. The combination with a plurality of spaced standards arranged in substantially tri-angular form, two of which constitute line anchoring standards, and the third a reel supporting standard, said reel standard being provided with guide rollers and having a seating recess formed therein, of a winding reel mounted for rotation in said recess, clothes lines each having one end thereof secured to the adjacent anchoring standard and its opposite end extended over the adjacent roller and provided with a terminal loop, and a flexible medium carried by the reel and provided with a terminal hook for detachable engagement with the loops of both lines, the space between the line anchoring standards being unobstructed.



3. The combination with a plurality of spaced standards arranged in tri-angular form, one of said standards being formed with a seating recess and provided with angularly disposed guide rollers, there being an inclined groove formed in one side of said standard and communicating with the seating recess, a winding reel mounted for rotation in said recess and provided with a ratchet wheel, clothes lines each having one end thereof secured to the adjacent standard and its opposite end extended over the adjacent roller and twisted to form a terminal loop, a wire cable secured to the winding reel and having its free end bent to form a hook for detachable engagement with the terminal loops of both lines, and a pawl pivotally mounted in the inclined groove and adapted to engage the ratchet wheel.

879,391. FRESH-AIR-TREATMENT APPARATUS. LAWRENCE P. LEONARD, St. Cloud, Minn. Filed June 17, 1907. Serial No. 379,490.



1. In a fresh air treatment apparatus, a duct opening to the outside air, a diffusing chamber secured to the inner end of the duct, a compartment on the end of the duct within the diffusing chamber containing resinous material, and means to connect said diffusing chamber with the patient's head, substantially as shown and described.

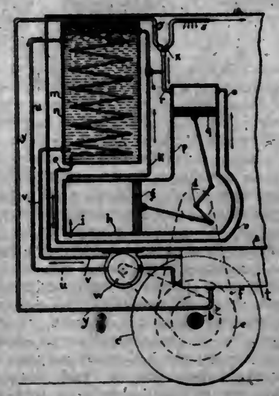
2. In a fresh air treatment apparatus, a duct opening to the outside air, a diffusing chamber secured to the inner end of the duct, an inhaler at the lower end of the diffusing chamber, shaped to surround the nose of the patient, a closed opening in said inhaler for inserting the hand, and means to secure the inhaler in position, substantially as shown and described.

3. In a fresh air treatment apparatus, a duct opening to the outside air, a diffusing chamber secured to the inner end of the duct, a compartment at the end of the duct, and within the diffusing chamber containing resinous material, an inhaler at the lower end of the diffusing chamber shaped to surround the nose of the patient, and means to secure the inhaler in position, substantially as shown and described.

4. In a fresh air treatment apparatus, a duct opening to the outside air, a diffusing chamber secured to the inner end of the duct, a compartment at the end of the duct and within the diffusing chamber containing resinous material, an inhaler at the lower end of the diffusing chamber shaped to surround the nose of the patient, a closed opening in said inhaler for inserting the hand, and means to secure the inhaler in position, substantially as shown and described.

5. A fresh air treatment apparatus comprising a duct extending to the outer air, a screen over the exposed end of the duct, a box below said exposed end containing resinous material, an awning covering said exposed end and box, a flexible chamber on the inner end of the duct, a compartment on the inner end of the duct inside of said chamber containing resinous material, an inhaler at the lower end of said chamber shaped to surround the patient's nose, said inhaler being provided with an opening in its side closed by a door for inserting the hand, and straps secured to said inhaler to secure it to the patient's head, substantially as shown and described.

879,392. SYSTEM OF COOLING ROOMS BY COMPRESSED AIR. OLIVIER LEVILLY, Paris, France. Filed Nov. 14, 1906. Serial No. 343,394.



In a car to be cooled by compressed air, the combination of a compressor for the air of the car, of a refrigerator adapted to receive the compressed air from the compressor and comprising a water reservoir and a cooling coil, a pipe joining the compressor and cooling coil, a motor, a pipe connecting the motor with the cooling coil, the perforated pipe for supplying the cold air from the motor to the interior of the car, a by-pass joining this supply pipe and the pipe connecting the compressor and the cooling coil, a shaft operated from the axle of the car and connected with the piston of the motor for operating the compressor piston, the car axle, and a three-way cock in the by-pass for delivering the air from the compressor directly to the car for heating the same, substantially as described and shown.

879,393. EXPANSION-REGULATOR FOR REFRIGERATING-MACHINES. OLIVIER H. LEVILLY, Paris, France. Filed Feb. 5, 1907. Serial No. 355,949.



An expansion regulator for refrigerating machines comprising in combination a valve-rod provided with side inclined recesses made in three separate parts, the driving shaft for the device which is influenced from the compressor, a centrifugal governor on the driving shaft comprising a movable sleeve having a stepped cam formed thereon, adapted to act upon the upper part of the valve-rod; a stepped slide inserted between the upper part and the middle part of the valve-rod, a device influenced through the thermometer of the cooling room connected with the stepped slide for displacing the same in horizontal direction, and a spiral spring around the lower part of the valve-rod for keeping said part in the position in which it closes the passage for the liquefied gas, substantially as described and shown and for the purpose set forth.

879,394. MUSIC CHART OR TABLE. LEO R. LEWIS, Somerville, Mass. Filed Sept. 19, 1904. Serial No. 224,965.



1. A music chart or table comprising a column or row of characters denoting scale-units, and a column or row of characters denoting proper intervals and also comprising arbitrary signs to indicate improper or impossible intervals which enter rarely or never into the structure of melody, said rows being so organized and arranged with relation to each other, as visually to indicate the proper interval or the improper or impossible interval as the case may be, between a given one of said scale-units and any other one of said scale-units.

2. A music chart or table comprising a column or row of characters denoting scale-units, a number of correlated columns or rows of characters denoting intervals, the unison character or starting point of each interval row being opposite a different scale-unit character, and the characters of each interval row indicating the interval or tone-relationship between the scale-units opposite said interval characters respectively and the scale-unit opposite said unison character or starting point in such interval row, the interval rows being parallel with each other and arranged in the same order of sequence as the scale-unit characters to which their respective interval characters are appropriate.

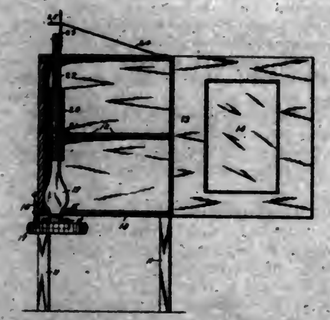
3. A music chart or table comprising a column or row of characters denoting scale-units, and a number of correlated columns or rows of characters parallel therewith denoting intervals, the unison characters of the several interval columns being transversely opposite different and appropriate scale-unit characters, and the interval rows being arranged in the same order of sequence as the scale-unit characters to which their several unison characters are appropriate, whereby the unison characters will fall in a diagonal line or row adapted to be used as a reference index in the manner described.

4. A music chart or table comprising a column or row of characters denoting scale-units, and a number of correlated columns or rows of characters parallel therewith denoting intervals, the unison characters of the several interval columns being transversely opposite different and appropriate scale-unit characters, and the interval rows being arranged in the same order of sequence as the scale-unit characters to which their several unison characters are appropriate, whereby the unison characters will fall in a diagonal line or row adapted to be used as a reference index in the manner described, and diagonal rulings demarking said unison characters.

5. A rectangular music chart or table comprising vertical and horizontal borders or margins containing characters denoting scale-units consecutively arranged, the series of scale-units in the vertical and horizontal borders being counterparts of one another, and a number of parallel columns of characters denoting intervals severally placed in alinement with the characters of the horizontal marginal row, and having their interval characters transversely opposite the several characters in the vertical marginal row, the unison character of each interval row being transversely opposite the character of the vertical marginal row corresponding with the character of the horizontal marginal row in alinement with its respective interval row, and the other characters in each interval row denoting the interval or tone-relationship between the scale-unit horizontally opposite and the scale-unit horizontally or vertically opposite said unison character.

[Claims 6 to 9 not printed in the Gazette.]

879,395. DOUGH-RAISING CABINET. WILLIAM P. MAGNER, Paton, Iowa. Filed May 13, 1907. Serial No. 373,385.

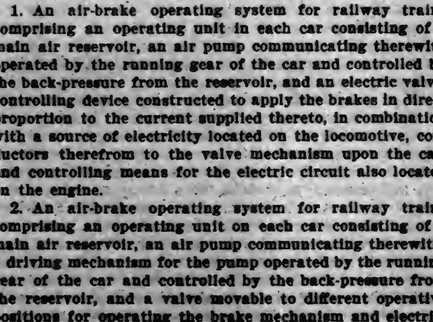


An improved dough raising cabinet, comprising a cabinet body, a hinged door at the front thereof, a slatted partition near the central portion of the cabinet, a pivoted lamp supporting bracket at the rear of the cabinet, capable of swinging under the bottom of the cabinet, a lamp body thereon, a lamp chimney extended through the bottom of the cabinet, and mounted on the bracket, a cylindrical radiating drum fixed to the slatted partition and extended to a point near the top of the cabinet, a pipe communicating with the top of the drum and extended to a point above the the cabinet, and mounted on the bracket, a cylindrical rawire fixed to the front of the cabinet, and extended into engagement with the notched rod, and a damper on said spring rod above the end of said pipe substantially as and for the purpose stated.

879,396. LIFTING-JACK. WILLIAM E. MAXWELL and JOHN M. ROWELL, Wylam, Ala. Filed Oct. 22, 1907. Serial No. 398,583.

1. A lifting-jack comprising a standard, a screw engaging the standard, a lever mounted on the upper end of said screw and a collar surrounding said standard and connected to said lever, said lever and collar being adapted to rotate.

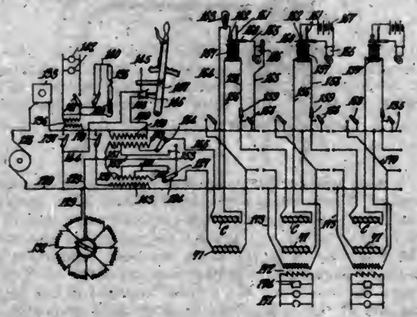
2. A lifting-jack comprising a standard, a screw engaging the standard, a lever mounted on the upper end of said screw, a collar surrounding said standard and brace-arms extending from said collar to said lever.



3. A lifting-jack comprising a standard, a screw engaging the standard, a lever mounted on the upper end of said screw, and a collar surrounding said standard, said collar being adapted to slide vertically on said standard when said screw is rotated.

4. A lifting-jack comprising a standard, a screw engaging the standard, a collar surrounding said standard said collar being adapted to slide vertically on said standard, and a lever mounted on the upper end of said screw said lever being provided with a head for engaging the object to be lifted.

879,397. AIR-BRAKE, LIGHTING, AND SIGNALING SYSTEM FOR RAILWAY-TRAINS. WILLIAM C. MAYO and JOHN HOULEHAN, El Paso, Tex., assignors of one-third to George Edwin Briggs, Barstow, Tex. Filed Jan. 31, 1907. Serial No. 355,148.



1. An air-brake operating system for railway trains comprising an operating unit in each car consisting of a main air reservoir, an air pump communicating therewith operated by the running gear of the car and controlled by the back-pressure from the reservoir, and an electric valve-controlling device constructed to apply the brakes in direct proportion to the current supplied thereto, in combination with a source of electricity located on the locomotive, conductors therefrom to the valve mechanism upon the car, and controlling means for the electric circuit also located on the engine.

2. An air-brake operating system for railway trains comprising an operating unit on each car consisting of a main air reservoir, an air pump communicating therewith, a driving mechanism for the pump operated by the running gear of the car and controlled by the back-pressure from the reservoir, and a valve movable to different operative positions for operating the brake mechanism and electrically actuated from the locomotive.

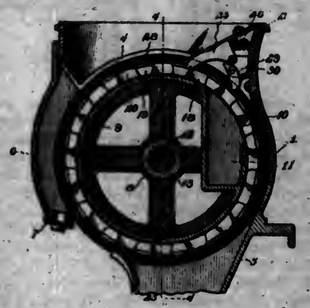
3. In an air-brake operating system for railway trains, an operating unit on each car, an electrically operated valve for the brake mechanism movable to different operative positions, electric circuits leading from the valve-operating mechanism to the engine cab, and means on the engine cab for charging the valve circuit with currents of a strength directly proportioned to the desired extent of movement of the valve.

4. In an air-brake operating system for railway trains, an operating unit on each car, an electrically operated valve for the brake mechanism movable to different operative positions, electric circuits leading from the valve-operating mechanism to the engine cab, a source of energy on the engine cab for constantly charging said circuit with currents of insufficient strength to operate the valve mechanism, and means on the engine cab for increasing the current in the circuit to a degree commensurate with the desired extent of operation of the valves.

5. An air-brake operating system for railway trains comprising an operating unit on each car including a main air reservoir for supplying compressed air to the brakes, an air pump, a driving mechanism for the pump operated by the running gear of the car and controlled by the back-pressure from the reservoir, an electrically controlled valve movable to different operative positions for controlling the brake mechanism, a source of current on the engine, circuits therefrom including an electric valve-operating mechanism, and means on the engine for charging said circuits with currents of different strengths sufficient to move the valve to its different operative positions.

[Claims 6 to 22 not printed in the Gazette.]

879,398. CORN-PLANTER. MELVIN MITCHELL, Peoria, Ill. Filed Feb. 14, 1907. Serial No. 357,279.



1. In a device of the class described, a casing, an operating shaft extended therethrough, a clutch wheel fixed on and for rotation with the shaft, a dropper ring fixed for movement with the clutch wheel, said ring being provided with a plurality of spaced lugs presenting intervening cells and a cut-off member mounted in the casing and adapted to ride over said dropper ring, said member being provided with a beveled engaging portion and the lugs having correspondingly beveled faces over which said portion travels.

2. In a device of the class described, a casing having a fixed annular bearing wall and provided with a tubular hub, an operating shaft journaled in said hub, a clutch wheel fixed for rotation with the shaft, a dropper ring arranged to travel on said wall and connected for movement with the clutch wheel, said ring being provided with a plurality of spaced lugs forming intervening cells and the outer edges of the lugs being beveled, and a cut-off member sustained in the casing to bear on the periphery of the dropper ring and having a beveled engaging portion to travel on the beveled faces of the lugs.

3. In a device of the class described, a casing having a feed opening provided with an annular bearing wall and with a tubular hub, an operating shaft journaled for rotation in said hub, a clutch wheel fixed for rotation with the shaft, a clutch ring carried by said wheel, a dropper ring arranged for travel on said bearing wall and connected for movement with the first named ring and wheel, a series of spaced lugs provided on the dropper ring and forming intervening grain receiving cells, the outer edges of the lugs

being beveled, and a cut-off finger disposed to bear on the periphery of the dropper ring and having an engaging tip beveled to conform to and ride upon the beveled faces of the lugs.

4. In a device of the class described, a casing provided with an annular bearing wall and with a tubular hub, a dropper duct leading from the casing and having a branch duct opening through the bearing wall, an operating shaft journaled in the hub, a clutch wheel fixed on and for rotation with the shaft, a dropper ring arranged for travel on the bearing wall and connected for movement with the clutch wheel, a series of spaced lugs provided on the ring and forming intervening grain receiving cells, the lugs being formed to provide the cells with restricted entrance openings and enlarged discharge openings and having their outer edges beveled, a cut-off member arranged in the casing to bear on the periphery of the ring and having a beveled engaging tip disposed to travel on the inclined faces of the lugs, and a knocker member pivoted in the casing in position to discharge the grains from the cells into the branch duct.

879,399. WATER-CLOSET-OUTLET CONNECTION. CHARLES H. MOORE, New York, N. Y. Filed Dec. 20, 1905. Serial No. 292,562.



1. The combination with an earthenware water closet bowl having an earthen base extending out from the discharge limb, said base provided with a depression or channel 3, of a metal flange provided with a projection extending into said depression and fixed thereinto with a layer of hard setting cement between the inner face of the projection and the earthenware, thereby leaving a space between the outer face of the projection and the corresponding opposite face of the depression, said flange also having a depending sleeve to engage with the soil pipe.

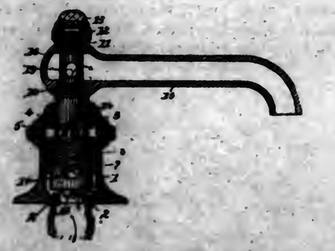
2. The combination with an earthenware water closet bowl having an earthen base extending out from the discharge limb, said base provided with a depression or channel 3, of a metal flange provided with a projection extending into said depression and fixed thereinto with a layer of hard setting cement between the inner face of the projection and the earthenware, thereby leaving a space between the outer face of the projection and the corresponding opposite face of the depression that may be filled with a non-expansive cement, said flange also having a threaded depending sleeve to engage with a threaded fitting connected to the soil pipe.

3. The combination with an earthenware water closet having a base extending out from the discharge limb, said base provided with a depression or channel 3, of a metal flange provided with two projections, one of the projections extending into the said depression or channel 3 and secured thereinto by a layer of hard setting cement, and the other projection extending up into the discharge limb of the closet and forming a receptacle into which that portion of the base that forms the inner wall of the depression 3 extends, and in conjunction with the two above named projections forms a trap into which water will be forced in discharging from the closet (if the space is left unfilled) and form a water seal that will prevent any escape of gases from the drain, independent of or in addition to the cement joint that is made in the depression or channel 3.

4. The combination with an earthenware water closet having a base extending out from the discharge limb, said base provided with a depression or channel, of a metal flange provided with two projections, one of the projections extending into said depression or channel, and the other projection extending up into the discharge limb of the closet and forming a receptacle into which that portion of the base that forms the inner wall of the depression extends, and in conjunction with the two above named projections forms a trap into which water will be forced in discharging from the closet (if the space is left unfilled) and forms a water seal that will prevent any escape of gases from the drain, a means provided to secure the above named flange rigidly to the base of the closet, and a portion of the flange prepared to engage with the soil pipe.

5. The combination with an earthenware water closet having a base extending out from the discharge limb, said base provided with a depression or channel 3, of a metal flange provided with two projections, one of the projections extending into the said depression or channel, and the other projection extending up into a recessed place in the base of the closet and forming a receptacle into which that portion of the base that forms the inner wall of the depression extends, and forms a trap, said receptacle communicating with the discharge limb in such a manner that discharging water from the closet will be forced into any part of it that is left unfilled and form a water seal that will prevent escape of gases from the sewer, a means provided to secure the above named flange rigidly to the base of the closet, and a portion of the flange prepared to engage with the soil pipe.

879,400. SWING-SPOUT COMPRESSION BASIN-COCK. PHILIP MUELLER, HENRY MUELLER, and ANTON SCHUERMANN, Decatur, Ill., assignors to H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois. Filed May 28, 1906. Serial No. 319,229.



1. In a swing-spout compression basin cock, the combination of an internally-screw-threaded body having a valve seat, an externally-screw-threaded valve stem adapted to close at one end against the valve seat and having the other end extending above the body, said valve stem having a passage way leading from above the valve end to above the cock body, and a spout attached to the projecting end of the valve stem, so as to turn therewith, and communicating with the upper end of the passage way through the stem; with means for adjusting the position of the spout around the stem, lugs on the stem and body and means for adjusting one lug and hence the position of the stem when the lugs engage.

2. In a swing-spout compression basin cock, the combination of an internally-screw-threaded body having a valve seat, an externally-screw-threaded valve stem adapted to close at one end against the valve seat and having the other end extending above the body, said valve stem having a passage way leading from above its valve end to above the cock body, a lug on the stem within said body, a ring adjustable annularly within the body, and a stop lug on the ring adapted to be engaged by that on the stem; with a set of ribs encircling the valve stem above the cock body, and a spout having an end fitting over the projecting end of the valve stem in engagement with the ribs and in communication with the upper end of the passage way.

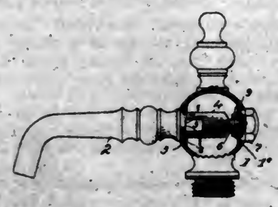
3. In a swing-spout compression basin cock, the combination of an internally-screw-threaded body having a valve seat, an externally-screw-threaded valve stem adapted to close at one end against the valve seat and having the other end extending above the body, said valve stem having a passage way leading from above its valve end to above the cock body, lugs on the stem and within the body and adapted to engage when the former is rotated and means for adjusting one lug annularly; with a set of ribs formed on the valve stem above the cock body, a spout having an end fitting over the projecting end of the valve stem in engagement with the ribs and in communication with the upper end of the passage way, and a nut screwed onto the upper end of the valve stem and against the spout.

4. In a swing-spout compression basin cock, the combination of an internally-screw-threaded body having a valve seat, an externally-screw-threaded valve stem adapted to close against the valve seat at one end and having its other end extending above the body, said valve stem having a passage way leading from above its valve end to above the cock body, a ring clamped on the upper surface of the body, a stop lug on the ring, means for adjusting the ring and the position of its lug, a lug on the valve stem adapted to engage the lug of the ring, and a spout attached to the projecting part of the valve stem and communicating with the upper end of the passage way through the stem.

5. In a swing-spout compression basin cock, the combination of an internally-screw-threaded body having a valve seat, an externally-screw-threaded valve stem adapted to close against the valve seat at one end and having its other end extending above the body, said valve stem having a passage way leading from above its valve end to above the cock body, a cap nut encircling the valve stem and screwing onto the upper end of the cock body, a ring clamped between the cap nut and the upper surface of the body, a stop lug on the ring, a lug on the valve stem adapted to engage the lug of the ring when the valve is open, and a spout attached to the projecting part of the valve stem, so as to turn therewith, and communicating with the upper end of the passage way through the stem.

[Claims 6 and 7 not printed in the Gazette.]

879,401. RIGHT AND LEFT BASIN-COCK. PHILIP MUELLER and HENRY MUELLER, Decatur, Ill., assignors to H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois. Filed June 19, 1906. Serial No. 322,487.



1. In a cock, the combination of a body having spout openings on opposite sides, a spout shaped to close either of the openings, an extension of the spout having a threaded end, and a nut on said end and closing the opposite opening in the body, substantially as described.

2. In a cock, the combination of a body having spout openings on opposite sides, the walls of said openings being circular and beveled, a spout having a bearing surface adapted to close either of said openings, an extension of the spout adapted to pass through the body and having a threaded end, and a nut for the threaded end of the spout extension having a circular, beveled bearing surface adapted to the openings in the cock body, substantially as described.

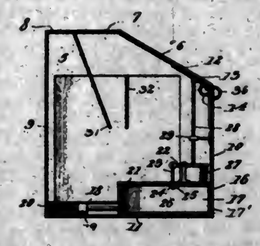
3. In a cock, the combination of a body having spout openings on opposite sides, a spout shaped to close either of the openings, an extension of the spout adapted to pass through the body and having a threaded end and a slot at the conjunction of the extension with the spout, and a nut connecting with the threaded end of the spout extension and closing the opposite opening in the body, substantially as described.

4. In a cock of the "Fuller" type, the combination of a body having spout openings on opposite sides, a spout shaped to close either opening, a thin extension of the spout having a threaded end, a nut connecting with the spout extension and closing the opposite opening in the body, a handle shaft having an eccentric for the ball stem placed at one side of the spout extension, and a ball stem deflected at its upper end to connect with the eccentric, substantially as described.

5. In a cock, the combination of a body having spout openings on opposite sides, a spout shaped to close either of the openings, an extension of the spout adapted to pass through the body and having a threaded end, a nut connected with the threaded end of the spout extension and closing the opposite opening in the body, notches in the walls of the openings and a pin on the spout adapted to engage either notch, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

879,402. MAIL-BOX. CARL C. MYRHOW, Fingal, N. D. Filed Apr. 23, 1907. Serial No. 369,861.



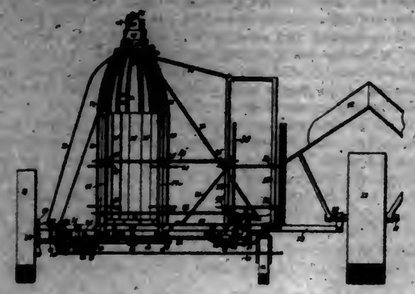
1. In a mail box, the combination with a body portion having an opening therein, of a lid for the opening, said lid being hinged for downward movement into open position, a sliding drawer in the lower portion of the body portion, a lever pivoted between its ends, a pin pivoted to one end of said lever, said pin being arranged for engagement with the drawer to hold it in closed position, a spring arranged to engage the opposite end of the lever from the pin to hold the lever with the pin in drawer engaging position, and a rod pivoted to the lid and arranged for engagement of the lever at the opposite side of the pivot point from the pin, said rod being movable with the lid to operate the lever for movement of the pin out of drawer engaging position, and a spring arranged to hold the drawer in open position.

2. In a mail box, the combination with a body portion having an opening therein, of a lid hinged for movement into and out of position to close the opening, a horizontal partition located within the body portion, a drawer slidable below said partition, said partition having an opening formed therethrough, said drawer having a notch in one side located to lie below the opening of the partition when the drawer is in closed position, a lever pivoted upon the partition, a pin pivoted to the lever for movement through the opening of the partition, a spring arranged to hold the lever with the pin at the downward limit of its movement and in position to engage in the notch of the drawer, means for holding the drawer normally in open position, means for holding the lid normally closed, and a rod pivoted to the lid and arranged for engagement of the lever for movement of the latter to raise the pin when the lid is moved into open position.

879,403. AUTOMATIC BUNDLE-SHOCKER FOR BINDERS. JOHN MCCORMICK, Des Moines, Iowa. Filed Apr. 16, 1903. Serial No. 153,258.

1. In a machine of the class described, a tilting platform to receive bundles of grain, an arm arranged for rotation in a path adjacent to the platform and means controlled

by the dropping of a bundle on the platform for moving said arm to position where it will tilt the platform and means for automatically returning the arm after the platform has been tilted.



2. In a machine of the class described, a tilting platform to receive bundles of grain, a sleeve arranged for sliding movement, means controlled by the dropping of a bundle upon the platform for moving said sleeve, an arm rotated in a path adjacent to the platform and positioned to be moved by said sliding sleeve to position where it will tilt the platform, a spring normally tending to move the arm to position for tilting the platform, and a stationary guide arranged in the path of the rotating arm to return the arm to its normal position after the platform has been tilted.

3. In a device of the class described, the combination of a hinged platform having an arm thereon, a rotary shaft, an arm slidingly mounted on the shaft, a spring normally holding the arm on the shaft in position where it will engage the arm on the platform, and a trip rod having arms above the platform and having an extension to engage the sliding arm and hold it in position out of the path of the said arm on the platform.

4. In a device of the class described, the combination of a hinged platform having an arm thereon, a rotary shaft, an arm slidingly mounted on the shaft, a spring normally holding the arm on the shaft in position where it will engage the arm on the platform, a trip rod having arms above the platform and having an extension to engage the sliding arm and hold it in position out of the path of the said arm on the platform, and a guide roller arranged in position to engage the arm on the shaft and slide it to position where it will not engage the arm on the platform after the said arm on the shaft has passed beyond and out of contact with the arm on the platform.

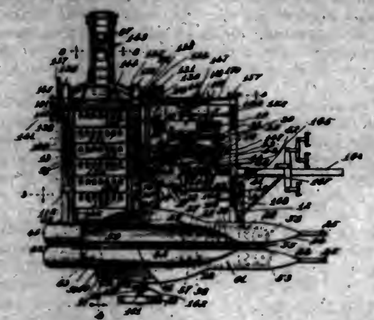
5. In a device of the class described, the combination of a hinged platform having an arm thereon, a rotary shaft adjacent to said arm, a hub slidingly mounted on said shaft and rotating therewith, an arm fixed to said hub, a roller in the end of the arm to engage the arm on the platform, a spring normally holding the hub to position where the arm on the hub will engage the arm on the platform, a spring actuated trip rod, an extension on one end of the trip rod normally holding the hub in position where the arm on the hub will not engage the arm on the platform, an arm on the trip rod above the platform, and a guide roller in position to engage the arm on the hub and force it to position out of the path in which the arm on the platform stands, substantially as and for the purposes stated.

[Claims 6 to 20 not printed in the Gazette.]

879,404. CORN-HUSKING MACHINE. FREDERICK MCINTURF and FRANK T. MCINTURF, Mendota, Ill. Filed Feb. 26, 1906. Serial No. 302,948.

1. In a corn harvesting machine, the combination with a cutter for severing the stalks, snapping rolls, of means for feeding the stalks thereto comprising a gathering chain having fingers, and a butt mover and means to drive the butt mover at less speed than the chain.

2. In a corn harvesting machine, the combination with a cutter for severing the stalks, snapping rolls, of means for feeding the stalks thereto and comprising a gathering chain having fingers, a butt support, and means traveling slower than the chain for moving the butt ends of the stalks along the support.



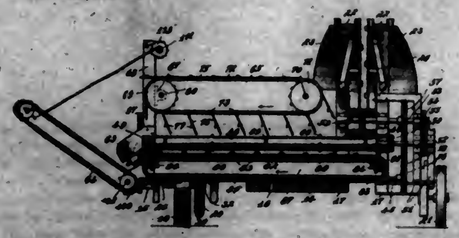
3. In a corn harvesting machine, the combination with a cutter for severing the stalks, snapping rolls, of mechanism for conveying the stalks to the rolls and consisting of a pair of coöperating gathering chains having fingers, a butt support, and an endless conveyer traveling at less speed than the chain for moving the butt ends of the stalks along the support.

4. In a corn harvesting machine, the combination with a cutter for severing the stalks, snapping rolls, of a conveyer for moving the butt ends of the stalks, and a conveyor located above and traveling at greater speed than the butt conveyer, whereby the upper ends of the stalks are tilted rearwardly.

5. In a corn harvesting machine, the combination with a cutter for severing the stalks, snapping rolls, of mechanism for moving the stalks to the snapping rolls and comprising an endless conveyer for moving the butt ends of the stalks, and a pair of chains moving at a higher rate of speed than the said conveyer and engaging the upper ends of the stalks, and a trough through which the butt conveyer travels.

[Claim 6 not printed in the Gazette.]

879,405. CORN-HUSKING MACHINE. FREDERICK MCINTURF and FRANK T. MCINTURF, Mendota, Ill. Original application filed Feb. 26, 1906, Serial No. 302,948. Divided and this application filed Apr. 1, 1907. Serial No. 365,628.



1. In a corn husking machine, the combination of horizontal husking rolls to receive ears of corn, means for rotating the husking rolls, a shaft located above the discharge end of the rolls and provided with sprocket wheels, side bars pivoted to the shaft and extending parallel with the rolls, a second shaft connecting the free ends of the side bars and provided with sprocket wheels, an endless carrier on the sprockets, teeth pivoted to the carrier, and springs for pressing the free ends of the bars toward the rolls.

2. In a corn husking machine, the combination of horizontal husking rolls to receive ears of corn, means for rotating the husking rolls, a shaft located above the discharge end of the rolls and provided with sprocket wheels, side bars pivoted to the shaft and extending parallel with the rolls, a second shaft connecting the free ends of the side bars and provided with sprocket wheels, an endless carrier on the sprockets, teeth pivoted to the carrier, springs for pressing the free ends of the bars toward the rolls, and an adjustable stop device for the bars.

3. In a corn husking machine, the combination of horizontal husking rolls to receive ears of corn, means for rotating the husking rolls, a shaft located above the discharge end of the rolls and provided with sprocket wheels, side bars pivoted to the shaft and extending parallel with the rolls, a second shaft connecting the free ends of the side bars and provided with sprocket wheels, an endless carrier on the sprockets, teeth pivoted to the carrier, plates at the sides of the rolls and closing the space between the rolls and teeth, contractile springs at the free ends of the bars, lateral ears on the bars, and adjustable stops on the plates against which the ears are drawn by the springs.

4. In a corn husking machine, the combination of horizontal husking rolls arranged in pairs, one roll of each pair provided with radial fingers and the other with annular grooves, of a pivoted frame located over the husking rolls, springs for pressing the frame towards the rolls, a shaft at each end of the frame and provided with sprocket wheels, endless chains adapted to the sprocket wheels and provided with cross rods having stop pins, and rake teeth pivoted to the rods and arrested in an inclined position by the stop pins in position to clear the radial pins of the rolls.

5. In a corn husking machine, the combination with horizontally disposed husking rolls, of a frame located over the same, endless chains carried by the frame, cross rods connecting the chains and each of which is provided with a radial stop pin, and a rake tooth consisting of a plate having a loop at the one end to receive a rod, such loop being provided with a slot to limit the movement of the tooth, whereby each tooth depends at an angle from the lower stretch of the chains and folds or collapses against the chains upon the return stretch of the latter.

[Claims 6 to 8 not printed in the Gazette.]

879,406. PROCESS OF DESTROYING INSECT EGGS AND LARVÆ. AUGUST E. NIENSTADT, New York, N. Y., assignor of one-half to Elizabeth E. Bauman, Hoboken, N. J. Filed May 7, 1906. Serial No. 315,535.

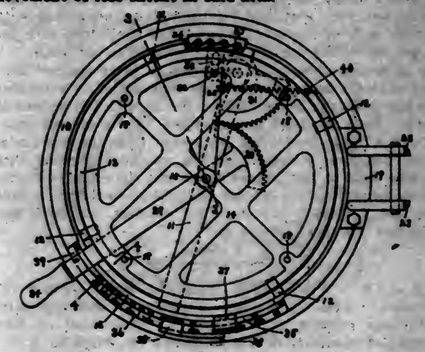
1. The improvement in the art of destroying eggs and larvæ of mosquitos consisting in applying to the mosquito infested swamps or pools a dry composition composed of calcium hydroxid and sal ammoniac of which the calcium hydroxid is largely in excess, setting free ammonia gas by the gradual action of the components of the mixture on each other in the presence of the water of the infested swamps or pools and producing a lastingly alkaline solution.

2. The improvement in the art of destroying the eggs and larvæ of mosquitos consisting in applying to the mosquito infested swamps or pools a dry composition consisting of about 10 parts of calcium hydroxid and about one part of sal ammoniac, setting free ammonia gas by the gradual action of the components on each other in the presence of water and producing a lastingly alkaline solution.

879,407. CHEESE-CUTTER. FRANCIS C. OSBORN, Detroit, Mich. Filed Dec. 15, 1904. Serial No. 236,956.

1. In a cheese cutter, the combination of a base, a revoluble carrier, an operating lever pivoted at or near the center of the carrier, an arm pivoted concentric with the operating lever, operative connections between the operating lever and arm whereby a given angular movement of the operating lever causes an angular movement of the arm of less extent, and engaging means between said arm and carrier.

2. In a cheese cutter, the combination of a base, a table revoluble on said base, an arm having means to engage said table to revolve the same, an operating lever, said arm and lever having a common pivot, and a movable operative connection between the arm and lever whereby a given angular movement of the lever causes an angular movement of less extent in said arm.



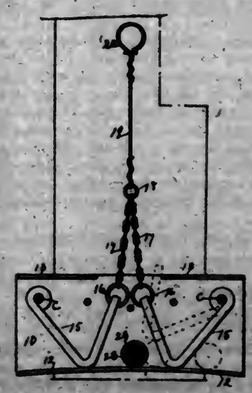
3. In a cheese cutter, the combination of a base, a table revoluble on said base, an arm pivoted on said base and adapted to actuate said table, a sector pivoted on said base eccentric with said arm and engaging said arm to actuate the same, the path of the point of engagement between said arm and sector being circular, and longitudinal of said arm, thereby causing the rate of circular movement of the arm to constantly decrease and the arm to stop during the actuating movement of the sector.

4. In a cheese cutter, the combination of a base, a table revoluble on said base, an arm pivoted on said base and adapted to actuate said table, a sector pivoted on said base eccentric with said arm and engaging said arm to actuate the same, the path of the point of engagement between said arm and sector being circular, and longitudinal of said arm, thereby causing the rate of circular movement of the arm to constantly decrease and the arm to stop during the actuating movement of the sector, and an operating lever to actuate the sector, arm and table.

5. In a cheese cutter, the combination of a base, a table revoluble on said base, a notched ring secured to said table, a slotted arm carrying pawls to engage said notched ring, a toothed sector pivoted on said base and having a pin engaging in the slot in said arm to actuate said table, a pivoted actuating lever having a toothed segment to engage the toothed portion of said sector, and a plurality of adjustable stops to determine the extent of movement of said lever.

[Claims 6 to 24 not printed in the Gazette.]

879,408. DUPLEX GRAVITY GATE-LATCH. CHRISTOPHER W. OWENS, Lake City, Iowa. Filed Sept. 9, 1907. Serial No. 391,911.

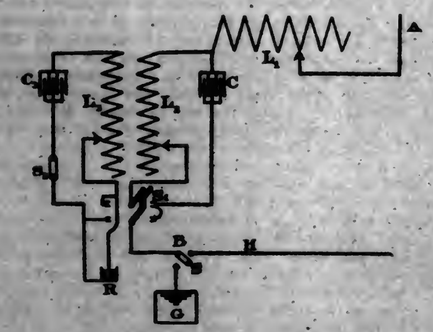


1. A duplex gate latch comprising a latch support having a straight back, an upwardly curved bottom extending

forward from the lower edge of the back, a top extending forward from the back and provided with a central opening and a flange projecting downward from the front edge of the top, two V-shaped latches, chains connected with the free ends of the latches and a rod connected with the chains, for lifting the latches, to operate as set forth.

2. A duplex gate latch comprising a latch support having a straight back, an upwardly curved bottom extending forward from the lower edge of the back, a top extending forward from the back and provided with a central opening and a flange projecting downward from the front edge of the top, two V-shaped latches, chains connected with the free ends of the latches and a rod connected with the chains for lifting the latches, in combination with a fixed post and a hinged gate carrying a roller, arranged and combined to operate as set forth.

879,409. WIRELESS TELEGRAPHY. GEORGE W. PIERCE, Cambridge, Mass., assignor to Massachusetts Wireless Equipment Company, a Corporation of New York. Filed Mar. 16, 1906. Serial No. 306,334.



1. In a receiving system for wireless telegraphy an inductive connection, a detector and a condenser connected with the secondary, and connections for sending the current set up in the primary of the inductive connection through the detector.

2. In a receiving system for wireless telegraphy, an inductive connection having a variable secondary, a detector and a condenser connected with the secondary, and connections for sending the currents set up in the primary of the inductive connection through the detector.

3. In a receiving system for wireless telegraphy, an inductive connection having a variable secondary, a detector and a condenser connected with the secondary, and connections for sending the currents set up in the primary of the inductive connection through the detector or directly to the ground.

4. In a receiving system for wireless telegraphy, an inductive connection having a variable secondary, a detector and a variable condenser connected with the secondary, and connections for sending the currents set up in the primary of the inductive connection through the detector.

5. In a receiving system for wireless telegraphy, an inductive connection having a variable primary and variable secondary, a detector and a condenser connected with the secondary, and connections for sending the currents set up in the primary of the inductive connection through the detector.

[Claims 6 to 8 not printed in the Gazette.]

879,410. ELECTRIC SIGNALING-CLOCK. HENRY S. PRENTISS, Elizabeth, N. J. Filed Aug. 4, 1905. Serial No. 272,715.

1. The combination with an electric signaling circuit and a clock mechanism, of a disk or plate mounted to be turned by said clock mechanism and provided with flexible circumferential contact teeth arranged for definite intervals of time, and which when in the plane of the disk are adapted to close said electric signaling circuit; a signal included in said signaling circuit; and a so-called scissor-switch in said circuit provided with arms of different length and engaging the teeth of said ratchet wheel said switch being adapted to limit the duration of said signal produced when the said circuit is closed by said contact teeth.

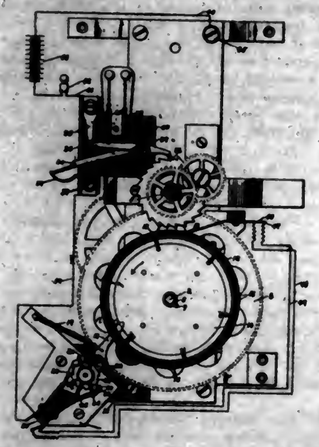
3. An electric signaling clock comprising an ordinary clock mechanism; an electric signaling circuit containing a source of electricity and one or more suitable signaling devices; a disk mounted to turn with said clock mechanism and provided with flexible circumferential contact teeth arranged for definite intervals of time and which when in the plane of the disk are adapted to close said electric signaling circuit; and means in circuit with said disk adapted to limit the duration of the signal produced when the circuit is closed by said contact teeth.

4. An electric signaling clock comprising an ordinary clock mechanism; an electric signaling circuit containing a source of electricity and one or more suitable signaling devices; a disk mounted to turn with said clock mechanism and provided with flexible circumferential contact teeth arranged for definite intervals of time and which when in the plane of the disk are adapted to close said electric signaling circuit; and a scissor-switch in circuit with said disk adapted to limit the duration of the signal produced when the circuit is closed by said contact teeth.

5. An electric signaling clock comprising an ordinary clock mechanism; an electric signaling circuit adapted to be closed by contact teeth and containing a source of electricity and one or more suitable signaling devices; a disk mounted to turn with said clock mechanism and provided with flexible circumferential contact teeth arranged for definite intervals of time and which when in the plane of the disk are adapted to close said electric signaling circuit; means controlled by said clock mechanism to temporarily suspend the action of said teeth; and means in circuit with said disk to limit the duration of the signal produced when the circuit is closed by said contact teeth.

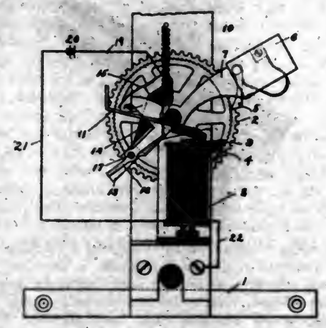
[Claims 6 to 11 not printed in the Gazette.]

vals of time, and which when in the plane of the disk are adapted to close said electric signaling circuit; a signal included in said signaling circuit; and a so-called scissor-switch in circuit therewith and comprising two levers having outer contact arms and inner arms of different lengths, said levers being controlled by said clock mechanism and adapted to limit the duration of said signal produced when said circuit is closed.



2. The combination with an electric signaling circuit and a clock mechanism, of a disk or plate mounted to be turned by said clock mechanism and provided with flexible circumferential contact teeth arranged for definite intervals of time, and which when in the plane of the disk are adapted to close said electric signaling circuit; a signal included in said signaling circuit; a ratchet wheel operated by said clock mechanism; and a so-called scissor-switch in said circuit provided with arms of different length and engaging the teeth of said ratchet wheel said switch being adapted to limit the duration of said signal produced when the said circuit is closed by said contact teeth.

879,411. SELF-WINDING CLOCK. HENRY S. PRENTISS, Elizabeth, N. J. Filed Sept. 14, 1906. Serial No. 334,661.



1. The combination with a weight actuated clock mechanism, and an electric circuit; of an electro-magnet in said electric circuit provided with an armature carrying an arm having a cross-piece at its extremity, a second arm adapted to oscillate with said weight, and means carried by said arm to close said electric circuit in conjunction with said cross-piece when the weight has descended a predetermined distance.

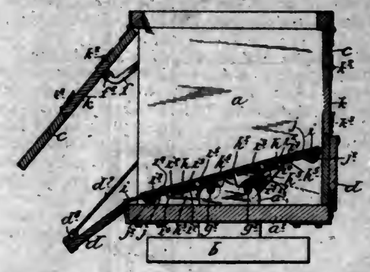
2. The combination with a weight actuated clock mechanism, and an electric circuit; of an electro-magnet in said electric circuit provided with an armature carrying an arm having a cross-piece at its extremity, a second arm adapted to oscillate with said weight, means carried by said arm to close said electric circuit in conjunction with said cross-piece when the weight has descended a predetermined distance, and means to break said electric circuit.

3. The combination with a clock mechanism, the center wheel arbor, a ratchet wheel mounted thereon, a weight carrying a spring pressed pawl engaging said ratchet wheel and adapted to rotate said arbor, and an electric circuit; of an electro-magnet in said electric circuit provided with an armature carrying an arm having a cross-piece at its extremity, a second arm adapted to oscillate with said weight, and means carried by said second arm to close said electric circuit in conjunction with said cross-piece when the weight has descended a predetermined distance.

4. The combination with a weight actuated clock mechanism and an electric circuit; of an electro-magnet in said electric circuit provided with an armature carrying an arm having a cross-piece at its extremity, a second arm adapted to oscillate with said weight, a contact brush carried by said second arm, a lever pivoted upon said second arm and having its outer arm arranged to engage with said cross-piece when said weight has descended a predetermined distance and thereby bring its inner arm into rubbing contact with the said contact brush to close said electric circuit, whereby the armature is attracted by the electro-magnet depressing the said arm and its cross-piece as well as the second arm and thereby restoring the weight to its active position and breaking said electric circuit.

5. The combination with a clock mechanism, the center wheel arbor, a ratchet wheel thereon, a weight carrying a spring pressed pawl engaging said ratchet wheel and adapted to rotate said arbor, an electric circuit, and an electro-magnet in said electric circuit; of a circuit closing device comprising an armature arranged to be controlled by said electro-magnet and carrying an arm having a cross-piece at its extremity, a second arm adapted to oscillate with said weight, a contact brush carried by said second arm, a lever pivoted upon said second arm its outer arm being adapted to engage with said cross-piece when said weight has descended a predetermined amount, and thereby bring its inner arm into rubbing contact with the said contact brush to close said electric circuit, whereby the armature is attracted by the electro-magnet depressing said arm and its cross-piece as well as the second arm and restoring the weight to its active position and breaking said electric circuit.

879,412. DUMPING-CAR. JUSTUS G. POTTER, Brooklyn, N. Y. Filed Nov. 18, 1907. Serial No. 402,581.



1. A dumping car provided with hinged side doors and inner supplemental bottom members which range longitudinally of the car and are hinged centrally and longitudinally thereof, said bottom members being provided with slides which are adapted to press against the doors and means for raising and lowering said bottom members and for closing and opening the doors.

2. A dumping car open at both sides and provided with doors which are hinged at the top and extend to the bottom thereof when closed, other doors hinged to the bottom and extending upwardly against the first named doors when closed, and means for opening and closing said doors, said car being also provided with inner supplemental bottom members which range longitudinally thereof and are hinged longitudinally and centrally of the car, and means for raising and lowering said bottom members.

3. A dumping car open at both sides and provided with doors which are hinged at the top and extend to the bottom thereof when closed, other doors hinged to the bottom and extending upwardly against the first named doors when closed, and means for opening and closing said doors, said car being also provided with inner supplemental bottom members which range longitudinally thereof and are hinged longitudinally and centrally of the car, and means for raising and lowering said bottom members, said bottom members being also provided with longitudinal slides which normally bear on the inner top side doors when the latter are closed.

4. A dumping car open at both sides and provided with doors adapted to swing outwardly, and means for opening and closing said doors; said car being also provided with inner false or supplemental bottom members which range longitudinally thereof and which are hinged or pivoted longitudinally and centrally of the car, said bottom members being provided with spring operated slides which normally bear on the doors when the latter are closed, and means for raising and lowering said bottom members and for holding them in any desired position with reference to each other.

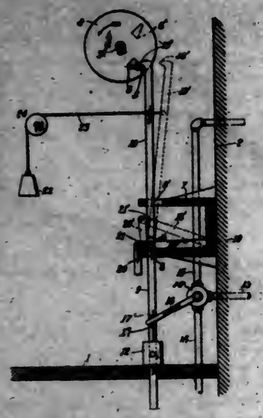
5. A dumping car open at both sides and provided with top and bottom doors, the top doors at their outer sides being provided with supplemental doors arranged centrally thereof, means for opening and closing said top and bottom doors and holding the same in a closed position, said car being also provided with inner false supplemental bottom members which are hinged centrally and longitudinally thereof above the main bottom thereof and are normally inclined downwardly and outwardly, and means for raising the outer side edges of said supplemental bottom members and for holding them in a raised position.

[Claim 6 not printed in the Gazette.]

879,413. STEAM-TRAMPING COTTON-PRESS. LINWOOD ROBBARD, Scotia, S. C. Filed Sept. 21, 1906. Serial No. 335,667.

1. The combination of a three-way valve having a handle for controlling the same, a reciprocating shaft having

stops for engaging and actuating said handle, and a power-driven catch that intermittently engages and releases said shaft for reciprocating the same.



2. The combination with a throttle-valve and a lever controlling the same, of a gravity-actuated reciprocating shaft independent of said lever but carrying stops arranged to engage and actuate said lever, and a revolubly-mounted catch arranged in such position as to engage and raise said shaft and thereafter release the same.

3. The combination with a throttle-valve and a lever controlling the same, of a gravity-actuated reciprocating shaft independent of said lever but carrying stops arranged to engage and actuate said lever, a revolubly mounted catch arranged in such position as to engage and raise said shaft and thereafter release the same, and means for shifting said shaft out of engagement by said catch.

4. The combination with a three-way valve of a steam-tramping-cotton-press or the like and a handle actuating said valve, of a vertically reciprocating shaft carried in guides and engaging said handle, a second vertical shaft pivoted at its lower end to the former and having a hook at its upper end, a driven pulley having a stud for engaging and releasing said hook, means for shifting and locking said pivoted shaft out of engagement with said stud, and means for restoring the same to normal position when released.

5. The combination of a revoluble pulley having a stud thereon, a vertically reciprocating shaft consisting of two members pivoted together, a shoulder on the upper member adapted to be engaged and released by said stud whereby the two members are raised and allowed to drop, a three-way valve having a handle engaged by the lower shaft aforesaid, a bar-and-trigger device having a pin adapted to engage the upper shaft-member and force the same backwards, said trigger adapted to lock the same out of engagement with the stud on said pulley.

[Claim 6 not printed in the Gazette.]

879,414. STEERING-GEAR FOR VEHICLES. DAVID E. ROSS, Brookston, Ind., assignor to The Ross Gear and Tool Company, La Fayette, Ind., a Corporation of Indiana. Filed May 10, 1907. Serial No. 372,854.

1. In a vehicle, ground wheels, a rack, a pinion meshing with said rack for moving the same longitudinally, means for turning said rack as it is thus moved, and connections between said rack and said ground wheels whereby the turning movement imparted to the rack turns the wheels for steering the vehicle.

2. In a vehicle, ground wheels, a rack, a pinion meshing with said rack for moving the same longitudinally, means for turning said rack as it is thus moved, a steering column connected with the pinion for turning the same, a crank connected with and turned by said rack, and connections between said crank and said ground wheels whereby the turning movement imparted to the rack turns the wheels for steering the vehicle.



3. In steering mechanism for vehicles, a housing that is provided with interior screw threads, a member within said housing engaging with said screw threads, means for moving said member longitudinally in the housing, whereby the said screw threads cause the member to turn, ground wheels, and connections between said member and said ground wheels, whereby the turning movement imparted to said member will also turn the wheels for steering the vehicle.

4. In steering mechanism for vehicles, a housing that is provided with interior screw threads, a rack within said housing having means projecting into said screw threads, a pinion engaging with said rack for moving the latter longitudinally in the housing, whereby the said screw threads cause the rack to turn, ground wheels, and connections between said rack and said ground wheels whereby the turning movement imparted to said rack will also turn the wheels for steering the vehicle.

5. In a steering mechanism for vehicles, a housing that is provided on its interior with spirally arranged grooves, a member within said housing, said member having projecting parts extending into the grooves of the housing, said member also being provided with transverse grooves forming gear teeth, a pinion journaled in the housing and meshing with said transverse grooves, a steering column connected with said pinion, ground wheels, and connections between said member and said wheels, the construction being such that, as the pinion is turned by the steering column, the member will be moved longitudinally in the housing and will be caused to turn therein by the grooves on the housing, which turning movement, will, through the connections with the ground wheels, turn the latter for steering the vehicle.

[Claims 6 to 15 not printed in the Gazette.]

879,415. METAL-SHAPING MACHINE. JAMES M. RUDE, Covington, Ky., assignor to National Cellular Steel Company, New York, N. Y., a Corporation. Filed Apr. 21, 1906. Serial No. 313,018.



1. In a metal shaping machine, a table a bodily detachable mandrel, means for clamping the ends of the mandrel upon the table, a U-shaped arm rigidly connected to the table, the loop of which is extended in the horizontal plane of the table, the upper end of said arm overhanging the table, a clamp in the end of said arm, and gaging devices between the clamp and the top of the mandrel, said clamp forming the medial brace for the mandrel, and a bender pivoted to turn sharply around the front corner of the table and mandrel when in position, substantially as described.

2. A machine for bending sheet metal into triangular cells, consisting of a table, a bender, an independent mandrel triangular in cross section, and means for detachably clamping the mandrel down upon the metal supported upon the table, whereby when the cell is formed and the clamp released the mandrel may be endwise removed from its cell, substantially as described.

3. A machine for bending sheet metal into triangular cells, consisting of a table, a bender, an independent mandrel triangular in cross section having a clamping lug on its apex, and means for detachably engaging the holding lug and clamping the mandrel down upon the work supported upon the table, whereby when the cell is formed and the clamp released the mandrel may be endwise removed from its cell, substantially as described.

4. A machine for bending sheet metal into triangular cells, consisting of a table, a bender, a U-shaped arm over the table, an independent triangular shaped mandrel having a lug on its apex, and clamping means supported in the outer end of said U-shaped arm adapted to detachably engage said lug, whereby the said mandrel may be gaged relative to the work and clamped down upon the metal supported upon the table, substantially as described.

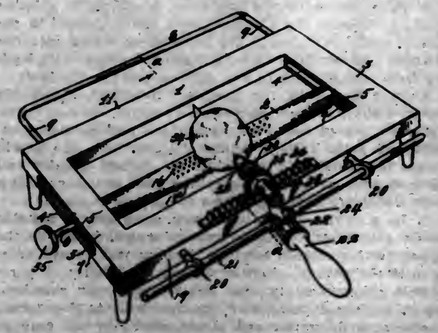
879,416. PROCESS OF PREPARING CELLULOSE FOR ARTIFICIAL SILK. GEORGE L. SCHAEFER, New York, N. Y., and AUGUST SCHAEFER, Basel, Switzerland. Filed June 5, 1907. Serial No. 377,477.

1. The process herein described of preparing cellulose for making artificial silk, which consists in subjecting the cellulose at a high temperature and a pressure of about one atmosphere successively to the action of a weak alkaline liquor and tar benzin, then to a diluted acid, and lastly to hydrogen peroxid.

2. The process herein described of treating cellulose preparatory to dissolving the same for making artificial silk, which consists in boiling the cellulose in a weak solution of sodium carbonate, a caustic alkali and tar benzin under a pressure of about one atmosphere and a correspondingly high temperature, then treating it with diluted sulfuric acid, and finally bleaching it with hydrogen peroxid.

3. The process of treating cellulose preparatory to dissolving the same for making artificial silk, which consists in boiling the cellulose under pressure and at a correspondingly high temperature in a solution of sodium carbonate, caustic alkali and tar benzin, then washing the same, next subjecting it to the action of a diluted acid, again separating the surplus water therefrom, and then bleaching the same with hydrogen peroxid.

879,417. COMBINED GRATER, PARER, AND CORER. CARL E. SEGELCKE, New York, N. Y. Filed Aug. 30, 1907. Serial No. 390,698.



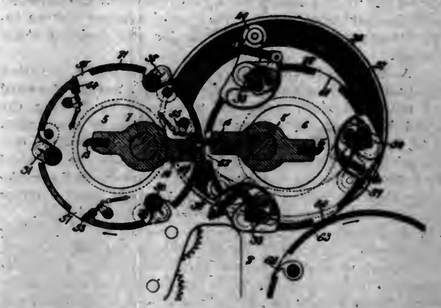
1. A combined grating, paring and coring device comprising a standard, a carrier slidably mounted on said standard, a coring device carried by said carrier, means for rotating said coring device, and a combined rotatable grating and paring tool adjacent to said coring device.

2. A combined grating, paring and coring device comprising a standard, a carrier slidably mounted on said standard, a coring device carried by said carrier, means for rotating said coring device, and a transversely movable combined grating and paring tool adjacent to said coring device.

3. A combined grating, paring and coring device comprising a rotatable coring device, a combined grating and paring tool adjacent to said coring device comprising a semi-cylindrical rotatable shell having upon the periphery thereof a grating surface and paring knives.

4. A combined grating, paring and coring device comprising a rotatable coring device, a combined grating and paring tool adjacent to said coring device comprising a transversely movable semi-cylindrical rotatable shell having upon the periphery thereof a grating surface and paring knives.

879,418. CUTTING AND FOLDING MACHINE. RALPH C. SEYMOUR, New York, N. Y., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 15, 1906. Serial No. 347,952.



1. In a cutting and folding machine, two rotary cylinders having co-acting folding devices, and two coacting rotary cutters both mounted to rotate within said cylinders.

2. In a cutting and folding machine, two rotary cylinders having a plurality of co-acting folding devices, and two coacting rotary cutters both mounted to rotate within said cylinders.

3. In a cutting and folding machine, two rotary cylinders having three co-acting folding devices, and two co-acting rotary cutters both mounted to rotate within said cylinders.

4. In a cutting and folding machine, two rotary cylinders one having a folding blade and the other a folding gripper arranged to co-act therewith, and two coacting rotary cutters both mounted to rotate within said cylinders.

5. In a cutting and folding machine, two rotary cylinders one having a plurality of folding blades and the other a plurality of folding grippers arranged to co-act therewith, and two coacting rotary cutters both mounted to rotate within said cylinders.

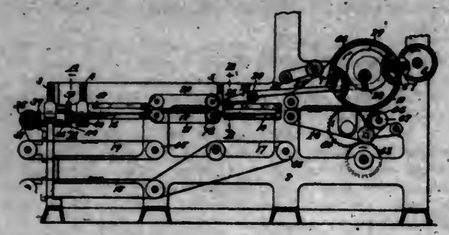
[Claims 6 to 34 not printed in the Gazette.]

879,419. SIGNATURE-DELIVERY MECHANISM FOR PRINTING AND FOLDING MACHINERY. RALPH C. SEYMOUR, New York, N. Y., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of New Jersey. Filed July 17, 1907. Serial No. 384,228.

1. A folding mechanism, two intermittently rotating longitudinally arranged parallel shafts having forward and rearward sheet droppers and devices for directing all of the folded sheets or signatures on to the forward sheet dropper and certain of the folded sheets or signatures on to the rearward sheet dropper.

2. A folding mechanism, two intermittently rotating

longitudinally arranged parallel shafts having forward and rearward sheet droppers, a carrier for feeding all of the folded sheets or signatures from the folding mechanism on to the forward sheet dropper and a carrier for feeding certain of the folded sheets or signatures to the rearward sheet dropper.

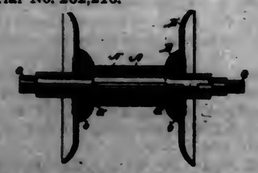


3. A folding mechanism, two intermittently rotating longitudinally arranged parallel shafts having forward and rearward sheet droppers, a carrier for feeding the folded sheets or signatures from the feeding mechanism on to the forward sheet dropper, a carrier for feeding certain of the folded sheets or signatures from the forward sheet dropper on to the rearward sheet dropper and an intermittently rotating lifting stop for the forward sheet dropper.

4. A folding mechanism, two intermittently rotating longitudinally arranged parallel shafts having forward and rearward sheet droppers, a carrier for feeding the folded sheets or signatures from the folding mechanism on to the forward sheet dropper, a carrier for feeding certain of the folded sheets or signatures from the forward sheet dropper to the rearward sheet dropper, an intermittently rotating lifting stop for the forward sheet dropper and a permanent stop for the rearward sheet dropper.

5. A folding mechanism, two intermittently rotating longitudinally arranged parallel shafts having forward and rearward sheet droppers each comprising a pair of oppositely rotating members of winged transverse section, means for directing all of the folded sheets or signatures from the folding mechanism on to the opposed wings of the members of the forward sheet dropper and for directing certain of the folded sheets or signatures on to the opposed wings of the rearward sheet dropper, an endless carrier for receiving the folded sheets or signatures as they are dropped from the forward sheet dropper and an endless carrier arranged to receive the folded sheets or signatures as they are dropped from the rearward sheet dropper.

879,420. SPOOL FOR FISHING-REELS. WILLIAM SHAKESPEARE, Jr., Kalamazoo, Mich. Filed May 25, 1905. Serial No. 262,216.



1. In a spool for fishing reels, the combination of a shaft of steel or other suitable material, shouldered to form a central enlargement, and having journals on each end thereof; a tubular casing of non-corrosive metal embracing said central enlargement; flange hubs crowded onto said shaft against the said shoulders thereof; and flanges arranged upon said hubs, for the purpose specified.

2. In a spool for fishing reels, the combination of a shaft, shouldered to form a central enlargement and having journals at each end thereof; flange hubs crowded onto said shaft against the said shoulders thereof; and spool flanges arranged upon said hubs, for the purpose specified.

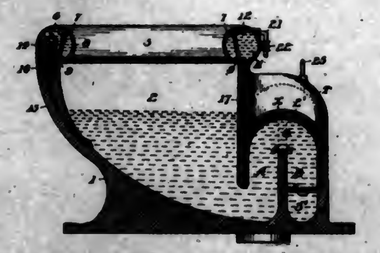
3. In a spool for fishing reels, the combination of a shaft of steel or other suitable material, having journals on each end thereof a tubular casing of non-corrosive metal embracing the central portion of said shaft; flange hubs having shoulders formed on their outer sides, crowded onto said shaft against the ends of said tubular casing; and flanges arranged upon the shoulder portions of said hubs and secured thereon by upsetting the same, for the purpose specified.

4. In a spool for fishing reels, the combination of a shaft of steel or other suitable material, having journals on each end thereof; a tubular casing of non-corrosive metal embracing the central portion of said shaft; flange hubs crowded onto said shaft against the ends of said tubular casing; and flanges arranged upon said hubs, for the purpose specified.

5. In a spool for fishing reels, the combination of a shaft of steel or other suitable material having journals formed thereon; a tubular casing of non-corrosive material embracing the central portion thereof; and suitable flanges, for the purpose specified.

[Claim 6 not printed in the Gazette.]

879,421. WATER-CLOSET. JAMES A. STEVENSON and LEWIS O. PHILLIPS, New Castle, Pa. Filed May 5, 1906. Serial No. 315,273.



1. In a device of the character described, a suitable bowl; a chamber for the storage of water formed in the upper portion of said bowl, a flushing rim formed adjacent to the storage chamber, an air chamber, means for introducing water into the storage chamber flushing-rim and air chamber, an air trap provided by an inverted U-shaped passage, one leg communicating with the bowl and the other leg with a second inverted U-shaped passage, means for introducing air from the air chamber into the trap during the filling process, and means for exhausting air from said trap during the emptying process.

2. In a device of the character described, a suitable bowl, a chamber, for the storage of water, formed in the upper portion of said bowl; means for introducing water into the chamber; means for trapping and holding the water in said chamber; and means for introducing water into the bowl from said chamber, when released.

3. In a device of the character described, a suitable bowl; a chamber, for the storage of water, formed in the rim of said bowl; means for introducing water into the chamber; an air trap in said chamber; and a duct leading from said air trap to any suitable point in the bowl.

4. In a device of the character described, a suitable bowl; a chamber, for the storage of water, formed in the upper portion of said bowl; a flushing rim having a plurality of ports therein communicating with the bowl; means for introducing water into the storage chamber and flushing rim; an air trap in said storage chamber; and a duct leading from said air trap to the bowl.

5. In a device of the character described, a suitable bowl; a chamber, for the storage of water, formed in the upper portion of said bowl; a flushing rim formed adjacent to the storage chamber having a plurality of ports therein communicating with the bowl; an air chamber; means for introducing water simultaneously to the storage chamber, flushing rim and air chamber; an air trap in said storage chamber; and a duct leading from said air trap to the bowl.

[Claims 6 to 15 not printed in the Gazette.]

879,422. PROCESS OF MAKING LEVULOSE, GLUCOSE, &c. FRANCIS L. STEWART, Murrysville, Pa., assignor of one-half to Samuel E. Gill, Pittsburg, Pa. Filed Nov. 12, 1906. Serial No. 342,963.

1. In the method of obtaining saccharine products from Jerusalem artichokes, the steps which comprise reducing the tubers to pulp, adding water and oxalic acid thereto, heating the mass, adding an alkaline salt and then separating the saccharine solution from the pulp and insoluble precipitate.

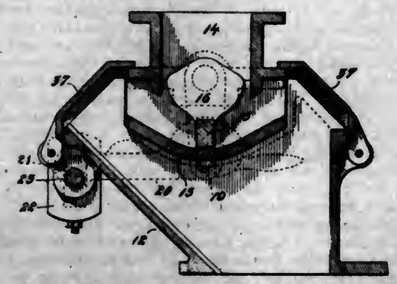
2. In the method of obtaining saccharine products from Jerusalem artichokes, the steps which comprise reducing the tubers to a pulp, adding water and oxalic acid, heating the mass, adding an alkaline salt, separating the saccharine solution from the pulp and insoluble precipitate, reacidifying the solution, clarifying the same, and again neutralizing the clarified solution.

3. In the method of obtaining saccharine products from Jerusalem artichokes, the steps which comprise reducing the tubers to a pulp, adding water and oxalic acid, heating the mass, adding an alkaline salt, separating the saccharine solution from the pulp and insoluble precipitate, adding tannic acid to the solution, clarifying it with a soluble silicate, and again neutralizing the solution.

4. In the method of obtaining saccharine products from Jerusalem artichokes, the steps which comprise reducing the tubers to a pulp, adding water and oxalic acid, heating the mass, adding an alkaline salt, separating the saccharine solution from the pulp and insoluble precipitate, adding tannic acid to the solution, clarifying it with a soluble silicate, again neutralizing the solution, and then reheating and filtering it.

5. The method of obtaining saccharine products from Jerusalem artichokes, which consists in reducing the tubers to a pulp, adding water and oxalic acid, heating the mass, neutralizing with an alkaline salt, separating the saccharine solution from the pulp and insoluble precipitate, reacidifying the solution with tannic acid, clarifying it with a soluble silicate, again neutralizing it with an alkaline salt, reheating it, filtering it through bone black, and finally concentrating the filtered saccharine solution.

879,423. MECHANICAL FEEDER. THOMAS L. STURTEVANT, Quincy, and THOMAS J. STURTEVANT, Wellesley, Mass., assignors to Sturtevant Mill Company, Portland, Me., a Corporation of Maine. Filed Oct. 8, 1907. Serial No. 396,474.



1. In a feeding device, the combination with a suitable casing, of a stationary pan or receptacle having open sides, a vibrating feeding bar swinging in the said pan or receptacle, means for operating said feeding bar, and adjusting means whereby the movements of the said feeding bar may be regulated to vary the feed.

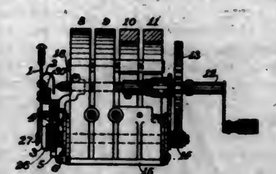
2. In a feeding device, the combination with a stationary pan or receptacle, to hold the material, and open at its sides, of a swinging or vibrating feeder working in said pan or receptacle and having an operating arm, a rotating shaft, an adjustable rotating operating device carried by said shaft, and a connecting rod communicating the movements of said operating device to said feeder.

3. The combination with a mill comprising crushing rolls, and shafts by which said rolls are carried, of a mill casing comprising a hinged cover, an eccentric rotating with one of said shafts, a feeder mounted on said cover and comprising a pan or receptacle having open sides, a swinging feeding bar and an operating arm, a hooked connecting rod for imparting movements to said arm from said eccentric and which connecting rod may be readily detached from said arm when said cover is to be lifted, and adjusting means for regulating the movements of said feeding bar.

879,424. PROCESS OF MAKING AZO DYES CONTAINING RADICALS OF HIGHER FATTY ACIDS. NATHAN SULZBERGER, Berlin, Germany. Filed Mar. 26, 1907. Serial No. 364,737.

A process for the production of azo-dyestuffs, containing the radical of a fatty acid occurring in fats, consisting in coupling the diazo compounds of the amido-fatty acid-arylids with amins and phenols, substantially as and for the purpose set forth.

879,425. ELECTRIC GENERATOR FOR TELEPHONE-LINES. HENRY TIDEMAN, Menominee, Mich. Filed Jan. 16, 1905. Serial No. 241,220.



1. In a commutator for magneto electric generators, two semi-circular segments of which the joint periphery forms a circle about a shaft, two conducting circular segments having a reduced diameter through half of the circumference, and an insulating circular segment of similarly reduced diameter through the half circumference, embraced between said two conducting circular segments, substantially as described.

2. In a commutator for magneto electric generators, two semi-circular segments of which the joint periphery forms a circle about a shaft, two conducting circular segments having a reduced diameter through half of the circumference, and an insulating circular segment of similarly reduced diameter through the half circumference, embraced between said two conducting circular segments and said insulating circular segments being concentric with the shaft, said conducting circular segments being so related angularly that their reduced half circumferences shall occupy the same angular relation to the shaft, substantially as described.

3. In a commutator for magneto electric generators, two semi-circular segments of which the joint periphery forms a circle about a shaft, two conducting circular segments having a reduced diameter through half of the circumference, and an insulating circular segment of similarly reduced diameter through the half circumference, embraced between said two conducting circular segments, said insulating segment and said conducting segments being concentric with each other and the shaft, said insulating segment being angularly so related to said conducting circular segments that its unreduced half circumference will register with the reduced half circumference of said conducting circular segments, substantially as described.

4. In a commutator for magneto electric generators, a conducting shaft, two semi-circular segments whose periphery forms a circle about said shaft, two conducting circular segments of reduced diameter throughout the half circumference, an insulating circular segment of similar reduced diameter throughout the half circumference, and a stud formed upon and electrically connected to that one of said conducting circular segments which forms the free end of the commutator, said insulating segment being embraced between said conducting circular segments and hav-

ing its unreduced half in registry with the reduced halves of said two conducting segments, substantially as described.

5. In a commutator for magneto electric generators, a ring of two conducting half circles insulated from each other, two conducting disks with a reduced half circumference, a central stud carried by one of said conducting disks, an insulating disk with a reduced half circumference and embraced between said two conducting disks so as to register its unreduced half circumference with the reduced half circumferences of said conducting disks, two brushes in contact with diametrically opposed portions of the periphery of said ring, a brush maintaining contact with the periphery of said conducting disks during a half rotation of the commutator, and with the periphery of said insulating disk during the other half rotation of the commutator, and a brush maintaining constant contact with said stud, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

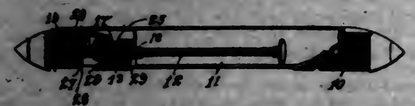
879,426. SIGN. FRANK S. TOWNSEND, Coshocton, Ohio, assignor to The Meek Company, Coshocton, Ohio, a Corporation of New Jersey. Filed June 25, 1907. Serial No. 380,756.



1. A sign composed of sheet material and formed with a base portion upon which it is adapted to stand, an apex above such base portion, and side walls leading from said base portion to said apex, said side walls being inclined rearwardly, and said sign being hollow and open at its rear, and having the appearance from the front of an inclosed figure.

2. A sign composed of sheet material and constructed in the form of a half-pyramid with a base portion upon which it is adapted to stand, an apex above said base portion, and two flat sides leading from said base portion to said apex, said sides being inclined rearwardly, and said sign being hollow and open at its rear, and having the appearance from the front of a complete pyramid.

879,427. LOOM-SHUTTLE. JOHN VARLEY, Jamestown, N. Y. Filed Aug. 22, 1907. Serial No. 389,615.

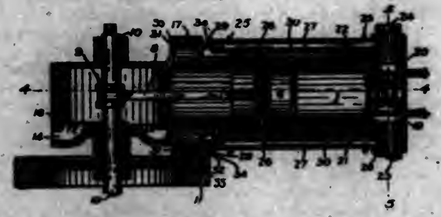


1. The combination of a shuttle body, a spindle pivoted therein, said spindle composed of a spindle body and spindle head, said head having a hole and bayonet slot therein to receive the end of said spindle body, said head having a crosswise slot intersecting said hole, and a projection on said spindle body to lock in said crosswise slot.

2. The combination of a shuttle body, a spindle pivoted therein, said spindle composed of a spindle body and spindle head, said head having a hole therein to receive the end of said spindle body, said head having a crosswise slot intersecting said hole, said head having a bayonet slot in said hole extending to said intersecting crosswise slot, and a spaced locking projection on said spindle body to lock with a turn on said intersecting slot.

3. The combination of a shuttle body 10 having a lengthwise slot 11 therein, a spindle composed of a spindle body 12 and head 13 pivotally mounted on a pin 21 in said slot, a projection 18 on said head, a tension spring 19 to engage said projection and hold said head, said head having a crosswise slot 23 with an angular wall 24, said head having a hole 15 and a bayonet slot 25 extending to said crosswise slot, an enlargement 16 on said spindle body and a pin 17 at a spaced distance therefrom to lock on said angular wall in said crosswise slot, and spaced inclines 27 and 28 on said shuttle body to limit the movement of said spindle body, substantially as and for the purpose specified.

879,428. COOLING DEVICE FOR ENGINES. GEORGE WOLKE, Jacksonville, Ill., assignor of one-fourth to E. P. Kirby and one-fourth to William K. McLaughlin, Jacksonville, Ill. Filed Aug. 9, 1906. Serial No. 329,919.



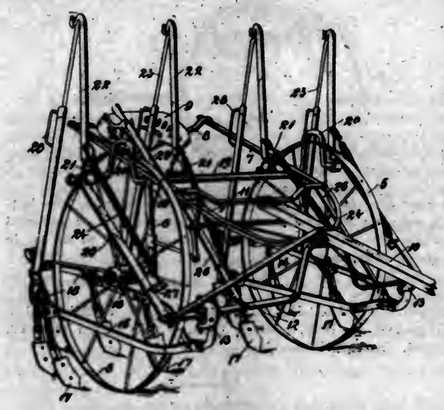
1. An internal combustion motor comprising a cylinder, a crank chamber communicating therewith, a piston arranged in the cylinder, a crank-shaft housed in the chamber and connected for operation by the piston, a fluid receiving chamber communicating with the crank chamber, means for controlling the admission of fluid from the crank chamber to the fluid-receiving chamber, jet tubes opening into and projecting from the latter, and perforated fluid-distributing tubes sustained around the cylinder and open ends to receive the respective jet tubes, the open ends of the distributing tubes being of greater internal diameter than the external diameter of the jet tubes.

2. An internal combustion motor comprising a cylinder, a crank chamber communicating therewith, a piston arranged in the cylinder, a crank shaft extended through the chamber and operatively connected with the piston, said chamber having an inlet and an outlet port and the cylinder being provided with a series of circumferential grooves, a fluid-receiving chamber communicating with the crank chamber through the medium of said outlet port, a series of perforated fluid-distributing tubes sustained around the cylinder and having their perforations disposed to direct fluid into said grooves, and a series of jet tubes opening into and projecting from the fluid-receiving chamber with their discharge ends disposed severally in the open ends of the respective distributing tubes.

3. In an internal combustion motor, the combination with a cylinder, a piston, a crank-shaft and crank chamber, of air-distributing means to direct cooling streams of air against said cylinder and having inlets opening to the outer air, an air-receiving means having a port in communication with said crank chamber, said crank chamber also having an air inlet, a valve actuated by said crank and common to both the said port and the said inlet, and jet tubes for directing the air in said air receiving means into said air distributing means through the air inlet opening thereof and thereby causing outside air of a lower temperature to be drawn or injected into the same, substantially as described.

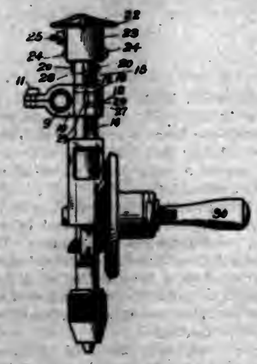
879,429. CULTIVATOR. SAMUEL H. YOUNG, Phillipsburg, Kans. Filed Oct. 4, 1907. Serial No. 395,663.

1. A cultivator comprising a wheeled frame carrying a draft-bar, shovel-beams connected to the draft-bar, said beams having branches between which the wheels travel, a beam secured to the axle and having an arched portion extending over the wheels, masts pivoted to said beam, and a connection between the masts and the rear ends of the branches of the shovel-beams.



2. A cultivator comprising a wheeled frame carrying a draft-bar, shovel-beams connected to the draft-bar, said beams having branches between which the wheels travel, a beam secured to the axle and having an arched portion extending over the wheel, masts pivoted to the beams, a connection between the masts and the rear ends of the branches of the shovel-beams, braces extending from the mast-supporting beams outside the wheels and from the frame between the wheels, respectively, to the draft-bar, and springs connected at their ends to the masts and to the braces, respectively.

879,430. DRILL ATTACHMENT. WALTER H. ADAMS, Sound Beach, Conn. Filed Mar. 1, 1907. Serial No. 360,100.



1. In a drill, a stationary member, a hollow member secured thereto, a feed screw extending through the hollow member, a stationary nut engaging the feed screw, a collar rigidly secured to the upper end of said feed screw and formed with peripheral ratchet teeth, a sleeve loosely surrounding the feed screw and rigidly secured to said hollow member said sleeve having an annular peripheral groove, a plate having a hub loosely engaging said sleeve, screws carried by said hub to project in said annular groove of the sleeve, and a spring pressed pawl carried by the hub and engaging said ratchet teeth of the collar.

2. In a drill, a stationary member formed with a central vertical arc-shaped socket and with opposite lateral recesses which merge into said socket, a hollow tube member having a feed screw therein, a nut on said screw having wings which extend through openings provided therefor in said tube member, means to secure said tube member and said wings of the nut to said stationary member in unison, said means comprising a cap member having a vertical socket to receive said tube member and recesses to receive said nut wings, and means to secure said cap member to said stationary member.

879,431. RAILWAY-SIGNAL. BERNARD E. AHLDERS, Indianapolis, Ind. Filed Oct. 9, 1907. Serial No. 396,560.

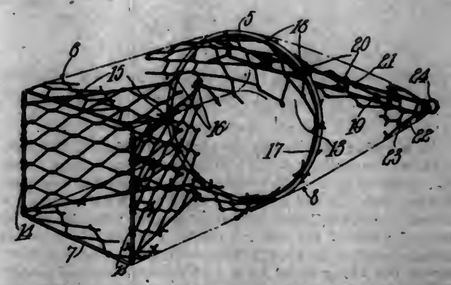


1. The combination, in a railway signal, of a signaling device carried by the train, a signaling station, means for operating the signaling device on the train from the signaling station, and means situated in said signaling station actuated by said signal-actuating means for recording the signals as given.

2. The combination, in a railway signal, of a signaling device carried by the train, a recording apparatus associated therewith, a signaling station, recording apparatus associated therewith, and signal-actuating means actuated from the signaling station for operating the signal on the train and for actuating the recording apparatus both on the train and in the signaling station whereby a record is made at both points of each signal at the time it is given.

3. The combination, in a railway signal, of a signaling device carried by the train, a recording apparatus associated therewith, a signaling station, recording apparatus associated therewith, and signal-actuating means actuated from the signaling station for operating the signal on the train and for actuating the recording apparatus associated with said signal-actuating means.

879,432. FISH-TRAP. ROBERT E. ALLDAY, Atlanta, Tex., assignor to Davis H. Allday, Atlanta, Tex. Filed July 29, 1907. Serial No. 386,042.



1. A fish trap including a casing having an opening at one end thereof and constituting the mouth of the trap, the adjacent walls of the casing at opposite end of the trap being separated, inclined wings extending inwardly from the mouth of the trap, and a locking member formed in two sections one of which is secured to one of the walls of the casing and provided with a plurality of spaced loops, the opposite section of the locking member being extended through the loops for drawing said walls in contact with each other.

2. A fish trap including a casing having a frame at one end thereof and constituting the mouth of the trap, there being an opening formed in the opposite end of the trap, inclined wings secured to the frame and defining an intermediate passage communicating with the interior of the trap, a bar secured to one of the walls of the opening and

provided with spaced loops, and a locking pin carried by the opposite wall of the opening and extending through said loops for drawing said walls together thereby to close the opening.

3. A fish trap including a casing having a frame at one end thereof and constituting the mouth of the trap, there being an opening formed in the opposite end of said trap, inclined wings secured to the frame and defining an intermediate passage communicating with the interior of the trap, a bar secured to one wall of the opening and having its intermediate portion provided with spaced vertically disposed loops and its opposite ends bent to form angularly disposed arms terminating in hooks for engagement with the adjacent walls of the casing, and a locking pin extending transversely of the trap and threaded through the loops.

4. A fish trap including a foraminous casing having one end thereof angular in cross section and its intermediate portion substantially cylindrical in shape, the upper and lower walls of the trap between the cylindrical portion thereof and the adjacent end of the trap being inclined rearwardly to form an opening, a reinforcing ring surrounding the trap and disposed at the cylindrical portion thereof, yieldably supported wings disposed within the angular portion of the trap and defining an intermediate passage, and locking means for drawing the walls of the trap together at said opening.

5. A fish trap including a casing formed of wire netting and having one end thereof angular in cross section and its intermediate portion substantially cylindrical in shape, the upper and lower walls of the trap between the cylindrical portion thereof and the adjacent end of the trap being inclined rearwardly to form an opening, a reinforcing band surrounding the casing at the cylindrical portion thereof, a binding wire coiled around the reinforcing band and engaging the wire netting, yieldably supported wings arranged within the angular portion of the trap, and a locking member for drawing the walls of the trap together at said opening.

[Claims 6 and 7 not printed in the Gazette.]

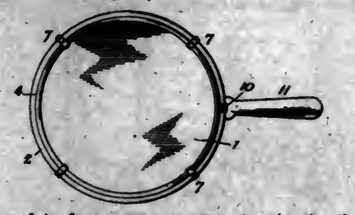
879,433. RUFFLER ATTACHMENT FOR SEWING MACHINES. WILLIAM M. AMMERMAN, New Haven, Conn., assignor to Edwin J. Toof, New Haven, Conn. Filed Mar. 16, 1903. Serial No. 147,890.



In a ruffler attachment for sewing machines, the combination, with the ruffler-blade, of actuating means therefor, comprising a ruffler-blade lever having an arm projecting laterally and upwardly therefrom with a space between it and the lever, and an operating lever located at the same side of the ruffler-blade lever as its said arm and being operative in a path intersecting the said space between the ruffler-blade lever and its arm and being provided with two contact points for engagement with the said ruffler-blade arm.

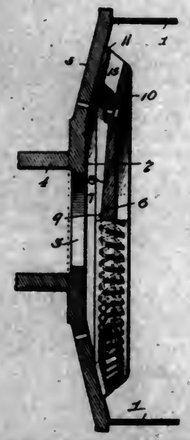
879,434. BAKING-PAN. JEANNE A. BAILEY, Brooklyn, N. Y. Filed Mar. 21, 1906. Serial No. 307,261.

A baking pan consisting of an annular body having reinforcing beads and wires at its upper and lower ends, the upper bead being cut away at intervals to expose the wire, and clamping members having inwardly extended eyes pivotally engaging the exposed portions of the wires and provided at their lower extremities with inwardly extended hooks or offsets, in combination with a detachable bottom member having an annular reinforcing bead and wire, said bead being cut away to expose a portion of the wire, and a handle pivotally engaging the exposed portion of the wire of the bottom member and having extended fingers of suitable length to engage the underside of the bottom member and form a stop for the handle when the latter is extended radially from said bottom



member and to form props or supports whereby the bottom member may be maintained in a tilted or inclined position when the handle member is upturned at an angle to the bottom member.

879,435. FEEDER-HEAD FOR ROTARY TUBE-MILLS. WILLIAM N. BEACH, New York, N. Y. Filed Oct. 12, 1906. Serial No. 338,556.



1. The combination with the mill shell, and the end head having a central inlet opening, of an interior feeder head arranged at the inner side of the end head in spaced relation to the latter and provided with a distributing ring having therein a continuous series of obliquely disposed feeding ports or holes.

2. The combination of the mill shell, and the end head having an inclined portion and a central inlet opening, an interior feeder head arranged at the inner side of the end head in spaced relation thereto and provided at its peripheral edge portion with a laterally offset distributing ring abutting against the inclined portion of said end head and provided therein with a continuous series of obliquely disposed feeding ports or holes.

3. The combination with the mill shell, and the end head provided with an inlet opening, of an interior feeder head secured to the inside of said end head in spaced relation thereto, said feeder being provided with a central conical portion and a lateral offset peripheral distributing ring in which are formed a series of feed ports or holes in communication with the feed chamber between the two heads and arranged oblique to the radii of the feeder head.

879,436. FOUNTAIN-PEN. GEORGE W. BENNUM, Georgetown, Del. Filed June 29, 1907. Serial No. 381,433.

1. A fountain pen comprising an ink reservoir, a feed device adapted to receive a supply of ink therefrom, a centrally-bored shaft within the feed device provided with means for controlling the supply of ink thereto, and a lug formed integral with said shaft and positioned contiguous said feed device and adapted for partial rotation, said lug abutting, at the limits of its rotation, the feed device for adjusting the supply-controlling means.



2. A fountain pen comprising an ink reservoir, a feed device adapted to receive a supply of ink therefrom and formed with an inlet aperture, a centrally-bored shaft within the feed device provided with means for controlling the supply of ink thereto, and a lug, formed integral with said shaft, located contiguous the feed device and adapted for limited rotation and, at the opposite limits thereof, to abut said feed device and aline and disaline said apertures.

3. A fountain pen comprising an ink reservoir, a feed device adapted to receive a supply of ink therefrom and provided with a plurality of feed grooves deepened near their outer ends to form a supplemental reservoir, a shaft rotatable within the feed device and provided with means for controlling the supply of ink thereto, and means located beneath said feed device for adjusting the supply-controlling means.

4. A fountain pen comprising an ink reservoir, a nipple formed with an offset to receive a pen point body, a feed device connected to the nipple and adapted to receive a supply of ink from the reservoir, a pen point, a centrally-bored shaft within the feed device adapted for oscillation and means located beneath the pen point body for controlling the flow of ink.

879,437. VEHICLE. NICKLAS H. BLOOM, Nashua, Iowa. Filed Apr. 11, 1907. Serial No. 367,651.



1. In a vehicle, the combination with a body, and front and rear axles for supporting the same, of a connection between the axles, including spaced reach members, and a conveyer in the bottom of the body having its rear portion movable beneath the rear axle and upwardly between the spaced members.

2. In a vehicle, the combination with a body, and front and rear axles for supporting the same, of means connecting the axles, including spaced reach members, forwardly and upwardly extending tracks located between the reach members, and a conveyer operating in the bottom of the body and having its rear portion movable beneath the rear axle and on the tracks between the spaced reach members.

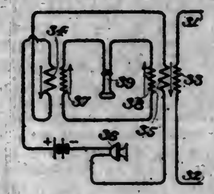
3. In a vehicle, the combination with an underframe including spaced reach members, of a conveyer movable rearwardly over the underframe and forwardly between the reach members.

4. In a vehicle, the combination with a body, of an underframe therefor, including spaced reach members beneath the body, and a conveyer movable in the body over the underframe and having its rear portion movable between the reach members.

5. In a vehicle, the combination with a body, of an underframe therefor including spaced rear brackets, a rear axle mounted on the brackets, a front axle, spaced reach bars connected at their rear ends to the rear brackets and at their front ends to the front axle, a conveyer operating in the body, said conveyer having its rear portion movable between the reach bars, and means for moving the conveyer.

[Claims 6 to 9 not printed in the Gazette.]

879,438. TELEPHONY. MORGAN BROOKS, Urbana, Ill. Filed May 31, 1906. Serial No. 319,440.



1. In a substation telephone set, the combination of line conductors, a transmitter, a receiver, and induction coils, said receiver being connected with said induction coils non-inductively for speech currents from said transmitter and a third winding on one of said induction coils and connected with said line conductors, whereby said receiver is inductively connected to said line, substantially as described.

2. In a substation telephone set, the combination of line conductors, a transmitter, a local battery circuit, a telephone receiver, and induction coils, said telephone receiver being connected with said induction coils neutrally with reference to speech currents set up by operating said transmitter and a third winding on one of said induction coils and connected with said line conductors, whereby said receiver is inductively connected to said line, substantially as described.

3. In a substation telephone set, the combination of line conductors, a transmitter, a receiver, and induction coils, said receiver being connected with a plurality of said induction coils and said line conductors being connected with but one of said induction coils, substantially as described.

4. In a substation telephone set, the combination of line conductors, two induction coils and a receiver, said receiver being connected with both of said induction coils and said line conductors being connected directly with but one of said induction coils, substantially as described.

5. In a substation telephone set, the combination of a transmitter, a receiver, and induction coils, said receiver being connected with said induction coils non-inductively with respect to speech currents resulting from operating said transmitter and inductively and non-conductively with reference to said line conductors, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

879,439. FIRE-ESCAPE. JOHN W. CAMPBELL, Colorado Springs, Colo. Filed Apr. 30, 1907. Serial No. 371,169.



1. In fire escapes the combination of an endless ladder, an upper drum over which it moves, a lower drum, suit-

able mechanism in connection with the said drum for moving a horisontal cylinder, a horisontal cylinder parallel with the axis upon which the lower drum revolves said cylinder adapted to move backward and forward along a piston rod and in moving to force liquid from one end to the other thereby retarding the movement of the ladder, all substantially as described and for the uses and purposes set forth.

2. In a fire escape, the combination of an endless ladder, an upper drum over which said ladder passes, a suitable supporting apparatus for said drum, a lower drum, a suitable base in which said drum and adjacent parts are mounted, cylindrical cams on said lower drum, a fluid cylinder, rollers on the bottom of said cylinder, a horisontal piston rod on which said cylinder is mounted, a stationary piston mounted on said piston rod, said cylinder being adapted to move when the rollers are engaged by the cams, means for preventing the cylinder from turning, and means for regulating the flow from one end of the moving cylinder to the other, substantially as described.

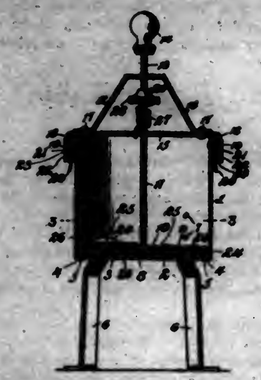
3. In fire escapes, the combination of an endless link chain, rungs passing through said link chain, two endless cables passing through the outer ends of said rungs and to which said rungs are secured, an upper drum over which the endless ladder passes, suitable brackets for supporting such upper dram, a lower drum, a sprocket wheel on said drum which engages the chain as the said ladder passes around it, a suitable base in which said drum and adjacent parts are mounted, cylindrical cams on said drum, a movable fluid cylinder, rollers on the under side of said cylinder for engaging said cylindrical cams, a piston secured in said base upon which said cylinder moves, a plunger attached to said piston rod, suitable means for regulating the flow of fluid, all substantially as described.

4. In fire escapes, the combination of a link chain, rungs passing through said link chain, slots cut in the ends of said rungs, endless cables passing through said slots, nuts screwed upon the ends of said rungs for securing said cables, an upper drum over which said chain, rungs and cable pass, brackets upon the wall of the building for supporting said drum, a lower drum, a suitable frame in which said lower drum and adjacent parts are mounted, a sprocket wheel upon said lower drum for engaging said chain, cylindrical cams on said lower drum, a movable fluid cylinder, a stationary piston upon which said cylinder is moved, said piston being secured in said frame, rollers upon the under side of said cylinder for engaging said cams, balls for reducing friction between the top of the cylinder and the top plate, grooves in the top of said cylinder for receiving said balls, a top plate on said base, grooves in the bottom of said top plate for receiving said balls, a plunger fitted to the said stationary piston, a longitudinal hole bored in said piston rod, two ports cut in said piston rod on opposite sides of said plunger connecting with the said longitudinal hole, a plunger fitted to said hole and long enough to entirely close one of the ports when screwed in, a shank on the end of said plunger by means of which said plunger may be screwed in any desired distance, all substantially as described.

879,440. COLANDER. BERT E. CAROTHERS, Milan, Mo. Filed Apr. 27, 1906. Serial No. 314,014.

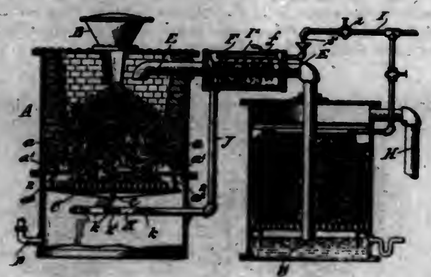
1. A device of the class described comprising a receptacle having a perforate bottom, a shaft provided with inclined blades for forcing the material through the said bottom, loops mounted on the receptacle, a bearing bracket receiving the shaft and having projecting portions extending into the loops, catches mounted within the loops and engaging the projecting portions of the bearing bracket, and a spring connected with the bearing bracket and with the shaft.

2. A device of the class described, comprising a receptacle, loops mounted on the receptacle and provided with separate openings, a bearing bracket having a transverse bar extending across the receptacle and provided with depending ends forming arms extending into one of the openings of each loop, catches mounted in the other openings of the loops and provided with means for engaging the said arms, and a shaft journaled in the bracket and carry



ing means for forcing material through the bottom of the receptacle.

879,441. GAS-PRODUCER. ROBERT B. CISSEL, Elizabeth, N. J., assignor to Backus Water Motor Company, Newark, N. J., a Corporation of New Jersey. Filed May 11, 1907. Serial No. 373,129.



1. A producer having a grate in its lower portion and an aqueous vapor supply device consisting of a hollow ring symmetrically disposed beneath the grate and having in its side substantially equidistant apertures extending downwardly along the sides provided with downwardly inclined hoods to prevent the admission of ashes to the ring and to facilitate the passage of ashes from the top of the ring.

2. A producer provided with a grate and having a vapor supply device located beneath the grate composed of a continuous hollow horisontally arranged body having a curved top and provided with apertures extending downwardly along the sides but terminating above the bottom of the vapor supply device which are protected by laterally projecting downwardly extending hoods and which have space beneath the level of the apertures for holding a substantial quantity of water.

879,442. CHAIR-BED, COUCH, STRETCHER, &c. HARRY P. CLEMETSON, Ashford, England. Filed Aug. 12, 1905. Serial No. 273,885.

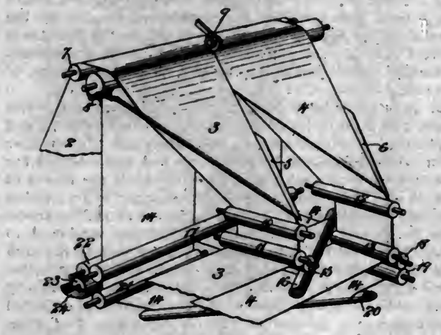
1. An adjustable chair-bed, stretcher or the like consisting in combination of a mattress frame composed of seat, back, and leg sections hinged together, a rigid frame, a pair of sway bars pivoted at one end to said rigid frame and at their other ends to said back section at the point of equipoise, legs rigidly connected to the front end of the seat section and pivoted upon said rigid frame, and a pair of knuckle-jointed links pivoted on the one hand to said rigid frame and on the other to said leg section, substantially as described.

2. An adjustable chair-bed, stretcher or the like consisting in combination of a mattress frame composed of seat, back, and leg sections hinged together, a rigid frame, a pair of sway bars pivoted at one end to said rigid frame and at their other ends to said back section at the point of equipoise, means for retaining said back section in any desired position, legs rigidly connected to the front end of the seat section and pivoted upon said rigid frame, and a pair of knuckle-jointed links pivoted on the one hand to said rigid frame and on the other to said leg section, substantially as described.



3. An adjustable chair-bed, stretcher or the like consisting in combination of a mattress frame composed of seat, back and leg sections hinged together, a rigid frame, the said back section supported at the point of equipoise, legs rigidly connected to the front ends of the seat section and pivoted upon the said rigid frame, and a pair of knuckle-jointed links pivoted on the one hand to said rigid frame, and on the other to said leg section substantially as described.

879,443. ANTISMUTTING DEVICE FOR PRINTING MACHINERY. EDGAR H. COTTRELL, Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of New Jersey. Filed July 18, 1907. Serial No. 384,367.



1. In a cutting and folding machine, a plurality of formers, means for passing printed webs over the formers, an endless smut web and means for passing it successively between the formers and printed webs at the same speed as the printed web.

2. In a cutting and folding machine, a plurality of formers, means for passing printed webs over the formers, an endless smut web and means for passing the smut web between one former and its printed web with one face against the printed web and between a succeeding former and its printed web with the other face against the printed web.

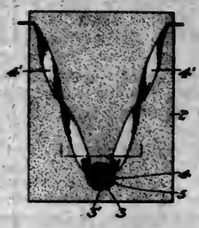
3. In a cutting and folding machine, a plurality of formers, means for passing printed webs over the formers, an endless smut web, means for passing it successively between the formers and printed webs and a cleaning device engaging the endless smut web for removing superfluous ink therefrom.

4. In a cutting and folding machine, a plurality of formers, means for passing printed webs over the formers, an endless smut web, means for passing it successively between the formers and printed webs, and a single cleaning device for removing superfluous ink from both faces of the smut web.

5. In a cutting and folding machine, a plurality of formers, means for passing printed webs over the formers, an endless smut web, means for passing the smut web between one former and its printed web with one face against the printed web and between a succeeding former and its printed web with the other face against the printed web and means for cleaning the faces of the smut web prior to engaging their respective printed webs.

[Claims 6 and 7 not printed in the Gazette.]

879,444. METALLIC REINFORCING STRUCTURE FOR CEMENTITIOUS BODIES. EDWARD F. CRANE, Newark, N. J. Filed July 19, 1906. Serial No. 326,820.



1. A re-inforcing structure for cementitious bodies comprising a main bar, a shearing member partially embracing said bar and projecting laterally therefrom, and a locking clip passing about the bar to embrace the same from opposite sides thereof with the bar-embracing-portion of the shearing member held therebetween and having an opening through which the shearing member extends.

2. A re-inforcing structure for cementitious bodies comprising a generally round main bar, a shearing member partially embracing said bar and projecting laterally therefrom, and a locking clip passing about the bar to embrace the same from opposite sides thereof with the bar-embracing portion of the shearing member held therebetween and having an opening through which the shearing member extends.

3. A re-inforcing structure for cementitious bodies comprising a main bar, a shearing member partially embracing said bar and projecting laterally therefrom, and a locking clip passing about the bar to embrace the same from opposite sides thereof with the bar-embracing-portion of the shearing member held therebetween and having an opening through which the shearing member extends; said clip and shearing member having engaging abutments for locking the same against relative movement.

4. A re-inforcing structure for cementitious bodies comprising a main bar, a shearing member projecting laterally from said bar, and a locking clip securing said member to the bar; said bar having a transverse projection which coöperates with the clip to form a locking recess for interposed cementitious material to lock the clip against movement longitudinally of the bar.

5. A re-inforcing structure for cementitious bodies comprising a main bar having a ribbed surface, a shearing member projecting laterally from said bar, and a locking clip securing said member to the bar and having an opening therein opposite the ribbed surface of the bar; the walls of said opening and the adjacent surfaces of the bar providing opposing walls for coöperation with interposed cementitious material to lock the clip and associated shearing member against movement lengthwise of the bar.

[Claims 6 to 12 not printed in the Gazette.]

879,445. COLOR PHOTOGRAPHY. ALBERT DAVIES, Stonehouse, Plymouth, England. Filed Mar. 12, 1907. Serial No. 361,894.

1. The process of producing colored photographs, which consists in first printing the same picture on sensitised pigment tissues of different colors, then attaching the said tissues to prepared plates, then removing the paper from the backs of the tissues and developing and fixing the

pictures while on the said plates, and finally superimposing the said pictures on a single sheet of transfer paper.

2. The process of producing colored photographs, which consists in first printing the same picture on sensitised pigment tissues of different colors, then attaching the said tissues to prepared plates, then removing the paper from the backs of the tissues and developing and fixing the pictures while on the said plates, and finally superimposing the fixed pictures upon a single sheet of gelatin transfer paper which has been hardened before applying the pictures to it.

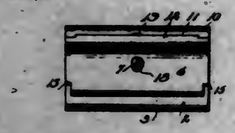
3. The process of producing colored photographs, which consists in printing the picture on blue pigment tissue which has been treated with picric acid and bichromate of potash, and printing the same picture on sensitized pigment tissues of other colors, then attaching the said tissues to prepared plates, then removing the paper from the backs of the tissues and developing and fixing the pictures while on the said plates, and finally superimposing the said pictures on a single sheet of transfer paper.

4. The process of producing colored photographs, which consists in first printing the same picture on sensitized pigment tissues of different colors, then attaching the said tissues to prepared plates, then removing the papers from the backs of the tissues and developing and fixing the pictures while on the said plates, reducing any picture which is too thick by rubbing it with spirits before removing it from its plate, and finally superimposing the said pictures on a single sheet of transfer paper.

5. The process of producing colored photographs, which consists in first printing the same picture on sensitised pigment tissues of different colors, then attaching the said tissues to glass plates which have been treated with chalky material and then coated with collodion, then removing the paper from the backs of the tissues and developing and fixing the pictures while on the said plates, and finally superimposing the said pictures on a single sheet of transfer paper.

[Claim 6 not printed in the Gazette.]

879,446. HOLDER FOR SAFETY-RAZOR BLADES. EDWARD J. DENBEN, Oneida, N. Y. Filed June 30, 1906. Serial No. 324,256.



1. A razor blade holder comprising a rear plate provided with a recess and horizontal members, a blade supported by said members, a front plate provided with a tongue fitting in said recess and a cut-a-way to provide shoulders resting upon the horizontal members, said front plate being provided with an opening having an enlarged portion, and a bolt passing through the opening and threadedly engaging the opening in the rear plate to clamp the blade between the plates.

2. A razor blade holder comprising a rear plate provided with a blade supporting member and having its upper end bent to provide a back, said back being provided with a recess, a front plate provided with a tongue adapted to fit in said recess, and means adapted to clamp a blade between the plates.

3. A razor blade holder comprising a rear plate provided with a threaded opening and with a blade supporting member, the upper end of said plate being formed to provide a back having a recess, a front plate provided with an opening having an enlarged portion, said plate being adapted to be supported by said member and to engage in said recess, and a screw passing through the opening in the front plate and threadedly engaging the opening in the rear plate, said enlarged portion of the opening permitting the removal of the front plate without the removal of the screw.

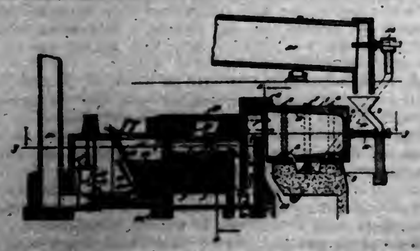
879,447. MANIFOLDING SALES-BOOK. JOHN R. DICKSON, Niagara Falls, N. Y., assignor to The Carter-Crume Company, Limited, Niagara Falls, N. Y., a Corporation of Canada. Filed Oct. 15, 1904. Serial No. 228,519.



1. In a sales book or pad, in combination, a transfer sheet, and a plurality of alternately disposed original and duplicate leaves substantially registering one with another about their edges and bound into a pad and adapted for use in conjunction with said transfer sheet, the leaves of one of said sets being notched or cut away in registering portions thereof and the remaining leaves extending across said notches in said first leaves and being weakened to adapt the same for detachment from the pad at the stub end thereof, whereby upon said second mentioned leaves being used and detached the registering notches of the corresponding first mentioned leaves expose the uppermost unused leaf of said second mentioned leaves and permit the ready separation of the unused and used portions of the pad.

2. In a sales book or pad, in combination, a transfer sheet, and a plurality of alternately disposed original and duplicate leaves substantially registering one with another about their edges and bound into a pad and adapted for use in conjunction with said transfer sheet, the leaves of one of said sets being notched or cut away in registering portions thereof and the remaining leaves extending across said notches in said first leaves and being weakened to adapt the same for detachment from the pad at the stub end thereof and being of a material having a distinctive color with respect to said first mentioned leaves, whereby upon said second mentioned leaves being used and detached the registering notches of the corresponding first mentioned leaves expose the uppermost unused leaf of said second mentioned leaves and permit the ready separation of the unused and used portions of the pad.

879,448. CEMENT-BURNING APPARATUS. BYRON E. ELDRED, Bronxville, N. Y. Filed Dec. 1, 1906. Serial No. 345,958.



1. A clinker making apparatus comprising in combination a rotary cement kiln provided with coal firing means adapted to produce relatively low calcining temperatures therein and a regeneratively operating clinkering kiln receiving calcines therefrom.

2. A clinker making apparatus comprising in combination a rotary cement kiln provided with firing means adapted to produce relatively low calcining temperatures therein, and a rotary clinkering kiln provided with means for withdrawing products of combustion at its clinker discharge end and with gas firing means also at the clinker discharge end.

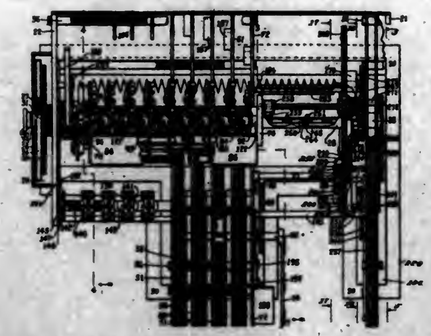
3. In a clinker making apparatus, a rotary inclined clinkering kiln provided with a sealing wall closing its upper end, means for introducing calcines therethrough, means for withdrawing clinker at its lower end, and gas firing means and means for withdrawing products of combustion, both located at said lower end.

4. Clinker making apparatus, comprising in combination a rotary inclined calcining kiln and a rotary clinkering kiln receiving calcines therefrom, said clinkering kiln being provided with gas firing means adapted to produce a gas flame entering and leaving said kiln at the clinker discharge end.

5. In clinker making apparatus, a rotary inclined clinkering kiln provided with a sealing wall at its upper end substantially closed against exit of gases and having means for introducing calcines therethrough and having means for introducing a gas flame and withdrawing products of combustion from the lower end.

[Claims 6 to 16 not printed in the Gazette.]

879,449. CALCULATING-MACHINE. EMORY S. ENSIGN, Newtonville, Mass., assignor to Ensign Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed May 3, 1906. Serial No. 315,021.



1. In a calculating-machine, a meter, a driving shaft and several parallel series of toothed segments arranged so that corresponding teeth of all of the segments are in alinement and adapted when displaced out of normal position to be met by the meter when it is revolved by its driving shaft.

2. In a calculating-machine, a series of toothed segments, an indicator, and an epicycle cylindrical meter adapted to be operated by the toothed segments but operating a wheel of the indicator on each revolution before its wheels are operated.

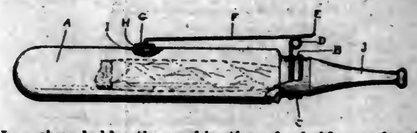
3. In a calculating-machine, an epicycle cylindrical meter, means for operating the wheels of the meter as it is revolved, multiplying-mechanism for revolving the meter as many times as desired, keys of different denominational values for operating the multiplying-mechanism, and an adding-key independent of the keys for revolving the meter once in problems of addition.

4. In a calculating machine, an epicycle cylindrical meter, a motor spring for revolving the meter; multiplying keys for regulating the revolving of the meter; a spring for moving the meter longitudinally, and means automatically operated for allowing of the moving of the meter by the spring one position towards the right after each operation of a multiplying key.

5. In a calculating-machine, an epicycle cylindrical meter, multiplying-keys for revolving the meter as desired, means for automatically moving the meter one position sidewise after each series of revolutions by the operation of a multiplying-key and a key for moving the meter one position sidewise without revolving the meter.

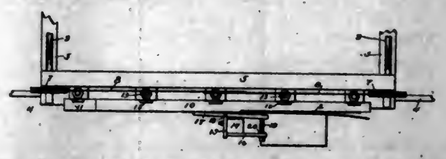
[Claims 6 to 57 not printed in the Gazette.]

879,450. CIGAR-HOLDER. PASQUALE FARACCHIO, Philadelphia, Pa. Filed Apr. 30, 1907. Serial No. 371,196.



In a cigar holder the combination of a holder, a chamber secured thereto provided with an aperture in the wall thereof, a valve seated in said aperture and a spring secured to said chamber and carrying said valve for permitting the opening and closing of the valve substantially as and for the purpose specified.

879,451. VENEER-SAWING MACHINE. JOHN FARROW, Covington, Ky., assignor of one-half to George Rowe and James A. Trunnell, Cincinnati, Ohio. Filed Oct. 31, 1904, Serial No. 230,779. Renewed Nov. 18, 1907. Serial No. 402,744.



1. In a veneer sawing machine, the combination with a movable carriage supporting the timbers to be cut, of a support, and a pressure plate comparatively thin in proportion to its width and length, with pivotal connection therefor to said support on an axis parallel to its width, and arranged to contact with the face of the timbers to be cut, substantially as described.

2. In a veneer sawing machine, the combination with a movable carriage supporting the timbers to be cut, of a support, and a pressure plate comparatively thin in proportion to its width and length, with pivotal connection therefor to said support on an axis parallel to its width, and arranged to contact with the face of the timbers to be cut, with means for adjusting the pressure of said plate, substantially as described.

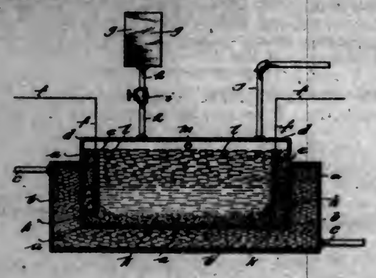
3. In a veneer sawing machine, the combination with the movable carriage supporting the timbers to be cut, of a fixed support, a pressure plate pivoted to said support and arranged to contact with the face of the timbers to be cut, a screw mounted on said support with slot in the pressure plate, and a nut in said slot engaged by said screw whereby the pressure of said plate may be regulated, substantially as described.

879,452. PROCESS OF MAKING MOLTEN PEROXIDS. HANS FOERSTERLING, Perth Amboy, N. J., and HECTOR R. CARVETH, Niagara Falls, N. Y., assignors to The Roessler & Hasslacher Chemical Co., New York, N. Y., a Corporation of New York. Filed Mar. 6, 1907. Serial No. 360,993.

1. A process of making molten alkaline oxids which consists in bringing the metal to be oxidized into reaction with an oxidising agent at such a temperature that the resulting oxid is instantaneously molten.

2. A process of making molten alkaline oxid which consists in bringing the metal to be oxidised into reaction with an oxidising agent and utilising the heat generated by the reaction to melt the resulting oxids.

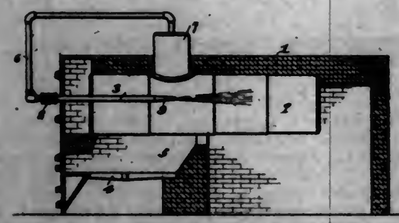
3. A process of making molten alkaline peroxid which consists in bringing the metal to be oxidized into reaction with an oxidizing agent at such a temperature that the resulting peroxid is instantaneously molten.



4. A process of making molten alkaline peroxid which consists in bringing the metal to be oxidized into reaction with an oxidizing agent and utilizing the heat generated by the reaction to melt the resulting peroxid.

5. A process of making molten sodium peroxid which consists in bringing molten sodium into reaction with air and utilizing the heat generated by the reaction to melt the resulting peroxid.

879,453. SMOKE-CONSUMER AND ARTIFICIAL DRAFT. ANDREW H. FORD, Westville, Tex., assignor of one-half to William E. Patterson, Lake Charles, La. Filed Aug. 18, 1906. Serial No. 331,195.

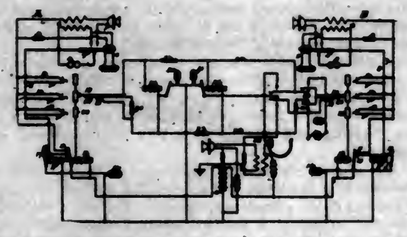


1. In a device of the class described, the combination with a furnace including a fire box and boiler, of a steam pipe located above the fire box and also above the bottom of the boiler and arranged exteriorly of the latter so as to be in the path of the products of combustion arising from the fire box, and having a discharge end terminating at a point so as to discharge over the back of the said fire box above the plane of the bottom of the boiler, whereby the blast from the steam pipe tends to draw the flame and products of combustion upward around and cause them to impinge against the bottom and sides of the boiler.

2. In a device of the class described, the combination with a furnace including a fire box and boiler, of a longitudinally disposed steam pipe extending into the furnace above the fire box and also above the bottom of the boiler and arranged exteriorly of the latter so as to be in the path of the products of combustion arising from the fire box, and having its discharge end located above and adapted to discharge over the back of the fire box in or near the same plane as the level of water within the boiler or boilers, whereby the blast from the steam pipe tends to draw the flame and products of combustion upward around and cause them to impinge against the bottom and sides of the boiler.

3. In a device of the class described, the combination with a furnace including a fire box and boiler, of a longitudinally disposed steam pipe entering the front of the furnace and extending into the same above the fire box and arranged above the bottom of the boiler in substantially the same plane as the level of water in the boiler of the furnace, and provided with a tapering nozzle located above and adapted to discharge over the back of the fire box, said steam pipe being located outside the boiler and within the range of the products of combustion arising from the fire box, whereby the blast from the steam pipe tends to draw the flames and products of combustion upward around and cause them to impinge against the bottom and sides of the boiler.

879,454. TELEPHONE-EXCHANGE APPARATUS. WILLIAM A. FRICKE, Chicago, Ill., assignor to Monarch Telephone Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 8, 1907. Serial No. 361,299.



1. A telephone exchange system including a plurality of telephone lines extending from sub-stations to an exchange, line and supervisory circuits, relays or magnets in said circuits, condensers, and connecting means at the exchange permanently associated with said condensers and adapted to connect said condensers in talking sides of the telephone lines, each of said connecting means serving to include a condenser in talking sides of united telephone lines and between the relays or magnets of a line circuit and its associated supervisory circuit.

2. A telephone exchange system including a plurality of telephone lines extending from sub-stations to an exchange, line and cut-off relay circuits, condensers for separating said circuits, and connecting means at the exchange permanently associated with said condensers and adapted to connect said condensers in talking sides of the telephone line and between the relays in said circuits.

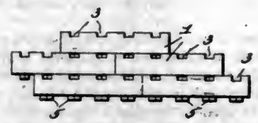
3. A telephone exchange system including a plurality of telephone lines extending from sub-stations to an exchange, line and supervisory circuits, relays or magnets in said circuits, condensers, connecting means at the exchange permanently associated with said condenser and adapted to connect said condensers in talking sides of the telephone lines, each of said connecting means serving to include a condenser in talking sides of united telephone lines and between the relays or magnets of a line circuit and its associated supervisory circuit, and a battery common to the telephone lines and said circuits.

4. A telephone exchange system including a plurality of telephone lines extending from sub-stations to an exchange, line and cut-off relay circuits, condensers for separating said circuits, connecting means at the exchange permanently associated with said condensers and adapted to connect said condensers in talking sides of the telephone line and between the relays in said circuits, and a battery common to the telephone lines and said circuits.

5. A telephone exchange system including a plurality of telephone lines extending from sub-stations to an exchange, line and supervisory or disconnect signal circuits, condensers for separating said signaling circuits, connecting means at the exchange permanently associated with said condensers and adapted to connect said condensers in talking sides of the telephone lines and between the relays in said line and supervisory circuits, said connecting means including double stranded link circuits, connecting devices at the termini of said strands, each of said connecting devices including two elements connected through one of said condensers, a strand of the link circuit being connected at each end with the said elements of a corresponding connecting device, a condenser being serially interposed between one of said elements and said strand, and line contacts adapted for connection with the said connecting elements of the connecting devices, one of the latter contacts of each line constituting a line relay terminal and the other contact of each line constituting a cut-off relay terminal.

[Claims 6 to 10 not printed in the Gazette.]

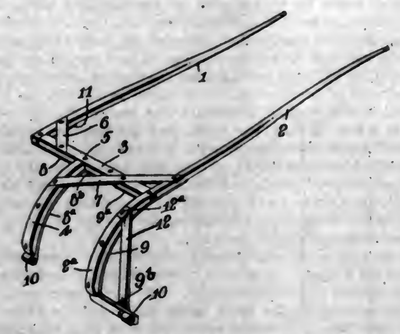
879,455. TOY BUILDING-BLOCK. CHARLES W. FROST, Philadelphia, Pa. Filed May 29, 1907. Serial No. 376,316.



1. A toy block having on one of its faces a series of squared projections, the sides of said projections being arranged obliquely to the sides and ends of said block.

2. A toy block having in one face thereof intersecting grooves or channels, and on its opposite face a series of squared projections, the sides of said projections being arranged obliquely to the sides of the block.

879,456. VEHICLE-SHAFT. OWEN GEERTSMA, Broadland, S. D. Filed Sept. 30, 1907. Serial No. 395,187.

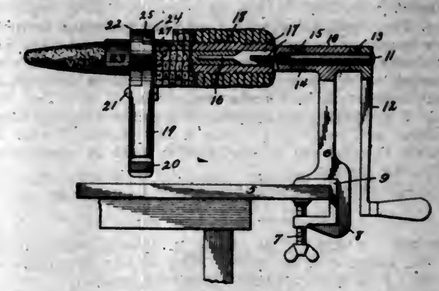


In combination, a pair of shafts, one of the shafts embodying a downwardly curved rear end portion, a cross bar connecting said shafts, a coupling member shaped similarly to the downwardly curved end of the aforesaid shaft and attached at its front end to the cross bar between the ends of the latter, a brace member extending diagonally with reference to the shafts and attached between its ends to the cross bar, means securing the rear end of the brace member to the coupling member and its front end to the shaft having the curved rear end, a shaft iron secured to the coupling member and attached to the cross bar, another shaft iron secured to the rear downwardly curved end of the first mentioned shaft and having a lateral extension projecting outwardly from said shaft and provided with a thill eye, and a brace connecting said extension at its outer end with the adjacent shaft.

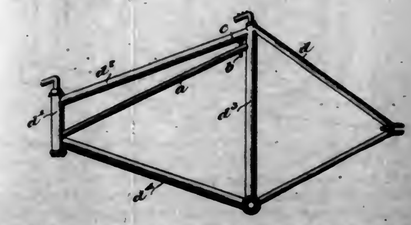
879,457. APPARATUS FOR REMOVING THE GRAINS OF CORN FROM CORNCOBS. WILLIAM B. GEORGE, Columbus, Ohio. Filed Sept. 9, 1907. Serial No. 391,851.

1. In a device of the character described, the combination with means for rotatably supporting an ear of corn entirely from one end thereof and leaving the other end of said ear of corn free and unobstructed, of a hand-tool comprising a body portion and a knife carried by said body portion, said hand-tool being adapted to be slipped over the free end of the ear of corn and the knife being adapted to cut the grains of corn from the cob, substantially as described.

2. A plier-like hand tool for the purpose set forth, said hand tool comprising a pair of handles, means for pivoting said handles together, a pair of heads, an elongated curved bearing plate carried by one of said heads, and a knife carried by said bearing plate.



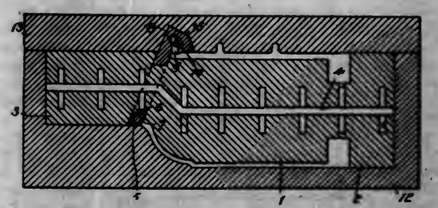
879,458. BRACE FOR BICYCLE-FRAMES. ARTHUR L. GIRARD, Lincoln, Nebr. Filed Sept. 16, 1907. Serial No. 393,000.



1. The combination of a bicycle frame with a rigid removable brace piece, each end of the bracepiece being made with projecting lips; with means for transmitting pressure from the top bar of the bicycle frame to the brace piece to forcibly hold and lock the latter in position against the seat post.

2. The combination of a bicycle-frame with a rigid, removable, brace-piece, the ends of the brace-piece being made with projecting lips and one end of the brace piece being provided with a transverse set-screw and lug.

879,459. CAR JOURNAL-BOX. EDGAR GOOD, Toledo, Ohio, assignor to Lacey Y. Williams and Frank B. Harrison, Toledo, Ohio. Filed Apr. 13, 1907. Serial No. 367,956.



1. The combination with a core for casting a journal box interior, of a mold for the end of the box having an extension with a matrix for a projection at the edge of the journal box opening.

2. The combination with a core for casting a journal box interior, of a mold for the end of the box having an extension with a matrix for a projection at the edge of the journal box opening, and a pin core in connection with said matrix for the purpose set forth.

3. The combination with a core for casting a journal box interior, of a mold for the end of the box having an extension with a matrix for a projection at the edge of

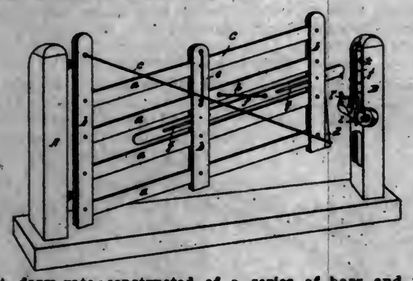
the journal box opening, and a supplemental mold in connection with said matrix to form part of the surface thereof.

4. The combination with a core for casting a journal box interior, of a mold for the end of the box having an extension with a matrix for a projection at the edge of the journal box opening, a supplemental mold in connection with said matrix, and a pin core.

5. A mold 5 for use in casting the end and top lug of a journal box, said mold having a top portion 8 with a matrix therein, and a supplemental mold in connection with said matrix.

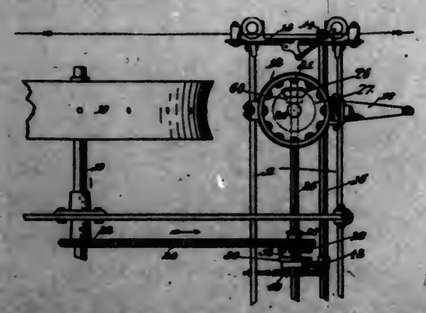
[Claim 6 not printed in the Gazette.]

879,460. FARM-GATE. JOHN R. GOODE, Washington, Pa., assignor of one-half to John W. Ely, Washington, Pa. Filed Sept. 24, 1907. Serial No. 394,271.



A farm-gate constructed of a series of bars and uprights, a supporting rod secured to both sides of the rear upright passing around the front upright and engaging a rack secured on said front upright, a sliding locking-bar adapted to be moved longitudinally by means of the connecting rod, strips formed in upper and lower sections, secured on the latch-post and provided with a series of holes in the upper sections thereof for receiving a pin for preventing the gate from being lifted, together with pawls pivotally secured to the latch post opposite interval between the sections in the strips for engaging the locking bar while in the normal or locked position, all substantially as and for the purposes shown and described.

879,461. CORN-PLANTER. WILLIAM S. GRAHAM, Canton, Ill., assignor to Parlin and Orendorff Company, Canton, Ill., a Corporation of Illinois. Filed Sept. 6, 1907. Serial No. 391,579.



1. In a corn-planter, the combination with seed-plates, carrying wheels and check-rower mechanism, of means for driving the seed-plates from the carrying wheels at a normal speed approximately corresponding with the seed-dropping motions of the check-rower mechanism, means operated by the check-rower mechanism to accelerate the motion of the seed-plates when the plates run too slow, and means operated by the check-rower mechanism to temporarily arrest the motion of the seed-plates when the speed of rotation thereof is too great, substantially as described.

2. In a corn-planter, the combination with seed-plates, carrying wheels, check-rower mechanism and gearing between said seed-plates and the carrying wheels adapted to drive the seed-plates normally at a speed approximately in time with the check-rower mechanism, of means operated by the check-rower mechanism to accelerate the seed-plates when they run at too slow a speed, and means operated by the check-rower mechanism to temporarily delay the seed-plates when they run too fast, substantially as described.

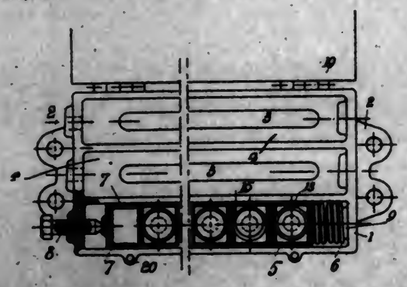
3. In a corn-planter, the combination with seed-plates, carrying wheels, check-rower mechanism and gearing between the seed-plates and the carrying wheels, of clutch mechanism interposed in said gearing between the carrying wheels and the seed-plates and adapted when normally in engagement to continuously drive the seed-plates at a speed approximately in time with the check-rower mechanism, means operated by the check-rower mechanism and upon said clutch mechanism to speed the seed-plates whenever they run too slow, and means operated by said check-rower mechanism adapted to temporarily disengage said clutch mechanism and arrest the motion of the seed-plates when running too fast, substantially as described.

4. In a corn-planter, the combination with seed-plates, carrying wheels, gearing between said seed-plates and carrying wheels and clutch mechanism interposed in said gearing between said seed-plates and carrying wheels and adapted when in engagement to continuously drive the seed-plates in proper seed-dropping time, of check-rower mechanism, an accelerator operated by said check-rower mechanism in inoperative relation to said clutch mechanism as long as the seed-plates are running in time with the seed-dropping mechanism and adapted to operate on said clutch mechanism to accelerate the speed of said seed-plates when moving too slow, and mechanism operated by said check-rower mechanism in inoperative relation to said clutch mechanism as long as said seed-plates are running at proper speed and adapted whenever said seed-plates run at too great a speed to temporarily disengage said clutch mechanism and arrest the motion of the seed-plates, substantially as described.

5. In a corn-planter, the combination with a seed-plate, means for driving the same, a runner having a seed-tube, a lower closure for said seed-tube, and check-rower mechanism for operating the same, of an upper closure valve in said seed-tube, and means connected with said seed-plate-driving mechanism for operating the same, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

879,462. BRANDING-MACHINE. WILLIAM J. GREEN, London, England. Filed July 22, 1907. Serial No. 385,060.



1. In a branding machine, the combination, with a frame provided with a bottom having a slot in it, of a series of cages adjustable longitudinally in the said frame, means for holding the said cages in position, a series of branding stamps provided with shanks which are slidable vertically in the said cages and slot, and a series of springs for depressing the said stamps.

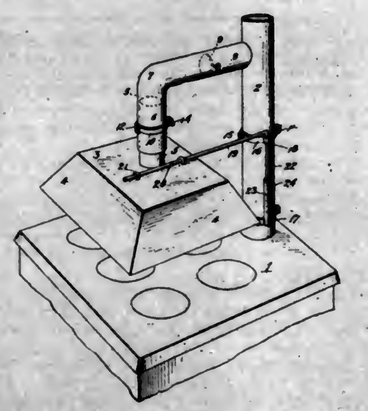
2. In a branding machine, the combination, with a frame provided with a series of guide channels, each said channel being provided with a slot in its bottom portion, a cover at the top of said frame, series of cages adjustable longitudinally in the said channels, means for holding the said cages in position, branding stamps provided with shanks which are slidable vertically in the said cages and slots, and springs interposed between the said shanks and cover for depressing the said stamps.

3. In a branding machine, the combination, with a frame having a slot in its bottom portion, of a cage arranged in the said frame and provided with a bottom and a diaphragm each having a guide hole in it, a branding stamp provided with a shank which is slidable vertically in the said guide holes and slot, and a spring for depressing the said stamp.

4. In a branding machine, the combination, with a frame having a slot in its bottom portion, of a cage arranged in the said frame, a branding stamp provided with a tubular shank which is slidable vertically in the said cage and slot, and a spring for depressing the said stamp.

5. In a branding machine, the combination, with a frame provided with a slot in its bottom portion, of a rectangular cage arranged in the said frame, a branding stamp provided with a shank which is slidable vertically in the said cage and slot, a rectangular guide head secured to the said shank and engaging with the said cage, and a spring for depressing the said stamp inclosed in the said cage and bearing on the said head.

879,463. STOVE-HOOD. HANS HANSEN, Warwick, N. D., assignor of one-third to Edward A. Gustafson, Warwick, N. D. Filed Apr. 23, 1907. Serial No. 369,776.

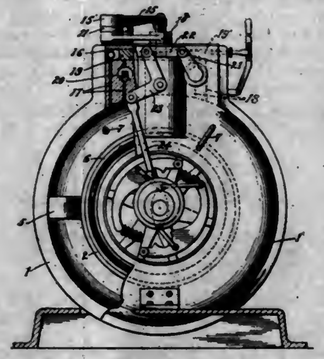


1. The combination with a stove and its pipe, of a pipe having one end in communication with the stove pipe and its other end depending and arranged above the stove top, a hood, a pipe arising from the latter and telescopically engaged with the depending end of the last mentioned pipe, upper and lower clamps arranged upon the stove pipe, slidably engaged and adjustably connected members carried by said clamps, and means connecting the member upon the upper clamp to said hood.

2. The combination with a stove and its pipe, of a pipe having one end in communication with the stove pipe and its other end depending and arranged above the stove top, a hood, a pipe arising from the latter and telescopically engaged with the depending end of the last mentioned pipe, upper and lower clamps upon said stove pipe, a guide member upon the lower clamp, a right angular supporting member upon the upper clamp and slidably engaged with said guide and means connecting said right angular supporting member to the hood.

3. The combination with a stove and its pipe, of a pipe having one end in communication with the stove pipe and its other end depending and arranged above the stove top, a hood, a pipe arising from the latter and telescopically engaged with the depending end of the last mentioned pipe, a clamp surrounding said telescoping pipes, eyes arranged upon said hood, upper and lower clamps upon said stove pipe, slidably engaged and adjustably connected supporting members carried by said clamps, and a horizontal arm upon the member on the upper clamp engaged with said eyes upon the hood, substantially as described.

879,464. ROTARY ENGINE. EDWARD HARRIGAN, Tacoma, Wash. Filed Jan. 30, 1907. Serial No. 354,033.



1. In a rotary engine, a casing, a rotatable carrier, a piston connected to said carrier and being slidable in said casing, an abutment comprising opposite members mounted for oscillation and formed with cutouts adapted to register, means to oscillate said members, and packing on each of said members, the packing on one of said members engaging that on the other member when the members are turned so that their cutouts are out of registration.

2. In a rotary engine, a casing formed of two sections, a carrier supported for rotation and having its rim projecting between said sections, a piston secured to the rim of the carrier and operating in said casing, the casing sections at the sides of the rim of the carrier being formed with grooves, hollow packing fitted in said grooves and bearing on the rim of the carrier, that portion of said hollow packing fitting in said grooves being split, and means to admit fluid under pressure into said grooves to expand said packing.

3. In a rotary engine, a casing formed of two sections, a carrier supported for rotation and having its rim projecting between said sections, a piston secured to the rim of the carrier and operating in said casing, expansible packing on opposite sides of the rim of the carrier, and conduits leading from the casing for supplying steam to the interior of said packing.

4. In a rotary engine, a casing formed of two sections, a carrier supported for rotation and having its rim projecting between said sections, a piston secured to the rim of the carrier and operating in said casing, the casing sections at the sides of the rim of the carrier being formed with grooves, hollow expansible packing arranged in each of said grooves and bearing on the rim of the carrier, and conduits leading from the casing for supplying steam to the interior of each packing.

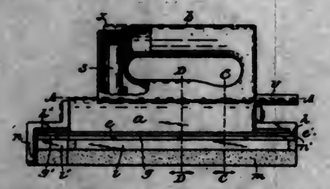
5. In a rotary engine, a casing, a rotatable carrier, a piston secured to said carrier and being slidable in said casing, coacting oscillatory abutment members mounted in said casing and formed with cutouts adapted to register, a cam rotatable with the carrier and having an external groove, a lever fulcrumed on the casing and having a bearing part engaged in the groove of said cam, and means operated by said lever for simultaneously oscillating said abutment members.

879,465. SNAP-FASTENING BUCKLE. GEORGE A. HOLMES, Newton, Mass., assignor to United States Fastener Company, Boston, Mass., a Corporation of Maine. Filed June 20, 1907. Serial No. 379,879.



In a snap fastening buckle, a plate having longitudinal slots near each edge thereof forming a central cross bar, a lateral recess in said cross bar and a tongue struck up from the body of said plate and integral therewith projecting into the said recess.

879,466. PORTABLE RUBBING-MACHINE. HENRY F. HOLTMANN, Indianapolis, Ind. Filed Oct. 25, 1906. Serial No. 340,441.



1. In a rubbing machine, the combination with a frame, and a guard attached to the middle portion of the frame and extending therefrom and having a downward-extending member, of a pair of rubbing heads mounted in the frame and having each a recess in the end thereof opposite to said guard member, said recesses each extending also in the side of each head that is adjacent to the companion head, said heads being movable beyond the frame to or from said member, substantially as shown.

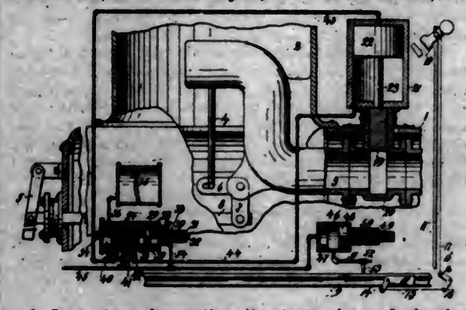
2. In a rubbing machine, the combination with a frame, and a pair of rubbing heads mounted in the frame and movable beyond an end thereof, each head having in an end thereof a recess in the side thereof adjacent to the companion head, of a guard attached to the middle portion of an end of the frame and extending outward therefrom and having a downward extending member opposite to the recesses that are in said pair of rubbing heads, substantially as shown.

3. In a rubbing machine, a hollow frame having a horizontal partition therein, a handle on the frame, a rock-arm pivoted between its ends to the under side of the partition, a vertical rotative shaft mounted in the frame and the handle, a bevel-gear wheel secured to the shaft beneath the partition, a crank-pin secured to the wheel, a pair of rubbing heads mounted movably in the frame under the partition, a connecting rod pivoted to one end of the rock-arm and also to one of the heads, a connecting rod pivoted to the opposite end of the rock-arm and also to the other one of the heads, a pitman pivoted to the rock-arm between the two connecting rods and also connected to the crank-pin, a horizontal drive shaft mounted in the frame above the partition, and a bevel gear wheel secured to the drive shaft and meshing with the gear wheel aforementioned, substantially as shown.

4. In a rubbing machine, a frame having a horizontal partition therein, a pair of rubbing heads mounted movably in the frame under the partition, a pivot secured to the partition, a rock-arm mounted between its ends on the pivot beneath the partition, a connecting rod pivoted to one end of the rock-arm and also to one of the heads, a connecting rod pivoted to the opposite end of the rock-arm and also to the other one of the heads, a pitman pivoted to the rock-arm between the two connecting rods, a rotative shaft mounted in the frame, and a wheel secured to the shaft beneath the partition and having a crank-pin secured thereto that is connected to the pitman, substantially as shown.

5. In a rubbing machine, a frame having a horizontal partition therein, a pivot secured to the partition near an end of the frame, a rock-arm mounted between its ends on the pivot beneath the partition, a handle on the frame, a rotative shaft mounted in the frame near the opposite end thereof and extending into the handle, a bevel gear wheel secured to the shaft beneath the partition, a crank-pin secured to the wheel, a pitman connected to the crank-pin and also to the rock-arm, a plug screwed into the handle above the rotative shaft, a drive shaft mounted in the frame above the partition, and a bevel gear wheel secured to the drive shaft and meshing with the gear wheel aforementioned, with a pair of rubbing heads mounted in the frame and connected with the rock-shaft, substantially as shown.

879,467. SAFETY APPLIANCE FOR STEAM-LOCOMOTIVES. CHARLES A. HOWARD and HAROLD V. COES, New York, N. Y. Filed May 21, 1907. Serial No. 374,874.



1. In a steam locomotive, its steam pipe and air pipe and a valve in the steam pipe automatically opened and closed by predetermined variations in the air pipe pressure.

2. In a steam locomotive, its steam pipe and air pipe, a valve in the steam pipe automatically opened and closed by predetermined variations in the air pipe pressure and an automatic device for preventing the reduction of air pipe pressure below a predetermined point.

3. In a steam locomotive, its steam pipe and air pipe, a pressure controlled steam pipe valve opened and closed by predetermined variations in the air pipe pressure and an emergency valve in the air pipe arranged to be opened by the locomotive passing an abutment for causing the steam pipe valve to close by the predetermined reduction in the air pipe pressure.

4. In a steam locomotive, its steam pipe and air pipe, a pressure controlled steam pipe valve opened and closed by predetermined variations in the air pipe pressure, an emergency valve in the air pipe arranged to be opened by the locomotive passing an abutment for causing the steam pipe valve to close by the predetermined reduction in air pipe pressure and an automatic device for preventing the reduction of air pipe pressure below a predetermined point.

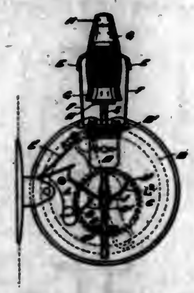
5. In a steam locomotive, its steam pipe, air pipe and throttle valve control and a pressure controlled valve for automatically closing and opening the steam pipe independently of the throttle valve control, said pressure controlled valve being closed by a predetermined reduction in air pipe pressure and opened by a predetermined increase in the air pipe pressure.

879,468. BAIT-CASTING REEL USED IN ANGLING. ALFRED H. ILLINGWORTH, Rhydding, England. Filed May 4, 1906. Serial No. 315,221.

1. In a device of the class described the combination, of a sliding but non-revoluble spindle, a spool mounted thereon, a winding device on the spindle having an eye, a disk and means for operating the winding device by the turning movement of the disk.

2. In a device of the class described, the combination with a sliding non-revoluble spindle, a spool mounted thereon and a thumb lever having an arm engaging with the spindle so as to give the spindle a reciprocating motion,

3. In a device of the class described, the combination with a sliding non-revoluble spindle, a spool mounted thereon, a disk, a cam L^2 having a recess, mounted on the disk, a lever having an arm engaging with the spindle and a pin on the lever engaging with the recess in the cam.

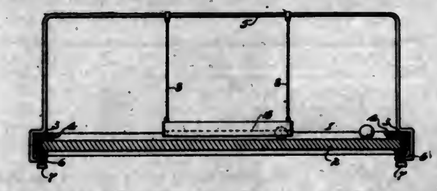


4. A reel comprising a revolving disk having beveled teeth thereon, a non-revoluble but sliding spindle, a spool mounted thereon, a flier revolving around said spool, a wheel revolubly mounted on said spindle and carrying said flier, said wheel having bevel teeth meshing with the teeth of the disk and means for giving said spindle a reciprocating motion, said means consisting of a lever L and an eccentric connected to the disk.

5. A bait casting reel comprising a non-revoluble reciprocating spindle having a flange H thereon, a nut N on said spindle and a spool on the spindle between the flange and nut.

[Claims 6 and 7 not printed in the Gazette.]

879,469. GAME APPARATUS. ARTHUR IWAN, New York, N. Y. Filed Sept. 24, 1907. Serial No. 394,384.



1. An amusement device adapted for attachment to and above a billiard table, comprising a frame, a ring flexibly suspended from said frame, a plurality of dice adapted to be retained by said ring, and means adapted to strike said ring and cause said dice to change their relative positions.

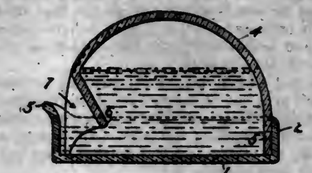
2. An amusement device adapted for attachment to and above a billiard table, comprising a frame, a ring flexibly suspended from said frame, a plurality of dice adapted to be retained by said ring, and a cue ball adapted to be impelled against said ring and cause the dice retained thereby to change their relative positions.

3. In a game apparatus the combination of a table, a ring flexibly supported by and above said table, a plurality of dice within said ring, and a ball adapted to strike said ring and cause said dice to change their relative positions.

4. In a game apparatus the combination of a yieldably supported ring having an interior elastic cushion, a plurality of dice within said ring having flattened surfaces, each of said surfaces having formed thereupon a symbol, and means adapted to strike said ring and cause the dice therein to change their relative positions.

879,470. INKSTAND. JAMES W. JACOBUS, Great Neck, N. Y. Filed Apr. 18, 1907. Serial No. 368,874.

1. An inkstand comprising two cup shaped members with interfitting cylindrical portions, one of said members constituting the base, the cylindrical portion of the base member being bent outward and extending upward at one side to form a lip and the cylindrical portion of the upper member being indented and cut away adjacent said lip, substantially as described.



2. An inkstand comprising a flat bottomed base member with an upturned cylindrical flange, and a dome shaped member having a cylindrical portion fitting within the base flange and extending to the bottom and being cut away and indented to form a dip opening.

879,471. UMBRELLA-TIP. GEORGE KABUREK, Jersey City, N. J. Filed Mar. 19, 1907. Serial No. 363,228.



1. A device of the class described, comprising a tip of resilient material provided with a central bore adapted to receive the end of an umbrella or walking stick, and a plate at the bottom of said bore, said plate being provided with upper and lower concaved surfaces.

2. A device of the class described, comprising a tip of resilient material provided with a central bore adapted to receive the end of an umbrella or walking stick and a plate in the bottom of said bore, said plate having an inclined or tapered edge and being provided with upper and lower concaved surfaces.

879,472. GAS-PRESSURE REGULATOR. PETER KELLER, Chicago, Ill. Filed May 18, 1907. Serial No. 374,460.



1. In combination with a pipe union having a shouldered member and an annular flange thereon; a gas pressure regulator having a casing provided with an annular flange and an off-set portion adapted to encircle the flange on the union and a closure therein, said union being adapted to act as a housing for said regulator.

2. In combination with a pipe union comprising a plurality of members and a binding nut; one of said members being shouldered and provided with an annular flange, a gas pressure regulator adapted to be placed within said union and provided with an annular flange and an off-set portion adapted to encircle the flange on said shouldered member of the union.

3. In combination with a pipe union having a member provided with an annular flange; a pressure regulator adapted to be placed within said union and having an an-

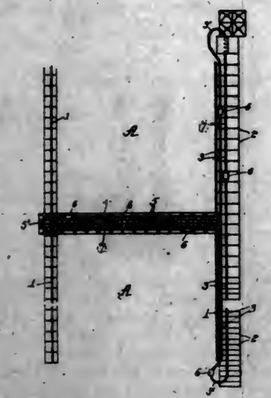
nular flange and an off-set portion adapted to encircle the annular flange in said member.

4. In a gas controlling device, a casing provided with a conical gas pressure chamber so placed that its longitudinal axis is substantially horisontal, a ball closure in said passage, and means for limiting the traverse of said closure in both directions.

5. In a gas controlling device, a casing provided with a conical gas pressure chamber having its longitudinal axis in substantially horisontal position, a longitudinal groove throughout the length of the inner wall of said chamber, a ball closure in said chamber, and means for limiting the traverse of said closure.

[Claim 6 not printed in the Gazette.]

879,473. STORAGE APPARATUS. THOMAS C. KENNEDY, Chicago, and EDWARD A. ELDER, La Grange, Ill., assignors to Fairbanks, Morse & Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 31, 1907. Serial No. 355,069.



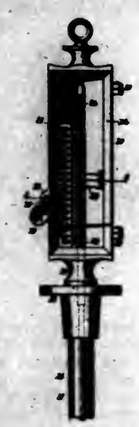
1. In a storage apparatus, the combination of a pair of stationary parallel tracks connected by end loops and extending along one side of the storage space or area, a bridge movable longitudinally thereof, and tracks on said bridge connected by an end loop and arranged to connect at their other end with one of the stationary tracks in all positions of the bridge.

2. In a storage apparatus, the combination of a pair of stationary parallel tracks connected by end loops and extending along one side of the storage space or area, a bridge movable longitudinally thereof, a pair of parallel tracks on said bridge connected by an end loop and arranged to connect at their other end with one of the stationary tracks in all positions of the bridge, and a cable circuit following the stationary tracks and the bridge tracks and arranged to draw the cars therealong.

879,474. THERMOMETER. EDWARD KESSLING, Brooklyn, N. Y. Filed Aug. 2, 1905. Serial No. 272,841.

1. A high grade thermometer comprising the long leg portion, a casing at the upper end thereof having inclined walls and a hinged door provided with a glass panel set into the door from the inner side thereof and a lock and key for securing the door, one of said inclined walls bearing the readings and the other horizontal index lines marked "H" "C" and "L" respectively, denoting high, correct and low, respectively, to guide the operator, and the straight glass thermometer tube extending upwardly through said leg portion and into said casing; substantially as set forth.

2. A high grade thermometer having the long tubular leg, the hollow plug screwed into the same and having a shoulder to engage but not project beyond the lower edges of said leg and also a lower threaded section of the same diameter as the upper section of said plug, the perforated tube screwed upon said lower section and corresponding in



diameter with the main tubular leg, and the metal casing for the mercury bath screwed into said plug and inclosing the bulb; substantially as set forth.

879,475. RAILROAD-JOINT. JOHN H. KOCHENDERFER, Galion, Ohio, assignor of one-half to W. E. Hughes, Clyde, Ohio. Filed May 1, 1907. Serial No. 371,246.



1. A rail-road joint comprising two fish plates for connecting the ends of abutting rails, each plate having an independent integrally formed support extending beneath and across the rails in contact with the bottom flanges thereof, and a connecting lug on each support and the opposite fish plate.

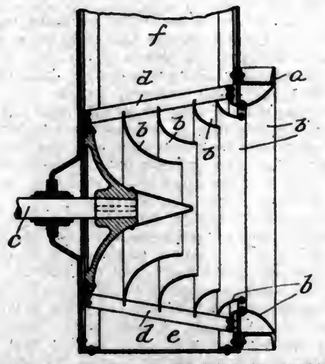
2. A rail-road joint comprising two fish plates for connecting the ends of abutting rails, an inwardly extending plate integral with each of said fish plates and adapted to extend beneath and across the bottom flanges of the abutting ends of two rails, a lug on the extreme end of each plate, and a coöperating lug on the fish plate adjacent the end of said plate.

3. A fish plate for rail-road joints provided on its lower edge with an inwardly extending plate adapted to pass beneath and wholly across the bottom flange of a rail and having a lug extending from the edge of the fish plate adjacent the cross plate.

4. A fish plate for rail-road joints provided on its lower edge near its longitudinal center with an inwardly extending plate perpendicular to the side of the fish plate and adapted to pass entirely and wholly across the bottom flange of the rail, a lug on the extreme end of said perpendicular plate, and a lug on the fish plate adjacent the connection of said perpendicular plate thereto.

5. A fish plate for railroad joints provided on its lower edge near its longitudinal center with an inwardly extending plate perpendicular to the side of said fish plate and having a downwardly extending lug and a lug extending downwardly from the fish plate near the junction therewith of the inwardly extending plate.

879,476. CENTRIFUGAL PUMP WITH FUNNEL-SHAPED GUIDE-PIPES IN THE SUCTION-SPACE BETWEEN THE SUCTION-PIPE AND RING OF BLADES. OTTO KELL, Charlottenburg, Germany, assignor to Siemens-Schuckertwerke G. M. B. H., Berlin, Germany, a Corporation of Germany. Filed Oct. 25, 1906. Serial No. 340,564.



1. A centrifugal pump comprising in combination a pressure chamber, a suction pipe and a delivery pipe connected therewith, a shaft mounted revolubly in said pressure chamber, a blade-wheel on said shaft, the diameter of said wheel decreasing from the end near the suction pipe towards the other end, a plurality of guide pipes attached to said blade-wheel, substantially as and for the purpose set forth.

2. A centrifugal pump comprising in combination a pressure chamber, a suction pipe and a delivery pipe connected therewith, a shaft mounted revolubly in said pressure chamber, a blade-wheel on said shaft, the diameter of said wheel decreasing from the end near the suction pipe towards the other end, and a plurality of funnel-shaped guide pipes attached to said blade-wheel, substantially as and for the purpose set forth.

3. A centrifugal pump comprising in combination a pressure chamber, a suction pipe and a delivery pipe connected therewith, a shaft mounted revolubly in said pressure chamber, a blade-wheel on said shaft, the outer surface of said blade-wheel forming a portion of a cone decreasing in diameter from the end near the suction pipe towards the other end, a plurality of funnel shaped guide pipes attached to said blade-wheel, substantially as and for the purpose set forth.

4. A centrifugal pump comprising in combination a pressure chamber, a suction pipe and a delivery pipe connected therewith, a shaft mounted revolubly in said pressure chamber, a blade-wheel on said shaft, the outer surface of said blade-wheel forming a portion of a cone decreasing in diameter from the end near the suction pipe towards the other end, said blade-wheel being provided with a plurality of blades of the same uniform radial depth whereby their inner edges lie on a conical surface, and a plurality of funnel-shaped guide pipes attached to said blade-wheel, substantially as and for the purpose set forth.

5. A centrifugal pump comprising in combination a pressure chamber, a suction pipe and a delivery pipe connected therewith, a shaft mounted revolubly on said pressure chamber, a blade-wheel on said shaft, the diameter of said wheel decreasing from the end near the suction pipe towards the other end, and a plurality of guide pipes attached to said blade-wheel, and a plurality of guide pipes attached to said suction pipe and projecting into said pressure chamber, substantially as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

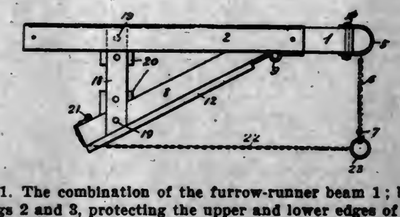
879,477. TENNIS-RACKET. CHARLES H. KRÜGER, Bradford, England. Filed Mar. 12, 1906. Serial No. 305,736.

In implements for games and exercises, a tennis racket handle including the lignum vitæ making up the piece, said handle having an internal channel therein extending into the lignum vitæ making up piece and a weight freely mov-



able in said channel said weight being composed of mercury.

879,478. DITCHER AND ROAD-GRADER. WILLIAM LARKIN, Barton, Ark. Filed May 27, 1907. Serial No. 375,986.



1. The combination of the furrow-runner beam 1; bindings 2 and 3, protecting the upper and lower edges of said beam; dirt-spreader 8, hinged to the front face of said beam; blades 11, each having two cutting edges slightly turned out, and three vertical rows of perforations; adjustable-bar 18, holding the running-beam and dirt-spreader apart; supporting-blocks 20, secured to said bar, supporting the runner-beam and dirt-spreader; clevis secured to front end of said beam; chain and hook secured to said clevis and chain and ring secured to rear end of said dirt-spreader, the said hook adapted to be hooked into said ring, substantially as shown and described and for the purposes set forth.

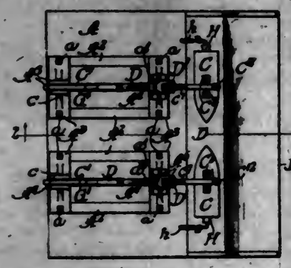
2. The combination of the bound furrow-runner, bearing on its front end a clevis, chain and hook; the dirt-spreader, hinged to one face of said furrow-runner; blades, each provided with two cutting edges and vertical rows of perforations, said blades adjustably secured to the front face of said dirt-spreader; a chain and ring secured to the rear end of said dirt-spreader and the adjusting-bar securing said runner and spreader apart, substantially as shown and described and for the purposes set forth.

879,479. MACHINE FOR PRESSING THE SEAMS OF GARMENTS. HJALMAR LINDESTRÖM, Chicago, Ill., assignor of one-half to Richard Tennerstedt, Chicago, Ill. Filed July 2, 1906. Serial No. 324,405.

1. A machine for pressing the seams of garments, comprising a pressing board, a pressing iron thereover, a vertically swinging beam carrying said iron, a standard extending above said arm and a swinging presser lever pivoted to said standard closely adjacent to the end of said beam carrying the iron and provided with a bearing device directly engaging an upwardly facing surface of said beam, the said bearing device and presser lever being so arranged that when the lever is swung on its pivot to depress the iron carrying beam, said bearing device is moved past the vertical plane of the lever pivot to lock said beam in its depressed position.

2. A machine for pressing the seams of garments, comprising a pressing board, a pressing iron thereover, a ver-

tically swinging beam carrying said iron, and a swinging presser lever acting on an upwardly facing part of the beam to press the iron towards the pressing board, the engaging surfaces of said lever and beam being toothed or corrugated, and one of said surfaces being formed on a part which is movable with respect to the part which carries the same.



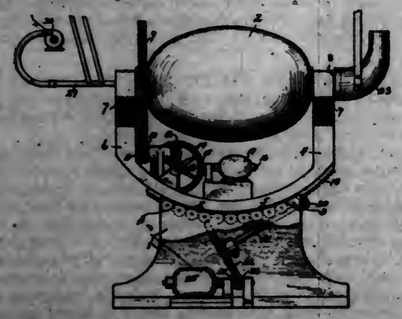
3. A machine for pressing the seams of garments comprising a pressing board, a pressing iron thereover, a vertically swinging beam carrying said iron, a standard extending above said arm, a swinging presser lever pivoted to said standard closely adjacent to said beam, and a roller mounted on the lower short arm of said lever and directly engaging an upwardly facing bearing surface at the end of said beam, carrying said iron the parts being so arranged that when the lever is swung on its pivot to depress the iron carrying beam the lower end thereof and the roller is moved past the vertical plane of the lever pivot to lock the beam in its depressed position.

4. A machine for pressing the seams of garments, comprising a pressing board, a pressing iron thereover, a vertically swinging beam carrying said iron, and a swinging presser lever acting on an upwardly facing part of the beam to press the iron towards the board, a roller carried by said lever which bears upon said upwardly facing part of the beam, said roller being toothed or corrugated and the upwardly facing part of the beam being provided with a complemental surface adapted to be engaged by said toothed roller.

5. A machine for pressing the seams of garments, comprising a pressing board, a pressing iron thereover, a vertically swinging beam carrying said iron, connections between said iron and beam comprising lugs on the iron, one at each side of the beam, a pin carried by the beam, said lugs being provided with slots through which said pin extends, and springs interposed between said beam and lugs.

[Claims 6 to 10 not printed in the Gazette.]

879,480. PROCESS FOR PURIFYING IRON. EDMUND VON MALTITZ, Chicago, Ill. Filed Apr. 30, 1906. Serial No. 314,367.



1. An improvement in the art of purifying metal which consists in confining a mass of fully fluid metal and a supernatant quantity of slag formed of added basic material in a substantially unbroken body, imparting to the metal a movement which constantly exposes in limited quantities fresh portions thereof at the surface from beneath the slag and without destroying the solidarity of the mass, subjecting such exposed surfaces to the action of an oxidising gas and effecting the refinement of the batch by that heat due alone to the oxidising reactions of the self-contained contents of the batch.

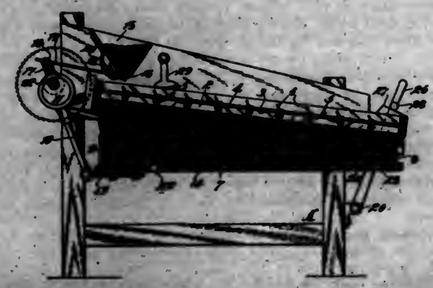
2. An improvement in the art of purifying iron which consists in confining a mass of fully fluid metal and a supernatant quantity of slag formed by the addition of basic material in a substantially unbroken body, imparting to the metal a movement which constantly exposes fresh portions thereof at the surface from beneath the slag and without destroying the solidarity of the mass, and subjecting such exposed surfaces to the action of an oxidising gas in a confined combustion space and effecting the refinement of the batch by that heat due alone to the oxidising reactions of the self-contained contents of the batch.

3. An improved process of purifying iron which consists in confining a mass of fluid metal and a supernatant quantity of basic slag in a body of substantially unbroken solidarity, said slag being formed by the addition of basic material of sufficient quantity to substantially cover and protect against oxidation the surface of the metal, imparting to one or more of the uprising sides of said mass an upwardly flowing movement which exposes fresh portions of the metal at the top surface thereof from beneath the slag without substantially disturbing the solidarity of the mass and concurrently subjecting such exposed metal to the action of an oxidising blast in a substantially closed combustion space and effecting the refinement of the batch by that heat due alone to the oxidising reactions of the self-contained contents of the batch.

4. An improved process of purifying iron which consists in confining in a substantially closed space a substantially unbroken mass thereof in fluid state together with a supernatant quantity of basic slag, imparting to the batch a bodily rotary circulatory movement which continually brings to the surface and exposes from beneath the slag fresh portions of the metal and continuously imparts a different circulatory movement to the slag, and subjecting such exposed surfaces concurrently to the action of an oxidising gas and effecting the refinement of the batch by that heat due alone to the oxidising reactions of the self-contained contents of the batch.

5. An improved process of purifying metal which consists in concurrently subjecting the molten metal in a substantially closed vessel to mechanical agitation, to surface oxidation in the presence of an oxidising gas and suitable slag, and to the heat of combustion thereby generated, continuing this treatment until the slag contains substantial quantities of iron oxids, then checking the oxidation due to the oxidising gas by restricting or arresting the supply of such gas and continuing the mechanical agitation of the mass, thereby reducing the iron oxid of the slag and deoxidising the batch.

879,481. CONCENTRATOR. JOSEPH MAIT, Alameda, Cal. Filed Dec. 31, 1906. Serial No. 350,300.



1. In a concentrating and like apparatus, the combination of a bellows hinged at one end, having inlet and regulating openings in the bottom board, means by which said bottom board is reciprocated, a riffle-board including a wire-supporting screen and a pervious woven fabric loosely fixed upon the surface of the screen, riffles extending transversely across said surface at intervals and means including swinging members pivotally secured to a fixed part of the apparatus and having free ends to engage the riffle board, by which the riffle-board is removably locked upon the top of the bellows.

2. In a concentrator and the like, the combination of a bellows having a hinged bottom board with a valved inlet opening near the movable end, a riffle-board having a tight joint, with the upper side of the bellows, fixed transverse bars at intervals across said board, a wire screen surface supported upon said bars, a canvas or other equivalent permeable fabric loosely fixed upon the top of the screen, riffle bars in the form of obtuse angle plates fixed upon the transverse bars of the riffle board so as to incline backwardly, a source of supply from which material may be delivered upon the upper end of the canvas surface, a tilting spring-pressed gate by which the discharge from such source is controlled, a crank or eccentric on said shaft having connection with the free end of the bellows to reciprocate it, a second crank or arm on said shaft, and a revoluble pin adjustably mounted on said second crank or arm and movable in unison with the crank, a lever connecting with the gate and intermittently actuated by the pin.

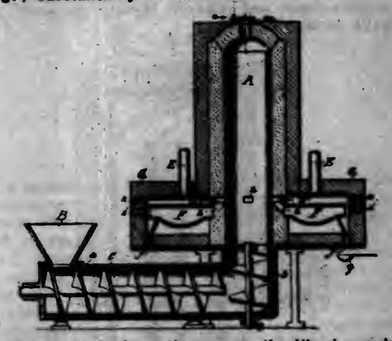
3. In a concentrating and like device, the combination of a bellows hinged at one end, a riffle-board or support with a screen and a canvas surface superposed thereon, said canvas being loosely fixed transversely at intervals so that air forced against and through it will cause the intermediate portions of the surface to curve upwardly at each impulse, a valved opening through which air is admitted to the bellows, an eccentric or crank connected with the bottom board of the bellows, an arm fixed to the eccentric shaft, a lug or roller radially adjustable upon said arm, a source of supply from which material to be concentrated may be delivered upon the upper end of the canvas surface, a spring-pressed hinged valve whereby the source of supply is controlled, a lever arm extending from said valve and in line with the circle of revolution of the adjustable lug whereby the degree of opening of the valve is regulated.

4. In a concentrator and the like, the combination of an inclined screen and a loose superposed canvas surface having backwardly inclined riffles fixed transversely at intervals, said canvas having free flexible sections between the riffles, a bellows the upper part of which forms a tight joint with the riffle-board, a hinge by which one end of the bottom board of the bellows is connected, swinging clamping members pivotally connected to a fixed part of the apparatus and having their free ends adapted to bear downwardly on the screen frame to clamp it to the top of the bellows, a reciprocating mechanism connected with the free end of said bottom board whereby said board is reciprocated, said bellows having an air inlet and an adjustable air outlet whereby the pressure of air through the canvas is regulated.

5. In a concentrator and like apparatus, the combination of a bellows having a hinged movable bottom board with a valved inlet and an adjustable discharge opening, an inclined riffle board forming a tight joint with the upper part of the bellows and removable with relation thereto, means for locking said board in position, said means including a wedge-shaped block carried by the riffle-board, a fulcrumed lever adapted to interlock with said block and a pivoted swinging link adapted to engage with the upper edge of the riffle-board to lock it in place.

879,482. METALLURGY OF ORES OF ZINC, &c. FRANS MEYER, Englewood, N. J., assignor to Metallurgical Company of America, New York, N. Y., a Corporation of New Jersey. Filed Jan. 13, 1906. Serial No. 295,928.

1. The method of treating ore or the like in an internally heated furnace, which consists in feeding the charge containing the ore in an upward direction through the active zone or zones of the furnace and progressively supplying from below fresh portions of the ore charge and supplying a body of air to promote combustion within the charge; substantially as described.



2. The method of treating ore or the like in an internally heated furnace, which consists in feeding the charge containing the ore in an upward direction through the active zone or zones of the furnace, progressively supplying, from below, fresh portions of the charge, and causing the air necessary for combustion to traverse the active zone or zones in a downward direction; substantially as described.

3. The method of treating ore or the like in an internally heated furnace, which consists in feeding the charge containing the ore in an upward direction through the active zone or zones of the furnace, progressively supplying, from below, fresh portions of the charge, causing the air necessary for combustion to traverse the combustion zone in a downward direction, and withdrawing the volatile products of combustion and reaction laterally from the moving charge; substantially as described.

4. The method of treating ore or the like in an internally heated furnace, which consists in feeding the charge containing the ore in an upward direction through the active zone or zones of the furnace, progressively supplying, from below, fresh portions of the charge, causing the air necessary for the combustion to traverse the active zone or zones in a downward direction, withdrawing the products of combustion and reaction laterally from the moving charge and condensing out any distilled or vaporized metal contained in said products, at their point of issuance from the charge; substantially as described.

5. The method of treating ore or the like in an internally heated furnace, which consists in feeding the charge containing the ore in an upward direction through the active zone or zones of the furnace, progressively supplying from below, fresh portions of the charge, causing the air necessary for combustion to traverse the active zone or zones in a downward direction, withdrawing the products of combustion and reaction laterally from the moving charge, condensing out any distilled or vaporised metal contained in said products, at their point of issuance from the charge, and maintaining the temperature of the condensed metal above its melting point so as to permit its collection in a liquid state; substantially as described.

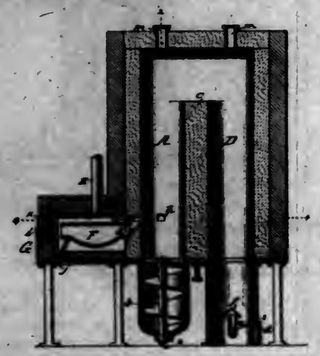
[Claims 6 and 7 not printed in the Gazette.]

879,483. METALLURGICAL FURNACE. FRANS MEYER, Englewood, N. J., assignor to Metallurgical Company of America, New York, N. Y., a Corporation of New Jersey. Filed Jan. 13, 1906, Serial No. 295,929. Renewed Jan. 11, 1908. Serial No. 410,445.

1. A metallurgical furnace, having a stack for the reception of the furnace charge, means for effecting internal combustion within said charge and means for feeding the furnace charge, containing the ore or like material to be treated, progressively upward through said stack; substantially as described.

2. A metallurgical furnace, having a stack for the re-

ception of the furnace charge, means for effecting internal combustion within said charge, a furnace charge supply conduit communicating with the base of the stack, and a conveyer for feeding the charge progressively forward in the supply conduit and upwardly through the stack; substantially as described.



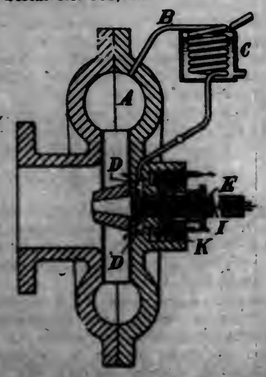
3. A metallurgical furnace, having a stack for the reception of the furnace charge, means for effecting internal combustion within said charge, a furnace-charge supply conduit communicating with the base of the stack, and a conveyer for feeding the charge progressively forward in the supply conduit and upwardly through the stack, said conveyer consisting of a feed screw located at the lower part of the stack; substantially as described.

4. A metallurgical furnace, having a stack for the reception of the furnace charge, means for effecting internal combustion within said charge, means for feeding the furnace charge, containing the ore or like material to be treated, progressively upward through said stack, and an ash stack into which the spent charge is discharged; substantially as described.

5. A metallurgical furnace, having internally heated main stack, means for feeding the furnace charge, containing the ore or like material to be treated, progressively upward through said stack, and an ash stack into which the spent charge is discharged, said ash stack being provided with an air-inlet at its lower portion, so that the air will be pre-heated as it rises through the ash stack prior to its entry into the main stack; substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

879,484. PUMP FOR CORROSIVE FLUIDS. EINAR MOSTRAUD, Torderöd, near Moss, Norway. Filed Sept. 3, 1907. Serial No. 391,116.

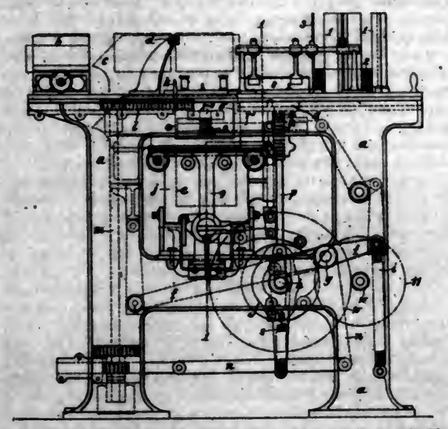


1. In pumps for corrosive fluids, an annular space surrounding the shaft near the pump wheel, a conduit leading to this space and carrying a noncorrosive fluid, and means whereby the pressure on the pressure side of the pump is transmitted to said conduit.

2. In pumps for corrosive fluids an annular space surrounding the shaft near the pump wheel, a conduit connecting the pressure side of the pump with said space and means connected with said conduit for depriving the fluid of its corrosive nature.

3. In pumps for corrosive fluids an annular space surrounding the shaft near the pump wheel, a conduit connecting the pressure side of the pump with said space and means for cooling the fluid passing through said conduit.

879,485. MACHINE FOR CASING IN BOOKS. JOHN MURRAY, Edinburgh, Scotland. Filed Nov. 2, 1906. Serial No. 341,694.



1. A casing-in machine for books comprising a knife-edge support for the book, a pendent extension on the support, an adhesive pot immediately beneath the book support extension, means for lowering and raising the support thereby dipping the extension into the adhesive, means for advancing an open cover over the back of the book when the support is lowered, a pair of gluing surfaces and means for advancing the latter alternately into contact with the book support extension and the sides of the book to be covered.

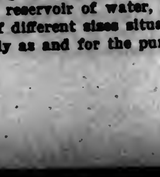
2. A casing-in machine for books comprising a knife-edge support for the book, a pendent extension on the support, an adhesive pot immediately beneath the book support extension, means for lowering and raising the support thereby dipping the extension into the adhesive, means for regulating the amount of the adhesive applied to the book, means for advancing an open cover over the back of the book when the support is lowered, a pair of gluing surfaces and means for advancing the latter alternately into contact with the book support extension and the sides of the book to be covered.

3. A casing-in machine for books comprising a knife-edge support for the book, a pendent extension on the support, an adhesive pot immediately beneath the book support extension, means for lowering and raising the support thereby dipping the extension into the adhesive, means for advancing an open cover over the back of the book when the support is lowered, means for forming the back of said cover into a curve, a pair of gluing surfaces and means for advancing the latter alternately into contact with the book support extension and the sides of the book to be covered.

4. A casing-in machine for books comprising a knife-edge support for the book, means for automatically sliding the book along said support, a pendent extension on the support, an adhesive pot immediately beneath the book support extension, means for lowering and raising the support thereby dipping the extension into the adhesive, means for advancing an open cover over the back of the book when the support is lowered, a pair of gluing surfaces and means for advancing the latter alternately into contact with the book extension and the sides of the book to be covered.

5. A casing-in machine for books comprising a knife-edge support for the book, a pendent extension on the support, an adhesive pot immediately beneath the book support extension, means for lowering and raising the support thereby dipping the extension into the adhesive, a hopper for book covers, means for automatically feeding covers from said hopper, means for advancing an open cover over the back of the book when the support is lowered, a pair of gluing surfaces and means for advancing the latter alternately into contact with the book support extension and the sides of the book to be covered.

879,486. GAS WATER-HEATER. HENRY W. MCCLELLAN, Canterbury, Victoria, Australia. Filed Apr. 25, 1907. Serial No. 370,145.



1. In a gas water heater in which the water is heated while passing therethrough, the combination of a reservoir for water said reservoir provided with a plurality of normally open outlets situated one above the other, a burner, a gas supply for said burner, and a float situated within said reservoir and adapted to control said gas supply according to the height of water in said reservoir.

2. In a gas water heater, a cylindrical casing having a reservoir of water in the bottom, a water outlet from said reservoir having a main passage and also another restricted passage below said main passage, a gas supply pipe and a vertically guided float in said reservoir adapted to control the outlet of said gas supply pipe, the whole being arranged as and for the purposes specified.

3. In a gas water heater, a reservoir, means for supplying water thereto, a floating valve controlled by the height of the water within the reservoir for regulating the supply of gas to the burner, in combination with an outlet or overflow for said reservoir comprising two separate passages, the upper one being of greater size than the lower one, substantially as herein described.

4. In a gas water heater, a water reservoir, a gas supply pipe, a float situated in said reservoir and provided with a sleeve surrounding said gas supply pipe, a cap on the top of said float having an outlet in the upper end and a partition or diaphragm near the bottom provided with comparatively large openings and with a central downwardly extending plug formed with a restricted vertical passage and adapted to be normally seated in the open end of said gas supply pipe, a burner above said cap and a water outlet to said reservoir, substantially as and for the purpose set forth.

5. In a gas water heater, a gas supply pipe extending upwardly through the bottom of the casing of said heater and provided with a tap within the casing, said casing being provided with a hinged door extending the whole or a portion of its side, in combination with a float supported in a reservoir of water in the bottom of said casing and provided with a cap having outlets and a plug formed with a restricted outlet passage and adapted to fit the open end of the gas supply pipe and a water outlet or overflow from said reservoir of water, said water outlet having passages of different sizes situated at different levels, all substantially as and for the purposes set forth.

879,487. PLOWSHARE. CHARLES W. MCWANE, Lynchburg, Va., assignor to Lynchburg Foundry Co., Lynchburg, Va., a Corporation of Virginia. Filed June 22, 1907. Serial No. 380,285.



1. A plowshare including opposite blades terminating in a common nose, the under sides of the blades at their juncture with the nose being separately concaved on different curves.

2. A plowshare including opposite blades terminating in a common nose, said nose having a longitudinal ridge on its under side at the juncture of the blades and said blades being concaved on opposite sides of the ridge.

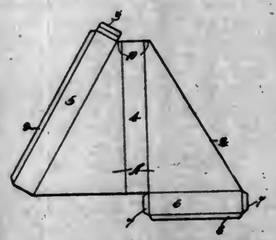
3. A plowshare including angularly disposed blades terminating in a common nose, the under sides of the blades being separately and transversely concaved on different curves.

4. A plowshare including opposite blades having opposite cutting edges terminating in a common nose, the under sides of the blades being separately and transversely concaved throughout their lengths on different curves.

5. A plowshare including opposite blades terminating in a common nose, said nose having a longitudinal ridge on its under side at the juncture of the blades, said blades being concaved throughout their lengths and on opposite sides of the ridge and said ridge being longitudinally concaved.

[Claim 6 not printed in the Gazette.]

879,488. PAPER BOX. CHARLES F. PITKIN, San Francisco, Cal. Filed Jan. 26, 1907. Serial No. 354,804.

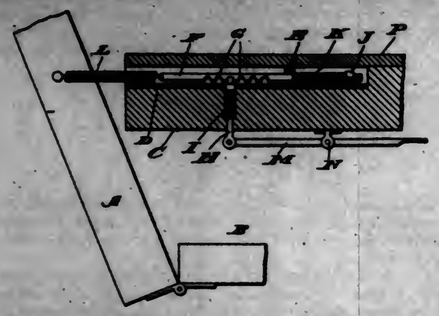


A blank for a foldable paper box comprising two right angled triangular sections, each connected, along one of its sides which includes the right angle, with an intermediate rectangular panel 4, said triangular sections and said panel constituting an isosceles triangle, a second rectangular panel 5 bendably connected to the hypotenuse edge of one of said right-angled-triangular sections, a single rectangular panel 6 bendably connected with the base edge of the other of said triangular sections and forming the bottom of the finished box, said last-named panel having respective side and end flaps 8—7, and said second panel having a side flap 9 and a creased closure-flap 3.

879,489. RECLINING-CHAIR. JOHN J. POKORNY, Chicago, Ill. Filed July 12, 1906. Serial No. 325,802.

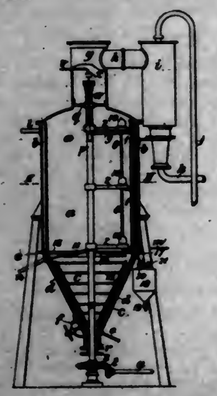
1. In a reclining chair, a back hinged to the seat portion, rods disposed in guides in the arms and longitudinally movable therein, springs engaging said rods for normally maintaining the same at the inner limits of their movement, racks on said rods, spring actuated dogs normally engaging said racks to hold said rods against the action of said springs, springs of less tensile strength

than said first named springs connecting said rods at one end with said back between the ends of the latter, and hand levers engaging said dogs.



2. In a reclining chair, a back hinged to the seat portion, rods disposed in guides in the arms and longitudinally movable therein, springs engaging said rods for normally maintaining the same at the inner limits of their movement, springs of less tensile strength than said first-named springs connecting said rods at one end with said back, racks on said rods, and spring actuated, hand controlled dogs normally engaging said racks to hold the same against movement in either direction against the action of said springs.

879,490. DESICCATING APPARATUS. SÖREN P. RASMUSSEN, Hanwell, England. Filed Sept. 19, 1907. Serial No. 393,688.



1. A cylindrical steam jacketed vacuum pan, a central slowly rotated shaft therein means attached to the shaft for continuously depositing a thin film of milk on the inner wall of the pan, means attached to the shaft for continuously scraping off the dried film a disk on the shaft for the dried material to fall upon a stationary scraper for raking it off and a handhole with cover for removing it.

2. A vacuum pan with upper truly bored cylindrical steam jacketed part and lower conical part provided with jacket for an attemperating fluid medium, a central slowly rotated shaft, a vertical pipe adapted to receive a continuous supply of milk and provided with adjustable outlet for the milk and for depositing it in a thin film on the inner cylindrical wall of the pan, and an adjustable yieldingly mounted knife or scraper for continuously scraping off the dried film the pipe being in the rear of the knife and both pipe and knife being carried by the shaft.

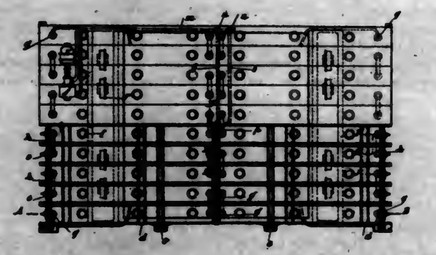
3. A cylindrical steam jacketed vacuum pan, a centrally slowly rotated shaft means attached to the shaft for continuously depositing a thin film of milk on the inner cylindrical wall of the pan, means attached to the shaft for continuously scraping off the dried film, an overflow gutter below the said means for milk supply, a disk on the shaft for the dried material to fall upon a stationary scraper for raking it off and a hand hole with cover for removing it.

4. A cylindrical steam jacketed vacuum pan a central slowly rotated shaft, hollow in its upper part for receiving the supply of milk, a vertical pipe connected with said hollow part and provided with adjustable slit outlet and a yieldingly mounted adjustable knife or scraper, both the pipe and the knife being carried by the shaft, and the pipe being in the rear of the knife.

5. A vacuum pan with upper cylindrical steam jacketed part and a lower conical part, provided with jacket for an attemperating fluid medium and terminating in a stuffing box, a central slowly rotated shaft passing out through the latter, its upper end being supported in a cylindrical upper prolongation of the aforesaid cylindrical part of the pan, said prolongation communicating with a condenser and thence with a vacuum pump, means attached to the shaft for continuously depositing a thin film of milk on the inner cylindrical wall of the pan, means attached to the shaft for continuously scraping off the dried film, a disk on the shaft for the dried material to fall upon, a stationary scraper for raking it off, and a hand hole with cover for removing it.

[Claims 6 to 9 not printed in the Gazette.]

879,491. TABLE FOR CASTING GLASS. LÉON REMBAUX, Moustier sur Sambre, Belgium. Filed Oct. 25, 1906. Serial No. 340,572.



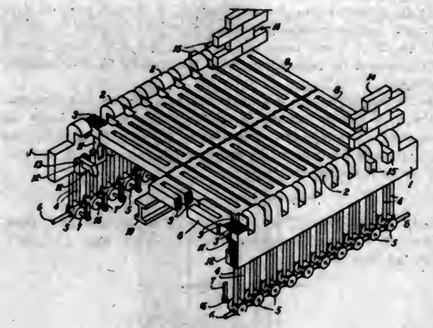
1. The combination with a table for casting glass and having internal cooling passages, of a reservoir carried by the table and connected to the cooling passages and means on the table to cause the water to circulate from the reservoir through the passages and back into the reservoir.

2. The combination with a table for casting glass and having internal water-cooling passages, of a reservoir, a pump and a motor, all carried by the table, said pump and reservoir included in the water circuit, whereby the motor will drive the pump to draw water from the reservoir and force it through the table.

3. The combination with a table for casting glass and having internal water cooling passages, of a reservoir, a centrifugal pump and an electrical motor directly connected to the pump, all secured to and beneath the table, said pump and reservoir connected to the cooling passages to form therewith a continuous circuit.

879,492. WATER-COOLED GRATE. WILLIAM C. RICHARDSON, Mystic, Conn. Filed Apr. 3, 1905. Serial No. 253,656.

1. In a water cooled grate for furnaces, independent grate units arranged to be independently attached and detached having water spaces; means for supporting the ends of said grate units; means for connecting the water spaces in said grate units with circulating pipes; said circulating pipes; valves in said circulating pipes having water passages so arranged as to permit a consecutively continuous flow of water in the passages and through the water spaces of all said grate units from the inlet pipe at one end of the grate to the outlet pipe at the other end of said grate; and means whereby the circulation of water may be shut off from the water spaces of one of said grate units without disturbing the circulation of water through the remaining grate units.



2. A water cooled grate for furnaces, composed of independent grate units, so arranged that each unit may be attached and detached from the grate independently of the others; each of said grate units having spaces for the circulation of water; supports for said grate units; means for connecting said grate units with circulating pipes; said circulating pipes; and means whereby a consecutively continuous water passage may be opened through said grate units from the inlet pipe in one end of the grate to the outlet pipe in the other end of said grate; and means for shutting off the water from the water spaces in one of said grate units, without stopping the flow of water through the water spaces in the remaining grate units.

3. A water-cooled grate for furnaces composed of a series of grate units, each provided with water spaces for the circulation of water therein; means for providing a circulation of water in said grate units; and means for cutting off the circulation of water from any one or more of said grate units without affecting the circulation of water in the remaining grate units and for providing a water outlet in the water spaces of the grate units in which the water circulation is cut off.

4. A water cooled grate for furnaces, having independently attachable and detachable grate bars provided with water spaces for the circulation of water therein; outlets for said water spaces; a supporting frame; water spaces arranged to connect with the water spaces in the grate bars; means for making and maintaining a tight connection between the outlets for the water spaces in the grate bars and the water spaces in the supporting frame; and means for cutting off the circulation of water in any one of the grate bars without stopping the consecutively continuous circulation of water in the remainder of said grate bars.

5. A water cooled grate for furnaces, composed of separate grate units arranged to be independently attached and detached, each grate unit having water spaces; means for supporting said grate units and for connecting the water spaces in same with the water spaces in circulating pipes; said circulating pipes; valves in said circulating pipes having water passages arranged and constructed to permit the water to be shut off or turned on from the water spaces in one or more of said grate units independent of the others without affecting the continuous circulation of water in the remaining grate units; and means in said valve whereby spaces in each of the grate units may be opened to permit the discharge of any water remaining therein.

[Claims 6 and 7 not printed in the Gazette.]

879,493. TAG-HOLDER. THOMAS ROBINSON, Haverhill, Mass. Filed Apr. 2, 1907. Serial No. 365,985.

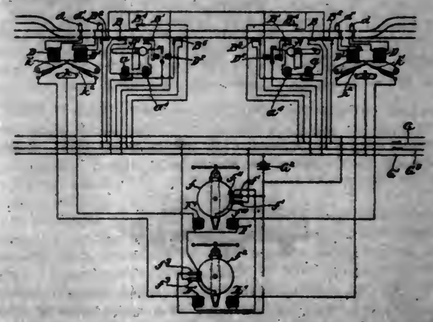


1. A tag holder comprising a continuous resilient wire formed to provide a coiled portion, a supporting shank connected to one end of said coiled portion and an arm connected to the other end thereof, said arm extending upwardly across a portion of said coil in clamping engagement therewith, and then downwardly and upwardly away from said arm to form a hook, substantially as described.

2. A tag holder comprising a continuous resilient wire formed to provide a coiled portion, a supporting shank connected to one end of said coiled portion and extended therefrom, an arm connected to the other end of said coiled portion and extending across an opposite portion of the coil in clamping engagement therewith and then downwardly with relation to the position in which said holder is adapted to be held and divergently upward to form a hook, said hook and said arm being disposed approximately in a plane perpendicular to the plane of said coil, substantially as described.

3. A tag holder composed of a continuous resilient wire formed to provide a coiled portion, a supporting shank connected to one end of said coiled portion, and an arm connected to the other end thereof, said arm extending approximately in the opposite direction from said shank across the opposite portion of said coil from said shank and in clamping engagement therewith, and a hook connected to the end of said arm and disposed at the opposite side of said arm from said coiled portion, substantially as described.

879,494. TRAIN PROTECTION FOR RAILWAYS. BENTON C. ROWELL, Chicago, Ill., assignor to Rowell Potter Safety Stop Company, Portland, Me., a Corporation of Maine. Filed Feb. 13, 1899. Serial No. 705,435.

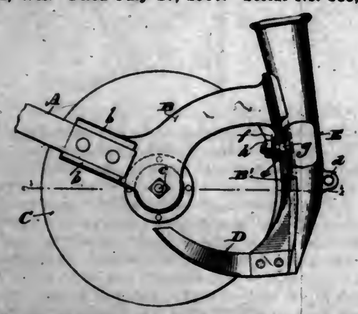


1. In a block system, a blocking appliance; automatic means for shifting that blocking appliance to safety on the approach of a train running in one direction; automatic means for shifting that blocking appliance to safety on the approach of a train running in the opposed direction;

and automatic means for shifting that blocking appliance back to danger as a train passes in either direction.

2. In a block system, a blocking appliance; two safety circuits for shifting it from danger to safety, one automatically operated by a train approaching from one direction, the other automatically operated by a train approaching from the opposite direction; a danger circuit automatically operated by a train passing in either direction; and means by which the first train to enter the block automatically makes its own safety circuit, and also inhibits the making of the other safety circuit by a train in the opposed direction.

879,495. GRAIN-DRILL. THEODORE B. ROWELL, Beaver Dam, Wis. Filed July 27, 1907. Serial No. 385,908.



1. The combination of an arm attachable to a drag-bar and having a partly depending rear portion concave at the back, a rotatory furrow-opening disk supported in connection with the arm, a disk-scraper attached to the lower end of the rear portion of said arm, and a boot fastened in the concavity of said rear portion of the aforesaid arm.

2. The combination of an arm attachable to a drag-bar and having a partly depending concave rear portion, a rotatory furrow-opening disk supported in connection with the arm and a boot detachably fastened to said rear portion of said arm in the concavity thereof.

3. The combination of an arm attachable to a drag-bar and having a rear concavity in which to detachably secure a boot, a rotatory furrow-opening disk in connection with the arm, and a disk-scraper also in connection with said arm.

4. The combination of an arm attachable to a drag-bar and having a partly depending rear portion concave at the back and provided with a recess and an opening central of the recess, a rotatory furrow-opening disk supported in connection with the arm, a boot fitting the concavity of the rear portion of said arm and having a countersunk partly angular opening extending through a boss engageable with the recess aforesaid, a partly angular bolt engaging the countersink and openings aforesaid, and a clamping nut run on the bolt against said depending portion of the aforesaid arm.

879,496. WORM-DRIVING MECHANISM. EPPA H. RYON, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Oct. 7, 1907. Serial No. 396,172.



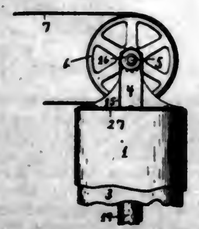
1. The combination with a rotary shaft, and a tooth or thread portion fast on said shaft, of a sleeve loose on said shaft, and having thereon two worm thread portions, a right hand, and a left hand, each one to be moved into line with the tooth or thread portion fast on the shaft, to form a complete worm thread, either a right hand thread, or a left hand thread.

2. The combination with a rotary shaft, and a tooth or thread portion fast on said shaft, of a sleeve loose on said shaft, and having thereon two worm thread portions, a right hand, and a left hand, each one to be moved into line with the tooth or thread portion fast on the shaft, to form a complete worm thread, either a right hand thread, or a left hand thread, and also having thereon a straight tooth or thread portion to be moved into line with the tooth or thread portion fast on the shaft to form a complete straight thread.

3. In combination, a rotary shaft, a thread portion fast thereon, a sleeve having thread portions thereon loose on said shaft, a worm gear adapted to mesh with said thread portions and be rotated or held stationary by said thread portions.

4. In combination, a rotary shaft, a thread portion fast thereon, a sleeve having thread portions thereon loose on said shaft, a worm gear adapted to mesh with said thread portions and be rotated in either direction or held stationary by said thread portions.

879,497. MECHANISM FOR BOAT PROPULSION. HERMAN S. SEARLE, Rochester, N. Y. Filed Apr. 17, 1907. Serial No. 368,748.



1. In a mechanism for propelling vessels a casing secured to the hull of the vessel and having an inturned flange, a hollow body within said casing, a wheel-house within said hollow body and having a flange resting on the flange of said casing, a wheel with shaft within said inner body, a driving-shaft carried by said inner body, connectors for said wheel-shaft and the driving-shaft, and means for turning the driving-shaft said hollow body and the parts within the casing being bodily removable.

2. In a mechanism for propelling vessels a casing secured to the vessel and having an inturned flange, a hollow body within the casing and removable therefrom, a wheel-house within said hollow body and having a flange resting on the flange of said casing, a wheel with shaft within said hollow body, a driving-shaft carried by said hollow body, sprockets on said two shafts, and chains on the sprockets said hollow body and the parts within the casing being bodily removable.

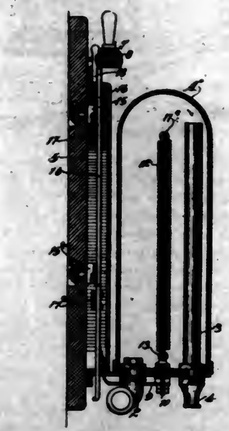
3. A mechanism for propelling vessels, comprising a casing secured within the vessel and having an inturned flange, a hollow body within said casing, a wheel-house with wheel and shaft carried at one end of said hollow body, said wheel-house supporting said hollow body and both supported on the inturned flange of the casing, a driving shaft carried at the other end of the hollow body, and means for connecting said two shafts and for revolving the driving-shaft said hollow body and the parts within the casing being bodily removable.

4. Mechanism for propelling vessels, comprising a cylindrical body secured to the body of the vessel, another cylinder within the outer cylindrical body and coaxial therewith, a saddle having standards secured at one end of the inner cylinder and extending longitudinally away therefrom, a driving-shaft in the standards, a pulley and sprocket on the driving-shafts, a wheel-house projecting within the opposite end of the inner cylinder and having a flange secured to said inner cylinder, a wheel-shaft carried by the wheel-house and disposed diametrically within the inner cylinder, a wheel on the shaft within the wheel-house, sprockets on the wheel-shaft and chains connecting said sprockets with the sprockets on the driving-shaft.

5. Mechanism for propelling vessels, comprising two cylinders one within the other the outer cylinder being secured to the vessel, a wheel-house projecting within the inner cylinder and having a base-plate between the end portions of the two cylinders and secured to the inner cylinder, a wheel in the wheel-house and means to support and to turn the wheel.

[Claims 6 to 14 not printed in the Gazette.]

879,498. ELECTRICAL WATER-HEATER. MILTON H. SHOENBERG, San Francisco, Cal. Filed June 5, 1907. Serial No. 377,322.



1. An electrical water-heater consisting of a water-receiver having inlet and discharge passages, a series of naked electrical coils out of contact, extending through the chamber, a standard extending in the direction of the length of the water receiver, contacts with which the opposite ends of the coils are connected, one of said contacts being fixedly connected to the standard and extending transverse of the latter a slidable switch adapted to make or break the circuit by contact with or separation from said plates, a lever by which the device is actuated, a water-supply cock having a cylindrical stem extending into the plane of movement of the switch lever, said lever operating in a plane substantially parallel with the axis of the stem and said stem being cut away on one side to allow the switch lever to move when the water-cock is opened, and to prevent it from moving when said cock is closed.

2. In a water and like heating apparatus, a receiver with supply and discharge means, and internally disposed heating coils, means by which an electrical current may be passed through the coils, said means including a standard within and parallel with the receiver, and cross bars within said receiver and to which the opposite ends of the coils are connected, one of said cross-bars being fixed to the standard a current controlling switch, and a water supply faucet, said faucet being so disposed as to prevent the closing of the circuit while the faucet is closed.

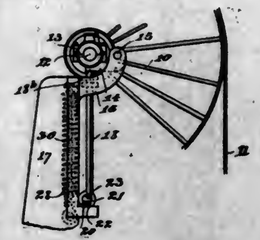
3. In an electrical water-heater, the combination of a water receptacle having inlet and outlet passages, a heating coil in said receptacle, electrical connections with opposite ends of said heating coil, connections comprising a standard extending longitudinally of the receptacle and having its upper end bent transversely, said end and a corresponding part in the opposite end of the receptacle forming contacts to which the opposite ends of the coil are connected a cock controlling the inlet of water to the receptacle, a switch in said electrical connections, said cock having a movable part co-acting with the switch to prevent the closing of the electrical circuit when the cock is closed, and said part operable independent of the switch to permit hot or cold water to be drawn.

4. In an electrical water-heater, the combination of a water receptacle having inlet and outlet passages, a heating coil in said receptacle, electrical connections with opposite ends of said heating coil, a cock controlling the inlet of water to the receptacle, a switch in said electrical connections, said cock having a turnable stem with a flattened portion, said flattened portion turnable into planes at right angles to each other, and said flattened portion forming a stop to the movement of the switch when the cock is closed, but permitting the operation of the switch when the cock is open.

879,499. PROCESS OF MANUFACTURING DIALKYL-BARBITURIC ACIDS. KARL STEPHAN and PAUL HUNSALZ, Berlin, Germany, assignors to Chemische Fabrik auf Actien (vorm. E. Schering), Berlin, Germany. Filed Feb. 16, 1905. Serial No. 245,835.

The herein described method of producing dialkyl barbituric acids, having the herein mentioned general formula, which consists in causing an acid to react in the presence of water upon the corresponding dialkyl-malonyl-guanidine, thereby introducing oxygen in place of the imino group by hydrolysis, and then separating the resulting dialkyl-barbituric acids.

879,500. BAND-SAW-TENSIONING DEVICE. BURT D. STEVENS, Beloit, Wis., assignor to The Berlin Machine Works, Beloit, Wis., a Corporation of Wisconsin. Filed Jan. 5, 1907. Serial No. 350,940.



1. In a mounting for a band-wheel or pulley, the combination of a swinging bearing for the shaft of the band-wheel or pulley, a suitably-supported hinge-pin or rod, said bearing having a sleeve loosely encircling said hinge-pin or rod, and an adjusting screw passing through said sleeve and hinge-pin, substantially as described.

2. In a band-saw, a saw-straining device comprising a swinging box or bearing, adjustably mounted on a hinge-pin and a straining rod having a knife-edge engagement with the box or bearing in line with the center of the shaft and at the longitudinal center of the bearing, substantially as described.

3. In a mounting for a band-saw-wheel shaft, a pivoted box or bearing member, a pivot pin or journal for said member, and means for changing the distance between the axes of the pivot pin and the bearing whereby to change the position of the saw-wheel shaft, substantially as described.

879,501. KNIFE-HOLDER FOR CUTTER-HEADS. AXEL THORSEN, Beloit, Wis., assignor to The Berlin Machine Works, Beloit, Wis., a Corporation of Wisconsin. Filed Nov. 8, 1906. Serial No. 342,540.

1. A cutter head having a series of longitudinal ribs upon its surface, in combination with detachable knife-holders each composed of two members fashioned to engage respectively opposite sides of said rib and having bearing faces radial to said head, and means for clamping said members upon said ribs, substantially as described.

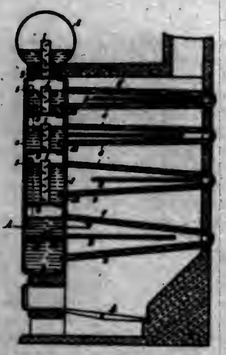
2. The combination with the cutter head having a longitudinal rib upon its surface, of a knife-holder therefor comprising two members each having a toe to engage with a lateral wall of said rib, and means for clamping said members together upon said rib, substantially as described.

3. The combination with a cutter head having longitudinal ribs with undercut lateral walls, of a two-part holder, each of the parts having a toe to engage one of said lateral walls, and a clamping bolt for clamping said members together, substantially as described.



4. The combination with a cutter head having a plurality of longitudinal ribs, of a two-part holder adapted to be clamped against the opposite sides of the same rib, and means for effecting such clamping, substantially as described.

879,502. STEAM-GENERATOR. JEAN VAN OOSTERWYCK, Chênée, Belgium. Filed May 28, 1906. Serial No. 318,099.

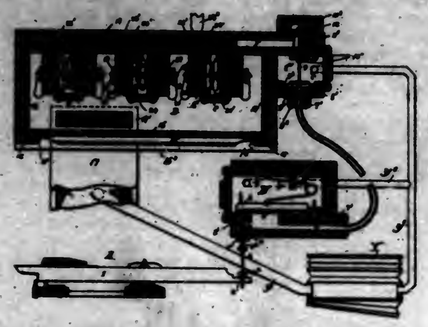


1. A steam generator comprising a plurality of superposed compartments having separated steam and water spaces, slanting tubes communicating with one end with the water space and with the other with the steam space of said compartments, and baffle-plates arranged in front of the ends of said tubes communicating with the water spaces of said compartments.

2. A steam generator comprising a plurality of superposed compartments having separated steam and water spaces, slanting tubes communicating with their lower ends with the water space and with their upper ends with the steam space of said compartments, baffle-plates arranged in all compartments but the lowermost in front of the ends of the tubes communicating with the water spaces of said compartments to prevent steam from reëntering said water spaces, and a perforated division wall in the water space of said lowermost compartment.

3. A steam generator comprising a plurality of superposed compartments arranged in sections around the firegrate and provided with separated steam and water spaces, slanting tubes communicating with their lower ends with the water space of one section of a compartment and with their upper ends with the steam space of another section of the same compartment, baffle plates arranged in all compartments but the lowermost in front of the ends of the tubes communicating with the water spaces of said compartments, and a division wall provided with perforations for the passage of steam formed before the water circulation of the steam generator has set in.

879,503. PNEUMATIC CHEST FOR PIPE-ORGANS. WILLIAM C. VERNEY, Mason City, Iowa. Filed July 30, 1906. Serial No. 328,318.



1. In a device of the class described the combination with a main chest D of a pair of valve bars therein, a passage opening outwardly from said chest through one of said bars, a valve controlling said passage, a circular cut-out 24 in said bar, a diaphragm covering said cut-out and connected with said valve, an auxiliary wind box C, a primary wind box B, a suitable wind connection between the wind box C and the primary wind box B, a valve 3 in the box B controlling said connection, a wind channel F communicating with the auxiliary wind box C and said cut-out, a valve 9 interposed between the channel F and the auxiliary wind box C for the purpose of relieving air pressure from the channel F and the cut-out, means for admitting air pressure to the outer side of said diaphragm and operating the valve controlling said passage, and a key adapted to operate said valve 3 and admit wind from the box B to the connection leading to the box C and actuate the valve 9.

2. In a device of the class described the combination with a main chest D, of a plurality of valve bars arranged therein in pairs, a chamber between the members of each pair, circular cut-outs in each bar adjacent said chambers, a diaphragm separating each cut-out from the adjacent chamber, passages opening from the chest D through the bars E valves on each bar connected with said diaphragms and controlling said passages, an auxiliary wind box C, a primary wind box B, wind channels F leading from the box C and communicating with said cut-outs, a valve 9 interposed between each channel F and the auxiliary wind box C, wind connections leading from the box B to the box C, valves 3 in the box B controlling said connections, a key adapted to actuate each valve 3, and means adapted to supply air of a uniform pressure to the primary wind box B and to the main chest D.

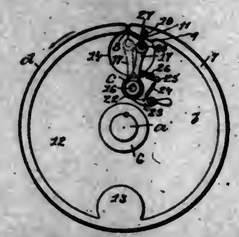
3. In a device of the class described the combination with the main chest D, of a plurality of valve bars E arranged therein in pairs, a chamber G between each pair of bars, passages opening from the chest D through said bars, valves on each bar controlling said passages, cut-outs on each bar adjacent said chambers, diaphragms separating said cut-outs from the chambers and connected with the valves, wind channels F communicating with said cut-outs and adapted to conduct air to and from the same and thereby operate the valves, and means adapted to supply air of a uniform pressure to the main chest D and to the chamber G.

4. In a device of the class described the combination with the main chest D, of a plurality of valve bars E arranged therein in pairs, valves on each bar, a chamber G inclosed between each pair of bars, a plurality of air channels F, a circular cut-out 24 in each bar adjacent to the chamber G, a diaphragm 20' secured to each valve and adapted to separate the said chamber G from the cut-out 24, a passage 24' connecting each of said cut-outs with one of the channels F, means adapted to supply air of the same pressure to the main chest D and to the chamber G, and means adapted to relieve air pressure in the channels F.

5. In a device of the class described the combination of the primary wind box B, with the main chest D, a plurality of valve bars E arranged in pairs in said chest, valves on each bar, a chamber G inclosed between each pair of valve bars E, a plurality of air channels F, operative connections between said channels and the wind box B, circular cut-outs 24 in said bars, diaphragms separating the chambers G from the cut-outs and connected with said valves, a passage 24' connecting each circular cut-out with the adjacent channel F, means adapted to supply wind of the same pressure to the main chest D, the chambers G and to the primary box B and a key and connections adapted when depressed to relieve air in the cut-outs 24 through one of the channels F.

[Claims 6 to 8 not printed in the Gazette.]

879,504. GRINDING OR POLISHING WHEEL. CYRA B. WATTLES, Providence, R. I., assignor to Surfacing Machine Company, Providence, R. I., a Corporation of Rhode Island. Filed Nov. 18, 1907. Serial No. 402,573.



1. In a grinding or polishing wheel, a strip of abrasive or polishing material on the peripheral face of the wheel, a take-up mechanism actuated by centrifugal force and operatively connected with the strip of abrasive or polishing material, and means in the take-up mechanism for holding the same from a retrograde movement.

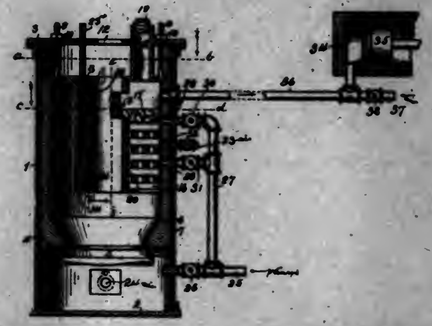
2. In a grinding or polishing wheel, a strip of abrasive or polishing material on the peripheral face of the wheel and fixed at one end to the wheel, an automatic take-up mechanism actuated by centrifugal force and operatively connected to the opposite end of the strip of abrasive or polishing material, and automatic means in the take-up mechanism for automatically holding the same from a retrograde movement.

3. In a grinding or polishing wheel, a strip of abrasive or polishing material on the peripheral face of the wheel and detachably secured at one end to the wheel, an automatic take-up mechanism actuated by centrifugal force and a coiled spring, means for detachably securing the opposite end of the strip of abrasive or polishing material to the automatic take-up mechanism, and means in the take-up mechanism for automatically holding the same from a retrograde movement.

4. In a grinding or polishing wheel, the combination of the following instrumentalities; a wheel b having a hub 6, an annular rim 7 in the face of which is a transverse slot 8, a thickened portion 9 at one edge of the slot 8 and having a hole 10 and a slit 11 extending from the hole 10 out through the inner face of the portion 9, a central web 12 having a counterbalanced portion 13, an opening 14, and an off-center bearing 15, an automatic take-up mechanism o consisting of a shaft 16, a U-shaped member 17 having the arms 18 18 and the cross bar 19 in which is a hole 20 and a slit 21 extending from the hole out, a ratchet gear 22 secured to the shaft 16, a pawl 23 pivotally secured to the web 12 in a position to engage with the ratchet gear 22, a coiled spring 24 connected with the pawl 23 and with a stud 25 on the web 12, a coiled spring 26 connected with the member 17 and with the stud 25, and a strip of abrasive or polishing material d having the beaded ends 27 and 28, as described.

5. In a grinding or polishing wheel, the combination of the following instrumentalities, a shaft a, a wheel b having a hub 6, an annular rim 7 in the face of which is a transverse slot 8, a thickened portion 9 at one edge of the slot and having a hole 10 and a slit 11 extending from the hole 10 out through the inner face of the portion 9, a central web 12 having a counterbalanced portion 13, an opening 14 and an off-center bearing 15, an automatic take-up mechanism o consisting of a shaft 16, in the bearing 15, a U-shaped member 17 having the arms 18 18 secured to the shaft 16 and the cross bar 19 in which is a hole 20 and a slit 21 extending from the hole out, a ratchet gear 22 secured to the shaft 16, a jewel 23 pivotally secured to the web 12 in a position to engage with the ratchet gear 22, a coiled spring 24 connected with the pawl 23 and with a stud 25 on the web 12, a coiled spring 26 connected with the member 17 and with the stud 25, a weighted arm 29 on the member 17 and a strip of abrasive or polishing material d having the beaded ends 27 and 28, as described.

879,505. GAS-PRODUCER. GEORGE J. WEBER, Kansas City, Mo. Filed Feb. 9, 1905. Serial No. 244,940.



1. In a gas producer, the combination with the combustion chamber provided with an inlet for air and an outlet for the products of combustion, of a gas superheating mechanism vertically adjustable in the chamber intermediate the said inlet and outlet.

2. In a gas producer, the combination with the combustion chamber provided with an inlet for air, and an outlet for the gaseous products of combustion, of a series of baffle plates vertically adjustable in the chamber intermediate said inlet and outlet.

3. In a gas producer, the combination with the combustion chamber provided with an inlet for air and an inlet for steam, and having a fuel support located above said inlets, and an outlet for gaseous products of combustion located above the fuel support, of a vertically adjustable superheating mechanism located above the said fuel support and below the said outlet and in said combustion chamber.

4. In a gas producer, the combination with the combustion chamber provided with a fuel support, inlets for air and steam disposed below said support, an outlet for gaseous products of combustion located above said support, and baffle plates vertically adjustable intermediate the said outlet and said support.

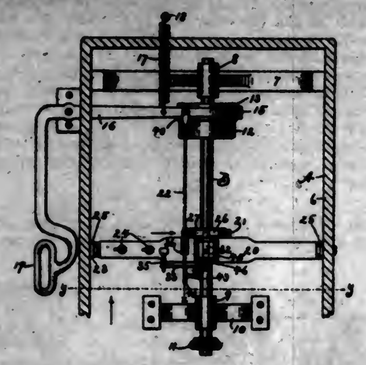
5. In a gas producer, the combination with a combustion chamber provided with a fuel support, of a fuel reservoir disposed above said support, superheating means carried by said reservoir and means by which the distance between the support and reservoir may be varied.

[Claims 6 to 36 not printed in the Gazette.]

879,506. AUTOMATIC BRAKE FOR KNITTING-MACHINES. GEORGE A. WHITE, Bristol, Conn. Filed May 8, 1907. Serial No. 372,563.

1. The combination of a driving shaft with fast and loose pulleys mounted on the said shaft, a shipper for shifting a belt on the said pulleys, a friction brake mounted on the said shaft and having a stop arm, a sliding bolt adapted to have one end moved into and out of the path of the stop arm of the said friction brake, and an operating bar or slide connected with the said shipper, for pro-

jecting the end of the said sliding bolt into the path of the said stop arm when the shipper is operated to shift the belt to the loose pulley.



2. The combination of a driving shaft with fast and loose pulleys mounted thereon, a shipper for shifting a belt on the said pulleys, a friction brake mounted on the said shaft and having a stop arm, a sliding bolt adapted to have one end moved into and out of the path of the said stop arm, a spring for withdrawing the said bolt from the path of the said stop arm, an operating bar or slide connected with the said shipper for acting upon the said bolt for projecting the end of the said bolt into the path of the said stop arm when the shipper is operated to shift the belt to the loose pulley, and means for throwing the said operating bar or slide out of action on the bolt after the end of said bolt has been engaged by the said stop arm.

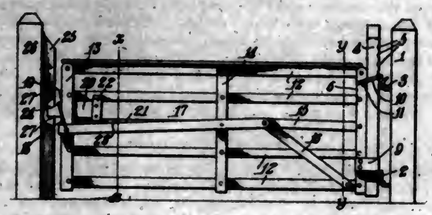
3. The combination of a frame or table with a driving shaft mounted thereon, mechanism for driving the said shaft, a shipper for putting the driving mechanism into and out of action, a friction brake mounted on the said driving shaft and having a stop arm on its periphery, a cross arm mounted on the said frame adjacent to the said friction brake, a sliding bolt mounted on the said cross arm and adapted to have one end moved into and out of the path of the said stop arm, a spring for moving the said bolt out of the path of the said stop arm, an operating bar or slide connected by one end with the said shipper and having its opposite end guided on the said cross arm, the said bar or slide having a shoulder for engaging a part that moves with the said sliding bolt and also having a lifting cam for engaging a fixed device on the said cross arm for lifting the said bar out of engagement with the said bolt after the said bolt has been projected into the path of the said stop arm.

4. The combination of a driving shaft with mechanism for driving the said shaft, a shipper for putting the said driving mechanism into and out of action, a friction brake comprising a hub fixed upon the said driving shaft, a ring having a stop arm projecting from its periphery and mounted to turn on the said hub and friction applying means between the said hub and ring, a bolt for obstructing the movement of the said ring with its hub, and means connected with the shipper for bringing the said bolt into the path of the stop arm on the said ring.

5. The combination of a driving shaft with mechanism for driving the same, a shipper for putting the driving mechanism into and out of action, a friction brake mounted on the said shaft and having a stop arm, a bolt adapted to have one end moved into and out of the path of the stop arm of the said friction brake, and means connected with the shipper for operating the said bolt for engaging and disengaging the said stop arm.

879,507. GATE. ORRIN J. WYMAN, Albion, N. Y. Filed Oct. 12, 1907. Serial No. 397,162.

1. A gate comprising end bars, parallel rails pivotally connected thereto, an adjusting lever having a substantially fixed pivotal connection with the gate, a movable pivotal connection between said lever and an intermediate portion of the gate, a latch slidably mounted upon the gate, and means carried by the lever for engaging the latch to support the gate.



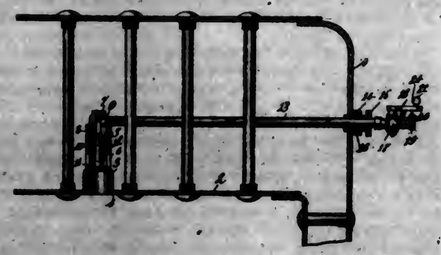
2. The combination with a latch post, a keeper connected thereto, and a supporting device upon the keeper; of a swinging gate comprising end bars, parallel rails pivotally connected to the bars, an adjusting lever having a relatively fixed fulcrum connected to one of the end bars, a pivotal connection between the lever and an intermediate portion of the gate, a latch upon the gate and movable into the keeper and above the supporting device, and means carried by the lever for engaging the latch to support the gate.

3. A gate comprising end bars, parallel rails pivotally connected thereto, an adjusting lever pivotally mounted upon an intermediate portion of the gate, means pivotally attached to the lever for connecting the same to an end bar of the gate, a latch slidably mounted upon the gate, and means carried by the lever for engaging the latch to support the gate.

4. A gate comprising end bars, parallel rails pivotally connected to the bars, a lever having a relatively fixed fulcrum and pivotally engaging an intermediate portion of the gate, said gate having a projection at one end, a latch upon and movable in relation to the gate, and means carried by the lever for detachably engaging either the projection or latch to support the gate.

5. A gate comprising end bars, parallel members pivotally connected to the bars, a lever pivotally mounted upon the gate, said gate having a projection at one end, a latch upon and movable in relation to the gate, and means carried by the lever for detachably engaging either the projection or latch to support the gate.

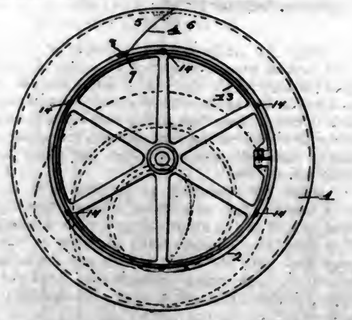
879,508. LOW-WATER ALARM. GEORGE YEATES, Montreal, Quebec, Canada. Filed Apr. 16, 1906. Serial No. 312,051.



1. In combination with a boiler, a stirrup, a screw-threaded opening in the crown sheet of said boiler, an extension on said stirrup provided with screw-threads adapted to engage the screw-threads of the aforesaid opening in the crown sheet and hold the stirrup in operative position, an interior screw-threaded portion in said stirrup, a plug, a screw-threaded extension on said plug adapted to engage the interior screw-threaded portion of the stirrup, a passage through said plug, a spring-pressed fusible valve removably mounted within said stirrup and adapted to normally close the passage in the plug and to establish communication between the interior of the boiler and the passage by being fused when the water in the boiler falls below the danger level, an alarm and a passage connecting the aforesaid passage in the plug and said alarm.

2. In combination with a boiler, a stirrup, a screw-threaded opening in the crown sheet of said boiler, an extension on said stirrup provided with screw-threads adapted to engage the screw-threads of the aforesaid opening in the crown sheet and hold the stirrup in operative position, an interior screw-threaded portion in said stirrup, a plug, a screw-threaded extension on said plug adapted to engage the interior screw-threaded portion of the stirrup, a passage through said plug, a spring-pressed fusible valve removably mounted within said stirrup and adapted to normally close the passage in the plug and to establish communication between the interior of the boiler and the passage by being fused when the water in the boiler falls below the danger level, an alarm, a passage connecting the aforesaid passage in the plug and said alarm and normally open, a valve controlling said connecting passage and normally inoperative and a seal on said valve to hold the same in inoperative position and to indicate when said valve has been turned to operative position.

879,509. FLEXIBLE TIRE-FRAME. EUGENE D. C. BAYNE and LAWRENCE A. SUBERS, Cleveland, Ohio. Filed Feb. 19, 1907. Serial No. 358,181.



1. A tire frame comprising an annular flexible tube having overlapping extremities, a rotatable support therefor, and means for alining said frame upon said support, comprising keys inserted in the inner edge of the frame and bearing against the edge of said support, substantially as described.

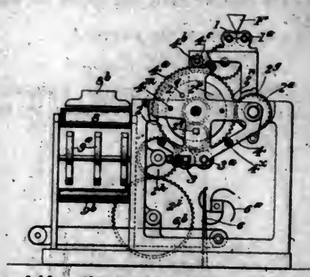
2. A flexible ring shaped tire frame, of horse-shoe shaped cross section and provided with laterally extending flanges 2 on its inner edges, and transversely parted at one side with an inclined and curved parting line, integral hooks 7 upon one set of meeting edges of said flanges, and corresponding recesses 8 upon the opposed extremities at the tread surface thereof and a corresponding recess 10 in the other extremity and tongues 11, 11 in one extremity and recesses 12, 12 in the other extremity, registering therewith, substantially as described.

879,510. FOLDING MECHANISM FOR PRINTING-PRESSES. HENRY F. BECHMAN, Battle Creek, Mich., assignor to Duplex Printing Press Company, Battle Creek, Mich., a Corporation of Michigan. Filed May 14, 1907. Serial No. 378,665.

1. In a folder, the combination of a folding cylinder, a cutting cylinder, and a folding device and means for adjusting the cutting cylinder and said device circumferentially of the folding cylinder.

2. In a folder, the combination of a folding cylinder, with a cutting cylinder and a pair of fold-rolls, and means for adjusting the cutting cylinder and said rolls to different positions circumferentially of the folding cylinder.

3. In a folder, the combination of a cylinder, hangers pivoted axially thereof, a second cylinder journaled in said hangers, folding devices also mounted in said hangers, and means for swinging the hangers to adjust the cylinder and folding devices circumferentially of the first cylinder.

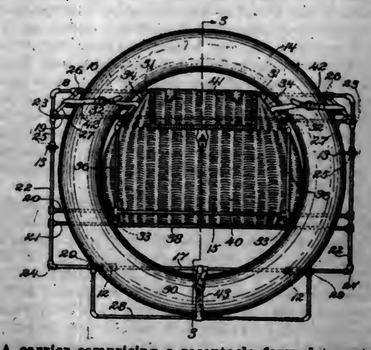


4. In a folder, the combination of a folding cylinder, hangers pivoted axially of the cylinder, a cutting cylinder journaled in said hangers, folding-rolls journaled in said hangers, and means for swinging the hangers to adjust the cutting cylinder and folding-rolls circumferentially of the folding cylinder.

5. In a folder, the combination of a folding cylinder, tucking blades and collecting pins therein; movable supports beside said folding cylinder; a cutting cylinder journaled in said supports, folding devices also mounted on said supports, and a pin-cam and a tucker-cam mounted on said supports, and means for adjusting the supports so as to move the parts thereon circumferentially of the folding cylinder, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

879,511. TIRE AND LUGGAGE CARRIER FOR AUTOMOBILES, &c. JOSEPH J. BOND, Reading, Mass. Filed Mar. 20, 1907. Serial No. 363,466.



1. A carrier comprising a receptacle formed to enter an automobile tire, and provided with means for attachment to a support, said receptacle being surrounded by a tire-receiving space, and the said carrier having means for securing a tire in said space.

2. A carrier comprising a receptacle formed to enter an automobile tire, and provided with means for attachment to a support, said receptacle being surrounded by a tire-receiving space, and the said carrier having means for supporting the inner side of a tire inserted in said space.

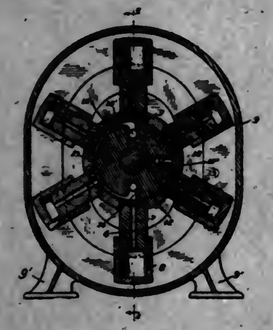
3. A carrier comprising a receptacle formed to enter an automoile tire, and provided with means for attachment to a support, said receptacle being surrounded by a tire-receiving space, and the said carrier having means for supporting the inner side and the outer periphery of a tire inserted in said space.

4. A carrier comprising a back provided with means for attachment to a support, a receptacle holder projecting outwardly from the back, and formed to enter an automobile tire, and tire guards projecting from the back, and separated from the holder by a tire-receiving space.

5. A carrier having supporting means adapted to hold an annular body, such as an automobile tire, supporting means adapted to hold a receptacle within the space bounded by the annular body, and means for attachment to a support.

[Claim 6 not printed in the Gazette.]

879,512. INTERNAL-COMBUSTION ENGINE. JOHN BRAUNWALDER, Chicago, Ill. Filed May 16, 1906. Serial No. 317,046.



1. In a rotary gas engine, a plurality of rigidly connected pistons, adapted to rotate concentrically about a common axis, in combination with a cylinder mounted upon each piston and means for controlling the radial positions of said cylinders.

2. In a rotary gas engine, a plurality of pistons rotating about and rigidly connected to a central shaft, and a cylinder reciprocating radially upon each piston, in combination with means for controlling the radial position of said cylinders, and means for controlling the admission and discharge of fluid to and from said cylinders.

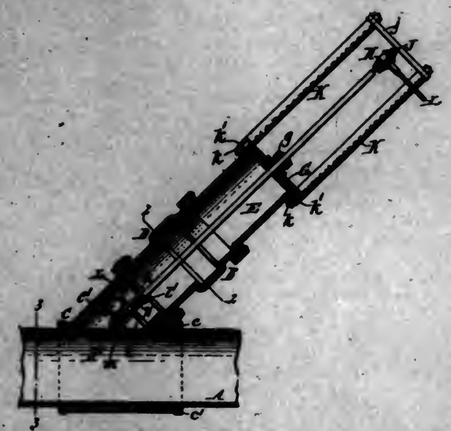
3. In a rotary engine, a plurality of pistons rotating about and rigidly connected to a central shaft, and a cylinder adapted to reciprocate radially upon each piston, in combination with means for controlling the radial position of each cylinder, a port extending radially entirely through each of said pistons and means for directing a fluid into or out of said ports, controlling the flow of fluid therein, and means for successively igniting an inflammable mixture in said ports.

4. In a rotary engine, a shaft, an annular flange concentrically mounted upon said shaft, a plurality of pistons rigidly mounted upon said flange each piston having a longitudinal port extending therethrough, a cylinder fitted upon each piston and adapted to reciprocate radially thereon, and means for controlling the radial movements of said cylinders, in combination with a cylindrical projection positioned within said flange and snugly fitting the interior thereof, a plurality of depressions formed in the periphery of said projection each adapted to successively communicate with the inner end of said ports and means for directing a fluid into or out of a portion of said ports.

5. A rotary engine, comprising a shaft, an annular flange concentrically mounted upon said shaft, a plurality of pistons rigidly mounted upon said flange, each piston having a port extending longitudinally therethrough, a cylinder fitted upon each piston and adapted to reciprocate radially thereon, and means for controlling the radial movements of said cylinders, in combination with a cylindrical projection positioned within said flange and snugly fitting the interior thereof, a plurality of depressions formed in the periphery of said projection and adapted to successively communicate with the inner ends of said ports comprising an admission, an ignition, and an exhaust chamber, fluid conducting means connected to said admission and exhaust chambers and means for producing a spark provided for said ignition chamber.

[Claim 6 not printed in the Gazette.]

879,513. PIPE-TAPPING DEVICE. JOHN H. B. BRYAN, Buffalo, N. Y., assignor, by direct and mesne assignments, of one-third to Nicholas J. Kelly and one-third to Nora Kelly, Buffalo, N. Y. Filed Jan. 18, 1906. Serial No. 296,634.



1. A device for producing an opening in a main pipe within a branch pipe, comprising a cutter adapted to be arranged axially within the branch pipe, a guide for said cutter adapted to engage with the bore of the branch pipe and also with the main pipe around the cutter, and means operating to force said guide against the main pipe as the cutter advances and penetrates the main pipe, substantially as set forth.

2. A device for producing an opening in a main pipe within a branch pipe, comprising a cutter adapted to be arranged axially in the branch pipe, a guide for said cutter which is adapted to engage with the bore of the branch pipe and also with the outer side of the main pipe next to the cutter, and means operating to hold said guide yieldingly against said main pipe, substantially as set forth.

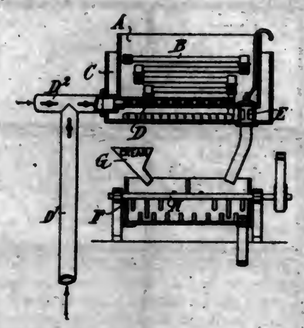
3. A device for producing an opening in a main pipe within a branch pipe, comprising a cutter adapted to be arranged axially in the branch pipe, a guide for said cutter having an enlarged cylindrical rear part which is adapted to engage with the bore of the branch pipe and a reduced tubular front part which is adapted to bear against the outer side of the main pipe close to the cutter, and a spring interposed between said cutter and guide and operating to yieldingly press said guide against the outer side of the main pipe, substantially as set forth.

4. A device for producing an opening in a main pipe for connecting the same with a branch pipe arranged at an angle thereto, comprising a cutter adapted to be arranged axially in the branch pipe, a guide for said cutter which surrounds the same and consists of a hollow cylindrical rear part adapted to engage the bore of said branch pipe and a tubular front part having a forwardly tapering front end which is adapted to engage with the outer side of the main pipe next to the cutter, and a spring surrounding the cutter within the hollow rear part of the guide and operating to press the guide yieldingly against the main pipe, substantially as set forth.

879,514. CONCENTRATED WHOLE MILK. CHARLES H. CAMPBELL, New York, N. Y. Filed Dec. 14, 1905. Serial No. 291,724.

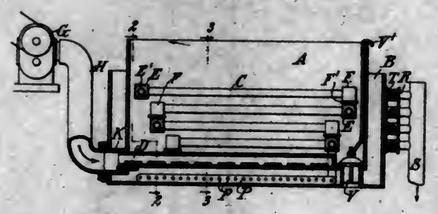
1. A food product consisting of a mixture of concentrated milk and raw unconcentrated cream in the form of a stable substantially uniform emulsion but with the fat globules substantially unbroken, so that when the product is diluted to the consistency of fresh milk cream will rise therein as in fresh milk.

2. A food product consisting of a mixture of raw unconcentrated cream with skim milk concentrated to approximately one-fourth of its original consistency, the quantity of cream being approximately the same as that oroginally separated from the milk and the mixture being



in the form of a stable substantially uniform emulsion but with the fat globules substantially unbroken, so that when the product is diluted to the consistency of fresh milk cream will rise therein as in fresh milk.

879,515. APPARATUS FOR CONCENTRATING LIQUIDS. JOSEPH H. CAMPBELL, assignor, by mesne assignments, to Charles H. Campbell and to Elizabeth and Charles H. Campbell, executors of said Joseph H. Campbell, deceased, New York, N. Y. Filed Feb. 6, 1901. Serial No. 46,225.

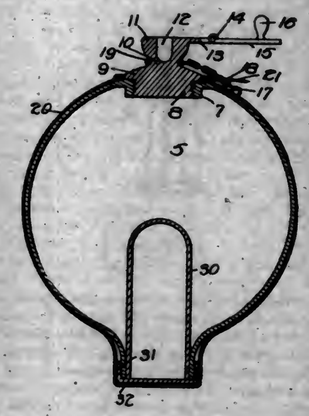


1. In apparatus for concentrating liquids, the combination of a tank for the liquid, a jacket surrounding said tank, a coil within said tank normally horizontal and trunnioned at one end so that it may be turned into a vertical position, and an air pipe extending into the liquid and apertured to introduce air thereinto near the bottom of the tank and in approximately the direction of said bottom, said air pipe being removable, whereby access to the tank, coil, and air pipe for cleaning the same is facilitated.

2. In an apparatus for concentrating liquids, the combination of a tank for the liquid and a series of coils one above the other within said tank, each coil comprising headers E and F, and pipes connected to said headers E and trunnioned in the walls of said tank, and supports in said tank for said headers F in positions to hold said coils substantially horizontal and one above another, each of said trunnioned pipes being offset from the one above.

3. In an apparatus for concentrating liquids, the combination of a tank for the liquid and a coil within said tank, said coil comprising headers E and F and pipes connected to said header E and trunnioned in the walls of said tank, supports in said tank for said header F in positions to hold said coils substantially horizontal and one above another, and an air pipe extending into the liquid and apertured to introduce air thereinto near the bottom of the tank and in approximately the direction of said bottom, said air pipe being removable, whereby access to the tank, coil, and air pipe for cleaning the same is facilitated.

879,516. HOT-WATER BOTTLE. THOMAS CANTWELL, St. Louis, Mo. Filed Sept. 19, 1907. Serial No. 393,724.



1. A device of the type set forth, comprising a metallic receptacle formed with an open end and with a threaded boss adjacent said open end, and a closure for said receptacle, comprising a cap having a threaded stem for engagement with said boss, a socketed head, and a lever hinged upon said head and provided with an angularly disposed handle, said handle being engaged in said socketed head in one position of said lever.

2. A device of the type set forth, comprising a metallic receptacle formed with an open end and with a threaded boss adjacent said open end, and a closure for said receptacle, comprising a cap having a threaded stem for engagement with said boss, a socketed head, and a lever hinged upon said head and provided with an angularly disposed handle, said handle being engaged in said socketed head in one position of said lever, several of said devices being arranged in a series on a curved line and covered with heat-storing material, and means for maintaining the material on the devices.

879,517. PROCESS OF HARDENING AND TEMPERING STEEL. BARNABAS J. CASTERLINE, Portland, Oreg., assignor to Casterline Cutlery Company, Portland, Oreg., a Corporation. Filed June 13, 1907. Serial No. 378,728.

The hereinbefore described improvement in tempering and hardening steel, consisting of first heating the steel to a "cherry red" heat, then submerging and cooling the steel in a solution of salt, saltpeter, carbonate of iron, borax, wood alcohol, glycerin and oil; then coating the steel with tallow, and subjecting it to the action of a slow fire by holding it over the same, substantially as described.

879,518. COMPOSITION OF MATTER EMPLOYED FOR HARDENING AND TEMPERING STEEL. BARNABAS J. CASTERLINE, Portland, Oreg., assignor to Casterline Cutlery Company, Portland, Oreg., a Corporation. Filed June 13, 1907. Serial No. 378,729.

1. The herein described composition of matter for hardening and tempering steel, consisting of the following ingredients, viz.: salt, saltpeter, carbonate of iron, borax, wood alcohol, glycerin and oil; substantially as described.

2. The herein described composition of matter for hardening and tempering steel consisting of the following ingredients, in the following relative proportions, viz.: of salt, two pounds; saltpeter, one quarter of a pound; carbonate of iron, one quarter of a pound; borax, one half of a pound; wood alcohol, fifteen pints; glycerin, five quarts; oil, five gallons.

879,519. CASTER. ADA R. CAVIS, Caney, Kans., assignor of one-half to The Todd Hardware & Supply Co., Caney, Kans. Filed Oct. 25, 1907. Serial No. 399,146.



1. The combination of a caster socket formed of a single piece of resilient sheet-metal and having a rounded upper portion closed at its top, a contracted intermediate portion and resilient lower portions separated by upright slips and also having flanges of U-shape in cross-section at the lower ends of said resilient portions, an apertured washer having a downwardly extending flange and also having a horizontal flange extending outward from the depending flange and disposed in the flanges on the resilient portions of the socket, an anti-friction ball, of larger diameter than the said contracted portion of the socket, arranged to turn in the rounded upper end portion of the socket, and a pintle carrying a wheel and extending upward through the apertured washer and into the socket and having a rounded upper end opposed to the anti-friction ball and also having a reduced portion disposed in the contracted intermediate portion of the socket.

2. The combination of a caster socket having a rounded upper end portion closed at its top and also having a contracted intermediate portion, an anti-friction ball, of larger diameter than the said contracted portion, arranged to turn in the upper end portion of the socket, and a pintle carrying a wheel and arranged in the socket and having a rounded upper end opposed to the anti-friction ball and also having a reduced portion disposed in the contracted intermediate portion of the socket.

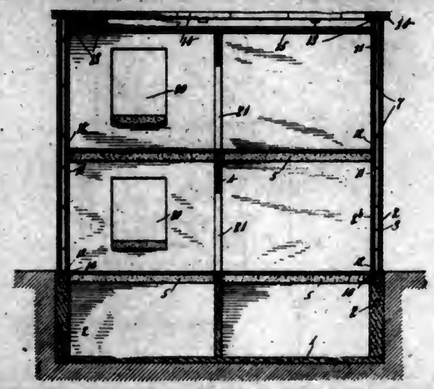
3. As an article of manufacture, a caster socket having a rounded upper end portion and a contracted intermediate portion and also having an apertured washer at its lower end and an anti-friction ball, of larger diameter than the said contracted portion, arranged to turn in its said rounded upper end portion.

4. The combination with a caster socket formed of a single piece of resilient sheet-metal and having a rounded upper portion, a contracted intermediate portion and resilient portions separated by upright slits and also having flanges of U-shape in cross-section at the lower ends of said resilient portions; of an anti-friction ball of larger diameter than the said contracted portion, arranged to freely turn in the said upper end of the socket, and a washer provided with a central aperture and having its edge portion disposed in the flanges on the resilient portions of the socket.

5. The combination with a caster socket formed of a single piece of resilient sheet-metal and having resilient portions separated by upright slits and also having flanges of U-shape in cross-section at the lower ends of said resilient portions; of an apertured washer having a downwardly extending flange and also having a horizontal flange extending outward from the depending flange and disposed in the flanges on the resilient portions of the socket.

879,520. BUILDING CONSTRUCTION. GEORGE W. CHANTIGNEY and JOSEPH P. MORENCY, Montreal, Quebec, Canada. Filed Nov. 27, 1906. Serial No. 289,209.

A building comprising an imperforate outer wall, an inner wall spaced therefrom to provide a continuous intervening air space, said inner wall being provided at different levels with ventilating openings communicating with the interior of the building, and ventilating ducts at its top, a roof supported on said inner wall at a distance below said ducts, and a coping extending across the tops of said inner and outer walls and projecting over said inner wall, whereby said roof and coping efficiently shield said ventilating ducts from the entrance of extraneous matter, substantially as described.



879,521. TOY DRUM. JULIUS CHEIN, New York, N. Y. Filed Oct. 5, 1907. Serial No. 396,018.

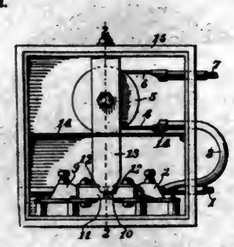


In a drum combined with a cylindrical body having an annular edge section extending outwardly, an annular band having its edge portions overturned on the inner side thereof, a non resonant band lying in contact with the inner face of said first named band and held by said overturned edge portions and a disk-shaped diaphragm having an offset outwardly extending edge portion lying in contact with the inner face of one of said overturned edge portions, the edge section of said body being held between said last named overturned edge portion and said diaphragm.

879,522. LIGHTNING-ARRESTER. GEORGE W. CLARK, Grand Rapids, Mich., assignor of one-fourth to James B. Doyle, Grand Rapids, Mich. Filed Apr. 26, 1907. Serial No. 370,346.

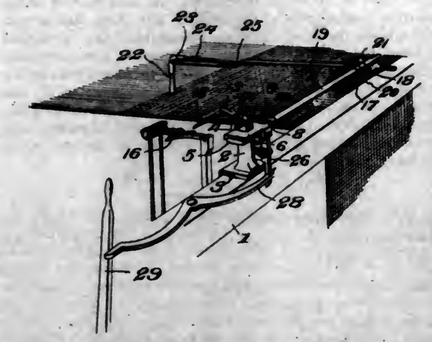
1. In a lightning arrester, a main line conductor exposed to the action of lightning, a pair of terminals spaced apart one of the same being in circuit with said conductor, a grounded conductor connected to the other terminal, and a portion in said first named conductor between the said terminals and the device to be protected from lightning formed of a series of smaller conductors connected in parallel.

2. In a lightning arrester, a main line conductor exposed to the action of lightning, a pair of terminals spaced apart one of which is in circuit with said conductor and the other connected to a grounded conductor, a series of coils in said circuit and connected in parallel, and a blow-out magnet excited by said coils and having its poles embracing the terminals.



3. In a lightning arrester, an electric circuit the positive side of which is exposed to lightning, a device to be protected connected in said circuit, a pair of terminals spaced apart, one terminal being in said circuit between said device and the exposed portion of the circuit, and the other terminal connected to a grounded conductor, a series of coils in said circuit between the terminals and the negative portion of the circuit and connected in parallel, and a magnet excited by said coils and with its poles embracing the terminals.

879,523. THIN-PLACE DETECTOR FOR LOOMS. WILLIAM F. CLAYTON, Atlanta, Ga., assignor to Clayton & Bentley Co., a Corporation of Georgia. Filed July 26, 1907. Serial No. 385,660.



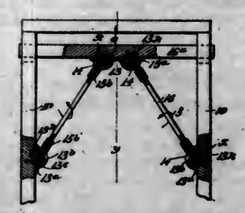
1. The herein described loom stopping device, or thin place preventer, comprising an adjustable standard, a table plate, or body carried by said standard, a socket pivotally mounted upon the end of said table, a seat carried by said socket, a rod disposed in said seat, a feeler arm having a spring controlled yielding finger, means to rigidly connect said rod and arm and a detent carried by an extension of said rod, whereby, when said detent is lowered to be struck by a moving part of the loom, the force of the blow will be communicated to a controlling part of the loom and the loom stopped.

2. The herein described loom attachment comprising the combination with a beam, a standard on said beam, a cross head at the upper end of said standard, a base at the lower end of said standard and means to secure the standard to the beam; of a plate having a slot extending longitudinally of the plate, means to adjustably secure the plate on the cross head, a socket member pivotally secured to one end of said plate, a threaded extension on said socket member, a tubular sleeve secured in the threaded extension, means to limit the downward movement of said threaded extension, a rod rotatably mounted in said tubular sleeve, a feeler point, means to adjustably and fixedly secure the feeler point to one end of said rod and means at the opposite end of the rod to support a detent, whereby when the feeler point is lowered, the detent will be engaged with parts of the loom and said loom stopped.

3. The herein described loom attachment, comprising the combination with a beam, a knock-off lever and a weft hammer; of a standard on said beam, means to secure the standard, a cross head at the upper end of the standard, a plate having a slot extending longitudinally thereof, means to adjustably secure the plate on the cross head, a socket member pivotally secured to said plate, a threaded extension on said socket member, said socket member having a seat therein, means to limit the downward swinging movement of the socket member, a tubular sleeve secured to said threaded extension, a rod extending through said sleeve, a feeler point, means to fixedly and adjustably mount said feeler point on one end of the rod, a finger on said rod, a lever pivotally secured to one edge of said plate, the lower end of which is in the path of the knock-off lever, a detent pivotally secured to said lever, an eye on said detent adapted to receive said finger and normally support the detent above the weft hammer and dispose the detent in engagement with the weft hammer to operate the knock-off lever when the feeler point is lowered.

4. The herein described attachment for looms, comprising the combination with a beam, a standard on said beam, a tubular sleeve and means to adjustably and pivotally mount the tubular sleeve to the standard; of a rod extending through said sleeve, a holder engaging the extended end of said rod, a set-screw carried by the holder adapted to adjustably secure the holder to the rod, a socket member depending from said holder, a feeler arm extending through said socket member, a locking device carried by the socket member adapted to engage and secure the feeler arm in its adjusted position and a feeler point at the outer end of said feeler arm.

879,524. ADJUSTABLE BRACE. JOHN B. COLLINS, Eros, La., assignor of one-half to Abe Cartwright, Eros, La. Filed Sept. 19, 1907. Serial No. 393,733.



In a brace of the character described, a bracket comprising a base portion having a pair of apertured lugs, and a bridge portion connecting said lugs, said bridge portion being provided with a semi-circular seat and a flat face, a fulcrum head pivotally connected between said lugs to coöperate with said seat, a cylindrical lug projecting from one face of said base portion and adapted to enter an aperture in the part to which the base portion is adapted to be secured and to be completely inclosed in said apertured part, said fulcrum head having a tubular internally threaded extension, and said bridge having a screw receiving aperture, substantially as shown and described.

879,525. WRENCH. JOSEPH N. COOK, Westover, Mo. Filed Aug. 13, 1907. Serial No. 388,398.

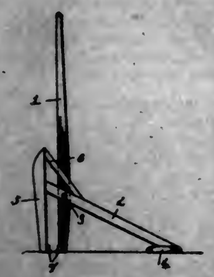
1. The combination, in a wrench, of a handle comprising a top plate and a bottom plate each having an enlarged upper end provided with an opening, said ends being offset from each other to form a chamber therebetween; a bolt extending through the openings in said ends; a wrench head disposed within said chamber and rotatably mounted upon said bolt, said head being provided with a pair of outwardly diverging jaws, a ratchet formed upon one side face of said head and provided with an axial opening through which said bolt passes; a pair of dogs located within the chamber upon opposite sides of

the ratchet, and pivoted to the adjacent wall of said chamber; and a resilient member interposed between the dogs and having its opposite ends engaged therewith to normally force the same into engagement with the ratchet.



2. The combination, in a wrench, of a handle comprising a top plate and a bottom plate each having an enlarged upper end provided with an opening, said ends being offset from each other to form a chamber therebetween; a bolt extending through the openings in said ends; a wrench head disposed within said chamber and rotatably mounted upon said bolt, said head being provided at each end with a pair of outwardly-diverging jaws; a ratchet formed upon one side face of the wrench head, and provided with an axial opening through which the bolt passes; a pair of dogs disposed within said chamber, each dog having a laterally-projecting tooth at its upper end; and a bowed spring interposed between the lower ends of the dogs and having its opposite ends fitted in openings formed therein, to force the toothed upper ends of the dogs into simultaneous engagement with the ratchet, to hold the wrench head in adjusted position with respect to the handle.

879,526. ROOT-PULLER. ROBERT A. DENOVAN, Dalkeith, Ontario, Canada. Filed Mar. 9, 1907. Serial No. 361,561.



In a root pulling device, parallel inclined braces, a vertical arm rigidly secured thereto, parallel inclined struts rigidly connecting said arm and braces, a lever handle pivotally mounted between the aforesaid braces, gripping jaws secured to the lever and arm respectively and adapted to coöperate the one with the other, and a weighted base member carried by the aforesaid parallel braces and adapted to maintain the device in operative position.

879,527. INSTEP-PAD. MATTIE DORRITY, Syracuse, N. Y. Filed Nov. 19, 1906. Serial No. 344,129.

1. As an article of manufacture, a pad for the foot, comprising a cover having a top and bottom united by stitching at their end edges and at one of their side edges, and having a side piece of flexible covering material sewed between the top and bottom at their remaining side edges, said side piece diminishing in width from a point between its ends to the end edges of the cover, and filling material within said cover.

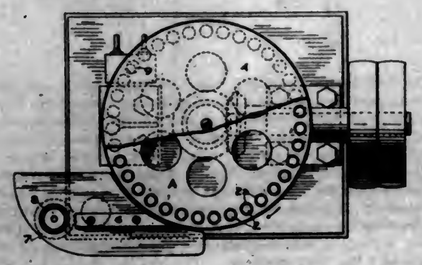


2. As an article of manufacture, a pad for the foot comprising a main pad having a cover consisting of a top and bottom connected at one side edge by a side piece diminishing in width from a point substantially mid-length toward opposite ends, said top and bottom being otherwise united at their edges by stitching, filling material within the cover, and a supplemental pad of smaller size than the main pad and of substantially semicircular outline adapted to be placed within said cover between the same and said filling material.

3. As an article of manufacture, a pad for the foot comprising a main pad having a cover consisting of a top and bottom connected at one side edge by a side piece diminishing in width from a point substantially mid-length toward opposite ends, said top and bottom being otherwise united at their edges by stitching, filling material within the cover, and a plurality of supplemental pads of smaller size than the main pad and of progressively smaller size with respect to each other adapted to be inserted within said cover between the same and the filling of the main pad.

4. As an article of manufacture, a pad for the foot comprising a main pad having a cover consisting of a top and bottom connected at one side edge by a side piece diminishing in width from a point substantially mid-length toward opposite ends, said top and bottom being otherwise united at their edges by stitching, filling material within the cover, and a supplemental pad of smaller size than the main pad and of substantially semicircular outline adapted to be placed within said cover between the same and said filling material, said supplemental pad having a thickened portion along its straight edge gradually diminishing toward opposite ends and tapering from the center of said straight edge toward all points of the remaining curved edge.

879,528. SMOOTH-EDGER FOR FABRICS. JOHN G. DORWARD, San Francisco, Cal. Filed Oct. 4, 1907. Serial No. 395,963.



1. In an apparatus of the character described, a revoluble cylindrical runner and freely turnable grooved rollers mounted in the runner near the edge and exposed through the periphery thereof whereby the edges of material may be entered into the grooves of the rollers.

2. In an apparatus of the character described, a revoluble cylindrical runner, rollers freely turnable in the runner near the circumference thereof, and exposed through said circumference, said rollers having convergent and adjustable grooves formed in their peripheries.

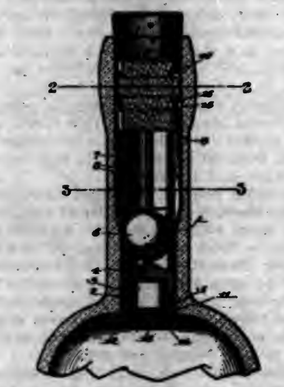
3. In an apparatus of the character described, a revoluble cylindrical runner having pockets around it near the periphery, two-part rollers turnable in said pockets and having V-shaped grooves formed between their meeting portions, and means for applying an elastic pressure to the rollers.

4. In an apparatus of the character described, a revoluble runner or support having cylindrical pockets formed around it near the periphery, rollers freely turnable in said pockets, said rollers consisting of a base portion having a reduced shank and a sleeve furnably fitting upon said shank, the meeting portion of said base and sleeve forming a V-shaped groove to receive the material to be treated.

5. In an apparatus of the character described, a revoluble runner having cylindrical pockets around it near the periphery and a V-shaped groove intersecting said pockets, rollers consisting of a base, a shank of smaller diameter, a sleeve freely slidable and turnable upon said shank, the meeting portions of said base and sleeve coinciding with the groove of the runner, and having coöperating edges, and a spring whereby the sleeve is yieldingly held in place with relation to the other part of the roller.

[Claims 6 to 9 not printed in the Gazette.]

879,529. BOTTLE-CLOSURE. JOSEPH W. DOWNING and HENRY C. DOWNING, Washington, D. C. Filed Feb. 25, 1907. Serial No. 359,221.



1. A bottle closure, comprising a casing having a contracted lower end and having a series of longitudinal inwardly projecting ribs above said contracted lower end, means for positively locking said casing within the neck of a bottle, a seat attached to the contracted lower end of the casing, a valve movable in said contracted lower end of the casing, a guard secured within the upper portion of the casing, and a movable body between said guard and valve and normally resting upon the valve.

2. A bottle closure comprising a casing provided with inwardly projecting longitudinal ribs terminating above the lower end of the casing, a valve seat attached to the lower end of the casing, a valve over said seat, a guard in the upper portion of the casing, and a movable body in the casing between the guard and valve said movable body being normally disposed at the lower end of the ribbed portion of the casing and resting on the valve below said ribbed portion of the casing.

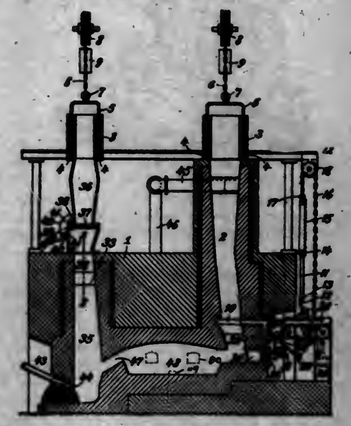
3. A bottle closure comprising a casing, a tubular valve seat attached to the lower end of the casing and having a tapering outer face, a concave valve over said seat and having a tapering inner wall to fit over the tapering portion of the valve seat, a guard in the upper portion of the casing and a movable body between said valve and guard.

4. A body closure, comprising a casing, a valve seat attached to the lower end thereof, a valve in the casing over said seat, a guard having a circumferential groove and staggered lugs on its periphery, said guard within the casing and the latter having a circumferential bead entering the circumferential groove in the guard and securing the latter in place within the casing.

5. The combination with a bottle having the bore of its neck of less diameter in its lower than in its upper portion, of a casing located within the neck of the bottle and conforming to the interior conformation thereof, a valve seat attached to the lower end of the contracted lower portion of the casing, a valve movable within said contracted portion of the casing, a guard secured in the larger upper portion of the casing, and a ball to enter said contracted lower portion of the casing and movable in the upper larger portion thereof between said valve and guard.

[Claims 6 to 8 not printed in the Gazette.]

879,530. PROCESS FOR THE REDUCTION OF COPPER ORE. LOUIS DURAND, Dumont, N. J., assignor of one-fifth to Ruben O. Currie, New York, N. Y. Filed Jan. 12, 1907. Serial No. 351,931.



1. The process for reducing copper ore which consists in subjecting copper sponge to the action of a reducent gas at a melting temperature, thereby melting the sponge and at the same time reducing the temperature of the gas, and utilize the gas at its reduced temperature to make more copper sponge.

2. The process of treating copper ore which consists in reducing copper in the ore to a spongy condition, melting the sponge by means of a reducent gas at a high temperature, the gas being thereby lowered in temperature and reducing further amounts of copper ore by said gas at its lower temperature.

3. The process of reducing copper ores which consists in first reducing the copper in the ore to copper sponge, then withdrawing the said copper sponge into a separate chamber, adding a proper flux and bringing the copper sponge to a molten condition and finally withdrawing the molten copper and the slag by separate means.

4. The process of reducing copper ores which consists first in reducing the copper in the ore to copper sponge, then drawing off the copper sponge and other products associated therewith from the bottom of the reduction chamber and introducing them immediately therefrom into another chamber, and bringing the copper sponge to a molten state by gases passing therethrough to the reduction chamber.

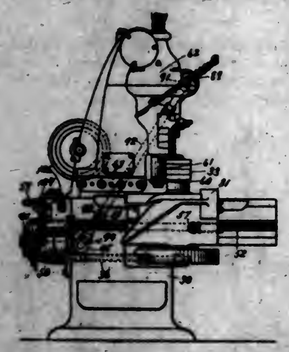
5. The process hereinbefore described of first reducing the copper in the ore to copper sponge by means of reducent gases and then immediately bringing the same to a molten condition by means of gases at a melting temperature.

[Claims 6 to 9 not printed in the Gazette.]

879,531. GEAR-GENERATING MACHINE. EDWIN R. FELLOWS, Springfield, Vt., assignor to The Fellows Gear Shaper Company, Springfield, Vt., a Corporation of Vermont. Filed Nov. 27, 1903. Serial No. 182,789.

1. In a machine having a gear-shaped cutter for cutting gear teeth in a blank by a planing cut and generating the

curves of the teeth by simultaneous and equal peripheral travel of cutter and blank, a cutter holder, a gear blank holder, means for imparting generating feed movements to said holders, rotary means for reciprocating one of the latter to impart the cutting movement, a frame carrying said reciprocable holder and pivoted on the axis of said rotary means, and means for oscillating the frame to separate the cutter and work on the non-cutting stroke.



2. In a machine having a gear-shaped cutter for cutting gear teeth in a blank by a planing cut and generating the curves of the teeth by simultaneous and equal peripheral travel of cutter and blank, a rotary cutter spindle, a gear blank holder, means for simultaneously rotating said spindle and blank holder to give the tooth-generating movements thereto, a frame in which the cutter spindle is journaled, an oscillatory driver connected to reciprocate the spindle for giving cutting movements to the cutter, said frame being pivoted to swing about the axis of said oscillatory driver, and means for swinging the frame to free the cutter on the return stroke thereof.

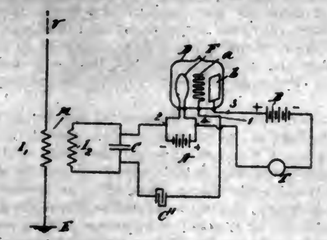
3. In a machine having a gear-shaped cutter for cutting gear teeth in a blank by a planing cut and generating the curves of the teeth by simultaneous and equal peripheral travel of cutter and blank, a pivoted frame adapted to swing toward and from the work-holder, a cutter spindle journaled and reciprocably movable in said frame, a driver for reciprocating said spindle to move the cutter past the work oscillatable about the pivotal axis of said frame, means for swinging the frame to relieve the cutter after each cutting stroke, spindle-rotating means mounted in said frame for imparting the generating feed movements to the cutter, and a drive for said spindle rotating means including a shaft jointed for universal movement to permit swinging of the frame.

4. In a gear-generating machine having a gear-shaped metal planing cutter, a work-holder and means for giving lateral tooth-generating feed movements simultaneously to the cutter and work-holder, a cutter spindle, an oscillatory driver for reciprocating the spindle and cutter, a frame journaling the spindle and pivoted upon the axis of said driver to swing toward and from the work to relieve the cutter on the return stroke thereof, a cam, and abutments carried by the frame bearing against the cam on opposite sides of its center for oscillating the frame.

5. In a gear-generating machine having a gear-shaped metal planing cutter, a work-holder and means for giving lateral tooth-generating feed movements simultaneously to the cutter and work-holder, a cutter spindle, an oscillatory driver for reciprocating the spindle and cutter, a frame journaling the spindle and pivoted upon the axis of said driver to swing toward and from the work to relieve the cutter on the return stroke thereof, a cam, and adjustable abutments carried by the frame having anti-friction rolls bearing against the cam on opposite sides of its center for oscillating the frame.

[Claims 6 to 17 not printed in the Gazette.]

879,532. SPACE TELEGRAPHY. LEE DE FOREST, New York, N. Y., assignor, by mesne assignments, to De Forest Radio Telephone Co., a Corporation of New York. Filed Jan. 29, 1907. Serial No. 354,662.



1. An oscillation detector comprising an evacuated vessel, an electrode inclosed therein, means for heating said electrode, a second electrode inclosed within said vessel, a local circuit having its terminals electrically connected to said electrodes, a conducting member inclosed within said vessel and located between said electrodes, and means for conveying the oscillations to be detected to the first mentioned electrode and said conducting member.

2. An oscillation detector comprising an evacuated vessel, two electrodes inclosed within said vessel, means for heating one of said electrodes, and a conducting member inclosed within said vessel and interposed between said electrodes.

3. An oscillation detector comprising an evacuated vessel, two electrodes inclosed within said vessel, means for heating one of said electrodes, and a grid-shaped member of conducting material inclosed within said vessel and interposed between said electrodes.

4. An oscillation detector comprising an evacuated vessel, a filament sealed therein, a source of electrical energy connected in series with said filament, an electrode sealed in said vessel, a local circuit having its terminals connected to said filament and electrode, respectively, said local circuit including a source of electromotive force and a signal indicating device, a grid of conducting material sealed in said vessel and interposed between said filament and electrode, and means for conveying the oscillations to be detected to said filament and grid.

5. An oscillation detector comprising an evacuated vessel, an electrode inclosed therein, means for heating said electrode, a second electrode inclosed within said vessel, a local circuit having its terminals connected to said electrodes, a conducting member inclosed within said vessel and located between said electrodes, a closed circuit for conveying the oscillations to be detected to said first mentioned electrode and conducting member, and a condenser in said closed circuit.

[Claims 6 to 21 not printed in the Gazette.]

879,533. CURTAIN-FIXTURE. GEORGE H. FORSYTH, Chicago, Ill. Filed Mar. 6, 1905. Serial No. 248,634.



1. The combination with a curtain stick, of a head at the end of the stick, a roller rotatably mounted in the head, and expansible means acting upon said roller to force the same laterally of the head into frictional engagement with the latter, substantially as described.

2. The combination with a curtain stick, of a hollow head at the end of the stick, a roller rotatively mounted in said head, and expansible means interposed between one side of said roller and the adjacent side of the head serving to force the opposite side of said roller into frictional contact with the side of the head adjacent thereto, substantially as and for the purpose described.

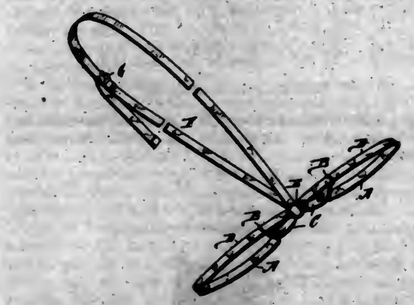
3. The combination with a curtain stick, of an elongated hollow head at the end thereof, a roller rotatably mounted in said head and adapted to peripherally contact with the window frame, and expansible means operating laterally upon said roller to create frictional contact between one side of the latter and the adjacent surface of the head, substantially as described.

4. The combination with a curtain stick, of a head carried thereby, a roller carried by said head, and an elastic thrust-member to force said roller sidewise laterally of the head into frictional contact with a side wall of the latter, whereby the rotation of said roller is retarded, substantially as described.

5. The combination with a curtain stick, of a hollow head at the end thereof, a roller rotatably mounted in said head and adapted to peripherally contact with the window casing, and a spring located and operating between one side of said roller and the adjacent side of the head to crowd said roller into frictional lateral engagement with the opposite side of the head, whereby the rotation of said roller is retarded, substantially as described.

[Claims 6 and 7 not given in the Gazette.]

879,534. BODY-GUARD. CLARENCE W. FRASER, Buffalo, N. Y. Filed February 21, 1907. Serial No. 358,596.



1. A device of the character described comprising a guard adapted to lie lengthwise and above the body, two leg-bands adapted to be attached to the legs above the knees, and a connection between said leg-bands and said guard or support.

2. A device of the character described comprising two adjustable leg-bands adapted to be applied to the legs above the knees, connecting-means between said bands, and a guard strap adapted to be passed around the neck and extend downward along the body and above the same and having its lower end connected to said connecting-means.

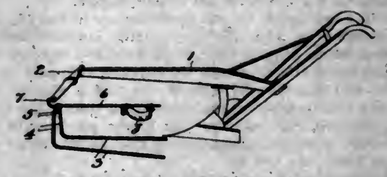
3. A device of the character described comprising a guard band adapted to be passed around the neck of the user and extend downward therefrom along the body and out of contact therewith, and leg-bands adapted to be applied to the legs and having connection with the lower end of said guard band.

4. A device of the character described comprising two leg-bands adapted to be applied to the legs of the user and being flexibly connected to permit limited lateral movement of the legs, and a guard consisting of a strap adapted to be passed around the neck and to extend downward along the body and out of contact therewith, said strap being affixed at its lower end to the flexible connection of the leg-bands.

5. A device of the character described comprising two leg-bands formed of straps, each strap having a buckle at one end, thence being passed through the buckle to form a connecting-loop and the other end thereof being secured at or near the first-mentioned end to form a leg-loop, a ring through which said connecting-loops are passed, and a strap passed through said ring and having a buckle at one end through which the other end thereof is to be passed, to form a band adapted to be passed around the neck of the user.

[Claims 6 and 7 not printed in the Gazette.]

879,535. AUTOMATIC PARIS-GREEN DISTRIBUTER. JACK P. FULLILOVE, Shreveport, La. Filed May 7, 1907. Serial No. 372,340.



1. A distributer consisting of a vibratory frame adapted to slide on the ground, a powder container mounted on said frame and adapted to be shaken by the vibrations thereof to distribute the powder, substantially as described.

2. A distributer having a part adapted to trail on the ground, a vibratory bar connected to said part and a powder container mounted on said bar, substantially as described.

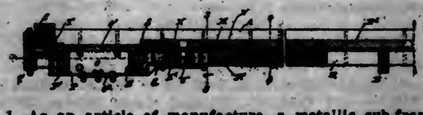
3. A powder distributer attachment for agricultural implements comprising a frame having arms adapted to bear on the ground and having a vibratory bar, a powder container attached to said bar and adapted to be shaken by the vibration of the bar to distribute the powder and means to attach said frame to the implement, substantially as described.

4. A powder distributing device for agricultural implements comprising a frame having arms adapted to bear on the ground and having a vibratory bar, and a powder containing bag adjustably mounted on said bar, substantially as described.

5. A powder distributing device for agricultural implements comprising a vibratory frame adapted to slide on the ground, a powder container secured to said frame, and a hood adapted to cover said frame and container and confine the powder within a certain area, substantially as described.

[Claim 6 not printed in the Gazette.]

879,536. SUBFRAME FOR RAILWAY-CARS. RICHARD D. GALLAGHER, Jr., New York, N. Y. Filed Mar. 14, 1907. Serial No. 362,418.



1. As an article of manufacture, a metallic sub-frame end for application beneath the under frames of cars, embodying a bolster, a center frame having beams rigidly united to the bolster and formed at their inner ends for connection to center sills extending from one sub-frame end to the other and a draft and buffing rigging housing mounted rigidly on the outer end of said center frame and forming a continuation thereof.

2. In a sub-frame adapted for application beneath the under frames of cars, the combination of separate metallic sub-frame ends, each embodying a bolster, a center frame having center beams and a buffing rigging housing rigidly connected together and wood sub-sills interposed between and connecting the beams of the sub-frame ends.

3. In a sub-frame for application beneath the under frames of railway cars, the combination with draft sills forming a housing for the draft and buffing rigging, of lon-

gitudinal beams located centrally from the line of the draft sills a distance greater than the thickness of the webs of the beams, said beams being a distance apart less than the width of the rear end of the draft and buffing rigging and having their ends positioned to form the rear stops therefor whereby buffing thrust is in alinement with and directly against the ends of the beams.

4. In a sub-frame for the underframing of railway cars, the combination with the longitudinal beams extending through the bolster, of strengthening plates applied to the sides of said beams at the ends and caps extending across and taking a bearing on the ends of said beams and plates to form the rear stops for the buffing rigging.

5. In a sub-frame for the under frames of railway cars, the combination with the body bolster, longitudinally extending beams passing through said bolster, channel irons of greater width than and overlapping the ends of the beams and forming the sides of the buffing rigging housing and spacers between the overlapping ends of the beams and channel irons whereby the beams are brought into alinement with the buffing rigging and directly receive the thrust from said rigging.

[Claims 6 to 10 not printed in the Gazette.]

879,537. DENTAL IMPLEMENT. JULIAN GARTRELL, Washington, D. C. Filed July 20, 1907. Serial No. 384,781.



1. A dental instrument for pyorrhea work having a head provided with a plane bearing surface adapted to contact with and bear against the surface of the root and having working surfaces at its opposite ends perpendicular to said plane surface, whereby said instrument is adapted to be used either with a pull or push motion.

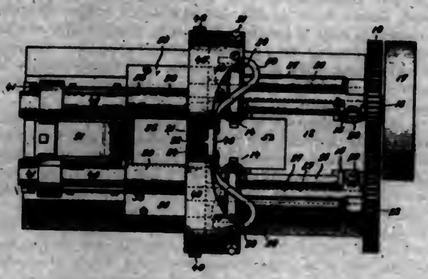
2. A dental instrument for pyorrhea work having a head provided with a perpendicular working surface at one end and a plane bearing surface perpendicular to said working surface and adapted to rest upon the surface of the root while the instrument is in use.

879,538. CORN-HUSKING MACHINE. CHARLES GORMLEY, Mount Morris, N. Y., assignor of one-half to John C. Winters and John W. Prophet, Mount Morris, N. Y. Filed Apr. 15, 1907. Serial No. 368,405.

1. In a corn husking machine, the combination with a pair of spur-wheels and means for driving the same, of a splitting knife or pin arranged between said spur-wheels and coöperating with the latter to split the husks of an ear of corn, two pairs of stripping rolls, and means for rotating said stripping rolls at a higher speed than that at which said spur wheels are rotated.

2. In a corn husking machine, the combination with a pair of yieldingly-mounted spur-wheels and means for driving the same, of a splitting knife or pin arranged between said spur-wheels and coöperating with the latter to split the husks of an ear of corn, two pairs of stripping rolls, and means for rotating said stripping rolls at a higher speed than that at which said spur-wheels are rotated.

3. In a corn husking machine, the combination with a pair of spur-wheels and means for driving the same, of a splitting knife or pin arranged between said spur-wheels and coöperating with the latter to split the husks of an ear of corn, and curved guides extending downward and outward from said splitting knife or pin adjacent to the faces of said spur-wheels.

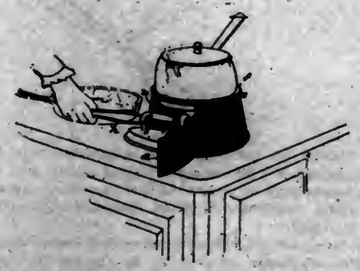


4. In a corn husking machine, the combination with a pair of yieldingly-mounted spur-wheels and means for driving the same, of a splitting knife or pin arranged between said spur-wheels and coöperating with the latter to split the husks of an ear of corn, and curved guides extending downward and outward from said splitting knife or pin adjacent to the faces of said spur-wheels.

5. In a corn husking machine, the combination with a pair of spur-wheels and means for driving the same, of an interposed splitting knife or pin, two pairs of stripping-rolls, and means, coöperating with said spur-wheels, for carrying the split husks of an ear of corn from said splitting knife or pin to the said stripping-rolls.

[Claims 6 to 18 not printed in the Gazette.]

879,539. KITCHEN APPLIANCE. MARY R. HABERMANN, Sun Prairie, Wis. Filed Aug. 24, 1907. Serial No. 390,051.

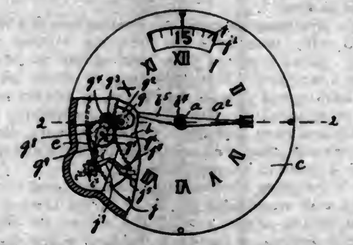


1. An appliance for the purposes described, which comprises an inverted dish shaped body having an opening and a hinge closure therefor on one side and having its top dished and formed with apertures from the center to the circumference, and a solid plate adapted to detachably fit over the apertured top to close off the central apertures therein the said plate having pendent lugs for the purposes described.

2. A new article for the purposes stated, consisting of a metal inverted dish shaped body whose top is dished and formed with apertures extending from the center to the circumference, one side of said body having an opening and a hinged closure member therefor, and a solid circular rim plate adapted to fit upon and close off the outermost ones of the apertures in the top of the body portion and a flat solid disk adapted to close off the central ones of the apertures in the said top and to fit within the circular rim, as set forth.

3. A new article for the purposes stated, which consists of a metal inverted dish shaped body whose top is dished and provided with apertures extending from the center to the circumference, one side of the said body having an opening and a hinged closure member therefor, an annular rim plate adapted to fit upon and close off the outermost ones of the apertures in the dished top of the body portion and a flat solid disk adapted to fit within the annular rim to close off the central apertures in the dished top of the body portion, the said annular rim and the solid flat disk having pendent lugs for engaging with the apertures in the dished top, all being arranged substantially as shown and for the purposes described.

879,540. TIME SPEED-INDICATING DEVICE. EDWIN J. HALL, Waltham, Mass.; Annie L. Hall executrix of said Edwin J. Hall, deceased. Filed Aug. 14, 1905. Serial No. 274,061.



1. In a time speed indicator, the combination with the center arbor of a clock movement, of a toothed gear secured thereto and thereby driven at a constant speed, a toothed gear adapted to be driven at a variable speed, speed indicating mechanism, and an actuating member for said indicating mechanism bearing a pinion which engages both said constantly and variably driven gears, substantially as described.

2. In a speed indicator, the combination with the center arbor of a clock movement, a toothed gear secured thereto and thereby driven at a constant speed, a ring gear disposed concentric to said toothed gear which is adapted to be driven at a variable speed, speed indicating mechanism, and an actuating member for said indicating mechanism bearing a pinion which engages both said constantly and variably driven gears, substantially as described.

3. In a speed indicator, the combination of a ring gear adapted to be driven at a variable speed, a constantly driven gear within said ring gear, speed indicating mechanism and an actuator for said indicating mechanism bearing a pinion which is interposed between said gears, substantially as described.

4. In a speed indicator, the combination with the center arbor of a clock movement, a toothed gear secured thereto and thereby driven at a constant speed, a gear adapted to be driven at a variable speed, speed indicating mechanism and an actuating gear for said indicating mechanism bearing a pinion which engages both said variably and constantly driven gears, substantially as described.

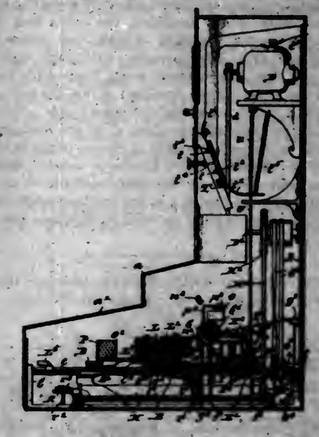
5. In a speed indicator, the combination with a center arbor of a clock movement, of a toothed gear secured thereto and thereby driven at a constant speed, a gear adapted to be driven at a variable speed, an actuating gear turning on said center arbor bearing a pinion which engages both said constantly and variably driven gears, an indicating disk also turning on said center arbor, and means for operating it which is operated by said actuating gear, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

879,541. SHOE-POLISHING MACHINE. ROBERT O. HAMMOND, Buffalo, N. Y., assignor, by mesne assignments, to Union Shoe Polishing Machine Company, Elmira, N. Y., a Corporation of New York. Filed Feb. 8, 1904, Serial No. 192,686. Renewed Nov. 18, 1907. Serial No. 402,743.

1. In a shoe polishing-machine, the combination with a foot-rest, of a suitable driving element, two oppositely traveling polishing bands, and means for transmitting motion from said driving element to said polishing bands.

2. In a shoe polishing-machine, the combination with the foot-rest, of a blacking-device movable toward and from a shoe supported on said foot-rest, oppositely traveling polishing bands serving to polish the shoe after the application of blacking by said blacking device, and means for operating the blacking device and the said polishing bands.



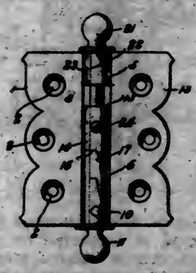
3. In a shoe polishing-machine, the combination with a suitable foot-rest, of a blacking device adapted to apply blacking to a shoe supported on said foot-rest, means for moving said blacking device away from said shoe after applying blacking thereto, a traveling polishing band serving to polish the shoe, mechanism for causing the said band to act against the shoe with increased pressure when said blacking device is moved away from the shoe, and means for operating the blacking device and said polishing band.

4. In a shoe polishing-machine, the combination with a suitable motor, of a suitably journaled revoluble feed-screw, a supporting-carriage suitably guided and having threaded connection with said feed-screw, a longitudinal driving roll, transmission mechanism connecting the said motor with said driving roll and with the feed-screw means for reversing the feed-screw, and blacking and polishing devices carried by the supporting-carriage and being operatively connected with said driving roll.

5. In a shoe polishing-machine, the combination of a reciprocating carriage, a brush-frame pivotally supported on said carriage, a revoluble brush journaled in the outer end of said frame, a polishing device carried on said carriage in rear of said brush, a blacking supply against which said brush is normally held, means for elevating said brush frame after the blacking-brush has applied blacking to the shoe, and transmission mechanism for revolving said brush and operating the polishing device.

[Claims 6 to 21 not printed in the Gazette.]

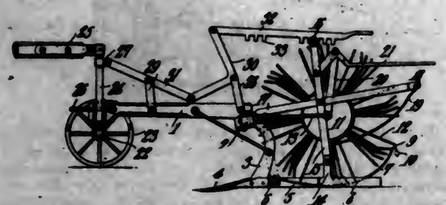
879,542. HINGE. JOHN R. HARTMAN, Davenport, Iowa. Filed June 29, 1906. Serial No. 324,085.



A hinge comprising two leaf members, one of which is provided with perforated spaced knuckles, the upper end of

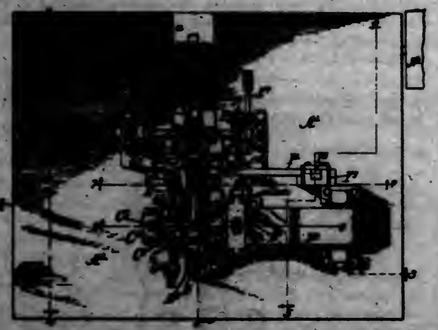
each of which is formed by two plain surfaces disposed at an obtuse angle to each other and which lie in planes at right angles to the planes of the leaf member and the meeting edges of which are diametrically disposed across the knuckles, a plug located in the perforation of the lower knuckle and having its upper end provided with angularly disposed surfaces lying in planes parallel with the surfaces of the upper ends of the knuckles, the other leaf member having a perforated knuckle which lies between the knuckles of the first said member, the lower end of the knuckle of the last said member being formed by the meeting surfaces of two planes disposed at an obtuse angle to each other and which lie at right angles to the plane of the leaf member and the meeting edges of which are diametrically disposed across the knuckle, a pintle lying in the perforations of the knuckles, and having a beveled end which engages the inclined end of the plug, said pintle having at its head a lug provided with a plane inclined surface which is parallel with the beveled surface at the opposite end of the pintle.

879,543. POTATO-DIGGER. TOLLEF HERBRAG, Hendrum, Minn. Filed June 21, 1907. Serial No. 380,135.



An implement as described comprising a beam having at its forward end a bearing, a stud slidably mounted in the bearing, a wheel supported axle attached to the lower end of the stud, a collar journaled upon the upper portion of the stud, links pivoted to the beam, a straight lever fulcrumed to one of the links and being pivotally connected with said collar, a bell crank lever fulcrumed to the other link, said bell crank lever and straight lever being pivotally connected together, an operating rod pivotally connected to the bell crank lever, a digger attached to the beam and an actiniform member journaled for rotation behind the beam and the digger.

879,544. WRAPPING-MACHINE. JOHN W. HICKS, Chicago, Ill., assignor to Oriental Candy Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 6, 1906. Serial No. 337,833.



1. The combination with mechanism for carrying and wrapping an article, of mechanism for feeding and preparatorily sizing a strip of material, a cutter in the rear of the feeding and sizing mechanism for severing the strip into articles to be wrapped, and a reciprocating feed-member serving to move the severed article rearwardly to the carrying and wrapping mechanism.

2. The combination with mechanism for carrying and wrapping an article, of means for feeding a strip of material into the machine, means for severing the strip into articles to be wrapped, a reciprocating member serving to move the article rearwardly after severance from the strip, and a plunger serving to deliver the article to the carrying and wrapping mechanism.

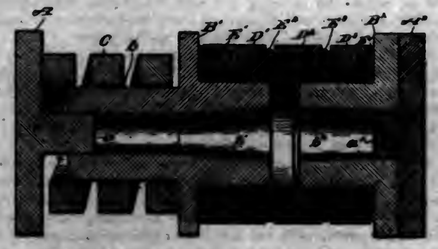
3. In a wrapping machine, the combination with mechanism for wrapping an article, of means for feeding a strip of material into the machine, a knife serving to sever the strip, a feed-finger opposed to said knife and adapted to move the article rearwardly after severance, and a plunger serving to deliver the articles to the wrapping mechanism.

4. In a wrapping machine, the combination of a carrier equipped with receptacles for receiving articles to be wrapped, means co-acting with said carrier for effecting folds of a wrapper, a feed-chute through which the articles to be wrapped pass to the carrier, means for feeding a strip of material into said feed-chute, a severing knife, and a reciprocating feed-finger adapted to move the articles rearwardly after severance from the strip and deliver them to a position above the carrier.

5. In a wrapping machine, the combination of a carrier equipped with receptacles for receiving the articles to be wrapped, means co-acting with said carrier for effecting folds of a wrapper, a feed-chute through which the articles to be wrapped pass to the carrier, means for feeding a strip of material into said feed-chute, a severing knife, a plunger serving to depress the articles from the plane of the feed-chute into the receptacles, as they pass in turn beneath the plunger, and a reciprocating feed-finger adapted to move the articles after severance through the feed-chute from the severing knife to said plunger.

[Claims 6 to 34 not printed in the Gazette.]

879,545. FRICTION-SPRING. PHILLIP HIEN, Chicago, Ill. Filed July 19, 1902. Serial No. 116,187.



1. A device of the character described comprising a series of resilient elements having inclined frictional surfaces the surfaces on adjacent elements adapted when said series of elements are subjected to compression to be relatively moved through engagement with each other thereby placing said resilient elements under tension.

2. A device of the character described comprising a series of resilient elements of graduated resisting capacity having inclined frictional surfaces adapted when said series of elements are subjected to compression to be relatively moved thereby placing said resilient elements under tension.

3. A device of the character described comprising a series of resilient rings having inclined frictional surfaces adapted when said series of rings are compressed to be relatively moved thereby placing said rings under tension.

4. A device of the character described comprising an expansible resilient ring and a compressible resilient ring, said rings having complemental inclined engaging frictional surfaces.

5. A device of the character described comprising a series of expansible resilient rings having inclined frictional surfaces and a compressible resilient ring interposed between adjacent expansible rings and having complemental inclined frictional surfaces.

[Claims 6 to 17 not printed in the Gazette.]

879,546. VENDING-MACHINE. HARRY R. HOLBROOK, Attleboro, Mass. Filed Sept. 19, 1904. Serial No. 224,938.



1. In a vending machine, the combination of a base, a hollow central column supported on the base, a coin chute reciprocally supported in the central column, a series of merchandise hoppers rotatably secured around the central column, a latch supported on the merchandise hoppers adapted to first receive the merchandise and then deliver the same, means for rotating the merchandise hoppers around the central column, and mechanism on the coin chute adapted to operate the latch on the merchandise hoppers to receive the merchandise by the reciprocation of the coin chute and then deliver the merchandise on the dropping of the coin.

2. In a vending machine, the combination of a hollow base having an open delivery chamber and a coin receptacle, a hollow column centrally supported on the base, a coin chute in the hollow column, means for reciprocating the coin chute, a series of merchandise hoppers and a transparent cylinder rotatably secured around the hollow column, means for rotating the hoppers and cylinder around the column, mechanism on the coin chute adapted to engage in succession with mechanisms on the hoppers to automatically release an article of merchandise from a hopper on the dropping of a coin in the coin chute, means for automatically holding a hopper in its delivery position over the delivery compartment, a top in which is a coin slot, and means for locking the coin slot against the insertion of a coin when the hoppers are out of their delivery position, as described.

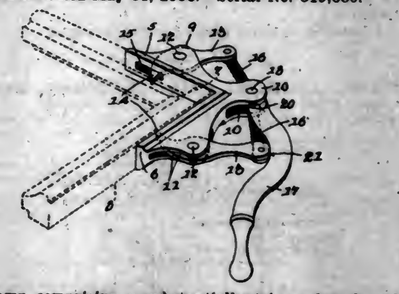
3. The combination with a vending machine of a hollow column b having the opening b', the aperture b^2 and the slot b^3, a coin chute c having the sides c' c', the bottom c^2, the curved upper end c^3 and the teats c^4 c^4, a release lever c^5 shaped to form a continuation of the coin chute c and pivotally secured at an angle to the lower end of the chute by the pin c^6, a coiled spring c^7 connected with the coin chute and the release lever which is constructed to have the stop arms c^8 c^8 and the L-shaped end c^9, the slide c^{10} secured to the coin chute by the pin c^6, the coiled spring c^{11} secured to the slide c^{10} and to the column b, a series of merchandise hoppers f f each hopper consisting of a flattened tube having the slot f', the aperture f^2, the opening f^3, the projections f^4 f^4, the ears f^5 and f^6, a latch f^7 pivotally secured to the ears f^5 by the pin f^6 and having the hook-shaped lower end f^8, the ears f^{10} and the yoke f^{11}, an operating lever f^{12} having the notched finger f^{13} and the end f^{14}, a pin f^{15} for pivotally securing the operating lever f^{12} to the latch f^7, and a flat spring f^{16} secured to the ears f^5 and bearing on the upper end of the operating lever f^{12}, as described.

4. A vending machine embodying a base, a cylinder, a cap thereon formed with radial openings, a revoluble merchandise hopper, and means for discharging merchandise from said hoppers involving a coin actuated depressible coin chute adapted to enter said openings upon its depression.

5. A vending machine, embodying a central movable coin chute, a series of merchandise hoppers mounted to rotate thereabout, means operated by said chute and the dropping of a coin for discharging merchandise from said hoppers, and means for permitting movement of said coin chute when one of said hoppers is in discharge position.

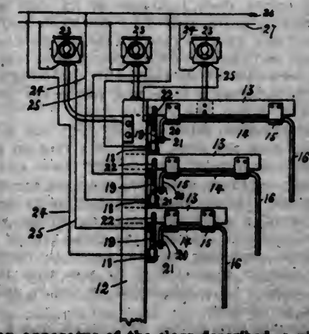
[Claims 6 to 11 not printed in the Gazette.]

879,547. MITER-CLAMP. THOMAS B. HOLTER, Bloomsburg, Pa. Filed May 31, 1906. Serial No. 319,630.



A clamp comprising a substantially tri-angular shaped base having angularly disposed perforated arms adapted to engage the mitered ends of the strips to be united and provided with a plurality of sets of spaced lugs, the central set of lugs being disposed at the juncture of said arms and extended beyond the adjacent sets of lugs, clamping jaws having their intermediate portions pivoted between the outer sets of lugs and provided at their inner ends with terminal spurs passing through the perforations in the arms for engagement with the adjacent edges of the strips, a lever pivotally mounted for swinging movement between the lugs of the central set and having its intermediate portion curved laterally and its free end terminating in an operating handle, and links forming a pivotal connection between the outer ends of the clamping jaws and the pivoted end of the operating lever, the pivot pins of the links and handle being disposed in alinement with each other when said handle is moved to operative position, thereby to lock the spurs in engagement with the strips.

879,548. SIGNALING APPARATUS. JEWET G. HOMET, Scranton, Pa. Filed Oct. 8, 1907. Serial No. 396,450.



1. In an apparatus of the class described, a plurality of electric lamps connected in parallel, and means whereby

said lamps are consecutively extinguished momentarily by a moving car.

2. In an apparatus of the class described, a plurality of lamps, and means whereby said lamps are consecutively extinguished momentarily by a moving car.

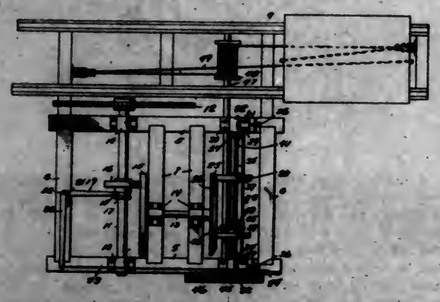
3. In an apparatus of the class described, a railway track, a car movable upon said track, a plurality of electric lamps spaced apart and connected in parallel, and means whereby said lamps are momentarily extinguished consecutively by the moving of said car.

4. In an apparatus of the class described, a railway track, a car movable on said track, a plurality of electric lamps spaced apart and connected in parallel, and means operative by said car whereby said lamps are consecutively extinguished momentarily.

5. In an apparatus of the class described, a plurality of electric lamps disposed at spaced intervals and connected in parallel, and means operative from a moving car whereby said lamps are momentarily extinguished consecutively.

[Claims 6 to 9 not printed in the Gazette.]

879,549. GEARING. NATHAN E. HOWARD, Statesboro, Ga. Filed Mar. 4, 1907. Serial No. 360,383.



1. The combination with a drive shaft and a countershaft driven from the drive shaft, of a friction gear carried by the countershaft and having plane and beveled faces, bearings, eccentrics arranged for movement in the bearings, a driven shaft journaled at its ends in the eccentrics, friction gears carried by the said driven shaft and adapted to coöperate one with the plane face of the first named friction gear and the other with the beveled face thereof, and means for moving the eccentrics whereby one or the other of the two gears will be brought into engagement with the first named friction gear and whereby both of the gears may be moved out of such engagement.

2. The combination with a drive shaft and a countershaft driven from the drive shaft, of a friction gear carried by the countershaft and having plane and beveled faces, bearings, eccentrics arranged for movement in the bearings, a driven shaft journaled at its ends in the eccentrics, friction gears carried by the shaft and adapted to coöperate one with the plane face of the first named friction gear and the other with the beveled face thereof, a member connected at its ends with the eccentrics, said member being adapted to be rocked, and means for rocking the member.

3. The combination with a drive shaft and a countershaft driven from the drive shaft, of a friction gear carried by the countershaft and having plane and beveled friction faces, bearings, eccentrics arranged for movement in the bearings, a driven shaft journaled at its ends in the eccentrics, friction gears carried by the driven shaft and adapted to coöperate one with the plane face of the first named friction gear and the other with the beveled face thereof, a member connected at its ends with the eccentrics, said member being adapted to be rocked, and a lever for rocking the member.

4. The combination with a drive shaft and a countershaft driven from the drive shaft, of a friction gear carried by the countershaft and having plane and beveled friction faces, bearings, eccentrics arranged for movement in the bearings, a driven shaft journaled at its ends in the eccentrics, friction gears carried by the shaft and adapted to coöperate one with the plane face of the first named friction gear and the other with the beveled face thereof, an arcuate frame pivotally mounted for rocking movement, said frame being pivotally connected at its ends with the eccentrics at points diametrically opposite to the points of connection of the shaft therewith, a lever mounted upon the frame for rocking movement longitudinally and transversely thereof, said lever being adapted when rocked longitudinally to shift one of the gears carried by the driven shaft and to rock the frame when rocked transversely so as to bring one or the other of the gears into engagement with the first named friction gear or to move both of the said gears out of such engagement.

5. The combination with a drive shaft and a countershaft driven from the drive shaft, of a friction gear carried by the countershaft and having plane and beveled faces, bearings, eccentrics arranged for movement in the bearings, a driven shaft journaled at its ends in the eccentrics, friction gears carried by the driven shaft and adapted to coöperate one with the plane face of the first named friction gear and the other with the beveled face thereof, and means for moving the eccentrics in opposition with respect to each other whereby one or the other of the two gears will be brought into engagement with the first named friction gear.

879,550. PIPE-COUPLING. CHARLES A. HUFFMASTER, San Leandro, Cal. Filed Nov. 20, 1906. Serial No. 344,209.



The combination with pipe sections and a union sleeve or collar therefor, one of said sections having an annular depression on its interior, and a tubular sleeve of soft compressible metal having a portion intermediate of its ends expanded into said depression to permanently lock the sleeve to the section, and having its outer end turned outwardly and adapted to be clamped between the adjacent ends of the sections.

879,551. CLOTH-LAYER. THOMAS S. JOHNSON, Bluefield, W. Va. Filed Apr. 20, 1907. Serial No. 369,298.



1. In a cloth laying machine, a carriage having means for supporting the cloth to be folded, and a gage extending the entire length of the carriage and adjustable transversely of the same.

2. In a cloth laying machine, a carriage including a bed plate provided with depending traction wheels and having spaced side walls, tension rollers journaled in the side walls at the opposite ends of the carriage and arranged in semi-circular form, a roller disposed in alinement with the bed plate at each end thereof, auxiliary rollers spaced from the bed plate and extended below the latter, traction rollers pivotally mounted on the opposite ends of the machine and adapted to bear against the cloth to be folded, and a longitudinal gage bar adjustable laterally of the carriage and having openings formed therein for the reception of the tension and auxiliary rollers, respectively.

3. In a cloth laying machine, a carriage having spaced tension rollers adapted to engage the cloth to be folded, a gage extending longitudinally of the carriage and slidably mounted for lateral movement on said rollers, and a traction roller pivotally mounted on one end of the carriage.

4. In a cloth laying machine, a reversible carriage, tension rollers mounted for rotation on the carriage and arranged in substantially semi-circular form, traction rollers pivotally mounted on the opposite ends of the carriage, and a longitudinal gage adjustable laterally of the carriage and having openings formed therein for the reception of the tension rollers.

5. In a cloth laying machine, a reversible carriage having a bed plate and provided with oppositely disposed side walls, tension rollers journaled in the side walls for engagement with the cloth, traction rollers pivotally mounted on the opposite ends of the carriage, a longitudinal gage adjustable laterally of the carriage and provided with openings for the reception of the tension rollers, and means for clamping the gage to the bed plate.

[Claims 6 and 7 not printed in the Gazette.]

879,552. BROWN AZO DYE AND PROCESS OF MAKING SAME. GEORG KALISCHER, Frankfort-on-the-Main, Germany, assignor to Cassella Color Company, New York, N. Y. Filed Sept. 4, 1907. Serial No. 391,386.

1. The process for the manufacture of monoazo dyes which consists in combining one molecule of the diazo compound of an orthoaminophenol derivative with one molecule of a diaminodiphenyl- or diaminophenylnaphthyl-ether sulfonic acid of the formula

$$C_6H_3NH_2(1)NH_2(3)OC_6H_4SO_3H(4)$$

or

$$C_6H_3NH_2(1)NH_2(3)OC_{10}H_4SO_3H(4).$$

substantially as described.

2. As new products the monoazo dyestuffs, thus obtained, corresponding to the

$$X\text{-}N:N\text{-}C_6H_3NH_2(1)NH_2(3)O.R.SO_3Na(4)$$

(wherein X signifies the radical of an orthodiazophenol and R an aromatical radical as phenyl or naphthyl), being dark powders, soluble in water with orange to brownish-red color, soluble in concentrated sulfuric acid with orange to red color, dyeing unmordanted wool in brownish-orange to brownish-red shades changing into brown shades by after-chroming, substantially as described.

879,553. PROCESS OF MORDANTING WOOL. SIGMUND KAPFF, Aix-la-Chapelle, Germany, assignor, by mesne assignments to Nitritfabrik Aktiengesellschaft, Cöpenick, near Berlin, Germany. Filed Jan. 7, 1905. Serial No. 240,080.

1. The herein described process of mordanting wool, consisting in bringing bichromates and free formic-acid into contact with the wool at a boiling temperature so that they may act upon each other under the influence of the wool without the addition of sulfuric-acid for setting free the chromic-acid.

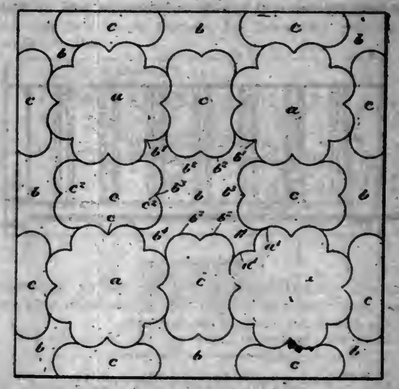
2. The herein described process of mordanting wool by means of bichromate consisting in bringing the wool into contact with a solution of bichromate and free formic-acid, boiling such solution in the presence of the wool and thus allowing the same to act upon the wool.

3. The herein described process of mordanting wool by means of bichromate, consisting in boiling the wool in an aqueous solution of bichromates and free formic-acid.

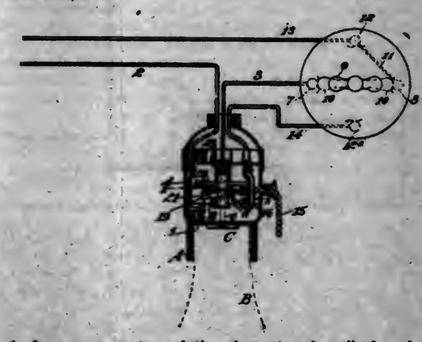
4. The herein described process of mordanting wool by means of bichromate consisting in bringing the wool into a bath containing about one part by weight of bichromates and about one part by weight of formic-acid and boiling this bath in the presence of the wool to be mordanted.

879,554. TILING FOR COVERING FLOORS AND WALLS. EDWARD M. KILBRIDE, Jersey City, N. J. Filed Nov. 18, 1905. Serial No. 287,954.

In a tile structure, the combination of pivot tiles having rounded edges, binder tiles of a general cruciform shape coöperating with the pivot tiles which are located at the ends of the arms of the binder tiles, and key tiles intervening between the pivot tiles and located on opposite sides of the arms of the binder tiles and binding therewith.



879,555. INCANDESCENT-LAMP CONTROL. ROY E. KIMBALL, Fruitvale, Cal. Filed Mar. 30, 1906. Serial No. 308,830.



1. In an apparatus of the character described, a lamp socket with a plurality of electrical circuits, fixed conducting plates with independent connections through said circuits, a post having connection with the main circuit, a ratchet disk having electrical connection with the post, and carrying arms adapted to make successive contact with the conducting plates, an insulating disk and pawls carried thereby, and means to engage the pawls and advance the ratchet disk.

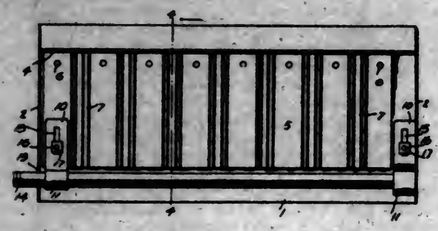
2. In an apparatus of the character described, a lamp socket, a main circuit, local means to complete and interrupt the circuit, said means including a turnable ratchet disk with arms, fixed independently connected conducting surfaces with which said arms are caused to successively contact when turned, and connections between the main circuit through the lamp, and the conducting surfaces.

879,556. GAS-BURNER. EDWARD S. LAUHON, Catlettsburg, Ky. Filed June 14, 1907. Serial No. 378,961.

1. A gas burner including connected plates constructed to afford transverse burner pipes, a gas pipe arranged rearwardly of said burner pipes and longitudinally with relation to said plates, and brackets supporting said gas pipe and mounted for transverse adjustment with relation to said plates, said gas pipe having openings formed to register severally with said burner pipes.

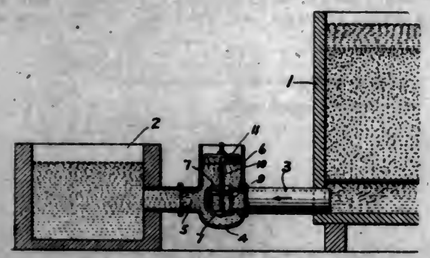
2. A burner of the type set forth, comprising a plate formed with a depending front portion, a second plate secured to the under surface of said first plate and

formed with deep transverse corrugations, and a gas pipe arranged longitudinally of said plates rearwardly of said corrugations and having openings formed to register



therewith, said depending portion having openings of larger size than and formed to register with said corrugations as and for the purpose set forth.

879,557. AUTOMATIC FLOW-CONTROLLER. JOHN W. LEDOUX, Swarthmore, Pa., assignor to Simplex Valve & Meter Company, Camden, N. J., a Corporation of New Jersey. Filed July 11, 1907. Serial No. 383,188.



1. The combination of a conduit having a contracted section, a chamber connected with said section so that liquid flowing in said conduit rises in said chamber, a device movable in said chamber by liquid controlled by the head inducing flow in said conduit, a valve for controlling the flow through said conduit, and mechanism connecting said device with said valve so that the position of said device regulates the position of said valve.

2. The combination of a filter, a conduit having a contracted section through which said filter discharges, a chamber, a tube connecting said conduit with said chamber, a device movable in said chamber by liquid from said conduit, a valve for regulating the flow through said conduit, and mechanism whereby said device is connected with and operates said valves.

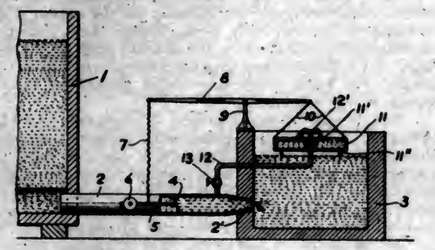
3. The combination of a conduit having a contracted section, a chamber connected with said conduit, a device in said chamber movable by liquid from said conduit subject to the restraining action of said section, a valve for controlling the flow through said conduit, and mechanism whereby the position of said device regulates the position of said valve.

4. The combination of a conduit having a contracted section, a valve for controlling the flow through said conduit, a reciprocating device connected with said valve, and a chamber containing said device, said chamber having connections on opposite sides of said device with a normal section and the contracted section of said conduit.

5. The combination of a conduit having a contracted section, a valve for controlling the flow through said conduit, a reciprocating device connected with said valve, means for balancing said valve and device, and a chamber containing said device, said chamber having connections on opposite sides of said device with a normal section and the contracted section of said conduit.

[Claim 6 not printed in the Gazette.]

879,558. AUTOMATIC FLOW-CONTROLLER. JOHN W. LEDOUX, Swarthmore, Pa., assignor to Simplex Valve & Meter Company, Camden, N. J., a Corporation of New Jersey. Filed July 11, 1907. Serial No. 383,189.



1. The combination of a conduit, a valve for controlling said conduit, a vessel into which said conduit discharges, and mechanism whereby the load in said vessel regulates said valve so as to maintain a substantially uniform rate of flow through said conduit.

2. The combination of a valve, a vessel having a restricted outlet for continuously discharging a liquid delivered thereto, and mechanism whereby the load in said vessel regulates the position of said valve.

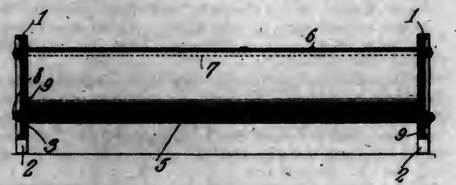
3. The combination of a conduit, a balanced vessel having an outlet through which its variable load discharges continuously and automatically, and means whereby the position of said vessel controls the flow through said conduit.

4. The combination of a conduit, a valve in said conduit, a fulcrumed lever connected with said valve, and a vessel connected with said vessel having a constantly open outlet and said lever, said conduit discharging into said vessel.

5. The combination of a filter, an effluent chamber, a conduit connecting said filter with said chamber, a valve controlling said conduit, a vessel, and balancing mechanism connecting said valve and vessel whereby the load in said vessel regulates said valve.

[Claim 6 not printed in the Gazette.]

879,559. FEED-TROUGH. EDWARD A. LEE, Vinita, Okla. Filed July 15, 1907. Serial No. 383,759.



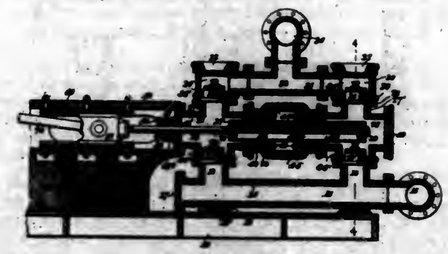
1. A feed trough comprising heads having concentric arcuate ribs thereon, a transversely curved plate interposed between the heads and constituting the trough body, the ends of said plate being disposed between the ribs upon the heads, and devices outside the trough body for detachably binding the heads upon the ends of the plate.

2. A feed trough comprising heads having concentric arcuate ribs thereon forming arcuate grooves therebetween, said grooves being V-shaped in cross section, a transversely curved plate interposed between the heads and having its ends seated within the grooves, said plate constituting the trough body, and devices outside the body for detachably binding the heads upon the plate to wedge the plate ends within the grooves.

3. A feed trough comprising heads having concentric arcuate ribs thereon forming grooves therebetween, each of said grooves being V-shaped in cross section, a transversely curved plate interposed between the heads and having its end portions seated within the grooves, the longitudinal edges of said plate being rolled, and tie devices connecting the heads and extending through the rolls, said devices being disposed to detachably hold the heads and plate in engagement.

4. A feed trough comprising oppositely disposed heads, each head having concentric arcuate ribs thereon forming a V-shaped groove therebetween, a transversely curved plate interposed between the heads and constituting the body of the trough, the ends of said plate being seated within the grooves, and the rods outside the body and adjustably connecting the heads and disposed to detachably bind them upon the plate ends.

879,560. TRIPLEX PUMP. DANIEL F. LEPLEY, Connellsville, Pa. Filed Oct. 5, 1905. Serial No. 281,516.



1. In a triplex pump, three pairs of pumping cylinders arranged in parallel relation and separated from each other to form clear working spaces between and around the cylinders, a sole plate, and suction inlet pipes supported by the sole plate and extending under and forming supports for the several pumping cylinders.

2. In a triplex pump, three pairs of pumping cylinders arranged side by side in parallel relation, suction inlet pipes extending under the cylinders and forming elevating supports therefor, the inlet pipes being parallel with the longitudinal axes of the cylinders to afford unobstructed working spaces between them.

3. In a triplex pump, three pairs of pumping cylinders arranged side by side and separated to form clear working spaces, a separate base for each pair of cylinders, said base being formed by the suction inlet pipe leading to said cylinders, the inlet pipes being detachable from the cylinders and movable laterally to release the valve seats.

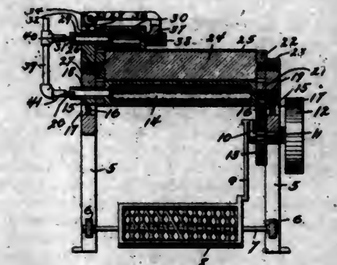
4. In a triplex pump, a plurality of pumping cylinders arranged in pairs and separated from each other to form clear working spaces around them, a sole plate, suction inlet pipes arranged under the cylinders and forming the sole supports therefor, the suction inlet valves of the pumps being disposed between said suction pipes and the cylinders, and liners disposed between the bottoms of the pipes and the sole plate to permit dropping of the pipes and their lateral movement to free the valve seats.

5. In a pump, a pair of alining cylinders, a center piece connecting them, the center piece and cylinders having bolting flanges, both of which are recessed, bushings having annular flanges confined in said recesses, said bushings being counter-bored to form packing spaces, wear rings and packing members arranged within said packing spaces to permit the ready renewal without detaching the bushing, and glands engaging the outer wear ring and serving to compress the packing.

[Claims 6 and 7 not printed in the Gazette.]

879,561. IRONING-MACHINE. LEWIS C. LEWIS, Columbus, Ohio, assignor to The Monarch Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed Feb. 25, 1907. Serial No. 359,082.

1. An ironing machine comprising a comparatively long fabric covered roller, a long hollow metallic roller which bears upon one side of the fabric covered roller, a frame supporting said rollers at both ends, a short hollow metallic roller which bears upon the long fabric covered roller, a yielding bearing carried by the frame for one end of the short roller, and a movable bearing member pivoted to the frame for the opposite end of the short roller, and foot power devices for imparting rotation to all of said rollers.



2. In a device of the character described, the combination with a supporting frame, of a fabric covered roller journaled in said supporting frame, a hollow metallic roller which bears against the underside of the fabric covered roller, spring bearings in which said last named roller is mounted, means for heating said roller, a pinion carried by said roller, a pinion carried by the fabric covered roller with which said first named pinion meshes, a shaft, a balance wheel mounted upon said shaft, foot power connections for imparting movement to said shaft and said balance wheel, a gear wheel mounted upon the shaft which meshes with the pinion of the hollow metallic roller, a second short hollow metallic roller, a pinion connected to said second short roller, a second pinion mounted upon the fabric covered roller with which the last named pinion meshes, a spring bearing for the short roller, and a pivoted arm adapted to support the outer end of the short roller, said arm serving to hold said roller against lateral movement.

3. In a device of the character described, the combination with a supporting frame, of a fabric covered roller journaled in said supporting frame, a long hollow metallic roller of substantially the same length as the fabric covered roller, spring bearings in which said last named roller is mounted, said spring bearing serving to hold said roller into engagement with said fabric covered roller, means for heating said roller, a pinion carried upon each end of said hollow metallic roller, a pinion mounted upon each end of the fabric covered roller, the pinions of the fabric covered roller meshing with the pinions of the hollow metallic roller, foot power devices for imparting rotation to the long metallic roller, a short hollow metallic roller of considerably less length than the fabric covered roller, a pinion connected to said short roller, said pinion meshing with one of the pinions of the fabric covered roller, and an arm connected to the supporting frame at one end of the short metallic roller and forming a bearing for the opposite end of said short metallic roller.

879,562. BRACKET-HANGER FOR WINDING-MACHINES. THOMAS LEWIS, Scranton, Pa. Filed Aug. 12, 1904. Serial No. 220,528.

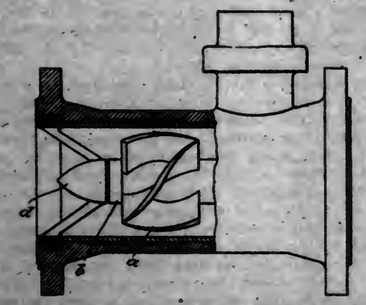
As a new article of manufacture an integral bracket for winding machines and the like, comprising a vertical base-plate formed with means whereby the same can be attached to a vertical support, a lateral arm projecting outwardly from the upper portion of the base plate and having the extremity thereof extended downwardly and hooked to form a bearing for a thread guide, the said bracket being provided at an intermediate point with a principal bearing opened both top and bottom, an auxiliary bearing closed at the bottom on one side of the principal bearing, and a closed bearing located upon the opposite side of the bracket, an arm projecting downwardly from the base-plate and having the lower extremity thereof curved upwardly to form two bearings for a swift, an intermediate support projecting from the base-plate and

formed with a bearing adapted to receive actuating rollers for operating the spindles carried by the first mentioned bracket, and a continuous rib extending under the intermediate support longitudinally along the downwardly projecting arm and into the curved end of said arm, the said



rib accomplishing the triple function of strengthening the arm, of dividing the bearings at the lower end of the arm into two portions, and of strengthening the before mentioned intermediate support.

879,563. LIQUID-METER. RICHARD LOHSE, Breslau, Germany. Filed Aug. 8, 1906. Serial No. 329,649.

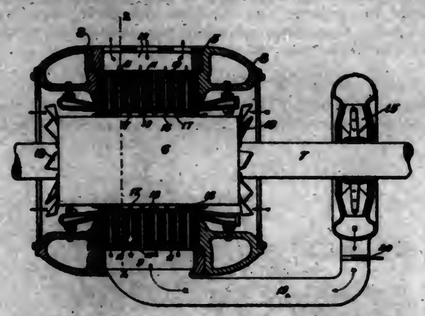


In a fluid meter, the combination of a cylindrical casing, a conical forward bearing block provided with an axially extending conical recess in its base, a shaft of the same diameter as the base of said forward bearing block, a tapered portion extending from the forward end of said shaft into the conical recess of said bearing block and formed with a taper corresponding to that of said recess, and a measuring wheel carried by said shaft, substantially as described.

879,564. TURBO-ALTERNATOR. CHARLES E. LORD, Norwood, Ohio, assignor to The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed June 7, 1905. Serial No. 264,159.

1. In a dynamo-electric machine, a rotatable field magnet, a stationary armature having ventilating passage-ways which permit a flow of air from the periphery of the machine through said passageways and out again at the periphery of the machine, in combination with means for confining the air to said passage-ways while flowing through said stationary armature so as to prevent same from entering the air-gap between the rotatable field magnet and the armature, means external to the machine for causing a current of air to flow through said passage-ways, and means carried by the field magnet for forcing an independent current of air through the air-gap.

2. In a dynamo-electric machine, a rotatable member, a stationary member provided with ventilating passage-ways arranged substantially concentrically about the axis of said rotatable member, means for cutting off direct communication between said passage-ways and the air-gap of the machine, means external to the machine for forcing air through said passage-ways, and means for producing an axial ventilation through said air-gap.



3. In a dynamo-electric machine, a stator having passageways through the core thereof, a rotor, means for causing a current of air to flow through the stator core passageways, means for causing a current of air to flow through the air-gap between the stator and rotor, and means for preventing said current of air from entering the stator after it has passed through the air-gap.

4. A dynamo-electric machine having a rotor, a stator surrounding said rotor and provided with ventilating passageways through its core substantially concentric with said rotor, said machine being constructed to permit a ventilating blast of air to flow through the air-gap between the rotor and stator without entering the stator core passageways while flowing through the machine, and means for forcing a blast of air through the air-gap.

5. In a dynamo-electric machine, a stationary member having passageways formed therethrough, a rotatable member, means for supplying a ventilating blast of air to said rotatable member, means for supplying a ventilating blast of air to the passageways of said stationary member, and means for regulating the relative intensities of said blasts.

[Claim 6 not printed in the Gazette.]

879,565. AUTOMATIC PRESSER-FOOT-LIFTING MECHANISM FOR SEWING-MACHINES. FRANK W. MERRICK, Boston, Mass. Filed July 2, 1906. Serial No. 324,293.



1. In combination, the bar, a clamp applied thereto having in connection with one of the members thereof an outward extension, a strut having one of the ends thereof in bearing contact with a seat on the other member of the clamp, a lever-like toggle-member in bearing contact with an abutment with which the said extension is provided and also with the other end of said strut, and a tappet co-acting with said lever-like toggle-member to close said clamp upon the bar and then occasion endwise movement of the bar.

2. In combination, the bar, a clamp applied thereto having in connection with one of the members thereof an outward extension, a strut having one of the ends thereof in bearing contact with a seat on the other member of the clamp, a lever-like toggle-member in bearing contact with an abutment with which the said extension is provided and also with the other end of said strut, and a tappet co-acting with said lever-like toggle-member to close the clamp upon the bar and move the latter endwise, the force transmitted from said tappet acting along lines at that side of the knuckle or joint of the toggle at which the bar is located.

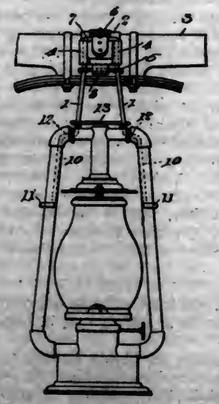
3. In combination, the bar, a clamp applied thereto, a strut having rounded ends with one thereof fitted to a corresponding seat on one member of the clamp, a lever-like toggle-member fitting the other end of the said strut and a rounded abutment on the other member of said clamp, and a tappet co-acting with the said toggle-member.

4. In combination, the bar, a clamp applied thereto and having one of the members thereof provided with an outward extension furnished with a rounded or convex abutment, a strut having rounded or convex ends with one thereof fitted to a cup or concavity in the other member of the clamp, a toggle-member having opposite concavities receiving the said abutment and the other end of the said strut, and a tappet engaging with said toggle-member and transmitting force along lines passing at that side of the knuckle or joint of the toggle at which the bar is located, to engage the clamp with the bar and move the latter endwise.

5. In combination, the bar, a sleeve applied to the said bar and provided with an outward extension, a movable clamp-member for engagement with said bar, an abutment screw applied to the said extension and having a rounded or convex inner end, a strut having rounded or convex ends with one thereof fitted to a cup or concavity in the said movable clamp-member, a coöperating toggle-member having opposite concavities receiving the rounded inner ends of the said abutment screw and strut, and a tappet co-acting with the said toggle-member.

[Claims 6 to 13 not printed in the Gazette.]

879,566. LANTERN-HOLDER. ADIN W. MITCHELL, Georgetown, Ohio. Filed Jan. 28, 1907. Serial No. 354,418.



1. A lantern holder comprising two wires having at their upper ends an attachment device for connecting with the vehicle, a cross connection between said wires at a point intermediate their ends, spring arms extending downward from the point of cross connection and provided at their lower ends with hooks to engage the lantern frame, and additional hooks extending from said wires near the point of said cross connection to engage the upper part of the lantern frame.
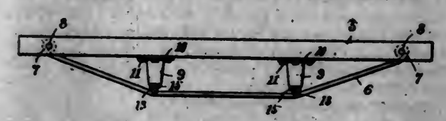
2. A lantern holder comprising a pair of supporting arms having downwardly inclined portions and vertical portions extending downwardly from the lower ends thereof, means near the upper ends of said arms for securing the same to the vehicle, hooks near the lower ends of said vertical portions adapted to engage the side members of a lantern, a cross connection between said arms near the upper end of said vertical portions, and hooks secured to said arms near the point of cross connection and adapted to engage the upper end of said lantern frame.

3. A lantern holder comprising a pair of supporting arms having downwardly inclined portions and vertically extending portions, horizontal portions connecting said inclined portions with said vertical portions, a cross member extending between said arm and around said horizontal portion and having hooks formed at the ends thereof adapted to engage the upper portion of the lantern frame, and hooks near the lower ends of said vertical portions adapted to engage the side members of said lantern frame, and means for securing said arms to the vehicle.

4. A lantern holder comprising a pair of supporting arms, means near the upper ends of said arms for attaching the same to the vehicle, a spring secured to and extending between said arms intermediate their ends, hooks secured to said arms near their point of connection with said spring and adapted to engage the upper portion of a lantern frame, and downwardly extending portions carried by said arms and provided with hooks near their lower ends adapted to engage the side members of said lantern frame.

5. A lantern support comprising a pair of supporting arms, a plurality of hooks carried by said arms and adapted to engage the lantern frame, a clip secured to the upper end of said arm and adapted to engage a portion of the vehicle, a bar extending between said arms near the lower end of said clip, a strap secured to said clip and extending beneath that portion of the vehicle frame engaged by said clip, around said bar, thence upward over said clip, and a buckle carried near the upper end of said arms adapted to engage said strap.

879,567. TRUSS. HENRY L. MORTIMER, Sound Beach, Conn., assignor of one-half to John Davenport, Stamford, Conn. Filed Oct. 8, 1907. Serial No. 396,407.



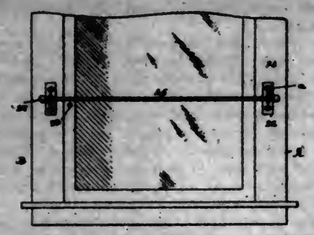
1. In a truss of the kind described, the combination with a bed and rod having its opposite ends connected to the said bed, a hollow post attached to the underside of the bed, a screw freely passing through an opening in the post and having a recessed end to engage the said rod, and a nut threadably attached to the screw in a way to adjust the same in or out of the post.

2. In a truss of the kind described, the combination with a bed and rod having its opposite ends connected to the said bed, a hollow post connected with the underside of the bed, a screw passing through the opening in the post and having a recessed end to engage the said rod, a nut threadably attached to the screw and arranged to operate against the outer end of the post.

879,568. BURGLAR-ALARM. JAMES E. MURRAY, Washington, Pa. Filed Feb. 1, 1907. Serial No. 355,192.

1. In combination with a window or other like frame, an alarm system comprising a battery, a switch, an alarm, a contact box on each side of said frame, a pair of contacts

in each of said boxes, a pin separating each pair of contacts, and means engaging said pins and adapted to positively operate one or both of the same for closing the alarm circuit and sounding the alarm, substantially as described.



2. In combination with a window or other like frame, an alarm system comprising a battery, a switch, an alarm, a pair of contacts on each side of said frame, pins for engaging with one of the contacts of each pair, one of said pins having an insulated portion, and circuit-completing means extending between and engaging with one of said pins and the insulated portion of the other and adapted when displaced from said insulated portion to close the alarm circuit and sound the alarm, substantially as described.

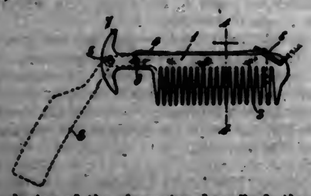
3. In combination with a window or other like frame, an alarm system comprising a battery, a switch, an alarm, a contact box on each side of the window frame, a pin in each of said boxes engaging one of the contacts thereof, one of which pins has an insulated portion, and a circuit completing rod extending between the pins and engaging one of the same and the insulated portion of the other and adapted when displaced from said insulated portion to close the alarm circuit and sound the alarm; substantially as described.

4. In combination with a window or other like frame, an alarm system comprising a battery, a switch, an alarm, a contact box on each side of the window frame, a pin in each of said boxes for engaging with one of the contacts thereof, said pins having eyes at their end, one of said eyes having an insulated portion, and a circuit-completing rod extending between said eyes and engaging one of said eyes and the insulated portion of the other eye, and adapted when displaced from said insulated portion to close the alarm circuit and sound the alarm; substantially as described.

5. In combination with a window or other like frame, an alarm system comprising a battery, a switch, an alarm, a pair of contacts, a pin having a flattened end and adapted in one position to prevent the said contacts from engaging with each other and when slightly rotated to permit engagement thereof, and means for rotating said pins; substantially as described.

[Claim 6 not printed in the Gazette.]

879,569. HAIR DRESSER AND TRIMMER. RODERICK A. MCDONALD and JOSEPH SALTER, North Side Boularderie, Nova Scotia, Canada. Filed Jan. 26, 1907. Serial No. 354,221.



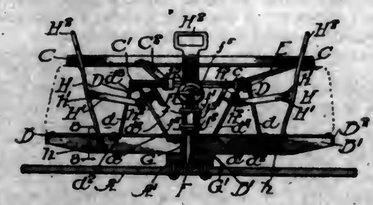
1. In a device of the character described, the combination of a body, teeth depending therefrom, a longitudinal slot extending through said body and into said teeth, a blade pivoted to the body and adapted to lie in the slot, and means for locking the blade in the slot.

2. In a device of the character described, the combination of a body, teeth depending therefrom, a longitudinal slot extending through said body and into said teeth, a blade pivoted to the body and adapted to lie in the slot, and means pivotally connected to the handle and adapted to lock the blade in the slot.

3. In a device of the character described, the combination of a body, teeth depending therefrom, a longitudinal slot extending through said body and into said teeth, a blade, pivoted to the body and adapted to lie in the slot, and a link pivotally connected to the handle and adapted to lock the blade in the slot.

4. In a device of the character described, the combination of a body, teeth depending therefrom, a longitudinal slot extending through said body and into said teeth, a blade pivoted to the body and adapted to lie in the slot, and a link pivotally connected to the handle and adapted to overlie and embrace the end of the blade to thereby lock the same in the slot.

879,570. REEL. OWEN E. MCMAHON, Elgin, Ill. Filed Apr. 23, 1907. Serial No. 369,859.



1. A reel comprising a rotative platform or support, a coil confining device above said support, between which and the support is adapted to be confined a coil of wire, said confining device comprising a ring and radial arms extending inwardly therefrom for attachment to the reel frame.

2. A reel comprising a rotative platform or support, a coil confining ring located above said support, between which and the support is adapted to be confined a coil, and means for locking said confining ring to the reel frame constructed to lock and release said ring by relative rotation of said ring and the part to which it is removably fixed.

3. A reel comprising a rotative platform or support, a coil confining ring located above said support, between which and the support is adapted to be confined a coil, and means for locking said confining ring to the reel frame comprising a locking ring on the reel frame, and arms extending inwardly from said confining ring and adapted to releasably engage said locking ring.

4. A reel comprising a rotative platform or support, standards rising therefrom, a locking ring supported on said standards, and a coil confining device removably connected with said locking ring between which and the platform is adapted to be confined a coil of wire.

5. The combination with a rotative coil support or platform of a reel, of standards rising therefrom, a locking ring supported on said standards and provided at its inner margins with notches, a confining ring provided with radial, inwardly extending arms provided with hooks adapted to pass through said notches and by angular movement of the confining ring to be engaged with the unnotched portion of the inner margin of the ring.

[Claims 6 to 10 not printed in the Gazette.]

879,571. MACHINE FOR FLUTING COLUMNS. JAMES NEILL, Orange, N. J. Filed Oct. 9, 1906. Serial No. 338,180.

1. In an apparatus for fluting columns, in combination, with lathe-members between which the column is supported, of a vertical shaft secured to and extending upwardly from the back of each lathe-member, a fluting mechanism longitudinally of the column, and means connected with each vertical shaft for raising and lowering the fluting mechanism, substantially as and for the purposes set forth.

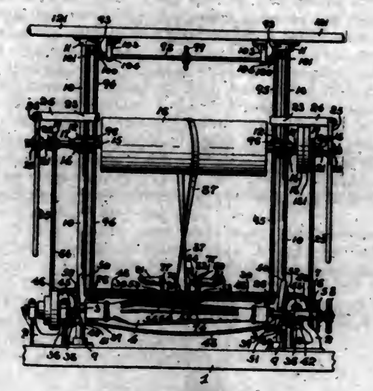
2. In an apparatus for fluting columns, in combination, with lathe-members between which the column is supported, of a vertical shaft secured to and extending upwardly from the back of each lathe-member, a reciprocatory fluting mechanism provided with a cutter, and means for moving said fluting mechanism back and forth and longitudinally of the column, and means connected with each vertical shaft for raising and lowering the fluting mechanism, substantially as and for the purposes set forth.

3. In an apparatus for fluting columns, in combination, with lathe-members between which the columns is supported, of a vertical shaft secured to and extending upwardly from the back of each lathe-member, a fluting mechanism provided with a cutter, means for moving said fluting mechanism longitudinally of the column, and means for automatically arresting the movement of the fluting mechanism when a flute of the desired length has been made, and means connected with each vertical shaft for raising and lowering the fluting mechanism, substantially as and for the purposes set forth.

4. In an apparatus for fluting columns, in combination, with lathe-members between which the column is supported, of a vertical shaft secured to and extending upwardly from the back of each lathe-member, a fluting-mechanism provided with a cutter, means for alternately moving said fluting mechanism in opposite directions longitudinally of the column, and means for automatically arresting the movement of the fluting-mechanism when a flute of the desired length has been made, and means connected with each vertical shaft for raising and lowering the fluting mechanism, substantially as and for the purposes set forth.

5. In an apparatus for fluting columns, in combination, with lathe-members between which the column is supported, of a vertical shaft secured to and extending upwardly from the back of each lathe-member, a fluting-mechanism provided with a cutter, means for moving said fluting mechanism in opposite directions longitudinally of the column, and means for automatically arresting the movement of the fluting-mechanism when a flute of the desired length has been made, of vertical shafts, bearings 26 mounted upon said shafts, an auxiliary bearing 28 connected with each bearing 26, spindles rotatively arranged in said bearings 28, a sprocket-wheel upon each spindle, and a link-chain arranged over said sprocket-wheels, said link-chain being attached to said fluting-mechanism, and means connected with each vertical shaft for raising and lowering the fluting mechanism, substantially as and for the purposes set forth.

[Claims 6 to 22 not printed in the Gazette.]



879,572. TELESCOPE WITH DISPLACEABLE REVERSING SYSTEM. EDMUND NEUMAYER, Friedenau, near Berlin, Germany, assignor to The Firm of Optische Anstalt C. P. Goerz, Aktiengesellschaft, Friedenau, near Berlin, Germany. Filed Nov. 26, 1906. Serial No. 345,095.



1. In a telescope, an objective and an ocular mounted at an invariable distance from each other, and a reversing system comprising two independently movable separate parts of positive focal-length, adjustable from an intermediate position of maximum separation to positions near either end of the telescope in which end postions the said parts are in proximity to each other, the said reversing system producing in one of the said two end-positions of its parts the maximum of magnification and in the other the maximum of diminution of the objective-image.

2. In a telescope, an objective, an ocular, a tube supporting same, said tube comprising sections placed at angles to each other and securing an invariable distance of the observer's point of view from his eye, and a reversing system mounted in said tube comprising two independently movable separate parts of positive focal length, adjustable from an intermediate position of maximum separation to end positions near either end of the telescope, in which end positions the said parts are in proximity to each other, the said reversing system producing in one of the said two end-positions of its parts the maximum of magnification and in the other the maximum of diminution of the objective-image.

879,573. BOOKBINDING. MARTIN C. NEUNER, Los Angeles, Cal. Filed Nov. 11, 1907. Serial No. 401,761.



1. A paper leaf having an orifice in the binding portion thereof, a binding thread or device passing through the orifice, and a fibrous material permanently incorporated in the binding portion of the leaf, the pulp of the paper penetrating the interstices of the fibrous material and being intimately intercombined therewith, the fibrous material surrounding the orifice and binding device whereby drawing strain of the binding thread or device is borne by the fibrous threads of the reinforcement and the pulp relieved of such strain.

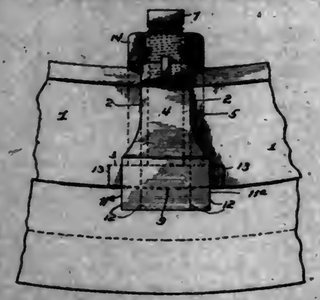
2. A paper leaf in the binding portion of which a fibrous material is permanently incorporated, the pulp of the paper penetrating the interstices of the fibrous material, the paper being punctured through the reinforced portion for the passage of the binding thread or device, whereby drawing strain of the binding thread or device is borne by the fibrous threads of the reinforcement and the pulp relieved of such strain.

3. A series of paper leaves, a fibrous material permanently incorporated in the binding portion of each leaf, the fibrous material interpenetrating the interstices of the pulp of the paper, and binding threads or devices passing through the pulp and fibrous material, whereby the drawing strains of the threads of binding devices are borne by the fibrous material and the pulp relieved of such strain.

4. A series of paper leaves arranged in pack form, their binding edges having orifices, binding threads or devices

passing through the orifices, a reinforcing material incorporated permanently in the binding portion of each leaf and displacing a corresponding amount of paper pulp whereby the pack of leaves has the same thickness throughout, the reinforcing material surrounding the orifices and bearing the strains of the binding threads or devices and relieving the pulp of the paper from such strain.

879,574. WHEEL-TIRE CLAMP. CHARLES NEWMAN, Staunton, Va. Filed May 4, 1907. Serial No. 371,832.



1. The combination with a wheel rim having a transverse recess, and tire, of a locking device located in the transverse recess in the rim and movable toward the tire to engage the latter.

2. The combination with a wheel rim provided with a recess enlarged at a point intermediate of its ends, and a tire, of a locking device disposed in the recess in the rim and engaging the tire, said locking device having an enlargement to enter the enlarged portion of the recess in the rim.

3. The combination with a wheel rim comprising sections and a tire, of a block located and movable in the space between adjacent sections, said block adapted to engage the tire and hold the same against movement, and means for securing said block to the rim.

4. The combination with a wheel rim and tire shrunk thereon, of a clamp movable toward the tire and carried by the rim and having end flanges engaging shoulders at the sides of the tire, and means for locking the clamp in place within the rim.

5. The combination with a wheel rim and tire shrunk thereon, of a clamp carried by the rim and held against endwise movement therein and engaging the tire at the sides, and means for locking the clamp in place.

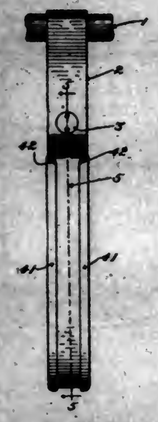
[Claims 6 to 9 not printed in the Gazette.]

879,575. HANGER-STRAP OR HANDHOLD FOR CARS, &c. JOHN F. NEWTON, Jr., Boston, Mass. Filed Oct. 28, 1907. Serial No. 399,493.

1. A hanger-strap or hand-hold having its depending loop furnished with a surfacing that covers the inner surface of such loop, the said surfacing having flanges which clasp the marginal portions of the strap, and the said loop also having applied to the outer surface of the same a facing strip which is secured in place by engagement of the said flanges with its marginal portions.

2. A hanger-strap or hand-hold having its depending loop furnished with a surfacing that covers the inner surface of such loop and is formed with lateral flanges which inclose the edges of the strap, and having applied to the outer surface of the loop a facing strip having its marginal portions entered beneath the said flanges, the said facing strip being capable of endwise insertion and removal under the said flanges.

3. A hanger-strap or hand-hold comprising a strap having its depending loop furnished with a surfacing that covers the inner surface of such loop and is formed with lateral flanges which inclose the edges of the strap, a facing strip applied to the outer surface of the loop with its marginal portions entered under the said flanges, a spreader for the meeting portions of the strap above the ends of the surfacing, and a fastening which holds such portions of the strap together beyond the spreader and thereby confines the latter in place.

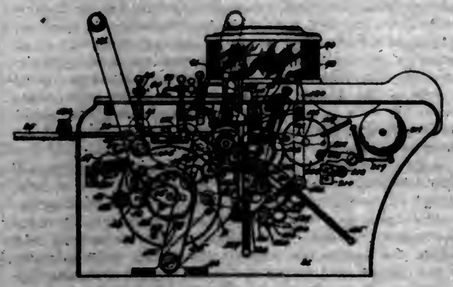


4. A hanger-strap or hand-hold comprising a strap having its depending loop furnished with a surfacing that covers the inner surface of such loop and is formed with lateral flanges which inclose the edges of the strap, a facing strip applied to the outer surface of the loop with its marginal portions entered under the said flanges, a spreader between the meeting portions of the strap above the ends of the surfacing and having wings which enter under the strap within the flanges of the surfacing, and a fastening which holds the meeting portions of the strap together beyond the spreader and thereby confines the latter in place.

5. A hanger-strap or hand-hold having its depending loop furnished with a surfacing of sheet-material formed with cylindrical or roll-like flanges receiving the marginal portions of the strap, and having such flanges flattened throughout the bend at the lower end of the loop to obviate cracking or splitting.

[Claims 6 to 10 not printed in the Gazette.]

879,576. ENVELOP SEALING AND STAMPING MACHINE. LAURITS M. NIELSEN, Montclair, N. J. Filed July 20, 1903. Serial No. 166,804.



1. Envelop sealing means comprising a shaft, arms mounted to swing on the shaft and having cams, a moistening pad also mounted on the arms, a second shaft connected with the main driving mechanism, and arms mounted on said second shaft, and adapted to be disconnected therefrom, for working against the cams of the pad arms to move the same.

2. Envelop sealing means comprising a feed roll, a fluid supply pipe extending beneath the roll and having a guard partially embracing the roll and a laterally extending fibrous feed strip and a moisture conveyer movably mounted beneath the feed strip.

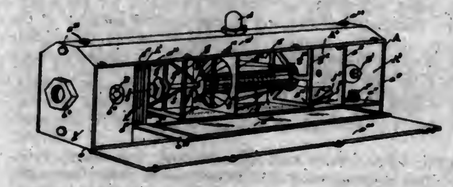
3. Envelop sealing means comprising means for feeding an envelop with its flap open, an inclined deflector, movably mounted in the path of the envelop, and having an upper beveled edge, means for moving the deflector and means for pressing the envelop flap against the deflector and at the same time moistening the gummed surface of the flap.

4. Envelop sealing means comprising primary envelop feeding devices adapted to feed the envelop with its flap open secondary feeding devices adapted to feed and compress the envelop after the flap is closed, and movable means normally located in the path of the envelop between such feeding devices and adapted to be moved out of such path at times to permit the further feeding of the envelop and adapted to close the flap of the envelop, together with means for moistening the flap.

5. Envelop sealing mechanism comprising primary and secondary envelop feeding devices, a deflector movably mounted in the path of the envelop for intercepting the flap of the envelop, means for moving the deflector out of the path of the envelop, and means located above the path of the envelop to limit its upward movement as said envelop passes over the deflector.

[Claims 6 to 30 not printed in the Gazette.]

879,577. FLASHBACK-STOP. DANIEL O'KEEFE, Cincinnati, Ohio, assignor, by mesne assignments, to The American Acetylene Company, Augusta, Me., a Corporation of Maine. Filed Jan. 7, 1907. Serial No. 351,178.



1. A flashback stop comprising a permanent shell having an inlet and an outlet, and means disposed within said shell for closing said inlet said closing means being adapted to be actuated by the action of the flame of the flashback.

2. A flashback stop comprising a permanent casing, having a gas inlet and a gas outlet, a valve adapted to close said inlet, and means disposed within said casing for automatically actuating said valve said inlet closing means being adapted to be actuated by the flame of the flashback.

3. A flashback stop comprising a permanent casing having a gas inlet and a gas outlet, a spring-actuated valve adapted to seat from within outwardly, and close said inlet, and means disposed within said casing for releasing said valve spring by the action of the flame of the flashback.

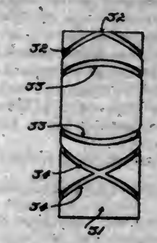
4. A "flashback" stop whose supply passage is normally open, explosives disposed in the path of the flame within the mechanism and mechanical means adapted to close said passage by explosives ignited by the "flashback".

5. A "flashback" stop whose supply passage is normally open, explosives disposed in the path of the flame within the mechanism and spring actuated stopping means adapted to be released by the explosives ignited by the "flashback".

[Claims 6 to 17 not printed in the Gazette.]

879,578. BEARING. ISAAC OSGOOD, Amesbury, Mass. Filed Oct. 4, 1906. Serial No. 337,350.

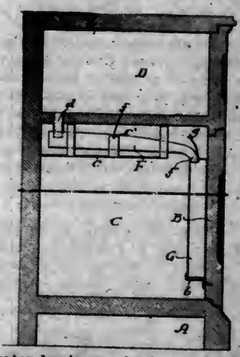
1. In an upright bearing, in combination, coacting bearings, one thereof formed with a continuous return groove winding around the same obliquely in reverse directions lengthwise of the upper portion of the bearing, the said bearing having in conjunction with the said groove a lubricant pocket with which the elevated portion of the groove communicates and from which lubricant passes into the groove, and also having below the said groove one or more obliquely extending grooves interlapping with the former and with one another without intersecting.



2. In an upright bearing, in combination, coacting bearings, one thereof formed with a continuous return groove winding around the same obliquely in reverse directions lengthwise of the upper portion of the bearing, the said bearing having in conjunction with the said groove a lubricant pocket with which the elevated portion of the groove communicates and from which lubricant passes into the groove, and also having below the said groove one or more continuous spiral return grooves interlapping with the former and with one another without intersecting.

3. In a vertical bearing for a rotating part, the combination of the said part and its bearing, one thereof having continuous spiral return grooves, one above the other, and interlapping with each other without intersecting.

879,579. REFRIGERATOR. CHARLES PABST, Jr., and HENRY C. SAVAGE, Philadelphia, Pa. Filed Mar. 27, 1907. Serial No. 364,839.



1. A refrigerator having an ice box and a door, a receptacle carried by the door, and a conductor placed to connect said receptacle with the ice box only when the door is in its closed position and being capable of retaining water from the ice box when the door is open, substantially as described.

2. The combination of a refrigerator having a removable receptacle for water and an ice box, with a conductor for delivering water from the ice box to the receptacle, said conductor being movably mounted so as to cut off connection between the receptacle and the ice box when the door of the refrigerator is open, substantially as described.

3. The combination of a refrigerator having a door, an ice box provided with an outlet for water, a water receptacle on the door, and an oscillatory conductor for connecting the ice box and the receptacle when said door is in a predetermined position, substantially as described.

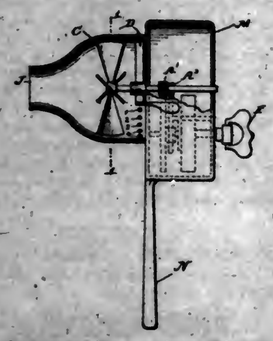
4. The combination of a refrigerator having an ice box provided with a water outlet opening into the food compartment, a door for said food compartment provided with a removable receptacle, an oscillatory conductor supported within the food compartment and placed to receive water

from the outlet of the ice box, with means for placing said conductor in connection with the receptacle on the door when said door is closed, substantially as described.

5. The combination of a refrigerator having an ice box and a food compartment, a door for said food compartment provided with a removable receptacle for water, a cam piece on the door, a removable receptacle within the food compartment communicating with the ice box and arranged to receive and hold water when the door is opened, said receptacle having a part placed to co-act with the cam piece on the door when the latter is moved to its closed position, substantially as described.

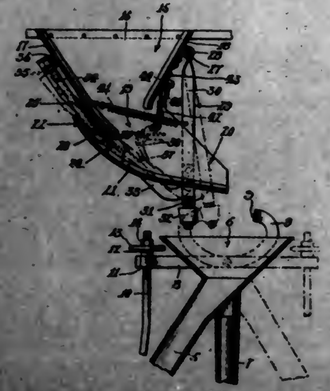
[Claim 6 not printed in the Gazette.]

879,580. FACE-COOLER. CHARLES W. PEARSALL, Binghamton, N. Y., assignor of one-half to Francis M. Michael, Binghamton, N. Y. Filed Jan. 9, 1907. Serial No. 351,475.



A face cooler comprising a casing, spring operated gearing in said casing, a shaft rotated by said gearing, said shaft having one end extending beyond the casing, a fan secured to said end, a second casing secured to the first and surrounding the fan, said second casing being perforated and a spring brake supported in the second casing and having an end projecting therefrom, said spring brake being normally in contact with the shaft to prevent rotation thereof.

879,581. FEEDING MECHANISM FOR CRUSHING-MILLS. FREDERICK B. PETTENGILL, Burbank, Cal., assignor of one-half to Samuel L. Kistler, Los Angeles, Cal. Filed Oct. 20, 1906. Serial No. 339,880.



1. In combination, a roller crushing mill comprising a mortar, crushing rolls, means for feeding ore to the mortar, means for producing a rolling movement of the rolls relatively to the mortar to crush the ore permitting a relative rectilinear movement between the mortar and rolls to accommodate variation in the amount of ore between the rolls and mortar, and means rotating with said second named means for controlling said feeding means.

2. In combination, a hopper with a spout, a plunger for pushing ore from the spout, a mortar, crushing rolls, means for rolling said crushing rolls on the mortar and permitting the rolls to rise or fall according to the amount of ore between them and the mortar, means for conveying ore from said spout to the mortar, and means rotating with the crushing rolls for operating said plunger.

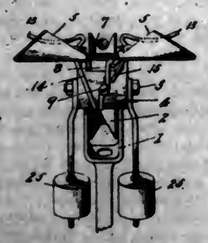
3. In combination, a hopper with a spout, a plunger for pushing ore from the spout, a mortar, crushing rolls, means for rolling said crushing rolls on the mortar and permitting the rolls to rise or fall according to the amount of ore between them and the mortar, means for conveying ore from said spout to the mortar, means rotating with the crushing rolls for operating said plunger, and means for automatically varying the length of stroke of said plunger when the crushing rolls change from one plane of rotation to another.

4. In combination, a roller crushing mill, a pivoted shoe connected and rotated therewith and adapted to be operated thereby in an orbit of various sizes according to the amount of rock in the mill, a hopper, and ore feeding means adapted to contact with and be operated by the shoe through a length of stroke dependent on the diameter of the orbit of the shoe.

5. In combination, a mortar, crushing rolls traveling therein, a hopper and ore chute rotating with the rolls but at a fixed elevation, a feeder, a shoe carried by the hopper for operating the feeder, and means carried by the frame in which said crushing rolls are journaled for automatically changing the diameter of the orbit of rotation of the shoe when the crushing rolls rise or fall in their plane of rotation thereby changing the shoe to correspondingly vary the operation of the feeder.

[Claims 6 to 17 not printed in the Gazette.]

879,582. TROLLEY-RETRIEVER. RICHARD PHILLIPS, Washington, D. C. Filed June 8, 1906. Serial No. 320,713.



1. In a trolley retriever, a swinging frame, means mounted in sockets on said frame for contacting with the feed wire when the trolley is thrown upwardly, means for engaging the wire to direct the trolley wheel back again to the same, said contacting means actuating said engaging means to throw the same into operative position.

2. In combination, a trolley pole, a harp formed on said pole, a trolley retriever having a swinging frame pivotally mounted in said harp, and a V-shaped guide, means automatically actuated to place said guide in operative position when the trolley is thrown upward and lock the frame to the harp.

3. In a swinging trolley retriever, means for engaging the feed wire means for locking said wire engaging means in inoperative position, means for automatically releasing said engaging means, and means for automatically relocking said engaging means when the same is forced under a cross wire.

4. In combination, a trolley pole, a harp formed on said pole, a trolley retriever having a pivotally mounted frame, means to automatically lock said frame to the harp of the pole when the trolley flies off, and means to relieve the same when the retriever has passed under a cross wire.

5. In a trolley retriever, a swinging frame weighted to a horizontal position, means for engaging the feed wire to return the wheel when the same flies off, said means being normally locked in inoperative position, means to automatically throw the engaging means into operative position, a trolley harp, means to lock the frame to the trolley harp while the engaging means is in operative position, and to release the frame when passed under a cross wire.

[Claims 6 to 11 not printed in the Gazette.]

879,583. EXHAUST-MUFFLER. ARTHUR PRATT, Dukinfield, England. Filed May 16, 1906. Serial No. 317,093.



1. An exhaust muffler comprising an expansion chamber, inlet and exhaust ports opening into the same and a flexibly mounted baffle between said ports, adapted to be actuated by and at all times to permit the passage of the exhaust vapors to the exhaust port.

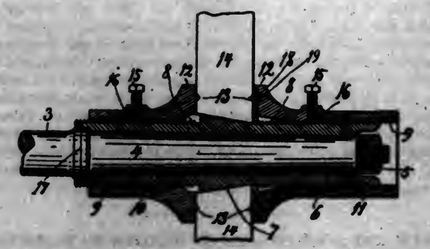
2. An exhaust muffler comprising an expansion chamber, perforated inlet and exhaust tubes opening into the same and a flexibly mounted member adapted to be actuated by the exhaust vapors interposed in said chamber between the inlet and exhaust ports.

3. An exhaust muffler comprising an expansion chamber, inlet and exhaust tubes opening into the same, an internal worm for each of said tubes, and a flexibly mounted member adapted to be actuated by the exhaust vapors interposed in said chamber between the inlet and exhaust ports.

4. An exhaust muffler comprising an expansion chamber, perforated inlet and exhaust tubes opening into the same, a perforated flexibly mounted baffle interposed in said chamber between the inlet and exhaust ports and adapted to be actuated by the exhaust vapors.

5. An exhaust muffler comprising an expansion chamber, perforated inlet and exhaust tubes opening into the same and provided respectively with an internal worm, a perforated flexibly-mounted baffle interposed in said chamber between the inlet and exhaust ports and adapted to be actuated by the exhaust vapors.

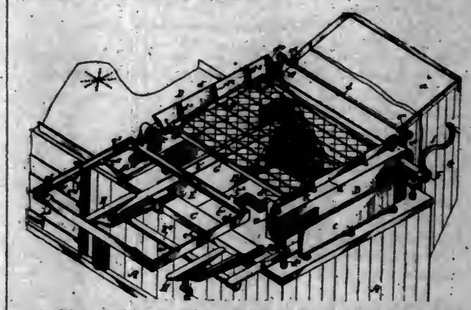
879,584. VEHICLE-HUB. WALTER M. PRESTON, Spring Valley, Wis., assignor of one-half to William Bahr and Roland Bahr, Spring Valley, Wis. Filed July 8, 1907. Serial No. 382,648.



1. The combination with an axle of a bushing adapted to revolve thereon and having external screw threads and near its middle a tapering collar, wheel-spokes butting against the periphery of the collar, hub sections threaded upon the bushing and engaging opposite sides of the spokes, and prongs on one of the hub-sections for engaging the spokes, set screws in the hub section and soft metal cushions between the ends of the set-screws and the bushing.

2. The combination with an axle of a bushing adapted to revolve thereon and having external screw threads and near its middle a tapering collar, wheel-spokes butting against the periphery of the collar, hub sections threaded upon the bushing and engaging opposite sides of the spokes, prongs on one of the hub sections for engaging the spokes, and a ring in a recess of the other hub section and provided with prongs for likewise engaging the spokes, substantially as and for the purpose set forth.

879,585. CONFECTIONERY-COATING MACHINE. HARRY C. REMMERS, Philadelphia, Pa. Filed July 25, 1907. Serial No. 385,452.



1. The combination in a coating machine, of a kettle, a basket supporting structure over said kettle, a pivotally mounted frame placed adjacent to said basket supporting structure so as to be capable of co-acting therewith to receive a basket, said frame being of an open construction to permit of the discharge of candies from the basket after it has been turned on its pivots, substantially as described.

2. The combination of a kettle, with a basket supporting structure mounted above the same, and having two side members, with a supplementary frame pivoted to said side members, so as to be capable of receiving a basket therefrom, said frame being of an open construction to permit of the discharge of candies from the basket after it has been turned on its pivots, substantially as described.

3. The combination of a kettle, a basket structure mounted above the same, with means for vibrating said structure, a supplementary structure arranged to be movable into a position to receive a basket from said first structure, said supplementary structure being of an open construction so as to permit of the discharge of candies through it.

4. The combination of a kettle, independent structures mounted on opposite sides thereof, each having means whereby it may be vibrated and being formed so as to be capable of together supporting a candy basket, with a supplementary frame having a pivotal connection with each of said structures, substantially as described.

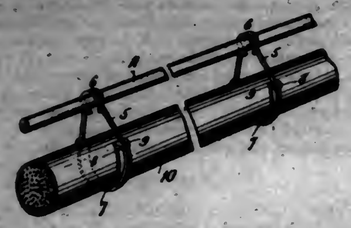
5. The combination with a kettle of structures mounted above and on opposite sides of said kettle, said structures each having an outwardly extending flange for guiding and maintaining a basket in position over the kettle, and being provided with knocking off devices, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

879,586 CABLE-HANGER. DE ELBERT A. REYNOLDS, New York, N. Y. Filed Sept. 7, 1906. Serial No. 333,655.

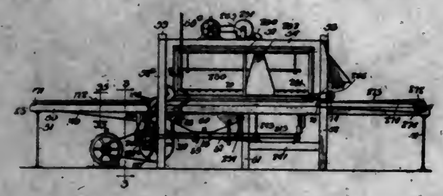
A cable hanger comprising a resilient supporting member arranged to embrace the cable with a yielding pressure and having two oppositely disposed hook-like portions normally out of alinement and arranged to individually hook over a supporting wire from opposite sides thereof

when forced into alinement against such yielding pressure, said hanger locked in position by the mere engagement



thereof with the said supporting wire, and a protective shield or lining.

879,587. COATING-MACHINE. RALPH R. RICHARDSON, Ottawa, Ill. Filed June 29, 1907. Serial No. 381,559.



1. In a coating machine, a carrier comprising upper and lower endless belts and advancing and guiding means therefor, said belts traveling with two of their laps parallel with each other, the lower belt being provided in advance of said parallel portions with a flat receiving portion and the upper belt being provided with means for confining the articles on the lower belt, automatic means for feeding the articles to be coated upon said receiving portion, and means for applying coating material to said articles while confined on said lower belt.

2. In a coating machine, a carrier comprising upper and lower endless belts and advancing and guiding means therefor, said belts traveling with two of their laps parallel with each other, the lower belt being provided in advance of said parallel portions with a flat receiving portion and the upper belt being provided with means for confining the articles on the lower belt, automatic means for feeding the articles to be coated upon said receiving portion, means for applying coating material to said articles while confined on said lower belt, and automatic means for removing the coated articles from the carrier.

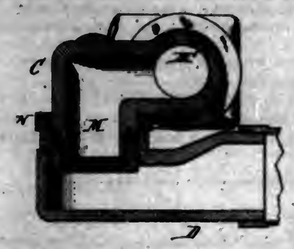
3. In a coating machine, a carrier comprising two endless belts and advancing and guiding means therefor, said belts traveling with two of their laps parallel with each other, one of said belts being provided with baskets which open on the front face of the belt and extend rearwardly therefrom and the adjacent lap of the other belt fitting flat on said front face to close the mouths of said baskets.

4. In a coating machine, a carrier comprising two endless belts and advancing and guiding means therefor, said belts traveling with two of the laps thereof flat together and parallel with each other and being provided with pockets arranged in transverse rows across one of the belts and extending rearwardly therefrom and opening towards the adjacent lap of the other belt, for the purpose set forth.

5. In a coating machine, a carrier comprising upper and lower endless belts and advancing and guiding means therefor, said belts traveling with their adjacent laps parallel with each other, and being provided with pockets arranged in transverse rows across the upper belt, which extend rearwardly therefrom and open toward the associated lap of the lower belt, said lower belt being arranged to provide in front of the line where said belts are brought together a horizontal receiving portion, and said belts being so arranged that the lower lap of the upper belt converges toward and travels flat against the adjacent lap of the lower belt.

[Claims 6 to 52 not printed in the Gazette.]

879,588. FLEXIBLE PIPE-JOINT. GEORGE RIEXINGER, Buffalo, N. Y. Filed Feb. 2, 1907. Serial No. 355,450.



1. A pipe-joint comprising two hollow members, one having a nipple and the other an opening, a coupling ring surrounding said nipple and secured in said opening, and a nut smaller than said opening applied to said nipple and arranged within the interior of said coupling ring, said nut having means engaging the inner end of the coupling ring, substantially as set forth.

2. A pipe-joint comprising two hollow members, one having a nipple and the other an opening, a coupling ring surrounding said nipple and secured in said opening, packing interposed between the nipple and the coupling ring, and a nut smaller than said opening applied to said nipple, arranged within the interior of said coupling ring and bearing against said packing, said nut having means engaging the inner end of the coupling ring, substantially as set forth.

3. A pipe joint, comprising two hollow members, one having a screw-threaded nipple and the other an opening, a coupling ring surrounding said nipple and secured in said opening, said nipple and said ring being provided in their adjacent walls with shoulders, a screw-threaded member engaging said nipple and arranged within the interior of said ring, and packing interposed between said screw threaded member and said shoulders, substantially as set forth.

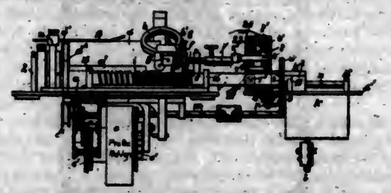
4. A pipe joint, comprising two hollow members, one having a screw-threaded nipple and the other an opening, a coupling ring surrounding said nipple and secured in said opening, a retaining nut applied to said nipple within the coupling ring and engaging the end of the ring, said nipple having an external shoulder and said ring an internal shoulder coinciding with said external shoulder, and packing interposed between said nut and said shoulders and extending across the joint between the latter, substantially as set forth.

5. A pipe joint, comprising two hollow members, one having a threaded opening and the other an externally threaded nipple having an external undercut shoulder, a threaded coupling ring surrounding said nipple, engaging said opening and having an internal shoulder arranged in line with the shoulder of the nipple, an annular nut arranged in said ring and engaging the nipple, said nut being provided within the ring with a shoulder and at its end with a flange which bears against the adjacent end of the ring, and packing gaskets interposed between the shoulder of the nut and the shoulders of the nipple and coupling ring, substantially as set forth.

879,589. PHONOGRAPH. WILLIAM W. ROSENFELD, New York, N. Y. Filed Aug. 5, 1904. Serial No. 219,599.

1. The combination with a phonograph and a motor for actuating the phonograph in reproducing a record, of means for automatically storing power in said motor in the interval between successive reproductions of a record or records, substantially as described.

2. The combination with a phonograph and a motor for actuating the phonograph in reproducing a record, of means controlled by the movement of a part of the phonograph for automatically storing power in said motor, substantially as described.



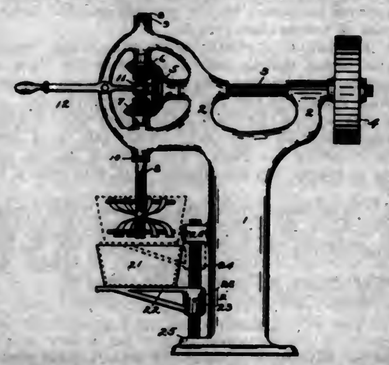
3. The combination with a phonograph and a motor for actuating the phonograph in reproducing a record, of a second motor, and means controlled by the movement of a part of the phonograph to cause power to be stored in the first motor by the operation of the second motor, substantially as described.

4. The combination with a phonograph and a motor for actuating the phonograph in reproducing a record, of a second motor for storing power in the first motor, and automatically operated means for causing the second motor to operate in the interval between successive reproductions of a record or records, substantially as described.

5. The combination with a phonograph and a motor for actuating the phonograph in reproducing a record, of a second motor for storing power in the first motor, and means controlled by the movement of a part of the phonograph for causing the second motor to operate in the interval between successive reproductions of a record or records, substantially as described.

[Claims 6 to 32 not printed in the Gazette.]

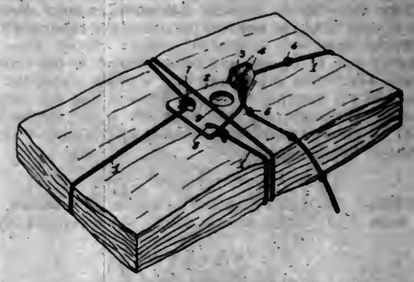
879,590. DOUGH-MIXING MACHINE. ANTON ROTH, Newport, Ky. Filed Apr. 10, 1907. Serial No. 368,157.



In a dough mixing machine, the combination, with a receptacle, of an agitator therefor, with means for rotating same, said agitator comprising four spiral blades arranged on opposite portions of the agitator shaft, each of said blades of the several pairs being secured at different distances from the axis of the shaft, one pair operating on the spaces left by the other pair, the lower ends of said blades being extended downwards and broadened out to completely scrape the bottom of the receptacle.

879,591. PACKET-HOLDER. PIERRE A. ROUSSEL, Raceland, La. Filed Aug. 2, 1907. Serial No. 386,797.

1. A packet holder comprising a flexible element provided with enlargements arranged at intervals upon the same and a body plate attached to said element and formed with a tapered or V-shaped portion having its converging edges bent up to provide upstanding flanges arranged in converging relation with their outer ends spaced apart, substantially as and for the purpose set forth.

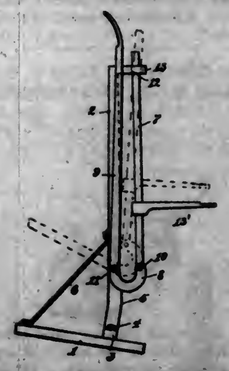


2. A packet holder comprising a flexible element provided with enlargements arranged at intervals upon the same and a body plate attached to said element and provided with converging flanges having their outer or converging ends spaced apart, said flanges being bent up from the opposite edges of the body plate and being inclined upwardly and inwardly toward each other, substantially as and for the purpose set forth.

3. A packet holder comprising a flexible element provided with enlargements arranged at intervals upon the same, and a body plate attached to said element and having a V-shaped portion bent upwardly out of the plane of the remainder of the same, said V-shaped portion being provided at its edges with upstanding flanges having their outer ends spaced apart, substantially as and for the purpose set forth.

4. A packet holder comprising a plate, formed with an aperture, an inwardly projecting hook stamped out from said plate and a V-shaped reduced end bent upwardly out of the plane of said plate, said end having its converging edges bent up to provide converging flanges or jaws having spaced outer ends, and a cord secured in the aperture of said plate and formed adjacent to its free end with a series of knots, substantially as described.

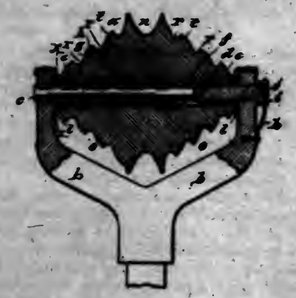
879,592. LIFTING-JACK. ELBERT E. RYAN, South Bend, Ind. Filed Aug. 1, 1907. Serial No. 386,668.



1. In a lifting jack, the base, a standard mounted upon the base, the standard rising from the base in a vertical plane and subsequently directed into an inclined plane and at its upper end provided with a laterally directed guide, a lifting bar slidable through said guide, a lever directed back upon itself at one end to provide a relatively long and a relatively short arm, the shorter arm at its free end being pivoted to the exereme lower end of the lifting bar and a pivot connecting the lever at the juncture of its two arms to one side only of the standard immediately above the vertical part of the standard, whereby the lower end of the lifting bar may be drawn toward the standard in the upward movement of the lifting bar.

2. In a lifting jack, a base, a standard mounted upon the base and provided with a laterally directed guide, a lifting bar slidable through said guide, a lever directed back upon itself at one end to provide a relatively long straight arm and a relatively short curved arm, the shorter arm at its free end being pivoted to the extreme lower end of the lifting bar, and a pivot connecting the lever at the juncture of its two arms to one side only of the standard, whereby the lower end of the lifting arm may be drawn toward the standard in the upward movement of the lifting bar.

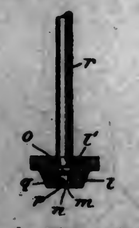
879,593. TROLLEY-WHEEL. JACOB M. SIEGRIST, Oswego, N. Y. Filed Sept. 4, 1907. Serial No. 391,341.



1. In combination with the harp and shaft, the trolley-wheel formed with a continuous axial bore of uniform diameter throughout the width of the wheel and larger than the diameter of the shaft, bushings secured in the ends of said bore and terminating in dams at the ends of the cylindrical lubricating chamber formed directly around the entire central portion of the shaft.

2. In combination with the harp and trolley-wheel, the shaft passing through said parts and formed at one of its ends with a rigid head provided with a shoulder to bear on the outer side of the harp and with a transverse groove in the outer face of said head, and a spring tongue attached at one end to the harp and having its free end passing through the aforesaid groove and pressing the head of the shaft onto the outer side of the harp.

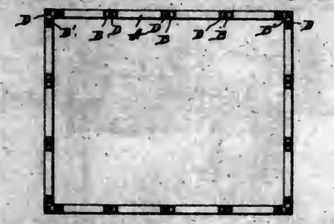
879,594. PIPE-CLEANSER. JAMES E. SIMPSON, Brooklyn, N. Y. Filed Nov. 30, 1906. Serial No. 345,613.



A cleansing device for tobacco pipes comprising a plug adapted to fit removably in the mouth of a pipe bowl, said plug having a passage therethrough, a valve casing within said passage having its outer end contracted to leave a small orifice and guard means adjacent its inner end, a check valve confined between said guard means and contracted end, the latter forming a seat for said valve, and a hollow stem adapted to fit within the outer portion of said passage.

879,595. BUILDING CONSTRUCTION. NEWTON SMITH, New Britain, Conn. Filed May 26, 1906. Serial No. 318,813.

1. In a building construction, a foundation, recessed ball supporting plates carried thereby, balls thereon, and cap plates resting upon said balls to receive the superstructure, the recessed portion of both of said plates having opposite supplementally depressed ball centering recesses spaced apart from the borders of said plates.



2. In combination, in a device of the class described, lower and upper bearing plates, having concavities, one or both of said plates having a small central cavity or hollow, and a ball fitting closely in said cavity, preventing movement of the ball except by special force.

3. In combination, in a device of the class described, lower and upper bearing plates, one or both of said plates having a shallow cavity or hollow and a ball fitting closely in said cavity, whereby movement of the ball is prevented except by special or abnormal force.

879,596. RECLAIMING TIN-SCRAP. ELMER A. SPERRY, Brooklyn, N. Y. Filed Oct. 8, 1906. Serial No. 337,883.

1. The method of reclaiming tin scrap which consists in concentrating the tin values, removing the black scrap, treating the impure tin concentrate with free chlorin in the presence of anhydrous stannic chlorid, removing the excess chlorin from the chlorid and distilling off the stannic chlorid from the residues.

2. The method of reclaiming tin scrap which consists in concentrating the tin factor, removing the black scrap therefrom and converting the tin concentrate into an anhydrous compound for the purpose specified under conditions of temperature control.

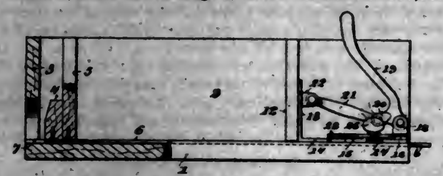
3. The method of reclaiming tin scrap which consists in concentrating the tin factor, removing the black scrap therefrom, submerging the tin concentrate in an anhydrous liquid and treating the same with chlorin.

4. The method of reclaiming tin scrap which consists in concentrating the material by electrolysis in an alkaline bath, removing the black scrap treating the tin concentrate to render it comparatively inert with regard to the air.

5. The method of reclaiming tin scrap which consists in concentrating the material by electrolysis in an alkaline bath, removing the black scrap treating the tin concentrate to render it comparatively inert as against farther chemical action on the part of the electrolyte.

[Claims 6 to 26 not printed in the Gazette.]

879,597. CIGAR-BUNCHER. WILLIAM STERNBERG, Milwaukee, Wis. Filed Aug. 9, 1907. Serial No. 387,801.

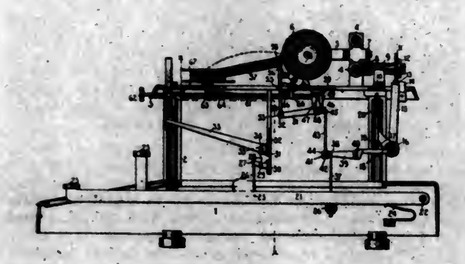


1. In a cigar-bunching device comprising a base having a side-wall and a head-block; the combination of a slotted strip secured to the head-block in slidable engagement with the base, locking means connecting the strip and base, a compression head-block, a bracket secured thereto, feet extending from the bracket, a spider having runways into which the feet are fitted, a bell-crank lever in pivotal connection with the spider, a toggle-link in pivotal connection with the bell-crank lever and bracket, and an adjustable stop-gage carried by the base, whereby limited movement of the compression head-block in one direction is had.

2. In a cigar-bunching device comprising a frame, a spider mounted upon the frame, a compression head-block in slidable-engagement with the spider, a hand-lever pivoted to the latter, the hand-lever being provided with a short-arm, a toggle-link in pivotal connection with said arm of the hand-lever and head-block, and an adjustable gage carried by the spider, whereby the motion of the hand-lever is limited in one direction.

3. In a cigar-bunching device, a side-wall, a base in connection with the side-wall provided with a longitudinal channel, a strip adjustable in the channel flush with the base, means for securing the strip in adjustable position, a head-block carried by said strip, and a compression head-block in slidable-connection with said base opposite the head-block aforesaid.

879,598. TYPE-WRITING MACHINE. BURNHAM C. STICKNEY, Elizabeth, N. J., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 13, 1902. Serial No. 127,108.



1. In a typewriting machine, the combination of means for automatically vibrating a ribbon to and from the printing point, and means adapted to maintain the ribbon against such vibration during the operation of the machine to effect printing and letter spacing.

2. In a typewriting machine, the combination of means for automatically vibrating a ribbon to and from the printing point at each printing operation, hand actuated means operable at will to position the ribbon at the printing point, and means adapted to render the said vibrating means ineffective to move the ribbon.

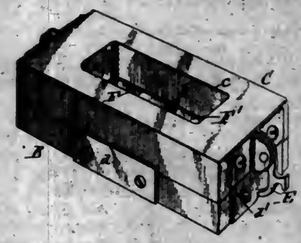
3. In a typewriting machine, the combination of a ribbon, means for normally maintaining the ribbon away from the printing point to expose it to the view of the operator, means for vibrating the ribbon to cover the printing point at each printing operation, and hand actuated adjustable means for moving the ribbon and maintaining it in position to cover the printing point and to simultaneously adjust the relation of the parts so that the said vibrating means are rendered ineffective to move the ribbon.

4. In a typewriting machine, the combination of a ribbon vibrator, means for automatically actuating said vibrator at each printing operation, and means adapted to maintain said vibrator in a position of rest during the actuation of the printing and letter feeding mechanisms.

5. In a typewriting machine, the combination of a ribbon vibrator, actuating means coöperating therewith to cause the vibrator to normally maintain the ribbon away from the printing point and to automatically move the ribbon to the printing point at each printing operation, and hand actuated means to effect a change in the relative disposition of the parts, and so as to render the actuating means ineffective to move the ribbon vibrator.

[Claims 6 to 46 not printed in the Gazette.]

879,599. APPARATUS FOR COVERING BOXES. JOHN R. SUNDER, Buffalo, N. Y., assignor to Empire Jewelry Case Company, Buffalo, N. Y., a Corporation of New York. Filed Apr. 6, 1907. Serial No. 366,714.



1. In an apparatus for covering boxes, a die-plate having cavities for receiving the body and the lid of a box, and means arranged at the adjacent inner corners of said cavities for supporting the covering-material above the surface of the die-plate, substantially as set forth.

2. In an apparatus for covering boxes, a die-plate having sockets or cavities for receiving the body and the lid of a box, and lugs or ridges arranged at the adjacent inner corners of said cavities and projecting above the surface of the die-plate, substantially as set forth.

3. In an apparatus for covering boxes, a die-plate having sockets or cavities for receiving the body and the lid of a box, a partition separating said cavities, and lugs or ridges arranged at opposite ends of said partition and projecting above the surface of the plate, substantially as set forth.

4. In an apparatus for covering boxes, a die-plate having sockets or cavities for receiving the body and the lid of a box, a partition separating said cavities, and raised lugs arranged at the junction of the partition and the walls of said cavities and conforming to the adjacent corners of the cavities, substantially as set forth.

5. In an apparatus for covering boxes, a die-plate having sockets or cavities for receiving the body and the lid of a box, a partition between said cavities terminating short of the upper surface of the die-plate, and lugs arranged at the junction of the partition and the walls of said cavities and projecting above the upper surface of the die-plate, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

879,600. LUBRICATOR. PETER J. SWEENEY, Windsor, Ontario, Canada, assignor to Penberthy Injector Company, Limited, Windsor, Canada, a Corporation of Canada. Filed Feb. 11, 1907. Serial No. 356,925.

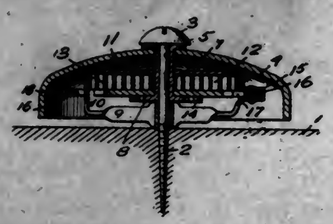


1. In a lubricator, the combination with the oil cup or reservoir, of a fill cup having communication with the reservoir at its upper end, a cap closing the fill cup, and a vent conduit within the cup independent of the oil pas-

sage, leading from a point in proximity to the cap into the reservoir.

2. In a lubricator, the combination with an oil reservoir, of a fill cup therefor, and a vent conduit between the cup and reservoir independent of the oil passage therebetween.

879,601. FIRE-ALARM. DAVID G. THALMAN, Kansas City, Mo. Filed May 13, 1907. Serial No. 373,315.



A device of the type set forth, comprising a bolt, a bell mounted thereon for rotation, a sleeve surrounding said bolt and having one end fixed to said bell, a ratchet wheel carried at the other end of said sleeve, a spacing member fixed to said bolt, and stationary cap supported from said spacing member and surrounding said sleeve, a flat coil spring having an end engaged with said sleeve and with said cap, a toothed wheel mounted upon said sleeve for movement therewith, a lever having an end pivoted to said spacing member and having escapement teeth on each side of its pivot for engagement with the teeth of said wheel, a tapper carried at the free end of said lever and a fusible connection between said lever and said spacing member.

879,602. COMBINATION-LOCK BANK. EUGENE R. WALKER, Chicago, Ill. Filed May 20, 1907. Serial No. 374,597.



1. In a combination-lock bank, the combination with a casing having an open end and a slot for the insertion of coins, and further provided with one or more locking lugs, of a closure for said casing including a normally inoperative combination-lock mechanism adapted to interlock with said lugs, said mechanism being rendered operative to unlock the closure when the bank is filled with coins, substantially as described.

2. In a combination-lock bank, the combination with a casing having an open end and a slot for the insertion of coins, and further provided with one or more locking lugs, of a closure for said casing, said closure carrying a combination-lock mechanism adapted to interlock with said lugs, coöperating parts whereof are normally separated rendering the mechanism inoperative, said parts being brought together to render the lock operative by the last coin inserted to complete the filling of the bank, substantially as described.

3. In a combination-lock bank, the combination with a cylindrical casing open at one end and transversely slotted for the insertion of coins, of internal locking lugs carried by said casing, and a rotatable closure carrying a normally inoperative combination lock mechanism adapted to interlock with said lugs and having normally separated coöperating parts, said lock mechanism being rendered operative upon the connection of said normally separated parts by the insertion of the last coin introduced to complete the filling of the casing, substantially as described.

4. In a combination-lock bank, the combination with a cylindrical casing open at one end and transversely slotted for the insertion of coins, of internal locking lugs carried by said casing, a rotatable closure for the open end of said casing, a series of ring tumblers carried by said closure adapted to interlockingly engage said lugs, a rotatable key adapted to actuate said tumblers, a spindle carried by and rotatable with said closure, and normally separated clutch devices carried by said spindle and key, respectively, said clutch devices being forced into coöperative relation whereby to turn said key from the turning of said closure by the last coin introduced to complete the filling of the casing, substantially as described.

5. In a combination-lock bank, the combination with a cylindrical casing open at one end, and transversely slotted below said open end for the insertion of coins, of internal locking lugs on the inner wall of said casing above said transverse slot, a rotatable closure for the open end of said casing, a series of ring tumblers carried by said closure adapted to interlockingly engage said lugs, an axially bored rotatable key extended through and adapted to actuate said tumblers, a spindle fast with said closure and extending loosely through said key, and normally separated clutch devices carried by said spindle and key, respectively, said clutch devices being forced into coöperative relation whereby to turn said key from the turning of said closure by the last coin introduced to complete the filling of the casing, substantially as described.

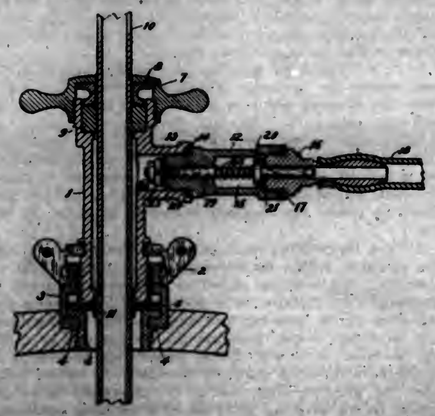
[Claim 6 not printed in the Gazette.]

879,603. METHOD OF PREPARING CALCIUM SULFATE. MAX WALLERSTEIN, New York, N. Y. Filed June 21, 1907. Serial No. 380,160.

1. The method of preparing calcium sulfate in plate-like crystals which consists in reacting upon a calcium salt in solution with a soluble sulfate in presence of a colloidal retarding agent.

2. The method of preparing calcium sulfate in plate-like crystals which consists in reacting upon a calcium salt in solution with a soluble sulfate in presence of gelatin.

879,604. BEER-TAP. JOHN WAWRZINSKI, Oshkosh, Wis. Filed Apr. 12, 1907. Serial No. 367,818.



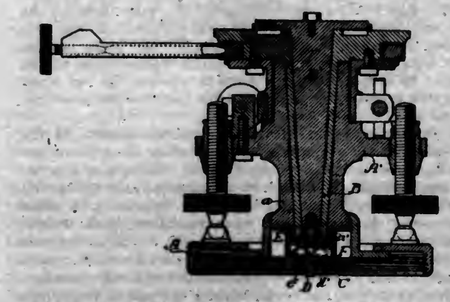
1. A beer tap, comprising a casing, a valve casing connected thereto and containing a valve chamber, a nipple closing the valve chamber, a valve stem slidable in the valve casing, a check valve on the valve stem seating on the nipple, a spring for holding the valve seated, and a nut threaded on the end of the valve stem and seating on the end of the valve casing to form a second check valve for closing the passage between the casing and the nipple.

2. In a beer tap, a back pressure valve comprising a valve casing containing a valve chamber, a nipple closing the valve chamber, a valve stem loosely mounted in the bore of the valve casing and the nipple, a head on the valve stem in the valve chamber for seating against the end of the nipple as a check valve, a spring surrounding the valve stem and bearing on the valve head and on the end of the valve chamber, and a nut threaded on the end of the valve stem and seating on the end of the valve casing to constitute a second check valve for preventing the passage of back pressure from the beer tap.

3. An attachment for beer taps, comprising a valve casing adapted to be threaded into the casing of a beer tap, a nipple threading into the valve casing and closing a valve chamber within the valve casing, a valve stem loosely mounted in the bore of the valve casing and the nipple, a valve head on the valve stem seating on the end of the nipple as a check valve, a spring surrounding the valve stem and bearing on the valve head and on the end of the valve chamber, a nut threaded on the end of the valve stem and seating on the end of the valve casing as a check valve, and a jam nut threaded on the valve stem for locking the said nut in its adjustments.

4. A beer tap, comprising a casing having means for connecting with a bung bushing and a slidable tube for communicating with the interior of the keg with packing between the casing and the tube, a valve casing threaded to said casing, a jacket closing the connection therebetween, a nipple threaded in the end of the valve casing, a gasket closing the connection therebetween, a valve stem loosely mounted in the bore of the valve casing and in the bore of the nipple, a valve head on the valve stem located in a valve chamber of the valve casing, a gasket on the valve stem forming a face for the valve head seating against the end of the nipple as a check valve, a coil spring surrounding the valve stem and bearing on the valve head and on the end of the valve chamber, a nut threaded on the end of the valve stem, a gasket on the valve stem forming a face for the nut to seat against the end of the valve casing and constituting a second check valve, and a jam nut threaded on the end of the valve stem for locking said nut in its adjustments.

879,605. TRANSIT-HEAD. ALFRED C. YOUNG, Philadelphia, Pa. Filed Jan. 29, 1907. Serial No. 354,737.



1. A transit head having a spindle and a bearing therefor, a cap adjustably mounted on the body of the transit head so as to be movable toward and from the end of the spindle, a spring carried in the cap, and an anti-friction device between the said spring and the end of the spindle, consisting of a ball, with a screw carrying said ball and threaded into the spindle substantially as described.

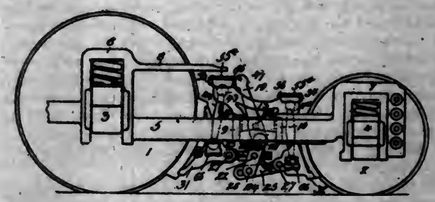
2. A transit head having a bearing and a spindle therein, a screw mounted in the end of the spindle and carrying a ball bearing, a cap threaded to the lower end of the body of the transit head, and a spring therein acting upon the ball bearing, substantially as described.

3. A transit head having a spindle, a bearing therefor, a cap closing the end of the spindle, an adjustable screw having a relatively large head within the cap and its body projecting from said cap, with a spring confined between said head of the screw and the end of the spindle, substantially as described.

4. A transit head having a spindle and a bearing therefor, a cap adjacent to the lower end of the spindle, a screw extending through the end of the cap, a second screw mounted in the end of the spindle, a ball revolubly held in the end of said second screw, and a spring interposed between the said ball and the screw of the cap, substantially as described.

5. A transit head having a spindle, a cap mounted adjacent to the end thereof, a screw having its head within the cap and its threaded portion extending through the head of said cap so as to serve for the attachment of a plumb line, with a spring between said screw and the end of the spindle, substantially as described.

879,606. BRAKE MECHANISM FOR CAR-TRUCKS. WALTER S. ADAMS, Philadelphia, Pa., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 27, 1907. Serial No. 385,791.



1. A brake mechanism comprising a plurality of brake shoes, the lever fulcrumed to operate the said shoes in opposite directions, and a second lever fulcrumed to the said first mentioned lever and a stationary fulcrum for said second lever beyond its point of fulcrum with the first lever.

2. A brake mechanism comprising a plurality of brake shoes, a lever fulcrumed so as to operate said shoes in opposite directions, a second lever fulcrumed to a support and connected to said first lever, the said levers between the stationary fulcrum of the second lever and the connection of the first lever with the brake shoes forming a toggle lever connection.

3. A truck provided with inside hung brake shoes, a lever fulcrumed so as to operate said shoes in opposite directions, a second lever fulcrumed to a support and having its end fulcrumed to the said first lever.

4. A brake mechanism, comprising a brake lever fulcrumed to a support another lever having one end fulcrumed to said operating lever, and brake shoes, said second lever being fulcrumed beyond its point of connection with the operating lever, so as to move the brake shoes in opposite directions.

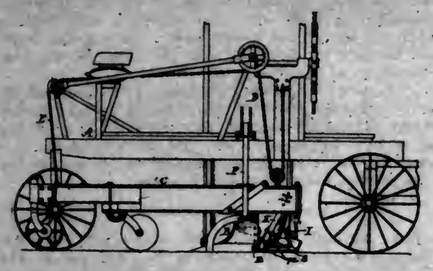
5. A brake mechanism comprising a brake lever fulcrumed to a support and adapted to be operated from one end, a second lever fulcrumed to the operating lever on the end opposite the operating end, and brake shoe holders, said second lever, being fulcrumed to the brake shoe holders beyond its fulcrum with the operating lever, whereby the second lever will move the brake shoe holders in opposite directions.

[Claims 6 to 23 not printed in the Gazette.]

879,607. ELEVATING-GRADER. LUKE V. BROPHY, Fort Wayne, Ind., assignor to Indiana Road Machine Company, a Corporation of Indiana. Filed Sept. 13, 1907. Serial No. 392,772.

1. In an elevating grader of the class set forth, a transversely arranged elevating conveyer; a plow opposite the lower receiving end of the elevating conveyer and having

a mold board for the lateral deflection and side delivery of the plowed up soil onto the elevating conveyer, and a succeeding supplemental mold board attached to the plow and arranged for collecting and laterally deflecting and delivering onto the elevating conveyer such portions of plowed up sand or loose soil as may have escaped from the delivery of the preceding mold board of the plow during operation.



2. In an elevating grader of the class set forth, a transversely arranged elevating conveyer; a plow opposite the lower receiving end of the elevating conveyer and having a mold board for the lateral deflection and side delivery of the plowed up soil onto the elevating conveyer, and a supplemental curved mold board back of said plow mold board and also extending under the same, said supplemental mold board being arranged for collecting and laterally deflecting and delivering onto the elevating conveyer such portions of plowed up sand or loose soil as may have escaped from the delivery of the preceding mold board of the plow during operation.

3. In an elevating grader of the class set forth, a transversely arranged elevating conveyer; a plow opposite the lower receiving end of the elevating conveyer and having a mold board for the lateral deflection and side delivery of the plowed up soil onto the elevating conveyer, and a supplemental mold board arranged back of the plow mold board and having its lower forward portion extending under the latter, the supplemental mold board being secured to the plow and having its high portion opposite the rear corner portion of the receiving end of the elevating conveyer, said supplemental mold board being arranged for delivering sand or loose soil which may have escaped from the delivery of the preceding plow mold board during the operation.

4. In an elevating grader of the class set forth, a transversely arranged elevating conveyer; a plow opposite the lower receiving end of the elevating conveyer and constructed with a mold board arranged for the lateral deflection and side delivery of the plowed up soil onto the elevating conveyer, and a supplemental mold board attached to the plow back of the plow mold board, said supplemental mold board having a width sufficient to cover the space between the elevating conveyer and a higher portion of the plow mold board, and having its high portion overhanging the lower end portion of the elevating conveyer, said supplemental mold board being also formed and arranged for side delivery in direction toward and onto the belt of the elevating conveyer.

5. In an elevating grader of the class set forth, a transversely arranged elevating conveyer; a plow opposite the lower receiving end of the elevating conveyer and having a mold board for the lateral deflection and side delivery of the plowed up soil onto the elevating conveyer belt, said plow being supported for lateral tilt; a supplemental mold board attached to and arranged back of the plow and operative for side delivery onto the elevating conveyer belt of sand or loose soil which has escaped from the delivery of the plow mold board during operation, and a fender secured to the lower rear end corner portion of the elevating conveyer frame in position to fend off the supplemental mold board and prevent the inner edge of the latter from contacting with and cutting the conveyer belt.

[Claims 6 to 14 not printed in the Gazette.]

879,608. SEWING-MACHINE NEEDLE. ANDREW M. CARLSEN, St. Paul, Minn. Filed Oct. 4, 1907. Serial No. 395,822.



1. The combination of a sewing-machine needle having an open-sided eye, a spring arm extending from below the eye and closing the side thereof, said spring arm extending toward the shank of the needle, and the needle having an angular shoulder adapted to meet and resist the end of the spring arm when the latter is in normal position, a guide fixed on the upper end of the spring arm and having its upper end inclined outward from the needle to admit entering of the thread, and one or more guiding edges projecting toward the needle beyond the end of the spring arm, so as to guide the thread past the end of the arm in moving it downward.

2. The combination of a sewing-machine needle having an open-sided eye, a spring arm extending from below the eye and closing the open side thereof, said spring arm extending toward the shank of the needle, and the needle having an angular shoulder adapted to meet and resist the end of the spring arm when the latter is in normal position, a guide fixed on the upper end of the spring arm and having its upper end leaning outward from the needle to admit entering of the thread, and one or more cam-edges projecting toward the needle beyond the end of the spring arm, whereby the entering thread is guided to pass the end of the arm, and a second or upper spring arm secured in and guided by a groove in the side of the shank of the needle and bearing normally upon the outer side of the free end of the first or lower spring arm, said second arm having its lower end projected beyond the point of contact with the lower arm to facilitate the insertion of the thread by simply moving it upward between the two arms and downward between the needle and the guide of the lower arm.

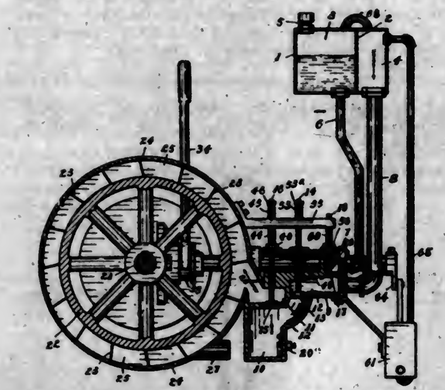
3. The combination of a sewing machine needle having an open-sided eye, a spring arm extending from below the eye and closing the open side thereof, said spring arm extending toward the shank of the needle, and the needle having an angular shoulder adapted to meet and resist the end of the spring arm when the latter is in normal position, a guide fixed on the upper end of the spring arm and having its upper end leaning outward from the needle to admit entering of the thread and one or more cam-edges projecting toward the needle beyond the end of the spring arm, whereby the entering thread is guided to pass the end of the arm, and a second or upper spring arm secured in and guided by a groove in the side of the shank of the needle and bearing normally upon the outer side of the free end of the first or lower spring arm, said second arm having its lower end projected beyond the point of contact with the lower arm to facilitate the insertion of the thread by simply moving it upward between the two arms and downward between the needle and the cam of the lower arm, said groove in the shank being deep enough to permit the upper spring arm to swing in radial direction of the shank also when the latter is held in the needle bar of the sewing machine, and the free end of the upper spring arm having a guiding engagement with the lower spring bar to prevent lateral displacement of the same.

4. A sewing machine needle having an open-sided eye, a primary spring arm fixed on the needle and covering the open side of the eye, an angular shoulder on the needle adapted to resist the end of the arm, and an auxiliary spring arm fixed on the needle and normally engaging the primary spring arm to impel it toward its engaging position with the shoulder, means for readily guiding the thread in between said two spring arms and means for guiding the thread in between the needle and the primary spring arm in threading the needle.

5. The combination with a sewing-machine needle having an open-sided eye, of an upwardly extending spring arm fixed on the needle and covering the side opening of the eye, and a downwardly extending spring arm fixed on the upper part of the needle and normally engaging the outer side of the upper end of the upwardly extending arm, said downwardly extending arm having its end projected beyond the point of contact with the first arm, and having at its inner side above said point of contact of the two arms a shoulder on the downwardly projecting arm to limit the upward movement of the thread, and means carried by the upwardly extending arm for the thread to engage and spring the two arms outward in passing down toward the eye of the needle.

[Claims 6 to 8 not printed in the Gazette.]

879,609. MECHANISM FOR GASOLENE-ENGINES. PAUL W. DILLON, Sterling, Ill. Filed Dec. 22, 1905. Serial No. 292,898.

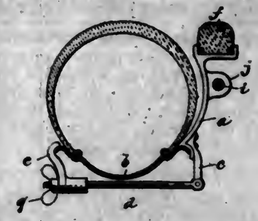


1. Mechanism for gasolene engines, comprising a rotary shaft 21, provided with a disk 32, fixed thereon; a rotary shaft 28, at right angles to the shaft 21, and having a friction wheel 31 slidably mounted thereon; a wheel 22, fixed on the shaft 21, and provided on its periphery with a plurality of vanes; a circular casing, inclosing said vanes; an expansion chamber, communicating with said cylinder; an explosion chamber, communicating with said expansion chamber; a valve, closing the opening between said explosion and expansion chambers; means for holding such valve normally closed; means for holding said valve open immediately following the explosion, such means being actuated by the rotation of the shaft 28; a mixing chamber, communicating with said explosion chamber, and provided with a valve adapted to close the opening between the same; means for holding such valve normally closed; means for suitably opening such valve by each rotation of the shaft 28; an oil chamber, communicating with said mixing chamber, and provided with a valve normally closing the opening between the same; means for holding such valve normally closed; means for slidably opening such valve upon each rotation of the shaft 28; means for introducing a current of air under pressure to the mixing chamber; and means for adjustment of the wheel 31 upon the shaft 28, substantially as shown and described.

2. In mechanism of the class named, the combination of the explosion chamber 10; the expansion compartment 11, auxiliary thereto; the valve 15, interposed between the chambers 10 and 11, and provided with the valve stem 16; the spring 44, holding the valve 15 normally in its seat; the lever 38, engaging the valve-stem 16 to hold said valve open, and means for suitably actuating the lever 38, substantially as shown and described.

3. The combination of the chamber 9, provided with the outlet valve 13; the valve-stem 14, fixed to the valve 13, and provided with a collar 49; the spring 53, holding the valve 13 normally in its seat; lever 47, engaging the collar 49; and means for suitably actuating said lever, substantially as and for the purpose set forth.

879,610. VEHICLE-TIRE. PERRY E. DOOLITTLE, Toronto, Ontario, Canada. Filed May 17, 1904. Serial No. 208,368.



1. In combination with a vehicle wheel carrying a collapsible tire, of an auxiliary wheel rim carrying a tire and detachably secured in a lateral position upon the vehicle wheel.

2. In combination with a vehicle wheel of reducible diameter, of an auxiliary wheel rim provided with means for detachably securing it in a lateral position upon the vehicle wheel.

3. In combination with a wheel and a pneumatic tire, a supplemental tire, a support for said supplemental tire extending radially outward and carrying the supplemental tire alongside of and substantially level with the pneumatic tire, and means to detachably secure said support to the wheel.

4. In combination with a wheel and a pneumatic tire, a supplemental hard tread tire, a support for said supplemental tire extending radially outward and carrying the supplemental tire alongside of the main tire and substantially even with the normal bearing surface of the main tire, and means to detachably secure said support to the wheel.

5. In combination with a pneumatic tire, a rim therefor, a supplemental rim, a hard tread part carried by said supplemental rim, means to secure the supplemental rim to the main rim independently of the pneumatic tire, whereby a supplemental bearing is provided.

[Claims 6 to 14 not printed in the Gazette.]

879,611. SAFETY-RAZOR. LEON EBNER, Philadelphia, Pa. Filed Nov. 22, 1907. Serial No. 408,248.

1. A safety razor comprising a tubular handle, a smaller stem carried by the handle and having formed integral therewith a backing plate, said plate and stem being centrally slotted, a centrally slotted blade, an operating plate for co-action with the backing plate, said operating plate being provided with a centrally arranged and threaded projection for penetrating the aforesaid slotted parts, and a lock-nut for engaging the threaded projection whereby the operating plate is drawn toward the backing plate to hold and flex the blade.

2. A safety razor comprising a handle having a stem, a slotted backing plate provided with a bifurcated member said member having pivotal relation with said stem, a slotted blade, an operating plate for co-action with the

backing plate said operating plate being provided with a centrally arranged and threaded extension for penetrating the aforesaid slotted parts, and a lock-nut for engaging the threaded projection whereby the operating plate is drawn toward the backing plate to hold and flex the blade.



3. A safety razor comprising a hollow handle screw threaded at its lower end for the reception of a screw-threaded cap, a top cap, a stem superposed upon the handle, a backing plate provided with a bifurcated extension said extension having pivotal relation with the stem, a blade, an operating plate having a threaded extension for penetrating the blade, backing plate and bifurcated extension, and a locking-nut for engaging the threaded extension whereby the operating plate is drawn toward the backing plate to hold and flex the blade.

879,612. ALKALINE STORAGE BATTERY. THOMAS A. EDISON, Llewellyn Park, Orange, N. J., assignor to Edison Storage Battery Company, West Orange, N. J., a Corporation of New Jersey. Filed June 29, 1904. Serial No. 214,653.

1. In a storage battery, the combination with suitable active materials, of a practically non-foaming alkaline electrolyte obtained by filtration of an alkaline solution through a filtering medium of very fine porosity, substantially as set forth.

2. In a storage battery, the combination with suitable active materials, of a practically non-foaming alkaline electrolyte obtained by filtration, of an alkaline solution through a filtering medium containing free carbon, substantially as set forth.

3. In a storage battery, the combination with suitable active materials, of a practically non-foaming alkaline electrolyte obtained by filtration of an alkaline solution through bone-black, substantially as set forth.

4. In a storage battery, the combination with suitable active materials, of a practically non-foaming alkaline electrolyte obtained by filtration of an alkaline solution through bone-black previously subjected to the purifying effect of a hot caustic solution followed by washing with water, substantially as set forth.

5. In a storage battery, the combination with suitable active materials, of an alkaline electrolyte substantially free from albuminous or gelatinous matter in a condition to cause foaming, substantially as set forth.

879,613. TRANSPLANTING-BASKET. CHARLES L. EDWARDS, Dallas, Tex. Filed Nov. 7, 1907. Serial No. 401,154.

1. A transplanting basket comprising a pair of separable open wirework sections, and means formed integral with said sections to detachably connect the same together, substantially as described.

2. A transplanting basket, comprising a pair of separable sections, identical in construction and formed of a series of wire rods or bars, and fastening coils formed at one of the upper inner corners of each of said sections, whereby said sections may be detachably connected together, substantially as described.

3. A transplanting basket, formed in separable sections, identical in construction, each of which comprises a curved or segmental top bar formed of wire, integrally formed outer side and end bars, intermediate side bars arranged between said end outer bars, and a fastening coil formed in one corner of each of said sections, whereby said sections may be detachably connected together to form the basket, substantially as described.



4. A transplanting basket comprising a pair of separable sections constructed to form an opening in the bottom when said sections are brought together in an operative position, thereby forming a root outlet, and integrally formed fastening devices to detachably connect said sections together, substantially as described.

5. A transplanting basket formed in separable sections identical in construction, each comprising a curved top bar, integrally formed outer side and end bars, intermediate side bars arranged between said outer side and end bars, integrally formed, outwardly curved bottom bars adapted to form an opening in the bottom of the basket when said sections are in operative position, thereby forming a root outlet and means to detachably connect said sections together, substantially as described.

879,614. FOUNTAIN-PEN. SIGMUND H. ENGELBERG, Brooklyn, N. Y. Filed Mar. 6, 1907. Serial No. 360,910.



A fountain pen having a barrel with the bore of gradually diminishing diameter or tapered at its lower or pen end portion, and a feed bar lying partially within said tapered portion and adapted to fit the tapered portion throughout that portion of its length which lies within the barrel so as to provide tight closure or fit.

879,615. AMUSEMENT DEVICE. CLIFFORD I. ENOCHS, Brooklyn, N. Y. Filed May 5, 1906. Serial No. 315,890.

1. In an amusement device, the combination with a water supply, of platforms arranged to permit a fall of water from one to another, tracks running under and through the fall of water and cars adapted to travel on the tracks and run in and out of the water falls.

2. In an amusement device, the combination with one or more platforms carrying tracks, of means for providing for the fall of water from one platform to another and cars adapted to travel on the tracks and run in and out of the water falls.



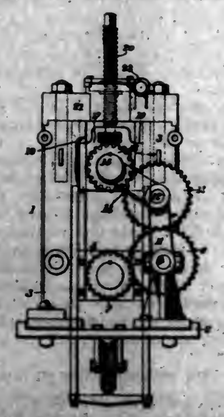
3. In an amusement device, the combination with a series of platforms provided with a supply of water to fall therefrom, of rails adapted to pass through the water as it falls from one platform to the other and cars or vehicles adapted to shed the water as they pass through the falls.

4. In an amusement device, the combination with scenery, of a series of platforms, means for supplying water to the platforms so it falls from one to the other, tracks on the platforms, cars representing lifelike objects adapted to move on the tracks and means for actuating certain parts of the cars to resemble the motions of the living objects.

5. In an amusement device, the combination with scenery, of a series of platforms, canals or tanks on the platforms, rails within the canals, a water supply adapted to flow over the edges of the platforms to represent water falls and cars adapted to move on the tracks through and under the water falls.

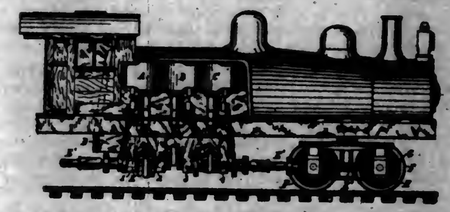
[Claims 6 to 11 not printed in the Gazette.]

879,616. ROLLING-MILL FOR CRUSHING PIPES, BLOOMINGS, &c. JAMES EYSON, Philadelphia, Pa. Filed Oct. 10, 1903. Serial No. 176,520.



In a device of the character described, a lower fixed roller, a gear thereon, an upper roller adjustable toward and from the fixed roller, housings at each end in which said upper roller is adjustable, a gear upon said upper roller, a floating shaft, a gear thereon meshing with the gear on the upper roller, a fixed shaft, inside and outboard bearing therefor, a gear upon said fixed shaft meshing with the gears upon the floating shaft and lower roller respectively and links connecting the floating shaft with the fixed shaft and upper roller upon opposite sides of the gears thereon.

879,617. LOCOMOTIVE-CRANK-SHAFT BRACKET. LEWIS E. FEIGHTNER, Lima, Ohio, assignor to Lima Locomotive and Machine Company, Lima, Ohio, a Corporation of Ohio. Filed Aug. 23, 1907. Serial No. 389,791.



1. In a locomotive having upright engines, the combination, with a plurality of cylinders arranged side by side above the same crank-shaft and the crank-shaft having a crank for each cylinder, of cylinder-frames extended downward one from each of the cylinders, and a junction-plate secured transversely to the cylinder-frames and provided with crank-shaft bearings embracing the crank-shaft at the sides of the several cranks.

2. In a locomotive having upright engines, the combination, with a plurality of cylinders arranged side by side above the same crank-shaft and the crank-shaft having a crank for each cylinder, of cylinder-frames extended downward one from each of the cylinders, and a junction-plate secured transversely to the cylinder-frames and perforated for the passage of the engine connecting-rods, and having crank-shaft bearings embracing the crank-shaft at the opposite sides of each of the cranks.

3. In a locomotive having upright engines, the crank-shaft bracket having a flat perforated plate for the passage of the connecting-rods, bearings projected downwardly therefrom for a crank-shaft, longitudinal side-plates uniting the bearings with the top-plate and notched or arched between the bearings to clear the cranks, and transverse webs connecting the top-plate and side-plates, forming a box-girder with the bearings thereon, and adapted to unite all the cylinder-frames when bolted thereto.

4. In a locomotive having a plurality of upright cylinders with upright cylinder-frames, the combination, with said frames, of a crank-shaft bracket having a flat junction-plate secured to the bottoms of the said frames and having perforations for the passage of the engine connecting-rods, bearings upon the lower side of the plate with side-plates connecting the bearings and top-plate, and a crank-shaft fitted to the bearings and having cranks corresponding to the several cylinders.

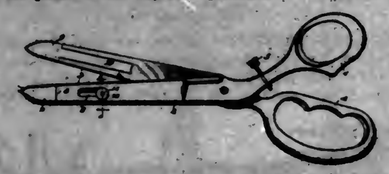
5. In a locomotive having upright engines, the combination, with the fire-box having a mud-ring, of a plurality of upright cylinders secured to the fire-box with frames extended downward therefrom, a crank-shaft at the side of the fire-box, and a crank-shaft bracket connecting the bottoms of the cylinder-frames, and having a yielding connection to the mud-ring, to brace the bearings laterally and permit the expansion of the fire-box without strain upon the cylinder-frames.

[Claims 6 and 7 not printed in the Gazette.]

879,618. SCISSORS. ESTHER E. FLYBERG, Baudette, Minn. Filed Oct. 26, 1907. Serial No. 399,860.

1. A pair of scissors provided with blades having squared ends, the inner faces of the blades being provided with guideways adjacent to the squared ends, and an extensible point for each blade, each of said points being provided with a shank engaging the guideway, a spring

arranged between the end of the shank and the end of the recess and acting normally to force the point away from the blade, each of the blades being provided with a slot and each of the shanks with a threaded stem projecting through the slot, and a thumb nut on the stem for clamping the point in its adjusted position.



2. A pair of scissors provided with blades having squared ends, the inner faces of the blades being provided with guideways, and an extensible point for each blade forming a continuation of said blade, each of said points being provided with a shank engaging the guideway, a spring acting normally to force the point away from the blade, and means for securing the point in its innermost position.

3. A pair of scissors provided with blades having extensible points forming continuations of the blades, each of said blades being provided with a guideway, and each of the points with a shank for engaging the guideway of the respective blades, means for moving the points longitudinally away from the blades, and means for clamping them in their adjusted position.

4. A pair of scissors provided with blades having extensible points forming continuations of the blades, each of said blades being provided with a guideway, and the point with a shank engaging the guideway, and means for adjusting the point with respect to the blade.

5. A pair of scissors provided with blades having points forming continuations of the blades movable longitudinally toward and away from the blade, means for securing the points in their adjusted position, and means for limiting the movement of the blades toward and from each other.

[Claim 6 not printed in the Gazette.]

879,619. BATH-PAD. JOHN H. FOOTE, Chicago, Ill. Filed Oct. 4, 1907. Serial No. 395,955.



1. The method of constructing a bath-pad, which consists in shaping a mat of hairlike material into a predetermined form, placing the same between two sheets capable of being disintegrated by moisture, said sheets having adhesive material thereon, sewing the same through said sheets, and finally removing said sheets and adhesive material by the application of liquid.

2. The method of constructing a bath-pad, which consists in shaping a mat of hairlike material into a predetermined form, confining and assembling the said material by means capable of being disintegrated by moisture, said means comprising an adhesive material, sewing said hairlike material through said soluble means, and finally removing said soluble means and adhesive material by the application of a liquid.

879,620. DRAWING-TABLE. LUTHER FORSYTH, Hagerstown, Md. Filed Nov. 1, 1907. Serial No. 400,240.

1. A drawing table embodying a pair of side rails each provided with a pair of longitudinally extending slots, the upper wall of one of said slots being toothed and the lower wall of the other of said slots being toothed, a drawing board pivotally mounted on said rails, means connected to said board and engaging in the slots having the lower wall toothed for maintaining said board at an inclination, a pair of legs pivotally connected to said rails, and a pair of legs pivotally connected to the first mentioned pair and engaging in the slots having the upper walls toothed for maintaining the table in an adjusted position with respect to height.



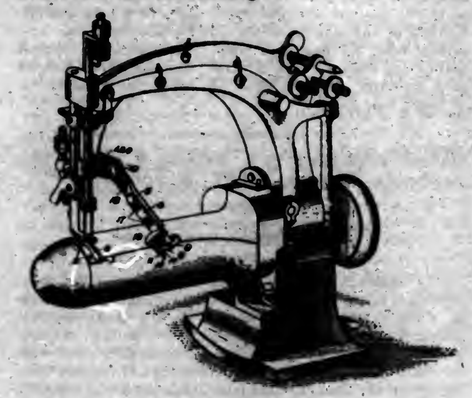
2. A drawing table embodying a pair of side rails each provided with a pair of longitudinally extending slots with one wall of each of the slots toothed, a drawing board pivotally mounted on said rails, means connected to said board and engaging the teeth formed in the walls of one pair of slots for maintaining said board at an inclination, a pair of legs pivotally connected to said rails, and a pair of legs pivotally connected to the first mentioned pair of legs and engaging in the teeth formed in the walls of the other pair of slots for maintaining the table in an adjusted position with respect to height.

3. A drawing board comprising a pair of side rails each provided with a pair of slots, a base formed of a pair of longitudinally-extending rails, a pair of supporting legs having bifurcated ends connected to the side rails and bifurcated lower ends slidably connected to the base rails, a pair of supporting legs having bifurcated lower ends pivotally connected to the base rails and bifurcated upper ends slidably connected in one of the slots in each of the side rails, means for pivotally connecting the legs of one pair to the legs of the other pair, said legs providing means for vertically adjusting the said side rails, a drawing board pivotally mounted on the side rails, and means engaging with the drawing board and in the other slot of each of the side rails for adjustably supporting the drawing board at various inclinations.

4. A drawing table embodying a pair of side rails each provided with a pair of longitudinally extending slots with one wall of each of the slots toothed, a drawing board pivotally mounted on said rails, means connected to said board and engaging the teeth formed in the walls of one pair of slots for maintaining said board at an inclination, a pair of legs pivotally connected to said rails, a pair of legs pivotally connected to the first mentioned pair of legs and engaging in the teeth formed in the walls of the other pair of slots for maintaining the table in an adjusted position with respect to height, a pair of base rails, means for pivotally connecting one pair of legs to the rear of the base rails, and means for slidably connecting the other pair of legs to the base rails.

879,621. FOLDING-GUIDE FOR SEWING-MACHINES. JOSEPH F. FOSCHINBAUR, Ridgeland, Ill., assignor to The Union Special Sewing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 19, 1898. Serial No. 678,129.

1. In combination with a sewing machine having an overhanging frame, an arm carrying on its lower end a folding guide member beneath the said frame, said arm being pivoted upon a stationary part of the machine, so as to have a vertical movement, and means for causing said arm to swing outwardly, as well as vertically in a plane oblique to the line of stitching.



2. In combination with a sewing machine, a bracket attached thereto having an angular projecting plate, an arm pivoted thereto having its lower portion twisted out of parallelism with said angular plate, and being movable in a plane oblique to the line of stitching, said arm being provided at its lower end with a folding guide; substantially as described.

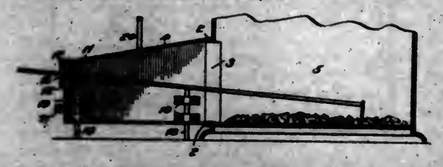
3. A folding guide for sewing machines, comprising a stationary portion secured to the bed of the machine, a portion movable in a plane oblique to the line of stitching and pivoted to the frame of the machine, said moving portion being provided with a double guiding member, and a vertical rib or wall, and the stationary portion with a cooperating guiding wall; substantially as described.

4. A folding guide for cylinder sewing machines having a stationary part secured to the bed of the machine and a vertically swinging sidewise moving part coöperating therewith, the said parts being shaped on their lower edges to conform to the periphery of the cylindrical bed plate of the machine; substantially as described.

5. A folding guide for sewing machines having a stationary portion secured to the bed plate of the machine and having a vertical rib or wall, a swinging portion secured to the frame of the machine and having two guiding recesses, and having a guiding wall or rib coöperating with the guiding wall or rib on the stationary portion of the two ribs practically forming one vertical wall; substantially as described.

[Claim 6 not printed in the Gazette.]

879,622. ASH-COLLECTING BOX ATTACHMENT FOR FURNACES, &c. JOHN GALVIN, Brattleboro, Vt. Filed Nov. 19, 1907. Serial No. 402,823.



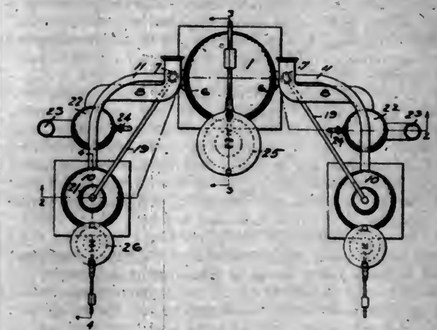
1. An ash-collecting attachment for furnaces consisting of a box having an open end adapted to fit and close the opening of the ash-pit door, a pair of grooved rolls mounted in the other end of the box, the roll grooves matching and forming a circular opening between them to form a bearing and guide for the handle of a scraper.

2. An ash collecting attachment for furnaces consisting of a box having an open end adapted to fit and close the opening of the ash-pit door, a hinged lid at the top of the other end of the box, a pair of grooved rolls one mounted in the free edge of the lid, the other mounted in an opening in the closed end of the box, the grooves matching and forming a circular opening between them, and adapted to form a bearing and guide for the handle of a scraper.

3. In an ash-collecting attachment for furnaces a box having an open end adapted to fit and close the opening of the ash-pit door, a hinged lid at the top of the front end of the box, a removable cover having a pair of hooks adapted to engage holes in the top edge of the box at its open end to close it, a hook at one side of the box adapted to engage the catch at the ash-pit door of the furnace, a slidable arm on the other side of the box adapted to engage the hinged end of the ash-pit door, and a pair of grooved rolls mounted in the closed end of the box, the grooves matching and forming a circular opening between them and adapted to form a bearing and a guide for the handle of a scraper.

4. In an ash collecting attachment for furnaces a box having an open end adapted to fit and close the opening of the ash-pit door, a hinged lid at the top of the front end of the box, a pair of legs at the inner and at the outer end of the box, means for vertically adjusting said legs, and a pair of grooved rolls mounted at the closed end of the box the grooves matching and forming a circular opening between them adapted to form a bearing and a guide for the handle of a scraper.

879,623. SMELTING-FURNACE FOR COPPER AND OTHER ORES. HENRY H. FREEMAN, Wilkinsburg, Pa. Filed Oct. 11, 1906. Serial No. 338,494.

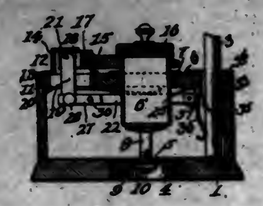


1. Ore reducing apparatus comprising in combination, a smelting furnace, a gas producer, connections from the producer to the hearth of the smelting furnace for supplying gas thereto at the normal pressure of the producer, a steam generator associated with and utilising the waste heat from said producer, an injector connected to the upper end of the smelter for producing suction in the smelting chamber, and a steam connection from the generator to said injector.

2. Ore reducing apparatus comprising in combination, a smelting furnace, a gas producer, connections from said producer to the hearth of the smelting furnace for supplying gas thereto under the normal pressure of the producer, a steam generator formed by a water jacket around said producer, an injector connected to the upper end of the smelting furnace for producing suction therein, and a steam connection from the generator to said injector.

3. Ore reducing apparatus comprising in combination a smelting furnace, a gas producer, twyers at the hearth of the furnace comprising a gas pipe having connection to the gas producer and an air inlet and mixer, a steam generator associated with and utilising the waste heat from said producer, an injector connected to the upper end of the smelting chamber for producing suction therein, and a steam connection from the generator to said injector.

879,624. INKSTAND. FREDERICK A. FRICKER, Scranton, Pa. Filed Sept. 27, 1907. Serial No. 394,896.



1. In an inkstand, the combination with a support, of a cover movably mounted upon said support, an arm carried by said support, means connecting said arm to said cover, and a hollow guide carried by said support contiguous to said arm, whereby when an object is inserted into said guide and in engagement with said arm, said arm and cover will be moved upon said support.

2. In an inkstand, the combination with a support, a cover pivotally mounted upon said support, of lever means provided with a depending, curved arm carried by said support, means connecting said lever means to said cover, a hollow guide carried by said support contiguous to said arm, and said guide provided with a lower end opening contiguous to the lower portion of said arm, whereby when an object is inserted into said guide and in engagement with said arm, said lever and cover will be swung upon said support.

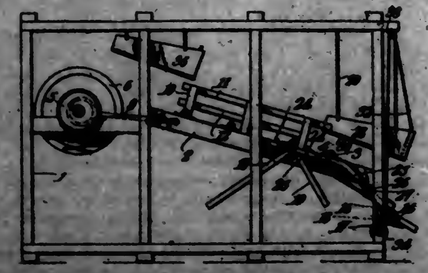
3. In an inkstand, the combination with a support, a movable cover carried by said support, of a hollow guide extending through a portion of said support and provided at one side with an inclined end or bottom producing a side-opening, and means connected to said cover and positioned contiguous to said inclined end and being adapted to be operated by the insertion of an object into said guiding means.

4. In an inkstand, the combination with a body, provided with a top, of a horizontal bracket provided with a body, said body provided with a front open end, a cover provided with an extension, the extension projecting through the open end of and having its rear end terminating in said bracket, means pivotally securing said extension to said bracket, and means engaging said extension for swinging said cover upon said bracket.

5. In an inkstand, the combination of a body and a detachable top, a receptacle provided with a flange positioned upon said top, said flange in engagement with said top, said receptacle provided with a threaded portion extending through a portion of said body, a nut threaded upon said threaded portion and securing said body and top together, and a movable cover for closing said receptacle.

[Claims 6 to 13 not printed in the Gazette.]

879,625. APPARATUS FOR SCREENING AND GRADING COAL. WILLIAM R. GARRETT and JAMES H. WALKER, Central City, Ky. Filed Oct. 19, 1907. Serial No. 398,279.



An apparatus of the character described comprising a frame having inclined side beams, bell crank rockers journaled upon said beams, a frame mounted upon the bell cranks of the rockers, plates mounted upon the last said frame and being arranged one above the other the upper plates being perforated and the lower plate being imperforate, the lower plate being the longest, the intermediate plate the shortest and the upper plate of a length intermediate of the lengths of the other plates, a hopper suspended from the first said frame and having an inclined bottom one end of which is under the upper plate an end gate pivotally mounted upon the hopper and means for swinging said gate.

879,626. FOUNTAIN-PEN. CHARLES W. GASTON, Allegheny, Pa. Filed Oct. 16, 1907. Serial No. 397,689.

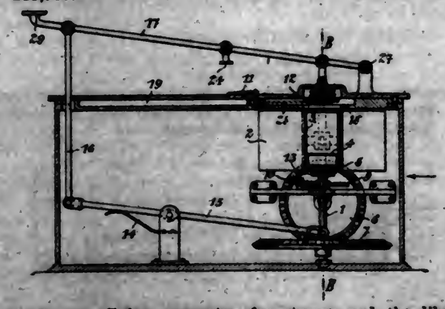


1. A fountain pen comprising a tubular handle piece forming a casing, a compressible ink-holding element therein, a pen attached to the handle piece, a feed tube connected with the ink-holding element and having its outer end spaced from the pen, and a tongue connected with the outer end of the tube and curved toward the pen from the side of the tube opposite from the latter for conducting the ink from the tube to the pen, the ink-carrying surface of the tongue being smooth and straight in transverse cross section.

2. The combination of a handle piece, a pen secured thereto, an ink feeding tube disposed under and spaced from the pen, a relatively flat extension extending from and integrally connected with the discharge end of the tube to proximity to a point adjacent the pen, a hollow plug into which the tube extends, an ink-holding sack open at one end to receive the plug, and a band binding the sack and plug together, the band being housed normally within the handle piece.

3. The combination of a tubular handle piece open at both ends, a compressible ink-holding element mounted therein and removable through either end thereof and having one end normally projecting out of the said piece, an ink feeding tube connected with the element and projecting from the opposite end of the handle piece, and a pen secured to the handle piece, there being a slot in the handle piece for permitting the element to be compressed by the finger of the user.

879,627. AFFIXING APPARATUS FOR STAMPS AND LABELS. EMANUEL GOLDSCHMIDT, Német Keréstur, Austria-Hungary. Filed Oct. 23, 1905. Serial No. 283,903.



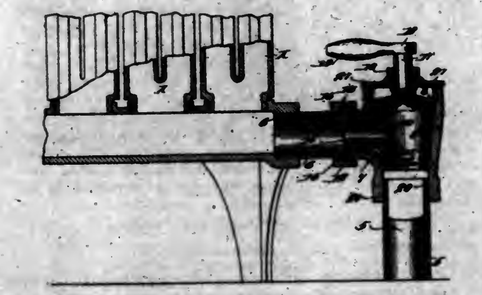
1. In an affixing apparatus for stamps and the like, the combination of a rotary drum, reservoirs arranged therein in different radii thereof, each reservoir having a movable bottom, a lever, and a piston carried by said lever and adapted to press against said bottom to raise the stamps or labels in said reservoir, substantially as described.

2. An affixing apparatus for stamps or labels comprising a spindle, a frame mounted on said spindle, a plurality of stamp containing reservoirs mounted thereon, movable bottom plates in said reservoirs and a gearing for rotating said spindle in combination with means for pressing the envelop against the stamps and for upwardly pressing the stamps, substantially as set forth.

3. An affixing apparatus for stamps or labels comprising a spindle, a frame mounted on said spindle, a plurality of stamp containing reservoirs mounted thereon, movable bottom plates in said reservoirs and a gearing for rotating said spindle, in combination with a cover, a pivoted lever, a spring pressure plate attached thereto, a pivoted spring controlled lever connected to said lever and operated thereby, a presser piston actuated by said spring controlled lever, substantially as set forth.

4. An affixing apparatus for stamps or labels comprising a spindle, a frame mounted on said spindle, a plurality of stamp containing receptacles mounted thereon, movable bottom plates in said reservoirs and a gearing for rotating said spindle in combination with a pivoted lever, a spring pressure plate attached thereto, a pivoted spring controlled lever connected to said lever and operated thereby, a presser piston actuated by said spring controlled lever, envelop engaging moistening rollers, a press plate and means for raising said press plate after the stamping of the envelops, substantially as set forth.

879,628. RADIATOR APPLIANCE. JOSEPH A. GORTON, Montclair, N. J. Filed Oct. 30, 1906. Serial No. 341,238.



1. In combination, a radiator, a single steam supply main, a valve casing connected to the main, a single pipe connection between the valve casing and the radiator having a single passage therein, and a valve plug within the casing having a relatively large opening therein for the passage of steam, and a relatively small opening for the passage of water located below the steam opening.

2. The combination of a radiator, a steam supply main therefor, a valve casing connected to the steam supply main, a pipe connection between the radiator and the valve casing having a single passage therein, and a valve plug within the casing having an upper passageway for the passage of steam, and a lower passageway for the passage of the water of condensation.

3. In combination a heating device, a steam supply main, a valve casing connected to the supply main, a connection between the valve casing and the heating device having a single passage therein, an upper steam passageway and a lower water passageway formed in the valve casing, and a valve within the casing having an upper steam passageway adapted to register with the steam passageway in the valve casing, and a lower water passageway adapted to register with the water passageway in the valve casing.

4. The combination with a heating device, of a steam supply pipe, and a valve casing connected thereto, a pipe connection between the valve casing and the heating device having a single passage therein, and a hollow valve plug within the casing having an upper passageway for the admission of steam to the heating device, and a lower passageway for returning the water of condensation to the supply main.

5. The combination with a radiator, a single steam supply main therefor, a valve casing connected to the supply main and having a steam duct, and a water duct, a pipe connection for the passage of steam and water connecting the valve casing with the radiator having a single passage therein, and a valve within the casing having a passageway therein for the admission of steam from the supply main to the pipe connection and radiator, and a passageway for permitting the water of condensation to pass from the radiator and pipe connection back to the supply main.

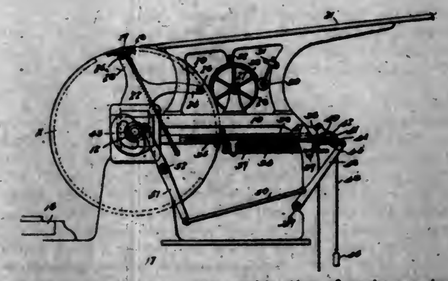
879,629. ORNAMENTAL PEDESTAL, COLUMN, AND PILASTER. WILLIAM J. GRAY, Jeannette, Pa. Filed Oct. 26, 1907. Serial No. 399,294.



1. A pedestal column, or like article comprising a frame consisting of a base, and a cap-piece each provided with a groove, and a standard connecting said cap-piece and base, in combination with a series of glass rods, strips, or sections the ends of which are confined within said grooves, said glass rods being in abutting engagement and forming the shell of the column.

2. A pedestal column, or like article comprising a frame consisting of a base formed with a circular groove on its upper sides, a standard rising centrally from said base and a cap-piece secured to the upper end of said standard, and formed on its underneath face with a circular groove, in combination with a series of glass rods, strips or sections having their ends confined within said grooves, said rods resting one against another to form a cylindrical glass shell.

879,630. SHEET-DELIVERY. RICHARD J. GREENWAY, Jr., Westerly, R. I., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of New Jersey. Filed July 23, 1906. Serial No. 327,429.



1. In a printing-press, the combination of an impression cylinder, guides for receiving and directing the sheet away from the cylinder, a receiving table immediately beneath the guides having its forward end adjacent to the cylinder and a carrier which receives and carries the sheet towards the cylinder to deposit it upon the receiving table beneath the guides.

2. In a printing-press, the combination with an impression cylinder of a rotating guide about which the printed sheet is curved to reverse it, and a tape-carrier which

moves towards and from the cylinder, receives the sheet as it comes from the guide and lays out the sheet as the carrier moves towards the cylinder.

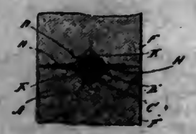
3. In a printing-press, the combination of an impression cylinder, a feed-board, rotary guides and curved stationary guides immediately beneath the feed-board to receive and curve the sheet, and a tape-carrier immediately below the guides to receive and direct the depending sheet.

4. In a printing-press, the combination of an impression cylinder, guides for receiving the leading edge of the sheet and curving the sheet to reverse it, and a reciprocating carrier which meets the falling leading edge of the sheet, travels forward with it and then withdraws from beneath it.

5. In a printing-press, the combination of a sheet-receiving table, guide-ways on opposite sides of the table, a tape-carrier frame traveling in the guide-ways, rollers in one end of the tape-frame, and tape-strips fixed at one end, weighted at the other and running over the tape-frame rollers.

[Claim 6 not printed in the Gazette.]

879,631. METHOD OF MAKING DRILLS. LEWIS GIBSON, New Bedford, Mass., assignor to Morse Twist Drill & Machine Company, New Bedford, Mass., a Corporation of Massachusetts. Filed Dec. 18, 1907. Serial No. 407,031.



As an improvement in the art of making two-part drills, the method herein described which consists in forming one or more recesses in the bit near the butt-end thereof, forming the shank with an excess of metal, forming in said shank a chamber to receive the recessed butt-end of the bit, inserting said end in said shank chamber, compressing the metal of the shank and thereby swaging the same into the bit recess or recesses, causing the excess of shank metal to flow outwardly in the form of a fin or fins and then removing said fin or fins.

879,632. CIGAR-LIGHTER. AUGUSTUS C. GRUHLER, Waterloo, Ind. Filed June 13, 1906. Serial No. 321,565.



1. An electrically ignited fluid burning lighter, comprising a fluid receptacle, a tube or casing leading therefrom for the reception of the wick, an electrode secured adjacent to the tip of said tube or casing, an extinguisher normally held over said tube or casing, and adapted to move substantially at right angles to said tube, said extinguisher being provided with an opposite electrode to be brought into contact with the electrode on the tube tip when the extinguisher is moved, and means connected with the extinguisher whereby the latter is moved, and so related to the tube or casing as to be directed in its movements thereby.

2. An electrically ignited fluid burning lighter, comprising a fluid receptacle, a tube or casing leading therefrom for the reception of the wick, an electrode secured adjacent to the tube or casing tip, an extinguisher adapted to move substantially at right angles to said tube and provided with an opposite electrode, means connected with the extinguisher whereby the latter may be moved away from the tube or casing tip, said means so related to the tube or casing as to be directed in its movement thereby, and mechanism for returning said means and the extinguisher to their normal position.

3. An electrically ignited, fluid burning lighter, comprising a fluid receptacle, a tube or casing leading therefrom for the reception of the wick, an electrode secured adjacent to the tube or casing tip, an extinguisher adapted to move to and from said tube, and provided with an opposite electrode, arms extending on opposite sides of said tube or casing and connected with the extinguisher, whereby the latter is moved in a defined path substantially at right angles to the tube or casing tip.

4. An electrically ignited fluid burning lighter, comprising a fluid receptacle, a tube or casing leading therefrom for the reception of the wick, an electrode secured adjacent to the tip of said tube or casing, an extinguisher normally held over said tube or casing and provided with an opposite electrode, arms extending on opposite sides of the tube or casing and connected with the extinguisher whereby the latter is moved in a defined path substantially at right angles to the tube or casing tip, and means acting on said arms whereby the latter, with the extinguisher, are returned to their normal positions.

5. An electrically ignited fluid burning lighter, comprising a fluid receptacle, a tube or casing leading therefrom for the reception of the wick, an electrode secured adjacent to the tube or casing tip, an extinguisher normally held over said tube or casing tip, said extinguisher being provided with an opposite electrode, and means connected with the extinguisher and having sliding contact with the tube or casing whereby the direction of its movement and the extinguisher is controlled.

[Claims 6 to 10 not printed in the Gazette.]

879,633. PROCESS OF TREATING METALLIC ORES OR MATTES. EMIL GÜNTHER and RUDOLF FRANKE, Eisleben, Germany. Filed June 18, 1907. Serial No. 379,535.

1. In extracting metallic ores and matte the method of producing nickel salt solution for electrolytic deposition of nickel consisting in subjecting copper and nickel containing concentrated regulus to electrolytic action as anode in a bath of chlorid of copper with addition of chlorid of alkali in presence of free hydrochloric acid, introducing copper salt into the bath during the electrolytic process separating the solution when rich in nickel from the solid residue of the anode and eliminating the contents in copper from the solution.

2. The method of obtaining pure metallic copper and nickel from copper and nickel containing regulus consisting in subjecting the copper-nickel-regulus to electrolytic action as anode in a bath containing chlorid of copper with addition of chlorid of alkali in the presence of free hydrochloric acid with the effect of electrodepositing metallic copper at the cathode, introducing chlorid of copper into the bath during the electrolytic process, separating the solution when rich in nickel from the solid residue of the anode, electrolysing the drawn off solution with insoluble anodes for electrolytically depositing the main portion of copper contained therein, chemically precipitating the rest of the copper out of the bath, electrolysing the nickel salt solution obtained in this way with insoluble anodes with the effect of electrodepositing pure metallic nickel, using the chlorin formed at the anode for producing chlorid of copper from suitable copper ores, and using such chlorid of copper as electrolyte when subjecting fresh charges of copper-nickel-regulus, as anode, to electrolytic action.

879,634. METHOD OF IMPROVING STEEL RAILS. ROBERT A. HADFIELD, Sheffield, England. Filed July 12, 1907. Serial No. 383,421.

1. The method herein described of treating steel rails, which consists in heating the rail to a relatively high temperature, quickly cooling it, reheating it to a predetermined lower temperature than the initial heating, and then subjecting it to a slower cooling, the two heats being to predetermined degrees such as to concurrently produce increased hardness and resistance to shock, substantially as described.

2. The method herein described of treating steel rails, which consists in heating the rail to a temperature of at least 850° C., quickly cooling it, reheating to between 500 and 700° C., and then subjecting it to a slower cooling substantially as described.

3. The method herein described of treating steel rails, which includes the steps of heating the rail, quickly cooling from a predetermined high temperature and afterwards slowly cooling from a predetermined lower temperature, the two temperatures being such as to produce concurrent hardness of the rail and resistance to shock, substantially as described.

4. The method herein described of treating steel rails, which includes the steps of heating the rail, quickly cooling the rail from a temperature of at least 850° C. to a temperature between 500° and 700° C., and afterwards slowly cooling the rail from a temperature of between 500 to 700° C., substantially as described.

5. The method herein described of treating steel rails containing more than .1 per cent. of phosphorus which includes the steps of heating the rail, quickly cooling it from a predetermined high temperature to a predetermined lower temperature, and afterwards subjecting it to a slower cooling from said predetermined low temperature, the two temperatures being such as to concurrently produce increased hardness of the rail and resistance to shock, substantially as described.

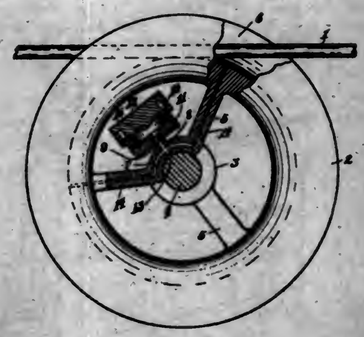
[Claims 6 and 7 not printed in the Gazette.]

879,635. SQUIB, MATCH, AND FILE CASE FOR MINERS. FRANK HARRIS, Acme, W. Va., assignor to Forest L. Garrison, Cincinnati, Ohio. Filed Oct. 19, 1906. Serial No. 339,691.



A squib case for miners' use comprising an oval-shaped body portion, a pair of longitudinally extending partitions arranged within the body portion and having their longitudinal edges secured directly to the inner face of the body portion, said partitions of a length equal to the length of the body portion, suitably spaced apart, arranged at each side of the center of the body portion and forming thereby a longitudinally extending compartment arranged medially of and of the same length as the body portion and open at each end, said partitions having their edges flush with the edges of the body portion, a pair of transversely extending partitions substantially semi-oval shaped in contour and each having the straight edge thereof flanged, said partitions arranged in transverse alinement with respect to the body portion and having the flanged edge thereof abutting against and secured to one side of a longitudinally extending partition, the other edge of each of the transverse partitions being directly secured to the inner face of the body portion, said transversely extending partitions arranged within the body portion at one side of the center thereof and each of said transversely extending partitions in connection with a longitudinally extending partition and the body portion forming at one side of the longitudinally extending partition a pair of compartments, one of the compartments of each pair being of greater length than the other compartments of the same pair, and a removable closure for each end of the body portion, each of said closures being disconnected from the body portion.

879,636. TROLLEY-WHEEL. EDWARD J. HARRISON, South Bend, Ind. Filed July 18, 1907. Serial No. 384,421.



1. A trolley wheel including a flanged periphery and hub, a recess formed in the hub, a lubricant cup mounted upon the hub and communicating with said recess, and ducts communicating with the recess and leading to the periphery of the wheel.

2. The combination with a trolley wire and trolley wheel, the wheel having a recess and communicating ducts leading to the periphery of the wheel, of a lubricant cup carried by the wheel and communicating with said recess.

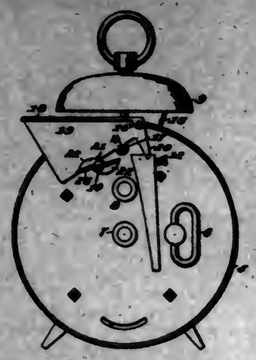
3. The combination with a trolley wire and a trolley wheel, the wheel including a hub provided with a recess, and communicating ducts between the recess and periphery of the wheel, the ducts being formed in spokes of the wheel, of a lubricant cup carried by the wheel and communicating with said recess.

879,637. ALARM-CLOCK. JOHN R. HAUSCHILDT, Eskridge, Kans. Filed Jan. 21, 1907. Serial No. 353,228.

1. The combination with an alarm clock, of a discharge tube operable by the verge-escapement of the alarm mechanism, and a liquid reservoir operable intermittently by the alarm-wind mechanism.

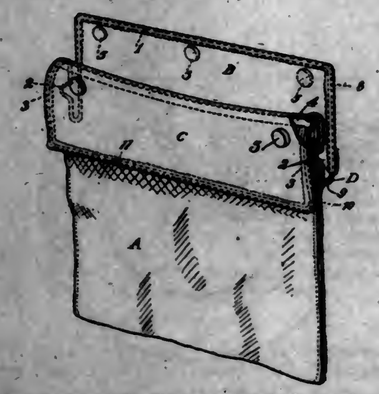
2. The combination with an alarm clock, of a vibrating discharge tube secured to the extended shaft 12 of the

escapement of the alarm mechanism, a tilting liquid reservoir adapted to discharge its contents into said tube,



and a cam secured to the alarm-wind for tilting the reservoir.

879,638. DETACHABLE POCKET FOR GARMENTS. JESSE W. HAYNE, Baltimore, Md., assignor of one-half to Morris Hirschman, Baltimore, Md. Filed June 17, 1907. Serial No. 379,343.



1. In a pocket of the character described, a pocket body, a reinforced extension projecting upward above the rear side thereof, a reinforced flap extended upward and then bent downward at the front side of the body, thus comprising a rear and a front flap-part, and a frame to which said extension and flap are secured, said frame comprising a portion extending around the top and side margins of the extension, side members continuous with and projecting upward from the lower ends of said portion along the side margins of the rear flap-part, and a portion extending around the bottom and side margins of the front flap-part with its upper ends continuous with the upper ends of said side members, said side members being bent to present forward-projecting loops for clamping the garment against the front part of the flap.

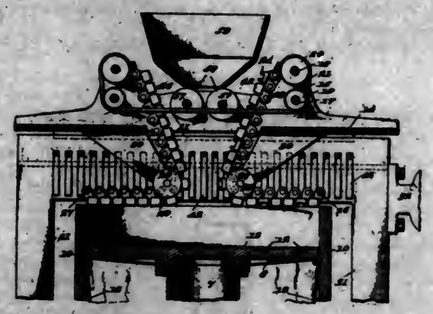
2. A detachable pocket of the character described, comprising a frame, a body part, a reinforced extension secured on the upper side of the frame, a reinforced flap similarly secured on the said frame on the opposite side thereof and slightly below the upper edge of the said extension, a flat metal strip secured within the upper edge of the flap, and means provided by the frame for securing the said pocket within the permanent pocket of a garment, substantially as described.

3. A detachable pocket of the character described, comprising a frame, a body part, a flap secured on the front side of the frame, a flat metal strip secured within the upper edge of the said flap, a reinforced extension secured on the opposite side of the said frame and extended above and below the upper edge of the said flap, a loop extension provided on the said frame and located opposite that part of the frame secured within the end of the said flap for the purpose of securing the said pocket within the permanent pocket of a garment, substantially as described.

4. A detachable pocket of the character described, comprising a body part provided with a reinforced extension on the inner top side, a reinforced flap provided on the outer top side thereof, a frame upon which the said body part and flap are secured, a flat metal strip secured to the said frame extending across the width of the said pocket parallel with the same, the said metal strip being housed within the upper edge of the said flap, loop extensions formed on the said frame located opposite the frame parts, extending through the end portions of the said flaps for the purpose of securing the said pocket within the permanent pocket of a garment, substantially as described.

5. A detachable pocket of the character described, comprising a frame, a body part provided with a reinforced top extension secured on the said frame, a reinforced flap similarly secured on the said frame on the side opposite that on which the said reinforced extension is secured, a flat metal strip secured within the upper edge of the flap parallel with the frame part secured within the lower edge thereof, means provided on the said flap and extension for securing each respectively to a garment, and means provided on the frame for securing the body part within the permanent pocket of a garment, substantially as described.

879,639. COTTON-PRESS. ROBERT E. HAYNES, Salisbury, N. C. Filed Oct. 1, 1907. Serial No. 395,365.



1. In a baling press the combination of means for feeding the material in a continuous layer, with reciprocating means for feeding the said layer into a compressing box, and dogs for maintaining a pressure on said last mentioned feeding means, substantially as described.

2. In a baling press the combination of rollers for feeding the fiber in a continuous layer, with reciprocating compressing chains for feeding the said layer into a compressing box, and pivoted dogs for maintaining a pressure on said chains, substantially as described.

3. In a cotton baling press, the combination of a baling box having the hinged walls 10, with rollers 58 for feeding the cotton in a continuous layer, chains 22 and 26 for pressing and feeding said layer into said box, pivoted dogs 42 for maintaining a continuous pressure on one or the other of said chains, and means to release said dogs at intervals, substantially as described.

4. In a cotton baling press the combination of a baling box, means to reciprocate the same, means to feed the cotton in a continuous layer, compressing chains to feed said layer into said box, means to reciprocate said chains, and pivoted dogs, to hold said compressing chains in place, substantially as described.

5. In a cotton baling press the combination of a baling box, means to reciprocate the same, means to feed the cotton in a continuous layer, compressing chains to feed said layer into said box, means to reciprocate said chains, pivoted dogs to hold said compressing chains in place, and reciprocating means adapted to release said dogs at predetermined intervals, substantially as described.

[Claims 6 to 27 not printed in the Gazette.]

879,640. CAMPAIGN-CANE. GEORGE C. HOCKENBERRY, Ravenna, Ohio. Filed Apr. 11, 1907. Serial No. 367,584.



1. In a cane, a stick, a sleeve secured to the upper end thereof and projecting beyond said upper end of the stick having an interiorly threaded outer end and provided near said outer end with an apertured boss, a hollow transparent handle threaded into the outer end of said sleeve, an incandescent bulb mounted in said handle, a storage battery mounted in said sleeve between the outer end of the stick and the inner end of said handle, a contact engaging the plug of said bulb, a second contact carried by said battery normally out of engagement with the first mentioned contact, and a spring-pressed push-button mounted in said apertured boss for engagement with the last mentioned contact to move the same into engagement with the first mentioned contact and complete an electric circuit from said battery to said bulb.

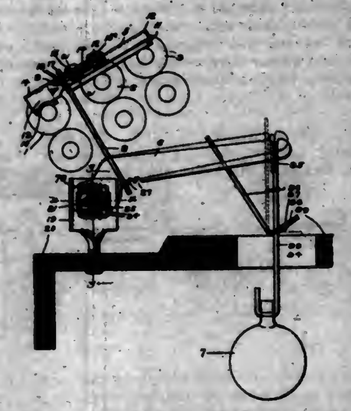
2. In a cane, a stick, a sleeve secured to the outer end thereof and extending beyond the stick, a hollow transparent handle removably fitted in the outer end of said sleeve and provided at its inner end with internal threads, an incandescent bulb extending into the hollow handle and having the plug thereof engaging the internal threads of said handle, a storage battery within the sleeve between said lamp and outer end of the stick, a stationary contact carried by said battery and normally engaging said lamp plug, a movable contact carried by said battery, an apertured boss carried by said sleeve, a spring-pressed push-button in said boss projecting into the sleeve and adapted when forced inwardly to move said movable contact into engagement with the stationary contact and complete an electrical circuit from the battery to the incandescent bulb, and a spring catch carried by the sleeve in the depressed or retracted positions.

879,641. TOP-ROLL SADDLE. LEWIS T. HOUGHTON, Worcester, Mass. Filed Oct. 18, 1906. Serial No. 339,454.

1. In a top roll saddle, the combination with an upper member adapted to bear on the front top roll and provided with a chamber of a size to receive the front end of the lower member, of said lower member arranged to bear on the middle and rear top rolls and having its front end received within the chamber of the upper member.

2. In a top roll saddle, the combination with an upper member substantially ⊓ shaped in cross section, of a lower member having its front end situated within the upper member.

3. In a top roll saddle, in combination, a lower member and an upper member straddling the front end of the lower member and having fulcruming engagement thereon.

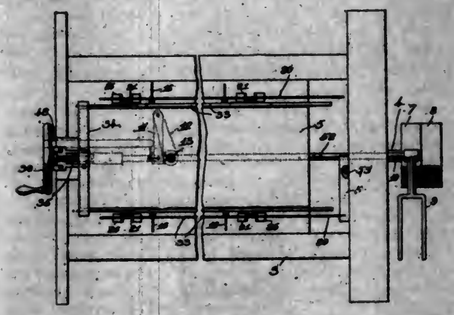


4. In a top roll saddle, in combination, an upper member substantially ⊓ shaped in cross section, and a lower member having its front end situated within the upper member and having a fulcruming engagement therewith.

5. In a top roll saddle, in combination, an upper member substantially ⊓ shaped in cross section and having a bearing block at one end, and a low member received within the upper member.

[Claims 6 to 31 not printed in the Gazette.]

879,642. SPINNING OR TWISTING FRAME. LEWIS T. HOUGHTON, Worcester, Mass. Filed Oct. 29, 1906. Serial No. 340,990.



1. In a spinning or twisting frame, the combination with a plurality of top-roll saddles and weighted levers therefor, of a weight-sustaining bar situated beneath all of the levers closely adjacent to the weighted ends thereof, and an actuator for elevating both ends of said bar in unison thereby to relieve the top rolls from pressure.

2. In a spinning or twisting frame, the combination with a plurality of top-roll saddles, of levers connected thereto, weights suspended from the ends of the levers, a weight-sustaining bar situated beneath all said levers adjacent to but in front of the weights, and an actuator for elevating both ends of said bar in unison.

3. In a spinning or twisting frame having in combination a plurality of top-roll saddles, weighted levers therefor, a weight-sustaining bar situated beneath the weighted levers, swinging arms for raising said bar and means to operate said arms in unison.

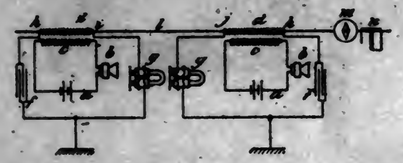
4. A spinning or twisting frame having in combination a plurality of top-roll saddles, weighted levers therefor, a weight-sustaining bar situated beneath the weighted levers, swinging arms for raising said bar, said arms being

pivoted to a fixed support, and means to operate said arms in unison.

5. In a spinning or twisting frame, a series of top-roll saddles on each side thereof, weighted levers for said saddles, in combination with two weight-sustaining bars one situated beneath the weighted levers for each series of saddles, and means to raise said bars simultaneously.

[Claims 6 to 11 not printed in the Gazette.]

879,643. TELEPHONE-CIRCUIT. CHARLES M. JACOBS, Reading, and WILLIAM J. THORROWGOOD, Wimbledon Park, England. Filed Oct. 12, 1906. Serial No. 338,679.

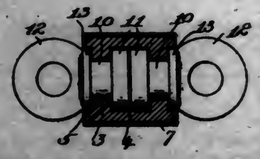


1. In a system for eliminating or reducing the influence of disturbing currents on telephone circuits, the combination of a telephone transformer and a phonoporically wound receiver, the latter being connected across the terminals of the secondary winding of the transformer, the said secondary winding being directly in the line.

2. In a system for eliminating or reducing the influence of disturbing currents on telephone circuits, the combination of a telephone transformer, a phonoporically wound receiver and a condenser, the said receiver and condenser being connected in series with each other across the terminals of the secondary winding of the transformer and having their intermediate point connected with earth.

3. In a system for eliminating or reducing the influence of disturbing currents on telephone circuits, the combination of a telephone transformer, a phonoporically wound receiver and a condenser, the said receiver and condenser being connected in series with each other across the terminals of the secondary winding of the transformer and having their intermediate point connected with earth, and the said secondary winding being connected directly in the line.

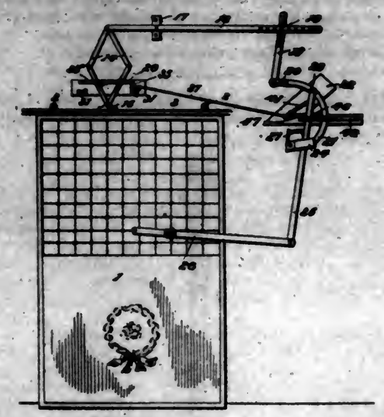
879,644. SWIVEL. WILLIAM J. JEFFRIES and ERNEST G. SKEELS, Kalama, Wash. Filed Mar. 26, 1907. Serial No. 364,640.



In a device of the class described, the combination of a casing, and a swivel member movably mounted in the casing and having a shank with a head at its inner end, an engaging device on the outer extremity, and a collar at the base of the engaging device which is fitted and movable in the end of the casing.

879,645. DEVICE FOR AUTOMATICALLY OPENING AND CLOSING ELEVATOR-DOORS. WILLIAM J. JEFFRIES, Oregon City, Oreg. Filed July 18, 1907. Serial No. 384,456.

1. In elevator mechanism, the combination with a door, and a cage or car, of door opening and closing means connected to said door and including a pair of toggle levers, rollers connected to the complemental members of said levers, a cam plate mounted on the car and provided with cam grooves designed to receive the said rollers, for the purpose specified, and means under the control of the operator of a car for moving said cam plate into and out of operation with the said rollers.



2. In elevator mechanism and in combination with a shaft door and car, means for opening and closing said door, said means including toggle levers provided with rollers, a cam plate carried by the car and provided with cam grooves designed to be engaged by said rollers, for the purpose specified, means for moving said cam plate into and out of operative relation to said rollers, the cam plate being provided with guide rails, and other rollers designed to bear against said guide rails with the cam plate in operative relation to the rollers of the toggle levers, whereby to retain the plate in such operative position.

3. In elevator mechanism and in combination with a shaft door and car, means for opening and closing the door, said means including toggle levers provided with rollers, a cam plate provided with cam grooves and mounted on the roof of the car, a support for said cam plate and in which said plate is designed to move forwardly and rearwardly, a rod connected to said cam plate at one end, a bell crank lever fulcrumed on the roof of the car and having one arm connected to the other end of said rod, a pull spring connected to the car and to the said arm of the bell crank, a foot treadle mounted in the car, and a connection between said foot treadle and the other arm of said bell crank.

4. In elevator mechanism, the combination with a door and a car, of means for opening and closing the door, said means including a pair of toggle levers, a rocking beam connected to one end of said levers, an actuating bar fulcrumed intermediate of its ends and having one end operatively connected with one end of said rocking beam, a depending arm having a link connection with the door, and a yielding connection between said arm and the actuating bar.

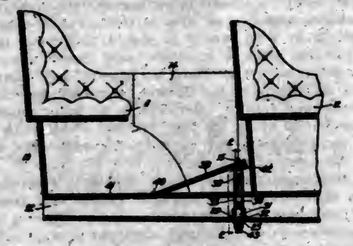
5. In elevator mechanism, the combination with a door and a car, of means for opening and closing the door, said means including a pair of toggle levers, a rocking beam connected to one end of said levers, an actuating bar fulcrumed intermediate of its ends and having one end operatively connected with one end of said rocking beam, a depending arm having a link connection with the door, and a connection between said arm and the actuating bar.

[Claims 6 and 7 not printed in the Gazette.]

879,646. FOOT-REST FOR VEHICLES. LOUIS A. JONES, Cambridge, Mass. Filed Feb. 20, 1907. Serial No. 358,512.

1. An apparatus of the character described comprising in its construction a body, a movable foot rest located at all times within said body, a door pivoted to swing about a vertical axis, and mechanism operatively connecting said foot rest to said door.

2. An apparatus of the character described comprising in its construction a body, a door, a foot rest located at all times within said body, said foot rest adapted to swing about a horizontal axis, and mechanism operatively connecting said foot rest to said door.



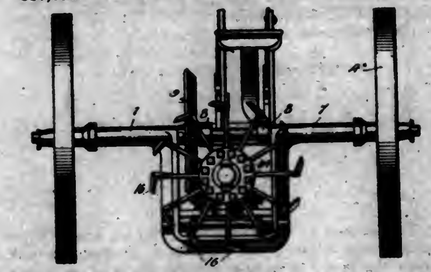
3. In a vehicle body, a movable foot-rest, two doors pivoted to swing about vertical axes, and mechanism operatively connecting said foot-rest to said doors.

4. In a vehicle body, a foot-rest pivoted to swing about a horizontal axis, two doors pivoted to swing about vertical axes, and mechanism operatively connecting said foot-rest to said doors.

5. An apparatus of the character described comprising in its construction a body, a foot-rest pivotally mounted thereon with its axis extending transversely thereof, two doors pivotally mounted on said body with their axes substantially vertical, said doors being located at opposite sides, respectively, of said body, and mechanism operatively connecting said doors to said foot-rest.

[Claim 6 not printed in the Gazette.]

879,647. COTTON-CHOPPER. WILLIAM M. JONES, Cross Plains, Tex. Filed June 25, 1907. Serial No. 380,692.

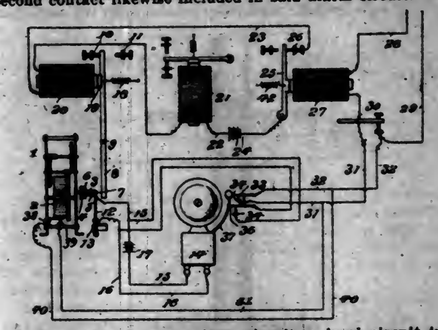


1. A cotton chopper comprising an axle, a wheel fitted to one end of said axle to rotate the same, and a wheel loosely mounted to rotate upon the opposite end of the axle, a yoke mounted on the axle, and a large bevel gear connected to the axle, an idler pinion in mesh with said bevel gear, a chopper shaft having a bevel pinion in mesh with said idler pinion, hoes provided with rounded shanks, and means for clamping said hoes radially upon a shaft.

2. In a cotton chopper, the combination of an axle, a wheel connected to said axle for rotating the same, a bevel gear on said axle, an idler pinion mounted upon a stub shaft connected to a bracket, a yoke, a chopper shaft having a ring which engages said stub shaft, an angle arm connected to said shaft, a lever connected to said angle arm, a lever pivoted to the tongue of the machine, chains connected to said lever and connected to rings mounted upon a shaft in said yoke.

879,648. MEANS FOR AUTOMATICALLY CLOSING ELECTRIC CIRCUITS. FAYETTE W. KEELER, Temple, Tex., assignor of one-half to W. Morants, Temple, Tex. Filed Aug. 18, 1906. Serial No. 331,216.

1. In combination, an alarm circuit, a local circuit including an electro-magnet and adapted to be opened and closed, a lever actuated by the magnetising and the demagnetising of said electro-magnet of the local circuit, and circuit closing means for the alarm circuit adapted to be operated by said lever, the same consisting of a rotary member, a complemental member brought into operative relation therewith upon movement of the said lever in one direction, a contact carried by said complemental member and included in the alarm circuit, and a second contact likewise included in said alarm circuit.



2. In combination, an alarm circuit, a local circuit including an electro-magnet and coöperating lever provided with an armature, said local circuit adapted to be opened and closed, and circuit closing means for the alarm circuit adapted to be controlled by means of the aforesaid lever and comprising a rotary member and a complemental member adapted to be brought into contact with said rotary member by the action of the aforesaid lever.

3. In combination, an alarm circuit including coöperating contacts, one of said contacts being movable, a rotary member, a complemental member adapted to be brought into contact with the rotary member and provided with said movable contact members, a lever adapted to effect engagement of the rotary and complemental members, and an electric circuit including an electro-magnet arranged to effect movement of the said lever.

4. In combination, a main circuit, a secondary circuit including contacts, a clock movement as means for bringing said contacts of the secondary circuit into engagement, and a cut out circuit having contacts arranged with reference to the clock movement to be actuated thereby when said movement is nearly or quite run down to effect cutting of the instrument out of circuit when the clock movement is nearly or quite run down.

5. In combination, an alarm circuit, a clock movement, electrically actuated means for effecting a closing of the alarm circuit by conjoint coöperation, and contacts for short circuiting the alarm circuit by inward movement of the hammer thereof, whereby said alarm circuit will continue to sound after the primary actuating means have been restored to normal condition.

[Claim 6 not printed in the Gazette.]

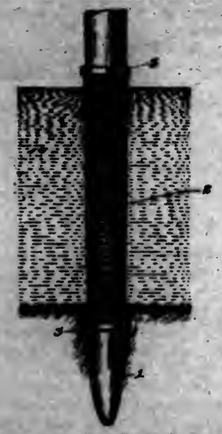
879,649. PROTECTING-COVERING FOR PILES. CHARLES W. KENNON, New York, N. Y., assignor of one-half to Edward K. H. D'Aeth, New York, N. Y. Filed June 18, 1907. Serial No. 379,610.

1. The combination with a pile, log or other timber, of a fibrous wrapping made from the palmetto applied directly to that portion of its surface which is to be submerged, said wrapping consisting of the individual strands of palmetto fiber woven into a material of desired thickness and width, substantially as described.

2. The combination with a pile, log or other timber, of a fibrous wrapping made from the palmetto applied directly to that portion of its surface which is to be submerged, said wrapping consisting of the individual strands of palmetto fiber woven into a material of desired thickness and width, and treated with a teredo protecting compound, substantially as described.

3. The process herein described of protecting piles, logs

etc., and rendering them teredo proof, the same consisting in first disintegrating the fiber of the palmetto into individual strands, then weaving the said fiber into a burlap of suitable width and thickness, then applying a suitable compound to the woven fabric, and finally securing the woven fabric to the exterior of the pile to be protected by wrapping the same around it in any suitable manner either spirally or otherwise and finally securing the fibrous wrapping directly upon the surface of the pile, etc. by any suitable fastening, substantially as described.



4. The process herein described of protecting piles, logs etc., and rendering them teredo proof, the same consisting in first disintegrating the fiber of the palmetto into individual strands, then weaving the said fiber into a burlap of suitable width and thickness, then applying a suitable compound to the woven fabric, and finally securing the woven fabric to the exterior of the pile to be protected, substantially as described.

5. The process herein described of protecting piles, logs etc., and rendering them teredo proof, the same consisting in first disintegrating the fiber of the palmetto into individual strands, then weaving the said fiber into a burlap of suitable width and thickness, then applying a suitable compound to the woven fabric consisting of a mixture of asphaltum, resin, pitch creosote and oxid of iron, and finally securing the woven fabric to the exterior of the pile to be protected, substantially as described.

879,650. ELECTRIC TRANSMISSION OF INTELLIGENCE. ISIDOR KITSEE, Philadelphia, Pa., assignor of one-half to William J. Latta, Philadelphia, Pa. Filed May 14, 1906. Serial No. 316,747.



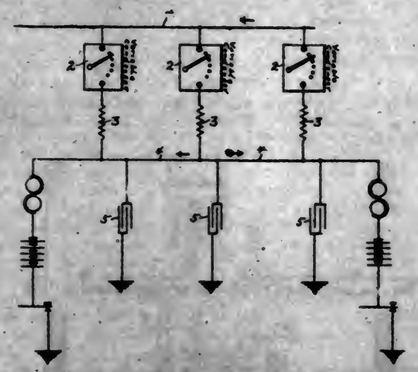
1. In combination with a power line, a line of transmission positioned in the region of the inducing influence of said power line and means to shield the terminal devices from the induced impulses, said means comprising a series of impedance coils distributed along the line in series, a direct shunt for one or the other of said impedance coils, said shunt including capacity devices and a ground connection for said shunt.

2. In combination with a power line, a line of transmission positioned in the inducing region thereof, electromagnetic receiving devices for the line of transmission and means to shield said devices from the induced impulses, said means comprising for the devices a direct shunt having no impedance but capacity and a ground for said shunt and further comprising a series of impedance coils distributed along the line, a direct shunt, having practically no inductance but capacity, for said coils and a ground therefor.

3. Means to induce impulses in a telegraphic line connected to electro-magnetic receiving devices, said means comprising a neighboring wire carrying a phase current, in combination with means to shield said receiving devices from the induced impulses, said means comprising a direct shunt with practically no impedance but capacity for each of said receiving devices, a ground for each of said shunts and further comprising a series of impedance coils distributed along the line, a direct shunt with practically no impedance but capacity for said coils and a ground for each of said shunts.

4. A telegraphic circuit, electro-magnetic receiving devices in said circuit and means to shield said receiving devices from impulses induced through neighboring wires, said means comprising a direct shunt with practically no impedance but capacity for each of said electro-magnetic devices, a ground for each of said shunts, in combination with a series of inductance coils distributed along the line, part of said coils provided with a direct shunt having practically no impedance but capacity, each shunt connected to the ground.

879,651. ELECTRIC TRANSMISSION OF INTELLIGENCE. ISIDOR KITSEE, Philadelphia, Pa. Filed Jan. 26, 1907. Serial No. 354,209.



1. The method of nullifying the effect of power wires on neighboring wires, which consists in producing a leak between the power wire and neighboring wire, said leak adapted to allow the flow of prime energy in said neighboring wire of about equal power as the induced energy.

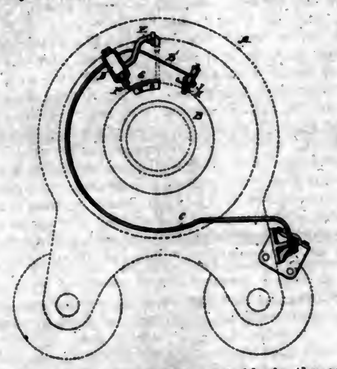
2. The method of making immune devices inserted in telegraphic lines from neighboring power wires, which consists in causing to flow in said telegraphic lines a prime current of the power wire of a force about equal to the induced current but of opposite direction.

879,652. SAFETY-LOCK FOR BREECH-BLOCKS. JOHN J. KNAPP, Washington, D. C. Filed Oct. 16, 1907. Serial No. 397,750.

1. In a gun provided with a breech block, the combination of means to admit fluid under pressure to the bore of said gun, with means adapted to automatically lock said block whenever the pressure of said fluid reaches a predetermined point, substantially as described.

2. In a gun provided with a breech block, the combination of means adapted to admit fluid under pressure to the bore of said gun, means on said block for controlling the flow of said fluid, and means for automatically locking said block, whenever the pressure of said fluid falls to a predetermined point, substantially as described.

3. In a gun provided with a breech block, the combination of means adapted to admit fluid under pressure to the bore of said gun, means on said gun for controlling the flow of said fluid comprising a projection on said block, and a valve device on the breech of said gun with which said projection is adapted to contact, and means on said gun adapted to automatically lock said block whenever the pressure of said fluid falls to a predetermined point, substantially as described.

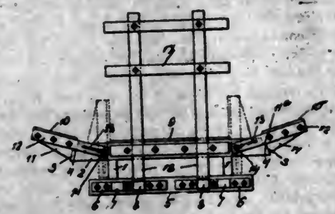


4. In a gun provided with a breech block, the combination of means to admit fluid under pressure to the bore of said gun, with means adapted to automatically lock said block whenever the pressure of said fluid falls to a predetermined point, said last mentioned means comprising a spring controlled plunger, substantially as described.

5. In a gun provided with a breech block, the combination of means adapted to admit fluid under pressure to the bore of said gun, a lug on said block, a spring controlled plunger adapted to engage said lug, and a connection between said fluid pressure means, and said plunger, whereby the said block is automatically locked whenever the pressure of said fluid falls to a predetermined point, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

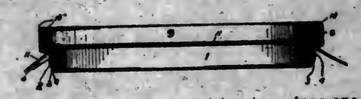
879,653. WAGON-BODY. HARRY KNOX, Washington, Pa. Filed Sept. 10, 1907. Serial No. 392,101.



1. A vehicle body comprising a pair of longitudinal beams, cross bars supported thereon and having their ends extending beyond the beams, said ends having shoulders formed therein, bolsters on which said longitudinal beams are supported, a bottom supported on said cross bars, sides for said body, standards to which said sides are secured, the said standards having shoulders at their lower ends engaging shoulders in the upper faces of the cross bars when the standards are in the vertical position, cleats secured to opposite sides of said standards extending below the cross bars and provided with slots, and pins carried by said cross bars and engaging in said slots, the said sides and standards being movable to an inclined position, the shoulders of the standards when the latter are inclined engaging the shoulders in the ends of the cross bars, and the pins in the cross bars engaging the extreme ends of the slots in said cleats.

2. A wagon body comprising a pair of longitudinal beams, cross bars supported thereon with their ends extending beyond the beams and provided with shoulders, a bottom mounted on the cross bars, sides for said body, and standards to which said sides are secured, the said sides and standards being movable from a vertical position to an inclined position, the said standards in their vertical position resting on the cross bars and in the inclined position engaging the shouldered ends of said cross bars, cleats secured to the standards and having slots, and pins extending through the cross bars and engaging in said slots to secure the sides when in the inclined position.

879,654. EMBROIDERY-HOOP. FREDERICK E. KOHLER, Canton, Ohio. Filed Nov. 29, 1907. Serial No. 404,206.



1. An embroidery hoop comprising two rings one adapted to telescope within the other, one of the rings having a raised portion with rounded sides on its holding face, and a leather band attached on the raised portion and having its edges curved over and abutted in the angles of the rounded sides.

2. An embroidery hoop comprising two rings one adapted to telescope within the other, one of the rings having a raised portion with rounded sides on its holding face, and a resilient frictional band attached on the raised portion and having its edges curved over and abutted in the angles of the rounded sides.

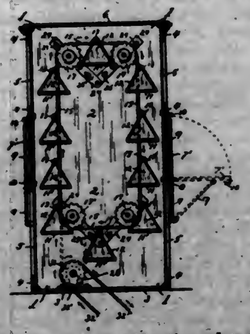
3. A ring for an embroidery hoop having a raised portion with rounded sides on its holding face, and a leather band attached on the raised portion and having its edges curved over and abutted in the angles of the rounded sides.

4. A ring for an embroidery hoop having a raised portion with rounded sides on its holding face, and a resilient frictional band on the raised portion and having its edges curved over and abutted in the angles of the rounded sides.

5. An embroidery hoop comprising two rings one adapted to telescope within the other, one of the rings having a raised portion on its holding face, and a leather band attached on the raised portion and having its edges extended over and abutted in the angles of the sides thereof.

[Claims 6 to 8 not printed in the Gazette.]

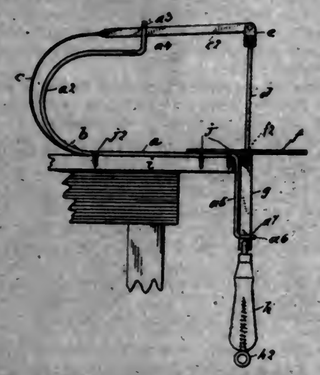
879,655. SHOW-CASE. ANDREW N. LAWRENCE, Los Angeles, Cal. Filed Apr. 18, 1907. Serial No. 369,173.



1. In a show case, the combination of a suitable case, a plurality of shelves suspended from rods by hangers, socket bearings in which said rods are pivotally mounted, endless chain belts upon which said socket bearings are carried, sprocket wheels mounted on journals and adapted to support said chain belts, anti-friction bearings to receive said journals, metallic plates retaining said bearings in position and adjustable angular braces made in two sections, pivoted at the vertex and adapted to support and adjust the before mentioned journals, substantially as described.

2. In a show case, the combination of a suitable case, a plurality of shelves suspended from rods by hangers, socket bearings in which the extremities of said rods are pivotally mounted, endless chain belts upon which said socket bearings are carried, sprocket wheels rigidly mounted on journals and adapted to support said chain belts, means for adjusting said journals journal boxes fitted with anti-friction rollers in which the before mentioned journals are carried, two of said journals extending through said journal boxes and provided with sprocket wheels rigidly mounted on the extremities thereof, two endless chain belts carried upon the last named sprocket wheels, an equalizing shaft extending longitudinally across and near the bottom of the case, having both extremities projecting through the ends thereof, anti-friction bearings in which said shaft is mounted, sprocket wheels rigidly mounted on the extremities of said shaft adapted to operate the last named endless chain belts, and a sprocket wheel mounted near the center of said equalizing shaft with means to connect with a suitable driving power for rotating the same, all operating in the manner and for the purposes substantially as hereinbefore described.

879,656. JIG OR SCROLL SAW. WILLIAM E. LAWRENCE, Brooklyn, N. Y. Filed May 21, 1907. Serial No. 374,822.



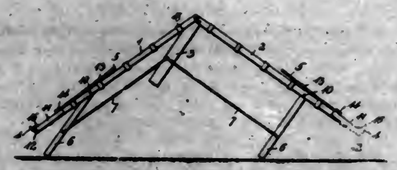
1. A jig or scroll saw comprising a bottom frame member provided at one end with an upwardly and forwardly curved frame arm having at its front end an upwardly directed member provided with a vertically arranged slot or opening, said bottom frame member being also provided at its opposite or front end with a downwardly directed arm having a laterally or forwardly directed extension provided with a slot or opening, and a spring secured to the base portion of the upwardly and forwardly directed frame arm and the free end of which is provided with an arm which passes forwardly through the slot or opening in the upwardly directed member of said arm, a saw blade connected with the free end of said spring arm and passing downwardly through a work support plate connected with the end of the base frame member over said downwardly directed arm, and an operating device connected with the lower end of said blade.

2. A jig or scroll saw comprising a bottom frame member provided at one end with a curved upwardly and forwardly directed frame arm having an upwardly directed member provided with a vertically arranged slot or opening, said bottom frame member being also provided at its opposite end with a work piece support having a central hole or opening, a spring connected with the outer base portion of the curved frame arm and carried upwardly thereover and provided with an arm which is passed through the slot or opening in the upwardly directed member of said arm, a saw blade connected with the forward end of said spring arm and passed downwardly through the hole or opening in the work piece support, and a working device connected with the lower end of said saw blade.

3. A jig or scroll saw comprising a base frame member provided at one end with an upwardly directed frame arm, a spring secured to the upwardly directed frame arm and provided with an arm passing through a guide slot or opening in said upwardly directed frame arm, and a saw blade connected with the free end of the spring arm and passing downwardly through a work piece support connected with the base frame member.

4. A jig or scroll saw comprising a frame, consisting of a base member provided at one end with an upwardly directed frame arm and at the other end with a downwardly directed frame arm having a forwardly directed extension, a spring secured outwardly of the upwardly directed frame arm and provided with a spring arm passing through a vertically arranged slot or opening in the end thereof, a saw blade connected with the free end of the spring arm and passing downwardly through a work piece connected with the base frame member, and a bar connected with the lower end of said saw blade and passing downwardly through the slot or opening in the end portion of the downwardly directed frame arm.

879,657. FOLDING BED. WILLIAM H. A. LEWIS, Evansville, Ind. Filed June 6, 1907. Serial No. 377,605.



1. In a folding bed, central legs, oppositely extending frames pivotally secured to the upper ends of the legs, end legs pivotally secured to said frames near their outer ends, truss rods connected with the central legs and with the end legs respectively near their lower ends, and folding end boards pivotally connected with the free ends of said frames.

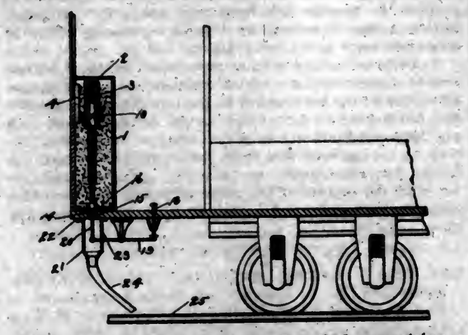
2. In a folding bed, central legs rigidly secured at a distance apart, oppositely extending frames pivotally secured to the outer ends of said legs, end legs pivotally secured to said frames near their outer ends, truss rods pivotally secured at their ends to the central and end legs respectively, said legs being formed from T iron, the truss rods being connected to the end legs upon the side of the stem or midrib opposite the pivotal connection of the legs with the frames, and the upper end of each end leg being adapted to engage with the side rails and form a brace to prevent outward longitudinal movement of the bed at each end.

3. In a folding bed, oppositely extending frames pivotally connected at their inner ends, legs for supporting the same, an end board pivotally secured at each end, said board comprising legs formed from angle iron, an extension secured at its ends to said legs, braces secured at their ends to the ends of said extension and legs respectively, and latches pivotally secured to said frames in position for being moved into and out of position with said legs to hold the end boards in a vertical position.

4. In a folding bed, oppositely extending frames pivotally connected at their inner ends, end boards for the same provided with posts, clamps secured to said posts and pivotally connected with said frames, central supporting legs, and truss rods connected with said legs, and posts near their lower ends.

879,658. SANDING DEVICE. BENJAMIN C. LORING, Edgewood, R. I., assignor to James Tillinghast, trustee, Providence, R. I. Filed May 6, 1907. Serial No. 372,009.

1. In a sanding device, a sand receptacle provided with an outlet through its bottom portion, a valve for controlling said outlet, a stirrer, an endwise movable shaft connected to said valve and stirrer, and means protected from the sand by which said shaft may be moved to rotate the stirrer to break up the sand, and also open said valve to deliver the sand therethrough.



2. A device of the character described comprising a sand receptacle provided with a bottom outlet, a valve for controlling said outlet, a stirrer, and means including a cam actuated shaft inclosed in a casing within said receptacle whereby said stirrer may be rotated to break up the sand and deliver the same through said outlet.

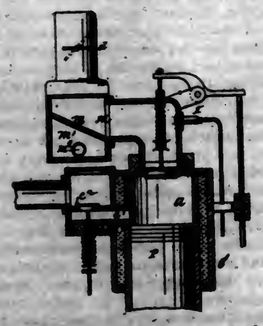
3. A device of the character described comprising a sand receptacle provided with a bottom outlet, a valve for controlling said outlet, a stirring device having angular blades, and means including a cam actuated shaft inclosed in a casing within said receptacle whereby said stirrer may be rotated to break up the sand and deliver the same through said outlet.

4. A device of the character described comprising a sand receptacle provided with a bottom outlet, a valve for controlling said outlet, a stirring device having blades, an endwise movable shaft connected to said valve and stirrer, and means protected from the sand by which said shaft may be moved to rotate the stirrer to break up the sand, and also open said valve to deliver the sand therethrough.

5. A device of the character described comprising a sand receptacle provided with a bottom outlet, a valve for controlling said outlet, a stirring device having angular blades, an upright shaft to which said stirrer is attached, and cam actuated means for rotating said shaft and stirring device for facilitating the delivery of said sand through said outlet.

[Claims 6 to 9 not printed in the Gazette.]

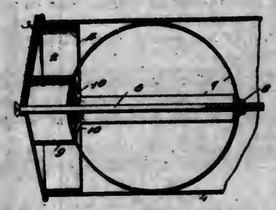
879,659. HYDROCARBON-MOTOR. ABBOTT A. LOW, Horseshoe, N. Y. Filed May 22, 1907. Serial No. 375,009.



1. A plurality of hydro carbon motors each formed with a mixing chamber and a heating chamber with a vaporising plate interposed between them, a conduit connecting each of said heating chambers with the next in the series, an external heater arranged to introduce a heating medium into the heating chamber in the first motor, and a conduit for conveying off the heating medium from the last heating chamber of the series.

2. A plurality of hydro carbon motors each formed with a mixing chamber, and a heating chamber with a vaporising plate interposed between them, conduits connecting each of said heating chambers with the next in the series, an external heater arranged to introduce a heating medium into the heating chamber in the first motor, a conduit for conveying off the heating medium from the last heating chamber of the series, and a damper in said conduit for regulating the escape of the heating medium.

879,660. FLUE-STOP. CORNELIUS C. LUMAN, Erick, Okla., assignor of one-half to J. F. Cannon, Erick, Okla. Filed July 11, 1907. Serial No. 383,800.



1. A flue stop comprising an expansible cover, and means for retaining the cover in position.

2. A flue stop comprising an expansible cover, and means for holding the cover in position and retaining it in an expanded position.

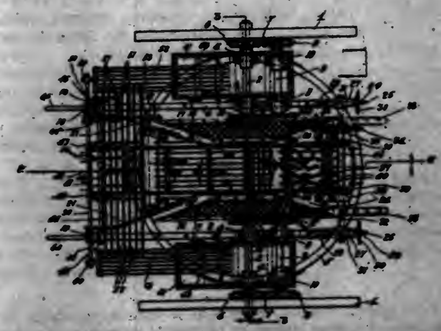
3. A flue stop comprising an expansible cover, an expansible flange carried by the cover, and means for retaining the cover in position.

4. A flue stop comprising an expansible cover formed from a disk having a radial slit therein the edges of which overlap and have a sliding connection, and means for retaining the cover in position.

5. A flue stop comprising an expansible cover formed from a disk provided with a radial slit the edges of which overlap, a double strip of material being applied to one of the edges and loosely receiving the opposite edge, and means for retaining the cover in position.

[Claim 6 not printed in the Gazette.]

879,661. POTATO-DIGGER. JOSEPH MOREAU, St. Germain de Grantham, Quebec, Canada. Filed May 13, 1907. Serial No. 373,373.



1. A potato digger comprising the combination of a wheeled frame, a digging member on the frame, a pair of separating wheels, means for rotating the wheels, and conveying means extending between the wheels.

2. A potato digger comprising the combination of a wheeled frame, a digging member on the frame, a pair of separating wheels having oppositely inwardly inclined

faces, means for rotating the wheels, and conveying means extending between the wheels.

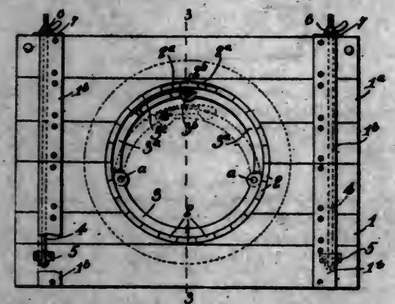
3. A potato digger comprising the combination of a wheeled frame, a digging member on the frame, a pair of separating wheels having oppositely inwardly inclined foraminated faces, means for rotating the wheels, and conveying means extending between the wheels.

4. A potato digger comprising the combination of a wheeled frame, a digging member on the frame, a pair of separating wheels, means for rotating the wheels in a direction opposite to the normal forward movement of the implement, and conveying means disposed between the wheels.

5. A potato digger comprising the combination of a wheeled frame, a digging member pivotally supported on the frame, means for maintaining the digging member in an elevated position, a pair of separating wheels, means for rotating the separating wheels, and conveying means disposed between the wheels.

[Claims 6 to 14 not printed in the Gazette.]

879,662. CULVERT-MOLD. EDGAR T. MORRIS, Elburn, Ill. Filed June 1, 1907. Serial No. 376,783.



1. The combination with a series of separable staves, of a supporting frame comprising segmental pieces hinged together, two of said pieces having a lapped joint and fastening device at their ends, adapted to permit said pieces to be contracted or expanded.

2. A supporting frame for collapsible molds, comprising segmental pieces having a joint at their ends permitting extension or contraction, and a contractible bar connecting the opposite ends of said pieces.

879,663. SPARK-ARRESTER. DANIEL MCIVOR, Humboldt, Minn. Filed Jan. 5, 1907, Serial No. 350,865. Renewed Sept. 13, 1907. Serial No. 392,763.

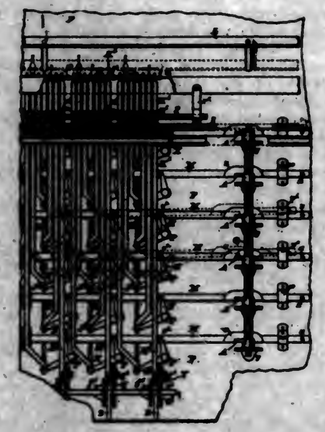


1. A spark arrester, comprising a wire screen made in the form of a cone having at its base a marginal ring and a hinge and having a goose-neck pipe extending from the top of the cone down to and terminating on a line with the base of the cone on the opposite side from the hinge in combination with a fixed pipe registering with the bottom of the goose-neck pipe, and a trap box at the lower end of the pipe having an escape vent.

2. The combination with a smoke stack having a funnel-shaped upper end; of a conical wire screen having a marginal ring at the base hinged to the top of the smoke stack and having at the top of the conical screen a goose-neck pipe dipping down to and terminating at the base of the cone on the opposite side from the hinge, a fixed trap box having a pipe extending up to and registering with the goose-neck pipe and a vent outlet.

3. The combination with a smoke stack having a funnel-shaped upper end; of a conical wire screen having a marginal ring at the base hinged to the top of the smoke stack and having at the top of the conical screen a goose-neck pipe dipping down to and terminating at the base of the cone on the opposite side from the hinge, a fixed trap box having two stand-pipes, one extending up to and registering with the bottom of the goose-neck pipe and the other extending upwardly and having a screen partition in the same.

879,664. VOTING-MACHINE. ANGUS MCKENZIE, Jamestown, N. Y., assignor, by mesne assignments, to U. S. Standard Voting Machine Co., Rochester, N. Y., a Corporation of New York. Filed Mar. 11, 1898. Serial No. 673,459.



1. In a voting machine, the combination of a plurality of separately operable ballot indicators, means for operating a plurality of said indicators simultaneously, a part connected to each of said ballot indicators and normally moved by said means, said part being mounted independently of said means and said indicators and adapted to be disengaged from said means.

2. In a voting machine, the combination of a series of separately movable ballot indicators, straight ticket voting means for operating a plurality of said indicators simultaneously, and a part connected to each of said ballot indicators and normally adapted to be moved by the movement of said straight ticket operating means, each of said parts being mounted independently of said means and said indicators and capable of adjustment so that it will not be engaged by said straight ticket operating means.

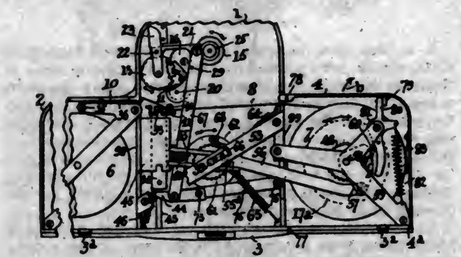
3. In a voting machine, the combination of a plurality of separately movable ballot indicators, a straight ticket bar for operating a plurality thereof at the same time, a lever operatively connected to each of said ballot indicators, each of said levers being mounted independently of said means and said indicators and capable of movement so that it will not be operated by the movement of the straight ticket bar.

4. In a voting machine, the combination of a plurality of separately operable ballot indicators, a straight ticket bar normally adapted to operate a plurality of said indicators, and a pivoted lever operatively connected to each of said indicators, and normally adapted to be moved by the straight ticket bar, each of said levers being mounted independently of said means and said indicator and adapted to be moved so that it will not be affected by the movement of said straight ticket bar.

5. In a voting machine, the combination of counters, separate means for operating each of said counters, a straight ticket bar provided with pins, a series of bell crank levers, one end of each of which is operatively connected to one of said means, and the other end of which is engaged by one of the pins of the straight ticket bar, each of said levers being mounted independently of said means and said indicators and adapted to be moved so that it will not engage any of the pins of the straight ticket bar.

[Claims 6 to 38 not printed in the Gazette.]

879,665. TIME-RECORDING REGISTER. NORMAN S. MCNAB, Caulfield, and JOSEPH S. LINK, Melbourne, Victoria, Australia. Filed July 26, 1907. Serial No. 385,726.



1. In a workman's time recorder, the combination of a minute recording typewheel; a sleeve on which said wheel is secured; an hour recording typewheel loose on said sleeve, and provided with a toothed wheel; a train of gears, one of the wheels of which is rigid with said sleeve; a clock mechanism; a clutch connecting the same with said train of gears; and means for locking and unlocking said toothed wheel, and for moving said wheel at intervals, substantially as described.

2. In a workman's time recorder, the combination of a minute recording typewheel; a sleeve on which said wheel is secured; a train of gear wheels, one of which is rigid with said sleeve; an hour recording typewheel provided with a toothed wheel loose on said sleeve; a clock mechanism; a clutch connection between said gears and said clock mechanism; and means for locking, unlocking and moving said toothed wheel comprising a pin and a recessed spring pawl, substantially as described.

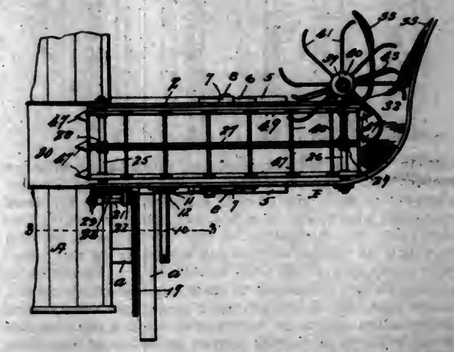
3. In a workman's time recorder, the combination of a minute recording typewheel; a sleeve on which said wheel is secured; a train of gear wheels, one of which is rigid with said sleeve; an hour recording typewheel provided with a toothed wheel loose on said sleeve; a clock mechanism; a clutch connection between said gears and said clock mechanism; a pin and a recessed spring pawl for locking, unlocking and moving said toothed wheel; a hanger, inking rollers on the same; means to oscillate the hanger to ink said type wheels on their under surfaces; and a handle to actuate said means, substantially as described.

4. In a workman's time recorder, the combination of a minute recording typewheel; a sleeve on which said wheel is secured; an hour recording typewheel loose on said sleeve, and provided with a toothed wheel; a train of gears, one of the wheels of which is rigid with said sleeve; a clock mechanism; a clutch connecting the same with said train of gears; inking rollers for said typewheels; a hanger for said rollers having sides covering said rollers except where they touch the typewheels; and means for locking and unlocking said toothed wheel, and for moving said wheel at intervals, substantially as described.

5. In a workman's time recorder, the combination of a casing having outer and inner walls for the protection of the mechanism contained therein, said inner walls being slotted to permit the passage of a paper band adapted to receive a record; a minute recording typewheel; a sleeve on which said wheel is secured; an hour recording typewheel loose on said sleeve, and provided with a toothed wheel; a train of gears, one of the wheels of which is rigid with said sleeve; a clock mechanism; a clutch connecting the same with said train of gears; and means for locking and unlocking said toothed wheel, and for moving said wheel at intervals, substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

879,666. MACHINE FOR CUTTING GRAIN. JOHN T. NEILD, Leonardville, Kans. Filed Feb. 9, 1907. Serial No. 356,601.



1. In a machine for cutting grain the combination with a wagon carrying a supporting frame at one side thereof, of a downward and outward runway pivotally mounted therein and having an angularly extending shelf at the lower end thereof terminating in a curved stationary cutting edge, rotating cutting knives mounted adjacent said shelf, transferring mechanism carried by said runway, and means for feeding the material from said cutters to said mechanism, substantially as described.

2. In a machine for cutting grain, a downward and outward inclined runway terminating at its lower end in an angularly extending shelf having a curved cutting edge, rotating cutting knives mounted adjacent said shelf, transferring mechanism carried by said runway, and rotating gathering arms mounted concentric with said cutting knives and arranged to feed the material from said cutters to said runway, substantially as described.

3. In a machine for cutting grain, a downward and outward inclined runway terminating at its lower end in an angularly extending shelf having a curved cutting edge rotating cutting knives mounted adjacent said shelf, transferring mechanism carried by said runway, rotating gathering arms mounted concentric with said cutting knives, and mechanism for driving said cutting knives at a relatively greater speed than said gathering arms, substantially as described.

4. In a machine for cutting grain, the combination with a wagon carrying a supporting frame, of a runway pivotally mounted in said frame, cutting and transferring mechanism carried by said runway, and a lever pivotally mounted in said frame and having a sliding connection with said runway adjacent its pivot for adjusting the same, substantially as described.

879,667. CIPHER SYSTEM. HENRY C. NEWTON, Kew, near Melbourne, and ANTHONY G. M. MITCHELL, Melbourne, Victoria, Australia. Filed Aug. 30, 1907. Serial No. 390,763.

1. In a cipher-system employing a number of syllables each consisting of one consonant and one vowel; the assignment to each pair of such syllables having the same consonant and vowel of a common numerical value; the

distinction of the two syllables of each such pair as normal or reversed according as the consonant or vowel precedes; the combination or resolution of a message as a succession of such syllables either normal or reversed; the division of such message into sections each consisting of a definite number of such syllables; the assignment to each of such sections of a check number according to the succession of normal and reversed syllables; and the establishment of a correspondence between the check-number so assigned to such section and a totality of the numerical values assigned to its separate syllables all for the purposes set forth.

00	BA	20	CA	40	SO	60	FE	80	ZY	3	HO				
01	BA	21	KE	41	ZI	61	WO	81	MI	23	SE				
02	BE	22	KA	42	NE	62	ZI	82	BY	43	SA				
03	TA	23	PA	43	NO	63	DE	83	LY	63	WE				
04	GO	24	VA	44	RO	64	MI	84	GU	4	SU				
05	ZA	25	GA	45	RU	65	VO	85	VY	5	BO				
06	JI	26	HA	46	CU	66	VU	86	PO	6	HU				
07	NA	27	LO	47	PU	67	VI	87	MU	7	MY				
08	CE	28	MA	48	RY	68	TY	88	HU	8	NA				
09	EE	29	ME	49	JU	69	XU	89	HU	9	JU				
10	KA	30	TA	50	FO	70	BY	90	LU						
11	BE	31	WA	51	BU	71	ZU	91	NY						
12	PE	32	YE	52	BI	72	MY	92	TI						
13	LE	33	DI	53	WU	73	NY	93	XY						
14	DA	34	HO	54	VE	74	LI	94	CU						
15	ZO	35	TU	55	XE	75	PI	95	TY						
16	VO	36	BU	56	WI	76	LY	96	FU						
17	ZA	37	BI	57	JU	77	JY	97	GY						
18	NE	38	CO	58	FI	78	CI	98	WY						
19	BO	39	PI	59	JU	79	RY	99	NO						

2. In a cipher-system employing a number of syllables each consisting of one consonant and one vowel; the assignment to each pair of such syllables, having the same consonant and vowel, of a common numerical value less than 100; the distinction of the two syllables of each such pair as normal or reversed according as the consonant or vowel precedes; the combination or resolution of a message as a succession of such syllables either normal or reversed; the division of such message into sections of five syllables each; the assignment to each such section of five syllables of a check number from 0 to 31 according to the order of succession of the normal and reversed syllables; and the establishment of an equivalence between the check-number so assigned to each section and the remainder obtained upon division by 32 of the sum, or last two figures of the sum, of the numerical values assigned to the separate syllables of the section all for the purposes set forth.

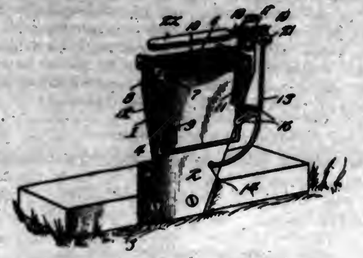
3. In a cipher-system, employing pronounceable words of five syllables consisting each of one consonant and one vowel; the assignment to each pair of syllables having the same consonant and vowel of a common numerical value less than 100; the distinction of the syllables of each such pair as normal or reversed, according as the consonant or vowel precedes; the assignment to such words of check-numbers from 0 to 31 according to the order of succession of normal and reversed syllables; and the establishment of an equivalence between the check-number so assigned to such word, and the remainder obtained upon division by 32 of the last two figures of the sum of the values assigned to the separate syllables of the word, all for the purposes set forth.

4. A cipher-system comprising a table of biliteral syllables and numbers, said syllables associated with said numbers, the numerical order of the number being independent of the alphabetical order of the syllables, and no two numbers associated with syllables having the same consonant or same vowel differing by 32 or by a multiple of 32.

879,668. TRAP. MARTIN H. OLSON, Lear, Mich. Filed Sept. 16, 1907. Serial No. 393,182.

1. A trap comprising a vertically disposed supporting plate, spring jaws pivotally mounted upon the opposite sides of the plate to swing to clamping position above the plate, a detent lever pivotally mounted for movement toward and from one of the side edges of the plate and having a forked portion to engage the retracted jaws, and a pivoted trip device at the upper end of the plate having a portion to engage with and hold the detent lever in operative position.

2. A trap comprising a vertically disposed supporting plate, spring-actuated companion jaws pivotally mounted on opposite sides of the plate below the top of the plate and adapted to swing to clamping position above the plate, a detent normally out of engagement with the jaws and movable toward and from the same, said detent having portions to project on opposite sides of the plate and positively engage and hold both jaws retracted, and a trip for holding and releasing said detent.



3. A trap comprising a vertically disposed supporting plate, spring jaws pivotally mounted at opposite sides of the plate to swing to a clamping position above the plate, a trip lever pivotally mounted upon one of the upper corner portions of the plate to provide an inwardly extending trip arm and an outwardly extending engaging member, and a detent pivoted at its lower end to the plate and having its upper end arranged to interlock with said engaging member, said detent being provided with a forked portion to engage and hold the jaws retracted.

4. A trap comprising a vertically disposed frame support, spring jaws pivotally mounted upon opposite sides of said support to swing to clamping position above the same, a detent lever having a forked portion providing arms to engage and hold the respective jaws retracted, and a retractable trip to engage and hold said detent in operative position.

5. A trap comprising a vertically disposed frame plate, and trap mechanism carried thereby, said plate being provided with a reduced lower end beveled to a penetrating edge and notched in one of its side edges to form a striking shoulder above the same.

[Claim 6 not printed in the Gazette.]

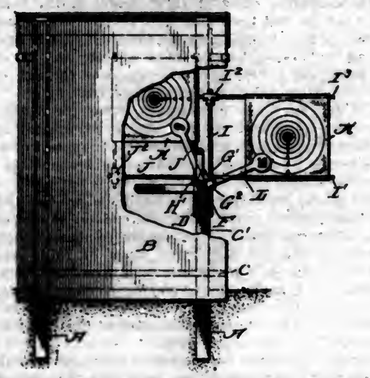
879,669. FRUIT-JAR. WILLIAM J. PERRITT, Rogers, Ark. Filed Oct. 14, 1907. Serial No. 397,419.



1. A fruit jar having its neck provided with a plurality of seats arranged in step-order, one wall of the neck being provided with segmental threads, sealing rings disposed upon the seats, and a cover having a plurality of shoulders arranged in step-order to bear upon the sealing rings, and having one face provided with thread valleys to engage with the threads of the neck, the under side of the cover being provided with an extension to fit snugly within the mouth of the jar.

2. A fruit jar having its neck provided with a plurality of seats arranged in step-order, one wall of the neck being provided with segmental threads, sealing rings disposed upon the seats, and a cover having a plurality of shoulders arranged in step-order to bear upon the sealing rings, and having one face provided with thread valleys to engage with the threads of the neck, the under side of the cover being provided with an extension to fit snugly within the mouth of the jar, and on its upper side with a plurality of upstanding lugs to be engaged by an unsealing tool.

879,670. TARGET AND SHIELD. CHARLES H. PETRY, Paterson, N. J. Filed Apr. 1, 1907. Serial No. 365,844.

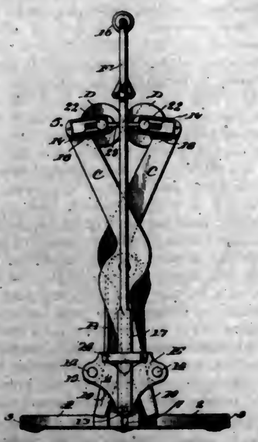


1. The combination with a shield, of a shaft mounted to the rear of said shield, and at right angles to the same, sleeves mounted on said shaft provided with sockets carrying adjustable supporting bars, one of said bars being longer than the other, and indicating hands mounted on said shaft, for the purpose described.

2. The combination with a supporting beam, of journals secured on said beam, a shaft mounted in said journal, sleeves mounted on said shaft provided with sockets at right angles to each other, bars secured in said sockets, a socket secured to each of said bars, and a bar secured in said socket forming parallel target holding members.

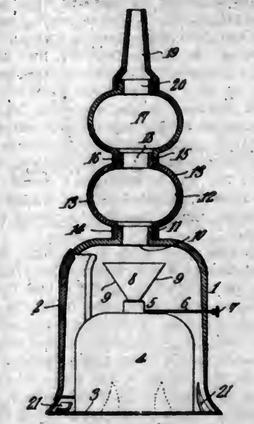
3. The combination with a shield, of beams arranged to the rear of said shield carrying journals, shafts mounted in said journals carrying a plurality of sleeves, bars adjustably secured in said sleeves for supporting the target, and angled indicating hands arranged on one end of said shaft provided with enlarged ends having numerals arranged thereon corresponding with the numerals of the target.

879,671. MOP-WRINGER. WILLIAM T. PHILLIPS, Los Angeles, Cal. Filed Jan. 29, 1907. Serial No. 354,605.



The combination, with vertical standards and a bucket support to which they are rigidly secured on opposite sides, of levers pivoted in pairs to the upper ends of said standards, the members of each pair crossing each other as described, wringer rolls journaled on the upper ends of said levers, devices D adapted to slide on the standards and embracing the lower arms of the levers, and a handle attached to said devices for sliding them, and extending upward therefrom as shown and described.

879,672. OIL-HEATER. JAMES T. RAY, Lone Oak, Tex. Filed Apr. 13, 1907. Serial No. 368,126.



A heating apparatus comprising a hollow metal base, its bottom, sides and top being integrally formed and having a door opening in the side, a door for closing said opening, draft openings near the bottom and an integral open neck projecting upwardly from the top, a plurality of hollow metal heating chambers axially disposed above the base with integral necks at their tops and bottoms to slidably connect with one another and with the base neck, a draft cap fitted to the neck of the highest heating chamber, and a removable heating apparatus within the base having a burner and a flame spreader to deflect the flame against the top and sides of said base for heating them, the flame then passing through the base neck into one or more heating chambers, air being supplied to said burner through the openings in the base.

879,673. LIFTING-JACK. DANIEL W. REARDON, Portland, Oreg., assignor, by mesne assignments, of three-fourths to Albert E. Holmes and James McNaughton, Creighton, Oreg. Filed Jan. 2, 1906, Serial No. 294,252. Renewed June 21, 1907. Serial No. 380,178.



1. In a lifting-jack, the combination of a standard consisting of two parts, one thereof being made with a web spacing the parts apart and having sockets in such web, and the other being made with studs positioned to enter said sockets, and there being perforations through said sockets and studs to receive bolts or screws to secure the parts together.

2. In a lifting-jack the combination of a standard comprising wall-portions 20, 21 made with recesses 39 respectively in their rear edge-faces, a wall-plate 30 affixed to the exterior of the wall portion 21, and having a web

35, lugs 36, 37 integrally formed on the exterior of the wall portions 20, 30, and a front plate provided with sides, straddling and fastened to the walls 20, 30, and having lugs interlocking with the lugs on the exterior of such walls, and further made with a protuberance inserted in said recesses of the walls 20, 21 in contact with the web 35 of the wall 30.

3. In a lifting-jack, the combination of a standard comprising wall-portions 20, 21 made with recesses 39 respectively in their rear edge-faces, a wall-plate 30 affixed to the exterior of the wall portion 21, and having a web 35, lugs 36, 37 integrally formed on the exterior of the wall portions 20, 30, a front plate provided with sides, straddling and fastened to the walls 20, 30, and having lugs interlocking with the lugs on the exterior of such walls, and further made with a protuberance inserted in said recesses of the walls 20, 21 in contact with the web 35 of the wall 30, and a lifting-bar, having a shoulder near the base thereof, adapted to abut against the base of said web 35 when the lifting-bar has been raised to its highest position.

4. A lifting-jack comprising a standard made of two parts, one part having a web 1^a provided with a series of sockets and a square stud or head 71, and the other part having a series of studs positioned to be inserted in said sockets, and there being perforations through the studs and sockets to lock the parts together, and said parts having wall portions 20, 21 respectively made with recesses 39 in their rear edge faces, a wall-plate 30 affixed to the exterior of the wall portion 21 and having a web 35 lugs 36, 37 integrally formed on the exterior of the wall-portions 20, 30, a front plate provided with sides straddling and fastened to the walls 20, 30 and having lugs interlocking with the lugs on the exterior of such walls, and further made with a protuberance inserted in said recesses of the walls 20, 30, in contact with the web 35 of the wall 30, and a protuberance of like thickness near its upper end, a cap having a flange rim encompassing the upper ends of the standard parts, and made with an elongated opening 72 into which the stud 71 projects, and a lifting bar rising through said opening 72, of the cap and having a shoulder near the base thereof adapted to abut against the base of the web 35 when the lifting-bar has been raised to its highest position.

5. In a lifting-jack, in combination with the pinion, and the pinion operating devices of housing wall-portions 20, 21, the former being made with integral webs 1^d 1^e, constituting a pocket, a trip lever, controlling in part the pinion operating devices and a spring comprising a coiled central part and expanding arms, which spring is secured in said pocket in position to cause the arms thereof to bear against the web 1^d and said trip lever, to control the latter as described.

[Claims 6 to 10 not printed in the Gazette.]

879,674. APPARATUS FOR ANNEALING WIRE. JOHN H. ROBERTS, Darlington, England. Filed June 27, 1907. Serial No. 380,996.



1. In an apparatus for annealing wire, the combination with an oven, furnaces to heat said oven, and fireclay annealing tubes passing in a straight line through said oven through which tubes said wire is drawn, the exit ends of said annealing tubes extending beyond the end wall of the oven and having full open ends, of burner tubes for conveying combustible gas and air entering through the walls of said annealing tubes at right angles to the length of same near the full open exit ends thereof and beyond the end wall of the oven, and means for conveying combustible gas and air to said burner tubes whereby the interior of said annealing tubes near the exit ends thereof, can be filled with flame, substantially as set forth.

2. In an apparatus for annealing wire, the combination with an oven, furnaces to heat said oven, fireclay annealing tubes passing in a straight line through said oven having full open ends, the exit ends of said annealing tubes extending beyond the end wall of the oven and a brick-work structure extending beyond said end wall of the oven to support and cover the projecting ends of said annealing tubes, of burner tubes for conveying combustible gas and air passing through the lower walls of said annealing tubes and opening into the interior thereof near the open exit ends, and means for conveying combustible gas and air to said burner tubes, whereby the interior of said annealing tubes near the exit ends thereof can be filled with flame, substantially as set forth.

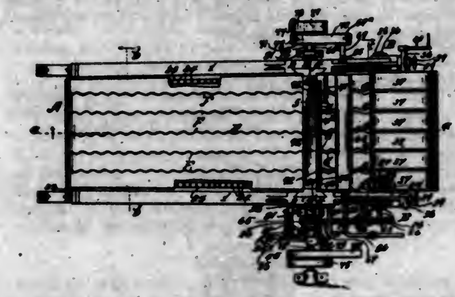
3. In an apparatus for annealing wire, the combination with an oven, furnaces to heat said oven, fireclay annealing tubes passing in a straight line through said oven having full open ends, the exit ends of said annealing tubes extending beyond the end wall of the oven and a brick-work structure extending beyond said end wall of the oven to support and cover the projecting ends of said annealing tubes, of burner tubes for conveying combustible gas and air passing through the lower walls of said annealing tubes and opening into the interior thereof near the open exit ends, a main gas supply pipe, branches from said gas supply pipe communicating respectively with the burner tubes to supply the latter with gas, a main air supply pipe to convey pressure air and branch pipes extending from said air main respectively to and opening into the lower ends of said burner tubes to convey pressure air, substantially as set forth.

4. In an apparatus for annealing wire, the combination with an oven, furnaces to heat said oven, fireclay annealing tubes passing adjacent to each other in a straight line through said oven through which tubes the wires to be annealed are drawn, the exit ends of said annealing tubes extending beyond the end wall of the oven, having full open ends and having a communication passage formed between the vertical dividing wall of each two adjacent annealing tubes near the exit ends of the same, of a burner tube for conveying combustible gas and air entering through the base between each pair of said annealing tubes, and opening into the communication passage aforesaid, and means for conveying combustible gas and air to said burner tubes, substantially as set forth.

5. In an apparatus for annealing wire, the combination with an oven, furnaces to heat said oven, fireclay annealing tubes passing adjacent to each other in a straight line through said oven through which tubes the wires to be annealed are drawn, the exit ends of said annealing tubes extending beyond the end wall of the oven, having full open ends, having a communication passage formed between the vertical dividing wall of each two adjacent annealing tubes near the exit ends of same, the upper wall of said communication passage having oppositely inclined surfaces to divide and divert the flame into the adjacent annealing tubes, of a burner tube for conveying combustible gas and air entering through the base between each pair of said annealing tubes and opening into the communication passage aforesaid, and means for conveying combustible gas and air to said burner tubes, substantially as set forth.

879,675. FABRIC-CUTTING MACHINE. ARNOLD ROOS, South Norwalk, Conn. Filed Oct. 30, 1906. Serial No. 341,204.

1. In a fabric cutting machine, the combination of a plurality of pivotally mounted independently adjustable cutting blades adapted to cut a plurality of similar designs from the cloth in an irregular line, a pantographic pattern to determine said line, means adapted to convey movement from said pattern to said cutting blades, and means for vertically reciprocating said blades.



2. In a fabric cutting machine, the combination of a plurality of pivotally mounted cutting blades adapted to cut the cloth in an irregular line, said blades being independently mounted and transversely adjustable, and means for controlling the travel of said blades to form a predetermined design.

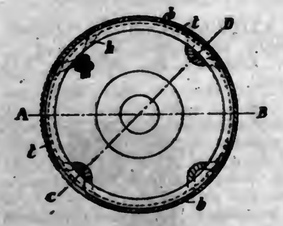
3. In a fabric cutting machine, the combination of movable elements adapted to impart motion to a sheet of fabric, said fabric having thereon a design, a plurality of reciprocating cutting blades adapted to cut said fabric, means adapted to cause said cutting blades to follow the contour of said design, and means adapted to maintain said sheet under tension adjacent to said cutting blades.

4. In a fabric cutting machine, the combination of a diverging traveling belt provided with gripping means adapted to grip and feed a sheet of fabric, a plurality of adjustable pivotally mounted reciprocating cutting blades, a pantographic device adapted to cause said blades to cut said cloth to a predetermined design, pressing rolls, and means for heating one of said rolls.

5. In a fabric cutting machine, the combination of a diverging traveling belt, a gripping device carried by said belt and adapted to grip and feed a sheet of fabric, means for adjusting said belt horizontally, a cutting device, a pattern, means whereby the pattern will cause the cutting device to sever the fabric to correspond with the pattern, pressing rolls adjacent to said cutting device, and means for heating one of said rolls.

[Claims 6 to 22 not printed in the Gazette.]

879,676. TIRE OF WHEELS. JOHN H. RYAN, Dublin, Ireland. Filed Dec. 14, 1907. Serial No. 406,405.



1. In a wheel, a rim having a series of holes extending around the periphery thereof adjacent the edge, and a protective covering for said rim composed of flexible material wound around said rim and passing alternately into and out of said holes, and means for securing said covering in position.

2. In a wheel, a rim having a series of holes arranged in pairs and extending around the periphery of said rim adjacent the edge, and a protective covering for said rim composed of a cord or band laced through said openings on both sides with means for securing the free ends.

3. In a wheel, a rim having a series of holes arranged in pairs and extending around the periphery of said rim adjacent the edge, and a protective covering for said rim composed of a cord or band laced through said openings on both sides, cotter pins passed through the loops extending into said openings, and means for securing the free ends.

879,677. SMOKING-PIPE. HARRY K. SADDLER, Oakmont, Pa., assignor of one-half to Clifford C. Taylor, Oakmont, Pa. Filed Feb. 28, 1907. Serial No. 359,843.



1. A pipe having a bowl and stem, said stem having a longitudinal smoke-bore, a permanently-positioned cap for said stem, a mouth piece removably secured to said stem, and a slide mounted in said stem, the inner end of the slide lying within said cap and between it and the threaded connection of the mouth piece, whereby the latter will be exposed upon a removal of the slide, said slide having a flat upper surface, and having a longitudinal movement within the stem irrespective of the position of the mouth-piece and cap.

2. The combination with a pipe and its stem having an undercut recess along its bottom, a permanently-positioned cap on said stem, said recess extending into the cap, of a slide having a flat upper surface and formed to fit within and move longitudinally of said recess, said slide forming the bottom wall of the smoke bore through the stem, the inner end of the slide extending within the cap and between it and the threaded connection of the mouth piece, whereby the latter will be exposed upon a removal of the slide.

3. The combination with a pipe and its stem having an undercut recess along its bottom, a permanently-positioned cap on said stem, said recess extending into the cap, of a slide having a flat upper surface and formed to fit within and move longitudinally of said recess, said slide forming the bottom wall of the smoke bore through the stem, said recess greatly decreasing in size toward the free end of the stem, the inner end of the slide extending within the cap and between it and the threaded connection of the mouth piece, whereby the latter will be exposed upon a removal of the slide.

4. The combination with a pipe and its stem having an undercut recess along its bottom, a permanently-positioned cap on said stem, said recess extending into the cap, of a slide having a flat upper surface and formed to fit within and move longitudinally of said recess, said slide forming the bottom wall of the smoke bore through the stem, said recess greatly decreasing in size toward the free end of the stem and said slide decreasing in size toward its inner end, the inner end of the slide extending within the cap and between it and the threaded connection of the mouth piece, whereby the latter will be exposed upon a removal of the slide.

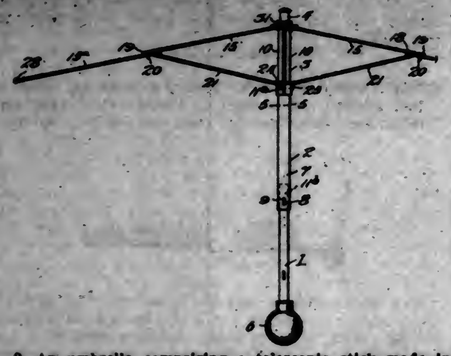
5. A pipe having a stem, cap and mouth piece, an insertible slide movable longitudinally of the stem and extending within the cap and between it and the threaded connection of the mouth piece, whereby the latter will be exposed upon a removal of the slide, said slide being removable irrespective of the position of the mouth piece.

[Claim 6 not printed in the Gazette.]

879,678. UMBRELLA. ARTHUR N. SANFORD, Wapato, Wash. Filed Apr. 10, 1907. Serial No. 367,378.

1. An umbrella comprising a stick made in sections and said sections adapted to slide one upon the other, each of said sections being composed of a plurality of substantially triangular members with the apices of the triangular members disposed centrally of the sections, spring catches for holding the sections extended, ribs comprising

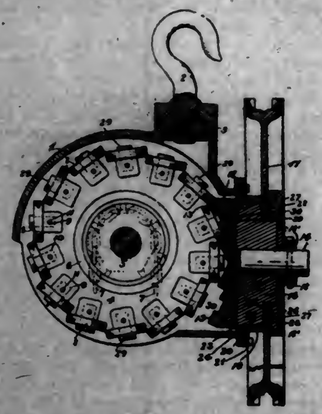
pivoted sections and sliding sections, and spring catches for holding said sliding catches in position.



2. An umbrella comprising a telescopic stick made in sections and each section consisting of a plurality of members of substantially triangular form in cross section, and means for holding the sections of said stick extended and retracted, substantially as described.

3. A folding umbrella provided with a telescopic stick made in sections and each section consisting of a plurality of members of substantially triangular form in cross section, said sections being mounted to slide one within the other, and clasps for holding the sections of the stick extended and retracted.

879,679. HOISTING DEVICE. HENRY J. SCHMICK, Hamburg, Pa. Filed Nov. 12, 1907. Serial No. 401,855.



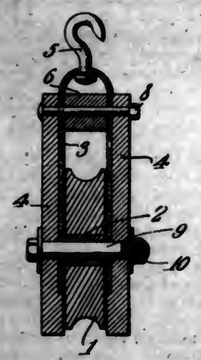
1. In a hoisting device, a revoluble disk or head provided with a working member on the face thereof having a groove in one wall thereof, means for revolving said disk, a hoisting member having members on the periphery thereof revoluble approximately at a right angle to the plane of revolution of said hoisting member, and shafts extending through the latter members.

2. In a hoisting device, a revoluble disk or head provided with radio-helical working members on the face thereof having a groove in their inner walls, means for revolving said disk, a hoisting member having revoluble members on the periphery thereof engaging said working members, and detachable shafts supporting the latter members and provided with a head at their outer ends.

3. In a hoisting device, a revoluble disk or head having a radio-helical working member on the face thereof, means for revolving said disk, a hoisting member having stub-shafts in the periphery thereof, and revoluble members supported on said shafts.

4. In a hoisting device, a revoluble disk or head having working members on the face thereof and of varying thickness, means for revolving said disk, and a hoisting member having revoluble members on the periphery thereof engaging said working members.

879,680. PULLEY-BLOCK. CHARLES I. SCOTT, Charlotte, Mich., assignor to Scott Manufacturing Co., Charlotte, Mich. Filed Oct. 5, 1907. Serial No. 396,089.



1. A pulley block comprising a sheave, a sleeve centered therein and projecting beyond both sides thereof, a yoke straddling the sheave and carrying a swiveled hook, a spacing block disposed within the yoke adjacent to its crest, cheek plates disposed exteriorly of the yoke and extending beyond the periphery of the sheave, bolts passing through the cheek plates, yoke and spacing block to hold the parts assembled, and a spindle bolt passing through the cheek plates and sleeve and embodying means for locking it in position.

2. A pulley block comprising a sheave, a sleeve centered therein and projecting beyond both sides thereof, a yoke straddling the sheave and carrying a swiveled hook, a spacing block disposed within the yoke adjacent to its crest, cheek plates into which the yoke members are rabbeted and that extend beyond the periphery of the sheave, bolts passing through the cheek plates, yoke and spacing block to hold the parts assembled, and a spindle bolt passing through the cheek plates and sleeve and embodying means for locking it in position.

879,681. KNITTING-MACHINE. ROBERT W. SCOTT, Philadelphia, Pa., assignor of one-half to Louis N. D. Williams, Ashbourne, Pa. Filed Mar. 3, 1902. Serial No. 96,456.



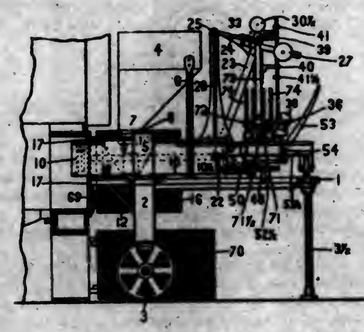
1. A rib knitting machine having two sets of needles, a knitting yarn guide, means for knitting upon the needles, a fleecing yarn guide, and means whereby needles of one set are caused to engage and draw stitches of said fleecing yarn, said means including fleecing yarn engaging devices occupying a fixed relation to the needles of the machine.

2. A rib knitting machine having two sets of needles, a knitting yarn guide, means for knitting upon the needles, a fleecing yarn guide, and means whereby needles of one set are caused to draw loops of said fleecing yarn, said means including fleecing yarn engaging devices disposed between the needles of one set and occupying a fixed relation to said needles.

3. A rib knitting machine having two sets of needles, a knitting yarn guide, means for knitting upon the needles, a fleecing yarn guide, means for drawing loops of said fleecing yarn by the needles of one set only, and fleecing yarn engaging devices notched to engage said fleecing yarn and prevent rise of the same with the needles at the knitting point.

4. A rib knitting machine having two sets of needles, a knitting yarn guide, means for knitting upon said needles, a fleecing yarn guide, means for drawing loops of said yarn by the needles of one set only, and fleecing yarn engaging devices occupying a fixed relation to said needles and notched to prevent rise of the fleecing yarn with the needles at the knitting point.

879,682. MECHANICAL STOKER. ARTHUR R. SELDEN, Rochester, N. Y., assignor of one-half to C. Schuyler Davis, Rochester, N. Y. Filed Oct. 2, 1905. Serial No. 280,885.



1. In a mechanical stoker the combination with a fuel supply of a longitudinally reciprocating projector, adapted to discharge fuel into the furnace; means for delivering fuel from said supply to said projector; means for gradually oscillating the delivery end of the projector from side to side by intermittent movements in each direction between the strokes of the projector; and means for actuating the projector.

2. In a mechanical stoker, the combination with a fuel supply, of a reciprocating projector adapted to discharge fuel into a furnace, and having a movable part that is adapted to engage the fuel; means for delivering fuel from said supply to said projector; means for changing between strokes of the projector the inclination of that part of it which engages the fuel; and means for actuating the projector.

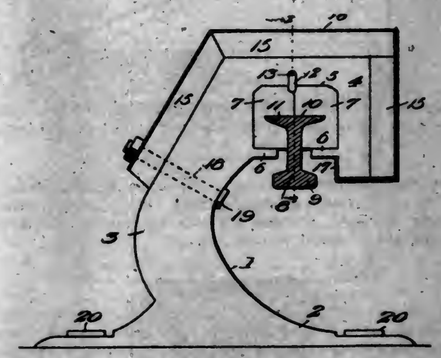
3. In a mechanical stoker, the combination with a fuel supply, of a reciprocating projector adapted to discharge fuel into a furnace; means for delivering fuel from said supply to said projector; means for changing the inclination of that part of it which carries the fuel to the furnace; means for changing the length of the stroke of the projector; and means for actuating said projector.

4. In a mechanical stoker, the combination with a fuel supply, of a reciprocating projector adapted to discharge fuel into a furnace and having a movable part that is adapted to engage the fuel; means for delivering fuel from said supply to said projector; means for gradually oscillating the projector; automatic means for gradually changing the inclination of that part of the projector which engages the fuel; means for changing the length of the stroke of the projector; and means for actuating said projector.

5. In a mechanical stoker, the combination with a fuel supply, of a reciprocating plunger adapted to discharge fuel into a furnace, and having a movable part that is adapted to engage the fuel; means for delivering fuel from said supply to said projector; means for changing the inclination of that part of it which carries the fuel to the furnace; means for gradually oscillating the projector; and means for actuating said projector.

[Claims 6 to 25 not printed in the Gazette.]

879,683. PROTECTOR FOR THIRD RAILS. FRANK D. SHARP, Altoona, Pa. Filed Jan. 19, 1907. Serial No. 353,095.



1. A supporting bracket or hanger for third-rails having a laterally-offset head provided with a recess in its underside, and supporting flanges near the lower end of said recess, a pin extending through the head above the recess, turn buttons upon said pin, and insulating blocks supported in the recess upon the flanges near the lower end of the latter and between the turn buttons.

2. A third-rail supporting bracket or hanger having a laterally offset head provided with a recess in its under side, and flanges near the lower end of said recess, insulating blocks supported upon said flanges and having rail-engaging recesses in their opposing faces, a third-rail sustained by said blocks, and pivotally supported means for preventing displacement of the blocks longitudinally of the rail.

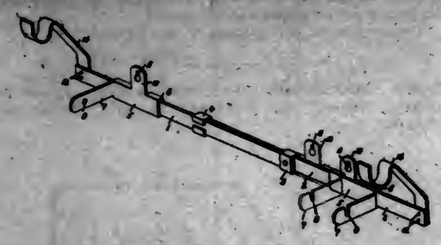
3. A third-rail supporting bracket or hanger having a laterally offset head provided with a recess in its under side, a plurality of protecting members supported exteriorly upon the head and coöperating to form an inverted trough, a strap having at one end a terminal hook engaging beneath that portion of the head which is distant from the shank of the hanger, and a securing member connecting the opposite end of the strap with said shank.

4. In a third-rail system, a plurality of brackets or hangers having laterally offset heads provided with recesses in their under sides, a third-rail, rail-supporting members consisting of insulating blocks mounted in the recess, means for preventing the displacement of said insulating blocks longitudinally of the rail, protecting members supported upon the heads of the hangers and coöperating to form an inverted trough, and securing devices consisting of straps each provided at one end with a terminal hook engaging beneath the head of a hanger, and bolts securing the opposite ends of said straps to the shanks of the hangers.

879,684. SHADE AND CURTAIN BRACKET. DAVID S. SHUTTS, New Brighton, Pa. Filed Aug. 23, 1907. Serial No. 389,878.

In a shade and curtain bracket, the body thereof formed of two parallel bars overlapped at one end, a keeper carried by the inner or overlapping end of each bar and receiving the other bar, a rectangular casing slidably mounted on each bar and having the longitudinal edges thereof flanged to embrace the bar, an upwardly-extending hanger-

ing carried by each of said casings, a shade-pole bracket formed integral with one end of each casing and project-



ing forwardly at right angles to the casing, and a curtain pole bracket carried by the outer end of each of said bars.

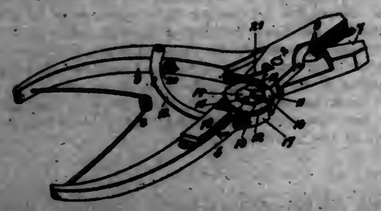
879,685. SHIRT. WALTER L. SIEWERS, Winston Salem, N. C. Original application filed Jan. 11, 1907, Serial No. 351,886. Divided and this application filed Mar. 18, 1907. Serial No. 363,113.



1. In a shirt, a body portion of fabric having a neck opening and formed with slot-like openings spaced apart and extending substantially longitudinally of the body portion and opening into the neck opening, leaving an intermediate portion of the body fabric and side portions spaced therefrom, and a tape connected to said intermediate portion and engaging said side portions for drawing the edges of the side portions toward the edges of the intermediate portion.

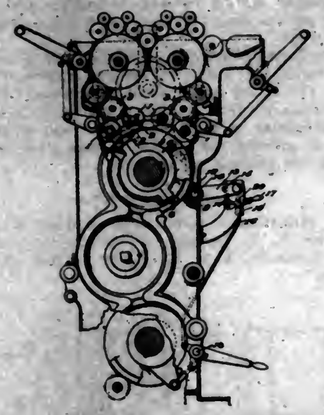
2. In a shirt, a body portion of fabric, a neck opening, said body portion being formed with slot-like openings spaced apart and extending from the neck opening downwardly into the body portion leaving an intermediate portion of the body fabric and side portions spaced therefrom, said side portions being formed with eyes and a tape engaging the intermediate portion.

879,686. WIRE-WORKING TOOL. PEARL SMITH, Bardwell, Ky. Filed Aug. 5, 1907. Serial No. 387,079.



A wire-working tool comprising a radially slotted ratchet-disk mounted on one of the handles, and having a central opening, wire-holding means carried by the ratchet-disk, a radially slotted washer fitting in the aforesaid opening, a radially slotted plate fitting on the washer and overlapping the ratchet-disk, means for fastening the washer and plate to the handle, and a pawl on the other handle engageable with the ratchet disk.

879,687. PRINTING-PRESS. WALTER H. SMITH, Niles, Ohio, assignor to The Harris Automatic Press Company, Niles, Ohio, a Corporation of Ohio. Filed Jan. 7, 1907. Serial No. 351,235.



1. In a printing press, the combination with the form-rolls, of means for moving such rolls out of their normal position, said means comprising a roll-engaging member, a spring-impelled shaft for actuating such member, a trip for normally restraining such shaft, and means for releasing such trip.

2. In a printing press, the combination with the form-rolls, and bearings therefor, of means for engaging such rolls and moving them from said bearings, said means comprising a roll-engaging member, a spring-impelled shaft for actuating such member, a trip for normally restraining such shaft, and means for releasing such trip.

3. In a printing press, the combination with a series of form-rolls arranged on the arc of a circle, of means for engaging said rolls and moving them out of their normal positions, comprising a roll engaging member movable concentrically to said rolls, a spring-impelled shaft for actuating such member, a trip for normally restraining such shaft, and means for releasing such trip.

4. In a printing press, the combination with a series of form-rolls arranged on the arc of a circle, of means for engaging said rolls and moving them out of their normal positions, comprising a plate mounted concentrically to said rolls and having a series of peripheral shoulders for engaging the latter and moving them into a different plane, spring-impelled means for actuating such plate, and means for normally restraining such latter means.

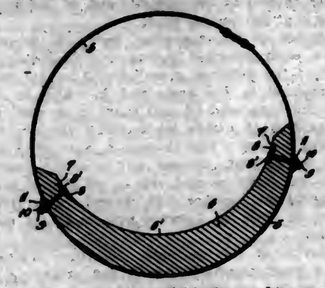
5. In a printing press, the combination with a series of form-rolls arranged on the arc of a circle, of means for engaging said rolls and moving them out of their normal positions, comprising a plate mounted concentrically to said rolls and having a series of peripheral shoulders for engaging the latter and moving them into a different plane, a spring-impelled shaft for actuating such plate, and means for normally restraining such shaft.

[Claims 6 to 14 not printed in the Gazette.]

879,688. PIPE-LINING. JAMES A. SMOODY, Seattle, Wash. Filed Feb. 21, 1907. Serial No. 358,576.

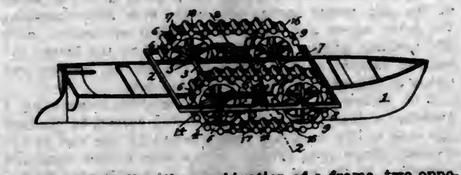
The combination with a conduit, of a lining therefor composed of a plurality of blocks having their outer surfaces conforming to the inner surface of the conduit and having their inner surfaces concaved, the blocks disposed transversely of the conduit with their side faces in contact and each block provided with transverse recesses near the ends opening into the concaved surfaces and

adapted to register when the blocks are disposed within the conduit, binding strips bearing in said recesses and



extending over a plurality of blocks, and means for fastening said strips to the conduits.

879,689. PROPELLER. ALBERT STANDAU, Terre Haute, Ind. Filed May 23, 1907. Serial No. 375,820.



1. In a propeller, the combination of a frame, two oppositely disposed drive sprocket wheels journaled near one end of said frame, two oppositely disposed sprocket wheels journaled near the opposite end of said frame, an endless paddle chain comprising a series of elongated cylindrical paddles having each a circumferential groove near each end, flexible members engaging the grooves for connecting said paddles together, the paddles being arranged equidistantly apart and adapted to work over said sprocket wheels, and a flexible casing incasing each of said paddles between its grooves.

2. In a propeller, the combination of a frame, two oppositely disposed drive sprocket wheels journaled near one end of said frame, two oppositely disposed sprocket wheels journaled near the opposite end of said frame, an endless paddle chain comprising a series of elongated cylindrical paddles having each a circumferential groove near each end, flexible members engaging the grooves for connecting said paddles together, the paddles being arranged equidistantly apart and adapted to work over said sprocket wheels, a flexible casing incasing each of said paddles between its grooves, and a housing mounted on said frame and fitting over said chain of paddles.

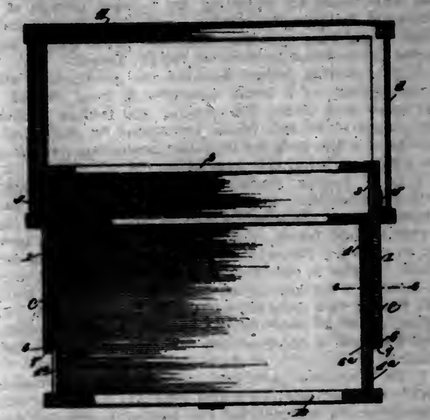
3. In a propeller, an endless chain comprising a series of elongated paddles, each having a groove near each end thereof, flexible means engaging said grooves for connecting said paddles together, flexible casings inclosing the greater portions of said paddles, and means for rotating said paddles.

4. In a propeller, the combination of a supporting frame, a paddle chain comprising a series of cylindrical paddles flexible members connecting said paddles together, the paddles being arranged equidistantly apart and working in said frame, means carried by said frame for rotating said paddles, flexible casings incasing the greater portions of said paddles, and a housing mounted on said frame and fitting over said paddle chain.

5. In a propeller, the combination of a supporting frame, a paddle chain comprising a series of cylindrical paddles flexible members connecting the paddles together, said paddles being arranged equidistantly apart and working in said frame, means carried by said frame for rotating said paddles, and flexible casings incasing the greater portions of said paddles.

[Claim 6 not printed in the Gazette.]

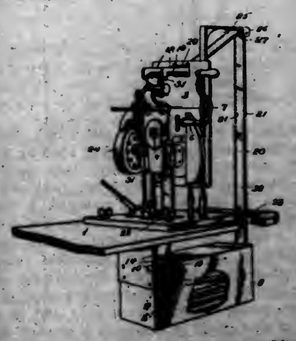
879,690. DRAWER AND DRAWER-SUPPORT. HENRY B. STARRETT, Clinton, Mich., assignor of one-half to George A. Kies, Clinton, Mich. Filed Dec. 17, 1907. Serial No. 406,860.



1. The combination with the frame of a bureau or other similar article of furniture, of a slidable drawer support arranged therein and composed of parallel side portions 1 and a back piece which rigidly connects their rear ends, said support having longitudinal grooves in the inner sides of the parallel portions, and a slidable drawer arranged in said support and provided with ribs adapted to fit and slide in the grooves of the aforesaid support, said ribs extending only a portion of the length of the drawer, and stops pivoted to the ends of the drawer support and adapted to engage the front ends of the drawer ribs when the drawer is extended its full length substantially as set forth.

2. The combination with a bureau frame, of a slidable drawer and a slidable drawer support whose parallel sides are arranged exterior to the sides of the drawer, the drawer and drawer support having corresponding ribs and grooves by which the drawer is supported and adapted to slide in the support, and L shape stops pivoted to the front ends of the drawer support and adapted when in pendent position to engage the ribs of the drawer and when swung outwardly on their pivots to release the drawer so that it may be removed from the drawer support, as shown and described.

879,691. MOVING-PICTURE APPARATUS. SHERMAN M. TANNEHILL, Connellsville, Pa. Filed Sept. 20, 1907. Serial No. 393,772.



1. In a moving picture machine the combination with a stereopticon, of a frame carrying the film feeding mechanism, and means for deflecting the forward portion

of a film strip fed from said mechanism out of alinement with the lens of the stereopticon.

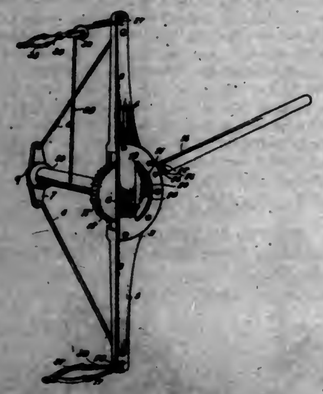
2. In a moving picture machine the combination with a stereopticon, of a frame carrying the film feeding mechanism, and means for deflecting the forward portion of a film strip fed from the feeding mechanism through said frame, comprising oppositely disposed conical pulleys supported in the frame in different vertical planes.

3. In a moving picture machine, the combination with a stereopticon, of a frame supported in front thereof, a box below said frame, film-carrying and feeding mechanism supported on said frame, and means for deflecting a portion of a film strip fed from said mechanism away from the sight opening of the machine.

4. In a moving picture mechanism, the combination with a stereopticon, of a frame supported in front of said stereopticon, a film-carrying and feeding mechanism supported by said frame, said frame provided with an opening to receive a film, a conical roller in said opening over which the film is drawn as it is fed through the feeding mechanism, a bracket carried by the rear face of the frame and located on a different plane than the opening in said frame, a conical roller carried by said bracket to receive said film, and a film-receiving box supported below said frame.

5. In a moving picture mechanism, the combination with a stereopticon, of a frame suported in front of said stereopticon, a film-carrying and feeding mechanism supported by said frame, said frame provided with an opening to receive a film, a conical roller in said opening over which the film is drawn as it is fed through the feeding mechanism, a bracket carried by the rear face of the frame and located on a different vertical plane than the opening in said frame, a conical roller in said bracket to receive said film, a film-receiving box supported below said frame, and means within said box for holding the film strip taut during the feeding operation.

879,692. DRAW-JACK. ELI B. TARR, Derrick City, Pa. Filed Apr. 2, 1906. Serial No. 309,520.



1. A device of the character described, comprising a housing, a shaft mounted within the housing and extending beyond one face thereof, brace rods carried by the housing a plate carried by the brace rods and in which the outer end of said shaft is mounted, a ratchet disk mounted on the shaft within the housing and double pawls carried by a lever for rotating said ratchet disk.

2. A device of the character described, comprising a housing, a shaft mounted within the housing and extending beyond one face thereof, brace rods carried by the housing a plate carried by the brace rods and in which the outer end of said shaft is mounted, a ratchet disk carried by the shaft within the housing, a lever pivoted within the housing and having double pawls operating the ratchet disk, a cable attached to the shaft between the brace rods and the housing, and passing around a block and secured to the one end of the housing, a clamp carried by the block and means carried by the opposite end of the housing for attaching it at the desired point.

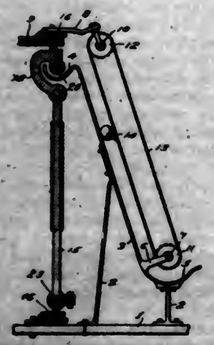
3. A device of the character described, comprising a housing a shaft mounted therein and extending through one wall of the housing, arms carried by the housing a plate supported by the arms and in which is rotatably mounted the outer end of said shaft, a ratchet disk carried by said shaft within the housing, the upper end of the housing having a slot therein, a lever pivoted within said slot intermediate its end, and a spring-pressed pawl carried by the lever on each side of its pivotal connection and engaging said ratchet disk, whereby the ratchet disk is rotated on both the forward and backward movement of the lever.

4. A device of the character described comprising a housing, a shaft mounted therein and extending through one wall of the housing, arms carried by the housing a plate supported by the arms and in which is rotatably mounted the other end of the shaft, a ratchet disk carried by the shaft within the housing, the upper end of the housing having a slot therein, a lever pivoted within said slot and of a thickness less than the width of the slot, a bushing carried by the lever for holding it in the center of the slot, pawls having bifurcated ends and straddling the lever above and below the pivotal connection with the housing, pivots securing the pawls to the lever, and springs carried by the levers for normally holding the pawls in engagement with the ratchet disk.

5. A device of the character described comprising a housing, a shaft mounted therein and extending through one side of the housing, arms carried by the end of the housing, brace rods carried by the ends of the arms and extending to the end of the shaft a plate carried by the brace rods and in which the shaft is rotatably mounted, a ratchet disk carried by the shaft within the housing, and a lever carrying pawls engaging the disk for rotating the same.

[Claims 6 and 7 not printed in the Gazette.]

879,693. COOKER. MILES D. TAYLOR, Rochelle, Ill. Filed Jan. 11, 1907. Serial No. 351,892.



1. A cooking apparatus comprising a cooking cylinder having a valved can inlet, a delivery trough alined with the inlet, a can operating plunger movable within the trough and through the inlet, a can receiving trough arranged below the delivery trough, and an elevator for transferring cans from the receiving trough to the delivery trough.

2. A cooking apparatus comprising a cooking cylinder formed with a can inlet and with a can outlet, a delivery trough alined with the inlet, a receiving trough arranged below the delivery trough, and elevating means for transferring the cans from the receiving trough to the delivery trough, a reciprocating carriage supported beyond the cylinder, and plungers carried by the carriage and cooperating respectively with the delivery trough and with the cylinder outlet.

3. A cooking apparatus comprising a cooking cylinder, a series of superimposed floors within the cylinder, means for delivering a can to one of the floors, and means for intermittently moving said cans transversely of the floor.

4. A cooking apparatus comprising a cooking cylinder, a floor arranged therein, means for delivering a can to said floor, a feeding apparatus to force the can transversely on the floor, and means for intermittently operating said feeding apparatus.

5. A cooking apparatus comprising a cooking cylinder, a floor arranged therein, means for delivering the cans to said floor, feeding plates coöperating with the cans to normally prevent movement thereof, and means for operating the feeding plates to force the cans transversely of the floor.

[Claims 6 to 18 not printed in the Gazette.]

879,694. LOCK-CASE. HENRY R. TOWNE, New York, N. Y., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Apr. 8, 1907. Serial No. 367,005.



1. A lock comprising a casing having an opening in one face thereof, and an undercut shoulder surrounding said opening, and a face plate having its outer edge forced under said shoulder, whereby the plate becomes permanently fastened to the casing.

2. A lock comprising a casing, having a seat and undercut shoulder, and an expanded face plate resting on the seat with its outer edge under said undercut shoulder.

3. A lock comprising a casing having a circular opening in one face, and a continuous seat and shoulder around said opening, and an expanded plate conforming in shape to the shape of said opening, the said plate resting on the seat with its edge under said undercut shoulder.

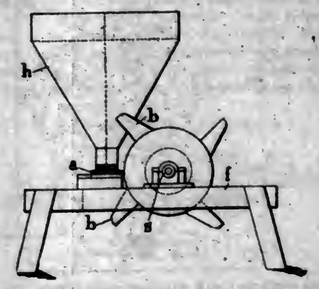
879,695. LOCK-CASE. HENRY R. TOWNE, New York, N. Y., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed July 27, 1907. Serial No. 385,889.



1. A lock comprising a casing having a recessed shoulder, a face plate the edge of which rests adjacent to the said shoulder and a shouldered ring seated in the recess in said shoulder and overlapping the edge of the face plate.

2. A lock comprising a casing having a seat, a recessed shoulder, a face plate, and a ring seated in the recess in the shoulder and overlapping the edge of the face plate.

879,696. NUTSHELL-BREAKING AND KERNEL-EXTRACTING APPARATUS. EARLE W. J. TREVOR, Westminster, London, England. Filed Aug. 10, 1907. Serial No. 388,046.



1. In a shell breaking machine, the combination of a pair of anvils, provided with a passage between the same, means for adjusting said anvils, and a striker adapted to be forced through said passage, substantially as described.

2. In a shell breaking machine, the combination of a pair of anvils, provided with slots, and having a passage between the working faces thereof, securing means passing through said slots, means for adjusting said anvils along said slots, and striking means adapted to be forced through said passage, substantially as described.

3. In a shell breaking machine, the combination of a pair of anvils, provided with slots, and having a passage for the shells to pass between the working faces of said anvils, holding bolts, *d*, passing through said slots, set screws, *e*, for adjusting said anvils along said slots, and striking means adapted to be forced through said passage, substantially as described.

4. In a shell breaking machine, the combination of a pair of anvils, provided with slots, and having a passage for the shells to pass between the working faces of said anvils, holding bolts, *d*, passing through said slots, set screws, *e*, for adjusting said anvils along said slots, striking means consisting of the blades, *b*, adapted to be forced through said passage, and a pulley, *p*, for operating said striking means, substantially as described.

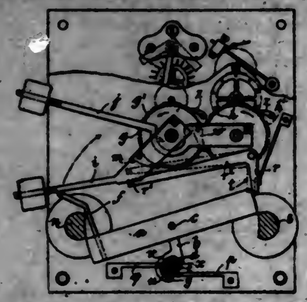
5. In a shell breaking machine, the combination of a pair of anvils, *a* and *c*, provided with inclined operating faces, and having slots, bolts, *d*, passing through said slots, screws, *e*, for adjusting said anvils along said slots, a frame, *f*, on which the said parts are mounted, said anvils provided with a passage between the same, and said frame, *f*, provided with a passage registering with said first named passage, a hopper, *h*, adapted to contain nuts located in operative relation with said anvils, a series of strikers, *b*, adapted to be forced through said passages and means for operating said strikers, substantially as described.

879,697. ELECTRIC CLOCK WINDING MECHANISM. ADOLF TRILKE, Eimsbüttel, near Hamburg, Germany. Filed Dec. 21, 1905. Serial No. 292,794.

1. In an electric clock winding mechanism, the combination with a plurality of wheel trains, of a swingingly mounted weighted lever for each of said wheel trains, an electromagnet, an oscillatory armature having a lifting arm extending into the path of travel of said weighted levers to be depressed thereby on the descent of the levers, and means operated by the armature for making contact when the armature descends to cause the electromagnet to oscillate the armature.

2. In an electric clock winding mechanism, the combination with a plurality of wheel trains, of a swingingly mounted weighted lever for each of said trains, an electromagnet and its circuit, an oscillatory armature having on one of its ends a lifting arm extending into the path of travel of said levers to be depressed thereby on the descent of the levers, and means operated by the armature whereby the circuit is closed in the electromagnet when

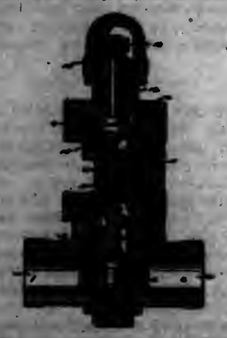
the lifting arm is depressed to cause the electromagnet to oscillate the armature and the circuit is broken when the lifting arm again ascends to lift the levers.



3. In an electric clock winding mechanism, the combination with a plurality of wheel trains, of a swingingly mounted weighted lever for each of said trains, an electromagnet and its circuit, an oscillatory armature having on one of its ends a lifting arm extending into the path of travel of said levers to be depressed thereby on the descent of the levers, means operated by the armature whereby the circuit is closed in the electromagnet when the lifting arm is depressed to cause the electromagnet to oscillate the armature and the circuit is broken when the lifting arm again ascends to lift the levers, and a stop normally projecting into the path of the armature to prevent the lifting arm to descend to close the circuit and adapted to be withdrawn by the descending levers to permit closing of the circuit.

4. In an electric clock winding mechanism, the combination with a plurality of wheel trains, of a weighted lever for each of said wheel trains, an electromagnet, an oscillatory armature having a lifting arm extending into the path of travel of the weighted levers to lift said levers, and a switch operated by said armature for closing and breaking the circuit in the electromagnet in unison with the oscillations of the armature; said switch comprising a star ratchet disk, having cams, a contact spring in continuous contact with said disk, a second contact spring having an insulated stud engaging with the cams on the disk to cause the spring to make and break contact when the ratchet disk rotates.

879,698. PRESSURE-REDUCING VALVE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed July 14, 1904. Serial No. 216,517.



1. A fluid pressure regulator comprising a main valve for controlling the flow of fluid, a movable abutment having equal areas exposed to fluid pressure on its opposite sides for operating said valve, a spring normally tending to move said valve to its open position, and a regulating valve operated by variations in the fluid pressure for controlling the release of fluid from one side of said abutment.

2. A fluid pressure regulator comprising a main valve for controlling the flow of fluid, a movable abutment having equal areas exposed to fluid pressure on its opposite sides for operating said valve, a spring normally tending to move said valve to its open position, a regulating valve for controlling the pressure on one side of said abutment, and means governed by the outlet pressure for operating said regulating valve.

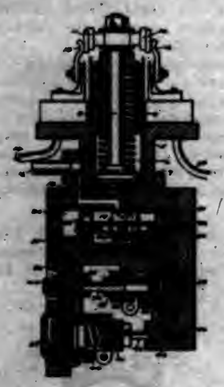
3. A fluid pressure regulator comprising a main slide valve for controlling the flow of fluid, a movable abutment having equal areas exposed to fluid pressure on its opposite sides for operating said valve, means normally tending to open said valve, a regulating valve controlling the pressure on one side of said abutment, and means governed by the outlet pressure for operating the regulating valve.

4. A fluid pressure regulator comprising a main slide valve for controlling the flow of fluid, a movable abutment having equal areas exposed to fluid pressure on its opposite sides for operating said valve, a spring normally tending to open said valve, a regulating valve for controlling the release of fluid from one side of the abutment, and a diaphragm subject to the opposing pressures of the outlet fluid and an adjustable spring for operating said regulating valve.

5. A fluid pressure regulator comprising a main slide valve subject to the high pressure for controlling the flow of fluid, a piston also exposed on one side to the high pressure for operating said valve, means for permitting a leakage of fluid to the piston chamber on the opposite side, a spring normally acting to move said slide valve to its open position, a regulating or vent valve for controlling the release of fluid from the piston chamber, and means governed by the outlet pressure for operating the regulating valve.

[Claims 6 and 7 not printed in the Gazette.]

879,699. ELECTRIC PUMP-GOVERNOR. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Sept. 21, 1905, Serial No. 279,462. Renewed June 28, 1907. Serial No. 381,311.



1. A pressure governor comprising a controlling device, an actuating piston for the same, means governed by the pump for supplying fluid to said piston and a low tension regulating means operating when the pump pressure diminishes to a certain point to positively release fluid under pressure from the actuating piston to cause the pump to cut in.

2. A pressure governor comprising a controlling device and a piston for actuating the same, a main valve for controlling the release of fluid under pressure from the actuating piston, and a low tension regulating valve device for causing the movement of the main valve when the pump pressure diminishes to a predetermined point.

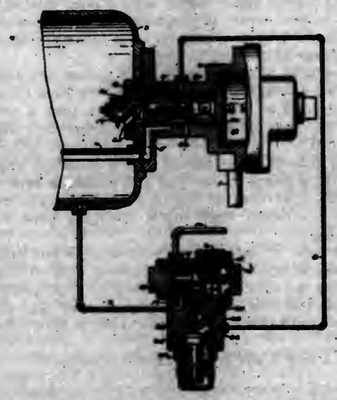
3. A pressure governor comprising a controlling device and a piston for actuating the same, a main valve for controlling the release of fluid under pressure from the actuating piston, a movable abutment for operating a high tension regulating means governed by the pump pressure to cause the pump to cut out, and a low tension regulating valve means for varying the pressure on said abutment when the pump pressure diminishes to a predetermined point.

4. A pressure governor comprising a controlling device and an actuating piston, a main valve and abutment for controlling the pressure on said actuating piston, a regulating valve means operated by the pump pressure for governing the release of fluid under pressure from one side of said abutment, and another regulating valve device for governing the release of fluid from the opposite side of the abutment.

5. A pressure governor comprising a controlling device and actuating piston, a low tension regulating means for causing the movement of the piston to cut in the pump, and a high tension regulating means for causing the movement of the piston to cut out the pump.

[Claims 6 to 23 not printed in the Gazette.]

879,700. GRADUATED-RELEASE VALVE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed June 27, 1906. Serial No. 323,610.



1. In an automatic fluid pressure brake system, the combination, with a triple valve, an auxiliary reservoir, and a brake cylinder, of means, for effecting a partial, or graduated, release of the brakes, comprising a reservoir charging valve device, and a valve device operative by movement of the triple valve piston for controlling the reservoir charging device.

2. In an automatic fluid pressure brake system, the combination, with an auxiliary reservoir, a train pipe, and a brake cylinder, of a reservoir charging valve device, and a valve device operative by movement of the triple valve piston for varying the pressure in the reservoir charging device and thereby effecting an increase of pressure in the auxiliary reservoir so as to cut off the release from the brake cylinder.

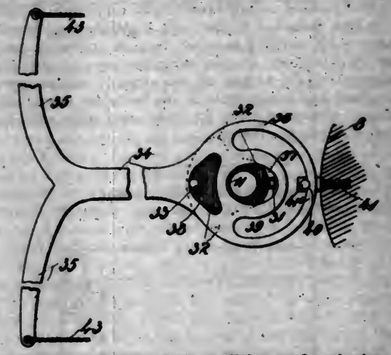
3. In an automatic fluid pressure brake system, the combination, with a triple valve, an auxiliary reservoir and a brake cylinder, of a device independent of the main valve of the triple valve for charging the auxiliary reservoir, and a valve operative by the stem of the triple valve piston for controlling the reservoir charging device and thereby effecting an increase of auxiliary reservoir pressure by which the exhaust from the brake cylinder is cut off.

4. In an automatic fluid pressure brake system, the combination, with an auxiliary reservoir, a brake cylinder, and a triple valve device, of means for effecting a partial, or graduated, release of the brakes, comprising a valve device for increasing pressure in the auxiliary reservoir, a movable abutment and valve auxiliary thereto, and a valve operative by movement of the triple valve piston for controlling pressure on the movable abutment and thereby controlling the operation of the reservoir charging device.

5. In an automatic fluid pressure brake system, the combination, with an auxiliary reservoir brake cylinder and triple valve, of an auxiliary reservoir charging device, and a valve device for effecting operation of the charging device by releasing fluid under pressure therefrom to the auxiliary reservoir when the triple valve is in full release position.

[Claims 6 to 8 not printed in the Gazette.]

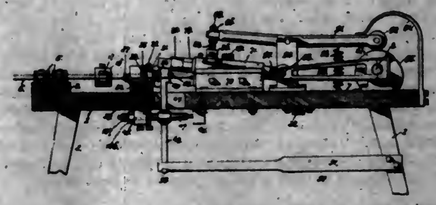
879,701. GATE. OSCAR VAN TASSELL, Bozeman, Mont. Filed Oct. 18, 1907. Serial No. 398,069.



1. The combination with a tilting and swinging gate, and its hinge-post, of a lever loosely mounted on the hinge-bar of the gate and having a triangular-shaped opening and an arc-shaped slot, a pin carried by the hinge-bar entering the aforesaid opening, and a pin carried by the hinge-post extending into the aforesaid slot.

2. The combination with a tilting and swinging gate, and its hinge-post, of a lever loosely mounted on the hinge-bar of the gate, and having a triangular-shaped opening and an arc-shaped slot provided with a recess in one of its sides, a pin carried by the hinge-bar entering the aforesaid opening, and a pin carried by the hinge-post extending into the aforesaid slot and entering the recess when the gate is closed.

879,702. NAIL-MAKING MACHINE. ALEXANDER VINCZE, Rankin, Pa. Filed June 19, 1907. Serial No. 379,753.



1. A nail making machine comprising the combination with a bed plate, of an operating shaft journaled thereon, housings carried by the bed plate, a header block holder movably-mounted in said housings, a beam pivoted upon the bed plate and actuated by said operating shaft for moving said holder, a header block movably-mounted in said holder and reciprocated by said operating shaft, and a header carried by said block.

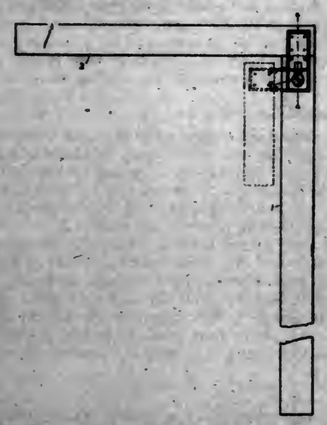
2. A nail making machine comprising the combination with a bed plate, of an operating shaft journaled thereon, a housing mounted upon the bed plate and formed with inclined slots, a holder mounted in the housing and provided with pins engaging in said slots, a reciprocatory header

block slidably-connected to said holder, a header secured to said block, means upon said shaft and connected with the holder for elevating it and said header block, and means operated from said shaft for reciprocating said header block.

3. A wire nail making machine comprising the combination with a bed plate, of an operating shaft journaled thereon, a housing mounted upon the bed plate and formed with inclinde slots, a holder mounted therein and provided with pins engaging said slots, a reciprocatory header block slidably connected to said holder, a header secured to said block, a beam having its forward end pivotally-connected to said holder and adapted when operated to elevate the holder, means carried by said shaft and engaging with said beam for operating it, and means connected with the header block and with the shaft for reciprocating said block.

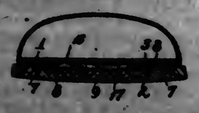
4. A nail making machine comprising a housing, a header block holder mounted within and engaging the housing, a header block slidably-mounted in said holder, a header carried by said block, an operating device, a pivoted beam engaging with said holder for elevating it, means carried by the shaft and engaging with the beam for actuating it, and means connected with the shaft and with said block for reciprocating the latter.

879,703. SEPARABLE SQUARE. ALBERT C. WAECKER, Wilmington, Del. Filed Aug. 16, 1907. Serial No. 388,018.



A separable square comprising two blade members having square ends, adapted to be secured together at right angles to each other, the end of one member having spaced recesses and a slot formed therein, and the side edge of the other member, adjacent its end, being provided with spaced projections adapted to fit in said recesses, the member with the projections having plates secured to its sides extending over said projections and provided with apertured ends, the aperture of one of said plates being threaded, and a thumb screw extending through said apertures and slot of the adjacent member whereby said members can be locked at right angles to each other or parallel to each other.

879,704. BOOT AND SHOE. CHARLES J. WALKER, North Fitzroy, near Melbourne, Victoria, Australia. Filed Apr. 24, 1907. Serial No. 370,043.



1. In combination in a boot or shoe, a flexible rand having its inner longitudinal edge split to form a pair of selvages, one of the selvages being angularly disposed with respect to the other, an upper having an inturned portion extending around the body portion of the rand and abutting against the angularly disposed selvage, means for securing the upper to said angularly disposed selvage, a sole mounted against the in-turned portion of the upper, and means for securing the sole, inturned portion of the upper and body portion of the rand together.

2. In combination in a boot or shoe, a flexible rand having the inner longitudinal edge thereof split to form a pair of selvages, an upper having an inturned portion overlapping the body portion of the rand, means for securing the inturned portion of the upper to one of the selvages, a sole abutting against the inturned portion of the upper, and means for securing the sole, inturned portion of the upper and body portion of the rand together.

879,705. COP-TUBE. SIMON W. WARDWELL, Providence, R. I. Filed Aug. 15, 1906. Serial No. 330,686.



1. A cop tube of sheet metal cylindrical in form with a close but unjoined seam, and having at the outer end a straight edge, and opposite the latter a rounded corner, for the purpose set forth.

2. A cop tube of sheet metal, with a close but unjoined seam and with a corner of the abutting edges rounded at one end of the tube the opposite edge being straight, and having a flange at one end.

3. A cop tube of sheet metal, with a close but unjoined seam, having a flange at one end formed up from the metal of the tube, and at the other end of the tube a straight edge and opposite the latter a rounded corner, for the purpose specified.

4. A cop tube of sheet metal, with a close but unjoined seam, having a flange at one end and means in said flange whereby the tube may be positively rotated, and at the outer end, a straight edge and a diverging edge with a rounded corner.

5. A cop tube of sheet metal, with a close but unjoined seam, having at one end a flange formed with an indentation whereby the tube may be positively driven, and at the other end of the tube a straight edge and an edge diverging therefrom towards the end and curved to form a rounded corner.

[Claims 6 and 7 not printed in the Gazette.]

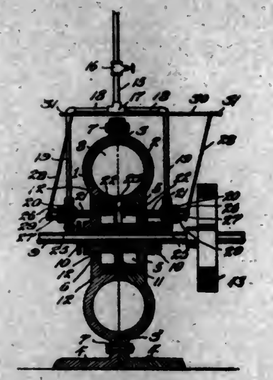
879,706. SCRUBBING-BRUSH. JESSE E. WATSON, Pensacola, Fla. Filed Nov. 1, 1907. Serial No. 400,191.



1. A fountain brush comprising a brush back provided with bristles, a handle secured thereto, a reservoir connected to the brush handle, a fountain tube communicating with said reservoir, an outlet pipe provided with a cut-off valve, and a discharge tube provided with a series of nipples, said nipples passing through the brush back.

2. A fountain scrubbing brush comprising a brush back provided with bristles, a handle secured thereto, a water reservoir having an inwardly extending funnel-like upper end, a transverse tube secured to the lower end of said reservoir and closed at its ends, an outlet tube leading from said transverse tube to a discharge tube and provided with a cut-off valve, and nipples leading from the discharge tube through the brush back.

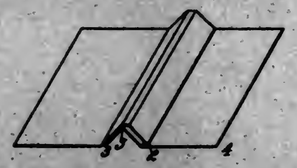
879,707. ROTARY ENGINE. JESSE WEATHERFORD, Horace, Ill. Filed June 11, 1907. Serial No. 378,459.



1. In a rotary engine, the combination of a cylinder comprising two sections, steam chests formed in said cylinder, a circular steam chamber, a piston carrier, a circular piston moving in said chamber and connected to said carrier, said carrier provided with oppositely disposed steam passages establishing communication between the steam chests and the steam chamber, sliding abutments comprising pivoted disks, levers connected to said disks, and cams for alternately moving said abutments into and out of line with said steam chamber.

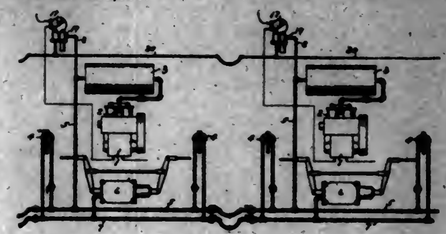
2. In a rotary engine, the combination of a cylinder, a shaft mounted in said cylinder, a piston carrier mounted on said shaft, a piston carried by said piston carrier, steam chests, steam inlet pipes communicating with the steam chests at opposite sides of said carrier, steam passages formed in said carrier upon opposite sides, sliding abutments comprising pivoted disks, levers connected to said disks, cams for actuating said levers and disks, a valve casing connected to each of said steam inlet pipes, levers, and a handle bar for shifting said valves to reverse the engine.

879,708. LAP-JOINT FOR ROOFING OR SIDING SHEETS. ELLSWORTH G. WELCH, Nankin, Ohio. Filed Jan. 29, 1907. Serial No. 354,622.



A lap joint comprising inner and outer overlapping sheets, the overlapping portions of the sheets being bulged outwardly to form the oppositely and inwardly inclined sides of the lap joint, the inner and outer sheets engaging on one side of the joint and spaced apart on the opposite side thereof to form the intervening space, substantially as described.

879,709. PRESSURE-GOVERNOR FOR PUMPS. HENRY H. WESTINGHOUSE, New York, N. Y., assignor to The Westinghouse Air Brake Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Dec. 13, 1902. Serial No. 135,077.



1. The combination on a plurality of cars, each having a motor driven air pump, a main reservoir, and a pressure operated device for controlling the pump, of a main reservoir pipe line connecting said reservoirs, and means operated by the main reservoir pressure for supplying compressed air simultaneously to all of said controlling devices.

2. The combination on a plurality of cars, each having a motor driven air pump, a main reservoir, and a pressure operated device for controlling the pump, of a main reservoir pipe line connecting said reservoirs, a governor pipe line for connecting said pressure operated controlling devices, and means operated by the main reservoir pressure for supplying compressed air to said governor pipe line.

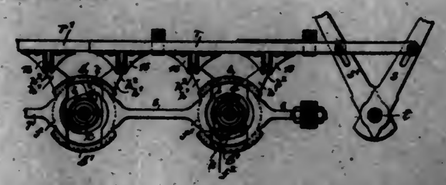
3. The combination with a plurality of motor driven pumps, main reservoirs, controlling devices for the motors, and cylinders with pistons for operating said controlling devices, of a main reservoir pipe line connecting said reservoirs, and means operated by the main reservoir pressure for supplying compressed air simultaneously to all of said pistons.

4. The combination with a plurality of motor driven pumps, main reservoirs, controlling devices for the motors, and cylinders with pistons for operating said controlling devices, of a main reservoir pipe line connecting said reservoirs, a governor pipe line leading to all of said cylinders, and means operated by the main reservoir pressure for supplying compressed air to said governor pipe line.

5. The combination with a plurality of pumps, of a controlling device for each pump, a cylinder and piston for operating each controlling device, an intermediate pipe connecting said cylinders and means actuated by the pressure at each pump for supplying fluid to and exhausting same from said intermediate pipe.

[Claims 6 to 11 not printed in the Gazette.]

879,710. CHANGEABLE-SPEED DEVICE. JOSEPH A. WILKIN, Matamoras, Pa. Filed May 18, 1907. Serial No. 374,393.



1. In a changeable speed device and in combination with a shaft, a sprocket thereon and a clutch device, of a frame comprising the concentric parts f, a plate face f^2, the concentric grooved members g g^1 and the end bars extending from said plate face to a place of support.

2. In a changeable speed device, the combination with a shaft, of a sprocket, a disk lying against one face of the sprocket and flanged and apertured, a cover disk for the flanged disk, a pawl mounted between the two disks, a ratchet between the disks mounted on said shaft and adapted to be engaged by the pawl, a rib on one side of the

pawl adapted to engage a groove of the sprocket face and means for dis-engaging the pawl from the ratchet at the pleasure of the operator.

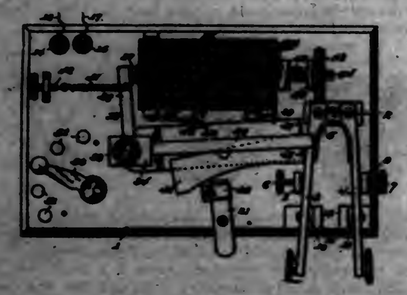
3. In a changeable speed device, the combination with a shaft, of a sprocket, a disk lying against one face of the sprocket and flanged and apertured, a cover disk for the flanged disk, a pawl mounted between the two disks, a ratchet between the disks mounted on said shaft and adapted to be engaged by the pawl, a rib on one side of the pawl adapted to engage a groove of the sprocket and devices manually actuated and revoluble outside of the said flanged disk adapted to act upon the pawl to dis-engage the same from the ratchet.

4. In a changeable speed device, the combination with a shaft and a sprocket, of a flanged disk, a cover disk therefor, a ratchet-wheel between said parts secured to the axle, a pawl also within the parts and adapted to engage the ratchet, a connection from the pawl to the sprocket, a support frame adjacent to said ratchet face, spiral grooved cases supported by said frame at opposite sides, a disk member between the said frame parts and the ratchet, having a flange extending over the ratchet face and having lugs received in the grooved cases of the frame, a crank pin connected to this disk member and means for swinging the disk member so that its lugs move through the spiral grooves of the frame to shift the position of this disk member longitudinally of the shaft so as to cause a movement of the flange of the disk member exteriorly and over the ratchet and pawl case so as to cover or un-cover the pawl end and contacting therewith to engage or dis-engage the pawl from the ratchet.

5. In a changeable speed device, the combination with a shaft and a sprocket having a radially disposed groove, of a case formed of a flanged disk with an aperture in the flange and a cover disk in a juxtaposed relation with said sprocket, a ratchet within the case and a pin connecting said ratchet for rotation to the shaft, a pawl within the case having shoulders in apertures of the disks forming the case for a bearing and having a tooth engaging the ratchet and a lever end adapted to pass through the aperture in the case and beyond the periphery thereof when the pawl is in engagement with the ratchet and said pawl having a rib on one side received in the groove of the sprocket, whereby the rotation of the sprocket is transferred through the groove and the rib of the pawl and through the pawl to the ratchet and to the shaft, or in the opposite direction, and means for swinging the pawl by contacting with its projecting end so as to remove the point of the pawl from the teeth of the ratchet.

[Claims 6 and 8 not printed in the Gazette.]

879,711. TELEGRAPHIC TRANSMITTER. CLYDE WILLIAMS, PORTER B. MITCHELL, and SHARPE HATHAWAY, Barton, Ohio. Filed May 6, 1907. Serial No. 372,195.



1. In a telegraphic transmitter, an electro-magnet, a block, a pair of horizontally moving spring pressed keys pivoted on said block, a contact post for each key, a pivoted spring-held angular lever, an armature for said magnet carried on one arm of said lever, a pivoted plate having an upright lug on its free end, a second plate adjustably carried by said first plate and having an upright lug on its outer end, the other arm of said lever extending between said upright lugs, a second upright lug carried by said first named plate, a flexible spring having a contact point normally in engagement with said second lug of the first named plate, electrical connections between said block and one of said contact posts for one of the keys, a connection between said last named contact post and said magnet, a connection between the other contact post and said first named plate, and a connection between said magnet and said flexible spring.

2. In a telegraphic transmitter, electric circuits including therein, an electro-magnet, a pair of contact posts a block, a pivoted lever, having an armature, and a flexible spring carrying a contact point, said block having a pair of keys pivoted thereto, means operated by said lever and coacting with the contact point of said flexible spring for breaking the circuit through said magnet, and means whereby the distance traveled by said first named means in its movement may be varied.

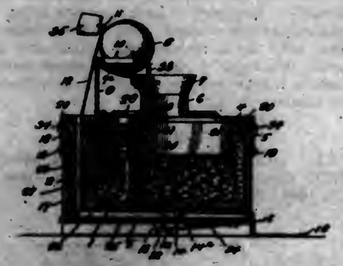
3. In a telegraphic transmitter, electric circuits including an electro-magnet, a spring held pivoted armature-carrying lever, a flexible contact-point-carrying spring, keys and contact posts for the keys, a pivoted element coacting with said contact-point of the spring to make and break the circuit through said magnet, and adjustable means on said element for engagement with said lever whereby the distance traveled by said element in its movement may be varied.

4. In a telegraphic transmitter, electric circuits including an electro-magnet, armature-carrying means, a contact point, keys and contact posts for the keys, and a pivoted plate co-acting with said contact-point to make and break the circuit through the armature, said plate having adjustable parts disposed on opposite sides of and operated by said armature carrying means, whereby the period of duration of the break may be varied.

5. In a telegraphic transmitter, electric circuits including an electro-magnet, an armature-carrying spring-held lever, a contact point, keys and contact posts for the keys, a pivoted plate having a part for engagement with said contact point and a part for engagement with one side of one of the arms of said lever, and a second plate movably secured to the first plate and having a part for engagement with the opposite side of said lever arm.

[Claims 6 and 7 not printed in the Gazette.]

879,712. INK-WELL. JOHN D. WOODS, Steubenville, Ohio. Filed July 5, 1907. Serial No. 382,329.



1. A non-spillable ink-well comprising a body portion provided with a vertical passage at one side thereof and a bottom groove communicating with said passage, a spring controlled pin below the bottom of the ink-well, a cover provided with a flaring mouth, a stopper fitting said mouth, and means within the receptacle connected to said stopper for seating the latter when said pin is moved by its spring.

2. A non-spillable ink-well comprising a body portion provided with a vertical passage at one side thereof and a bottom groove communicating with said passage, a spring-controlled pin below the bottom of the ink-well, a cover provided with a flaring mouth, a stopper fitting said mouth, and means within the receptacle connected to said stopper for seating the latter when said pin is moved by its spring, said means consisting of a stationary spindle, a spring pressed slide thereon, and a flexible connection between said slide and stopper.

3. The combination with an ink-well formed at one side with a vertical hollow projection, and at its bottom with a horizontal groove, of a casing within which the ink-well fits, a pin extending centrally through the bottom of the casing, a spring secured at one end to the bottom of the casing, and connected at its opposite end to said pin, a cover detachably connected to said ink-well and provided with a flaring mouth bracket projecting from said cover, and having curved arms, a spherical stopper adapted to rest on said arms, a spring-controlled slide within the ink-well having a flexible connection with said stopper for seating the latter when said pin is forced outward by its spring, a cord attached to said flexible connection and a block carried by said cord to engage said pin.

4. The combination with an ink-well formed with a vertical cord passage at one side and a bottom groove communicating therewith, of a casing within which the ink-well fits, a spring-pressed pin extending centrally through the bottom of the casing, a removable cover provided with a flaring mouth, a bracket projecting from said cover, arms extending from said bracket, a cord extending through said passage and groove, a block secured to said cord, a spherical stopper supported by said arms, a vertically disposed rod or spindle within the ink-well, a spring-pressed slide on said rod or spindle, and a chain connection between said slide and said stopper.

5. The combination with a receptacle constituting an ink well, of a removable cover therefor, said cover having a depending flange engaging the said receptacle, said flange having its periphery flush with the periphery of the receptacle, a casing within which said receptacle fits, a band surrounding the casing and provided with an annular inwardly extending flange engaging the cover for maintaining it in position, and means for securing the band to the casing thereby connecting the casing cover and receptacle together.

[Claim 6 not printed in the Gazette.]

879,713. WATERPROOF SELF-SEATING TUBE FOR PROTECTING THE MOUTH END OF CIGARS. ROBERT H. YOUNG, Nanticoke, Md. Filed Mar. 18, 1907. Serial No. 362,916.



As a new article of manufacture a conical tube of waterproof paper adapted to be self seating and self adhesive upon the taper end of a cigar and having its inner end turned inward in a fold, whereby to increase the thickness of the edge and to form an annular binding fold to increase its holding function upon the wrapper and prevent edge fraying or splitting.

879,714. LOCK-NUT. IRA L. ABE and JACOB ABE, Alaska, W. Va. Filed July 31, 1907. Serial No. 386,407.



1. The combination of a threaded member provided with one or more depressions, a nut on the member having an arcuate chamber open at one end to communicate with the bore of the nut and open at its opposite end in one of the side surfaces of the nut, and a locking device in the chamber, said device consisting of an arcuate strip bent inwardly into a hook at one end and shaped to move in and out through the inner opening of the chamber for engaging or disengaging the depressions of the said member and having its outer end bent outwardly in the opposite direction from the hook and projecting normally out of the other opening of the chamber, an apertured lug formed on the member at an intermediate point on the same, a pivot in the chamber extending through the aperture of the lug, and a leaf spring secured to the member and terminating adjacent the hook of the latter and engaging the wall of the chamber for holding the member in locking position.

2. The combination of a threaded member having one or more depressions; a nut thereon composed of two parts, one part having a chamber opening into the bore of the nut at one end and at one side of the nut at the opposite end, one side of the chamber being closed by the second part of the nut, and fastening devices for securing the parts of the nut together; and a locking device in the said chamber, said locking device comprising a strip of metal having one end bent into an inwardly extending V-shaped hook arranged to project through the opening at the inner end of the chamber for engaging in a depression of the said threaded member, and the opposite end being bent outwardly to project out of the outer open end of the chamber to be engaged by a wrench, a lug formed on the said member at a point intermediate the ends thereof, a pivot engaging in an opening in the lug for removably holding the member in the chamber and to permit movement thereof, and a leaf spring secured at one end to the member at a point intermediate the lug and inner end and having its opposite end disposed adjacent the hook to engage the wall of the chamber for holding the member in locking position.

879,715. SEED-COTTON-DRYING APPARATUS. JOSEPH A. ADAMS, Woodville, Okla. Filed Oct. 19, 1907. Serial No. 398,247.



1. A seed cotton drying apparatus embodying a steam chamber located in a suction or pneumatic conveyer or cotton flue and embodying an inner shell through which the cotton passes, an outer shell having a steam and air tight connection therewith and leaving an annular steam space between the inner and outer shells, and an outer jacket inclosing beneath the inner and outer shells and providing an air circulation space, substantially as and for the purpose described.

2. A seed cotton drying apparatus embodying a drier interposed at a suitable point in a suction conveyer or cotton flue and comprising an inner shell through which the cotton passes, an outer shell surrounding the same and secured thereto by a tight joint to leave an annular steam space, an outer jacket inclosing the said shells, a steam supply pipe leading to said steam chamber, and valve controlled openings between the inner shell and outer jacket.

3. A seed cotton drying apparatus embodying a drier interposed in a suction conveyer or cotton flue and embodying an inner shell through which the cotton passes, an outer shell leaving an intervening annular steam chamber between the two shells, an inclosing outer jacket covering both shells, air inlet ports affording communication between the inner shell and the outer jacket, and valve controlled openings also leading from the inner shell into the outer jacket.

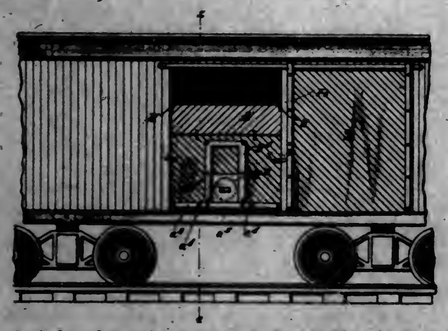
4. A seed cotton drying apparatus embodying a drier located at a suitable point in the suction conveyer or cotton flue and embodying an inner shell through which the cotton passes, an outer shell surrounding the inner shell and secured thereto and leaving an annular steam chamber, a steam supply pipe leading thereto, an outer inclosing jacket surrounding both shoulders, means for diverting air from the cotton flue through said outer jacket, and

a steam pipe leading from the steam chamber into and lengthwise of said suction conveyer or cotton flue.

5. A seed cotton drying apparatus embodying a drier interposed at a suitable point in the length of the pneumatic or suction conveyer or cotton flue and embodying connected inner and outer shells forming an annular steam chamber through which said cotton is caused to pass, an outer jacket surrounding said steam chamber, air ports leading from the inner tube into the outer shell, valve openings in said inner shell, and spring sustained valves controlling the last named openings and adapted to operate automatically as the suction pressure varies.

[Claims 6 to 9 not printed in the Gazette.]

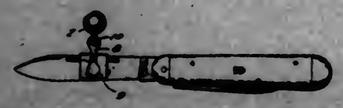
879,716. GRAIN-CAR AND DOOR THEREFOR. HENRY ALSOP, Chicago, Ill. Filed Jan. 14, 1907. Serial No. 352,167.



1. A door for grain cars composed of wood and adapted to be raised and swung inwardly against the inner roof of the car, said door having a circular relief opening therethrough near its lower end, metal guides extending vertically on each side of the relief opening and offset from the outer face of the door, a cross metal bar connecting the upper ends of said vertical guides, a rectangular metal gate fitting against the outer face of the door and within the offset vertical guide and adapted to control the said relief opening, an elongated eye projecting forwardly from said metal gate, a bar lever passing through said elongated eye and having one end pivoted to the said door, whereby the said metal gate may be moved vertically to cover or uncover the relief opening.

2. A door for grain cars composed of wood and adapted to be raised and swung inwardly against the inner roof of the car, said door having a relief opening therethrough near its lower end, metal guides extending on each side of the relief opening and offset from the outer face of the door, a metal gate fitting against the outer face of the door and within the offset guides and adapted to control the said relief opening, an elongated eye projecting forwardly from said metal gate, a bar lever passing through said elongated eye and having one end pivoted to the wooden door, whereby the metal gate may be moved to cover or uncover the relief opening.

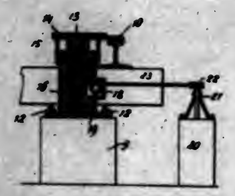
879,717. SEED-CORN MAGNIFIER. GEORGE ANDERSON, Wakefield, Nebr. Filed June 29, 1907. Serial No. 381,522.



1. A device of the character described comprising a supporting bracket, a frame carried by the said bracket and formed of a single piece of sheet metal, said frame having a folded supporting arm and rings carried by said arm, together with a magnifying glass held between the rings one of said rings being formed with a flange lapping over upon the other to secure the rings together.

2. A device of the character described comprising a supporting bracket, a sheet metal frame held by the bracket, said frame having a folded portion providing a supporting arm, rings carried by the terminals of the arm, one of said rings having a flange folded over upon the other rings to unite said rings, and a magnifying glass held between the two rings.

879,718. AUTOMATIC SIGNAL FOR RAILWAY-CROSSINGS. ALBERT ARETZ, Tarentum, Pa. Filed Dec. 13, 1907. Serial No. 406,344.



1. In a signal the combination with a rail, of a bell tower located adjacent to said rail, a bell carried by said tower and having a pivoted clapper, a casing supported at the inner side of said rail, and a considerable distance away from said bell tower, a spring supported plunger mounted in said casing, a beveled cap carried by said plunger and having depending flanges surrounding said casing, said cap extending above the tread of said rail, rods arranged at opposite sides of said casing for preventing the displacement of said cap, a pulley journaled in said casing, a cable connected to said plunger and passing over said pulley, a sheave located adjacent to said rail, a sheave carried by said bell tower, said cable passing over said sheave and connecting with the pivoted clapper of said tower, substantially as described.

2. In a signal, the combination with a rail, of a bell tower located adjacent thereto, a bell arranged in said tower, a pivoted clapper adapted to strike said bell, an operating device arranged adjacent to said rail and a considerable distance from said tower, said device comprising a casing, a spring supported plunger, a beveled cap carried by said plunger and extending above the tread of said rail, a cable connecting with said plunger, and with the clapper of said bell tower, and means for preventing the displacement of said plunger with relation to said casing.

879,719. TOWEL-HOLDER. CHARLES ARNING, Syracuse, N. Y. Filed Apr. 6, 1907. Serial No. 366,823.



1. A holder of the class described comprising a single length of wire bent into a U-shaped jaw, a second jaw, a coil connecting the jaws, one extremity of the wire being offset to pass through the coil and hold the latter against a support for the device, and staple points on the extremities of the wire for attaching the device to a support.

2. A device of the class described comprising a single length of wire bent into a U-shaped jaw composed of two members, a second jaw composed of one member, a coil between the second jaw and one of the members of the first jaw, the said U-shaped jaw being movable outwardly from the fixed jaw and normally straddling the latter, means at the extremity of the second jaw for attaching the device to a support, and means on the extremity of one of the members of the U-shaped jaw for securing the opposite end of the device to a support, there being an offset in the said member passing through the coil for holding the coiled end of the device fixed.

879,720. CAM-ADJUSTING MECHANISM FOR KNITTING-MACHINES. GEORGE L. BALLARD, Norristown, Pa., assignor to Wildman Manufacturing Company, Norristown, Pa. Filed June 4, 1907. Serial No. 377,220.



1. In combination, a support or carrier, a cam thereon, and means for adjusting the cam comprising a member to transmit force thereto, and means for locking the cam in position, said locking means forming the connection between the member and the cam, substantially as described.

2. In combination, a support or carrier, a cam thereon and means for adjusting the cam, comprising the member movably supported on the carrier or support, a screw connecting the same with the cam, said screw serving to transmit the movement of said member to the cam when loosened and serving to lock said member and cam against movement when tightened, substantially as described.

3. In combination with the support or carrier, a pivoted cam, a member having turning movement in a horizontal plane above the cam and a connecting and locking device between said member and said cam, substantially as described.

4. In combination, a support or carrier, a cam, a rotary disk or block, a screw extending from the block to the cam and loosely connected with one while fixed to the other, said screw serving to lock the parts in adjusted position, substantially as described.

5. In combination, the support or carrier recessed on its upper side, a kerfed rotary block in said recess, a cam and a connection between the rotary block and the cam for adjusting the same; consisting of a screw which also serves to lock the parts in adjusted position, substantially as described.

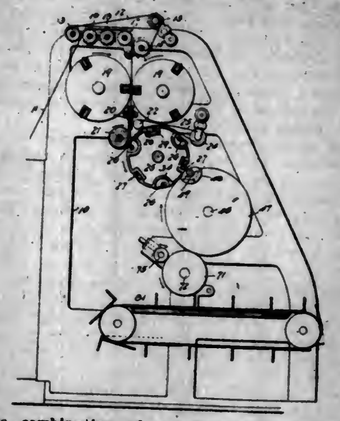
[Claims 6 to 8 not printed in the Gazette.]

879,721. COLLECTING AND FOLDING MACHINE. HOWARD M. BARBER, Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of New Jersey. Filed June 11, 1907. Serial No. 378,892.

1. The combination of a sheet-collecting cylinder having a relatively fixed tucking blade, a folding cylinder having a jaw, and means for causing the jaw to project beyond the periphery of the folding cylinder to grasp the sheet about the tucking blade.

2. The combination of a sheet-collecting cylinder having a tucking blade whose edge does not project beyond the pitch line of the periphery of the collecting cylinder, a folding cylinder having a jaw, and means for projecting the jaw beyond the pitch-line of the periphery of the folding cylinder at the time of taking the sheet.

3. The combination of a sheet-collecting cylinder having a plurality of relatively fixed tucking blades, a folding cylinder bearing a pair of co-acting gripping jaws, and means for projecting the gripping jaws into the collecting cylinder to successively grasp the sheets in a fold about the edges of the several tucking blades.

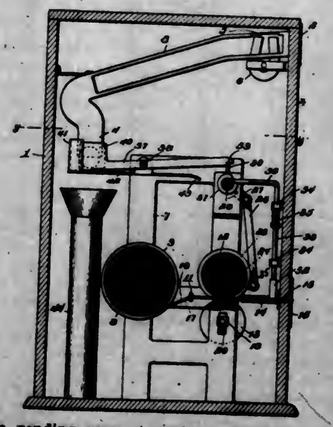


4. The combination of a collecting cylinder bearing folding or tucking blades, a folding cylinder bearing a jaw, and a delivery cylinder, with means for projecting the jaw at the point of taking the sheets from the collecting cylinder, partially withdrawing it during the succeeding movement of the folding cylinder, and drawing it in to lie in the pitch line of the periphery of the folding cylinder at the point of delivering the sheets.

5. In a printing press, a collecting cylinder receiving a plurality of sheets, having relatively fixed tucking blades and pins on the tucking blades which pierce and hold in register the successive sheets.

[Claims 6 to 9 not printed in the Gazette.]

879,722. COIN-CONTROLLED VENDING APPARATUS. RUBICK N. BEASLEY, Paint Lick, and BENJAMIN F. BEASLEY, Lexington, Ky. Filed Jan. 23, 1906. Serial No. 297,492.

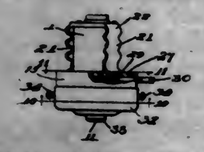


1. In a vending apparatus, the combination of a coin chute having a vertical delivery portion, a rotary shaft carrying a locking projection, a horizontally-arranged locking lever extending between the shaft and chute, said lever being intermediately pivoted to tilt in a vertical plane and having a long arm operating to hold the lever in normal position and provided with a locking projection to engage said projection on the shaft to lock the latter from movement and a short arm adapted to be depressed by the weight of a coin and carrying a coin pocket to

telescopically engage the delivery end of the chute, said pocket being open at its top and outer end, a vertically tilting coin retaining and releasing lever pivoted along side the locking lever to provide a trip arm operating to normally hold said lever in coin retaining position and a retaining arm carrying a laterally projecting guard telescopically engaging the outer end of said coin pocket, and means operated by the shaft to depress said trip arm and tilt the guard upwardly subsequent to the release of said shaft by the tilting of the locking lever under the weight of a coin dropping into said pocket.

2. In a vending apparatus, the combination of a coin chute having a vertical delivery portion, a rotary shaft carrying a locking projection, a rod arranged parallel with the shaft and between the same and the coin chute, a locking lever extending horizontally between the chute and shaft and pivotally mounted upon said rod to tilt in a vertical plane and to provide long and short arms, the long arm being formed with a locking member to engage the locking member on the shaft and the short arm with a pocket telescopically engaging the delivery end of the chute, said short arm being adapted to be depressed by a coin dropping into said pocket, a vertically tilting coin retaining and releasing lever pivoted to said rod on one side of said locking lever and having its arms projecting respectively toward the chute and shaft, the first named arm being provided with a laterally extending portion folded to form a guard telescopically engaging the pocket to normally close the same and release a coin therein, and means operated by the shaft to depress the other arm of the releasing lever and tilt the guard upwardly subsequent to the release of said shaft by the tilting of the locking lever under the weight of a coin dropping into said pocket.

879,723. ATTACHMENT-PLUG. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 29, 1904. Serial No. 191,172.



1. An attachment plug for electric lamp sockets comprising an insulating base, a movable lamp contact carried by said base, a ring having a slot formed therein associated with said base, said slot being adapted to engage said lamp contact, said ring being adapted to remove said contact from engagement with the lamp socket, to permit the plug to be inserted therein without rotating the plug.

2. An attachment plug for electric lamp sockets comprising an insulating base, a movable lamp contact carried by said base, a ring having a slot associated with said base, said slot being formed with a radial offset therein and being adapted to engage said lamp contact, said ring being adapted to remove said contact from engagement with the lamp socket, to permit the plug to be inserted therein without rotating the plug.

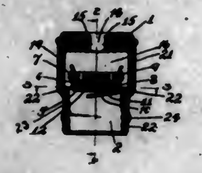
3. An attachment plug for screw threaded electric lamp sockets comprising an insulating base, a center contact carried by said base, an outer contact, means for expanding and contracting said last mentioned contact, binding screws for the leading-in wires, and means for locking said movable contact at both limits of its movement.

4. An attachment plug for electric lamp sockets comprising an insulating base, a lamp contact carried by said base, a ring having a slot formed therein, said slot being adapted to engage said lamp contact, and means for rotating said ring whereby said contact is held in firm engagement with said socket when said plug is in position therein.

5. An attachment plug for electric lamp sockets comprising an insulating base, said base being formed with two diameters, a center contact carried by said base, an outer contact disposed upon the smaller of said diameters, a contact ring disposed upon the other of said diameters, said ring having a slot formed therein, said slot being adapted to engage the end of said last mentioned contact, means for rotating said ring to radially expand and contract said last mentioned contact, binding posts disposed upon the front of the plug, and a removable metal casing or cap for said binding posts.

[Claims 6 to 15 not printed in the Gazette.]

879,724. ELECTRIC-LAMP SOCKET. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 29, 1904. Serial No. 195,829.



1. In a pendent lamp socket, the combination with a one-piece insulating base having an opening in the top thereof to accommodate the leading-in wires, and a transverse opening therein communicating with said top opening, and recesses formed on either side thereof, of a threaded shell carried on the under face of said base, a binding post carried on one of said side recesses and electrically connected with said shell, a center contact also carried on the under face of said base, and a binding post carried on the other recess formed in said base, and electrically connected with said center contact, a metallic inclosing casing detachably connected to said base, and a lining interposed between said casing and binding post and threaded shells.

2. In a pendent lamp socket, the combination with a one-piece insulating base having an opening in the top thereof to accommodate the leading-in wires, and a transverse opening therein communicating with said top opening, and recesses formed on either side thereof, of a threaded shell carried on the under face of said base, a binding post carried on one of said side recesses and electrically connected with said shell, a center contact also carried in the under face of said base, and a binding post carried on the other recess formed in said base, and electrically connected with said center contact, a metallic inclosing casing detachably connected to said base, a two part insulating lining having the coinciding edges overlapping.

3. In a pendent lamp socket, the combination with an insulating base, said base having an opening formed therein for the leading-in wires, said opening having flaring walls, of a lamp receiving shell carried by said base, a metal casing of two diameters for said base and shell, a ring or strip of insulating material having an inwardly extending flange formed upon the lower edge thereof and disposed between the casing and said base, and a second ring or strip of insulating material having an outwardly extending flange formed upon its upper edge, disposed between said casing and said shell, the inwardly and outwardly extending flanges carried by said insulating strips or rings co-acting to form a continuous insulating member.

4. In a pendent lamp socket, the combination with an insulating base, said base having an opening formed therein for the leading-in wires, said opening having flaring walls, of a lamp receiving shell carried by said base, a U-shaped plate disposed in the bottom of said shell and bolts or screws extending through said base and engaging said plate to secure said shell in position, said plate having a turned up portion disposed in a recess formed in said base, a strip having a portion struck up therefrom, a bolt or screw passing through said base and engaging said struck up portion to secure said strip in position, the free end of said strip being bent upwardly and disposed in a recess formed in said base, said strip constituting the center contact for the lamp, and a suitable casing for said socket.

5. A lamp socket comprising an insulating base, associated contacts carried by said base, an inclosing shell or casing of two diameters for said socket and an insulating sheath or lining for said casing, said lining consisting of two strips or rings of insulating material, the contiguous edges of said strips or rings having inwardly and outwardly extending flanges formed thereon, said flanges overlapping and interlocking to form a continuous insulating member.

[Claims 6 to 9 not printed in the Gazette.]

879,725. ATTACHMENT-PLUG. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 25, 1907. Serial No. 364,404.



1. In an attachment plug, the combination of a base, a plug carried thereby and movable relatively thereto, a plurality of corrugated strips secured to said base, means carried by the plug for spreading said strips, and spring means tending to move said plug away from said base.

2. In an attachment plug, the combination of a base and plug movable relatively thereto, an outer contact member carried by said base and adapted to be moved away from the axis of the plug when said plug is moved away from the base, and spring means tending to move said plug away from said base.

3. In an attachment plug, the combination of a base, a plurality of corrugated strips arranged concentrically about the axis of said base, a plug movable toward and away from said base and adapted when moved away from said base to spread said strips, and spring means tending to move said base and plug away from each other.

4. In an attachment plug, the combination of a base, a plurality of corrugated strips secured to said base concentrically around the axis thereof, a movable plug disposed between said strips and adapted when moved away from said base to separate said strips, and spring means adapted to move said plug and base away from each other.

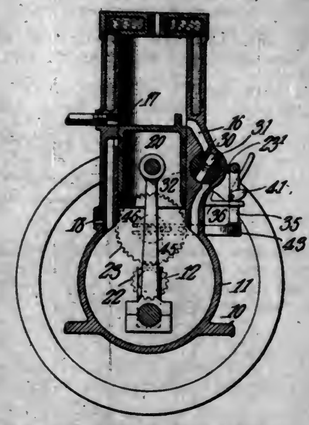
5. In an attachment plug, the combination of a base, a corrugated strip having one of its ends secured to said base, a plug movable relatively to said base, said strip extending along the side of said plug, means on said plug adapted to engage said strip and move the same away from the center of the plug when the plug moves away from the base, and means tending to move said plug away from said base.

[Claims 6 to 16 not printed in the Gazette.]

879,726. GAS-ENGINE. JOSEPH S. BENSON, Iowa City, Iowa. Filed Aug. 2, 1907. Serial No. 386,852.

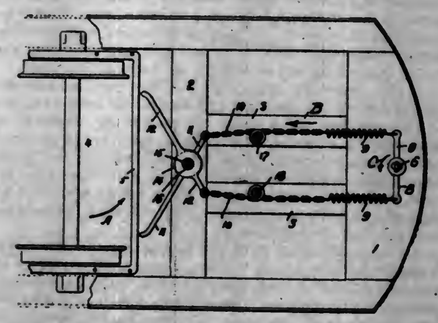
1. In an internal combustion engine, a cylinder, a crank casing, a transfer port for conveying an explosive charge from the crank casing to the cylinder, a rocker valve arranged in said port, a half time shaft, a valve actuating means operable from said shaft and serving to move the valve to open position once during each two revolutions of the crank shaft, and means for disconnecting the operating mechanism and locking said valve in open position to permit operation as a two cycle engine.

2. In an internal combustion engine, a cylinder, a crank case, a piston, a crank shaft connected to the piston, an inlet port in communication with the crank case, a transfer port within the crank case of the cylinder, an exhaust port leading from the cylinder, a rocker valve mounted in the transfer port and controlling the same, a rocker arm connected to the valve, a half time shaft geared to the crank shaft, a disk carried by the half time shaft and provided with a crank pin, a lever arranged



to be engaged and operated by the crank pin, a rod connected to the rocker arm and arranged to be engaged by said lever to move the valve to open position once during each two revolutions of the crank shaft, a spring for moving the valve to closed position, and means for locking the rod out of contact with the lever and holding the valve in open position.

879,727. HEADLIGHT. GEORGE W. BROWN, Lexington, Ky. Filed Aug. 28, 1907. Serial No. 390,469.

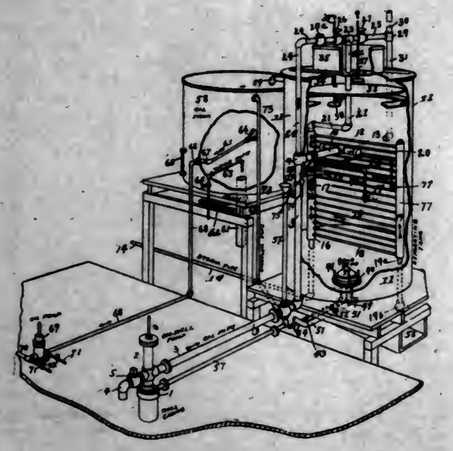


1. In combination with a car truck having a transversely-extending brace, and a car platform, a vertical shaft journaled in the platform, a cross-head carried by the lower end of said shaft, and a head light carried by the shaft above the platform, chains connected at one end to the ends of the cross-head, a king-bolt journaled in the platform, and two actuating arms mounted on said king-bolt for independent movement having their outer ends connected to said chains and their inner ends lying in close proximity to said transverse brace on the car truck to be engaged thereby for actuating the headlight.

2. In combination with a car having a platform and having a rigid actuating member at the rear of the platform, of a vertical-shaft journaled in the platform at the forward end thereof, a head light carried by said shaft, a cross-head on the lower end of the shaft, a king-bolt journaled in the platform, two actuating arms mounted on said king-bolt for independent movement, one of said arms hav-

ing a bearing at its pivotal point receiving the other arm therein, the said arms having their rear ends extending in close proximity to said rigid actuating member, and connections between the outer ends of said arms and the cross-head on said vertical shaft, whereby when either of said arms is engaged by said actuating member, the vertical shaft will be turned.

879,728. OIL-CLEANING APPARATUS. LINUS W. BROWN, Bakersfield, Cal. Filed Mar. 21, 1907. Serial No. 363,762.



1. The apparatus for separating sand from oil comprising an oil-receiving and separating tank having a bottom opening and a valve which normally closes the same and controls the discharge of sand, a tubular steam heater arranged in the body of the tank, an exterior steam pipe connected therewith, and an oil pump arranged exteriorly and a pipe connecting the same with the tank, as described.

2. The improved apparatus for the purpose specified comprising an oil-receiving and separating tank having a bottom opening and a valve for controlling discharge of sand thereat, a tubular steam heater arranged in the tank and a steam-pipe connection extending outside the latter, an oil pipe connected therewith and extending into the tank, and a pipe connecting the steam heater with such oil pipe whereby steam is mingled with the oil as introduced into the tank, as described.

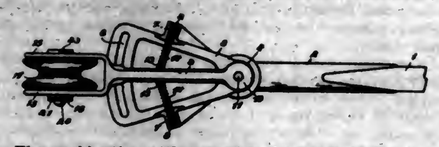
3. The combination with an oil-receiving and separating tank and a steam heater therein, of an oil pump and an oil pipe connecting it with the said tank, and a steam pipe connected with such oil pipe whereby steam is discharged into the oil as it flows into the tank, in the manner described.

4. The combination with the oil-receiving and separating tank having a bottom opening and a valve controlling discharge of sand therefrom, of a steam heater arranged in said tank and composed of vertical tubes, one of which is centrally provided with a hollow partition or diaphragm, and a series of small tubes connecting the two larger vertical tubes above and below the said diaphragm, and a steam pipe connected with the heater and extending outside the tank, in the manner described.

5. The combination with the oil-receiving and separating tank of an oil pump and a pipe connected therewith and extending into the said tank, a tubular steam heater also arranged in said tank and having a vertical extension passing through the top of the tank and having a branch pipe provided with a stop-cock and extending down and connected with the oil pipe, in the manner described.

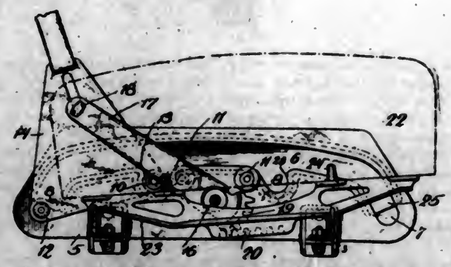
[Claims 6 to 12 not printed in the Gazette.]

879,729. TROLLEY-POLE HEAD. GEORGE G. BUCHANAN, Dubois, Pa. Filed Apr. 21, 1906. Serial No. 313,051.



The combination with a member, formed to be fitted to a trolley pole, of a triangular shaped frame, comprising two diverging arms having pockets, and a guiding member connecting the outer ends of the arms, said guiding member having curved slots, said triangular frame having at its smaller end, a circular flange, a head pivotally connected to the forward end of the frame and inside of said flange, said head having a headed stud projecting through the slot of the guiding member, coiled springs seated in the pockets and connected to the opposite sides of the heads, and a trolley wheel carried by the head.

879,730. CAR-SEAT. EDWARD G. BUDD, Philadelphia, Pa., assignor to Hale-Kilburn Metal Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 9, 1906. Serial No. 329,902.



1. In a reversible car-seat, the combination of a frame, a movable back, a back-supporting arm, a cam surface on said frame having a large central substantially horizontal portion, downwardly-turned portions at the ends of said central portion and offsets equidistant from said ends, and parts on said arm coacting with said cam surface to guide the back in reversing and with said ends and offsets to support the back, substantially as set forth.

2. In a reversible car-seat, the combination of a frame, a movable seat, a movable back, a back-supporting arm, a cam surface on said frame having a large central portion, downwardly-turned portions at the ends thereof and offsets in said central portion equidistant from said ends, parts on said arm coacting with said cam surface to guide the back in reversing and with said ends and offsets to support the back, a pivotally-mounted lever connected to said arm by a pin-and-slot connection, and means actuated by said lever for moving said seat, substantially as set forth.

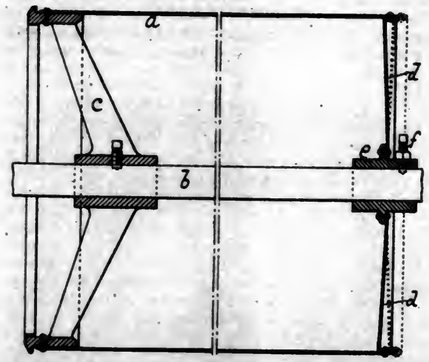
3. In a reversible car-seat, the combination of a frame, a movable back, a back-supporting arm, a metallic plate secured to said frame having a slot therein, said slot having a central, substantially horizontal portion, downwardly turned end portions and offsets intermediate the ends of the slot, a metallic plate secured to said first-named plate over said slot to conceal the slot and strengthen the plate, and parts on said arm entering said slot and coacting with the walls thereof to guide the back in reversing and with said offsets and the ends of the slot to support the back, substantially as set forth.

4. In a reversible car-seat, the combination of a frame, a movable back, a back-supporting arm, a plate secured to said frame and having a slot therein, said slot having a large central portion, downwardly-turned portions at the ends thereof and offsets equidistant from the ends of the slot, and parts on said arm entering said slot and coacting with the walls thereof to guide the back in reversing and with said ends and offsets to support the back, substantially as set forth.

5. In a reversible car-seat, the combination of a frame, a movable back, a back-supporting arm, a cam surface with which said arm coacts to guide the back in reversing, said surface having an offset and a roller mounted adjacent to said cam surface and coacting with said arm to support the same in moving over said offset, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

879,731. ROASTER FOR COFFEE, &c. ROBERT BURNS, New York, N. Y. Filed Oct. 19, 1907. Serial No. 398,280.



1. A roaster cylinder for coffee and other material having a shaft or axle, a front fixed to the shaft and a flexible back head to allow for and take up expansion and contraction of the shell, said back head having a hub fixed to the axle or shaft of the roaster.

2. A roaster with a shaft, said roaster having a front fixed to the shaft and a flexible back head also fixed to said shaft, said back head having its center or hub drawn outward and fixed to the shaft so as to allow the rim portion of the back head to readily respond to expansion of the shell.

3. A roaster for coffee and other material having a flexible back head to allow for and take up expansion and contraction of the shell, said roaster having a shaft and the back head having a hub secured to the shaft.

4. A roaster for coffee and other material having a flexible back head to allow for and take up expansion and contraction of the shell, said roaster having a shaft and the back head having a hub secured to the shaft, said hub having a flange with rounded edge portion for attaching the back head and avoid injury to the latter when springing back and forth.

5. A roaster cylinder having a shaft the cylinder having its heads or end portions fixed to the shaft and one of the end portions made flexible to give under expansion and contraction.

879,732. ANTISLIPPING TREAD FOR BOOTS AND SHOES. NAHUM J. BUSBY, Boston Mass., assignor to L. A. Busby, Chelsea, Mass. Filed June 18, 1907. Serial No. 379,587.



1. A tread for boots and shoes, embodying a body portion of resilient material recessed on its tread surface to leave a narrow surrounding rim, said rim at the toe portion having its inner edge curved reversely to the outer curve of the toe to thereby widen the same, and a filling for said recess of anti-slipping material.

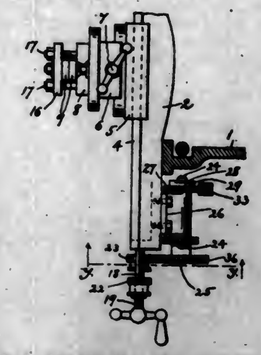
2. A tread for boots and shoes embodying a body portion of resilient material recessed on its tread surface to leave a narrow surrounding rim, said rim at the toe portion being thickened and having its inner edge curved reversely to the outer curve of the toe to thereby widen the same, and a filling for said recess of anti-slipping material.

879,733. TWINE-CUTTER. FRED B. CALDWELL, Kenesaw, Nebr. Filed Sept. 11, 1907. Serial No. 392,411.



The herein described twine cutter comprising a ring, a shank riveted to the ring, a member extending at right angles to said shank and riveted to the ring, and a curved cutting blade extending backwardly from said ring.

879,734. METAL-PLANING MACHINE. EDWIN P. CARPENTER, Pawtucket, R. I. Filed Mar. 20, 1905. Serial No. 251,145.

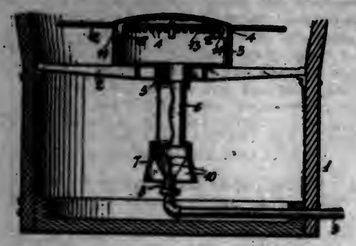


In a metal planing machine, the combination with the feed-rack-bar and feed-screw having pinion thereon, of a plate secured to the machine-frame and provided with journal bearings; two horisontally arranged shafts rotatably mounted on the journal bearings of said plate; a gear loose on each of said shafts and in mesh with the rack-bar; a ratchet wheel keyed on each of said shafts and each wheel having its teeth disposed in the reverse order of the other wheel; a pawl carried by each of said gears to engage the teeth of said wheels; a gear keyed on each of said shafts and in mesh with each other; and a gear keyed on one of said shafts and arranged to mesh with the pinion-gear of the feed-screw, substantially as shown and for the purpose specified.

879,735. BURNER FOR NATURAL GAS. JOHN W. CHAMBERLAIN, Toledo, Ohio. Filed Nov. 22, 1906. Serial No. 344,573.

In a gas burner, a cylindrical burner bowl having its upper edge notched to form passages and its bottom provided with means for connecting it with a supply pipe, an asbestos spreader on top of the bowl provided with perforations, the outer wall of each perforation registering with the inner wall of the bowl when in position and the edge of the spreader extending beyond the bowl, and a concave cap loosely seated upon the spreader, the underside of which is provided with downwardly extending pro-

jections which pass through said perforations, the outer face of each projection engaging with the inner wall of



the bowl to prevent lateral movement of the cap and of the spreader.

879,736. WOVEN FABRIC. CHARLES L. CHRISTMANN, Englewood, N. J. Filed Apr. 12, 1907. Serial No. 367,771.



1. As an improved article of manufacture, a bedspread or the like comprising a woven fabric section having a design outline spaced from the edges of the fabric section and varying from the edge outline of said section, said design outline providing a line of cut for severing the bedspread from the fabric section.

2. As an improved article of manufacture, a bedspread or the like comprising a woven fabric section having a design outline spaced from the edges of the fabric section, said design outline marking a body portion having a central section and an end flap and side flap projecting therefrom, said design outline providing a line of cut for severing said body portion from the fabric section.

3. As an improved article of manufacture, a bedspread or the like comprising a woven fabric section having a design outline spaced from the edges of the fabric section and varying from the edge outline of said section, a design border line arranged within and conforming to the design outline, said design border line being spaced from the design outline, and a series of independent designs arranged within and spaced from the design border line.

4. As an improved article of manufacture, a bedspread or the like comprising a woven fabric section having a design outline spaced from the edge outline of the section and varying therefrom, a design border line arranged within and spaced from the design outline, said design border line conforming to the design outline, a complete central design arranged within and spaced from the design border line and independent edge designs arranged within the design border line and between the latter and the central design.

5. As an improved article of manufacture, a bedspread or the like comprising a woven fabric section having a body pattern and a design outline spaced from the body pattern and from the edges of the fabric section, said design outline being arranged in part to extend inwardly on angularly related lines outside of the body pattern and at the corners of at least one end of the fabric section, said design outline defining a line of severance whereby the said corners may be cut out to form recesses outside the body pattern, leaving the adjacent end and sides of the bedspread relatively free to form distinct flaps.

[Claim 6 not printed in the Gazette.]

879,737. WOVEN FABRIC. CHARLES L. CHRISTMANN, Englewood, N. J. Filed May 2, 1907. Serial No. 371,495.



1. As an improved article of manufacture, a bedspread or the like comprising a woven fabric section having a main design outline spaced from the edges of the fabric section and varying from the edge outline of said section, said section also having an auxiliary design outline so disposed with relation to the main design outline as to complete with portions of said main design outline a line of demarcation conforming to the edge outline of the section.

2. As an improved article of manufacture, a bedspread or the like comprising a woven fabric section having a main design outline spaced from the edges of the fabric section and varying from the section edge outline at determinate points, said section also having an auxiliary design outline arranged adjacent the irregularities in the main design outline and completing with the regular portions of said main design outline a line of demarcation conforming to the edge outline of the section, said auxiliary design outline having its terminals spaced from the adjacent portions of the main design outline, whereby the fabric section may be used in original form, or be severed along the line of the main design outline, or be severed along the auxiliary design outline and the regular portions of the main design outline.

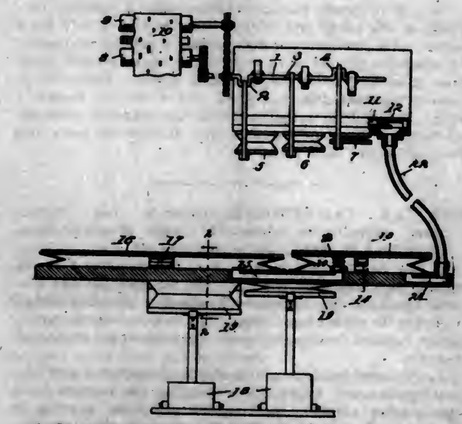
3. As an improved article of manufacture, a bedspread or the like comprising a woven fabric section having a design outline spaced from the edges of the section, said design outline having major lengths extending in approximately parallel relation with the adjacent edges of the fabric section and minor lengths projecting inwardly from the ends of the major lengths, said fabric section also having an auxiliary design outline alined with the major lengths of the main design outline and terminally separated therefrom, said auxiliary design outline being arranged adjacent to and beyond the minor lengths of the main design outline.

4. As an improved article of manufacture, a bedspread or the like comprising a woven fabric section having a design outline spaced from the edges of the section, said design outline having major lengths extending in approximately parallel relation with the adjacent edges of the fabric section and minor lengths projecting inwardly from the ends of the major lengths, said fabric section also having an auxiliary design outline alined with the major lengths of the main design outline and terminally separated therefrom, said auxiliary design outline being arranged adjacent to and beyond the minor lengths of the main design outline, a complete central design arranged within the main design outline and approximately conforming thereto, and edge designs arranged within the main design outline between the central design and major lengths of the main design outline.

5. As an improved article of manufacture, a bedspread or the like comprising a woven fabric section having a design outline spaced from the edges of the section, said design outline having major lengths extending in approximately parallel relation with the adjacent edges of the fabric section and minor lengths projecting inwardly from the ends of the major lengths, said fabric section also having an auxiliary design outline alined with the major lengths of the main design outline and terminally separated therefrom, said auxiliary design outline being arranged adjacent to and beyond the minor lengths of the main design outline, a complete central design arranged within the main design outline and approximately conforming thereto, and independently complete edge designs arranged within the main design outline between the central design and the major lengths of the main design outline, said edge design approximately conforming in length to the length of the adjacent major lengths of the main design outline and in width to the length of the adjacent minor lengths of the main design outline.

[Claim 6 not printed in the Gazette.]

879,738. BELLOWS FOR AUTOMATIC MUSICAL INSTRUMENTS. MELVILLE CLARK, Chicago, Ill. Application filed Dec. 19, 1902, Serial No. 135,898. Renewed Nov. 14, 1904. Serial No. 232,585.



1. In an automatic musical instrument in combination with two exhaust chambers for different purposes, an exhauster having communication for exhausting both of said chambers; means for closing by the collapse of one of said chambers the port of communication through which such chamber is exhausted, said means including a valve constructed to be seated simultaneously over substantially the entire extent of its seat.

2. In an automatic musical instrument in combination with two exhaust chambers, one for operating the playing devices and the other for a supplemental purpose, an exhauster which operates to exhaust both said chambers; means for closing by the collapse of the supplemental chamber the windway or port through which it is exhausted, said means including a valve constructed to be seated simultaneously over substantially the entire extent of its seat.

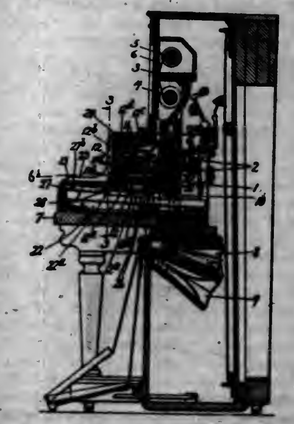
3. In an automatic musical instrument, an exhaust chamber for receiving air from the devices of the instrument; an exhauster for exhausting the air from such chamber; means for closing by the collapse of said chamber the windway or port of communication through which it is exhausted, said means including a valve which is constructed to be seated simultaneously at substantially the entire extent of its seat, and a spring which is compressed in the seating of the valve.

4. In an automatic musical instrument, a pneumatic motor; an exhaust chamber or bellows for operating such motor; an exhauster for exhausting such bellows; means for closing by the collapse of said bellows the port of communication through which it is exhausted, said means including a valve constructed to be seated simultaneously over substantially the entire extent of its seat.

5. In an automatic musical instrument, in combination with a pneumatic motor, an exhaust chamber or bellows for operating it; an exhauster for exhausting the air from said bellows; means which control the windway or port of communication through which the bellows is thus exhausted, adapted for closing the same upon the approach of the tension in said bellows to a predetermined maximum and opening it upon recession from said maximum, said means including a valve constructed to be seated simultaneously over substantially the entire extent of its seat.

[Claims 6 to 8 not printed in the Gazette.]

879,739. AUTOMATIC PIANO. MELVILLE CLARK, Chicago, Ill. Filed Mar. 23, 1905. Serial No. 251,581. Renewed July 8, 1907. Serial No. 382,719.



1. In an automatic piano, in combination with the manual keys, motor pneumatics and strikers connected therewith respectively for operating on the keys; a rigid frame or cabinet in which the motor pneumatics and strikers are all mounted, such frame or cabinet being mounted on the piano case for fore-and-aft movement between a position above the rear part of the keys and the position above their forward part; controlling devices for the motor pneumatics supported within the piano case and flexible connections between the motor pneumatics and their respective controlling devices.

2. In an automatic piano, in combination with the piano case and the manual keys, a frame or cabinet mounted on the piano case for fore-and-aft movement between a posi-

tion above the rear part and a position above the forward part of the keys; motor pneumatics mounted in such cabinet; controlling devices mounted in the piano case; flexible connections from the controlling devices to the motor pneumatics respectively, the forward side of the motor pneumatic cabinet constituting an exposed upright panel of the piano case back of the manual, and a fall board hinged at its rear part to the lower side of said panel.

3. In an automatic piano, in combination with the case and the manual keys, a motor pneumatic frame or cabinet mounted on the piano case for movement fore-and-aft between a position above the rear part and a position above the forward part of the keys; motor pneumatics and strikers connected with them respectively mounted in such frame or cabinet; controlling devices for the motor pneumatics mounted within the piano case and flexible connections from them to the motor pneumatics respectively; a fall board hinged to the lower forward side of such frame or cabinet and a counterweight connected with such fall board contained within the piano case.

4. In a piano, in combination with the piano case and manual keys, a frame or cabinet mounted on the piano case for fore-and-aft movement between a position above the rear part and a position above the forward part of the keys; automatically operated devices for striking the keys mounted in such cabinet, the forward side of said cabinet constituting an exposed upright panel of the piano case back of the manual; a fall-board hinged to said panel, and counterbalancing devices for the fall-board connected thereto and located within the cabinet.

5. In a piano, in combination with the case and the manual keys, a frame or cabinet mounted on the case for fore-and-aft movement of its forward side over the portion of the keys exposed for playing; motor pneumatics and key strikers operated thereby mounted in such cabinet, the forward side of the cabinet constituting an exposed upright panel of the piano case back of the manual at the rear position of said cabinet; a fall-board hinged at its rear part to the lower side of said panel; counterbalancing devices for the fall-board located within the cabinet and connected to the fall-board at the ends of the latter.

[Claims 6 to 8 not printed in the Gazette.]

879,740. POISON-INDICATOR. GEORGE COHEN, Jamestown, N. Y. Filed Apr. 11, 1907. Serial No. 367,644.



1. In a device of the character described, the combination of a necked receptacle, an indicator stem yieldably mounted within the neck and normally projecting beyond the same, and a removable stopper for the receptacle designed to hold the indicator stem within the neck when in position.

2. In a device of the character described, the combination of a necked receptacle, a valve operating to close the outlet of the receptacle, an elastic strip normally holding the valve in an operative position, a stopper, and indicator means carried by the valve and engaging the stopper for the purpose specified.

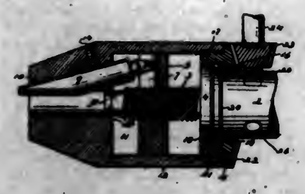
3. In a device of the character described, the combination of a necked receptacle, a valve operating to close the outlet of the receptacle, an indicator stem carried by the valve and extending through the neck, an elastic strip extending transversely across the neck and engaging the indicator stem, the said elastic strip coöperating with the indicator stem to hold the valve yieldingly upon its seat, and a removable stopper engaging the stem and holding the valve away from its seat when in position.

4. In a device of the character described, the combination of a necked receptacle, a valve operating to close the outlet of the receptacle, a stem carried by the valve and extending through the neck, the said stem projecting beyond the mouth of the bottle when the valve is seated and the projecting end of the stem being marked to indicate the contents of the bottle, an elastic strip extending transversely across the neck and engaging the stem to normally seat the valve, and a stopper engaging the stem whereby the valve is held against the action of the elastic strip when the stopper is in position.

5. In a device of the character described, the combination of a necked receptacle, a disk located within the receptacle and designed to bear against the base of the neck to close the outlet opening, an indicator stem carried by the disk and extending through the neck, the extremity of the stem projecting beyond the neck of the bottle when the valve is seated and being suitably marked to indicate the contents of the bottle, an elastic strip extending transversely across the mouth of the bottle and engaging the stem to hold the valve normally in a seated position, and a stopper engaging the stem whereby the disk is held against the action of the elastic strip when the stopper is in position.

[Claim 6 not printed in the Gazette.]

879,741. DRILL-CHUCK. HARRY L. COIT, New London, Conn. Filed July 1, 1907. Serial No. 381,649.



In a drill chuck, the combination with a mandrel provided at its lower end with a stem having a left hand thread, of a jaw-carrying disk having a concentric threaded opening adapting it to be mounted upon the said stem, jaws suspended from the said disk, a shell chambered to receive the said disk and jaws, and a cap by means of which the shell is suspended from the mandrel, whereby by turning the shell the said disk is movable back and forth upon the said stem.

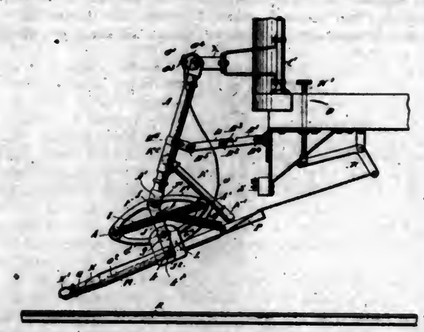
879,742. CAR-FENDER. ALBERT L. COLE, Newton, Mass., assignor to Adams D. Claflin, Newton, Mass. Filed June 17, 1907. Serial No. 379,345.

1. The combination in a fender, of extensible hangers, means for suspending the hangers on a car, catches normally holding the extensible hangers in closed position, a forwardly projecting tripper, and connections therefrom to the catches, to trip the latter and release the extensible hangers.

2. The combination in a fender of a flexible guard, extensible hangers, means for suspending the hangers on a car, catches normally holding the extensible hangers in closed position, a forwardly projecting tripper, and connections therefrom to the catches to trip the latter and release the extensible hangers.

3. The combination in a fender, of extensible hangers, pivotally suspended on supports therefor, the supports, catches normally holding the extensible hangers in closed position, a forwardly projecting tripper, and connections therefrom to the catches, to trip the latter and release the extensible hangers.

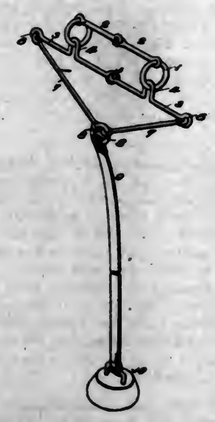
4. The combination in a fender, of hanger-toggles, means for suspending the toggles on a car, catches normally holding the hanger-toggles in closed position, a forwardly projecting tripper, and connections therefrom to the catches to trip the latter and release the hanger-toggles.



5. The combination in a fender of a flexible guard, hanger-toggles, means for suspending the toggles on a car, catches normally holding the hanger-toggles in closed position, a forwardly projecting tripper, and connections therefrom to the catches to trip the latter and release the hanger-toggles.

[Claims 6 to 27 not printed in the Gazette.]

879,743. HORSE-HITCH. WILLIAM H. COLLINS, Indianapolis, Ind. Filed May 13, 1907. Serial No. 373,478.

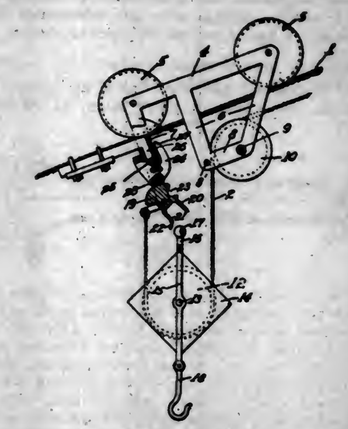


1. The combination of a bit comprising rings, levers fulcrumed at an intermediate point upon the rings and having their inner ends loosely connected, a hitching strap, and link members connecting the hitching strap and the outer ends of the levers.

2. The combination of a bit comprising rings, levers provided at their intermediate portions with crimps receiving the rings, the inner ends of the levers being loosely connected, a hitching strap, and connecting means between the hitching strap and the outer ends of the levers.

3. The combination of a bit comprising rings, levers pivotally mounted at an intermediate point upon the rings and provided with crimped portions receiving the said rings, the inner ends of the levers being loosely connected, a hitching strap, and link members connecting the outer ends of the levers and the hitching strap.

879,744. HOISTING AND CONVEYING APPARATUS. JOHN W. COOPER, Seattle, Wash. Filed May 13, 1907. Serial No. 373,507.



1. In combination with a track, a carriage mounted thereon and a hoisting rope supported on said carriage, a rotatable lock element on said carriage, said element being formed with a depression, a movable catch disposed to engage in said depression when said element is rotated, a means fixed on said element and operated by said rope to rotate said element, and a projection on said rotatable element to prevent lowering of the load, said projection having a downwardly and outwardly projecting guard.

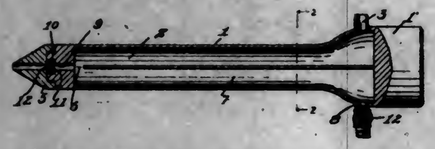
2. In combination with a track, a carriage mounted thereon, and a hoisting rope supported on said carriage, a rotatable element on said carriage provided with a depression, a movable catch disposed to engage in the depression of said element when said element is rotated, means connected to be raised and lowered by said rope, an upwardly projecting stem on said means provided with an enlargement, means fixed to said element and operated by the enlargement on said stem during movement of said first means to rotate said element, and a projection on said rotatable element slotted to receive said stem and engage under the enlargement thereof to prevent lowering of said first means, said projection having downwardly and outwardly projecting guard means.

3. In combination with a track and a stop thereon, a carriage on said track, a hoisting rope supported on said carriage, a frame connected to said rope to be raised and lowered thereby and provided with a bucket hook, an upwardly projecting stem on said frame provided with an enlargement, a rotatable element on said carriage having a depression and provided with a projection adapted to be engaged by the enlargement on said stem to effect rotation of said element, means secured to said element at a point below the projection thereof for engagement under the enlargement of said stem, and a catch member pivoted to said carriage and having its lower portion formed to snugly engage the edge portion of said element or engage in the depression thereof and having its upper portion formed with a seat for reception of said stop, for the purpose specified.

4. In combination with a track, a carriage mounted thereon, said carriage being provided with depending portions arranged one in advance of the other, one of said members being provided with an approximately horisontal rail, said rail being formed with a plurality of openings, a sheave, a shaft on which said sheave is carried adapted to be journaled in any of the openings of said rail, whereby said sheave can be adjusted toward or from the other of said depending portions of the carriage, a hoisting rope passing over said sheave, a rotatable element on said carriage provided with a depression, a movable catch disposed to engage in the depression of said element when

said element is rotated, bucket carrying means supported on said rope provided with an enlargement, means fixed to said element and operated by the enlargement on said bucket carrying means, and a projection on said rotatable element arranged to engage under the enlargement of said bucket carrying means to prevent lowering thereof.

879,745. THAWING DEVICE. JOHN W. COOPER, Seattle, Wash. Filed May 13, 1907. Serial No. 373,508.



1. A device of the character described comprising an elongated body provided with a working point and having an impact part at its outer portion, said body being formed with inlet and outlet ports and a conduit extending from said inlet port to said outlet port and being in communication therewith, the working point of said body being formed with a conduit communicating with said first named conduit at a point between the inlet and outlet ports of said body, for the purpose specified.

2. A device of the character described comprising an elongated body provided at its outer portion with an impact part and having a working point, said body being formed with inlet and outlet ports, a conduit in communication with said inlet and outlet ports and a conduit extending through the working point of said body and communicating with said first conduit at a point between the inlet and outlet ports of said body, and a valve in said last named conduit, for the purpose specified.

3. A device of the character described comprising an elongated body having a working point, and provided with a conduit extending through said working point, and a valve in said conduit, said body being formed in its upper portion with inlet and outlet ports and having a conduit in communication with said inlet and outlet ports in said body and with said first named conduit, for the purpose specified.

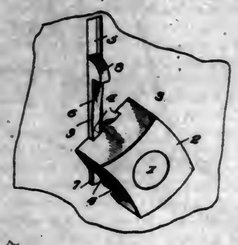
4. A device of the character described comprising an elongated body having a working point and provided with a conduit extending through said working point, a spring pressed inwardly closing valve in said conduit, said body being provided adjacent its outer end portion with inlet and outlet ports and having conduits leading therefrom to said first named conduit, and a valve in said outlet port, for the purpose specified.

5. An apparatus of the character described comprising a plurality of elongated bodies each having a working point and provided with inlet and outlet ports, a pipe leading from the exhaust port of one of said bodies to the inlet port of another, there being a conduit in each of said bodies in communication with the inlet and outlet ports thereof and extending through its working point, and a valve in said conduit for controlling the flow of steam therethrough.

879,746. NUT-LOCK. ALBERT COTTOM, Chillicothe, Iowa. Filed Apr. 30, 1907. Serial No. 371,094.

1. In a nut lock, the combination of a bolt, a nut cooperating with the bolt and having a groove formed therein, both ends of the groove opening exterior of the nut, a plate receiving the bolt and provided with a groove designed to register with the groove in the nut, and a key received within the groove in the plate and designed to engage the groove in the nut to lock the latter against working loose, the said key extending entirely through the nut and being provided at one end with a laterally extending nose adapted to engage one of the exterior faces of the nut to prevent accidental displacement of the key.

2. In a nut lock, the combination of a bolt, a nut cooperating with the bolt and having a groove formed in the base thereof and opening exterior of the nut at opposite ends thereof, a plate receiving the bolt and provided with a groove designed to register with a groove in the nut, and a key received within the groove in the plate and adapted to engage the groove in the nut to lock the latter against working loose, the said key having an intermediate portion thereof cut away to form a reduced



inclined shank which is somewhat smaller than the groove in the nut and permits the latter to have a slight rotary movement, a nose being formed at one end of the key and designed to project beyond the groove in the nut to engage a face of the nut and prevent accidental displacement of the key when the nut is given a slight rotary movement permitted by the reduced shank of the key.

879,747. PERMUTATION-PADLOCK. HENRY F. CRIM and WILLIAM C. LOY, Rochester, Ind. Filed Jan. 30, 1907. Serial No. 354,952.



In a permutation padlock of the character described, the combination of a casing 2 comprising the annular wall 10, face 11 and extension 3, a shackle 4 pivoted to said extension, a series of tumblers within said casing for engagement with the free end of said shackle, a cap 26 for said casing, said cap being cut away on its periphery to receive said shackle, the said annular wall 10 being provided with a recess 25 and the said tumblers being each provided with a notch 24 on its periphery to register with the said recess 25 in the annular wall 10, the said free end of the shackle entering said recess 25 in the wall 10 and said notches 24 in the peripheries of the tumblers, substantially as described.

879,748. ELASTIC-FLUID TURBINE. CHARLES G. CURTIS, New York, N. Y., assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed Aug. 17, 1904. Serial No. 221,006.



1. In a stage expansion elastic fluid turbine, the combination of high pressure jet stages and low pressure annular stages, operating at low velocity and high pressure at the nozzle end, substantially as set forth.

2. In a stage expansion elastic fluid turbine, the combination of two or more high pressure jet stages having moving buckets and provided with nozzles and stationary intermediate buckets occupying a part only of the circumference, with two or more low pressure annular stages each having a greater number of annular buckets than the high pressure stages, and provided with nozzles and stationary intermediate buckets occupying the entire circumference, substantially as set forth.

3. In a stage expansion elastic fluid turbine, the combination of two or more high pressure jet stages having each two or more sets of moving buckets and provided with nozzles and stationary intermediate buckets occupying a part only of the circumference, with two or more low pressure annular stages each having a greater number of annular buckets than the high pressure stages and provided with nozzles and stationary intermediate buckets occupying the entire circumference, substantially as set forth.

4. In an elastic fluid turbine, the combination with an annular nozzle and an annular set of moving buckets to which the nozzle delivers the elastic fluid, of a lateral projection extending across the inner clearance between the nozzle end and the moving buckets and transferring the clearance from radial to cylindrical surfaces, substantially as set forth.

5. An elastic fluid turbine comprising a plurality of stage compartments working at different pressures, a nozzle for a high pressure stage which converts the available pressure thereof into velocity, and whose end pressure is substantially the same as that of the exhaust from the stage compartment, wheel buckets coöperating therewith to abstract the velocity, an annular nozzle for a low pressure stage which partially converts the available pressure of the stage into velocity and has an end pressure considerably in excess of that of the exhaust from the stage compartment, a wheel having rows of buckets, all of which are active, and a complete annular row of intermediate buckets, the said rows of intermediate and wheel buckets alternately converting the pressure of the fluid into velocity and abstracting it as the fluid flows through the stage compartment.

[Claims 6 to 12 not printed in the Gazette.]

879,749. GOGGLES. CARL F. DIECKMANN, New York, N. Y., assignor to The Meyrowitz Manufacturing Company, a Corporation of New Jersey. Filed Feb. 16, 1907. Serial No. 357,732.



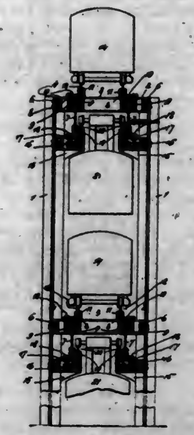
1. A construction of goggles comprising substantially rigid frames, inner frames having a curved outline generally corresponding to that of the outer frames and having a pair of depressed portions at substantially diametrically opposite points thereon, such inner frames being flexible, whereby they may be contracted by pressing together said depressed portions thereof and thereupon sprung tightly into the outer frames.

2. A construction of goggles having inner frames with inwardly embossed perforated portions, and outer frames also having perforations adapted to overlie said inwardly embossed portions of the inner frames.

3. A construction of goggles having inner frames with inwardly embossed perforations, and outer frames adapted to be assembled upon the inner frames and having openings overlying said inwardly depressed portions, said openings of the outer frame having lugs or screens thereon outwardly inclined toward the rear of the goggles.

4. A construction of goggles having resilient inner frames, and outer frames having different zones or diameters separated by a ledge, the outer zone adapted to closely receive an inner frame in firm but removable frictional engagement.

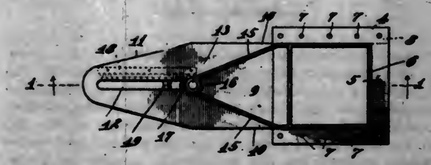
879,750. RAILWAY. GEORGE DIPPEL and CHRISTIAN KOENIG, Pittsburg, Pa. Filed Aug. 22, 1907. Serial No. 389,682.



1. A railway structure embodying a plurality of standards, constructed of angle bars having confronting flanges, plates connecting said standards, channel bars connecting said standards, stringer plates constituting hangers arranged between the confronting ends of said plates and channel bars, longitudinally disposed rail sleepers supported upon said plates and channel bars, girder plates carried by said standards, channel bars connecting said girder plates with said standards, angle plates connecting said channel bars with said hangers, and longitudinally disposed sleepers carried by said channel bars beneath the above mentioned sleepers, substantially as described.

2. A railway elevated structure embodying standards, plates connecting said standards, channel bars connecting said standards, rail sleepers carried by said channel bars, sleepers arranged beneath the first mentioned sleepers and supported by said standards, and hangers for directly connecting the last mentioned sleepers with the first mentioned sleepers.

879,751. CUT-OFF SLIDE. JOHN F. DORNFELD, Chicago, Ill. Filed May 2, 1907. Serial No. 371,374.



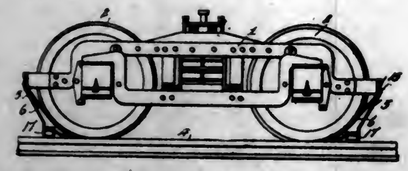
1. In a cut-off slide, in combination, a casing; a slide movably mounted in said casing; a hanger extending from said casing; a shaft supported in said hanger and acting, with the casing, as a guide for said slide; a pinion and a hand wheel on said shaft; and a rack bar attached to said slide and meshing with said pinion.

2. In a cut-off slide, in combination, a casing; an arm extending outwardly from said casing; a bearing at the outer end of said arm; a slide movably mounted in said casing and having an extension provided with an elongated opening; an operating rod rotatably mounted in

said bearing and extending through said elongated opening; a rack bar fixed to said slide extension; and a pinion fixed on said rod and meshing with said rack bar.

3. In a cut-off slide, in combination, a casing comprising two sections; spacing means lying between said sections; securing means extending through said sections and said spacing means, one of said sections having means of attachment for a conductor; an arm cast integral with said last-mentioned section; a bearing at the outer end of said arm; a slide movably mounted between the sections of said casing, said slide having an operating extension provided with an elongated opening; an operating rod rotatably mounted in said bearing, and extending through said opening; a rack bar fixed to said operating extension; and a pinion fixed on said operating rod and meshing with said rack bar.

879,752. WHEEL-GUARD. MAURICE F. DOTY, Chicago, Ill. Filed May 29, 1907. Serial No. 376,383.



1. A car wheel fender or shield comprising a metal plate supported upon the car truck and provided with a curved arm extending under the tread surface of the wheel, a slot formed in said plate, and a removable block having oppositely disposed grooves and fitted in the slot of the plate, substantially as described.

2. A car wheel fender comprising a metal support having a curved arm extending down near the bearing surface of the wheel, said fender being secured to the car truck, and said fender being provided with a slot or aperture, and a removable fender block having oppositely disposed grooves secured to said fender, substantially as described.

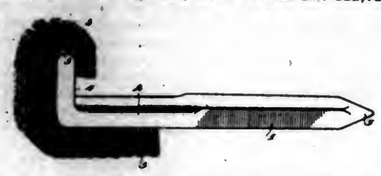
879,753. COLLAPSIBLE CUP. WILLIAM A. ECKERT, Buffalo, N. Y. Filed Jan. 12, 1906. Serial No. 295,735.



1. An improved collapsible cup comprising a base, a series of telescopic tapering rings on said base, the top ring having a beaded edge and a flanged cover having the top portion of the flange interiorly milled and adapted to frictionally engage the beaded top edge of the top ring when the cup is collapsed and the flanged cover fitted thereon, whereby the cup is instantly opened by a separating movement of the cover, substantially as set forth.

2. A collapsible cup comprising a base, a foot secured to the base and having an upwardly extending flange, a series of telescopic ring like members upon the base and a cover having a flange adapted to completely inclose the telescopic members when collapsed and to fit within the flange of the foot; the flange of said cover being milled sufficiently deep to provide both an outer roughened surface for the convenient grasp of the operator and an inner roughened surface for frictional engagement with the top ring like member.

879,754. BRUSH. MATTHIAS E. FEATHERSTONE, St. Elmo, Ill. Filed Apr. 14, 1906. Serial No. 311,730.



A brush for the purpose described comprising a handle with an elongated integral right angular extension projecting from one end of the handle and rounded on its under surface at its intersection with the handle, said extension being also rounded at its terminal, bristles secured part way to the upper surface of the extension and to its terminal and to its intersecting rounded portion and also part way on the side of said handle, said extension being of a sufficient length which serves when inserted through the opening of a cuspidor to permit of the bristles on the intersecting rounded portion and those on the outer vertical face to contact with the inner surface of the bottom of the cuspidor, while those that are arranged part way on the inner vertical portion of the extension will contact with the inner surrounding surface of said cuspidor, substantially as specified.

879,755. TALKING-MACHINE. ALEX FISCHER, London, England. Filed Dec. 29, 1906. Serial No. 350,014.



1. In a talking machine, the combination of a tone arm having a flange at its extereme end, a trumpet having a corresponding flange at its extreme end, and a cap extending from one flange around the end of the other flange and supporting it on the opposite side, but leaving an intermediate space for free movement, substantially as described.

2. In a talking machine, the combination of a tone arm having a convex annular flange at its extreme end, a trumpet having a similarly shaped, but concave, annular flange at its extreme end and adapted to fit over said first named flange, a cap fastened to and extending from one flange around the edge of the other flange and supporting it on the opposite side, but leaving an intermediate space for free movement, substantially as described.

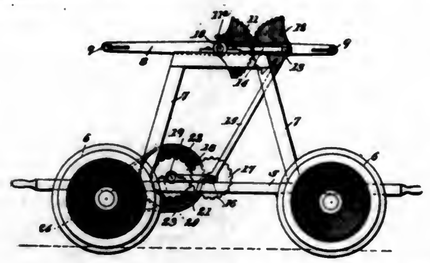
3. In a talking machine, the combination of a tone arm having an annular convex flange at its extreme end, a trumpet having a similarly shaped but concave annular flange at its extreme end, and adapted to fit against said first named flange, a cap fastened to and extending from one of said flanges around the edge of the other flange and supporting it on the opposite side, but leaving an intermediate space for free motion, and anti-friction devices between said cap and one of said flanges, substantially as described.

879,756. HAND-CAR. JOHN W. FINCH, Elizabeth, Miss. Filed July 16, 1907. Serial No. 383,966.

1. In a driving mechanism, the combination of a rocking lever having a gear thereon, a sun and planet gearing, and a combined bent lever and pitman supported between the planet gear and the lever and having a gear in mesh with the gear on the lever.

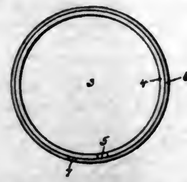
2. In a driving mechanism, the combination of a rocking lever having a segment gear fastened thereto, a sun and planet gearing, a combined bent lever and pitman one end of which is connected to the planet gear and the other end of which is provided with a segment gear meshing with said segment gear, and a swinging link connecting the pivots of the rocking and bent levers.

3. In a driving mechanism for a hand car, the combination with a rocking lever pivoted on the pedestal of the car, a sun and planet gearing mounted on the frame of the car and geared to an axle thereof, a pitman one end of which is connected to the planet gear, swinging links connecting the other end thereof to the pivot of the rocking lever, and a segment gear rigid with the pitman and forming a bent lever therewith and another segment gear rigid with the rocking lever and meshing with the segment gear of the pitman.



4. The combination of a sun and planet gearing, a bent lever one arm of which forms a pitman and is connected at its end to the planet gear and the other arm of which has a segment gear, a rocking lever, a pair of links connecting the pivots of said levers, and a segment gear fast on the pivot of the rocking lever and in mesh with the said segment gear.

879,757. PISTON-RING. HENRY FORD, Detroit, Mich. Filed July 16, 1906. Serial No. 326,481.



1. A packing ring comprising an inner ring having oblique overlapping ends and a pair of outer facing rings seated side by side on the inner ring each having their ends halved and gained together, said ends being staggered in relation to each other and to the inner ring ends.

2. A packing ring comprising a comparatively wide inner ring of spring metal severed on a line oblique to the margins, forming overlapping ends with oblique faces, and a pair of facing rings of spring metal together covering the inner ring, each having ends halved and gained together, the joints of said rings being in staggered relation.

3. A packing ring comprising a comparatively heavy inner expansible ring of spring metal adapted to completely fill the bottom of the conventional retaining groove of an engine piston, severed on a line oblique to the margin, forming overlapping ends with oblique faces, and a pair of lighter facing rings of spring metal encircling the inner ring and filling the groove, each of the outer rings being severed and halved together to form tenons permanently overlapping each other and closing in corresponding rabbets, the faces and sides of the tenons forming right angled shoulders and the rings being assembled with their joints in staggered relation.

4. A packing ring consisting of an inner heavy ring of spring metal severed at one side at an inclination to its edge to form overlapping ends, two outer rings of spring metal of lesser thickness than the inner ring on the outer surface of said inner ring yieldingly opposing the expansion of the inner ring and forming the surface for the packing, said outer rings together equaling in width the width of the inner ring, each being severed at one side and its severed ends notched to form overlapping tongues adapted to engage corresponding rabbets, and all of said rings being so placed relative to each other as to break joints.

879,758. NEEDLE. FRANK B. FOSTER, Santa Barbara, Cal. Filed June 14, 1907. Serial No. 378,992.

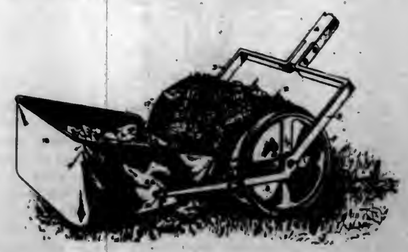


1. A needle, having an aperture entering its blunt or base end and emerging at one side thereof and a forwardly inclined groove encircling the body of the needle and intersecting the point of emergence of said aperture.

2. A needle, having an aperture passing from its blunt or base end to one side thereof, and a groove encircling the body of the needle and connecting with said aperture.

3. A needle, having an aperture passing therethrough and a groove surrounding the body of the needle and connecting with said aperture.

879,759. LAWN CLEANER AND CULTIVATOR. HARRY C. FRENCH, Cleveland, Ohio. Filed Oct. 5, 1906. Serial No. 337,501.



1. In a lawn cleaner, a drum, a plurality of circumferential rows of points projecting from said drum, a receptacle, a plurality of stripping fingers carried by said cleaner, said fingers having each of their ends projecting into the spaces between the said circumferential rows of points, whereby, when the drum is rolled in one direction, the matter thereon will be stripped from about the points and guided to the receptacle, and, when the drum is rolled in the opposite direction, the matter on said drum will be stripped from about said points and dropped upon the lawn.

2. In a lawn cleaner, a drum, a plurality of circumferential rows of points projecting radially from said drum, a receptacle and a plurality of crescent-shaped stripping fingers carried by said cleaner, said fingers having one of their ends projecting into the spaces between the said circumferential rows of points above the receptacle and their opposite ends projecting into said spaces below the receptacle, whereby when the drum is rolled in one direction, the matter thereon will be stripped from about the points above the receptacle and guided to the receptacle, and when the drum is rolled in an opposite direction, the matter on said drum will be stripped from about said points below the receptacle and dropped upon the lawn.

3. In a lawn cleaner, a drum, a plurality of circumferential rows of points carried by said drum, a bar extending parallel to said drum, a receptacle attached to said bar and a plurality of stripping fingers carried by said bar, said fingers projecting between the circumferential rows of points and extending downwardly from the stripping line for stripping the matter from the points and for guiding the said matter to the receptacle.

4. In a lawn cleaner, a drum, a plurality of circumfer-

ential rows of points carried by said drum, a bar extending parallel to said drum, a receptacle attached to said bar, and a plurality of crescent-shaped stripping fingers carried by said bar, said fingers projecting between the circumferential rows of points for stripping the matter therefrom, the ends of the fingers above the bar serving to guide the said matter to the receptacle, and the ends of the fingers below the bar serving to deposit the matter on the lawn when the drum is rolled backwardly.

5. In a lawn cleaner, a drum, collecting points carried by said drum, yoke arms within which said drum is journaled, said arms having forward extensions, a bar connecting said extensions and extending parallel with the axis of the drum, a receptacle carried by said bar and by said extensions of the yoke arms and a plurality of fingers attached to said bar, said fingers being adapted to strip matter from the said points, the fingers extending downwardly from the stripping line so that the matter will be caught in the receptacle.

[Claims 6 to 19 not printed in the Gazette.]

879,760. SWITCH-PLUG. HENRY C. FROELICH, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 12, 1903. Serial No. 169,173.



1. A switch-plug comprising the combination of a body, a longitudinally movable post, a cap integrally formed with the post, a contact-tip carried by said post, and a contact-strip adapted to engage a socket-terminal and sustained by said body, and shifted laterally into position to engage the socket by longitudinal movement of the post.

2. A switch-plug comprising the combination of a body, a longitudinally movable cap, a post secured to the cap, a contact-tip carried by the post and a shank comprising laterally movable sections connected with the body and having a contact-strip secured thereto, and shifted, by longitudinal movement of the cap in one direction, into position to secure the plug in a socket.

3. A switch-plug comprising the combination of a body, a longitudinally movable member, a shank comprising pivotally sustained sections, a contact-strip for engagement with a socket and secured to the shank, a contact-tip carried by said member and means spreading said sections when said member is moved longitudinally in one direction.

4. A switch-plug comprising the combination of a body, a longitudinally movable cap having a post secured thereto, a terminal-plate secured to said body, and having ears and a shank comprising sections pivotally secured to said ears and a pair of contact-strips secured to the sections, said sections being spread by said post when the post is shifted longitudinally in one direction.

5. A switch-plug comprising the combination of a body, a longitudinally movable post, means operated by longitudinal movement of said post and whereby the body can be attached to a socket, a pair of line-terminals, a pair of contacts one of which is carried by said post, and a make-and-break connection between the tip and one of said terminals, operated by shift of said post.

[Claims 6 to 13 not printed in the Gazette.]

879,761. RENEWABLE-FRONT WASHBOARD. WILLIAM G. FROST, Broad Ripple, Ind. Filed Oct. 13, 1906. Serial No. 338,706.

1. A washboard comprising a frame with two side bars, a rubbing plate in the frame, and a wedge-shaped locking key comprising a bar having one of its longer sides inclined to the plane of the opposite longer side of the bar so that one longer edge is thinner than the other longer edge of the bar, the key extending from one to the other side bar and having its ends inserted removably in the side bars and normally locking the rubbing plate in the frame.



2. A washboard comprising a frame with side bars, bearings on the side bars, and a lower cross-bar; lugs on the side bars opposite to the cross-bar, a rubbing plate in the frame, and a locking key extending across the rubbing plate from one side bar to another side bar and having its ends inserted between the lugs and the lower cross bar.

3. The herein-described improvement in washboards, comprising two side bars, bearings on the fronts of the side bars, an upper cross bar with a lip opposed to the bearings, a lower cross bar, lugs on the side bars opposite to the lower cross bar, a rubbing plate on the bearings, a back board on the rubbing plate between it and the lip, and a locking key extending against the back board from one side bar to the other side bar unattached to the back board and engaging the lugs on the side bars, substantially as set forth.

4. In a washboard, the combination with a frame having two side bars and two cross bars, a rubbing plate, and a back board in the frame, of a wedge-shaped locking key engaging the two side bars and one of the cross bars and locking the rubbing plate and the back board removably in the frame, said key being removable laterally away from the cross bar, substantially as set forth.

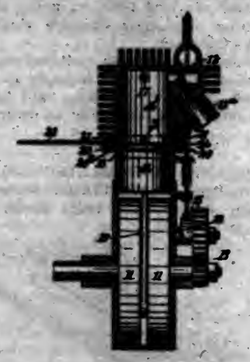
879,762. GAS-STOVE. THOMAS H. GALLAGHER, Ingram, Pa. Filed May 9, 1907. Serial No. 372,702.



1. A stove consisting of a base, a vertically disposed rear plate carried by said base, a burner arranged upon said base, plates supported above said burner and having a sinuous arrangement for providing a sinuous passage, said plates having their upper edges secured to said vertically disposed plate, said plates having openings formed therein adjacent to their upper edges, shutters closing some of said openings, said rear plate having an opening formed therein, and end plates supporting the side edges of said sinuously arranged plates.

2. In a gas stove, a base, a vertically-extending rear plate provided near its upper edge with openings, a pair of plates supported on the base in front of the rear plate being spaced apart and bent to form a sinuous passage therebetween, the said plates at their upper ends being projected rearwardly and overlapped on the upper end of the rear plate and secured thereto, each of said plates being provided with openings adjacent their upper ends.

879,763. EXPLOSIVE-MOTOR. CARL E. GEROLER, New York, N. Y. Filed May 28, 1907. Serial No. 376,048.



1. In explosive motors, a cylinder and its piston, said cylinder being provided with an exhaust port above the piston when the latter is at the limit of its explosive stroke, and a manually operated valve for closing said exhaust, said valve comprising a substantially U-shaped ring, the inner face of the ring being provided with openings adapted to register with the exhaust port of the cylinder.

2. In an explosive motor, a cylinder and its piston said cylinder being provided with an auxiliary port above the piston when it is at the limit of its explosive stroke, and a manually operated valve for the auxiliary exhaust, which valve is independent in its action of the main exhaust valve of the motor.

3. In an explosive motor, the combination with a cylinder provided with a main and an auxiliary exhaust port, of a mechanically operated valve for the main exhaust, and a manually operated valve for the auxiliary exhaust.

4. In an explosive motor, the combination with a cylinder provided with a main and an auxiliary exhaust port, of a mechanically operated valve for the main exhaust, and a manually operated valve for the auxiliary exhaust, the one valve being independent in its operation of the other.

5. In an explosive motor, a cylinder and its piston, said cylinder being provided with an exhaust port above the piston when the latter is at the limit of its explosive stroke, and a manually operated valve for said port, and an exteriorly located protective hood for the said manually operated valve.

[Claims 6 and 7 not printed in the Gazette.]

879,764. ADJUSTABLE CLEANING-BRUSH. ROBERT T. GILLESPIE, Bloomfield, N. J. Filed Sept. 6, 1906. Serial No. 333,524.



1. A cleaning implement comprising a main shank portion provided with terminal cheeks, a brush having a bearing extremity pivoted between said cheeks, an operating rod connected with the bearing extremity of said brush extending backwardly and provided with a laterally projecting terminal, and a spirally grooved stem engaging said terminal, substantially as set forth.

2. In a cleaning brush, the combination of a main shank, a pivoted brush, an operating rod having a laterally extending element, and a spirally grooved rotatable shank engaging said laterally extending element of the rod to adjust the said rod longitudinally, substantially as set forth.

3. In a cleaning brush, the combination of a main shank, a pivoted brush, an operating rod having a laterally extending element, a spirally grooved rotatable shank engaging said laterally extending element of the rod, and means adapted to prevent rotation of the operating rod, substantially as set forth.

4. In a cleaning brush, the combination with a holding shank, of a bearing frame, an adjusting spirally grooved stem mounted in said frame, a pivoted brush, and an operating rod connected with the brush and engaging said spirally grooved stem, substantially as set forth.

5. The combination with a main shank provided with a holding terminal and a cleaning brush pivotally mounted at the other end of the shank, of a longitudinal operating rod having a laterally bent terminal, and a spirally grooved hollow shank engaging the terminal end of said rod, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

879,765. SUPPORT FOR ELECTRIC SERVICE WIRES AND CABLES. EDWARD H. GREENLEAF and THEODORE A. DISSEL, Newburgh, N. Y. Filed July 23, 1907. Serial No. 385,098.



1. A support for electric service wires and cables comprising a span wire and a device for carrying the wires or cables, the device having coils adapted to be sprung in place on the span wire to engage the same by the resiliency of the members of the coils, to hold the device in place on the span wire.

2. A support for electric service wires comprising a span wire and a device having coils and supporting arms for the service wires, the coils being adapted to be sprung in place on the span wire to hold the device in place thereon, and the said arms being arranged to receive and hold the service wires.

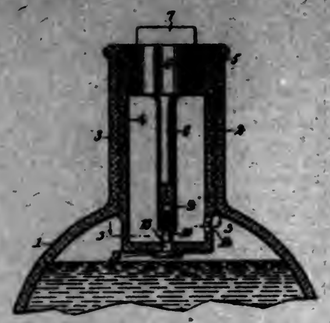
3. A support for electric service wires comprising a span wire and a device having coils and a depending loop for the reception of service wires or cables, the coils being adapted to be sprung in place on the span wire to hold the device in place thereon, and the said depending loop being arranged to permit of placing a drawing rope in position therein for drawing the cable into the said loop.

4. A support for electric service wires comprising a span wire and a device having coils and supporting arms for the service wires, the coils being adapted to be sprung in place on the span wire to hold the device in place thereon, the said arms being arranged to receive and hold the service wires, and the said coils being connected with each other by cross pieces forming a saddle adapted to rest on the top of the span wire.

5. A support for electric service wires comprising a span wire and a device having coils and a depending loop for the reception of service wires or cables, the coils being adapted to be sprung in place on the span wire to hold the device in place thereon, the said depending loop being arranged to permit of placing a drawing rope in position therein for drawing the cable into the said loop, and the said coils being connected with each other by cross pieces forming a saddle adapted to rest on the top of the span wire.

[Claims 6 to 10 not printed in the Gazette.]

879,766. BOTTLE. WILLIAM HARRISON, Day Dawn, Western Australia, Australia. Filed June 12, 1907. Serial No. 378,474.



1. A bottle having an interiorly-threaded neck, a cup exteriorly-threaded and screwed into said neck, a stopper in the cup, and means loosely passing through the bottom of the cup detachably connecting it with the stopper.

2. A bottle having a neck, a cup secured in said neck, a stopper closing the opening in the cup, and means detachably connecting the cup and stopper together and adapted to drop to the bottom of the bottle when said cup and stopper are disconnected.

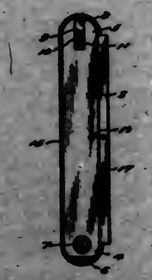
3. A bottle having a neck, a cup secured in said neck, a stopper closing the opening in the cup, a stem projecting from the stopper within the cup and having an interiorly threaded bore, and a screw passing through the bottom of the cup in threaded engagement with said bore.

4. A bottle having a neck, a cup secured in said neck having an opening in one side thereof leading into the bottle, a stopper closing the opening in the cup, a stem carried by the stopper having an interiorly-threaded bore, and a screw passing through the bottom of the cup and in threaded engagement with said bore.

5. A bottle having a neck, a cup secured in said neck, a stopper in the cup, a thimble interposed between the stopper and cup, and means for detachably connecting the stopper with the cup.

[Claims 6 and 7 not printed in the Gazette.]

879,767. BLACKBOARD-ERASER. WILLIAM H. HARTLEY, Mount Pleasant, Mich. Filed June 13, 1907. Serial No. 378,822.



1. A blackboard eraser comprising a box or receptacle, rollers journaled in said receptacle, endless bands of erasive material mounted on said rollers, and a cover for said receptacle provided with cleaning blades to bear upon the surface of the endless bands to remove the fine particles of chalk and deposit them in said receptacle.

2. A blackboard eraser comprising a receptacle, rollers mounted in the receptacle, one of said rollers being mounted upon springs, endless erasive bands mounted on said rollers, and a cover provided with means for removing the chalk from the bands.

3. A blackboard eraser comprising a box or receptacle, rollers mounted in said receptacle, endless bands mounted on said rollers, a support for said bands provided with a slot, and a cover provided upon its under side with inwardly projecting, oppositely disposed cleaning blades, substantially as described.

4. In a blackboard eraser, the combination of a box or receptacle, endless erasive bands mounted to rotate upon the eraser, and means for cleaning said bands at one point in their rotation, substantially as described.

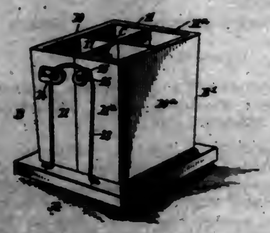
879,768. PROCESS FOR MAKING SHIELDS OR ARMOR FOR PNEUMATIC TIRES. OTTO A. HENSEL, Pittsburg, Pa. Filed Aug. 31, 1906. Serial No. 332,865.



1. The herein-described process of treating hides or skins for the purpose specified, consisting of treating said hide with bichromate of potash ($K_2Cr_2O_7$) in solution, exposing said hide to the action of diffused daylight, densifying by a bath in a solution of gelatin, bichromate of potash and water brought to a temperature of approximately two-hundred and thirteen degrees, Fahrenheit and again exposing the hide to the action of the light, as described.

2. The herein-described process of treating hides or skins for the manufacture of shields or armors for pneumatic tires, consisting of cutting said hide lengthwise into strips, treating said strips with bichromate of potash in solution, exposing said strips thus treated to the action of diffused daylight and at the same time treating the edges of said strips to a bath of diluted bichromate of potash, sulfate of alumina and chlorid of sodium to soften said edges, densifying the central portion of the strips by immersing in a solution of gelatin, bichromate of potash and water brought to the boiling point, securing said strips to forms and again exposing the same to the action of light, as described.

879,769. KNOCKDOWN PLANT-BOX. NELSON HIGHT, Wolfboro, N. H. Filed May 22, 1907. Serial No. 374,989.



1. A box for growing plants comprising a base and a body mounted upon the base, said body comprising separable members adapted in one position to swing outward from the base, and a bail pivoted to the base and adapted to swing upward against the side of the body, said body being provided with means for engaging the bail, whereby to lock the base and the body together.

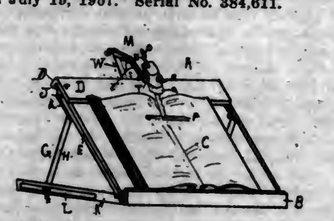
2. In a box for growing plants, the combination with a base having a recess in its upper face and bails pivotally mounted on the said base adjacent its recess, of a body comprising two members independent of each other and independent of the base, said members when brought together having their lower ends fitted in the said base, and buttons carried at opposite sides of the said members for locking engagement with the said bails.

3. In a box for growing plants, the combination with a base and bails pivotally connected to the upper face of the said base, of a body constructed in separable members independent of the base yet having bearing thereon when the said members are brought together, and buttons carried by the said members for engagement with the said bails.

4. In a box for growing plants, the combination with a base having a recess in its upper face and bails pivoted at opposite sides of the said recess on the said base, of a body, the lower end of which is adapted to be fitted in the recess of the base, which body consists of two members, each comprising a full panel and two partial panels, the partial panels being adapted, to be brought together when the body of the box is fitted to the base, a fixed button on each of the partial panels of one member of the body, and pivoted buttons on the partial panels of the opposing member of the body, the said buttons being adapted for locking engagement with the said bails.

5. In a box for growing plants, the combination with a base having a recess in its upper face and bails pivoted at opposite sides of the said recess on the said base, of a body, the lower end of which is adapted to be fitted in the recess of the base, which body consists of two members, each comprising a full panel and two partial panels, the partial panels being adapted to be brought together when the body of the box is fitted to the base, a fixed button on each of the partial panels of one member of the body, and pivoted buttons on the partial panels of the opposing member of the body, the said buttons being adapted for locking engagement with the said bails, and a partition removably located in the body of the box.

879,770. ADJUSTABLE BOOK-SUPPORT AND COPY-SPACER. FRANK H. HOFFMANN, Dubuque, Iowa. Application filed Dec. 22, 1904, Serial No. 237,900. Renewed July 19, 1907. Serial No. 384,611.



1. In a device of the character described, a frame for supporting a book, sustaining standards pivoted to the frame, each standard consisting of two members pivoted together, and braces secured to the frame, the standards being adjustably attached to said braces.

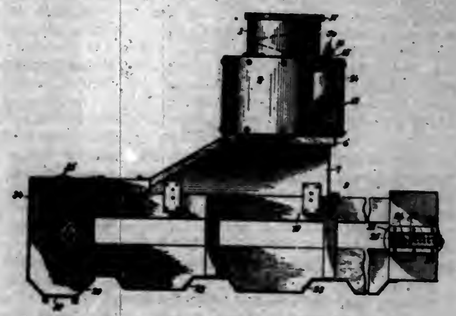
2. In a device of the character described, a frame, braces each provided with a slot and attached to the opposite sides of the frame, sustaining standards pivoted to the frame, each standard consisting of two members pivoted together, and said standards adjustably attached to said braces by means engaging the slots in the braces.

3. In a device of the character described, a frame provided with side pieces of angular shape, a brace secured to each side piece, and standards each consisting of two members pivoted together and attached to each side piece and adjustably attached to the braces.

4. In a device of the character described, a frame for supporting a book, braces secured to the frame, sustaining standards each consisting of two members pivoted together and secured to the frame and adjustably attached to the braces, and a spacer for indicating the line to be copied.

5. In a device of the character described, a frame, standards pivoted to the frame and each formed of two members pivoted together, braces provided with slots secured to the frame, set screws adapted to engage the slots in the braces and adjustably secure the standards to the braces, a spacer attached to the frame, and means for permitting the spacer to be moved a predetermined distance between the lines to be copied.

879,771. PNEUMATIC GIN-FEEDER. ROBERT L. HOLLINGSWORTH, Decatur, Ga. Filed Apr. 15, 1907. Serial No. 368,308.



1. In a cotton machine of the class described, a screen, means for developing an air current to carry cotton alongside the screen, a bonnet delivering to the screen, said bonnet being provided with a helical guide for imparting a swirling motion to the cotton, whereby the sand carried thereby may be thrown through the screen.

2. In a cotton machine, and in combination, an air chamber having a substantially cylindrical screen passing therethrough, an outlet pipe leading from the said chamber through which air may be exhausted, whereby to carry cotton alongside the screen, and a bonnet delivering to the screen, said bonnet being provided with a helical guide plate for imparting a swirling motion to the cotton, for the purpose set forth.

3. In a cotton machine of the class described, in combination, an air-chamber having a substantially cylindrical screen passing therethrough, an outer pipe leading from said air-chamber and adapted to withdraw air therefrom, means within said air chamber for equalizing the draft through said screen, and means for delivering a current of air through said air-chamber, within said screen.

4. In a cotton machine of the class described, in combination, an air-chamber having a substantially cylindrical screen disposed therethrough, an outlet pipe leading from said chamber, a baffle plate adapted to diffuse the draft of air through said screen, and a bonnet in connection with said chamber, having an outlet pipe to which a current of air may pass, inwardly, said bonnet having a guide for directing the incoming air current through said screen.

5. In a cotton cleaner, in combination, an air-chamber having a pair of heads, a substantially cylindrical screen attached in said heads and adapted to direct the incoming cotton through said air-chamber, an outlet pipe leading through the side wall of said air-chamber, a substantially conical baffle plate having the small end disposed near one end of said air-chamber and affording means for diffusing the air current drawn through said screen, and a bonnet above said air-chamber, and having means for directing an incoming air-current through said screen.

879,772. PAPER-BAG HOLDER. CHARLES HOBBELL, Madison, Ill. Filed July 12, 1907. Serial No. 383,477.

1. A bag-holder composed of a single piece of wire comprising a lower front and an upper rear parallel section, a diagonal intermediate section, resilient connections between the sections, and means on the lower section for holding suitable cards, substantially as set forth.

2. A bag-holder composed of a single piece of wire comprising a lower front, and an upper rear parallel section, a diagonal intermediate section, resilient loops connecting said intermediate section with the other sections, springs

connecting the loops formed at the juncture of the lower section and intermediate section, with the rear section, and a series of loops formed on the lower front section and



coiled in planes at right angles to the loops connecting the intermediate section with the front and rear sections, substantially as set forth.

879,773. EXTENSION-PLUG FOR ELECTRIC LIGHTS. BRYSON D. HORTON, Detroit, Mich., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 2, 1903, Serial No. 175,469. Renewed Jan. 12, 1906. Serial No. 295,684.



1. An extension coupling for electric conductors, having in combination a body part, a reciprocatory coned pin, electrically connected to one of a pair of extension conductors, a corrugated arm secured to the body and electrically connected to the other of the pair of conductors and adapted to engage in the screw threads of a socket and provided with a finger engaging the cone of said pin and adapted to be actuated thereby, substantially as described.

2. An extension coupling for threaded electric lamp sockets, said coupling having in combination a body part, a corrugated arm secured to the body part and electrically connected to one of a pair of conductors and adapted to engage the threads of said socket, a reciprocating outwardly-spring-pressed pin connected to the other of the pair of conductors and operated by the insertion of the coupling in the socket, and means actuated by said pin to cause said corrugated arm to engage the screw threads of the socket.

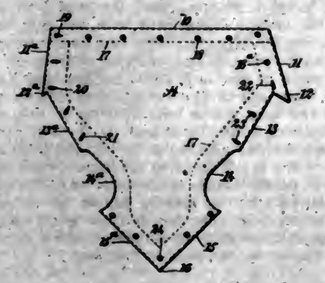
3. An extension coupling for coöperation with a screw-threaded electric socket, said coupling having in combination a body part, a reciprocatory pin electrically connected to one of a pair of extension conductors, a corrugated arm secured to the body and electrically connected to the other of the pair of conductors, and arranged to engage the screw threads of the socket, and provided with a finger engaged by said pin to cause said arm to engage the screw threads of the socket.

4. An extension coupling for coöperation with a socket having a center contact and a side contact, said coupling having a plug portion provided with a central bore, an outwardly-spring-pressed center contact member disposed in said bore, a laterally-movable side contact tending to move toward said plug portion, and means operated by the inward movement of said center contact member, for moving said side contact away from said plug portion and into engagement with said outer contact of said socket.

5. An extension coupling for coöperation with a socket having a center contact and a side contact disposed in planes at right angles with each other, said coupling having a body portion, a conducting pin slidably arranged within said body portion and tending to move outward with respect thereto, a movable side contact carried by said body portion, and means whereby said side contact is shifted laterally into engagement with the side contact of the socket when said pin engages said center contact of said socket and is thereby moved inward with respect to said body portion.

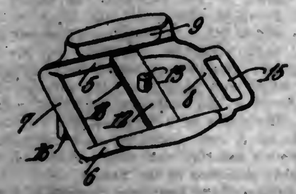
[Claims 6 to 11 not printed in the Gazette.]

879,774. DIAPER-HOLDER. FRANK JONATA, New York, N. Y. Filed July 23, 1907. Serial No. 385,128.



A diaper holder constructed of a single piece of material having a straight wide upper portion whose sides incline downwardly and outwardly terminating in pointed tabs, a substantially triangular lower portion, the point of which is centrally located with respect to the upper portion, and an intermediate portion extending from the base of the tabs to the triangular portion, the intermediate portion having its sides inclined downwardly and inwardly for a portion of its length and then formed with recesses extending to the triangular portion, the upper portion being provided with button holes along one inclined side and a button and a button hole along its other inclined side, the buttonhole being at the lower end of said side, the intermediate portion being provided with button holes along its inclined sides, and the lower triangular portion with buttons along its sides, and one at its point, the buttons at the sides engaging the button holes of the intermediate portion and the button at the point, the button holes at the lower end of the upper portion.

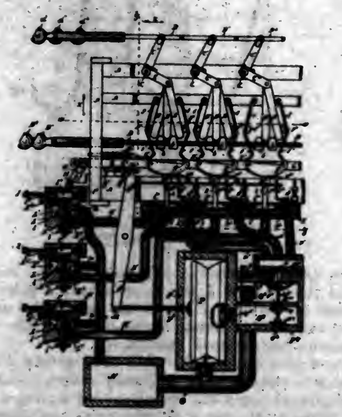
879,775. TRACE-BUCKLE. TILLMAN H. JONES, Juda, Wis. Filed May 27, 1907. Serial No. 375,883.



1. A trace buckle including a frame having oppositely disposed strap-receiving loops, a bar extending transversely of the frame and provided with a tongue adapted to engage the strap, said bar being provided with a curved bearing surface for engagement with a trace.

2. The combination with a billet strap, of a buckle adjustable vertically of the strap and provided with aligned openings for the reception of said strap, a bar extending transversely across the buckle and having its flat upper surface provided with a laterally extending rigid tongue for engagement with the billet strap, the opposite face of the bar being curved or rounded, a trace threaded through the buckle in front of the billet strap and engaging the curved bearing surface of the bar, and a lug projecting laterally from the one side of the buckle and adapted to engage the trace.

879,776. COMBINATION ORGAN STOP-ACTION. ALBERT E. KENT, Erie, Pa., assignor to A. B. Felgimaker Erie Organ Company, Erie, Pa., a Corporation of Pennsylvania. Filed Sept. 28, 1907. Serial No. 394,983.



1. In an organ stop-action, the combination of a stop-rod, a shoulder-block thereon, a vertically movable finger pivoted above said stop-rod, mechanism adapted to raise said finger and then lower the same in front of or behind the shoulder-block on said stop-rod, a transverse bar on each side of said finger, oppositely moving slide-bars on each side of said stop-rod, hooks pivoted to each slide-bar adapted to engage and move said transverse-bars toward each other when said slide-bars are reciprocated, means adapted to raise said hooks up to engage said transverse-bars, and means adapted to cause said slide-bars to reciprocate, substantially as set forth.

2. In an organ stop-action, the combination of a stop-rod, a stop-combination setting mechanism, transverse bars adapted to engage said setting mechanism, slide-bars on each side of said stop-rod, a hook on each slide-bar adapted to be raised up to engage and operate said transverse bars, an air chamber in the lower portion of said stop-action frame, a diaphragm in the top of said chamber, a post resting upon said diaphragm, a transverse bar resting on the top of said post and supporting the hooks on said sliding-bars, means to supply air to said air-chamber and to allow the same to exhaust therefrom when desired, an operating motor, connections therefrom to said sliding bars and means adapted to cause the motor to operate to slide said bars when air is supplied to said air-chamber and diaphragm, and to release said bars when the air is exhausted therefrom, substantially as set forth.

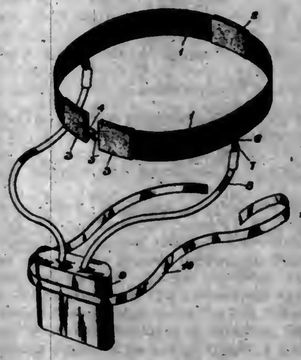
3. In an organ stop-action the combination of, a stop-rod, stop-setting mechanism, transverse bars adapted to contact with and actuate said stop-setting mechanism, sliding bars mounted on opposite sides of said stop-rod, hooks pivoted on said slide-bars adapted when raised to engage said transverse bars and draw the same toward each other when said slide-bars are reciprocated in opposite directions, a rocking lever pivoted in said action frame and connecting said slide-bars, a spring adapted to actuate said slide-bars in one direction, a motor and connections adapted to operate said slide-bars in the opposite direction against said spring, means adapted to raise said hooks to engage said cross-bars, and means operated thereby to cause said motor to actuate said slide-bars, substantially as set forth.

4. In an organ action, the combination of a plurality of stop-rods, a plurality of stop-combination setting mechanisms, selective mechanism adapted to select the desired previously set stop-combination, and a common actuating mechanism adapted to throw into speaking position any combination selected, substantially as set forth.

5. In an organ stop-action, the combination of a plurality of stop-rods, one or more shoulder-blocks secured on each stop-rod, one or more combination-setting mechanisms adapted to engage said shoulder-blocks on said stop-rods, transverse operating bars on each side of said setting mechanism, oppositely reciprocating slide-bars adjacent to each side of said stop-rods, one or more hooks pivoted on each of said slide-bars, those on one bar hooking in one direction, those on the other bar hooking in the opposite direction, means to raise a hook on one bar in unison with a hook on the other bar directly opposite thereto so that said hooks will engage the transverse bars on each side of said combination-setting mechanism, an operating motor, connections therefrom to the slide bars, and means whereby the motor is thrown into operation to actuate each of said slide bars, and a spring to actuate said slide bars in the opposite direction, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

879,777. ELECTROMEDICAL APPLIANCE. SAMUEL H. LACKLAND, St. Louis, Mo. Filed Apr. 22, 1907. Serial No. 369,698.

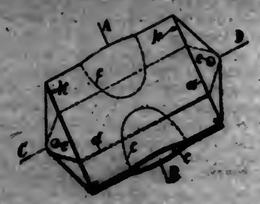


An electro medical appliance, comprising a pair of semi-circular electrodes of reticulated material, the body portions of which are uncovered and exposed, and adapted to encircle the neck of a wearer, a section of flexible insulating material connecting the rear ends of the electrodes, flexible insulating sections arranged on the front ends of the electrodes, a hook fixed to one of the last mentioned insulating sections, a loop fixed to the opposite insulating section whereby the front ends of the semi-circular electrodes are connected, a battery, metal hooks connected to the sides of the electrodes, and conductors leading from the poles of the battery and being detachably secured to the hooks on the sides of the semi-circular electrodes.

879,778. CATAMENIAL BANDAGE. WILHELMINA LAUFFS, Zurich, Switzerland. Filed Apr. 25, 1905. Serial No. 257,337.

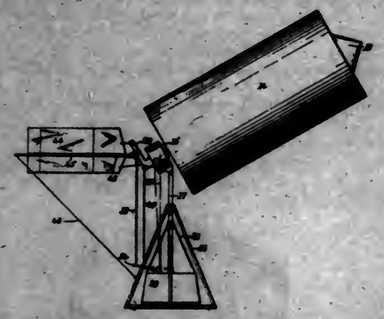
In a catamenial bandage, the combination of two superimposed layers of absorbent fabric secured together and having oppositely disposed pockets formed therebetween at a point adjacent to each edge thereof, removable absorbent wads or pads in each said pocket, means whereby the edges of said layers may be folded inwardly and overlapped, and secured in this position, triangular end flaps carried by one of said strips, a non-absorbent outer

strip covering one side of said folded layers, means whereby said non-absorbent strip is removably secured to said



layers, and means carried thereby whereby said layers and said covering may be attached to the wearer.

879,779. AIR-SHIP. EDGAR F. LEEDS, Mount Carmel, Ill. Filed July 5, 1907. Serial No. 382,262.



1. In an air ship, a propelling screw, a cylinder in fixed relation to and inclosing the screw, and a car suspended from one end of the screw having means for varying the angular position of the screw and cylinder with respect thereto.

2. In an air ship, a propelling means comprising a driving-shaft, a cylinder surrounding the driving-shaft and rigid therewith, a spiral blade in fixed relation to the cylinder with the portion thereof adjacent to the driving-shaft being removed, whereby an annular opening surrounding the driving-shaft is provided, and a conical cap at the forward end of the cylinder covering said opening.

3. In an air ship, a propelling screw composed of a central shaft having a spiral blade affixed thereto, a cylinder rigidly secured to and surrounding said blade, a car pivotally suspended from one end of the screw, and means for varying the angular position of the shaft, blade and cylinder with respect to the car.

4. In an air ship, a screw, a frame pivotally supported from the screw, a car pivoted at its bottom within the frame, and means for regulating the relative inclination of the car with respect to the frame.

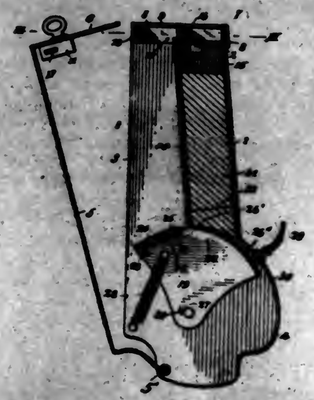
5. In an air ship, a propelling screw, a motor having a casing journaled at one end of the screw, a pyramidal frame pivotally suspended from the casing, and a car rockingly mounted within the frame.

[Claims 6 to 14 not printed in the Gazette.]

879,780. SOAP-DISPENSER. HERMAN J. S. LEWIS, New York, N. Y. Filed Mar. 25, 1907. Serial No. 364,497.

1. In a soap dispenser, a main body having an outwardly flanged upper edge, a U-shaped frame inset in said body and having an inwardly flanged edge thereby producing a magazine with a restricted entrance, and a knife frame pivoted in the body beneath said magazine.

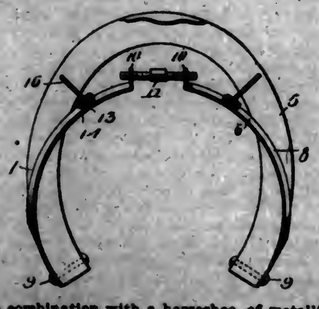
2. In a soap dispenser, a main body flanged outwardly at its upper edge, a U-shaped strip inset in said upper edge so that the front of said strip projects slightly inwardly from the corresponding front inside face of the body, a U-shaped frame placed in the body and flanged inward at its upper edge thereby producing a magazine with a restricted entrance, and a knife frame pivoted in the body beneath said magazine.



3. In a soap dispenser, a main body having a knife frame pivoted therein, said knife frame having a ledge directly in front of the knife, said ledge being depressed to a greater radius immediately in front of the knife than it is at a point more remote therefrom.

4. In a soap dispenser, a main body having a magazine in which a cake of soap is loosely received and a knife frame pivoted below the magazine and having a ledge in front of the knife edge, said ledge being less depressed immediately in front of the knife edge than it is at a point more remote from the knife edge, whereby a loose fragment of soap may be positively cut, substantially as described.

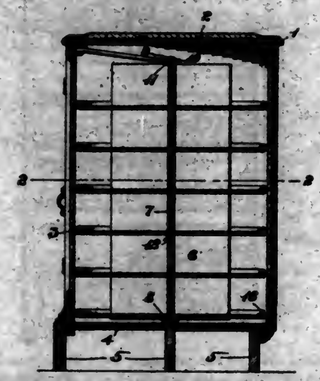
879,781. DETACHABLE HORSESHOE. EIKE E. LUBBERS, Monticello, Ill. Filed Aug. 22, 1907. Serial No. 389,674.



1. The combination with a horseshoe, of metallic straps secured at their rearward ends against the outer faces of the heels of the shoe, and extending upwardly and forwardly and inwardly over the shoe, said straps having their forward extremities turned at right angles to form ears, a bolt engaged through the ears, and rivets engaged in the forward portion of the shoe and slidably connected with the straps.

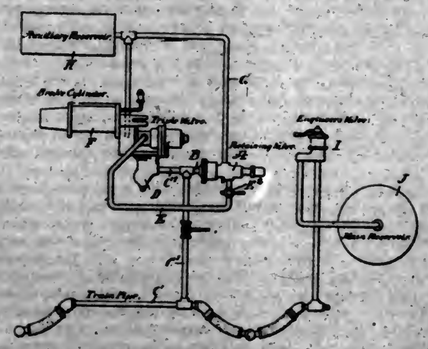
2. The combination with a horseshoe, of metallic straps secured at their rearward ends against the outer faces of the heels of the shoe, and extending upwardly and forwardly and inwardly over the shoe, said straps having their forward extremities turned at right angles to form ears, a bolt engaged through the ears, said straps having recesses in their inner faces adjacent to their forward ends and having longitudinal slots within said recesses, and rivets engaged in the forward portion of the shoe and extending upwardly and rearwardly and having their rearward portions engaged through the slots, said rivets having heads lying in the recesses.

79,782. DISPLAY-CABINET. FERDINAND D. MAGUOLO, St. Louis, Mo. Filed May 6, 1907. Serial No. 371,986.



A display cabinet, comprising a frame, having transparent sides and top, transparent doors forming one of the sides of the frame, a vertically disposed cross frame arranged for rotation with the first mentioned frame, in the side faces of the members of which cross frame are formed grooves, a series of sets of segmental panels arranged in said grooves to form circular shelves, which panels project beyond the edges of the members of the cross frame, and the meeting edges of the projecting portions of said panels being grooved, and filler blocks located in the grooves formed in said panels.

879,783. AUTOMATIC RETAINING-VALVE. CALVIN MARTIN and MIKE BRADLEY, Dickson, Tenn. Filed Aug. 10, 1906. Serial No. 330,003.



1. An automatic retaining valve for fluid pressure brakes, comprising a casing having connection with the train pipe, triple valve exhaust and auxiliary reservoir, a valve in the casing and normally opening in triple valve exhaust to the atmosphere, and a piston in the casing and operating to move the valve into closed position on setting the brakes, said piston being controlled by the pressure from the train pipe and the auxiliary reservoir and capable of moving without shifting the valve.

2. An automatic retaining valve for fluid pressure brakes, comprising a casing having connection with the train pipe, triple valve exhaust and the auxiliary reservoir, a valve in the casing and normally opening the triple valve exhaust to the atmosphere, and a piston in the casing and operating to move the valve into closed position on setting the brakes and into open position on releasing the brakes, said piston being controlled by the pressure from the train pipe and auxiliary reservoir and capable of moving without shifting the valve.

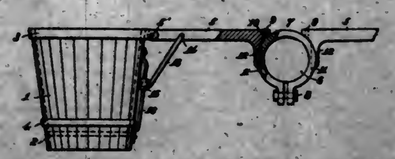
3. An automatic retaining valve for fluid pressure brakes, comprising a casing having connection with the train pipe, triple valve exhaust and the auxiliary reservoir, a valve in the casing and normally opening the triple valve exhaust to the atmosphere, a piston in the casing and connected with the valve to operate the same and to have movement independent of said valve, said piston being controlled by the pressure from the train pipe and the auxiliary reservoir and operating to move the valve into closed position on setting the brakes and into open position on releasing the brakes, and a tension device for returning the piston to normal position on equalizing of the pressure on opposite sides of the piston when releasing the brakes.

4. An automatic retaining valve for fluid pressure brakes, comprising a casing having connection with the train pipe, triple valve exhaust and auxiliary reservoir, a valve in the casing and normally opening the triple valve exhaust to the atmosphere, a piston in the casing and connected with the valve to operate the same and to have movement independent of the valve, said piston being controlled by the pressure from the train pipe and the auxiliary reservoir and operating to move the valve into closed position on setting the brakes and into open position on releasing the brakes, a tension device for returning the piston to normal position on equalizing of the pressure on opposite sides of the piston when releasing the brakes, and a three-way valve in the triple valve exhaust connection.

5. An automatic retaining valve for fluid pressure brakes, comprising a casing having connection with the train pipe, the triple valve exhaust and the auxiliary reservoir, a piston movable in the said casing and controlled by the pressures from the train pipe and the auxiliary reservoir, the said ipston having a stem provided with spaced collars, a slide valve in the said casing and normally opening the triple valve exhaust to the atmosphere, the said valve being adapted to be engaged alternately by the said collars, to shift the valve into closed and open positions, and a tension device normally in inactive position and actuated by one of the said collars on shifting the piston when releasing the brakes.

[Claims 6 to 9 not printed in the Gazette.]

879,784. FEED-BUCKET. JOHN MATEKA, Chicago, Ill. Filed Nov. 4, 1907. Serial No. 400,604.



1. In a device of the class described, a bucket in combination with an arm pivotally connected thereto, means for connecting said arm to the draft member of a vehicle and means for maintaining said bucket in extended position, substantially as described.

2. In a device of the class described, a bucket in combination with an arm pivotally connected thereto, means for connecting said arm to the pole of a vehicle, a brace member pivotally connected to said arm, a slidable connection between the other end of said brace member and said bucket and means for preventing downward movement of said connection, substantially as described.

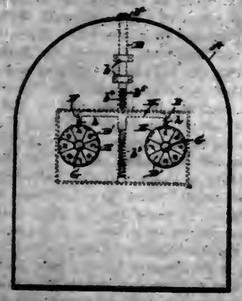
3. In a device of the class described, a bucket in combination with an arm pivotally connected thereto, means for connecting said arm to the pole of a vehicle, a vertically disposed bar secured to said bucket, a slide mounted upon said bar, a brace member pivotally connected at one end

to said arm and at the other end to said slide and a ratchet connection between said slide and said bar, substantially as described.

4. In a device of the class described, a bucket, in combination with an arm pivotally connected thereto, said arm having a hole arranged in its free end and a lug adjacent to said hole and extending at right angles from said arm, a member adapted to be secured to the pole of a vehicle and having a lug adapted to engage the hole in said arm and a groove adapted to be engaged by the lug on said arm, substantially as described.

5. In a device of the class described, a bucket in combination with an arm pivotally connected thereto, said arm having a hole arranged in its free end and a lug adjacent to said hole and extending at substantially right angles from said arm, a device adapted to be secured to the pole of a vehicle and to engage with said hole and said lug to hold said arm in extended position, said arm being of less length than the height of said bucket and said bucket being notched below its bottom to receive said lug, substantially as described.

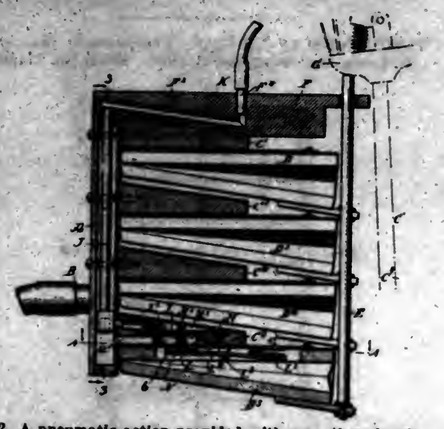
879,785. PERMUTATION-LOCK. JAMES R. MAXFIELD, Grand Saline, Tex. Filed Jan. 16, 1907. Serial No. 352,613.



In combination with a box and a door therefor, a lock for the box comprising a bolt slidably secured to the interior of the door and adapted to coöperate with a keeper on the box, said bolt being provided with an actuating portion projecting through the door of the box, a pair of dogs carried by the bolt and movable therewith, a pair of shafts journaled in said door and having equi-sided polygonal shaped portions projecting beyond the outside thereof, a pair of indicator disks engaging the projecting portions of said shafts, operating knobs removably secured to the ends of the projecting portions of said shafts and serving to lock said indicator disks thereon, a pair of disks rigidly connected to the inner ends of said shafts and lying snugly against the interior of the door, each of said disks having a notch in the periphery thereof adapted to receive one of the dogs carried by said bolt, a casing secured to the inner side of said door and housing said disks, said casing lying snugly against the backs of said disks, and a spring arranged within the casing intermediate said notched disks and normally serving to hold the bolt out of engagement therewith, said spring being positioned between the planes of the surfaces of said disks.

879,786. PNEUMATIC ACTION. HERMANN MEYER, New York, N. Y. Filed May 17, 1907. Serial No. 374,117.

1. A pneumatic action provided with a suction chamber for connection with a suction device, a diaphragm chamber on the said suction chamber and having a diaphragm, the suction side of the diaphragm chamber being connected with said suction chamber, a pipe for connection with the tracker board and extending through the suction chamber to connect with the pressure side of the diaphragm chamber, a pneumatic having one member fixed to the said diaphragm chamber at the suction side thereof, the said fixed member being provided with an air inlet port and an air exhaust port leading to the exhaust side of the diaphragm chamber, and a swinging valve lever having valves at the ends for controlling the said ports, the valves being controlled by the said diaphragm.



2. A pneumatic action provided with a suction chamber for connection with a suction device, a diaphragm chamber on the said suction chamber and having a diaphragm, the suction side of the diaphragm chamber being connected with the said suction chamber, a pipe for connection with the tracker board and extending through the suction chamber to connect with the pressure side of the diaphragm chamber, a pneumatic having one member fixed to the said diaphragm chamber at the suction side thereof, the said fixed member being provided with an air inlet port and an air exhaust port leading to the exhaust side of the diaphragm chamber, and a swinging valve lever having valves at the ends for controlling the said ports, the valves being controlled by the said diaphragm by way of the said exhaust port.

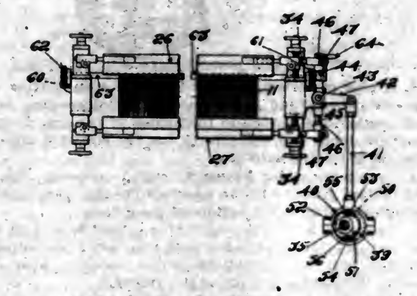
3. A pneumatic action provided with a suction chamber for connection with a suction device, a diaphragm chamber on the said suction chamber and having a diaphragm, the suction side of the diaphragm chamber being connected with the said suction chamber, a pipe for connection with the tracker board and extending through the suction chamber to connect with the pressure side of the diaphragm chamber, a pneumatic having an air inlet port and an air exhaust port leading to the exhaust side of the diaphragm chamber, a swinging valve lever having valves at the ends for controlling the said ports, and a button on the said diaphragm and engaging the exhaust port valve.

4. A pneumatic action provided with a suction chamber for connection with a suction device, a diaphragm chamber on the said suction chamber and having a diaphragm, the suction side of the diaphragm chamber being connected with the said suction chamber, a pipe for connection with the tracker board and extending through the suction chamber to connect with the pressure side of the diaphragm chamber, a pneumatic having one member fixed to the said diaphragm chamber at the suction side thereof, the said fixed member being provided with an air inlet port and an air exhaust port leading to the exhaust side of the diaphragm chamber, a swinging valve lever having valves at the ends for controlling the said ports, and a button on the said diaphragm and engaging the exhaust port valve.

5. A pneumatic action comprising a suction chamber connected with a suction device, rails arranged in tiers and each being provided with a plurality of diaphragm chambers, opening at the suction side into the said suction chamber, tracker board pipes one for each diaphragm chamber, the said pipes extending through the said suction chamber, and the said pipes connecting at one end with the tracker board and at the other end with the pressure side of the corresponding diaphragm chamber, and pneumatics on the said rails and connected with the open air and the said diaphragm chambers, at the suction side thereof.

[Claims 6 and 7 not printed in the Gazette.]

879,787. PAPER-COATING MACHINE. JOHN B. MORROW, East Pepperell, Mass., assignor to Pepperell Card & Paper Company, Pepperell, Mass., a Corporation of Massachusetts. Filed May 1, 1907. Serial No. 371,232.



1. In a paper coating machine, the improved operating means for jigger-brushes in pairs whose members lie on opposite sides of the paper, comprising a three arm bell crank lever, to one arm of which the upper jigger-brush is connected and to the lower arm of which the lower brush is connected, and operating means connected to the third arm of the said bell crank lever to cause the same to reciprocate, whereby the said jigger-brushes are given simultaneous movements in opposite directions.

2. In a paper coating machine, the improved operating means for jigger-brushes in pairs which consists of a three arm bell crank lever to the upper arm of which the upper jigger-brush is pivotally connected by means of a collar slidably mounted on the said upper arm and to the lower arm of which the said lower jigger-brush is pivotally connected by means of a collar also slidably mounted on the said lower arm of the said bell crank lever, and operating means connected to the third arm of the said bell crank lever, whereby the said jigger-brushes are given simultaneous movements in opposite directions.

3. In a paper coating machine, jigger-brushes in pairs and operating means for the said pairs of jigger-brushes, comprising a three arm bell crank lever for each pair, to the upper arms of which the upper jigger-brushes of the pairs are pivotally connected and to the lower arms of which the said lower brushes are pivotally connected, a shaft provided with eccentrics having different throws, and connecting means between the said eccentrics and the third arm of the said bell crank levers, whereby the said pairs of jigger-brushes are given different lengths of strokes, according to the throws of the eccentrics which operate them.

4. In a paper coating machine, jigger-brushes in pairs and operating means for the said pairs of jigger-brushes, comprising a three arm bell crank lever for each pair to the upper arms of which the upper jigger-brushes of the pairs are pivotally connected and to the lower arms of which the said lower brushes are pivotally connected, shafts running at different speeds provided with eccentrics having different throws, and connecting means between said eccentrics and the third arm of the said bell crank lever, whereby the said pairs of jigger-brushes are given different lengths of stroke and different speeds according to the throws of the eccentrics which operate them and the speeds of the shafts upon which the said eccentrics are located.

5. In a paper coating machine, the combination with an upper and lower set of jigger-brushes in pairs and operating means therefor, of lifting means operating upon one set of jigger-brushes to move simultaneously the brushes comprising the said set out of contact with the paper passing between the said two sets of jigger-brushes.

[Claims 6 to 8 not printed in the Gazette.]

879,788. METHOD OF MAKING INDICATOR-BUTTONS. HENRY MUELLER, Decatur, Ill., assignor to H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois. Filed Aug. 23, 1907. Serial No. 389,830.



1. The method of forming substantially round pottery indicator buttons and the like which consists in shaping them with one or more flattened faces, applying the indications to other faces, supporting the buttons by said flattened faces, and glazing and burning them while so supported.

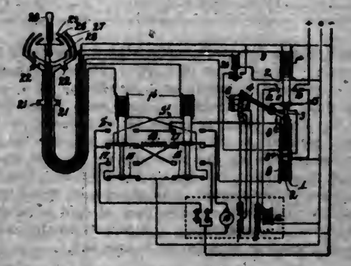
2. The method of forming round pottery indicator buttons and the like which consists in shaping each button with a flattened chord on one face, applying the indications to other faces, supporting the button by said chord, and glazing and burning it while so supported.

3. The method of forming substantially spherical pottery indicator buttons and the like which consists in shaping each button with a flattened chord on one face, applying the indications to other faces, standing the button on said chord, and glazing and burning it while so supported.

4. The method of forming solid spherical pottery indicator buttons and the like which consists in shaping each button with a flattened chord on one face, applying the indications to other faces, standing the button on said chord, and glazing and burning it while so supported.

5. The method of forming round pottery indicator buttons and the like each having a curved periphery in at least one direction, which method consists in shaping each button with a flattened chord at one point on said curved periphery, applying the indications to other faces, standing the button on said chord, and glazing and burning it while so supported.

879,789. REGULATING MAGNET-CONTROLLER FOR ELECTRIC ELEVATORS. HENRY P. MCCOLL, Hawthorn, Victoria, Australia. Filed May 29, 1906; Serial No. 319,249. Renewed Aug. 7, 1907. Serial No. 387,566.



1. A regulating magnet controller for electric elevators comprising a rheostat actuated by solenoids having windings with opposite influences, said windings being controlled by the car switch so that acceleration of the motor may be suspended at any speed by the operation of said switch.

2. A regulating magnet controller for electric elevators comprising a balanced rheostat lever actuated by a double solenoid, said solenoid having "fast" and "slow" coils wound in opposite directions and operated from a car switch, said fast coil being connected respectively with the armature terminals, and said slow coils with the mains

and motor circuit, substantially as and for the purpose set forth.

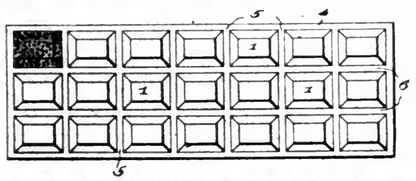
3. In a regulating magnet controller for electric elevators a solenoid having a winding at one end and connected when in circuit directly across the mains and another winding on the same end in series with the armature circuit said windings constituting a "slow" circuit and a third winding or "fast" circuit on the other end connected across the armature terminals said solenoid having a soft iron core provided at one end with a rod or projection attached to one end of a rheostat lever substantially as and for the purpose set forth.

4. In a regulating magnet-controller for electric elevators a solenoid having a winding at one end connected when in circuit directly across the mains and another winding on the same end in series with the armature circuit said windings constituting a "slow" circuit and a third winding or "fast" circuit on the other end connected across the armature terminals, a balanced rheostat lever connected to the core of said solenoid and adapted to make contact with the rheostat contacts in combination with a single solenoid for controlling the brake and motor substantially as set forth.

5. In a regulating magnet controller for electric elevators a solenoid having a widening at one end connected, when in circuit directly across the mains and another winding on the same end in series with the armature circuit said windings constituting a "slow" circuit and a third winding or "fast" circuit on the other end connected across the armature terminals, a balanced rheostat lever connected at one end to a rod on the core of said solenoid and adapted to make contact at the other end with the rheostat contacts in combination with a single solenoid having an insulated disk attached to the core thereof, the said core adapted to normally rest upon the rheostat lever or the rod of the double solenoid and when raised by the single solenoid to close the switches of the mains, brake and shunt field substantially as set forth.

[Claim 6 not printed in the Gazette.]

879,790. ANTISLIPPING AND NON-WEARING MEDIUM. CORNELIUS D. MCGIEHAN, Jersey City, N. J. Filed Nov. 20, 1906. Serial No. 344,338.

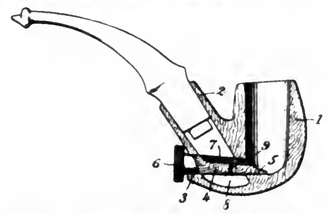


A tread device for steps comprising a base with the upper surface thereof upon the same plane throughout, a plurality of tread members each consisting of a mass of carborundum and a metallic alloy, said tread members having flat lower faces, said flat lower faces of said tread members secured to the upper face of the base, said tread members having the sides thereof beveled and uninterrupted throughout, the upper faces of said tread members further uninterrupted throughout said tread members disposed throughout the upper face of said base so as to form a series of transversely and longitudinally-extending intersecting grooves between said members.

879,791. PIPE. FRANK P. NOUASE, Lewiston, Idaho. Filed May 29, 1907. Serial No. 376,256.

1. A pipe comprising a bowl having a stem portion leading from the side thereof, and a plug intersecting said stem portion of the pipe and passing to the bottom of the cup of the bowl, having a longitudinal groove forming communication between the cup and said stem portion.

2. A pipe comprising a bowl having a stem portion at the side thereof with an opening passing through said stem portion to the bottom of the cup of the bowl, and a plug seated in said opening, cutting off the bottom portion of the stem and providing an inclosed chamber, said plug having a longitudinal groove forming communication between the cup of the bowl and the stem, with an aperture passing through the bottom of said groove to said chamber.



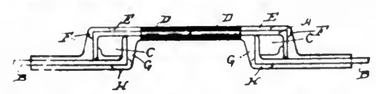
3. A pipe comprising a bowl having a stem portion at the side thereof, and a removable plug intersecting said stem portion and passing to the bottom of the cup, having a beveled inner end operable to cut the collected matter from the bottom of said cup.

4. In a pipe, a plug having a beveled extremity, and a longitudinal groove with an aperture passing transversely through the plug at the bottom of the groove.

5. In a pipe, a conical plug having a head formed on its enlarged end, the inner end of said plug being beveled and provided with a longitudinal groove with an aperture passing through the bottom of the groove.

[Claims 6 and 7 not printed in the Gazette.]

879,792. INTERLOCKING SHEET-PILING. GEORGE E. NYE, Chicago, Ill., assignor to National Interlocking Steel Sheeting Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 25, 1907. Serial No. 403,666.



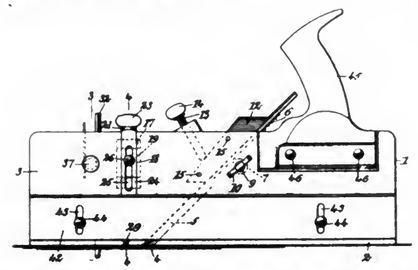
1. Interlocking sheet piling comprising structural iron units provided on their side edges with flanges, said units being disposed parallel with each other and having adjacent flanges opposed to each other, there being a space between said opposed flanges of adjacent units in which packing is adapted to be received, and interlocking means on each unit and engaging the next adjacent unit and maintaining said units in proper relative lateral position to maintain said space.

2. Interlocking sheet piling comprising units each provided with flanges at its side edges and adapted to be driven successively in opposed relation to each other and overlapping each other, there being free spaces between the inner faces of the webs and flanges of adjacent units in which packing is adapted to be received, each of said units being equipped with devices engaging the other and coacting to hold said units against relative lateral movement.

3. Interlocking sheet piling comprising units each provided with flanges at its side edges and adapted to be driven successively in opposed relation to each other and overlapping each other, there being free spaces between the inner faces of the webs and flanges of adjacent units in which packing is adapted to be received, each of said units being equipped with removable devices engaging the other and coacting to hold said units against relative lateral movement.

4. Interlocking sheet piling comprising units each provided with flanges at its side edges and adapted to be driven successively in opposed relation to each other and overlapping each other, there being free spaces between the inner faces of the webs and flanges of adjacent units in which packing is adapted to be received, each of said units being equipped at one end with a U-shaped member receiving the end portion of the web and provided on its respective flanges with projections, said projections of adjacent units coacting to hold said U-shaped members and said units against relative lateral movement.

879,793. PLANE. ANDRO NYLUND, Duluth, Minn. Filed May 28, 1907. Serial No. 376,047.



1. In a plane, a plane iron having a rack, and a pinion adapted to be manually controlled and operatively engaging with said rack, a block tapered toward the cutting edge of said iron and loosely mounted to engage the same, and a set screw adjustably engaging said block to lock said iron in position.

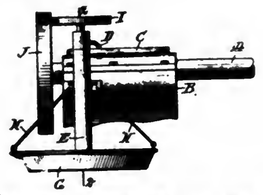
2. In a plane, a body having a guide-groove, a guide-blade mounted to slide in said groove, a movable member arranged to slide in the longitudinal direction of said groove and having an adjustable connection with said blade, and means for adjusting said member.

3. In a plane, a body having a recess, and a guide-groove communicating with said recess, a movable member in said recess, a guide-blade in said groove and having an adjustable connection with said member, and a screw-pin engaging with said member and controlling the same.

4. In a plane, a body having a recess, and a guide-groove communicating with said recess and presenting a shoulder, a movable member in said recess, a guide-blade in said groove and having an adjustable connection with said member, said guide-blade presenting a shoulder adapted to engage said shoulder of said guide-groove to limit the projection of said blade from said groove, and a screw-pin engaging with said member and controlling the same.

5. In a plane, a body having a recess and guide-grooves at opposite sides of said body and communicating with said recess, a movable member in said recess, guide-blades in said grooves and presenting slots, adjustable screws carried by said member and engaging said slots to secure said blades to said member, and a screw-pin operatively engaging said member and having collars engaging said body to prevent the longitudinal movement of said pin.

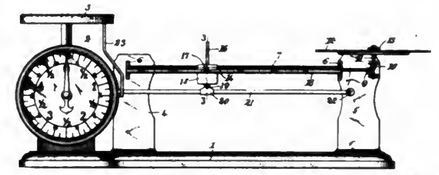
879,794. OILING DEVICE. BENJAMINE H. PADDACK and ALVA A. DINWIDDIE, Granada, Colo. Filed Feb. 15, 1907. Serial No. 357,490.



1. An oiling device for the bearings of shafts and other rotating parts, comprising a pump having a barrel and a screw rotating therein and having an uninterrupted thread from end to end of the screw, the said barrel being secured to the bearing supporting the shaft to be lubricated and extending at its upper end above the top of said bearing, the barrel having a discharge spout at its upper end, a vessel for containing the oil and extending beneath the bearing to receive the drip oil from said bearing, the suction end of the pump barrel being immersed in the oil in the vessel and the discharge spout of the said barrel extending over the said bearing and discharging into the oil cup of the bearing, and a direct driving connection between the shaft to be lubricated and the said screw.

2. The combination with a bearing having an oil cup at its upper face and a horizontal shaft to be oiled, the said shaft being mounted to turn in said bearing, and provided at one end with a friction wheel, of a pump comprising a vertically arranged barrel secured to one side of said bearing and extending above the same, the said barrel having a spout near its upper end extending over the said bearing and discharging into the said oil cup, and a screw adapted to rotate in the barrel and having a shaft at its upper end provided with a friction wheel in engagement with the friction wheel on said horizontal shaft, a pan for containing the oil and extending beneath the bearing to receive the drip oil from said bearing, and means for suspending said pan, the lower or suction end of the pump barrel being immersed in the oil in the pan.

879,795. COMPUTING-SCALE. WALTER PETERKIN, New York, N. Y. Filed July 20, 1906. Serial No. 327,028.



1. In combination, a measuring device, a lever adapted to be actuated thereby, a spindle extending longitudinally with respect to said lever, a member connecting said spindle and said lever, adapted to rotate said spindle and having means for adjustment thereupon, and a computing dial actuated by said spindle.

2. In combination, a measuring device, a lever adapted to be actuated by said measuring device, a spindle extending substantially parallel with said lever, a rack connected with said lever and adapted to rotate said spindle, a computing dial, and a hand coöperating with said dial and actuated by said spindle.

3. In combination, a measuring device, a lever actuated by said measuring device, a sleeve slidably mounted on said lever, a rack pivotally attached to said sleeve, a spindle extending longitudinally with said lever and engaging said rack, whereby said rack may rotate said spindle, a computing scale, and a hand carried near the face of said dial and actuated by said spindle.

4. In a computing device, in combination, a computing dial, a spindle adapted to actuate the same, a lever, a member adjustably mounted on said lever and engaging said spindle to rotate the same, and a price scale extending longitudinally of said spindle, and means for indicating the position of said member upon said scale.

5. In a device of the class described, in combination, a weighing scale, a spindle, a guide bar disposed substantially parallel with said spindle, a shoe slidably mounted on said guide bar, a member mounted in said shoe and adapted to rotate said spindle, a lever actuated by said scale, a connection between said member and said lever, a computing dial, and a hand coöperating therewith and actuated by said spindle.

[Claims 6 and 7 not printed in the Gazette.]

879,796. TOBACCO-PIPE. WILLIAM H. PLANE, Chicago, Ill. Filed Oct. 10, 1907. Serial No. 396,721.

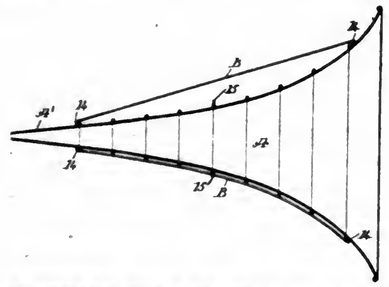
1. In a device of the class described, a bowl, and a stem having a cylindrical bore, in combination with a cylindrical core snugly fitting within said bore, said core having a plurality of annular grooves spaced at equal distances apart thereon and a pair of grooves forming an exit from each said annular grooves and converging

into one before discharging into the next succeeding groove and a mouth piece at the end of said core, substantially as described.



2. In a device of the class described, a bowl and a stem having a cylindrical bore, in combination with a cylindrical core, arranged to fit within said bore, said core having a tortuous passageway for the smoke and a plurality of nicotin pockets, an enlarged portion at the end of said core forming an extension of the stem and having a socket to receive the end of a mouth piece, a mouth piece arranged therein and a threaded intermediate portion on said core for attaching the same and the mouth piece to the stem, substantially as described.

879,797. PHONOGRAPH-HORN. VICTOR H. RAPKE, New York, N. Y. Filed June 15, 1907. Serial No. 379,119.



1. A phonograph horn or like device, constructed in independent sections, and clamping devices for drawing the sections together and holding them in abutting engagement one with the other.

2. A phonograph horn or like device, constructed in a series of independent sections, separable connections between opposing edges of the sections, and devices for drawing the sections together in abutting relation.

3. A phonograph horn or like device, constructed in a series of independent abutting sections, separable connections for the sections, and clamping devices in engagement with the exterior portion of the end sections of the horn.

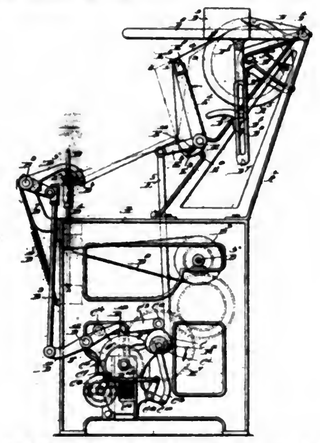
4. A phonograph horn or like device, constructed in a series of independent sections, tie rods in clamping engagement with the exterior faces of the end sections of the horn, and keepers for the said rods carried by an intermediate section of the horn.

5. A phonograph horn or like device, constructed in a series of independent sections, separable connections between opposing sections, tie rods of a spring material having their end portions in clamping engagement with the outer faces of the end sections of the horn, and keepers secured to the exterior of an intermediate section of the horn, the said tie rods being sprung beneath the said keepers at points between their ends whereby to have a drawing action on the sections of the horn.

[Claim 6 not printed in the Gazette.]

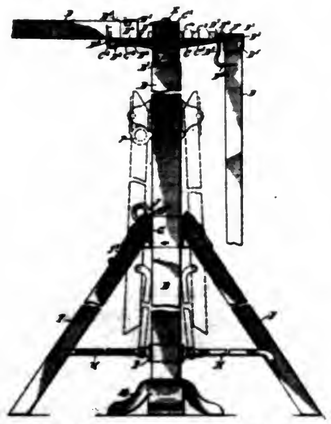
879,798. BOBBIN-WINDING MACHINE. WILLIAM D. RUNDLETT, North Andover, Mass., assignor to Davis & Furber Machine Company, North Andover, Mass., a Corporation of Massachusetts. Filed Aug. 10, 1907. Serial No. 388,033.

1. In a winding machine, a spindle to carry a bobbin, means to rotate the spindle at a uniform speed, a yarn carrying spool moved at substantially uniform surface velocity by the yarn being wound, and means to increase and then diminish the length of yarn extended from the spool to the bobbin as demanded by the varying diameter of the yarn load being wound on the bobbin.



2. In a winding machine, a spindle to carry a bobbin, means to rotate the spindle at a uniform speed, a yarn carrying spool, a constant tension device for said spool, said spool being rotated at a substantially uniform surface velocity by the yarn being wound, and means to increase and then diminish the length of yarn extended from the spool to the bobbin as demanded by the varying diameter of the yarn load being wound on the bobbin.

879,799. CLOTHES-DRIER. JOHN R. SCHMIEDER, Cincinnati, Ohio, assignor, by mesne assignments, of one-half to William Wesley Sterling, Cincinnati, Ohio. Filed Jan. 17, 1907. Serial No. 352,716.



1. A clothes drier provided with a holding plate having radial slots, each enlarged at the outer end, a clothes arm and an attaching head fixed on the inner end of the said clothes arm, for holding the latter in either an extended or folded position on the said holding plate, the said head being of I-shape, the web of the head engaging a slot in the end of the clothes arm and the flanges of the head engaging the top and bottom of the clothes arm, the said web of the head having an integral extension at its underside, the extension terminating in a knob for passing through the enlarged end of the said slot, and a bar extending integrally from the said knob approximately parallel to the clothes arm, the bar having an angular point at its end for engagement with the underside of the clothes arm.

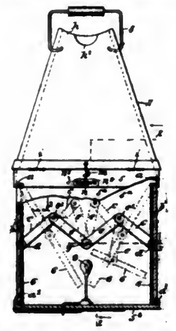
2. A clothes drier provided with a holding plate having radial slots each enlarged at the outer end, a clothes arm, and an attaching head fixed on the inner end of the said clothes arm for holding the latter in either an extended or folded position on the said holding plate, the said head being I-shape, the web of the head engaging a slot in the end of the clothes arm, and the flanges of the head engaging the top and bottom of the clothes arm, the top flange having integral clenching prongs for engaging the sides of the clothes arm, the said web of the head having an integral extension at its underside, the extension terminating in a knob for passing through the enlarged end of the said slot, and a bar extending integrally from the said knob approximately parallel to the clothes arm, the bar having an angular point at its end for engagement with the underside of the clothes arm.

3. A clothes drier comprising a base, an apertured post erected thereon, a holding plate mounted to turn on the upper end of the post, clothes arms held on the said holding plate and adapted to be moved into an extended horizontal position or into a folded vertical position, legs, a leg fixture slidable on the said post and to which the upper ends of the legs are pivoted, braces pivotally connected with the said legs, a brace fixture on the said post adjacent to its base and to which the said braces are pivoted, and a pin for engagement with the apertures of the post, to hold the leg fixture in its uppermost and lowermost positions.

4. In a clothes drier, the combination of a holding plate having radial slots with enlarged outer ends and clothes arms, each having a headed projection on its under side at its inner end, and a bar extending from the head of the projection approximately parallel with the arm.

5. In a clothes drier, the combination of a holding plate having radial slots with enlarged outer ends, and clothes arms provided with heads at their inner ends, having prongs for securing the heads to the arms said heads being each provided on its under side with a headed projection and with a bar projecting from the head of the projection and having its end secured to the clothes arm.

879,800. EGG-TESTER. CARL F. SWANSON, St. Paul, Minn., assignor to X-Ray Egg Tester Co., St. Paul, Minn. Filed July 16, 1907. Serial No. 384,037.



1. An egg-testing device, embodying a hollow four-sided body having an opening in each of two opposite sides, and mirrors adjustably supported in the body, adapted for closure of the openings or for receiving inclinations in the body.

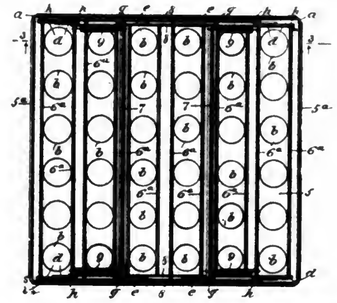
2. An egg-testing device, embodying a hollow four-sided body having an opening in each of two opposite sides, two mirrors, and adjustable link-bars pivoted upon the body and upon the mirrors, that by adjustment of said link-bars may effect the closure of the openings or be given changeable inclinations in the body.

3. An egg-testing device, embodying a hollow four-sided body having an opening in each of two opposite sides, a mirror adjustably supported in the body and adapted for inclination at the opening, a hood having upwardly converged walls and a slight-opening at the upper edge of said hood.

4. An egg-testing device, embodying a four-sided hollow body, two opposite sides thereof having an opening in each, two framed and backed mirrors that may close these openings, and two pairs of link-bars, each pair pivoted together at their lapped ends and at the remaining ends respectively pivoted upon the side edges of the mirror-frames and upon the walls of the body at opposite points, whereby the mirrors may be given different inclinations from a vertical plane, for the reflection of impinging rays of light upwardly.

5. An egg-testing device embodying a rectangular hollow body having a rabbeted upper edge and having an apertured egg-holder plate seated on said rabbeted edge, a rock-shaft journaled in a side wall of the body, near the holder-plate, an arm on an end of said shaft, and means for turning the shaft, for impinging an end of the arm on the holder-plate, thus raising said plate and permitting its manual removal.

879,801. EGG-LIFTER. CARL F. SWANSON, St. Paul, Minn., assignor to X-Ray Egg Tester Co., St. Paul, Minn. Filed July 16, 1907. Serial No. 384,038.



1. An egg lifter, comprising an apertured base-plate, two carrier-bars slidable at each edge of the base-plate, means for simultaneously sliding the carrier-bars, spacing-rods connecting the said bars in pairs, and lifter-loops hung from the spacing-rods and working through perforations in the base-plate.

2. An egg lifter, comprising a base-plate having apertures therein, angular levers pivoted on the base-plate, two slidable carrier-bars at each side edge of the base-plate, and pivoted at the sides of the angle-levers, spacing-rods mounted at their ends on the carrier-bars and connecting the said bars in pairs, and lifter-loops hung from the spacing-rods and working through perforations in the base-plate.

3. An egg lifter, comprising a base-plate having apertures therein, two angular levers pivoted on the base-plate near each edge thereof, handle bars connecting opposite levers, two pairs of oppositely slidable carrier-bars at the sides of the angle-levers and pivoted thereto at their angles, spacing rods mounted at their ends on the carrier bars, and lifter loops hung from the spacing rods and working through perforations in the base plate.

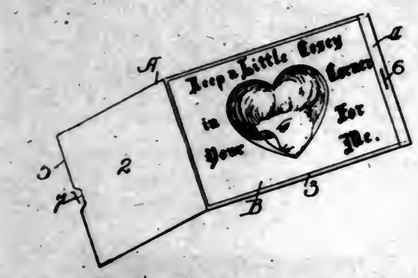
4. An egg lifter, comprising a base plate having apertures therein, angular levers pivoted on the base plate at their lower end and near opposite edges of the base plate, two pairs of oppositely slidable carrier bars, pivoted on the levers at their angles, spring actuated handle bars connecting opposite pairs of the angle levers, spacing rods mounted at their ends on the carrier bars, and lifter loops hung from the spacing rods and working through perforations in the base plate.

5. An egg lifter, comprising a base plate having apertures therein, a pair of spaced angular levers pivoted by their lower ends on ears formed on each of two opposite

edges of the base plate, two pairs of oppositely slidable carrier bars pivoted upon the levers at their angles, handle bars connecting opposite pairs of the angle levers at their upper ends, spacing rods mounted at their ends upon the carrier bars, springs connecting the handle bars with certain of the spacing rods, and lifter loops hung from the spacing rods and working through perforations in the base plate.

[Claims 6 and 7 not printed in the Gazette.]

879,802. POSTAL CARD. HUGH G. TAYLOR, St. Paul, Minn. Filed Feb. 28, 1907. Serial No. 359,728.



A postal card provided with front and back flaps, the latter having a margin folded on its outer end, a fastener securing said margin to said back, and an insert between said flaps; said front flap having its free end notched to span said fastener below said margin.

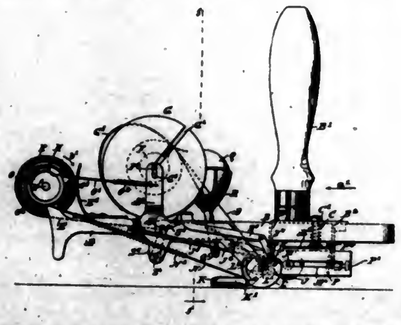
879,803. COMBINED CHAIR AND CABINET. CHARLES J. VLASAK, St. Louis, Mo. Filed Oct. 9, 1907. Serial No. 396,595.



1. A combined chair and cabinet, comprising solid side pieces having front and rear legs, the front legs projecting above the side pieces, upwardly extending side bars at the rear thereof, and arms extending from the side bars to the upper ends of the front legs, a rearwardly inclined front secured between the forward portions of the side pieces, a bottom extending from the front between the sides, beyond the rear legs, a cap piece secured to the upper ends of the side bars and extending rearwardly beyond the same, a back secured to the cap piece, to the projecting portion of the bottom and to the rear edges of the side pieces and side bars, a transverse bar between the side pieces adjacent to the lower ends of the side bars, a door hinged at one longitudinal edge to each of the side bars, and a seat formed of a fixed front section and a rear section hinged to the front section, the said rear section having a projection on its upper face at its free edge engaging the said doors and holding them closed.

2. A combined chair and cabinet, comprising side pieces having front and rear legs, and upwardly extending side bars at the rear thereof, a front secured between the front portions of the side pieces, a bottom extending rearwardly from the front between the side pieces, and beyond the rear legs, a cap piece secured between the upper ends of the side bars, a back secured to the cap piece, side pieces, side bars and to the projecting portion of the bottom, a transverse bar between the rear portions of the side pieces at the lower ends of the side bars, a door hinged at one edge to each of the side bars, and a seat having a hinged rear section, the free edge of which is provided on its upper face with a projection engaging the said doors to hold them closed.

879,804. STAMP-AFFIXING MACHINE. HERMAN J. WERTZBERGER, Holyrood, Kans. Filed July 3, 1907. Serial No. 382,056.



1. An affixing machine comprising a frame, a moistener for moistening a portion of the matter to receive the gummed stamp, and a feeding and pressing roller mounted to turn and to slide bodily on the frame, the said roller following the said moistener and engaging the stamp and drawing and pressing it onto the said moistened portion of the matter.

2. An affixing machine comprising a frame, a moistener for moistening a portion of the matter to receive the gummed stamp, a feeding and pressing roller mounted to turn and to slide bodily on the frame, the said roller following the said moistener and engaging the stamp and drawing and pressing it onto the said moistened portion of the matter, and means for holding the next stamp to allow the roller to tear the applied stamp off the next one held against movement.

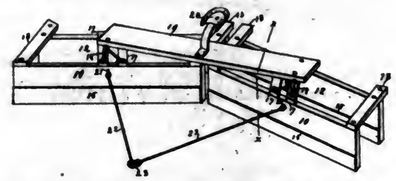
3. An affixing machine comprising a main frame, a spring-pressed auxiliary frame having a handle and pivoted on the main frame, a spool held on the main frame and containing a roll of gummed stamps, a feed mouth held on the main frame for the passage of the free end of the roll of stamps, a spring-pressed moistening pad mounted to swing on the main frame, a drawing and pressing roller for engaging the end of the stamp projecting rearwardly beyond the said mouth, and wheels journaled on the said main frame and having flat peripheral portions to allow the main frame to drop.

4. An affixing machine comprising a frame having a spring-pressed bar, and a feeding and pressing roller mounted to turn and to move bodily on the said frame, the said spring-pressed bar pressing the said roller during a part of the time the roller is moving bodily to hold the roller against returning, toward normal position.

5. An affixing machine comprising a main frame, a spring-pressed auxiliary frame having a handle and pivoted on the main frame, a spool held on the main frame and containing a roll of gummed stamps, a feed mouth held on the main frame for the passage of the free end of the roll of stamps, a spring-pressed moistening pad mounted to swing on the main frame, a drawing and pressing roller for engaging the end of the stamp projecting rearwardly beyond the said mouth, the said roller being mounted to slide bodily on the said main frame, and wheels journaled on the said main frame and having flat peripheral portions to allow the main frame to drop.

[Claims 6 to 27 not printed in the Gazette.]

879,805. DUPLEX ROAD-GRADER DRAG. GEORGE ALEXANDER, State Center, Iowa. Filed Sept. 3, 1907. Serial No. 391,727.

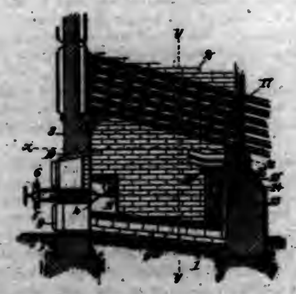


1. A duplex road scraper drag comprising two mating and reversely inclined frames composed of parallel straight bars rigidly connected by short cross bars fixed therto, metal scrapers fixed to the front faces and lower edge portions of the parallel bars, a chain fixed to the inner ends of the frames, reach bearers fixed on the tops of the two frames and a reach pivotally connected with the reach bearers, to operate as set forth.

2. A duplex road scraper drag comprising two mating and reversely inclined frames composed of parallel straight bars rigidly connected by short cross bars fixed thereto, metal scrapers fixed to the front faces and lower edge portions of the parallel bars, a chain fixed to the inner ends of the frames, reach bearers fixed on the tops of the two frames and a reach pivotally connected with the reach bearers, and means for hitching horses to the flexibly connected frames, to operate as set forth.

3. A duplex road scraper drag comprising two mating and reversely inclined frames composed of parallel straight bars rigidly connected by short cross bars fixed thereto, metal scrapers fixed to the front faces and lower edge portions of the parallel bars, a chain fixed to the inner ends of the frames, reach bearers fixed on the tops of the two frames and a reach pivotally connected with the reach bearers, a seat on the reach, bolts fixed in the parallel bars of the frames, rods pivotally connected with said bolts and the front ends of the rods connected for hitching horses thereto, arranged and combined to operate as set forth.

879,806. BOILER-FURNACE. WILLIAM N. BEST, New York, N. Y., assignor to The International Calorific Company, Los Angeles, Cal., a Corporation of California. Filed May 2, 1906. Serial No. 314,783.



1. In a furnace, the burner extending through the front setting thereof, a plurality of rows of brick supported on the base of the furnace and spaced apart to form air ducts, a bridge wall, a cross-wall, a checker-work of refractory blocks supported on said rows of brick, and from which, said cross-wall extends upward, the said cross-wall being spaced from the bridge wall to form an air space communicating with the air ducts, an arch at the upper portion of the cross-wall, and having perforations at its under side providing communication between said air space and the interior of the furnace, the said arch being projected forward of the cross-wall, the said projection being inclined upward.

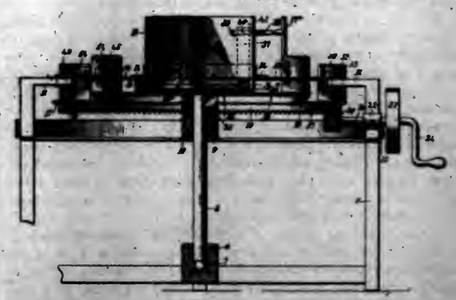
2. A furnace having a combustion chamber, a burner communicating therewith, a bridge wall, a cross wall spaced therefrom to form an air passage, a conduit for delivering air from the outside atmosphere to said passage, and an arch at the upper portion of the bridge wall closing the passage between the cross wall and the bridge wall and extending into the combustion chamber, said cross wall being provided with perforations adjacent the lower side of the arch, whereby air may flow from the air passage between the walls into said combustion chamber and beneath said arch.

879,807. ANTIFRICTION GRINDING-ROLLER. HERMAN BESSER, Alpena, Mich. Filed Mar. 21, 1907. Serial No. 363,670.



The combination of a wearing plate having a grinding surface, a roller provided with a surface for engaging said grinding surface of said wearing plate, a base having the general form of a disk and provided with a stem projecting centrally upward from said disk for supporting said roller, said base being further provided with an aperture, a revoluble table for supporting said base, and a pivot secured rigidly to said revoluble table and extending through said aperture in said base for the purpose of allowing said base to swing.

879,808. CONCRETE-MIXER. HERMAN BESSER, Alpena, Mich. Filed Apr. 16, 1907. Serial No. 368,504.



1. The combination of a revoluble table, a stationary hopper mounted thereover, a packing engaging said revoluble table for preventing entry of materials from said hopper to certain portions of said revoluble table, and stationary baffles disposed adjacent to said revoluble table and in the path of travel of materials discharged from said hopper.

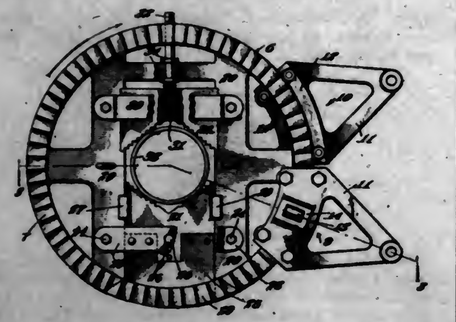
2. The combination of a table provided with a plurality of portions having different levels separated from each other, means for mixing upon one of said portions materials in a dry state, mechanism for transferring said materials thus mixed to the other portion, and mechanism disposed adjacent to said last-mentioned portion for wetting said materials.

3. The combination of a stationary member provided with slots, baffles mounted within said slots, means for adjusting said baffles in a plane crossing the general direction

of said stationary member, a revoluble table provided with a plane surface and with a step, said plane surface engaging one of said baffles, and said step engaging another of said baffles, and means for turning said table relatively to said stationary member.

4. The combination of a hopper provided with a plurality of compartments, a plurality of separate gates for discharging material from the compartments, a revoluble table disposed adjacent to said hopper and adapted to receive said materials when discharged therefrom, means for turning said table, and stationary baffles disposed adjacent to said table.

879,809. CASING-TONGS. JOHN W. BRACKNEY, Fullerton, Cal. Filed Aug. 12, 1907. Serial No. 388,136.



1. In a casing tongs, a rim provided with ratchet teeth on both of its faces, casing gripping means mounted within said rim, an operating arm mounted on each face of the rim and adapted to slide thereon, spring pressed dogs in said operating arms adapted to engage with the ratchet the casing, a pair of operating arms adapted to rotate said operating arms.

2. In a casing tongs, a rim, means to clamp said rim on the casing, a pair of operating arms adapted to rotate said rim, and means to alternately oscillate said arms.

3. In a casing tongs, a rim provided with ratchet teeth thereon, means to clamp said rim on the casing, a pair of operating arms adapted to engage the ratchet teeth on said rim, and means to alternately oscillate said arms.

4. In a casing tongs, a circular rim provided with ratchet teeth on both its faces, casing gripping means rigidly mounted within said rim, said rim being provided with a removable portion for the placement of the same around the casing, an operating arm slidably mounted on each face of said rim, spring pressed dogs in said arms adapted to engage with the teeth on said rim, and means to alternately oscillate said arms.

5. In a casing tongs, a circular rim provided with a double set of ratchet teeth, and also provided with a removable section for placement around the casing, a frame rigidly mounted inside said rim, slidable casing gripping jaws mounted on said frame, a pair of operating arms slidably mounted on said rim, dogs in said arms adapted to engage with the teeth in said rim, and means to alternately oscillate said arms.

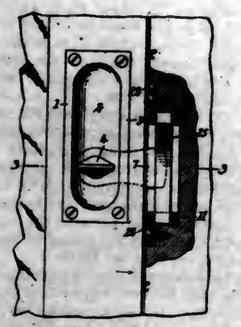
879,810. NUT AND PIPE WRENCH. WILLIAM BRANDON, Hillsboro, Wis., assignor of one-half to James Miller, Greenwood, Wis. Filed May 9, 1907. Serial No. 372,837.

A combined nut and pipe wrench, comprising a handle having a longitudinal opening therein and an opening in one side, heads on said handle, a shank slidably mounted in said handle, an extension thereon, teeth formed on one side of said shank and upon the extension, heads on said shank adapted to coöperate with the heads on the handle, one of said heads being cut away, a toothed plate disposed in said cut-away portion adapted to engage an object having curved surfaces, a lever pivotally secured in the opening in the handle, an extension on the pivoted end of said lever, teeth on one side of said lever and on said extension



adapted to coöperate respectively with the teeth on the extension and side of the shank whereby said shank may be securely locked in desired position.

879,811. WINDOW ATTACHMENT. FRANK S. BURGESS, New York, N. Y. Filed Sept. 24, 1907. Serial No. 394,324.



1. An attachment for windows comprising a bolt having a cam side face adjacent to its free end, a slotted keeper disconnected from the bolt, a spring carried by the keeper, and means for projecting said cam face of the bolt into the slot of the keeper behind and against the stress of the spring.

2. An attachment for windows, comprising a pivoted bolt, a slotted keeper, a bowed spring having its opposite ends let into slots of the keeper, and means for projecting the bolt into the slot of the keeper behind and against the stress of the spring.

3. An attachment for windows, comprising a face plate, a bolt pivotally mounted at the rear side of the face plate, a keeper having a detachable spring, and means for projecting the bolt between the keeper and spring.

4. An attachment for windows, comprising a keeper having a longitudinal slot formed therein, slots passing at each side of the keeper through the ends thereof and communicating with said longitudinal slot, and a flat spring arranged in said longitudinal slot with the ends thereof passing into said communicating slots at one side of the keeper.

5. An attachment for windows, comprising a plate having a depression in the face thereof, a button seated in said depression having a stem journaled in said plate, a bolt rigidly fixed to said stem, a slotted keeper, a curved flat spring carried by the keeper and arranged in said slot and acting to bind the bolt against the keeper, and means for limiting the further movement of the bolt when in position in the keeper.

[Claims 6 to 8 not printed in the Gazette.]

879,812. FISHING-TOOL. WILLIAM H. BUTTON and ELBERT DYER, Brandon, Oreg. Filed Nov. 11, 1907. Serial No. 401,589.

1. In a tool of the character described, jointed sections, one of which is provided with gripping means, and means normally operating to throw said sections out of alinement.



2. In a tool of the character described, a bar having a gouge-shaped head, and gripping-jaws pivotally mounted within recesses of said head and having opposed gripping-faces normally converging upwardly.

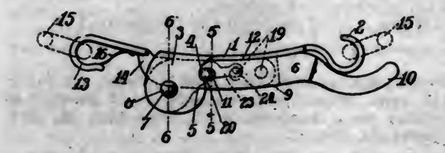
3. In a tool of the character described, a bar having an enlarged head of substantially semi-cylindrical form, and gripping-jaws pivoted within said head having opposed gripping-faces converging upwardly when in normal position.

4. In a tool of the character described, a bar composed of two sections pivoted together, means for attaching one of said sections to a drill-rod or the like, automatic gripping means carried by the other section, and means operating to throw said sections out of alinement.

5. In a tool of the character described, a bar composed of sections pivoted together, gripping means carried by one of said sections, and a spring operating to throw said sections out of alinement.

[Claims 6 and 7 not printed in the Gazette.]

879,813. HAME-FASTENER. ALEXANDER B. CORCILIUS, Jamestown, N. Y., assignor of one-third to Eric C. Anderson, one-third to Hollis J. Burr, and one-third to Herman Hirschauer, Jamestown, N. Y. Filed Oct. 2, 1907. Serial No. 395,639.



1. In a hame fastener, the combination with a housing, a lever carried by said housing, of a link pivotally secured to said lever, said link comprising a vertical body portion provided at its outer end with a horizontal hook, a flat spring engaging at one end the inner face of the outer end of the hook, and the opposite end of said spring provided with a bifurcated portion surrounding part of the vertical portion of said link, and means securing one end of said spring against the horizontal portion of said hook.

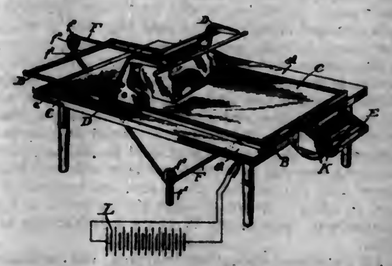
2. In a hame fastener, the combination of a housing provided with a cam-portion and a recess or curved edge, a lever pivotally mounted upon said housing, said lever provided with an elongated aperture, a link positioned contiguous to said lever, said link provided with an aperture registering with the elongated aperture of said lever, and a pin extending through said registering apertures and adapted to ride over the cam-portion of said housing and be seated in said recess for normally securing said lever in a locked position.

3. In a hame fastener, the combination of a housing, provided with depending sides, each side provided upon one edge with a cam portion and with a recessed or concaved portion, a bifurcated lever positioned between the sides of said housing, means pivotally securing said lever upon said sides, said lever provided with registering, elongated apertures formed in its sides, a link positioned within the bifurcated portion of said lever, said link provided with an aperture registering with the elongated apertures of said lever, a pin extending through the registering apertures of said lever and link and adapted to pass over the cam portions of the sides and engage the recessed edges thereof, and movable fastening means carried by said lever for normally securing the pin in a fixed position.

4. In a hame fastener, the combination with a housing provided with parallel sides, a lever pivotally mounted upon said sides, a link positioned contiguous to said lever, of a detachable, slidable pin extending through said link and lever and securing the same together, said pin provided with an annular notch formed therein, and movable means carried by said lever and adapted to engage the notch of said pin for preventing displacement of said pin off of said lever and link.

5. In a hame fastener, the combination with a housing provided with a depending side, of a bifurcated lever pivotally mounted upon said side, a link positioned within the bifurcated portion of said lever, said link provided with an aperture, said lever provided with apertures formed in its bifurcated portion and registering with the aperture of the link, and a pin extending through the registering apertures of said link and lever and adapted to engage the edge of said depending side and be positioned above the pivot of the lever, when said lever and link are in a locked position.

879,814. ELECTRICAL TYPE-WRITER. GEORGE W. DONNING, East Orange, N. J., assignor to Harry T. Ambrose, Orange, N. J. Filed Mar. 28, 1903. Serial No. 150,031.



1. In an electrical writing machine, the combination with a platen, a longitudinally-traveling carriage, and a transversely-traveling carriage supported on the longitudinally-traveling carriage, of a stationary key-board disposed independent of said carriages, movable operating-keys positioned in said key-board, electrical terminals disposed independent of said keys and in the path of movement thereof, operating members comprising typebars disposed in and traveling with said laterally-traveling carriage, rocking levers also disposed in said laterally-traveling carriage and connected to said typebars, armatures carried at one end of said rocking levers, electro-magnets disposed in juxtaposition to said armatures and constructed to effect rocking of said levers, and electric connections between said electrical terminals and electro-magnets and constructed, when said operating keys are moved, to effect a circuit through the terminals and electro-magnets to operate said typebars, substantially as described.

2. In an electrical writing machine, the combination with a platen, a longitudinally-traveling carriage, and a transversely-traveling carriage supported on the longitudinally-traveling carriage, of a stationary key-board disposed independent of said carriages, movable operating-keys positioned in said key-board, electrical terminals disposed independent of said keys and in the path of movement thereof, operating-members comprising typebars disposed in and traveling with said laterally-traveling carriage, rocking levers also disposed in said laterally-traveling carriage and connected to said typebars, armatures carried at one end of said rocking-levers, electro-magnets disposed in juxtaposition to said armatures and constructed to effect rocking of said levers, electric connections between said electrical terminals and electro-magnets and constructed, when said operating-keys are moved, to effect a circuit through the terminals and electro-magnets to operate said typebars, and a source of electrical supply common to said electric connections.

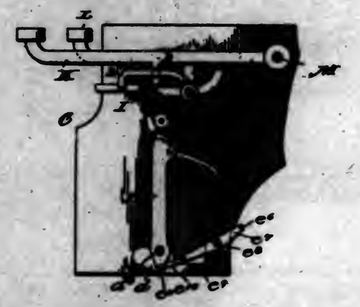
3. In an electrical writing machine, the combination with a platen, a track-frame, a longitudinally-traveling carriage disposed to travel on said track-frame, and a transversely-traveling carriage supported on the longitudinally-traveling carriage, of a stationary key-board disposed independent of said carriages, movable operating-keys positioned in said key-board, electrical terminals disposed independent of said keys and in the path of movement thereof, operating members comprising typebars disposed in and traveling with said laterally-traveling carriage, rocking levers also disposed in said laterally-traveling carriage and connected to said typebars, armatures carried at one end of said rocking levers, electro-magnets disposed in juxtaposition to said armatures and constructed to effect rocking of said levers, and electric connections between said electrical terminals and electro-magnets and constructed, when said operating-keys are moved, to effect a circuit through the terminals and electro-magnets to operate said typebars, substantially as described.

4. In an electrical writing machine, the combination with a platen, a hinged track-frame, a longitudinally-traveling carriage disposed to travel on said track-frame, and a transversely-traveling carriage supported on the longitudinally-traveling carriage, of a stationary key-board disposed independent of said carriages, movable operating-keys positioned in said key-board, electrical terminals disposed independent of said keys and in the path of movement thereof, operating members comprising typebars disposed in and traveling with said laterally-traveling carriage, rocking levers also disposed in said laterally-traveling carriage and connected to said typebars, armatures carried at one end of said rocking levers, electro-magnets disposed in juxtaposition to said armatures and constructed to effect rocking of said levers, and electric connections between said electrical terminals and electro-magnets and constructed, when said operating-keys are moved, to effect a circuit through the terminals and electro-magnets to operate said typebars, substantially as described.

5. In an electrical writing machine, the combination with a platen, a hinged, tiltable track-frame, a longitudinally-traveling carriage disposed to travel on said track-frame, and a transversely-traveling carriage supported on the longitudinally-traveling carriage, of a stationary key-board disposed independent of said carriages, movable operating-keys positioned in said key-board, electrical terminals disposed independent of said keys and in the path of movement thereof, operating members comprising typebars disposed in and traveling with said laterally-traveling carriage, rocking levers also disposed in said laterally-traveling carriage and connected to said typebars, armatures carried at one end of said rocking levers, electro-magnets disposed in juxtaposition to said armatures and constructed to effect rocking of said levers, and electric connections between said electrical terminals and electro-magnets and constructed, when said operating-keys are moved, to effect a circuit through the terminals and electro-magnets to operate said typebars, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

879,815. TYPE-WRITER. GEORGE W. DONNING, Stamford, Conn., assignor to Harry T. Ambrose, Orange, N. J. Filed Aug. 13, 1904. Serial No. 220,652.



1. A typebar embodying the following elements, namely, a movable plural typehead, a shiftable-device traveling with the typebar for shifting the head from one printing position to a different printing position, and a locking device movable into and out of engagement with one of said two elements, to lock rigidly, and to unlock, respectively, the head in any printing position.

2. A typebar embodying the following elements, namely, a movable plural typehead, a shiftable-device traveling with the typebar for shifting the head from one printing position to a different printing position, and a locking device movable into and out of interlocking engagement with one of said two elements, to lock rigidly, and to unlock, respectively, the head in any printing position.

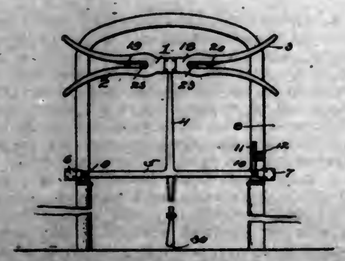
3. A typebar embodying a movable plural typehead, a shiftable-device traveling with the typebar for shifting the head from one printing position to a different printing position, and means constructed to have a two-way positive abutment engagement with one of the first two elements to effect rigid locking of the head against movement in either direction.

4. A typebar embodying a movable plural typehead, a shiftable-device traveling with the typebar for shifting the head from one printing position to another printing position, and means constructed and disposed to have a two-way positive abutment engagement with one of the first two elements in any printing position to effect rigid locking of the head against movement in either direction.

5. A typebar embodying the following elements, namely, a movable plural typehead shiftable to a plurality of printing positions, means for effecting such shifting, and means shiftable into and out of engagement with the head to lock rigidly, and to unlock, respectively, the head in any of its printing positions.

[Claims 6 to 66 not printed in the Gazette.]

879,816. MAIL-CATCHER. JOHN H. EARLE and JAMES H. SENN, Greenville, S. C., assignors of one-third to Walter West, Greenville, S. C. Filed Sept. 24, 1907. Serial No. 394,391.



1. In a mail bag catcher, a body having a mouth adapted to receive a mail bag hanger, and a bowed spring curved at one end within said mouth for preventing accidental removal of the hanger, and means for moving said body into and out of operative position.

2. In a mail bag catcher a body provided with mouths at each end thereof and adapted to receive and hold a mail bag hanger, means mounted within said mouths for preventing an accidental removal of said hangers, and means mounted upon said body for steadying the hanger.

3. In a mail bag catcher, a body portion provided with a mouth at each end thereof and a bowed spring mounted in said mouths, said springs being adapted to permit the insertion of a hanger to said catcher and also adapted to retard removal of the same.

4. In a mail bag catcher, a body portion, means provided on each end thereof for catching a hanger, means positioned in said catching means for resisting the removal of a hanger after it has entered said catching means, and a spring for steadying a hanger positioned in said catching means.

5. In a mail bag catcher, a body portion, means formed thereon for catching a mail bag, means for moving said body portion into and out of operative position, an arm rigidly secured to said last mentioned means and a spring for engaging said arm for holding said body portion in an inoperative position.

[Claims 6 and 7 not printed in the Gazette.]

879,817. SELF-FILLING FOUNTAIN-PEN. PARKE P. FLOURNOY, Bethesda, Md., assignor of one-twelfth to Parke P. Flournoy, Jr., one-twelfth to Benjamin C. Flournoy, one-twelfth to Richard W. Flournoy, one-twelfth to Edmund S. Flournoy, one-twelfth to Addison H. Flournoy, and one-twelfth to Frank C. Flournoy, Bethesda, Md.. Filed Nov. 20, 1907. Serial No. 403,038.



1. A combined closure and suction cap for self-filling fountain pens having a portion of its length of contracted and thinner cross section and adapted to engage at that point only the exterior surface of a fountain pen barrel.

2. A combined closure and suction cap for self-filling fountain pens having formed thereon a drawn in and thinned annulus adjacent its open end for the purposes described.

3. A fountain pen comprising a barrel having an elongated metallic ferrule secured upon an end thereof, and a suction cap adapted for close sliding fit with said ferrule, said ferrule having air inlets adjacent its outer end.

4. A fountain pen comprising a barrel having an elongated metallic ferrule secured upon an end thereof, and a suction cap adapted for close sliding fit with said ferrule, said ferrule having corrugations formed thereon adjacent its outer end.

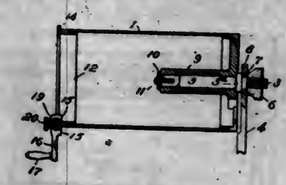
5. A fountain pen comprising a barrel having a bore through its rear end and a headed plug for engagement with said bore, and extending a little way into the reservoir and forming an annular recess with the barrel during the filling operation of the pen, said plug having a normally closed passage therethrough arranged to be uncovered upon a partial withdrawal of the plug.

[Claims 6 and 7 not printed in the Gazette.]

879,818. STENCILING-MACHINE. CHARLES GIBBS, New York, N. Y., asignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 6, 1907. Serial No. 405,331.

1. A stenciling machine comprising a frame having a standard, a stud detachably secured upon said standard, a stencil drum having an interior hub mounted upon said stud, and a cap attached to the inner end of the stud to retain the hub thereon; said stud forming the sole support of the drum and being detachable together with said drum from the standard.

2. A stenciling machine comprising a frame having a standard, a stud fitted in a bearing in said standard and keyed thereto, a nut threaded upon the end of said stud, the latter having a shoulder drawn against the standard by means of said nut, and a stencil drum having an interior hub, whereby the drum is wholly supported upon said stud; the latter having on its inner end means to retain the hub upon the stud, so that the drum and stud may be removed together from the standard.



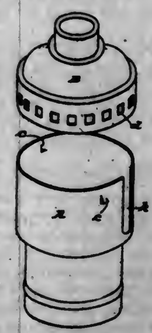
3. A stenciling machine comprising a frame having a standard, a stud having a collar and extending through said standard and keyed thereto, a nut threaded upon the end of the stud to draw said collar against the standard, and a stencil drum having an interior hub revoluble upon said stud and confined between said collar, and a cap or keeper provided upon said stud, so as to be removable with the latter from the machine.

4. In a stenciling machine, the combination of a revoluble stencil drum open at one end, an annular cap fitted upon the open end of the drum to form internal and external flanges, and a stop arm having claws to catch over said flanges, and provided with means to secure it at different points around said cap; said cap being split to permit detachment and attachment of the stop arm when the cap is disconfiected from the drum.

5. In a stenciling machine, the combination of a revoluble stencil drum open at one end, an annular head upon said end of the drum, an annular cap fitted upon the open end of the drum to form internal and external flanges, and a stop arm having claws to catch over said flanges, and provided with means to secure it at different points around said cap; said cap being split to permit detachment and attachment of the stop arm when the cap is disconnected from the drum.

[Claim 6 not printed in the Gazette.]

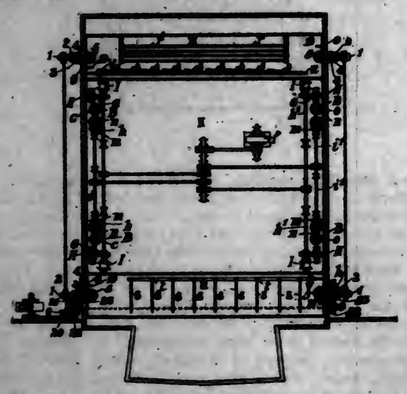
879,819. ELECTRIC-LAMP SOCKET. GILBERT W. GOODRIDGE, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Original application filed July 18, 1907, Serial No. 384,732. Divided and this application filed Oct. 26, 1907. Serial No. 399,265.



1. The combination with a two-part lamp socket consisting of a shell and a cap, of a plurality of engaging means on each of said parts, the engaging means on one part being symmetrically repeated around its circumference and exceeding in number the means on the other part.

2. An electric lamp socket having the end of the shell provided with projections and having the cap flange provided with a greater number of symmetrically arranged openings with any of which the projections in the shell can latch.

879,820. SCENE-SHIFTING DEVICE. ENRICO GIULIETTI, Genoa, Italy. Original application filed Mar. 14, 1905, Serial No. 250,088. Divided and this application filed Aug. 12, 1907. Serial No. 388,103.



1. In theater staging, a plurality of scaffolds, means for vertically adjusting said scaffolds, frames pivotally supported in said scaffolds, and side scenes supported in said frames.

2. In theater staging, a stage, a plurality of vertically adjustable scaffolds in front of said stage, a plurality of vertically adjustable scaffolds behind said stage, and sets of side scenes for both the right and left hand sides of the stage carried by said scaffolds.

3. In theater staging, a stage, a plurality of scaffolds, columns situated at the four corners of the stage and each provided with a groove, a toothed wheel with a tenon on each of said columns, a toothed wheel with an internal thread gearing with said first wheel, a vertical column at each corner of said stage carrying each of said internally threaded toothed wheels, and means for actuating said grooved columns simultaneously, said internally threaded toothed wheels being connected to said scaffolds.

4. In theater staging, a plurality of vertically adjustable scaffolds in front of said stage, a plurality of vertically adjustable scaffolds behind said stage, frames pivotally mounted in each of said scaffolds, side scenes mounted in each of said frames, and means for raising and lowering said scaffolds.

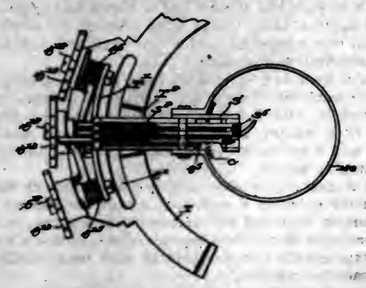
5. In theater staging, a stage, a plurality of vertically adjustable scaffolds in front of said stage, a plurality of vertically adjustable scaffolds behind said stage, a frame mounted in each of said scaffolds, side scenes mounted in each of said frames, and means for permitting each of said frames to be swung at right angles to its respective scaffold.

[Claim 6 not printed in the Gazette.]

879,821. THREAD-FEEDING MECHANISM FOR KNITTING-MACHINES. WARREN D. HUSE and LEON C. HUSE, Laconia, N. H. Original application filed Feb. 4, 1901, Serial No. 46,004. Divided and this application filed Jan. 17, 1906. Serial No. 296,443.

1. In a knitting machine, a thread-changing device comprising a plurality of thread guides one for each thread, a plurality of thread catchers one for each thread, pattern-controlled mechanism for moving any desired thread guide into or out of needle-feeding position, and for operating the corresponding thread catcher accordingly to release the thread end after it has been caught by the needles, or to clamp and hold the thread taken from the needles.

2. In a knitting machine, a thread-changing device mounted upon and carried by the part of the machine movable with respect to the needles, comprising a plurality of thread guides one for each thread, pattern-controlled mechanism for moving any desired thread guide into or out of needle-feeding position, and for operating the corresponding thread catcher accordingly, to release the thread end after it has been caught by the needles, or to clamp and hold the thread taken from the needles.



3. In a knitting machine, a thread-changing device mounted upon and carried by the movable cam cylinder of the machine, comprising a plurality of thread guides one for each thread, a plurality of thread catchers one for each thread, pattern-controlled mechanism for moving any desired thread guide into or out of needle-feeding position and for operating the corresponding thread catcher accordingly to release the thread end after it has been caught by the needles, or to clamp and hold the thread taken from the needles.

4. In a knitting machine, a thread-changing device comprising a plurality of thread guides one for each thread, a plurality of thread catchers one for each thread acting upon the thread between the delivery end of its thread guide and the needles, pattern controlled mechanism for moving any desired thread guide into or out of needle-feeding position, and for operating the corresponding thread catcher accordingly to release the thread end after it has been caught by the needles, or to clamp and hold the thread taken from the needles.

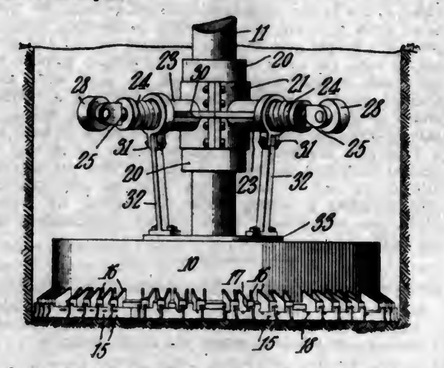
5. In a knitting machine, a thread-changing device comprising a plurality of thread guides, one for each thread, a plurality of thread catchers one for each thread acting upon the thread between the delivery end of its thread guide and the needles, a double cam for each set of thread guide and catcher, one cam part of which controls the movement of its thread guide and the other the movement of its thread catcher, the former cam part acting in advance of the latter, pattern-controlled mechanism for operating said cams to cause thereby the movement of any desired thread guide into or out of needle-feeding position and the operation of the corresponding thread catcher accordingly to release the thread end after it has been caught by the needles, or to clamp and hold the thread taken from the needles.

[Claims 6 to 11 not printed in the Gazette.]

879,822. SINK-SHAFT DRILL. JOHN P. KARNS, Boulder, Colo., assignor to The J. P. Karns Tunneling Machine Co., Boulder, Colo. Filed Mar. 15, 1907. Serial No. 362,533.

1. In a percussive drilling machine for sinking shafts of large diameter, an open drill head carrying cutter bits on its lower face, a shaft extending upward from the center of the drill head, a plurality of radially disposed arms projecting from the shaft at a point above the drill head, the outer ends of said arms being disconnected from each other to form clear spaces for the admission of the barrel of a sand pump or the like, and anti-friction members supported by said arms and arranged to engage with the wall of the shaft being drilled.

2. In percussive drilling mechanism for sinking shafts of large diameter, an open drill head having cutting bits on its lower face, a shaft connected to the head, a plurality of arms radiating from the shaft at a point above the head, the outer ends of said arms being disconnected from each other to form clear spaces for the admission of the barrel of a sand pump or the like, spring pressed pins supported by said arms, and a plurality of anti-friction rollers at the ends of said pins.

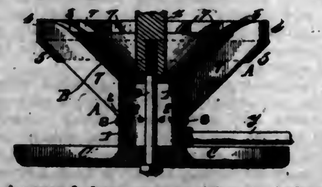


3. In percussive drilling machines for sinking shafts of large diameter, an open drill head having cutting bits on its lower face, a carrying shaft extending upward from the head, a plurality of guiding arms radiating from the shaft, anti-friction members supported by the arms, the outer ends of said arms being disconnected and spaced from each other for the reception and support of a sand pump bucket.

4. In a percussive drilling machine for sinking shafts of large diameter, an open drill head having a plurality of cutting bits on its lower face, a shaft extending upward from the center of the head, a collar rigidly secured to said head and provided with a plurality of radially extending recessed arms, the outer ends of which are disconnected to form free open spaces for the admission of a sand pump or the like, pins having their inner ends guided within said recesses, the outer portions of said pins being threaded, nuts mounted on the threaded portions of the pins, compression springs disposed between the nuts and the outer ends of the arms, and anti-friction rollers disposed at the extreme outer ends of said pins.

5. In percussive drilling mechanism for sinking shafts of large diameter, a drill head having dove tailed slots and provided with openings extending through the head, and cutting bits, each having a dove tailed head arranged to fit within the slot, each of the bits having an opening, and an auxiliary securing bolt for each bit, the bolt having a laterally bent arm arranged to engage in the opening in the bit shank, and an upwardly extending arm passing through the opening in the drill head, and a securing nut on said bolt.

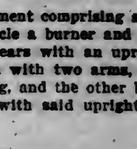
879,823. GAS-BURNER. EUGENE E. KEHNERT, Lorain, Ohio, assignor to William E. Kay, Amherst, Ohio. Filed May 9, 1907. Serial No. 372,649.



1. The improved burner comprising a body portion formed of a hollow cylinder having lateral discharge openings for a combustible medium and a series of upwardly and outwardly projecting plates separated from each other, a ring joining the outer ends of the same, and a superposed part comprising an inverted hollow cone arranged within the body part and having a series of upwardly and outwardly inclined plates adapted to fit between the corresponding plates of the body part as shown and described.

2. The combination, with the body part A, comprising a hollow central portion having gas discharge orifices and a series of upwardly and outwardly diverging plates constituting partitions, a cylindrical and a beveled ring surrounding and connected with the outer ends of such partitions, the inner part B formed of a hollow inverted truncated cone and a series of upwardly and outwardly divergent plates constituting partitions, the same being adapted to pass between the partitions of the part A and thus divide the spaces surrounding the gas receiver and discharger into numerous chambers or passages wherein combustion is effected in the manner described.

879,824. LIGHTING ATTACHMENT FOR GAS AND ACETYLENE BURNERS. CLIFFORD J. LARKIN, Everett, Mass., assignor of one-half to John R. Learned, Newton, Mass. Filed Aug. 10, 1907. Serial No. 387,997.



1. A lighting attachment comprising a body having ears bent to encircle a burner and provided with two arms one sustaining a main electrode, the other arm sustaining insulating material, and a fulcrum block having a depending shank held in said insulating material, the lower end of the shank being bent laterally and outward below said material, combined with a main electrode pivotally sustained by one of said arms, and with a secondary electrode pivotally mounted on the fulcrum block above said insulating material, a spring connected with said main electrode, a spring connected at one end with said secondary electrode, and at its other end with the laterally bent lower end of the fulcrum block shank, the movement of the main electrode taking with it the secondary electrode, the contact being broken therewith at the point where the gas issues from the burner, said springs immediately returning said main and secondary electrodes to their inoperative positions.

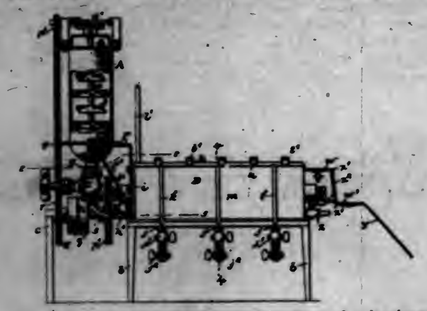
2. In a lighting attachment, a body shaped to present two arms and a foot to embrace the burner, a main electrode pivoted on one of said arms, a fulcrum block insulated from but sustained by the other of said arms and having a depending shank bent laterally at its lower end, a secondary electrode pivoted on said fulcrum block, a spring intermediate said body and said main electrode, and a second spring intermediate said secondary electrode and the laterally bent end of the shank of said block.

3. A lighting attachment comprising a standard having two ears bent to encircle a burner and provided midway of the length of said ears with an upright portion provided at its upper end with two arms, one bent to constitute a double bearing, and the other bent into position substantially parallel with said upright, and again bent at its end to constitute a holder for insulating material, combined with a stud sustained in said double bearing, a movable electrode mounted on said stud between the arms of said double bearing, a spring acting normally to retain said electrode in its inoperative position, and a second electrode sustained by the insulating material of said holder.

4. A lighting attachment comprising a standard having two ears bent to encircle a burner and provided midway of the length of said ears with an upright portion provided at its upper end with two arms, one bent to constitute a double bearing, and the other bent into position substantially parallel with said upright and again bent

at its end to constitute a holder for insulating material, combined with a stud sustained in said double bearing, a movable electrode mounted on said stud between the arms of said double bearing, a spring acting normally to retain said electrode in its inoperative position, and a second electrode located substantially in the line of the longitudinal axis of the burner, said second electrode being sustained in the insulating material of said holder.

879,825. AMALGAMATOR. JOHN S. MARQUETTE, Baltimore, Md., assignor of one-half to Peter J. Nelson, Baltimore, Md. Filed Feb. 9, 1907. Serial No. 356,609.



1. In an amalgamator, the combination of a horizontal tank provided with an end-wall over the top edge of which the waste pulp solution from the tank will overflow and having one of its walls near the bottom provided with a narrow slot; a pulp supply above said tank, and a tubular connection therefrom extending down and laterally in the form of a curved elbow, and said lateral part being broadened in the horizontal direction and narrowed in the vertical direction and said broadened part connected with the narrow slot in the tank, whereby the supply of pulp in the form of a thin broad stream will enter the tank near its bottom and be projected into the body of the solution which fills the said tank.

2. In an amalgamator, the combination of a horizontal tank; mercury-coated plates with flat sides and pendent within the tank and said flat sides in a diagonal position, and a horizontal revoluble shaft provided with propeller blades, whereby the pitch of said blades will push the solution directly against the said diagonal plates.

879,826. DUMP-CART. EZRA A. MATHERS, Philadelphia, Pa., assignor to Elihue Eldridge Smith, Philadelphia, Pa. Filed Nov. 23, 1905. Serial No. 288,762.

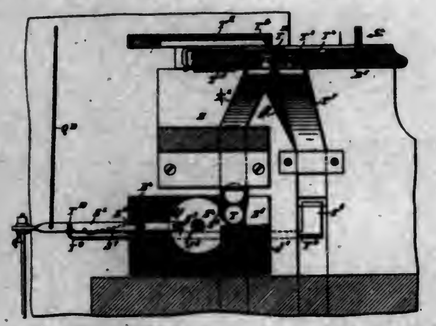


1. In a dump cart, the combination of the body having a bottom composed of sections mounted on horizontal hinges, tubular casings mounted along the top edges of sides of said body, an operating shaft mounted in suitable bearings on the front of the structure having spools mounted thereon, flexible connections running from said spools to each end of the hinged bottom sections and connected thereto, those running to the rear end passing along the top edges of the sides of the body and through said tubular casings and over pulleys on the rear end of the body in line with said casings, and means for winding, holding and releasing said shaft, substantially as set forth.

2. In a dump cart, the combination of the main body, the hinged bottom sections, the operating shaft carrying spools, a hand-operating wheel connected to said shaft by a clutch connection, a ratchet-wheel mounted thereon, a pawl for holding said ratchet wheel against backward movement, means for opening and closing said clutch and means for locking the clutch parts in engagement, substantially as set forth.

3. In a dump cart, the combination of the body provided with a bottom composed of hinged sections, an operating shaft carrying spools, flexible connections running from said spools over suitably arranged pulleys and connected with the inner edges of said hinged sections at each end, a hand-wheel mounted on said shaft and adapted to be connected therewith through a sliding clutch mounted on said shaft by means of a spline, a ratchet-wheel on the side of said hand-wheel, a pawl on a fixed part alongside said ratchet-wheel for holding it against backward movement, a shifting fork for holding said clutch and mechanism for operating said shifting fork including a locking device for holding the clutch parts into engagement when desired, substantially as set forth.

879,827. COIN-CONTROLLED APPARATUS. HERMANN MEYER, New York, N. Y. Original application filed Aug. 3, 1905, Serial No. 272,499. Divided and this application filed Dec. 23, 1905. Serial No. 293,078.



1. A coin controlled apparatus comprising two electric circuits having a part common to both circuits, a motor in both circuits, a coin controlled switch for closing and opening one of the circuits, a pneumatically controlled switch for opening and closing the other circuit, and pneumatic means for actuating the said coin controlled switch to release the coin and break the coin controlled circuit immediately previous to closing the other circuit by the pneumatically controlled switch.

2. A coin controlled apparatus comprising two electric circuits having a part common to both circuits, one of the circuits being coin controlled and the other pneumatically controlled, a motor in both circuits, a coin controlled switch having a fixed and a movable member, the members being adapted to be electrically connected with each other by a coin, pneumatic means for actuating the said movable member of the coin controlled switch to retain or release the coin, a pneumatically controlled switch for opening and closing the pneumatically controlled circuit, and pneumatic means for actuating the said pneumatically controlled switch immediately after the said movable switch member releases the coin and breaks the said controlled circuit.

3. A coin controlled apparatus provided with an electric motor, two electric circuits having a part common to both circuits and both circuits being connected with the said electric motor, one of the circuits being coin controlled and the other being pneumatically controlled, a coin controlled switch having a fixed member, a disk mounted to turn and a spring pressed lever for turning the said disk, the said disk and the said fixed member forming terminals for the said coin controlled circuit to close the latter on the introduction of a coin between the said fixed member and the said disk, a pneumatic connected with the said lever for actuating the latter to turn the disk to release the coin, a switch for the said pneumatically controlled circuit, and another pneumatic for actuating the switch for the said pneumatically controlled circuit immediately after the coin is released by the turning of the said disk.

4. A coin controlled apparatus provided with an electric motor, two electric circuits having a part common to both circuits and both circuits being connected with the said electric motor, one of the circuits being coin controlled and the other being pneumatically controlled, a coin controlled switch having a fixed member, a disk mounted to turn and a spring-pressed lever for turning the said disk, the said disk and the said fixed member forming terminals for the said coin controlled circuit to close the latter on the introduction of a coin between the said fixed member and the said disk, a pneumatic connected with the said lever for actuating the latter to turn the disk and release the coin, a switch for the said pneumatically controlled circuit, another pneumatic for actuating the switch for the said pneumatically controlled circuit immediately after the coin is released by the turning of the said disk, and means driven by the said motor for actuating the said pneumatics in the proper sequence.

879,828. ELECTROPNEUMATIC DRILL. OLIN S. PROCTOR, Denver, Colo. Filed Aug. 26, 1905. Serial No. 275,921.



1. The combination with a fluid cylinder of two pistons in said cylinder, whereby it is divided into a central and two end chambers, said cylinder provided with a bypass connecting the end chambers and means to control the flow of fluid through said bypass.

2. The combination with a cylinder, a pair of pistons movable therein, a motor for driving one of the pistons, of the inlet check valve 41 located in the wall of said cylinder near the rear end and means for affording communication between the space included by the wall of the cylinder, the rear cylinder head and the rear face of the motor driven piston and the space included by the wall of the cylinder the forward face of the motor driven piston and the rear face of the forward piston.

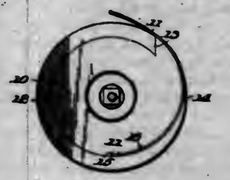
3. The combination with a cylinder of two pistons in said cylinder, whereby it is divided into a central and two end chambers, said cylinder provided with a by-pass connecting the end chambers and means for affording communication between said central chamber and said bypass and for controlling the flow of fluid between said bypass and said central chamber.

4. The combination, as a rock drilling apparatus; of a casing or shell, a drilling tool supported therein; an air cylinder comprised in the casing and having a port or passage outside the air chamber, communicating from one end thereof to the other; a piston, movable, independently, in said cylinder and constituting a hammer to strike the tool; a plunger, also in said air cylinder, axially behind and movable independently of the piston; and means for reciprocating the plunger in the air cylinder, behind the piston, to alternately compress and rarefy the air between said plunger and piston, so as to cause the latter to strike the drill at every stroke of the plunger.

5. In a rock drilling machine, the combination, in a suitable casing or frame, of an actuating motor, an air cylinder, comprised in said casing, and provided with spring pressure valves, to automatically regulate the density of the air in the cylinder, a by-pass or port, communicating with each end of the air chamber of the cylinder, a plunger and a piston adapted to reciprocate in said air cylinder, independently of each other, the latter constituting a hammer to strike the tool, means for transmitting the motion of the motor to the plunger, a chuck or drill support held in the casing against longitudinal motion, and mechanism for rotating the said chuck, all substantially as shown and described.

[Claims 6 to 14 not printed in the Gazette.]

879,829. ARBOR. ORLANDO ROSE, Crown Point, Ind. Filed Sept. 26, 1907. Serial No. 394,659.



1. The combination, with an arbor and spring, of a collet which is applied around the periphery of the arbor, the end of the spring being held between the arbor and collet and extending out between the separated ends of the collet.

2. The combination with an arbor having a recess in the periphery thereof, of a spring the end of which is attached to the arbor in said recess, and a collet which extends around the arbor and outside of said end, to hold the same in place.

3. The combination of an arbor having a recess therein the inner surface of which forms a curve which merges into the circumference of the arbor, a spring the end of which fits in said recess, and a collet which extends around the periphery of the arbor and overlies the end of the spring, and is tapered at the end to form a circle at the outer edge concentric with the axis of the arbor.

4. The combination of an arbor having a recess in its periphery, a spring the end of which extends into said recess and is attached to the arbor therein, and a collet tapered to form a circle at its periphery, extending around the arbor and overlapping the end of the spring and having detached ends between which the spring passes.

5. The combination of an arbor having a reduced portion or notch in its periphery, and also having a recess provided with a pin, a spring the end of which extends into said recess and engages the pin, and a collet one end of which is set in said notch and the other end of which overlaps the end of the spring, the collet being tapered at the end to form a circular winding surface.

879,830. ATTACHMENT-PLUG. DAVID L. WEBB, New York, N. Y., assignor, by direct and mesne assignments, to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 16, 1903. Serial No. 152,886.



1. An attachment plug comprising an insulating base, spring fingers supported thereon, a longitudinally movable spindle, and means connected to said spindle for forcing said fingers outwardly, for substantially the purposes set forth.

2. An attachment plug comprising an insulating base, and spring contacts thereon for making contact with the shell of a suitable socket, a knob or handle adapted to be moved longitudinally of the plug outwardly and inwardly, and means connected to be operated by the movement of said handle for forcing said spring contacts apart, for substantially the purposes set forth.

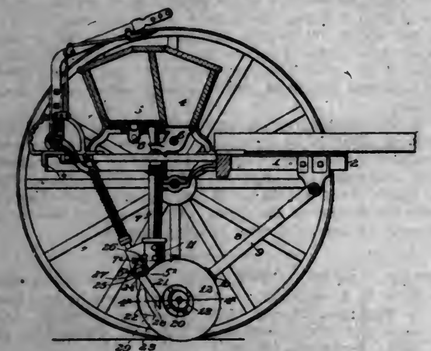
3. An attachment plug comprising an insulating base having an aperture therein, spring contacts connected to one side of said base, and electric contacts connected to the other side, one of said electric contacts connecting with the said spring contacts, a longitudinally movable spindle passing through the aperture in the base and in electric connection with the other of said electric contacts, an insulating disk on said spindle adapted to force the spring contacts apart when the spindle is moved longitudinally, and a contact on said disk electrically connected to the spindle, for substantially the purposes set forth.

4. The combination with a lamp socket, of an attachment plug having spring fingers adapted to be forced outwardly into contact with the shell of the socket, and a longitudinally movable disk connected to operate said spring fingers, for substantially the purposes set forth.

5. A switch-plug comprising the combination of a body, a longitudinally movable member, a contact-tip, a contact-strip adapted to engage a socket-terminal and means shifting said strip laterally into position to engage a socket when said member is shifted longitudinally in one direction.

[Claims 6 to 21 not printed in the Gazette.]

879,831. DISK DRILL. ALBERT ARMITAGE, Fairport, and WILLIAM P. THISTLETHWAITE, Macedon, N. Y., assignors to Ontario Drill Company, Despatch, N. Y., a Corporation of New York. Original application filed Apr. 24, 1905, Serial No. 257,053. Divided and this application filed Apr. 21, 1906. Serial No. 312,958.



1. In an agricultural tool, the combination with a support and a disk revolubly mounted thereon, of a block detachably connected to the support and spring fingers rigidly connected to the block and yieldingly engaging opposite sides of the disk.

2. In an agricultural tool, the combination with a support and a disk revolubly mounted thereon, of a block, spring fingers thereon engaging opposite sides of the disk and means for connecting the block to the support to rotate it thereon to place said fingers under tension.

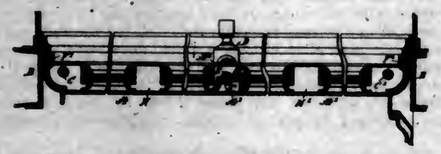
3. In an agricultural tool, the combination with a support and a disk revolubly mounted thereon, of a block, spring fingers arranged thereon with the working edge of one normally extending laterally toward the corresponding edge of the other, said fingers being adapted to engage opposite sides of the disk and means for securing the block to the support.

4. In an agricultural implement, the combination with a disk, a support on which the latter is journaled, a block having inner and outer faces, of scraper fingers adapted to engage opposite sides of the disk, each having an end resting against one of said faces on the block, a single attaching device securing the blades to the block and a clamping member attaching the latter to the support.

5. In an agricultural tool, the combination with a support and a revoluble disk mounted thereon, of a block, scraper fingers thereon adapted to yieldingly engage opposite sides of the disk and disposed relatively to each other on the block so that when the latter is in the normal position spring tension is imparted to the fingers and a securing device for clamping the block to the support.

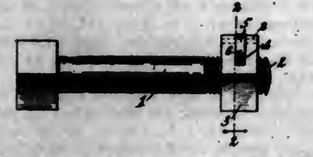
[Claim 6 not printed in the Gazette.]

879,832. WINDOW. SIDNEY U. BARR, New York, N. Y. Filed Mar. 27, 1907. Serial No. 364,781.



A window comprising a mullionless window frame, sashes mounted to swing in the said frame and having their adjacent stiles interlocking when the sashes are closed, the contact face of each interlocking stile having a straight middle portion and curved side portions, and a packing held in recesses formed in the said straight middle portions.

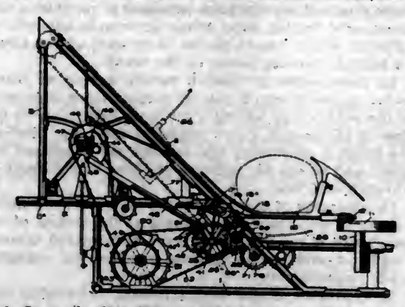
879,833. NUT-LOCK. OLIVIER BLAIS, Bromptonville, Quebec, Canada, assignor of one-half to J. E. Bilodeau, Bromptonville, Canada. Filed May 19, 1906. Serial No. 317,830.



1. A nut lock, comprising a nut provided with a slot therein, a dog pivotally mounted within said slot and adapted to engage the threads of a bolt passing through said nut to thereby lock said nut upon said bolt, oppositely disposed arms extending from the dog, and projecting through and beyond adjacent faces of the aforesaid nut, a tooth on said dog adapted to be forced into operative engagement with the threads of a bolt, a spring within said slot and bearing upon the inner face of one of the aforesaid arms to thereby maintain the tooth normally disengaged from the threads of said bolt and the other of said arms being adapted to act as a lever whereby said tooth may be forced out of engagement with the threads of the aforesaid bolt to thereby allow rotation of the nut.

2. A nut lock comprising a nut provided with a slot extending horizontally substantially half way through said nut from corner to corner diagonally, a dog pivotally mounted within said slot adjacent the slotted corner of the nut, arms projecting in opposite directions from said dog through said slot and extending through and beyond adjacent faces of said nut, a tooth on said dog intermediate the ends of said arms adapted to engage the threads of a bolt passing through said nut to thereby lock said nut against rotation on said bolt, a spring mounted within said slot and bearing upon the inner face of one of said arms and thereby acting to maintain the tooth in inoperative position or disengagement with the threads of said bolt, and the other of said arms acting as a lever whereby said tooth may be forced out of locking engagement with the threads of the bolt after it has previously been forced into engagement with the same.

879,834. TRIPPING AND BUNDLE-COUNTING MECHANISM FOR GRAIN-SHOCKERS. JOSEPH BODA, Plano, Ill., assignor to Independent Harvester Company, Plano, Ill., a Corporation of Maine. Original application filed Jan. 16, 1907, Serial No. 352,544. Divided and this application filed Sept. 6, 1907. Serial No. 391,721.



1. In a shocker for a grain harvester, in combination with a bundle-elevating mechanism and means for delivering the bundle thereto; means by which the delivery of each bundle trips the elevator into action; means for arresting the elevating action upon the completion of a given movement after each tripping; a wheel rotated in the elevator train; a device for interfering with the operation of the elevator-arresting device, and an element rotated by the last-mentioned wheel which operates said interfering means to cause the elevator to perform extra travel after a predetermined number of operations with ordinary travel.

2. In a grain shocker, a bundle elevator and means for delivering the bundles thereto; elevator-operating mechanism which operates in steps with rest intervals and in a cycle consisting of a predetermined number of such steps and intervals and which is tripped into action by the delivery of each bundle to the elevator; means for terminating each step of the elevating action normally after a limited amount of elevation less than the whole height of the elevator; a device for interfering with the action of said step-terminating means; a wheel in the elevator train which makes one complete revolution for each full cycle of the elevator's action; a device on said wheel which operates said interfering device to cause the elevator to operate periodically with an increased step.

3. In a grain shocker, a bundle elevator comprising bundle carriers and a train for operating them; means operated by the delivery of the bundle to the elevator for tripping the train into engagement with the driving power and means for disengaging it from the driving power to cause it to operate normally in steps corresponding to one rotation of a shaft in said train; means for interfering with the disengaging device to multiply the length of the step of the elevating action; a wheel rotated in the elevator train having a device which actuates said interfering means, said wheel being geared with the train to make one complete revolution for the complete cycle of the elevator's action including a predetermined number of normal steps and one multiplied step, such device being extended throughout the portion of the circumference of said wheel corresponding to the length of the multiplied step.

4. In a grain shocker, a bundle-elevating mechanism; means for delivering the bundles thereto; means for tripping the elevating mechanism into operation when the bundles are delivered to it, comprising a tripper on the bundle-delivering mechanism; a trip on the elevator frame with which the tripper collides upon the delivery of the bundle; a rock shaft mounted on the elevator frame; connections by which it is rocked by said collision of the tripper with the trip; a continuously rotating wheel; a clutch device for connecting such wheel with the initial operating shaft of the elevator, said trip rock shaft having a detent arm which engages the clutch dog to hold it out of operating connection with the continuously rotating wheel; a spring which tends to throw it into connection when relieved from the detent arm; a trip dog having a terminal with which said detent arm directly collides when it encounters the dog, said terminal being spring-pressed in the direction of such encounter and adapted to be retracted by its spring under the detent when the latter is lifted, and to prevent said detent from dropping in behind the dog again before the clutch engagement is effected.

5. In a shocker for a grain harvester, in combination with a bundle-elevating mechanism and means for delivering the bundles thereto, means by which the delivery of each bundle trips the elevator into action; means for arresting the elevating action upon the completion of a given movement after each tripping, the elevator train having a wheel provided with a part rotating with it for interfering with the elevator-arresting device at a predetermined part of the revolution of said wheel, said part being extended to continue such interference for a predetermined portion of said revolution to cause the elevator to perform a predetermined amount of extra travel after a predetermined number of operations in its ordinary travel.

[Claims 6 and 7 not printed in the Gazette.]

879,835. PROCESS OF MAKING DIALKYL BARBITURIC ACID. MAX ENGELMANN, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Original application filed July 20, 1906, Serial No. 327,084. Divided and this application filed July 16, 1907. Serial No. 384,079.

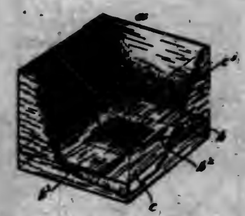
1. The process for the production of dialkyl barbituric acids having the above given general formula, which process consists in first heating dialkyl malonyl diurethanes in the presence of carbonic acid derivatives and isolating from the thus obtained melt the resulting 5-dialkyl-2.4.6-trioxypyrimidins, substantially as described.

2. The process for the production of dialkyl barbituric acids, which process consists in first heating dialkyl malonyl diurethanes in the presence of carbonic acid derivatives, dissolving the thus obtained melt in ammonia, filtering the liquid, boiling the filtrate to drive off the ammonia, and crystallizing the resulting 5-dialkyl-2.4.6-trioxypyrimidins therefrom, substantially as described.

3. The process for the production of diethyl barbituric acid, having the above given general formula, which process consists in first heating diethyl malonyl diurethanes in the presence of carbonic acid derivatives, and isolating from the thus obtained melt the resulting 5-diethyl-2.4.6-trioxypyrimidin, substantially as described.

4. The process for the production of diethyl barbituric acid, which process consists in first heating diethyl malonyl diurethanes in the presence of carbonic acid derivatives, dissolving the thus obtained melt in ammonia, filtering the liquid, boiling the filtrate, to drive off the ammonia, and crystallizing the resulting 5-diethyl-2.4.6-trioxypyrimidin therefrom, substantially as described.

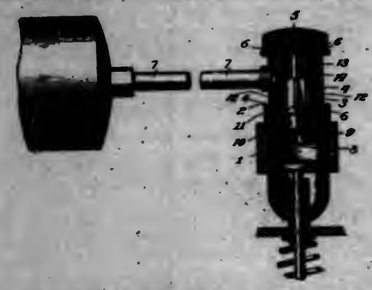
879,836. FOLDING FRUIT-BOX. HENRY F. PADGHAM, Portland, Oreg. Filed Feb. 18, 1907. Serial No. 358,137.



A folding fruit box comprising folding walls, a bottom, said bottom comprising two members formed of veneer and scored along their folding edges to provide attaching portions, means for fastening the attaching portions to the walls of the box, one of said members being equal in area

to the interior area of the box and abutting against the walls thereof and provided with an opening, the other said bottom member having only a portion of its body equal to the width of the companion member and abutting against the side walls and having a tongue extending centrally from said body portion, said tongue passing through the opening in the companion member and resting on the top of the latter.

879,837. EXPLOSION-ENGINE. CARL F. PEARSON, Chicago, Ill., assignor to The Triumph Motor Car Company, a Corporation of Illinois. Original application filed Sept. 22, 1906, Serial No. 335,835. Divided and this application filed Feb. 13, 1907. Serial No. 357,160.

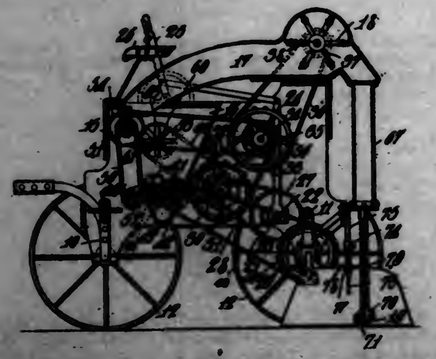


1. A reducing valve, comprising an inner casing provided with a shoulder on its exterior, an outer casing resting at one end on said shoulder, and a cap engaging the opposite end of the outer casing and also engaging the inner casing.

2. A reducing valve, comprising a cylindrical casing screw-threaded at each end, a shoulder on said casing, a screw-threaded cap on said casing, an outer casing engaging said shoulder and cap forming a chamber which communicates with the interior of said inner casing and a spring pressed valve in said inner casing.

3. A pressure reducing valve for explosion engines, comprising a tubular portion having a valve seat formed therein and radial cavities extending through the shell thereof, a plunger portion formed of substantially square stock and having a valve cone formed upon one end and a spring seat upon the other end thereof, a spring bearing upon the spring seat and mounted within the tubular portion, a cap threaded upon the end of the tubular portion and forming a seat for the spring, and a cylindrical shell portion inclosing a portion of the tube and forming a tight chamber about such tube.

879,838. INSECT-DESTROYER. JOSEPH S. PEEK, Kerrville, Tex., assignor of one-half to James H. Holliman, Kerrville, Tex. Filed Nov. 18, 1907. Serial No. 402,688.



1. In combination, a wheeled vehicle, a crushing device carried thereby, a pair of suction tubes arranged to straddle a row of plants and having their lower ends adjacent to the surface of the ground, guard fingers carried by the lower portions of the tubes, plant shaking devices carried by the vehicle, and means for creating the flow of a current of air through said tubes.

2. In combination, a wheeled vehicle, a crushing device thereon, a pair of suction tubes arranged to straddle a row of plants and having their lower inlet ends adjacent to the ground, guard fingers at the lower ends of the tubes, and a suction inducing means on the vehicle.

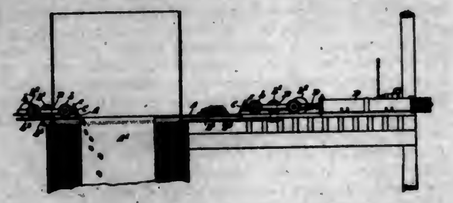
3. In combination, a wheeled vehicle having an insect receiving compartment, a pair of suction tubes depending from the vehicle and having their inlet ends close to the surface of the ground, guard fingers at the lower portions of the tubes, a conducting flue between the tubes and the chamber, and means for inducing the flow of a current of air through said flue.

4. In apparatus of the class described, a receiving chamber, a pair of crushing rolls arranged at the bottom of the chamber, and a receiving casing for the crushed insects, the walls of said casing forming scrapers for engaging with the crushing rolls.

5. In apparatus of the class described, a receiving casing, crushing means at the bottom of said casing, an endless slatted belt forming one wall of the chamber, and means for preventing the accumulation of material on the belt and thereby permitting the free passage of air.

[Claims 6 and 7 not printed in the Gazette.]

879,839. MECHANICAL ORE-FEEDER FOR BLAST-FURNACES. FREDERICK S. SANDERSON, Queenstown, Tasmania, Australia, assignor to The Mount Lyell Mining and Railway Company Limited, Melbourne, Australia. Filed Aug. 9, 1906. Serial No. 329,812.



1. A mechanical ore feeder for blast furnaces consisting of a series of push plates or scrapers assembled in line one in front of each oppositely located furnace feed opening, each line of push plates being supported by hinges upon a frame borne on wheels which carry the said frame above the charging floor and about the furnace and the frame being capable of being worked to and from the furnace feed openings by aid of a hydraulic ram substantially as described and shown.

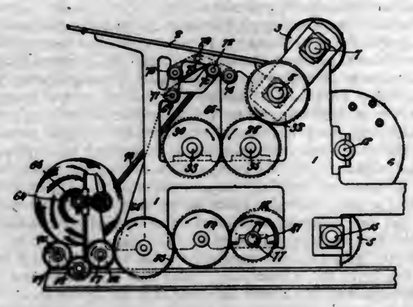
2. A mechanical ore feeder for blast furnaces, consisting of a series of push plates or scrapers assembled in line one in front of each oppositely located furnace feed opening, each line of pusher plates being supported upon a frame carried on wheels which convey said frame above the charging floor and about the furnace, and means for reciprocating said frame to and from the furnace feed opening.

3. A mechanical ore feeder for blast furnaces, consisting of a series of push plates or scrapers assembled in line one in front of each oppositely located furnace feed opening, each line of pusher plates being supported upon a frame carried on wheels which convey said frame above the charging floor and about the furnace, said frame being adapted to be reciprocated to and from the furnace feed openings by the aid of hydraulic mechanism.

4. A mechanical ore feeder for furnaces, consisting of a series of push plates or scrapers assembled in parallel lines one in front of each oppositely located furnace opening, movable frames for suitably supporting said pusher plates, means for connecting together said frames, and mechanism for reciprocating said frames to and from the furnace feed openings.

5. A mechanical ore feeder for furnaces, consisting of push plates or scrapers assembled in parallel lines one in front of each oppositely located furnace opening, said pusher plates being hinged to suitable movable frames, wheels attached to said movable frames for conveying said frames above the charging floor and about the furnace, tie rods connecting said frames together, and hydraulic mechanism for reciprocating said frames to and from the furnace feed openings.

879,840. PRINTING-PRESS. RALPH C. SEYMOUR, New York, N. Y., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of New Jersey. Original application filed Dec. 30, 1905, Serial No. 293,923. Divided and this application filed July 3, 1906. Serial No. 324,602.



1. In combination, a web roll, rotary cutters driven at a constant speed and means for feeding greater or lesser lengths of web to the cutters during one revolution thereof to permit sheets of different lengths to be cut from the web, said web feeding means including friction driving rolls forming a support for the web roll and a variable drive mechanism.

2. In combination, a web roll, rotary cutters driven at a constant speed and means for feeding a length of web to the cutters during one revolution thereof sufficient to permit a sheet of one length to be cut from the web and for feeding a shorter length of web to the cutters during one revolution thereof sufficient to permit a shorter sheet to be cut from the web, said web feeding means including friction driving rolls forming a support for the web rolls and a variable drive mechanism.

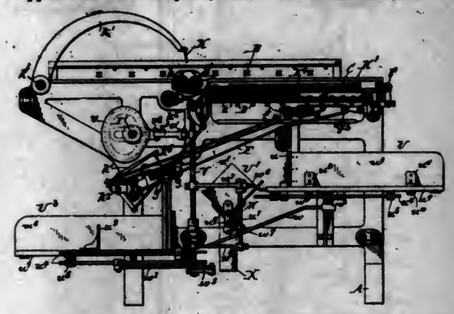
3. In combination, a web roll, rotary cutters driven at a constant speed and means for feeding a length of web to the cutters during one revolution thereof sufficient to permit a full length sheet to be cut from the web and for feeding a shorter length of web to the cutters during one revolution thereof sufficient to permit a shorter sheet to be cut from the web, said web feeding means including friction driving rolls forming a support for the web roll, and a variable drive mechanism.

4. In combination, a web roll, rotary cutters and means for feeding a predetermined length of web to the cutters during one revolution thereof and for varying the speed of the web during said one revolution of the cutters, said web feeding means including friction driving rolls forming a support for the web roll and a variable drive mechanism.

5. In combination, a web roll, rotary cutters and means for feeding a predetermined length of web to the cutters during one revolution thereof and for feeding the web to the cutters at the surface speed of the cutters at the time the sheet is severed from the web and at a slower speed intermediate the cutting operations, said web feeding means including friction driving rolls forming a support for the web roll and a variable drive mechanism.

[Claims 6 to 9 not printed in the Gazette.]

879,841. PACKING MECHANISM FOR FOLDING-MACHINES. CHARLES A. STURTEVANT, Plainfield, N. J., assignor to E. C. Fuller Company, New York, N. Y., a Corporation of New York. Original application filed Jan. 23, 1905, Serial No. 242,273. Divided and this application filed May 22, 1906. Serial No. 318,175.



1. A folding machine comprising an upright packer shaft, a plurality of stacking boxes arranged around said shaft and extending horizontally in different directions therefrom, packers movable lengthwise in said boxes, operating connections between said packers and said shaft, one of said connections together with the corresponding packer and box being vertically adjustable relatively to said shaft without disturbing the other connections, packers and boxes, substantially as set forth.

2. A folding machine comprising an upright packer shaft, a plurality of stacking boxes arranged around said shaft and extending horizontally in different directions therefrom, packers movable lengthwise in said boxes, and operating connections between said packers and said shaft consisting of a plurality of rock arms arranged on said shaft, and rods connecting said arms with said packers, substantially as set forth.

3. A folding machine comprising a plurality of stacking boxes, packers reciprocating horizontally in said boxes, slides supporting said packers, an upright rock shaft provided with a plurality of rock arms, rods connecting some of said rock arms directly with the slides of some of the packers and a rock lever having one of its arms connected by a rod with one of the rock arms of said shaft while its other arm is connected by a rod with the slide of one of said packers, substantially as set forth.

4. A folding machine comprising a vertically adjustable stacker box, a packer reciprocating in said box, a slide guided on the box and carrying said packer, an upright rock shaft, an upright adjusting bar connected by rock arms with said shaft, and a link pivoted directly at one end on the slide of said packer and capable of sliding at its opposite end on said adjusting bar, substantially as set forth.

5. A folding machine comprising a stacker box, an upright shank carrying said box, an adjusting pinion meshing with a gear rack on the shank, a bracket having a socket in which the shank is guided, a bearing in which the pinion is journaled and a split through said socket and bearing, and a clamping device for drawing the split parts of the bracket together, substantially as set forth.

[Claim 6 not printed in the Gazette.]

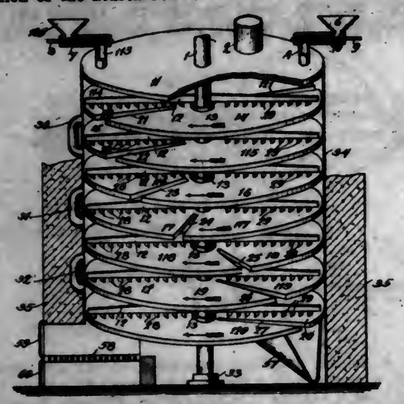
879,842. ROASTER. WALTER G. SWART, Denver, Colo. Original application filed Feb. 25, 1905, Serial No. 247,211. Divided and this application filed Mar. 31, 1906, Serial No. 309,067. Renewed June 11, 1907. Serial No. 378,419.

1. A roaster having a hearth with a plurality of substantially radial slots extending inward from its periphery.

2. In roasters, a series of vertically arrayed hearths each provided with a plurality of substantially radial slots out of vertical alinement.

3. In roasters, a series of vertically arrayed hearths,

each provided with a plurality of substantially radial slots out of vertical alinement, the slots extending inward from the periphery of the hearth, each slot being above the rear portion of the hearth below.



4. In roasters, a series of vertically arrayed hearths, each provided with a plurality of substantially radial slots, out of vertical alinement, and feed devices to feed material to the separate divisions of the hearths.

5. In roasters, a series of vertically arrayed hearths each provided with a plurality of substantially radial slots out of vertical alinement, and feed devices to feed material to the separate divisions of the hearths.

[Claims 6 to 8 not printed in the Gazette.]

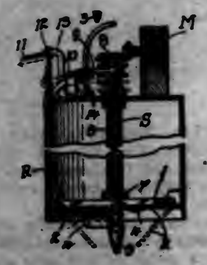
879,843. METHOD OF PREPARING BREWING-WATERS. MAX WALLERSTEIN, New York, N. Y. Filed June 21, 1907. Serial No. 380,159.

1. The method of treating water for the preparation of beverages which consists in precipitating calcium sulfate in presence of a colloidal retarding agent, and dissolving the precipitate in water in the required proportion.

2. The method of treating water for the preparation of beverages which consists in precipitating calcium sulfate in presence of a colloidal retarding agent, separating the precipitate, mixing therewith salts capable of accelerating its solution and modifying its action, and dissolving the mixture in water in the required proportion.

3. The method of treating water for the preparation of beverages which consists in precipitating calcium sulfate in presence of a colloidal retarding agent, separating the precipitate, mixing therewith chlorids of alkali or alkali earth metals, and dissolving the mixture in water in the required proportion.

879,844. EXCAVATOR. OSCAR SCHALLER, Maplewood, Mo. Filed Aug. 31, 1907. Serial No. 390,904.



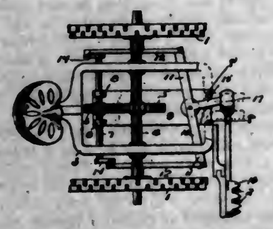
1. An excavator comprising a receptacle open at the bottom, gates for closing said bottom, means located at the center axis of the receptacle for locking the gates in their closed position, the gates having openings formed therein for permitting the passage of the dirt therethrough into the receptacle for the closed position of the gates, blades depending from the bottom faces of the gates adjacent to the openings and means for releasing the gates from the locking means upon the removal of the receptacle from the surface operated on, substantially as set forth.

2. An excavator comprising a cylindrical receptacle having an open bottom, a rotating shaft passing axially through the receptacle, radial arms at the bottom of the shaft, gates hinged to the ends of the arms and normally closing against the shaft and temporarily closing the bottom of the receptacle locking means for the gates, blades depending from the bottom faces of the gates, the latter being provided with openings for the passage of the dirt loosened by the blades, into the receptacle, and means for effecting the release of the gates and releasing the dirt upon withdrawal of the receptacle for the surface operated on, substantially as set forth.

3. An excavator comprising a receptacle having an open bottom, a rotating shaft passing axially through the same, radial arms at the bottom of the shaft, gates hinged to the ends of the arms and normally closing against the shaft and temporarily closing the bottom of the receptacle, blades depending from the bottom faces of the gates, the latter being provided with openings for the passage of the dirt into the receptacle, a sliding bar disposed longitudinally of the shaft, a shoulder at the lower end of the bar and normally supporting the free edges of the gates, a ring slidingly mounted on the shaft and coupled to the bar, a spring-controlled lever carried by the receptacle for normally supporting the ring and bar in an elevated position, and a cord or cable secured to one arm of the lever for tripping the latter and depressing the bar and releasing the gates, substantially as set forth.

REISSUES.

12,752. MOWING-MACHINE, JOHN L. TOMER, Export, Pa., assignor of one-half to George D. Hamor, New Kensington, Pa. Filed Oct. 9, 1907. Serial No. 396,694. Original No. 834,646, dated Oct. 30, 1906, Serial No. 317,277.



1. In a mowing-machine, the combination of a main frame provided with an axle and supporting traction wheels, an underframe, a crank shaft and gearing connecting it with the axle, a sickle bar, a pivoted triple-arm lever mounted on the underframe and connected with the sickle bar, and pitmen actuated by the crank shaft and connected with the triple-arm lever, substantially as set forth.

2. In a mowing-machine, the combination of a main frame provided with an axle and supporting traction wheels, an underframe, a crank shaft and gearing connecting it with the axle, a sickle bar, a pivoted triple-arm lever mounted on the underframe and having a ball-and-socket connection with the sickle bar, and pitmen actuated by the crank shaft and connected with the triple-arm lever, substantially as set forth.

3. In a mowing machine, the combination of a main frame provided with an axle and supporting traction wheels, an underframe, a reciprocating sickle, a triple-arm lever mounted on the under-frame having one arm connected with the sickle and oppositely extending arms at substantially right angles to said arm, a shaft geared with the axle and provided with cranks, and pitmen connecting each of said cranks with each of said oppositely extending arms and arranged to alternately actuate said arms in opposite directions, substantially as set forth.

4. In a mowing machine, the combination of a main frame provided with an axle and supporting traction wheels, an under-frame, a reciprocating sickle, a triple-arm lever mounted on the under-frame having one arm connected with the sickle and oppositely extending arms at substantially right angles to said arm, a shaft geared with the axle and provided with cranks, and pitmen connecting each of said cranks with each of said oppositely extending arms and arranged to positively actuate each of said arms alternately forwardly and backwardly to reciprocate the sickle, substantially as set forth.

5. The combination with the axle, the drive-wheels mounted thereon, and the main frame in which the axle is journaled, of a pinion mounted on the axle, a transverse shaft journaled in the frame on a plane below the axle and having a crank on each end, a pinion on said transverse shaft meshing with the pinion on the axle, hangers mounted on said transverse shaft, hangers secured to the frame near its forward end, a platform suspended from said hangers, a pitman-lever pivotally mounted on said platform near its forward end, pitmen connecting said pitman-lever with the cranks of the transverse shaft, and a ball-and-socket joint connecting said pitman-lever with a sickle, substantially as described.

[Claim 6 not printed in the Gazette.]

12,753. DENTURE. ROBERT M. CRAIG, Dennison, Ohio. Filed Nov. 13, 1907. Serial No. 402,048. Original No. 830,887, dated Sept. 11, 1906, Serial No. 296,499.



1. In a denture, a porcelain having its body portion dovetail in cross-section, being widest at the rear, forming thereby shoulders and side faces, a backing also interiorly dovetail in cross-section, which backing fits close to the said side faces and against said shoulders, and a locking device for the backing.

2. In a denture, a porcelain provided with a posterior portion dovetail in cross-section, the anterior portion of said porcelain extending beyond the side faces of the posterior portion of the porcelain, one of said side faces having a recess therein, and a backing dovetail in cross-section, which backing conforms strictly to the contour of the posterior portion of the porcelain and adheres closely thereto, the side members of the said backing engaging with the shoulders formed by the extension of the anterior portion of the porcelain beyond the sides of its posterior portion, one of the side members of the backing having an opening therein adapted to register with the recess in the porcelain, and a key passed through said opening into said recess.

3. In a denture, the combination with a recessed backing; of a porcelain body having a wedge shaped portion removably engaging said backing, of greatest cross-sectional area at its gingival end, but having its widest portion at its occlusal end.

4. In a denture, the combination with a recessed backing; of a porcelain body having a wedge shaped portion removably engaging said backing and converging both from its occlusal end toward its gingival end and from its lingual side toward its labial side.

DESIGNS.

39,133. BADGE. BROADUS J. CLARKE, Los Angeles, Cal. Filed Dec. 2, 1907. Serial No. 404,858. Term of patent 3½ years.



The ornamental design for a badge, as shown.

39,134. BADGE. HARRY L. DIEHL, Chicago, Ill. Filed Nov. 8, 1907. Serial No. 401,345. Term of patent 7 years.



The ornamental design for a badge as shown.

39,135. STICK-PIN. JOHN L. KEILMAN, Dyer, Ind. Filed Jan. 7, 1908. Serial No. 409,721. Term of patent 3½ years.



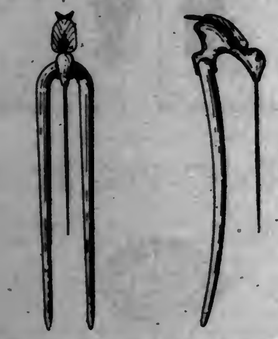
The ornamental design for a stick pin, as shown

39,136. NECKLACE. CHARLES A. MCDONALD, San Francisco, Cal. Filed Nov. 5, 1907. Serial No. 400,891. Term of patent 3½ years.



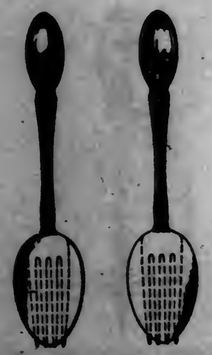
The ornamental design for a necklace, as shown.

39,137. HAT-HOLDER PIN. JOSEPH E. JULIEN and ERNEST BEAUDOIN, Leominster, Mass. Filed Mar. 8, 1906. Serial No. 305,003. Term of patent 3½ years.



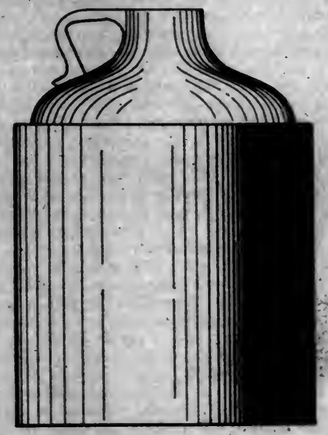
The ornamental design for a hat holder pin, as shown.

39,138. HANDLE OF SPOONS, FORKS, OR SIMILAR ARTICLES. FREDERICK HABENSACK, Sag Harbor, N. Y., assignor to Fahys Watch Case Company, New York, N. Y., a Corporation of New York. Filed Dec. 26, 1907. Serial No. 408,200. Term of patent 7 years.



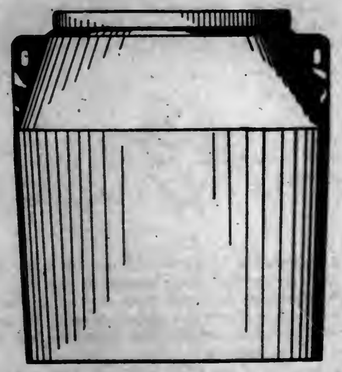
The ornamental design for the handle of a spoon, fork or similar article, as shown.

39,139. POTTERY JAR. WILLIAM D. BREETON, Monmouth, Ill. Filed Nov. 29, 1907. Serial No. 404,641. Term of patent 14 years.



The ornamental design for a pottery jar, as shown.

39,140. POTTERY JAR. WILLIAM D. BREETON, Monmouth, Ill. Filed Nov. 29, 1907. Serial No. 404,642. Term of patent 14 years.



The ornamental design for a pottery jar, as shown.

39,141. JUG. OSCAR KOPEL, New York, N. Y. Filed Dec. 20, 1907. Serial No. 407,429. Term of patent 3½ years.



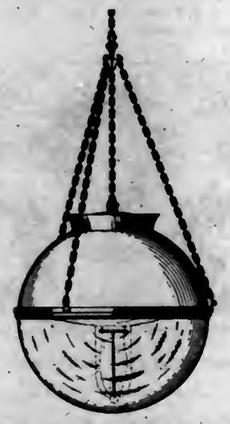
The ornamental design for a jug, as shown.

39,142. BOX. MOSES M. MARCUSE, New York, N. Y. Filed Nov. 3, 1906. Serial No. 341,961. Term of patent 14 years.



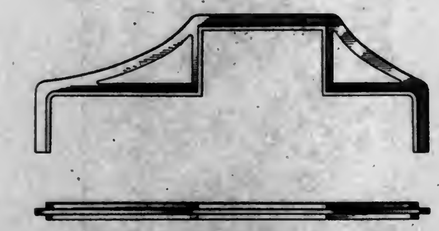
The ornamental design for a box as shown and described.

39,143. ELECTRIC-ARC-LAMP GLOBE. WALTER D'A. RYAN and GEORGE H. STICKNEY, Lynn, Mass., assignors to General Electric Company, a Corporation of New York. Filed Dec. 9, 1907. Serial No. 405,827. Term of patent 14 years.



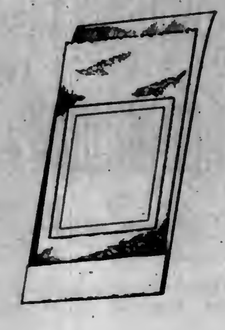
The ornamental design for an electric arc lamp globe, as shown and described.

39,144. AUTOMATIC TELEPHONE-SWITCH FRAME. EDWARD E. CLEMENT, Washington, D. C. Filed Dec. 23, 1905. Serial No. 293,142. Term of patent 14 years.



The ornamental design for an automatic telephone switch frame, as shown.

39,145. PHOTOGRAPH-MOUNT. HERBERT L. STANTON and JAMES M. LOVE, Los Angeles, Cal. Filed Dec. 5, 1907. Serial No. 405,295. Term of patent 14 years.



The ornamental design for a photograph mount, as shown.

39,146. FONT OF PRINTING-TYPE. HOWARD W. STEIGER, Lakewood, Ohio, assignor of one-half to Harold M. Steiger, Cleveland, Ohio. Filed Dec. 23, 1907. Serial No. 407,852. Term of patent 14 years



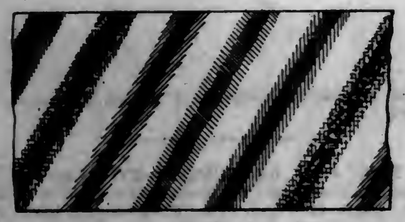
The design for a font of printing-type as herein shown and described.

39,147 TRIMMING. FANNY M. DANIELS, Somerville, Mass., assignor to Dennison Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 30, 1907. Serial No. 408,710. Term of patent 14 years.



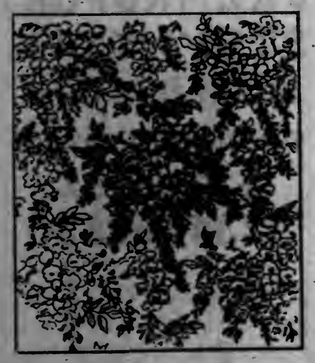
The ornamental design for trimming, as shown.

39,148. SILK FABRIC. SAVVA Y. JOHNSON, Chicago, Ill. Filed Jan. 9, 1908. Serial No. 410,064. Term of patent 7 years.



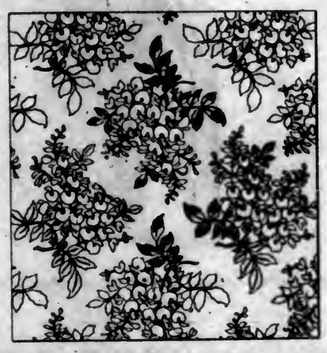
The ornamental design for silk fabric, as shown.

39,149. TEXTILE FABRIC. PAUL DUPONT, Paris, France, assignor to Cheney Brothers, a Corporation of Connecticut. Filed Jan. 14, 1908. Serial No. 410,867. Term of patent 3½ years.



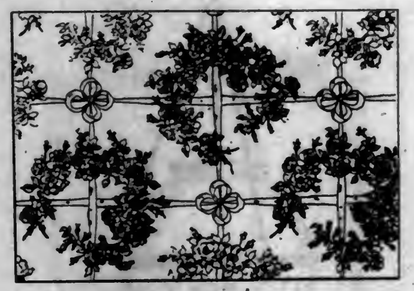
The ornamental design for a textile fabric, as shown.

39,150. TEXTILE FABRIC. ROBERT GATTIKER, Paris, France, assignor to Cheney Brothers, a Corporation of Connecticut. Filed Jan. 14, 1908. Serial No. 410,862. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

39,151. TEXTILE FABRIC. ROBERT GATTIKER, Paris, France, assignor to Cheney Brothers, a Corporation of Connecticut. Filed Jan. 14, 1908. Serial No. 410,863. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

39,152. TEXTILE FABRIC. ROBERT GATTIKER, Paris, France, assignor to Cheney Brothers, a Corporation of Connecticut. Filed Jan. 14, 1908. Serial No. 410,864. Term of patent 3½ years.



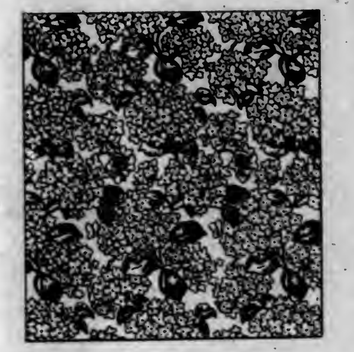
The ornamental design for a textile fabric, as shown.

39,153. TEXTILE FABRIC. ROBERT GATTIKER, Paris, France, assignor to Cheney Brothers, a Corporation of Connecticut. Filed Jan. 14, 1908. Serial No. 410,865. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

39,154. TEXTILE FABRIC. ROBERT GATTIKER, Paris, France, assignor to Cheney Brothers, a Corporation of Connecticut. Filed Jan. 14, 1908. Serial No. 410,866. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

TRADE-MARKS

PUBLISHED FEBRUARY 18, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

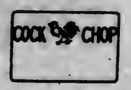
"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 8,490. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JOSEPH DEBAR, Cincinnati, Ohio. Filed June 19, 1905.



Particular description of goods.—Whisky.

Ser. No. 9,985. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) ARCHIBALD JOHN LITTLE, Chungking, China, and London, E. C., England. Filed July 8, 1905.



Particular description of goods.—Bristles for Brush-Making.

Ser. No. 10,091. CLASS 39. CLOTHING.) M. D. WELLS Co., Chicago, Ill. Filed July 11, 1905. Used ten years.

Eureka

Particular description of goods.—Leather Boots, Shoes, and Slippers.

Ser. No. 10,120. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) RENNOUS, KLEINLE & CO. OF BALTIMORE CITY, Baltimore, Md. Filed July 11, 1905. Used ten years.



Particular description of goods.—Whitewash-Brushes.

Ser. No. 13,151. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) H. C. WHITE Co., North Bennington, Vt. Filed Sept. 30, 1905.

ALADDIN

Particular description of goods.—Stereoscopic Views and Photographs Adapted for Use in Both Stereoscopic and Graphoscopic Instruments.

Ser. No. 13,954. (CLASS 37. PAPER AND STATIONERY.) FABRIK STOLZENBERG DEUTSCHE BUREAU-EINRICHTUNGS-GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Oos, Germany. Filed Oct. 26, 1905. Used ten years.

Stolzenberger

Particular description of goods.—Paper Index-Files.

Ser. No. 14,540. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) TANQUERAY GORDON & CO LIMITED, London, England. Filed Nov. 13, 1905.



Particular description of goods.—Gin.

Ser. No. 19,668. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) F. WOLFF & SOHN, Karlsruhe, Germany. Filed May 18, 1906.

KALODERMA

Particular description or goods.—Creams for the Skin, Face Powder, and Glycerin and Honey Jelly.

Ser. No. 20,645. (CLASS 2. RECEPTACLES.) STAR EGG CARRIER & TRAY MFG. CO., Rochester, N. Y. Filed June 29, 1906.



Particular description of goods.—Egg-Carriers and Egg-Trays.

Ser. No. 20,968. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE GEORGE TRITCH HARDWARE COMPANY, Denver, Colo. Filed July 13, 1906. Used ten years.

KOLORADO KLIPPER

Particular description of goods.—Stoves, Ranges, Lamps, and Lanterns.

Ser. No. 20,969. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE GEORGE TRITCH HARDWARE COMPANY, Denver, Colo. Filed July 13, 1906. Used ten years.

TRIED & TRUE

Particular description of goods.—Stoves, Ranges, Lamps, and Lanterns.

Ser. No. 22,271. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) FELICIA V. MORSE, Canton, Mass. Filed Sept. 24, 1906.



Particular description of goods.—Prepared Black Lead, Plumbago, or Graphite, and for Foundry-Facings.

Ser. No. 22,273. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) FELICIA V. MORSE, Canton, Mass. Filed Sept. 24, 1906.

SUN

Particular description of goods.—Lubricants and Lubricating Material, Comprising Black Lead, Plumbago, or Graphite.

Ser. No. 22,274. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) FELICIA V. MORSE, Canton, Mass. Filed Sept. 24, 1906.



Particular description of goods.—Prepared Black Lead, Plumbago, or Graphite. and for Foundry-Facings.

Ser. No. 22,275. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) FELICIA V. MORSE, Canton, Mass. Filed Sept. 24, 1906.

RISING SUN

Particular description of goods.—Prepared Black Lead, Plumbago, or Graphite. and for Foundry-Facings.

Ser. No. 22,276. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) FELICIA V. MORSE, Canton, Mass. Filed Sept. 24, 1906.

RISING

Particular description of goods.—Prepared Black Lead, Plumbago, or Graphite. and for Foundry-Facings.

Ser. No. 22,278. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) FELICIA V. MORSE, Canton, Mass. Filed Sept. 24, 1906.

BEAUTY

Particular description of goods.—Prepared Black Lead, Plumbago, or Graphite, and for Foundry-Facings.

Ser. No. 24,033. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MAX ELB GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Dresden, Germany. Filed Dec. 14, 1906.

Silvana

Particular description of goods.—Food-Preservatives, Insecticides, Fungicides, Animal-Poisons, Chemical Preparations for Purifying the Air, Ethereal Oils, and Wash-Blues.

Ser. No. 24,317. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEISENBERGER BROS., Natches, Miss. Filed Dec. 28, 1906.

3

Particular description of goods.—A Remedy for Rheumatism.

Ser. No. 24,440. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JONAS & COLVER, LIMITED, Sheffield, England. Filed Jan. 4, 1907.

INTRA

Particular description of goods.—Machine-Knives, Machine-Tools, Twist-Drills, Milling and other Machinery Cutters Included in This Class.

Ser. No. 24,450. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE KEUFFEL & ESSER COMPANY, Hoboken, N. J. Filed Jan. 4, 1907.



Particular description of goods.—Draftsmen's Instruments, Section-Liners, Draftsmen's Scales, Draftsmen's Rules, Draftsmen's Curves, Draftsmen's Straight-Edges, Draftsmen's Angles, and Draftsmen's T-Squares.

Ser. No. 24,451. (CLASS 37. PAPER AND STATIONERY.) THE KEUFFEL & ESSER COMPANY, Hoboken, N. J. Filed Jan. 4, 1907.



Particular description of goods.—Drawing-Paper, Bristol-Board, Tracing-Paper, Profile and Cross-Section Paper.

Ser. No. 26,528. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSÉ SOLIVERAS, Mexico, Mexico. Filed Apr. 6, 1907.



Particular description of goods.—Tonic Medicines.

Ser. No. 26,645. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MOSES S. BARLOW, Newkirk, Okla. Filed Apr. 11, 1907.



BARLOW

Particular description of goods.—A Remedy for Fevers and Ulcers and for Diseases of the Throat, Lungs, Liver, Kidneys, and Stomach and for Female Diseases.

Ser. No. 27,418. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ALAMO IRON WORKS, San Antonio, Tex. Filed May 16, 1907.

"DUPLEX"

Particular description of goods.—Hydraulic Pumps.

Ser. No. 28,067. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) O. MUSTAD & SÖN, Christiana, Norway. Filed June 12, 1907.

M

Particular description of goods.—Fish-Hooks.

Ser. No. 28,647. (CLASS 37. PAPER AND STATIONERY.) J. W. BUTLER PAPER CO., Chicago, Ill. Filed July 8, 1907.



Particular description of goods.—Writing-Paper.

Ser. No. 28,655. (CLASS 37. PAPER AND STATIONERY.) J. W. BUTLER PAPER CO., Chicago, Ill. Filed July 8, 1907.



Particular description of goods.—Writing-Paper.

Ser. No. 28,658. (CLASS 37. PAPER AND STATIONERY.) J. W. BUTLER PAPER CO., Chicago, Ill. Filed July 8, 1907.

VOUCHER BOND

Particular description of goods.—Writing-Paper.

Ser. No. 28,660. (CLASS 37. PAPER AND STATIONERY.) J. W. BUTLER PAPER CO., Chicago, Ill. Filed July 8, 1907.

1893

Particular description of goods.—Writing-Paper.

Ser. No. 29,064. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) P. BEIERSDORF & Co., Hamburg, Germany. Filed July 29, 1907.



Particular description of goods.—Medicinal Tinctures, Powders, Plasters, and Salves, Tooth-Cleansing Pastes, Remedies for Preserving the Teeth, and Remedies for Corns.

Ser. No. 29,232. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) PARKER-BROWNE CO., Fort Worth, Tex. Filed Aug. 5, 1907.

Res-ola

Particular description of goods.—Fruit Flavors for Non-Alcoholic Beverages.

Ser. No. 29,274. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HOLLANDER BROS. DRUG CO., Braddock, Pa. Filed Aug. 7, 1907.



Particular description of goods.—A Remedy for Dyspepsia.

Ser. No. 29,739. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE MONA MANUFACTURING COMPANY, Boston, Mass. Filed Sept. 3, 1907.

MONA

Particular description of goods.—Textile Shoe-Linings.

Ser. No. 30,086. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EASTMAN KODAK CO., Rochester, N. Y. Filed Sept. 19, 1907.



Particular description of goods.—Photographic Plates, Photographic Film, and Photographic Outfits, Comprising Cameras, Developing-Machines, Film, Mixing-Receptacles, Printing-Frames, Printing-Paper, Developing-Tubes, Developing-Trays, Mounts, and Mounting-Tissue.

Ser. No. 30,165. (CLASS 27. HOROLOGICAL INSTRUMENTS.) CIE. DES MONTRES INVAR, Chaux de Fonds, Switzerland. Filed Sept. 23, 1907.

INVAR

Particular description of goods.—Watches, Watchcases, and Watch-Movements.

Ser. No. 30,208. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) FILTER- & BAUTECHNISCHE MASCHINENFABRIK, ACTIENGESELLSCHAFT VORMALS L. A. ENZINGER, Berlin, Germany. Filed Sept. 23, 1907.

MAMMUT

Particular description of goods.—Bottle Cleaning and Soaking Machines, Barrel and Bottle Filling Machines, Bottle Corking and Closing Machines.

Ser. No. 30,480. (CLASS 12. MASONRY MATERIALS.) BELKNAP HARDWARE AND MANUFACTURING CO., Louisville, Ky. Filed Oct. 7, 1907.



Particular description of goods.—Felt Roofing.

Ser. No. 30,717. (CLASS 38. PUBLICATIONS.) RICHARD D. WYCKOFF, New York, N. Y. Filed Oct. 21, 1907.

THE TICKER

Particular description of goods.—A Magazine.

Ser. No. 30,721. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE LIVERPOOL BORAX CO., LTD., Liverpool, England. Filed Oct. 22, 1907.

ALGOR.

Particular description of goods.—A Preparation for Removing Scale, Corrosion, and Grease from Boilers.

Ser. No. 30,758. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM H. JUENGER, Los Angeles, Cal. Filed Oct. 24, 1907.

A-Z

Particular description of goods.—A Remedy for Gonorrhea, Gleet, and Lucorrhea.

Ser. No. 31,003. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHAUNCEY S. CAREY, Elmira, N. Y. Filed Nov. 4, 1907.

Opthalmin.

Particular description of goods.—Eye-Lotions.

Ser. No. 31,102. (CLASS 30. CROCKERY, EARTHENWARE, AND PORCELAIN.) IGNAZ STRAUSS & Co., New York, N. Y. Filed Nov. 9, 1907.



Particular description of goods.—Plates, Cups, Saucers, Chocolate-Pots, Teapots, Cream-Pitchers, Celery-Dishes, Salad-Bowls, Condiment-Holders, Cake-Plates, Mayonnaise Sets, Egg-Cups, Cracker-Jars, Bonbonnieres, Vases, Flower-Pots, Tobacco-Jars, Jardinières, Pin-Trays, Ash-Trays, Comb and Brush Holders, Hair-Receivers, Bonbon-Dishes, Nut-Bowls, Olive-Dishes, Hat-Pin Holders, Salt and Pepper Holders, Sugar-Shakers, Toothpick-Holders, Butter-Dishes, Sugar and Creamers, Berry-Dishes, Soap-Boxes, Jewelry-Boxes, Mustard-Pots, Loving Cups and Tankards, Manufactured of Crockery, Earthenware, and Porcelain.

Ser. No. 31,160. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE H. PEMBROKE, New Brunswick, N. J. Filed Nov. 14, 1907.



Particular description of goods.—Chewing-Gum.

Ser. No. 31,175. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ALEXANDER L. JACOBS, Alliance, Ohio. Filed Nov. 14, 1907.

PRISCILLA

Particular description of goods.—Waterproof Cloth.

Ser. No. 31,200. (CLASS 39. CLOTHING.) LEVI STRAUSS & Co., San Francisco, Cal. Filed Nov. 16, 1907.

Elasco

Particular description of goods.—Dress-Shirts, Overshirts, Night-Shirts, Pajamas, Gloves, Collars, Cuffs, Sweaters, Underwear, Cardigan Jackets, and Hosiery.

Ser. No. 31,248. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) CLARK & ROWLAND, Pittsburg, Pa. Filed Nov. 18, 1907.

"CLARO"

Particular description of goods.—Rheostats and Resistance-Coils.

Ser. No. 31,259. (CLASS 39. CLOTHING.) PAD O'POWDER INSHU CO., Omaha, Nebr. Filed Nov. 20, 1907.



Particular description of goods.—Insoles.

Ser. No. 31,379. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PFEIFFER & DILLER G. M. B. H., Horchheim, Germany. Filed Nov. 26, 1907.

KOSYR

Particular description of goods.—A Preparation to Improve the Color, Aroma, and Flavor of Coffee.

Ser. No. 31,383. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE SMITH BREWING COMPANY, Youngstown, Ohio. Filed Nov. 26, 1907.



Particular description of goods.—Beer.

Ser. No. 31,401. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) ACME BREWING COMPANY, Macon, Ga. Filed Nov. 27, 1907.

Hopoline.

Particular description of goods.—A Non-Alcoholic Carbonated Beverage.

Ser. No. 31,465. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) IOWA HOG & CATTLE POWDER COMPANY, South Omaha, Nebr. Filed Nov. 29, 1907.

CARSOLIUM

Particular description of goods.—A Certain Medicated Cattle-Dip.

Ser. No. 31,520. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ERNEST NARJOT, Los Angeles, Cal. Filed Dec. 3, 1907.

EGGALENE

Particular description of goods:—Face-Cream, Face-Powder, and Scalp-Tonic.

Ser. No. 31,533. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. L. & J. W. DART, St. Paul, Minn. Filed Dec. 3, 1907.

Inglenook

Particular description of goods.—Candies and Salted Nuts.

Ser. No. 31,586. (CLASS 2. RECEPTACLES.) THE OVAL WOOD DISH CO., Delta, Ohio. Filed Dec. 5, 1907. Used ten years.

O. W. D.

Particular description of goods.—Wood Dishes.

Ser. No. 31,596. (CLASS 38. PUBLICATIONS.) THE MCCLURE COMPANY, New York, N. Y. Filed Dec. 6, 1907.

TRAVELOGUES

Particular description of goods.—Catalogues and Advertising-Circulars.

Ser. No. 31,597. (CLASS 48. MALT EXTRACTS AND LIQUORS.) EDWARD & JOHN BURKE, LIMITED, Dublin, Ireland, and New York, N. Y. Filed Dec. 6, 1907.



Particular description of goods.—Ale.

Ser. No. 31,625. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HOMER P. D. KINGSBURY, Redlands, Cal. Filed Dec. 9, 1907.



Particular description of goods.—Apricot, Fig, and Berry Jams, Orange and Grape Marmalades, Orange and Quince Jellies, Preserved Peaches and Figs, Lemon and Orange Extracts Intended for Flavoring.

Ser. No. 31,641. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) UNDERWOOD TYPEWRITER COMPANY, New York, N. Y. Filed Dec. 9, 1907.

Particular description of goods.—Type-Writing Machines and Type-Writing-Machine Parts.

Ser. No. 31,674. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) SHARP & DOHME, Baltimore, Md. Filed Dec. 11, 1907.

NAZEPTIC

Particular description of goods.—Medicated Cotton-Wool.

Ser. No. 31,714. (CLASS 2. RECEPTACLES.) THE UNION BAG & PAPER COMPANY, New York, N. Y. Filed Dec. 13, 1907.

FOX TERRIER



Particular description of goods.—Paper Bags.

Ser. No. 31,728. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RIDENOUR-BAKER GROCERY CO., Kansas City, Mo. Filed Dec. 14, 1907.

Punch

Particular description of goods.—Clams, Fish, Lobsters, Salmon, Oysters, Sardines, and Shrimp.

Ser. No. 31,744. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE C. S. MOREY MERCANTILE COMPANY, Denver, Colo. Filed Dec. 16, 1907.

SOLITAIRE

Particular description of goods.—Spices.

Ser. No. 31,748. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PEPPERELL MANUFACTURING CO., Biddeford, Me. Filed Dec. 16, 1907.



Particular description of goods.—Bleached and Unbleached Cotton Piece Goods.

Ser. No. 31,749. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PEPPERELL MANUFACTURING CO., Biddeford, Me. Filed Dec. 16, 1907.



Particular description of goods.—Bleached and Unbleached Cotton Piece Goods.

Ser. No. 31,750. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PEPPERELL MANUFACTURING CO., Biddeford, Me. Filed Dec. 16, 1907.



Particular description of goods.—Bleached and Unbleached Cotton Piece Goods.

Ser. No. 31,752. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PEPPERELL MANUFACTURING CO., Biddeford, Me. Filed Dec. 16, 1907.



Particular description of goods.—Bleached and Unbleached Cotton Piece Goods.

Ser. No. 31,753. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PEPPERELL MANUFACTURING CO., Biddeford, Me. Filed Dec. 16, 1907.



Particular description of goods.—Bleached and Unbleached Cotton Piece Goods.

Ser. No. 31,763. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LAUREL SILK WORKS, Paterson, N. J., and New York, N. Y. Filed Dec. 17, 1907.

LAURELINE

Particular description of goods.—Broad Silk.

Ser. No. 31,764. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LAUREL SILK WORKS, Paterson, N. J., and New York, N. Y. Filed Dec. 17, 1907.

LAURELETTE

Particular description of goods.—Broad Silk.

Ser. No. 31,765. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) LAUREL SILK WORKS, Paterson, N. J., and New York, N. Y. Filed Dec. 17, 1907.

SUN RAY

Particular description of goods.—Broad Silk.

Ser. No. 31,785. (CLASS 39. CLOTHING.) CAPITAL COLLAR AND CUFF CO., Lincoln, Nebr. Filed Dec. 17, 1907.

ANCHOR BRAND

Particular description of goods.—Waterproof Collars and Cuffs—*i. e.*, Collars and Cuffs the Material of Which is Formed by a Layer of Celluloid Interposed Between Layers of Textile Material.

Ser. No. 31,810. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM H. MINER, Chicago, Ill. Filed Dec. 18, 1907.

HEART'S DELIGHT FARM

Particular description of goods.—Butter, Cheese, Milk, and Cream.

Ser. No. 31,811. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM H. MINER, Chicago, Ill. Filed Dec. 18, 1907.

HEART'S DELIGHT FARM

Particular description of goods.—Poultry, Chickens, Ducks, Turkeys, and Eggs.

Ser. No. 31,826. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MALTET CHEMICAL COMPANY, New York, N. Y. Filed Dec. 18, 1907.

MALTET

Particular description of goods.—Cough-Drops.

Ser. No. 31,832. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) SOCIETE ANONYME DE LA GRANDE DISTILLERIE E. CUSENIER FILS AINE ET COMPAGNIE, Paris, France. Filed Dec. 18, 1907.

FREEZOMINT

Particular description of goods.—A Mint Cordial.

Ser. No. 31,840. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARGARET A. PALERMO, Bellmore, N. Y. Filed Dec. 19, 1907. Used ten years.

FLESHMORE

Particular description of goods.—Salve.

Ser. No. 31,847. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MANHATTAN DRUG CO., New York, N. Y. Filed Dec. 19, 1907.

HEALEX

Particular description of goods.—Blood Purifier and Tonic, Either in Ointment Form or as a Resolvent, in Liquid, Powder, Pill, and Tablet Form.

Ser. No. 31,848. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WALTER K. PEBE, New York, N. Y. Filed Dec. 19, 1907.

KROY WEN

Particular description of goods.—A Salve or Ointment and an Emollient for Wounds, Sores, Cuts, Burns, Abrasions, Bites, Stings of Insects, Piles, Ulcers, Eczema, and All Skin Diseases.

Ser. No. 31,871. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) KNUFFEL & ESSER COMPANY, Hoboken, N. J., and New York, N. Y. Filed Dec. 21, 1907. Used ten years.

DUPLEX

Particular description of goods.—Slide-Rules.

Ser. No. 31,878. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) GENERAL LUBRICATING COMPANY, Philadelphia, Pa. Filed Dec. 21, 1907.

"UNEO"

Particular description of goods.—Lubricants.

Ser. No. 31,889. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ENO COTTON MILLS, Hillsboro, N. C. Filed Dec. 23, 1907.

ENOWEB

Particular description of goods.—Ginghams, Chambrays, and Shirtings.

Ser. No. 31,902. (CLASS 17. TOBACCO PRODUCTS.) SOCIETE ANONYME LE KHEDIVE, Brussels, Belgium, and Paris, France. Filed Dec. 23, 1907.

TANAGRA

Particular description of goods.—Cigarettes.

Ser. No. 31,903. (CLASS 17. TOBACCO PRODUCTS.) SOCIETE ANONYME LE KHEDIVE, Brussels, Belgium, and Paris, France. Filed Dec. 23, 1907.

XANTHIA

Particular description of goods.—Cigarettes.

Ser. No. 31,926. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AMEDEE FORTIER, Waterville, Me. Filed Dec. 26, 1907.

Particular description of goods.—Remedies for Coughs and Diseases of the Throat and Lungs.

Ser. No. 31,947. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal. Filed Dec. 27, 1907.

YELLOW CORD

The cord being printed in yellow.

Particular description of goods.—Dried Fruits—Namely, Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, and Raisins.

Ser. No. 31,948. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal. Filed Dec. 27, 1907.

BLUE CORD

The cord being printed in blue.

Particular description of goods.—Dried Fruits—Namely, Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, and Raisins.

Ser. No. 31,958. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) LAMINATED BELTING COMPANY, New York, N. Y. Filed Dec. 28, 1907.

PATENT LAMINATED BELT C CAN'T FAIL A CERTAINLESS FAILLESS BELTING

Particular description of goods.—Leather Belting.

Ser. No. 31,973. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM EDGAR GARRETSON, Portland, Oreg. Filed Dec. 30, 1907.

Eye-Rine

Particular description of goods.—An Eye-Wash.

Ser. No. 31,974. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM J. JONES, Cleveland, Ohio. Filed Dec. 30, 1907.

TRI-MOR

Particular description of goods.—Sausage, Lard, Dried Beef, Ham, and Bacon.

Ser. No. 31,991. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE KEUFFEL & ESSER COMPANY, Hoboken, N. J. Filed Dec. 31, 1907.

PARAGON

Particular description of goods.—Scales and Drafting Instruments.

Ser. No. 31,996. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE KEUFFEL & ESSER COMPANY, Hoboken, N. J. Filed Jan. 2, 1908.

K&E

Particular description of goods.—Measuring-Tapes, Omnimeters, Levels, Transits, Artificial Horizons, Extension-Tripods, Tachymeters, Triangulation Instruments, Slide-Rules, Parallel Attachments, Pocket-Rules, Drawing Instruments, Calculating-Machines, Planimeters, Integrators, Integraphs, Print-Hangers, and Print-Frames.

Ser. No. 31,998. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) WICHMAN, LUTGEN & CO. INC., San Francisco, Cal. Filed Jan. 2, 1908.

RAMONA

Particular description of goods.—Brandy.

Ser. No. 32,001. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CHARLES H. KEITH, Cleveland, Ohio. Filed Jan. 2, 1908. Used ten years.



Particular description of goods.—Polishing Chamois Skin.

Ser. No. 32,015. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) WINOLA OIL GAS DEVELOPMENT AND IMPROVEMENT COMPANY, Factoryville, Pa. Filed Jan. 2, 1908.

East Mountain

Particular description of goods.—Mineral Water.

Ser. No. 32,036. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BONDWELL MEDICINE CO. LTD., Detroit, Mich. Filed Jan. 2, 1908.

La Vita

Particular description of goods.—Suppositories.

Ser. No. 32,038. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BONNIE BROS., Louisville, Ky. Filed Jan. 3, 1908.



Particular description of goods.—Whisky.

Ser. No. 32,043. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) LAZARUS GOODMAN CO., Lynchburg, Va. Filed Jan. 3, 1908.

SHOEMAKER



Particular description of goods.—Whisky.

Ser. No. 32,044. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS). M. GANS CO., Pine Bluff, Ark. Filed Jan. 3, 1908.

Ebony Grove

Particular description of goods.—Whisky.

Ser. No. 32,046. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) MOSES H. HARRIS, New York, N. Y. Filed Jan. 3, 1908. Used ten years.

HARRIS
SUCTION
CLIP

Particular description of goods.—Clips or Holding Devices for Eyeglasses.

Ser. No. 32,063. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARMSBY PRESERVING CO., San Francisco, Cal. Filed Jan. 4, 1908.

GOLDEN POPPY

Particular description of goods.—Canned Fruits—Namely, Apples, Apricots, Blackberries, Cherries, Raspberries, Strawberries, Grapes, Nectarines, Peaches, Pears, Plums, and Loganberries.

Ser. No. 32,064. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARMSBY PRESERVING CO., San Francisco, Cal. Filed Jan. 4, 1908.



Particular description of goods.—Canned Fruits—Namely, Apples, Apricots, Blackberries, Cherries, Raspberries, Strawberries, Grapes, Nectarines, Peaches, Pears, Plums, and Loganberries.

Ser. No. 32,065. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARMSBY PRESERVING CO., San Francisco, Cal. Filed Jan. 4, 1908.

GOLDEN POPPY



Particular description of goods.—Canned Fruits—Namely, Apples, Apricots, Blackberries, Cherries, Raspberries, Strawberries, Grapes, Nectarines, Peaches, Pears, Plums, and Loganberries.

Ser. No. 32,131. (CLASS 37. PAPER AND STATIONERY.) DENNISON MANUFACTURING COMPANY, Boston, Mass. Filed Jan. 8, 1908.



Particular description of goods.—Paper Napkins and Handkerchiefs, Crape-Paper, and Tissue-Paper.

Ser. No. 32,197. (CLASS 48. MALT EXTRACTS AND LIQUORS.) THE F. W. COOK BREWING CO., Evansville, Ind. Filed Jan. 13, 1908.

Malthale

Particular description of goods.—Beer.

Ser. No. 32,198. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GIANT CHEMICAL COMPANY, Philadelphia, Pa. Filed Jan. 13, 1908.



Particular description of goods.—A Corn-Salve.

Ser. No. 32,215. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. A. BROMUND, New York, N. Y. Filed Jan. 14, 1908.



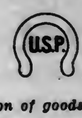
Particular description of goods.—Beeswax.

Ser. No. 32,216. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. A. BROMUND, New York, N. Y. Filed Jan. 14, 1908.



Particular description of goods.—Beeswax.

Ser. No. 32,217. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. A. BROMUND, New York, N. Y. Filed Jan. 14, 1908.



Particular description of goods.—Beeswax.

Ser. No. 32,218. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. A. BROMUND, New York, N. Y. Filed Jan. 14, 1908.



Particular description of goods.—Beeswax.

Ser. No. 32,230. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PURITOL CHEMICAL CO., Kansas City, Mo. Filed Jan. 15, 1908.

PURITOL

Particular description of goods.—Toilet Preparations—Namely, Tooth-Paste, Liquid Antiseptic, Face-Cream, Tooth-Powder, Face-Powder, and Talcum Powder.

Ser. No. 32,245. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) BAUER & DÜRRSCHMIDT, Markneukirchen, Germany. Filed June 16, 1908.

Immortelle

Particular description of goods.—Musical Strings.

Ser. No. 32,264. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARGARETHA LANGE, Omaha, Nebr. Filed Jan. 16, 1908.

SURPRISE

Particular description of goods.—A Salve.

Ser. No. 32,301. (CLASS 10. FERTILIZERS.) UNION GUANO COMPANY, Winston Salem, N. C. Filed Jan. 18, 1908.

Q & Q

Particular description of goods.—Fertilizers.

Ser. No. 32,302. (CLASS 10. FERTILIZERS.) UNION GUANO COMPANY, Winston Salem, N. C. Filed Jan. 18, 1908.

QUAKER

Particular description of goods.—Fertilizers.

Ser. No. 32,303. (CLASS 10. FERTILIZERS.) UNION GUANO COMPANY, Winston Salem, N. C. Filed Jan. 18, 1908.

OLD HONESTY

Particular description of goods.—Fertilizers.

Ser. No. 32,305. (CLASS 10. FERTILIZERS.) UNION GUANO COMPANY, Winston Salem, N. C. Filed Jan. 18, 1908.



Particular description of goods.—Fertilizers.

TRADE-MARKS

REGISTERED FEBRUARY 18, 1908.

67,690. CHEMICAL STARCH PREPARATION USED FOR SIZING TEXTILES. AMALGAMATED GUM COMPANY, Troy, N. Y.
Filed August 26, 1907. Serial No. 29,575. PUBLISHED DECEMBER 17, 1907.

67,691. LAUNDRY STARCH. JOHN S. HARRIS, New York, N. Y.
Filed November 8, 1907. Serial No. 31,096. PUBLISHED DECEMBER 17, 1907.

67,692. CERTAIN PREPARED TALCUM. DR. MAX LEHMANN & Co., Berlin, Germany.
Filed September 11, 1907. Serial No. 29,873. PUBLISHED DECEMBER 17, 1907.

67,693. ANTISEPTIC WASH. JOHN H. LEONARD, New York, N. Y.
Filed October 31, 1907. Serial No. 30,897. PUBLISHED DECEMBER 17, 1907.

67,694. COPPER SULFATE. THE MOND NICKEL COMPANY, LIMITED, Westminster, England.
Filed November 4, 1907. Serial No. 31,001. PUBLISHED DECEMBER 17, 1907.

67,695. ANTISEPTIC MEDICINAL PREPARATION. GEORGE A. TRUESDELL, Winthrop Harbor, Ill.
Filed May 2, 1907. Serial No. 27,076. PUBLISHED DECEMBER 17, 1907.

67,696. DISINFECTANT, DEODORIZER, AND INSECT AND GERM KILLER. JOHN WILSON, Sacramento, Cal.
Filed November 4, 1907. Serial No. 31,110. PUBLISHED DECEMBER 17, 1907.

67,697. CERTAIN COTTON LACES. BIRKIN & Co., Nottingham, England.
Filed July 29, 1907. Serial No. 29,089. PUBLISHED DECEMBER 17, 1907.

67,698. CERTAIN ELECTRICAL GOODS. COMMERCIAL ELECTRICAL SUPPLY COMPANY, St. Louis, Mo.
Filed September 14, 1907. Serial No. 29,969. PUBLISHED DECEMBER 17, 1907.

67,699. BICYCLES AND MOTOR-CYCLES. GEO. M. HENDEE, Springfield, Mass.
Filed December 5, 1905. Serial No. 15 220. PUBLISHED DECEMBER 17, 1907.

67,700. MOTOR-CABS. NEW YORK TAXI-CAB COMPANY, New York, N. Y.
Filed October 11, 1907. Serial No. 30,547. PUBLISHED DECEMBER 17, 1907.

67,701. BEER. SCHWENK BARTH BREWING COMPANY, Yankton, S. D.
Filed August 9, 1906. Serial No. 21,442. PUBLISHED APRIL 30, 1907.

67,702. CREWEL-NEEDLES FOR HAND-SEWING. THOS. HARPER & SONS LTD., London, England.
Filed May 8, 1905. Serial No. 4,724. PUBLISHED DECEMBER 17, 1907.

67,703. WHEAT-FLOUR. BAY STATE MILLING Co., Boston, Mass.
Filed November 4, 1907. Serial No. 31,009. PUBLISHED DECEMBER 17, 1907.

67,704. CANDY. PHOTIOS BOONDAS, New York, N. Y.
Filed July 8, 1907. Serial No. 28,664. PUBLISHED DECEMBER 17, 1907.

67,705. BUTTER. HERBERT HENRY BROWN, Philadelphia, Pa.
Filed October 30, 1907. Serial No. 30,872. PUBLISHED DECEMBER 17, 1907.

67,706. CANNED FRUITS AND VEGETABLES. HENRY P. CANNON, Bridgeville, Del.
Filed April 9, 1906. Serial No. 18,630. PUBLISHED DECEMBER 17, 1907.

67,707. CHOCOLATE CANDY. CEDAR RAPIDS CANDY COMPANY, Cedar Rapids, Iowa.
Filed November 16, 1907. Serial No. 31,207. PUBLISHED DECEMBER 17, 1907.

67,708. WHEAT-FLOUR. COHEN & ROSENBERG. Boston, Mass.
Filed October 9, 1907. Serial No. 30,514. PUBLISHED DECEMBER 17, 1907.

67,709. CERTAIN CLOTHING. THE CRAVENETTE COMPANY LIMITED, Bradford, England.
Filed July 17, 1907. Serial No. 28,844. PUBLISHED DECEMBER 17, 1907.

67,710. FLAVORING EXTRACTS. DOMESTIC SCIENCE MFG. Co., Boston, Mass.
Filed August 23, 1907. Serial No. 29,553. PUBLISHED DECEMBER 17, 1907.

67,711. CERTAIN FOODS. CHRISTIAN ECKARDT, Hamburg, Germany.
Filed September 14, 1907. Serial No. 29,966. PUBLISHED DECEMBER 17, 1907.

67,712. CERTAIN CLOTHING. EDWARD KORY Co., New Orleans, La.
Filed October 12, 1907. Serial No. 30,570. PUBLISHED DECEMBER 17, 1907.

67,713. FRESH FRUITS AND VEGETABLES. WILL H. FOX, Graysville, Tenn.
Filed November 11, 1907. Serial No. 31,119. PUBLISHED DECEMBER 17, 1907.

67,714. FLAVORING EXTRACTS. JOHN CAMPBELL HAGAN, Richmond, Va.
Filed November 14, 1906. Serial No. 23,347. PUBLISHED DECEMBER 17, 1907.

67,715. TABLE-SYRUP. HALPEN, GREEN & Co., Philadelphia, Pa.
Filed September 30, 1907. Serial No. 30,292. PUBLISHED DECEMBER 17, 1907.

67,716. TEXTILE COLLARS. JOHN S. HARRIS, New York, N. Y.
Filed November 4, 1907. Serial No. 30,977. PUBLISHED DECEMBER 17, 1907.

67,717. CERTAIN CLOTHING. THE JOSEPH & FEISS Co., Cleveland, Ohio.
Filed September 20, 1907. Serial No. 30,102. PUBLISHED DECEMBER 17, 1907.

67,718. CANDY. THE MARJENHOFF Co., Charleston, S. C.
Filed August 28, 1907. Serial No. 29,638. PUBLISHED NOVEMBER 26, 1907.

67,719. LEATHER GLOVES OF ALL KINDS. MARSHALL FIELD & COMPANY, Chicago, Ill.
Filed October 21, 1907 Serial No. 30,707. PUBLISHED DECEMBER 17, 1907.

67,720. CERTAIN CLOTHING. THE MONA MANUFACTURING Co., Boston, Mass.
Filed May 6, 1907. Serial No. 27,170. PUBLISHED DECEMBER 17, 1907.

67,721. CHEWING-GUM AND CANDY. DAVID H. REEDER, Laporte, Ind.
Filed November 13, 1907. Serial No. 31,155. PUBLISHED DECEMBER 17, 1907.

67,722. LEATHER GLOVES. SARANAC GLOVE COMPANY, Littleton, N. H.
Filed April 25, 1907. Serial No. 28,998. PUBLISHED DECEMBER 17, 1907.

67,723. CHOCOLATES AND BONBONS. THE WALTER M. LOWNEY COMPANY, Boston, Mass.
Filed November 13, 1907. Serial No. 31,146. PUBLISHED DECEMBER 17, 1907.

67,724. MILK CHOCOLATE. THE WALTER M. LOWNEY COMPANY, Boston, Mass.
Filed November 15, 1907. Serial No. 31,182. PUBLISHED DECEMBER 17, 1907.

67,725. FRESH AND STORAGE EGGS. G. W. NICHOLSON COMPANY, Grand Junction, Iowa.
Filed March 11, 1907. Serial No. 25,917. PUBLISHED DECEMBER 17, 1907.

67,726. CURED MEATS AND SAUSAGE. KINGAN AND COMPANY, LIMITED, Belfast, Ireland; Indianapolis, Ind.; Baltimore, Md., and Richmond, Va.
Filed June 27, 1907. Serial No. 28,420. PUBLISHED DECEMBER 17, 1907.

67,727. OLIVE-OIL. STROHMEYER & ARPE COMPANY, New York, N. Y.
Filed October 2, 1907. Serial No. 30,332. PUBLISHED DECEMBER 17, 1907.

67,728. SALAD-OIL. STROHMEYER & ARPE COMPANY, New York, N. Y.
Filed October 2, 1907. Serial No. 30,333. PUBLISHED DECEMBER 17, 1907.

67,729. CERTAIN SEA FOODS. STROHMEYER & ARPE COMPANY, New York, N. Y.
Filed October 2, 1907. Serial No. 30,334. PUBLISHED DECEMBER 17, 1907.

67,730. CHEMICAL STARCH PREPARATION FOR FINISHING TEXTILES AND FOR LAUNDRY PURPOSES. AMALGAMATED GUM COMPANY, Troy, N. Y.
Filed August 26, 1907. Serial No. 29,573. PUBLISHED DECEMBER 17, 1907.

67,731. PORT AND SHERRY WINES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,938. PUBLISHED DECEMBER 17, 1907.

67,732. PORT AND SHERRY WINES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,939. PUBLISHED DECEMBER 17, 1907.

67,733. PORT AND SHERRY WINES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,940. PUBLISHED DECEMBER 17, 1907.

67,734. PORT AND SHERRY WINES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,941. PUBLISHED DECEMBER 17, 1907.

67,735. PORT AND SHERRY WINES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,942. PUBLISHED DECEMBER 17, 1907.

67,736. PORT AND SHERRY WINES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,943. PUBLISHED DECEMBER 17, 1907.

67,737. PORT AND SHERRY WINES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,944. PUBLISHED DECEMBER 17, 1907.

67,738. PORT AND SHERRY WINES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,945. PUBLISHED DECEMBER 17, 1907.

67,739. PORT AND SHERRY WINES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,946. PUBLISHED DECEMBER 17, 1907.

67,740. PORT AND SHERRY WINES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,947. PUBLISHED DECEMBER 17, 1907.

67,741. WATERPROOFED TEXTILE FABRICS. AUGUST A. FISCHER, Paterson, N. J.
Filed October 21, 1907. Serial No. 30,698. PUBLISHED DECEMBER 17, 1907.

67,742. PRINTED AND DYED COTTON PIECE GOODS. GARNER & Co., New York, N. Y.
Filed November 7, 1907. Serial No. 31,000. PUBLISHED DECEMBER 17, 1907.

67,743. COTTON SHEETINGS. INDIANA COTTON MILLS, Cannelton, Ind.
Filed October 25, 1907. Serial No. 30,790. PUBLISHED DECEMBER 17, 1907.

67,744. COTTON SHEETINGS. INDIANA COTTON MILLS, Cannelton, Ind.
Filed October 25, 1907. Serial No. 30,791. PUBLISHED DECEMBER 17, 1907.

67,745. TEA. GEORGE LEWIS AND COMPANY, Chicago, Ill., assignors to G. H. Adamick, Chicago, Ill
Filed June 26, 1907. Serial No. 28,410. PUBLISHED DECEMBER 17, 1907.

67,746. BROAD SILKS. M. C. MIGEL & Co., New York, N. Y.
Filed August 26, 1907. Serial No. 29,596. PUBLISHED DECEMBER 17, 1907.

67,747. BROAD SILKS. M. C. MIGEL & Co., New York, N. Y.
Filed August 26, 1907. Serial No. 29,598. PUBLISHED DECEMBER 17, 1907.

67,748. BROAD SILKS. M. C. MIGEL & Co., New York, N. Y.
Filed August 26, 1907. Serial No. 29,600. PUBLISHED DECEMBER 17, 1907.

67,749. SILK PIECE GOODS. L. & E. STIAN, New York, N.Y.
Filed August 27, 1907. Serial No. 29,622. PUBLISHED DECEMBER 17, 1907.

67,750. COTTON DIAPER-CLOTH. JAMES L. WILSON & Co., New York, N. Y.
Filed October 21, 1907. Serial No. 30,718. PUBLISHED DECEMBER 17, 1907.

67,751. BOOKBINDERS' CLOTH. THE WINTERBOTTOM BOOK CLOTH COMPANY, LTD., Manchester, England.
Filed October 30, 1907. Serial No. 30,881. PUBLISHED DECEMBER 17, 1907.

67,752. CERTAIN SPORTING GOODS. A. J. REACH COMPANY, Philadelphia, Pa.
Filed October 23, 1907. Serial No. 30,754. PUBLISHED DECEMBER 17, 1907.

67,753. OUTLET-BUSHINGS FOR ELECTRIC-WIRING PURPOSES. APPLETON ELECTRIC COMPANY, Chicago, Ill., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York.
Filed March 4, 1907. Serial No. 25,733. PUBLISHED APRIL 28, 1907.

67,754. FIRE-ESCAPES. WILLIAM C. BAIRD, New York, N. Y.
Filed October 31, 1907. Serial No. 30,893. PUBLISHED DECEMBER 17, 1907.

67,755. WINES. CARMEL WINE COMPANY, New York, N. Y.
Filed November 7, 1907. Serial No. 31,045. PUBLISHED DECEMBER 17, 1907.

67,756. WINES. CARMEL WINE COMPANY, New York, N. Y.
Filed November 7, 1907. Serial No. 31,046. PUBLISHED DECEMBER 17, 1907.

67,757. WINES. CARMEL WINE COMPANY, New York, N. Y.
Filed November 7, 1907. Serial No. 31,047. PUBLISHED DECEMBER 17, 1907.

67,758. WINES. CARMEL WINE COMPANY, New York, N. Y.
Filed November 7, 1907. Serial No. 31,048. PUBLISHED DECEMBER 17, 1907.

67,759. WINES. CARMEL WINE COMPANY, New York, N. Y.
Filed November 7, 1907. Serial No. 31,051. PUBLISHED DECEMBER 17, 1907.

67,760. FLUTES, CLARINETS, DRUMS, CORNETS, AND THEIR CASES. THE CUNDY-BETTONEY COMPANY, Boston, Mass.
Filed September 28, 1907. Serial No. 30,289. PUBLISHED DECEMBER 17, 1907.

67,761. CURATIVE OINTMENTS. PHILIPPE DESTREMPES, Lowell, Mass.
Filed July 1, 1907. Serial No. 28,520. PUBLISHED DECEMBER 17, 1907.

67,762. JEWELRY. HANSEN-BENNETT COMPANY, Providence, R. I.
Filed October 14, 1907. Serial No. 30,592. PUBLISHED DECEMBER 17, 1907.

67,763. CIGARS, CHEROOTS, AND LITTLE CIGARS. HEINEMAN BROTHERS, Baltimore, Md.
Filed November 14, 1907. Serial No. 31,169. PUBLISHED DECEMBER 17, 1907.

67,764. PHOTOGRAPHIC PRINTS OF PLANS, SPECIFICATIONS, AND SURVEYS. J. WARD HERITAGE, Philadelphia, Pa.
Filed October 5, 1907. Serial No. 30,444. PUBLISHED DECEMBER 17, 1907.

67,765. CERTAIN MEDICINES AND PHARMACEUTICAL PREPARATIONS. FRANK F. NEWELL, Burlington, Wis.
Filed August 29, 1907. Serial No. 29,670. PUBLISHED DECEMBER 17, 1907.

67,766. CERTAIN MEDICINES AND PHARMACEUTICAL PREPARATIONS. SAGINAW MEDICINE CO., Saginaw, Mich.
Filed May 25, 1907. Serial No. 27,656. PUBLISHED DECEMBER 17, 1907.

67,767. DENTAL ALLOY. JOHN F. SCHOTZ, Chicago Ill.
Filed August 5, 1907. Serial No. 29,240. PUBLISHED DECEMBER 17, 1907.

67,768. FACIAL LOTIONS, HAIR-TONICS, NASAL WASHES AND GARGLES, AND LIQUID CREAMS FOR THE COMPLEXION. LUDWIG BOTHO SCHENCK, New York, N. Y.
Filed November 1, 1907. Serial No. 30,912. PUBLISHED DECEMBER 17, 1907.

67,769. WITHDRAWN.

67,770. REMEDY FOR EPILEPSY. THE TUCKER PHARMACAL CO., Brooklyn, N. Y.
Filed October 28, 1907. Serial No. 30,845. PUBLISHED DECEMBER 17, 1907.

67,771. EYEGLASSES. THE WHITE-HAINES OPTICAL COMPANY, Columbus, Ohio.
Filed August 29, 1907. Serial No. 29,669. PUBLISHED DECEMBER 17, 1907.

67,772. CERTAIN FISHING-TACKLE. HORACE A. WHITTEMORE, Boston, Mass.
Filed Oct ber 3, 1907. Serial No. 30,405. PUBLISHED DECEMBER 17, 1907.

67,773. CIGARETTES, CIGARS, SMOKING-TOBACCO, AND CHEWING-TOBACCO. WILLIAM ROBERT ALLEN, Manchester, England.
Filed November 13, 1 07. Serial No. 31,153. PUBLISHED DECEMBER 17, 1907.

67,774. ANTIFRICTION METAL. AMERICAN IMPROVED ANTI-FRICTION METAL COMPANY, Mobile Ala.
Filed November 8, 1907. Serial No. 31,084. PUBLISHED DECEMBER 17, 1907.

67,775. CHEWING AND SMOKING TOBACCO. THE AMERICAN TOBACCO COMPANY, New York, N. Y.
Filed October 30, 1907. Serial No. 30,875. PUBLISHED DECEMBER 17, 1907.

67,776. REMEDY FOR THE TREATMENT OF RHEUMATISM. JABEZ GEACH BRAY, Laurium, Mich.
Filed October 15, 1907. Serial No. 30,603. PUBLISHED DECEMBER 17, 1907.

67,777. CERTAIN MEDICINES. REUBEN S. CLYMER, Allentown, Pa.
Filed October 15, 1907. Serial No. 30,604. PUBLISHED DECEMBER 17, 1907.

67,778. METAL BARS FOR REINFORCING CONCRETE. CONCRETE-STEEL ENGINEERING COMPANY, New York, N. Y.
Filed September 20, 1907. Serial No. 30,104. PUBLISHED DECEMBER 17, 1907.

67,779. PARTS OF MACHINERY FOR TRANSMISSION PURPOSES. JOSEPH MEYER DAVIDSEN, Paris, France.
Filed April 3, 1906. Serial No. 18,475. PUBLISHED DECEMBER 17, 1907.

67,780. HAIR-BRUSHES AND NAIL AND TOOTH BRUSHES. J. C. DOWD & Co., New York, N. Y.
Filed October 31, 1907. Serial No. 30,896. PUBLISHED DECEMBER 17, 1907.

67,781. REMEDY FOR COUGHS AND COLDS. EDNUR PHARMACAL CO., St. Louis, Mo.
Filed October 6, 1905. Serial No. 13,386. PUBLISHED DECEMBER 17, 1907.

67,782. CHAINS, CHAIN-LINKS, AND CHAIN-HOOKS. THE HAYDEN-CORBETT CHAIN CO., Columbus, Ohio.
Filed October 18, 1907. Serial No. 30,660. PUBLISHED DECEMBER 17, 1907.

67,783. REMEDY FOR THE CURE OF MALARIA AND DISEASES OF THE BLOOD AND KIDNEY. HODGE & BAILEY, Little Rock, Ark.
Filed June 8, 1907. Serial No. 27,984. PUBLISHED DECEMBER 17, 1907.

67,784. CERTAIN CUTLERY AND EDGE-TOOLS. HYDE MANUFACTURING CO., Southbridge, Mass.
Filed August 23, 1907. Serial No. 29,554. PUBLISHED DECEMBER 17, 1907.

67,785. CERTAIN PLUMBING SUPPLIES. L. WOLFF MFG. CO., Chicago, Ill.
Filed May 11, 1905. Serial No. 5,062. PUBLISHED DECEMBER 17, 1907.

67,786. CERTAIN MEDICINE. LASH'S BITTERS COMPANY, San Francisco, Cal.
Filed October 7, 1907. Serial No. 30,463. PUBLISHED DECEMBER 17, 1907.

67,787. LAXATIVE TABLETS. THE M. A. WINTER CO., Washington, D. C.
Filed October 23, 1907. Serial No. 30,748. PUBLISHED DECEMBER 17, 1907.

67,788. STEAM-BLOWERS. MCCLAVE-BROOKS CO., Scranton, Pa.
Filed August 27, 1907. Serial No. 29,618. PUBLISHED DECEMBER 17, 1907.

67,789. LIQUID CAR-CLEANERS. THE MODOC COMPANY, Chester, Pa.
Filed February 26, 1907. Serial No. 25,625. PUBLISHED DECEMBER 17, 1907.

67,790. WITHDRAWN.

67,791. AUGER-BITS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed November 14, 1905. Serial No. 14,621. PUBLISHED DECEMBER 17, 1907.

67,792. HAMMERS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed November 14, 1905. Serial No. 14,622. PUBLISHED DECEMBER 17, 1907.

67,793. AXES, HATCHETS, CANE-KNIVES, AND RAZORS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed November 14, 1905. Serial No. 14,623. PUBLISHED DECEMBER 17, 1907.

67,794. MEASURING-TAPES. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed November 14, 1905. Serial No. 14,624. PUBLISHED DECEMBER 17, 1907.

67,795. DIVIDERS AND SQUARES. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed November 14, 1905. Serial No. 14,626. PUBLISHED DECEMBER 17, 1907.

67,796. CERTAIN CUTLERY AND EDGE-TOOLS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed November 14, 1905. Serial No. 14,629. PUBLISHED DECEMBER 17, 1907.

67,797. SCOOPS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed November 14, 1905. Serial No. 14,630. PUBLISHED DECEMBER 17, 1907.

67,798. CERTAIN CUTLERY AND EDGE-TOOLS. SIMMONS HARDWARE COMPANY, St. Louis, Mo.
Filed June 10, 1907. Serial No. 28,014. PUBLISHED DECEMBER 17, 1907.

67,799. LINIMENT. J. H. SNYDER MED. CO., Jonesboro, Ark.
Filed October 29, 1907. Serial No. 30,847. PUBLISHED DECEMBER 17, 1907.

67,800. SHOE BLACKINGS AND DRESSINGS FOR BLACK AND TAN SHOES. SOVEREIGN POLISH CO., Boston, Mass.
Filed November 4, 1907. Serial No. 31,004. PUBLISHED DECEMBER 17, 1907.

67,801. YARNS. BERNHARD ULMANN & CO., New York, N. Y.
Filed November 8, 1907. Serial No. 31,083. PUBLISHED DECEMBER 17, 1907.

67,802. MEDICINES IN TABLET FORM. WILLIAM R. WARNER & CO., Philadelphia, Pa.
Filed October 28, 1907. Serial No. 30,844. PUBLISHED DECEMBER 17, 1907.

67,803. CIGARETTES. ALFRED M. WOLF, New York, N. Y.
Filed October 26, 1907. Serial No. 30,817. PUBLISHED DECEMBER 17, 1907.

67,804. WIRE PICTURE-CORD. WRIGHT WIRE COMPANY, Worcester, Mass.
Filed March 18, 1907. Serial No. 26,050. PUBLISHED APRIL 30, 1907.

67,805. CERTAIN HEATING, LIGHTING, AND VENTILATING APPARATUS. ALCOHOL LIGHT, HEAT AND POWER COMPANY, Meriden, Conn.
Filed October 30, 1907. Serial No. 30,885. PUBLISHED DECEMBER 17, 1907.

67,806. CERTAIN RUBBER GOODS. BOSTON RUBBER COMPANY, Boston, Mass.
Filed October 22, 1907. Serial No. 30,730. PUBLISHED DECEMBER 17, 1907.

67,807. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,916. PUBLISHED DECEMBER 17, 1907.

67,808. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,917. PUBLISHED DECEMBER 17, 1907.

67,809. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,919. PUBLISHED DECEMBER 17, 1907.

67,810. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,920. PUBLISHED DECEMBER 17, 1907.

67,811. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,922. PUBLISHED DECEMBER 17, 1907.

67,812. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,924. PUBLISHED DECEMBER 17, 1907.

67,813. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,925. PUBLISHED DECEMBER 17, 1907.

67,814. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,926. PUBLISHED DECEMBER 17, 1907.

67,815. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,927. PUBLISHED DECEMBER 17, 1907.

67,816. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,928. PUBLISHED DECEMBER 17, 1907.

67,817. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,929. PUBLISHED DECEMBER 17, 1907.

67,818. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,930. PUBLISHED DECEMBER 17, 1907.

67,819. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,932. PUBLISHED DECEMBER 17, 1907.

67,820. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,933. PUBLISHED DECEMBER 17, 1907.

67,821. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,934. PUBLISHED DECEMBER 17, 1907.

67,822. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,937. PUBLISHED DECEMBER 17, 1907.

67,823. COGNACS AND CORDIALS. CARMEL WINE COMPANY, New York, N. Y.
Filed November 7, 1907. Serial No. 31,042. PUBLISHED DECEMBER 17, 1907.

67,824. COGNAC AND CORDIALS. CARMEL WINE COMPANY, New York, N. Y.
Filed November 7, 1907. Serial No. 31,044. PUBLISHED DECEMBER 17, 1907.

67,825. LEATHER BELTING. CHICAGO BELTING COMPANY, Chicago, Ill.
Filed October 21, 1907. Serial No. 30,694. PUBLISHED DECEMBER 17, 1907.

67,826. PERIODICAL ISSUED ANNUALLY. THE CLASS JOURNAL CO., New York, N. Y.
Filed August 28, 1907. Serial No. 29,628. PUBLISHED DECEMBER 17, 1907.

67,827. STOVES, RANGES, GAS-HEATERS, AND PARTS THEREOF. COMSTOCK CASTLE STOVE CO., Quincy, Ill.
Filed September 30, 1907. Serial No. 30,318. PUBLISHED DECEMBER 17, 1907.

67,828. WHISKY. CORTWRIGHT COMPANY, New York, N. Y.
Filed October 11, 1907. Serial No. 30,543. PUBLISHED DECEMBER 17, 1907.

67,829. CERTAIN HARNESS. COVERT MANUFACTURING CO., Watervliet, N. Y.
Filed August 3, 1907. Serial No. 29,194. PUBLISHED DECEMBER 17, 1907.

67,830. WHISKY. EDGEWOOD DIST. CO., Cincinnati, Ohio.
Filed May 6, 1905. Serial No. 4,482. PUBLISHED JUNE 12, 1906.

67,831. PENHOLDERS AND PAPER-WEIGHTS. GEO. BORGFELDT & CO., New York, N. Y.
Filed October 3, 1907. Serial No. 30,402. PUBLISHED NOVEMBER 26, 1907.

67,832. WHISKY. HANNAH & HOGG, Chicago, Ill.
Filed July 15, 1905. Serial No. 10,342. PUBLISHED AUGUST 6, 1907.

67,833. WHISKY. J. W. KELLY & CO., Chattanooga, Tenn.
Filed April 20, 1905. Serial No. 2,346. PUBLISHED AUGUST 20, 1907.

67,834. DRUG JOURNAL. GUY T. KETCHESON, Portland, Oreg.
Filed October 29, 1907. Serial No. 30,880. PUBLISHED DECEMBER 17, 1907.

67,835. INK-STAIN REMOVER. DR. MAX LEHMANN & CO., Berlin, Germany.
Filed September 11, 1907. Serial No. 29,874. PUBLISHED OCTOBER 29, 1907.

67,836. GRATES. MCCLAVE-BROOKS CO., Scranton, Pa.
Filed August 27, 1907. Serial No. 29,619. PUBLISHED DECEMBER 17, 1907.

67,837. MONTHLY MAGAZINE. THE MORSE-BROUGHTON COMPANY, New York, N. Y.
Filed November 7, 1907. Serial No. 31,061. PUBLISHED DECEMBER 17, 1907.

67,838. WRAPPING-PAPER. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed November 14, 1905. Serial No. 14,625. PUBLISHED DECEMBER 17, 1907.

67,839. MONTHLY MAGAZINE. OUTDOOR NEWS COMPANY, New York, N. Y.
Filed September 11, 1907. Serial No. 29,866. PUBLISHED DECEMBER 17, 1907.

67,840. WHISKY. THOMAS PEPPER'S SONS, Ashland, Pa.
Filed July 3, 1905. Serial No. 9,722. PUBLISHED JANUARY 8, 1907.

67,841. WITHDRAWN.

67,842. WHISKY. EDWARD J. RIFFLE, Allegheny, Pa.
Filed April 14, 1906. Serial No. 18,800. PUBLISHED DECEMBER 17, 1907.

67,843. LEATHER LAP-ROBES AND LEATHER BOOTS. SCANDINAVIAN FUR & LEATHER CO., New York, N. Y.
Filed August 23, 1907. Serial No. 29,535. PUBLISHED NOVEMBER 12, 1907.

67,844. MAGAZINES. THE SYSTEM COMPANY, Chicago, Ill.
Filed September 9, 1907. Serial No. 29,799. PUBLISHED DECEMBER 17, 1907.

67,845. VARNISHES, ENAMELS, AND VARNISH-PAINTS. THE THOMSON WOOD FINISHING CO., Philadelphia, Pa.
Filed June 7, 1905. Serial No. 7,586. PUBLISHED DECEMBER 17, 1907.

67,846. LEATHER BOOTS AND SHOES. WALTON AND LOGAN COMPANY, Lynn, Mass.
Filed October 7, 1907. Serial No. 30,472. PUBLISHED DECEMBER 17, 1907.

67,847. CERTAIN LEATHER GOODS. WESTERN LEATHER MFG. CO., Chicago, Ill.
Filed January 24, 1907. Serial No. 24,881. PUBLISHED DECEMBER 17, 1907.

67,797. SCOOPS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
Filed November 14, 1905. Serial No. 14,630. PUBLISHED DECEMBER 17, 1907.

67,798. CERTAIN CUTLERY AND EDGE-TOOLS. SIMMONS HARDWARE COMPANY, St. Louis, Mo.
Filed June 10, 1907. Serial No. 28,014. PUBLISHED DECEMBER 17, 1907.

67,799. LINIMENT. J. H. SNYDER MED. CO., Jonesboro, Ark.
Filed October 29, 1907. Serial No. 30,847. PUBLISHED DECEMBER 17, 1907.

67,800. SHOE BLACKINGS AND DRESSINGS FOR BLACK AND TAN SHOES. SOVEREIGN POLISH CO., Boston, Mass.
Filed November 4, 1907. Serial No. 31,004. PUBLISHED DECEMBER 17, 1907.

67,801. YARNS. BERNHARD ULMANN & CO., New York, N. Y.
Filed November 8, 1907. Serial No. 31,063. PUBLISHED DECEMBER 17, 1907.

67,802. MEDICINES IN TABLET FORM. WILLIAM R. WARNER & CO., Philadelphia, Pa.
Filed October 28, 1907. Serial No. 30,844. PUBLISHED DECEMBER 17, 1907.

67,803. CIGARETTES. ALFRED M. WOLF, New York, N. Y.
Filed October 26, 1907. Serial No. 30,817. PUBLISHED DECEMBER 17, 1907.

67,804. WIRE PICTURE-CORD. WRIGHT WIRE COMPANY, Worcester, Mass.
Filed March 18, 1907. Serial No. 26,050. PUBLISHED APRIL 30, 1907.

67,805. CERTAIN HEATING, LIGHTING, AND VENTILATING APPARATUS. ALCOHOL LIGHT, HEAT AND POWER COMPANY, Meriden, Conn.
Filed October 30, 1907. Serial No. 30,885. PUBLISHED DECEMBER 17, 1907.

67,806. CERTAIN RUBBER GOODS. BOSTON RUBBER COMPANY, Boston, Mass.
Filed October 22, 1907. Serial No. 30,730. PUBLISHED DECEMBER 17, 1907.

67,807. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,916. PUBLISHED DECEMBER 17, 1907.

67,808. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,917. PUBLISHED DECEMBER 17, 1907.

67,809. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,919. PUBLISHED DECEMBER 17, 1907.

67,810. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,920. PUBLISHED DECEMBER 17, 1907.

67,811. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,922. PUBLISHED DECEMBER 17, 1907.

67,812. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,924. PUBLISHED DECEMBER 17, 1907.

67,813. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,925. PUBLISHED DECEMBER 17, 1907.

67,814. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,926. PUBLISHED DECEMBER 17, 1907.

67,815. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,927. PUBLISHED DECEMBER 17, 1907.

67,816. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,928. PUBLISHED DECEMBER 17, 1907.

67,817. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,929. PUBLISHED DECEMBER 17, 1907.

67,818. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,930. PUBLISHED DECEMBER 17, 1907.

67,819. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,932. PUBLISHED DECEMBER 17, 1907.

67,820. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,933. PUBLISHED DECEMBER 17, 1907.

67,821. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,934. PUBLISHED DECEMBER 17, 1907.

67,822. WHISKY, RUM, GIN, BRANDY, COCKTAILS, AND PUNCHES. BOSTON WINE & SPIRITS CO., Boston, Mass.
Filed November 1, 1907. Serial No. 30,937. PUBLISHED DECEMBER 17, 1907.

67,823. COGNACS AND CORDIALS. CARMEL WINE COMPANY, New York, N. Y.
Filed November 7, 1907. Serial No. 31,042. PUBLISHED DECEMBER 17, 1907.

67,824. COGNAC AND CORDIALS. CARMEL WINE COMPANY, New York, N. Y.
Filed November 7, 1907. Serial No. 31,044. PUBLISHED DECEMBER 17, 1907.

67,825. LEATHER BELTING. CHICAGO BELTING COMPANY, Chicago, Ill.
Filed October 21, 1907. Serial No. 30,694. PUBLISHED DECEMBER 17, 1907.

67,826. PERIODICAL ISSUED ANNUALLY. THE CLASS JOURNAL CO., New York, N. Y.
Filed August 28, 1907. Serial No. 29,628. PUBLISHED DECEMBER 17, 1907.

67,827. STOVES, RANGES, GAS-HEATERS, AND PARTS THEREOF. COMSTOCK CASTLE STOVE CO., Quincy, Ill.
Filed September 30, 1907. Serial No. 30,318. PUBLISHED DECEMBER 17, 1907.

67,828. WHISKY. CORTWRIGHT COMPANY, New York, N. Y.
Filed October 11, 1907. Serial No. 30,543. PUBLISHED DECEMBER 17, 1907.

67,829. CERTAIN HARNESS. COVERT MANUFACTURING CO., Watervliet, N. Y.
Filed August 3, 1907. Serial No. 29,194. PUBLISHED DECEMBER 17, 1907.

67,830. WHISKY. EDGEWOOD DIST. CO., Cincinnati, Ohio.
Filed May 6, 1905. Serial No. 4,482. PUBLISHED JUNE 12, 1906.

67,831. PENHOLDERS AND PAPER-WEIGHTS. GEO. BORGFELDT & CO., New York, N. Y.
Filed October 3, 1907. Serial No. 30,402. PUBLISHED NOVEMBER 26, 1907.

67,832. WHISKY. HANNAH & HOGG, Chicago, Ill.
Filed July 15, 1905. Serial No. 10,342. PUBLISHED AUGUST 6, 1907.

67,833. WHISKY. J. W. KELLY & CO., Chattanooga, Tenn.
Filed April 20, 1905. Serial No. 2,346. PUBLISHED AUGUST 20, 1907.

67,834. DRUG JOURNAL. GUY T. KETCHESON, Portland, Oreg.
Filed October 29, 1907. Serial No. 30,859. PUBLISHED DECEMBER 17, 1907.

67,835. INK-STAIN REMOVER. DR. MAX LEHMANN & CO., Berlin, Germany.
Filed September 11, 1907. Serial No. 29,874. PUBLISHED OCTOBER 29, 1907.

67,836. GRATES. MCCLAVE-BROOKS CO., Scranton, Pa.
Filed August 27, 1907. Serial No. 29,619. PUBLISHED DECEMBER 17, 1907.

67,837. MONTHLY MAGAZINE. THE MORSE-BROUGHTON COMPANY, New York, N. Y.
Filed November 7, 1907. Serial No. 31,061. PUBLISHED DECEMBER 17, 1907.

67,838. WRAPPING-PAPER. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo.
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67,839. MONTHLY MAGAZINE. OUTDOOR NEWS COMPANY, New York, N. Y.
Filed September 11, 1907. Serial No. 29,866. PUBLISHED DECEMBER 17, 1907.

67,840. WHISKY. THOMAS PEPPER'S SONS, Ashland, Pa.
Filed July 3, 1905. Serial No. 9,722. PUBLISHED JANUARY 8, 1907.

67,841. WITHDRAWN.

67,842. WHISKY. EDWARD J. RIFFLE, Allegheny, Pa.
Filed April 14, 1906. Serial No. 18,800. PUBLISHED DECEMBER 17, 1907.

67,843. LEATHER LAP-ROBES AND LEATHER BOOTS. SCANDINAVIAN FUR & LEATHER CO., New York, N. Y.
Filed August 23, 1907. Serial No. 29,535. PUBLISHED NOVEMBER 12, 1907.

67,844. MAGAZINES. THE SYSTEM COMPANY, Chicago, Ill.
Filed September 9, 1907. Serial No. 29,799. PUBLISHED DECEMBER 17, 1907.

67,845. VARNISHES, ENAMELS, AND VARNISH-PAINTS. THE THOMSON WOOD FINISHING CO., Philadelphia, Pa.
Filed June 7, 1905. Serial No. 7,586. PUBLISHED DECEMBER 17, 1907.

67,846. LEATHER BOOTS AND SHOES. WALTON AND LOGAN COMPANY, Lynn, Mass.
Filed October 7, 1907. Serial No. 30,472. PUBLISHED DECEMBER 17, 1907.

67,847. CERTAIN LEATHER GOODS. WESTERN LEATHER MFG. CO., Chicago, Ill.
Filed January 24, 1907. Serial No. 24,881. PUBLISHED DECEMBER 17, 1907.

LABELS

REGISTERED FEBRUARY 18, 1908.

14,046.—*Title:* "TALKER." (For Cigars.) C. B. HENSCHEL Mfg. Co., Milwaukee, Wis. Filed January 18, 1908.

14,047.—*Title:* "HAMMER." (For Cigars.) C. B. HENSCHEL Mfg. Co., Milwaukee, Wis. Filed January 18, 1908.

14,048.—*Title:* "KARMA." (For Cigars.) WILLIAM STEINMEIER, Grand Island, Nebr. Filed January 16, 1908.

14,049.—*Title:* "AFFINITY." (For Whisky.) J. SAMUELS & Co., New York, N. Y. Filed January 17, 1908.

14,050.—*Title:* "THE PONCE DE LEON FOUNTAIN OF YOUTH MINERAL SPRING WATER." (For Mineral-Spring Water.) LUELLA DAY, St. Augustine, Fla. Filed January 11, 1908.

14,051.—*Title:* "CROWN FOOT POWDER." (For Foot-Powder.) THE M. AND H. CHEMICAL CO., New York, N. Y. Filed January 16, 1908.

14,052.—*Title:* "ELECTRA." (For Perforated Music Sheets or Rolls.) GEORGE HOWLETT DAVIS, West Orange, N. J. Filed January 22, 1908

14,053.—*Title:* "A COLLECTION OF THE FAMOUS BOILEAU HEADS." (For Envelops of a Special Design for Post-Cards.) REINTHAL & NEWMAN, New York, N. Y. Filed December 20, 1907.

14,054.—*Title:* "COMPOSITE BASE PAINT." (For Paints.) GEORGE B. HECKEL, Philadelphia, Pa. Filed January 17, 1908.

PRINTS

REGISTERED FEBRUARY 18, 1908.

2,219.—*Title:* "STOLEN SWEETS." (For Maraschino Cherries and Glacé Cherries.) THE BEACH-CLARRIDGE CORPORATION, Boston, Mass. Filed January 13, 1908.

2,220.—*Title:* "BLUE RIBBON NO. 323." (For a Box for Playing-Cards.) WILLIS W. RUSSELL CARD Co., Milltown, N. J. Filed January 22, 1908.

2,221.—*Title:* "McGRAW'S CORSETS." (For Corsets.) THE A. P. McGRAW CORSET Co., McGraw, N. Y. Filed December 16, 1907.

2,222.—*Title:* "LOOSE FITTING SLEEPING SUIT." (For Men's Sleeping-Garments.) ELLANGER BROTHERS, New York, N. Y. Filed January 22, 1908.

2,223.—*Title:* "MEN'S AND BOYS' APPAREL." (For Men's and Boys' Clothing.) H. C. LYTTON, Chicago, Ill. Filed January 18, 1908.

2,224.—*Title:* "'A KALAMAZOO DIRECT TO YOU' AT FACTORY PRICES, WE PAY THE FREIGHT." (For Stoves.) KALAMAZOO STOVE Co., Kalamazoo, Mich. Filed January 22, 1908.

2,225.—*Title:* "A KALAMAZOO DIRECT TO YOU." (For Stoves.) KALAMAZOO STOVE Co., Kalamazoo, Mich. Filed January 22, 1908.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

MCARTHUR *v.* MYGATT.

PATENT INTERFERENCE.

Decided October 24, 1907.

1. INTERFERENCE—PRIORITY—DILIGENCE.

Where McA. conceived the invention in the summer of 1903, but did practically nothing toward reduction to practice until April 21, 1904, when he wrote to his patent attorney instructing him to file an application, which was prepared promptly and sent to McA., but was not filed until September 19, 1904, *Held* that he was not diligent as against M., who entered the field on March 1, 1904.

SAME—SAME—SAME—ALLEGED POVERTY.

A claim by McA. of poverty as an excuse for failure to reduce to practice is not sustained by evidence showing that it was not until six months after his business was established that he could afford to move from a place for which the rental was eleven dollars per month to a place for which the rental was thirty-five dollars per month, where it appeared that the old place was retained and business carried on at both places for about three months before his opponent entered the field; nor does the fact that he sustained a financial loss by the peculation of an employee affect the question where such loss occurred some months after the beginning of the period to be covered by the showing.

APPEAL from Examiners-in-Chief.

COMBINED LAMP SHADE AND REFLECTOR.

Mr. Thomas Ewing, Jr., and *Mr. Vernon M. Dorsey* for McArthur.

Mr. Wallace A. Bartlett and *Mr. Fenelon B. Brock* for Mygatt.

MOORE, *Commissioner:*

This is an appeal by McArthur from a decision of the Examiners-in-Chief affirming the decision of the Examiner of Interferences and awarding priority of invention to Mygatt.

The issue relates to prismatic shades or reflectors. McArthur is a patentee, the application on which the patent was granted having been filed September 19, 1904. Mygatt's application was filed March 24, 1904. The lower tribunals have found that McArthur was the first to conceive, but the last to reduce to practice, and that he was lacking in diligence, priority being therefore awarded to Mygatt.

It seems to be clearly established by the record that Mygatt conceived the invention about March 1, 1904, as found by the Examiner of Interferences. The evidence also warrants the conclusion reached by the Examiner of Interferences that McArthur conceived the invention in the summer of 1903, but that he did not reduce it to actual practice prior to the filing of his application. It was thus necessary for McArthur to show that just prior to March 1, 1904, he was diligently engaged in an endeavor to reduce his invention to practice and that his endeavors in this direction did not cease before actual accomlipshment or that because of poverty or other compelling circumstances it was impossible for him to so reduce the invention to practice. On this question of diligence the lower tribunals found against McArthur. It has been urged by McArthur that Mygatt's application does not disclose the invention in issue. This question was not decided by the Examiner of Interferences, but the Examiners-in-Chief held, in two decisions rendered after *ex parte* and *inter partes* consideration, that Mygatt's application contained a proper foundation for these claims. The only questions which appear to be of any consequence here are, therefore, that of McArthur's diligence and whether Mygatt can properly make the claims in issue.

On the question of diligence McArthur acknowledges that nothing was done toward filing an application until April 21, 1904, when he wrote to his patent attorney giving him instructions to prepare the application. Although the application was prepared and sent to McArthur within a few days after the letter was written, it was not filed until September 19, 1904.

The only testimony tending to show any activity toward actual reduction to practice by McArthur prior to the filing of his application is that of the inventor himself, who states (McA. Rec., p. 70, Q. 37) that he received the first pressing of the new style of goods in August, 1904; but the particular construction referred to is not described, and in any event this testimony of the inventor is not corroborated. McArthur states (McA. Rec., p. 68, A. 33) that he intended to make molds and file papers about the time he made a wooden model in June, 1903, but owing to the condition of his business from that time to a year or more later he did not see his way clear to spare the money. Since McArthur was doing nothing at all with his invention when Mygatt entered the field on March 1, 1904, and since the record fails to prove any acts toward an actual or constructive reduction to practice from that time on up to the filing of his application except the preparation of the application papers on April 21, it is believed that the lower tribunals were correct in holding that McArthur was lacking in diligence.

McArthur seeks to excuse his lack of diligence on

the ground that he was financially unable to reduce the invention to practice. I fail to find in the evidence, however, anything of a compelling nature which prevented McArthur from reducing the invention to practice.

As evidence of McArthur's inability to bear the expense incident to the filing of an application or an actual reduction to practice it is pointed out that it was not until December, 1903, six months after embarking in the business in which he is now engaged, that he could afford to move from a place for which he paid eleven dollars per month rental to a place where he paid thirty-five dollars. It is to be observed, however, that the old place was retained and business was carried on at both places. This tends to indicate that McArthur thought more of enlarging his business than of securing his rights to his new invention. As McArthur states, (Rec., p. 67, Q. 32:)

> I had goods then which I knew I could sell and I also knew that the construction was practical and this new compound prism was in a measure an experiment, and I could not afford to take any chances on its being a failure.

The testimony accords with this view of appellant that he preferred to enlarge his old business rather than take any chances on the new construction. An inventor cannot thus make the rights of another dependent upon his own business convenience. Mygatt having in the meantime entered the field in good faith and taken the necessary steps to place the invention before the public must be considered as having acquired superior rights.

McArthur is shown to have sustained considerable financial loss through the peculation of an employee; but this did not occur until the summer of 1904, (the month is not given,) and hence has no material bearing on the question under consideration. It must be held, therefore, that the evidence is insufficient to excuse McArthur's lack of diligence.

The remaining question for consideration is whether Mygatt's application discloses the invention in issue. The invention is a combined lamp shade and reflector the outer surface of which is substantially covered with a series of integral prisms adapted to reflect light-rays emanating from a source within the reflector back into the reflector and out at the open mouth thereof. The contention made on behalf of McArthur is that Mygatt does not disclose series of prisms which, within the meaning of the specification of McArthur's patent from which the claims were copied, are raised in step-like formation above those of an adjacent series, as called for by the issue. As understood the specification of the patent defines the meaning of "step-like formation" as being that arrangement whereby the prisms of "one series are disposed along a curved surface raised relatively above (or removed from) the surface of disposition of the adjacent series." The curvature of the surface may be disregarded, as this is a mere matter of form. Disregarding this feature we find in the device of Mygatt a construction responding to the language of the patent, for upon looking at the drawing it is seen that the upper end of each prism is lower than the lower end of the upper adjacent prism, the upper ends of the whole series being thus lower than the lower ends of the adjacent upper series. Again, a plane including the upper edge of one prism is below a plane including the upper edge of the adjacent prism above, so that the series of prisms are arranged in step-like formation whether we regard the expression as applicable only to the adjacent portions of the series of prisms or to the entire surfaces of adjacent series. It is true that the McArthur device is specifically different from the device disclosed by Mygatt; but as I view the issue of this interference it defines only features common to the two constructions and is not confined to the construction shown by McArthur.

The decision of the Examiners-in-Chief awarding priority of invention to Mygatt is affirmed.

EX PARTE MOORHEAD.

APPLICATION FOR PATENT.

Decided January 21, 1908.

REQUIREMENT OF DIVISION—CURSORY EXAMINATION.

Where a requirement of division is made, the most pertinent references readily available should be cited in order that the applicant may be able to intelligibly divide his application.

ON PETITION.

FLOOR-CLEANSING APPARATUS.

Mr. Vernon E. Hodges for the applicant.

MOORE, *Commissioner:*

This is a petition that the Examiner cite references in the art pertaining to the claims before insisting upon the requirement of division. The record shows that in his action requiring division in the case certain claims were held to relate to the invention in fountain scrub-brushes, certain other claims to cover inventions in dust-collectors, and the remaining claims to comprise aggregations of the two alleged inventions. No references were cited.

Upon request by the applicant that references be cited the Examiner stated that he "had no knowledge of any references at the time the requirement of division was made." The practice in regard to the examination of applications where division is required is believed to be well settled. An order published in 83 OFFICIAL GAZETTE, page 301, is, in part, as follows:

> In requiring division the Examiner will observe the decision of the Commissioner and furnish such references and other information as will enable the applicant to divide intelligently.

This order is still in force and has been repeatedly quoted with approval. (*Ex parte Randall and Luck*, 95 O. G., 2063; *ex parte Albert*, 96 O. G., 426; *ex parte MacKaye*, 103 O. G., 888.) In the latter decision it is stated that—

> The "cursory examination" which is contemplated by the order consists in the citation of any references of which the Examiner may have knowledge at the time the requirement of division is made.
>
> The order is not based upon any right of an applicant; but it is a courtesy extended to him by the Office. If the Examiner is not aware of any pertinent reference, a statement of that fact would be a compliance with the order. If, however, the Examiner is aware of any references which are pertinent to the case or if he can readily find such references, he should cite them to indicate the state of the art when requiring division.

It appears in the present case that the Examiner was not aware of any references for the claims at the time the requirement for division was made. It does not appear, however, whether he could readily find such references. In order that the applicant may be able to intelligently divide his application, he should be given the benefit of the references in the art corresponding most nearly to the devices disclosed in his application. It is not the duty of the Examiner to make an exhaustive search of the art in such cases; but the nearest references readily available should in each case be cited. If in the present case references of this character can be readily found, they should be cited.

The petition is granted to this extent.

ALT v. CARPENTER.

PATENT INTERFERENCE.

Decided January 22, 1908.

INTERFERENCE—CONCESSION OF PRIORITY—SIGNATURE OF APPLICANT NECESSARY.

A concession of priority should be signed by the applicant, if living, or, if not, by his executor or administrator, even though both the applications involved in the interference are assigned to the same party.

APPEAL on motion.

STORAGE BATTERY.

Messrs. Mason, Fenwick & Lawrence for Alt.

Messrs. Munn & Co. and *Messrs. Mason, Fenwick & Lawrence* for Carpenter.

MOORE, *Commissioner:*

This is an appeal by Alt from the decision of the Examiner of Interferences dismissing his motion for judgment of priority and dismissing a concession of priority of invention signed by the assignee of the entire interest in the application of Carpenter.

The application of Carpenter was filed by the administratrix of the estate of the inventor on February 1, 1906. The application of Alt was filed April 1, 1907. Both applications are assigned to the American Battery Company, of Cedarhurst, N. Y. No preliminary statements were filed, and the Examiner of Interferences issued an order requiring Alt to show cause why judgment of priority on this record should not be rendered against him.

A concession of priority was filed in favor of Alt signed by the assignee of the Carpenter application. Subsequently an affidavit was filed by the administratrix, who executed the Carpenter application, opposing the concession and alleging that the same is in fraud of her rights.

Rule 125 provides that a concession of priority in order to afford a sufficient basis for a judgment of priority must be "signed by the inventor himself (and by the assignee, if any)." In the case of *Skinner* v. *Murray*, (107 O. G., 542,) where Rule 125 is construed, it is stated:

> In all papers of this kind the signature of the real owner is of course necessary, and to avoid dispute it is believed that the signatures of nominal parties are necessary as well. The parties are not claiming tangible property to which any one has a legal title at the present time, but merely the right to secure a patent by following the requirements of the law. The statute requires the inventor to make the application, even where he has parted with all interest, and therefore in all cases he is at least a nominal party. If after abandonment the attempt should be made to file a new application for the same thing, it would have to be made by the inventor. He should be required to place a statement on record which would estop him from coming forward with such application.

Where the inventor is dead, the right of applying for and obtaining the patent devolves upon the executor or administrator, (sec. 4896, R. S.,) and papers that would require the signature of the inventor, if living, must be signed by said executor or administrator.

In the present case not only has the administratrix refused to sign the concession of priority, but has filed in protest an affidavit alleging fraud. Where the application of both parties to an interference are assigned to the same company, circumstances may arise where it is for the interest of the common assignee to have judgment awarded in favor of one party to the prejudice of the rights of the other party and without regard to the actual dates of invention. This would be easy of accomplishment where both applications are assigned to the same assignee unless the signature of the inventor or, in case he is deceased, of the executor or administrator is required to a concession of priority.

The decision of the Examiner of Interferences is affirmed.

BLACKMORE v. HALL.

PATENT INTERFERENCE.

Decided February 3, 1908.

INTERFERENCE—DELAY IN FILING MOTION TO DISSOLVE—TRANSMISSION.

A delay of seven weeks in the filing of a motion to dissolve will not be excused on a showing that counsel called applicant's attention to the advisability of filing the motion, that it was applicant's intention to visit Washington for the purpose of consulting his attorney regarding the motion, but that before a meeting could be arranged business of great importance called him to other places, especially in view of a vigorous protest by the opposing party against delay and a showing that such delay would result in hardship to him.

APPEAL on motion.

METHOD OF PRODUCING ALUMINIUM.

Mr. J. R. Nottingham for Blackmore.

Mr. Joseph B. Hall per se.

MOORE, *Commissioner:*

This is an appeal by Blackmore from the decision of the Examiner of Interferences refusing to transmit a motion to dissolve the interference.

The Examiner of Interferences denied the motion to transmit on the ground that appellant was not diligent in bringing his motion and that the showing made did not excuse the delay.

The preliminary statements were opened and approved on October 4, 1907. Consequently the thirty days provided by Rule 122 for the filing of motions to dissolve expired November 4, 1907. Blackmore did not file his motion until December 26, 1907. The showing in excuse of the delay in bringing the motion consists of the affidavits of Blackmore and of his counsel. It appears therefrom that Blackmore's counsel called his client's attention to the advisability of bringing such a motion. Blackmore states that it was his intention to visit Washington for the purpose of consulting with his attorney concerning the matter, but that before a meeting could be arranged business of great importance called him to various other places, so that he did not reach Washington until December 19, 1907.

If Blackmore was unable to personally consult his attorney within the proper time, it does not appear why the matter could not have been attended to through correspondence. According to Blackmore's own showing the delay was not unavoidable, but rather a matter of business convenience, in that he chose to

attend first to matters he considered of greater importance. These affidavits do not indicate that Blackmore exercised due diligence or show circumstances that would justify excusing the delay, especially in view of Hall's vigorous protest and his showing that great hardship would result to him by reason of the delay. (*Carney* v. *Latimer*, 119 O. G., 652; *McKee* v. *Baker*, 120 O. G. 557.)

The decision of the Examiner of Interferences is affirmed.

BARBER *v.* WOOD.

PATENT INTERFERENCE.

Decided January 6, 1908.

INTERFERENCE—ABANDONMENT OF INVENTION—NOT CONSIDERED ON PETITION.

A petition that a rule be issued against an opposing party to show cause why it should not be held that he has abandoned his invention and that petitioner be permitted to offer testimony upon such question will not be entertained under the Commissioner's supervisory authority where petitioner has other remedies and is, in fact, pursuing another remedy before the Examiner of Interferences.

ON PETITION.

SHEET-DELIVERY MECHANISM.

Mr. Walter F. Rogers for Barber.

Messrs. Southgate & Southgate for Wood.

BILLINGS, *Assistant Commissioner:*

This is a petition by Barber that a rule be issued against Wood to show cause why it should not be held that he has abandoned the invention of the issue of this interference, that counsel for Barber be permitted to be present and to participate in the examination of the witnesses on behalf of Wood, and that Barber be permitted to offer such testimony in support of the averment herein as may be deemed advisable.

Barber's petition is, in effect, a petition for the exercise of the supervisory authority of the Commissioner. It is well settled that the supervisory authority of the Commissioner will be exercised only in case of manifest error and where the moving party has no other remedy. (*Hicks* v. *Costello*, 103 O. G., 1163; *Woods* v. *Waddell*, 106 O. G., 2017; *Sobey* v. *Holsclaw*, 119 O. G., 1922; *Locke* v. *Crebbin*, 124 O. G., 317; *Adkins and Lewis* v. *Seeberger*, 127 O. G., 1578; *Barber* v. *Wood*, 127 O. G., 1991; *Daggett* v. *Kaufmann*, 127 O. G., 3641.)

In the present case the record shows that petitioner did not exhaust his remedies before bringing this petition. On the day that this petition was filed Barber filed before the Examiner of Interferences the following motion:

Motion is hereby made for an order permitting Barber to take testimony for the purpose of showing that the Wood invention is, in certain respects, inoperative as set forth by his application, and to establish the ground of public use of the invention prior to the date of Wood's application in interference, Serial No. 204,923, and that the invention was in use under circumstances showing that Wood had in fact abandoned the invention before he filed his second or new application.

By granting an accompanying motion for suspension of proceedings pending the determination of the above petition to the Commissioner the Examiner of Interferences suspended action on the first-mentioned motion. Said motion, brought in the regular course of the proceedings, affords petitioner an adequate remedy without the necessity of invoking the supervisory authority of the Commissioner and should be determined in the first instance by the Examiner of Interferences. (*Lowry and Cowley* v. *Spoon*, 122 O. G., 2687.)

It is noted that petitioner in his brief bases his petition largely on the holding of the Court of Appeals of the District of Columbia in the case of *Christensen* v. *Noyes*, (90 O. G., 223.) In that case the application of Noyes was forfeited at the time Christensen's patent issued, so that "there was no pending application in the Office nor any unexpired patent with which it would interfere." In the present case the patent to Barber was granted April 12, 1904, while the application of Wood, allowed January 23, 1904, did not become forfeited until after July 23, 1904. The facts in this case therefore differ materially from those considered by the court of appeals in the case of *Christensen* v. *Noyes*, *supra*.

The petition is denied.

DUNLEVY & BROTHER *v.* NELSON MORRIS & CO.

TRADE-MARK INTERFERENCE.

Decided January 15, 1908.

TRADE-MARKS—INTERFERENCE—APPLICANT AND REGISTRANT.

Where in an interference between an applicant and a registrant the latter takes no testimony and the former establishes a date of adoption and use prior to the date of registration, it is unnecessary to consider whether there is an interference in fact or whether the testimony shows actual conflict in trade.

ON APPEAL.

TRADE-MARK FOR LARD.

Mr. T. W. Johnson for Dunlevy & Brother.

Mr. H. A. Seymour for Nelson Morris & Co.

BILLINGS, *Assistant Commissioner:*

This is an appeal by Nelson Morris & Co, the senior party to this interference, from a decision of the Examiner of Interferences holding that Dunlevy & Brother is entitled to register a mark consisting of the words "White Lily" associated with a cluster of callalilies as a trade-mark for lard.

The proceeding involves the application of Dunlevy & Brother, filed May 8, 1905, and the registration of Nelson Morris & Co., No. 20,180, granted September 29, 1891.

The questions raised by the assignment of errors may be reduced to four contentions—first, that the evidence shows that Dunlevy & Brother used their mark as a grade-mark and not as a trade-mark; second, that the record does not show continuous use by Dunlevy & Brother and their predecessors since the year 1882; third, that there is no interference in fact, and, fourth, that the testimony fails to show actual confusion.

As to the first contention, there is not sufficient evidence to warrant the conclusion that the mark in issue was used by appellee as a grade-mark and not as a trade-mark. Unquestionably the mark was used in a way to satisfy the requirements of the law as to trade-mark use, and the evidence fails to show that appellee used any other trade-mark on the particular product to which the mark in issue was applied.

The testimony of Jeremiah Dunlevy and Paul Dunlevy, who are the present members of the firm of Dunlevy & Brother, and who are also members of the firm

of Walker, Dunlevy & Bro., predecessors of the present firm, and of other witnesses who were employed by both of these firms shows that the trade-mark in issue has been in continuous use by Dunlevy & Brother and by their predecessors since 1882. This testimony is so clear and convincing that it requires no discussion. As Nelson Morris & Co. took no testimony to prove adoption and use prior to their registration, dated September 29, 1891, it follows that Dunlevy & Brother must be regarded as the first to adopt and use the mark.

Since Dunlevy & Brother were the first to adopt and use the mark, registration must be granted to them even though their mark may conflict with the mark registered by appellant. Hence, the allegation that there is no interference in fact and that the testimony is insufficient to show an actual conflict in trade are immaterial to the determination of the right of Dunlevy & Brother to registration.

The decision of the Examiner of Interferences is affirmed.

OSWEGO MAIZE PRODUCTS COMPANY *v.* NATIONAL STARCH COMPANY.

OPPOSITION.

Decided February 6, 1908.

1. TRADE-MARK—OPPOSITION—SUFFICIENCY OF PROOF TO NEGATIVE EXCLUSIVE USE.

In a trade-mark opposition proceeding opposing registration of a mark under the "ten-year" proviso of Section 5 of the Trade-Mark Act proof of contemporaneous use by the opposer after the passage of the act is not sufficient to negative the "exclusive" use required by the statute. In order to negative exclusive use, contemporaneous use within the ten years next preceding the passage of the act must be shown.

2. SAME—SAME—GROUNDS FOR REFUSING REGISTRATION.

While the statute provides that any one who believes he would be damaged by the registration of a mark may oppose registration of the same, registration cannot be refused by the Office unless the opposer shows that the mark does not come within the registrable marks specified in section 5 of the Trade-Mark Act.

APPEAL from Examiner of Interferences.

TRADE-MARK FOR LAUNDRY STARCH.

Mr. Archibald Cox for Oswego Maize Products Company.

Messrs. Dickerson, Brown, Raegener & Binney for National Starch Company.

BILLINGS, *Assistant Commissioner:*

This is an appeal by the Oswego Maize Products Company from a decision of the Examiner of Interferences dismissing its notice of opposition to the registration by the National Starch Company of the word "Oswego" as a trade-mark for corn-starch.

The mark claimed is geographical, being the name of a well-known city of the State of New York. Registration can be granted, therefore, only under the "ten-years" clause of section 5 of the present Trade-Mark Act.

The record is clear that applicant used the mark claimed as a trade-mark for more than ten years next preceding the passage of the Trade-Mark Act, and appellant does not appear to be contesting this question.

But it is contended that such use was not exclusive, because the evidence shows that opposer used this word prior to April 1, 1905, the date of the passage of the act, or at any rate that opposer began the manufacture and sale of starch before such date, as is conclusively shown by the fact that it registered the mark "Velvet" for starch in January, 1905.

The Examiner of Interferences discussed the evidence relative to the question of opposer's use of the mark prior to April 1, 1905, and concluded that it failed to prove such use. Appellant points out that the witness called on behalf of the opposer testified that the use of the word "Oswego" began very soon after the business of opposer began, and that in view of the fact that the opposer registered the mark "Velvet" for starch in January, 1905, on an application filed December 28, 1904, in which the accompanying affidavit stated that such mark had been used since about December 1, 1904, it must be concluded that opposer's business began before April 1, 1905, and it is argued that if this evidence proves that the business began before April 1, 1905, it also sufficiently proves the use of the word "Oswego" before this time, since opposer could not carry on business without using its corporate name and address, each of which includes the word "Oswego;" but this evidence is not regarded as sufficient to discharge the burden of proof resting upon the opposer upon the issue of contemporaneous use within the ten-year period thus raised by the opposer.

It is also urged that it is not necessary to show use by the opposer prior to the passage of the Trade-Mark Act, but that it is sufficient to negative exclusive use by the applicant if it is shown that another began the use of the mark after the date of the passage of the act and before the filing of the application against which the opposition is directed. Upon this point I am of the opinion that the meaning of the statute is clear. The statute clearly specifies the "passage of the act" as the end of the period within which exclusive use is required, and I am unable to see how the plain wording thereof can be construed in any other way.

The contention which appellant characterizes as involving the real merits of the opposition is that, as section 6 of the present Trade-Mark Act provides that any one who "believes he would be damaged by the registration of a mark may oppose the same," if an opposer shows that he would be damaged by the registration such registration must be refused unless the applicant has a monopoly in the use of the mark for which registration is asked. Appellant then points out reasons why he would be damaged and endeavors to show that the applicant has no right to a monopoly of the mark claimed, from which he concludes that registration should be refused; but it is thought that this argument misconceives the purpose and effect of the present statute. While the statute provides that any one who believes he would be damaged may oppose a registration, it seems clear that an opposition cannot be successful unless the opposer shows that the mark does not come within the registrable marks specified in section 5 of the act. Section 5 states that—

No mark by which the goods of the owner of the mark may be distinguished from other goods of the same class shall be refused registration as a trade-mark on account of the nature of such mark unless such mark—

is of specified character. After specifying certain marks which shall not be registered this section concludes as follows:

And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors,

or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act.

The applicant herein having made the necessary allegations to bring his case within this proviso, registration can be refused only upon evidence showing that he has not complied with some of its conditions. The notice of opposition sets forth only two grounds which bring in question applicant's non-compliance with such conditions, one of such grounds being that applicant has not used the mark as a trade-mark, and the other that the applicant has not had exclusive use of the mark during the ten-year period specified. As stated above, the evidence is regarded as clearly showing applicant's use of the mark as a trade-mark. The record also fails to show that any person, firm, or corporation other than the applicant used the mark as a trade-mark within the ten years next preceding the passage of the act, as above pointed out, and hence there is nothing in the record to overcome applicant's *prima facie* right to registration.

The decision of the Examiner of Interferences dismissing the opposition is affirmed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 8, 1908.

Mariano Sanz, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the applications of Bennett, Sloan & Company, National Grocer Company, and Mariano Sanz for registration of a trade-mark, a letter having been received from the attorney of record for said Mariano Sanz stating that he is informed and believes that Sanz is dead and that he cannot say whether or not there is a successor to the business, and the Office having been unable to obtain any communication from said Mariano Sanz, notice is hereby given to the said Mariano Sanz, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 8, 1908.

Thomas N. Dwyer, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of James E. Moroney, of Philadelphia, Pa., for registration of a trade-mark and a trade-mark registered to Thomas N. Dwyer, whose known address is 36 South William street, New York, N. Y., and it appears from the record of the case that the registrant, Thomas N. Dwyer, cannot be located.

Notice is therefore hereby given to said Thomas N. Dwyer, his assigns or legal representatives, that if they or any of them desire to contest said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 29, 1908.

Weber & Schillinger, their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The George Wiedemann Brewing Company, of Newport, Ky., for registration of a trade-mark and a trade-mark registered to Weber & Schillinger, of Louisville, Ky., and it appears from the record of the case that the registrant, Weber & Schillinger, cannot be located.

Notice is therefore hereby given to said Weber & Schillinger, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 18, 1908.

Helen Ryan & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The A. Spiegel Company, of Milwaukee, Wis., for registration of a trade-mark and a trade-mark registered to Helen Ryan & Company, of 12 South Elliott place, borough of Brooklyn, New York, N. Y., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Helen Ryan & Company having been returned undelivered, notice is hereby given to the said Helen Ryan & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 23, 1908.

D. L. Wing & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of J. F. Meyer & Sons' Milling Company, of 172-174 Laclede Bldg., St. Louis, Mo., for registration of a trade-mark and a trade-mark registered March 14, 1882, to D. L. Wing & Company, of St. Louis, Mo., and the notice of said declaration mailed by the Patent Office in the usual manner to the said D. L. Wing & Company having been returned undelivered, notice is hereby given to the said D. L. Wing & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 23, 1908.

Joseph H. Brown, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of Kingan & Company, Limited, of Indianapolis, Ind., for registration of a trade-mark and a trade-mark registered to Joseph H. Brown, of Fort Worth, Tex., and a letter has been filed in the case by the attorney of record for said Brown stating that he is unable to locate his client.

Notice is therefore hereby given to said Joseph H. Brown, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 18, 1908.

The heirs, executor, or administrator of Siman Miyata, take notice:

An interference has been declared by this Office between an application of the Standard Import Company, Limited, of New Orleans, La., and an application of Siman Miyata, of West Orange, N. J., both for registration of a trade-mark, and a letter has been filed in the case from the attorney of record for said Miyata stating that Miyata has died.

Notice is therefore hereby given to the heirs, executor, or administrator of the said Siman Miyata that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.
[BY AUTHORITY OF CONGRESS.]

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AMENDED RULE 22.

(ORDER No. 1,751.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 5, 1908.

Acting under the provisions of section 483 of the Revised Statutes and with the approval of the Secretary of the Interior, Rule 22 of the Rules of Practice of the United States Patent Office is amended by inserting after section (*c*) thereof the following paragraph:

(*d*) The Secretary of the Interior may after notice and opportunity for a hearing, suspend or exclude from further practice before the Patent Office any person, firm, corporation, or association shown to be incompetent, disreputable or who refuses to comply with the rules and regulations thereof, or who shall with intent to defraud, in any manner deceive, mislead or threaten any claimant or prospective claimant, by word, circular, letter or by advertisement, or by guaranteeing therein the successful prosecution of any application for patent or the procurement of any patent, or which word, circular, letter or advertisement shall contain therein any false promise or misleading representation. (Sec. 5, act approved July 4, 1884.)

So that the rule as amended shall read as follows:

22. (*a*) Applicants and attorneys will be required to conduct their business with the Office with decorum and courtesy. Papers presented in violation of this requirement will be returned. But all such papers will first be submitted to the Commissioner, and only returned by his direct order.

(*b*) Complaints against Examiners and other officers must be made in separate communications, and will be promptly investigated.

(*c*) For gross misconduct the Commissioner may refuse to recognize any person as a patent agent, either generally or in any particular case; but the reasons for such refusal will be duly recorded and be subject to the approval of the Secretary of the Interior.

(*d*) The Secretary of the Interior may after notice and opportunity for a hearing, suspend or exclude from further practice before the Patent Office any person, firm, corporation, or association shown to be incompetent, disreputable, or who refuses to comply with the rules and regulations thereof, or who shall with intent to defraud, in any manner deceive, mislead or threaten any claimant or prospective claimant, by word, circular, letter or by advertisement, or by guaranteeing therein the successful prosecution of any application for patent or the procurement of any patent, or which word, circular, letter or advertisement shall contain therein any false promise or misleading representation. (Sec. 5, act approved July 4, 1884.)

EDWARD B. MOORE,
Commissioner.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business February 18, 1908.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		Amended	New.	
308	XVII. Clutches; Linotyping; Matrix-Making; Nut and Bolt Locks; Printing.	Feb. 4	Jan. 20	180
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Garment-Supporters; Signals; Toilet.	Feb. 3	Nov. 25	638
312	VII. Games and Toys; Mechanical Motors; Optics; Paper Manufactures; Velocipedes.	Feb. 1	Jan. 2	200
172	XXXI. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Mineral Oils; Oils, Fats, and Glue; Water Purification.	Jan. 27	Dec. 28	237
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Educational Appliances; Fishing and Trapping; Stationery; Stone-Working.	Jan. 21	Jan. 18	253
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Jan. 21	Dec. 23	359
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Jan. 20	Nov. 7	382
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Jan. 18	Jan. 6	230
167	V. Bookbinding; Harvesters; Jewelry; Music.	Jan. 17	Dec. 24	325
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Jan. 16	Dec. 23	278
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Engraving; Measuring Instruments; Wind-Wheels.	Jan. 15	Jan. 2	470
147	XXIX. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Jan. 15	Nov. 11	353
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Jan. 14	Jan. 14	208
315	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Jan. 7	Jan. 7	166
282	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Iron Structures; Loading and Unloading; Towers.	Jan. 6	Jan. 15	277
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Jan. 4	Dec. 11	381
303	XV. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Hydraulic Lime and Cement; Laminated Sheets and Fabrics; Paper-Making; Paving; Photography; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Jan. 3	Dec. 23	392
276	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Jan. 3	Oct. 21	508
227	XVIII. Injectors and Ejectors; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Dec. 31	Dec. 18	244
154	XXXIII. Cutlery; Domestic Cooking Vessels; Electric Signaling; Electricity, Medical and Surgical; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas, and Canes.	Dec. 27	Jan. 3	298

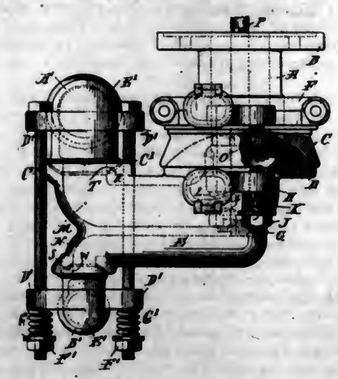
Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		Amended	New.	
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Pneumatics; Presses; Store-Service; Tobacco.	Dec. 26	Dec. 7	348
322	XII. Elevators; Journal-Boxes; Lubrication; Machine Elements; Pulleys and Shafting.	Dec. 26	Dec. 3	612
332	X. Carriages and Wagons	Dec. 26	Nov. 5	465
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Dec. 26	Oct. 14	282
152	XXX. Fluid-Pressure Regulators; Lamps and Gas-Fittings; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Dec. 24	Dec. 20	257
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heating Plants.	Dec. 20	Nov. 21	483
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Dec. 18	Jan. 2	369
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Dec. 16	Dec. 2	604
280	XL. Baggage; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Fine Arts; Lighting-Fixtures; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Dec. 16	Nov. 11	681
105	XXVI. Electric Heating and Rheostats; Electric Railways; Electricity, Generation; Motive Power.	Dec. 16	Oct. 9	371
238	XIX. Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel; Stoves and Furnaces.	Dec. 12	Oct. 30	484
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Railway-Rails and Joints; Railway-Ties and Fasteners; Ships.	Dec. 7	Oct. 25	563
307	XIV. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire-Working.	Dec. 3	Oct. 7	224
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Dec. 3	Sept. 28	538
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Nov. 29	Nov. 15	427
107	XXXVII. Electric Lighting; Electricity, Conductors; Electricity, General Applications.	Nov. 23	Oct. 1	593
142	IX. Air and Gas Pumps; Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage.	Nov. 22	Jan. 4	223
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Nov. 6	Oct. 23	560
109	XVI. Telegraphy; Telephony	Nov. 2	Aug. 3	619
321	XXXIX. Baths and Closets; Water Distribution.	Oct. 23	Sept. 6	915
382	XLI. Railway Draft Appliances; Resilient Tires and Wheels.	Oct. 15	Sept. 3	840
	Total number of applications awaiting action			17,308
161	TRADE-MARKS, DESIGNS, LABELS, AND PRINTS.			
	Trade-Marks	Feb. 15	Jan. 18	276
	Designs	Feb. 9	Jan. 9	74
	Labels and Prints			

PATENTS

GRANTED FEBRUARY 25, 1908.

879,845. STEAM FITTING OR JOINT FOR JOURNALS OF ROTARY STEAM-CYLINDERS OR OTHER REVOLVING BODIES. ALONZO ALDRICH, Beloit, Wis. Filed Sept. 3, 1907. Serial No. 391,006.



1. In a steam fitting or joint for journals for revolving steam cylinders, the combination of a hollow journal a fitting, a pipe connected to the fitting, and steam joints between said fitting and journal and pipe respectively, and means for permitting relative rotary movements of said fitting and journal and pipes.

2. In a device of the class described, a hollow journal, a fitting, said journal and fitting having coöperating bearing seats to form a steam tight joint therebetween, and a steam pipe having relatively rotative steam tight connection to said fitting in laterally off-set relation with respect to said steam joint.

3. In a device of the class described, a hollow journal, a fitting, said journal and fitting having coöperating relatively rotative bearing seats to form a steam tight joint therebetween means for maintaining said seats in bearing relation with respect to each other, said fitting having a laterally off-set portion, and a steam supply pipe having relatively rotative connection to said off-set portion.

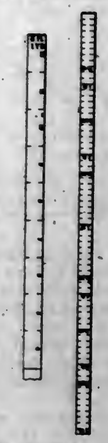
4. In a device of the class described, a hollow journal having a seat in its end, a fitting, having a passage therethrough and having bearing seats at the respective ends of said passage, the bearing seats in said fitting lying in substantially the same plane, a steam supply pipe having relatively rotative connection with one of said fitting bearing seats, the other of said fitting bearing seats cooperating with the seat in the end of the journal.

5. The combination with a hollow revolving journal, and a steam supply pipe, of a laterally off-set fitting and relatively rotative steam joint connections between the ends of said fitting and said journal and pipe respectively.

[Claims 6 to 10 not printed in the Gazette.]

879,846. CLOTH-MEASURING DEVICE. WILLIAM K. BAYLESS and THOMAS B. BAYLESS, Lexington, Ky. Filed Sept. 24, 1906. Serial No. 336,083.

A tape-measure designed to be rolled into a bolt of material and being of a length commensurate with that of the latter, said measure having upon its obverse or exposed face linear graduations indicating feet, yards and fractions of yards, the yard graduations being designated by like denominating symbols throughout the length of the tape and the foot graduations being numbered consecutively in progressively increasing ratio from the outer to the inner end of the tape to disclose the amount of material sold, the yard and foot denominating symbols being of a distinctively contrasting nature, said tape having on



its reverse or normally concealed face linear graduations identical in character and arrangement with the first named graduations but to read in relatively reverse order with the foot graduations numbered in progressively increasing ratio from the inner to the outer end of the tape for disclosing the amount of material remaining in the bolt and adapting the tape, by end-wise reversal, to be disposed with either face uppermost in the operation of incorporating the same in the bolt.

879,847. SAFETY CONTROLLING MECHANISM. THADDEUS R. BELL, New York, N. Y. Filed Apr. 11, 1907. Serial No. 367,533.



1. The combination of a vehicle having an axle mounted for pivotal movement in a horizontal plane, propelling means for the vehicle, and mechanism actuated from the pivotal movement of the axle and arranged to control the operation of said propelling means.

2. The combination of a vehicle having an axle mounted for pivotal movement in a horizontal plane, an engine arranged to propel the vehicle and provided with a steam supply, a valve controlling said steam supply and mechan-

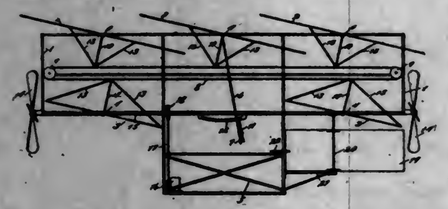
ism actuated from the pivotal movement of the axle and arranged to control the operation of said valve.

3. The combination of a vehicle having an axle mounted for pivotal movement in a horizontal plane, propelling means for the vehicle, brake mechanism, and mechanism actuated from the pivotal movement of the axle and arranged to operatively control the propelling and brake mechanism of the vehicle.

4. The combination of a vehicle having an axle mounted for pivotal movement in a horizontal plane, electrically actuated propelling mechanism, a controller arranged to control the electric supply of said propelling mechanism, and mechanism actuated from the pivotal movement of the axle and connected to operate said controller.

5. The combination of a vehicle having an axle mounted for pivotal movement in a horizontal plane, propelling means for the vehicle, mechanism actuated from the pivotal movement of the axle and arranged to control the operation of the propelling means, and means, independent of said controlling mechanism and arranged to control the propelling means.

879,848. AEROPLANE. GEORGE H. BENEDICT, Chicago, Ill. Filed Mar. 18, 1907. Serial No. 363,079.



1. The combination with a suitable frame-work comprising vertical planes and propelling means, of a plurality of movable planes, said planes being mounted in the frame-work and between the vertical planes so as to be capable of changes in angular position, and controlling means for changing the angular positions of said planes.

2. The combination with a frame-work comprising vertical planes and propelling means, of a plurality of movable planes mounted at their centers on such frame-work and between the vertical planes so as to be capable of change in angular position, and controlling means for changing the angular positions of said planes.

3. The combination with a suitable frame-work comprising vertical planes and propelling means, of a plurality of movable planes mounted in said frame-work and between the vertical planes so as to be capable of change in angular position, said planes being arranged one above the other, and controlling means for changing the angular positions of said planes.

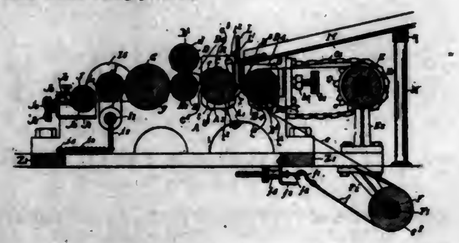
4. The combination with a suitable frame-work comprising vertical planes and propelling means, of a plurality of movable planes mounted in said frame-work and between the vertical planes so as to be capable of change in angular position, said planes being arranged in series, one series located above the other, and controlling means for changing the angular positions of said planes.

5. The combination with a suitable frame-work comprising vertical planes and propelling means, of a plurality of movable planes mounted in said frame-work and between the vertical planes so as to be capable of change in angular position, said planes being arranged in parallel series, one series above the other, and controlling means for changing the angular positions of said planes.

[Claims 6 to 15 not printed in the Gazette.]

879,849. PENCIL-PRINTING MACHINE. HENRY C. BIETTE, Toronto, Ontario, Canada. Filed Mar. 26, 1907. Serial No. 364,741.

1. In a printing machine, the combination with an impression cylinder and a printing cylinder arranged side by side and adapted to intermittently rotate round articles fed between them, of two pair of transversely operating opposed sliding supports adapted to sustain such articles while being printed.



2. In a printing machine, the combination with an impression cylinder and a printing cylinder arranged side by side and adapted to intermittently rotate round articles fed between them, of two pairs of transversely operating opposed sliding supports adapted to sustain such articles while being printed, and drop them after being printed.

3. In a printing machine, the combination with an impression cylinder journaled in a frame, a printing cylinder journaled in the frame adjacent and substantially parallel with the impression cylinder, adapted to impart an intermittent rolling motion to round articles fed between the cylinders, and two pairs of transversely operating opposed reciprocating supports adapted to sustain such articles between the cylinders while being printed.

4. In a printing machine, the combination with an impression cylinder journaled in the frame, a printing cylinder journaled in the frame adjacent and substantially parallel with the impression cylinder, adapted to impart an intermittent rolling motion to round articles fed between the cylinders, and two pairs of transversely operating opposed reciprocating supports adapted to sustain such articles between the cylinders while being printed, and to drop the same as soon as the printing operation is concluded.

5. In a printing machine, the combination with an impression cylinder and a printing cylinder journaled in a frame side by side, of two pairs of transversely operating opposed sliding supports arranged to sustain the articles to be printed between the cylinders while being printed and to drop them after being printed, and means for driving the printing cylinder continuously and the impression cylinder intermittently at the same speeds and in the same direction.

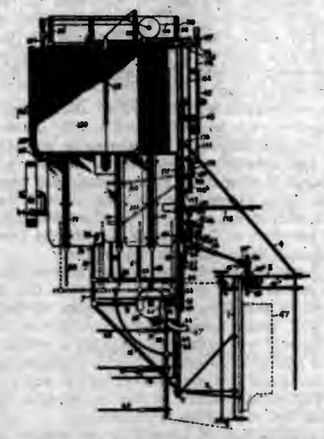
[Claims 6 to 15 not printed in the Gazette.]

879,850. GRAIN-SHOCKER. JOSEPH BODA, Piano, Ill., assignor to Independent Harvester Company, Piano, Ill., a Corporation of Maine. Filed Jan. 16, 1907. Serial No. 352,544.

1. In combination with a harvester frame, a grain shocker having a rigid frame pivotally attached thereto at the stubbleward side, the axis of the pivotal connection being fore-and-aft, and having for its support, in addition to its pivotal attachment to the harvester frame, two caster wheels, one at the stubble-side and the other at the grain-side further rearward than the stubble-side wheel.

2. A shocker for a grain harvester, comprising, in combination with the harvester frame, a rigid shocker frame pivotally attached to the harvester frame at a fore-and-aft pivot line, and supported by the harvester frame, said shocker frame comprising a shock receptacle at the rear end, the supports for such frame, in addition to the harvester frame, being a caster wheel opposite the shock receptacle at the grainward side, and a second caster wheel at the stubbleward side forward of the shock receptacle.

3. A grain shocker comprising, in combination with the harvester frame, a rigid shocker frame pivotally connected to the stubbleward side of the harvester frame at a fore-and-aft pivot line and supported by the harvester frame with capacity for rocking about such pivot, the support for the stubbleward side of the shocker frame being a caster wheel located opposite the rear end of the pivotal connection of said frame to the harvester frame.



4. In combination with a harvester frame, a shocker frame pivoted thereto at the stubbleward side by a fore-and-aft pivot, having a shock receptacle located rearward of the rear line of the harvester frame and beyond the rear pivotal connection of the two frames, the support of the shocker frame other than the harvester frame consisting of a caster wheel at the stubbleward side forward of the shock receptacle, and a caster wheel at the grainward side opposite the shock receptacle.

5. A shocker for a grain harvester comprising a cradle for receiving the bundles from the harvester deck mounted for swinging about a vertical pivot at the rear end from a position parallel with the line of travel to a position transverse thereto; a trip arm on the cradle in position to receive the impact of a bundle delivered thereinto from the harvester deck; mechanism for swinging the cradle to and from said transverse position and means by which it is tripped into action by the bundle lodging against said trip arm; an elevator extending inclined upward and rearward from the transverse position to which the cradle swings; mechanism for operating the elevator and means by which it is tripped into action by the cradle when it reaches said transverse position.

[Claims 6 to 36 not printed in the Gazette.]

879,851. COMBINED TOBACCO-RESERVOIR AND CIGARETTE-FILLER. HAROLD D. BONNELL, Norfolk, Va. Filed Oct. 24, 1907. Serial No. 398,958.



1. In a device of the class described, the combination with the body portion, of an elongated cylindrical discharge portion provided with a longitudinal discharge slot, and a semi-cylindrical closure rotatively mounted in said discharge portion.

2. In a device of the class described, the combination with a body portion, of an elongated cylindrical discharge portion having in its bottom an opening communicating with said body portion and in its upper portion a longitudinal discharge opening, and a rotary semi-cylindrical closure mounted in said discharge portion and adapted to close either the discharge opening or the opening leading into the body portion.

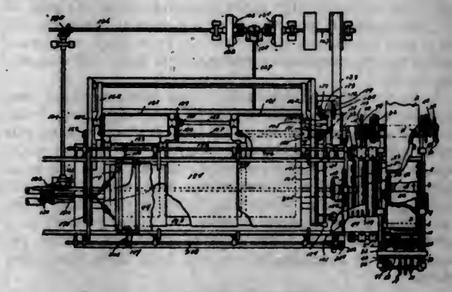
3. In a device of the class described, the combination with a body portion, of an elongated cylindrical discharge portion having in its bottom an opening communicating with said body portion and in its upper portion a longitudinal discharge opening, a rotary semi-cylindrical closure mounted in said discharge portion and adapted to close either the discharge opening or the opening leading into the body portion, and a spring tending normally to hold said closure in position to close the discharge opening.

4. In a device of the class described, the combination with a body portion, of an elongated cylindrical discharge portion having in its bottom an opening communicating with said body portion and in its upper portion a longitudinal discharge opening, the said openings extending substantially the length of the discharge portion, and a rotary semi-cylindrical closure mounted in said discharge portion and adapted to close either the discharge opening or the opening leading into the body portion.

5. In a device of the class described, the combination with a body portion, of an elongated cylindrical discharge portion having in its bottom an opening communicating with said body portion and in its upper portion a longitudinal discharge opening, the said openings extending substantially the length of the discharge portion, and a rotary semi-cylindrical closure having a sharp lower edge mounted in said discharge portion and adapted to close either the discharge opening or the opening leading into the body portion.

[Claims 6 to 9 not printed in the Gazette.]

879,852. DOUGH-FEEDING DEVICE. ALEXANDER W. COPLAND, Detroit, Mich. Filed Jan 31, 1902. Serial No. 92,006.



1. The combination with a continuous feeding mechanism for cut dough, of mechanism for automatically separating sections of the cut dough therefrom and conveying it to a section stripper for feeding it to a transversely moving charge stripper, said section and charge strippers, and an oven stripper to which the sections are fed from the charge stripper.

2. The combination with a continuous feeding mechanism for cut dough, of mechanism for automatically separating sections of the cut dough therefrom and delivering the same to a section stripper, said section stripper, a cross feed belt to which the section stripper belt delivers the sections, a charge stripper to which the cross feed belt delivers the sections, and an oven stripper to which the charge stripper delivers the sections.

3. The combination of a belt stripper, a conveying belt beneath the same, means for intermittently reciprocating said conveyer synchronously with the discharge of the stripper thereon, and means for actuating the conveyer belt to feed the charge therefrom.

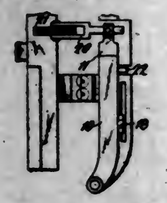
4. The combination with a feeding belt for cut dough, a skip movement belt feeding therefrom, a stripper therefrom, a cross feed belt, said stripper and cross belt having a synchronous movement with the skip movement of the feed belt.

5. A stripper comprising a looped belt, a movable loop

bar on which the forward end of the loop is supported, and a movable support for the intermediate portion of the loop.

[Claims 6 to 11 not printed in the Gazette.]

879,853. WARP STOP-MOTION FOR LOOMS. JOSEPH CORZILIUS, South Manchester, Conn., assignor to Ellsworth & Company, New York, N. Y., a Firm. Filed Aug. 10, 1906. Serial No. 330,008.

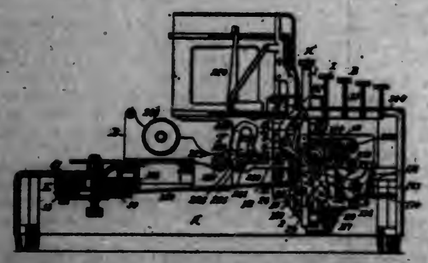


1. In a warp stop motion for a pile fabric loom the combination of loom stopping mechanism, a controlling circuit for said mechanism, drop devices adapted to close said circuit when a pile warp breaks, said drops being carried by the unbroken pile warps as they rise and fall with the easing rods, a stop plate extending transversely of the loom, and means for moving said plate into position to receive the drops on their downward movement to temporarily release them from the supporting warps.

2. In a warp stop motion for a pile fabric loom the combination of loom stopping mechanism, a controlling circuit for said mechanism, drop devices adapted to close said circuit when a pile warp breaks, said drops being carried by the unbroken pile warps as they rise and fall with the easing rods, a pivoted stop plate normally out of the path of the rising and falling drops, and a cam for moving said plate into position to receive the drops on their downward movement to temporarily release them from the supporting warps.

3. In a warp stop motion for a pile fabric loom the combination of loom stopping mechanism, a controlling circuit for said mechanism, a series of drop devices for each pile warp adapted to close said circuit when a pile warp breaks, said drops being carried by the unbroken warps as they rise and fall with the easing rods, a stop plate for each series of drops extending transversely of the loom, and means for alternately moving said plates whereby as a given series of drops approaches its lowermost position the drops will be temporarily released from their supporting warps.

879,854. POWER DRIVING MECHANISM FOR COMPUTING TYPE-WRITERS. EDWIN B. CRAM, Brooklyn, N. Y., assignor to New York Adding Typewriter Company, Orange, N. J., a Corporation of Missouri. Filed Dec. 9, 1903. Serial No. 184,451.



1. The combination with typewriter mechanism, capable upon the actuation of a key, of recording the character represented by said key, and a computing mechanism, of a motor and connections adapted to operate both said typewriting and computing mechanisms, and means operated on shifting the typewriter carriage for storing power in the motor.

2. The combination with typewriter mechanism, capable upon the actuation of a key, of recording the character represented by said key, and a computing mechanism, of a motor and connections adapted to operate both said typewriting and computing mechanisms, said typewriting mechanism being operable independent of said motor and computing mechanism.

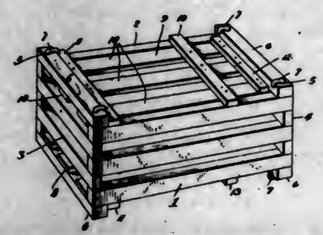
3. The combination with typewriter mechanism, capable upon actuation of a key, of recording the character represented by said key, and a computing mechanism, of a motor and connections adapted to operate both said typewriting and computing mechanisms, said typewriting mechanism being operable independent of said motor and computing mechanism, and a series of starters adapted to effect a connection of the motor with both the typewriting mechanism and the computing mechanism.

4. The combination with typewriter mechanism, capable upon the actuation of a key, of recording the character represented by said key, and a computing mechanism, of a motor and connections adapted to operate both said typewriting and computing machanism, a series of keys adapted to operate the typewriting mechanism independently of the computing mechanism, and a series of starters for effecting connection of the motor with both said typewriting and computing mechanisms.

5. The combination of typewriter mechanism including numeral and letter type and capable upon the actuation of a key of printing the character represented by said key, a computing mechanism, a motor and connections adapted to operate both the computing mechanism and the numeral printing devices of the typewriter, and a series of starters for effecting connection of the motor with the computing and typewriting mechanisms.

[Claims 6 to 47 not printed in the Gazette.]

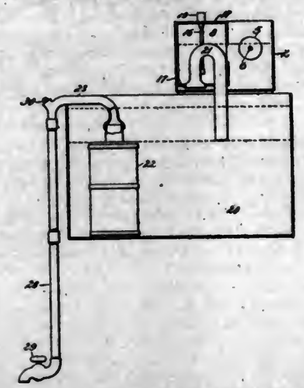
879,855. FOLDING CRATE. CHARLES W. CRONBAUGH, EDWARD L. CRONBAUGH, and MILO D. CRONBAUGH, Ada, Ohio. Filed Feb. 18, 1907. Serial No. 358,061.



The herein described folding crate comprising sides and ends formed by parallel slats having their ends overlapping and formed with vertically alining apertures, pivot rods passed through said alining apertures in the overlapping ends of the slats and having their projecting ends bent inwardly in a longitudinal direction to provide runners for the crate, and removable top and bottom sections each consisting of longitudinal resilient slats united adjacent to one of their ends by the short cross bar 12 and adjacent to their opposite ends by the long cross bar 11 and at a point between their centers and the short cross bar 12 by the long cross bar 13, whereby the portions of the resilient slats of said top and bottom sections between said cross bars 12, 13 may be sprung inwardly to permit said sections to be moved longitudinally and tilted, substantially as described and for the purpose set forth.

879,856. APPARATUS FOR PURIFYING WATER. CARL R. DARNALL, Washington, D. C. Filed Aug. 27, 1906. Serial No. 332,250.

1. An apparatus for purifying water comprising, in combination, a filter-tank or vessel, a filtering medium therein and a siphon arranged to draw the water through said filtering medium, a mixing-tank or vessel located at a higher level, means for supplying water thereto with automatic controlling means to prevent the rise of water above a certain level in said mixing tank, automatic means for feeding chemicals to the water in said mixing tank only when the water is below a certain level therein, and a siphon arranged to discharge the water from said mixing tank when the water therein has attained said first-mentioned level, said siphon having a greater rate of discharge than the inflow of water to said mixing tank.



2. An apparatus for purifying water having, in combination, a mixing tank or vessel, means for supplying water thereto with automatic controlling means to prevent the rise of water above a certain level, automatic means for feeding chemicals to the water in said vessel only when the water is below a certain level, a siphon arranged to discharge the contents of said vessel when the water therein attains the first-mentioned level, said siphon having a greater rate of discharge than the inflow of water, and means for filtering the water discharged from said vessel.

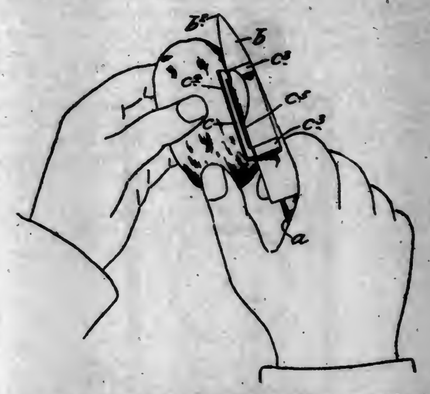
3. An apparatus for purifying water having, in combination, a filter-tank or vessel, a siphon arranged to conduct water therefrom, a filter through which the water is drawn by the action of said siphon, a relatively higher mixing-tank or vessel, a siphon arranged to discharge the water therefrom to said filter-tank, said siphon having its discharge branch depending below the maximum water-level in the filter-tank but above the minimum level at which the filter is covered, means for supplying water to the mixing-tank to a level to start the second-mentioned siphon, and means for supplying a definite amount of chemicals to such quantity of water as is taken from the mixing tank at one discharge of said siphon.

4. An apparatus for purifying water having, in combination, a filter-tank or vessel, a siphon arranged to conduct water therefrom, a filter through which the water is drawn by the action of said siphon, a relatively higher mixing-tank or vessel, a siphon arranged to discharge the water therefrom to said filter-tank, said siphon having its discharge branch depending below the maximum water-level in the filter-tank but above the minimum level at which the filter is covered, a water supply to the mixing-tank with automatic controlling means to limit the flow to such level as will start the discharge siphon therefrom, said siphon having a greater rate of discharge than the rate of said supply, and chemical-feeding means operative only below a certain level in said mixing-tank.

5. An apparatus for purifying water having, in combination, a mixing-tank or vessel, means for successively supplying a substantially uniform quantity of water thereto, means for mixing with such quantity of water definite amounts of chemicals to form a precipitate therein, means for repeatedly conducting off such quantity of water, and a filter and siphon by means of which the water is drawn through said filter.

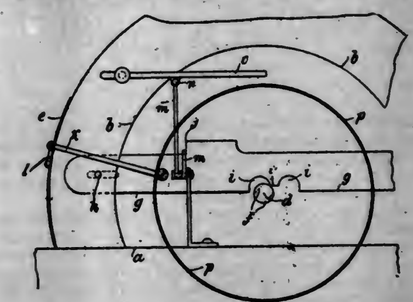
[Claims 6 to 18 not printed in the Gazette.]

879,857. PARING ATTACHMENT FOR KNIVES. EVERT L. DE VALK, New York, N. Y. Filed Oct. 11, 1907. Serial No. 396,901.



A paring attachment for knife blades, composed of a sheet of spring metal folded centrally and longitudinally to form clamping side members between which the blade is inserted, said device being provided at the side edge thereof opposite that into which the blade is inserted with a laterally curved longitudinal lip between which and the blade when the latter is inserted is a longitudinal slot or opening.

879,858. MEANS FOR LOCKING CARDING-ENGINE-CYLINDER DOORS. JOHN ECKERSLEY, Preston, England, assignor to Dobson and Barlow Limited, Bolton, England. Filed May 16, 1907. Serial No. 373,934.

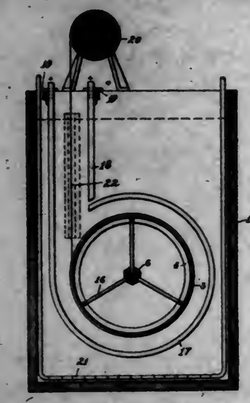


In a carding engine, a belt and fast and loose pulleys, a cylinder cover, a crank thereon, a cylinder shaft having flats thereon, a notched sliding bar connected to the crank and having a projection in the notch, a strap fork and a lever actuated thereby for locking the cover when running and also to lock the strap fork with the belt on the loose pulley when the cover is open.

879,859. APPARATUS FOR PRODUCING VERY THIN SHEET METAL. THOMAS A. EDISON, Llewellyn Park, Orange, N. J., assignor to Edison Storage Battery Company, West Orange, N. J., a Corporation of New Jersey. Original application filed June 29, 1904, Serial No. 214,651. Divided and this application filed Mar. 1, 1905. Serial No. 247,865.

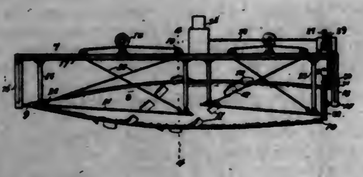
1. Apparatus for producing thin metallic strips or films, comprising in combination an electro-deposition bath, a cathode in said bath formed of copper-aluminium alloy in which the percentage of copper largely predominates, and an anode arranged adjacent to said cathode, substantially as set forth.

2. A cathode, from which electro-deposited metal may be readily stripped, formed of copper-aluminium alloy, in



which the percentage of copper largely predominates, substantially as set forth.

879,860. SPEED-BOAT. GEORGE A. FARRELL, Chicago, Ill. Filed June 13, 1907. Serial No. 378,813.



1. In a boat, the combination of a pair of elongated revoluble bodies, a hydroplane adapted to be secured between the bodies, a platform above and secured to the bodies, and means for revolving the elongated bodies to propel the boat, substantially as described.

2. In a boat, the combination of cigar-shaped revoluble bodies, hydroplanes adapted to be secured between the bodies, a platform above the bodies and secured thereto, means for regulating the hydroplanes, and means for revolving the cigar-shaped bodies to propel the boat, substantially as described.

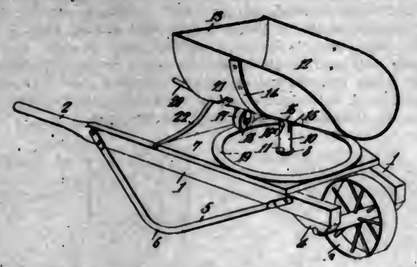
3. In a speed boat, the combination of a pair of cigar-shaped revoluble bodies, a plurality of fins secured to the bodies, a hydroplane adapted to be secured between the bodies, a platform above and secured to the bodies, and means for revolving the elongated bodies to propel the boat, substantially as described.

4. In a speed boat, the combination of a pair of cigar-shaped revoluble bodies, a plurality of fins spirally arranged on the body, hydroplanes adapted to be secured between the bodies, a platform above the bodies and secured thereto, means for regulating the hydroplanes, and means for revolving the cigar-shaped bodies outwardly at a high rate of speed to propel the boat, substantially as described.

5. In a speed boat, the combination of a pair of cigar-shaped revoluble bodies, a plurality of fins spirally arranged on the bodies, hydroplanes adapted to be secured between the bodies, a platform above the bodies and secured thereto, means for regulating the hydroplanes consisting of cords passed through eyelets at the opposite ends of the hydroplanes, the cords being regulated by winding drums upon the boat platform, and means for revolving the cigar-shaped bodies outwardly at a high rate of speed to propel the boat, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

879,861. WHEELBARROW. JOHN FERGUSON, Creston, Ill. Filed Aug. 9, 1907. Serial No. 387,864.



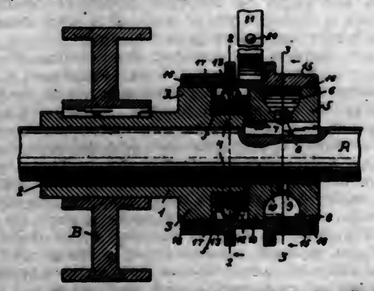
1. A wheel-barrow comprising a frame, a vertically disposed socket bearing secured to said frame, a circular track fixed to said frame concentric to the axis of said socket, a standard mounted to rotate in said socket, a hopper pivotally attached to said standard on an axis at a right angle to that of the standard, and a roller attached to the hopper and adapted to run on said track and support a part of the superposed weight.

2. A wheel-barrow comprising a frame, a platform thereon and a vertically disposed socket attached to said platform, a standard mounted to turn in said socket bearing, a hopper connected to said standard by a horizontal pivot and a roller supporting the rear end of said hopper.

3. A wheel-barrow comprising a frame, a platform thereon, and a vertically disposed socket attached to said platform, a standard mounted to turn in said socket bearing, a hopper pivoted to said standard and adapted to turn in a vertical plane, a roller attached to and upholding the rear end of said hopper, an operating handle attached to said hopper and means attached to the frame of the wheel-barrow for holding said hopper in normal position.

4. A wheel-barrow, comprising a frame, a platform thereon and a vertically disposed socket attached to said platform, a cross brace attached to the under side of the barrow frame and supporting the lower end of the said socket, a track attached to the upper side of the platform, a standard pivotally mounted in said socket, a hopper provided with a central strengthening band and a lug on the under side of said band pivoted to the upper end of said standard, a roller attached to the rear of the hopper and adapted to travel on said track, and means for operating said hopper and locking it in normal position.

879,862. FRICTION-CLUTCH. JOSEPH FUCHS, Cincinnati, Ohio. Filed Nov. 15, 1907. Serial No. 402,340.



1. In a friction clutch of the character described, the combination of a shaft, a loose bush mounted on said shaft and provided with means for transmitting power, a tight bush secured to said shaft adjacent said loose bush, and having a circular flanged portion extending upon a portion of said loose bush and provided with slotted openings therein, clamping members disposed within said openings to bear upon said loose bush, and an operating sleeve slidably mounted upon portions of said tight and loose bushes and adapted to force said clamping members into tight engagement with said loose bush, said operating sleeve

having recessed portions into which said clamping members may enter to disengage the same, substantially as described.

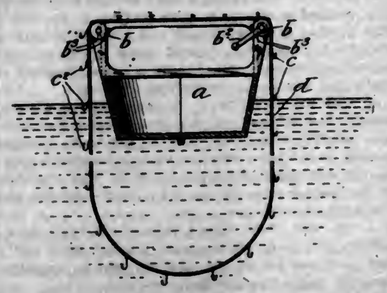
2. In a friction clutch of the character described, the combination of a shaft, a loose bush mounted on said shaft and provided with means for transmitting power, a tight bush secured to said shaft adjacent said loose bush and having a circular flanged portion extending upon a portion of said loose bush and provided with slotted openings therein, clamping members disposed within said opening to bear upon said loose bush, an operating sleeve slidably mounted upon portions of said tight and loose bushes and adapted to force said clamping members into tight engagement with said loose bush, said operating sleeve having recessed portions in which said clamping members may enter to disengage the same, and an operating lever for moving said sleeve, substantially as described.

3. In a friction clutch of the character described, the combination of a shaft, a loose bush mounted on said shaft and provided with means for transmitting power, a tight bush secured to said shaft adjacent said loose bush and having a circular flanged portion extending upon a portion of said loose bush and provided with slotted openings therein, clamping members disposed within said openings to bear upon said loose bush, and an operating sleeve slidably mounted upon portions of said tight and loose bushes and adapted to force said clamping members into tight engagement with said loose bush, said operating sleeve having recessed portions into which said clamping members may enter to disengage the same, one of said bushes being provided with a reservoir adapted to contain a lubricant, and with an opening extending from said reservoir through its internal surface, to lubricate the said shaft, substantially as described.

4. In a friction clutch of the character described, the combination of a shaft, a member loosely mounted upon said shaft, a member secured upon said shaft and provided with a portion thereof projecting upon and surrounding a reduced portion of said loose member and provided with slotted openings, clamping members mounted within said openings, and an operating member surrounding said tight and loose members to force said clamping members inwardly into frictional engagement with said reduced portion of said loose member, substantially as described.

5. In a friction clutch of the character described, the combination of a shaft, a member loosely mounted upon said shaft, a member secured upon said shaft and provided with a portion thereof projecting upon and surrounding a portion of said loose member and provided with slotted openings therein, clamping members mounted within said openings, and an operating member to force said clamping members inwardly into frictional engagement with said loose member, said operating member being provided with means to allow said clamping members to move away from said loose bush to disengage the same, substantially as described.

879,863. FISHING APPARATUS. SAMUEL E. GLADDING, Jersey City, N. J. Filed Dec. 19, 1907. Serial No. 407,118.

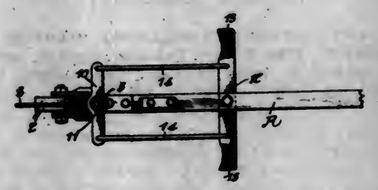


1. In a fishing apparatus, a boat, an endless flexible device mounted transversely of and over the boat and extending around the same and through the water thereunder and provided with hooks and means for turning said flexible device around the boat and through the water.

2. In a fishing apparatus, a boat provided with rollers mounted over the opposite sides thereof and an endless flexible device mounted on said rollers and passing around the boat and provided with hooks.

3. In a fishing apparatus, a boat provided with rollers mounted over the opposite sides thereof and an endless flexible device mounted on said rollers and passing around the boat and provided with hooks, one of said rollers being also provided with a crank.

879,864. GUIDING DEVICE FOR WHEELED AGRICULTURAL IMPLEMENTS. GEORGE E. GORDON, Shenandoah, Iowa. Filed July 30, 1907. Serial No. 386,310.



In a guiding attachment for wheeled agricultural implements, the combination with the seat bar of the implement having a bearing formed at its rear end, and a slanting brace bar extending downwardly from said seat bar and formed with a bearing at its lower end in alinement with said bearing of said bar, of a vertical shaft rotatively journaled in said bearings and extending therethrough, said shaft having a threaded upper end and a squared portion adjacent said threaded end and above said seat bar, and having caster forks secured upon its lower end below said brace bar bearing, a caster wheel journaled to rotate within said forks, a transverse lever having a central squared opening fitting about said squared portion of said shaft, a nut for engagement upon said threaded portion to hold said lever, an operating foot lever pivotally mounted centrally of its length upon said seat bar, and a pair of connecting rods extending between said operating lever and said transverse lever, parallel with and on each side of said seat bar, substantially as described.

879,865. PASTEBOARD BOX. JONATHAN GODFREY, Bridgeport, Conn., assignor to The Compressed Paper Box Co., Bridgeport, Conn., a Corporation of Connecticut. Filed June 12, 1907. Serial No. 378,514.

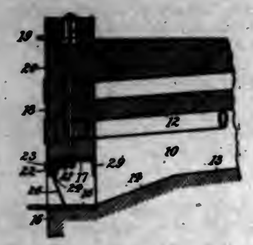


A box formed of a single pasteboard blank which has rounded corners, the corners of the completed box being formed of substantially vertically disposed plaits which overlap and extend obversely and reversely, said plaits being compressed into each other both inside and outside said corners and finally subjected to a prolonged ironing in substantially the direction in which said plaits are disposed, whereby said corners will have smooth unbroken faces that form continuations of the smooth unbroken faces of the sides of the box.

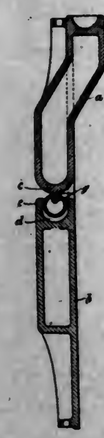
879,866. BAKER'S OVEN. JOHN F. GOERNDT, Chicago, Ill. Filed June 28, 1907. Serial No. 381,232.

A baker's oven provided with side walls, a beam supported thereon at its ends and having a depending rear flange and a depending front flange, and a door hinged to

the depending front flange, and extending the entire width of the oven substantially as specified.



879,867. AGING AND STEAMING CHAMBER FOR FABRICS. JOHN E. GRAY, New Mills, England, assignor of one-half to George W. Gray, North Adams, Mass. Filed Apr. 6, 1907. Serial No. 366,752.



1. In an apparatus of the character described, an aging chamber provided in its wall with two steam chambers separated from each other, the upper wall of one steam chamber having a receptacle to contain fluid and a float mounted in said receptacle and adapted to bear against the lower wall of the other steam chamber.

2. In an apparatus of the character described, an aging chamber provided in its front wall with two steam chambers separated from each other, the lower wall of the upper steam chamber being curved, and the upper wall of the lower steam chamber having a float receptacle adapted to contain fluid and a float in said receptacle adapted to bear against the lower curved wall of the upper steam chamber.

3. In an apparatus of the character described, an aging chamber provided in its front wall with two steam chambers separated from each other, the upper wall of the lower steam chamber having a receptacle therein adapted to contain fluid, and a floating steam pipe mounted in said receptacle and adapted to bear against the bottom wall of the upper steam chamber.

4. In an aging or steaming chamber in combination the top steam chamber *a* having a rounded surface *c* forming the top of the cloth opening, the bottom steam chamber *b* having a trough containing mercury or the like, a steam pipe *e* floating in the mercury and forming the bottom surface of the cloth opening, all substantially as and for the purposes herein set forth.

879,868. GARMENT-SUPPORTER CLASP. GEORGE N. HALL, Omaha, Nebr. Filed May 1, 1907. Serial No. 371,280.

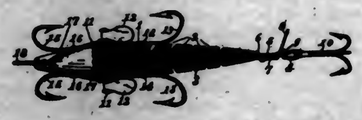


1. A garment supporter clasp comprising a plate, clamp members hingedly connected thereto at different distances from one end thereof, and a slide upon one of said members, said member being insertible into the other member, the slide constituting a stop for the last mentioned member, and a supporting strap connected to the slide.

2. A garment supporter clasp comprising a plate, clamp members of approximately equal length hinged to said plate at different distances from one end of the plate, one of said members adapted to pass through the other, a slide on one of said members, and a strap for suspending the garment supporter connected to said slide.

3. A garment supporter clasp comprising a body portion, clamp members hingedly connected to said body portion the free ends of said members being movable along intersecting arcs, one of said members being insertible into the other member, a supporting strap, and means engaged by the strap and movably mounted on the insertible member for limiting the movement of the other clamp member, said strap being disposed to bind the insertible member upon the lapped portion of the other clamp member.

879,869. FISH-BAIT. JACOB HANSEN, Muskegon, Mich. Filed Oct. 28, 1907. Serial No. 399,454.



1. A fish bait comprising a laterally flexible body, and a rotative tail piece having a single laterally and rearwardly inclined member adapted to oscillate the tail piece.

2. A fish bait comprising a body having vertically divided sections, a laterally flexible strip connecting said sections, and a rotative tail piece having a laterally and rearwardly inclined member.

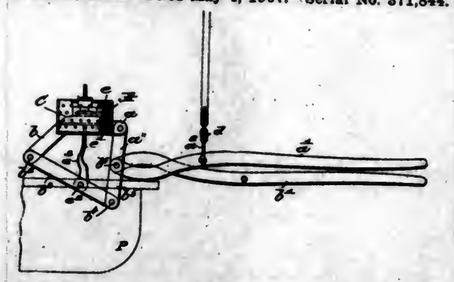
3. A fish bait comprising a body having a series of vertically divided sections, a wire having a flattened and flexible portion connecting said sections and a rearwardly extended round portion, a tail piece journaled on said extended portion and also having a spiral member and a laterally and rearwardly projecting member.

4. A fish bait comprising a body having a series of vertically divided sections, a wire having a flattened and flexible portion connecting said sections and a rearward extension, a tail piece rotative on said extension, a transverse pin extending through the body and through the said flattened portion of the wire, and side fins pivoted on the ends of said pin.

5. A fish bait comprising a laterally flexible body, and a rotative tail-piece at the rear thereof, said tail piece having a transverse spiral member, and a laterally and rearwardly projecting member.

[Claims 6 to 9 not printed in the Gazette.]

879,870. METAL-EXTRACTOR. HANS C. HANSEN, Newton, Mass. Filed May 4, 1907. Serial No. 371,844.



1. A metal extractor comprising a receptacle and a cover to enter the same, and two crossing levers, one pivoted on the other between the ends of said levers, one lever being operatively connected with said receptacle and the other with said cover, the movement of said levers about their common pivotal point causing the coaction of the cover with said receptacle to express the liquid metal from the dross.

2. A metal extractor comprising a receptacle, a cover to enter said receptacle, two levers, one pivoted on the other, each lever having an extension at its inner end, and means to connect the extension of said levers respectively to said receptacle and said cover.

3. A metal extractor comprising a metallic receptacle, and a cover, a cover carrier, a lever on which said cover carrier is sustained, and two hand-operated crossing levers one pivoted on the other, one lever being operatively jointed to the receptacle and the other to the lever sustaining the cover carrier.

4. A metal extractor comprising a foraminous receptacle having a hole in its bottom, a lever connected therewith, a cover carrier extended from the under side of said receptacle upwardly through the hole in its bottom, and a cover mounted on said carrier.

5. A metal extractor comprising a foraminous receptacle having a hole in its bottom, a lever connected therewith, an offset cover carrier extended from the under side of said receptacle upwardly through the hole in its bottom, and a cover mounted loosely on said carrier.

[Claims 6 and 7 not printed in the Gazette.]

879,871. NITRO DERIVATIVE OF CELLULOSE AND PROCESS OF MAKING SAME. BERNARD HERSTEIN, Bayonne, N. J. Filed Aug 17, 1905. Serial No. 274,544.

1. The process of making nitro derivative of cellulose, which consists in treating cellulose with a mixture containing about 63% of sulfuric acid (H_2SO_4), about 10% of nitric acid (HNO_3) and about 27% of inert material.

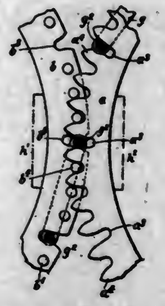
2. The process of making a nitro derivative of cellulose, which consists in treating cellulose with a mixture containing about 63% of sulfuric acid (H_2SO_4), about 10% of nitric acid, (HNO_3) and about 27% of inert material, at a low temperature as specified until complete gelatinization is obtained.

3. The process of making a nitro derivative of cellulose, which consists in treating cellulose with a mixture containing about 63% of sulfuric acid (H_2SO_4), about 10% of nitric acid, (HNO_3) and about 27% of inert material, until complete gelatinization is obtained, and then washing out the acid.

4. As a new article of manufacture a nitro derivative of cellulose containing less than about four and one-half per cent. of nitrogen, said article being structureless, insoluble in ether, alcohol, acetone or amylacetate, and exhibiting the property of becoming gelatinized and transformed into a plastic transparent or translucent mass when treated with caustic soda.

5. As a new article of manufacture, a nitro derivative of cellulose containing four and one-half per cent. of nitrogen, said article being structureless and insoluble in ether, alcohol, acetone, or amylacetate.

879,872. AMUSEMENT APPARATUS. HERMANN HILL, Greenwich, Conn., assignor to Darcy & Speck, Philadelphia, Pa., a Copartnership. Filed Mar. 9, 1907. Serial No. 361,619.



1. In an apparatus of the class described, vehicle carrying rods, and toothed propelling wheels constantly engaged and having peripheral recesses receiving the rods.

2. In an apparatus of the class described, vehicle carrying rods, toothed propelling wheels constantly engaged and having peripheral recesses receiving the rods and means for driving one of said wheels.

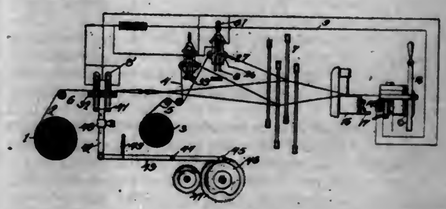
3. In an apparatus of the class described, a toothed wheel having recesses at intervals between the teeth thereof, a toothed wheel with teeth removed at intervals having recesses in place of removed teeth and vehicle carrying rods engaging in said recesses, said toothed wheels being constantly engaged with each other.

4. In an apparatus of the class described, vehicle carrying rods, toothed wheels constantly engaged and having peripheral recesses receiving the rods and trucks upon which said vehicle carrying rods are mounted.

5. In an apparatus of the class described, the combination of an endless track, wheeled trucks mounted on said track, vehicle carrying rods mounted on said trucks, and toothed wheels constantly engaged and having peripheral recesses receiving the rods.

[Claims 6 to 8 not printed in the Gazette.]

879,873. WARP STOP-MOTION FOR LOOMS. HERBERT HORSFAL, Bridgeport, Conn., assignor to The Saits Textile Manufacturing Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Aug. 10, 1906. Serial No. 330,007.



1. In a warp stop motion for looms the combination of stopping mechanism, drop devices supported on unbroken warp threads and adapted to set in operation the stopping mechanism when a warp thread breaks, a plate located below said drop devices, and means for producing a relative movement between said plate and drop devices for intermittently raising the latter from the supporting warp threads during the normal running of the loom.

2. In a warp stop motion for looms the combination of stopping mechanism, a controlling circuit for said mechanism, drop devices supported on unbroken warp threads adapted to close said circuit when a warp thread breaks, a plate located below said drop devices, and means for producing a relative movement between said plate and drops

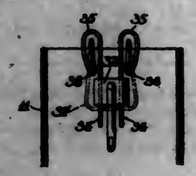
for intermittently raising the latter from the supporting warp threads during the normal running of the loom.

3. In a warp stop motion for a pile fabric loom the combination of stopping mechanism, a controlling circuit for said mechanism, means for supporting the pile warps during a portion of their travel in a substantially horizontal plane, drop devices supported on the unbroken pile warps at such point said drops being adapted to close said circuit when a pile warp breaks, a plate located below said drops, and means for producing a relative movement between said plate and the drops for intermittently raising the latter from the supporting warp threads during the normal running of the loom.

4. In a warp stop motion for a pile fabric loom the combination of stopping mechanism, a controlling circuit for said mechanism, easing rods over which the pile warps pass, drop devices supported on unbroken warps between the easing rods said drops being adapted to close said circuit when a pile warp breaks, and stationary plates extending transversely of the loom below and in the path of travel of said drops for intermittently raising the latter from the supporting warp threads during the normal running of the loom.

5. In a warp stop motion for a pile fabric loom the combination of stopping mechanism, a controlling circuit for said mechanism, means for supporting the pile warps at a point between the beam and the easing rods in a substantially horizontal plane, drop devices supported on unbroken warps at said point said drops being adapted to close said circuit when a pile warp breaks, a plate extending transversely of the loom below said drops, and means for intermittently moving said plate against the drops for raising the latter from the supporting warp threads during the normal running of the loom.

879,874. ADJUSTABLE MANTLE-SUPPORT. FRANK B. HOWARD and ALCORN RECTOR, New York, N. Y., assignors to Rector Gas Lamp Company, New York, N. Y., a Corporation of Connecticut. Filed July 11, 1906. Serial No. 325,673.



1. The combination with an incandescent gas lamp, of a clip to grip the chimney top, said clip having opposed members, a bracket slidable up and down on the said opposed members, and a mantle engaging hook carried by the bracket.

2. The combination with an incandescent lamp, of means engaging the chimney top, a bracket engaging said means, and a mantle engaging hook carried by the bracket.

3. The combination with an incandescent gas lamp, of a clip to grip the chimney top, said clip having opposed members, a bracket slidable up and down on the said opposed members, the tension of the members one with relation to the other being sufficient to prevent the bracket from sliding off the clips, and a mantle engaging hook carried by the bracket.

879,875. REMOVABLE SAFETY-GUARD FOR RAZORS. GEORGE JOHNSON and FREDERICK J. MCLAREN, Fremantle, Western Australia, Australia. Filed June 29, 1907. Serial No. 381,491.

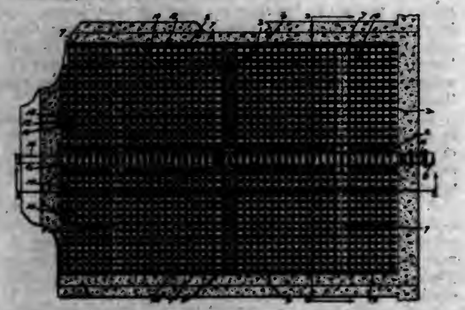
1. A safety guard for razors comprising a rear portion, convergent sides connected to said rear portion, and a guide extending upwardly and outwardly from one of the sides.

2. A safety guard for razors comprising the rear portion e, the converging sides b having lugs projecting in-



wardly therefrom and the guide c^6 extending upwardly and outwardly from one of the sides.

879,876. FILTER. LLEWELLYN W. JONES, Sewickley, and PAUL HANSEN, Pittsburg, Pa., assignors to Pittsburgh Filter Manufacturing Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Apr. 13, 1905. Serial No. 255,376.



1. In a filter, the combination of a tank or reservoir, a bed of filtering material, a wall in said tank having a gutter therein, an air supply pipe in said wall below said gutter, a plurality of air pipes having openings therein extending in both directions from said air supply pipe, a manifold below said air pipe and crossed thereby, and a plurality of pipes extending in both directions from said manifold.

2. In a filter, the combination of a tank, or reservoir, a bed of filtering material, a wall in said tank having a gutter therein, an air supply pipe in said wall below said gutter, and a manifold below said air pipe and crossed thereby.

879,877. FERTILIZER. ARTHUR L. KENNEDY, New York, N. Y. Filed July 2, 1907. Serial No. 381,858.

1. The new fertilizer described, composed of ground cellulose material, short asbestos fiber, marl, and fertilizing mineral salts, all in granular form.

2. The new fertilizer described, composed of ground corncobs, short asbestos fiber, and marl, containing phosphate of lime, nitrate of soda, and muriate of potash.

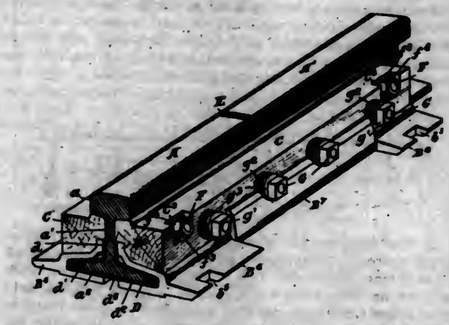
3. The new fertilizer described, composed of ground corncobs impregnated with phosphate of lime, nitrate of soda, and muriate of potash; short asbestos fiber, and marl; in granular form, dry and hard.

4. The new fertilizer described, composed of ground corncobs impregnated with calcium phosphate, sodium nitrate, and potassium muriate, in relative proportions of about two parts of the calcium salt to about one of each of the others, with short asbestos fiber, and marl; in hard, dry, granular form, substantially as set out.

879,878. INSULATED JOINT FOR RAILWAY-RAILS. KOBY KOHN, New York, N. Y., assignor to The Rail Joint Company, a Corporation of New York. Filed June 14, 1906. Serial No. 321,691.

1. In an insulated rail joint, a channeled base support having an open vertical channel to receive the connecting bars and insulating means.

2. In an insulated rail joint, a channeled base support provided with two upwardly extending portions providing a vertical channel between them and insulating means.



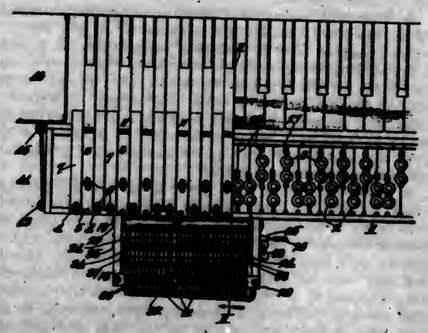
3. In an insulated rail joint, a channeled base support provided with an upwardly extending brace portion and thrust portion forming a vertical channel between them and insulating means.

4. In an insulated rail joint, a channeled base support having a brace portion, a thrust portion, and an interposed web portion forming a vertical channel and insulating means.

5. In an insulated rail joint, a channeled base support having an upwardly extending thrust portion, a brace portion, a web portion, and an inclined connecting portion between the web portion and brace portion, forming a vertical channel between them and insulating means.

[Claims 6 to 34 not printed in the Gazette.]

879,879. ELECTROMAGNETIC PIANO-PLAYER. WESLEY B. KRAFT, Milan, Kans. Filed June 19, 1906. Serial No. 322,462.



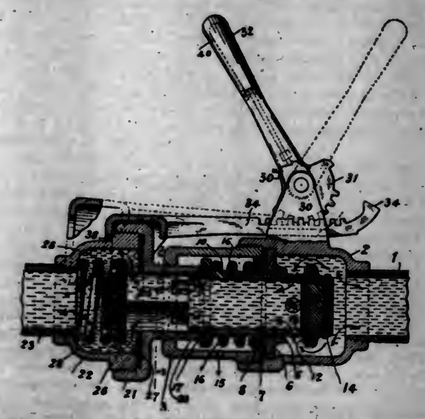
1. A piano player, comprising electro magnets, lever hammers, armatures for said magnets carried by said hammers, a perforated note sheet, feed rollers therefor, a contact bar over which the note sheet travels, pivoted fingers adapted to project through the note sheet perforations and engage said bar, a source of electric supply in circuit with said magnets, contact bar and fingers, means for operating the feed rollers, and an angular rock bar arranged adjacent to and bearing directly against the contact fingers for moving and holding said fingers out of contact with said contact bar.

2. A piano player, comprising electro magnets, lever hammers, armatures for said magnets carried by said hammers, a perforated note sheet, feed rollers therefor, a contact bar over which the note sheet travels, pivoted fingers adapted to project through the note sheet perforations and engage said bar, a source of electric supply in circuit with said magnet, contact bar and fingers, means for operating the feed rollers, an angular rock bar bearing against the contact fingers for moving and holding said fingers out of contact with said bar, and means for yieldingly holding the rock bar in position to permit the fingers to engage the contact bar or to hold said fingers out of contact with said bar.

3. In a piano player, the combination of a box arranged to be held to the keyboard of a piano, electro-magnets within said box located to correspond to the white and black keys of the piano, blocks of different lengths on the front edge of the said box, key strikers hinged to said blocks and having their inner ends adapted to rest on the keys, the inner portions of the strikers attached to the longer blocks being arched to clear the white keys and engage the black keys, armatures secured to the under sides of the key strikers, and note-sheet-controlled circuit-closers electrically connected with the electro-magnets.

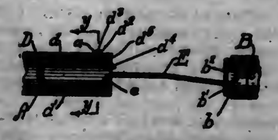
4. The combination of feed rollers, a convex guide bar adjacent to the feed rollers, a conductor bar secured on the rear edge of the guide bar, contact fingers pivoted above the guide bar and arranged to rest on said conductor bar, a yieldingly-held angular rock bar bearing against the contact fingers, a series of key strikers, and a series of electro-magnets controlling the key strikers and in circuit with the conductor bar and the contact fingers.

879,880. PIPE-COUPLING. DEWIS LANDAU, San Francisco, Cal. Filed Mar. 15, 1907. Serial No. 362,447.



The combination in a coupling, of one member provided with a valve seat, a tubular valve in said member adapted to normally close on said seat, a second member of said coupling provided with a valve seat and with a tubular extension adapted to enter the end of said first named member and engage said tubular valve, and a valve in said second member adapted to normally close on said last named valve seat and having a stem adapted to engage said tubular valve, a hook for holding said members in closed position, and a rack and pinion for operating said hook, substantially as described.

879,881. BRACELET. SIGMUND L. LEDERER, Providence, R. I. Filed Apr. 17, 1907. Serial No. 368,754.



1. In a bracelet two hollow wings hinged together, a cap fixed in one wing and provided with an opening, a

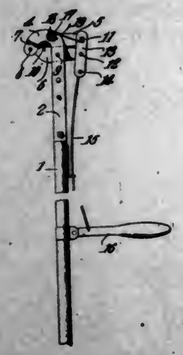
spring loop mounted in the other wing, a latch upon one end of the loop adapted to engage the cap, a guide rod upon the other end of the loop traversing the opening, and a hook upon the end of the guide rod within the first-mentioned wing.

2. In a bracelet two hollow wings hinged together, a spring loop in one member, a latch upon the loop, a rod upon the loop, a hook upon the rod, and means in the other wing adapted to engage the latch and the hook.

3. In a bracelet two hollow wings hinged together, a cap fixed in one wing and provided with an opening in its top wall, a two arm spring loop mounted in the other wing, a recess in one arm of the loop adapted to receive the margin of the cap wall, a slot in the other arm of the loop, a guide rod fixed in said slot, extending through the opening, and a hook upon the guide rod within the wing first mentioned.

4. In a bracelet two hollow wings hinged together, a spring loop provided with a slot within one member, a latch upon the loop, a rod fixed within the slot in the loop, a hook upon the rod, and means in the other wing adapted to engage the latch and hook.

879,882. PRUNING-SHEARS. AUGUST F. MISCHKE, Fremont, Ohio. Filed Nov. 27, 1907. Serial No. 404,087.



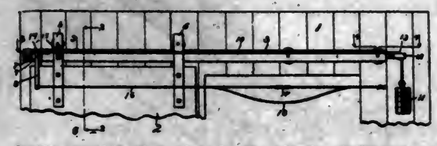
1. A pruning implement comprising two spaced plates parallel to each other and formed into hooks at their upper ends, a pair of cutting blades movable between said plates, one of said blades pivoted at its end between the ends of said hooks and the other blade pivoted intermediate its ends to the plates below the first mentioned blade, links pivoted to the projecting ends of said blades and an operating means pivotally attached to said links.

2. A pruning implement comprising two spaced plates parallel to each other and having their upper ends formed into hooks, an upper cutting blade pivoted at its end between the ends of said hooks and extending laterally between the hooks to and beyond the edges of said plates, a lower cutting blade pivoted between said plates intermediate its ends, one of said ends having a cutting edge to coöperate with the upper blade and the other end projecting laterally below the outer end of the upper blade, links pivoted to the outer ends of said blades, a pull rod pivoted to said links for closing the cutting edges of said blades and a spring for separating said cutting edges.

879,883. AUTOMATIC-CLOSING DOOR. CORY MULL, Indianapolis, Ind., assignor to T. C. Prouty Company, Albion, Mich. Filed June 6, 1907. Serial No. 377,655.

1. The combination of a door; a horizontally-arranged track therefor; hangers for said door; a bracket mounted on said track at the rear end thereof; a lever-like trip latch pivoted on said bracket; a weight adapted to close said door when connected thereto; a suspending cable therefor engaging one end of said trip latch; a guide pulley for said cable arranged at the front end of said track; an eye on said door through which said cable is arranged; a button on said cable adapted to engage said trip lever and to engage said eye for connecting said cable to said door when said cable is released; a trip cord for said trip latch; and a fusible link in said trip cord, for the purpose specified.

2. The combination of a door; a horizontally-arranged track therefor; hangers for said door; a bracket mounted on said track at the rear end thereof; a lever-like trip latch pivoted on said bracket; a weight adapted to close said door when connected thereto; a suspending cable therefor engaging one end of said trip latch; a guide pulley for said cable arranged at the front end of said track; an eye on said door through which said cable is arranged; a button on said cable adapted to engage said eye for connecting said cable to said door when said cable is released; a trip cord for said trip latch; a fusible link in said trip cord; and a stop cord connected to said trip cord at each side of said fusible link, said stop being of such length as to permit the operation of the trip on the fusing of the link, for the purpose specified.



2. The combination of a door; a horizontally-arranged track therefor; hangers for said door; a bracket mounted on said track at the rear end thereof; a lever-like trip latch pivoted on said bracket; a weight adapted to close said door when connected thereto; a suspending cable therefor engaging one end of said trip latch; a guide pulley for said cable arranged at the front end of said track; an eye on said door through which said cable is arranged; a button on said cable adapted to engage said trip lever and to engage said eye for connecting said cable to said door when said cable is released; a trip cord for said trip latch; and a fusible link in said trip cord, for the purpose specified.

3. The combination of a door; a horizontally-arranged track therefor; hangers for said door; a trip latch; a weight adapted to close said door when connected thereto; a suspending cable therefor detachably connected to said trip latch; a guide pulley for said cable; an eye on said door through which said cable is arranged; a button on said cable adapted to engage said eye for connecting said cable to said door when said cable is released; a trip cord for said trip latch; a fusible link in said trip cord; and a stop cord connected to said trip cord at each side of said fusible link, said stop cord being of such length as to permit the operation of the trip on the fusing of the link, for the purpose specified.

4. The combination of a door; a horizontally-arranged track therefor; hangers for said door; a trip latch; a weight adapted to close said door when connected thereto; a suspending cable therefor detachably connected to said trip latch; a guide pulley for said cable; an eye on said door through which said cable is arranged; a button on said cable adapted to engage said eye for connecting said cable to said door when said cable is released; a trip cord for said trip latch; and a fusible link in said trip cord, for the purpose specified.

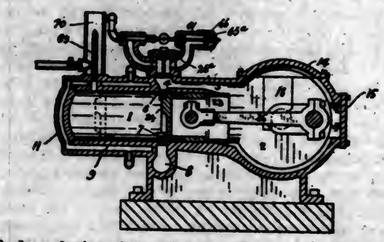
5. The combination of a door; a horizontally-arranged track therefor; hangers for said door; a lever-like pivoted trip latch; a weight adapted to close said door when connected thereto; a suspending cable therefor engaging one end of said trip latch; means for automatically connecting said cable to said door when the same is released by said trip latch; a trip cord for said trip latch; a fusible link on said trip cord; and a stop cord connected to said trip cord at each side of said fusible link, said stop cord being of such length as to permit the operation of the trip on the fusing of the link, for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

879,884. CRUDE-OIL ENGINE. CHARLES H. MCCLINTOCK, Hartford City, Ind. Filed Dec. 24, 1906. Serial No. 349,238.

1. In a feeding mechanism for internal combustion engines, the combination of a feed-receptacle having a puppet-valve therein adapted to normally close the mouth of said feed-receptacle, an oil-inlet member and an air-inlet member leading into said feed-receptacle, a spring pressed valve in each of said members, the said valves having their stems disposed toward each other, a speed governor, and a device supported by said feed-receptacle and controlled by the said speed-governor and engaging said valve-stems to actuate the said valves simultaneously.

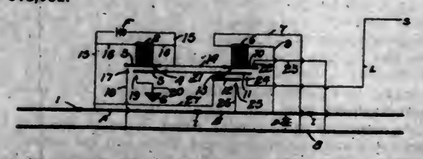
2. In a device of the kind described, the combination of a feed-receptacle having a puppet-valve therein adapted to normally close the mouth of said feed-receptacle, an oil-inlet member and an air-inlet member leading into said feed-receptacle each member having a spring-pressed valve therein, the stems of said valves being disposed toward each other, a speed-governor, means to actuate said valves including a wedge mounted between and in slidable engagement with the said valve-stems and adjustably secured on a shaft connected to the governor whereby the wedge will be moved by the action of the governor.



3. In a device of the kind described, the combination of a feed-receptacle having a puppet-valve therein adapted to normally close the mouth of said feed-receptacle, an oil-inlet member and an air-inlet member leading into said feed-receptacle each member having a spring-pressed valve therein, the stems of said valves being disposed toward each other, means to actuate said valves including a shaft having its one end journaled in a bearing supported by the feed-receptacle, its other end being journaled in the body-portion and engaging the arms of a centrifugal governor which is journaled on a bearing supported by the feed-receptacle, a wedge adjustably secured on said shaft and engaging the said valve-stems slidably but being not free to revolve, a spring to sustain the end of the shaft in actual engagement with the governor, and a device to adjust the tension of said spring, substantially as set forth.

4. In a device of the kind described, a feeding mechanism comprising a box-shaped receptacle with an aperture 45 having its lower inner edge machined to receive the face of the valve 46 positioned therein, its stem extending through the top of the receptacle, and having a head thereon and being sustained by a spring so that the valve is normally pressed against the seat of the aperture, oppositely disposed oil-inlet and air-inlet members opening into the aperture, and having disposed slidingly in the heads thereof the adjustable valve stems 52 and 63 yieldingly pressed toward each other and having valves thereon, a wedge between the stems of said valves mounted on the transversely extending shaft 37 which is slidingly supported at its one end in the journal-box 29 and yieldingly pressed by a spring against the ball-bearing in the bifurcated head 36 journaled in the sleeve 33, this sleeve being rotatably mounted in the journal-box 30 and having a pulley 32 thereon, and having pivotally supported on its sides weighted centrifugal levers, substantially as set forth.

879,885. INTERLOCKING RELAY. EDWARD MCCLINTOCK, St. Paul, Minn. Filed Apr. 30, 1907. Serial No. 371,051.



1. The combination, with a track having insulated rail sections and normally closed relay circuits, of a normally open signal circuit and said relay circuits being arranged to close said signal circuit when a train is moving over said insulated rail sections in one direction and to allow said signal circuit to remain open when a train is moving over said insulated rail sections in the opposite direction.

2. The combination, with the track rails having insulated rail sections A and B and a battery D in circuit with said section B and the opposite rail, of a relay having a battery F in circuit with said rail sections A, a second relay in circuit with said rail section B and with the opposite rail, a contact point having a ground connection in the path of the armature of said first named relay, a second contact point in the path of the armature of said second named relay, a conductor connecting said armatures, a signal circuit connected with said second contact point, whereby when a truck passes on to said insulated sections from the left, said relays will be deënergized and said signal circuit closed through said contact points, substantially as described.

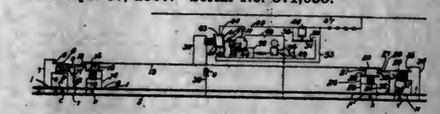
3. The combination, with the track rails having insulated rail sections, of a closed circuit relay connected with one of said rail sections, and deënergized upon the entrance of a train upon said insulated track section, a second closed circuit relay connected with said second track section and deënergized by the passage of a truck on to said second insulated track section, a signal circuit normally open, and means whereby when said second relay is deënergized said signal circuit will be closed to operate the signal, substantially as described.

4. The combination, with the track rails having insulated rail sections A and B on the same side of the track, of a signal circuit normally open having a suitable signal, relay circuits normally closed and sources of electrical energy therefor and said relay circuits being arranged to be successively short circuited upon the passage of a train over said rail sections moving in one direction to close said signal circuit and operate said signal and to allow said signal circuit to remain open when a train is moving over said insulated rail sections in the opposite direction, substantially as described.

5. The combination, with the track rails having insulated rail sections, of normally closed relay circuits arranged to be short circuited upon the passage of a train on to said insulated sections, a normally open signal circuit and means whereby said signal circuit will be closed and the signal operated upon the short circuiting of said relay circuits and the deënergizing of their relays when a train passes over said insulated rail sections moving in one direction and whereby said signal will remain open when said relays are deënergized by the passing over said sections of a train moving in the opposite direction.

[Claim 6 not printed in the Gazette.]

879,886. HIGHWAY-CROSSING SIGNAL FOR ELECTRIC ROADS. EDWARD MCCLINTOCK, St. Paul, Minn. Filed Apr. 30, 1907. Serial No. 371,053.



1. The combination, with a normally closed track circuit arranged to be short circuited by the passage of a car approaching a highway crossing, of a line circuit closed by the short-circuiting of said track circuit, a relay in said line circuit, a signal circuit normally opened and controlled by said relay, a time element arranged to prevent the opening of said signal circuit for a predetermined period after said line circuit is opened and while the car is approaching the crossing, a second normally closed track circuit on the opposite side of the crossing from said first named track circuit and arranged to open said line circuit and prevent the operation of said signal when the car is leaving said crossing.

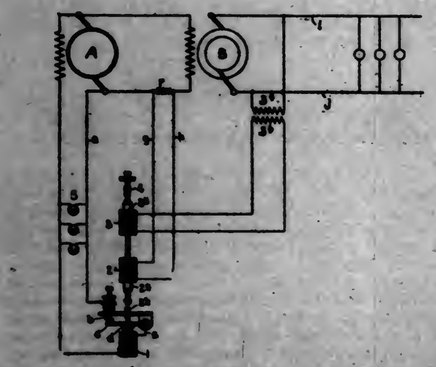
2. The combination, with the track rails having a highway crossing, of the insulated track sections on one side of the crossing and on the same side of the track, track circuits connected with said sections and the opposite rails

and normally closed, a line circuit normally open and having a relay, a signal circuit controlled by said relay and having a signal, a time element arranged to prevent the opening of said signal circuit when said line circuit is opened after a car has passed over said insulated rail sections moving toward said crossing, insulated track sections on the other side of the crossing and on the same side of the track and over which the car passes leaving said crossing, track circuits connected with said last named sections, and means whereby said last named track circuits will open said line circuit and prevent the operation of said signal when the car is leaving said crossing.

3. The combination, with the track rails having a highway crossing, of insulated track sections provided in said rails on each side of said crossing and on the same side of the track, normally closed track circuits provided in connection with said sections and arranged to be short circuited by the passage of a car over said crossing, a line circuit, a relay in said line circuit, a normally open signal circuit controlled by said relay and having a signal, a time element arranged to keep said signal circuit closed and continue the operation of said signal for a predetermined period after a car has passed over said insulated rail sections and is moving toward the crossing from either direction and said track circuits being arranged to prevent the operation of said relay and the closing of said signal circuit when a car is leaving the crossing and moving in either direction.

4. In an electric railway, the combination with the track rails and a highway crossing, of insulated track sections provided in said rails on each side of said crossing and on the same side of the track, normally closed track circuits provided in connection with said sections and arranged to be short circuited by the passage of a car over said sections, a line circuit, a relay in said line circuit, a normally open signal circuit controlled by said relay and having a signal, a time element arranged to keep said signal circuit closed and continue the operation of said signal for a predetermined period after a car has passed over said insulated rail sections and is moving toward the crossing from either direction, a trolley wire, a solenoid in circuit with said wire and with said relay, and time element and said track circuits being arranged to prevent the operation of said relay and the closing of said signal circuit when a car is leaving the crossing, moving in either direction.

879,887. METHOD OF REGULATING ELECTRIC GENERATORS. GEORGE S. NEELEY, St. Louis, Mo. Filed May 9, 1907. Serial No. 372,773.



1. The improvement in the art of regulating dynamo electric machines comprising, in combination, variable resistance in the field circuit of the exciter, means for effectively maintaining the said variable resistance by opposing magnets, one of which is energized by the field current of the exciter, and the other by the field current of the generator, and means energized by the work circuit or system for disturbing the balance between said opposing magnets; substantially as described.

2. The improvement in the art of regulating dynamo electric machines which consists in the combination of the field circuit of the exciter and the field circuit of the generator, magnets energized by each of said circuits respectively, said magnets being opposed to each other and maintaining in equilibrium between them an arc in series with the field of the exciter, means energized by the work circuit or system for disturbing said equilibrium, said means tending to increase said arc and with it the resistance in the field of the exciter, and other means in opposition to said last mentioned means, which other means tends to decrease said arc; substantially as described.

3. The improvement in the art of regulating dynamo electric machines comprising a variable resistance in series with the field of the exciter, a shunt resistance 5, which shunt resistance has a negative temperature coefficient, opposing magnets for maintaining said variable resistance, said opposing magnets being energized respectively by the field current of the exciter and by the field current of the generator, mechanical means which tend at all times to decrease said variable resistance, and magnetic means in opposition to said mechanical means, said magnetic means being energized by the work circuit of the system and tending to increase said variable resistance; substantially as described.

4. The improvement in the art of regulating dynamo electric machines, comprising a variable resistance in the field circuit of the exciter, said variable resistance being controlled by a movable element, in combination with differential coils for maintaining said movable element in a position of equilibrium one of which coils is energized by the field current of the exciter and the other by the field current of the generator, and auxiliary means energized by the work circuit of the system for disturbing the equilibrium established by said differential coils; substantially as described.

5. The improvement in the art of regulating dynamo electric machines, the combination with a variable resistance in the field circuit of the exciter, a movable element for varying said resistance, magnets energized by the intensities of the field currents of the exciter and the generator respectively for maintaining said movable element in a position of equilibrium, and means energized by the current output of the generator for disturbing said equilibrium and for moving said movable element; substantially as described.

[Claim 6 not printed in the Gazette.]

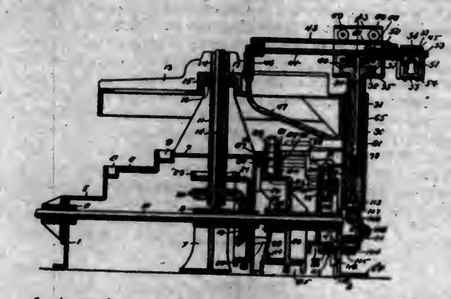
879,888. PROCESS OF PRODUCING PAPER OR PAPER BOARD AND THE LIKE. CHARLES E. NELSON, Capac, Mich., assignor to Edward P. Metcalf, Providence, R. I., and Adolph Loewenthal and Clifford E. Dunn, trustees, New York, N. Y. Filed Feb. 23, 1907. Serial No. 358,774.

1. A process of producing paper or board and the like from half-stuff containing peat fibers and the natural gelatinous matter of the peat, which process consists in heating the gelatinous matter insufficiently to coagulate the same, and running said gelatinous matter and the peat fibers into paper or board and the like.

2. A process of producing paper or board and the like from half-stuff containing peat fibers and the natural gelatinous matter of the peat, which process consists in floating and heating the peat fibers and gelatinous matter insufficiently to coagulate said gelatinous matter, and then running said fibers and gelatinous matter into paper or board and the like.

3. A process of producing paper or board and the like from half-stuff containing peat fibers and the natural gelatinous matter of the peat, which process consists in heating the half-stuff to a temperature insufficient to coagulate the gelatinous matter, and then running the said half-stuff into paper or board and the like.

879,889. MECHANICAL GLASS-GATHERER. WILLIAM NEWBY, Pittsburg, Pa. Filed June 11, 1906. Serial No. 321,197.



1. A mechanical glass gatherer comprising a tubular cup-support, a cup suspended therefrom, means for projecting the end of the support, and the cup, into a glass furnace, a suction pipe communicating with said tubular support and cup, means for elevating the support and cup and withdrawing them from the furnace, means for cutting off the suction within the cup, and mechanism for reversing the cup and moving it away from the furnace.

2. In a mechanical glass gatherer the combination with a revoluble table, of a plurality of tubular cup supports carried by said table, and each having a cup suspended therefrom, means for imparting an intermittent rotary motion to said table, means for moving said cup supports longitudinally, and mechanism for creating a suction through the tubular supports, and cups, and for cutting off such suction, and automatic mechanism for reversing the positions of said cups.

3. In a mechanical glass gatherer, the combination with a revoluble table, of a movable carrier, a cup support supported therein, and means for imparting a longitudinal motion to said carrier, comprising a vertically disposed shaft, a gear wheel mounted thereon, and rack teeth on the side of said carrier.

4. In a mechanical glass gatherer, the combination with a revoluble table, of a movable carrier, a hollow cup support carried by said table, means for moving said carrier and cup support longitudinally, and means for imparting a rotary motion to said cup support comprising a vertically disposed shaft, a beveled gear mounted thereon, and a beveled pinion on said cup support.

5. In a mechanical glass gatherer, the combination with a revoluble table, of a movable carrier, a hollow cup support provided with perforations at its outer end, a cup suspended upon the outer end of the support and having a perforated bottom, means for moving said carrier and cup support longitudinally, and means for imparting a rotary motion to the cup support.

[Claims 6 to 15 not printed in the Gazette.]

879,890. DISTANCE-LIGHTING GAS-BURNER DEVICE. RICHARD N. OAKMAN, Brooklyn, N. Y. Filed June 18, 1907. Serial No. 379,643.

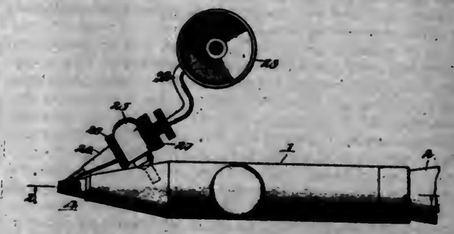
1. In a distance lighting burner device, a valve chamber having ports communicating with the longitudinal gas passage, said chamber being closed and free from vent at the rear end beyond said ports, in combination with a solid reciprocating piston to close the ports when its body covers them and to open the ports when its end has passed beyond them in the chamber, and means for applying fluid pressure or exhaust in the chamber, substantially as described.

2. In a distance lighting burner device, a transverse cylinder having ports communicating with the gas passage to the burner, said chamber being closed and free from vent beyond said ports, in combination with a solid reciprocating piston, a stop device adapted to arrest the piston after it has closed the ports and leave an air space in the rear end of the cylinder, and means for applying fluid pressure and exhaust for reciprocating the piston, substantially as described.



3. In a distance lighting burner device, a valve chamber having ports communicating with the gas passage to the burner and closed beyond said ports, in combination with a solid reciprocating piston to close the ports when its body covers them and to open the ports when its end has passed beyond them, a stop-screw or pin inserted in the rear end of the chamber to stop the travel of the piston and provide that an air space shall always be left between the end of the piston and the rear end of the chamber, and means for pneumatically reciprocating the piston, substantially as described.

879,891. AIR-BRUSH. JENS A. PAASCHE, Chicago, Ill. Filed June 27, 1907. Serial No. 381,009.



1. An air brush having a removable pigment receptacle provided with an attaching tube, said tube being tapered at one end, and a member having a tapered opening into which said tapered end is adapted to be removably inserted and frictionally held.

2. In an air brush, in combination, a pencil-like body having an air discharge opening at its forward end; an air valve located at the under side of said body; means upon the upper side of said body for operating said air valve; a color discharge nozzle outside of and near the forward end of said body, said nozzle extending at an angle with the direction of the air current; and a pigment receptacle attached to the rear end of said nozzle, the angular position of said nozzle and receptacle providing a space between said receptacle and said body for the fingers of the operator.

3. An air brush comprising a body having an air discharge opening at its forward end, a color discharge nozzle located at one side of said body and adjustable toward and away from said air discharge opening, and a pigment receptacle removably attached to and carried by said nozzle.

4. In an air brush, in combination, a body comprising a stem having an air discharge opening at its forward end; an air valve located in said stem and having a plunger operable from the upper side of said stem; a color discharge nozzle located at one side of said body; and a pigment receptacle attached to said nozzle.

5. An air brush having a color-discharge nozzle; and a

needle rotatably mounted in said nozzle, and provided with a scraping edge adapted to clear said nozzle of obstructions.

[Claims 6 to 12 not printed in the Gazette.]

879,892. LAWN-SPRINKLER. HARRY T. PACKARD, Pasadena, Cal. Filed Aug. 23, 1907. Serial No. 389,901.



1. A sprinkler including a casing having an intake and provided with an interior chamber having a discharge orifice, a stem disposed concentric with the walls of the orifice and provided with a rectangular head, the walls of said head at its juncture with the stem being curved inwardly and downwardly and provided with converging water passages opening through the top of the head.

2. A sprinkler including a casing having an intake and provided with a chamber having a discharge orifice, a projection extending vertically from one wall of the casing and having a threaded socket formed therein, a shank having its lower end threaded for engagement with the walls of the socket and its upper end disposed concentric with the walls of the orifice, said shank being provided with a rectangular head having converging water passages formed therein and opening through the top of said head.

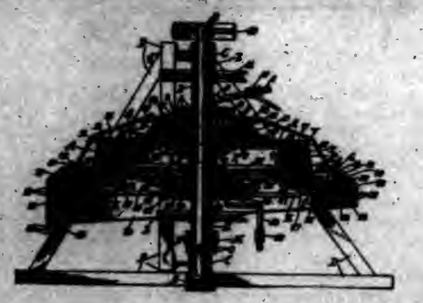
3. A sprinkler including a casing having an intake and provided with a chamber having a discharge orifice communicating therewith, a stem disposed concentric with the orifice and provided with a rectangular head having converging water passages formed therein and opening through the top of the head, the walls of the passages at the upper surface of the head being inclined laterally.

4. A sprinkler including a casing having one end thereof provided with an enlargement, the interior walls of which are threaded for detachable engagement with a water conductor, said casing being provided with an interior chamber having a discharge orifice communicating therewith, a projection extending vertically from one wall of the casing and provided with a threaded socket, a stem having its lower end threaded for engagement with the walls of the socket and having its upper end extended through the orifice and provided with a substantially rectangular head, the side walls of the head at its juncture with the stem being curved inwardly and downwardly and provided with converging water passages opening through the top of the head.

5. A sprinkler including a casing having an intake and provided with a chamber having a discharge orifice, a stem disposed concentric with the orifice and provided with a substantially rectangular head, the side walls of which are curved downwardly and inwardly and provided with converging water passages extending from the curved walls to the top of the head, said head being provided with a marginal shoulder for deflecting the water laterally in the form of a rectangular spray.

879,893. CENTRIFUGAL ORE-SEPARATOR. PHILIP F. PECK, Chicago, Ill. Filed Jan. 25, 1907. Serial No. 354,078.

1. In a centrifugal ore separator, rotatable supply means provided with material and water distributing members adapted to supply material from a predetermined segmental part of its field of rotation in position for delivery on a predetermined segmental separating area and at the same time to supply water alone from a different predetermined segmental part of its field of rotation in position for delivery on a predetermined segmental concentrates removing area, in combination with rotatable means having a separating surface within a separating channel adapted to be submerged during operation, said separating surface embracing the said areas and being relatively circumferentially travelable thereto, a rotatable deflector adapted to frictionally generate an aqueous scouring or washing force over the separating surface and across said areas, said supply means and said means having the separating surface and said deflector all being differentially rotatable with respect to each other, substantially as described.



2. In a centrifugal ore separator, rotatable supply means provided with material and water distributing members adapted to supply material from a predetermined segmental part of its field of rotation in position for delivery on a predetermined segmental separating area, and at the same time to supply water alone within a different predetermined segmental part of its field of rotation in position for delivery on a predetermined segmental concentrates removing area, in combination with rotatable means having a separating surface within a separating channel adapted to be submerged during operation, said separating surface embracing the said areas and being relatively circumferentially travelable thereto, a rotatable deflector adapted to frictionally generate an aqueous scouring or washing force over the separating surface and across said areas, said supply means and said means having a separating surface, and said deflector, all being differentially rotatable with respect to each other and means differentially rotatable to said rotatable distributing device, means adapted to conduct said material and said clean water alone separately from said distributing device to their respective segmental areas on the separating surface, substantially as described.

3. In a centrifugal ore separator, the combination of a rotatable element having a separating surface within a covered separating channel adapted to be submerged while in operation, a deflector differentially rotatable to said separating surface forming one wall of said separating channel and adapted to generate an aqueous scouring force within said channel, feed distributing means having material and water passages and being differentially rotatable to said element with the separating surface and to said deflector and establishing in part a segmental separating zone and a segmental concentrates removing zone of form embracing different substantially transverse segmental areas of the separating surface, which areas are travelable circumferentially with respect to said separating surface and said deflector, said distributing means adapted to deliver material for separation within said separating zone, and for delivery of water within said concentrates removing zone, and means for feeding material for separation, and water alone in their respective passages in said feed distributing means, substantially as described.

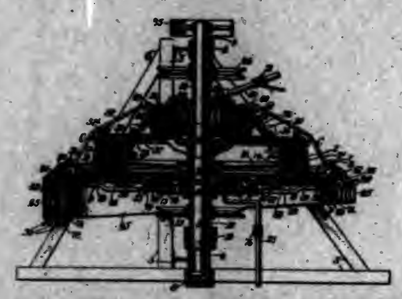
4. In a centrifugal ore separator, the combination of a rotatable distributing device adapted to deliver material for separation, from a predetermined part of its circumferential portion and to deliver clean water from another

predetermined part of its circumferential portion, a differentially rotatable vessel portion having a separating surface and forming the outer wall of a covered separating channel which is adapted to be filled with water during operation, a deflector portion differentially rotatable to the distributing device and the vessel portion, forming the inner wall of the separating channel, said distributing device and said vessel and said deflector portion all differentially rotatable to each other, establishing a segmental separating zone and a segmental concentrates removing zone which embrace different substantially transverse segmental areas of the separating surface, said areas being relatively circumferentially travelable to said separating surface and deflector portions and synchronously traveling during operation with the feed distributing device, said separating surface adapted to receive material for separation within the separating zone and to carry concentrates for removal into the concentrates removing zone, substantially as described.

5. In a centrifugal ore separator, the combination of rotatable means forming the outer wall of a separating channel and having a separating surface within said channel, a differentially rotatable deflector forming the inner wall of said channel and adapted to generate an aqueous scouring force in said channel, a feed distributing device differentially rotatable to said separating surface and deflector and provided with distributing channels, and adapted at the same time to deliver material for separation, middlings removing water and concentrates removing water respectively within separate predetermined travelable substantially transverse segmental areas on the separating surface, and rotatable means for delivering separately at the same time the several separated products discharged from the separating surface, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

879,894. CENTRIFUGAL ORE-SEPARATOR. PHILIP F. PECK, Chicago, Ill. Filed Mar. 14, 1907. Serial No. 362,329.



1. In a centrifugal ore separator, the combination of a rotatable element having a separating surface forming one wall of a separating channel or passage which is adapted to be filled with water during operation, a deflector differentially rotatable to said element, forming the other wall of said channel, means differentially rotatable to said element having the separating surface and to the deflector, having members respectively at the same time adapted to distribute material for deposit and separation in said channel and on the separating surface with a particular segmental separating zone or area while said surface is traveling relatively to said zone or area, and to distribute concentrates removing water to said channel within a particular segmental concentrates removing zone or area on the separating surface while said surface is traveling relatively to said zone or area, means for increasing the water discharge capacity from desired differentially circumferentially travelable segmental zone or area, and means differentially rotatable to the separating surface adapted to catch and deliver separately the several separated products discharged from said separating surface provided with removable portions for deflecting material to different planes of discharge from said delivery means in a direction transverse to the axis of rotation, substantially as described.

2. In a centrifugal ore separator, a rotatable feed distributing device having members respectively at the same time adapted to distribute material for separation within a segmental separating zone or area, and to distribute water alone within a segmental wash water zone or area, and to distribute concentrates removing water within a segmental concentrates removing zone or area in combination with a relatively travelable element having a separating surface adapted to be submerged while in operation and differentially rotatable means adapted at the same time to catch and deliver separately at different vertical planes with respect to the axis, the several separated products discharged from the separating surface, such means having removable portions for diverting material to the said different planes, and a fixed launder having compartments adapted to separately catch the respective products from said several planes as delivered, substantially as described.

3. In a centrifugal ore separator, the combination of a rotatable element having a separating surface, rotatable feed means embodying several feed sections, each having multiple channels therefrom terminating in positions adapted for delivery of water and material within desired segmental portions of the circumference of said feed means, a rotatable element with multiple channels communicating with said feed means for delivery of water and material therefrom to the separating surface, and means differentially rotatable to the separating surface adapted to catch and deliver separately the several separated products discharged from the segmental zones or areas of different action in the separator, such latter means having removable portions adapted to divert material to different vertical planes with respect to the axis of rotation of discharge, substantially as described.

4. In a centrifugal ore separator, the combination of a rotatable element having a separating surface adapted to be submerged in water while in operation, differentially rotatable means for supplying material for deposit and separation within particular segmental zones or areas on said separating surface, rotatable means for supplying concentrates removing water within other particular segmental zones or areas on the separating surface, and adjustable means adapted to increase the water discharge capacity from progressively changing portions of the separating surface while in operation as and while said portions enter and are passing through particular segmental zones in the separator, substantially as described.

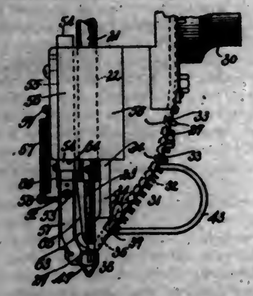
5. In a centrifugal ore separator, the combination of a rotatable element having a separating surface adapted to be submerged while in operation, differentially rotatable means for supplying material for deposit and separation within particular areas on said separating surface, rotatable means for supplying concentrates removing water within particular areas on the separating surface, said separator being provided with primary and secondary discharge holes, adjustable mechanism for closing said secondary discharge holes within desired segmental areas or zones of action and for opening them within other desired segmental areas or zones of action in the separator, and means differentially rotatable to the separating surface and material supply means for generating an aqueous washing force on said surface, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

879,895. MACHINE FOR SETTING RIVETS. JOSEPH E. PERRAULT, Waltham, Mass., assignor to Judson L. Thomson M'f'g. Co., a Corporation of Maine. Filed Feb. 21, 1907. Serial No. 358,614.

1. In a machine for driving rivets and the like, a raceway, a carrier adapted to receive a rivet or the like from said raceway, a movable guide-finger adapted to engage the head of said rivet as it passes from said raceway to said carrier, and adjustable means adapted to locate said finger relatively to said raceway and carrier as said rivet is passing from said raceway to said carrier.

2. In a rivet setting machine, a reciprocatory driver, a raceway, a rivet carrier provided with a chamber adapted to receive a rivet, a finger pivoted to said carrier, the free end of said finger normally located above said chamber with its inner edge inclined at an angle to and bearing against the lower end of said driver, means to hold said finger in sliding contact with said driver, and a stop to limit the upward movement of said driver, whereby the relative location of the free end of said finger to said chamber and raceway may be determined.



3. In a machine for driving rivets and the like a raceway, a reciprocatory carrier adapted to receive a rivet from said raceway, a reciprocatory driver, a guide-finger pivoted to said carrier, the free end of said finger normally located above said chamber, with its upper edge inclined to and bearing against the lower end of said driver, means to hold said finger in sliding contact with said driver, means to stop said carrier during the upward movement of said driver, and means to subsequently stop the upward movement of said driver, whereby the relative location of said finger to said raceway and carrier is changed and determined during the last part of the upward movement of said driver.

4. In a machine for feeding and driving rivets and the like, a raceway terminating at the lower end thereof in a foot, said foot consisting of a plate adapted to be fastened to a stationary member, and having a groove adapted to guide said rivets or the like, extending downwardly across the lower end thereof at an angle thereto.

5. In a machine for feeding and driving rivets and the like, a raceway terminating at the lower end thereof in a foot, said foot consisting of a plate adapted to be fastened to a stationary member, and having a groove adapted to guide said rivets or the like, extending downwardly across the lower end thereof at an angle thereto, and having a second groove extending horizontally thereacross and intersecting said rivet-guiding groove.

[Claims 6 to 8 not printed in the Gazette.]

879,896. MACHINE FOR SETTING RIVETS. JOSEPH B. PERRAULT, Waltham, Mass., assignor to Judson L. Thomson M'fg. Co., a Corporation of Maine. Filed July 31, 1907. Serial No. 386,849.



1. In a machine for driving rivets and the like, a raceway, a carrier adapted to receive a rivet or the like from said raceway, a movable guide-finger, and means adapted to move said finger into contact with the top of said rivet while it is on said raceway and to move said finger with said rivet and in contact with the head thereof while said rivet is passing from said raceway to said carrier, whereby said rivet is prevented from tipping over.

2. In a machine for driving rivets or the like, a raceway, a carrier adapted to receive a rivet or the like from said raceway, a movable guide finger adapted to engage the head of said rivet while it is on said raceway and as it passes from said raceway to said carrier, and adjustable means adapted to locate said finger relatively to said raceway and carrier while said rivet is on said raceway.

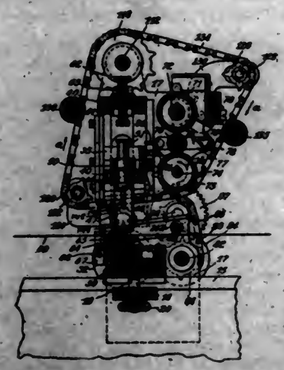
3. In a rivet setting machine, a reciprocatory driver, a raceway, a rivet carrier provided with a chamber adapted to receive a rivet, a finger pivoted to said carrier, the free end of said finger normally located above and extending across said chamber and adapted to contact with the top of the head of said rivet while it is on said raceway, the inner edge of said finger inclined at an angle to and adapted to bear against said driver, and means to hold said finger in sliding contact with said driver, whereby the relative location of the free end of said finger to said chamber and raceway may be varied, and said rivet prevented from tipping over.

4. In a rivet setting machine, a reciprocatory driver, a raceway, a rivet carrier provided with a chamber adapted to receive a rivet, a finger pivoted to said carrier, the free end of said finger normally located above and extending across said chamber and adapted to contact with the head of said rivet while it is on said raceway, the inner edge of said finger inclined at an angle to and adapted to bear against said driver, means to hold said finger in sliding contact with said driver, and a stop to limit the upward movement of said driver, whereby the relative location of the free end of said finger to said chamber and raceway may be determined.

5. In a rivet setting machine, a reciprocatory driver, a raceway, a rivet carrier provided with a chamber adapted to receive a rivet, a finger pivoted to said carrier, the free end of said finger normally located above and extending across said chamber and adapted to contact with the head of a rivet on said raceway, the inner edge of said finger inclined at an angle to and bearing against said driver, means to hold said finger in sliding contact with said driver, and an adjustable stop to limit the upward movement of said driver whereby the relative location of the free end of said finger to said chamber and raceway may be varied and determined.

[Claims 6 to 10 not printed in the Gazette.]

879,897. PRINTING-PRESS. GEORGE H. PIERCE, Melrose, Mass. Filed Apr. 2, 1907. Serial No. 365,950.



1. In a printing press, a frame, a form-carrier slidably mounted on said frame, a stop supported on said frame, mechanism to impart a reciprocatory movement to said form-carrier, a type-wheel holder supported on said form-carrier and rotatably adjustable thereon, a type-wheel rotatably mounted in said holder, a plunger slidably mounted in said holder adapted to strike said stop plunger operatively connected to said type-wheel, and an ink-carrier roll movable across said type-wheel.

2. In a printing press a frame, a form-carrier slidably mounted on said frame, mechanism to impart a reciprocatory movement to said form-carrier, a type-wheel holder supported on said form-carrier and rotatably adjustable thereon, a type-wheel rotatably mounted in said holder, a stop adjustably mounted on said frame, a plunger slidably mounted in said holder adapted to strike said stop, said plunger operatively connected to said type wheel, and an ink-carrier roll movable across said type-wheel.

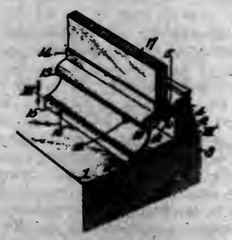
3. In a printing press, a frame, a form-carrier slidably mounted on said frame, a stop supported on said frame, mechanism to impart a reciprocatory movement to said form-carrier, a type-wheel holder supported on said form-carrier and rotatably adjustable thereon, a type-wheel rotatably mounted in said holder, a plunger slidably mounted in said holder adapted to strike said stop, said plunger operatively connected to said type-wheel, an endless chain carried by said form-carrier, an ink carrier roll journaled on said endless chain, and gearing operatively connected to said chain.

4. In a printing press, a frame, a form-carrier slidably mounted on said frame, a stop supported on said frame, mechanism to impart a reciprocatory movement to said form-carrier, a type-wheel holder supported on said form-carrier and rotatably adjustable thereon, a type-wheel rotatably mounted in said holder, a plunger slidably mounted in said holder adapted to strike said stop, said plunger operatively connected to said type-wheel, two endless chains carried by said form-carrier, an ink-carrier roll journaled on said endless chains, and gearing operatively connected to said chains.

5. In a printing press, a frame, a form-carrier slidably mounted on said frame, a stop supported on said frame, mechanism to impart a reciprocatory movement to said form-carrier, a type-wheel holder supported on said form-carrier and rotatably adjustable thereon, a type-wheel rotatably mounted in said holder, a plunger slidably mounted in said holder adapted to strike said stop, said plunger operatively connected to said type-wheel, two endless chains carried by said form-carrier, an ink-carrier roll journaled on said endless chains, gearing operatively connected to said chains, two wheels journaled on opposite ends, respectively, of said roll, and two tracks located on opposite sides, respectively, of said frame, said wheels adapted to roll on said tracks, respectively.

[Claims 6 to 24 not printed in the Gazette.]

879,898. STORE-FRONT CONSTRUCTION. FRANCIS J. PLYM, Niles, Mich. Filed June 8, 1907. Serial No. 377,987.



1. In a construction of the character described, the combination of an angle plate having a perforated gutter at its upper end and an upwardly projecting portion near its outer edge past which water may travel, a bracket secured upon the angle plate and having an arm underlying and projecting outward beyond the gutter, and a face plate or molding fitting at its lower end against the outer edge of the angle plate and having its upper edge overhanging said arm of the bracket and provided with an upwardly projecting flange substantially paralleling the gutter, the said face plate or molding having holes in its lower edge; and means to force the face plate inwardly toward the bracket and against the outer edge of the angle plate.

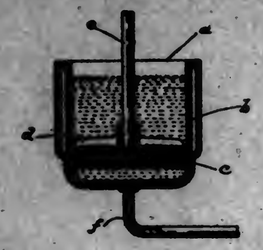
2. In a construction of the character described, the combination of an angle plate having a perforated gutter at its upper end and an upwardly projecting portion near its outer edge past which water may travel, a bracket secured upon the angle plate and having an arm underlying and projecting outward beyond the gutter, a face plate or molding fitting at its lower end against the outer edge of the angle plate and having its upper edge overhanging said arm of the bracket and provided with an upwardly projecting flange substantially paralleling the gutter, the said face plate or molding having holes in its lower edge; means to force the face plate inwardly toward the bracket and against the outer edge of the angle plate, and a transparent plate or window pane resting upon said arm of the bracket and clamped between the gutter and the flange of the face plate.

3. In a construction of the character described, the combination of a window sill, a floor, an angle plate fitting upon said sill and against the outer edge of said floor and provided at the upper end of its floor-engaging arm with a perforated gutter and at the outer edge of its sill-engaging arm with parts projecting upward and spaced apart, a channel bracket underlying the gutter and fitting upon the sill-engaging and against the floor-engaging arms of the angle plate and projecting outwardly beyond the gutter, a transparent plate or pane supported by the bracket outward of the gutter, a face plate or molding resting at its lower edge upon the sill and provided with holes at such edge and engaging the outer edge of said sill-engaging arm and having its upper edge overlying the bracket and equipped with a flange engaging the outer face of the transparent plate or pane, means for securing the bracket and angle plate in position, and means for clamping the face plate or molding against said plate or pane and the outer edge of the sill-engaging arm of the angle plate.

4. In a construction of the character described, the combination of a window sill, a floor, an angle plate fitting upon said sill and against the outer edge of said floor and provided at the upper end of its floor-engaging arm with a perforated gutter and at the outer edge of its sill-engaging arm with an upwardly projecting angle portion, a channel bracket underlying the gutter and fitting upon the sill-engaging arm and against the floor-engaging arm of the angle plate and projecting outwardly beyond the gutter, a transparent plate or pane supported by the bracket outward of the gutter, a face plate or molding resting at its lower edge upon the sill and provided with holes at such edge and engaging the outer edge of said sill-engaging arm and having its upper edge overlying the bracket and equipped with a flange engaging the outer face of the transparent plate or pane, means for securing the bracket and angle plate in position, and means for clamping the face plate or molding against said plate or pane and the outer edge of the sill-engaging arm of the angle plate.

5. In a construction of the character described, the combination with a window casing, of an angle plate fitting therein and provided at one edge with a resilient gutter, a bracket secured to the angle plate and having an arm projecting outward beyond the gutter, a transparent plate or pane fitting in the window casing with its edge against the said arm of the bracket and its inner face in engagement with the resilient gutter, and a face plate or molding fitting at its outer edge against the corresponding edge of the angle plate and having its inner edge projecting beyond and rearward of the arm of said bracket, and provided at such edge with a flange substantially paralleling the gutter and engaging the outer face of the plate or pane, the said face plate or molding having holes in the edge engaging the angle plate; and means to force the face plate or molding toward the bracket and against the outer edge of the angle plate.

879,899. PROCESS OF OBTAINING DINITROGLYCERIN, &c. FRANCIS I. DU PONT, Wilmington, Del., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed Sept. 11, 1907. Serial No. 392,257.



1. In the process of nitrating an organic compound with nitric acid alone, the hereinbefore described step of neutralising the excess of nitric acid for the purpose of producing a valuable by-product, which consists in neutralising said excess acid with ammonia.

2. In the process of nitrating an organic compound with nitric acid alone, the hereinbefore described step of neutralising the excess nitric acid for the purpose of producing a valuable by-product, which consists in neutralising said excess acid with ammonia admitted in a comminuted form.

3. In the process of nitrating an organic compound with nitric acid alone, the hereinbefore described step of neutralising the excess of nitric acid for the purpose of producing a valuable by-product, which consists in neutralising said excess acid with ammonia, and maintaining the mass, during said neutralization, at a temperature at which the nitrated material will not decompose.

4. The hereinbefore described process, which consists in nitrating glycerin to dinitroglycerin by nitric acid alone, neutralising the excess nitric acid by means of ammonia hydroxid and water, and then subjecting the mixture to the action of heat, and a vacuum sufficient to maintain the temperature of the evaporating point of the water below that affecting the dinitroglycerin.

879,900. METAL-SHEARS. GEORGE POTSTADA, San Francisco, Cal. Filed Oct. 22, 1907. Serial No. 398,673.



1. In a metal shears, the combination with a pair of handles, of a knife carried by one of the handles, a head carried by the other handle and through which the knife is slidable, and a spring held guide for keeping the cut straight.

2. In a metal shears, the combination of a pair of handles, a knife carried by one of the handles and adapted to move at right angles with the cutting edge, a head carried by the other handle and through which the knife is adapted to slide said head having a cutting edge on each side of said knife, and means to guide the shears across the metal sheet, as the cut is made.

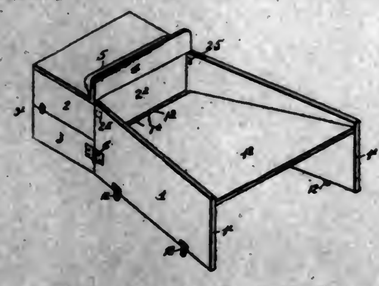
3. In a metal shears, the combination with a pair of handles, of a knife carried by one of the handles said knife having an elongated shank passing through a head carried by said handle, a head carried by the other handle and through which the knife is adapted to slide, and a guide in the rear of the knife to keep the cut straight.

4. In a metal shears, the combination of a head having a handle secured thereto said head comprised of a pair of plates having circular eyes near the top thereof, a head fitted to said eyes and having a handle secured thereto, a pin in said head and eccentrically placed with respect to the head, a knife carried by the head and having a cutting edge at substantially a right angle with the shank, and means in the rear of the knife to guide the shears as the cut in the metal is made.

5. In a metal shears, the combination of a head having a handle secured thereto said head having a pair of circular eyes near the top thereof, a second handle having a head to fit said eyes and having a pin placed eccentrically with reference to said eyes and head, a knife carried by the pin and having its cutting edge extending at right angles with its supporting shank the shank of said knife just above the cutting edge being thinner than the cutting edge, a guide carried by the shear head and having lugs on each side thereof whereby the sheet is held close to the shears when the knife is pushed against the sheet on the inoperative stroke.

[Claims 6 to 8 not printed in the Gazette.]

879,901. MAIL-POUCH CATCHER. RICHARD H. POWELL, Batesville, Ark. Filed Oct. 22, 1907. Serial No. 398,603.



1. In a mail-pouch catcher the combination of a pair of trucks, provided with keepers 11, secured to the outer faces of the base of said trucks; a chute, consisting of side boards 1^3, flared at their outer ends, and an inclined board, its wide end secured near the top edges of said side board, running backwardly and downwardly, and provided near its lower end with a cross groove 1^5, and in said groove perforations 1^6; a box 2, secured to the rear end of said chute, said box provided with an offset 2^1, and in its bottom with perforations 2^2; a door 3, hinged to said box by hinge 6, and adapted to be held closed by a button 3^1; a swinging door 2^9, hinged to the front end and upper wall of said box by a spring-hinge 2^4; stop-blocks 2^8, secured to the inner faces of the side boards 1^1, preventing said door from swinging too far forward, and a guard board 4, secured across the upper wall and rear end of said box, substantially as shown and described and for the purposes set forth.

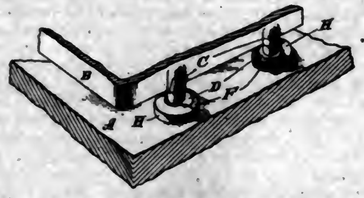
2. In a mail-pouch catcher the combination of a chute, much wider at its front than at its rear end, its inclined board running backwardly and downwardly, and near its lower end provided with a cross-groove, and perforations in said groove; a box, secured to the rear end of said chute, provided with perforations in its bottom and a door in one of its side walls; a swinging door, secured to the front end of the upper wall of said box by a spring-hinge, said hinge adapted to throw the lower edge of said door on a line with said perforated groove and stop-blocks secured to the inner faces of the side boards, preventing said door from swinging too far forward, said chute and box adapted to be mounted on and secured to a truck, substantially as shown and described and for the purposes set forth.

879,902. CLEANSING COMPOUND. FREDERICK F. PRUSS, Centralia, Ill. Filed Nov. 2, 1907. Serial No. 400,859.

1. A cleansing compound composed of rip-sawed sawdust, fine sand, common salt, wheat bran, floor oil, borax, turpentine and carbolic acid, substantially as described and for the purpose set forth.

2. The herein described composition of matter for cleansing purposes, consisting of rip-sawed sawdust, 1 pound; fine sand, 1 pound; common salt, 1/4 pound; wheat bran, 1/4 pound; floor oil, 3/4 pound, borax, 1/2 ounce; turpentine, 1 ounce, carbolic acid, 1/2 dram, and coloring matter to suit, substantially as and for the purpose set forth.

879,903. TYPE-WRITER CUSHION. GEORGE M. REDWAY, Newark, N. J. Filed Feb. 20, 1907. Serial No. 358,433.



1. In a device of the character described the combination of a cushion, means for securing the same to the machine, a shell or casing partly inclosing the cushion adapted to be secured to the table-top and to hold the said cushion against vertical and lateral movement.

2. In a device of the character described, the combination of a cushion, means for securing the same to the machine, said cushion extending beyond the feet of the machine, a casing adapted to receive said cushion, means for movably securing the said casing to the table-top and a portion of said casing turned upwardly to facilitate the insertion of the cushion.

3. In a device of the character described, the combination of a cushion, said cushion extending beyond the feet of the machine, a casing adapted to receive said cushion, means for movably securing the said casing to the table-top and a piece of metal for securing the cushion to the foot of the machine below the upper surface of a portion of the cushion.

4. In a device of the character described, the combination of a piece of compressible material, means for securing the same to the foot of the machine, a metallic holder movably secured to the top of the table or stand and adapted to prevent vertical movement of the compressible material and to prevent lateral movement of the same in one direction while permitting lateral movement in another direction, the positions to which the said holder is moved determining the direction in which the compressible material may be moved.

5. In a device of the character described, the combination of a cushion proper of compressible material, a metallic disk within the side edges of the same secured to the cushion proper and to the machine a holder rotatably secured to the table or stand adapted to receive said cushion and disk and to prevent vertical movement of the same, while permitting lateral movement thereof in one direction and preventing lateral movement in other directions.

[Claims 6 to 10 not printed in the Gazette.]

879,904. SHOE-HEEL ATTACHMENT. EDWARD RENNIE, Halifax, Nova Scotia, Canada. Filed May 16, 1907. Serial No. 373,967.

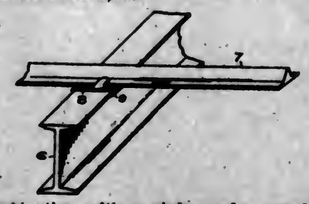
1. In combination with a heel, an upper plate provided with a socket having inwardly projecting lugs, a securing nut disposed in the socket beneath the lugs, means for securing the upper plate to a shoe, and a coöperating bolt secured to the heel.

2. In combination with a shoe heel, an upper plate adapted to be attached to the shoe and a lower plate adapted to be attached to a removable heel, each plate being provided with a socket, a nut disposed in one socket and held therein against rotation relatively thereto, a bolt having its head seated in the other of said sockets and prevented from rotating relatively thereto, and connections between said bolt and nut whereby relative rotation of the two plates is permitted.



3. In combination with a shoe heel, an upper plate adapted to be attached to a shoe and a lower plate adapted to be removably attached to a heel, each of said plates being provided with a socket, a nut disposed in one socket, lugs adjacent said socket and overlying the edges of the nut to thereby retain the same in its socket and hold it against rotation relatively thereto, a bolt having its head seated in the other of said sockets and prevented from rotating relatively thereto, and connections between said bolt and nut whereby relative rotation of the two plates is permitted.

879,905. CLIP FOR STRUCTURAL IRONWORK. CHARLES E. RHOEER, Columbus, Ind. Filed Dec. 26, 1906. Serial No. 349,509.



The combination with a girder and a member transverse thereto, of a clip for attaching the transverse member to said girder, said clip comprising a plate laid between the transverse member and the girder, having tongues struck out and upright from the body of the plate, said tongues being adapted to be struck down upon the flanges of the transverse member and thereby place the plate adjacent to the base of said tongue additionally in tension, the ends of said plate being extended and bent around the girder to embrace the latter and lock the clip thereto.

879,906. SASH-WEIGHT. CHARLES E. RHOEER, Columbus, Ind. Filed June 10, 1907. Serial No. 378,277.



1. In a compound sash-weight, a weight unit having a recess at one end, and a hook at the other end of the unit making a working fit with a corresponding recess of

an adjacent unit, said hook having an up-turned end to require an angular relation in assembling the units, said units having oblique corners adjacent to the open side of the hook, and shoulders opposite the oblique corners in a plane approximately through the center of said cross-bar.

2. In a compound sash weight, a weight unit having a recess at one end and a hook at its other end, said recess comprising a pair of parallel plates and a cross-bar located approximately midway between two opposite sides of the weight, and said hook having straight parallel sides to fit the slot of its adjacent unit and an upturned end to require an angular relation of the units in assembling same, said hook having an angle or corner to contact with the adjacent unit, and the corners of both units on their sides adjacent to the open side of the hook being beveled.

3. A sectional sash-weight member having at one end a flat-sided, central, projecting hook provided with a transverse circular opening and a front entrance thereto, the body of the member extending at its back approximately to the middle of the circular opening, and at its other end provided with a recess formed with parallel sides to receive the hook of a contiguous member, and a cross-bar half in the recess and half above, having parallel front and back faces, and having the front corners of both ends of the member beveled.

879,907. FOLDING GO-CART. MARION B. RIFFO, Philadelphia, Pa. Filed June 26, 1907. Serial No. 380,857.



1. A folding go-cart or carriage comprising a seat or body portion, a front wheel frame hinged to the body portion adjacent its front end, side frames connected to the front wheel frame at points remote from the connection of the latter to the seat or body portion, rear wheel supports connected to the side frames, and means for detachably securing the side frames to the seat or body portion to hold the parts in position to permit the carriage to be used as a perambulator, the parts being so arranged that when the side frames are released the front wheel frame may be folded under the seat or body portion and the side frames and the rear wheel supports lifted with respect to the body or seat portion.

2. A folding go-cart or carriage comprising a seat or body portion, a front wheel frame hinged to the body portion adjacent its front end, side frames hinged to the front wheel frames at points remote from the connection of the latter to the seat or body portion and slidingly connected to the seat or body portion adjacent its rear end, rear wheel supports connected to the side frames and means for detachably securing the side frames to the seat or body portion to hold the parts in position to permit the carriage to be used as a perambulator, the parts being so arranged that when the side frames are released they may be slid upward with respect to the body or seat portion to fold the front wheel frame under the said body or seat portion and raise the rear wheel supports.

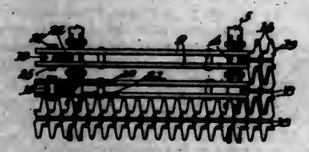
3. A folding go-cart or carriage comprising a seat or body portion, a front wheel frame hinged to the body portion adjacent its front end, side frames hinged to the front wheel frame at points remote from the connections of the latter to the seat or body portion, said side frames being provided with longitudinal slots terminating at their upper ends in transverse downwardly extending portions, rear wheel supports connected to the side frames, pintles or projections carried by the seat or body portion adjacent its rear end which enter the slots in the side frames and rest in the transverse portions thereof to hold the carriage in the perambulator condition, but may be moved into the longitudinal slot portions to permit the carriage to be collapsed.

4. A folding go-cart or carriage comprising a seat or body portion, a front wheel frame hinged to the body portion adjacent its front end, side frames hinged to the front wheel frame at points remote from the connection of the latter to the seat or body portions, sliding connections between the side frames and the body or seat portion, rear wheel supports hinged to the side frames, collapsible braces extending between the side frames and the rear wheel supports, and means for detachably securing the side frames to the seat or body portion to hold the parts in position to permit the carriage to be used as a perambulator, the parts being so arranged that the carriage may be collapsed by sliding the side frames relative to the seat or body portion to fold the front wheel frame under the body portion and by collapsing said braces to permit the rear wheel supports to be turned toward the front wheel frame.

5. A folding go-cart or carriage comprising a seat or body portion, a front wheel frame hinged to the body portion adjacent its front end, side frames hinged to the front wheel frame at points remote from the connection of the latter to the seat or body portion, sliding connections between the side frames and the body or seat portion, rear wheel supports hinged to the side frames, collapsible braces extending between the side frames and the rear wheel supports, means for detachably securing the side frames to the seat or body portion to hold the parts in position to permit the carriage to be used as a perambulator, the parts being so arranged that the carriage may be collapsed by sliding the side frames relative to the seat or body portion to hold the front wheel frame under the body portion and by collapsing said braces to permit the rear wheel support to be turned toward the front wheel frame, and a handle for manipulating the carriage as a perambulator, and a second handle for use in converting the carriage from one form into the other and in carrying the carriage and its occupant when the carriage is in its collapsed or folded form.

[Claims 6 and 7 not printed in the Gazette.]

879,908. FURNACE-GRATE. WESLEY O. ROOT, Chicago, Ill. Filed July 28, 1906. Serial No. 328,253.



1. A grate bar comprising two bars; means for securing said bars together in parallel position and spaced apart, said bars having flanges at their lower edges; means adapted to slidably engage said flanges for securing the grate bar in place in the grate; and means for releasably clamping said securing means and said grate bar together.

2. A grate bar comprising two bars; shouldered rivets for securing said bars together in parallel position and for spacing them apart, said bars having flanges at their lower edges; means adapted to slidably engage said flanges for securing the grate bar in place in the grate; and means for releasably clamping said securing means and said grate bar together.

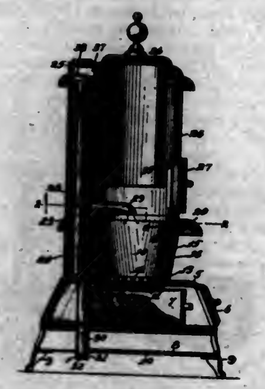
3. A grate bar comprising two channel bars, means engaging the flanges at one side of said bars for securing the grate bar in place in the grate, means for releasably clamping said engaging means and said channel bars together; and members forming the grate surface, and provided with shanks adapted to lie between the other flanges of said channel bars.

4. A grate comprising two traveling chains, a plurality of grate bars, blocks adapted to releasably engage said chains and means for releasably securing said blocks to said grate bars.

5. In a grate, in combination, two chains having openings therein; a grate bar; and two blocks adapted to be movably secured to said grate bar, said blocks having studs thereon adapted to lie in said openings.

[Claims 6 to 10 not printed in the Gazette.]

879,909. STOVE. WILLIAM RUBE, O'Fallon, Ill. Filed Aug. 12, 1907. Serial No. 388,187.

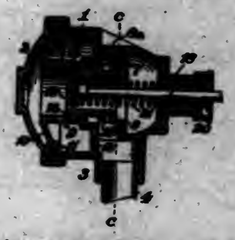


1. A stove of the class described comprising a fire box of two sections; a base; an auxiliary base; flues formed in the fire box between the two sections; dampers located in the upper ends of the flues and a fresh air supply pipe for conveying fresh air from the bottom of the stove to the top of the fire box, substantially as specified.

2. A stove of the class described comprising a base; an auxiliary base; a fire box; flues formed in the fire box extending from the top of the fire box down to the base; dampers located in the upper ends of said flues; a stove casing mounted upon the fire box; a smoke flue communicating with the base and with the top of the stove, and a fresh air pipe for supplying fresh air upon the top of the fire box, collecting the air from below the auxiliary base, and a damper located in the fresh air pipe for regulating the circulation of the air, substantially as specified.

3. A stove of the class described comprising a stove casing; a fire box located beneath the stove casing, said fire box composed of two sections; a pair of flues formed in the fire box between the two sections extending from the top of said fire box down to the base; slide dampers located in the upper end of the inner section of the fire box to control the circulation between the fire box and the flues; a base supporting the fire box, said base acting as the ash pit; an auxiliary base supporting the first mentioned base besides, said auxiliary base being in skeleton form; a fresh air pipe extending horizontally into the stove casing and located above the fire box, said fresh air pipe also bent downwardly and extending through the bases for collecting air from beneath the auxiliary base and delivering it upon the fire within the fire box; a shield partially extending across the bottom of the auxiliary base to deflect the heat, and a damper located in the air pipe for regulating the circulation of air, substantially as specified.

879,910. WATER-VALVE FOR INSTANTANEOUS WATER-HEATERS. EDWIN RUUD, Pittsburg, Pa. Filed Apr. 8, 1907. Serial No. 367,081.



1. In a valve mechanism for instantaneous water heaters, the combination of a casing provided with water inlet and outlet connections, a valve controlling communication between said connections, a piston fitting a cylindrical chamber in the casing and connected integrally to the valve by a cylindrical body which forms a dash pot between said valve and heater, said casing also provided with passages establishing communication between the inlet connection and one side of the piston, between the opposite side of the piston and the outlet connection, and between the inlet and outlet connections past the valve, a gas valve actuating stem connected to the valve, and a spring bearing on the valve in direction to impart closing movement thereto.

2. In a valve mechanism for instantaneous water heaters, the combination of a casing provided with water inlet and outlet connections, a piston and dash pot chamber in said casing separated by a partition from said inlet and outlet connections, a valve seat partition interposed between the inlet and outlet connection, a valve controlling an opening in the valve seat partition, a piston fitting in the piston and dash pot chamber and connected integrally to the valve by a cylindrical body, said casing also provided with passages through said cylindrical body establishing communication between said chamber and the inlet connection on one side of the piston, between said chamber and the outlet connection on the opposite side of the piston, and between the inlet and outlet connections past the valve, a gas valve actuating stem connected to the valve and a spring bearing on the valve in direction to impart closing movement thereto.

3. In a valve mechanism for instantaneous water heaters, the combination of a casing provided with water inlet and outlet connections, a piston and dash pot chamber in said casing separated by a partition from said inlet and outlet connections, a valve seat partition interposed between the inlet and outlet connections, a valve controlling an opening in the valve seat partition, a piston fitting in the piston and dash pot chamber, a cylindrical body passing through the partition of said chamber and connecting the piston and valve, said casing also provided with passages establishing communication between said chamber and the inlet passage, on the side of the piston further from the valve, between said chamber and the outlet connection, through the partition of the chamber, and between the inlet and outlet connections past the valve, a gas valve actuating stem connected to the valve, and a spring bearing on the valve in direction to impart closing movement thereto.

4. In a valve mechanism for instantaneous water heaters, a combined water valve and motor, comprising a valve, a piston, a dash pot between the valve and piston, a cylindrical body integrally connecting the valve and piston forming a guide and provided with a passage for the traverse of water from one side of the piston to the other, a transverse head formed in said cylindrical body, and a spring actuated valve stem seated against said head.

5. In a valve mechanism for instantaneous water heaters, a combined water valve and motor, comprising a cylindrical valve having a plurality of peripheral guides, a piston, a tubular body connecting the valve and piston, passages in the body for the traverse of water from one

side of the piston to the other and from one side of the valve to the other, and a transverse partition in the body interposed between said passages.

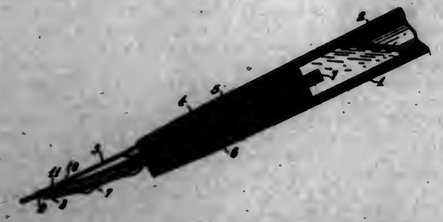
879,911. DRAFT-GEAR FOR CAR-COUPLINGS. JOHN A. SAMPLE, Rankin, Pa. Filed Feb. 21, 1907. Serial No. 358,569.



1. In a draft gear, the combination with the draw head, of a draft gear yoke having its side jaws connecting with the said head, a strengthening bracket secured within the yoke and having a stem also engaging the draw head, and a connecting pin passing through a portion of the draw head and through said stem of the strengthening bracket and the side jaws of the draft gear yoke.

2. In a draft gear, the draw head having a shank provided with a socket therein, a draft gear yoke having its side jaws connecting with said shank at the upper and lower sides thereof, a forked strengthening bracket rigidly mounted in the draft gear yoke and having a stem projecting into the socket of the draw head shank, and a connecting pin passing through the draw head shank, and also through the side jaws of the yoke and the stem of the strengthening bracket.

879,912. FOUNTAIN-PEN. PERCY P. SANFORD, Bratenahl village, Ohio. Filed Mar. 8, 1907. Serial No. 361,206.



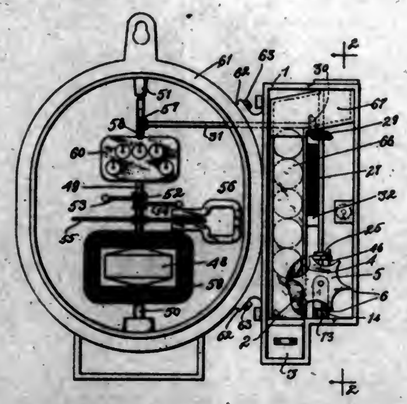
1. In a fountain pen, the combination of a pen holder providing a reservoir for ink, a pen carried by said pen holder, a feeding tube extending from the reservoir toward the point of the pen and terminating beneath it, said feeding tube having flattened portion adjacent to the pen but separated therefrom a substantial distance, and the duct through the feeding tube terminating in said flattened portion some distance from the lower end thereof, whereby a globule of ink may accumulate on said flattened portion and be delivered to the pen.

2. In a fountain pen, the combination of a pen holder providing a reservoir for ink, a pen carried by said pen holder, a feeding tube extending from the reservoir toward the point of the pen and terminating beneath it, said feeding tube having a flattened portion adjacent to the pen but separated therefrom a substantial distance, and the duct through the feeding tube terminating in said flattened portion some distance from the lower end thereof, said feeding tube being longitudinally adjustable for different sized pens.

3. In a fountain pen, in combination, a pen holder, said holder having a reservoir for ink, a threaded sleeve screwing into the pen holder, a tube fitting in said sleeve, a pen having its shank held by and between said sleeve and tube, and a feeding tube mounted in the tube first mentioned and adapted to deliver ink to the pen, said feeding tube having a flattened portion adjacent to but separated a substantial distance from the pen, the duct through the feeding tube terminating in said flattened portion some distance from the lower end thereof.

4. In a fountain pen, a penholder, said holder having a reservoir for ink, a threaded sleeve screwing into the penholder and forming a continuation of the lower end thereof, a tube fitting within the said sleeve, a pen or marker inserted between the sleeve and said tube and an adjustable feeding tube slidably mounted within the first mentioned tube, said feeding tube being provided with a feeding duct, the tube extending from the reservoir toward the point of the pen and having a flattened portion adjacent the pen but separated therefrom a substantial distance, the duct in the feeding tube terminating in said flattened portion some distance from the lower end thereof, said flattened portion forming a surface upon which and between the tube and the pen a globule of ink may accumulate and be delivered to the pen point.

879,913. PREPAYMENT ARRANGEMENT FOR METERS. HENRY W. SAYLES, Peoria, Ill., assignor, by mesne assignments, to George M. Willis, Chicago, Ill. Filed Dec. 4, 1905. Serial No. 290,133.



1. The combination with the movable element and pressure current circuits in a meter, of prepayment mechanism for controlling said circuits, electromagnetic mechanism for the prepayment mechanism included in the pressure circuit for controlling the current circuit, contact mechanism for controlling the pressure circuit, two contact-members for said contact mechanism, one of said members being associated with the coins passing through the machine and the other member being in driven connection with the movable element of the meter, clutch mechanism between the contact members adapted to allow slight relative movement between said members independently of the movable element, means for normally holding said contact members in electrical engagement to close the pressure circuit whereby the electromagnetic mechanism therein is controlled to open the current circuit, and means upon engagement of coins with the one contact member for causing disengagement of said members to open the pressure circuit whereby the electromagnetic mechanism is controlled to close the current circuit, both contact members being then driven upon movement of the movable element.

2. The combination with the movable element and pressure and current circuits in a meter, of prepayment mechanism for controlling said circuits, electromagnetic mechanism for the prepayment mechanism included in the pressure circuit for controlling the current circuit, contact mechanism for controlling the pressure circuit, two contact members for said contact mechanism, one of said members being associated with the coins passing through the machine and the other member being in driven connection with the movable element of the meter, clutch mechanism between the contact members adapted to allow slight relative movement between said members independently of the movable element, means for normally holding said contact members in electrical engagement to close the pressure circuit whereby the electromagnetic mechanism therein is controlled to open the current circuit, and means upon engagement of coins with the one contact member for causing disengagement of said members to open the pressure circuit whereby the electromagnetic mechanism is controlled to close the current circuit, both contact members being then driven upon movement of the movable element, said one contact member acting also as an escapement means for allowing passage of the coins through the device at a rate proportional to the energy to be measured by the meter, disengagement of coins from the one contact member allowing relative movement of the contact members to again close the pressure circuit whereby the electromagnetic mechanism causes opening of the series circuit.

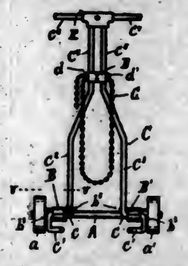
3. The combination with the movable element and energizing circuits of a meter, of prepayment mechanism for controlling the circuits, there being a coin slot through which coins may pass, an escapement wheel projecting into said coin slot for engagement with the coins upon their passage therethrough, a contact member connected rigidly with said escapement wheel, a companion contact member connected with the movable element to be driven thereby upon actuation thereof, yielding spring clutch mechanism between the contact members disposed to normally hold the contact members in one relative position to render the circuits ineffective, means upon passage of coins through the mechanism in engagement with the escapement wheel for moving the contact member in another relative position to render the circuits effective whereby the movable element is actuated, said contact members and escapement wheel upon actuation of the movable element being then driven together to allow escapement of the coins at a rate proportional to the energy to be measured by the meter, said clutching mechanism upon release of the wheel from coins causing return of the contact members to their normal relative position to again render the circuits ineffective.

4. The combination with the movable element and energizing circuits of an electrical meter, of prepayment mechanism for controlling the circuits, an escapement wheel disposed in the path of coins to the mechanism, a contact member rigidly connected with the escapement wheel, a pivot shaft upon which said wheel and associate contact member are adapted to rotate, a companion contact member secured to the shaft, gearing mechanism connecting said shaft with the movable element, said first contact member being confined to rotate through a small arc with respect to the companion contact member, said contact members being associated with the meter circuits, yielding means tending to hold the contact members in one relative position to render the circuits ineffective when there are no coins in engagement with the escapement wheel, and means upon engagement of coins with the escapement wheel for causing the contacts to move against the action of said yielding means to change their relative position to render the circuits effective whereby the meter may operate.

5. The combination with the movable element and energizing circuits of an electrical meter, of prepayment mechanism for controlling the circuits, an escapement wheel disposed in the path of coins to the mechanism, a contact member rigidly connected with the escapement wheel, a pivot shaft upon which said wheel and associate contact member are adapted to rotate, a companion contact member secured to the shaft, gearing mechanism connecting said shaft with the movable element, said first contact member being confined to rotate through a small arc with respect to the companion contact member, said contact members being associated with the meter circuits, yielding means tending to hold the contact members in one relative position to render the circuits ineffective when there are no coins in engagement with the escapement wheel, and means upon engagement of coins with the escapement wheel for causing the contacts to move against the action of said yielding means to change their relative position to render the circuits effective whereby the meter may operate, said contact members upon actuation of the movable element then being driven together at a rate to allow escapement of coins by the escapement wheel at a rate proportional to the energy to be delivered through the meter.

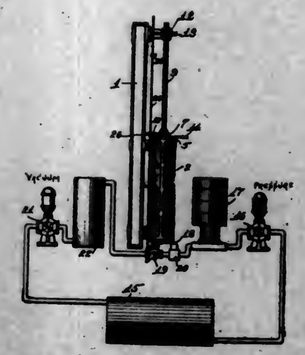
[Claims 6 to 10 not printed in the Gazette.]

879,914. BARREL-TRUCK. OLIVER P. SCHRIVER, Fort Thomas, Ky., and JOHN M. WEBSTER, Cincinnati, Ohio, assignors to O. P. Schriver & Co., Cincinnati, Ohio, a Copartnership. Filed Apr. 21, 1906. Serial No. 312,950.



In a barrel-truck the combination of an axle, wheels upon the axle, a frame composed of two rods bent at their lower ends into feet and bent at right angles at their upper ends into handles, brackets secured to the axle and the lower ends of the frame and having lugs upon the sides for contacting the frame, a block with right angled channels for engaging the bends at the upper ends of the rods, and means for holding a receptacle upon the truck.

879,915. MOLDING-MACHINE. EDWIN J. SCHRODER, Hamilton, Ohio. Filed Nov. 11, 1907. Serial No. 401,545.



1. A molding machine comprising a vertically disposed mold closed at its lower end and open at its upper end, a piston adapted to reciprocate therein, a core projecting upwardly from the piston, means for raising and lowering the piston and core in the mold, and a movable blade for use at the top of the mold and adapted to be entered between the top of the piston and the base of a molded article supported thereon, combined substantially as set forth.

2. A molding machine comprising a vertically disposed cylindrical mold closed at its lower end and open at its upper end, a piston adapted to reciprocate therein, a cylindrical core projecting upwardly from the piston, means for raising and lowering the piston and core in the mold, and a blade movably mounted at the top of the mold and adapted to be entered between the top of the piston and the base of a molded article supported thereon, combined substantially as set forth.

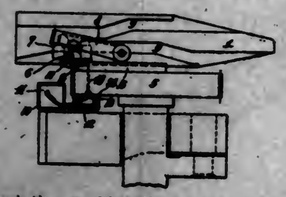
3. A molding machine comprising a vertically disposed mold closed at its lower end and open at its upper end, a piston adapted to reciprocate therein, a core projecting upwardly from the piston, wings projecting rigidly outward from the core and extending lengthwise thereof and engaging the bore of the mold so as to divide the same into several compartments, means for raising and lowering the piston and core in the mold, and a blade movably mounted at the top of the mold and adapted to be entered between the top of the piston and the base of the molded article supported thereon, combined substantially as set forth.

4. A molding machine comprising a vertically disposed mold closed at its lower end and open at its upper end, a piston adapted to reciprocate therein, a core projecting upwardly from the piston, means for raising and lowering the piston and core in the mold, and a pair of blades pivotally mounted at the top of the mold and adapted to be entered between the top of the piston and the base of a molded article supported thereon, combined substantially as set forth.

5. A molding machine comprising a vertically disposed mold closed at its lower end and open at its upper end, a piston adapted to reciprocate therein, a core projecting upwardly from the piston, means for injecting and withdrawing liquid from under said piston, and a blade movably mounted at the top of the mold and adapted to be entered between the top of the piston and the base of a molded article supported thereon, combined substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

879,916. LUBRICATING DEVICE. WALTER SCOTT, Plainfield, N. J.; Isabella Scott and David John Scott executors of said Walter Scott, deceased. Filed June 22, 1905. Serial No. 266,382.



1. In a printing machine, the combination of a gear for imparting motion to the bed, a spindle moving with said gear located on one side of the same and having a duct extending from its interior to its outside surface, a friction roll carried by said spindle, a duct extending through the said gear and connecting with the interior of the spindle, and means for supplying lubricant to the duct, extending through the said gear.

2. In a printing machine, the combination of a gear for imparting motion to the bed, a spindle for supporting a friction roll located on one side of the said gear and having a duct extending from its interior to its outside surface, an arm mounted on the same shaft as the gear and having a duct connecting with the interior of the spindle, a duct extending through the said gear and connecting with the duct in the arm, and means for supplying lubricant to the duct extending through the said gear.

3. The combination of a rotatabid gear, a spindle moving with the said gear and located on one side of the same for supporting a friction roll and provided with a duct connecting its interior with its surface, a source of supply of lubricant whose position is fixed, a duct, having an enlarged portion, extending through the said gear and connecting with the interior of the spindle, a plug closing the outer end of the enlarged portion of the duct to prevent the lubricant from flowing out and having a mouth provided with an inwardly projecting lip, and an outwardly projecting tongue in said mouth for receiving the lubricant from the source of supply and allowing it to flow through the mouth and lip into the enlarged portion of the duct.

4. In a printing machine, the combination of a source of supply of lubricant located in a fixed position, a spindle, for supporting a friction roll having a duct from its interior to its outer surface, a rotatable gear interposed between the spindle and source of supply and having also a sliding motion toward and away from the spindle but rotating in unison with the latter, and a duct adapted to receive lubricant from the source of supply and conveying it to the interior of the spindle on which duct the said gear slides.

5. As a means for transferring lubricant, a rotating duct having an enlarged portion, a plug closing the outer end of the enlarged portion to prevent the lubricant from flowing out and having a flaring mouth provided with an inwardly projecting lip, and an outwardly projecting tongue in said mouth for receiving the lubricant from a source of supply and allowing it to flow through the mouth and slip into the enlarged portion of the duct.

879,917. ACOUSTICAL INSTRUMENT. PHILIPP SEILER, Chicago, Ill., assignor, by mesne assignments, to Rose Connett, Upper Montclair, N. J. Filed July 5, 1904. Serial No. 215,390.



1. An acoustical instrument comprising a conical, elongated, hollow body, the larger end of which is resonant and provided with a clapper and the smaller end is provided with a reed.

2. An acoustical instrument comprising a conical, elongated, hollow body, the larger end of which is resonant and the smaller end is provided with a reed, a support intermediate the ends of the body, and a clapper loosely connected with the support in position to strike the inner walls of the resonant end.

3. A horn, having a body, a striker tongue suspended within the body of the horn and adapted to strike the same, whereby the body and said tongue form a bell.

4. A horn provided with a flaring body portion, and a striking tongue suspended within the flared body and adapted to strike the same, whereby the body and said tongue comprise a bell.

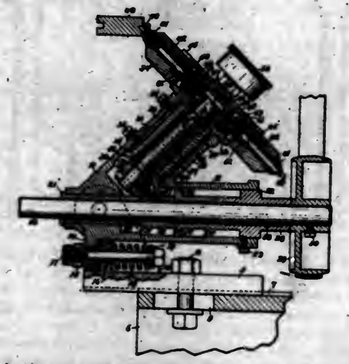
5. A horn having a body, a rod suspended within the body of the horn, and provided with a striker adapted to strike the inside of the horn body.

[Claims 6 to 9 not printed in the Gazette.]

879,918. BORING-MACHINE. WILLIS S. SHERMAN, Milwaukee, Wis. Filed Mar. 22, 1907. Serial No. 363,854.

1. A boring machine, comprising a pivotally mounted casing, a drive shaft journaled therein, a drill head rotatably mounted in the casing at an angle to the drive shaft, and a spindle shaft for the drill head geared to the drive shaft.

2. A boring machine, comprising a base having trunnion bearings, a casing pivotally mounted in the trunnion bearings, a drill head rotatably mounted in the casing, a spindle shaft for operating the drills of the drill head, means for turning the spindle shaft, a lug on the casing, a bushing adjustably threaded therein, a stop on the base adapted to be engaged by the bushing, a bolt passing through the bushing and an opening of the stop, and a coil spring surrounding the bolt and bearing on the stop to hold the bushing in engagement with the stop.



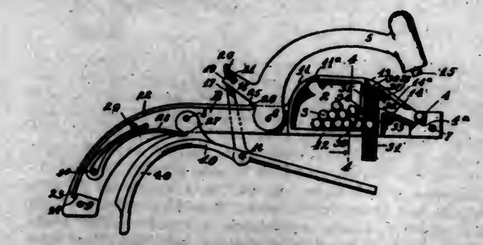
3. A boring machine, comprising a pivotally mounted casing, a drill head rotatably mounted therein, a spindle shaft for driving the drills of the drill head, a pinion mounted thereon, a driving shaft journaled in the casing at an angle to the spindle shaft, a pinion on the driving shaft meshing with the pinion on the spindle shaft, and a bushing on the driving shaft removably mounted in the casing for permitting the driving shaft and its pinion to be withdrawn without interfering with the drill head and the spindle shaft.

4. A boring machine, comprising a pivotally mounted casing, a driving shaft journaled therein, a drill head rotatably mounted in the casing at an angle to the driving shaft, a spindle shaft for driving the drills of the drill head, intermeshing pinions on the spindle shaft and the driving shaft, and a bushing surrounding the spindle shaft and removably mounted in the casing, whereby the drill head and the spindle shaft with its pinion may be withdrawn from the casing without interfering with the driving shaft.

5. In a boring machine, a drill head comprising a rotatably mounted disk like member, a pair of concentric rings mounted thereon, a cover plate secured to the disk like member and clamping the rings therebetween, drill spindles journaled in the rings, drill members on the outer ends of the spindles, pinions on the inner ends of the spindles, and a suitably driven gear meshing with the pinions.

[Claims 6 to 17 not printed in the Gazette.]

879,919. DETONATING-PISTOL. WILLIAM SIMPSON, Berea, Ohio, assignor to John H. Fox, Berea, Ohio. Filed Apr. 22, 1907. Serial No. 369,486.



1. In a detonating pistol, the combination of a magazine having in the lower front portion thereof a port, a short partition extending rearwardly from said port and forming with the bottom of the magazine a passageway of a width to accommodate a single torpedo, a slide reciprocably mounted in a transverse passageway in front of said port and having an aperture therein for a torpedo, a detonating chamber in front of said slide, a hammer having a detonating head for detonating torpedoes in said chamber, a trigger, and an operative connection between said trigger and said hammer, said trigger having an extension adapted to engage said slide, there being an inclined passageway extending from the upper portion of the transverse passageway to the detonating chamber.

2. In a detonating pistol, the combination of a magazine having in the lower portion thereof a discharge port, a partition above and at the rear of said port and forming with the bottom of the magazine a passageway leading to said port, the width whereof will accommodate a single torpedo, a slide mounted in a transverse passageway in front of said port, said passageway having a port therein above the said discharge port, a detonating chamber in front of the latter port, there being an inclined passageway extending between said port and chamber, a hammer having a detonating head adapted to explode torpedoes in said chamber, a trigger, and an operative connection between said trigger and hammer, said trigger being adapted to operate said slide, substantially as specified.

3. In a detonating pistol, the combination of a magazine having in the lower portion thereof a discharge port, a partition above and at the rear of said port and forming with the bottom of the magazine a passageway leading to said port, the width whereof will accommodate a single torpedo, a slide mounted in a transverse passageway in front of said port, said passageway having a port therein above the said discharge port, a detonating chamber adjacent to the front end of the pistol, there being an inclined passageway extending between said port and chamber, a hammer having a detonating head adapted to explode torpedoes in said chamber, a trigger, said trigger being adapted to operate said slide, substantially as specified.

4. In a detonating pistol, the combination of a magazine, a detonating chamber, a slide interposed between said magazine and chamber and adapted to supply torpedoes from the former to the latter, a hammer having a detonating head adapted to explode torpedoes in said chamber, said hammer being pivoted at the rear of said magazine and having an operating arm or extension, a trigger pivoted rearwardly of said hammer and having a bail adapted to engage said arm or extension, said trigger also having a portion adapted to engage and operate said slide, substantially as specified.

5. In a detonating pistol, the combination of a magazine, a detonating chamber, means for automatically supplying torpedoes from said magazine to said chamber, a hammer having a detonating head adapted to explode the torpedoes in the said chamber, said hammer having an arm projecting rearwardly therefrom, a trigger pivoted rearwardly of said hammer and having a grip portion adjacent to the handle or stock of the pistol, a connection between the portion of the trigger which is in front of the pivot thereof and said arm, and a spring for operating said hammer, substantially as specified.

[Claims 6 to 24 not printed in the Gazette.]

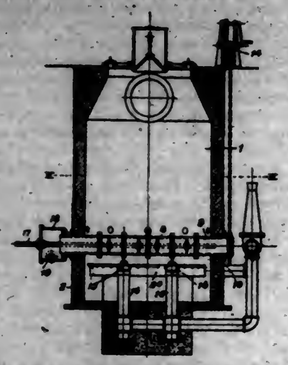
879,920. GAS-PRODUCER. HORACE E. SMYTHE, Oakmont, Pa. Filed Feb. 18, 1907. Serial No. 358,026.

1. A gas producer having in combination means for supporting the charge and means arranged in the producer above and adjacent to the lower portion of and adjacent to the charge supports, and movable in vertical planes for loosening the lower portion of the charge.

2. A gas producer having discharge openings at its lower ends, a basin extending above the upper walls of said openings said basin forming the support for the charge, a shaft horizontally extending across the producer in a plane above and adjacent to the discharge openings and provided with radial arms, and means for rotating the shaft.

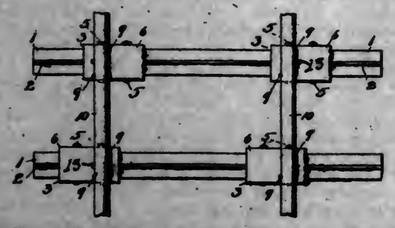
3. A water sealed gas producer having in combination therewith, a shaft horizontally extending across the pro-

ducer in a plane above the water seal and provided with arms, means for rotating the shaft, and means for introducing a blast of air into the producer.



4. A water sealed gas producer having in combination therewith a hollow shaft extending horizontally across the producer in a plane above the water seal and provided with hollow arms having perforations, means for rotating the shaft and means for introducing a blast into said shaft.

879,921. RAILROAD-TIE. JAMES B. SPERA, Dillsburg, and SAMUEL G. COCKLIN, Mechanicsburg, Pa. Filed May 31, 1907. Serial No. 376,589.



1. In a railroad tie, a metal base, boxes supported by said base and at unequal distances from the middle thereof, blocks of fibrous material in said boxes, and means to secure the rails to said blocks, substantially as shown and described.

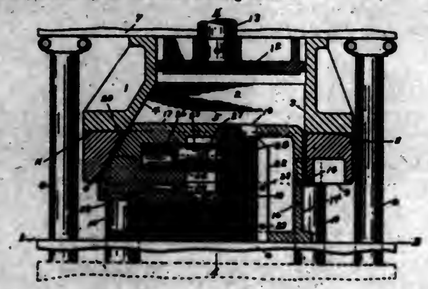
2. In a railroad tie, a metal base, boxes supported by said base and at unequal distances from the middle thereof, blocks of fibrous material in said boxes, cap plates on top of said boxes, and means to secure the rails through said cap plates and to the blocks, substantially as shown and described.

3. In a railroad tie, a metal base, boxes supported by said base and at unequal distances from the middle thereof, blocks of fibrous material in said boxes, cap plates on top of said boxes having holes therein, and spikes inserted through said holes in the cap plate and into the fibrous block to secure the rails in position, substantially as shown and described.

879,922. DIE FOR FORMING SHEET-METAL VESSELS. EDGAR R. STODDARD, Detroit, Mich. Filed Aug. 8, 1907. Serial No. 387,580.

1. In a device for drawing sheet metal, a pair of coacting dies adapted to close past each other, one of which automatically varies to conform to the other's contour as they close, means adapted to close the dies past each other, and means to maintain pressure between the variable face of one die and the opposing face of the other in directions transverse to the die stroke adapted to act independently of the die closing means.

2. In a device for drawing sheet metal, a pair of coacting dies adapted to close past each other, one of which varies its working face and edge to conform to the other's contour as they close, means adapted to close the dies past each other and means adapted to maintain pressure between the variable face of one die and the opposing fixed face of the other die transversely to the die stroke independently of the die closing means.



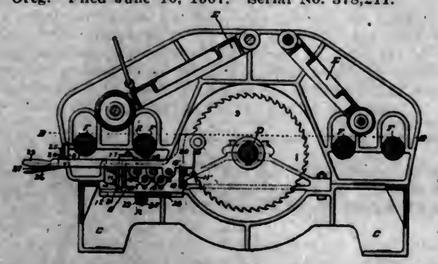
3. In a device for drawing sheet metal, a pair of coacting dies adapted to close past each other, one of which varies to conform to the other's contour as they close, and means to force the variable die and interposed blank toward the other die transversely to the die stroke, and to force the variable die against the formed blank transversely to the die stroke after both have cleared the opposing die on the return stroke.

4. In a device for drawing sheet metal, a pair of coacting dies one of which is adapted to vary its working face to conform to the other's contour when the dies are closed past each other, means adapted to close the dies past each other, means adapted to force the face of the variable die against the opposing die independently of the die closing means, and means to vary the pressure exerted by said forcing means at any instant of the stroke.

5. In a device for drawing sheet metal, a pair of coacting dies one of which varies to conform to the other's contour as they close past each other, means operated by fluid under pressure adapted to close the dies past each other and means operated by fluid under pressure adapted to force the variable die toward the other die transversely to the die stroke.

[Claims 6 to 17 not printed in the Gazette.]

879,923. GANG-EDGER. JAMES T. STODDARD, Westport, Oreg. Filed June 10, 1907. Serial No. 378,211.



1. In a gang-edger, the combination with saws keyed on arbors mounted in a suitable frame, provided with feed and presser roller mechanism, of saw shifters placed in a sliding frame G having side and end bearings therefor and comprising the shifting bars 20 fixedly secured at right angles in suitable positions upon rods 19, laterally movable of the machine, adapted to pass through openings in the sides of the sliding frame, yokes 21 having friction blocks and formed of a height to make bearing surfaces for material passing over them in the horizontal plane of the feed rollers, the handles 23 and dogs 24 pivoted thereon and of such form and in position to adapt them to engage V-shaped teeth which are formed vertically above the dogs in the lower side of a graduated scale plate fixedly

secured in the standard frame C, and dog latch levers 26, outwardly retained by springs 27 substantially as described.

2. In a gang-edger, the combination with saws keyed on arbors mounted in a suitable frame, provided with feed and presser roller mechanism, of a longitudinally sliding and saw shifter carrying frame G, resting upon guides 12—12', formed in the standard frame C and having slots 13, means to secure the sliding frame in adjusted position with relation to the saws, and means to move the frame G longitudinally, side bars 11—11' formed with beveled upper edges, and of a height adapting them to receive the shifters in sliding engagement, end parts 10—10' formed with rectangular oil waste boxes therein and having a suitable number of transverse openings adapted to receive rods carrying saw shifters fixedly secured thereon and allow their free longitudinal movement through the same, substantially as described.

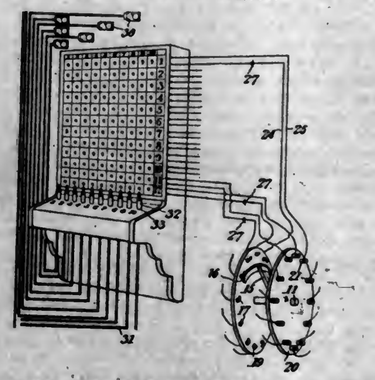
3. In a gang-edger, a saw shifter, fixedly secured in suitable position at right angles to and upon a rod 19, which is movable transversely to the vertical plane of the saws and is mounted in bearings at each side of the machine, located apart from each other a distance not less than that from the friction blocks to the handle in the shifter, having means to engage the saw and to lock and release it in any desired position, substantially as described.

4. In a gang-edger a longitudinally sliding saw shifter carrying frame G, resting upon guides 12—12', formed in the standard frame C and having slots 13, and means to secure the frame in adjusted position with relation to the saws, and means to move the frame G longitudinally, side bars 11—11', formed with beveled upper edges and of a height adapting them to receive shifters in sliding engagement, end parts 10—10' formed with rectangular oil waste boxes therein, and having a suitable number of transverse openings adapted to receive rods carrying saw shifters fixedly secured thereon, and allow their free longitudinal movement through the same, substantially as described.

5. In a gang-edger, rectangular oil waste boxes formed in the side of the frame and having a suitable number of transverse openings adapted to receive rods carrying saw shifters fixedly secured thereon and allow their free longitudinal movement through the same, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

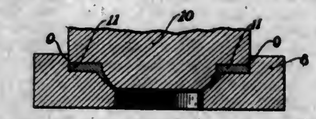
879,924. ELECTRICAL APPLIANCE FOR CLOCKS. HARRY O. SWEDBERG and AMOS T. DURBIN, Rossville, Ill. Filed Oct. 11, 1906. Serial No. 338,530.



1. In an apparatus of the class described, the combination with two fixed annular spaced series of spring contacts, each terminating in a binding post, of a clock-actuated spring bridging contact arranged to successively bridge the opposing contacts of the two series, a switchboard having rows of jacks, the number of rows corresponding to the number of contacts in the annular series, each row being connected to one of said contacts, alarms and alarm circuits, and separate plugs connected to said circuits and insertible in said jacks.

2. In an apparatus of the class described, the combination with a pair of spaced disks, of an annular series of contacts carried by each disk, the contacts being arranged in opposing pairs, a clock actuated arbor passing through the axis of the disks, a circuit closing arm carried by the arbor and arranged to bridge said contacts, a switch board having a number of rows of jacks equal to the number of contacts in each annular series and connected thereto, a battery in each of said connections, a series of alarms, and a series of alarm circuits each including a separate plug insertible in any one of the jacks.

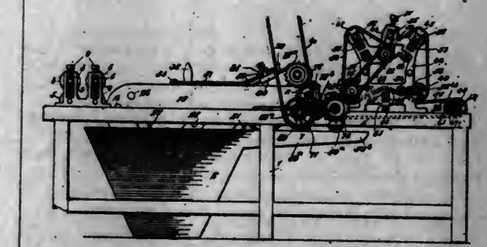
879,925. FLANGE-MAKING PROCESS. JAMES H. TAYLOR, Chicago, Ill. Filed Mar. 5, 1904. Serial No. 196,680.



1. The process of making a pipe flange which consists in confining a metal ring between dies, one of which has a conoidal central cavity and the other a conoidal projection, and compressing the ring so as to force the metal into the space between the cavity and projection, and then expanding the conoidal portion of said ring.

2. The method of making a flanged article having a flanged portion and a rim portion extending from the flanged portion, which consists in placing a heated ring having ends in juxtaposition and heated to a welding heat between two dies, one of which dies has a compressing portion and a cavity, the other of which dies has a compressing portion adapted to coöperate with the compressing portion of the first mentioned die, and also a projecting portion smaller than the aforesaid cavity and adapted to extend into the said cavity, compressing the said heated ring between the said dies and while the ends of the ring are at a welding heat, thereby welding the ring and simultaneously causing the metal to flow into the space between the face of the cavity of one of the dies and the projecting portion of the other die.

879,926. STARCHING-MACHINE. WILLIAM H. H. TRACY, Troy, N. Y. Filed June 29, 1906. Serial No. 323,972.



1. A machine for treating articles with liquids, comprising a tank, two belts arranged in contact with each other for a portion of their length and dipping into said tank, means for feeding the articles to said belts, another set of belts arranged in contact with each other and adapted to receive the articles between them after their passage through the tank and to press the excess of liquid therefrom, and mechanism for driving the belts.

2. A machine for treating articles with liquids, comprising a tank, two belts arranged in contact with each other for a portion of their length and dipping into said tank, means for feeding the articles to said belts, another set of belts arranged to receive the articles after their

passage through the tank and to press the excess of liquid therefrom, a device for removing from one of the last named belts, the adhering liquid it has removed from the articles, and mechanism for driving the belts.

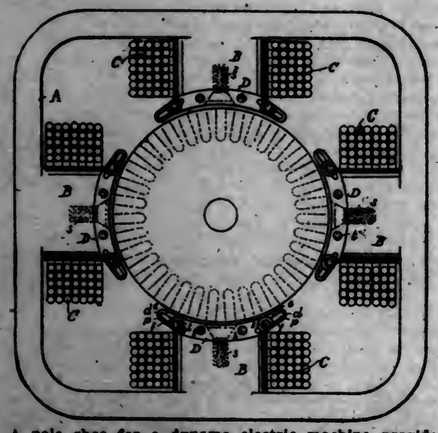
3. A machine for treating articles with liquids, comprising a tank, two belts arranged in contact with each other for a portion of their length and dipping into said tank, said belts being adapted to feed the articles under treatment, another set of belts arranged in receiving relation to the discharge portion of the first named belts, the belts of said second set being also in engagement with each other for a portion of their length, and squeezing means engaging one of the belts of the second set at a portion where it is out of contact with the other belt.

4. A machine for treating articles with liquids, comprising a tank, a traveling conveyer for passing the articles through the tank, a squeezing device arranged outside of the tank for removing the excess of liquid from the articles after their passage through the tank, and means for freeing the squeezing device from the liquid adhering thereto.

5. A machine for treating articles with liquids, comprising a traveling conveyer for the articles, means for applying a liquid to the traveling articles, a squeezing device for removing the excess of liquid from the articles, and rotary means for freeing the squeezing device from the liquid adhering thereto.

[Claim 6 not printed in the Gazette.]

879,927. POLE-SHOE FOR DYNAMO-ELECTRIC MACHINES. ROBERT B. TREAT, Newark, N. J., assignor to Crocker-Wheeler Company, Ampere, N. J., a Corporation of New Jersey. Filed Apr. 9, 1906. Serial No. 310,588.



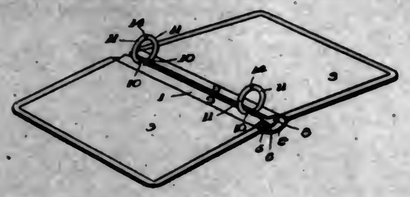
A pole shoe for a dynamo electric machine provided with pole tips, each having an elongated perforation inclined to the face of the pole shoe at the tip, substantially as described.

879,928. TEMPORARY BINDER. CLARENCE D. TRUSSELL, New York, N. Y., assignor, by direct and mesne assignments, to Trussell Manufacturing Company, a Corporation of New York. Filed Mar. 17, 1906. Serial No. 306,541.

1. In a temporary binder, a spring plate having integral parallel wings, and mating prongs notched for engagement with said wings and retained by the resiliency of said spring-plate in open or closed position.

2. In a temporary binder, a spring plate having oppositely arranged notches, mating prongs having notches adapted to engage the edges of the notches in the spring plate and a joint for each of said mating prongs adapted to be moved above or below the level of the notches in the spring plate for opening or closing said prongs.

3. In a temporary binder, a resilient member carrying mating prongs notched in their periphery for engagement with integral wings of said resilient member, and means whereby the spring of said member retains said prongs in open or closed position.

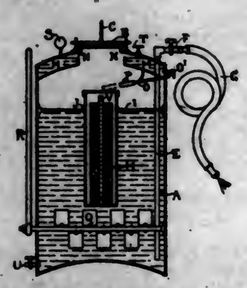


4. In a temporary binder, a series of mating prongs having notches in their sides and a spring member adapted to engage said notches and to retain the prongs open when their joints are in one position and to hold the prongs together when the joints are in another position.

5. In a temporary binder, an integral spring member, a series of mating prongs directly and loosely carried upon said spring member by engagement with edges thereof and means to shift the joints of the prongs above or below the points of contact between the prongs and the spring member to retain the prongs in open or closed position.

[Claims 6 to 10 not printed in the Gazette.]

879,929. AUTOMATIC SPRAYING DEVICE. WILLIAM TYREE, Nelson, New Zealand. Filed June 13, 1907. Serial No. 378,850.



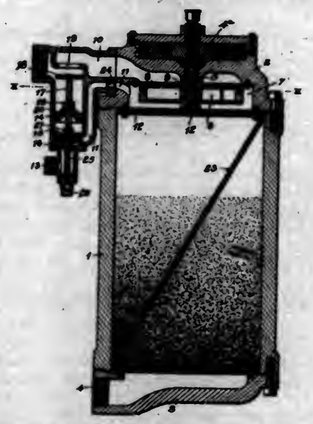
1. An automatic spraying device comprising a receptacle adapted to contain the fluid to be sprayed, a carbid chamber in said receptacle for the generation of acetylene gas, a water chamber, a pipe leading therefrom, to the carbid chamber, a valve in said pipe and means for operating the valve from the exterior of the receptacle.

2. An automatic spraying device comprising a receptacle adapted to contain the fluid to be sprayed, a carbid chamber in said receptacle for the generation of acetylene gas, a vertical perforated tube in said carbid chamber extending from the top to the bottom thereof, circular perforated cups, or receptacles for carbid slidably supported on said tube, a water chamber, a pipe leading therefrom to the carbid chamber, a valve in said pipe and means for operating the valve from the exterior of the receptacle.

3. A spraying device comprising a receptacle adapted to contain the fluid to be sprayed, means for subjecting the said fluid to the action of acetylene gas to force the fluid out of the receptacle separated by a tap or valve external to the cylinder and a pressure gage on the receptacle.

879,930. PURIFYING DEVICE FOR STEAM-BOILERS. WILLIAM P. WIEMANN, Allegheny, Pa., assignor to Wiemann-Munhall Company, Pittsburg, Pa., a Copartnership. Filed Sept. 28, 1907. Serial No. 394,991.

1. In an apparatus for purifying the water in boilers, the combination of a filter, means for causing the water to flow from the boiler through the filter and back into the boiler, and means operating automatically to reverse the flow of water through the filter to a suitable discharge port.



2. In an apparatus for purifying the water in boilers the combination of a filter, means for causing the water to flow from the boiler through the filter and back into the boiler, and means operating automatically on a predetermined increase of resistance in the filter to the normal flow of water to cause a reverse flow through the filter to a suitable discharge port.

3. In an apparatus for purifying the water in boilers the combination of a filter, means for causing water to flow from the boiler, through the filter and back into the boiler, valves controlling the flow of water to and from the filter through a discharge port, and adapted to be shifted to close the inlet and open the discharge port on an increase of resistance to the normal flow of water through the filter.

4. In an apparatus for purifying the water in boilers, the combination of a filter, having at opposite ends inlet and an outlet connection to the boiler, and provided with a discharge port means for causing the water to flow from the boiler through the filter and back to the boiler, valves controlling the inlet and discharge port, a piston adapted in its movement to shift said valves and subjected on one side to normal boiler pressure and on the opposite side to an increased pressure due to resistance presented by the filter to the normal flow of water.

5. In an apparatus for purifying the water in boilers the combination of a filter having inlet and discharge ports at one end and an outlet port at the opposite end, means for causing water to flow from the boiler through the filter and through the outlet to the boiler, valves controlling the discharge and inlet ports on the same end, a cylinder connected at its opposite ends to the inlet and discharge passages or ports, a piston arranged in said cylinder and adapted in its movements to simultaneously shift the valves controlling said ports.

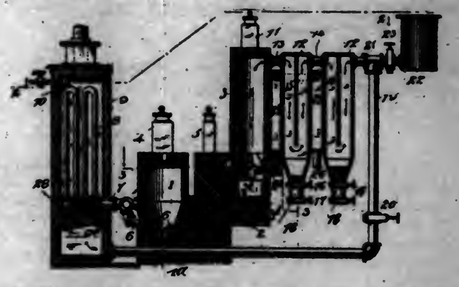
[Claims 6 to 8 not printed in the Gazette.]

879,931. PROCESS OF REDUCING ARSENICAL ORES. GUSTAF M. WESTMAN, New York, N. Y. Filed May 24, 1906, Serial No. 318,466. Renewed June 26, 1907. Serial No. 380,908.

1. The process of producing metallic arsenic consisting in subjecting arsenical ores to the action of heated reductive gases, and then condensing the arsenical vapors passing from said ores.

2. The process of producing metallic arsenic consisting in passing heated reductive gases containing carbon monoxid and hydrogen through arsenical ores, and then condensing the arsenical vapors passing from said ores.

3. The process of producing metallic arsenic consisting in producing reductive gases containing carbon monoxid and hydrogen in a heated state, passing said gases through arsenical ores, and condensing the arsenical vapors passing from said ores.

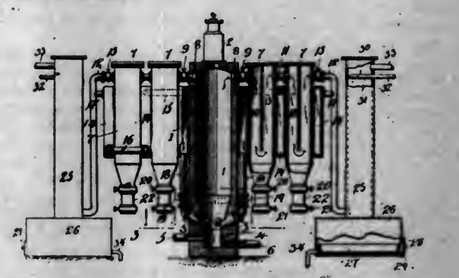


4. The process of producing metallic arsenic consisting in passing air mixed with steam through glowing coke to form reductive gases containing carbon monoxid and hydrogen, subjecting arsenical ores to contact with said reductive gases and producing arsenical vapors, and condensing said vapors.

5. The process of producing metallic arsenic consisting in passing a heated mixture of air and steam through glowing coke to form carbon monoxid and hydrogen, passing said gases through arsenical ores to produce arsenical vapors, and then condensing said vapors.

[Claims 6 and 7 not printed in the Gazette.]

879,932. PROCESS OF REDUCING ARSENICAL ORES. GUSTAF M. WESTMAN, New York, N. Y. Filed Nov. 20, 1906, Serial No. 344,225. Renewed June 29, 1907. Serial No. 381,550.



1. The process of producing metallic arsenic consisting in subjecting arsenical ores to the action of heated reductive gases containing carbon monoxid, and then condensing the arsenical vapors passing from said ores.

2. The process of producing metallic arsenic consisting in passing air through glowing coke in the presence of arsenical ores, and then condensing the arsenical vapors passing from said ores.

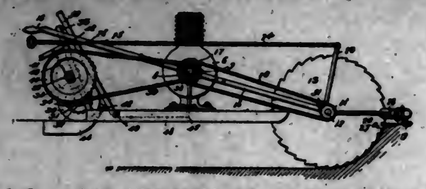
3. The process of producing metallic arsenic consisting in passing air through glowing coke and arsenical ores in the same chamber, and then condensing the arsenical vapors passing from the said ores.

4. The process of producing metallic arsenic consisting in charging coke and arsenical ores in a chamber, heating said coke to incandescence, passing air through said coke and ore to produce heated reductive gases and volatilize the arsenic, and then condensing the arsenical vapors passing from said ores.

5. The process of producing metallic arsenic consisting in charging coke, arsenical ores and limestone or lime into a chamber, heating the coke, passing air through said charge to produce heated reductive gases to expel the arsenic, and then condensing the arsenical vapors passing from said ores.

[Claims 6 and 7 not printed in the Gazette.]

879,933. ICE-CUTTING MACHINE. FORREST WHITE, Euclid, Ohio. Filed Nov. 21, 1906. Serial No. 344,459.



1. In an ice cutting machine, in combination, runners, a vertically-swinging frame supported thereon and extending forwardly in front of the runners, a boxing hinged to the front end of said frame, a saw having its arbor journaled in the boxing, an operating lever connected to the boxing to raise or lower the saw, and means to drive the saw.

2. In an ice cutting machine, in combination, runners, a vertically-swinging frame supported thereon and extending forwardly therefrom, a boxing hinged to the front end of said frame, a saw having its arbor journaled in the boxing, a gage bar connected to the frame and extending across in front of the saw and having shoes which rest on the ice, means to drive the saw, and means to turn the boxing on its hinge to raise and lower the saw.

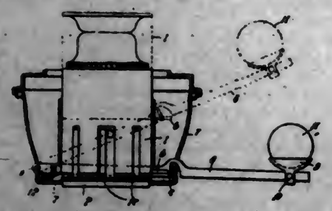
3. In an ice cutting machine, in combination, runners, a vertically-swinging frame pivotally mounted thereon, a bar connected to the front end of the frame and having shoes which slide on the ice, a hinge joint in the frame between its pivot and the said bar, a saw supported on said frame, at about the hinge joint, so that it is raised or lowered by flexing said joint, means to drive said saw, and means to adjustably flex said joint.

4. In an ice cutting machine, in combination, runners, a saw, means carried on the runners to support and drive the saw, a gage bar having shoes, extending across in advance of the saw, and a saw guide mounted upon the gage bar.

5. In an ice cutting machine, in combination, runners, a saw, means carried on the runners to support and drive the saw, a gage bar having shoes, extending across in advance of the saw, and a saw guide mounted upon the gage bar, and having fingers which engage the edge of the saw on opposite sides thereof.

[Claim 6 not printed in the Gazette.]

879,934. SAFETY-LAMP. ARTHUR G. R. WILLIAMS, Petone, Wellington, New Zealand. Filed Aug. 6, 1906. Serial No. 329,866.



In a lamp, in combination with a wick tube, of a lever pivoted at one end to the lamp frame and having a kink at its middle part, a spring adapted to raise the lever, a cup upon the other end of the lever, a ball, a circular shield surrounding the wick tube, a pin projecting from the shield and passing into a hole in the kink of the lever, and projecting vertical guides upon the wick tube passing into slots in the shield, substantially as set forth.

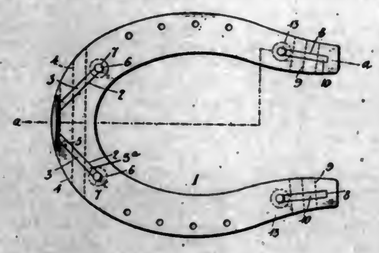
879,935. RAILWAY FISH-PLATE. GILBERT T. WILSON, Wellington, New Zealand. Filed May 14, 1907. Serial No. 373,626.

1. A jointing device comprising in combination a jaw having a pair of projecting lugs adapted to take into holes in the respective parts to be joined, a second jaw having a screw threaded hole, a bolt passing through a hole in the first jaw and screwing into the threaded hole in the second jaw substantially as specified herein.



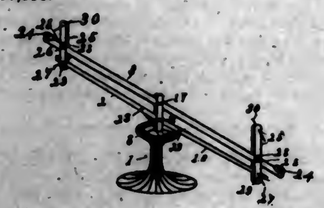
2. In jointing devices in combination with two parts to be joined, a jaw having projecting lugs thereon respectively passing into holes formed in each of said parts, a bolt adapted to pass through a hole in said jaw, the parts to be joined having corresponding semi-circular recesses in their ends which together form a hole for the passage of the bolt, and a second jaw having a screw threaded hole through which the bolt is screwed substantially as specified.

879,936. HORSESHOE. EDWARD WOLLET, Cleveland, Ohio. Filed Feb. 18, 1907. Serial No. 358,022.



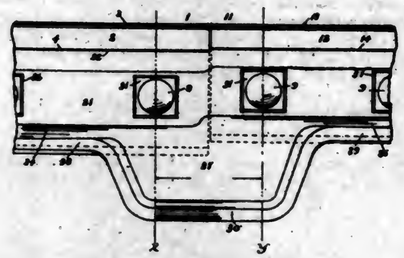
In combination with a horseshoe having a key slot extending therethrough, one end of said slot being inclined and the other end screw-threaded, of a calk having a key flange extending transversely across the base thereof intermediately of its ends and projecting at opposite ends beyond the sides of said calk, one end of said flange being inclined to engage the inclined end wall of said slot and the other end screw-threaded to coact with the screw-threaded end of said slot to form a screw-receiving aperture, and a set-screw to engage said screw-threaded portion of said slot and flange to wedge and hold said flange tightly in position.

879,937. SEESAW AND ROTARY SWING. ISAAC S. WOODWARD, Wichita, Kans. Filed Oct. 8, 1906. Serial No. 337,959.



In a see-saw and rotary swing, a pedestal having interior recesses, a plurality of detents, in one recess, a swivel detented to register with the detents in the recess and balls to lie between the swivel and the pedestal, bars mounted in the swivel, the free ends of one pair of bars converging to the adjacent bar, dogs pivotally secured to one pair of bars said dogs having a detent in one end, an angular disk with a flange having teeth thereon, as set forth.

879,938. RAILWAY OFFSET JOINT. JOHN H. ALLEN, East Orange, N. J., assignor to William R. Davis, trustee, New York, N. Y. Filed May 4, 1906. Serial No. 315,241.



1. A connecting plate for railway offset joints, comprising a main upright portion having a vertical offset therein, outwardly and upwardly beveled bearings at the upper edge of said main portion, outwardly and downwardly inclined flanges at the bottom of said main portion and a lower vertical portion depending from said flanges beneath the offset in the main vertical portion.

2. A connecting plate for railway offset joints, comprising a main upright portion having a vertical offset therein, outwardly and upwardly beveled bearings at the upper edge of said main portion, outwardly and downwardly inclined flanges at the bottom of said main portion, and a web or extension depending from the outer edges of said flanges beneath the offset in the main upright portion and being of less length.

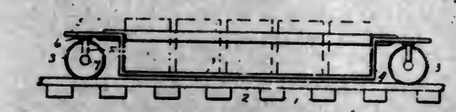
3. A connecting plate for railway offset joints, comprising a main upright portion having a vertical offset therein, outwardly and upwardly beveled bearings at the upper edge of said main portion, outwardly and downwardly inclined flanges at the bottom of said main portion, a lower upright portion depending from said flanges beneath the offset in the said main portion, and a lateral rib extending along the margin of said depending portion.

4. A connecting plate for railway offset joints, comprising a main upright portion having a vertical offset therein, outwardly and upwardly beveled bearings at the upper edge of said main portion, outwardly and downwardly inclined flanges at the bottom of said main portion, a web or extension depending from the outer edges of said flanges beneath the offset in the main portion, terminating at its ends short of the ends of said flanges, and a rib extending along the free edges of said flanges and web.

5. In a railway offset joint, the combination with abutting rail ends, of opposite connecting plates each having a main upright portion with an offset therein, outwardly and upwardly beveled bearings at the upper edge of said main portion to engage the heads of the rails, outwardly and downwardly inclined flanges at the bottom of the main portion to engage the base flanges of the rails, a web depending from the junction of said flanges adapted to be free from the bases of the rail ends and bolts passed through said connecting plates and rail ends.

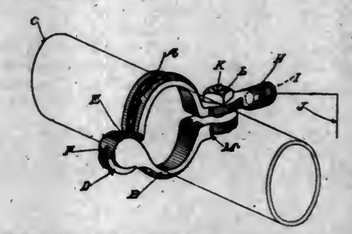
[Claim 6 not printed in the Gazette.]

879,939. THAWING-FURNACE TRUCK. THOMAS D. BAUSHER, Reading, Pa. Filed Dec. 21, 1907. Serial No. 407,507.



A truck comprising a set of wheels and axles, a frame comprising two angled pieces and two cross-arms, said angled pieces being joined together at their ends by said cross-arms and having the portions between the ends thereof depressed to a point very close to the surface on which the wheels rest, uprights on said axles on which the ends of said cross arms rest, bolts pivotally connecting each axle with the cross-bar above it, and a series of thawing furnaces located in the depending portions of said frame pieces, all substantially as and for the purpose set forth.

879,940. GROUND-CONNECTION CLAMP. WILLIAM H. BLOOD, Jr., Wellesley, Mass. Filed Mar. 23, 1905. Serial No. 251,572.



A clamp for making electric connection between a ground wire and a pipe comprising two coöperating jaws having curved interior surfaces to fit the cross sectional contour of the pipe, one of said jaws being provided at one end with a hook having a curved inner face, and the other jaw being provided at one end with a bulbous extension having a slot with which said hook engages, the outer end of the slot being convexly curved to conform to the concavity of the hook, means for clamping together the other ends of said jaws and an electric connection for the ground wire.

879,941. WIRE SPLICE OR COUPLING. IRA M. BOTKIN, Carlos, Ind. Filed Sept. 16, 1907. Serial No. 393,174.



1. A coupling of the kind described, consisting of a homogeneous body or unit of suitable length having perforations extending from its ends in a substantially diagonal direction and through the opposite sides of said body, substantially as described.

2. A coupling of the kind described, consisting of a body substantially round in cross section and of suitable length having perforations extending from its ends in diagonal directions through the opposite sides of said body, and diagonal peripheral grooves passing said perforations at substantially right angles to said perforations.

3. A coupling of the kind described, consisting of a body substantially round in cross-section and of suitable length having a diagonally disposed perforation extending from each end thereof and through the opposite sides of said body, substantially as described.

4. A coupling of the kind described, consisting of a body substantially round in cross section and of suitable length having a diagonally disposed perforation extending from each end thereof and through the opposite sides of said body, and diagonal peripheral grooves passing said perforations at substantially right angles to said perforations, said peripheral grooves being gradually flared toward the extremity of the perforations most distant therefrom, substantially as described.

879,942. PATTERN FOR CASTING CYLINDERS. GEORGE C. BOURDEREAUX, Peoria, Ill., assignor of one-third to Melvin W. Swarts and two-thirds to Julia Bourdereaux, Peoria, Ill. Filed Jan. 21, 1907. Serial No. 353,382.

1. A pattern having a cylindrically curved surface and a series of removable transversely disposed flanges upon such curved surface.

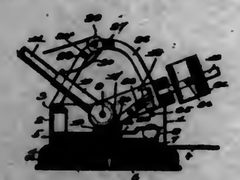
2. A pattern consisting of a cylindrical body having in

fixed position upon its convex surface a series of circumferential flanges, the whole being divided in an axial



plane and each half cylinder being readily separable from its flanges by movement perpendicular to its axis.

879,943. TROLLEY-POLE SUPPORT. JAMES L. CHASE, Ayer, Mass., assignor of one-half to Ralph J. Joslin, Webster, Mass. Filed Aug. 23, 1907. Serial No. 389,883.



1. In a trolley-pole support, a pole provided with a trolley-wheel, a fixed horizontal fulcrum upon which the pole is pivotally mounted, and tension means, including a weighted yoke pivoted on the fixed pole fulcrum, combined with means to lock the pole and yoke together to rock in unison on the fulcrum, whereby the pole is maintained elevated by said tension means, and a device independent of the yoke and pole to unlock the pole and yoke automatically when the pole is elevated abnormally, to thereby permit the pole to swing down about its fixed fulcrum and lower the trolley-wheel to inoperative position.

2. In a trolley-pole support, a pole provided with a trolley-wheel, a weighted tension member, a horizontal fulcrum on which said member and the pole are pivotally mounted at opposite sides thereof, means to lock said pole and the tension member together to rock in unison and maintain the pole elevated with the trolley-wheel in engagement with the wire, a tripping device sustained independently of the tension member and the pole to unlock said member and the pole when the latter is elevated abnormally, and a cushion mounted independently of the tension member and pole to take up shock and engage and support the pole when unlocked.

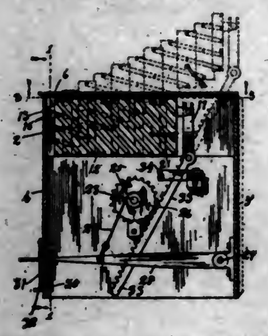
3. In a trolley-pole support, a pole provided with a trolley-wheel, a weighted tension member, a horizontal fulcrum on which said member and the pole are pivotally mounted at opposite sides thereof and upon which they may swing in unison or relatively to each other, locking pawls and teeth connected with the tension member and pole respectively, to coöperate automatically when the pole is elevated to slightly above operative position, to effect unison movement of the pole and tension member about their common fulcrum, means independent of the tension member to trip the pawls and disengage them wholly from the teeth when the pole is elevated abnormally, to thereby unlock the pole from the tension member, and means to manually elevate the pole independently of the tension member.

4. In a trolley-pole support, in combination, a turn-table, a pole pivotally mounted thereon and provided with a trolley-wheel, a swinging yoke fulcrumed on the pole pivot, an adjustable weight on said yoke, means on the yoke to lock the yoke and pole to swing in unison, a trip to act upon and render said means inoperative, and a trip-controller to temporarily withdraw the trip from operative position by or through manual elevation of the pole to slightly above operative position.

5. In a trolley-pole support, in combination, a turn-table, a common horizontal fulcrum on the turn-table, a pole provided with a trolley-wheel pivotally mounted on said fulcrum, tension means also pivotally mounted thereon, a locking device to connect the pole and tension means when the pole is manually elevated to slightly above operative position, a trip to act upon the locking device and disconnect the pole and tension means when the trolley-wheel leaves the wire, and means to temporarily retract the trip to inoperative position when the pole is elevated manually.

[Claims 6 and 7 not printed in the Gazette.]

879,944. FILING-CASE. HENRY B. CLARKE, Highland Park, Ill. Filed Feb. 20, 1906. Serial No. 302,133.



1. A collapsible filing case, comprising a series of partition plates, parallel links connecting said plates at each end, each link extending across and connected to the ends of two or more of said plates whereby they are maintained parallel and supported one from the other and a collapsible but substantially inflexible bottom mechanism extending between the several partition plates.

2. A collapsible filing case, comprising a series of partition plates, each provided with side-closure plates arranged alternately in planes out of register with each other so as to overlap, parallel links connecting said plates at each side, each link extending across and connected to the ends of two or more of said plates whereby they are maintained parallel and supported one from the other, and a collapsible bottom mechanism extending between the partition plates.

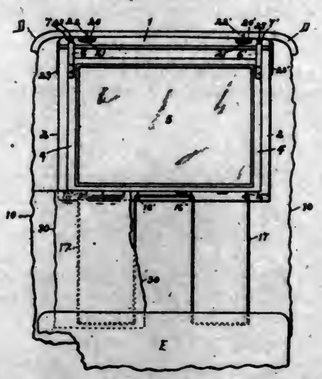
3. A collapsible filing case, comprising a series of partition plates, a series of corresponding side plates arranged to overlap and telescope upon each other, parallel links connecting said partition plates at each side, each link extending across and connected to the ends of two or more of said plates whereby they are maintained parallel and supported one from the other, and bottom-bars connected with the front and rear ends of the case and arranged to slide past each other as the filing case is collapsed, the combined length of each pair of front and rear bars being equal to or greater than the extended length of the bottom of the file.

4. In combination, a collapsible filing case comprising a series of vertically disposed partition plates, parallel links connecting said plates at each side and maintaining them in substantial parallelism during their collapsing and extending movements, a collapsible bottom connected with said partition plates, and a supporting mechanism comprising a stationary front member upon which the front end of the filing case is supported and a movable supporting member carrying the rear end of the filing case and guided to move in a direction parallel with the line of expansion of the filing case.

5. In combination, a collapsible filing case comprising a series of partition plates and corresponding side plates at each end of each partition plate, parallel links connecting said plates at each side and arranged to effect an expanding and collapsing movement of the filing case in a direction oblique to the vertical, a support arranged to hold the front-end of the case in definite position, and manually-actuated extending mechanism operatively connected with the rear end of the case and operable to extend and collapse the latter.

[Claims 6 to 13 not printed in the Gazette.]

879,945. STORM-FRONT. LEWIS COCKERILL, Richmond, Ind. Filed May 14, 1907. Serial No. 373,617.



1. In a storm front, the combination of a frame inclosing a sash adapted to be hingedly supported from the front bow of a vehicle top, a guard depending from the bottom of the frame in such fashion as to fold inward only, being adapted to engage the outer side of the dash to hold the frame against inward swinging, and a pad also depending from the bottom of the frame at the rear of the guard and adapted to be interposed between the latter and the dash.

2. In a storm front, the combination of a brow-board adapted to be secured to the front bow of a vehicle top, a sash depending therefrom by pivoted hangers, and anti-rattle devices, positioned to engage said hangers when the sash is swung inward and upward to inoperative position.

3. In a storm front, the combination of a brow-board adapted to be secured to the front bow of a vehicle top, a sash depending therefrom by pivoted hangers, and resilient stops secured to and projecting rearward from the brow-board in position to engage said hangers when the sash is swung inward and upward to inoperative position.

879,946. LOCKING DEVICE. AUGUST W. CORDES, Berlin, Germany, assignor to Florian William Stocker, Hoboken, N. J. Filed Sept. 6, 1907. Serial No. 391,569.



1. A locking device comprising a clamping member having a cylindrical portion and peripheral cams projecting therefrom, and a rotatable operating member having a top ring the inner edge of which engages the clamping member, and segmental portions spaced from the cylindrical portion of the clamping member and arranged to engage the cams thereof.

2. A locking device comprising a clamping member having peripheral cams, and an operating member having an undeformable top an an elastically deformable lower portion arranged to engage said cams and to be deformed thereby while pressing them inward.

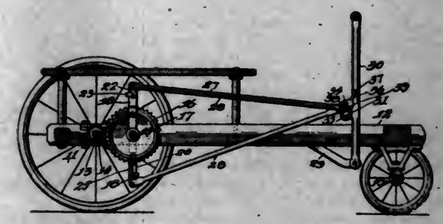
3. A locking device comprising a clamping member having a flat top, a conical portion adjacent thereto and a lower portion provided with peripheral cams, a packing disk located within said top and extending downward within said conical portion, and an operating member mounted to turn on the clamping member and arranged to force its cams inward.

4. A locking device comprising a clamping member having a top and a sleeve portion provided with peripheral cams, a packing disk located within said top and having its edge portion bent downward within the sleeve portion, and an operating member mounted to turn on the clamping member and arranged to force its cams inward.

5. A locking device comprising a clamping member adapted to engage the article to which said device is fitted and having a series of outwardly extending peripheral cams, and an operating member capable of turning relatively to the clamping member and provided with spaced segmental portions to engage said cams, and with free spaces between said portions to register with the cams and relieve them of pressure from the operating member.

[Claims 6 to 17 not printed in the Gazette.]

879,947. TOY VEHICLE. THEODORE E. CRECELIUS, St. Louis, Mo. Filed Dec. 1, 1906. Serial No. 345,939.



1. A toy vehicle comprising a running gear, a friction ratchet operating mechanism, a reciprocating lever in combination with a shifting mechanism carried by the reciprocating lever for imparting reverse movement to the ratchet operating mechanism by the manipulation of the shifting mechanism, substantially as specified.

2. A device of the class described comprising a running gear, a friction ratchet propelling mechanism, a reciprocating lever, in combination with a shifting mechanism carried by the reciprocating lever, rods connecting the shifting mechanism with the friction ratchet propelling mechanism for imparting reverse motion to the propelling mechanism substantially as specified.

3. A device of the class described, comprising a pivotal front gear, a driving gear, and a supporting frame, a pinion connected to the driving gear, a flanged gear wheel supported to the frame, operating levers located on the side of the gear wheel, friction ratchet levers carried by the operating levers arranged to contact with the flanges of the gear wheel, fulcrums carried by the operating levers, and controlling the movement of the friction ratchet levers, a reciprocating lever supported by the frame, connecting bars connecting the operating levers with the reciprocating lever, cams located on the reciprocating lever and shifting bars connecting the fulcrums and operated by the cams to place the friction ratchet levers in various positions, substantially as specified.

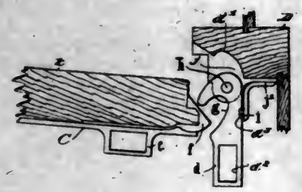
4. A toy vehicle comprising a running gear, a flanged propeller wheel operating the running gear, friction ratchet levers communicating with the flange of the propeller wheel, operating levers carrying the friction ratchet levers, means for shifting the friction ratchet levers to contact with the flange to operate the wheel in either direction, and means for operating the operating levers, substantially as specified.

5. A device of the class described comprising a running gear, a shaft supported upon the running gear, a gear wheel mounted upon said shaft and provided with a flange on each side of the teeth of said wheel, a pair of operating levers supported upon said shaft, a pair of friction ratchet levers carried by the operating levers, their free ends engaging with the flanges of the gear wheel, a reciprocating lever in combination with a shifting mechanism carried by the reciprocating lever, rods connecting

the shifting mechanism with the operating levers and the friction ratchet levers for reversing the movement of the gear wheel substantially as specified.

[Claim 6 not printed in the Gazette.]

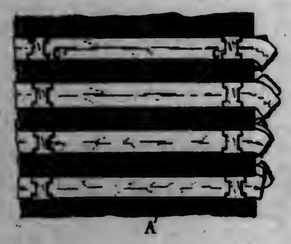
879,948. HASP-LOCK. PIERRE DURETT, Nice, France. Filed Mar. 28, 1907. Serial No. 365,032.



1. A hasp lock for single or folding doors comprising a bolt support provided with a vertically sliding bolt in combination with guides for the bolt arranged one above the other, with a space between them for the reception of a locking member pivoted either to the frame of the door or to one half of the folding door, the movable door having a projection *f* and the pivoted locking member a recess *g* coöperating with the said projection to bring the locking member into the vertical plane of the guides of the movable door, and a spring catch for holding the locking member out of the way when the door is open.

2. A hasp-lock comprising in combination, a bolt support adapted to be secured to a door and provided with a bolt guide, a locking member movably mounted on the door casing, and a bolt for said support adapted to cooperate with said guide and locking member, said door being provided with rigid means adapted to engage and swing said locking member into and out of operative relation to said guide and bolt when the door is closed and opened.

879,949. COIL-RETAINER FOR DYNAMO-ELECTRIC MACHINES. GANO DUNN, East Orange, N. J., assignor to Crocker-Wheeler Company, Ampere, N. J., a Corporation of New Jersey. Filed June 3, 1907. Serial No. 376,992.

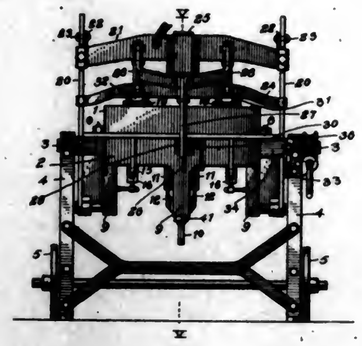


1. The combination of a slotted dynamo-electric machine element, windings located in the slot, and a coil-retainer constructed to admit of passage into the slot from the face of the element, and for locking into the walls of the slot by rotation, substantially as described.

2. The combination of a slotted dynamo-electric machine element, the walls of the slots near their mouths being notched, windings located in the slots, and a coil-retainer with a middle section shaped for engagement with a suitable key, the outside dimension along one axis being less than the width of the slot, and the outside dimension along another axis being equal to the distance apart of the bottoms of opposing notches, substantially as described.

3. The combination of a slotted dynamo-electric machine element, the walls of the slots near their mouths being notched, windings located in the slots, and a coil-retainer having a narrow middle section and enlarged ends, with the middle section shaped for engagement with a suitable key, the outside dimension along one axis being less than the width of the slot, and the outside dimension along another axis being equal to the distance apart of the bottoms of opposing notches, substantially as described.

879,950. MOLDING-MACHINE. MICHAEL J. DUNN, Pittsburg, Pa. Filed Jan. 5, 1907. Serial No. 350,962.



1. In a molding machine, the combination of a reversible frame, a head or pattern board movably mounted in said frame, and a stand compressing mechanism mounted on the frame and movable transversely of the pattern board to and from operative position and reversible with the frame.

2. In a molding machine the combination of a reversible frame, a head or pattern board movably mounted in said frame, means for locking said head in operative position, compressing mechanism pivotally mounted on the frame and reversible therewith and means for locking the compressing mechanism in operative position.

3. In a molding machine the combination of a reversible frame, a head or pattern board movably mounted in said frame, arms mounted on the frame, a pressing mechanism movable along said arms, a lever for shifting said head and means for locking the lever to the frame and thereby holding the completed mold in position on the frame.

4. In a molding machine, the combination of a reversible frame, a head or pattern board movably mounted in the frame and adapted to move laterally into and out of line with the pattern board, arms mounted on the frame, a cross-head adjustably mounted on the arms, a pressing head, a lever pivotally mounted on the cross-head and connected to the presser-head and means for locking the lever to the frame and thereby holding the completed mold in position on the frame.

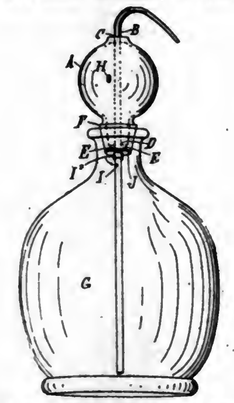
5. In a molding machine, the combination of a reversible frame, a compressing mechanism carried by the frame, means for locking the compressing mechanism in position to hold a mold section on the frame, a head or pattern board movably mounted in the frame, and means for withdrawing the head or pattern board into the frame.

[Claims 6 to 10 not printed in the Gazette.]

879,951. MEANS FOR EMPTYING BOTTLES OR OTHER VESSELS. OWEN A. ELIAS, London, England. Filed Jan. 17, 1905. Serial No. 241,504.

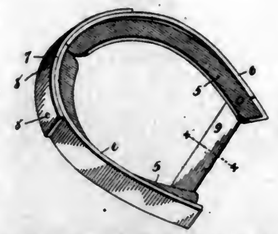
A bulb-stopper comprising in a single piece, a perforated middle bulb portion, a reduced axial and elongated stopper portion at its lower end formed with a central

passage surrounded with a plurality of parallel air passages, a centrally bored internally thickened top portion



for said bulb in combination with a discharge tube firmly secured in the thickened ends of said bulb, as set forth.

879,952. NAILLESS HORSESHOE. JOHN A. ENRIGHT, Columbus, Ohio. Filed June 10, 1907. Serial No. 378,135.

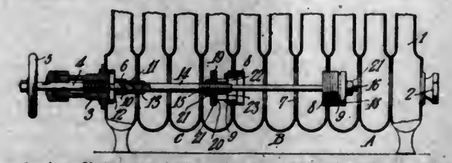


1. A horse shoe comprising a flat wearing portion and an inclined wall which is adapted to engage over the hoof of the animal, the opposite sides of the horse shoe being yieldingly connected to permit the opposed side walls to be forced away from each other, and a U-shaped bar adapted to connect the rear ends of the side walls of the horse shoe.

2. A horse shoe comprising a flat wearing portion and an inclined wall which is adapted to engage over the hoof of an animal, the opposite sides of the horse shoe being yieldingly connected to permit the opposed side walls to be forced away from each other, a U-shaped bar adapted to connect the rear ends of the side walls of the horse shoe, and a bar forming a calk which extends across the forward portion of the horse shoe.

3. A horse shoe formed in two sections, each of said sections comprising a flat wearing portion and an inwardly inclined wall, of a flat spring plate which overlaps the abutting inclined walls and is secured to said inclined walls.

879,953. RADIATOR. BENJAMIN F. FOSS, Fairfield, Me. Filed Apr. 22, 1907. Serial No. 369,642.

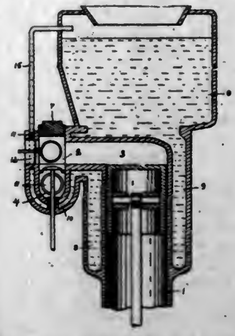


1. A radiator consisting of a plurality of sections, valve seats at one end of the sections and through which said sections solely communicate, said sections being arranged to form an intermediate and end divisions, one of said end divisions having an inlet, and connected simultaneously movable valves disposed to alternately close, said valves being designed to establish or cut off communication between the inlet division and either or both the remaining divisions.

2. A radiator comprising a plurality of sections communicating solely at one end, said sections being arranged in an intermediate and end divisions, one of said end divisions having an inlet, valve seats interposed between the respective divisions, a spindle extending through the seats, oppositely disposed valves thereon, and means extending from the radiator for actuating the spindle to alternately close the valves, and establish communication between the inlet division and either or both the remaining divisions.

3. A radiator comprising a plurality of sections having registering openings at one end through which they communicate, valve seats disposed in certain of the openings and sub-dividing the radiator into an intermediate and end divisions, one of said end divisions having an inlet, a spindle movable longitudinally through the seats, oppositely disposed valves secured upon the spindle and within the end divisions, and means for alternately seating and unseating the valves.

879,954. EXPLOSIVE-ENGINE. CHARLES M. FOX, De Kalb, Ill. Filed Feb. 11, 1907. Serial No. 356,699.



1. In a device of the class named, the combination with the explosion chamber 2 and exhaust chamber 4, of the water compartment 10, inclosing the chamber 4, the water chamber 11, communicating with the compartment 10; the reservoir 8, communicating with the chambers 10 and 11, and the pipe 15, connecting the chamber 11 and upper part of the reservoir 8, substantially as shown and for the purpose set forth.

2. In an explosive engine, the combination with the cylinder 1, explosion chamber 2, expansion chamber 3 and exhaust chamber 4 thereof, of a reservoir 8, located above said cylinder; a water-jacket 9, surrounding the upper part of said cylinder, and opening upwardly into the reservoir 8; a water compartment 10, inclosing the exhaust chamber 4, and communicating with the water jacket 9; a water-chamber 11, above the chamber 2, and communicating with the water compartment 11; and a pipe 15, connecting the chamber 11 with the upper part of the reservoir 8, substantially as shown and described.

879,955. CUFF-PROTECTOR. HARRY A. FRANK, Chicago, Ill. Filed Oct. 26, 1907. Serial No. 399,273.

1. A cuff protecting device including a sheet of material folded back upon itself to constitute two protecting walls, between which a cuff may be interposed, hook mechanism adapted to engage the inner edge of the cuff, an extensible and contractible link mechanism uniting the hook mechanism and the folded sheet, the hook mechanism includ-

ing a hook formed of strip metal, from the central portion of which the hook proper is struck, an extension e^1 projecting from this hook forward for the attachment of the extensible and contractible link mechanism, and an extension e^2 extending backward from the hook to constitute a thumb and finger hold.



2. A cuff protecting device including a sheet of transparent material folded back upon itself to constitute two protecting walls, between which a cuff may be interposed, hook mechanism adapted to engage the inner edge of the cuff, and extensible and contractible link mechanism uniting the hook mechanism and the folded sheet, said link mechanism serving to press the cuff protecting device, where folded back upon itself, against the outer edge of the cuff, said cuff protecting device being thus afforded two places of anchorage upon the cuff, namely, the outer edge of the cuff where the fold of the cuff protector is engaged and the inner edge of the cuff, where the extensible and contractible link mechanism is engaged; the sheet of material being curved so as to be adapted to the shape of a cuff, the outer and inner layer of the cuff protector each having opposed edges extending across the cuff protector and adjacent to the meeting edges of the cuff.

3. A cuff protecting device including a sheet of material folded back upon itself to constitute two protecting walls, between which a cuff may be interposed, hook mechanism adapted to engage the inner edge of the cuff, and extensible and contractible link mechanism uniting the hook mechanism and the folded sheet, said link mechanism serving to press the cuff protecting device, where folded back upon itself, against the outer edge of the cuff, said cuff protecting device being thus afforded two places of anchorage upon the cuff, namely, the outer edge of the cuff where the fold of the cuff protector is engaged and the inner edge of the cuff, where the extensible and contractible link mechanism is engaged; the sheet of material being curved so as to be adapted to the shape of a cuff, the outer and inner layer of the cuff protector each having opposed meeting edges extending across the cuff protector and adjacent to the edges of the cuff.

879,956. REGISTER FOR RAILWAY MAIL-MATTER. ARTHUR L. GROSSER, Buffalo, N. Y. Filed Jan. 18, 1906. Serial No. 296,610.

1. An apparatus of the character described comprising a scale, a cyclometer, and means for simultaneously producing a record of said scale and cyclometer on the same sheet, substantially as set forth.

2. An apparatus of the character described comprising a scale, a cyclometer, and means for simultaneously producing a record of said scale and cyclometer side by side on the same sheet, substantially as set forth.

3. An apparatus of the character described comprising a printing scale and a printing cyclometer, said parts being organized to permit of producing simultaneous record thereof on a sheet and said printing scale having a part which is capable of adjustment for changing the position of the record which it produces on the sheet relatively to the record of the cyclometer, substantially as set forth.

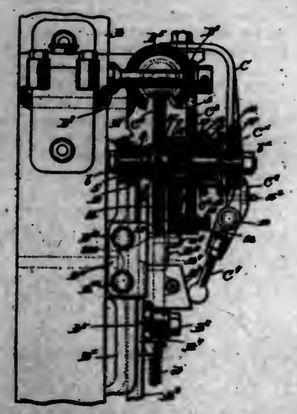
4. An apparatus of the character described comprising a scale having printing members, a cyclometer having printing members, means for supporting a record receiving sheet adjacent to the printing members of the scale and cyclometer, means for simultaneously producing a record of said scale and cyclometer printing members on the sheet, and means for shifting said scale printing members relatively to said sheet to permit of producing the scale record on different parts of said sheet, substantially as set forth.



5. An apparatus of the character described comprising a frame, means for supporting a record sheet on said frame, a scale comprising a plurality of dial wheels, having their peripheries provided with type numbers which are adapted to be engaged by said sheet, a scale bar guided on said frame and adapted to be depressed by the weight of the matter attached thereto, springs for yieldingly holding the scale bar in an elevated position, a gear rack arranged on said scale bar, an elongated pinion meshing with said rack and operatively connected with said dial wheels, and a carriage which slides on said frame and upon which said wheels are mounted, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

879,957. REVOLUTION-INDICATING MECHANISM FOR SPINNING-MACHINES. LYMAN O. GOODWIN, North Andover, Mass., assignor to Davis & Furber Machine Company, North Andover, Mass., a Corporation of Massachusetts. Filed Oct. 22, 1903. Serial No. 178,066.



1. In mechanism of the class described, an indicator-wheel, a continuously moving actuator, a clutch to operatively connect said indicator-wheel and actuator, means to hold the clutch positively in engagement, means tending normally to disengage the clutch, and separate means to automatically release the clutch from control of said holding means, to free the indicator-wheel from the actuator.

2. In mechanism of the class described, an indicator-wheel, a continuously moving actuator, a clutch intermediate said parts, means tending normally to disengage the clutch, positively acting means to hold the clutch in engagement, and automatically operating means to move the means to hold the clutch when the indicator-wheel is to be moved by said actuator.

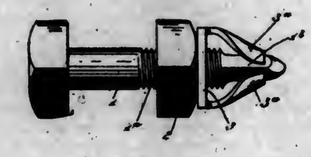
3. In mechanism of the class described, a continuously moving actuator, having a clutch part rotated thereby, an indicator-wheel, a second clutch part rotatable therewith, automatic means to engage said clutch parts when the indicator-wheel is to be turned by the actuator, means to lock the clutch parts in engagement, and means actuated by the indicator-wheel to unlock the locking means and to permit disengagement of the clutch parts.

4. In mechanism of the class described, a worm-toothed gear, a continuously moving member always in mesh therewith, and moving the same continuously, an indicator-wheel, a clutch intermediate the indicator-wheel and the gear to operatively connect them, and clutch disengaging means controlled by the indicator-wheel.

5. In mechanism of the class described, a worm shaft having a worm, a non-rotatable stud fixed with relation to the worm-shaft, a worm-toothed gear rotatably mounted on the stud and in mesh continuously with the worm, an indicator-wheel, and means to couple the same operatively with said worm-toothed gear, that the latter may rotate the indicator-wheel for a predetermined part of a revolution.

[Claims 6 to 11 not printed in the Gazette.]

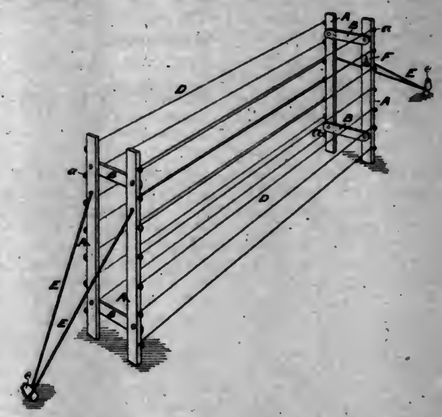
879,958. NUT-RETAINER. STEPHEN E. GUTRIDGE and JOHN F. BAKER, Newark, Ohio. Filed Apr. 20, 1907. Serial No. 369,255.



1. The combination with a threaded bolt having an unthreaded end square in cross section to form flat surfaces and longitudinal corners, a threaded jam-nut on the thread of the bolt, said jam-nut having a shanked elastic finger extending longitudinally from the face of the nut and in a plane at right angles to said face to yieldingly press laterally upon the unthreaded end of the bolt, said finger having its free end bent to form an angular surface for engagement with the corners of the bolt end to normally hold the nut in adjusted position on the bolt, said finger being adapted to ride transversely over said corners and constantly engage the bolt end when the nut is rotated to adjust or remove the same.

2. The combination with a threaded bolt having an unthreaded end square in cross section to form flat surfaces and longitudinal corners, a threaded jam-nut on the thread of the bolt, said jam-nut having shanked elastic fingers extending longitudinally from the face of the nut and in a plane at right angles to said face to yieldingly press laterally upon the unthreaded end of the bolt, said fingers having their ends bent to form angular surfaces for engagement with the corners of the bolt end to normally hold the nut in adjusted position on the bolt, said fingers being adapted to ride transversely over said corners and constantly engage the bolt end when the nut is rotated to adjust or remove the same.

879,959. MEANS FOR SUPPORTING CLIMBING PLANTS. CHARLES HALLIDAY, Banbridge, Ireland. Filed July 9, 1906. Serial No. 325,376.

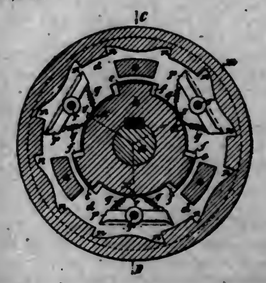


1. A trainer or support for peas or other plants constructed with two end frames each frame comprising two uprights connected loosely together by cross bars pivoted thereto and provided with devices to which to attach wires or cords, intermediate frames furnished with hooks to assist in holding up the wires between the two end frames, and wires or cords stretched from frame to frame substantially as described.

2. In a trainer or support for peas or other plants the combination of two uprights A provided with pointed ends to enter the ground, devices thereon to which to attach cords or wires cross bars B loosely affixed thereto to permit of an independent movement to each standard when being forced into and withdrawn from the ground, wires or cords D affixed to the standards and stretched between them and stays E to maintain the standards upright.

3. In a trainer or support for peas or other plants the combination of two uprights A provided with pointed ends to enter the ground, devices thereon to which to attach cords or wires cross bars B loosely affixed thereto to permit of an independent movement to each standard when being forced into and withdrawn from the ground, wires or cords D affixed to the standards and stretched between them and stays E to maintain the standards upright and straining keys F to tighten the stays E, substantially as described.

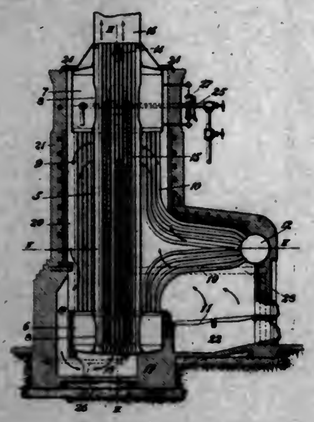
879,960. DOUBLE-PAWL COUPLING. MAX HANUSCH, Marienbad, Austria-Hungary. Filed Apr. 12, 1906. Serial No. 311,372.



A double pawl coupling comprising a notched disk b secured upon the shaft, disk d loose on the shaft at opposite sides of disk b having inner teeth projecting into the recesses of disk b their length in circular direction being shorter than the recesses, double armed pawls fulcrumed

between the disks *d*, springs connecting the ends of the pawls to the disk *b* at points about the middle of the recesses and a wheel hub loosely mounted on the periphery of the disks *d* having inner ratchet teeth projecting between said disks and adapted to be engaged by either end of the pawls substantially as described.

879,961. STEAM-BOILER. CHARLES HARTER, Tucson, Ariz. Filed June 18, 1907. Serial No. 379,569.



1. A boiler comprising in combination a pair of drums in substantial vertical alinement, a tubular shell extending between and through the two drums and secured to both faces of each drum and provided with openings into the drums, a series of fire tubes extending through the tubular shell and constituting a flue, and a series of water tubes arranged about said tubular shell and connecting the two drums.

2. A boiler comprising in combination a pair of drums in substantially vertical alinement, a third drum lying between and to one side of said pair of drums, a tubular shell communicating with and connecting the said pair of drums, a set of fire tubes extending through the tubular shell and constituting a flue, a set of substantially vertical water tubes connecting said pair of drums, a second set of water tubes connecting the said third drum with the top drum and a third set of water tubes connecting said third drum with the bottom drum.

3. The combination with a boiler comprising a pair of drums in substantially vertical alinement, and a series of tubes connecting the adjacent surfaces of the same, of a vertical casing inclosing the boiler and spaced away from the upper drum to permit the removal of the tubes, and a movable means for closing the opening between said casing and drum.

4. The combination with a boiler comprising a pair of drums in substantially vertical alinement, and a series of tubes connecting the adjacent surfaces of the same, of a vertical casing inclosing the boiler and spaced away from the upper drum to permit the removal of the tubes and a series of hinged doors adapted to close the opening between said casing and drum.

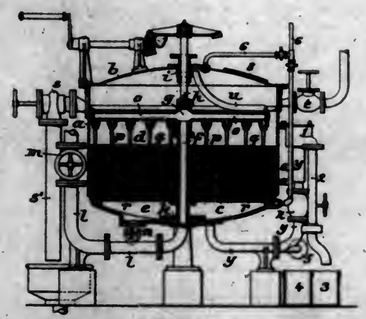
879,962. SAW-GUMMER. GEORGE E. HAWKINS, Wellborn, Fla., assignor of one-half to T. J. Hackney, Wellborn, Fla. Filed Aug. 5, 1907. Serial No. 387,132.

The combination in a saw gummer, of a frame comprising separated parallel side members adapted to receive a saw blade between them, and each of said side members provided with a plurality of diagonal slots, the slots of one member alining with the slots of the other, and a transverse rotatable arbor adapted for insertion within a selected pair of said slots, and having a milling cutter formed thereon between said side members of said frame,



and adjustable means for adjusting said saw blade within said frame toward said cutter, substantially as described.

879,963. FILTER. LUDWIG HIRT, Grevenbroich, Germany, assignor to Maschinenfabrik Grevenbroich, Grevenbroich, Germany. Filed May 15, 1907. Serial No. 373,751.

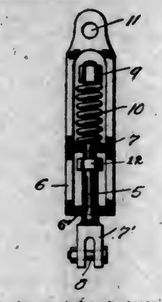


1. In filtering apparatus for syrups the combination of a tank having a perforated false bottom dividing the tank into upper and lower chambers, filtering medium resting on said bottom, an inlet for the syrup in the upper chamber, an outlet for the filtered syrup in the lower chamber, an overflow tank connected to said outlet, a syrup discharge conduit, an upwardly directed inlet pipe for a cleansing stream of steam and water in the upper chamber, a discharge cock for said cleansing stream in the syrup outlet pipe, a discharge conduit for said cleansing stream, a hollow central vertical shaft in the tank, hollow arms radiating from said shaft, pipes projecting from said arms downwards into the filtering medium, perforations in the walls of said pipes, inlets for rinsing water connected to the lower end of the vertical shaft and to the lower chamber, an outlet near the top of the upper chamber for said rinsing water, and means for rotating the hollow shaft together with its radiating arms and perforated pipes as set forth.

2. In filtering apparatus for syrups the combination of a tank having a perforated false bottom dividing the tank into upper and lower chambers, filtering medium resting on said bottom, an inlet for the syrup in the upper chamber, an outlet for the filtered syrup in the lower chamber, an overflow tank connected to said outlet, a syrup discharge conduit, an upwardly directed inlet pipe for a cleansing stream of steam and water in the upper chamber, a discharge cock for said cleansing stream in the syrup outlet pipe, a discharge conduit for said cleansing stream, a swivel pipe connecting the overflow tank with the syrup discharge conduit or with the discharge conduit for the cleansing water, a hollow central vertical shaft in the tank, hollow arms radiating from said shaft, pipes projecting from said arms downwards into the filtering medium, perforations in the walls of said pipes, inlets for rinsing water connected to the lower end of the vertical shaft and to the lower chamber, an outlet near the top of the upper chamber for said rinsing water, and means for rotating the hollow shaft together with its radiating arms and perforated pipes as set forth.

3. In filtering apparatus for syrup the combination of a tank having a perforated false bottom dividing the tank into upper and lower chambers, a cover for said tank, filtering medium resting on said bottom, an inlet for the syrup in the upper chamber, an outlet for the filtered syrup in the lower chamber, an overflow tank connected to said outlet, a syrup discharge conduit, an upwardly directed inlet pipe for a cleansing stream of steam and water in the upper chamber, a discharge cock for said cleansing stream in the syrup outlet pipe, a discharge conduit for the cleansing stream, a swivel pipe connecting the overflow tank with the syrup discharge conduit or with the discharge conduit for the cleansing water, a hollow central vertical shaft in the tank, hollow arms radiating from said shaft, pipes of oval cross section having inclined, closed, lower ends projecting downwards from said arms into the filtering medium, perforations in the walls of said pipes, inlets for rinsing water connected to the lower end of the vertical shaft and to the lower chamber an outlet near the top of the upper chamber for said rinsing water and means for rotating the hollow shaft together with its radiating arms and perforated pipes as set forth.

879,964. TUBE-HOISTING APPLIANCE FOR OIL-WELLS. JAMES HOGUE, Bradford, Pa. Filed Sept. 5, 1906. Serial No. 333,364.



In combination in a tube hoisting appliance for oil wells, a frame, a wire rope, and the connection between the wire rope and said frame consisting of a yoke connected to the frame, a stem arranged to slide and also turn in said yoke, a spring surrounding the stem, a nut on the stem bearing on one end of the spring, the said yoke having a cross bar upon which the other end of the spring bears and through which the stem extends, and having a second cross bar through which the stem extends, and a limiting stop or nut on the stem to contact with the second cross bar and limit the pressure of the stem on the spring, substantially as described.

879,965. STAPLE FORMING AND DISCHARGING MECHANISM. VERNON HOXIE, Adrian, Mich. Filed July 5, 1907. Serial No. 382,247.

1. In a machine of the class described, an incasing member, a fixed rib therein about which a staple is formed, a reciprocatory member coöperating with the rib to form a staple from a section of wire fed to the incasing member, a discharging element movable with the reciprocatory member and disposed in a plane intersecting the surface plane of the plunger, said incasing member having a chamber contiguous to said rib within which a formed staple is permitted to have a free circular falling movement to move from forming to discharging position, and means for ejecting the staple from the rib after being formed.



2. In a staple machine, an incasing member having a fixed staple-forming part, a non-rotatable plunger having a staple-forming part and a staple-discharging part disposed in intersecting planes, the staple-forming part coöperating with the fixed staple-forming part to form a staple, and a pressure-block operative to eject the formed staple from said fixed part to permit it to move into position to be engaged by the discharging part.

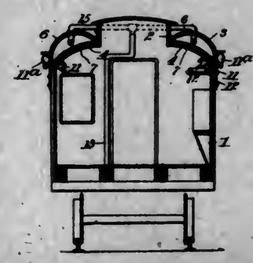
3. In a staple machine, an incasing member, a plunger having a staple-forming part and a staple-discharging part disposed in intersecting planes, a fixed portion within the member with which the forming part coöperates to form a staple, and a pressure-block U-shape in cross-section which straddles said fixed portion and effects an ejectment of the formed staple therefrom at a predetermined point in the movement of the plunger to permit the staple to move into position to be discharged.

4. In a staple machine, an incasing member having a fixed forming rib and a chamber at the side of the rib, a staple-forming part and a staple-discharging part operative in said member and disposed in intersecting planes in different portions of said chamber, the forming part coöperating with the rib to form a staple from a section of wire fed to the member, and a member movable to eject a formed staple from said rib to permit it to freely fall in said chamber in position to be discharged by the discharging part.

5. In a staple machine, an incasing member having a fixed staple-forming rib, a staple-forming element and a staple-discharging element movable in unison in said member and having their flat sides disposed in intersecting planes, the forming element coöperating with said rib to form a staple, and means for ejecting a staple from the rib after being formed to permit it to fall by gravity and turn from forming to discharging positions.

[Claims 6 to 12 not printed in the Gazette.]

879,966. FIRE-EXTINGUISHING APPARATUS. GEORGE W. HUNT and JERRY KINNEY, Pocatello, Idaho. Filed Aug. 15, 1906. Serial No. 330,704.



1. In a fire extinguishing apparatus for cars, the combination with a car, of a tank composed of material destructible upon the destruction of the car in a wreck, said tank being mounted upon the top of the car and having its base portion spaced from the car throughout its entire surface and provided with an inlet and an outlet.

2. In a fire extinguishing apparatus for cars, the combination with a car, of a tank arranged on top of the car and in spaced relation thereto throughout the entire surface of its base.

3. In a fire extinguishing apparatus for cars, the com-

bination of a car, of an elongated tank arranged on top of the car and in spaced relation thereto throughout the entire surface of its base; the tank having reduced ends, and a steam heating pipe arranged longitudinally of the tank at the top of the latter with its ends arranged to prevent leakage, the tank having an inlet and a valved outlet.

4. In a fire extinguishing apparatus for cars, the combination with a car, of an elongated tank arranged upon top of the car and in spaced relation thereto throughout the entire surface of its base, and a steam heating pipe arranged longitudinally of and within the tank, the tank having an inlet and valved outlets.

5. In a fire extinguishing apparatus for cars, the combination with a car, of a tank arranged on the car and composed of a material destructible upon the destruction of the car in a wreck.

[Claims 6 to 14 not printed in the Gazette.]

879,967. METHOD OF TREATING ALBUMINOIDS AND THE COMPOSITION OF MATTER PRODUCED THEREFROM. MONE R. ISAACS, Philadelphia, Pa. Filed Jan. 3, 1907. Serial No. 350,610.

1. The method of preparing a proteid which consists in precipitating the same from a solution by hydro-fluo-silicic acid.

2. The method of preparing a proteid which consists in precipitating the curd from milk by hydro-fluo-silicic acid.

3. The method of precipitating casein from milk which consists in adding to the milk substantially one half of one percent. of hydro-fluo-silicic acid.

4. The method of producing a glue or sizing which consists in precipitating the casein from milk by adding hydro-fluo-silicic acid thereto, separating the casein from the whey, then adding to said separated casein an alkaline substance.

5. The method of forming glue or sizing consisting in precipitating casein by hydro-fluosilicic acid, separating the casein from the whey, and adding an alkaline substance and water to said casein.

[Claims 6 to 9 not printed in the Gazette.]

879,968. SOAP-MOLDING MACHINE. FRIEDRICH JÜRGENS, Sangerhausen, Germany. Filed Nov. 5, 1907. Serial No. 400,802.



1. In a soap-molding machine, the combination with a cooling vessel, of vertical molds mounted therein, a slide adapted to close said vertical molds at the bottom, a box on said cooling vessel and adapted to receive hot liquid soap, plungers vertically guided in said box and adapted to engage in the mouths of said molds, means for driving said plungers to detach the congealed soap from the walls of said molds, and means for conducting compressed air to the spaces between the soap-rods and said plungers after the latter have been withdrawn, so as to expel the detached soap-rods from said molds.

2. In a soap-molding machine, the combination with a cooling vessel, of vertical molds mounted therein, a slide adapted to close said molds at the bottom, a box on said cooling vessel and adapted to receive hot liquid soap, its bottom having holes registering with said molds and also channels for conducting compressed air, plungers vertically guided in said box and adapted to engage through its bottom holes in the mouths of said molds, means for driving said plungers to detach the congealed soap from the walls of said molds and for withdrawing said plungers only so much as to uncover said channels for permitting the compressed air to expel the detached soap-rods from said molds.

3. In a soap-molding machine, the combination with a cooling vessel, of vertical molds mounted therein, a slide adapted to close said molds at the bottom, a box on said cooling vessel and adapted to receive hot liquid soap, its bottom having holes registering with said molds and also channels for conducting compressed air, means for heating said box, plungers vertically guided in said box and adapted to engage through its bottom holes in the mouths of said molds, means for driving said plungers to detach the congealed soap from the walls of said molds and for withdrawing said plungers only so much as to uncover said channels for permitting the compressed air to expel the detached soap-rods from said molds.

4. In a soap-molding machine a vertical mold having an opening for expelling soap therefrom, means for cooling said mold, a plunger movable in the mold to loosen solidified soap therein, and an opening for supplying compressed air within said mold above said solidified soap to expel the latter from the mold, the plunger cutting off said supply of compressed air when moved to soap loosening position.

5. In a soap-molding machine, a vertical mold having an opening for expelling soap therefrom, an opening for supplying soap to said mold, means for cooling the latter, a plunger movable in the mold to loosen solidified soap therein, and an opening for supplying compressed air within said mold above said solidified soap to expel the latter from the mold, the plunger cutting off the supply of soap and the supply of compressed air when moved to soap loosening position.

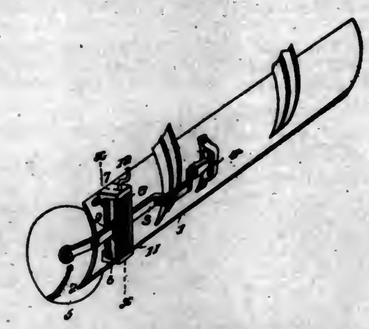
879,969. BRAKE-SHOE. LOUIS E. KELLER, Oil City, Pa. Filed Feb. 27, 1907. Serial No. 359,590.



1. A device of the character described, comprising a supporting member and a contact member, said contact member comprising a portion of cast iron, a reinforcing strip for the same formed with corrugations on each side, said strip being the same width throughout and having its ends bent for forming stops on one side and bent on the opposite side for forming auxiliary holding means for the cast material, and a supporting member cast integral with said cast material and provided with a tempered metal reinforcing strip.

2. In a device of the character described, comprising a supporting member, and a contact member, said contact member comprising a cast frictional portion, a longitudinally corrugated reinforcing member of steel, the same width throughout its entire length, for said frictional portion, and a retaining member cast integral with said frictional member and engaging the sides of the reinforcing member.

879,970. ROAD-GRADER. JOHN V. KRUSE, Virginia, Ill. Filed Feb. 16, 1907. Serial No. 357,622.



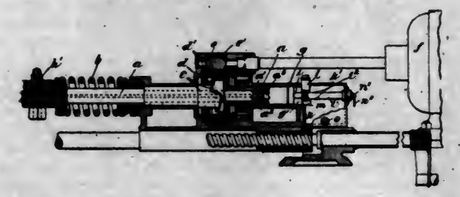
1. In a road grader, the combination of a scraper, a disk mounted in coöperative relation to the scraper, and means for moving the disk into and out of operative position.

2. In a road grader, the combination of a scraper, a disk beam pivoted to the scraper, and a disk carried by the said beam.

3. In a road grader, the combination of a scraper, a disk beam pivoted to the scraper, a disk mounted upon the said beam, a slide mounted upon the scraper and having an operative connection with the beam, and means for moving the slide to throw the disk into and out of operative position.

4. In a road grader, the combination of a scraper, a disk beam pivoted to the scraper, a disk carried by the beam, a slide mounted upon the scraper and having an operative connection with the beam, and an adjusting screw engaging the slide for moving the same to throw the disk into and out of operative position.

879,971. ROCK-DRILL. BRADFORD H. LOCKE, New York, N. Y. Filed July 10, 1907. Serial No. 382,985.



1. In a rock drill, the combination of a reciprocating piston, a reservoir in which air is compressed by the reciprocating piston, and means to discharge the air therefrom into the drill hole.

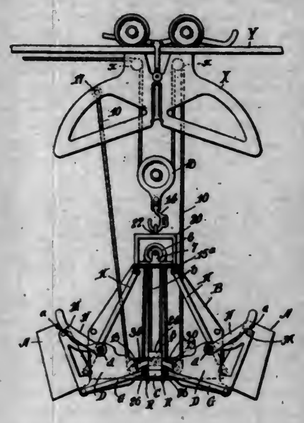
2. In a rock drill, the combination of a back cylinder, a piston reciprocating therein, an air reservoir carried by the cylinder, an inlet valve to admit air into the back end of the cylinder, a valve to admit air from the cylinder into the reservoir, and means to discharge air from the reservoir into the drill hole.

3. In a rock drill, the combination of a reciprocating piston, a spring to drive the same forward, a cam secured to the piston, a geared sleeve surrounding the cam, a ball coupling between the sleeve and cam, an electric motor and driving connections between the same and the geared sleeve, a reservoir in which air is compressed by the reciprocation of the piston, and means to discharge air from the reservoir into the drill hole.

4. In a rock drill, the combination of a reciprocating piston having a longitudinal channel, an air reservoir in which air is compressed by the reciprocations of the piston, a tube connecting the air reservoir with the channel of the piston, a valve controlling the admission of air from the reservoir through said tube to said channel, and means to operate said valve.

5. In a rock drill, the combination of a reciprocating piston having a longitudinal channel, a drill stock carried by said piston and having a channel communicating with the channel in the piston and provided with an opening near the drill head, an air reservior in which air is compressed by the reciprocations of the piston and means to discharge air from said reservoir through the channels of the piston and drill stock into the drill hole.

879,972. EXCAVATING, HOISTING, AND CONVEYING BUCKET. JOSEPH MAROUSCH, Cleveland, Ohio. Filed June 5, 1907. Serial No. 377,422.



1. The combination of a carriage, a supporting frame, buckets arranged to open and close in the frame, and a closing, hoisting and conveying cable attached at its dead end to the carriage and operatively connected to the buckets.

2. The combination of a carriage, a supporting frame having an upper sheave therein, buckets pivotally connected to the frame, a lower sheave connected to the buckets and movable up and down, and a closing, hoisting and conveying cable attached at its dead end to the carriage and extending around the sheaves.

3. The combination of side frames having vertical guides, and a cross piece at the top, a top sheave at the middle of said cross piece, a cross head movable up and down in the guides, arms projecting from the cross head on opposite sides thereof, sheaves mounted on the arms, buckets supported by the side frames and having an operative connection to the cross head, and a hoisting cable extending around the last mentioned sheaves and intermediately around said top sheave.

4. The combination of side frames, buckets hung therefrom and adapted to swing open and closed, and a latch pivoted to the side frame and engageable with a projection on a bucket when the buckets are closed and acting to prevent opening thereof.

5. The combination with a frame, of buckets hung therein and arranged to swing together or apart, a cross piece slidable up and down in the frame, between and connected to the buckets, a cross head slidable up and down in the frame above the cross piece and having a hook automatically engageable with the cross piece when the cross head is lowered to contact therewith, means at the top of the frame to automatically disengage the hook when the cross piece is lifted to the top of the frame and the buckets are closed, and a supplemental latch engageable with the buckets and arranged to hold the same closed until released.

[Claims 6 and 7 not printed in the Gazette.]

879,973. ANIMAL-SHEARS. THOMAS A. MARTIN, Chicago, Ill., assignor to Davis-Martin Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 6, 1907. Serial No. 391,544.



1. An animal shears comprising a shaft having a crank portion, a lever pivoted at one end upon said shaft and engaged by said crank portion, a cutter attached to the other end of said lever, and a stationary cutter.

2. An animal shears comprising a crank shaft, a lever engaged by said crank shaft, said lever being loosely pivoted at one end, a cutter pivotally connected with the other end of said lever, means for guiding said cutter and retaining it in place, and a stationary cutter.

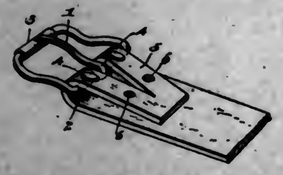
3. An animal shears comprising a casing, a stationary cutter and a movable cutter secured to said casing, a rib and groove connection between the upper side of the movable cutter and the wall of the casing, a lever attached to said cutter, and a shaft having a crank connection with said lever.

4. An animal shears comprising a casing, a stationary cutter, means on said casing for preventing said cutter from turning, a movable cutter having a bearing upon said casing, spring-actuated means for pressing said cutters together and against the casing, and means for moving said movable cutter.

5. An animal shears comprising a supporting structure, a lever having an opening through its rear end, a crank shaft extending into said opening and having a crank portion therein, a cutter pivoted to the forward end of said lever, guide means on said supporting structure for said movable cutter, a stationary cutter, and means for holding said cutters together and to the structure.

[Claims 6 to 16 not printed in the Gazette.]

879,974. BUCKLE. JOSEPH H. M. MICHON, Aneta, N. D. Filed Apr. 24, 1907.. Serial No. 370,062.

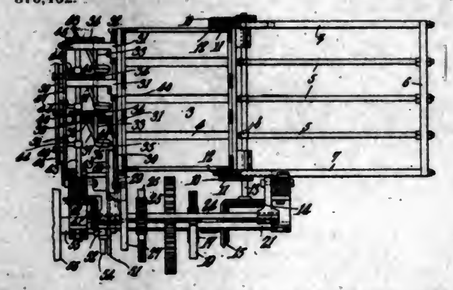


1. A buckle comprising a frame having a cross-bar provided with a strap engaging tongue, studs projected from said cross bar and arranged upon opposite sides of the tongue provided thereon, each of said studs comprising a shank projected laterally from the plane of the buckle frame, and a bill or bent portion arranged in a plane about parallel with the plane of the buckle frame and flattened so as to be close against the strap confined thereby.

2. A buckle comprising a frame embodying a cross bar provided with a strap engaging tongue which latter is pivoted and adapted to have its free end engage with a cross bar of the buckle frame spaced from the cross-bar supporting the tongue, and studs projected from the cross-bar having the tongue mounted thereon and facing away from said tongue so as to overhang and confine the part of the strap in engagement with the shank portions of said stud.

3. In combination a buckle comprising a frame embodying a cross-bar, and a tongue pivotally mounted upon said cross bar and adapted to engage with a terminal cross-bar of the buckle frame, studs projected from the tongue supporting cross-bar and having their outer ends face away from the tongue, and a strap having portions separated by a cut to engage with the said tongue supporting cross bar at opposite sides of the tongue and provided with a series of openings corresponding ones of which receive the said studs.

879,975. BALE-BINDING ATTACHMENT FOR HAY-PRESSES. CLARENCE T. MILLER and GEORGE A. CARLSON, Moscow, Idaho. Filed June 17, 1907. Serial No. 379,462.



1. In a bale-binding attachment for hay presses, a series of needle bars movable across the baling chamber, knotters for tying the ends of the bale bands, cutters arranged to engage the wire strands carried by the needle bars, and clamp disks coacting with and moved by said cutters for holding the severed ends of the wire strands coming from the wire supply.

2. In a bale-binding attachment for hay presses, a series of reciprocatory needle bars for carrying wire strands across the baling chamber and knotters coacting therewith and consisting of a rotatable shaft terminating in a clamp jaw, a closing jaw pivoted to the shaft, and a guiding member for said second jaw timed to open and close the same to receive and tie and release the wires.

3. In a bale-binding attachment for hay presses, reciprocating needle bars for carrying the wire coming from a source of supply and movable across the baling chamber, and knotting mechanism at the limit of travel of the needle bars consisting of a series of rotatable shafts, each terminating in a jaw out of the path of the needle bars, another jaw pivoted to each shaft, means for operating said jaws, and a reciprocating bar having fingers arranged to engage wire strands carried by the needle bars and to move them into the path of the knotters.

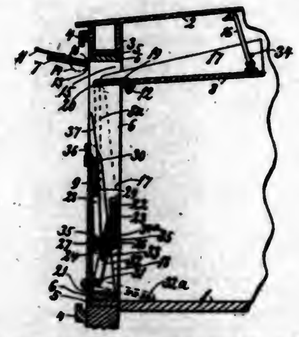
4. In a bale-binding attachment for hay presses, a series of reciprocatory needle bars for carrying wire strands from a source of supply across the baling chamber, knotters out of the path of said needle bars, a movable bar having fingers engaging the wires carried by the needle bars and carrying them into the path of the knotters, shearing blades movable into the path of the wire strands, a stationary member coacting with the shearing blades to sever the wires, and clamps coacting with and operated by the shearing blades to hold the severed ends of the wire coming from the source of supply.

5. In a baling press, means for applying wire bands to the bales, means for propelling the wire-binding mechanism, and other means for timing the application of power to the wire-binding mechanism comprising a clutch member for coupling the power to the driving shaft, a toothed lever carried upon the drive shaft and a stop mechanism normally in the path of the toothed member to hold it out of engagement with the clutch mechanism and movable by the baling plunger to a position out of the path of the toothed member to permit the latter to engage the clutch member.

[Claim 6 not printed in the Gazette.]

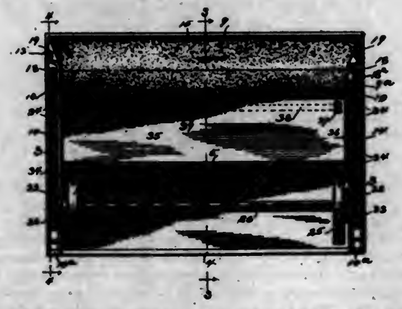
879,976. GRAIN-CAR DOOR. CALVIN MOORE, Becker, Minn. Filed Nov. 26, 1906. Serial No. 345,002.

The combination with a car body having a door opening, of a frame in the door opening, a door hung in the frame and comprising two partly overlapping sections, one section being hinged in the upper part of the frame, the other to the bottom of the frame means for holding said sections in closed position and in more or less open position, said means being provided at each vertical edge of the door and consisting of the link bars 23 and 28 pivoted by sliding joints, one to the frame and the other near the top of the bottom section of the door, a short link connecting



said two links and having two projections, a lever 32 engaged between said projections and having its lower end pivoted to the lower door section and its upper part provided with a slot, a pin near the lower corner of the upper section and engaging said slot in a detachable manner, and latches on the frame for holding the link bars or levers 28 in folded position, for the purposes set forth.

879,977. CARPET-SWEEPER. WILLARD A. MORRISON and FRED L. BRYANT, Chicago, Ill. Filed Mar. 20, 1902. Serial No. 99,109.

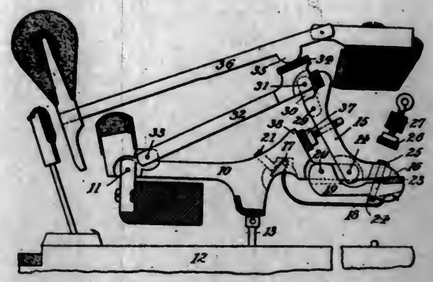


1. In a carpet sweeper, the combination with, a casing of inner walls secured to the ends of said casing, a transverse wall connecting the inner walls at the middle of the casing to divide the casing into two compartments, a rotary brush disposed in one of said compartments, rollers operatively connected with said brush disposed in the other of said compartments; a dust pan disposed proximate to said brush and, pivoted in the outer end walls, springs secured to the outer end walls of the casing to support said dust pan, and means for depressing said dust pan to remove the sweepings from the same.

2. In a carpet sweeper, the combination with a casing, of inner walls secured to the ends of said casing, a transverse wall connecting the inner walls at the middle of the casing, a brush mounted in the front part of said casing, a dust pan at the bottom of said casing pivoted in the outer end walls, springs secured to the outer end walls of the casing to support said dust pan, means for depressing said dust pan, and rollers mounted on a spring rod whereby the brush may be pressed closer to the floor when desired, said spring rod being pivoted to permit said rollers to rock on an uneven floor.

3. In a carpet sweeper, in combination, a casing, inner walls secured to the ends of said casing, a brush having pinions at each end and mounted in the fore part of the casing, drive wheels secured to an axle bearing in the end walls at the back part of the casing, spur gear wheels mounted loosely on the said axle between each of the end walls of the casing and the adjacent inner wall and having bosses extending through the inner wall, wheel trains connecting the spur gear wheels with the pinions on the brush, one of said trains having an even, and the other an odd number of wheels, springs reversely disposed on each of the aforesaid bosses, friction pawls disposed in peripheral notches in the bosses, said springs operating reversely with the flange of each of the drive wheels to jam the friction pawl between the spur gear wheel and flange on the driving wheel to lock the driving wheel and spur wheel together, to drive the brush continuously in one direction.

879,978. REPEATING ACTION FOR GRAND PIANOS. ADAM NICKEL, New York, N. Y., assignor to Wessell, Nickel & Gross, New York, N. Y. Filed Dec. 26, 1907. Serial No. 408,101.



1. A repeating action for grand pianos provided with a jack, a spring operatively engaging the same and adapted to throw the jack backwards, means for releasing the jack from the spring, a lever linked to the jack, and a hammer supported by the lever, substantially as described.

2. A repeating action for grand pianos provided with an elbow-shaped jack, a spring operatively engaging the toe thereof, means for releasing the toe from the spring, a lever linked to the jack, and a hammer supported by the lever, substantially as specified.

3. A repeating action for grand pianos provided with a support, an elbow-shaped jack pivoted thereto, a spring mounted on the support and adapted to operatively engage the jack, an escapement successively engaging the spring and jack, a lever linked to the jack, and a hammer supported by the lever, substantially as specified.

4. A repeating action for grand pianos provided with a support, an elbow-shaped jack pivoted thereto, a spring-arm engaging the jack, a projection extending upwardly from the arm, an escapement successively engaging the projection and jack, a lever linked to the jack, and a hammer supported by the lever, substantially as specified.

5. A repeating action for grand pianos provided with a support, an elbow-shaped jack pivoted thereto, an arm also pivoted to the support and engaging the jack, a spring engaging the arm, a projection extending upwardly from the arm, an escapement successively engaging the projection and jack, a lever linked to the jack, and a hammer supported by the lever, substantially as specified.

879,979. SHOE. SAMUEL N. NORTH, Rising Sun, Ind. Filed Aug. 25, 1906. Serial No. 332,029.

A shoe of the type described having the counter thereof provided at its rear portion with a vertical split, stiffening frame pieces secured to the meeting edges of the vertical split and having the lower ends thereof pivoted at the heel of the shoe, means for locking the counter sections in

a closed position, and a U shape reinforcing strip extending across the heel and having its end portions projecting upwardly and secured to the counter sections of



the shoe upon opposite sides of the before mentioned split, the said U shape strip having a spring action serving to hold the counter sections normally closed.

879,980. WRENCH. WILLIAM B. ORR, Salisbury, N. C. Filed June 19, 1907. Serial No. 379,760.



1. A wrench including a shank, a stationary jaw, a movable jaw slidably mounted on the shank, rollers interposed between the movable jaw and shanks, and an operating lever provided with cam slots adapted to receive the adjacent ends of the rollers for actuating the latter thereby to lock the movable jaw in adjusted position.

2. A wrench including a shank provided with a stationary jaw, a movable jaw slidably mounted on the shank, gripping devices interposed between the movable jaw and shank, an operating lever having spaced arms engaging the opposite sides of one of the jaws, and cam slots formed in the arms and adapted to engage the gripping devices for actuating the latter, thereby to clamp the movable jaw in adjusted position.

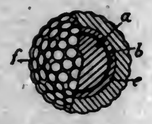
3. A wrench including a shank having a stationary jaw, a movable jaw slidably mounted on the stationary jaw and provided with a cam face, rollers interposed between the cam face and the shank of the wrench, and an operating lever having slots formed therein adapted to receive the rollers for actuating the latter thereby to lock the movable jaw in adjusted position.

4. A wrench including a shank having a stationary jaw, a movable jaw slidably mounted on the shank and provided with an elongated slot having a cam face, rollers seated in the slots and bearing against the cam face and shank, respectively, and an operating lever pivotally mounted on the movable jaw and provided with cam slots adapted to receive the ends of the rollers for actuating the latter thereby to lock the movable jaw in adjusted position.

5. A wrench including a shank having a stationary jaw, a movable jaw slidably mounted on the shank and provided with an elongated slot one wall of which is provided with a V shaped recess, gripping devices seated in the slot, and an operating lever bearing against the opposite sides of one of the jaws and provided with inwardly extending lugs having inclined slots formed therein for the reception of the gripping devices thereby to lock the movable jaw in adjusted position when the operating lever is actuated.

[Claim 6 not printed in the Gazette.]

879,981. GOLF-BALL. CHARLES L. READE, Bexhill, England. Filed Jan. 17, 1907. Serial No. 352,747.

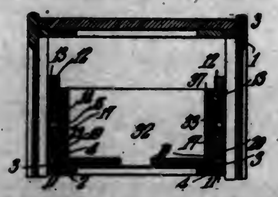


1. In a golf-ball, the combination with an outer shell of a swollen hydrocarbonized resilient core of vulcanized rubber and a vapor-proof covering for said core, as and for the purpose set forth.

2. In a golf-ball, the combination with the outer shell, of a swollen hydrocarbonized resilient core of molded vulcanized rubber and a vapor-proof covering for said core as set forth.

3. In a golf-ball, the combination with the outer shell, of a swollen hydrocarbonized resilient core of vulcanized rubber, a vapor-proof covering around said core and hydrocarbonized windings of vulcanized rubber between said covering and the shell, as set forth.

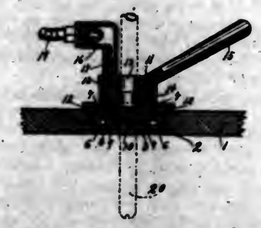
879,982. DRAWER-GUIDE. GEORGE R. ROSS, Muskegon, Mich. Filed July 12, 1907. Serial No. 383,487.



The combination with tracks and guides disposed thereabove, said guides having longitudinal grooves in their adjoining faces; of main slides interposed between the tracks and guides, the forward portion of each slide being reduced, a drawer interposed between the guides and slides, anti-friction devices carried by the drawer and mounted to travel within the grooves in the guides, auxiliary slides secured to the sides of the drawer and bearing upon the reduced portions of the main slides, said auxiliary slides being movable into position between the main slides and guides, the adjoining faces of the guides, slides, and tracks being provided with registering longitudinal races, transversely curved wear plates within the races and extending throughout the lengths thereof, balls seated within the races in the tracks and in the upper portions of the main slides, said balls projecting into the races registering therewith and disposed to prevent relative lateral movement of the slides, tracks, and guides, and stop devices extending through the wear plates and within the races for limiting the movement of the balls, said stop devices constituting securing means for the wear plates.

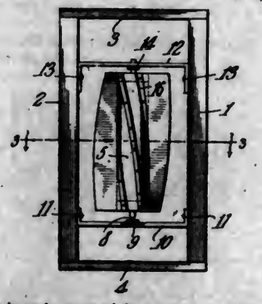
879,983. TAP AND BUSH FOR BEER-KEGS. HARRY J. SANDELL, Minneapolis, Minn. Filed Apr. 20, 1907. Serial No. 369,236.

1. A bush 2 having an inwardly tapered axial passage 3, annular groove 6, inwardly projecting lugs 7, annular air duct 8, in the outer extremity of its hub portion, and air ducts extending from said duct 8 to the intermediate portion of said flaring passage 3, in combination with a cap 11 insertible into the groove 6, of said bush, and provided with cam lugs 12 engageable with the said bush lugs 7, a lever 15 rigid with said cap, an air conducting neck 16 also rigid with said cap 11, an annular packing 14 within said cap 11, the said cap having a tube passage 13, and a sleeve extension 18 from the air passage of said neck 16 extending through said packing 14 and leading to the annular air duct 8 of said bush, substantially as described.



2. The combination with a bush adapted for application to a keg and having an axial tube passage and an eccentric air supply duct, of a cup-shaped head or cap having interlocking engagement with said bush and provided with an axial tube passage and an eccentrically located air duct, and a packing ring within said head and arranged in itself to form a liquid tight joint between said bush, head and a tube which is adapted to be inserted through the axial passages thereof, the air duct of said cap having a tubular extension passed through said packing ring and communicating with the air duct in said bush, substantially as described.

879,984. BARBER'S POLE. OTTIS E. SMITH, Shattuck, Okla. Filed June 7, 1907. Serial No. 377,767.

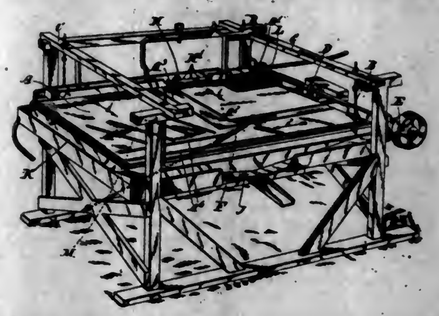


1. A barber's pole comprising a rectangular frame, supports secured thereto, each being provided with a bearing, a shaft engaging the bearings, a cylindrical body operatively connected with the shaft, and helical wings carried by the exterior of the body and extending from end to end thereof.

2. A barber's pole comprising a rectangular frame, supports secured thereto one of which is provided with a cone bearing and the other with an orifice, a cylindrical body, a shaft passing through the body and having at one end a cone journaled to engage the cone bearing and its other end engaging the orifice, means for holding the shaft from disconnection from the bearing, and helical wings carried by the body and extending from end to end thereof.

879,985. SEPARATION OF METALLIFEROUS MINERALS FROM GANGUE. HENRY L. SULMAN, HUGH F. KIRKPATRICK-PICARD, and JOHN BALLOT, London, England. Filed Feb. 20, 1905. Serial No. 246,637.

1. The process of treating ores to separate metalliferous matter from gangue which consists in mixing the powdered mineral with water to form a freely flowing pulp, agitating the mineral pulp with a small quantity of oil sufficient only to impart a thin coating of oil to the metalliferous particles, distributing the mixture in the form of a thin sheet of flowing liquid, causing the immersed particles to be exposed to the air and thereafter to meet the surface of the liquid, collecting the floating oiled metalliferous particles and collecting the gangue which sinks.



2. The process of treating ores to separate metalliferous matter from gangue which consists in mixing the powdered mineral with water to form a freely flowing pulp, agitating the mineral pulp with a small quantity of oil sufficient only to impart a thin coating of oil to the metalliferous particles distributing the mixture in the form of a thin sheet of flowing liquid, directing currents of air on to the liquid to expose the immersed mineral to the air, whereby the oil-coated metalliferous particles float, collecting the floating oiled metalliferous particles and collecting the gangue which sinks.

879,986. SAIL-BOOM. PERCY TATCHELL, London, England. Filed July 2, 1906. Serial No. 324,484.



1. The combination with a sail-boom, of means for curving the boom laterally to impart belly to the sail; said means comprising a stay secured to one end of the boom, means for projecting the stay laterally from the boom and means for tightening or slackening said stay.

2. The combination with a sail-boom, of means for curving the boom laterally to impart belly to the sail; said means comprising a stay secured to one end of the boom, means connected to the other ends of the stay for tightening or slackening the stay, and a lateral strut on the boom loosely engaging the stay for projecting the stay from the boom.

3. The combination with a sail-boom, of means for curving the boom laterally to impart belly to the sail; said means comprising a pair of stays secured to one end of the boom at opposite sides thereof, means extending laterally from the boom and loosely engaging the stays for projecting the stays from the boom and means connected to the other ends of the stays for tightening or slackening the stays.

4. The combination with a sail-boom, of mechanism for curving the boom laterally to impart belly to the sail; said mechanism comprising a pair of stays having one end secured to the boom at opposite sides thereof, means for projecting the stays laterally from the boom and means connected to the other ends of the stays for tightening or slackening the stays and constructed to slacken one stay when the other stay is tightened.

5. A sail-boom of gradually tapering form from its outer to its inner end and provided with means for curving the boom to impart belly to the sail.

[Claim 6 not printed in the Gazette.]

879,987. STOVE-FLUE. EVERETT E. THOMPSON, Kaufman, Tex. Filed Feb. 25, 1907. Serial No. 359,228.



1. In combination with a stove-pipe and a collar-brace secured thereto to secure the pipe in position, a thimble comprising a casing having an annular plate on its lower end, and a sleeve slidably mounted on said casing and provided with slots to receive said brace, substantially as shown and described.

2. In combination with a building having a roof, floor, joists, and a ceiling, a stove-pipe passing through said ceiling, floor and roof and between two of said joists, a collar-brace secured to said pipe and having laterally extended arms secured to the said joists, a casing surrounding the pipe and extended above the roof, a sleeve slidably mounted on said casing and having slots to receive said brace-arms, a thimble-casing having a perforated annular plate secured to its lower end and extended beyond the side of the casing to engage the ceiling, the sleeve aforesaid fitting over said thimble-casing, and a chimney-cowl secured to the delivery end of the pipe and provided with a conical-shaped hood on its lower end to fit over the first named casing, substantially as shown and described.

879,988. EMERGENCY-COT. MARTIN H. THOMPSON, Schenectady, N. Y. Filed May 17, 1907. Serial No. 374,222.



1. In a cot or bed, the combination with a head-member and a foot-member each hollow and open on the side toward the other, and together adapted to form an inclosure; of detachable side-bars adapted to connect together and hold apart said head and foot-members; a flexible bottom connected at one end with one of said head and foot-members; and a roll mounted upon the other of said head and foot-members, and connected with the other end of said flexible bottom, which bottom enters both hollow members through the open sides thereof.

2. In a cot or bed, the combination with a head-member and a foot-member each hollow and open on the side toward the other, and together adapted to form an inclosure; of detachable side-bars adapted to connect together and hold apart said head and foot-members; a flexible bottom connected at one end with one of said head and foot-members; a ratchet fixed upon said roll; and a dog engageable with said ratchet.

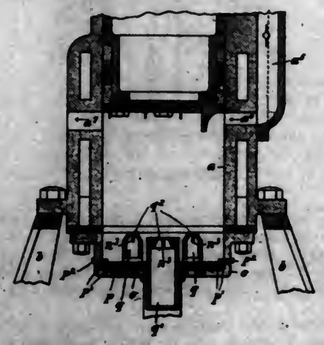
3. In a cot or bed, the combination with a hollow-head member and a hollow-foot member; of detachable folding side-bars adapted when extended to connect together and hold apart said head and foot-members, and adapted when detached and folded to lie within one of said hollow members; a flexible bottom connected at one end with one of said hollow members; and a roll mounted within the other of said hollow members and connected with the other end of said flexible bottom.

4. In a cot or bed, the combination with a hollow head-member and a hollow foot-member each open on the side toward the other, and together adapted to form an inclosure; and a series of studs on the head-member; of detachable side-bars adapted to connect together and hold apart said head and foot-members; a flexible bottom connected at one end with said head-member interiorly thereof; a roll mounted within the foot-member and connected with the other end of said flexible bottom; and a flap connected with the flexible bottom near the head and provided with buttonholes to receive the studs on the head-member, said flexible bottom and flap being adapted to be wholly contained within said inclosure.

5. In a cot or bed, the combination with a head-member and a foot-member; of detachable side-bars adapted to connect together and hold apart said head and foot-members; a flexible bottom connected at one end with one of said head and foot-members; a roll mounted upon the other of said head and foot-members, and connected with the other end of said flexible bottom; another roll mounted upon said foot-member; and a blanket connected with the last mentioned roll.

[Claim 6 not printed in the Gazette.]

879,989. INTERNAL-COMBUSTION ENGINE. HERBERT G. UNDERWOOD, New York, N. Y. Filed Oct. 25, 1905. Serial No. 284,271.

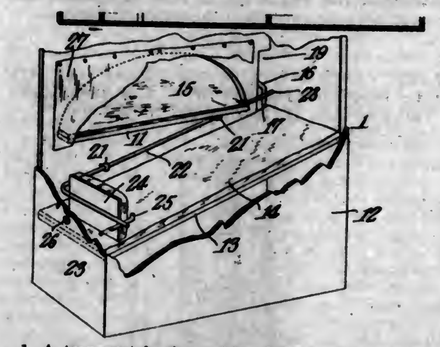


1. In an internal combustion engine of the compression type, the combination of a working cylinder; a piston; a tubular support carried by the cylinder head and projecting into the clearance space, said support being in permanently open communication at two points remote from each other with the interior of the working cylinder; and a gas occluding body located within said support and adjacent the upper end thereof.

2. In an internal combustion engine of the compression type, the combination of a working cylinder; a piston; a tubular support carried by the cylinder head and projecting into the clearance space, said support being in permanently open communication at both its ends with the interior of the working cylinder; and a gas occluding body located within said support and adjacent the upper end thereof.

3. In an internal combustion engine of the compression type, the combination of a working cylinder; a piston; a plate within the cylinder carried by the cylinder head and insulated therefrom; a tubular support carried by said plate and projecting into the clearance space, said support being in permanently open communication at both its ends with the interior of the working cylinder; and a gas occluding body located within said support and adjacent the upper end thereof.

879,990. TRAP-NEST. WILLIAM H. WARNER, Jr., Allegan, Mich. Filed Mar. 18, 1907. Serial No. 363,058.



1. A trap nest having a hinged door, an inclined runway composed of two parts at an angle to each other and forming a continuous passage for the newly laid egg, a rod extending from the door when fully opened to the rear end of the higher runway, a sliding abutment near the end of the lower runway, and a trip means connected to said abutment adapted to engage said rod and hold the door open until a newly laid egg has moved the abutment and disengaged the trip means.

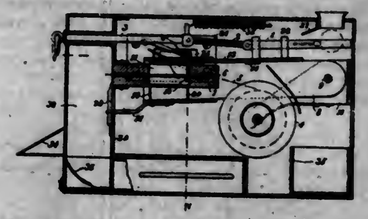
2. A trap nest having a hinged door, a rod pivotally connected to said door and extending to the rear of the nest, an inclined two part runway angularly disposed with relation to each other, the lower runway having a sliding abutment near its end and a support therefor, a trip rod attached to said runway and adapted to engage the end of said rod, whereby the door is caused to fall when the newly laid egg rolling down the runway strikes the abutment and disengages the rod.

3. A trap nest having a hinged door, a plurality of consecutive inclined surfaces forming a runway, a sliding abutment near the end of said runway, and a trip device between said abutment and the hinged door whereby the door is held open by the trip device when the abutment is moved forward, and permitted to drop when the abutment has been moved by a newly laid egg rolling down the runway causing the trip device to operate and permit the door to fall.

4. A trap nest, comprising a box having a central partition and an extension on the rear of said box, an inclined runway extending from said partition into the extension through an opening formed in the rear wall of said box, a second inclined runway within said extension, a hinged door for said trap nest, a rod extending from said door through the said extension, and a tripping device in said extension for engaging said rod to hold said door in open position.

5. A trap nest, provided with a hinged door and a rod extending therefrom to the rear of the nest, a sliding rod adapted to engage said first mentioned rod to hold the door in open position, an abutment on the lower end of said sliding rod, and an inclined runway extending from a nest to said abutment, and down which an egg newly laid by a fowl on said nest will roll and striking the abutment cause the door to close.

879,991. COIN-CONTROLLED SELLING APPARATUS FOR STAMPS, TICKETS, AND THE LIKE. CARL R. WEDELIN, Stockholm, Sweden, assignor to Aktiebolaget L. M. Ericsson & Co., Stockholm, Sweden. Filed Oct. 17, 1905. Serial No. 283,097.



1. The combination in an automatic selling apparatus for stamps, tickets, and the like, stored up in the apparatus in the shape of a ribbon, of two sets of needles movable transversely relative to the ribbon and adapted to alternately engage the same, and means for moving the one set of needles in the longitudinal direction of the ribbon, substantially as and for the purpose set forth.

2. The combination in an automatic selling apparatus for stamps, tickets, and the like, stored up in the apparatus in the shape of a ribbon, of two sets of needles movable transversely relative to the ribbon, the one set of needles being also movable in the longitudinal direction of the ribbon, holders supporting said sets of needles located on each side of the ribbon, the holder of the set of needles serving for the feeding of the ribbon being supported and guided by the other holder, substantially as and for the purpose set forth.

3. The combination in an automatic selling apparatus for stamps, tickets, and the like, stored up in the apparatus in the shape of a ribbon, of two sets of needles movable transversely relative to the ribbon and adapted to alternately engage the ribbon, the one set of the needles being also movable in the longitudinal direction of the ribbon, holders supporting said sets of needles located on each side of the ribbon, the holder of the set of needles serving for feeding the ribbon having lateral projections, and fixed guide-blocks having rectangular guide-slots engaged by the said projections, substantially as and for the purpose set forth.

4. The combination in an automatic selling apparatus for stamps, tickets, and the like, stored up in the apparatus in the shape of a ribbon, of two sets of needles movable transversely relative to the ribbon, the one set of needles being also movable in the longitudinal direction of the ribbon, holders supporting the said sets of needles located on each side of the ribbon, the holder of the set of needles serving for feeding the ribbon having lateral projections, fixed guide-blocks having rectangular guide-slots engaged by the said projections, and spring-actuated levers provided in the path of the said projections, substantially as and for the purpose set forth.

5. The combination in an automatic selling apparatus for stamps, tickets, and the like, stored up in the apparatus in the shape of a ribbon, of two sets of needles movable transversely relative to the ribbon and adapted to alternately engage the same, the one set of needles being also movable in the longitudinal direction of the ribbon, holders for said sets of needles, a cutting device, and a connection between the same and the one of said holders, substantially as and for the purpose set forth.

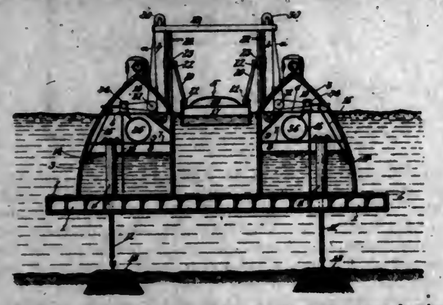
[Claims 6 to 8 not printed in the Gazette.]

879,992. WAVE-MOTOR. GEORGE M. WILSON, Los Angeles, Cal. Filed Apr. 18, 1907. Serial No. 369,008.

1. In combination a stable floating structure, a wave actuated float, power transmission mechanism intermediate the float and stable structure, and a shock absorbing device in said power transmitting mechanism.

2. In a wave motor, a stable floating structure, vertical guideways upon said structure, a cross head mounted to

reciprocate upon said ways, said head comprising a central abutment, heads above and below the central abutment carried upon a rod, cushioning means between said head and central abutment, two cables, each connected at its end with one of said heads, a clutch connected with the intermediate portion of said cables, power transmitting mechanism connected with said clutch, and a wave actuated float for reciprocating the cross head.

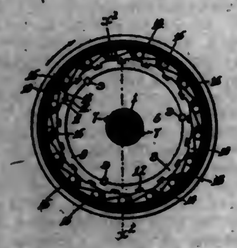


3. In a wave motor, a stable floating structure having two parallel chambers, transverse girders supporting said chambers, bulk-heads within the chambers forming upper, lower and intermediate compartments, said lower compartment constituting a water ballast compartment, and means within said upper compartment for varying the amount of ballast in said lower compartment.

4. In a wave motor, a stable floating structure having two parallel chambers, transverse girders supporting said chambers, bulkheads within the chambers forming upper, lower, and intermediate compartments, tubes extending from the intermediate compartment through the lower compartment, and anchor chains extending from the intermediate compartment through said tubes.

5. A stable floating structure having two parallel chambers, transverse girders supporting said chambers, bulkheads within said chambers forming upper, lower and intermediate compartments, pumps within the upper compartment, accumulators within the intermediate compartment, connections between said pumps and accumulators, a wave actuated float, and power transmission means between said float and pump.

879,993. ROLLER-CLUTCH. GEORGE M. WILSON, Los Angeles, Cal. Filed May 20, 1907. Serial No. 374,793.



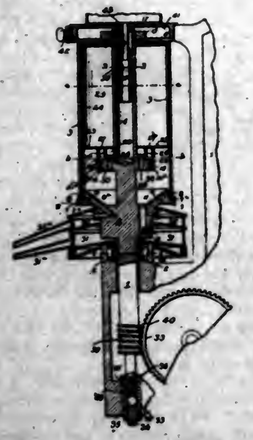
1. In a roller clutch, a disk, a driving drum concentric therewith, a series of wedge-shaped roller seat blocks detachably fastened to the disk, a gang of rollers between each seat block and the driving drum, and means engaging grooves in the respective seat blocks for holding each individual roller of a gang in contact with its seat block and the driving drum.

2. A roller clutch comprising a disk, a concentric driving drum, a series of wedge-shaped roller seat blocks each having a boss fitting in the disk, a screw passing through each boss into the disk, and a gang of rollers between each seat block and the driving drum.

3. A roller clutch comprising a disk, a concentric, driving drum, a series of wedge-shaped roller seat blocks each having a boss fitting in the disk, a screw passing through each boss into the disk, a gang of rollers between each seat block and the driving drum, each of said seat blocks having a groove along its wider edge, a flat spring seated in each groove, a spring plate supported by each flat spring, a sinuous spring supported by each spring plate, each sinuous spring making contact with the individual rollers of the adjacent gang of rollers.

4. In a roller clutch, a shaft, plates attached to the shaft, a spacing plate, disks on opposite sides of the spacing plate, a series of wedge-shaped roller seat blocks detachably fastened to each disk, driving drums concentric with the respective disks, a gang of rollers between each seat block and the adjacent driving drum, and spring means for holding each individual roller of a gang in contact with the adjacent seat block and driving drum.

879,994. CENTRIFUGAL CREAM-SEPARATOR. WILLIAM WITT and FREDERICK W. C. HARTMANN, Ripon, Wis. Filed Apr. 11, 1907. Serial No. 367,679.



1. In a cream separator, the combination with a rotary bowl, of a feed chamber extending downwardly within the axis thereof, means for introducing milk into the upper end of said chamber means for permitting air to escape from said chamber intermediate its ends, a separating device arranged in said bowl and removably connected to the axis thereof, and means to conduct the milk from the lower end of said chamber to said separating device, substantially as described.

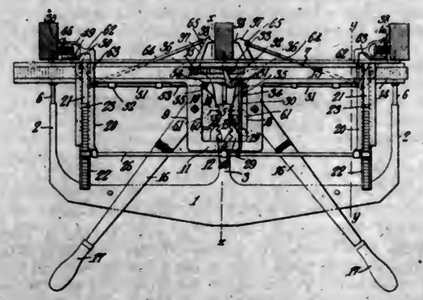
2. In a cream separator, the combination with a revolubly-mounted shaft having in its upper end a vertically-disposed chamber, the upper portion of the wall of said chamber being provided with obliquely arranged slots, of a bowl removably attached to said shaft when operated thereby, means to introduce milk into the chamber of said shaft, a separating device removably connected to the latter within said bowl, means whereby the milk is conducted from the chamber to said shaft through said separating device, and means to discharge the separated milk and cream therefrom, substantially as described.

3. In a cream separator, the combination with a revolubly-mounted shaft having in its upper end a vertically disposed chamber, of a supporting head formed on said shaft, said head having arranged therein milk and cream passages, and a cream receiving basin, a bowl removably-mounted on said shaft and head, a hopper arranged above the upper end of said shaft, telescoping feed tubes connected to the lower end of the hopper and projecting into the chambered upper end of the shaft, a cup arranged on said shaft within the bowl, said cup having formed therein radially-disposed discharge passages communicating with the chamber of said shaft, a collar arranged on said cup to form an annular space around the same, which communicates with the discharge passage therein, a plate arranged on the upper end of said collar above said cup, said plate having formed therein apertures which communicate with the cup and with the annular space around the same, a separating device arranged on said plate in the upper portion of the bowl by means of which the milk and cream passing from the lower end of the chamber in said shaft are separated and discharged through the passages in the head on said shaft, and independent receptacles arranged on said head to receive said separated milk and cream, substantially as described.

4. In a cream separator, the combination with a revolubly-mounted shaft having a chambered upper end, a bowl mounted on said shaft to turn therewith, a cup formed on said shaft, a collar arranged on said cup to form an annular channel, a plate on said sleeve and cup, said plate having inlet and discharge passages to communicate respectively with said channel and cup, and a separating device arranged on said plate, said device forming a series of radially-disposed V-shaped separating spaces in said bowl, substantially as described.

5. In a cream separator, the combination with a revolubly-mounted shaft chambered in its upper end and having formed therein an annular series of gas and air vents arranged obliquely around the shaft, a head on said shaft having a series of milk and a series of cream discharge passages formed therein, a bowl having a closed upper end, means to removably secure said bowl on the shaft, a recessed enlargement formed on said shaft within said bowl, said enlargement having milk discharge passages communicating with the chamber in said shaft and cream discharge passages formed therein, a collar removably mounted on said enlargement to form an outer annular channel, a supporting plate on said enlargement, said plate having formed therein a series of milk passages to communicate with said annular channel, and a cream discharge aperture surrounding said shaft and communicating with said cup, and a separating device arranged on said plate to form a series of V-shaped separating spaces in the upper portion of said bowl, substantially as described.

879,995. LATHING-MACHINE. ROBERT R. ZAHNTER, Fruit, Ill. Filed Apr. 19, 1907. Serial No. 369,142.



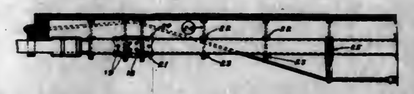
1. In a lathing machine, means for feeding the laths one at a time into position for nailing, means for feeding the nails one at a time to each point on the lath to be nailed, and means for simultaneously driving all the nails for a single lath.

2. In a lathing machine, means for feeding the laths one at a time to a position to be nailed, means for feeding all the nails for a single lath into position simultaneously, means for moving the entire machine a distance equal to the width of a lath and the space between the contiguous edges of two laths when in place, means for holding the machine to the studding, means for driving all the nails for a single lath simultaneously, and a single operating means connected to the feeding and nailing means to operate the same in proper sequence.

3. In a lathing machine, a longitudinally-moving, perforated, nail-carrying strip having ratchet teeth thereon, a lath feeding device having ratchet teeth thereon, nail punches arranged to move into and out of the perforations in the nail-carrying strip, operating levers therefor, a rock shaft carrying pawls in operative relation to the lath feeding device, a pawl in operative relation to the ratchet teeth on the nail-carrying strip, connections between the nail-strip operating pawl and the rock shaft, and connections between the operating levers and the nail and lath feeding mechanisms for feeding the laths and nails and for driving the nails in proper sequence.

4. In a lathing machine, a nail-carrying strip movable step-by-step to present the nails to be driven, a nail driving frame movable with relation to the nails to be driven, a lath feeding mechanism, grippers for holding the machine to the studding, feeding mechanism for the machine for determining the distance between the laths, operating levers for the nail-driving mechanism, connections between the operating levers and the nail and lath feeding mechanisms, connections between the operating levers and the grippers, and connections between the operating levers and the spacing mechanism, all arranged to be operated in proper sequence by the movement of the operating levers to and from each other.

879,996. CAR-UNDERFRAME. JOHN M. AMES, Dongan Hills, N. Y., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Nov. 21, 1907. Serial No. 403,195.



1. In a car-underframe, the combination comprising longitudinal sills, continuous draft sills of channel form disposed below said longitudinal sills, a needle beam recessed for said draft sills, a cover plate over said draft sills and needle beam, and secured to both sills.

2. In a car-underframe, the combination comprising longitudinal sills, continuous draft sills of channel form disposed below said longitudinal sills, a needle beam recessed in its upper portion for said draft sills, queen posts secured to said needle beam, a cover plate over said draft sills and needle beam and bolts connecting said cover plate, draft sills and queen posts.

3. In a car underframe, the combination comprising longitudinal sills, continuous draft sills coextensive therewith, said draft sills comprising channels with wide horizontal flanges, a needle beam with recesses in its upper portion for said channels, and a cover plate secured to said draft sills and needle beam.

4. In a car underframe, the combination comprising longitudinal sills, bolsters and draft sills in a substantially uniform plane below said longitudinal sills, needle beams recessed for said draft sills and a cover plate connected to said draft sills and needle beam.

5. In a car underframe, the combination comprising longitudinal sills, bolsters and draft sills in a substantially uniform plane below said longitudinal sills, needle beams recessed for said draft sills, a cover plate connected with said needle beam and draft sills and stops on said draft sills adapted to abut against said bolsters.

[Claims 6 to 20 not printed in the Gazette.]

879,997. STEAM-TRAP. DANIEL ARTHUR, New York, N. Y. Filed Mar. 7, 1907. Serial No. 361,125.

1. In a trap of the character described, the combination with a valve casing, of a valve seated therein and having an outwardly extending stem, a movable member supported on said casing and bearing on said stem, means for automatically moving said member whereby the valve

will be opened, and means carried by said first mentioned means for manually moving the same, substantially as described.



2. In a trap of the character described, the combination with a valve casing, of a valve seated therein and having an outwardly extending stem, a lever supported on said casing and bearing on said stem, an expansible member secured to said casing, means secured to said member and engaging said lever whereby the contraction of said member will move said lever to open the valve, and manually operated means carried by said first mentioned means whereby the lever may be moved, substantially as described.

879,998. NOVELTY DEVICE. VIOLA J. AUGIR, Brooklyn, N. Y. Filed Aug. 12, 1907. Serial No. 388,090.

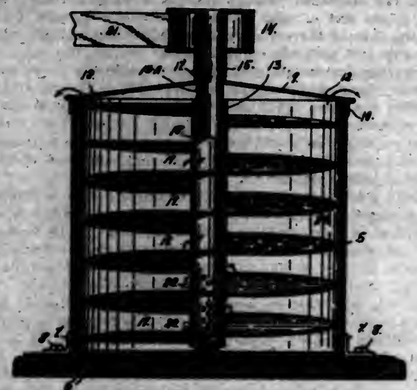


1. A pencil sharpener, comprising a body portion having a chamber in one end portion thereof which opens outwardly through said end, and means for closing said opening of said chamber, the other end of the body portion being solid except for a longitudinal opening formed therein and which communicates with said chamber and which opens outwardly through said end, the longitudinal axis of said opening being at an angle to that of said chamber, and a pencil sharpening device secured in said longitudinal opening.

2. A pencil sharpener, comprising a body having a chamber, in one end portion thereof which opens outwardly through said end, and means for closing said chamber, the other end portion of the body being solid except for a longitudinal opening formed therein and which communicates with said chamber and which opens outwardly through said end, said opening being provided with means for sharpening a pencil.

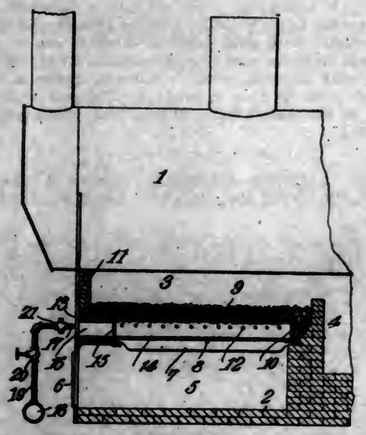
879,999. AMALGAMATOR. JAMES M. BARNES, Idaho Springs, Colo., assignor, by mesne assignments, to The Barnes Mining, Milling and Machinery Company, Denver, Colo. Filed Dec. 3, 1906. Serial No. 346,183.

1. In an amalgamator, the combination with a tank, of a spirally flanged hollow shaft centrally journaled in the tank and having its lower portion perforated to permit the escape of pulp from the shaft into the tank said shaft provided with a continuous spiral groove for engaging said flange, the flange of the shaft being coated with mercury for the purpose set forth.



2. In an amalgamator, the combination with a tank, of a shaft provided with a spiral flange composed of sections removably connected with the shaft said shaft provided with a continuous spiral groove for engaging the flange sections, substantially as described.

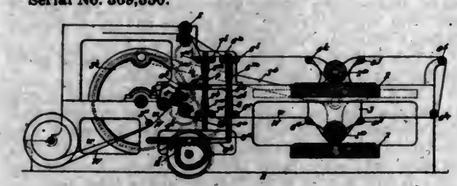
880,000. GAS-BURNING FURNACE. OLIVER H. P. BASOM, Chitwood, Mo. Filed Sept. 11, 1906. Serial No. 334,196.



1. The combination with a furnace having a grate therein, of a hollow gas mixing cylinder extending longitudinally of the furnace above the grate thereof and having an open end projecting to the exterior of the furnace to receive air and having a perforated partition extending transversely of the cylinder at a point in proximity to the open end thereof dividing the cylinder into open and closed mixing chambers, the closed chamber being of greater capacity than the open chamber and serving as an expansion chamber for relieving the pressure from the gas, the upper wall of the closed chamber being provided with a set of emission orifices, a nozzle discharging into the open chamber of the cylinder at the exterior of the furnace, and serving to draw atmospheric air into the cylinder, and a bed of refractory material covering the grate and the perforated cylinder thereon, the draft of the furnace serving to draw the gas and air from the expansion chamber and creating a draft of air from beneath the grate to mix with the gas and air from the expansion chamber of the cylinder.

2. The combination with a furnace embodying a grate provided with a source of air supply beneath it, and a combustion chamber above it, of a row of horizontally arranged tubular bodies located above the grate, the inner end of each body being closed and the upper wall thereof being provided with gas emission orifices, the outer end of each body being open to the atmosphere, a gas discharge nozzle adjacent to and directed into the open end of each body, a manifold connected to and supporting the nozzles of the set, a perforated gas and air mixing partition arranged transversely of each body at a point adjacent to the open end thereof and dividing each body into an initial gas and air mixing chamber that is open to the atmosphere, and a relatively larger gas and air mixing and expansion chamber between the partition and the closed inner end of the tube, and a bed of refractory material covering the grate and the set of tubular bodies and serving to create a draft that will draw the mixed gas and air from the enlarged mixing and expansion chambers of the several bodies.

880,001. TRAVELING-CYLINDER WEB-PRINTING PRESS. HENRY F. BECHMAN, Battle Creek, Mich., assignor to Duplex Printing Press Company, Battle Creek, Mich., a Corporation of Michigan. Filed Apr. 22, 1907. Serial No. 369,550.



1. In a printing press, the combination of a bed and co-acting cylinder, guides for directing webs between said bed and cylinder, mechanism for feeding webs to and delivering same from the press at different speeds, a looping mechanism for each web, and means for operating one looping mechanism from the other but at a different speed whereby the webs are fed and delivered simultaneously but at different speeds.

2. In a printing press, the combination of a bed and cylinder, fast and slow feeding mechanisms for directing webs through the press, a looping mechanism for the fast web, a looping mechanism for the slow web, and mechanism whereby one looping mechanism operates the other at a different speed.

3. In a printing press, the combination of a bed and co-acting cylinder, a sectional web feeding roll having a fast and a slow portion respectively adapted to feed a web to the press, guides for directing the webs between the bed and cylinder, and mechanism for looping the fast and slow webs.

4. In a printing press, the combination of a pair of beds and co-acting cylinders, guides for directing a web or webs between said beds and cylinders, a sectional web feeding roll having a fast and a slow portion respectively adapted to feed a fast and a slow web to the press, and mechanisms for looping the fast and slow webs.

5. In a web printing press, the combination of a bed and cylinder, guides for directing a web or webs between the bed and cylinder, and means for feeding and delivering two webs through the press at different speeds; with a set of looping rollers for each web, a cam operating one set of rollers, a pivoted lever connected with the said rollers, and connections between said lever and the second set of rollers, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

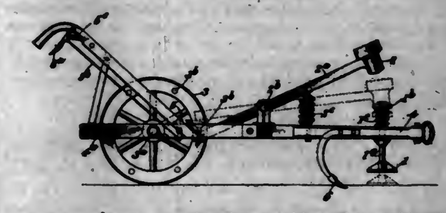
880,002. EYEGLASSES. WALLACE L. BEMIS, Brockton, Mass. Filed Aug. 1, 1907. Serial No. 386,593.

1. In eyeglasses, an eyeglass spring having a bow part shaped to fit the nose of the wearer; the ends of said bow part being each wound into a turn of a helical coil and then into an elongated loop which extends to the rear of said coil; said bow part and helical turn being susceptible of being raised and lowered about the rear bend of said elongated loop for adjustment of the bow part without deformation of said turn or change of relative position of said bow part and turn.



2. In eyeglasses, an eyeglass spring having a bow part shaped to fit the nose of the wearer; the ends of said bow part being each wound into a turn of a helical coil and then into an elongated loop which extends to the rear of said coil; the outside of said loop lying well within the outside of said coil and said bow part and helical turn being susceptible of being raised and lowered about the rear bend of said elongated loop for adjustment of the bow part without deformation of said turn or change of relative position of said bow part and turn.

880,003. MACHINE FOR THINNING COTTON-PLANTS. OSCAR R. BRUSH and MARK P. JACKSON, Montezuma, Ga. Filed June 27, 1907. Serial No. 381,156.



1. In a cotton row thinning machine, the combination of a frame, a yielding stamp mounted thereon, and an automatically and intermittently operated hammer adapted to deliver blows upon the head of said stamp, substantially as and for the purpose described.

2. In a cotton thinning machine, the combination of a frame, a spring controlled stamp mounted thereon; with means for actuating the stamp by impact at predetermined intervals, substantially as described.

3. The combination in a cotton plant thinning machine, of a suitable frame having a bull-wheel mounted thereon; with a pivoted hammer adapted to be automatically operated by said wheel, and a yielding stamp adapted to receive blows from the hammer, all substantially as and for the purpose described.

4. In a cotton thinning machine, the combination of a frame, a yieldable stamp mounted thereon, a pivoted spring actuated hammer mounted on said frame and adapted to actuate the stamp at predetermined intervals, and means for throwing the hammer into or out of operation.

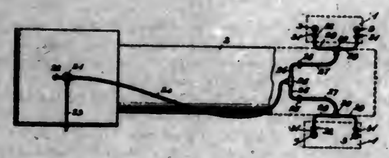
5. In a cotton thinning machine, a frame, a stamp mounted thereon, a pivoted spring actuated hammer, in combination with a wheel provided with pins secured at intervals on the face thereof for engagement of the hammer lever, whereby when the hammer is raised the spring is put under tension, and when released from engagement with the pins the stamp receives the impact of the hammer.

[Claims 6 to 8 not printed in the Gazette.]

880,004. CYLINDER RELIEF-VALVE. MATHEW BOHN, Pueblo, Colo. Filed Aug. 5, 1907. Serial No. 387,186.

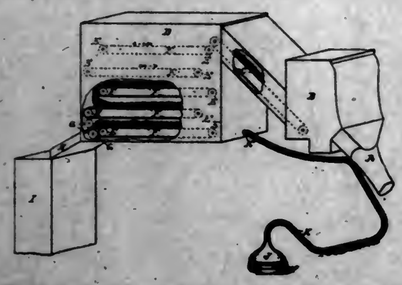
A cylinder relief valve for locomotives, one or more of said valves being attached to each of the cylinders and each of said valves, embracing a connecting member comprising an intermediate body portion formed with a central longitudinal bore and with a second bore extending

from the wall of the longitudinal bore, an upright exteriorly threaded tubular stem adapted for screwed engagement with an engine cylinder and a central exteriorly threaded depending portion closed in at its outer end by a centrally apertured end wall, the diameter of such aperture corresponding with that of the tubular stem bore and being slightly less than that of the body portion, a plunger movable longitudinally through the connecting member, the end portion of the plunger being of cylindrical form to closely fit the aperture and its opposite end portion of triangular form in cross-section to form steam passages between its sides and the wall of the tubular



stem, an outwardly flared enlargement formed at said last mentioned end portion to normally close the inner end of the tubular stem, a cylinder formed with an outer centrally apertured end wall, screwed to the depending portion of the connecting member and a piston arranged at the outer end of the plunger and to closely fit within the cylinder, a fluid supply pipe, extending forwardly along the locomotive boiler, the rear end of said pipe communicating with the interior of the boiler, and the forward end of the same leading under the boiler to a point in rear of the cylinders, and suitable branch connections leading from the forward end of the supply pipe to the several relief valves.

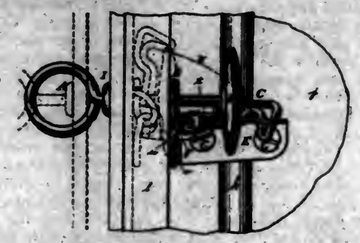
880,005. APPARATUS FOR BLEACHING COTTON. JOHN B. BRENNAN, Sherman, Tex. Filed July 15, 1907. Serial No. 383,753.



The combination with a closed bleaching receptacle, of means for supplying material to the upper portion of the receptacle, superposed independently operated aprons in the receptacle and arranged to travel in opposite directions, the alternate aprons reaching from one end of the receptacle to near the opposite end so as to cause the material to drop from one apron to the next lower one in zigzag fashion to the apron at the bottom of the receptacle, condensing rollers in the bottom of the receptacle adjacent the end of the last apron to receive material therefrom and pass the same outward, and means for introducing a gaseous bleaching compound to the material during its passage over the aprons.

880,006. DOOR-LATCH. JOHN H. BROWN, Independence, Kans. Filed Sept. 30, 1907. Serial No. 395,147.

1. In a door latch, the combination of a latch hook having at one end a curved lever and at the other end a portion designed to engage a keeper, also a portion acting as a kicker, with an integral frame having screw eyes and having a coil at one end with two half-loops at the other end of the frame, a push-button in connection with a push-rod, upon which rod is a ring, a keeper designed to be placed on the door jamb.

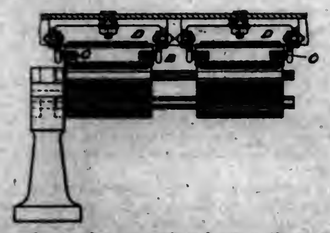


2. In a door-latch, an integral hook having a curved part at one end, and at the other end an engaging portion formed by bending the wire rod inward, then a little distance out on said wire, said wire being bent up and curved down to form a hook, then the wire being turned up at a slant from said curved portion thence turned back again when a little above the plane of the curved portion, then following the wire back from the curved portion back to and just past the angle or corner formed in said wire where the first turn as above described to form said hook was made, thence being turned down past the lower part of this wire thence outward, and thence upward to form a kicker, a brace securing the corners of the hook.

3. In a door-latch, a wire frame, a movable hook, a push-button, and a push rod, as described and shown.

4. In a door-latch a push rod having at one end a ring and at the other end a portion designed to engage a button, a button, a guide for said rod to pass through, a wire frame with an eye designed for said push rod to pass through, said wire frame having apertures for securing the rotating part of a latch hook, and a latch-hook designed to be raised by the contact of said push button, a keeper, and a washer designed to be placed immediately beneath the screw eyes at either end of the said keeper.

880,007. CLEARER FOR PREPARING FRAMES FOR COTTON AND OTHER FIBERS. NORMAN S. BROWN, Wigan, England. Filed Sept. 11, 1905. Serial No. 277,988.

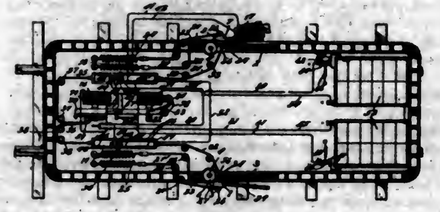


1. In a clearer for preparing frames, the combination with the cover A and adjustable brackets affixed thereto of clearer rollers tubular at the ends, pins fixed to the adjustable brackets of less diameter than the interior of the clearer rollers and projecting into the rollers without contact therewith so that the rollers can rotate freely upon the drawing rollers without touching the pins and can be raised with the covers and accommodate themselves to a re-setting of the drawing rollers without being re-set, substantially as described.

2. The combination with the roller cover A of adjustable brackets B affixed thereto, pins C projecting from the brackets and a roller clearer D with tubular ends into which the pins C project without contact therewith the internal diameter of the roller being much greater than the external diameter of the pin, to give a free movement in every direction, so that while the clearers can be raised with the covers they can adjust themselves to a re-setting of the rollers without being re-set, substantially as described, and shown.

3. A roller clearer constructed of a cylindrical tube D provided with inclined ends to cause a longitudinal travel of the roller in combination with pins C, which project into it, of external diameter less than the internal diameter of the tube, upon which the tube is mounted, to permit of the adjustment of the clearers to a re-setting of the rollers without being re-set, substantially as described.

880,008. MAIL-POUCH RECEIVING AND DELIVERY APPARATUS FOR RAILWAY-CARS. CHAUNCEY W. BROUGHTON, Carlton, Ill. Filed Dec. 6, 1907. Serial No. 405,393.



1. In an apparatus for the purpose described the combination of means upon a railway car for supporting a mail pouch magnetically, and means arranged at the side of the line of movement of the car for holding the mail pouch preparatory to being engaged by said magnetic supporting means.

2. In an apparatus for the purpose described the combination of a car or vehicle, means arranged at the side of the line of movement of the car or vehicle for supporting a mail pouch preparatory to being delivered to the car, magnetic means upon the car for receiving and supporting said mail pouch, and means for moving said magnetic means into and out of position for engaging the mail pouch while on said supporting means.

3. In an apparatus for the purpose described the combination of a car, an electro magnet supported thereon and embodying an electric circuit for energising the same, means at the side of the line of movement of the car for supporting a mail pouch preparatory to being delivered to the car, means for throwing said electro magnet into position to receive the mail pouch while on said supporting means, and means for drawing the electro magnet into the car and breaking the electric circuit therethrough.

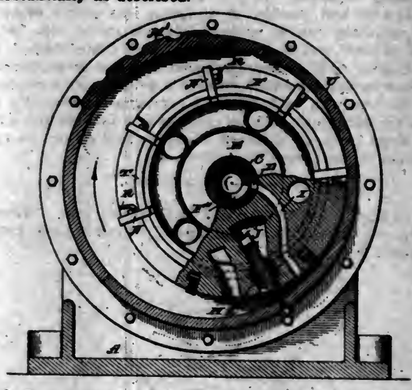
4. In an apparatus for the purpose described the combination of a mail pouch provided with an armature, means for supporting said pouch and armature, a car, a magnet mounted on the car, and means for moving said magnet into position to engage the armature of the mail pouch while the car is in motion.

5. In an apparatus for the purpose described the combination of a mail pouch, an armature secured thereto, means for supporting said pouch and armature, a car, an electro magnet mounted upon the car and adapted to engage said armature while the car is in motion, said electro magnet embodying a circuit whereby it is energized, means for turning said electro magnet outwardly into position to engage said armature, means for turning said electro magnet inwardly from said outward position, means for keeping the circuit closed through the electro magnet when in said two positions, and means for turning the electro magnet still further inward and simultaneously breaking the circuit therethrough whereby the mail pouch will be delivered and dropped into the car.

[Claims 6 to 10 not printed in the Gazette.]

880,009. ROTARY ENGINE. GEORGE F. BURTON, Woodlawn, Ala., assignor of one-fourth to Le Roy A. Christian and one-fourth to Charles W. Cram, Woodlawn, Ala. Filed May 23, 1907. Serial No. 375,257.

1. In a rotary engine, the combination of a shaft, a disk secured concentric thereto and provided with the live steam port I leading from its center, a cylinder eccentric to said shaft and a piston rigidly attached to one of said parts and pivotally and slidingly attached to the other, substantially as described.



2. In a rotary engine, the combination of a revolving shaft, a disk rigidly secured concentric thereto and provided with a live steam port leading from its center to its circumference, a revolving cylinder eccentrically disposed relative to said shaft, and a piston rigidly attached to one of said parts and movably attached to the other, substantially as described.

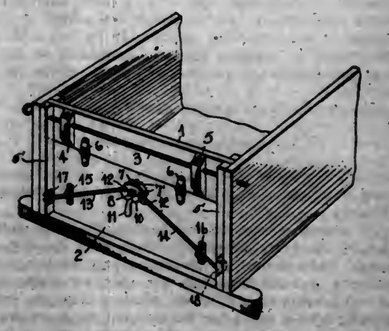
3. In a rotary engine, the combination of a shaft a revolving disk secured concentric thereto and provided with a live steam port leading from its center to its circumference, a revolving cylinder having bearings eccentric to said shaft, and a piston slidingly and pivotally secured to said disk and rigidly secured to said cylinder, substantially as described.

4. In a rotary engine, the combination of a revolving shaft, a revolving disk secured concentric to said shaft and provided with an admission port leading from its center and an exhaust port leading from its circumference, a revolving cylinder eccentric to said shaft and a piston secured to said disk and to said cylinder, substantially as described.

5. In a rotary engine, the combination of a revolving shaft provided with a steam port, a revolving disk rigidly and concentrically attached thereto, and provided with an exhaust port, a revolving cylinder eccentrically disposed with relation to said shaft and a piston rigidly attached to said cylinder and slidingly and pivotally attached to said disk, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

880,010. END-GATE. FRANK CAHA, Valparaiso, Nebr. Filed Sept. 12, 1907. Serial No. 392,534.



In combination with a wagon box, of an end gate composed of two members hingedly connected, one of said

members being adapted to be fixed to the wagon box and the other member being free to swing outwardly, a cam revolubly mounted on said swinging member near its upper edge and provided on its lower side with a depending operating handle, sockets arranged in the side members of said wagon box on the inner faces thereof at their lower ends, keepers arranged near the lower corners of said swinging member, locking rods pivotally connected at one end with said cam and extending downwardly in opposite directions, passing through said keepers and having their free ends arranged to engage said sockets on the turning of the cam.

880,011. DYNAMO-ELECTRIC MACHINE. HENRY CHITTY, Strand, London, England. Filed June 2, 1904. Serial No. 210,766.



1. In a dynamo electric machine having projecting pole pieces the combination with a pole piece having a portion in a direction transverse to that of rotation of the armature removed therefrom, of a bridge piece of magnetic material extending between adjacent pole pieces and forming a shunt path for the magnetic flux.

2. In a dynamo electric machine having radial pole pieces the combination with a pole piece having a portion near the polar face in a direction transverse to that of rotation of the revolving member of the machine removed therefrom, of a bridge piece of magnetic material extending between the tips of adjacent pole pieces and forming a shunt path for the magnetic flux.

3. In a dynamo electric machine having radial pole pieces the combination with a pole piece pierced with a hole in a direction transverse to that of rotation of the revolving member of the machine, of a bridge piece of magnetic material extending between adjacent pole pieces and forming a shunt path for the magnetic flux.

4. In a dynamo electric machine having projecting pole pieces the combination of a pole piece pierced with a hole in a direction transverse to that of rotation of the revolving member of the machine, of a bridge piece of magnetic material extending between the tips of adjacent pole pieces and forming a shunt path for the magnetic flux.

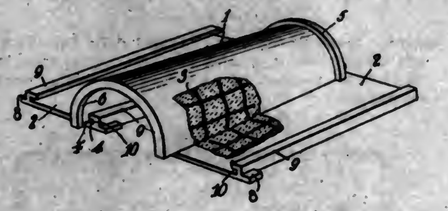
5. In a dynamo electric machine having projecting pole pieces the combination with a pole piece having its tip pierced with a hole in a direction transverse to that of rotation of the revolving member of the machine, of a bridge piece of magnetic material extending between adjacent pole pieces and forming a shunt path for the magnetic flux.

[Claims 6 to 27 not printed in the Gazette.]

880,012. ROOFING-TILE. BERTEL R. CHRISTENSEN, San Francisco, Cal. Filed Nov. 26, 1906. Serial No. 345,120.

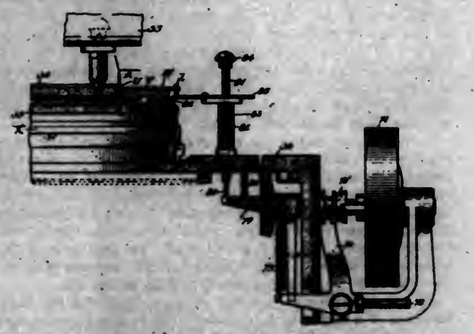
1. A tapering semi-tubular roofing tile, the ends and edges of which are flanged, the flanges on the ends being internal and external on the larger and smaller ends respectively, and the flanges on the edges extending inward and terminating at a sufficient distance from the internal flange to form a space for the external flange of the adjacent tile.

2. A roof composed of a series of tapering flat and semi-tubular tiles, the flat tiles each having inwardly extending overhanging flanges upon its edges and a downwardly extending projection on its bottom at the wider end, and a portion of them each having a laterally extending projection at its narrow end for the reception of holding means, the semi-tubular tiles each having its ends and edges



flanged, the end flanges being internal and external on the larger and smaller ends respectively, and the edge flanges extending inward and engaging with the overhanging portions of the flat tiles and each terminating at a distance from the internal flange to form a space, and the external flange of one tile fitting in said space in the tile above it.

880,013. STOP-MOTION FOR KNITTING-MACHINES. JOHN S. CRANE, Laconia, N. H. Filed Mar. 31, 1903. Serial No. 150,361.



1. A knitting machine having a drive-shaft, a plurality of yarn feeds, a rotating dial, a stationary plate, a loose stop-ring or detector-carrier resting on the plate, guides on the plate for centering said stop-ring or carrier concentrically with the axis of said rotating dial, an abutment on said dial rotating therewith, a knock-off operatively connected with said drive-shaft to stop the knitting machine when moved in the proper direction, a hammer attached to said stop-ring or carrier and coöperating with said knock-off, and a plurality of gravity detectors, each having a thread-eye through which passes one of the yarns on its way to one of the yarn feeds, each of said detectors being mounted to slide vertically in a guideway in said stop-ring or carrier, said detectors being normally upheld by their respective yarns out of the path of said rotary abutment, but each detector on the breaking or slackening of its yarn dropping by gravity into the path of said abutment, whereby the stop-ring or carrier is coupled to the dial and rotates therewith, thus causing said hammer to actuate said knock-off and thereby stop the machine, in combination with a cam on the said stationary plate, and a stud on said stop-ring or carrier which encounters said cam when the stop-ring or carrier is rotated, whereby the stop-ring or carrier is lifted and uncoupled from the dial after the knock-off has been set in operation, thus preventing undue motion of the stop-ring or carrier due to the momentum of the moving parts of the machine.

2. A knitting machine having a drive-shaft, a plurality of yarn feeds, a rotating dial, a stationary plate, a stop-ring or detector-carrier supported by the plate and movable thereon both rotatively and to and from the same, an abutment on said dial rotating therewith, a knock-off operatively connected with said drive-shaft to stop the knitting machine when moved in the proper direction, a hammer attached to said stop-ring or carrier and coöperating with said knock-off, and a plurality of gravity detectors, each having a thread eye through which passes one of the yarns on its way to one of the yarn feeds, each of said detectors being mounted to slide vertically in a guide-way in said stop-ring or carrier, said detectors being normally upheld by their respective yarns out of the path of said rotary abutment, but each detector on the breaking or slackening of its yarn dropping by gravity into the path of said abutment, whereby the stop-ring or carrier is coupled to the dial and rotates therewith, thus causing said hammer to actuate said knock-off and thereby stop the machine, in combination with a cam on the said stationary plate, and a stud on said stop-ring or carrier which encounters said cam when the stop-ring or carrier is rotated, whereby the stop-ring or carrier is lifted and uncoupled from the dial after the knock-off has been set in operation, thus preventing undue motion of the stop-ring or carrier due to the momentum of the moving parts of the machine.

3. A knitting machine having, in combination, a drive-shaft, a plurality of yarn feeds, a rotating dial, a stationary plate, a rotatable stop-ring or detector carrier supported by said plate, an abutment on said dial rotating therewith, a knock-off operatively connected with said drive-shaft to stop the knitting machine when moved in the proper direction, a hammer attached to said stop-ring or carrier, and coöperating with said knock-off, and a plurality of gravity detectors, each having a thread-eye through which passes one of the yarns on its way to one of the yarn feeds, each of said detectors being mounted to slide vertically in a guide-way in said stop-ring or carrier, said detectors being normally upheld by their respective yarns out of the path of said rotary abutment, but each detector on the breaking or slackening of its yarn dropping by gravity into the path of said abutment, whereby the stop-ring or carrier is coupled to the dial and rotates therewith, thus causing said hammer to actuate said knock-off and thereby stop the machine.

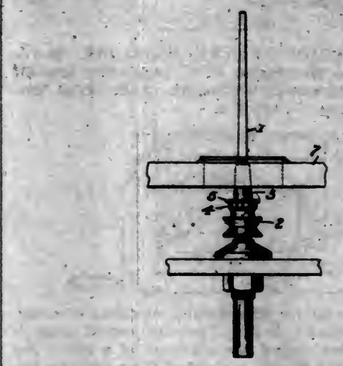
4. A knitting machine having, in combination, a drive-shaft, a knock-off controlling the rotation of said shaft, a plurality of yarn feeds, an abutment, a plurality of detectors, for the yarns, a carrier for said detectors, said detectors being normally held by their yarns out of the reach of said abutment, but so that when a yarn breaks or becomes unduly slack its detector moves to couple said detector-carrier and said abutment whereby the carrier and the abutment move together and thus operate the knock-off to stop the machine, and means for subsequently and automatically uncoupling the carrier and abutment.

5. A knitting machine having, in combination, a drive-shaft, means controlling the rotation of said shaft, a yarn feed, an abutment, a detector for the yarn, a carrier for said detector, said detector being normally held by its yarn out of the reach of said abutment, but so that when the yarn breaks or becomes unduly slack its detector moves to couple said detector-carrier and said abutment whereby the carrier and the abutment move together and thus operate the shaft controlling means to stop the machine, and means for subsequently and automatically uncoupling the carrier and abutment.

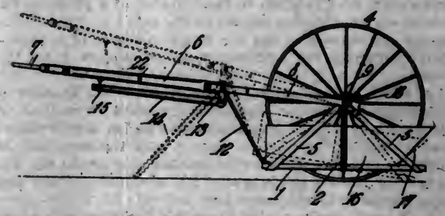
[Claims 6 to 12 not printed in the Gazette.]

880,014. DOFFING MEANS FOR RING-SPINNING MACHINES. ROBERT L. CUMNOCK, Anderson, S. C. Filed Nov. 7, 1906. Serial No. 342,401.

In ring spinning machinery and in combination, a spindle, and a flange on said spindle below the bobbin projecting horizontally and having notches extending from its edge at an angle to the radii presenting forwardly directed openings to receive the yarn, substantially as described.



880,015. TRUCK. JACOB F. DE LONG, Bristow, Iowa. Filed Sept. 17, 1907. Serial No. 393,268.



1. A truck comprising suitable supporting wheels, a drop axle, a platform supported by said axle at all times below the axis of the wheels, a handle connected to the axle and platform and capable of tilting the platform about the axis of the wheels as a pivot to a position where one edge of said platform will engage the ground, and a leg pivoted at one end to the handle and having the other end arranged to engage the ground and hold the end of the platform in engagement with the ground.

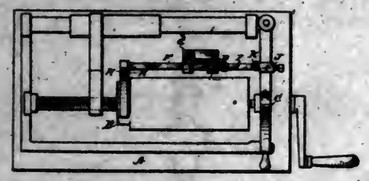
2. A truck comprising suitable wheels, a drop axle having its ends formed into journals for the wheels and between the wheels carrying a platform close to the ground, braces extending from the axle to the ends of the platform, a handle and yoke connection between the same and the axle adjacent to the wheels, braces from the handle to the adjacent end of the platform, and a leg pivotally supported at one end from the handle and of such length as to engage the ground when the platform is tilted to bring the end remote from the handle into engagement with the ground.

3. A truck comprising suitable wheels, a drop axle therefor, a platform supported by the axle, a handle connected to the axle and to the platform, reel supports adjacent to the axle, a reel adapted to said supports, a crank shaft having one end journaled in the handle near the manipulating end thereof, brace rods connected to the platform and handle for supporting the other end of the crank shaft, and connections between the crank shaft and reel for rotating the latter when the crank shaft is rotated.

4. A truck comprising suitable wheels, a drop axle therefor, a platform supported by the axle, a handle connected to the axle and to the platform, reel supports adjacent to the axle, a reel adapted to said supports, a crank shaft having one end journaled in the handle near the manipulating end thereof, brace rods connected to the platform and handle for supporting the other end of the crank shaft, connections between the crank shaft and the reel for rotating the latter when the crank shaft is rotated, and a leg pivotally supported by the handle and

arranged to engage the ground in such manner as to bring the end of the platform remote from the handle also into engagement with the ground.

880,016. ATTACHMENT FOR PHONOGRAPHS. EDWIN B. DONALDSON, Washington, D. C., assignor of one-half to Frederick A. Linger, Washington, D. C. Filed Mar. 28, 1907. Serial No. 365,074.



1. An attachment for phonographs consisting of a bar, adapted to reciprocate, bearings therefor, curved arms on the end of the bar shaped to the contour of a cylindrical record and adapted to abut the end of the record, an end gate, and means for connecting the bar to the end gate to take movement therefrom.

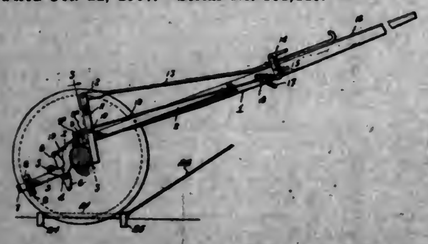
2. In an attachment for phonographs, a bar adapted to reciprocate with relation to the cylinder of a phonograph, record engaging means carried by the said bar and suitable means for connecting the bar to the end gate of a phonograph whereby the said bar takes movement from the lever.

3. In an attachment for phonographs, a bar adapted to reciprocate, means for supporting the bar with relation to the record of a phonograph, record engaging members carried by the bar adapted to contact with the inner end of the said record, means for connecting the bar to the end gate of a phonograph whereby the movement of the end gate is communicated to the bar.

4. An attachment for phonographs, having a cylindrical record, consisting of a reciprocating member, a bearing therefor, curved arms on the end of the reciprocating member adapted to conform to the contour of the record and contact the ends thereof, whereby the endwise movement of the record is afforded.

5. An attachment for phonographs having a cylindrical record, consisting of a reciprocating rod, a bearing for the rod, curved arms on the rod adapted to lie back of the end of the record, and means for reciprocating the rod.

880,017. CAR-MOVER. JOHN M. FISK, Curlew, Iowa. Filed Oct. 21, 1907. Serial No. 398,449.



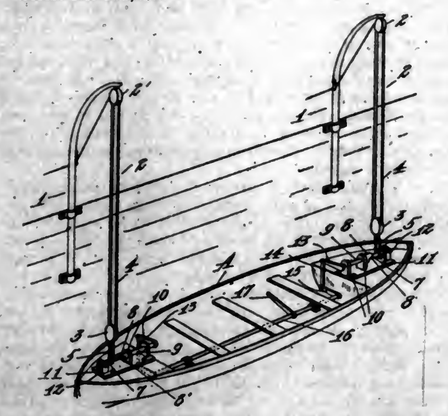
1. In a car mover, a hook, a lever pivotally connected therewith, means for limiting the movement of the hook with respect to the lever, and an auxiliary clamping lever having hinged connection with said main lever, all substantially as described and for the purpose specified.

2. In a device of the character described, the combination with a main lever of an auxiliary lever having pivotal connection therewith, an arm connected with said auxiliary lever, and means connected with said arm for fixing the position of the said auxiliary lever with respect to the main lever, substantially as described and for the purpose specified.

3. In a car mover, in combination with a main lever having a downwardly curved end, a bar pivotally connected with said main lever at said curved end, a hook upon the free end of said bar, and means for limiting the movement of said bar, for the purpose specified.

4. In a combination of the class described, a wheel block consisting of a body member with arms bent at substantially right angles to the same, the ends of said arms also being bent to substantially right angles to said arms, said ends being adapted to engage one edge of a rail and said body member being adapted to engage the side of a car wheel on said rail.

880,018. APPARATUS FOR LAUNCHING BOATS. JOSEPH FORCIER, Seattle, Wash. Filed Sept. 18, 1907. Serial No. 393,561.



An apparatus for launching boats comprising means for lowering and holding a boat suspended in a lowered position, bases secured in the opposite end portions of the boat, catch members pivoted to said bases for engaging said means, spaced uprights fixed to said bases, shafts supported for rotation in said uprights, keepers fixed to said shafts for holding said catch members against swinging, said keepers projecting from the outer ends of said shafts, a shaft rotatably supported beneath said first named shafts and provided with an operating handle, arms fixed to the other ends of said first named shafts, arms fixed to the last named shaft, and links connecting the arms of said shafts.

880,019. PUMP FOR OIL-WELLS. ROBERT S. FUTHEY, Los Angeles, Cal. Filed May 11, 1905. Serial No. 259,873.

1. A pump having a hollow plunger, a working barrel therefor, a valve cage in said barrel, a ball valve in said cage, a valve in said plunger, and a rod mounted in said valve cage and provided with a wing adapted to engage said ball to move the same from its seat, said rod being normally held in raised position and provided with a portion adapted to contact with the plunger.

2. A pump having a hollow plunger, a working barrel therefor, a valve-cage in said barrel, a valve therein, a valve in said plunger, said valve-cage carrying reciprocating means for unseating said valves, said means normally out of engagement with said valves and adapted to be operated by the extreme downward thrust of the plunger, and means carried by the plunger adapted to seat on said valve-cage and limit the downward thrust of the plunger.

3. A pump having a hollow plunger, a working barrel therefor, a valve-cage in said barrel, a valve therein, a valve in said plunger, a rod mounted in said valve-cage and provided with a wing to unseat the valve therein, said rod normally held in raised position and provided with a portion adapted to contact with the plunger and with a portion extending into said plunger and adapted to unseat



the plunger-valve when the plunger is in its extreme lower position.

880,020. VAULT-LINING. JACOB L. GRASS, Minneapolis, Minn., assignor to The American Bank Protection Company, Minneapolis, Minn. Filed July 13, 1907. Serial No. 383,554.



1. A vault lining comprising inner and outer plates insulated from each other and an alarm circuit having its terminals connected with said plates respectively and normally open, and means so arranged in relation to said plates that when pressure is applied to bend or buckle the vault lining plates the alarm circuit will be closed.

2. A vault lining comprising inner and outer plates insulated from one another, an alarm circuit having its terminals connected with said plates respectively, and normally open, and a circuit closing plate covering the joint between said lining plates, and means whereby when pressure is applied to bend or buckle the said lining plates at the joints said alarm circuit will be closed through said circuit closing plate, substantially as described.

3. A vault lining comprising inner and outer plates insulated from one another, an alarm circuit having its terminals connected with said plates respectively, and normally open, and circuit closing means lapping by the joints of said lining plates, whereby when pressure is applied to bend or buckle the said lining plates said alarm circuit will be closed.

4. A vault lining comprising inner and outer plates insulated from one another, an alarm circuit having its terminals connected with said plates respectively, a curved circuit closing plate arranged on the joint between the lining plates and in circuit with said inner lining plates and insulated from said outer lining plates, and means whereby when pressure is applied to bend or buckle the said lining plates the circuit will be closed through said curved plate.

5. A vault lining comprising inner and outer plates having an insulating material between them and an alarm circuit having its terminals connected with said plates respectively and normally open, curved circuit closing plates in circuit with the inner lining plates and insulated from the outer lining plates, and contact points formed on the outer lining plates and arranged to contact with said curved plate when the wall is bent or pressed out of its normal position.

[Claims 6 to 13 not printed in the Gazette.]

880,021. TROLLEY. GEORGE H. GROSS, Binghamton, N. Y. Filed Apr. 26, 1906. Serial No. 313,812.



1. In a device of the class described, a non-rotatable ring having a clear open space therethrough from side to side, an oil cup within the ring and having a conduit attached thereto and to the ring and extending through its periphery, and a trolley-ring rotatable on the periphery of the first named ring.

2. In a device of the character described, a pole, a harp journaled on the pole and having a limited rocking movement, means for limiting such movement, a non-rotatable ring composed of annular sections, one of said sections being attached to the harp, and a trolley journaled on said ring.

880,022. POTATO-GRATER. HERMANN HALBACH, Neunkirchen, Germany. Filed Feb. 18, 1907. Serial No. 358,150.



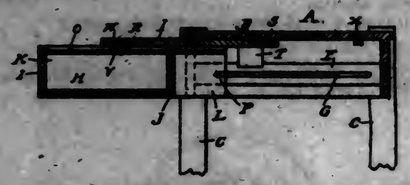
A potato grater, comprising in combination, a vertical shaft, four arms provided with notches attached to the shaft, a crown supported by the arms, a spiral saw blade with a free space between the coils situated inside the crown, notches in the arms to give the required spiral shape to the saw blade, and free space between the spirals of the saw blade to allow the passage of the vegetables, substantially as described and shown and for the purpose set forth.

880,023. DESK-TABLE. MORLEY P. HARDING, Detroit, Mich., assignor to Cadillac Cabinet Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 25, 1907. Serial No. 359,142.

1. As an article of manufacture, the combination with a table, a draw sliding therein, a sliding desk top for the drawer, and a stop upon the inner side and in proximity to the outer edge of the desk top for preventing its outward movement beyond the drawer.

2. As an article of manufacture, the combination with a table, of a drawer sliding therein, a desk top mounted upon the drawer for sliding movement, and disk rollers

carried by the top and engaging grooves formed in the drawer sides.

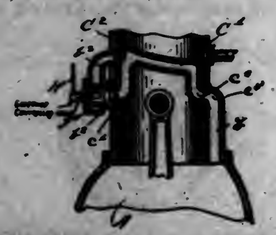


3. As an article of manufacture, the combination with a table, of a drawer sliding therein, means for permitting the projection of the drawer back beyond the table front, and a sliding desk top for the drawer extending normally thereover and rearwardly beyond the drawer back, forming a supporting section.

4. As an article of manufacture, the combination with a table, of a drawer sliding therein, the drawer sides extending rearwardly beyond the back a sufficient distance to permit, on outward movement of the drawer, the projection of its back beyond the table front, and a sliding desk top for the drawer comprising a main section covering the drawer proper, and a supporting section for writing materials resting normally upon the drawer extensions.

5. As an article of manufacture, the combination with a table, of a drawer sliding therein, the drawer sides extending rearwardly beyond the back a sufficient distance to permit, on outward movement of the drawer, the projection of its back beyond the table front, a sliding desk top for the drawer comprising a main section covering the drawer proper, and a supporting section for writing materials resting normally upon the drawer extensions, and stop-pins upon said extensions engaging the table rails and acting to limit the outward movement of the drawer.

880,024. EXPLOSIVE-ENGINE. JOHN D. HAY, Chicago, Ill., assignor of one-half to William R. Donaldson and one-fourth to George W. Marble, Chicago, Ill. Filed Oct. 13, 1906. Serial No. 338,752.



1. In a device of the class described the combination with a crank case and cylinder secured thereto having an inlet port of a passage cored in the wall of the cylinder opening directly into the crank case at one end and opening through the side of the cylinder, an exhaust port opening from the cylinder above said passage, a piston in said cylinder having a chamber in the head thereof, passages leading downwardly therefrom through the wall of the piston and opening outwardly, one of said passages adapted to register with the end of the passage in the cylinder wall and a passage adapted to communicate with the other passage in the piston at the lowest limit of movement of the piston and also communicating with the inlet port for the cylinder.

2. In a device of the class described the combination with a crank case and cylinder of a piston therein having a passage opening through one side thereof and extending upwardly through the side wall of the same beneath the piston head and extending downwardly through the wall of the piston on the opposite side thereof, a passage in the wall of the cylinder adapted at one end to communicate with one end of the passage in the piston and at its opposite end opening directly into the crank case and a pipe opening into the cylinder at one end to communicate with the other end of said passage in the piston and at its opposite end opening into the cylinder above the piston at its lowest limit of movement.

3. In a device of the class described the combination with a crank case and cylinder of a piston in the cylinder having oppositely disposed passages in its side walls opening through the piston at their lower extremities and communicating with a chamber in the piston head, a passage in the wall of the cylinder having one end opening into the cylinder and adapted to communicate with one of said passages therein and at its opposite end opening into the crank case and not controlled by the piston, a passage opening at one end through the cylinder adapted to communicate with the other passage in the piston and affording communication with the cylinder above the piston at the limit of its power stroke and a controlling valve in said last named passage.

880,025. RUNNING-GEAR OR SUSPENSION-FRAME FOR VEHICLES. REINHOLD HEBMAN, Crafton, Pa. Filed Dec. 15, 1905. Serial No. 291,876.



1. A vehicle frame comprising in combination with a pair of axles, and springs mounted thereon, bolsters mounted on the springs, and a pair of superposed frames, one of which is journaled at one end in one of the bolsters, and the other of which is journaled at the opposite end in the other of said bolsters.

2. In a vehicle, the combination with the axles, and the springs mounted thereon, of a bolster mounted on each set of springs, and two superposed frames, the upper of which is journaled at one end in one of the bolsters and rigidly connected at its other end to the other of said bolsters, and the lower of which frames is likewise journaled at one end in one of the bolsters, and rigidly connected at its other end to one of the axles.

3. In a vehicle, a front and a rear bolster, each mounted on springs, and two frame-members arranged one above the other, one of said frame-members journaled in one of the bolsters, and the other of said frame-members journaled in the other of said bolsters.

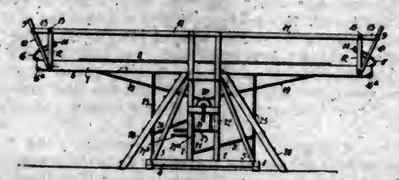
4. In a vehicle, a front and a rear bolster each yieldingly-mounted, and a pair of frames, one journaled at one end in one of the bolsters, and the other journaled at the opposite end in the other of said bolsters.

5. An automobile frame comprising in connection with the axles and the springs mounted thereon, a pair of bolsters mounted on said springs, and frame-members each having a trunnion, the trunnion of one frame member being journaled in one of said bolsters, and the trunnion of the other frame-member being journaled in the other bolster.

[Claims 6 to 29 not printed in the Gazette.]

880,026. SEESAW. WILLIAM L. JENKINS, New Castle, Pa. Filed Mar. 11, 1907. Serial No. 361,786.

1. In a see saw, a supporting frame, a tilting platform pivoted between its ends thereto and having longitudinally extending guide beams, a counterbalancing weight slidably sustained on said beams, guide pulleys journaled at opposite ends of the path of travel of said weight, a pulley journaled to the frame beneath the platform, a flexible operating cable terminally engaged with the weight and arranged for travel between its ends on the guide pulleys, said cable being led once around the operating pulley for actuation thereby to move the weight back and forth as the platform rocks, seats pivotally sustained at the ends of the platform, and connecting bars pivoted to the seats and to the frame for holding the seats in upright position while in operation.



2. In a see saw, a supporting frame, a tilting platform pivoted between its ends thereto and provided with longitudinal guide beams, a counterbalancing weight slidably sustained on said beams, guide pulleys journaled at the ends of the path of travel of the weight, an operating cable terminally attached to the weight and arranged for travel on the guide pulleys, an operating pulley journaled on the frame beneath the platform and having the cable wrapped once therearound for actuation to move the weight back and forth as the platform tilts, a brake band arranged around and to control the movement of the operating pulley, a lever connected with and for tightening said band, means for holding the lever in adjusted positions, seats pivotally sustained at the ends of the platform, connecting bars terminally pivoted to the frame and to the seats for holding the latter in upright position, rocking bars fixed for movement with the respective seats, and expansible springs terminally attached to the forward ends of the rocking bars and to the platform.

880,027. METHOD OF MAKING ELECTRODES. ERNST W. JUNGNER, Kneippbaden, Sweden, assignor to Nya Ackumulator Aktiebolaget Jungner, Stockholm, Sweden. Filed Apr. 4, 1907. Serial No. 366,391.

1. The method of producing electroactive substances for secondary batteries which comprises binding small particles of magnetic metal by a hydrate of one of these metals, converting this hydrate to a higher state of oxidation by anode electrolysis in alkali, treating the mass with a solution of a compound of the metal, and subsequently electrolyzing it in an alkaline electrolyte.

2. The method of producing electroactive substances for secondary batteries which comprises binding small particles of magnetic metal by a hydrate of one of these metals, converting this hydrate to a higher state of oxidation treating the mass with a solution of a compound of the metal, while metallically connected to a plate of the same metal and subsequently electrolysing it in an alkaline electrolyte.

3. The method of producing electroactive substances for secondary batteries which comprises binding small particles of magnetic metal by a hydrate of one of these metals, converting this hydrate to a higher state of oxidation as $Ni(OH)_2$, subsequently converting said higher hydrate to a lower one as $Ni(OH)_2$, and simultaneously forming additional hydrate at $Ni(OH)_2$ and finally converting all the hydrate to a higher state of oxidation as $Ni(OH)_4$, substantially as described.

4. The method of producing electroactive substances for secondary batteries which comprises binding small particles of magnetic metal and graphite with a hydrate of the metal, converting said hydrate to a higher state of oxidation, treating the mass so formed with a solution of a compound of said metal, and finally subjecting the resulting mass to electrolysis in alkali, substantially as described.

5. The method of producing electroactive substances for secondary batteries which comprises binding small particles of magnetic metal and graphite galvano-plated with one of these metals with a hydrate of the metal, converting said hydrate to a higher state of oxidation, treating the mass so formed with a solution of a compound of said metal, and finally subjecting the resulting mass to electrolysis in alkali, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

880,028. TELESCOPE. ALBERT KÖNIG, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed May 25, 1907. Serial No. 375,605.



1. In a two-fold telescope having the entrance axes inclined to each other the combination with two objectives of two image reversing systems adapted to bring the images into juxtaposition in a direction approximately perpendicular to the directions of the entrance axes, and an ocular system having a single eye-point.

2. In a two-fold telescope having the entrance axes inclined to each other the combination with two objectives of two image reversing systems adapted to bring the images into juxtaposition in a direction approximately perpendicular to the directions of the entrance axes, and two oculars inclined to each other so that their eye-points coincide.

3. A two-fold telescope with the entrance axes in the horizontal plane and inclined to each other, comprising two objectives, two terrestrial oculars having a common reversing lens and a common eye-point, and two systems of reflecting prisms adapted to raise the entrance axes above the eye-point and to locate the images one closely above the other.

4. A two-fold telescope with the entrance axes in the horizontal plane, comprising two objectives, two terrestrial oculars which have a common reversing lens and a common eye-point, and two prism systems adapted to raise the entrance axes above the eye-point, the optical axes of the two single telescopes lying in the same vertical plane and one prism system being retrospective.

880,029. IGNITION DEVICE FOR AUTOMOBILE TORPEDOES. FRANK M. LEAVITT, New York, N. Y., assignor to E. W. Bliss Company, Brooklyn, N. Y., a Corporation of West Virginia. Filed Feb. 16, 1907. Serial No. 357,629.



1. In an automobile torpedo, the combination of a heater for compressed air, an igniter in said heater, and means for operating the igniter comprising a part movable through a prescribed space before it reaches its operative position, and engine connections for moving said part through such space while the engine is executing a predetermined number of revolutions.

2. An ignition mechanism for an automobile torpedo comprising a movable part restrained by fluid pressure, and means operated by the engine for relieving the pressure to permit the movement of said part.

3. An ignition mechanism for an automobile torpedo comprising a shell, a movable part therein, means for admitting fluid pressure thereto on opposite sides of said part, and means operated by the engine for relieving the pressure to permit the movement of said part.

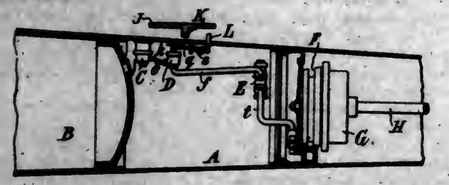
4. An ignition mechanism for an automobile torpedo comprising a movable part restrained by fluid pressure, means for relieving the pressure to permit movement of

said part, and a connection with the engine adapted to operate said means upon a prescribed movement of the engine.

5. An ignition mechanism for an automobile torpedo comprising a movable part restrained by fluid pressure, means for relieving the pressure to permit movement of said part, and reducing gearing connecting said means with the engine to operate it upon a prescribed movement of the engine.

[Claims 6 to 10 not printed in the Gazette.]

880,030. STARTING-VALVE FOR AUTOMOBILE TORPEDOES. FRANK M. LEAVITT, New York, N. Y., assignor to E. W. Bliss Company, Brooklyn, N. Y., a Corporation of West Virginia. Filed Feb. 16, 1907. Serial No. 357,630.



1. A starting valve for automobile torpedoes comprising a pressure-actuated part receiving a gaseous pressure tending to hold the valve closed, a frangible part confining such pressure, and means for breaking or puncturing such frangible part to permit an escape of such pressure, in substantially the manner set forth.

2. A starting valve for automobile torpedoes comprising a valve shell, a movable part therein, means for admitting pressure to a chamber on one side of said part to hold the valve closed, a frangible part in communication with said chamber and serving to confine such pressure, and means for breaking or puncturing the frangible part to permit an escape of presspre from said chamber.

3. A starting valve for automobile torpedoes comprising a valve shell, a piston and valve proper movable therein, an air inlet to one side of said piston, a restricted duct for communicating pressure from said inlet to a chamber on the opposite side of the piston, and a frangible part communicating with said chamber and confining the pressure therein.

4. A starting valve for automobile torpedoes comprising a valve shell, a movable part and valve proper therein, an inlet opening, a restricted duct permitting pressure from said inlet to a chamber on the opposite side of said moving part, opening into said chamber at a seat adapted to close by the opening movement of the valve, and a frangible part in communication with said chamber and confining the pressure therein.

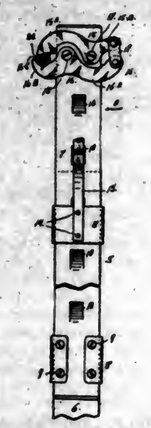
5. A starting valve for automobile torpedoes comprising a valve shell having an inlet, a valve seat and an outlet, a piston and attached valve movable therein, means for admitting a restricted flow from the inlet to a chamber on the opposite side of said piston in which the pressure acts against the entire area of the latter, and a frangible part in communication with said chamber and confining the pressure therein.

[Claims 6 to 9 not printed in the Gazette.]

880,031. EXTENSIBLE CLOTHES-LINE SUPPORT. ARCHIBALD MACKENZIE and THOMAS M. NORTON, Denver, Colo. Filed June 11, 1906. Serial No. 321,167.

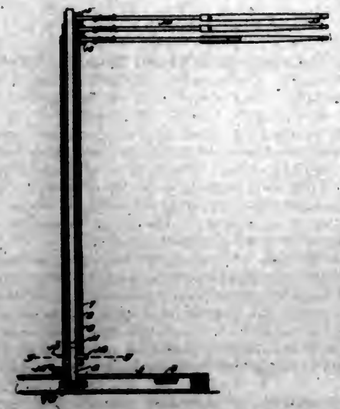
1. A bar having pivoted at one extremity thereof two coöperating gripping jaws with suitable link connection, whereby they are closed automatically when pressure is applied to the gripping extremity of one of the jaws.

2. A line supporting bar in combination with two lever-like jaws each pivotally mounted on the bar and each having one arm longer than the other, the long arm of each jaw being disposed adjacent the short arm of the other jaw, and a link connection between two adjacent arms of the jaws while the other two adjacent arms are



constructed to automatically grip the line to be supported as pressure is applied to one of the gripping arms.

880,032. MUSIC-LEAF TURNER. ALLEN I. MERCER, Mannington, W. Va. Filed May 16, 1907. Serial No. 373,999.



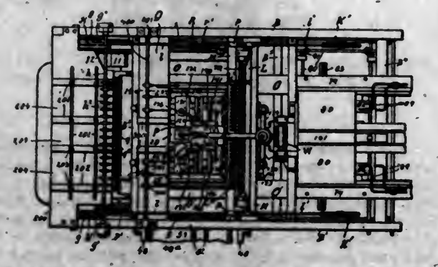
1. A music leaf turner, comprising a support, a vertical shaft journaled on said support, means for turning said shaft, said shaft being provided with a pin, and the support being provided with an upwardly extending shoulder with which said pin is adapted to register upon the rotation of the shaft, a plurality of telescoping tubes loosely mounted on said shaft, said tubes being provided in their lower edges with bayonet slots with which said pin is adapted to successively engage so as to turn the tube in succession, the tubes being adapted to drop one after the other over the shoulder, and arms carried by the respective tubes, said arms being each provided with means for attaching it to a leaf.

2. A music leaf turner, comprising a support, a vertically extending shaft journaled on said support and provided with a radially extending pin, means for turning said shaft back and forth on the support, the support being provided with a shoulder with which said pin is adapted to register upon the actuation of the shaft, a plurality of telescoping tubes loosely mounted to move vertically and revolve on said shaft, said tubes being provided in the lower edges with downwardly opening bayonet slots adapted to successively pass down over the shoulder and also adapted to be successively engaged by the pin so as to carry them around towards the shoulder, said tubes being provided at their upper face with studs, and the stud of one tube extending over the upper edge of the next outermost tube and adapted to hold its tube at a higher elevation than the said next outermost tube, whereby the bayonet slots of the several tubes will be normally out of alinement, and arms carried by the respective tubes, said arms being provided with means for attaching them to the leaves.

3. A music leaf turner, comprising a support, a vertical shaft journaled on said support, means for turning said shaft, said shaft being provided with a pin, and the support being provided with an upwardly extending shoulder with which said pin is adapted to register upon the rotation of the shaft, a plurality of telescoping tubes loosely mounted on said shaft, said tubes being provided in their lower edges with bayonet slots with which said pin is adapted to successively engage so as to turn the tube in succession, the tubes being adapted to drop one after the other over the shoulder, and arms carried by the respective tubes, said arms being each provided with means for attaching it to a leaf, said arms having a jointed connection with the tubes, whereby they may be folded against the same.

4. A music leaf turner, comprising a supporting case, a toothed segment mounted in said case and spring pressed in one direction, a pinion with which said segment meshes, a vertically extending shaft journaled in said case and to which said pinion is secured, said shaft being provided with a radially extending pin near its lower end, the case being provided with an upwardly extending shoulder with which said pin is adapted to register, a plurality of telescoping tubes loosely mounted on said shaft to slide vertically and turn thereon, the several tubes being provided at their lower edges with downwardly opening bayonet slots, and adapted to be successively engaged by said pin so as to move the tubes in succession until their slots register with the said shoulder, whereby the tubes in succession may drop over the shoulder, and arms carried by the respective tubes, said arms being provided with means for attaching them to the several leaves of a music book or the like.

880,033. MACHINE FOR MAKING BOOK-COVERS. ALBERT MUGLER, Brooklyn, N. Y. Filed July 12, 1907. Serial No. 383,400.



1. A machine of the class described provided at the front with a gage shaft having gage fingers and a transverse gripper shaft having gripping fingers, a gage plate mounted transversely of the machine and provided with gages adjustable longitudinally thereof and transversely of the machine, a stationary folder bar arranged rearwardly of said shafts, and transverse guides connected with said folder bar and adjustable transversely of the machine.

2. A machine of the class described provided at the front with a gage shaft having gage fingers and a transverse gripper shaft having gripping fingers, a gage plate mounted transversely of the machine and provided with gages adjustable longitudinally thereof and transversely of the machine, a stationary folder bar arranged rearwardly of said shafts and transverse guides connected with said folder bar and adjustable transversely of the machine, said machine being also provided with a transverse shaft arranged over said folder bar and provided with right and left and backwardly directed guide arms having straight horizontal bottom portions adapted to bear on said folder bar and provided with inwardly directed flanges.

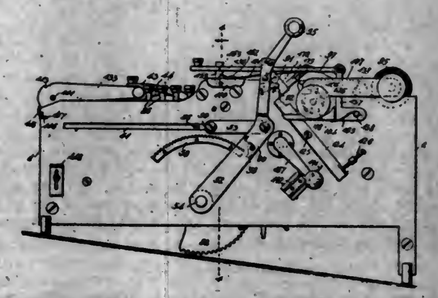
3. A machine of the class described provided at the front with a gage shaft having gage fingers and a transverse gripper shaft having gripping fingers, a gage plate mounted transversely of the machine and provided with gages adjustable longitudinally thereof and transversely of the machine, a stationary folder bar arranged rearwardly of said shafts, and transverse guides connected with said folder bar and adjustable transversely of the machine, said machine being also provided with a transverse shaft arranged over said folder bar and provided with right and left and backwardly directed guide arms having straight horizontal bottom portions adapted to bear on said folder bar and provided with inwardly directed flanges, the end portions of said folder bar being upwardly, forwardly and backwardly directed.

4. A machine of the class described provided at the front with a gage shaft having gage fingers and a transverse gripper shaft having gripping fingers, a gage plate mounted transversely of the machine and provided with gages adjustable longitudinally thereof and transversely of the machine, a stationary folder bar arranged rearwardly of said shafts, and transverse guides connected with said folder bar and adjustable transversely of the machine, said machine being also provided with a transverse shaft arranged over said folder bar and provided with right and left and backwardly directed guide arms having straight horizontal bottom portions adapted to bear on said folder bar and provided with inwardly directed flanges, the end portions of said folder being upwardly, forwardly and backwardly directed, said machine being also provided rearwardly of the folder bar with a transverse forwardly and backwardly movable cloth carrier adapted to move between the folder bar and said shaft.

5. In a machine for making book covers of the class described a gage plate placed transversely over the front portion of the machine and provided with gages which range longitudinally of the machine and are adjustable transversely thereof on said plate, said machine being also provided rearwardly of the gage plate with a stationary transverse folder bar, and guides connected with said bar which range longitudinally of the machine and are adjustable transversely thereof.

[Claims 6 to 15 not printed in the Gazette.]

880,034. ADDING-MACHINE. ROBERT H. MCNAIR and WILLIAM A. MCNAIR, Peoria, Ill. Filed Apr. 1, 1907. Serial No. 365,881.



1. In an adding machine, a plurality of sets of registering disks, means for moving the characters thereon into two positions, one of said positions being the zero or non-printing position and the other being the operative posi-

tion, the operative position of one disk being different from the operative position of the other disk.

2. In an adding machine, a plurality of disks, each provided with characters, the characters of the alternate disks occupying one position after having been actuated, and the characters of the other disk occupying a different position, and means for taking an impression from the characters of either set of disks as though they occupied the same position.

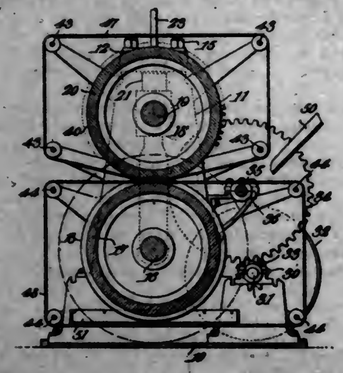
3. In an adding machine, printing mechanism, a plurality of sets of disks, means for actuating them, the characters of the disks of one set occupying one position relatively to said mechanism after said disks have been operated and the characters of the other disk occupying another position after they have been operated, and means for moving said mechanism vertically and laterally relatively to said disks.

4. In an adding machine, printing mechanism, a plurality of independently operable sets of indicating disks, means for holding one of the disks of each set against reverse movement in either of two positions relative to the printing mechanism, and means for reciprocally rotating the other disk of each set so as to move the first-mentioned disk into one of said positions.

5. In an adding machine, a plurality of sets of independently operable registering disks, one of the disks of each set being provided with a series of shoulders upon each side, two stops for engaging with the shoulders upon one side, and means upon the other disk of said set for engaging with the shoulders upon the other side of the first-mentioned disk.

[Claims 6 to 80 not printed in the Gazette.]

880,035. ROLLER-PRESS. CHRISTEN NEILSEN, Memphis, Tenn. Filed Oct. 30, 1906. Serial No. 341,284.



A roller press comprising a suitable base, a pair of opposed cheek plates or standards having vertical slots, a roll having journaled supports in the lower ends of said slots and provided with end flanges, another roll directly above the first-named roll and having journal bearings adjustably mounted in said slots, cap plates closing the upper ends of the slots, hydraulic jacks interposed between the cap plates and the journal bearings of the upper roll, a pair of endless belts, one for each roll, carrying rollers for the belts, journal supports for the belt rollers projecting from said cheeks or standards, and a receiving pan located above the path of the lowermost run of the belt passing around the lower roll and entered by said lower roll and the flanges thereof.

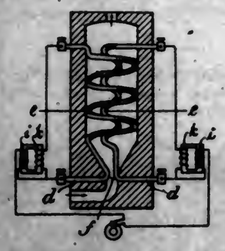
880,036. GATE-HINGE. WILLIAM J. PEARSON, Winchester, Oreg. Filed July 22, 1907. Serial No. 384,974.

1. In an automatic gate closer, the combination with a gate, of a plate member fixed to the upper end of the upright member of said gate and projecting beyond the inner face of said upright and provided with laterally spaced hinge-engaging means, laterally spaced members fixed to the adjacent post at its upper end, members having their respective ends pivotally connected with said post-carried members and with the spaced means of said gate-carried plate, a hinged member fixed to said post near its lower end and at a point in alinement with a line passing through the center of the space between the laterally spaced members at the upper end of said post, and a member pivotally engaged at one end with said post member at the lower end of the post, and pivotally engaged with the lower end of said gate upright.



2. In an automatic gate closer, the combination with a gate, of a plate member fixed to the upper end of the upright member of said gate and projecting beyond the inner face of said upright and provided with laterally spaced apertures, laterally spaced eye-ended members fixed to the adjacent post at its upper end, U-shaped members having their legs disposed one in said post-carried eye-members and the other in the apertures of said gate-carried plate, a hinged member fixed to said post near its lower end and at a point in alinement with a line passing through the center of the space between the laterally spaced eye-members at the upper end of said post, and a member pivotally engaged at one end with said post member at the lower end of the post, and pivotally engaged with the lower end of said gate upright.

880,037. METHOD OF TREATING GASES AND GAS MIXTURES BY MEANS OF VOLTAIC ARCS. ALBERT J. PETERSSON, Alby, Sweden. Filed Aug. 23, 1904. Serial No. 221,907.

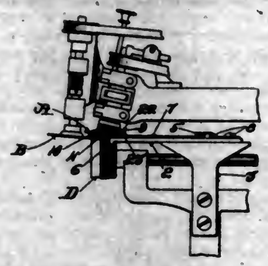


1. The method of treating gases by means of voltaic arcs, which consists in leading gases through a furnace chamber, creating the said arcs between electrodes in the said furnace chamber and creating electrodynamic forces for strengthening the displacing action exerted upon the arcs by the currents flowing through the electrodes to the said arcs, substantially as and for the purpose set forth.

2. The method of treating gases by means of voltaic arcs, which consists in leading gases through a furnace chamber, creating the said arcs between electrodes in the said furnace chamber, and creating electrodynamic forces by means of electric currents of greater intensity than that of the current creating the arcs for displacing the latter, substantially as and for the purpose set forth.

3. The method of treating gases by means of voltaic arcs which consists in leading gases through a furnace chamber, creating the said arcs between electrodes in the said furnace chamber and creating electrodynamic forces by means of electric currents of greater intensity than that of the current creating the arcs and induced by the last mentioned current for displacing the arcs substantially as and for the purpose set forth.

880,038. FEED-GUIDE FOR TRIMMING AND SKIVING MACHINES. CHARLES S. PIERCE, Brockton, Mass. Filed Dec. 13, 1906. Serial No. 347,584.



1. In a machine of the character described, the combination with a rotary cutting disk and feeding mechanism, of a tapering roll and a fixed guide between the said roll and the said cutting disk, said guide serving to guide the stock in its passage from said roll to said cutting disk.

2. In a machine of the character described, the combination with a rotary cutting disk and feeding mechanism, of a roll and a fixed guide between the said roll and the said cutting disk, said fixed guide having a contour on the side toward the said roll corresponding to the adjacent portion of the said roll.

3. In a machine of the character described, the combination with a rotary cutting disk and feeding mechanism, of a roll loosely mounted on a yielding vertically adjustable support and a fixed guide between the said roll and the said cutting disk, said guide being also mounted on said vertically adjustable support to effect the simultaneous adjustment of the roll and guide without changing their relative adjustment.

4. In a machine of the character described, the combination with a rotary cutting disk and feeding mechanism, of a tapering roll loosely mounted and a fixed guide between the said roll and the said cutting disk.

5. In a machine of the character described, the combination with a rotary cutting disk and a tapering feed wheel, of a roll tapering to correspond with the said feed wheel and a fixed guide between the said roll and the said cutting disk, said fixed guide having a contour on the side toward the roll corresponding to the adjacent portion of the said roll.

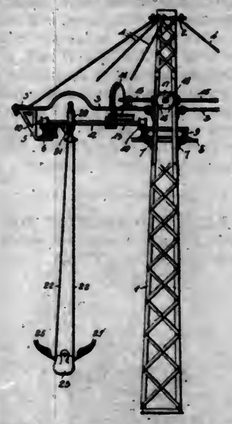
[Claim 6 not printed in the Gazette.]

880,039. PUMP. MARK POLLATSCHEK, Bucharest, Roumania. Filed Dec. 12, 1904. Serial No. 236,577.



In a pump, the combination with a cylinder, of a cylinder extension of reduced diameter, a sleeve uniting the same, a ball valve in said extension, a piston and delivery tube fitting the cylinder and having a valve seat and ball valve, the arrangement being such that the opening in the piston and delivery tubes corresponds in size with the opening in the extension cylinder whereby the valve for the latter may pass through the opening in the former, substantially as described.

880,040. PLEASURE-RAILWAY. JOHN C. RECKWEG, Palo Alto, Cal. Filed Sept. 4, 1907. Serial No. 391,857.



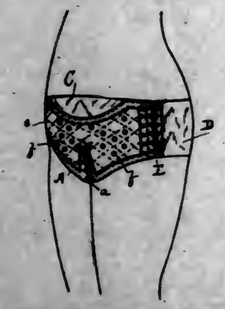
1. A device of the character described, comprising a centrally disposed supporting tower, a series of radially projecting supporting arms secured at their inner ends to said tower, brace rods adapted to support the outer ends of said arms, an outer circular track supported by the outer ends of the arms, an inner circular track supported by the tower, an inner and outer series of flanged rollers or wheels adapted to travel on the tracks, shafts to connect said wheels, means to drive said shafts, bird-like cars supported by said shafts, means on the latter to move the cars up and down when being swung around, pivoted wings arranged on said bird-like cars, and means whereby said wings are moved up and down with the movement of the car, substantially as described.

2. A device of the character described, comprising a centrally disposed supporting tower, a series of radially projecting supporting arms secured at their inner ends to said tower, brace rods adapted to support the outer ends of said arms, an outer circular track supported by the outer ends of the arms, an inner circular track supported by the tower, inner and outer series of flanged rollers or wheels adapted to travel on the tracks, shafts to connect said wheels means to drive said shafts, eccentric disks fixedly mounted on the latter, eccentric straps arranged around said disks, supporting rods pivotally connected at their upper ends to said straps, bird-like cars secured to the lower ends of said rods, seats arranged in said cars, and wings pivotally mounted on the body of the same and adapted to be moved up and down to simulate the motion of a bird in flight, substantially as described.

3. A device of the character described, comprising a centrally disposed tower, a series of radially projecting supporting arms connected at their inner ends to said tower, brace rods adapted to support the outer ends of said arms, depending brackets arranged on said outer ends, an outer circular track secured to said brackets, an inner circular track secured to the tower, flanged supporting rollers traveling on said tracks, shafts to connect said flanged rollers, a circular rack connecting said shafts, radially disposed drive shafts mounted on the tower, spur gear wheels mounted on the ends of said shafts and engaging said circular rack, bevel gears on the inner ends of said shafts, a motor, a motor shaft operated thereby, a bevel gear wheel on said shaft adapted to operate the bevel gears on said drive shafts, a series of bird-like cars, supporting rods, whereby said cars are operatively connected with the drive shafts, and means to move said cars up and down while being swung around, substantially as described.

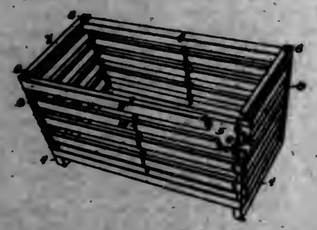
4. A device of the character described, comprising a centrally disposed tower, a series of radially disposed supporting arms secured to said tower, inner and outer circular supporting tracks, means to connect said tracks with said tower and supporting arms, flanged rollers traveling on said tracks, supporting shafts connecting said rollers, operating cams fixedly mounted on said shafts, cam or eccentric straps arranged on said cams, bird-like cars, supporting rods adapted to connect said cars with the eccentric straps on said cams, wings pivotally connected to the sides of the body portion of said cars, said wings being pivotally connected together at their inner ends, a coiled spring connected to said pivoted inner ends and a fixed part of said cars, whereby when said wings are swung upwardly by the downward motion of the car, said spring will restore or swing the same downwardly when the car is being raised, substantially as described.

880,041. BELT AND SUPPORT FOR ABDOMINAL TREATMENT. HENRY T. RENTON, Oakland, Cal. Filed Jan. 22, 1906. Serial No. 297,351.



In combination, a belt comprised of a plurality of layers of material, a reticulated body interposed between said layers, a medicated pad between the layers of the belt eyelets penetrating the belt, and rubber gussets positioned at intervals along the opposite edges of the belt and the medicated pad.

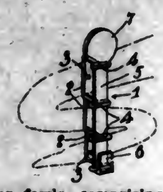
880,042. CRATE. HENRY RIETMANN, Crown Point, Ind. Filed May 20, 1907. Serial No. 374,620.



1. A crate of the character specified, embracing a bottom, a body comprising side and end pieces, the latter being arranged to alternate with the former, binding wires arranged at the corners of the crate body, said wires being bent alternately in different planes or directions to form receiving loops for receiving the ends of the side and end pieces of the body, and upright reinforcing wire arranged at the inner corners of the body and passing through the loops of the binding wires.

2. A crate of the character specified, embracing a bottom, a body comprising side and end pieces, the latter being arranged to alternate with the former, a binding wire arranged at each corner of the crate body, said wire being bent alternately in different directions to form two series of securing loops, one series being disposed approximately at right angles to the other and receiving the adjacent ends of the side pieces, and the other series the adjacent ends of the end pieces, and an upright reinforcing wire, arranged at each inner corner of the crate body and to pass through the loops of the adjacent binding wire.

880,043. HOPPLE FOR FOWLS. ERNEST C. ROLFE, Memphis, Tenn. Filed Apr. 1, 1907. Serial No. 365,822.

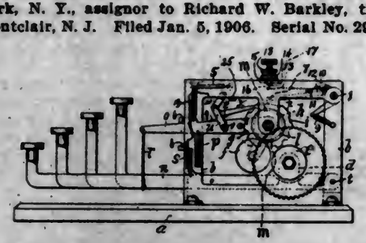


1. A hopple for fowls, comprising a frame having a series of spaced bars connected to receive the joints of a wing between them, and means to secure said frame in place, substantially as described.

2. A hopple for fowls, comprising a frame having a series of spaced bars connected to receive the joints of a wing between them, and a fastening bar adapted to be engaged with the outer ends of said spaced bars to hold the hopple on the wing, substantially as described.

3. A hopple for fowls, comprising a frame having a series of spaced bars connected to receive the joints of a wing between them, loops or eyes formed on the outer ends of said spaced bars, a fastening bar adapted to be inserted through the loops or eyes on the end of said spaced bars and doubled over at one end to secure the same in place, and a head on the opposite end of said bar, substantially as described.

880,044. TRANSMITTER. SAMUEL W. ROTHERMEL, New York, N. Y., assignor to Richard W. Barkley, trustee, Montclair, N. J. Filed Jan. 5, 1906. Serial No. 294,699.



1. In a transmitter, the combination with the movable member of a circuit-closer, of a cam-wheel for operating the said member, a toothed gear to which said cam-wheel is connected, an arm pivoted on the axis of said gear, a tooth gear mounted on said arm and meshing with the first-named gear, a tooth driver from which the second-named gear is normally disengaged, means for swinging said arm to engage said second-named gear with said driver, means for locking said arm with said gear and driver in mesh with each other, and means for throwing off said locking means when the cam-wheel reaches a given position.

2. In a transmitter, the combination with the movable member of a circuit-closer, of a cam-wheel for operating said member, a tooth gear to which said cam-wheel is connected, an arm pivoted on the same axis as said gear, a tooth gear mounted on said arm and meshing with the first-named gear, a toothed driver from which the second-named gear is normally disengaged, key-actuated means for swinging said arm to engage said second-named gear with said driver, a toggle for locking said arm with said gear and said driver in mesh with each other, a thrust-arm connected with said toggle, and a pin or projection rotating with said cam-wheel and coacting with said thrust-arm to move said toggle from its locking position.

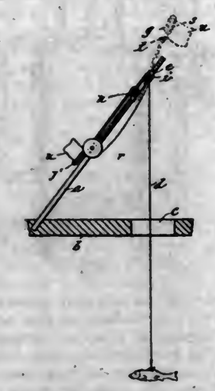
3. In a transmitter, the combination with the movable member of a circuit-closer, of a cam-wheel for operating said member, a toothed gear with which said cam-wheel is connected, a bent lever fulcrumed on the the axis of said gear, a gear mounted on said lever and meshing with the first-named gear, a toothed driver from which the second-named gear is normally disengaged, a sub-lever pivoted on the bent lever and held against a stop on the bent lever by a spring, a key-lever connected with said sub-lever, a toggle having one member pivoted on the fixed frame and the other member pivotally connected with said sub-lever, a thrust-arm pivotally connected with said toggle, and a pin or projection connected with the cam-wheel and acting on said thrust-arm to throw said toggle beyond its line of centers.

4. In a telegraph transmitter, the combination with a pair of percussive contact-points, of a rotatable cam or telegraph-wheel for actuating one of said points, a rotary driver having its axis of motion outside of said cam-wheel, and key-operated mechanism for connecting and disconnecting said cam-wheel to and from said driver.

5. In a transmitter, the combination with two percussive contact-points, of a plurality of cam-wheels for moving one of said points, a driver whose axis of motion is external to said cam-wheels, and a plurality of mechanisms (one for each cam-wheel) for connecting and disconnecting said cam-wheels with and from said driver independently of one another.

[Claims 6 to 17 not printed in the Gazette.]

880,045. FISHERMAN'S TYPE. CHARLES S. RUGGLES, Three Rivers, Mass. Filed Mar. 12, 1907. Serial No. 361,939.

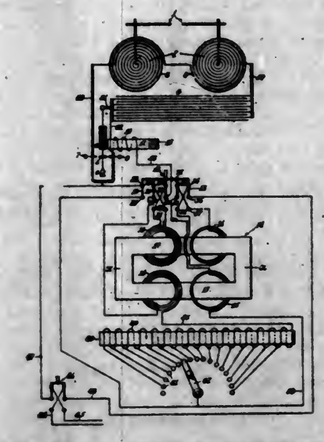


1. In a device of the class described, a standard provided with an opening therein, a rotatable element mounted within said opening, one end of the rotatable element being provided with a suitable signal and the other end being bent into a hook-shape, whereby when the hook-shaped end of the rotatable element is in an elevated position, the line can be supported thereon, and when the hook-shaped part of the rotatable element is in a lowered position, the line will be readily disengaged therefrom; and elastic means for retaining the rotatable element in either an elevated or lowered position.

2. In a device of the class described, a standard provided with an elongated opening therein, one portion of the opening being of greater width than the remaining portion of the opening, a flag-holder rotatably mounted on the enlarged portion of the elongated opening, an eye also formed in the flag-holder, an elastic element having one end secured to the eye and the other end to the standard, the eye portion being outside of the center line of the flag-staff in either a raised or lowered position whereby the flag-holder is yieldingly retained against rotation.

3. A device of the class described, a standard, a signal device rotatably mounted in the standard and provided with a bent portion at one end for receiving the signal proper, the opposite end of the signal device being provided with a hook-shaped part, elastic means on the standard and connected eccentrically to the pivot portion of the signal device for holding the signal device in an elevated or lower position, a reel carried by the standard for supporting the line, whereby when the line is looped over the hook-shaped part and a suitable tension is exerted thereon, the signal device will be tripped as described.

880,046. HIGH-FREQUENCY DISCHARGE APPARATUS. JAMES E. SEELEY, Los Angeles, Cal., assignor to Synchronous Static Company, Los Angeles, Cal., a Corporation of California. Filed Nov. 26, 1906. Serial No. 345,242.



1. A high frequency discharge apparatus comprising a discharge circuit, a charging circuit, a supply circuit, an induction apparatus having a plurality of windings, means for connecting one of said windings in the supply circuit and the other of said windings in the charging circuit, and means for connecting both of said windings in the charging circuit.

2. A high frequency discharge apparatus comprising a discharge circuit, a charging circuit, a supply circuit, an induction apparatus having a plurality of windings, means for connecting one of said windings in the supply circuit and the other of said windings in the charging circuit, and means for closing or opening the magnetic circuit of the induction device to adapt it for operation with either alternating or direct current.

3. A high frequency discharge apparatus comprising a discharge circuit, a charging circuit, a supply circuit, an induction apparatus having a plurality of windings, means for connecting one of said windings in the supply circuit and the other of said windings in the charging circuit, said induction device having a closed circuit core, and switch means for connecting the coils on said core to energize the core on closed magnetic circuit or in open magnetic circuits in opposite directions.

880,047. CANE. WILLIAM S. SMITH, Chicago, Ill. Filed July 3, 1906. Serial No. 324,604.

1. In a device of the class described the combination with a tubular stick of a shaft revolubly held therein, and a flag or the like wound upon the shaft and having one end attached thereto, there being recesses formed in the shaft at the edges of the flag to receive the increased bulk thereof caused by hems or selvage.

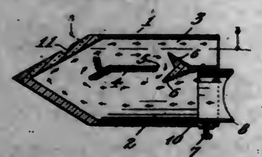
2. In a device of the class described, a tubular stick, a shaft revolubly held therein, a flag or the like attached to the shaft, there being a longitudinally extending slot in

the tubular stick through which one end of the flag is passed, and a flexible roll formed at the outer end of the flag, said roll comprising a flexible cord and a binding



over the same, and the external part of the longitudinal slot in the stick being widened to receive the flexible roll.

880,048. SOLDERING-COPPER. ROBERT R. STEIN, Seattle, Wash. Filed June 10, 1907. Serial No. 378,279.



1. A hollow soldering copper provided with a partition and formed on opposite sides of said partition with inwardly extending conduits in communication with one another at their inner end portions, said wall or partition separating said conduits being formed with an opening forming a passage between said conduits, for the purpose specified.

2. A soldering copper formed with inwardly extending conduits and spaced passages communicating therewith, and deflector means adjacent the outer of said passages, for the purpose specified.

3. A soldering copper formed with inwardly extending intake and return conduits and spaced passages communicating therewith, and deflector means arranged in said return conduit and adjacent the outer of said passages, for the purpose specified.

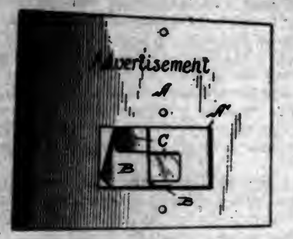
4. A soldering copper formed with inwardly extending intake and return conduits and spaced passages communicating therewith, and deflectors projecting from the outer of said passages into said conduits, for the purpose specified.

5. A soldering copper formed with inwardly extending intake and return conduits and spaced passages communicating therewith, and forwardly projecting deflectors in said conduits fixed to the wall or partition separating said conduits to the rear of the outer of said passages.

880,049. DISPLAY-EASEL. ALFRED M. STOFFLET, Mauch Chunk, Pa. Filed June 24, 1907. Serial No. 380,610.

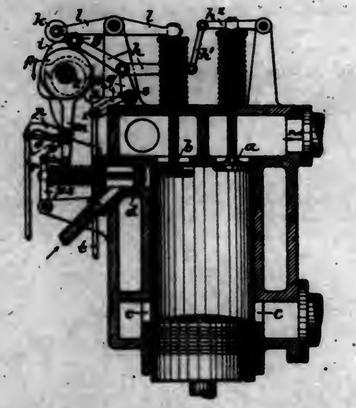
1. A device of the kind described, comprising a body having an opening formed therein a triangular support secured to the rear of said body having a notch registering with said opening, and flaps extending in opposite directions from the rear of said notch forming a back for an article when arranged in the opening of the body.

2. In a device of the kind described, the combination with a body provided with an opening, of a flanged triangular shaped support secured to the rear of the body provided with a notch, the upper and lower edges of which



are in alinement with the upper and lower edges of the body, and flaps extending in opposite directions from the rear of the notch forming a back.

880,050. REVERSING-GEAR FOR INTERNAL-COMBUSTION ENGINES. JAKOB SULZER, Winterthur, Switzerland. Filed Dec. 5, 1905. Serial No. 290,369.



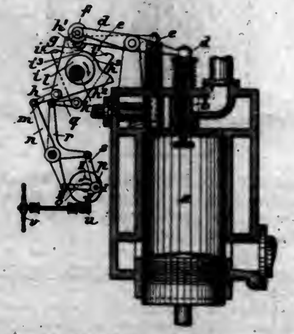
1. In a reversal gear for internal combustion engines the combination with a fuel admission gear of a roller carried by said fuel admission gear, an actuating cam and means for moving the roller into a middle position beyond the range of the actuating cam and into either of two extreme positions within the range of the cam and corresponding respectively with the two directions of running of the engine, substantially as described and for the purpose set forth.

2. In a reversal gear for internal combustion engines the combination with a fuel admission gear of a roller carried by said fuel admission gear, an actuating cam, means for moving the roller into a middle position beyond the range of the actuating cam and into either of two extreme positions within the range of the cam and corresponding respectively with the two directions of running of the engine, an air admission valve, means for opening the air admission valve for both directions of running at a certain period of the crank movement after the exhaust begins to open and means for closing the air valve at the same time that the exhaust is closed, substantially as described and for the purpose set forth.

3. In a reversal gear for internal combustion engines the combination with a fuel admission gear of a roller carried by said fuel admission gear, an actuating cam, means for moving the roller into a middle position beyond the range of the actuating cam and into either of two extreme positions within the range of the cam and corresponding respectively with the two directions of running

of the engine, an air admission valve, an exhaust valve, means for opening the latter at a certain period of the crank movement before the air admission valve begins to open and means for closing the exhaust valve at the same time that the air admission valve is closed substantially as described and for the purpose set forth.

880,051. REVERSING-VALVE MECHANISM FOR INTERNAL-COMBUSTION MOTORS. JAKOB SULZER, Winterthur, Switzerland. Filed Dec. 8, 1905. Serial No. 290,915.



1. An internal combustion or explosion motor having a reversing valve and a fuel-supply valve, in combination with oscillating cam-plates for actuating said valves, and means for shifting the oscillating cam-plates to an intermediate position in which they do not move the said valves, and into two extreme positions, corresponding to the two directions of movement of the motor, in which they do move the said valves, substantially as described.

2. An internal combustion or explosion motor having a reversing valve and a fuel-supply valve, in combination with oscillating cam plates for actuating said valves, the said cam-plates being so mounted that they are capable of being shifted to an intermediate position in which they do not move the said valves, and into two extreme positions, corresponding to the two directions of movement of the motor, in which they do move the said valves, and means for simultaneously shifting the said cam-plates from a position in which the fuel-admission-valve is operated by this cam-plate and the reversing valve is not operated, to a position in which the reversing valve is actuated by this cam-plate and the fuel-admission-valve is not operated, and then into a position in which the fuel-admission valve is operated at a time corresponding to the reversed movement of the engine and the reversing valve is not operated, substantially as described.

880,052. DOOR-LOCK. WILLIAM H. THOMAS, Whittier, Cal. Filed Jan. 16, 1906. Serial No. 296,266.



1. A door lock having means to work the locking mechanism from the outside by means of a pass key comprising a disk revolubly mounted in a cylinder carrying screw tumblers and having in the center of the inner end thereof a square socket for the reception of a square shank on the main key on the inside of the lock and having on the periphery thereof a recess for the reception of the projecting end of the pass key.

2. The herein described means to operate a lock of the character herein described by means of a pass key comprising a cylindrical casing; a tumbler barrel therein; a key engaging disk revolubly mounted in the inner end of the cylindrical casing, the said disk having in its center a square socket; an aperture in the periphery thereof in combination with a pass key and a main key adapted to operate the lock.

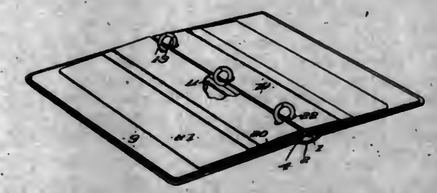
3. The herein described means to operate a lock of the character herein described comprising the cylinder lock G having mounted therein a tumbler barrel *l* having screw threaded openings therein for the reception of screw threaded tumblers *h* a disk Z rotatively mounted in the rear end thereof and having square apertures Z'' in the center thereof and a slot Z' in the periphery thereof; a revoluble key cylinder *f* rotatively mounted in the tumbler barrel in combination with the main key H having a square projecting shank H' on the end of the stem thereof adapted to be turned upon the rotation of the disk Z, substantially as herein shown and described.

4. The herein described means in a lock of the character herein described to adapt the lock for use on a door opening to the right or left comprising a latch E having a lug E' projecting on both sides thereof in combination with a bolt having a shoulder F' on the upper edge thereof and a removable casing having a bifurcated key opening therein and means to secure said removable casing to the casing of the lock substantially as herein shown and described.

5. In a lock of the character herein described the herein described means to operate both the latch E and the door bolt F comprising the pivoted lever P pivotally secured in the corner of the casing of the lock as at P' and projecting upwardly into the path of the web of the main key and contacting therewith on the rotation of the main key in combination with a latch operating lever Q having a downwardly projecting extension Q' thereon adapted to contact with the lever P substantially as herein shown and described.

[Claims 6 to 9 not printed in the Gazette.]

880,053. TEMPORARY BINDER. CLARENCE D. TRUSSELL, New York, N. Y., assignor to Trussell Manufacturing Company, New York, N. Y., a Corporation of New York. Filed June 15, 1907. Serial No. 379,106.



1. In a temporary binder, a pair of metallic plates apertured for the mating prongs and bossed or bent inwardly at the outer and inner edges of each aperture.

2. In a temporary binder, a pair of metallic plates apertured for the mating prongs and bossed or bent inwardly between each aperture and the inner edge of the plate to form a groove in which a prong will lie when the binder is closed.

3. In a temporary binder, a spring plate, a series of mating prongs, and a pair of flat, metallic plates apertured for the mating prongs and bossed or bent inwardly at the outer edge of each aperture so that the plates will not catch in the joints between the spring plate and the mating prongs.

4. In a temporary binder, mating prongs; means to retain said prongs in open or closed position; and apertured metallic plates engaged by said prongs and adapted

to open the prongs when pressed backward by the operator.

5. In a temporary binder, mating prongs; covers; and a fly-leaf next to each cover engaging the mating prongs and composed of a metallic plate at its base covered by paper and having a paper wing or extension outwardly.

[Claim 6 not printed in the Gazette.]

880,054. DUMPING-WAGON. JAMES H. VAN ARSDALE, St. Louis, Mo., assignor to Luedinghaus-Espenschied Wagon Co., a Corporation of Missouri. Filed June 7, 1906. Serial No. 320,634.



1. A dumping wagon, comprising a body, a bottom formed of two sections, one located on each side of the rear axle, and means for swinging said sections to the front and rear away from the axle to provide a free passage for the material, substantially as specified.

2. A dumping wagon, comprising a body, a receptacle formed in the body, the receptacle portion of the body supported upon the rear axle, a bottom composed of two sections, said sections pivotally connected to the sides of the body, the ends communicating with the axle when in closed position to form the bottom of the receptacle, and clear free from the axle when open, and means for closing the sections and to hold the same in closed position, substantially as specified.

3. A device of the class described, comprising a body, a running gear, the rear portion of the running gear supporting the receptacle portion of the body, a bottom composed of two sections one located on each side of the axle of the running gear, brackets supporting said sections to the sides of the body, said sections arranged to swing open by gravity, and means for retaining the sections in closed position, and to permit the same to open when released, and a lever mechanism for raising the sections to a point higher than their normal position of gravity, substantially as specified.

4. A dumping wagon comprising a body, the rear portion having a receptacle in which the material is to be placed, an axle supporting the receptacle portion of the body, and located at a position to receive the greater portion of the weight of the wagon and material, a bottom arranged to swing away from the axle to permit the contents of the receptacle to freely pass therefrom, and means for opening and closing said bottom, substantially as specified.

880,055. ARC-LIGHT ELECTRODE CONTAINING METAL WITHIN THE SAME. HERMANN VIERTEL, Charlottenburg, Germany, assignor to Gebrüder Siemens & Co., Charlottenburg, Germany, a Corporation of Germany. Filed Apr. 16, 1907. Serial No. 368,594.

1. A method of manufacturing arc light electrodes, consisting in filling the interstices of a reticulated metal tube with core material and inserting said tube into a hollow carbon casing and drying the same.

2. A method of manufacturing arc-light electrodes, consisting in covering a core with a reticulated metal tube, in impregnating the same with core-material, and in inserting the core-rod thus obtained into a carbon casing containing core-material, and in drying the same.

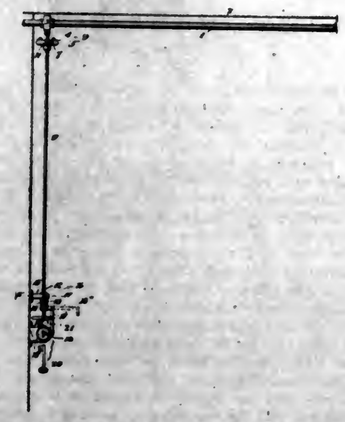
3. An arc-light electrode, comprising in combination a core, a reticulated metallic tube and a carbon casing inclosing the same, the spaces and interstices within said casing being filled with core-material.

4. An arc-light electrode comprising in combination a core, a reticulated metallic tube cemented thereto where-



by a core-rod is formed, and a carbon casing cemented to the latter.

880,056. VALVE LOCKING MECHANISM. LESTER A. WERNER, New York, N. Y., assignor to Water Overflow Preventive Co., a Corporation of New York. Filed Oct. 27, 1906. Serial No. 340,793.



1. In combination with the usual valves of a piping installation, a rod adapted to be connected thereto in the axial direction of the valve stem, and means for initially insuring a predetermined rotation of said rod and subsequently locking it against rotation.

2. A means for insuring the closure of a valve comprising a rod adapted to be connected thereto in the axial direction of the valve stem, a lock, and an auxiliary key mechanism adapted to secure said rod against movement after a predetermined angular rotation thereof.

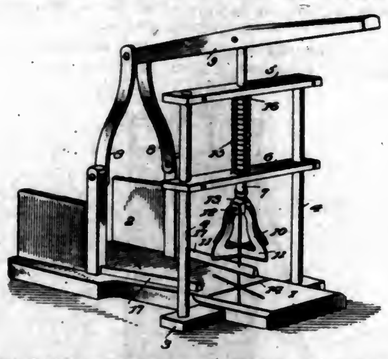
3. A means for insuring the closure of a valve, comprising a rod having a flanged collar thereon, a slotted plate adapted to fit around the valve stem, means for connecting said collar and plate and clamping them upon the valve handle, and means to secure said rod against movement after a predetermined angular rotation thereof.

4. A means for insuring the closure of a valve, comprising a rod adapted to be connected thereto in the axial direction of the valve stem, a lock, a finger formed to be received in said lock, and means whereby said finger is positioned to be received in the lock after a predetermined rotation of said rod.

5. A means for insuring the closure of a valve, comprising a rod adapted to be connected thereto in the axial direction of the valve stem, a lock, means moved by said rod and adapted to be received in said lock, and an auxiliary key mechanism adapted to permit the removal of said means from the lock.

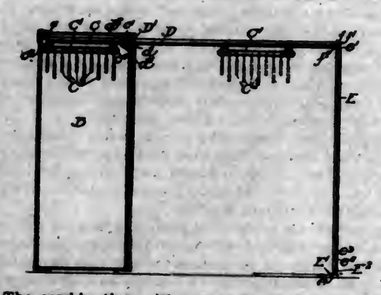
[Claims 6 and 7 not printed in the Gazette.]

880,057. POTATO-CUTTER. MELLEY M. WHEELER, Winnsboro, Tex. Filed May 4, 1907. Serial No. 371,914.



In a device of the character described, the combination of a base, a pair of companion standards projecting from opposite sides of the base at one end thereof, spaced cross bars connecting the standards, a reciprocating plunger guided in its movements by the cross bars, a knife carried by the lower end of the plunger and adapted to cooperate with the base, a coil spring surrounding the plunger between the spaced cross bars and operating to hold the plunger normally in an elevated position, a lever for actuating the plunger, and a pair of upright walls on opposite sides of the base at the other end thereof, the said walls constituting a hopper and facing towards the knife.

880,058. TRUNK. CHARLES T. WILT and ELMER E. WILT, Chicago, Ill., assignors to Chas. T. Wilt, Chicago, Ill., a Firm. Filed Aug. 10, 1906. Serial No. 329,993.



1. The combination with a receiving compartment provided with a door, of a tubular, slotted rail fixed to the upper wall of said compartment, a tubular, slotted extension rail hinged or pivotally connected to the fixed rail by a part supported on said upper wall and independent of said door, and a hanger suspending carriage provided with part which extend through the slots of said rails and have bearing within the hollow rails, the slots of the rails extending continuously from the stationary to the extension rail, when the latter is in operative position, to form a continuous track for said carriage.

2. The combination with a receiving compartment, of a fixed rail therein, a hanger suspending carriage movably mounted thereon, and a rail extension hinged directly to the fixed rail and designed to be folded in said compartment when not in use, said fixed and extension rails being formed to provide a continuous way for the carriage whereby the latter may be moved directly from the fixed rail to the extension rail and vice versa.

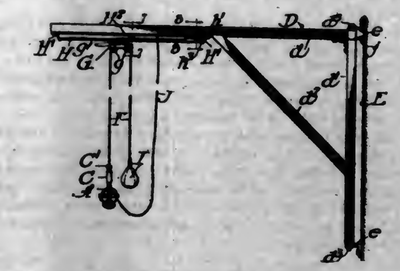
3. The combination with a receiving compartment, of a fixed horizontal rail therein, an extension rail, a hinge directly connecting the latter rail with the fixed rail, and a hanger sustaining carriage movable on said rails, the rails and hinge being arranged to constitute a continuous way for the carriage to permit it to be moved from one rail to the other.

4. The combination with a receiving compartment provided with a laterally swinging door for closing the same, of a stationary rail fixed to the upper wall of the compartment, an extension rail hinged to the stationary rail by a part independent of said door and which is supported on said upper wall of the compartment, means for supporting the extension rail in horizontal alinement with the stationary rail, tracks or ways on said rails arranged to constitute a continuous track from the stationary to the extension rail when the latter occupies its horizontal position, and a carriage movable on said track or ways.

5. The combination with a receiving compartment, of a tubular, slotted rail fixed horizontally in the upper part of the compartment, a slotted, tubular extension rail, a hinge member on the fixed rail to which the extension rail is pivotally connected, the slots of said rails being located in alinement with each other when the extension rail occupies a horizontal position, the hinge member being provided with a slot disposed in alinement with and connecting the slots of said rails, and a carriage having bearing in the tubular rail and provided with a bracket adapted to travel in said slots.

[Claims 6 to 24 not printed in the Gazette.]

880,059. OVERHEAD SUSPENDING MECHANISM FOR MOTOR-DRIVEN TOOLS. CHARLES T. WILT and ELMER E. WILT, Chicago, Ill., assignors to Chas. T. Wilt, Chicago, Ill., a Firm. Filed Aug. 15, 1906. Serial No. 330,703.



1. The combination with an overhead support, an engine supported therefrom provided with a tool connected with and driven from said engine, of a holder in which said engine is swingingly mounted, said engine being eccentrically loaded with respect to its swinging connection with the holder, whereby when released from manual control it assumes a position to direct the tool upwardly.

2. The combination with an overhead support and an engine and its tool suspended therefrom, of a holder in which said engine is swingingly mounted, a cable for suspending the holder from said overhead support, said engine being eccentrically loaded with respect to its swinging connection with the holder whereby, when released from manual control, it assumes a position to direct the tool upwardly.

3. The combination with an overhead support and an engine and its directly driven tool, of a holder in which said engine is mounted comprising yoke arms extending on opposite sides of the engine casing, lugs extending from said engine casing and engaging bearing apertures in said yoke arms, and means for flexibly suspending said holder from the overhead support, said motor being eccentrically loaded whereby, upon release from manual control, it automatically assumes a position to direct the tool upwardly.

4. The combination with a tool holder and means for flexibly sustaining it from an overhead support, of an engine and its directly driven tool swingingly mounted in said holder, a housing or casing fixed to the holder, the

motor being overweighted on the side thereof opposite to the tool relatively to the swinging axis whereby the engine is automatically swung to a position to move the tool into said housing when the engine is released from manual control.

5. The combination with an engine and its directly driven tool, of a holder in which said engine is swingingly mounted, means for flexibly sustaining the holder from an overhead support, said engine being eccentrically loaded whereby, when released from manual control, it assumes a position to swing the tool upwardly, and the holder being formed to provide a protecting housing into which said tool is swung.

880,060. SUPPORTING-SHEATH FOR TRAIN-PIPE COUPLING-HOSE. GUILFORD S. WOOD, Chicago, Ill. Filed May 20, 1907. Serial No. 374,795.

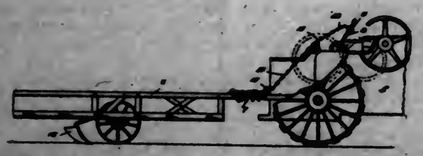


1. A resilient supporting member for train pipe coupling hose comprising a sheath of relatively stiff material surrounding one end of the hose and overlapping the train pipe nipple, said sheath closely embracing the hose adjacent to the nipple and being made larger in diameter at its other end.

2. A resilient connecting member for train pipe coupling hose comprising, in combination with a train pipe and its nipple adapted for insertion at one end into the hose, a sheath surrounding said hose and arranged in overlapping relation with respect to said nipple, the sheath increasing in diameter and flexibility towards its outer end.

3. The combination with a train pipe hose and a tubular connecting nipple inserted in the end of the same, of a sheath surrounding the end of said hose and arranged in overlapping relation with respect to said nipple, said sheath consisting of a helical coil of wire closely surrounding at its inner end said hose and increasing in diameter towards its outer end.

880,061. AUTOMATIC THROTTLE-OPERATOR. ANDREW S. ANDERSON, Naughton, N. D. Filed July 20, 1907. Serial No. 384,728.



1. The combination with a draft engine having a controlling lever, of an implement to be drawn, extensible connections between said implement and the engine and connections between said implement and the controlling lever for operation of the latter when the implement and engine are moved away from each other.

2. The combination with a draft engine having a controlling apparatus, of an implement to be drawn, extensible connections between said implement and the engine, operative connections between said implement and the controlling apparatus, said last named connections including extensible portions.

3. The combination with a draft engine having a controlling lever, of an implement to be drawn, a connecting spring between said implement and the engine and a connecting member between said lever and the implement for movement of the lever when the implement and the engine are moved one away from the other, said connecting member being arranged for adjustment longitudinally of the lever.

880,062. CARBURETER. FRANK W. BEARDSLEY, New York, N. Y. Filed Nov. 4, 1902. Serial No. 130,013.



1. A carbureter comprising a main casing open at its top, a generating container therein open at its top above the main casing, an air induction space being formed between the casing and the container, a valve controlled outlet from the container, a modifying chamber in communication with said valve outlet and with the air space between the container and the casing, means for regulating the supply of air to the said modifying chamber and to the container, and a burner connected to the modifying chamber whereby the draft caused by said burner will draw air through the modifying chamber and through the container.

2. A carbureter comprising a main casing; a generating-container let into and supported on a seat within the main casing; and elastic means for holding said container down to its seat, substantially as herein specified.

3. A carbureter comprising a main casing; a generating-container let into and supported on a seat within the main casing; a cover for closing said main casing, and elastic means on said cover for holding the container to its seat; substantially as herein specified.

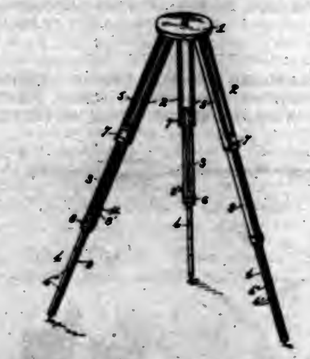
4. A carbureter comprising a main casing; a valve-controlled nozzle situated within said casing; packing-service on said nozzle; a generating-container on said packing-service and communicating with said nozzle and means for removably seating said container on said packing-service under force, substantially as herein specified.

5. A carbureter comprising a main casing; a cover on said casing, adapted to be temporarily fastened thereto, and having an air inlet-opening; a generator-container let into and supported within the main casing; an elastic element between said cover and said container, and pressing downward on said container when the cover is in position whereby the container is removably seated under force; and means for variably obstructing said air inlet-opening, substantially as herein specified.

[Claims 6 to 11 not printed in the Gazette.]

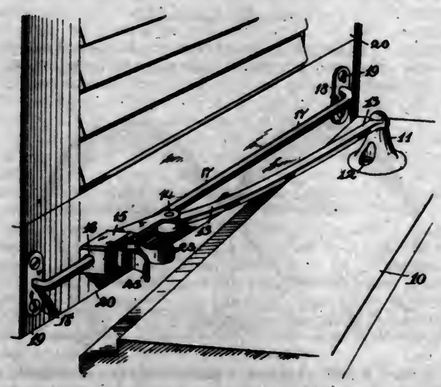
880,063. TRIPOD. GEORGE A. BEILFUSS, Chicago, Ill. Filed June 7, 1907. Serial No. 377,719.

1. In a tripod a head, in combination with the legs connected thereto, each said leg comprising top, intermediate, and bottom portions, said top and intermediate portions each being formed of a pair of strips rigidly spaced apart, and said bottom portion telescoping between the strips of said intermediate portion, said bottom portion comprising a pair of flat wooden strips having a flat metal strengthening strip secured between them, there being a plurality of notches in the edge of said metal strip, and means on said intermediate portion for engaging said notches, to adjust said bottom to the intermediate portion.



2. In a tripod, a head, in combination with the legs connected thereto, each said leg comprising top, intermediate and bottom portions, said top and intermediate portions each being formed of a pair of strips rigidly spaced apart, and said bottom portion telescoping beaween the strips of said intermediate portion, said bottom portion comprising a pair of flat wooden strips having a flat metal strip secured between them, said metal strip having a plurality of notches in one edge thereof and a spring pressed pawl in said intermediate portion adapted to engage said notches, substantially as described.

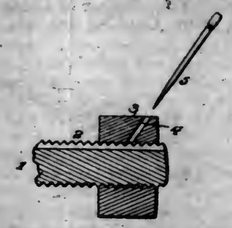
880,064. SHUTTER-BOWER. BERTRAND E. BEYER, Paterson, N. J. Filed July 30, 1907. Serial No. 386,286.



In combination with a casing having a swinging member, of a standard secured to the casing, an arm having one end secured to the standard and arranged to swing thereon, a sliding member pivotally secured to the projecting end of the arm, a rod secured to the swinging member, the sliding member being mounted on the rod, a pair of finger-pieces projecting from the swinging member, the inner ends of the finger-pieces being perforated to receive the rod, and springs on the swinging member to force the inner ends of the finger-pieces in engagement with the rod to lock the same.

880,065. NUT-LOCK. JOHN J. BRUNELLO, Bluefield, W. Va. Filed Feb. 26, 1907. Serial No. 359,361.

A nut lock comprising a bolt having one end thereof threaded and provided with a plurality of longitudinally disposed grooves, a nut fitted upon the threaded end of the bolt and formed with a plurality of lateral openings extending from the sides of the nut to the bolt receiving opening therethrough, the said lateral openings being inclined inwardly toward the base of the nut and being spaced differently from the before mentioned longitudinal grooves in the bolt, and a locking key adapted to be driven through one of the inclined openings in the nut and to be



deflected into the registering groove of the bolt, the said key being provided with a beveled end which coöperates with the inclination of the lateral opening to insure a proper deflection of the point of the key, and also with a head which limits the inward movement of the key and forms a means for withdrawing the same.

880,066. CONCRETE SIDEWALK-BLOCK. CHARLES DEMG, Madison, Wis., assignor of one-third to Peter Weller and one-third to Charles H. Fix, Madison, Wis. Filed Aug. 1, 1907. Serial No. 386,532.



1. A cement sidewalk block comprising a flat body-portion having parallel lateral oblique-faced ends, matched grooves in the oblique faced ends, the grooves being adapted to receive locking-pins, longitudinal stringers depending from the body-portion of the block at right-angles to said oblique-faced ends, and stringer end-extensions projecting beyond said body-portion, the opposite ends of the stringers being cut-away for a distance equal to the length of the end-extensions aforesaid.

2. A cement sidewalk block comprising a flat body-portion having parallel lateral oblique-faced ends, matched grooves in the oblique-faced ends, the grooves being adapted to receive locking-pins, longitudinal stringers depending from the body-portion of the blocks at right-angles to said oblique-faced ends, end-extensions of the stringers projecting beyond said body-portion, oblique inclined faces at the ends of the extensions and parallel with the adjacent oblique end-faces of the block, cutaway-portions at the opposite ends of the stringers, the cut-away portions conforming in shape to the reverse contour of end-extensions aforesaid, whereby matched-joint connection is had between stringers of an adjacent block.

3. A cement sidewalk block comprising a flat body-portion having parallel lateral oblique-faced ends, matched grooves in the oblique-faced ends, the grooves being adapted to receive locking-pins, longitudinal stringers depending from the body-portion of the block at right-angles to said oblique-faced ends, end-extensions of the stringers projecting beyond said body-portion, the end-extensions terminating in oblique faces and having convexed upper surfaces, and cutaway-portions at the opposite ends of said stringers, the cutaway portions conforming in shape to the reverse contour of the end-extensions aforesaid, whereby matched-joint connection is had between stringers of an adjacent block.

4. A cement sidewalk block comprising a flat body-portion having anchor-rods embedded therein and parallel lateral oblique-faced ends, rectangular matched grooves in the oblique-faced ends, the grooves being adapted to receive squared locking-pins, longitudinal stringers depending from the body-portion of the block at right-angles

to said oblique-faced ends, anchor-rods embedded in the stringers, and stringer end-extensions projecting beyond said body-portion, the opposite ends of the stringers being cut away for a distance equal to the length of the end-extensions aforesaid.

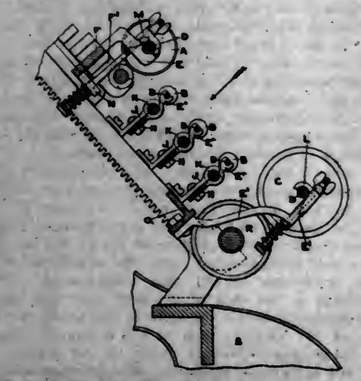
880,067. BUCKLE. GEORGE W. DOSS, Erick, Okla. Filed July 19, 1907. Serial No. 384,574.



1. The herein described buckle comprising a frame formed of side pieces 1 having the opposite ends thereof each connected by a pair of spaced cross bars 2 and 3, and a swinging tongue 4 mounted upon the inner cross bar 3 of each pair and adapted to engage the outer cross bar 2, the buckle frame being also formed with a pair of keepers 7 projecting laterally upon opposite sides thereof, the said keepers being in alinement with each other and serving to reinforce the side pieces and to engage the tongues 4 when swung rearwardly.

2. The combination of a cross line buckle embodying means for engaging both the cross line and the hand line, a loop slidably mounted upon the hand line, and a fastener detachably connecting the cross line to the loop.

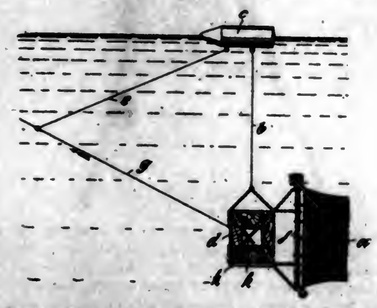
880,068. SPINNING, DRAWING, ROVING, AND LIKE FRAME. JOSEPH FARRAR, Halifax, England. Filed Jan. 24, 1906. Serial No. 297,587.



1. In a worsted or silk spinning frame, the combination with a supporting standard F^1 in which is journaled the bottom back roller, of a saddle secured to said standard and provided with nibs E, top back rollers A having bearing necks D between the two bosses of said rollers A and journaled in said nibs; the saddles H secured to the standard J and provided with nibs E^2 in which are journaled the bottom carrier rollers K, top carrier rollers B having bearing necks between the two bosses of said rollers B and journaled in said nibs; the front saddle G to which is secured the curved arm or nib E^3 terminating in a fork E^4, the top front rollers C having bearing necks between the two bosses of said rollers C, and journaled upon the fork E^4 which also forms a support for the pressure hook L, substantially as set forth.

2. In a worsted or silk drawing or roving frame, the combination with a supporting standard J in which is journaled the bottom carrier roller K, of a saddle H secured to said standard and provided with nibs E^2, top carrier rollers B having bearing necks between the two bosses of said rollers and journaled in said nibs; the front saddle G to which is secured the curved arm or nib E^3 terminating in a fork E^4, the top front rollers C having bearing necks between the two bosses of said rollers C and journaled upon the fork E^4 which also forms a support for the pressure hook L, substantially as set forth.

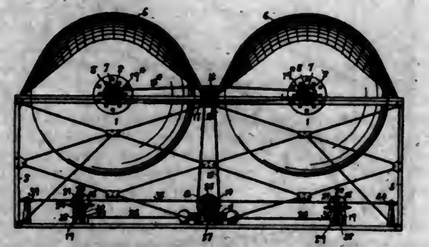
880,069. TRAWLING-NET FOR USE IN HERRING OR OTHER FISHING. JOHANNES A. GARMS, Varel-Hafen, Germany. Filed Jan. 8, 1907. Serial No. 351,820.



1. In trawling nets for herring fishing the combination of a net with a rectangular opening with long stiffening bars at its vertical edges, shear boards, connecting chains for the boards and bars, trawling ropes, chain crosses connecting the ropes and boards, means for keeping the net at a suitable depth as and for the purpose specified.

2. In trawling nets for herring fishing the combination of a net provided with an opening and with long stiffening bars for the opening, shearboards connected with the bars, floats bearing the boards, trawling ropes connected with the boards, ropes connecting the floats and the trawling ropes.

880,070. DIRIGIBLE BALLOON. AUGUST GERSTNER, New York, N. Y. Filed Apr. 30, 1907. Serial No. 371,166.



1. In a dirigible balloon, a plurality of gas containers, a framework suspended therefrom, longitudinal open ended tubes centrally arranged in the gas containers, a plurality of propelling devices for the containers situated in said tubes, a propelling device for the framework and a common motor for all the propelling devices.

2. In a dirigible balloon, a plurality of gas containers, a framework suspended therefrom, longitudinal open ended tubes centrally arranged in the gas containers, a plurality of propelling devices for the containers situated in said tubes, a plurality of propelling devices for the frame and a common motor for all the propelling devices.

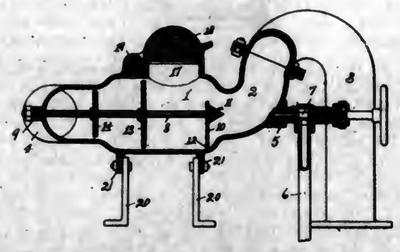
3. In a dirigible balloon, a plurality of gas containers, a framework suspended therefrom, longitudinal open ended tubes centrally arranged in the gas containers, a plurality of propelling devices for the containers situated in said tubes, a combined propelling and steering device for the frame and a common motor for all the propelling devices.

4. In a dirigible balloon, a plurality of gas containers, a framework suspended therefrom, longitudinal open ended tubes centrally arranged in the gas containers, a plurality of propelling devices for the containers situated in said tubes, a plurality of combined propelling and steering devices for the frame and a common motor for all the propelling devices.

5. In a dirigible balloon, a plurality of gas containers a framework suspended therefrom, longitudinal open ended tubes centrally arranged in the gas containers, a plurality of propelling devices for the containers situated in said tubes, a combined propelling and steering device consisting of a radially swinging tube and a propeller situated therein, said tube being fastened to the frame and arranged to swing in a plane parallel thereto and a common motor for all of the propelling devices.

[Claims 6 to 8 not printed in the Gazette.]

880,071. OIL-BURNER. JACOB GOGEL, Toledo, Ohio. Filed Apr. 25, 1906. Serial No. 313,544.



1. The combination with the combustion-chamber of an oil-burner, and the jet tapping one end thereof, of a baffle the products of combustion pass, said gates being axially arranged therein and adjustable toward and away from each other.

2. The combination with the combustion-chamber of an oil-burner, and the jet tapping one end thereof, of a baffle-member and a spreader-gate disposed in opposite portions of the chamber and being relatively adjustable.

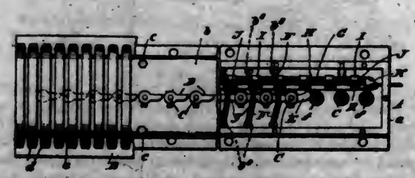
3. The combination with the combustion-chamber of an oil-burner, of a plurality of spreader-gates mounted within the chambers adjacent the discharge end thereof, and an element adjustably carrying said gates.

4. The combination with the combustion-chamber of an oil-burner, of a baffle-member and a plurality of spreader-gates, and a common member carrying all of said parts, the spreader-gates being adjustable relative to the baffle-member and to each other.

5. An oil-burner, comprising in combination a shell having one end angled and contracted to form a discharge nozzle, its other end contracted and forming an air inlet, and its central portion forming a combustion-chamber and provided with a stoppered opening, a jet tapped into the air-inlet end of the shell, and a baffle member and spreader means disposed intermediate the shell ends said member and means being relatively adjustable.

[Claims 6 to 10 not printed in the Gazette.]

880,072. RAILWAY SIGNAL APPARATUS. FRANK GRAZIANO, New Orleans, La. Filed June 15, 1907. Serial No. 379,229.



1. In a railway signal, a track apparatus comprising a grating having spaced bars, and terminals arranged below the upper surface of the grating and arranged to form parts of normally open electric circuits and also arranged to enable tappets, on cars, passing between the bars of the grating to complete the said circuits.

2. The combination in a railway signal, of a casing adapted to be arranged crosswise in the bed of a railway and having a cover, movable terminals arranged in said casing and adapted to form part of individual electric circuits, and vertical shafts extending through the cover of the casing and having triggers disposed above said cover and also having arms arranged in the casing in position to engage and move the terminals.

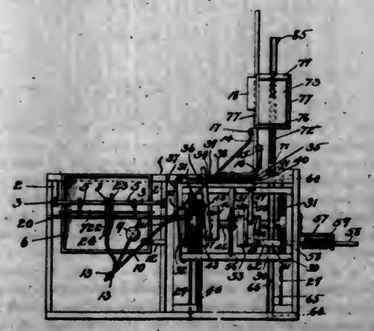
3. The combination in a railway signal, of a casing adapted to be arranged crosswise in the bed of a railway and having a cover, movable terminals arranged in said casing and adapted to form part of individual electric circuits, vertical shafts extending through the cover of the casing and having triggers disposed above said cover and also having arms arranged in the casing in position to engage and move the terminals, and a protective grating arranged above and fixed with respect to the casing and having spaced bars and also having the spaces between the bars arranged over the triggers.

4. The combination in a railway signal, of a casing adapted to be arranged crosswise in the bed of a railway and having a cover, a grating arranged above and fixed with respect to the casing and having spaced bars, movable terminals arranged in the casing and adapted to form part of individual electric circuits, vertical shafts extending through the cover of the casing and having triggers disposed above said cover and below the spaces between the bars of the grating, and also having arms arranged in the casing in position to engage and move the terminals; the said arms being provided with rearwardly extending projections, and tractile springs extending between and connected to said projections and opposite portions of the casing.

5. The combination in a railway signal, of a casing adapted to be arranged crosswise in the bed of a railway and having a cover, a body of insulating material fixed in and extending lengthwise of the casing, a conductive strip connected to one side of said insulating body and having terminals extending above said insulating body, a plurality of movable terminals adapted to form part of individual electric circuits; the latter terminals being connected to the opposite side of the insulating body and opposed to the first mentioned terminals, and means whereby tappets on passing cars are enabled to move the second mentioned terminals into contact with the first mentioned terminals.

[Claims 6 to 8 not printed in the Gazette.]

880,073. MILK-WEIGHING MACHINE. OLE GUNDERSON, Bristol township, Worth county, Iowa. Filed Mar. 19, 1906. Serial No. 306,931.



1. In a fluid weighing machine, a token-controlled apparatus for controlling the passage of the fluid to and from said machine consisting of means for receiving the token, a frame slidably mounted on said means, and operative

connections between said frame and the fluid controlling means, substantially as shown and described.

2. In a fluid weighing machine, valves for controlling the passage of the fluid to and from the machine, a token controlled apparatus for controlling the operation of said valves comprising a rod, a token slidably mounted on the rod, a frame slidably mounted on the rod, operative connections between the valves and frame, and means to actuate the frame, substantially as shown and described.

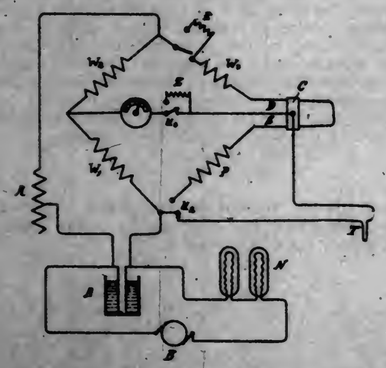
3. In a fluid weighing machine, valves for controlling the passage of the fluid to and from the machine, a rock shaft for actuating said valves, a token controlled apparatus comprising a grooved rod, a token slidably mounted in the groove in the rod, a frame slidably mounted in the rod, a rod connecting the frame with the rock shaft, and means to actuate the frame, substantially as shown and described.

4. In a check controlled apparatus, a grooved rod slidably mounted, a spring actuated frame slidably mounted on said rod, a shaft journaled in said frame, means to actuate said shaft, a bar slidably mounted on the spring actuated frame and adapted to engage the grooved rod; and operative connections between shaft and bar to disengage it from the grooved rod, substantially as shown and described.

5. In a check controlled apparatus, a grooved rod slidably mounted, a spring actuated frame slidably mounted on said rod, a shaft journaled in said frame, a spring actuated lever arm secured to said shaft, a bar slidably mounted on the spring actuated frame and adapted to engage the grooved rod, a ratchet wheel loosely mounted on the shaft and having projections thereon to engage the bar, and a pawl to engage said ratchet wheel secured to the shaft, substantially as shown and described.

[Claims 6 and 7 not printed in the Gazette.]

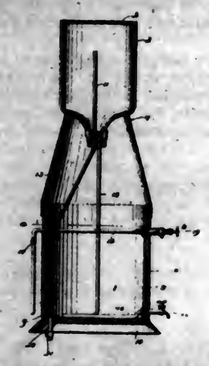
880,074. ELECTRICAL SYSTEM OF MEASURING TEMPERATURES. ERNST HAAGN, Hanau, Germany, assignor to Firm of W. C. Heraeus, Hanau, Germany. Filed May 27, 1907. Serial No. 375,989.



1. In a system of electrically measuring temperatures, the combination with a Wheatstone bridge, of a resistance thermometer included in one of the branches of said bridge, a galvanometer included in the central branch of the bridge and having a scale indicating the variations of the temperature of said resistance thermometer, and an iron resistance connected in series with the source of electric current.

2. In a system of electrically measuring temperatures, the combination with a Wheatstone bridge, of a resistance thermometer included in one of the branches of said bridge a galvanometer included in the central branch of the bridge and having a scale indicating the variations of the temperature of said resistance thermometer, an iron resistance connected in series with the bridge, and a polarization coil connected in shunt with the bridge.

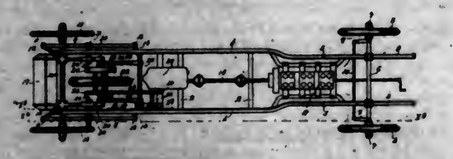
880,075. APPARATUS FOR COOLING AND DISPENSING BEVERAGES. JAMES R. HALLORAN, New Britain, Conn. Filed May 27, 1907. Serial No. 375,985.



1. In an apparatus for cooling and dispensing beverages, the combination with a cold-box, of a hood located thereupon and provided with a door, an inverted bottle supported in the top of the hood and having a vent in its bottom for the escape of gas, the said cold-box, hood and bottle forming a vertical tier of parts, a supply-pipe leading into the bottle through the cork thereof, a supply-cock in the said supply pipe, a terminal pipe extending upward into the said bottle from the said supply-pipe, a "dead"-beer pipe leading downward from the cork of the bottle into the bottom of the cold-box in which it terminates in a coil, a "dead"-beer cock connected with the outer end of the said coil, a branch pipe leading from the said supply-pipe at a point therein below the said supply-cock, and a fizz-cock connected with the terminal of the branch pipe.

2. In an apparatus for cooling and dispensing beer, the combination with a cold-box, of a hood mounted thereupon and provided with a door for access to the cold-box, an inverted bottle supported in the top of the hood and having a vent in its bottom for the escape of gas, the said cold-box, hood and bottle forming a vertical tier of parts, a terminal pipe extending upward into the bottle from the cork thereof, a supply-pipe entering the apparatus through the said cold-box and rising therefrom through the said hood to the said cork in which it connects with the said terminal pipe, a supply-cock located in the said supply-pipe, a "dead" beer pipe leading downward from the cork of the bottle through the hood and cold-box and terminating at its lower end in a coil, a "dead" beer cock connected with the outer end of the said coil, a branch pipe connected with the supply-pipe at a point therein below the said supply-cock and passing through the said cold-box, and a fizz cock located at the outer terminal of the branch-pipe.

880,076. RUNNING-GEAR FOR MOTOR-DRIVEN VEHICLES. REX P. HICKS, Minneapolis, Minn. Filed Nov. 21, 1906. Serial No. 344,451.



1. In a running gear of the kind described, the combination with a main frame and a supplemental frame, of rear wheels journaled to said supplemental frame, a driving wheel journaled to said supplemental frame between and forward of said rear wheels, resilient main frame supporting connections applied to said supplemental frame longitudinally intermediate of the axes of said driving wheel and of said rear wheels, and connections between said main and supplemental frames for causing the same to travel together, substantially as described.

2. In a running gear of the kind described, the combination with a main frame and a supplemental frame, of front wheels connected to the forward portion of said main frame, rear wheels journaled to the rear portion of said supplemental frame, a driving wheel journaled to the forward portion of said supplemental frame and located transversely between said rear wheels, springs connected to said supplemental frame longitudinally intermediate of the axes of said driving wheel and of said rear wheels and supporting the rear portion of said main frame, links connecting the forward portion of said supplemental frame to a more forward portion of said main frame, and means for rotating said driving wheel, substantially as described.

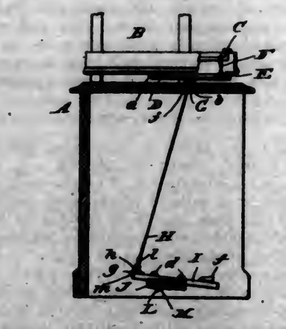
3. In a running gear of the kind described, the combination with a main frame and front wheels connected to the forward portion thereof, of a rear axle, laterally spaced equalizing bars and transverse spindle, said parts being rigidly connected and constituting a rigid supplemental frame, wheels journaled on the ends of said rear axle, a driving wheel journaled on said spindle, main frame supporting connections applied to the intermediate portions of said equalizing bars, links connecting the forward portion of said rigid supplemental frame to the more forward portion of said main frame, and means for rotating said driving wheel, substantially as described.

4. In a running gear of the kind described, the combination with a main frame and front wheels connected to the forward portion thereof, of a rigid supplemental frame, rear wheels journaled to the rear portion of said supplemental frame, a driving wheel journaled to the forward portion of said supplemental frame and located transversely between said rear wheels, main frame supporting connections applied to said supplemental frame longitudinally intermediate of the axes of said driving wheel and of said rear wheels, and torsionally yielding links connecting theh forward portions of said supplemental frame to a more forward portion of said main frame, substantially as described.

5. In a running gear of the kind described, the combination with a main frame having suitable wheel support at its forward portion, of a supplemental frame, rear wheels and a driving wheel journaled to said supplemental frame with the said driving wheel located transversely between said rear wheels and axially out of line therewith, and swiveled links connecting said supplemental frame to said main frame, substantially as described.

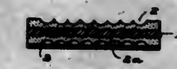
[Claims 6 to 9 not printed in the Gazette.]

880,077. TYPE-WRITING-MACHINE ATTACHMENT. EUGENE T. HILLS, Salt Lake City, Utah, assignor of one-half to P. C. Hosmer, Salt Lake City, Utah. Filed Oct. 11, 1907. Serial No. 396,994.



In a typewriter attachment, the combination with a pedal lever, a socket piece disposed on the upper side of the forward portion of the pedal lever and having an upwardly extending loop-shaped portion in which is an oblong opening terminating at its lower end in an enlarged opening, a lever disposed above the pedal lever and equipped with means for actuating the shifting means of a typewriting machine, a socket piece disposed at the under side of the upper lever and having a depending loop-shaped portion in which is an oblong opening terminating at its upper end in an enlarged opening, and a spring for cushioning the pedal lever and raising said lever when the same is relieved of pressure; of a connecting rod extending through the oblong openings of the socket-pieces and having heads arranged in the loop-shaped portions of said pieces and also arranged to be withdrawn through the enlarged openings communicating with said oblong openings.

880,078. PROCESS FOR PREPARING FILTER-PRESS PLATES. FRANK HOBBIS, Widnes, England. Filed July 15, 1907. Serial No. 383,838.

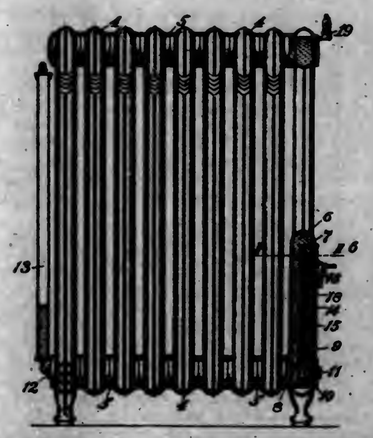


2. The improved process for preparing filter press plates which consists in coating the skeletons or frames of the plates with a corrugated or channeled covering of cement or the like material, substantially as described.

2. The improved process for preparing filter press plates which consists in coating the skeletons or frames of the plates with a corrugated or channeled covering of a composition of cement, sand, and salt, substantially as described.

3. The improved process for renovating worn metallic filter press plates which consists in covering the worn plates with a composition of cement, sand, and salt, and subsequently corrugating or channeling the surface of the composition while in a plastic state, substantially as described.

880,079. RADIATOR. GEORGE HODGDON, Wilkinsburg, Pa. Filed June 8, 1907. Serial No. 377,913.



1. A radiator section comprising a plurality of vertical pipes arranged side by side and communicating at their lower ends with a casing 6, a partition 7 extending back into the casing and forming a compartment, and electrical heating means in the compartment and a cover for the recess.

2. A radiator comprising a plurality of sets of columns 4, the end one of which is provided with a casing 6 provided with an inclosing partition 7 forming a compartment 9, electrical heating means in the compartment, and a cover for the compartment.

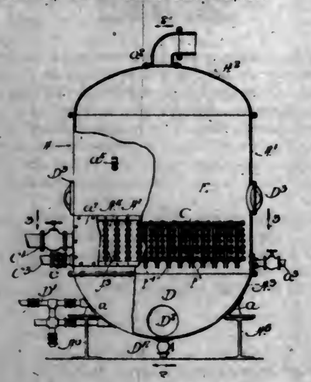
3. A radiator section comprising a vertical casing, a plurality of radiator pipes of substantially the thickness of

the casing seated thereon and communicating therewith, a partition extending back into the casing and forming a compartment, electrical heating means mounted therein and a cover for the compartment.

4. A radiator section of substantially uniform width and thickness from top to bottom and comprising a vertical casing and a plurality of radiator pipes communicating with the end thereof, a corrugated partition extending backwardly into the casing and forming a compartment, electrical heating coils mounted in the corrugations and a cover for the compartment.

5. A radiator section comprising in combination a vertical radiator column provided at its lower end with an integral closed casing, said casing being provided with an opening for the reception of a hot water or steam pipe, and a recess adapted to receive an electric heater.

880,080. EVAPORATOR. PAUL G. KAISER, Chicago, Ill. Filed Mar. 16, 1907. Serial No. 362,691.



1. The combination, in an evaporating pan, of liquid heating means located near the lower end thereof and designed to be submerged by the liquid in said receptacle, comprising a plurality of groups of heating tubes extending horizontally between two opposing walls of the pan and supported at their ends at said walls, said groups being separated by vertical spaces, and a plurality of upright plates located in said spaces and affording passages for upwardly flowing currents of liquids between the plates and groups of tubes, and vertical passages for downwardly flowing currents of liquid between adjacent plates.

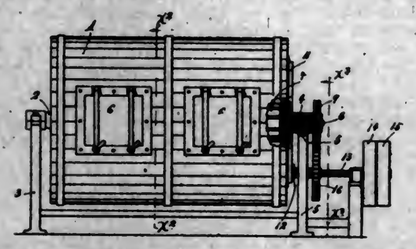
2. The combination, in an evaporating pan, the latter comprising an upper and a lower compartment, of heating means between said compartment comprising a plurality of heating tubes, arranged to be submerged by the liquid in the evaporating pan, said tubes being arranged in groups, said groups extending horizontally across the pan and supported at their ends on opposite walls of the pan and separated by vertical spaces, the tubes in each group being disposed in superposed relation to each other, and upright plates located in the spaces between said groups and arranged to afford passages for upwardly flowing currents of liquid between the plates and said groups of tubes and other passages for downwardly flowing currents of liquid between the plates.

3. The combination, in an evaporating pan, the latter comprising an upper and a lower compartment, of heating means between said compartment comprising a plurality of heating tubes, arranged to be submerged by the liquids in the evaporating pan, said tubes being arranged in groups, said groups extending horizontally across the pan and supported at their ends on opposite walls of the pan and separated by vertical spaces, the tubes in each group being disposed in superposed relation to each other, upright plates located in the spaces between said groups and arranged to afford passages for upwardly flowing currents of liquid between the plates and said groups of tubes and other passages for downwardly flowing currents of liquid between the plates and steam chests exterior to the walls which support the tubes communicating with said tubes.

4. The combination with an evaporating pan having an upper compartment and a lower compartment, of horizontal heating tubes located between said upper and lower compartments, and arranged in groups separated by vertically extending spaces and vertical plates located in the said vertically extending spaces, said plates extending a substantial distance below the lowermost of said tubes into the said lower compartment.

5. The combination, in an evaporating pan, of liquid heating means located near the lower end of the pan comprising a plurality of heating tubes extending horizontally between two opposing walls of the pan and supported at their ends at said walls, said groups being separated by vertical spaces, a plurality of upright plates located in said spaces and affording passages for upwardly flowing currents of liquid between the plates and groups of tubes and vertical passages for downwardly flowing currents of liquid between adjacent plates, and means for supporting said plates on said tubes.

880,081. COMBINED CHURN AND BUTTER-WORKER. GODFREY J. KAPLAN, Gwatonna, Minn., assignor, by direct and mesne assignments, to Perfection Churn Company, a Corporation of Minnesota. Filed Aug. 6, 1906. Serial No. 329,384.



1. The combination with a horizontally disposed rotary drum, of a single centrally disposed paddle roller within said drum, a pair of diametrically opposite radially disposed lifting abutments secured within said drum and terminating at their inner edges in close proximity to said roller, and means for rotating said drum in one direction and the said roller in the opposite direction, substantially as described.

2. The combination with a horizontally disposed rotary drum, of a centrally located paddle roller within said drum, a pair of diametrically opposite radially disposed lifting abutments secured within said drum with their outer edges spaced from the shell of the drum and with their inner edges terminating in close proximity to the said roller, and means for rotating said drum in one direction and said roller in the opposite direction, substantially as described.

880,082. BOTTLE. JAMES L. KENDRICK, Boston, Mass. Filed July 1, 1907. Serial No. 381,786.

1. In a bottle the combination of two or more separable bodies provided with suitable interlocking media formed on the rim of each body, each body forming an individual receptacle and provided with removable bottoms for the purpose specified substantially as set forth.

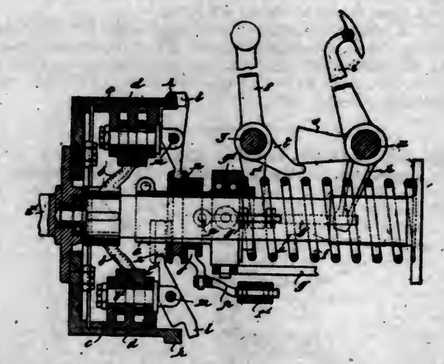
2. In a bottle the combination of two or more separable bodies provided with suitable interlocking media formed on the rim of each body, each body forming an individual receptacle and provided with removable bottoms having flanges, said bottoms forming non-leakable packing for the purpose specified substantially as set forth.

3. In a bottle the combination of two or more separable bodies "A—B" provided with suitable interlocking media formed on the rim of each body, each body forming an individual receptacle and provided with removable bottoms "C" having flanges "c" projecting outwardly forming a non-leakable packing, one of said bodies having an aperture "a" in the top thereof for the purpose specified substantially as set forth.



4. A bottle or the like comprising a plurality of individual sections, one of the sections having a removable bottom which serves for closing the end orifice of the next adjoining section when the sections are clamped together and each of the adjoining sections provided with a complemental portion of suitable interlocking media for clamping the sections together.

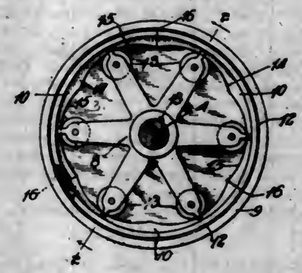
880,083. FRICTION-CLUTCH. ERNST LEHMANN, Marchienne-au-Pont, Belgium. Filed Nov. 27, 1906. Serial No. 345,870.



1. In a friction clutch in combination a casing, the said casing serving as a driving member and being provided with teeth on its outer edge, friction members coöperating with the inner face of the said casing, a driven shaft, a sleeve adapted to slide on said shaft and acting on the friction members to bring them in frictional engagement with the driving member, bolts or catches pivoted on the said friction members and adapted to be engaged with the teeth on the driving member, a second sleeve actuating the said bolts or catches, and means whereby the said second sleeve is acted upon on the stopping of the clutch substantially as described and for the purpose set forth.

2. In a friction clutch in combination a casing serving as a driving member and being provided with teeth on its outer edge, friction members coöperating with the inner face of the said casing, a driven shaft, a sleeve adapted to slide on said shaft and acting on the friction members to bring them in frictional engagement with the driving member, bolts or catches pivoted on the said friction members and adapted to be engaged with the teeth on the driving member, a pedal shaft actuating said sleeve, a second sleeve acting on the bolts or catches, a second pedal shaft for displacing the said second sleeve, a connection between the two pedal shafts whereby the second shaft is rotated angularly when the first pedal shaft is acted upon to stop the action of the clutch and a spring acuated pawl coöperating with the second pedal shaft to prevent undue movement of the bolts actuating sleeve, substantially as described and for the purpose set forth.

880,084. FRICTION DRIVING-CLUTCH. AXEL R. LE MOON, Chicago, Ill. Filed Apr. 11, 1907. Serial No. 367,646.



1. The combination of a driving member and a driven member separately journaled to rotate about the same axis, a friction shoe loosely mounted between said members and having thereon two cam surfaces located in different angular positions with respect to the axis of said members, one of said members having thereon a pair of projections angularly spaced with respect to said axis to correspond with the angular spacing of said cam surfaces, said cam surfaces and projections being adapted to urge said shoe toward said driven member through the relative rotation of said shoe and driving member.

2. The combination of a driving member and a driven member separately journaled to rotate about the same axis, a friction shoe loosely mounted between said members and having thereon two cam surfaces located in different angular positions with respect to the axis of said members, one of said members having thereon a pair of projections angularly spaced with respect to said axis to correspond with the angular spacing of said cam surfaces, said cam surfaces being exactly alike and being similarly disposed with respect to said axis and to the adjacent surface of said driven member and said projections being alike and equally distant from said axis and adapted to coact with said cam surfaces to urge said shoe toward said driven member through the relative rotation of said shoe and driving member.

3. The combination of a driven member having an inner annular friction surface, a driving member journaled concentrically within said driven member and having thereon a pair of projections angularly spaced with respect to the axis of said members, a friction shoe having its outer periphery shaped to fit said friction surface of said driven member and having a pair of concave cam surfaces on its inner surface spaced angularly to correspond with the angular spacing of said projections, said cam surfaces and projections being adapted to coact with each other to force said shoe into frictional contact with said friction surface through the rotation of said driving member in either direction with respect to said shoe and means normally urging said shoe out of engagement with said friction surface.

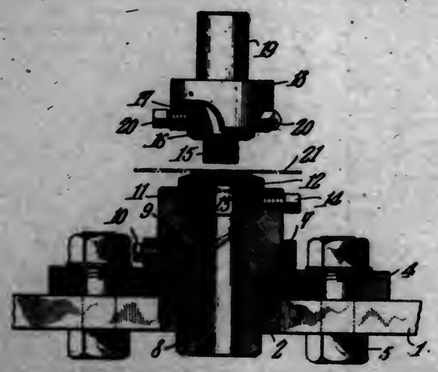
4. The combination of a driven member having an internal annular friction surface, a driving member journaled concentrically within said friction surface, a pair of anti-friction rollers journaled on said member on axes parallel with the axis of said members and angularly spaced with respect to said axis, a friction shoe interposed between the friction surface on said driven member and said rollers, the outer surface of said shoe being shaped to fit said friction surface and the inner surface of said shoe comprising two concave cam surfaces angularly spaced to coact respectively with said anti-friction rollers and suit-

ably shaped to cause said shoe to be urged into gripping contact with the friction surface on said driven member through the rotation of said driving member in either direction with respect to said shoe, and means normally urging said shoe out of engagement with said friction surface.

5. The combination of a driven member having an internal annular friction surface; a driving member journaled concentrically within said surface; an annular series of segmental friction shoes opposed to the friction surface on said driven member, each having an outer surface fitting said friction surface and having an inner surface comprising a pair of concave cam surfaces respectively located adjacent to opposite ends of the shoe; a plurality of anti-friction rollers, two for each shoe, journaled on said driving member and angularly spaced to correspond with the angular spacing of said cam surfaces, said cam surfaces being so shaped as to cause each of said shoes to be urged into gripping engagement with the friction surface on said driven member through the rotation of said driving member in either direction with respect to said series of shoes; and means normally urging said shoes out of such gripping engagement.

[Claims 6 to 8 not printed in the Gazette.]

880,085. PUNCHING-MACHINE. THOMAS A. LINDSEY, Biltmore, N. C. Filed May 2, 1907. Serial No. 371,441.



The combination with a base plate having a socket and an opening concentric with the wall of the socket; of a chuck detachably mounted within said plate and having a head seated in the socket and a shank within the opening, there being a passage through the chuck and a circular socket at one end of the passage, means for securing a chuck within the base plate, a cylindrical die slidably mounted upon the bottom of the socket in the chuck and having a bore formed with a contracted receiving end, said bore registering at all times with the passage, and a plurality of adjusting devices within the chuck and around the socket for centering the die within the socket.

880,086. BROOM-COVER. WILLIAM S. LODGE, Albany, N. Y. Filed Feb. 9, 1905. Serial No. 244,840.



A broom cover comprising a working portion of soft heavy fleeced fabric in the form of a cylinder; cylindrical fabrics of lighter weight secured to each end of said working portions, respectively; a means for contracting the loose edges of said lighter fabric; all so constructed that a broom may be inserted through the cylindrical lighter weight portion and about midway through the heavy working portion; the balance of the broom cover being bent over upon the portion covering one side of the broom, and each end secured to the broom, substantially as described.

880,087. STEAM-TRAP. GUSTAV LÜSEBRINK, Hagen, Germany. Filed Feb. 17, 1906. Serial No. 301,630.



1. A steam trap comprising a pipe, a hollow grooved plug therein and provided with openings in communication with the interior of the plug and the grooves thereof, and a piston reciprocable in said plug and adapted to cover and uncover said openings substantially as set forth.

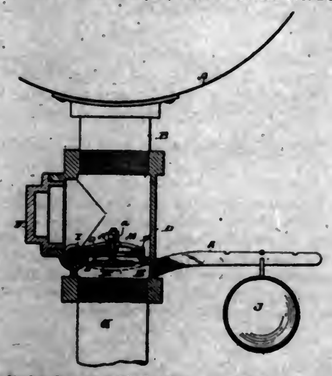
2. A steam trap comprising a pipe a hollow grooved plug therein water outlet passages in said plug and a piston reciprocable in said plug substantially as set forth.

3. A steam trap comprising a pipe and a double spirally-grooved tortuous plug fitting therein substantially as set forth.

4. A steam trap comprising a pipe and a series of tortuous grooved plugs fitting one within the other inside said pipes substantially as set forth.
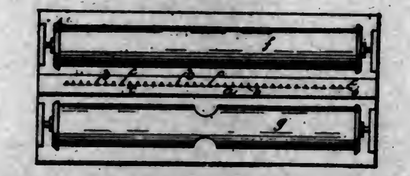
5. A steam trap comprising a pipe and a grooved plug fitting closely within the pipe, the groove of the plug being at all times adapted to establish communication between the spaces above and below the plug without requiring adjustment of said plug.

880,088. RELIEF-VALVE. CHARLES W. MILLER, Milwaukee, Wis. Filed July 6, 1905. Serial No. 268,385.



In a relief-valve provided with a casing having an annular flanged seat and a semi-circular pocket in the annular flanged seat; the combination of a flap-valve comprising a ring-portion adapted to close upon the flanged seat, the ring-portion being provided with an ear-extension fitted into the pocket, a central apertured hub in spider-connection with the ring-portion, a gravity-controlled check-valve closure for said ring-portion, a stem for the check-valve in reciprocative engagement with the hub of the aforesaid ring-portion, a rod fitted in the ear-extension of the ring-portion, bearings for the rod in the casing, an arm secured to said rod exterior of said casing, and an adjustable weight in connection with the arm.

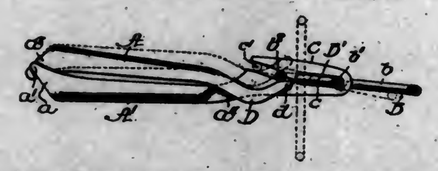
880,089. MECHANICALLY-PLAYING KEYED INSTRUMENT. FRIEDRICH MORITZ, Dortmund, Germany. Filed Mar. 8, 1907. Serial No. 361,842.



1. A tracker board having air channels and having a metal plate attached to said tracker board over its air channels, said plate having main and supplementary openings leading to the tracker board channels,—a main and a supplementary opening leading to each tracker board channel,—the main opening in the plate being slits of least dimension in the direction of travel of the sheet, and the supplementary openings in the plate being arranged in advance of the main opening.

2. A tracker board having channels and main and supplementary openings leading to the tracker board channels—a main and a supplementary opening leading to each channel—the main openings being slits of least dimension in the direction of travel of the sheet, and the supplementary openings being arranged in advance of the main openings.

880,090. GRIPPING DEVICE. OWEN E. MCMAHON, Elgin, Ill. Filed Apr. 23, 1907. Serial No. 369,858.



1. A gripping device comprising two jaws hinged together at their rear ends, a pulling link having slotted connection with the forward end of one of the jaws, said latter jaw being provided with an inclined notch an inclined surface on the forward end of the other jaw, and a part on said link engaging said notch and inclined surface and operated by the pulling force on the link to force said jaws together.

2. A gripping device comprising two jaws hinged together at their rear ends, a pulling link provided with a transverse member having slotted connection with the forward end of one of the jaws and provided with a rearwardly extending locking loop, said other jaw being provided with an inclined surface adapted for engagement by said locking loop, as and for the purpose set forth.

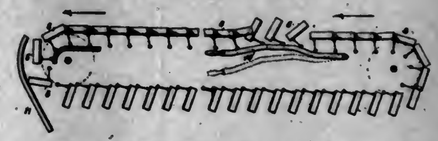
3. A gripping device comprising two jaws hinged together at their rear ends, one of said jaws being provided at its forward end with an inclined notch and the other jaw with an inclined surface adjacent to said notch, and a pulling link connected with said first jaw and provided with a locking member occupying said notch and adapted to engage said inclined surface, as and for the purpose set forth.

4. A gripping device comprising two jaws hinged together at their rear ends, one of said jaws being provided at its forward end with an inclined notch and the other jaw with an inclined surface adjacent to said notch, and a pulling link connected with said first jaw and provided with a locking member occupying said notch and adapted to engage said inclined surface, said link having slotted connection with its associated jaw, permitting the locking member to be disengaged from said notch.

5. A gripping device comprising two jaws hinged together at their rear ends, one of said jaws being provided with a slotted extension and with a rearwardly opening inclined notch and the other jaw being provided with a forwardly inclined arm adjacent to said notch, and a drawing or pulling link having sliding connection with said slotted extension and provided with a rearwardly directed locking loop, a part of which occupies said inclined notch and is adapted to engage said inclined arm, as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

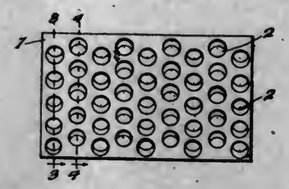
880,091. APPARATUS FOR CONVEYING AND DISCHARGING ORES, &c. PETER PATON, London, England Filed Sept. 21, 1906. Serial No. 335,610.



1. A chain conveyer comprising a series of pivoted trays forming an endless band, in which each tray is pivoted on the chain and provided with a rigid projecting arm arranged to make contact with a dumper device fitted adjacent to the upper track of the trays, the said trays adapted to hang in vertical position on the lower or return track and allow the material dumped from the upper track to drop freely through as set forth.

2. In a chain conveyer, the combination with a series of trays adapted to travel in loaded position along the upper run or track, of the curved plate 11 located at the end of the conveyer to contact with the free end of each tray where the direction of the travel of the trays is reversed and hold the same in dumping position at such place.

880,092. FACING-BLOCK. JAMES H. PEARSON, Bloomfield, Ind. Filed May 31, 1907. Serial No. 376,520



1. A facing block comprising a body portion having a plurality of circular sockets formed therein, the said circular sockets being arranged in rows and the sockets of each row being disposed alternately with respect to those of the next adjacent row while the sockets of the various rows are inclined in opposite directions.

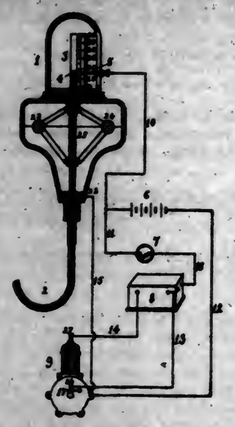
2. In a facing block comprising a body portion having a plurality of sockets formed therein which are flared outwardly, the mouths thereof being of a greater diameter than the bases, the said sockets being arranged in rows and the sockets of each row being disposed alternately with respect to those of the next adjacent row, the sockets of the various rows being inclined in opposite directions.

880,093. SPEED-LIMITING DEVICE FOR ELECTRICALLY-IGNITED EXPLOSIVE-ENGINES. FREDERIC S. PERRIN, New York, N. Y. Filed Jan. 9, 1907. Serial No. 351,489.

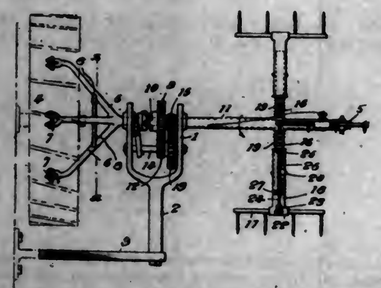
1. In an electrically ignited explosive engine, a primary circuit, means for shunting the primary current from its circuit, consisting of a speed indicator; a movable index, a contact point adapted to be set at any point upon the indicator scale, in the path of the index; and an electric circuit, in multiple with the primary circuit, including the contact point and the index.

2. A tedder attachment for agricultural implements, the speed of a vehicle propelled by an electrically ignited ex-

plosive engine, a movable index, a contact point adapted to be set at any point upon the indicator scale, in the path of the index; a primary circuit, an electric circuit, in multiple with the primary circuit, including the contact point and the index, the index shunting the primary current when it meets the contact point.



880,094. TEDDER ATTACHMENT. JOHN H. PLETSCHER, Deer Creek, Okla. Filed Mar. 11, 1907. Serial No. 361,856.



1. A tedder attachment for agricultural implements, the same comprising a shaft, means for connecting said shaft with the drive wheel of the implement to support said shaft therefrom and impart movement thereto, and arms projected outward from the shaft and provided with forks.

2. A tedder attachment for agricultural implements, the same comprising a shaft provided with means for connecting it to a drive or supporting wheel of the implement, arms loosely mounted upon the said shaft and projected outward therefrom and provided with forks, a speed gear between the said arms and the shaft, whereby the forks are rotated at a higher speed than the drive wheel to which the attachment is secured and from which it derives motion.

3. A tedder attachment comprising a shaft, means for connecting said shaft to a drive wheel for imparting movement to the shaft and supporting the same from the drive wheel, a second shaft mounted upon the first mentioned shaft and provided with outwardly extended arms bearing forks, and a variable speed gearing between the two shafts, whereby the shaft provided with the forks is adapted to rotate at a higher speed than the shaft supported from and attached to the drive wheel.

4. In a tedder attachment, the combination of a frame, a shaft mounted in said frame and adapted to be connected with the drive wheel of a mower or like machine, a rotary fork or rake mounted concentric with said shaft, gearing between the rotary fork and shaft including the clutch to admit of throwing the fork into and out of operation, and means for preventing rotation of the frame in which the aforementioned shaft is mounted.

5. A tedder attachment comprising a frame, a shaft mounted in the frame, arms radiating from said shaft and provided in their ends with clips, braces between said arms and shaft, a second shaft concentric with the first mentioned shaft, a train of gearing between the two shafts including a clutch, and forks or rakes connected with said second shaft to rotate therewith.

880,095. SKIRT-SUPPORTER. FRANCIS A. RAYMOND and FRANK DETTMANN, Judson, N. D. Filed Apr. 25, 1907. Serial No. 370,281.



1. A skirt supporter comprising a pair of clamping jaws having corresponding ends thereof enlarged, the said enlarged portions being hinged and terminating in transverse shoulders, one of said jaws being formed with an extension, and means carried by the extension for engaging the opposite jaw to hold the two jaws together.

2. A skirt supporter comprising a pair of clamping jaws having corresponding ends thereof enlarged and hinged, a spring interposed between the enlarged portions, the said enlarged portions terminating in shoulders which cooperate with each other to prevent the garment from coming into contact with the spring, one of said jaws being formed with an extension, and means carried by the extension for engaging the opposite jaw to hold the jaws together.

3. A skirt supporter comprising a pair of clamping jaws having corresponding ends thereof hinged, a spring interposed between the jaws, and a guard for preventing the garment from coming into contact with the spring.

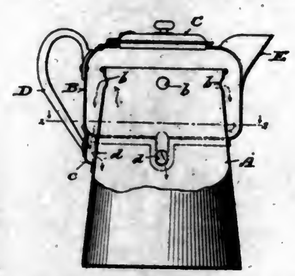
4. A skirt supporter comprising a pair of clamping jaws having corresponding ends thereof hinged, a spring interposed between the clamping jaws, and a pin carried by one of the jaws and operating loosely within an opening in the opposite jaw to prevent the garment from coming into contact with the spring.

5. A skirt supporter comprising a pair of clamping jaws having corresponding ends thereof enlarged and hinged, the said enlarged portions terminating in shoulders and being provided with corresponding depressions, a spring interposed between the jaws and operating within the depressions, and a guard member for preventing the garment from coming into contact with the spring.

[Claim 6 not printed in the Gazette.]

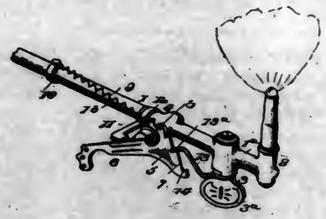
880,096. COFFEE-POT. OTTO F. RSONELL, Milwaukee, Wis. Filed Apr. 6, 1907. Serial No. 366,692.

A coffee-pot comprising an open top vessel, an upwardly extended shell of greater diameter than the vessel with which it is for the most part in water-tight union outside the same approximately midway of the bottom and rim thereof, said shell being provided with a spout-extension; a hinged lid for an opening in the top of the shell, ducts



leading from the lower portion of the shell into said vessel, and a handle attached to the aforesaid shell opposite the spout-extension of same.

880,097. SAFETY DEVICE FOR GAS-BURNERS. JOSEPH N. REYNOLDS, Anita, Iowa. Filed Mar. 30, 1907. Serial No. 365,560.



1. In a gas bracket, the combination of a manually operable stop-cock, and an automatic stop-cock, both of them being of the turning plug variety, means for coupling said stop-cocks together to hold them with their plugs in an open position, said coupling means being susceptible to adjustment whereby the one plug may be held either fully or partially open, and means for automatically closing the automatic stop-cock upon the uncoupling of the two cocks.

2. In a gas bracket, the combination of a manually operable stop-cock, and an automatic stop-cock, both of them being of the turning plug variety, means for coupling said stop-cocks together to hold them in an open position, said coupling means being susceptible to adjustment whereby to hold the automatic stop cock at different positions, and means for automatically closing the automatic stop-cock upon the uncoupling of the two cocks.

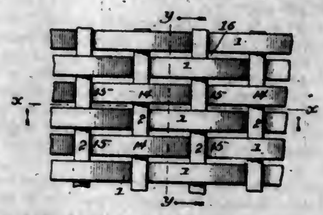
3. In a gas bracket, the combination of a manual stop-cock, an automatic stop-cock, a spring normally holding said automatic stop cock closed, a finger carried by said manually operable stop-cock and provided with a lateral extremity, and a latch plate carried by the automatic stop-cock and adapted to swing towards said extremity and be engaged thereby, as and for the purpose set forth.

4. In a gas bracket, the combination of two stop-cocks mounted to turn about axes at right angles to each other, a finger carried by one of said stop-cocks, and movable therewith, a latch plate carried by the other stop-cock and arranged for engagement with said finger, and a spring connected to said last named stop-cock and adapted to turn the same to the closed position.

5. In a gas bracket, the combination of two stop-cocks, a latch plate carried by one of said stop-cocks, and provided with a series of notches, a finger carried by the other stop-cock and adapted for locking engagement in any of the notches of the latch plate, and means for automatically turning the first named stop-cock to the closed position.

[Claim 6 not printed in the Gazette.]

880,098. WOVEN LATHING AND METHOD OF TREATING SAME. WILLIAM E. ROBINSON, Washington, D. C., assignor, by mesne assignments, to American Woven Lath Company, Washington, D. C., a Corporation of West Virginia. Filed Apr. 26, 1906. Serial No. 313,893.



1. As a new article of manufacture, lathing consisting of woven wooden warp or clench slats and wooden weft or cross slats, the warp slats being substantially straight and the weft slats having straight portions lying substantially flush with the surfaces of the warp slats.

2. As a new article of manufacture, lathing consisting of woven wooden warp or clench slats and compressed wooden weft or cross slats, the warp slats being substantially straight and the weft slats having straight portions lying substantially flush with the surfaces of the warp slats.

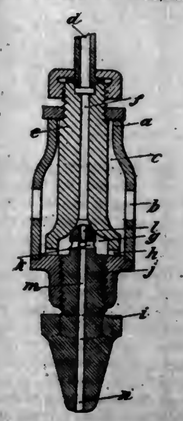
3. A lathing composed of a series of comparatively closely arranged slats and a series of interwoven slats spaced more widely apart, the distortion necessitated by the alternate under and over lapping of the slats of the two series being confined to the slats of the latter series.

4. A lathing composed of a series of comparatively closely arranged slats and a series of interwoven slats spaced more widely apart, the latter slats being parallel with the former where their surfaces overlap and the distortion necessitated by the alternate under and over lapping of the slats of the two series being confined to the slats of the latter series and to the portion thereof which lies between adjacent slats of the first named series.

5. The method of treating woven lathing which consists in straightening the warp slats thereof by reversely bending their curved portions beyond opposite sides of their mean plane, so that, when the bending pressure is removed, they will spring back to a substantially straight condition.

[Claims 6 to 8 not printed in the Gazette.]

880,099. HEATING AND WELDING METALS. CAMILLE RODRIGUES-ELY and EMILE GAUTHIER, Paris, France. Filed Apr. 5, 1907. Serial No. 366,549.



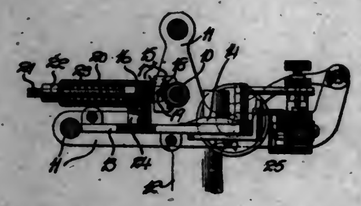
1. Apparatus for heating and welding metals by means of gases, having separate conduits for the two gases under

different degrees of pressure, and means for causing the gas under lower pressure to be carried along by the gas under higher pressure, said means comprising a removable outlet nozzle part having a mixing chamber and a rounded head constituting a seal and formed with a longitudinal and lateral passages.

2. An apparatus for heating and welding metals by means of gases having separate conduits for the two kinds of gases under different degrees of pressure, an interposed removable part constituting a nozzle having a mixing chamber and formed at one end with radial channels constituting ports for the passage of gas under low pressure to the mixing chamber, and a longitudinal channel for the passage of gas under high pressure, to the mixing chamber.

3. A removable and detachable mouthpiece for metal heating and welding apparatus employing gases under different pressures comprising an outlet nozzle, a mixing chamber and an injector, said injector being formed with a central and a lateral channel, and with a seal to the high pressure gas conduit.

880,100. CARRIAGE-FEED FOR PHONOGRAPH-MACHINES. JULIUS ROEVER, New York, N. Y., assignor to National Patent Company, New York, N. Y., a Corporation of New York. Filed June 10, 1907. Serial No. 378,062.



1. In a machine of the kind described, the combination with the feed screw and carriage, of a spring pressed support on the carriage, and a blade yieldingly mounted on the support and arranged to connect with the screw.

2. The combination with the feed screw and carriage, of a support yieldingly connected with the carriage, and a blade mounted on the support so as to have a limited movement in relation thereto, said blade being arranged also to engage the thread of the screw.

3. The combination with the feed screw and the carriage, of a slotted support yieldingly mounted on the carriage, and a blade to engage the screw, said blade being mounted in the slot of the support and having a limited movement in the said slot.

4. The combination with the feed screw and the carriage, of a casing, a spring pressed plunger mounted in the casing, and a blade supported on the plunger so as to have a limited movement in relation thereto, said blade being also arranged to engage the screw.

880,101. PESSARY. ELBERT S. ROGERS, Knoxville, Tenn. Filed July 15, 1907. Serial No. 383,783.

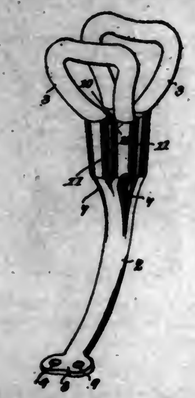
1. A pessary embodying a shank, a head provided with longitudinal orifices, and supporters of different heights having their terminals detachably positioned within the orifices.

2. A pessary embodying a shank, a head provided with longitudinal orifices, and supporters of different heights having their terminals frictionally held within the orifices.

3. A pessary embodying a shank, a head provided with longitudinal orifices, and supporters of different heights having reduced terminals to engage the orifices.

4. A pessary embodying a shank, a head provided with longitudinal orifices that converge toward the shank, and supporters of different heights having their terminals disposed within the orifices.

5. A pessary embodying a shank, a head provided with longitudinal orifices, and approximately U-shaped supporters of different heights having their terminals disposed within the orifices.



[Claims 6 to 12 not printed in the Gazette.]

880,102. KEY-FASTENER FOR LOCKS. FREDERICK H. ROGERS, Los Angeles, Cal., assignor of one-half to Theodore Wiesendanger, Los Angeles, Cal. Filed July 25, 1905. Serial No. 271,136.



1. The combination of a lock and key, said lock being provided internally with a key-retainer for engaging each side of the key-web to prevent rotation thereof.

2. The combination of a lock and key, said lock being provided internally with an automatic key-retainer for engaging each side of the key-web to prevent rotation thereof.

3. The combination of a lock and key, said lock being provided internally with a slot for the reception of a key-web when the bolt is in locked position, and means for automatically pressing said key-web into said slots.

4. A lock provided with retaining slots for a key-web, and a spring adapted to force the key-web into said slots.

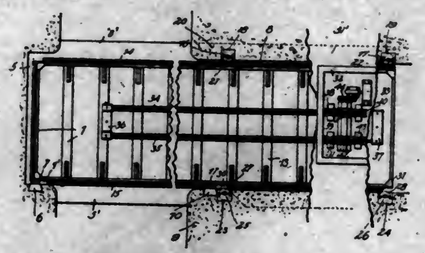
5. A bolt, a key adapted to operate said bolt, a case for said bolt provided with slots into which the key is adapted to fit in the locked and unlocked position of said bolt, said slots constituting catches to prevent withdrawal or rotation of the key.

[Claims 6 to 12 not printed in the Gazette.]

880,103. LOCK-GATE. EDWARD SCHILDHAUER, Washington, D. C. Filed June 24, 1907. Serial No. 380,431.

1. In a roller lock gate, the combination of the gate body, an extension from the body part, and guiding walls between which said extension travels and against which said extension bears when the gate is opened whereby swinging or tilting of the gate is prevented.

2. In a roller gate for locks, the combination of the body part of the gate, a guiding extension on the body part, a pocket or recess into which the extension extends, guide rollers in the walls of the recess, and guide rails on the extensions for engaging the rollers whereby equilibrium and stability of the gate body is maintained during opening of the gate.



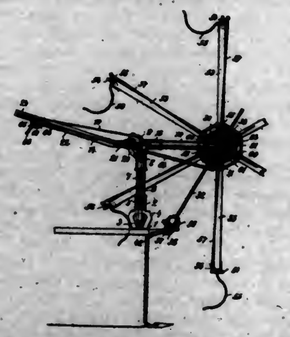
3. In a roller gate for canal locks, the combination of the rectangular gate body, a tail piece extending from the gate body, a recess or pocket into which the tail piece extends, guide rollers mounted in the walls of the recess adjacent to the tail piece, guide rails carried by the tail piece, the distance between opposite rollers being equal to the distance between the guide surfaces of the guide rails, and notches in one of said guide rails opposite one set of guide rollers when the gate is in a closed position.

4. In a roller gate for canal locks, the combination of the rectangular gate body, and a guiding tail piece extending from one end thereof.

5. In combination, a canal channel way, a lock gate having a body part for locking the channel way, a pocket at one side of the channel for receiving the front end of the gate body when the gate is closed, a pocket or recess at the opposite side of the channel for receiving the gate body when the gate is opened, and a guide extension projecting from the rear end of the gate into the pocket or recess, said guide extension having engagement with the sides of said recess whereby equilibrium and stability of the gate body is maintained after the front end of the gate body leaves its locking pocket.

[Claims 6 to 8 not printed in the Gazette.]

880,104. REEL FOR REAPING, MOWING, AND THE LIKE MACHINES. MORITZ SCHILLER, Berlin, Germany. Filed Sept. 16, 1907. Serial No. 393,087.



1. In a reel for reaping machines, the combination with the reel-shaft, and rotatably-mounted reel-bars, of a nave fast on said shaft and having radially-arranged guides, rods connected at their outer ends with the reel-bars and having their inner ends movably connected with the guides in said nave, and means comprising a cam and parts connected to said rods adapted to engage said cam as the reel revolves so as to move said rods and thereby turn said reel-bars.

2. In a reel for reaping machines, the combination with the reel-shaft, and rotatably-mounted reel-bars, of a nave fast on said shaft and having radially-arranged guides, rods connected at their outer ends with the reel-bars and having their inner ends movably connected with the guides in said nave, and means comprising an adjustable cam and parts connected to said rods adapted to engage said cam as the reel revolves and thereby move said rods to turn said reel-bars, and means adapted for adjusting said cam.

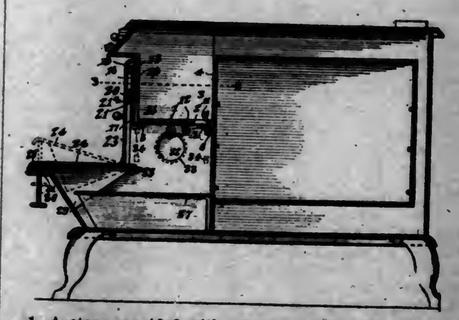
3. In a reel for reaping machines, the combination with the reel-shaft, and rotatably-mounted reel-bars, of a nave fast on said reel-shaft having radial guides, shoes movable radially in said guides and having lateral rollers, rods connected with said shoes and with the reel-bars, and a cam arranged to be engaged by said rollers as the reel revolves for moving in the shoes and thereby turning said reel-bars.

4. In a reel of reaping machines the combination of a shaft, a star nave fastened on the said shaft, spokes fastened on the star nave, grooves radially arranged on the star nave, reel bars, rotatably mounted on the spokes, tines fastened on the reel bars, rods connected with the said reel bars, means adapted for guiding the said rods within the radial grooves of the star nave, an adjustable cam, means adapted for adjusting the said cam, a lever having a sleeve adapted for bearing the reel shaft, a pivotally mounted column adapted for supporting the said lever, handles fastened on the lever, means adapted for fixing the lever, and means adapted for fixing the pivotally mounted column, substantially as set forth.

5. In a reel of reaping machines the combination of a shaft, a star nave fastened on the said shaft, spokes fastened on the star nave, grooves radially arranged on the star nave, reel bars, rotatably mounted on the spokes, tines fastened on the reel bars, rods connected with the said reel bars, means adapted for guiding the said rods within the radial grooves of the star nave, an adjustable cam, means adapted for adjusting the said cam, a lever having a sleeve adapted for bearing the reel shaft, a pivotally mounted column adapted for supporting the said lever, handles fastened on the lever, a handle hinged with its one end to the handle of the lever with its other end to a rod adapted for fixing the lever, and a handle hinged with its one end to the handle of the lever with its other end to a rod adapted for fixing the pivotally mounted column, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

880,105. GRATE FOR COOK-STOVES. JOSEPH J. SHIMER, Cuba, Kans. Filed May 24, 1906. Serial No. 318,501.



1. A stove provided with a bottom grate having an imperforate front body portion and provided with a rear opening for causing an upward draft at the rear wall of the fire box, said bottom grate being also provided with means located at the back of the said opening for throwing the air forwardly.

2. A stove having a bottom grate provided with an imperforate front body portion and having a rear opening, said grate being provided at the back of the opening with a depending deflecting portion having an inclined front edge.

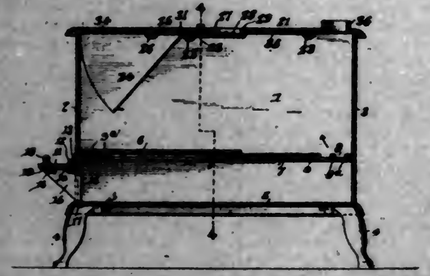
8. A stove provided with a front grate having upper and lower slots or openings, and upper and lower slidable doors or dampers mounted on the front grate and provided with slots or openings corresponding with those of the said grate.

4. A stove provided with a front grate having slots or openings, and a door or damper slidably connected with the front grate and hinged, whereby the slidable door or damper is also adapted to swing outwardly and inwardly.

5. A stove having a front grate provided with upper and lower slots or openings, upper and lower horizontally alined guides, the lower guides being provided with depending hooks, an upper door or damper slidable in the guides, and a lower slidable door or damper provided with slots and receiving the hooks of the lower guides.

[Claims 6 to 8 not printed in the Gazette.]

880,106. CONVERTIBLE HEATING AND COOKING STOVE. JOSEPH J. SHIMEK, Cuba, Kans. Filed June 4, 1906. Serial No. 320,105.



1. A convertible heating and cooking stove provided with a top having a hinged section adapted to form an air inlet, said top being also provided at the back with a smoke outlet, a grate having a movable section or member arranged to form a rear opening and adapted to close the same, and a door arranged below the grate.

2. A convertible heating and cooking stove provided with a top having a front hinged section adapted to form an air inlet, a grate having an adjustable section or member movable toward and from the back of the stove to provide a rear opening and also to close the same, said stove having a smoke outlet located at the rear end of the top of the stove at a point above the rear opening of the grate, and a door located below the grate.

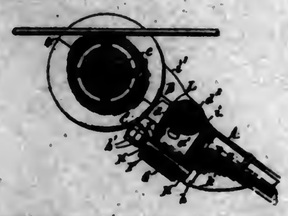
3. A convertible heating and cooking stove, the combination of a body provided at the top with a hinged section or member adapted to be raised, and having depending sides or wings coöperating with the hinged section when the latter is open to form an air conduit, said sides or wings forming side walls for the said conduit, means for supporting the hinged section or member in its raised position, and a grate located at an intermediate point between the top and bottom of the stove and having an opening and provided with means for closing it to form a heating stove of the upper portion of the body.

4. In a convertible heating and cooking stove, the combination of a body provided at the top with front and rear sections or members hinged together, the rear section or member being also hinged to the body of the stove, means for rigidly connecting the sections or members to permit the same to swing upwardly on the hinge joint, which connects the rear section or member to the body, and a grate located at an intermediate point between the top and bottom of the stove and provided with means for cutting out the lower portion of the said stove.

5. In a convertible heating and cooking stove, the combination of a body provided at the top with front and rear sections or members hinged together, the rear section or member being also hinged to the body of the stove, means for rigidly connecting the sections or members to permit the same to swing upwardly on the hinge joint, which connects the rear section or member to the body, said means comprising a pivoted dog mounted on one of the sections and engaging the other, and a locking device carried by the latter section for engaging the dog, and a grate located at an intermediate point between the top and bottom of the stove and provided with means for cutting out the lower portion of the said stove.

[Claim 6 not printed in the Gazette.]

880,107. ELECTRIC TROLLEY. LEONARD SMITH, North Tonawanda, N. Y. Filed Dec. 9, 1905. Serial No. 291,071.



1. The combination of a trolley wheel, a frame in which said wheel is journaled, a head to which said frame is pivoted at its lower front portion, said frame having a head projecting rearwardly from said pivot, and said head having a part projecting rearwardly beneath said projecting part of the frame, and a spring between said projecting parts of the frame and head, said projecting part of the head forming a guard to prevent said projecting part of the frame and said spring from striking the trolley wire or other object, substantially as set forth.

2. The combination of a trolley wheel, a frame in which said wheel is journaled, a head having a hollow portion which underlies said frame and in which the lower portion of said frame is pivoted, and a spring in said hollow portion of the head which presses the frame toward the trolley wire and normally holds it out of contact with the underlying part of the head to allow the frame to swing downwardly independently of the head, the hollow portion of said head inclosing and forming a guard for the lower portion of said frame and said spring, substantially as set forth.

3. The combination of a trolley wheel, a rigid frame in which said wheel is journaled, a head having a part which underlies said frame and to which said frame is pivoted to swing toward and from the trolley wire only, and springs which yieldingly oppose the movement of said frame in opposite directions and normally press said frame toward the trolley wire and hold it out of contact with the underlying part of the head to allow the frame to swing downwardly independently of said head, said underlying part of the head forming a guard for said springs, substantially as set forth.

4. The combination of a trolley wheel, a frame in which said wheel is journaled, a head to the front portion of which the front portion of said frame is pivoted, said head and frame having portions extending rearwardly from their pivotal connection, a spring between said portions of the head and frame within the confines of said head for pressing the frame toward the trolley wire, and means for yieldingly opposing the movement of the frame toward the trolley wire, substantially as set forth.

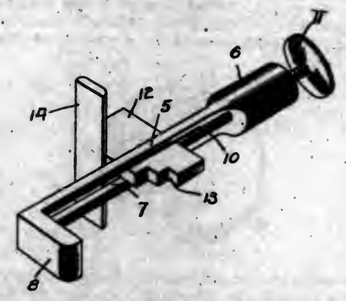
5. The combination of a trolley wheel, a frame in which said wheel is journaled, a head to which said frame is pivoted, a rod arranged in rear of the pivotal connection of said frame and head and passing through holes in said frame and head, a spring surrounding said rod between said frame and head, and springs between enlargements at the ends of said rod and said frame and head, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

880,108. DOOR-SECURER. LEWIS C. SMITH, New York, N. Y. Filed Apr. 26, 1907. Serial No. 370,387.

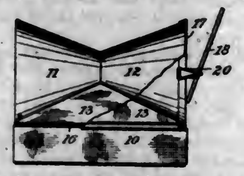
A door securer comprising a plate having an enlarged portion at one end and having a laterally-extending finger

at its opposite end, said plate having a longitudinal slot between its enlarged portion and finger, said enlarged portion having a threaded longitudinal passage formed therethrough communicating with the slot, a member engaged in the slot and extending oppositely beyond the plate, said member having a broadened portion at one end and at its side which lies in the direction of the finger and having its corner at its opposite end from the broadened



portion in the direction of the finger cut away at an angle, the resulting slanting face being notched, and a screw engaged in the threaded passage and impinging against the member, said finger being adapted for engagement in the opening of a door-frame face plate, and said member being adapted to receive an edge of said face plate in its notches interchangeably.

880,109. HARMONICA. FERDINAND STRAUSS, New York, N. Y. Filed Dec. 4, 1907. Serial No. 405,030.



1. A harmonica body provided with a communicating resonating chamber composed of a pair of hollow truncated cones placed point to point, substantially as specified.

2. A harmonica body provided with a communicating resonating chamber composed of a pair of hollow truncated cones placed point to point, and of intervening side plates adapted to engage the harmonica body, substantially as specified.

3. A harmonica body provided with a communicating tapering resonating chamber the axis of which is parallel to that of the harmonica body, a drum-head on the end of said chamber, and a drum stick adapted to engage said head, substantially as specified.

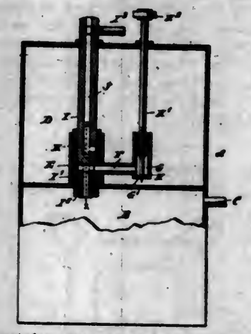
4. A harmonica body provided with a communicating resonating chamber composed of a pair of hollow truncated cones placed point to point, one of said cones being open, and the other cone being closed, substantially as specified.

5. A harmonica body provided with a communicating resonating chamber composed of a pair of hollow truncated cones placed point to point, a drum-head on the base of one of said cones, and a drum stick adapted to engage said head, substantially as specified.

[Claim 6 not printed in the Gazette.]

880,110. ACETYLENE-GAS GENERATOR. LEON SUSSMAN, Bayonne, N. J., assignor to The Manhattan Screw and Stamping Works, New York, N. Y., a Firm. Filed Apr. 28, 1906. Serial No. 314,114.

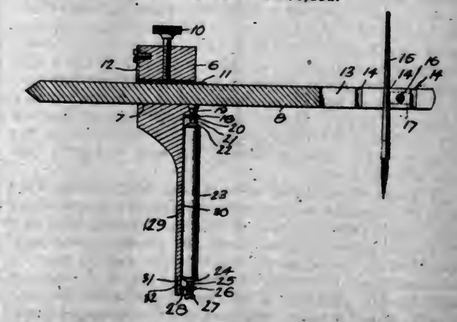
1. In an acetylene gas generator, a carbid chamber and a water chamber, a valve which in one position establishes communication between the two chambers and which in another position throws the carbid chamber into communication with the outer air, and another valve located in the connection between the water chamber and the first-named valve and provided with a stem which extends outside of said chamber for regulating the flow of water to the carbid chamber.



2. In an acetylene gas generator, a carbid chamber and a water chamber, a valve casing having connection with both chambers and provided with a recess, a valve mounted to turn in said casing and provided with two longitudinal channels disconnected from each other, one of which is adapted to admit water to the carbid chamber and the other of which always communicates with the outer air, said longitudinal channels being adapted to be brought into connection with each other through the medium of the recess in the valve casing when the valve is in one of its positions.

3. In an acetylene gas generator, a carbid chamber and a water chamber, a valve casing having connections both with the water chamber and with the carbid chamber, a valve located in the water chamber and controlling the passage of water into the valve casing, and an independent valve also located in said water chamber and having two channels, one for controlling the passage of water from said casing to the carbid chamber, and the other for connecting the carbid chamber with the outside air when the said water supply channel is closed.

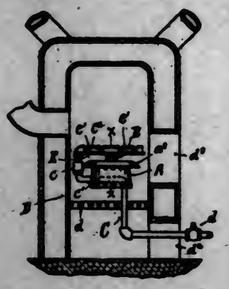
880,111. STRIPER. JOHN F. THOMAS, Elkhart, Ill. Filed June 5, 1907. Serial No. 377,431.



1. A striper comprising a block including an integral downwardly extended extension, the said extension being provided in its forward face with a groove, a plate set into the block at the upper end of the groove, a plate set into the extension at the lower end of the groove, said extension having its lower end reduced, a split fitted upon the said reduced lower portions of the front edge of the last mentioned plate, set screws adjustable through said plates and provided in their ends with sockets, a roller provided at its ends with studs which are seated in said sockets, and a brush carrying arm adjustably engaged through said block.

2. A striper comprising a block including an integral downwardly directed extension, the said extension being provided in its forward face with a groove, plates set one into the block and the other into the lower end of the extension, bearing screws adjustably engaged through the plates and provided each with a socket, a roller provided at its ends with studs which seat in the sockets in the ends of the screws, the said roller being in this manner journaled partially within the groove and projecting beyond the said forward face of the extension and the block, said block being provided with a longitudinally extending opening, and a brush carrying arm adjustably engaged through the said opening.

880,112. GAS-BURNER. FREDERICK C. VEARING, Cincinnati, Ohio. Filed Dec. 7, 1907. Serial No. 405,474.



1. In a burner a housing having its upper end imperforate except for a nozzle opening, a nozzle projecting downward through the upper end of the housing, a horizontal partition within the housing adjacent to the nozzle and forming with the closed end of the housing a shallow combustion chamber, the said combustion chamber having perforations in its walls and the partition having perforations in it, and a gas-pipe connected to the nozzle whereby the gas is discharged downward through the nozzle, spread by the partition and mixed with air arising through the perforations in the partitions into the combustion chamber.

2. In a burner a housing having its upper end imperforate except for a nozzle opening, a nozzle projecting downward through the upper end of the housing, a horizontal partition within the housing adjacent to the nozzle and forming with the closed end of the housing a shallow combustion chamber, the said combustion chamber having perforations in its walls and the partitions having perforations in it and a gas pipe connected to the nozzle whereby the gas is discharged downward through the nozzle, spread by the partition, the pipe having in it a horizontal portion passing through the housing beneath the partition and a mixer connected to the pipe upon the exterior of the housing between the said horizontal portion and the nozzle.

3. A burner consisting of a housing in the form of an inverted cup with a horizontal external ledge around its top, a perforated partition within the housing forming a shallow combustion chamber in the top of the housing, the housing having perforations in its walls below the ledge, a nozzle projecting through the top of the housing and opening adjacent to the partition, and a gas pipe connected to the nozzle whereby gas is discharged downwardly from the nozzle, spread by the partition and admixed with air arising through the partition and the products of combustion escaping through the perforations beneath the ledge are deflected by the ledge.

880,113. GEAR-CASE FOR MECHANICAL MOVEMENTS. WILLIAM H. VOSS, Davenport, Iowa. Filed Jan. 15, 1906. Serial No. 296,151.

1. A mechanical movement for washing machines comprising a continuously revolving horizontal drive-shaft, a rotary reciprocal driven shaft arranged substantially at right angles thereto and in the same vertical plane therewith and having its upper end extend through its bearings and terminate adjacent to the contiguous end of said drive-shaft, a supporting-frame in which said shafts are journaled, gearing for connecting the contiguous ends of said shafts and communicating the motion of said drive-shaft to said driven shaft, and a casing consisting of two hemispherical sections inclosing said gearing and suitably locked together whose meeting edges are in the same vertical plane with said shafts and one of which is rigidly secured in position and the other hinged thereto.



2. A mechanical movement for washing machines comprising a continuously revolving horizontal drive-shaft, a rotary reciprocal driven shaft arranged substantially at right angles thereto and in the same vertical plane therewith and having its upper end extend through its bearings and terminate adjacent to the contiguous end of said drive-shaft, a supporting-frame in which said shafts are journaled, gearing for connecting the contiguous ends of said shafts and communicating the motion of said drive-shaft to said driven shaft, and a casing consisting of two hemispherical sections inclosing said gearing hinged together opposite the end of said drive-shaft, said sections having their meeting edges in the same vertical plane with said shafts and one of which is rigidly secured to its support.

3. A mechanical movement for washing machines comprising a continuously revolving horizontal drive-shaft, a rotary reciprocal driven shaft arranged substantially at right angles thereto and in the same vertical plane therewith and having its upper end extend through its bearings and terminate adjacent to the contiguous end of said drive-shaft, a supporting-frame in which said shafts are journaled, gearing for connecting the contiguous ends of said shafts and communicating the motion of said drive-shaft to said driven shaft, and a casing consisting of two hemispherical sections inclosing said gearing hinged together opposite the end of said drive-shaft and provided with means opposite said hinge for locking the same together, said sections having their meeting edges in the same vertical plane with said shafts and one of which is rigidly secured to its support.

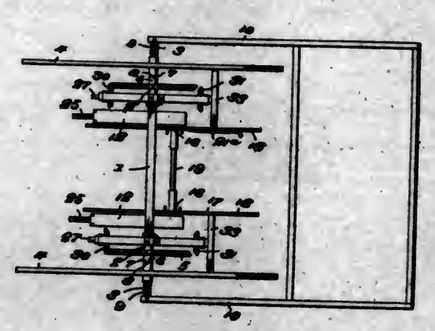
4. A gear case for mechanical movements comprising two hemispherical sections whose meeting edges are in a vertical plane, which are hinged together mediate their tops and bottoms, and have recesses in their meeting edges whereby openings into said case are provided, one of said sections being rigidly secured to its support, and the other provided with a transverse spring snap hook whereby said sections are locked together.

5. A gear case for mechanical movements comprising two hemispherical sections whose meeting edges are in a vertical plane adapted to aline with the axis of the drive-shaft of a mechanical movement, which are hinged together mediate their tops and bottoms, and have recesses in their meeting edges whereby openings into said case are provided, one of said sections being rigidly secured to its support, and the other provided with a transverse spring snap hook whereby said sections are locked together.

[Claims 6 to 11 not printed in the Gazette.]

880,114. AUTOMATIC WIRE-REEL. CARL E. WALLGREEN, Adams, N. D. Filed Apr. 30, 1907. Serial No. 371,134.

1. In a device of the class described, the combination with a frame, having supporting wheels therefor; of a reel, guides on said frame, heads in said guides, having openings, pivot pins carried by said reel adapted to enter said openings and pivotally mount the reel on the frame, means to normally hold said pivot pins in said openings, and means carried by the reel to move said pivot pins longitudinally, whereby the reel may be removed from the frame.



2. In a device of the class described, the combination with a frame having guides thereon, and ways in said guides; of a reel, said reel having a hollow axle, heads in said ways and having openings therein, pivot pins mounted in said axle, and adapted to extend into said openings in the heads, means to normally hold said pivot pins in said openings, and a cable secured to the inner ends of said pivot pins an auxiliary cable secured to the first mentioned cable and directed around a pin in the axle, whereby when a pull is given to the auxiliary cable, the pivot pins will be moved into the axle, and out of engagement with the openings in the heads.

3. In a device of the class described, the combination with a frame having guides thereon, and ways in said guides; of a reel adapted to extend between said guides, heads in said guides having openings therethrough, a hollow axle for said reel, pivot pins mounted in said axle and adapted to engage the openings in said heads to form a support for said reel, springs in said axle adapted to hold said pivot pins extended, a cable secured between said pivot pins an auxiliary cable secured to the first mentioned cable and extended beyond one end of said axle, whereby when a pull is made on the auxiliary cable, the pivot pins will be moved inwardly, and means to yieldingly mount the heads in said guides.

4. In a device of the class described, the combination with a frame, axles on said frame, and supporting wheels on said axles; of guides on said frame, a reel rotatably mounted between said guides, bevel gears on said axles, driving shafts carried by said axles, pinions on said shafts, means to move said pinions longitudinally on said driving shafts whereby the rotation of the driving shafts will be reversed and friction pulleys carried by said driving shafts adapted to engage and rotate the reel.

5. In a device of the class described, the combination with a frame, tubular sockets secured to said frame, axles fixed in said sockets and supporting wheels on said axles, of a reel, guides for said reel means to mount said reel between the guides, driving shafts extended laterally through said tubular sockets and axles, gears on said axles, pinions on said driving shafts adapted to alternately engage said gears, whereby the rotation of the driving shafts will be reversed, a frame secured to said pinions, means to move said frames longitudinally whereby the pinions at one end of the shafts will be moved into engagement with the gears and the pinions at the opposite ends of the shafts moved out of engagement with the gears, friction pulleys on said shafts adapted to engage and rotate the reel, and means to engage said bevel gears with the supporting wheels.

[Claim 6 not printed in the Gazette.]

880,115. BOTTLE-LABEL. JOHN F. AHRENS, New York, N. Y. Filed May 3, 1907. Serial No. 371,580.



1. A bottle label formed with a short transverse slit and vertical lines of perforations extending downwardly from opposite ends of the slit and a tape arranged in rear of the label between the lines of perforations and extending out at its upper end through the slit to the front of the label.

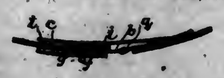
2. A bottle label formed with a series of short transverse slits in different horizontal planes and vertical lines of perforations extending downwardly from opposite ends of the slits and a series of tapes arranged in rear of the label between the lines of perforations and extending at their upper ends through the slits to the front of the label.

3. A bottle label formed with a series of short transverse slits arranged in different horizontal and vertical planes, vertical lines of perforations extending downwardly from the upper ends of the slits and a series of tapes arranged in rear of the label between the lines of perforations and extending at their upper ends through the slits to the front of the label.

4. A bottle label formed with two lines of vertically arranged perforations extending from the top of the label downwards and a tape arranged in rear of the label between the perforations having its lower end turned outward and secured to the front face of the label and having a forwardly projecting upper end for the purpose specified.

5. A bottle label formed with a series of short transverse slits arranged in different horizontal planes and vertical lines of perforations extending downwardly from the upper ends of the slits and tabs projecting forwardly from the upper ends of the label sections bounded by said slits and perforations.

880,116. CLASP. MORRIS D. ARNOW, Boston, Mass. Filed Feb. 21, 1907. Serial No. 358,644.



1. A clasp for foot and hand coverings, consisting of socket and tongue members fastened respectively to adjacent separable parts of the covering, the socket member being open at one end to receive the end of the tongue member and having internal teeth, and the tongue member having an integral resilient latch inclined away from the free end of the tongue, adapted to slip over the teeth when the tongue is pushed into the socket and to engage behind the teeth.

2. A clasp consisting of a socket member having a plurality of spaced shoulders inclined inwardly toward the interior of the said member, and a tongue member adapted to enter said socket member and carrying an outwardly inclined integral spring latch to slip past the shoulders when inserted into the socket and to engage behind the shoulders and prevent withdrawal of the tongue.

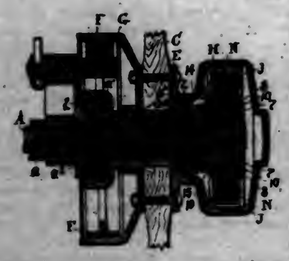
3. A clasp consisting of a socket member having internally projecting locking shoulders or teeth and a slot, a sheet-metal tongue provided with an integrally united

latch struck up from the metal thereof between its ends, whereby said latch may be entirely retracted within the body of the tongue, adapted to enter the socket and interlock with the shoulders, and a projection on the tongue extending through the slot of the socket when the members are together, to be engaged manually for drawing the tongue a further distance into the socket.

4. A clasp for securing separable parts of foot or hand coverings comprising a socket member having locking teeth and prongs for attachment to one of the parts, and a tongue member having lips or flanges to be clamped about a lug on the other part, said tongue member being adapted to enter the socket member and carrying a spring latch for automatic engagement with the teeth thereof as the tongue member is inserted into the socket.

5. A clasp comprising socket and tongue members adapted to be engaged telescopically, the former having a plurality of locking shoulders or teeth and the latter a spring latch to engage behind said teeth, and a fastening device for the tongue member having a projection passed through a slot in the tongue member and doubled back for pivotal union therewith, and having flanges or lips adapted to be clamped about a portion of the article to which it is applied.

880,117. COMPENSATING MECHANISM FOR AUTOMOBILES. CHARLES H. BALL and JOHN F. ROGERS, Cleveland, Ohio. Filed Apr. 6, 1906. Serial No. 310,297.



1. A compensating mechanism for vehicles, comprising a driven axle, a wheel mounted to turn independently on the axle, and mechanism to positively engage the wheel with the axle comprising segments and a cam and wedges to force the segments into locking engagement with the wheel.

2. A compensating mechanism comprising a driven axle, a wheel mounted on the axle, a cam fixed on said axle and a rim on said wheel, and wedges and friction segments interposed between said cam and rim to operatively engage the wheel with the axle.

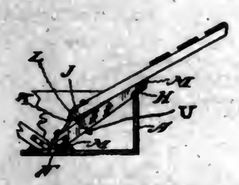
3. Means to drive an independently mounted wheel comprising an axle carrying said wheel, a cam on the axle and wedges adapted to be actuated thereby, segments having their ends in working contact with said wedges and a rim on said wheel adapted to be frictionally engaged by said segments about their outer surfaces.

4. The axle of a vehicle and a wheel mounted to turn independently thereon, and means to automatically lock and unlock the wheel operatively as to said axle comprising a rim rigid with the wheel at one side thereof, a double faced cam fixed on said axle, wedges mechanically connected with said cam so as to both force the wedges outward and draw them back, and segments having inclined edges engaged by said wedges and adapted to frictionally engage said rim.

5. A vehicle axle, and a wheel independently mounted over the same, and having a lateral rim at one side thereof with an inner engaging surface, in combination with means to lock and unlock said wheel in respect to the axle, comprising a pair of segments with oppositely inclined projections at corresponding ends, wedges between said projections and a double faced cam on said axle bearing against the said wedges, said cam and wedges constructed to cause said wedges to move both outwardly and inwardly according as the wheel travels with the axle or at a greater relative speed.

[Claims 6 to 8 not printed in the Gazette.]

880,118. HAY-RACK. ELIAS A. W. BEMMER, Scotland, Ontario, Canada. Filed Apr. 27, 1906. Serial No. 314,091.



1. A wagon box in combination with hay rack sides provided with arms extending downwardly and inwardly to the bottom of the box and adapted to hook over the upper edges of the box sides; and detachable means securing the lower ends of the arms to the bottom of the box, to hold them rigid against outward movement in the direction of their length, substantially as described.

2. A wagon box in combination with hay rack sides provided with arms engaging the sides of the box and extending downwardly and inwardly to the bottom of the box where they are pivoted together in pairs; a metal tongue secured to each arm extending past the pivot; and a metal plate secured to the wagon bottom and having a slot formed therein adapted to receive the tongues when parallel to one another, and to engage them when crossed, substantially as described.

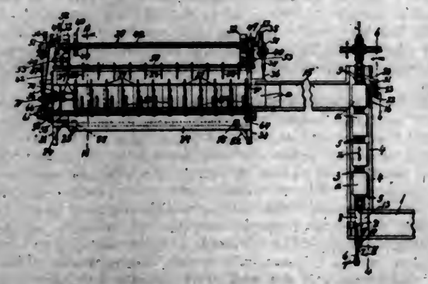
3. A wagon box in combination with hay rack sides provided with arms extending downwardly and inwardly to the bottom of the box and adapted to hook into the bottom of the wagon box and over the sides of the box to brace the bottom and sides together, substantially as described.

4. A wagon box in combination with hay rack sides provided with inner arms detachably secured to the bottom of the box inside and hooked on to the upper edges of the box sides, and outer arms detachably secured to the inner arms, substantially as described.

5. A hay rack side provided with inner and outer arms, and a socket piece secured to each inner arm into engagement with which the outer arms may be slipped from an outward upper direction, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

880,119. CAN FEEDING AND RIGHTING MACHINE. MERTON D. BLAKESLEE, Cazenovia, N. Y., assignor of one-fourth to Henry Burden, Second, Cazenovia, N. Y. Filed Aug. 24, 1906. Serial No. 331,888.



1. In a can-righting machine, an inclined chute along which the cans are adapted to roll, a carrier running transversely of and in proximity to the low end of said chute and receiving the cans therefrom, a detent at the low end of the chute for temporarily holding the cans in said chute, means actuated by the carrier for tripping the detent, automatic means actuated by the carrier for removing the cans one by one therefrom as they are brought to a predetermined position, and a can righting device for receiving the cans from the carrier and arranging them right side up.

2. In a can-righting machine, a can chute having an outlet, a movable detent in the path of the cans near the outlet, a conveyer for receiving the cans from said outlet, means actuated by the conveyer for tripping the detent to permit the cans to gravitate in succession onto the conveyer, means actuated by the conveyer for automatically forcing the cans therefrom when brought to a predetermined position, and a can-righting mechanism receiving said cans from the conveyer and arranging them right side up with their open ends at the top.

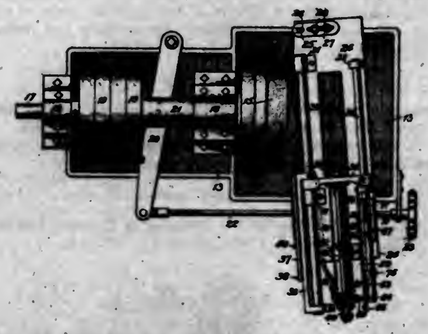
3. In a can-righting machine, an inclined can-chute having an outlet, a detent projecting into the chute in the path of the cans near the outlet, a conveyer traveling under the outlet, means actuated by the conveyer for tripping the detent at regular intervals to allow the cans to gravitate one by one onto the conveyer, means for automatically forcing the cans, one by one, from the conveyer when brought to a predetermined position, a can-righting mechanism and means for receiving the cans from the conveyer and carrying them to the righting device.

4. In a can-righting machine, a can chute having an outlet at its low end, a conveyer adapted to receive the cans discharged through said outlet, and to arrange them end to end thereon, a detent movable into and out of the path of the cans at the outlet, abutments on the conveyer for engaging the ends of the cans and feeding them endwise, and means actuated by said abutments for tripping the detent at regular intervals.

5. In a can feeding and righting machine, an inclined chute having an outlet at its lower end, a conveyer traveling under the low end of the chute for receiving the cans and conveying them away from said chute, means at the low end of the chute and actuated by the conveyer for feeding the cans one by one from the chute onto the conveyer, a swinging gate actuated by the conveyer for forcing the cans laterally from said conveyer as they are successively presented thereto, and a can righting mechanism receiving the cans as they are successively discharged from the conveyer by said gate.

[Claims 6 to 15 not printed in the Gazette.]

880,120. GRINDING-MACHINE. JOHN G. BLESSING, Chicago, Ill., assignor to American Cutlery Company, Chicago, Ill. Filed Apr. 17, 1906. Serial No. 312,112.



1. In a grinding-machine, the combination with a base and a grinding-wheel journaled thereon, of a bed on said base provided with guide-bearings, rods secured together and reciprocably mounted in said bearings, a work-holder secured to one of said rods to reciprocate therewith and move the work to be ground against the grinding-surface of said wheel, and means for reciprocating said rods.

2. In a grinding-machine, the combination with a base and a grinding-wheel mounted thereon, of a bed on the base, a reciprocating work-holder on the bed for moving the work to be ground against the grinding-surface of the wheel, a cylinder on the bed, a piston in said cylinder directly connected with said carrier for actuating the latter, and means for actuating the piston, for the purpose set forth.

3. In a grinding-machine, the combination with a base and a grinding-wheel mounted thereon, of a bed mounted on said base and provided with guides, a rod reciprocably confined in said guides, a work-holder connected with said rod, a cylinder on said bed, a piston in said cylinder and connected with said rod to reciprocate it and the work-holder, and means for actuating the piston.

4. In a grinding-machine, the combination with a base and a grinding-wheel mounted thereon, of a bed mounted on said base and provided with guides, rods reciprocably confined in said guides, a cross-head secured to said rods, a work-holder connected with said rods, a cylinder on said bed, a piston in said cylinder and connected with said rods to reciprocate them and the work-holder, and means for actuating the piston.

5. In a grinding-machine, the combination with a base and a grinding-wheel journaled thereon, of a work-holder, a cylinder, a piston in said cylinder and connected with said work-holder for reciprocating the latter, and means for actuating the piston by fluid-pressure, comprising a valve for controlling the preasure-supply to said cylinder, a spring-controlled operating-lever for turning said valve, an arm adapted to engage said lever to releasably hold it against the tension of said spring, and means operated by the piston for engaging said arm to disengage the lever therefrom and cause it to return to normal position at the end of the inward stroke of the piston.

[Claims 6 to 16 not printed in the Gazette.]

880,121. ELECTRICAL INSULATOR. DANIEL G. BOLTON, Camden, N. J. Filed Nov. 23, 1906. Serial No. 344,752.

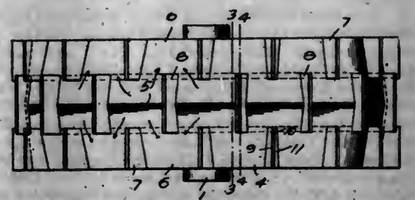


1. An electric insulator, comprising a pin, disks thereon spaced apart, and a sleeve or bushing of flexible insulating material around the pin between the disks.

2. An electric insulator, comprising a pin having a head on one end and constructed at its opposite end for attachment to its support, a series of disks on said pin, and sleeves or bushings of flexible insulating material around the pins and spacing the disks apart.

3. An electric insulator, comprising a headed pin, wire clamping disks loose on the pin, and a flexible elastic sleeve or bushing around the pin between the disks.

880,122. WHEEL. GEORGE M. BUCEY, East Springfield, Ohio. Filed Apr. 13, 1907. Serial No. 368,013.



1. A wheel of the type set forth having its tread formed with a centrally located peripheral rib and with two series of teeth, one series of teeth having their inner ends terminating short of said rib, and the other series of teeth intersecting said rib and arranged in staggered relation to the first-named series of teeth.

2. A wheel of the type set forth having its tread

formed with a centrally located peripheral rib having inclined sides, and with two separate series of teeth, the teeth of one series terminating short of said rib and the teeth of the other series intersecting said rib and arranged in staggered relation to the first-named series of teeth, said last-named series of teeth having their ends disposed partially in the space between the first-named series of teeth, to afford a continuous tortuous passage.

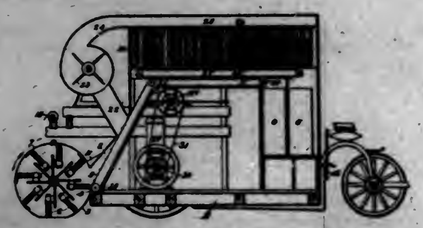
880,123. KNIFE. THOMAS F. BURK, Providence, R. I. Filed May 21, 1907. Serial No. 374,839.



1. A knife of the class described comprising a handle, a main blade, and a pair of supplemental blades adjustably fixed upon the main blade, one of the supplemental blades having one of its edges positioned beyond the cutting edge of the main blade.

2. A knife of the class described comprising a handle, a main blade, and a pair of supplemental blades adjustably fixed upon the main blade, one of the supplemental blades having its cutting edges positioned inwardly of the cutting edge of the main blade.

880,124. STREET-CLEANING APPARATUS. CHARLES H. BUTLER, Oakland, Cal. Filed Oct. 20, 1904. Serial No. 229,266.



1. In a street cleaning apparatus, the combination of a wheeled-vehicle-frame, a rotary brush carried thereby, a casing for said brush, an endless conveyer extending upwardly and forwardly and traveling in a passage-way formed in the vehicle frame, a receiving chamber for the material lifted by said conveyer, an air trunk intersecting said conveyer passage-way, air induction means in said air trunk coöperating with the brush to cleanse the roadway, said air-trunk extending forward of the vehicle, settling tubes connected with the air trunk, a conveyer receiving the collections from said settling tubes, a receptacle into which said conveyer discharges, means for rotating the brush and means for operating said air induction means.

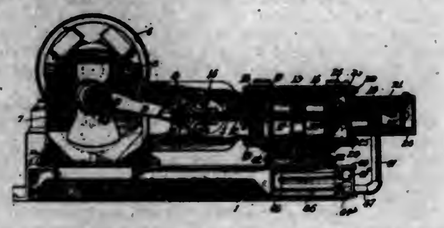
2. In a street cleaning apparatus, the combination of a wheeled-vehicle-frame a rotary brush carried thereby, said frame having a passage-way into which the material raised by the brush is discharged, said passage-way having two branches, an endless conveyer operating in one branch to carry the coarser deposits from the brush, air induction means in the other branch to convey the lighter particles raised by the brush, dry settling devices to which the material is delivered by said air induction means, and separate receptacles for receiving the deposits from said conveyer and said air induction means, and means for operating the brush and the said air induction means.

3. In a street cleaning apparatus, the combination of a wheeled-vehicle, a rotary brush carried thereby, an endless carrier operating in a passage-way in the vehicle-frame, means for operating the brush to deliver material on to said conveyer, an air trunk connected with said passage-way intermediate of its ends, air induction means interposed in said air trunk, settling tubes connected with said air trunk, and dust receptacles carried by the vehicle.

4. In a street cleaning apparatus, the combination of a wheeled-vehicle-frame, a rotary brush carried thereby, an endless conveyer operating in a passage-way in the vehicle frame, means for operating the brush for delivering material onto said conveyer, an air trunk connected with the said passage-way, air induction means in said air trunk, settling tubes connected with said air trunk, a separate conveyer receiving the collections from said settling tubes, and dirt receptacles into which said conveyers discharge.

5. In a street cleaning machine of the character described, the combination of a wheeled vehicle, a rotary brush, a casing therefor, a conveyer receiving the heavier deposits from the brush, means on the vehicle for storing said deposits, air induction means on the vehicle for conveying the finer sweepings of the brush, a receiver for said sweepings from the air induction means, means on the vehicle for settling in a dry condition the sweepings of the brush, and means for operating the brush, the conveyer and the air induction means.

880,125. COMPOUND AIR-COMPRESSOR. NIELS A. CHRISTENSEN, Milwaukee, Wis. Filed Nov. 11, 1902. Serial No. 130,895.



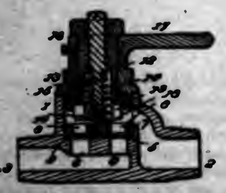
1. A compound compressor power as a unitary structure with low and high pressure cylinders arranged in tandem and having between them a valve head common to both of them, connections for compressed air between said cylinders but extraneous and independent of their pistons and imperforate and valveless pistons in said cylinders.

2. A compound compressor formed as a unitary structure with low and high pressure cylinders, arranged in tandem, said cylinders being double acting and having between them a head common to both and containing the suction and discharge valves of the adjacent ends of the low and high pressure cylinders respectively and imperforate and valveless pistons in said cylinders.

880,126. BOILER COMPOUND. JAMES L. COOPER, Pulaski, Va. Filed July 27, 1907. Serial No. 385,851.

A boiler-cleaning compound consisting of cutch, soda ash, borax, coal-oil, and oak-bark ooze.

880,127. TURNING-PLUG. HERBERT H. CRAMER, Denver, Colo. Filed Oct. 8, 1906. Serial No. 338,034.

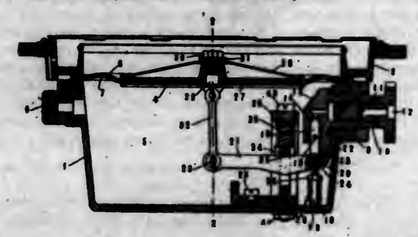


1. A turning plug comprising a casing having a valve seat formed with ports, a valve disk having ports, and lips circumjacent to each port of the valve disk, a facing for the latter retained in place by said lips, and means for turning said disk.

2. A turning plug comprising a casing having a valve seat formed with ports, a valve disk also having ports, tubes fitted in said latter ports and projecting beyond the face of the disk, a facing for said disk retained in place thereon by said tubes, and means for turning said disk.

3. A turning plug comprising a casing having a valve seat, a valve disk fitted thereon, a stem formed at its end to engage said disk, said stem having a central bore and a threaded opening leading from such bore, a spring located within said bore and engaging said valve disk, and an adjustable plug having a threaded portion working in said threaded opening, said plug being also designed to engage and hold said disk.

880,128. PRESSURE-REGULATOR. ROBERT M. DIXON, East Orange, N. J., assignor to The Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed June 19, 1906. Serial No. 322,393.



1. In a pressure regulator, in combination, a pressure chamber provided with a flexible diaphragm and having gas inlet and outlet openings, a valve casing in the inlet opening, a valve located within said valve casing, a lever pivotally connected with said valve and adapted to control the movements thereof, said valve being pivotally supported at one end within said chamber and having its opposite end pivotally connected with said diaphragm, a saddle resting upon said lever intermediate its ends, and resilient means interposed between said saddle and a member fixed within said casing, said resilient means being adapted through said saddle and lever to yieldingly oppose a movement of said diaphragm under the influence of the pressure of gas in said chamber.

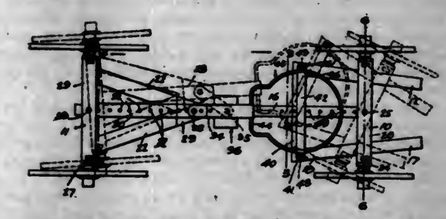
2. In a pressure regulator, in combination, a pressure chamber provided with a flexible diaphragm and having gas inlet and outlet openings, a valve casing in the inlet opening thereof adapted to a seat in said valve casing, a lever pivotally mounted upon said valve casing and having an operative connection with said lever whereby the opening and closing movements of the same are controlled thereby, means for connecting the outer end of said lever with said diaphragm, a saddle resting upon said lever intermediate its ends and upon which said lever rocks, a frame fixed within said casing, and a pair of resilient members interposed between said saddle and said frame adapted to yieldingly oppose a movement of said lever when said diaphragm is distended under pressure of gas in said chamber.

3. In a pressure regulator, in combination, a pressure chamber provided with a flexible diaphragm and having gas inlet and outlet openings, a valve casing in the gas inlet opening, a valve adapted to a seat in said valve casing, a lever pivoted in said valve casing and having an operative connection with said valve, a link pivotally connected with said lever, said link having a pivotal connection with said diaphragm, a saddle resting upon said lever intermediate its ends and upon which said lever is adapted to rock, a frame fixed within said casing, a pair of resilient members interposed between said saddle and said frame adapted to yieldingly oppose a movement of said lever when said diaphragm is distended under pressure of gas in said chamber, and guiding means for said resilient members.

4. In a pressure regulator, in combination, a pressure chamber having gas inlet and outlet openings, a valve adapted to a seat in said inlet opening, a lever pivoted within said chamber and having an operative connection with said valve, a flexible diaphragm forming a wall of said chamber and connected with said lever, said diaphragm through said lever being adapted to control said valve, a saddle resting upon said lever intermediate its length, a frame fixed within said chamber and extending about said saddle, and a pair of springs interposed between said saddle and a portion of said frame adapted to yieldingly oppose a movement of said diaphragm when the same has a tendency to become distended under the influence of gas pressure in said chamber.

5. In a pressure regulator, in combination, a pressure chamber having gas inlet and outlet openings, a valve adapted to seat in said inlet opening, a lever pivoted within said chamber having an operative connection with said valve, a flexible diaphragm forming one wall of said chamber and connected with said lever, said diaphragm through said lever being adapted to control the opening and closing operations of said valve, a saddle resting upon said lever intermediate its length and upon which said lever is adapted to rock, a frame fixed within said casing and extending about said saddle, a pair of coil springs interposed between said saddle and a portion of said frame adapted to yieldingly oppose a movement of said diaphragm when the same has a tendency to become distended under the influence of the gas pressure in said chamber, and guiding means positioned within said springs.

880,129. VEHICLE. JOHN S. DUNCAN and JACOB L. CAIST, Lynchburg, Va. Filed July 17, 1907. Serial No. 384,165.



1. The combination with the pivoted front and rear trucks of a vehicle, and the reach connecting said trucks, of a member carried by the rear truck and at its front end having connection with an open frame provided with a curved working portion, spaced plates supported rearwardly of the front truck and fixed with relation thereto and pins interposed between the ends of said plates, said curved working portion projecting between said plates and bearing relatively opposite sides thereof against said pins.

2. The combination with the pivoted front and rear trucks of a vehicle, and a reach connecting said trucks, of a member supported from the rear truck, an open frame carried at the front end of said member and having a curved working portion, a block mounted upon said reach, a plate pivoted to said block and having pivotal connection at its other end with said member, spaced plates supported rearwardly of the front truck, said curved working portion projecting between said plates, and friction rollers mounted between the ends of said plates and formed to bear against said curved working portion.

880,130. HOSE-SUPPORTER. KATHARINE F. EIKER and FRISBEY G. EIKER, Washington, D. C. Filed Aug. 1, 1907. Serial No. 386,649.

1. In a combined hose supporter and body shaping appliance, the combination of a tension strap or band connected at its upper end to a corset or other like article of apparel and having means for securing the lower ends thereof to the leg, and a detachable stocking engaging device adapted to be secured to either side of said tension strap.

2. In a combined hose supporter and body shaping appliance, the combination of a tension strap or band connected at its upper end to a corset or other like article of apparel and having means for securing the lower end to the leg, a clasp or buckle adjustable on said tension strap, and an adjustable stocking engaging device adapted to be secured to either side of said tension strap.



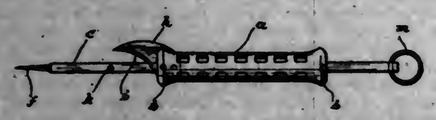
3. In a combined hose supporter and body shaping appliance, the combination of a tab attached to a corset or other like article of apparel, a clasp adjustably secured to said tab, a leg band, and a tension strap connecting the leg band with the adjustable clasp and having a sliding connection with said clasp.

4. In a combined hose supporter and body shaping appliance, the combination of a tab attached to a corset or other like article of apparel, a clasp adjustably secured to said tab, a loop carried by said clasp, a leg band, and a tension strap connected at its two ends to the leg band and having a sliding engagement with the loop at its intermediate portion.

5. In a combined hose supporter and body shaping appliance, the combination of a tab attached to the corset or other like article of apparel, a clasp adjustably secured to said tab, a loop carried by said clasp, a leg band, a tension strap connected at its ends to the leg band and having a sliding engagement with the loop at its intermediate portion, and stocking engaging devices secured to said tension strap.

[Claim 6 not printed in the Gazette.]

880,131. CAN-OPENER. ALFRED G. EULNER, Philadelphia, Pa. Filed Sept. 25, 1907. Serial No. 394,444.



1. A can opener comprising a hollow handle having orificed end walls, a rod extending entirely through the handle and supported and guided in the orifices in the end walls, said rod being offset at its forward end to form a piercing point, and a cutting blade secured to the forward end of the handle and projecting laterally and forwardly.

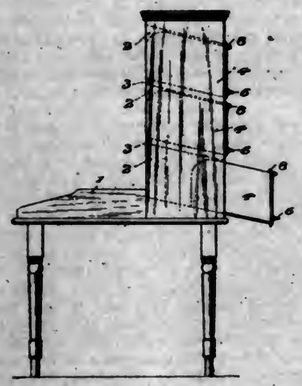
2. A can-opener comprising a hollow handle having orificed end walls, a rod extending entirely through the handle and supported and guided in the orifices in the end walls, said rod being bent at its forward end downward and thence forward and contracted to a piercing point, and a cutting blade secured to the forward end of the handle and extending under the rod and projecting laterally and forwardly with respect thereto, the edge of the blade nearest the rod being a cutting edge, substantially as described.

3. A can-opener comprising a hollow handle having orificed end walls, a rod extending entirely through the handle and supported and guided in the orifices in the end walls, said rod being bent at its forward end downward and thence forward and contracted to a piercing point, and a cutting blade secured to the forward end of the handle and extending under the rod and projecting laterally and forwardly with respect thereto, the edge of the blade nearest the rod being a cutting edge concave with respect to the body of the blade and separated from the rod in a lateral direction by a substantial space, substantially as described.

4. A can-opener comprising a hollow handle having orificed end walls, a rod extending entirely through the handle and supported and guided in the orifices in the end walls, said rod being offset at its forward end to form a piercing point, and a cutting blade secured to the forward end of the handle and having a cutting edge curving outwardly and thence forwardly, the forward end of said cutting edge being substantially straight and parallel with the rod and separated therefrom a substantial distance, substantially as described.

5. A can-opener comprising a mutually-slidable rod and handle, said handle having no supports or guides for the rod except orifices in the end walls of the handle, means at both ends of the rod limiting the extent of its relative longitudinal movement, the front of the rod being offset to form a piercing point, and a knife secured to the handle on the side thereof corresponding to the side on which the rod is off set, said knife projecting from the rod and handle laterally and forwardly, substantially as described.

880,132. POST-OFFICE SEPARATING-CASE. MALIN EWING, Sharon, Pa. Filed Mar. 16, 1907. Serial No. 362,749.

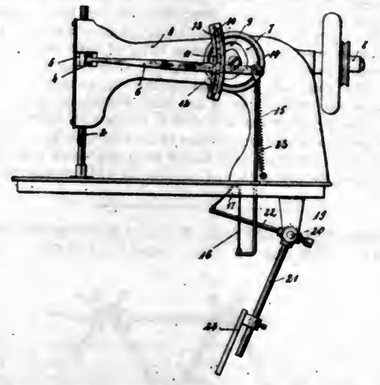


In a device of the kind described, the combination of a table, a pigeon-hole case thereon open from front to rear, removable receptacles in said pigeon-hole case extending from front to rear thereof, said receptacles being closed at their back ends and open at the ends adjacent said table, and means for holding said receptacles in place within said pigeon-hole case.

880,133. SEWING-MACHINE. JOHN FINK, New York, N. Y. Filed Mar. 2, 1907. Serial No. 360,238.

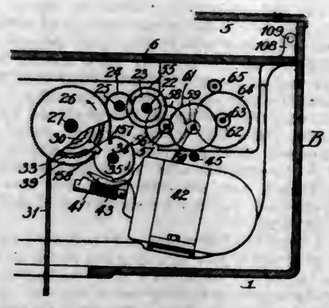
In a sewing machine, the combination with the needle bar, of a swinging bracket for said bar, a pitman hinged to said bracket, a cam disk operated from the driving shaft, a connecting link oscillated by said cam disk, a slide formed on said pitman and movable in the connecting link, a rod hinged to said pitman and projecting downwards, a pulley secured to the frame of the machine, flexible means attached to the lower end of said rod and guided over said pulley, a swinging shaft supported in the frame of the machine, a bar rigidly secured to said shaft and having its free end connected with the flexible

means, a rod or handle for manipulating the said shaft to adjust the slide, and a spring tending to return the



latter into initial position, substantially as and for the purpose specified.

880,134. ALARM-SIGNAL MECHANISM. ELLSWORTH E. FLORA and ROBERT J. ZORGE, Chicago, Ill., assignors to Zorge Safety Railway Equipment Company, a Corporation of Illinois. Filed June 19, 1907. Serial No. 379,792.



1. The combination with torpedo-carrying and projecting-mechanism, of gear-mechanism for actuating the same, a motor tending normally to move said gear-mechanism, means for restraining the mechanism from movement, and an automatically-controlled re-winding motor serving to re-wind said first-named motor.

2. The combination with torpedo-carrying and projecting-mechanism, of a motor tending normally to actuate the same, an electrically-controlled stop restraining the mechanism from motion, and an electric winding motor having a circuit which is automatically established by the first-named motor and which is automatically broken after the winding operation.

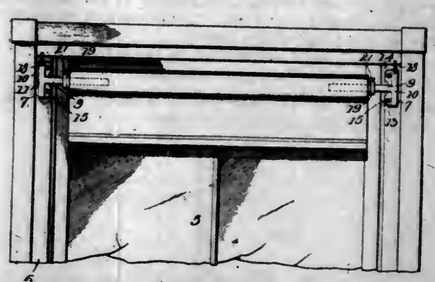
3. The combination with torpedo-carrying and projecting-mechanism, of a gravity motor equipped with a circuit maker and breaker, electrically-controlled locking means normally restraining said motor from action, and a winding motor having a circuit controlled by said circuit maker and breaker.

4. The combination with torpedo-carrying and projecting mechanism, of a motor for actuating the same equipped with a weight and provided with a circuit breaker, a re-winding motor having a circuit equipped with a switch operated by said circuit-breaker, a latch for holding said switch in a closed position, and means actuated by the weight for releasing said latch after the winding operation.

5. The combination of a rotary carrier, torpedo-carrying slides mounted thereon, carrier-rotating mechanism, a slide-actuating member, a rock-shaft serving to actuate the slide-actuating member in one direction, means tending normally to rotate the rock-shaft to project a torpedo, a gear-train, a motor tending normally to rotate said gear-train, a two-part connecting member joining a gear of said gear-train to said rock-shaft and equipped with a magnet normally restraining the rock-shaft from movement, and a re-winding motor.

[Claims 6 to 10 not printed in the Gazette.]

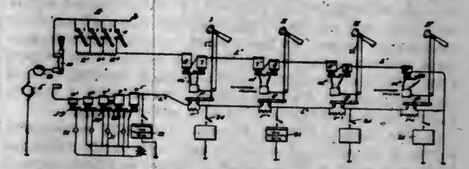
880,135. SHADE AND CURTAIN BRACKET. RICHARD H. FOLEY, Mystic, Conn. Filed June 8, 1907. Serial No. 377,061.



1. An article of the class described comprising an arm, a plate carried by one end of the arm, a roller receiving member slidably mounted on the arm, said plate being bent rearwardly on a line spaced from the end of the arm to form a front portion and an inwardly extending portion, and being again bent to form a portion parallel with the front portion, said last named portion being provided with openings for the reception of attaching devices, and a pole supporting member engaged in the parallel portions.

2. A supporting member for shade and curtain brackets comprising a blank having a portion bent to form an arm, and including an end portion bent at right angles on a line spaced from the arm and bent again at right angles to form a portion lying in parallel relation to the unbent portion, said portion being provided with fastener receiving openings, said parallel portion being perforated for the reception of a roller supporting member.

880,136. SIGNAL SYSTEM. JULIEN A. GEHRUNG, New York, N. Y. Filed Feb. 2, 1907. Serial No. 355,369.



1. In a signal system, a line having a plurality of signals selectively operated by different strengths of current, means for transmitting currents of varying strength to the line, and means for automatically sending back a current of varying strength to send a repeat or checking signal back to the transmitting station.

2. In a signal system, a line having a plurality of signals selectively operated by different strengths of current, means for transmitting currents of varying strength to the line, a second line having devices therein at each signal for sending currents of varying strengths back to the transmitting station, and indicating means at the transmitting station in said second line, whereby the particular signal displayed is indicated at the transmitting station.

3. In a signal system, a line having signals each with a plurality of separate contacts selectively closed by dif-

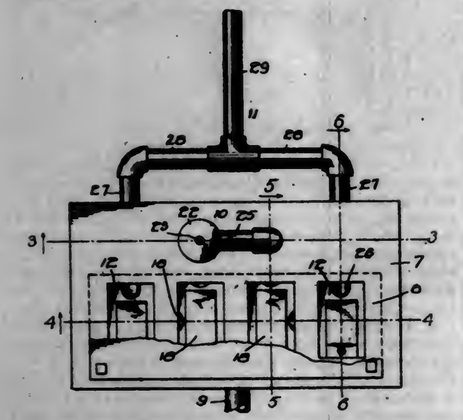
ferent strengths of current, means for transmitting currents of varying intensity over said line to actuate any selected signal, and means operated by the signal displayed for repeating or checking the action thereof at the transmitting station.

4. In a signal system, a line having signals selectively operated by different strengths of current, means for transmitting currents of varying intensity over said line to actuate any selected signal, a second line, and means at the signal actuated for transmitting a current of varying strength over said second line to check or repeat the actuation at the transmitting station.

5. In a signal system, a line having signals selectively operated by different strengths of current, means for transmitting currents of varying intensity over said line to actuate any selected signal, and means at the signal actuated for causing a current of predetermined strength to flow at the transmitting station.

[Claims 6 to 24 not printed in the Gazette.]

880,137. PUMP. GEORGE GRACE, Wichita, Kans. Filed Nov. 16, 1907. Serial No. 402,496.

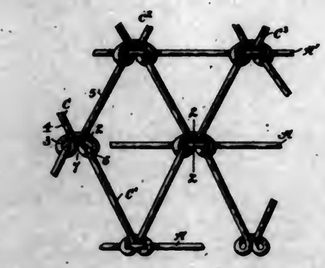


1. The combination, in a pump, of a valve chest provided with a plurality of separate inlet and outlet chambers, with an interiorly located inlet passage having a separate branch communicating with each inlet chamber, and with a separate outlet passage communicating with each outlet chamber, each inlet chamber communicating with the adjacent outlet chamber; a valve disposed within each chamber; an operating mechanism comprising a U-shaped pipe having the free ends of its arms fitting in passages communicating with each inlet chamber, one of said arms having an extension, and a plunger movable in said extension; and a discharge pipe provided with a branch having its free ends fitting in each outlet passage.

2. The combination, in a pump, of a solid valve chest having a plurality of separate inlet and outlet chambers formed therein, and provided with an interiorly-located inlet passage having a separate branch opening through the bottom wall of each outlet chamber, and with a separate interiorly-located outlet passage communicating with each outlet chamber, each inlet chamber communicating with the adjacent outlet chamber; a valve disposed within each valve chamber; an operating mechanism comprising a U-shaped pipe having the free ends of its arms fitting in passages communicating with each inlet chamber, one of said arms having an extension, and a plunger movable in said extension; and a discharge pipe provided with a branch having its free ends fitted in each outlet passage.

3. The combination, in a pump, of a solid valve chest having a plurality of separate inlet and outlet chambers formed therein, and provided with an interiorly-located inlet passage having a separate branch opening through the bottom wall of each outlet chamber, and with a separate interiorly-located outlet passage communicating with each outlet chamber, each inlet chamber communicating with the adjacent outlet chamber by means of an interiorly-located passage opening through the bottom wall of the latter; a valve disposed within each chamber for covering and uncovering the open ends of said passages; an operating mechanism comprising a U-shaped pipe having the free ends of its arms fitting in passages opening through the rear walls of the inlet chambers, one of said arms having an extension, and a plunger movable in each extension; a U-shaped discharge pipe having the free ends of its arms fitted in said outlet passages; and a laterally-projecting discharge spout carried by said discharge pipe.

880,138. WIRE FENCING. WILLIAM H. GRIFFITH, Omaha, Nebr. Filed Aug. 1, 1906. Serial No. 328,645.



1. In a wire fence or fabric, a joint formed by a longitudinal wire and a pair of stay wires, the legs of one stay wire extending on one side of the longitudinal wire and the legs of the other stay wire extending on the opposite side of the longitudinal wire from the joint, the stay wires being interlocked at the joint whereby tension on the wires will tighten the joint and prevent its unlocking.

2. In a wire fence or fabric, a joint formed by a longitudinal wire, and a pair of stay wires looped at the joint with the legs of the respective wires extending on opposite sides of the longitudinal wire, one of the stay wires being bent to form a loop and the other stay wire passing through the loop, and the longitudinal wire also passing through the loop.

3. In a wire fence or fabric, a joint formed by a longitudinal wire, and a pair of stay wires looped at the joint with the legs of the respective wires extending on opposite sides of the longitudinal wire, one of the stay wires bent to form a loop and the other stay wire passing through the loop, and the longitudinal wire also passing through the loop, and a transverse body wire passing through the joint.

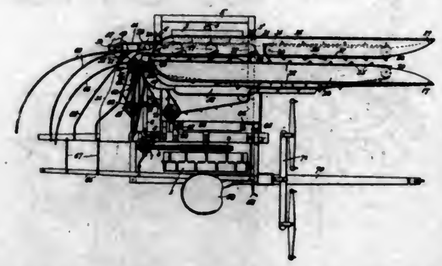
4. In a wire fence or fabric, a joint formed by a longitudinal wire, and a pair of stay wires looped at the joint with the legs of the respective wires extending on opposite sides of the longitudinal wire, one of the stay wires being bent to form a loop and the other stay wire passing through the loop, and the longitudinal wire also passing through the loop, one of the stay wires being convoluted around the longitudinal wire.

5. In a wire fence or fabric, a joint formed by a longitudinal wire, and a pair of stay wires looped at the joint with the legs of the respective wires extending on opposite sides of the longitudinal wire, one of the stay wires being bent to form a loop and the other stay wire passing through the loop, and the longitudinal wire also passing through the loop, additional longitudinal wires adjacent the joint, one of the stay wires having its legs convoluted around the additional wires.

[Claims 6 to 9 not printed in the Gazette.]

880,139. CORN-HARVESTER. HERMAN HAHN, Napoleon, Ohio. Filed May 20, 1907. Serial No. 374,699.

1. In a corn harvester, a pair of longitudinal frame beams spaced apart, vertical frame structures upon said beams including connecting arches, downwardly and forwardly inclined guide boards supported upon the frame structures and terminating in gathering prongs at their lower front ends, and endless chains having stalk engaging fingers supported adjacent to said guide boards.



2. In a corn harvester, a pair of longitudinal frame beams spaced apart, vertical frame structures upon said beams, downwardly and forwardly inclined guide boards supported upon said frame structures, a plurality of vertical shafts supported by one of the frame structures, a plurality of horizontal chains supported by said shafts and having stalk engaging fingers, and an inclined gathering chain supported upon the opposite frame structure and having stalk engaging fingers.

3. In a corn harvester, vertical frame structures cooperating to form a stalk passage, driven chains supported upon said frame structures and having stalk engaging fingers, a hopper supported adjacent to one of the frame structures, and an ear detaching member supported for rotation by the latter frame structure and having ear engaging flanges adapted to move the ears over said detaching member and into the hopper.

4. In a corn harvester, vertical frame structures cooperating to form a stalk passage, driven chains supported by said frame structures and having stalk engaging fingers, one of said chains being supported in an inclined position and extended the entire length of its supporting structure, an ear receiving hopper arranged adjacent to the latter frame structure, and an ear detaching member supported for rotation in said frame structure and provided on opposite sides of its axis with ear engaging flanges adapted to move the ears over said detaching member and into the hopper.

5. In a corn harvester the combination with a receptacle; of an ear detaching member supported for rotation and consisting of a body provided on opposite sides of its axis with oppositely extending flanges, said body extending above and below and overhanging the receptacles, a trough extending from one end and below the receptacle, and a conveyer within the trough for conveying to the receptacle ears detached below the receptacle.

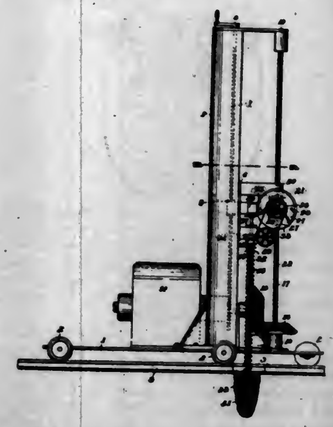
[Claim 6 not printed in the Gazette.]

880,140. DRILLING-MACHINE. BENJAMIN HASTINGS, Cleveland, Ohio, assignor to The Electric Controller and Supply Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 7, 1906. Serial No. 346,750.

1. In a drilling machine, a carriage, a drilling tool thereon, means for rotating the tool, a centrifugal hammer for driving the tool, a clutch adapted to engage and lift the tool when the carriage rises, and means for releasing the clutch when the drill is in operative position relative to the hammer.

2. In a drilling machine, a carriage, a drilling tool thereon, means for rotating the tool, a centrifugal hammer for driving the tool, a clutch adapted to engage and lift the tool when the carriage rises, a spiral on said tool and rotatable therewith, and a spring between the spiral and the clutch.

3. In a drilling machine, a carriage, a drilling tool thereon, means for rotating the tool, a centrifugal hammer for driving the tool, a clutch adapted to engage and lift the tool when the carriage rises, a spiral slidable on said tool and rotatable therewith, and a spring between the spiral and the clutch to release the clutch and cushion the rebound of the tool.



4. In a drilling machine, a centrifugal hammer, a drilling tool coöperable therewith, and a removable cap in engagement with the tool to receive the blows of the hammer.

5. In a drilling machine, a centrifugal hammer, a drilling tool coöperable therewith, a removable cap in engagement with the tool to receive the blows of the hammer, and yielding means for holding the cap and the tool in contact.

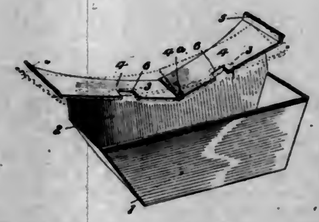
[Claims 6 to 9 not printed in the Gazette.]

880,141. GLAZE FOR THE INTERIOR OF VATS AND THE LIKE. WILLIAM HERMS, San Francisco, Cal. Filed May 19, 1906. Serial No. 317,818.

1. A new composition of matter comprising a mixture of seed-lac, paraffin, and a suitable solvent, the amount of seed-lac employed being in excess of that of the paraffin.

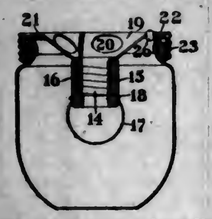
2. A new composition of matter comprising a mixture of approximately 80 parts of seed-lac, approximately 20 parts of paraffin, and a suitable quantity of alcohol.

880,142. SAP-RECEPTACLE. SOLOMON W. HOLLAND, New Orleans, La. Filed June 22, 1907. Serial No. 380,288.



A sap receptacle having its rear wall formed with longitudinal slots, an apron composed of two corresponding sections overlapping at their inner meeting ends, each section having a hook extending from its underside for taking in the slots of the cup, said hooks being of less width than the slots to permit the apron sections to be adjusted relatively to each other.

880,142. MANTLE-SUPPORT AND GLOBE-HOLDER FOR INCANDESCENT LAMPS. GEORGE E. HULAN, Jersey City, N. J., assignor to The Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Feb. 7, 1906. Serial No. 299,853.



1. In gas lighting apparatus, a depending shade having at its upper end a peripheral groove, a ring interfitting with said groove and normally permanently secured to said shade, an overlying collar adapted to detachably engage with said ring to carry said depending shade, and a depending mantle support adapted to be engaged with and supported from the aforesaid collar.

2. In gas lighting apparatus, a depending shade having at its upper end a peripheral groove, a ring interfitting with said groove and normally permanently secured to said shade, a collar adapted to engage with said ring to carry said depending shade, means detachably engaging said parts to maintain them in interlocking relation, and a depending mantle support adapted to be engaged with and supported from the aforesaid collar.

3. In gas lighting apparatus, a shade having a flanged edge, a ring having a flange, packing intermediate said edge and flange, and interfitting therewith and thereby secured to said shade, an overlying retaining collar adapted to engage with said ring and having a top inturned edge adapted to abut said shade whereby, upon moving said collar, said ring may compress said packing, clips adapted to engage said shade, a collar adapted to be engaged with the aforesaid collar, and a stop carried thereby and resiliently positioned, whereby said parts are positively maintained against a relative movement.

4. In gas lighting apparatus, a shade having a peripheral groove, a ring interfitting therewith and thereby secured to said shade, a collar adapted to engage with said ring, means detachably engaging said parts to maintain them in interlocking relation, a mantle support adapted to be engaged with the aforesaid collar, and a releasable stop carried thereby and so positioned as to positively maintain said parts against a relative movement.

5. In gas lighting apparatus, a shade having a peripheral groove, a ring interfitting therewith and thereby secured to said shade, a collar adapted to engage with said ring, clips adapted to engage said shade a collar to restrain said parts against moving, a mantle support adapted to be engaged with the latter collar, and a releasable stop carried thereby and so positioned as to positively maintain said parts against relative movement.

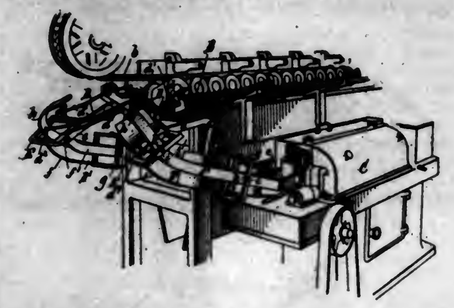
[Claims 6 to 19 not printed in the Gazette.]

880,144. RUNWAY OR CHUTE FOR CAN-END-SOLDERING MACHINES. OLIVER J. JOHNSON, Wheeling, W. Va., Filed Jan. 16, 1906, Serial No. 296,272. Renewed July 31, 1907. Serial No. 386,361.

1. A can runway or chute for soldering machines, comprising a downwardly and laterally inclined and curved upper portion, and a lower portion which inclines downwardly from the end of said curved upper portion and is substantially straight laterally, substantially as set forth.

2. A can runway or chute for soldering machines, comprising a downwardly and laterally inclined upper portion which is curved laterally, and a downwardly curved lower portion which inclines downwardly without substantial lateral change of direction from the end of said curved upper portion, substantially as set forth.

3. A can runway or chute for soldering machines, comprising a downwardly and laterally inclined and curved upper portion, and a laterally straight lower portion which inclines downwardly from the end of said upper portion, each of said portions being composed of bottom and side strips, substantially as set forth.



4. A can runway or chute for soldering machines, comprising a laterally inclined and curved upper portion, and a lower portion which is substantially straight laterally and inclines downwardly and at an abrupt angle from the end of said upper portion, substantially as set forth.

5. A can runway or chute, comprising a downwardly and laterally inclined and curved upper portion, a substantially laterally straight and inclined lower portion, and an open frame joining said upper and lower portions, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

880,145. VEHICLE-AXLE. SAMUEL E. KIMBALL, Powderville, Mont. Filed June 18, 1907. Serial No. 379,572.

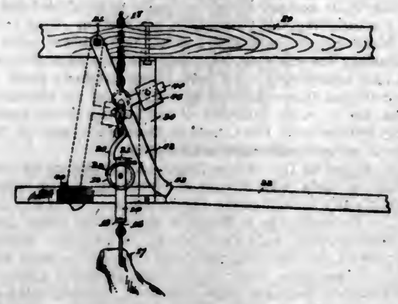


The combination, in an axle, of an axle-tree having its under face rabbeted at opposite ends, each rabbet having a longitudinal, depending, right-angular shoulder formed thereon, the apex of each shoulder terminating in a downwardly projecting finger extending below the under face thereof, the outer face of each finger forming a continuation of that of the corresponding shoulder, each rabbet being provided adjacent to the inner end of its shoulder with a countersink; a stock rabbeted complementary to each of the rabbeted axle-tree ends and provided with a spindle, the rabbeted face of each stock having a longitudinal seat formed therein adapted to receive the corresponding shoulder and terminating at its inner end in a countersink in which the finger on said shoulder is adapted to be received, the outer end of the rabbeted face of each stock having an upwardly extending finger formed thereon and adapted to fit in the adjacent countersink in the axle-tree; and a series of straps embracing said axle-tree and stock, for securing the same together.

880,146. CATTLE-LANDER. ELBERT E. LAMB, East St. Louis, Ill. Filed Aug. 24, 1906. Serial No. 331,889.

1. In a device of the character described, the combination of a track, a carrier adapted to be attached to and support a body to be transported, said carrier having a part adapted to travel on said track, means to raise and lower said carrier and permitting said carrier to be swung around, a guide to position the track-engaging portion of said carrier over said track as said carrier is swung around, whereby lowering of said carrier lands it upon said track, substantially as described.

2. In a device of the character described, the combination of a track, a carrier adapted to be attached to and support a body to be transported, a wheel rotatably mounted on said carrier adapted to roll on said track, means to raise and lower said carrier and permitting said carrier to be swung around, a guide to position said wheel over said track as said carrier is swung around, whereby lowering of said carrier lands its wheel upon said track, substantially as described.



3. In a device of the character described, the combination of a track, a carrier designed to be attached to and support a body to be transported, a wheel rotatably mounted on said carrier adapted to roll upon said track, a supporting member adapted to be detachably connected to said carrier, said supporting member becoming detached from said carrier when lowered relatively thereto, means to raise and lower said supporting member and carrier and permit them to be swung around, a guide to position said wheel over said track as said supporting member and carrier are raised above said track and swung around, whereby lowering of said supporting member and carrier frees the latter from the former and lands its wheel upon the track, substantially as described.

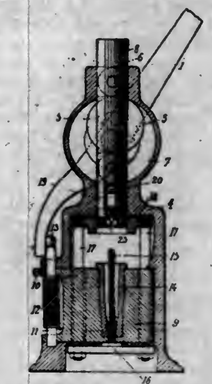
4. In a device of the character described, the combination of an inclined track, a carrier designed to be attached to and support a body to be transported, a wheel rotatably mounted on said carrier and adapted to roll on said track, a hook to support said carrier and body, means to raise and lower said hook, carrier, and body and permit them to be swung around, a guide to position said wheel over said track when swung around, whereby upon lowering said hook, carrier, and body said wheel engages said track, said hook becomes automatically disengaged from said carrier, and the latter with the body travels down said inclined track, substantially as described.

5. In a device of the character described, the combination of a track, a carrier adapted to travel on said track and support a body to be transported, a supporting means to sustain said carrier, said supporting means having a connection with said carrier which is automatically disengaged and moved out of the path of travel of the latter on the track when said supporting means is lowered relatively to the carrier after the latter has engaged the track, and hoisting and lowering means for said supporting means, carrier, and body, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

880,147. APPARATUS FOR REMOVING THE PERCUSSION-CAPS FROM DISCHARGED SHELLS. DANIEL LARSSON, Smedjebacken, Sweden, assignor to Aktiebolaget B. A. Hjorth & Co., Stockholm, Sweden. Filed Feb. 6, 1906. Serial No. 299,796.

1. The combination with an apparatus for removing the percussion caps from discharged cartridge shells having a reciprocating piston, and an operating member for moving the said piston, of a lever pivoted to the latter, a pin carried by the said lever and adapted to grip the percussion caps, a stop adapted to make contact with the said lever and turn it into operative position during the last part of the movement of the piston toward the shell, a spring-actuated member pivoted to the piston and adapted to lock the lever in position, when the pin thereon has entered the cap of the shell, and parts adapted to successively make contact with the locking member and with the uncapping lever during the movement of the piston away from the cartridge shell so as to first unlock the lever and then turn it into inoperative position, substantially as and for the purpose set forth.



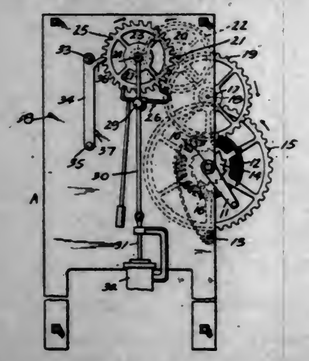
2. The combination with an apparatus for removing the percussion caps from discharged cartridge shells having a reciprocating piston, and an operating member for moving the said piston, of a lever pivotally mounted in a recess at the operating end of the piston, a pawl pivotally mounted in the said recess above the said lever, a pin secured to the said lever and adapted to grip the percussion caps, a stop adapted to make contact with the said lever and turn it into operative position during the last part of the movement of the piston toward the shell, a spring acting upon the pawl to turn it into locking engagement with the uncapping lever, when the pin thereon has entered the cup of the shell, and a shoulder adapted to successively make contact with the locking member and with the uncapping lever during the movement of the piston away from the cartridge shell so as to first unlock the lever and then turn it into inoperative position, substantially as and for the purpose set forth.

3. An apparatus for removing the percussion caps from discharged cartridge shells comprising in combination a frame, a piston adapted to be reciprocated in the said frame, an operating lever for moving the said piston, a spring-actuated block pivotally mounted in the frame and carrying a compressing-sleeve for the cartridge, said sleeve being situated in the prolongation of the axis of the piston, when the block is retained, by its spring, into operative position, a bottom situated beneath the block and carried by the end of the piston adjacent to the said block, a rod resting on the said bottom and extending through the block and the compressing-sleeve situated therein, means actuated by the operating lever for turning the block into its shell-receiving position, when the said lever is turned in the one direction, a lever pivotally mounted in a recess at the operating end of the piston, a pawl pivotally mounted in the said recess above the said lever, a pin secured to the said lever and adapted to grip the percussion caps, a stop adapted to make contact with the said lever and turn it into operative position during the last part of the movement of the piston toward the shell, a spring acting upon the pawl to turn it into locking engagement with the uncapping lever, when the pin thereon has entered the cup of the shell, and a shoulder adapted to successively make contact with the locking member and with the uncapping lever during the movement of the piston away from the cartridge shell so as to first unlock the lever and then turn it into inoperative position, substantially as and for the purpose set forth.

880,148. SPRING-MOTOR. KASPER J. LATHROP, Cathay, N. D. Filed May 18, 1907. Serial No. 374,355.

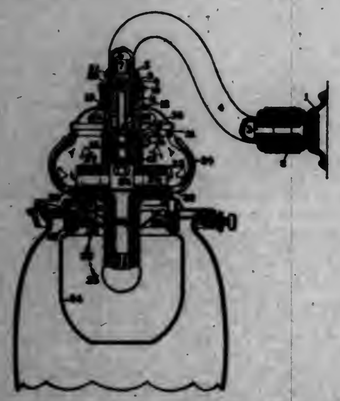
1. In a motor of the class described, the combination with the motor frame, a driven shaft mounted in the

frame, and a gear carried by the shaft, of a lever pivoted upon the frame and having a tooth adapted to engage with the teeth of the gear when the lever is in one position and to be out of such engagement when the lever is in another position, and a spring pressed stop pin arranged in the path of movement of the lever and adapted to hold it out of engagement with the gear.



2. In a motor of the class described, the combination with the motor frame, a driven shaft mounted in the frame, and a gear carried by the shaft, of a lever pivoted upon the frame and having a tooth adapted to engage with the teeth of the gear when the lever is in one position and to be out of such engagement when the lever is in another position, a socket arranged upon the frame, a pin extending through the frame in the path of movement of said lever to hold the same out of engagement with the gear, the said pin being provided with a head which works in the socket, and a spring arranged in the socket and bearing against the head to normally hold the pin in extended position.

880,149. STRAINER AND PERFORATE DISCHARGE FOR LAMPS. CHARLES M. LUNGREN, Bayonne, N. J., assignor to The Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Feb. 20, 1906. Serial No. 302,006.



1. A device of the nature disclosed comprising in combination, a lamp-body having a depending burner-nozzle, a hollow shell encompassing the upper part of said lamp-body for receiving the products of combustion rising from said burner-nozzle, said shell having in its lower portion perforations for enabling relatively cool air to enter said shell and intermingle with said rising products prior to their ultimate discharge from said shell, and an inspirator having one or more laterally extending air inlets terminating within said shell below the region in which said products are received by said shell.

2. A device of the nature disclosed comprising in combination, a lamp-body having a depending burner-nozzle, a hollow shell encompassing the upper part of said lamp-body for receiving the products of combustion rising from said burner-nozzle, said shell having in its lower portion perforations for enabling relatively cool air to enter said shell and intermingle with said rising products prior to their ultimate discharge from said shell, and an inspirator having one or more laterally extending air inlets terminating within said shell remote from the path of the products escaping through said shell.

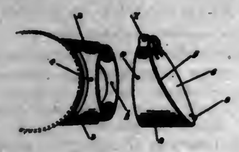
3. A device of the nature disclosed comprising in combination, a lamp-body having a depending burner-nozzle, a hollow shell encompassing the upper part of said lamp-body for receiving the products of combustion rising from said burner-nozzle, said shell having in its lower portion perforations for enabling relatively cool air to enter said shell to commingle with said rising products prior to their ultimate discharge from said shell, an inspirator arranged in said lamp-body and having one or more laterally extending air inlets arranged adjacent the lower end of said perforate shell, upwardly extending channels for conveying products of combustion past said air inlets to prevent contamination of the intaken fresh air by said products, and a globe support secured to said lamp-body and having perforations enabling air to intermingle with the rising products of combustion prior to their passage through said channels.

4. A device of the nature disclosed comprising in combination, a lamp-body having a depending burner-nozzle, a hollow shell encompassing the upper part of said lamp-body for receiving the products of combustion rising from said burner-nozzle, said shell having in its upper portion perforations for enabling said products to escape from said shell, and an inspirator having one or more laterally extending air inlets terminating adjacent the lower end of said perforate shell.

5. A device of the nature disclosed comprising in combination, a lamp-body having a depending burner-nozzle, a hollow shell encompassing the upper part of said lamp-body for receiving the products of combustion rising from said burner-nozzle, said shell having in its upper portion perforations for enabling said products to escape from said shell, and an inspirator having one or more laterally extending air inlets terminating within said shell below the region in which said products are received by said shell.

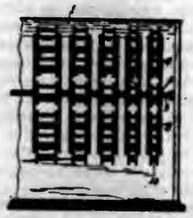
[Claims 6 to 30 not printed in the Gazette.]

880,150. UNIVERSAL CHECK-DRAFT. CLARENCE M. LYMAN, Utica, N. Y., assignor to International Heater Company, Utica, N. Y. Filed Oct. 8, 1906. Serial No. 337,875.



The combination in a check draft device of a tubular base section having a flanged and grooved base end to fit a flue and having a circular end and stop flanges 3—3, a tubular gate section having a beveled end and at the other end fitting over the circular end and abutting against said flanges of the base section and rotatably adjustable thereon, a gate hinged to and closing against said beveled end, and means for securing the gate section to the base section in sundry positions of adjustment, substantially as set forth.

880,151. RIBBON SHOW-CASE. WESLEY E. MILLER, Oakdale, Cal. Filed Aug. 13, 1907. Serial No. 388,330.

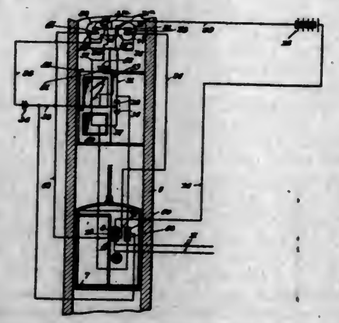


1. In a device of the character set forth, a case, a shaft journaled therein, a plurality of flanges mounted on said shaft, the same being spaced apart in pairs, independent cores mounted on said shaft intermediate each pair of flanges, collars on said shaft bearing against the outer sides of said flanges, means locking said collars in position, and a plurality of ribbon bolts disposed intermediate each pair of flanges as set forth.

2. In a device of the character described, a case, a shaft journaled therein, a plurality of flanges disposed on said shaft and spaced apart in pairs, an independent core mounted on said shaft intermediate each of said pairs, collars mounted on said shaft and bearing against the outsides of said flanges, set screws disposed through said collars and set against said shaft, and a plurality of ribbon bolts disposed intermediate each pair of said flanges, as described.

3. In a device of the character described, a shaft, a plurality of flanges thereon spaced apart in pairs, ribbon bolts disposed intermediate each pair, pins secured in said flanges and extending in the front of the said bolts, and independent spring members secured to said pins and bearing against said ribbon bolts, as set forth.

880,152. ELECTRIC SIGNAL FOR ELEVATORS. CHARLES E. MOORE, Los Angeles, Cal. Filed Mar. 7, 1906. Serial No. 304,793.



1. A signal device for elevators comprising a signal box in the elevator cage having sight apertures therein, there being a sight aperture for each floor of the building; an artificial light in said signal box back of said apertures; two colored transparent disks adjacent to each of said apertures, said disks being of different colors and normally not in view through said apertures; magnets adjacent to said disks; a connection from said magnets to said disks, whereby both disks at any aperture may both appear before said aperture at the same time when the magnets are energised; a switch; a source of electrical energy; a connection from one pole of one of said magnets to said switch; a connection from said switch to said source of energy; and a connection from said source of energy to the other pole of said magnet; mechanism to hold said disks when brought before the apertures; and mechanism to release said holding mechanism.

2. A signal device for elevators comprising a signal box in the elevator cage having sight apertures therein, there being a sight aperture for each floor of the building; an artificial light in said signal box back of said apertures; two colored transparent disks adjacent to each of said apertures, said disks being of different colors and normally not in view through said apertures; electrical mechanism operatively connected to said disks for separately moving said disks before said sight apertures when energized, whereby both disks at any aperture may both appear before said aperture at the same time; mechanism at each floor for closing circuits whereby said electrical mechanism is energized; and mechanism for deënergising said electrical mechanism upon the opening of the elevator door.

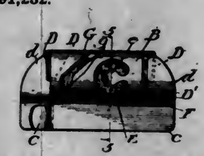
3. A signal device for elevators comprising a signal box in the elevator cage having sight apertures therein, there being a sight aperture for each floor of the building; an artificial light in said signal box back of said apertures; two colored transparent disks adjacent to each of said apertures, said disks being of different colors and normally not in view through said apertures; electrical mechanism for separately moving said disks before said sight apertures when energized, whereby both disks at any aperture may both appear before said aperture at the same time; means for rendering and holding said electrical mechanism energized; and means for releasing said holding means.

4. A signaling system for elevators comprising a plurality of sets of electrically operated chromatic signal devices, each set comprising signal devices of different color arranged to display their distinctive colors when operated separately and to display a blended color when operated conjointly; and corresponding sets of circuit controlling devices at different landings and circuit connections for controlling the respective signal devices of each set from the corresponding circuit controlling devices.

5. In an electric signal system for elevator cars, illuminating means; a plurality of sets of signal devices in the elevator car, each set comprising two transparent color screens means movable separately into position in front of the illuminating means, the color screen means of the two signal devices of each set being of different color; electromagnetic means for operating the said signal devices of each set, separately or conjointly, to display the distinctive color of each screen or the blended color of both screens; and a corresponding plurality of sets of switch devices at different landings of the elevator shaft, each set comprising two switch devices connected to operate the respective electromagnetic signal operating means of the corresponding set of signal devices.

[Claims 6 and 7 not printed in the Gazette.]

880,153. SHARPENING DEVICE FOR SKATES, &c. LOUIS J. MOORMAN, Chicago, Ill. Filed Sept. 3, 1907. Serial No. 391,232.



1. As an article of manufacture a skate-sharpening device consisting of a suitable rotatable sharpening stone, and a holder therefor comprising a portion within which the stone is housed having its longitudinal edges flanged outwards substantially parallel to each other.

2. As an article of manufacture a skate-sharpening device consisting of a suitable sharpening stone, and a holder therefor comprising a portion within which the stone is housed having its longitudinal edges flanged outwards substantially parallel to each other, and the end of one of said flanges and the opposite end of the other flange being provided with laterally projecting lugs.

3. As an article of manufacture a skate-sharpening de-

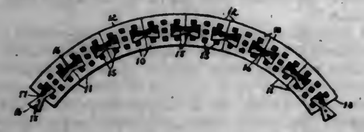
vice consisting of a suitable rotatable sharpening stone, and a holder therefor comprising a portion within which the stone is housed having its longitudinal edges flanged outwards substantially parallel to each other, the end of one of said flanges and the opposite end of the other flange being provided with laterally projecting lugs, and each of said flanges opposite said lugs being provided with an extended guard.

4. As an article of manufacture a skate-sharpening device consisting of a suitable revoluble sharpening stone, and a holder therefor comprising a portion within which the stone is housed having its longitudinal edges flanged outwards substantially parallel to each other.

5. As an article of manufacture a skate-sharpening device consisting of a suitable revoluble sharpening stone, and a holder therefor comprising a portion within which the stone is housed having its end edges provided with bearing lugs lapping in front of the ends of said stone and its longitudinal edges flanged outwards substantially parallel to each other.

[Claims 6 to 18 not printed in the Gazette.]

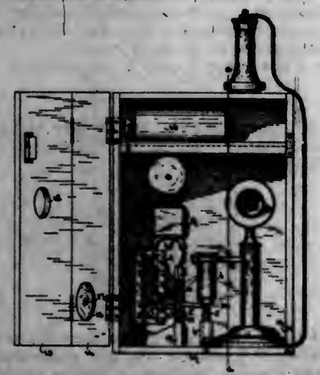
880,154. TIE FOR BUILDING-BLOCKS. AUGUST J. MUELLER, Chicago, Ill. Filed Dec. 5, 1907. Serial No. 405,148.



1. In combination with a wall, a bonding member consisting of a plate having its margins flaring outwardly from the middle, barbs projecting from the surfaces of the plate, and transverse corrugations in said plate.

2. A bonding member for wall construction, consisting of a corrugated plate having dovetail shaped ends, and integral barbs projecting from the opposite surfaces of said plate.

880,155. AUTOMATIC TELEPHONE-ALARM. MILTON L. MURDOCK and JOHN C. GALLAGHER, Elmira, N. Y.; said Gallagher assignor to said Murdock. Filed Mar. 25, 1907. Serial No. 364,541.



1. The combination, with a telephone instrument and a telephone circuit, of an audible signaling device, means for automatically operating the instrument when the signaling device is actuated to place it in condition to transmit the signal over the circuit, and means for automatically disconnecting the instrument from said circuit after a limited period of time.

2. The combination, with a telephone instrument, of a clockwork, an audible signaling device, and means actuated by the clockwork at a determined time for automatically sounding the signal and at the same time placing the instrument in operative condition to transmit the signal.

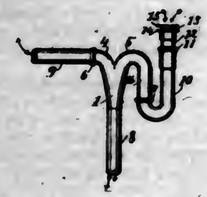
3. The combination, with a telephone instrument and a telephone circuit, of a clockwork, an audible signaling device, and means actuated by the clockwork at a determinate time for automatically sounding the signal and at the same time moving the receiver hook to place the instrument in connection with the circuit.

4. The combination, with a telephone instrument and a telephone circuit, of a clockwork, an audible signaling device, means actuated by said clockwork at the end of a determinate period of time to connect the instrument with the circuit, and means for manually setting the clockwork back before the end of said period.

5. The combination, with a telephone instrument, of a cabinet adapted to be closed and locked, means within the cabinet for automatically producing an audible alarm, a device adapted to engage and hold down the hook of the telephone instrument when inserted in the cabinet, and means operated in conjunction with the means for producing the alarm for actuating said device to lift the hook when the alarm is sounded.

[Claim 6 not printed in the Gazette.]

880,156. TRAP FOR BASINS, SINKS, &c. RICHARD C. MCCAFFREY, Spokane, Wash. Filed Jan. 25, 1907. Serial No. 354,141.



1. A trap fitting for basins, sinks, etc., consisting of a main pipe or conduit having two oppositely disposed and bent branches joining the main stem at an acute angle and extending in the same direction, one branch having a half bend and the other branch having a full return bend at the junction of the two branches with the main stem, the said branches being of such a length that when either is attached to the return bend at the bottom of a trap the crown of the waste pipe will be below the outlet of the sink or basin.

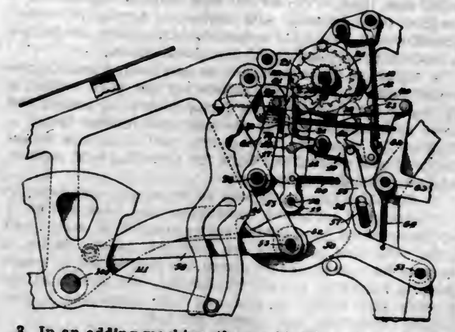
2. A trap fitting for basins, sinks, etc., consisting of a main pipe or conduit having two oppositely disposed and bent branches joining the main stem at an acute angle and extending in the same direction, one branch having a half bend and the other branch having a full return bend at the junction of the two branches with the main stem, there being a lateral enlargement at said junction, and the said branches being of such a length that when either is attached to the return bend at the bottom of a trap the crown of the waste pipe will be below the outlet of the sink or basin.

880,157. CARRYING MECHANISM FOR ADDING-MACHINES. CHARLES N. MCFARLAND, Kingston, Pa., and CHARLES WALES, Cleveland, Ohio, assignors to The Adder Machine Company, Kingston, Pa., a Corporation of Pennsylvania. Filed Sept. 17, 1906. Serial No. 335,026.

1. In an adding machine, the combination of two wheels side by side, each bearing numerals from "zero" to "9", means for rotating the right-hand wheel, means by which carrying is effected when an accumulation greater than 9 is registered on the right-hand wheel, and means adapted to prevent an over rotation of said wheel during accumulation and other means adapted to prevent an over rotation of said wheel during the carrying, and further means adapted to disengage the first means from said wheel as the second means is brought into operation.

2. In an adding machine, the combination of two wheels side by side, each bearing numerals from "zero" to "9"

means for rotating the right-hand wheel, means by which carrying is effected when an accumulation greater than 9 is registered on the right-hand wheel, and means adapted to prevent an over rotation of said wheel during accumulation and other means adapted to prevent an over rotation of said wheel during the carrying, further means adapted to disengage the first means from the said wheel as the second means is brought into operation, comprising a holder for the lever supporting the said first and second means and a device for disengaging said holder therefrom.



3. In an adding machine, the combination of two wheels side by side, each bearing numerals from "zero" to "9", means for rotating the right-hand wheel, means by which carrying is effected when an accumulation greater than 9 is registered on the right-hand wheel, and means adapted to prevent an over rotation of said wheel during accumulation and other means adapted to prevent an over rotation of said wheel during the carrying, and further means adapted to disengage the first means from said wheel as the second means is brought into operation, comprising a holder for the lever supporting the said first and second means and a device for disengaging said holder therefrom, said holder being mounted upon a normally spring retracted arm which is oscillated by the carrying means of the right-hand wheel.

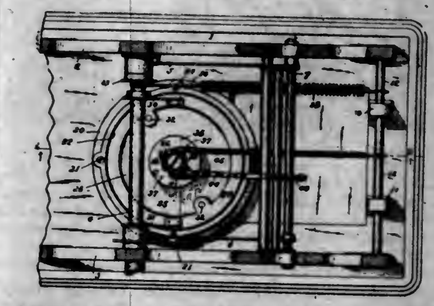
4. In an adding machine, the combination of two wheels side by side, each bearing numerals from "zero" to "9", means for rotating the right-hand wheel, a lever, a pawl at one end thereof, means for actuating the lever to cause the pawl to move the left hand wheel one step when an accumulation greater than 9 is registered on the right-hand wheel, a pawl on the opposite end of the lever, and means for actuating the last named pawl to prevent over rotation of the right-hand wheel when it is rotatable in the operation of accumulation.

5. In an adding machine, the combination of two wheels side by side, each bearing numerals from "zero" to "9", means for rotating the right-hand wheel, a lever, a pawl at one end thereof, means for actuating the lever to cause the pawl to move the left hand wheel one step when an accumulation greater than 9 is registered on the right hand wheel, a pawl on the opposite end of the lever, means for actuating the last-named pawl to prevent over rotation of the right hand wheel when it is rotated in the operation of accumulation, and means carried by the lever to prevent over-rotation of the left-hand wheel during carrying.

[Claims 6 and 7 not printed in the Gazette.]

880,158. MOMENTUM-ABSORBER FOR ADDING-MACHINES. CHARLES N. MCFARLAND, Kingston, Pa., and CHARLES WALES, Cleveland, Ohio, assignors to The Adder Machine Company, Kingston, Pa., a Corporation of Pennsylvania. Filed Sept. 17, 1906. Serial No. 335,027.

1. In a machine of the character described, a vibratory shaft, devices actuated thereby, elastic means adapted to retract the shaft to its initial position and means adapted to prevent a too-sudden return of said devices to their initial positions, including a friction ring a rotating plate pivoted centrally within said ring moved by the retraction of said elastic means and provided with a diametric rib, a plurality of substantially semi-circular members each pivoted eccentrically on the outside of said rib normally in contact therewith, and lugs on the peripheries of said members near their pivotal points adapted to be thrown in contact with the inner surface of said friction ring by the centrifugal force of rotation of the plate.



2. In a machine of the character described, a vibratory shaft, devices actuated thereby, elastic means adapted to retract the shaft to its initial position and means adapted to prevent a too-sudden return of said devices to their initial positions, a rotary brake, an independent means adapted to bring it quickly to rest after the shaft has been retracted to its initial position.

3. In a machine of the character described, a vibratory shaft, devices actuated thereby, elastic means adapted to retract the shaft to its initial position and means adapted to prevent a too-sudden return of said devices to their initial positions, a rotary brake and independent means adapted to bring it quickly to rest after the shaft has been retracted to its initial position, comprising one or more brake shoes carried by the shaft and adapted to contact with rotating part of the brake.

4. In a machine of the character described, a vibratory shaft, devices actuated thereby, elastic means adapted to retract the shaft to its initial position and means adapted to prevent a too-sudden return of said devices to their initial positions, a rotary brake and independent means adapted to bring it quickly to rest after the shaft has been retracted to its initial position, comprising one or more brake shoes carried by the shaft and adapted to contact with a rotating part of the brake, and upon which shoes the force of the elastic retracting means is brought to bear.

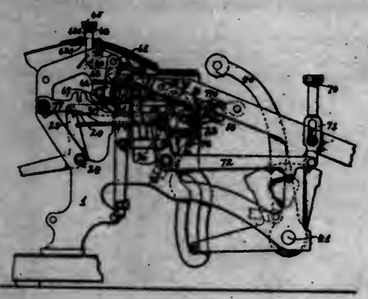
5. In a machine of the character described, a vibratory shaft, devices actuated thereby, elastic means adapted to retract the shaft to its initial position and means adapted to prevent a too-sudden return of said devices to their initial positions, a rotary brake comprising a friction ring, a plate centrally pivoted therein, wings eccentrically pivoted to the plate adapted to contact with the inner surface of the ring, and a brake shoe rigidly secured to the vibratory shaft and adapted to contact with the rotating plate at the end of the movement thereof.

880,159. ADDING-MACHINE. CHARLES N. MCFARLAND, Dorranceton, Pa., assignor to The Adder Machine Company, Kingston, Pa., a Corporation of Pennsylvania. Filed June 26, 1907. Serial No. 380,858.

1. In an adding machine, comprising numeral wheels, a non-adding key, means operated by the depression of said key for holding the numeral wheels inoperative, and a total key, the combination therewith of means for locking the total key while the non-adding key is depressed, comprising a connection intermediate the total key and the numeral wheels, and means actuated by the depression of the non-adding key to prevent the operation of said connection.

2. In an adding machine, comprising numeral wheels, a non-adding key, means operated by the depression of said key for holding the numeral wheels inoperative, and a

total key, the combination therewith of means for locking the total key while the non-adding key is depressed, comprising a connection intermediate the total key and the numeral wheels and a stop brought into position by the depression of the non-adding key to prevent the movement of said connection.



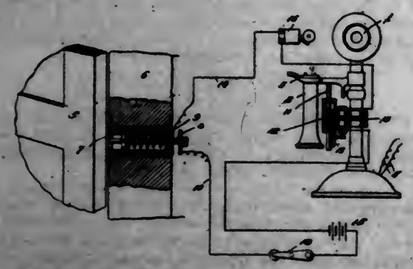
3. In an adding machine, comprising numeral wheels provided with pinions, actuating racks meshing directly therewith, a non-adding key, and means actuated by the depression of the non-adding key for disengaging the pinions from the racks, the combination therewith of a total key, a slide moved thereby and means for locking the slide against movement brought into operation by the depression of the non-adding key.

4. In an adding machine, comprising numeral wheels provided with pinions, actuating racks meshing directly therewith, a non-adding key, and means operated by the depression of the non-adding key for disengaging the pinions from the racks, the combination therewith of a total key, a slide moved thereby, means for locking the slide against movement brought into operation by the depression of the non-adding key and comprising a lever adapted to be moved by said key, a pin mounted thereon, and a connection between the pin and the slide.

5. In an adding machine, comprising numeral wheels provided with pinions, actuating racks meshing therewith, a non-adding key which when depressed is adapted to keep the pinions out of mesh with the racks, a total key and a slide moved thereby, means for locking the slide against movement brought into operation by the depression of the non-adding key and comprising a lever adapted to be moved by said key, a pin mounted thereon, a pin on the slide and a trip adapted to engage with both pins.

[Claims 6 to 18 not printed in the Gazette.]

880,160. BURGLAR-ALARM SYSTEM AND APPARATUS THEREFOR. MILTON R. NEY and SAMUEL S. ULLMAN, Washington, D. C. Filed Sept. 25, 1907. Serial No. 394,481.



1. Signaling apparatus such as described, comprising in combination spring-actuated receiver-hook-actuating means arranged to engage and actuate a receiver hook, a detent for said actuating means, a magnet for operating said detent, electrically-controlled sound producing means and a protective circuit arranged to actuate said magnet and sound producing means.

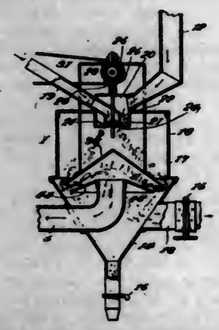
2. Signaling apparatus such as described, comprising in combination spring-actuated receiver-hook-raising means arranged to engage and actuate a receiver hook, a detent for said actuating means, a magnet for operating said detent, electrically-controlled sound-producing means and a protective circuit arranged to actuate said magnet and sound producing means.

3. Signaling apparatus such as described, comprising in combination a telephone transmitter and hook switch, a spring-actuated hook-raising device adapted to engage and raise said hook, a detent for said hook-raising device, a magnet for operating said detent, a protective circuit therefor and means for operating said circuit comprising a contact device, and sound-producing means.

4. Signaling apparatus such as described, comprising in combination a telephone transmitter and hook switch, a spring-actuated hook-raising device adapted to engage and raise said hook, a detent for said hook-raising device, a magnet for operating said detent, and automatic means comprising a protective circuit for operating said magnet, and sound-producing means.

5. Signaling apparatus such as described, comprising in combination a telephone transmitter and hook switch, a spring-actuated hook-raising device adapted to engage and raise said hook, a detent for said hook-raising device, a magnet for operating said detent, an electric bell in transmitting proximity to said transmitter, and means for operating said detent magnet and bell comprising a protective circuit for said magnet and bell.

880,161. AIR AND DUST SEPARATOR. WILLIAM S. OSBORNE, Marietta, Pa. Filed Aug. 16, 1905. Serial No. 274,385.



1. A separator having in combination, a casing, two concentric upwardly pointing cones, one of which sets into the other, an inlet for material to be separated located above said cones, an inlet for air, means for introducing the material into a current of air and for mingling it therewith at the admission of both into the casing, and means for causing a current of air to flow inward between the cones and downward to carry the lighter particles of material, substantially as described.

2. In apparatus of the character described, in combination, a casing, a central hollow boss on the top thereof having a wall projecting down therefrom into the casing, a feed pipe entering said boss and having its opening slightly above the lower edge of the wall of the boss, a disk rotatably supported slightly below the bottom of the feed pipe to scatter the material against said wall and into the casing, a conical deflector below said disk, means to admit air above said disk, a second conical member below the first and coöperating therewith, an air outlet from the space between said cones and means for relatively adjusting the two, substantially as described.

3. In a separator, in combination, a casing, an air inlet, and an air outlet from said casing, a conical collar surrounding said outlet, a cone coöperating with said collar to control the outlet, a skeleton frame projecting through the casing and supporting said cone, and means without the casing for adjusting the position of said frame, substantially as described.

4. A separator, having, in combination, two concentric upwardly pointing cones one of which sets into the other, the upper cone having steeper sides than the lower cone, means for feeding material to be separated above the upper cone, and means for causing a current of air to flow downward and outward over the upper cone and then inward between the cones to carry the lighter particles of material, substantially as described.

5. A separator, having, in combination, a truncated upwardly pointing cone provided with an air inlet at its summit, means for causing a current of air to pass into the air inlet, a complete upwardly pointing cone concentric with the truncated cone and setting over it, the pitch of the latter cone being greater than that of the truncated cone, and means for delivering material and a current of air to the upper surface of the upper cone, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

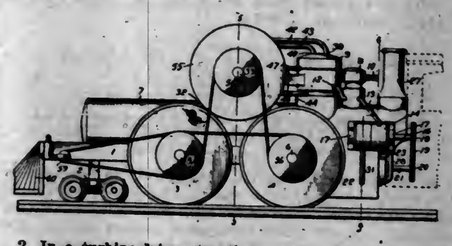
880,162. CAN-WASHER. WILLIAM L. PEARCE, Volta, Cal. Filed May 9, 1906. Serial No. 315,968.



A can washer of the class described consisting of a handle shank which is flattened and slightly offset at the beginning of its flattened portion, the said flattened portion being bent to extend downwardly and in a plane parallel with the handle shank proper, thence horizontally, thence vertically, this latter portion being parallel with the first mentioned downwardly bent portion, thence horizontally and secured at its extreme end to the handle shank at the offset therein whereby a rectangular frame is formed, a brush shaft journaled in the two horizontal portions of this frame, a nut engaged upon the upper end of the shaft and resting upon the upper horizontal portion, a gear splined to the shaft and resting upon the lower horizontal portion, a crank shaft journaled in the first mentioned vertically bent portion, a gear carried by the said crank shaft for rotation therewith, said gear being in mesh with the first mentioned gear and rotating against the said vertically entending portion in which the crank shaft is journaled, and a transverse handle fixed at the upper end of the handle shank.

880,168. TURBINE-DRIVEN LOCOMOTIVE. CHARLES POTTICARY, St. Thomas, Ontario, Canada. Filed June 22, 1907. Serial No. 380,283.

1. In a turbine-driven traction vehicle, the combination with a frame and a plurality of driving wheels carried thereby, of a boiler mounted upon the frame; a turbine mounted upon the boiler, and disposed transversely thereof between said driving wheels, the shaft of said turbine carrying a driving wheel at each end; belt connections between the hubs of the first and last mentioned driving wheels; and means for controlling the supply of pressure medium to said turbine.



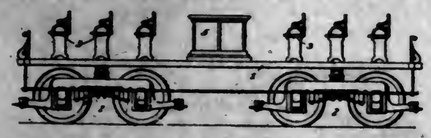
2. In a turbine-driven traction vehicle, the combination with a frame and a plurality of driving wheels carried thereby, each of said driving wheels having an enlarged hub formed on its outer face and provided with a plurality of peripheral grooves, of a boiler mounted upon the frame; a turbine mounted upon the boiler and disposed transversely thereof between said driving wheels, the shaft of said turbine carrying a driving wheel at each end, each of said last-mentioned driving wheels having a grooved, enlarged hub similar to those formed on said first-mentioned driving wheels; a cable connection between each set of driving wheels, the loops of each cable being seated in the grooves in each hub and crossing each other in their passage from one hub to another; and means for controlling the supply of pressure medium to said turbine.

3. In a turbine-driven traction vehicle, the combination, with a frame and a plurality of driving wheels carried thereby, of a boiler mounted upon the frame; a turbine mounted upon the boiler and disposed transversely thereof between the wheels, said turbine including inlet and exhaust pipes; a steam chest communicating with said inlet pipes; means for controlling the supply of steam to said steam-chest; a driving wheel carried upon each end of the turbine shaft; and a cable connection between the hub of each of said last-mentioned driving wheels and the hubs of the adjacent driving wheels carried by said frame.

4. In a turbine-driven traction vehicle, the combination, with a frame and a plurality of driving wheels carried thereby, of a boiler mounted upon the frame; a housing mounted upon the boiler between the driving wheels; a pair of turbine wheels mounted side by side within the housing, each turbine having a pair of inlet pipes and an outlet pipe communicating therewith at one end; a steam-chest mounted upon the boiler and provided with a series of ports in which the opposite ends of said inlet pipe are fitted; a pair of cutoff valves slidably engaged in said steam chest; means for operating said cutoff valves simultaneously to direct the flow of steam through one or the other of each pair of inlet pipes, to rotate the turbine wheels in one direction or the other; a driving wheel carried upon each end of the turbine shaft; and a cable connection between the hub of each of said last-mentioned driving wheels and the hubs of the adjacent driving wheels carried by said frame.
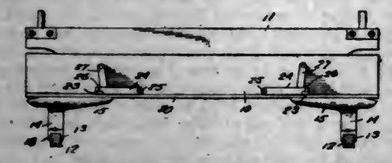
5. In a turbine-driven locomotive, the combination with a frame and front and rear driving wheels carried thereby, of a boiler disposed upon the frame; a housing mounted upon the boiler between the driving wheels; a turbine disposed within the housing transversely of the boiler and provided with a pair of inlet pipes and an exhaust pipe communicating therewith at one end; a steam-chest mounted upon the boiler and provided with a series of ports in which the opposite ends of said inlet pipes are fitted; a throttle mounted upon the boiler in communication with the steam-chest; reversing mechanism carried by the steam-chest for directing the flow of steam into one or the other of said inlet pipes, to change the direction of rotation of the turbine; a turbine mounted upon the frame at the rear end thereof; a screw-conveyer disposed within the fire-box of the locomotive; and driving connections between the shaft of said conveyer and the shaft of the last-mentioned turbine.

880,164. RAILWAY-CAR. CHARLES V. ROTE, Lancaster, Pa., assignor of one-third to Parke E. Shee and one-third to Frederick Shoff, Lancaster, Pa. Filed June 3, 1907. Serial No. 377,098.



A railway car having the passenger seats arranged in two groups, one group at each end of the car, a motorman's station located at or near the proximal center of the car, and the controlled mechanism located at the side of the car and to one side of the motorman's station.

880,165. SLEIGH. MAX R. RUDOLPH, Warrens, Wis. Filed May 21, 1907. Serial No. 374,812.



1. The combination with a sleigh beam having a recessed under face, of a plate secured upon the under face of the beam and extending longitudinally thereof and covering the entire face thereof, said plate being provided adjacent each of its ends with a pair of openings, knees provided at their upper ends with elongated heads, lugs formed integral with the upper face of the heads and projecting upwardly therefrom, heads formed integral with the lugs and projecting outwardly therefrom in opposite directions, the lugs being engageable through the openings in the plate, latches pivoted to the plate and engageable beneath the head upon one of the lugs upon the knee, latches for holding the said latches against disengagement, and keepers for holding the last named latches against disengagement from the first named latches.

2. The combination with a sleigh beam having a recessed under face, of a plate secured upon the under face of the beam and extending longitudinally thereof and covering the entire face thereof, said plate being provided adjacent each of its ends with a pair of openings, knees provided at their upper ends with elongated heads, lugs formed integral with the upper face of the heads and projecting upwardly therefrom, heads formed integral with the lugs and projecting outwardly therefrom in opposite directions, the lugs being engageable through the openings in the plate, latches pivoted upon the plate and engageable beneath the head upon one of the lugs upon the corresponding knee, latches pivoted upon the forward face of the beam and provided with shoulders against which one edge of the corresponding first mentioned latch abuts, and keepers pivoted upon the said forward face of the beam and movable to frictionally engage the last named latches and hold them from disengagement from the first mentioned latches.

880,166. GREEN-CORN FORK. GEORGE W. RUGGLES, Charlotte, N. Y. Filed Sept. 13, 1907. Serial No. 392,700.

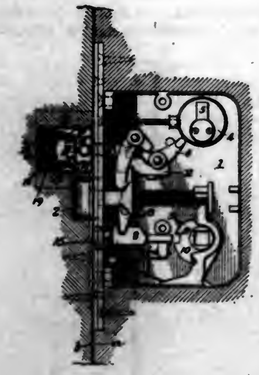


1. A green corn fork having a handle and a bowl at one end thereof divided longitudinally, with its under face curved transversely, said bowl being curved longitudinally and provided with tines extending throughout the length of the transversely curved portion of the bowl, each of said tines being triangular in cross section with two of the sides of each concave.

2. A green corn fork, having a part to be held in the hand and a series of tines at one end thereof triangular in cross section, the three faces of each tine being concave.

3. A green corn fork having a handle and a bowl having a concave lower surface, said bowl being longitudinally divided forming tines extending throughout the length of the concave portion, said tines being each triangular in cross section and the three faces of each tine being concave the outer edges of the outside tines being raised.

880,167. COMBINED LOCK AND ELECTRIC SWITCH. WILLIAM M. SHANNON and GEORGE K. TAYLOR, Columbia, S. C. Filed July 1, 1907. Serial No. 381,741.



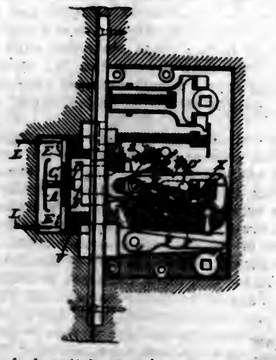
1. In a door lock switch for electric lighting circuits and the like, the combination with a lock controlling push button which projects beyond the lock face when in advanced position, of a switch located in the door jamb and having a movable member in the path of movement of said push button; whereby the switch is operated by the closing of the door.

2. In a door lock switch for electric lighting circuits and the like, the combination with a pair of push buttons which control the dead latch, one of which buttons projects beyond the lock face when in advanced position, of a switch located in the door jamb having a spring plunger for operating the movable member of the switch and adapted to be engaged by said projecting bolt as the door is closed.

3. In a door lock switch for electric lighting circuits and the like, the combination with the lock having a pair of push buttons to control the operation of the dead latch, one of said push buttons projecting beyond the face of the lock when in advanced position, of an electric switch located behind the lock strike and having a spring plunger carrying the movable contacts and lying in the path of movement of said projecting bolt as the door is closed, said lock strike being recessed adjacent said plunger to permit the passage of the end of the push button.

4. In a door lock switch for electric lighting circuits and the like, the combination with the lock having a pair of push buttons to control the operation of the dead latch, one of said push buttons projecting beyond the face of the lock when in advanced position, of an electric switch mounted in the door jamb behind the lock strike, said switch comprising a stationary contact and a movable contact normally engaging each other, said movable contact lying in the path of movement of the projecting push button as the door closes, whereby the electric circuit is broken by the closing of the door.

880,168. COMBINED LOCK AND ELECTRIC SWITCH. WILLIAM M. SHANNON and GEORGE K. TAYLOR, Columbia, S. C. Filed Aug. 22, 1907. Serial No. 389,711.



1. In a door lock switch, the combination with the main bolt of the lock, a secondary bolt having a sliding connection with the main bolt, an electric switch located in the door jamb and adapted to be operated by the secondary bolt, a key adapted to actuate both bolts when inserted from one side of the lock and to actuate the main bolt only when inserted from the other side of the lock, and a latch for holding the secondary bolt in advanced position said latch being released by the key in the unlocking operation.

2. In a door lock switch, the combination with the main bolt of the lock, a secondary bolt located beside the main bolt and having a head engaging a recess in the head of said main bolt, an electric switch located in the door jamb and adapted to be operated by the secondary bolt, and a key adapted to actuate both bolts when inserted from one side of the lock and to actuate the main bolt only when inserted from the other side of the lock.

3. In a door lock switch, the combination with a main bolt of the lock, a secondary bolt arranged beside the main bolt and having a head engaging a recess in the head of said main bolt, an electric switch located in the door jamb adapted to be operated by the secondary bolt, a key adapted to actuate both bolts when inserted from one side of the lock and to actuate the main bolt only when inserted from the other side of the lock, and a pivoted lever adapted to engage a shoulder in the secondary bolt to hold the same in advanced position and to be released by the key in the unlocking operation.

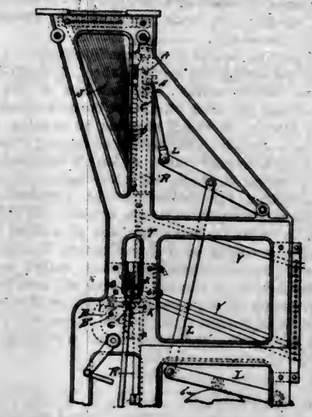
4. In a door lock switch, the combination with the main bolt of the lock, a secondary bolt mounted beside the same, both of said bolts having registering notches to be engaged by the key bit, an electric switch located in the door jamb adapted to be operated by the secondary bolt, and a key having a bit recessed or cut away at one edge, whereby the key will actuate both bolts when inserted from one side of the lock and will operate the main bolt only when inserted from the other side of the lock.

5. In a door lock switch, the combination with the main bolt of the lock, a secondary bolt beside the main bolt and having a head engaging a recess in the head of said main bolt, said main and secondary bolts being operated by a key inserted from one side of the lock and the main bolt only being operated by the key when inserted from the other side of the lock, and an electric switch located in the door jamb and operated by the secondary bolt.

[Claim 6 not printed in the Gazette.]

880,169. MACHINE FOR SETTING CARPET-WARPS. BENJAMIN S. SMITH and RICHARD N. W. SMITH, Paisley, Scotland. Filed Nov. 22, 1905. Serial No. 288,566.

1. Apparatus for setting and winding tuft or pile yarns for use in weaving imperial Axminster carpets comprising in combination winding mechanism including a wide bobbin and pattern mechanism for selecting the yarns to be wound on said bobbin, as described.

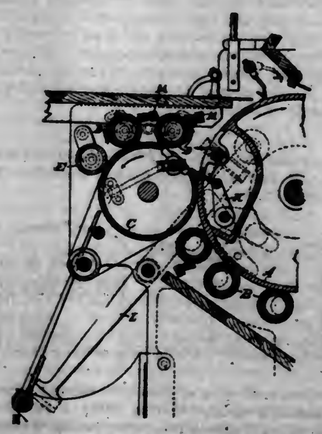


2. Apparatus for setting and simultaneously winding differently colored tuft or pile yarns for use in weaving imperial Axminster carpets, comprising, in combination, winding mechanism including a wide bobbin, mechanism for selecting the yarns to be wound on said bobbin, and jacquard apparatus controlling said selecting mechanism.

3. Apparatus for setting and simultaneously winding differently colored tuft or pile yarns for use in weaving imperial Axminster carpets, comprising, in combination, winding mechanism including a wide bobbin, mechanism for selecting the yarns to be wound on said bobbin, jacquard apparatus controlling said selecting mechanism, and devices for severing the yarns on the completion of the winding operation.

4. Apparatus for setting and simultaneously winding differently colored tuft or pile yarns for use in weaving imperial Axminster carpets, comprising, in combination, winding mechanism including a wide bobbin, mechanism for selecting the yarns to be wound on said bobbin, jacquard apparatus controlling said selecting mechanism and devices for bringing the selected yarns to said bobbin.

880,170. BRONZING-MACHINE. MARK SMITH, South Reddish, near Manchester, England. Filed Dec. 9, 1905. Serial No. 291,062.



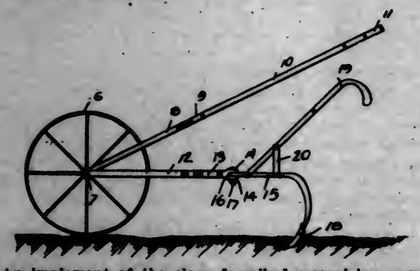
1. In a bronzing machine, the combination of a gripper cylinder for delivering the bronzed sheet, a brushing roller

or brushing rollers arranged to rotate against the rotation of the gripper cylinder, to brush the back of a sheet borne by such gripper cylinder and a taking-off roller, rotating in nipping conjunction with such gripper cylinder substantially as described.

2. In a bronsing machine, the combination of a gripper cylinder for delivering the bronsed sheet, a brushing roller arranged to rotate against the rotation of the gripper cylinder to brush the back of a sheet borne by such gripper cylinder, a taking off roller rotating in nipping conjunction with such gripper cylinder and a clearing brush to engage with such brushing roller, as herein specified.

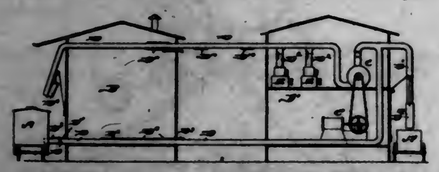
3. In a bronsing machine, the combination of a gripper deliverey cylinder for delivering the bronsed sheet, a brushing roller arranged to rotate against the rotation of the gripper cylinder to brush the back of a sheet borne by such cylinder, a taking off roller rotating in nipping conjunction with such gripper cylinder a casing containing the bronsing devices, a fan for drawing air into the casing past the brushing roller, a separator where the suspended bronze dust is separated from the so drawn air, and pipes connecting the casing, the fan and the separator, as herein specified.

880,171. GARDEN-PLOW. GEORGE A. SMITH and HARRY E. STEIN, Baxter Springs, Kans. Filed Sept. 19, 1907. Serial No. 393,708.



An implement of the class described comprising a pair of bars, a ground wheel journaled between the forward ends of the bars, a bar provided at its forward end with a yoke, the ends of the yoke being secured to the rear ends of the first mentioned bars, a body rest carried at the rear end of the last mentioned bar, a pair of bars connected at their forward ends outwardly of the first mentioned pair of bars, a yoke secured at its ends to the rear ends of the last mentioned pair of bars, the stem of the yoke being formed with a pair of spaced ears, a beam provided at its forward end with an ear which is received between the pair of ears upon the yoke stem, a bolt engaged through said ears and designed to hold the yoke at various angles with respect to the first mentioned pair of bars, a soil treating element carried at the lower end of the beam, and a pair of handles secured at their lower ends to the beam and extending thereabove.

880,172. COTTON AND COTTON-SEED CONVEYER. WILLIAM B. SMITH, Hartsells, Ala. Filed Oct. 28, 1903. Serial No. 178,930.



1. A cotton conveying system comprising a pipe returning substantially to its starting point, a fan casing arranged in the said pipe, a fan in the casing, a branch having a hinged section, valve controlled branches, dust screens arranged in the pipe, the said pipe having a plurality of openings, and valves controlling said openings.

2. A system of the kind described comprising a cotton conveying pipe extending from a warehouse to a gin house and adapted to receive cotton from a car, the said pipe extending through the lower portion of the warehouse, through the gin house above the gins and back through the upper portion of the warehouse and thence to the car, the said pipe having valve controlled outlets adapted to discharge cotton from the pipe into the warehouse, branch pipes leading from the said conveyer pipe, and means for creating a current of air in the said conveyer and branch pipes.

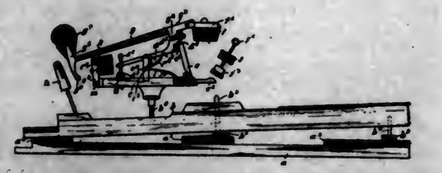
3. A system of the kind described comprising a main pipe starting from and returning substantially to the same point and adapted to convey unginned cotton and cotton seed, casings interposed in said pipe, a fan in one of the casings, a valve in the other casing, a screen between the casings, a branch receiving pipe leading into the main pipe in advance of the fan casing, branch discharge pipes carried by the main pipe to the rear of the fan casing, valves arranged in the said pipes, deflectors arranged in the main pipe and adapted to throw cotton into the branch discharge pipes, the said main pipe having a plurality of openings formed therein, dust screens arranged in a portion of said openings, and valves adapted to close the remainder of said openings.

4. A conveyer system of the kind described comprising a conveyer pipe, means for creating a suction of air through the said pipe, said pipe being arranged adjacent the floor of a warehouse, a hinged section connected to the outer end portion of said pipe, said pipe having openings formed in its upper wall within the warehouse, slides adapted to close said openings, and rods operable from without the warehouse for the purpose of closing or opening said slides.

5. A cotton or cotton-seed conveyer comprising a conveyer pipe having its ends at approximately a common place, means for creating an air suction in said pipe, delinters or gins adapted to receive cotton or cotton-seed from said pipe, and means for diverting cotton from said pipe to the said gins or delinters.

[Claims 6 to 11 not printed in the Gazette.]

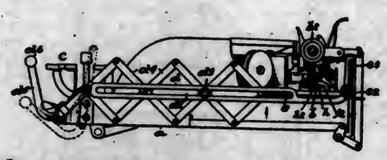
880,173. PIANO-ACTION. CHERUB J. B. SOCIN, Brooklyn, N. Y. Filed May 8, 1907. Serial No. 372,480.



1. In a piano action, a rocking lever, an upright support connected therewith, an escapement lever pivoted to said support, a jack pivoted to the end of the rocking lever, a pivoted hammer stem and an escapement spring, the front of the escapement lever being provided with a forwardly directed nose on the bottom of which is a shoulder, below and rearwardly of which is another shoulder in connection with which shoulders the upper end of the jack operates.

2. In a piano action, a rocking lever, an upright support connected therewith, an escapement lever pivoted to said support, a jack pivoted to the end of the rocking lever, a pivoted hammer stem and an escapement spring, the front of the escapement lever being provided with a forwardly directed nose on the bottom of which is a shoulder below and rearwardly of which is another shoulder in connection with which shoulders the upper end of the jack operates, the hammer stem being also provided with a downwardly directed boss or projection adapted to bear on the top surface of the nose of the escapement lever and forwardly thereof with a regulating screw also adapted to operate in connection with the nose of the escapement lever.

880,174. TYPE-WRITER-CARRIAGE CONTROL. CHARLES M. SORENSEN, Brooklyn, N. Y., assignor to Vidal Typewriter Company, New York, N. Y., a Corporation of Cuba. Filed Oct. 22, 1907. Serial No. 398,582.



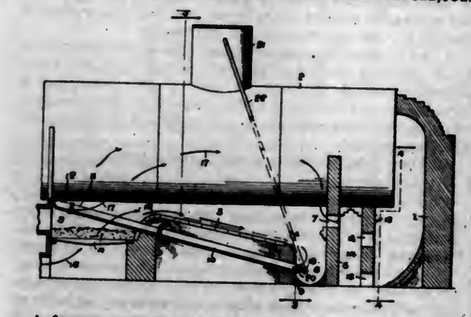
1. In combination with the carriage of a typewriter and the platen thereof, a longitudinal bar at one end of the typewriter frame having a slot along its length, a set of lazy tong levers arranged at one side of said bar, a stud carried by said levers and operating in said slot, and a flexible connection connected to said levers and to the opposite end of the carriage.

2. In combination with the carriage of a typewriter and the platen thereof, a longitudinal bar at one end of the typewriter frame having a slot along its length, a set of lazy tong levers arranged at one side of said bar, a stud carried by said levers and operating in said slot, a pulley at the end of said bar, a second pulley at right angles to said first pulley, and a cable connected to said levers engaging over both of said pulleys and connected to said carriage.

3. In combination with the carriage of a typewriter, a longitudinal bar slotted at one end and carrying a pulley at its other end, a set of lazy tong levers arranged at one side of said bar and carrying a stud which operates in said slot, said levers being pivoted to the front end of said bar at a relatively fixed point thereon, an arm connected to the foremost of said levers, an inwardly extending transverse handle secured to said arm, and a cable connected to the outermost of said levers passing over said pulley and secured to said carriage.

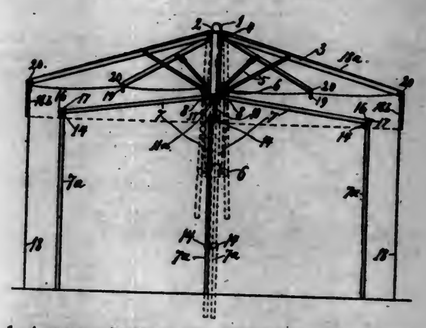
4. In combination with the carriage of a typewriter, a set of lazy tong levers arranged at right angles to said carriage, an operating arm connected to the foremost of said levers, a pulley at the rear end of said levers, a cable connected to the rear of said levers and to the carriage and passing over said pulley, means for conducting said cable from said pulley to said carriage, a projection carried by said levers and means for receiving and guiding said projection during the movement of said levers.

880,175. BOILER-FURNACE. SAMUEL S. SPIVEY, Paducah, Ky. Filed June 22, 1906. Serial No. 322,931.



A furnace comprising side and end walls, a combustion chamber at one end thereof, a rearwardly and downwardly inclined bridge wall, a partition to the rear of the bridge wall with passages at its upper end, a curved bottom to the chamber formed between said partition and the rear end of the bridge wall, flues leading from near the bottom of said chamber to the front of the combustion chamber and having curved ends directed toward each other, an auxiliary partition to the rear of said first-named partition and having openings below those of the front partition, and a pipe leading from the steam space of the boiler to direct steam into the ends of said flues in said chamber.

880,176. CANOPY. HARRY C. SWANWICK, Houston, Tex. Filed July 8, 1907. Serial No. 382,749.



1. A canopy having a supporting frame comprising an elevated central standard, a top notch fixed near the top thereof, a runner on the standard, ribs pivoted to the top notch, stretchers pivoted with their ends to said ribs and to the runner, legs pivoted to the lower end of the standard to swing outward radially therefrom and to fold together so as to permit the runner to pass downward upon them; said legs being each formed of two sections secured together by an adjustable swivel joint having a clamping screw holding the sections adjustably clamped together.

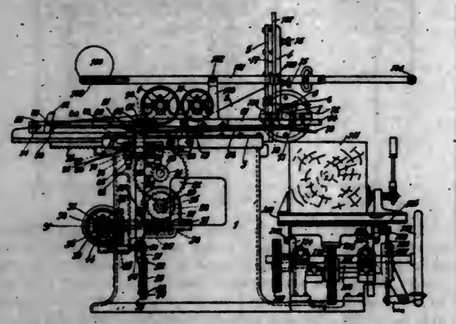
2. A canopy having a supporting frame comprising an elevated central standard, a top notch fixed near the top thereof, a runner on the standard, ribs pivoted to the top notch, stretchers pivoted with their ends to said ribs and to the runner, legs pivoted to the lower end of the standard to swing outward radially therefrom and to fold together so as to permit the runner to pass downward upon them; said legs being each formed of two sections secured together by an adjustable swivel joint having a clamping screw holding the sections adjustably clamped together, said leg sections also having serrations on the faces held in contact with each other by the clamping screws.

3. A canopy having an umbrella-shaped frame with the lower portion of the stick or standard divided into several legs pivoted to the upper portion and adapted to be gathered into linear position therewith and to be spread radially therefrom, said legs being each divided into an upper and a lower section pivoted together by adjustable joints, whereby the lower section may occupy a vertical position while the upper section assumes a substantially horizontal position and thereby supports the top portion of the standard and the runner thereon; said top portion of the standard having above the pivot joints of the legs a shoulder adapted to rest upon the legs when they are unfolded, and below the pivot joints a revoluble disk with radial notches for the legs to fold into, and margins between the notches for engaging the legs to hold them unfolded.

4. A canopy having an umbrella-shaped frame with the lower portion of the stick or standard divided into several legs pivoted to the upper portion and adapted to be gathered into linear position therewith and to be spread radially therefrom, said legs being each divided into an upper and a lower section pivoted together by adjustable joints, whereby the lower section may occupy a vertical position while the upper section assumes a substantially horizontal position and thereby supports the top portion of the standard and the runner thereon; said top portion of the standard having above the pivot joints of the legs a shoulder adapted to rest upon the legs when they are unfolded, and below the pivot joints a revoluble disk with radial notches for the legs to fold into, and margins between the notches for engaging the legs to hold them un-

folded, the outer ends of the ribs of the umbrella frame having eyes, a side-netting having hooks adapted for detachable engagement with said eyes, and a top netting covering the top of the canopy and having hooks adapted to engage detachably in said eyes; the outer edge of said top netting extending beyond the hooks therein so as to form a valance about the upper portion of the side netting.

880,177. GAINING-MACHINE. JOHN R. THOMAS, Cincinnati, Ohio, assignor to J. A. Fay & Egan Company, Cincinnati, Ohio, a Corporation of West Virginia. Filed Aug. 24, 1907. Serial No. 389,936.



1. In a gaining machine, the combination, with a cutter-head saddle and means for driving the same, of means for affecting the direction of movement of said cutter-head saddle comprising an operating lever, a link articulated therewith and having connection with said driving means, a bar articulated with said link, and a stop for said bar, said bar having connection with said operating lever for permitting release of the same from said stop, substantially as described.

2. In a gaining machine, the combination, with a reciprocating cutter-head saddle and means for driving the same, said driving means comprising a shiftable member, of an operating lever having a handle, a link articulated therewith and having connection with said shiftable member, a rod having connection with said shiftable member and provided with a stop, and a second link articulated with said rod and with said operating lever adjacent the handle thereof, substantially as described.

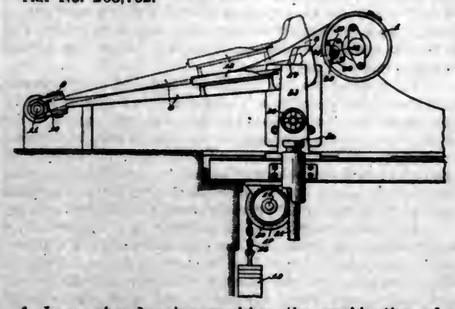
3. In a gaining machine, the combination, with a reciprocating cutter-head saddle and means for driving the same, said driving means comprising a shiftable member, of an operating lever having a handle, a link articulated therewith and having connection with said shiftable member, a rod having connection with said shiftable member and provided with a stop, a second link articulated with said rod and with said operating lever adjacent the handle thereof, and a spring for normally urging said shiftable member in a given direction, and constructed and arranged for shifting said shiftable member in the opposite direction by the manipulation of said operating lever, substantially as described.

4. In a gaining machine, the combination, with a frame, a reciprocating cutter-head saddle thereon, and means for driving the latter, said driving means comprising a shiftable member, of an operating lever having a handle, a link articulated therewith and having connection with said shiftable member, a rod having connection with said shiftable member and provided with a shoulder, said frame provided with a shoulder with which said first-named shoulder is arranged to make engagement, a spring for normally urging said shoulders into engagement, and a second link articulated with said rod and with said operating lever adjacent the handle thereof, substantially as described.

5. In a gaining machine, the combination, with a frame, a reciprocating cutter-head saddle thereon, and means for driving the latter, said driving means comprising a shiftable member, of an operating lever having a handle, a link articulated therewith and having connection with said shiftable member, a rod having connection with said shiftable member and provided with a shoulder, said frame provided with a shoulder with which said first-named shoulder is arranged to make engagement, means for adjusting the relative position between said shoulders, a spring for normally urging said shoulders into engagement, and a second link articulated with said rod and with said operating lever adjacent the handle thereof, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

880,178. WIRE-DRAWING MACHINE. HUGH L. THOMPSON, Waterbury, Conn. Filed June 5, 1905. Serial No. 263,762.



1. In a wire drawing machine, the combination of a block having a horizontal axis of rotation, a die holder, a counterbalanced elevating device therefor and rack and pinion means for operating the same.

2. In a wire drawing device, the combination of a block having a horizontal axis of rotation, a die holder, a coil supporting device connected therewith, a counterbalanced elevating device therefor and means for arbitrarily operating said elevating device.

3. In a wire drawing device, the combination of a block having a horizontal axis of rotation, a coil supporting and die holding member, mechanism for elevating and lowering said member comprising a pinion mounted on a counterbalanced shaft and a rack for coöperating therewith, and arbitrary means for depressing said counterbalanced member.

4. In a wire drawing machine, the combination of a block having a horizontal axis of rotation, a die holder, a counterbalanced elevating device therefor, rack and pinion means for operating the same, and a spring controlled keeper for the counterbalanced mechanism.

5. In a wire drawing machine, the combination of a block having a horizontal axis of rotation, gripping mechanism connected therewith, a pivoted die holder and a counterbalanced elevating device therefor, a table connected with the elevating device, and rack and pinion means for its operation.

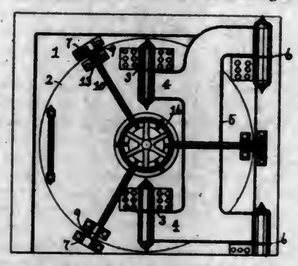
[Claims 6 to 15 not printed in the Gazette.]

880,179. MECHANISM FOR FORCING DOORS FOR SAFES, &c., TO THEIR SEATS. BENJAMIN F. TRIPP, Medford, Mass. Filed Feb. 2, 1906. Serial No. 299,069.

1. The combination with a door, of mechanism carried by the door for closing the same and comprising a rotatable cam shaft provided with a cam or crank, a housing coöperating with said cam or crank, a main shaft, and differential gearing connecting said main shaft with said rotatable cam shaft, substantially as described.

2. The combination with a door, of mechanism carried by the door for closing the same and comprising a main shaft, differential gearing operatively connected with said main shaft, a rotatable shaft operated by said differential gearing and means coöperating with said rotatable shaft to force the door to its seat, substantially as described.

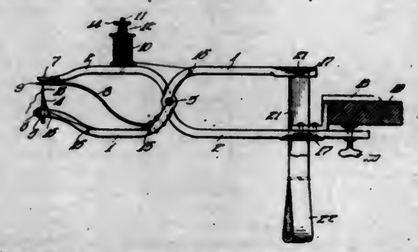
3. The combination with a door, of mechanism carried by the door for closing the same and comprising a main shaft, differential gearing operatively connected with said main shaft and comprising a hub or disk eccentrically mounted on said main shaft, differential gears loosely mounted on said hub or disk, a stationary gear engaging one of said differential gears, a movable gear engaging the other of said differential gears, and means operated by said movable gear for affecting the closing of said door.



4. The combination with a door, of mechanism carried by the door for closing the same and comprising a main shaft, a hub or disk eccentrically mounted on said shaft, differential gears mounted on said hub, a stationary gear coöperating with one of said differential gears, a rotatable gear for coöperating with the other of said differential gears, and a shaft driven by said rotatable gear, substantially as described.

5. The combination with a door, of mechanism carried by the door for closing the same and comprising a main shaft provided with a hub or disk eccentric thereon, differential gears mounted on said hub, a stationary gear coöperating with one of said differential gears, a rotatable gear coöperating with the other of said differential gears, and means driven by said rotatable gear, substantially as described.

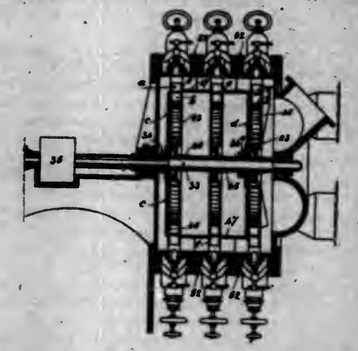
880,180. COBBLER'S SEWING-TOOL. WILLIAM E. WARD, Spaulding, Cal. Filed May 15, 1906. Serial No. 317,024.



A sewing tool comprising a work-supporting member and a needle-carrying member, a needle carried by the latter member said members being pivoted together, and crossing one another, a spring attached to the needle-carrying member and extending adjacent to the end of the work-supporting means, the end portion of the spring and of the work-supporting member being slotted for the passage of a needle, and the slotted end of the spring normally lying at a point between the end of the needle and work supporting member, and said work-supporting member being provided with spool-holding and tensioning means, and the needle-carrying member being provided with thread-guiding means for drawing the thread from the spool and guiding it through the needle.

880,181. TURBINE. CARLO WEDEKIND, St. Jean-sur-Mer, France. Filed Nov. 20, 1906. Serial No. 344,251.

1. In a gaseous fluid turbine the combination of a plurality of sections formed of double concentric crowns adapted to turn in opposite directions, blades carried by said crowns, and nozzles for the admission of the gases leading opposite the blades of the crowns and arranged for each section in a plane perpendicular to the axis of the turbine, substantially as described and for the purpose set forth.



2. In a gaseous fluid turbine the combination of a plurality of sections formed of double concentric crowns adapted to turn in opposite directions, blades carried by said crowns, disks carrying the interior crowns of blades and provided with hubs screwed into each other, felties of stamped sheet metal on which are riveted the exterior crowns of blades, and nozzles for the admission of the gases leading opposite the blades of the crowns and arranged for each section in a plane perpendicular to the axis of the turbine, substantially as described and for the purpose set forth.

880,182. ROTARY ENGINE. JOSEF ZURA, Berlin, Germany, assignor of one-half to Gebrüder Hammer, Berlin, Germany. Filed July 1, 1907. Serial No. 381,760.



1. In a machine of the type described, the combination with a cylinder, a shaft rotatable therein and a piston on said shaft, of packing members carried by the piston comprising an outer radially movable bar, axially and radially movable lateral bars, and axially and radially movable inner bars, and means connecting said bars.

2. In a machine of the type described, the combination with a cylinder, a shaft rotatable therein, and a piston on said shaft, of a plurality of packing members comprising an outer radially movable bar, lateral bars, means connecting the latter with the radially movable bar adapted to permit independent axial displacement of the lateral bars, inner bars, and means connecting the latter with the lateral bars adapted to permit independent radial displacement of the inner and lateral bars.

3. In a machine of the type described, the combination with a cylinder, a shaft revoluble therein and a piston on said shaft, of an outer bar having projections and sliding faces at its ends, a pin at each end of said bar, side bars each having a longitudinal slot at one end adapted to be

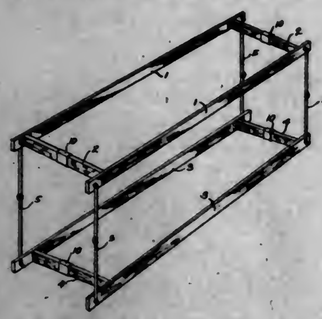
engaged by the pins, the ends of the side bars having projections and sliding faces, inner bars having ends adapted to said side bars, all of said bars being displaceable on said piston and adapted to pack the same, and means tending to displace said bars, the arrangement being such that the projections of said bars are guided positively on the sliding faces of adjacent bars where said bars abut one another, as set forth.

4. In a machine of the type described, the combination with a cylinder, a shaft revoluble therein and a grooved piston on the shaft, of an outer bar having pins and sliding faces at its ends, said bars having slots at one end adapted to be engaged by said pins and having guides and curved faces at the other end, inner bars having rounded heads adapted to said guides and having curved faces adapted to the aforesaid curved faces, said bars being displaceable in the grooves on the piston and adapted to pack the same, and means tending to displace said bars, the arrangement being such that the projections of said bars are guided positively on the sliding faces of adjacent bars where said bars abut one another.

5. In a machine of the type described, the combination with a cylinder having admission and exhaust ports, a shaft rotatable therein and a piston on said shaft, of a casing having a recess, a drum rotatively mounted in the casing, a rotary valve communicating with the admission port, and a conduit connecting the valve with the recess, whereby the admission of the driving medium to the recess is regulated by the valve.

[Claims 6 to 8 not printed in the Gazette.]

880,183. CANOPY. BARBARA K. APPLE, Sterling, Ill. Filed Aug. 27, 1907. Serial No. 390,364.

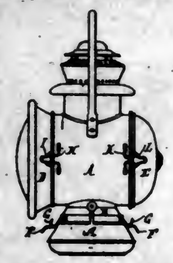


1. In a canopy, a frame, comprising a pair of parallel side pieces 1; a pair of inwardly folding braces 2, uniting said side pieces near the ends thereof; a pair of parallel side-pieces 3; a pair of inwardly-folding braces 4; uniting said side-pieces near the ends thereof; and a plurality of inwardly folding braces 5; pivotally attached at their ends to the outer faces of the side-pieces 1 and 3, substantially as shown and described.

2. In a device of the class named, a lower pair of side-pieces 3, adapted to rest upon the ground; a pair of folding braces 4, uniting said side-pieces near their ends; an upper pair of side-pieces 1; a pair of folding braces 2 uniting the same near their ends; two pair of folding-braces 5, pivotally attached to the outer faces of the side pieces 1 and 3, near the ends thereof; a canopy 12, adapted to inclose the frame formed by said side-pieces 1 and 3, when the same are opened; an opening, in the side of the canopy 12; and means for closing said opening, substantially as shown and set forth.

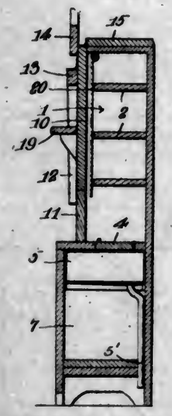
880,184. LAMP AND LANTERN. CHARLES BERGENER, Rochester, N. Y., assignor to C. T. Ham Manufacturing Company, Rochester, N. Y. Filed Sept. 30, 1907. Serial No. 395,108.

1. The combination with a lamp or lantern body and a movable part adapted to be fastened thereto, of a spring catch pivoted to said body and a lug on said movable part which is engaged by said catch, the latter being constructed of elastic wire and comprising bows on opposite sides of said lug, pintles at adjacent ends of said bows, locking portions at the opposite ends of said bows engaging the outer face of said lug, and an end loop forming a raised finger piece, substantially as set forth.



2. The combination with a lamp or lantern body and an oil pot provided with fastening lugs, of spring catches pivoted to said body and engaging said lugs, said catches comprising bows on opposite sides of each lug, horizontal pintles journaled on said body, locking portions engaging the outer face of the lug, and an end loop forming a raised finger piece, substantially as set forth.

880,185. KITCHEN-CABINET. ROY BEVERLY, Melfa, Va. Filed Oct. 7, 1907. Serial No. 396,298.



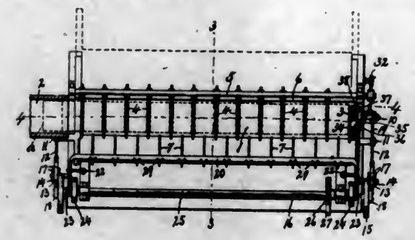
1. In an article of the class described, the combination of a refrigerator having a shelved vertical extension arranged thereabove to form a cabinet, a member hingedly connected at one end to said refrigerator adjacent the lower end of said cabinet and adapted to form a closure therefor, a foldable support connected with the free end of said member to adapt it when open for use as a table, means for holding said member in raised position, and a door arranged in said member near its hinged end to afford access to the ice box of the refrigerator, the inner face of said door being flush with the inner face of said hinged member to form a smooth unbroken surface when used as a table.

2. In an article of the class described, the combination of a refrigerator having a shelved vertical extension arranged thereabove to form a cabinet, a member hingedly connected at one end to said refrigerator adjacent the lower end of said cabinet, and adapted to form a closure therefor, a foldable support connected with the free end of said member to adapt it when open for use as a table, means for holding said member in raised position, a door arranged in said member near its hinged end to afford access to the ice box of the refrigerator, a leaf hingedly connected with the free end of said hinged member and adapted to extend transversely thereof and flush therewith, and a strip secured to the outer face of the free end of said member and projecting beyond the edge thereof to form a support for said leaf when open and an ornament for the top of the cabinet when closed.

3. The combination of a cabinet having a refrigerator formed in the lower part thereof, and a dish closet in its upper portion, a member hingedly mounted thereon to form a closure for said closet in one position and a table when in its other position, foldable means carried by said member to form a support for said hinged member when open, and as a decoration when closed, and a curtain suspended from the top of said closet to form a closure therefor when the hinged member is used as a table.

4. The combination of a cabinet having a refrigerator formed in the lower part thereof, and a dish closet in its upper portion, a member hingedly mounted thereon to form a closure for said closet in one position, and a table when in its other position, and foldable means carried by said member.

880,186. CAN-RIGHTING MACHINE. MERTON D. BLAKESLEE, Cazenovia, N. Y., assignor of one-fourth to Henry Burden, Second, Cazenovia, N. Y. Filed Feb. 26, 1906. Serial No. 303,004.



1. In a machine of the character described, a reciprocatory bed-plate and means for feeding the cans thereon, in combination with means for forcing the bed-plate out from under the cans, additional means synchronized with the first named means for entering the open ends of the cans facing in one direction, and temporarily supporting said open ends while the bed-plate is being withdrawn from under the cans, whereby the cans which have their open ends temporarily supported are caused to fall bottom downward, and further means for restoring the bed-plate to its normal position for receiving the cans.

2. In a device of the character described, a series of upright can chutes, a can-supporting plate movable back and forth across the tops of said chutes, means to feed the cans thereon, a series of fingers movable into and out of engagement with one end of the cans, whereby the fingers will be caused to enter the openings in said cans, and means for actuating said fingers forwardly and upwardly.

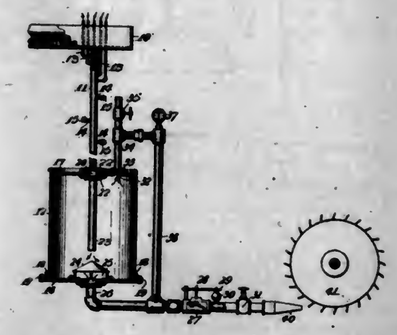
3. In a machine of the character described, a can-supporting bed, means to feed the cans upon the bed, means to move the bed out from under the cans, additional means to return the bed to its normal position and an oscillatory sliding frame having a series of yielding fingers engaging the adjacent open ends of the cans for tilting the latter right-side up as said bed is returned to its normal position.

4. In a can-righting machine, a can-supporting bed, means to feed the cans upon the bed, separating blades movable into and out of position between the cans while on the bed-plate, means for forcing the bed-plate out from under the cans, and additional means for entering the open ends of the cans having their open ends facing in one direction to temporarily support said open ends while the bed-plate is being withdrawn from under the cans, whereby such cans are caused to fall bottom downward through the space previously occupied by the bed-plate.

5. In a machine of the character described, a can-supporting bed and means to feed the cans thereon, in combination with a reciprocatory frame, fingers slidable thereon and movable into the can openings which may face the fingers, and means for actuating said frame, whereby the fingers are caused to elevate the open ends of the cans immediately after entering their openings.

[Claim 6 not printed in the Gazette.]

880,187. HYDRAULIC AIR-COMPRESSOR. ROBERT I. BLAKNEY, Seattle, Wash. Filed Apr. 24, 1907. Serial No. 369,899.



1. In a hydraulic air compressor, the combination of a head-race, a water in-take extending vertically downwardly therefrom, air inlet tubes from the upper part of said in-take extending above the level of the air in the head-race, additional air inlets below the first named inlet tubes, a check-valve in the additional inlets to allow air to enter and to prevent air or water being discharged through them, a separating tank into which the open lower end of the water in-take discharges, a breaker immediately below the discharge end of the in-take spaced from the bottom of the tank, a water outlet under the breaker, and an air outlet from the upper end of the separating tank.

2. In a hydraulic air compressor, the combination of a head-race, a water in-take extending downwardly therefrom, air inlets in the in-take having means whereby air may be admitted but cannot be discharged through them, a separating tank into which the open lower end of the water in-take discharges, a breaker below the discharge end of the in-take, a water outlet at the bottom of the tank, and an air outlet at the upper end of the tank.

3. In a hydraulic air compressor, the combination of a vertical water in-take, air inlets extending therefrom at intervals along the same, and check-valves in each of said inlets to admit air and prevent the outlet of water or air, and a separating tank into which the in-take discharges having means for separating water and air.

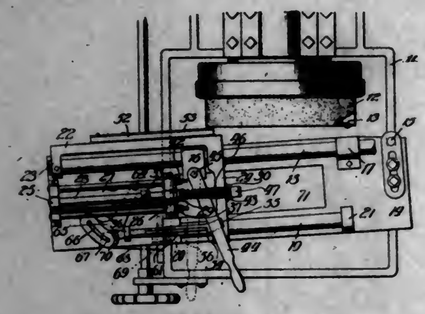
4. In a hydraulic air compressor, the combination of a head-race, a water in-take extending downwardly therefrom air inlets in the in-take having means whereby air may be admitted but cannot be discharged through them, a separating tank into which the open lower end of the water in-take discharges, a breaker below the discharge end of the in-take, a water outlet at the bottom of the tank, an air outlet at the upper end of the tank, and an adjustable valve in the water outlet whereby the pressure of water in the separating tank, and consequently the pressure of air, may be regulated.

5. In a hydraulic air compressor, the combination of a vertical water in-take having means for admitting air, a separating tank into which said in-take discharges, the bottom of the in-take being near the bottom of the tank, a separator or breaker immediately below the lower end of the in-take and spaced from the bottom of the tank, a discharge outlet from the tank located under said breaker, a safety valve communicating with said outlet and having means whereby the pressure at which it opens to dis-

charge water from the tank may be regulated, whereby the pressure of the air in the separating tank will be regulated.

[Claims 6 to 10 not printed in the Gazette.]

880,188. GRINDING-MACHINE. JOHN G. BLESSING, Chicago, Ill., assignor to American Cutlery Company, Chicago, Ill. Filed Oct. 15, 1906. Serial No. 338,932. Renewed Dec. 9, 1907. Serial No. 405,783.



1. In a grinding machine, the combination with a stationary frame and a grinding-wheel, of a swinging bed pivoted to the frame, a work-holder on the bed, a motor for reciprocating the work-holder, reversing means on the bed for the motor, and mechanism in the path of movement of said reversing means for swinging the bed with reference to the grinding-wheel.

2. In a grinding-machine, the combination with a stationary frame and a grinding-wheel, of a swinging bed pivoted to the frame, a work-holder on the bed, a motor for reciprocating the work-holder, reversing means on the bed for the motor, and mechanism for swinging the bed with reference to the grinding-wheel comprising a lever pivoted to said bed and slidably connected with said frame, and operating means for the lever in the path of said reversing means.

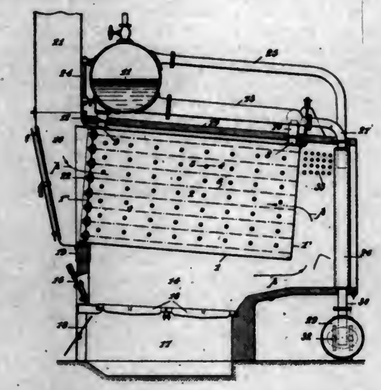
3. In a grinding-machine, the combination with a stationary frame and a grinding-wheel journaled therein, of a bed pivoted at one end to the base, a work-holder and cylinder on the bed, a piston in said cylinder connected with said work-holder for reciprocating the same, and means for oscillating the bed, comprising a swinging lever having a segmental slot in its swinging end and pivoted to the bed of the machine, and a pin on said base engaging said slot, said lever being operatively connected at its slotted end with said work-carrier for the purpose set forth.

4. In a grinding-machine, the combination with a stationary frame and a grinding-wheel, of a swinging bed pivoted to the frame, a work-holder on the bed, a motor for reciprocating the work-holder, reversing means on the bed for the motor, and mechanism for swinging the bed with reference to the grinding-wheel, comprising a rod, a lever connected with said rod and pivoted to the bed and slidably connected with said frame, and tappets on said rod in the path of said reversing means.

5. In a grinding-machine, the combination with a stationary frame and a grinding-wheel, of a swinging bed pivoted to the frame, a work-holder on the bed, a motor for reciprocating the work-holder, an operating lever constructed and arranged to control the forward and reverse operation of the motor, a spring controlling said lever, a second lever fulcrumed on a support and provided at one end with a catch for releasably holding said operating lever against the tension of said spring, and mechanism for swinging the bed with reference to the grinding-wheel, comprising a rod, a third lever connected with said rod and pivoted to the bed and slidably connected with said frame, tappets on said rod adapted to be engaged by said work-holder in its travel in opposite directions to shift the rod, and a third tappet on said rod into the path of which an arm of said second lever extends, for the purpose set forth.

[Claims 6 to 9 not printed in the Gazette.]

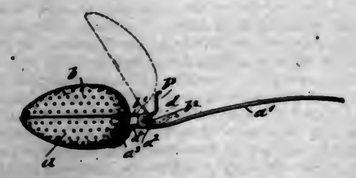
880,189. MULTITUBULAR BOILER. CHARLES BOURDON, Paris, France. Filed Dec. 9, 1905. Serial No. 291,060.



1. In a boiler, the combination of a plurality of movable elements, each element formed of a corrugated plate folded upon itself to provide a series of enlarged chambers for receiving the boiler water, and means for supporting the adjacent corrugated elements with the convex outer surfaces of their water chambers in contact for providing independent flues for the furnace gases between said several chambers, substantially as described.

2. In a boiler, the combination of a plurality of movable elements, each element formed of a corrugated plate folded upon itself to provide a series of enlarged chambers for receiving the boiler water, means for supporting the adjacent corrugated elements with the convex outer surfaces of their water chambers in contact for providing independent flues for the furnace gases between said several chambers, means for closing the ends of said several elements, and means for providing a circulation of feed water through said elements.

880,190. TEA-STRAINER. BRUNO VON BÜLTZINGSLÖWEN, New York, N. Y., assignor to Felix Kornicker, New York, N. Y. Filed Sept. 25, 1907. Serial No. 394,442.



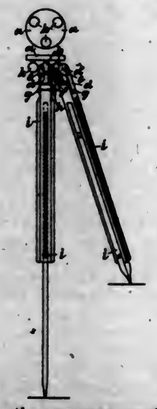
A tea-strainer comprising a spoon-bowl, a handle attached to said bowl and provided adjacent the same with ears bent up at the sides of the handle integral therewith, a cover fitting over said bowl, a shank carried by said cover having downwardly-bent ears, a pintle connecting said first and last named ears, a spring interposed between said shank and said handle, and an upwardly-directed thumb-piece bent up from said shank at its rear end and which abuts against said handle and forms a stop to limit the opening movement of said cover.

880,191. NON-BINDING NECKTIE. WAYLAND O. BURDICK, Stockton, Cal. Filed Apr. 25, 1907. Serial No. 370,215.



A device of the character described comprising a strip of smooth slippery material embodying an imperforate body portion and adapted to abut against the inner portion of a neck band of a tie and of a length as to extend only partially the length of said band, said strip further comprising a plurality of bendable flaps integral with and arranged in equal numbers along the opposite side of said body portion, said flaps provided with V-shaped incisions, the incisions between the upper flaps arranged in vertical alinement with the incisions between the lower flaps, said flaps adapted to be bent over the edges of said neck band and to contact with the outer face thereof thereby securing the strip to the neck band so that the strip will move with the neck band, said flaps being of a width as to extend partly across the outer face of the neck band.

880,192. STAND FOR PHOTOGRAPHIC CAMERAS, TELESCOPES, AND OTHER SCIENTIFIC INSTRUMENTS. WILLIAM BUTLER, Birkdale, Southport, England. Filed Oct. 6, 1906. Serial No. 337,701.



1. In a stand for the purposes specified, a head; projections securely connected with said head; links provided with recesses adapted to receive and clasp said projections; legs connected to said links; and means whereby said links and said legs may be held in required positions.

2. In a stand for the purpose specified, a head; projections securely connected with said head, legs provided with recesses adapted to receive and clasp said projections and means whereby said legs may be rotated in any direction about said projections and means for holding said legs in required positions.

3. In a stand for the purposes specified; a head; ball shaped projections securely connected with said head; links provided with recesses adapted to receive and clasp said projections; legs connected to said links; and means whereby said links and said legs may be held in required positions.

4. In a stand for the purposes specified; a head; ball shaped projections securely connected with said head; links provided with recesses adapted to receive and clasp said projections; legs connected to said links by bolts adapted to pass through the lower parts of said links, and the upper parts of said legs, and wing nuts; and tightening bolts and nuts adapted to secure the links to said projections.

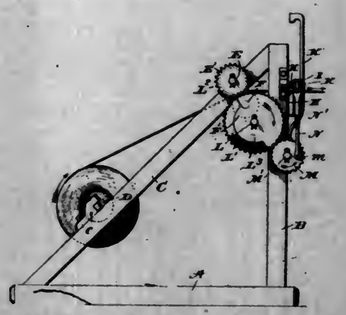
5. In a stand for the purposes specified; a head; ball shaped projections securely held to said head; recessed pieces secured to the upper parts of said legs, by means of bolts and nuts; and bolts and wing nuts adapted to hold said legs in required positions.

880,193. OIL-BURNER. CHARLES J. CHURCH, Porter Corners, N. Y. Filed Nov. 7, 1905. Serial No. 286,213.



In a device for burning oil, the combination of a rectangular metal box, A having a continuous bottom the upper portion of the walls of said box being reduced in thickness to form shoulders a^1, a gird B engaging said shoulders and forming a cover for said box, the top of said grid being flush with the walls of the box, said grid provided with numerous attenuated perforations, and an oil supply pipe passing through one of the lateral walls of said box below said grid.

880,194. MACHINE FOR CUTTING BAGGING. ROBERT CLARK, Charlie, Tex. Filed May 28, 1907. Serial No. 376,164.



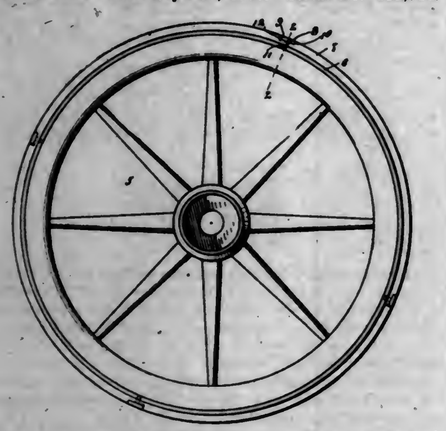
1. In a machine of the character described, a table a fixed cutting edge adjacent one edge thereof, a shaft carrying a feed roll, a pivoted cutter arranged to coöperate with said fixed cutting edge, a shaft for actuating said cutter, a gear carried by the cutter actuating shaft, a shaft provided with a segmental gear adapted to periodically engage the gear on the cutter actuating shaft, and gearing connecting said last mentioned shaft and the feed roll shaft.

2. In a machine of the character described, a table, a fixed cutting edge adjacent one edge thereof, a shaft carrying a feed roll, a pivoted cutter arranged to coöperate with said fixed cutting edge, a shaft for actuating said cutter, a gear carried by the cutter actuating shaft, a shaft provided with a segmental gear adapted to periodically

engage the gear on the cutter actuating shaft and intermeshing gears removably secured to said last mentioned shaft and the feed roll shaft.

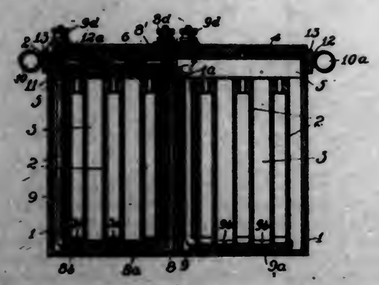
3. In a machine of the character described, a table, a fixed cutting edge adjacent one edge thereof, a shaft carrying a feed roll, a pivoted cutter arranged to coöperate with said fixed cutting edge, a link pivotally secured to said cutter, a shaft, a gear wheel carried thereby a link eccentrically pivoted to said gear wheel and connected to the before-mentioned link, a second shaft provided with a segmental gear adapted to periodically engage the gear on the first mentioned shaft, and gearing between the last mentioned shaft and the feed roll shaft.

880,195. TIRE ATTACHMENT. EDWARD COLLINS, Ekalaka, Mont. Filed Sept. 13, 1907. Serial No. 392,764.



An attachment for vehicle tires comprising a band encircling the tire, said band being triangular in cross section with its apex notched and outwardly presented, and fastening bolts passing through the band into the tire, said bolts having their heads fitting in the notches in the band, and shaped to extend flush with the apex and the sides of the band.

880,196. BATTERY. FRANK A. DECKER, Philadelphia, Pa., assignor, by mesne assignments, to Decker Electrical Manufacturing Company, Wilmington, Del. Filed Mar. 21, 1904. Serial No. 190,304.



1. The combination of a conduit, a socket intersecting said conduit, a tube extending into said socket, and a nut engaging said tube and having a passage therein through which said tube and conduit communicate, substantially as specified.

2. The combination of a conduit, a socket intersecting said conduit, said socket having a shoulder, a tube communicating with said conduit, and means in said socket supported by said shoulder and engaging said tube, substantially as specified.

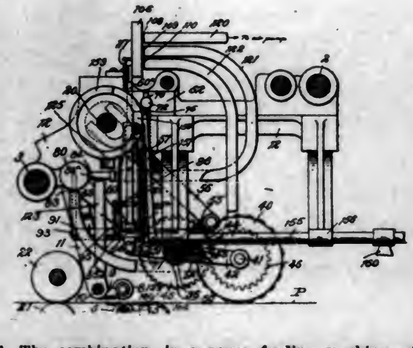
3. The combination of a cell, with a conduit, a shouldered socket intersecting said conduit, a tube communicating with said cell and extending into said socket, and a hollow nut engaging said tube and supported by said shoulder in said socket, substantially as specified.

4. The combination of a cell, with a conduit, a shouldered socket intersecting said conduit, a tube connecting said cell and socket, a gasket surrounding said tube, and a hollow nut engaging said tube and jamming said gasket against said shoulder, substantially as specified.

5. A cell, in combination with an insulating leg having a passage therethrough, a socket intersecting said passage and a tube seated in said socket and communicating with said cell, substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

880,197. PAPER-FEEDING MACHINE. TALBOT C. DEXTER, Pearl River, N. Y. Filed Mar. 1, 1907. Serial No. 360,000.



1. The combination, in a paper feeding machine, of a sheet moving instrument, means for operating the sheet moving instrument, means for arresting the operation of said instrument, sheet controlled suction means controlling said arresting means, and means operated by the arrest of operation of said instrument for throwing out of action the suction means.

2. The combination, in a paper feeding machine, of a sheet moving instrument, means for operating the sheet moving instrument, means for arresting the operation of said instrument, sheet controlled suction means controlling said arresting means, a relief valve for releasing the suction, and means for operating said valve actuated by the movements of the sheet moving instrument into and out of operation.

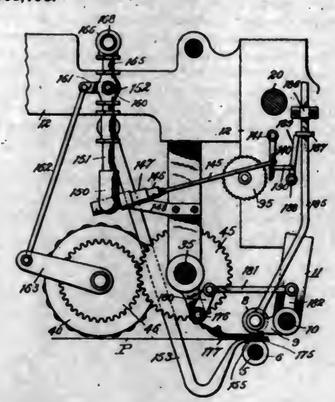
3. The combination in a paper feeding machine, of a sheet moving instrument adapted to be moved into and out of engagement with a sheet, a spring device adapted to elevate the sheet moving instrument, means for restraining the action of the spring device, and sheet controlled suction means adapted to release said restraining means.

4. The combination in a paper feeding machine, of a sheet moving instrument, a driving shaft operating said sheet moving instrument, spring mechanism for elevating the sheet moving instrument, means normally restraining the action of the spring mechanism, and sheet controlled suction means adapted to release the restraining means.

5. The combination in a paper feeding machine, of a sheet moving instrument, a driving shaft operating said sheet moving instrument, spring mechanism for elevating the sheet moving instrument, a latching device normally restraining the action of the spring mechanism, and sheet controlled suction means adapted to release the latching device.

[Claims 6 to 20 not printed in the Gazette.]

880,198. PAPER-FEEDING MACHINE. TALBOT C. DEXTER, Pearl River, N. Y. Filed Mar. 22, 1907. Serial No. 363,796.



1. The combination, in a paper feeding machine, of a sheet moving instrument, means controlling the operation of the sheet moving instrument, a ratchet wheel included in said controlling means, a pawl adapted to engage said ratchet wheel, and sheet controlled suction means for actuating said pawl.

2. The combination, in a paper feeding machine, of a sheet moving instrument, means controlling the operation of the sheet moving instrument, a ratchet wheel included in said controlling means, a pawl adapted to engage said ratchet wheel, a spring normally holding the pawl disengaged from the ratchet wheel, and sheet controlled suction means for moving said pawl into engagement with the ratchet wheel.

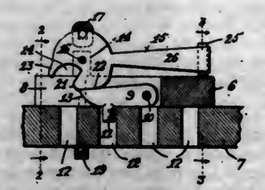
3. The combination, in a paper feeding machine, of a sheet moving instrument, means for raising and lowering the sheet moving instrument, including a ratchet wheel, a pawl adapted to engage said ratchet wheel, and sheet controlled suction means for actuating said pawl.

4. The combination, in a paper feeding machine, of a sheet moving instrument, means controlling the operation of the sheet moving instrument, a longitudinally movable throw-out shaft included in said controlling means, and sheet controlled suction means adapted to effect the longitudinal movement of said shaft.

5. The combination, in a paper feeding machine, of a sheet moving instrument adapted to be moved into and out of engagement with a sheet, means adapted to elevate the sheet moving instrument, means for restraining the action of the elevating means, a longitudinally movable throw-out shaft adapted to release said restraining means, and sheet controlled pneumatic mechanism for effecting the longitudinal movement of the throw-out shaft.

[Claims 6 to 34 not printed in the Gazette.]

880,199. RUNNING-GEAR FOR VEHICLES. JAMES M. DICK, Fleming, Pa. Filed Sept. 17, 1907. Serial No. 393,283.



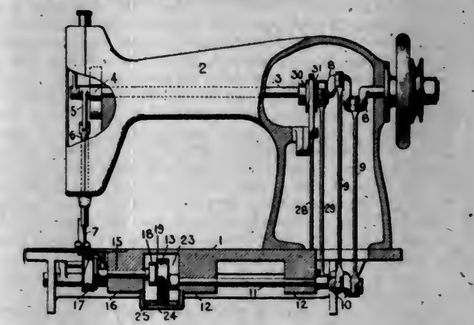
1. In running gear for vehicles, a reach, a plate adjustable on said reach, a dog pivoted on said plate and operating to engage said reach, a lever to actuate said dog, a saddle for said reach, and a toggle connection between said lever and said saddle for clamping the reach and plate together.

2. In running gear for vehicles, a reach provided with a plurality of sockets, a plate adjustable on said reach, a dog pivoted on said plate, a locking pin on said dog to engage said sockets, a lever pivoted to said plate, a cam on said lever operating on said dog to press said locking pin into a socket, a tongue on said lever to engage said dog and operating to raise the same to lift the locking pin from the socket, and means for clamping the plate and reach together.

3. In running gear for vehicles, a reach, a plate adjustable on said reach, means for locking the plate and reach together, a lever pivoted to said plate, a saddle for said reach and a toggle connection between said saddle and the lever for clamping the reach and plate together.

4. In running gear for vehicles, a reach provided with sockets, a plate adjustable on said reach, a dog pivoted to said plate, a locking pin on said dog to engage a socket, a lever pivoted to said plate, a cam on said lever operating on said dog to press said locking pin into a socket, a tongue on said lever to engage said dog and operating to raise the same to lift the locking pin from the socket, a cross-piece on said lever, a saddle for said reach, chains connecting said saddle with said cross-piece, and adjusting hooks in said chains.

880,200. LOOP-TAKER-ACTUATING MECHANISM FOR SEWING-MACHINES. PHILIP DIEHL, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Oct. 13, 1905. Serial No. 282,560.



1. In combination, a main-shaft, a reciprocating needle, operative connections between said main-shaft and needle whereby the latter receives a single reciprocation for each rotation of the former, feeding mechanism, operative connections between the same and the main-shaft, a single-hook loop-taker adapted to coöperate with said needle in the production of stitches, a shaft parallel with the main-shaft and carrying the loop-taker mounted thereon with the plane of movement of its hook adjacent and parallel with the path of reciprocation of the needle, a third shaft parallel with but offset from the loop-taker shaft, a trammel-wheel mounted upon the end of said third shaft, a plural-armed crank adapted to coöperate with said trammel-wheel and mounted upon said loop-taker shaft, whereby the speed of said loop-taker shaft is accelerated beyond that of said third shaft, and an operative connection between said main-shaft and said third shaft.

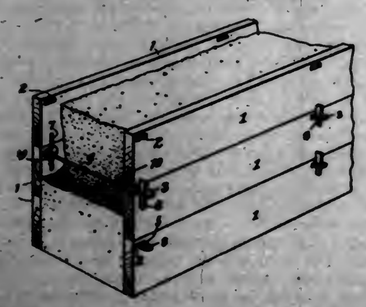
2. In combination, a main-shaft, a reciprocating needle, operative connections between said main-shaft and needle whereby the latter receives a single reciprocation for each rotation of the former, feeding mechanism, operative connections between the same and the main-shaft, a single-hook loop-taker adapted to coöperate with said needle in the production of stitches, a shaft parallel with the main-shaft and carrying the loop-taker mounted thereon with the plane of movement of its hook adjacent and parallel

with the path of reciprocation of the needle, a third shaft parallel with but offset from the loop-taker shaft, a trammel-wheel mounted upon the end of said third shaft, a plural-armed crank adapted to coöperate with said trammel wheel and mounted upon said loop-taker shaft, whereby the speed of said loop-taker shaft is accelerated beyond that of said third shaft, and an operative connection between said main-shaft and said third shaft consisting of a pair of angularly-disposed cranks correspondingly arranged upon each of said shafts and a pitman-rod connecting each crank upon one shaft with the corresponding crank upon the other shaft.

3. In a sewing-machine, the combination with the frame comprising the bed-plate and bracket-arm, of a main shaft journaled in the bracket-arm, a needle-bar carrying a needle and a positive crank-and-pitman connection between said needle-bar and the main shaft, an intermediate shaft mounted beneath the bed-plate, crank-and-pitman connections between said intermediate shaft and the main shaft, a loop-taker shaft also mounted beneath the bed-plate eccentrically in respect of said intermediate shaft and carrying at its forward end a rotary loop-taker, a disk mounted upon the forward end of said intermediate shaft and provided with a plurality of intersecting diametrically-disposed grooves or slide-ways, elongated slide-blocks disposed in said grooves or slide-ways and having their ends partially cut away upon the adjacent faces to enable them to partially overlap, and a crank-head fixed upon the rear end of said loop-taker shaft and provided with crank-pins each entering a suitable aperture in one of said slide-blocks.

4. In a sewing-machine, the combination with the frame comprising the bed-plate provided with a cavity in its lower side and a removable cap for closing the bottom of the same and providing therefor a detachable oil-holding cup or reservoir, within the cap therefor and the bracket-arm secured upon said bed-plate, of a main shaft journaled in the bracket-arm, a needle-bar carrying a needle and a positive crank-and-pitman connection between said needle-bar and the main shaft, an intermediate shaft mounted beneath the bed-plate, crank-and-pitman connections between said intermediate shaft and the main shaft, a loop-taker shaft also mounted beneath the bed-plate eccentrically in respect of said intermediate shaft and carrying at its forward end a rotary loop-taker, a disk mounted upon the forward end of said intermediate shaft within said cavity of the bed-plate and within the cap therefor and provided with a plurality of intersecting diametrically-disposed grooves, and a crank-head fixed upon the rear end of said loop-taker shaft also disposed within said cavity of the bed-plate and provided with a plurality of crank-pins each entering one of said intersecting grooves.

880,201. APPARATUS FOR MOLDING CONCRETE AND THE LIKE. CHARLES DIETRICHS, Little Ferry, N. J. Filed Nov. 27, 1907. Serial No. 404,065.



1. In apparatus for molding concrete, a device for securing mold members comprising a main clamp member for a shank adapted to extend through the side of a mold and provided with a pin extending perpendicularly through the shank and adapted to engage the inner face of the mold, said mold member being provided with a hook portion for engagement with the extremity of a stay rod and having its shank adapted to receive a wedging member, and a wedging member adapted to coöperate with the main clamp member in clamping the mold members.

2. A securing device for the members of concrete molds comprising a main clamp member and a wedging member coöperating therewith, said main clamp member being provided at one extremity with means for engaging a stay rod and having a pin mounted perpendicularly therein and adjacent to the means for engaging the stay rod, the shank of said main clamping member being adapted to extend through the side of the mold and adapted to receive the wedging member which coöperates with the main clamping member in clamping the mold members.

880,202. AUTOMOBILE. ALLEN H. DINGMAN, De Haven, Pa., assignor of one-half to John Sauers, De Haven, Pa. Filed June 13, 1907. Serial No. 378,842.

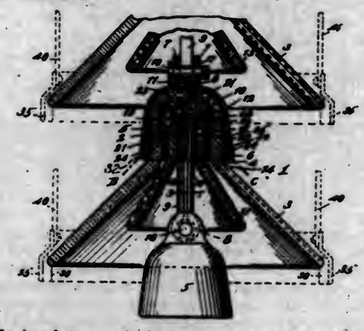


1. In a vehicle steering gear, a wheel hub embodying a metallic housing closed at the outer end and open at the inner end, dowel pins carried on the inner face of said closed end, a spindle inclosed by said hub and having a head on its inner end having openings to receive said dowel pins, a screw passed through said closed end into said spindle, a swivel-joint support mounted on said spindle, and provided with diametrically-opposed apertured lugs, connecting rods pivotally-attached at their outer ends to said lugs, means connected to the inner ends of said connecting-rods for operating the same two oppositely-disposed and vertically-alined bearing-pins carried by said swivel-support having bearing-sleeves surrounding the same, and an axle bifurcated to form arms at its outer ends, the said arms being secured to said bearing-sleeves, and said axle supporting the inner ends of the connecting rods and the operating means therefor.

2. In a vehicle steering gear, the combination with an axle bifurcated at its ends to form arms, of wheel hubs each comprising metallic housings having an integrally-closed outer end and open inner end, a spindle having an annular head on its inner end provided with openings, dowel pins carried by the closed end of said housing to engage said openings, and a screw passed through the closed end of the housing whereby the spindle is supported centrally of said housing, a swivel-joint support mounted on said spindle and provided on opposite sides with apertured lugs, oppositely-disposed bearing pins carried by said swivel-support having bearing-sleeves surrounding the same, ball-bearings for said bearing-sleeves, the arms of said axle being connected to said bearing-sleeves, connecting-rods pivotally-attached at their outer ends to said apertured lugs carried by the swivel-joint, means for connecting and supporting the inner ends of said connecting rods mid-way the length of the axle, and means connected to said connecting rods for actuating the same.

880,203. INSULATOR. JOHN D. E. DUNCAN, Brooklyn, N. Y. Filed Sept. 9, 1907. Serial No. 391,893.

1. In insulators, a body portion having an inclined internal supporting shoulder, a petticoat having a dome within said body portion, an internal petticoat having an inner dome located within the dome of said outer petticoat, a fastening bolt having a plurality of arms provided with inclined ends in the chamber within said inner dome, there being coöperating inclined shoulders on said domes to coöperate with said bolt ends and said supporting shoulder and cement locking the parts together and adapted to transmit strain angularly outward through said shoulders to said body portion.



2. In insulators, a body portion having an internal supporting shoulder, a petticoat having a dome within said body portion, an inner petticoat having an inner dome within the dome of said outer petticoat, fastening means provided with an enlarged upper end in the chamber within said inner dome, there being coöperating inclined shoulders on said domes to coöperate with the end of said fastening means and said supporting shoulder and cement locking the parts together and adapted to transmit strain angularly outward through said shoulders to said body.

3. In insulators, a body portion having an internal supporting shoulder, a petticoat having a dome within said body portion, an inner petticoat having an inner dome within the dome of said outer petticoat, a fastening having a flaring end in the chamber within said inner dome, there being coöperating shoulders on said domes to coöperate with the end of said fastening and said supporting shoulder and cement locking the parts together and adapted to transmit strain outward through said shoulders to said body portion.

4. In insulators, a body portion, a petticoat having a dome supported within said body portion, said dome being provided with internal shoulders, a fastening having a plurality of members provided with enlarged portions in the chamber within said dome and coöperating with said shoulders, means to lie between the ends of said members to prevent the withdrawal of said fastening from the insulator and binding material to secure the parts together and to transmit strain angularly outward through said shoulders.

5. In insulators, a body portion, a petticoat having a dome within said body portion, an inner petticoat having an inner dome within the dome of said outer petticoat, a fastening bolt having a plurality of arms provided with flaring portions in the chamber within said inner dome, there being inclined shoulders on said inner dome to coöperate with said flaring portions and binding material locking the parts together and adapted to transmit strain angularly outward through said shoulder to said body portion.

[Claims 6 to 22 not printed in the Gazette.]

880,204. COMPOSITION FOR GENERATING FORMALDEHYDE. ARTHUR EICHENGRÜN, Dusseldorf, Germany, assignor to Farbenfabriken vorm. Freidr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed June 2, 1906. Serial No. 319,963. (Specimens.)

1. A composition of matter, generating gaseous formaldehyde and water vapor when treated with water, and consisting of a mixture of polymeric formaldehyde with salts of those peracids which are derived from metallic peroxids, having an alkaline reaction, substantially as hereinbefore described.

2. A composition of matter generating gaseous formaldehyde and water vapor when treated with water, and consisting of a mixture of para-formaldehyde with salts of those peracids which are derived from metallic peroxids, having an alkaline reaction, substantially as hereinbefore described.

3. A composition of matter generating gaseous formaldehyde and water vapor when treated with water, and consisting of a mixture of para-formaldehyde with perborate of sodium, substantially as hereinbefore described.

4. A composition of matter generating gaseous formaldehyde and water vapor when treated with water, and consisting of a mixture of polymeric formaldehyde with salts of those peracids which are derived from metallic peroxids, having an alkaline reaction, and fixed alkaline compounds, substantially as hereinbefore described.

5. A composition of matter generating gaseous formaldehyde and water vapor when treated with water, and consisting of a mixture of para-formaldehyde with salts of those peracids which are derived from metallic peroxids, having an alkaline reaction, and fixed alkaline compounds, substantially as hereinbefore described.

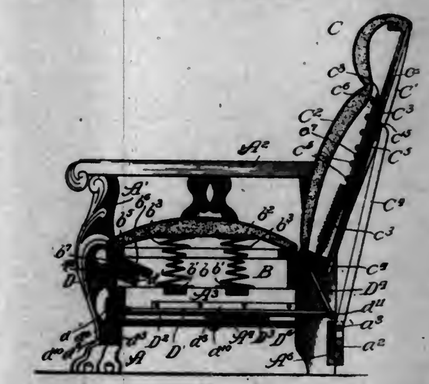
[Claim 6 not printed in the Gazette.]

880,205. ROLL. JOHN J. EVANS and REES LEWIS, New Castle, Pa. Filed Apr. 12, 1907. Serial No. 367,880.



A roll comprising a body portion formed with a collar and neck at each end thereof, said roll further provided with a centrally-disposed longitudinal bore extending from end to end thereof, and a core of copper tightly disposed in said bore.

880,206. CHAIR. ANTON G. EYLES, Pontiac, Ill. Filed Apr. 5, 1907. Serial No. 366,531.



1. In a chair, the combination of a main frame, a swinging back, a movable member serving to actuate said back, a spring connected with and serving to actuate said member, and a brace pivotally connected with said member and with the main frame.

2. In a chair, the combination of a main frame, a swinging back provided with a longitudinal guide, a slide connected with said guide, a spring connected with the back and with said slide and tending normally to depress the slide, and a brace connected with said slide and said main frame, whereby depression of the slide under the action of its spring serves to elevate the back.

3. In a chair, the combination of a main frame, a swinging chair-back, a pivot connecting said back and frame, a

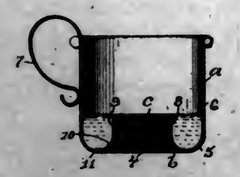
slide connected with said back, a brace connecting said slide and main frame, and a slide-locking device having a pivoted actuating lever with the pivot thereof co-axial with the pivot of the chair-back.

4. In a chair, the combination of a main frame, a swinging back, a spring-actuated back-actuating member, a brace connecting said member with the main frame, a locking pawl for said member, and a pawl-actuating shaft connected with the main frame.

5. In a chair, the combination of a main frame, a back, pivots connecting the back with the main frame, one of said pivots being tubular, a crank-shaft extending through said tubular pivot and equipped with an actuating arm, a locking pawl actuated by said crank-shaft, a slide connected with said back and equipped with locking shoulders coacting with said locking pawl, and a brace connecting said slide with said main frame.

[Claims 6 and 7 not printed in the Gazette.]

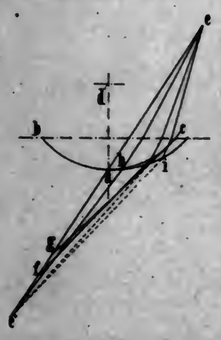
880,207. SHAVING-CUP. ROBERT G. FOSTER, Providence, R. I. Filed Nov. 29, 1907. Serial No. 404,847.



1. A shaving cup comprising a cylindrical body and an internal cylindrical wall forming an upward continuation of the wall of said body, and spaced from the cylindrical wall of said body, said internal wall having its inner face roughened to frictionally grip a cake of soap held therein.

2. A shaving cup comprising a cylindrical body having its lower portion of U shaped cross section, the said lower portion including an upwardly extending cylindrical wall spaced concentrically from said body and having its inner face roughened to frictionally grip a cake of soap held therein.

880,208. OPTICAL LENS. JULES E. GERMAIN and GEORGES A. OSSART, Ruell, France, assignors to Jules Alphonse Gustave Rousset, Vincennes, France. Filed Mar. 8, 1907. Serial No. 361,403.



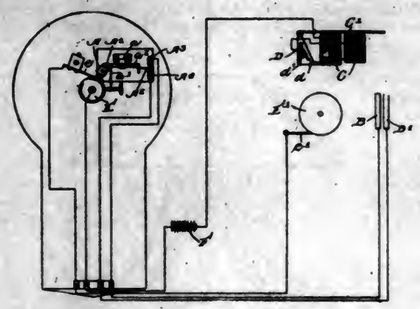
1. An optical lens having a meridian curve which is a true conchoid.

2. An optical lens having the meridian curves of its admission and its exit surfaces conchoidal in form.

3. An optical lens having as its meridian curve a fourth degree curve of the following equation:

$$(x^2+y^2)(x-a)^2=R^2x^2.$$

880,209. ELECTRICALLY-OPERATED CLOCK. HARLEIGH GILLETTE, Chicago, Ill. Filed Mar. 27, 1907. Serial No. 364,829.



1. The combination with a master clock movement, of a secondary clock motor, time-indicating means, connections between the time-indicating means and said secondary clock motor, electrical connections including the motor, means controlled by the movement of the master clock movement for regularly and alternately setting up two different electrical states in the connection, said secondary clock motor being constructed and arranged to be operated in the same direction during each of said electrical states, mechanical means operatively driven by the movement of the motor for interrupting each electrical state after a predetermined movement, whereby the motor is stopped, and mechanical means operatively driven by the motor whereby such movement of the motor shall set devices in the secondary clock in such position that the motor can respond to and be moved by the next succeeding electrical state in the connections.

2. The combination with a master clock movement, and a secondary clock motor, of time-indicating means and connections between the same and said motor, two electrical circuits from the master clock including the secondary clock motor, means at the master clock and operated by the movement thereof for periodically and alternately closing one circuit and breaking the other, whereby the motor will be periodically set in motion, and means mechanically driven by the motor after a certain movement for opening the closed circuit which is operating the motor and closing the circuit which is open at the master clock, whereby the parts are in position for the closing of the circuit which is open at the master clock to actuate the motor.

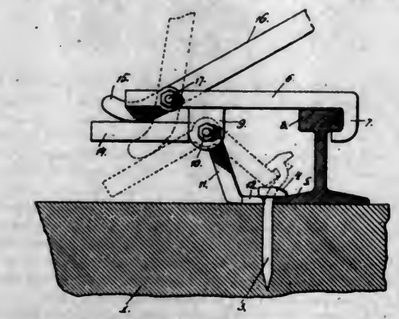
3. The combination with a master clock movement and a secondary clock motor, of time-indicating means and connections between the same and said motor, two electrical circuits from the master clock including the secondary clock motor, means at the master clock and operated by the movement thereof for periodically and alternately closing one circuit and breaking the other, whereby the motor will be periodically set in motion, means operated by the motor after a certain movement for opening the closed circuit which is operating the motor and closing the circuit which is open at the master clock, whereby the parts are in position for the closing of the circuit which is open at the master clock to actuate the motor, a third or synchronizing circuit including the motor, means operated by the movement of the master clock for closing said synchronizing circuit at longer intervals, and means movable with the secondary clock motor for holding said synchronizing circuit closed until the secondary clock reaches a position synchronous with the master clock, and then breaking it to stop the motor, the circuit being broken at the master clock by continued movement thereof before it is again closed at the secondary clock.

4. The combination with a master clock movement, a secondary clock motor and two circuits including the secondary clock motor, of means operated by the master clock movement for alternately closing one of said circuits and opening the other thereof, two segments movable by the motor, each of said segments being included in one of said circuits, and two brushes, one adapted to bear on each segment and included in the circuit thereof respectively, the brushes and segments being constructed and arranged so that when one circuit is closed at the master clock, the current will flow through the corresponding brush and segment, driving the motor for a predetermined space, at the end of which the brush will pass off the segment, opening the circuit, the other segment being meanwhile advanced into contact with its brush to close its circuit at the secondary clock preparatory to a second operation of the master clock.

5. The combination with a master clock movement, a secondary clock motor and two circuits including the secondary clock motor, of means operated by the master clock movement for alternately closing one of said circuits and opening the other thereof, two segments movable by the motor, each of said segments being included in one of said circuits, two brushes, one adapted to bear on each segment and included in the circuit thereof respectively, the brushes and segments being constructed and arranged so that when one circuit is closed at the master clock, the current will flow through the corresponding brush and segment, driving the motor for a predetermined space, at the end of which the brush will pass off the segment, opening the circuit, the other segment being meanwhile advanced into contact with its brush to close its circuit at the secondary clock preparatory to a second operation of the master clock, a synchronizing circuit including the motor, a segment located at each clock and included in the circuit, said segments being driven by the master clock and the secondary clock motor respectively, brushes included within the synchronizing circuit and bearing upon said segments respectively, said segments being so constructed and arranged that when the circuit is closed at the master clock it will drive the secondary clock motor until said secondary clock reaches a corresponding position therewith, whereupon the circuit will be broken by the passage of the brush from the segment at the secondary clock.

[Claim 6 not printed in the Gazette.]

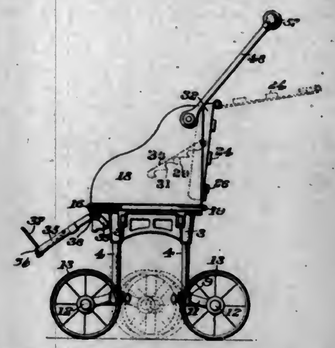
880,210. SPIKE-PULLER. CHARLES E. GLONER, Carnegie, Pa. Filed July 26, 1907. Serial No. 385,614.



1. A spike puller comprising a pair of members each consisting of an elongated flat bar having a hooked end adapted to extend over a support, each of said bars provided at a point intermediate the ends thereof with a lug which depends from the lower face of its respective bar, each of said lugs having a circular opening, a transversely-extending member mounted in said openings, a claw member pivotally-mounted upon said transversely-extending member and embodying a forwardly inclined portion terminating at its lower end in a claw, and at its upper end in a rearward portion extending at an angle with respect to said inclined portion, and a lever pivotally-connected with the clamping members at a point between the lugs and the rear ends of said members and having an uninterrupted curvilinear lower end adapted to engage the angularly-extending rear portion of the claw member.

2. A spike puller comprising a pair of members each of which is provided with a depending lug at a point intermediate the ends thereof, each of said lugs formed with a circular opening, a transversely-extending member mounted in the lugs, a transversely-extending member mounted in the clamping members at the rear thereof, a claw member pivotally-mounted upon that transversely-extending member which is mounted in the lugs and embodying a forwardly-inclined portion terminating at its lower end in a claw and at its upper end in the rearward portion extending at an angle with respect to said inclined portion, and a lever pivotally-mounted upon that transversely-extending member which is mounted in the clamping members and having an uninterrupted curvilinear lower end adapted to engage the angularly-extending portion of the claw member.

880,211. FOLDING GO-CART. CARL S. GROSS, Philadelphia, Pa. Filed June 17, 1907. Serial No. 379,353.



1. In a device of the character described, base plates, running gear carried thereby, seat plates, sides, back pieces, and a back plate suitably pivoted together, whereby the running gear can be located within the other parts when the cart is folded and means allowing the parts to be slidably moved toward and from each other.

2. In a device of the character described, base plates, running gear carried thereby, seat plates, sides, back pieces and a back plate suitably pivoted together, whereby the running gear can be located within the other parts when the cart is folded, means allowing the parts to be slidably moved toward and from each other and a handle adjustably mounted on said sides, whereby the position of the same can be varied.

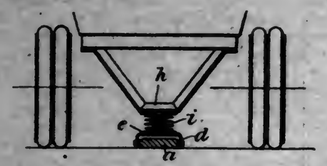
3. In a device of the character described, base plates, running gear carried thereby, seat plates, sides, back pieces, and a back plate suitably pivoted together, whereby the running gear can be located within the other parts when the cart is folded, handles carried by said side pieces, and means for adjusting and locking said handles in adjusted position and means allowing the parts to be slidably moved toward and from each other.

4. In a device of the character described, base plates, adjustably connecting means therefor, back pieces adjustably connected, seat pieces adjustably connected, a back plate, a running gear carried by said base plates, and means for pivotally connecting the suitable parts, whereby the cart can be folded or opened and means allowing the parts to be slidably moved toward and from each other.

5. In a device of the character described, base plates, legs carried thereby, wheels adjustably and rotatably mounted upon said legs, seat pieces pivotally connected with said base plates, sides connected with said seat pieces, back pieces pivotally connected with said seat pieces, and means whereby the parts can be moved towards and away from each other.

[Claims 6 to 16 not printed in the Gazette.]

880,212. **MEANS FOR PREVENTING SIDE SLIP OF MOTOR-VEHICLES.** THOMAS B. HEATHORN, Knightsbridge, London, England. Filed Nov. 11, 1907. Serial No. 401,690.



1. An apparatus for preventing side slip of motor or other road vehicles comprising rollers with helical ribs or projections adapted to engage the surface of the road and means for supporting the rollers in contact with the road surface.

2. An apparatus for preventing side slip of motor or other road vehicles comprising a pair of rollers provided respectively with right and left hand helical ribs or projections, a depending bracket in which the rollers are mounted with their axes parallel and a spring arranged on the bracket to resiliently press the rollers against the road surface.

880,213. **PACKER FOR DEEP WELLS.** CHARLES M. HEETER, Butler, Pa. Filed June 17, 1904. Serial No. 212,998.



1. A double packer for deep wells having two connected packers, the lower packer being constructed for expansion by the weight of a superimposed casing and the upper one having an expanding device, substantially as described.

2. A double packer for deep wells, having upper and lower connected packers, a down-holding device above the upper packer; and means for releasing the down-holding device substantially as described.

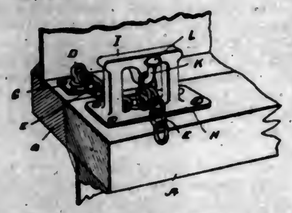
3. A double packer for deep wells having two connected packers, the lower one being constructed for expansion by the weight of a superimposed casing, and the upper one having an expanding screw, substantially as described.

4. A double packer for deep wells having two connected packers, the lower one being a gravity packer and the upper having an expanding screw, and a down-holding device above the upper packer; substantially as described.

5. A double packer for deep wells having two connected packers, one a gravity packer, and the other having an expanding screw, and anchoring devices above the upper packer and below the lower packer; substantially as described.

[Claims 6 to 25 not printed in the Gazette.]

880,214. **WINDOW-SASH FASTENER.** REINHOLD E. HENNINGES, Cleveland, Ohio. Filed Dec. 4, 1907. Serial No. 405,031.



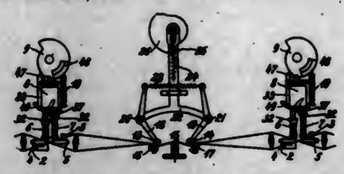
1. The combination, with the meeting rails of a pair of sashes, of a chain secured to one sash, and an arch provided with a hook, and secured to the rail of the other sash, so that a link of the chain may be attached to said hook.

2. A window sash fastener consisting of an anchor ring attachable to one sash, a chain attached to said ring, and an arched piece attachable to the other sash, and having a hook to which one of the chain links may be attached.

3. A window sash fastener consisting of a chain and anchor attachable to one of the sashes, a hook attachable to the other sash, and means coöperating with the hook to retain the chain thereon.

4. A window sash fastener comprising a chain and anchor attached to one sash, a hook attached to the other sash and on which a link of the chain may be placed and a screw serving to close the hook over the chain link and inaccessible for removal after the parts are in operative position.

880,215. **DEVICE FOR SEPARATING THE ENDS OF WARP-THREADS IN WARP-TWISTING MACHINES.** GUSTAV HILLER, Zittau, Germany. Filed Nov. 2, 1906. Serial No. 341,731.



1. In a device of the character described, lease rods between which the ends of the threads form leases, and pairs of pushers adapted to be pushed into the lease in proximity to the lease rods and then to be moved towards one another and towards the middle of the lease during the displacement, substantially as and for the purpose herein set forth.

2. In a device of the character described, lease rods between which the ends of the threads form leases, pairs of vertical spindles near the middle of the leases, horizontal arms fixed to these spindles, pushers on the free ends of the said arms and means for operating the pushers substantially as and for the purpose herein set forth.

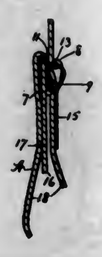
3. In a device of the character described, lease rods between which the ends of the threads form leases, pairs of vertical spindles near the middle of the leases, horizontal arms fixed to these spindles, pushers on the free ends of the said arms, and slides adapted to be moved vertically up and down and in which the said vertical spindles are arranged in pairs and adapted to turn, substantially as and for the purpose herein set forth.

4. In a device of the character described, lease rods between which the ends of the threads form leases, pairs of vertical spindles near the middle of the leases, horizontal arms fixed to these spindles, pushers on the free ends of the said arms, slides adapted to be moved vertically up and down and in which the said vertical spindles are arranged in pairs, and adapted to turn, spur wheels of equal size adapted to engage with each other and secured upon the spindles of each pair, means for preventing the turning movement of the spindles with the pusher arms beyond the position of the arms parallel to the warp threads, means for continually turning the spindles with the pusher arms to the position of the arms parallel to the warp threads, means for moving the slide up and down, and means for turning the pusher arms to the position perpendicular to the warp threads, substantially as and for the purpose herein set forth.

5. In a device of the character described, lease rods between which the ends of the threads form leases, pairs of vertical spindles near the middle of the leases, horizontal arms fixed to these spindles, pushers on the free ends of the said arms, slides adapted to be moved vertically up and down and in which the said vertical spindles are arranged in pairs and adapted to turn, spur wheels of equal size adapted to engage with each other and secured upon the spindles of each pair, means for preventing the turning movement of the spindles with the pusher arms beyond the position of the arms parallel to the warp-threads, an arm on one of the spindles of each pair, a spring arranged to act upon the arm and to force the spindles so as to move the pusher arms parallel to the warp threads, means for limiting this turning movement of the spindles of the pusher arms, means for turning the spindles with the pusher arms in opposition to the action of the spring, a guide for each slide, and means for the upward and downward movement of the slide, substantially as and for the purpose herein set forth.

[Claims 6 to 30 not printed in the Gazette.]

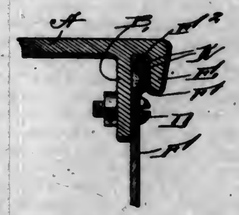
880,216. **BUCKLE.** ERNEST N. HUMPHREY, New Britain, Conn., assignor to Traut & Hine Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed July 1, 1907. Serial No. 381,617.



1. A rustless buckle for a webbing, comprising a frame having a plate-like back with ears at its opposite ends, one jaw of the buckle being formed on the said back between the said end ears, and a free and unobstructed passage for the webbing over the said jaw of the back between the said ears, a swinging jaw pivotally mounted on the said ears and having a biting edge extended lengthwise of the said frame between the said end ears for coacting with the jaw portion of the said back, and an operating lever pivotally mounted on and between the said end ears of the frame with its shorter arm in position for acting upon the said swinging jaw near the biting edge thereof for pressing the jaws together, the said frame, jaws, and lever, being all combined and arranged with a free passage for the webbing to extend longitudinally wholly through the buckle between the said ears.

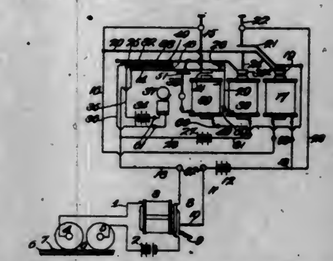
2. In a rustless buckle, the combination of a frame having a plate-like jaw and back, a swinging jaw mounted on the said frame and adapted to move to and from the said jaw and back, an operating lever mounted on the said frame for forcing the said swinging jaw towards the said jaw and back, and a webbing having one end secured to the said frame and a loop extending downwardly therefrom with one member of the loop in the rear of the said back, and the other member thereof extending upwardly through the buckle between the said swinging jaw and the said plate-like jaw and back.

880,217. **PACKING-JOINT FOR RADIATORS.** STEWART W. JAMESON, Oskaloosa, Iowa. Filed May 29, 1907. Serial No. 376,331.



A packing joint for warm air furnaces, comprising, in combination with a top of cast metal having two concentric flanges of unequal lengths projecting from the same adjacent to its marginal edge, the adjacent walls of said flange being parallel, a circumferential wall having its upper portion bent to form a swage to be inserted in the space between said flanges, a curved portion of said swage adapted to contact with the inner face of the outer flange, a concaved portion of the swage forming means for the reception of cement, the parts being so arranged that, when adjusted in place, the swage will cause the filling to pack tightly to secure a gas tight joint, as set forth.

880,218. **SIGNAL MECHANISM FOR BLOCK-SIGNAL SYSTEMS.** HARRY L. JOHNSON, Topeka, Kans. Filed Apr. 2, 1907. Serial No. 366,059.



1. In a signal mechanism for block signal systems, a source of electric current supply, an electro-magnet in circuit therewith, a yieldingly retracted armature for the magnet, a pin movable with the armature and in circuit with the magnet, a local battery, a magnet in circuit therewith, a yieldingly retracted armature therefor, a pin movable with the armature and in circuit with the last-named magnet, a contact electrically connected to the local battery, a pair of contacts electrically connected to the source of electric current supply and to the contacts connected to the local battery and adapted when in engagement to complete the circuit through the source of current supply and energize the connected magnet and cause the pin movable with the armature of such magnet to move the pin movable with the armature of the local battery magnet into engagement with the contact connected to the local battery and thus complete a circuit through said local battery magnet.

2. In a signal mechanism for block signal systems, a source of electric current supply, an electro-magnet in circuit therewith, a yieldingly retracted armature for the magnet, a pin movable with the armature and in circuit with the magnet, a local battery, a magnet in circuit therewith, a yieldingly retracted armature therefor, a pin movable with the armature and in circuit with the last-named magnet, a contact electrically connected to the local battery, a pair of contacts electrically connected to the source of current supply and to the contact connected to the local battery and adapted when in engagement to complete the circuit through the source of current sup-

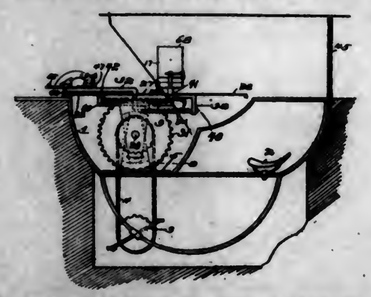
ply and energize the connected magnet and cause the pin movable with the armature of such magnet to move the pin movable with the armature of the local battery magnet into engagement with the contact connected to the local battery, in combination with a second local battery, a pair of conductors connected to opposite ends of the same, a signal mechanism on one of said conductors and a pair of contacts connected to the ends of said conductors, one of said contacts being moved into engagement with the other by the armature of the magnet of the first-named local circuit when the latter is completed.

3. In a signal mechanism for block signal systems, a source of electric current supply, an electro-magnet in circuit therewith, a yieldingly retracted armature for the magnet, a pin movable with the armature and in circuit with the magnet, a contact in circuit with the source of current supply and the magnet in circuit therewith, a local battery, a magnet in circuit therewith, a yieldingly retracted armature therefor, a pin in circuit with the last-named magnet and movable with the armature therefor, a contact in permanent circuit with the battery and in contact with the first-named contact, a pair of contacts electrically connected to the source of current supply and to the contact in permanent circuit with the local battery and adapted when in engagement to complete the circuit from said source of current supply and energize its connected magnet to cause the pin movable with its armature to move the pin movable with the armature of the local magnet into engagement with the contact in permanent circuit with said local battery and thus complete a circuit through said local magnet and also move said last-named contact out of engagement with said first-named contact, and a bridge wire establishing electrical connection between the contact in permanent circuit with the local battery and the first-named pin when the armature movable with the latter is attracted.

4. In a signal mechanism for block signal systems, a source of electric current supply, an electro-magnet in circuit therewith, a yieldingly retracted armature for the magnet, a pin movable with the armature and in circuit with the magnet, a contact movable with and insulated from said pin and in circuit with the source of current supply, a second contact in circuit with the source of current supply and also in circuit with said magnet, a local battery, a magnet in circuit therewith, a yieldingly retracted armature therefor, a pin in circuit with the last-named magnet and movable with the armature therefor, a third contact in circuit with the battery, and in contact with said second contact, a pair of contacts electrically connected to the source of current supply and to the contact in permanent circuit with the local battery and adapted when in engagement to complete the circuit from said source of electric current supply and energize the connected or first-named magnet to cause the pin movable with its armature to move the pin movable with the armature of the local magnet into engagement with the contact in permanent circuit with the local battery and thus complete a circuit through said local battery magnet and also cause said last-named contact to move out of engagement with said second contact, a secondary magnet in circuit with the contact movable with and insulated from the pin movable with the armature of the first-named magnet and adapted to be energized by the second completion of the circuit from said source of current supply—viz. by the reëngagement of said "pair of contacts",—an armature to be attracted by the energized secondary magnet to move the said third contact out of engagement with the pin in circuit with the local battery magnet and thus break the local circuit, a signal battery, a signal in circuit therewith, contacts connected to opposite poles of said battery and means, actuated by the movement of the armature of the local battery toward its magnet to cause said last-named contacts to engage and complete the signal circuit and to separate said contacts and thus break the signal circuit when the local circuit is broken by the energization of the secondary magnet.

[Claims 6 to 8 not printed in the Gazette.]

880,219. PIGEON-TRAP. THOMAS W. KAY, Scranton, Pa. Filed Oct. 19, 1906. Serial No. 339,711.



1. A traget trap comprising a primary frame, an auxiliary frame mounted in said primary frame, a rotating plate mounted on said auxiliary frame, a pivotally mounted frame partially inclosing said plate and holding same in position, means for rotating said plate, a rotating arm passing through said plate and adapted to be partially rotated by said plate, a spring for continuing the rotation of said plate at an accelerated speed independent of said plate, and means for changing the tension of said spring.

2. A device of the character described, comprising a rotating arm, means for supporting said arm, means for partially rotating said arm, a spring for completing the rotation of said arm at an accelerated speed, a framework partially surrounding said arm rotating means and movably supported thereby, said frame and said spring being connected, and means permitting the variation of the position of said frame and said spring whereby the angle of the discharge of a target from said arm will be varied.

3. A device of the character described comprising a rotating target throwing arm, means for supporting the same in position, means for partially rotating said arm, a spring for completing said rotation at an accelerated speed, means for varying the tension of said spring, and an adjustable pivotally mounted frame inclosing the arm-rotating frame and holding the latter in position, and formed with a spring supporting arm for holding said frame in correct position.

4. A device of the character described, comprising a primary frame, an auxiliary frame, said auxiliary frame comprising a stationary support and a pivotally mounted support secured to said stationary support, a plate mounted on said pivotally mounted support having notches formed therein on the periphery thereof, a target throwing arm passing through said plate, means for adjusting the angle at which said target throwing arm is adapted to throw the target, and means carried by said adjusting means for engaging the notches in said plate.

5. A device of the character described, comprising a primary frame, an auxiliary frame mounted therein, said auxiliary frame comprising a base, supports, and a plate mounted on said supports, said plate having formed therein on one side thereof a plurality of notches means for engaging the notches and holding the plate in position, a target throwing arm mounted in said auxiliary frame, a rotating member mounted on said plate for partially rotating said arm, means mounted between said rotating member and said plate for preventing said rotating member from revolving backward, and means for completing the rotation of said arm at an accelerated speed.

[Claims 6 to 11 not printed in the Gazette.]

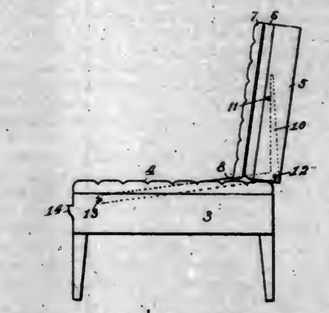
880,220. COMBINATION-UNDERGARMENT. MINNIE B. KEGG, Toledo, Ohio. Filed June 19, 1907. Serial No. 379,762.



In combination, in an undergarment, like major waist portions joined in a center back seam and extending forward to partially cover the busts, said portions being provided with extensions which join with seams to form arm holes and being cut on a bias under such holes, and each having its forward edge cut in an ogee curve to form a bust line, a bust-supporter piece joined to the curved edge of each waist portion and adapted to be detachably joined to the other bust piece, a front corset-cover piece joined to each waist portion at the rear of its curved forward edge and adapted to detachably join with the other front piece to form a loose corset-cover front, and drawers attached to the waist-line of the waist portions and front pieces and being cut full at the bottom to have the appearance of a skirt, each leg preferably comprising a single piece which is joined to the other leg along central front and back seams respectively, said two seams coinciding at a point to form the separation of the leg holes, substantially as described.

880,221. DAVENPORT. CHARLES J. KINDEL, St. Louis, Mo. Filed Mar. 29, 1906. Serial No. 308,749.

1. In a davenport, wherein the back is adapted to be brought forward into horizontal position in front of the seat, the combination with said back of a bed pad hinged to the upper edge thereof and hanging in front of the same and adapted to cover the seat when the back is placed in said horizontal position.



2. In a davenport, wherein the back is adapted to be brought forward into horizontal position in front of the seat, the combination with said back of a bed pad hinged to the front side upper edge of the back and to the seat and adapted to be displayed when the back is placed in said horizontal position.

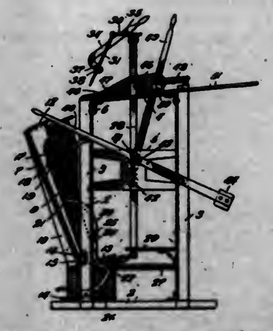
3. In a folding bed, the combination with a main portion and a folding portion, of a pad on said main portion, a second pad on said folding portion, and a third pad secured to one edge of said second-named pad and to a point intermediate of the edges of said first pad.

4. In a davenport, wherein the back is adapted to be brought forward into horizontal position in front of the seat, the combination with said back of a bed-surfaced cushion on the face of the back, a pad hinged to said cushion at its upper edge and having a bed surface on its inner side and a cushion surface on its outer side whereby, when the back is placed in said horizontal position, the cushion surface will lie upon the seat and said two bed surfaces will form a continuous bed surface for the davenport bed.

5. In a davenport, the combination with the seat, of a back, links at either end of the davenport connecting the back to the seat and adapted to direct it into horizontal position in front of the seat, and a pad hinged to the upper edge of the back and having a bed surface on its inner side and a cushion surface on its outer side whereby, when the back is placed in said horizontal position, the bed surface will be displayed over the seat.

[Claims 6 and 7 not printed in the Gazette.]

880,222. OYSTER-SHUCKING APPARATUS. WILLIAM KLINGE, Washington, D. C., assignor of one-half to James McManus, Washington, D. C. Filed Nov. 23, 1907. Serial No. 403,474.



1. An oyster shucking apparatus comprising a frame, oyster clamping means carried thereby, means for severing the shell sections at the joint, and means for stripping away one of said shell sections.

2. An oyster shucking apparatus comprising a frame, oyster clamping means carried thereby, an adjustable knife for severing the shell sections of the oyster at the joint, operating means for said knife, a device operative to engage and strip away one of the shell sections, and means for operating the same.

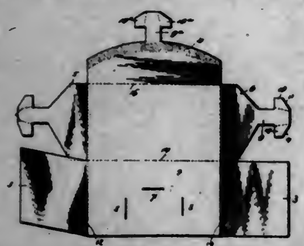
3. An oyster shucking apparatus comprising a frame, oyster clamping means carried thereby, a splitting knife for severing the shell sections of the oyster at the hinge joint, means for operating said knife, a severing knife for engaging and stripping away one of the shell sections, and means for operating said stripping knife.

4. An oyster shucking apparatus comprising a frame, oyster clamping means carried thereby adapted to hold the oyster for the exposure of the hinge joint thereof, a knife operative to sever said joint and separate the shell sections at the butt, a second knife operative to enter between the separated portions of the shell and strip one shell section away from the oyster, and means for operating the respective knives.

5. An oyster shucking apparatus comprising a frame, means for holding an oyster to be shucked, means for splitting the hinge joint of the shell, and means for removing one of the shell sections.

[Claims 6 to 12 not printed in the Gazette.]

880,223. ENVELOP. JACOB KUHN, Pittsburg, Pa., assignor of one-fourth to John N. Lippert, Pittsburg, Pa. Filed Mar. 30, 1906. Serial No. 308,958.



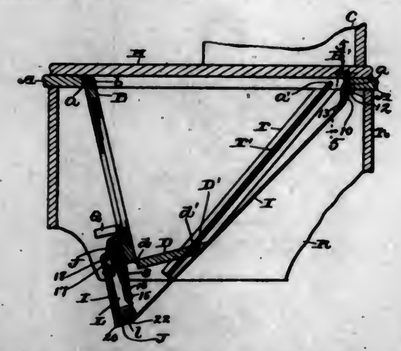
1. A foldable envelop having its side flaps and top flap each provided with a securing tongue, and having its bottom flap provided with slits to receive the tongues, the tongues and slits for the side flaps being positioned relatively to the tongue and slit of the top flap in a manner whereby the folding of the top flap to its proper folded position will carry said flap over the slits of the side flaps to conceal the tongues and their slits of said side flaps, the bottom flap having end flaps foldable to provide an inner protecting element for the tongues of the side and top flaps when said tongues are positioned within their respective slits.

2. A foldable envelop having a body-portion provided with flaps at its top, bottom and opposing sides, the top and sides each having an integral tongue, the bottom flap having two parallel slits and a slit spaced therefrom and extending at right angles therewith, the parallel slits being located adjacent the free edge of said flap, said bottom, side and top flaps being foldable upon the body portion with the bottom flap adjacent the body-portion, the side-flap tongues entering said parallel slits, the top flap being of a size to be folded over the slits for the side-flap tongues to conceal said tongues and their slits, the top-flap tongue being placed within the single slit, the bottom flap having end flaps foldable to provide an inner protecting element for the tongues of the side and top flaps when said tongues are positioned within their respective slits.

3. A foldable envelop having a body-portion provided with flaps at its top, bottom and opposing sides, the top and sides each having an integral tongue, the bottom flap having side flaps and also having its main portion provided with two parallel slits and a slit spaced therefrom and extending at right angles therewith, the parallel slits being located adjacent the free edge of said flap, the side flaps of the bottom flap being foldable thereon, and the bottom, with its folded side flaps, the side flaps and the top flap being foldable upon the body portion, the side-flap tongues entering said parallel slits, the top flap being of a size to be folded over the slits for the side-flap tongues to conceal said top-flap tongues and their slits, the tongue being placed within the single slit, the end flaps of the bottom flaps being foldable to provide an inner protecting element for the tongues of the side and top flaps when said tongues are positioned within their respective slits.

4. A blank for foldable envelops formed with a body-portion, top, bottom and side flaps on the edges of the body-portion, said side and top flaps each having a projecting tongue, the side flaps and tongues being of a combined length less than the length of the body-portion, parallel slits extending crosswise of the bottom flap, said bottom flap also having a slit extending lengthwise thereof and spaced from said parallel slits and located between said slits and the line of folding of the bottom flap, and end flaps formed on the ends of the bottom flap, the end flaps of the bottom flap, during the folding operation of the envelop, being foldable to provide an inner protecting element for the tongue of the side and top flaps when said tongues are positioned within their respective slits.

880,224. SEWING-MACHINE TABLE OR CABINET. THEODOR KUNDTZ, Lakewood, Ohio. Filed Sept. 27, 1905. Serial No. 280,291.



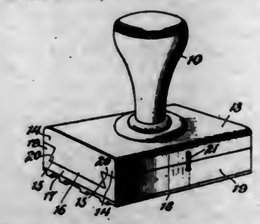
1. In a sewing-machine table or cabinet, the combination with the table-top having an opening extending vertically therethrough, the platform pivotally supported from the table-top and arranged to swing in a vertical plane and instrumental in closing the said opening in its upwardly swung position, and a leaf adapted to cover the said opening and hinged to the table-top, of a bracket arranged at the under side of and rigid with the platform; an arm pivotally attached to the said bracket and arranged with its axis parallel with the axis of the platform, said arm projecting downwardly when the platform is in its opening-closing position; a guide-sheave supported from the bracket; a spring acting to retain the said arm in position alongside of the bracket; means for limiting the swinging of the arm out of the said position, and an operative connection between the arm and the cover-forming leaf, said connection comprising a strap extending in under and engaging the aforesaid sheave in the depending position of the platform.

2. In a sewing-machine table or cabinet, the combination, with the table-top having an opening therethrough, a platform pivotally supported from the table-top and arranged to swing in a vertical plane and instrumental in closing the said opening in its upwardly swung position, and a hinged leaf adapted to cover the said opening, of an arm arranged at the under side and transversely of and pivotally supported from the platform, said arm being arranged to project downwardly from the platform when the platform is in its opening-closing position; a guide-sheave arranged at the under side of and supported from the platform, with its axis coincident with the axis of the arm; means acting to retain the arm swung toward the platform; means for limiting the swinging of the arm away from the platform, and an operative connection between the arm and the cover-forming leaf, and connection comprising a strap leading in under and engaging the aforesaid sheave in the depending position of the platform.

3. In a sewing machine table or cabinet, the combination, with the table-top having an opening extending vertically therethrough, the platform pivotally supported from the table-top and arranged to swing in a vertical plane and instrumental in closing the said opening in its upwardly swung position, and a leaf adapted to cover the said opening and hinged to the table-top, of an arm arranged at the under side of and pivotally supported from the platform, with the axis of the arm parallel with the axis of the platform, said arm being arranged to project downwardly from the platform when the platform is in its opening-closing position; a guide-sheave arranged at the under side of and supported from the platform; a spring acting to retain the arm toward the platform; means for limiting the arm away from the platform, and an operative connection between the arm and the cover-forming leaf, said connection comprising a strap leading in under and engaging the aforesaid sheave in the depending position of the platform.

4. In a sewing-machine table or cabinet, the combination, with the table-top having an opening therethrough; a platform pivotally supported from the table-top and arranged to swing in a vertical plane and instrumental in closing the said opening in its upwardly swung position, and a hinged leaf adapted to cover the said opening, of an arm arranged at the under side and transversely of and pivotally supported from the platform, said arm being arranged to project downwardly from the platform when the platform is in its opening-closing position; a spring acting to retain the arm swung toward the platform; means for limiting the swinging of the arm away from the platform, and an operative connection between the arm and the cover-forming leaf, said connection comprising a suitably guided strap.

880,225. HAND-STAMP. RICHARD L. LAMB and EUGENE M. TILDEN, Washington, D. C. Filed June 4, 1907. Serial No. 377,257.



1. A hand stamp comprising a base or carrier, a handle detachably connected with said base or carrier and a resilient member provided with a printing surface and formed with offset portions releasably sprung into engagement with the lower portion of said carrier.

2. A hand stamp comprising a base or carrier provided with a reduced portion, a handle detachably connected with said base or carrier and a resilient member provided with a printing surface and formed with offset flanges releasably sprung over the edges of said reduced portion.

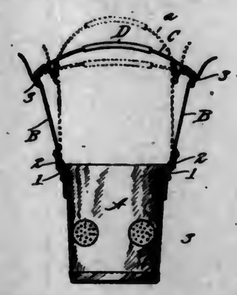
3. A hand stamp comprising a base or carrier, a handle detachably connected with said base or carrier and a resilient member provided with a printing surface and releasably secured to and held by frictional contact to said carrier.

4. A hand stamp comprising a base or carrier provided with a reduced portion having inclined edges, and a resilient member provided with a printing surface, said member being releasably sprung over said inclined edges.

5. A hand stamp comprising a base or carrier provided with a reduced portion having outwardly flared edges, and a resilient member provided with a printing surface, said member being provided with offset flanges sprung over said flared edges.

[Claims 6 to 19 not printed in the Gazette.]

880,226. FEED-BAG. GEORGE W. LESTER, Chicago, Ill. Filed Nov. 4, 1907. Serial No. 400,683.



1. The combination of a bag, a resilient member arranged to rest on the top of a horse's head and forming a supporting and raising means for the bag, and connections between the member and bag.

2. The combination of a bag, flexible elements attached thereto, and a spring adapted to extend over the head of a horse and connected with the elements for gradually raising the bag as the feed is consumed.

3. The combination of a feed bag, a spring forming the sole support for suspending the bag on the horse's head and of such resiliency as to gradually raise the bag as the feed is consumed, and means for adjustably connecting the bag with the spring.

4. The combination of a feed bag, a spring forming the sole support for suspending the bag on the horse's head and of such resiliency as to gradually raise the bag as the feed is consumed, means for adjustably connecting the bag with the spring, and a cushion on the spring for preventing the latter from injuring the horse's head.

5. The combination of a feed bag, side straps connected therewith, a flat strip of spring metal for engaging the top of a horse's head to support the bag in position and yieldable under the combined weight of the bag and feed therein, and buckles secured to the ends of the spring for connection with the straps.

880,227. CUTTER OF ROCK-CUTTING APPARATUS. FRED LOBNITZ, Renfrew, Scotland. Filed June 11, 1907. Serial No. 378,338.

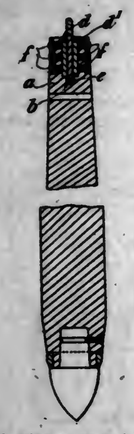
1. A metal cutter having a hole in its upper end, movable grippers seated in said hole and having recesses in the back, and two sets of screws horizontally arranged in the cutter and adapted to be seated in said recesses, said screws forming the sole means of connection between the cutter and said grippers.

2. A metal cutter having a hole in its upper end, movable grippers seated in the hole and having recesses in the back thereof, laterally extending ridges on the face of said grippers, and screws engaging said cutter and seated in said recesses for causing said grippers to bite the rope.

3. A metal cutter having a hole in its upper end, movable grippers seated in said hole, laterally extending ridges on the face of said cutter arranged in staggered order with respect to each other, and screws adapted to actuate said grippers to cause the same to grip the rope.

4. A metal cutter having a hole in its upper end, mov-

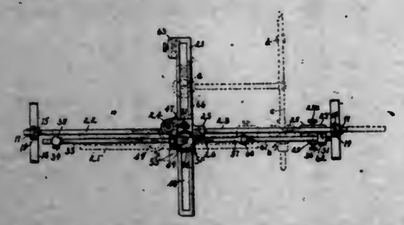
able grippers seated in said hole and having recesses in the back thereof, laterally extending ridges on the face of said grippers and arranged in staggered order with respect to each other, and two sets of horizontally arranged screws engaging with the cutter and adapted to be seated in said recesses for controlling said grippers.



5. A metal cutter having a central hole at its upper end and two enlargements one at each side of the hole, grippers corrugated on the face and recessed on the back, and two sets of screws arranged horizontally in the cutter their outer ends being in countersunk holes or recesses in the cutter.

[Claim 6 not printed in the Gazette.]

880,228. ELLIPSOGRAPH. HENRY LOOYER, Chicago, Ill. Filed June 14, 1907. Serial No. 378,953.



1. An apparatus for the purpose specified, including a pivoted slideway, an operating member mounted in said slide-way, a slide adapted to be reciprocated in a right line, a tracing bar attached to said slide and adapted to be adjusted circumferentially, and operative means connecting the slide with said member.

2. An apparatus for the purpose specified including supports, a sliding member adapted to be reciprocated in a right line, a tracing bar pivotally attached to the said sliding member, an operating member, means for sliding said operating member upon its support and means for simultaneously reciprocating said sliding member and rotating said tracing bar upon its pivot.

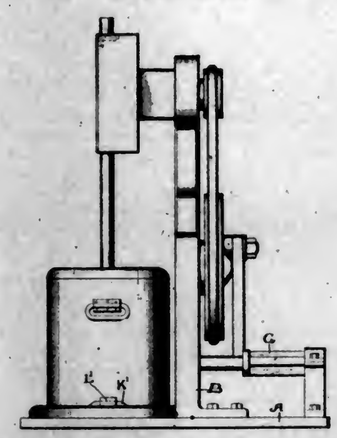
3. An apparatus for the purpose specified, including adjustable standards, means connecting the standards, a slidable member adapted to be reciprocated in a right line, a tracing member pivotally connected with said slidable member, an operating member mounted upon a slide, means for adjusting the operating member on said slide, said operating member being adapted to simultaneously reciprocate said sliding member and rotate the said tracing bar upon its center.

4. An apparatus for the purpose specified, including adjustable standards, a plurality of bars connecting the standards, a slide adapted to reciprocate upon one of said bars, an operating member mounted upon a pivoted slide frame means for adjusting said slide frame upon its pivot, means for adjusting said operating member upon its slide-frame, operative connection between said member and said slide, and a tracing bar pivotally connected with said slide and adapted to be rotated upon its pivot synchronously with the reciprocation of said slide.

5. An apparatus for the purpose specified, including adjustable standards, a plurality of adjustable bars connecting the standards, a slide adapted to reciprocate upon one of said bars, an operating member adapted to move said slide longitudinally, means for fixing said slide in selected positions upon its way, a tracing bar pivotally connected with the slide and adapted to be rotated upon its pivot synchronously with the movement of said slide, and means for adjusting said tracing bar circumferentially about its pivot.

[Claims 6 to 16 not printed in the Gazette.]

880,229. COMBINED HAND AND FOOT MOTOR FOR CHURNS. DANIEL P. MALONE, Rockwood, Ala. Filed Sept. 17, 1907. Serial No. 393,369.



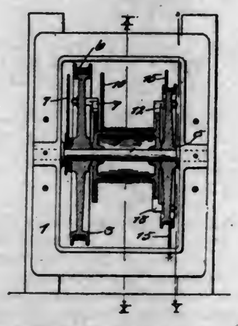
1. In a combined hand and foot motor for churns, the combination of a base, a standard rising therefrom, three horizontal shafts carried by said standard, a foot lever carried by one of said shafts, and a grooved wheel carried by each of the others, a link connecting said foot lever and one of said wheels, and a band joining the said wheels, an eccentric carried by one of said shafts, a dasher rod carrying a cam plate in which said eccentric operates, said cam plate provided with the straight guide edges E', bearings against which said edges slide, and a dasher attached to said rod, substantially as described.

2. In a combined hand and foot motor for churns, the combination of a base, two standards rising therefrom, three horizontal shafts carried by one of said standards, a foot lever carried by one of said shafts and supported by both of said standards, and a grooved wheel carried by each of the others, a link connecting said foot lever and one of said wheels, and a band joining the said wheels, a disk provided with an eccentric having a roller carried by one of said shafts, a dasher rod carrying a cam plate having a heart shaped cam in which said eccentric operates, said cam plate provided with the straight guide edges E', bearings against which said edges slide, and a dasher attached to said rod, substantially as described.

3. The combination of a churn and a combined hand and foot motor provided with a base, two standards rising therefrom, a shaft passing through said standards, a foot lever carried by said shaft, a second shaft carried by one of said standards, a wheel on said second shaft and provided with the pin J, said pin being of such dimensions as to be capable of being used as a handle, a link connecting said lever and pin, a washer and a nut on said pin, a third shaft carried by one of said standards, a second wheel fixed to said third shaft, a band connecting said wheels, a bearing or head F carried by one of said standards through which said third shaft passes, a disk carrying an eccentric pin and roller carried by said third shaft and working in said head F, a dasher rod provided with a plate having a heart shaped cam therein, receiving said pin and roller, said plate having straight guide edges E', and said head F having straight guide edges D' against which said edges E' slide, said head F also having undercut grooves C', a cover W working in said grooves, and a dasher F' on said dasher rod, substantially as described.

4. The combination of the base A, provided with the seat J' and lugs K', the standards B and B², the shaft C, journaled in said standards, the foot lever G, carried by said shaft, the shaft D carried by said standard B, the wheel M carried by said shaft and provided with the groove N and pin J, the washer L, and nut K on said pin, the link H joining said lever G and pin J, the shaft E, the wheel P carried by one end of the same, the band O connecting said wheels M and P, the head F, the connection Q between the same and said standard, the said head provided with the undercut grooves C', having the straight edges D', the disk R, eccentric S and roller T carried by said shaft E, said disk fitting into a recess with which said head F is provided, the dasher rod V provided with the plate A' having the straight edges E' adapted to slide on the said edges D', and the heart shaped cam B' in which said pin and roller is adapted to operate, a dasher F' on said rod, a churn G', and lugs L' on said churn, adapted to engage the lugs K' on said seat, substantially as described.

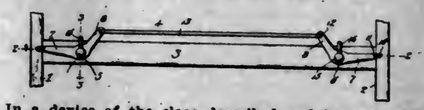
880,230. LIFTING OR HOISTING GEAR FOR LIFTING FORAGE, GRAIN-BAGS, &c. ELIE M. A. MARILLY, Bolandoz, France. Filed Sept. 17, 1906. Serial No. 335,016.



1. In an improved hoisting gear for lifting forage, grainbags and the like, a frame work, a fixed spindle supported by the said frame, two grooved loose pulleys mounted on the same axle; and a loose drum on the same axle and between the said pulleys, one of the said pulleys having a hauling cable attached to it, and the other a braking rope or cable, both pulleys being connected to the drum by dogs and a ratchet, automatic means for rewinding the hauling cable when released, and means for operating said braking rope or cable to prevent rearward movement of the hauling cable when the load has reached the desired height.

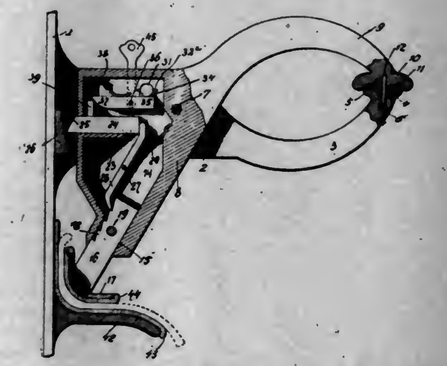
2. In an improved hoisting gear for lifting forage, grain bags and the like, a frame work, a fixed spindle supported by the said frame, two grooved loose pulleys mounten on the same axle, and a loose drum on the said axle and between the said pulleys, means for conveying power to the device, and consisting of a traction cable attached to one of the said pulleys, which is pulled by a convenient power, means for connecting the said hauling pulley to the drum consisting of a dog and a ratchet, means for lifting the weights consisting of a cable wound on the drum and running over rollers, automatic means for rewinding the traction cable consisting of a counterpoise attached to a cord wound on the side of the pulley, means for preventing backward motion of the load when the latter has reached the required height, consisting of a cable wound around the brake pulley and acting as a brake on the said brake pulley which is connected to the drum by dogs and a ratchet; the said cable being controlled by a weight lever, and the said weight lever controlled by a cable.

880,231. WHIFFLETREE. JAMES E. MOAN, Vincennes, Ind. Filed Feb. 19, 1906. Serial No. 301,866.



In a device of the class described and in combination with a cross-bar, of a pair of bell cranks disposed respectively adjacent opposite ends thereof and each having a longitudinal outwardly extending arm and a rearwardly extending arm, the said bell cranks being provided on their inner faces at their elbows with bosses which space the arms from the cross bar, vertical pivoting bolts extending through the cross bar and bell cranks at the elbows of the latter, U-shaped clips having upper and lower arms bearing respectively upon the adjacent outer faces of the bell cranks and cross bar and provided with eyes to receive the pivoting bolts, the vertical portions of the clips being disposed to bear against the rear face of the cross bar, and to be held rigid thereby to form stops for limiting the pivotal movement of the bell cranks, and a rod extending between and pivotally connected with the rearwardly extended arms of the bell cranks.

880,232. HAT, COAT, AND UMBRELLA RACK. JAMES J. MCNEARNEY, Pittsburg, Pa. Filed June 11, 1907. Serial No. 378,458.



1. A hat, coat and umbrella rack, comprising a plate, hook-shaped converging arms carried thereby and terminating in an enlargement having a recess formed therein, a recessed member pivotally mounted between said arms and having an arch shaped end for engaging said enlargement, a depending pin carried by said member and adapted to enter the recess of said enlargement, a bar slidably mounted in said member and having a cap, a spring pressed pawl pivotally mounted in said member for engaging said bar, a locking bolt movably mounted in said member and engaging said pawl, a toothed block carried by said plate and adapted to be engaged by said bolt, a spring pressed tumbler pivotally mounted in said member for holding said locking bolt in a fixed position, a hook-shaped member loosely mounted in said member and

adapted to be engaged by said tumbler, a hat holder carried by said plate beneath said arms, and means for raising said bar.

2. A hat, coat and umbrella rack, comprising a plate, converging arms carried thereby, a member pivotally mounted between said arms and having an arch-shaped end for holding a coat upon said arms, a bar movably mounted in said member, a hook-shaped member loosely mounted in said member, a spring pressed tumbler pivotally mounted in said member for engaging said hook-shaped member, a spring pressed pawl pivotally mounted in said member for engaging said bar, a locking bolt movably mounted in said member for engaging said pawl and provided with means for locking said tumbler, a toothed block carried by said plate with which the locking bolt is adapted to engage, and a hat holder arranged beneath said arms for holding a hat to be engaged by said bar.

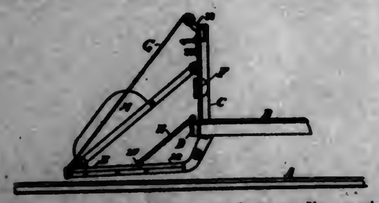
3. A hat, coat and umbrella rack, comprising hook-shaped converging arms, a member pivotally mounted between said arms for holding a coat thereon, a hat holder located beneath said member, a bar movably mounted in said member for holding a hat upon said holder, a hook-shaped member loosely mounted in said pivoted member for holding an umbrella in engagement with one of said arms, a locking bolt movably mounted in said member for holding said member in a fixed position, and means arranged within said member and actuated by said locking bolt for holding said bar and said hook-shaped member in a locked position.

4. A hat, coat and umbrella rack, comprising converging arms, a member pivotally mounted between said arms for holding a coat thereon, a hat holding bar movably mounted in said member, a complemental portion opposing said hat holding member for supporting the hat, an umbrella holding member loosely mounted in said pivoted member, and means arranged in said member for locking said bar, umbrella member and pivoted member in a fixed position.

5. A hat and coat rack comprising a stationary garment supporting member having a laterally-extending portion, said portion having two spaced arms curved in the direction of their length and located on the same plane, the outer end of said arms being connected together to form a single support, said support having its upper face irregularly shaped and corrugated to form a gripping face, and a pivotally-mounted member having an arm curved in the direction of its length in opposition to the curvature of the arms of the laterally extending portion, and also having a gripping face opposing the gripping face of the stationary member, said gripping faces being complemental to each other.

[Claims 6 to 8 not printed in the Gazette.]

880,233. STREET-CAR FENDER. JAMES A. MCQUADE, Lowell, Mass. Filed Dec. 9, 1907. Serial No. 405,717.



1. In a street car fender, downwardly projecting brackets, a bottom frame or gridiron pivoted thereto and comprising at its top longitudinal tracks, a dash board, a spring roller carried at the top thereof, a curtain attached to the roller and to the forward end of the gridiron, pivoted hanger arms between the dash board and gridiron whereby its drop is limited, means for holding and releasing the gridiron when folded against the dash board, and a locking device adapted to automatically lock the gridiron in position when down to prevent it from rising.

2. In a street car fender, downwardly projecting brackets, a bottom frame or gridiron pivoted thereto and comprising at its top longitudinal tracks, a dash board, a spring roller carried at the top thereof, a curtain attached to the roller and to the forward end of the gridiron, pivoted hanger arms between the dash board and gridiron whereby its drop is limited, a trigger adapted to hold and to release the gridiron when folded against the dash board, a main spring attached to the dash board and so placed as to be compressed when the gridiron is held upright by the trigger, and a locking device adapted to automatically lock the gridiron in position when down and to prevent it from rising.

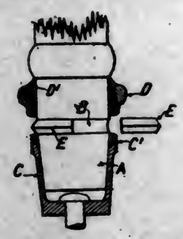
3. In a street car fender, a pivoted gridiron comprising parallel longitudinal tracks provided with notches, pivoted hanger arms therefor, and a lock comprising side arms pivoted to the dash board and connected by locking bar adapted to enter said notches when the fender is dropped.

4. In a street car fender, a pivoted gridiron comprising parallel longitudinal tracks provided with notches, pivoted hanger arms therefor, and a lock comprising side arms pivoted to the dash board and connected by a locking bar adapted to enter said notches when the fender is dropped, and latches adapted to hold said locking bar in the notches.

5. In a locking device for street car fenders, a pivoted bottom frame comprising parallel longitudinal tracks with notches therein, side bars pivoted to the dash board, a locking bar which connects said side bars and is adapted to drop into said notches, and latches at each end of said locking bar adapted to pass under said tracks when the locking bar is in said notches.

[Claims 6 and 7 not printed in the Gazette.]

880,234. CASTER. DAVID C. MCVAIL and SAMUEL MECHAN, Glasgow, Scotland. Filed Aug. 31, 1907. Serial No. 390,853.



A caster fitting, for application to the terminal end of a wooden member formed with a circumferential groove, consisting of a socket having an exteriorly screw threaded head in combination with a plain divided ring and an interiorly screw threaded cap formed with a seating, for the purposes set forth.

880,235. WIRE-BENDING DEVICE. ALBERT H. NELLER, Fairfield, Iowa, assignor to Louden Machinery Company, Fairfield, Iowa, a Corporation of Iowa. Filed Dec. 9, 1907. Serial No. 405,701.



1. In a wire bending device, two members pivoted together and provided with means to receive a straight wire when open, and to hold the ends thereof parallel with the members and to bend the wire by the closing of the members.

2. In a wire bending device, two members pivoted together at one end and provided with means to receive a straight wire when open, and to hold the ends thereof parallel with the members and to bend the wire by the closing of the members.

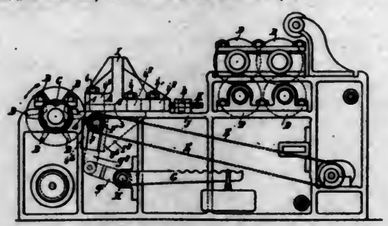
3. In a wire bending device, two members pivoted together and provided with a looping pin and means to hold the wire in contact therewith, whereby the ends of the wire will be held parallel with the members and be bent by the closing of the members.

4. In a wire bending device, two members pivoted together and provided with a looping pin and wings to hold the wire in contact therewith and its ends parallel with the members, whereby it will be bent by the closing of the members.

5. In a wire bending device, two members pivoted together and provided with a looping pin, each of them with a wing to hold the wire in contact therewith, and its ends parallel with the members, whereby it will be bent by the closing of the members.

[Claims 6 to 12 not printed in the Gazette.,]

880,236. APPARATUS FOR CUTTING RAGS, ROPES, AND THE LIKE. JAMES NUTTALL, Bury, England. Filed June 18, 1907. Serial No. 379,558.



1. In an apparatus for cutting rags, ropes and the like, cutters to cut the material in one direction, and cutters to cut the material in another direction, said second set of cutters comprising a fixed knife and a knife rotated past said fixed knife in an upward direction, said fixed knife being arranged in a plane only slightly above the axial plane of the rotary knife, substantially as described.

2. In apparatus for cutting rags, ropes, and the like, the combination witht a fixed knife and a knife rotated past the fixed knife in an upward direction, of a creeper passing over a counterweighted roller beneath the fixed knife, so as to act both as a carrier and feeder of the material to the said knives.

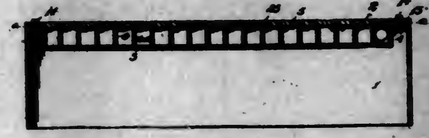
3. In apparatus for cutting rags, ropes and the like, the combination with a fixed knife and a knife rotated past the fixed knife in an upward direction, of a creeper yieldingly supported beneath the fixed knife so as to act both as a carrier and yieldable feeder to the said knives.

4. In apparatus for cutting rags, ropes and the like, cutters to cut the material in one direction, cutters to cut the material at an angle to said first cut and means yieldingly supported to convey and feed the material from the first to the second set of cutters.

5. In apparatus for cutting rags, ropes, and the like, the combination with a rotary knife and a fixed knife secured in place by means symmetrically arranged for reversal of its faces and ends, of adjusting screws and screw rod and nuts, the said rods having hooked ends, engaging with central holes in the ends of the fixed knife; substantially as hereinbefore described.

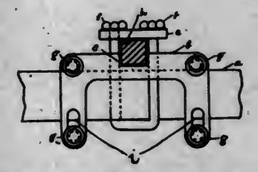
880,237. WATER-HEATER. FREDERICK P. OBENAUER, Detroit, Mich. Filed May 24, 1907. Serial No. 375,495.

1. In a water heater, the combination of two case members, one of said members being provided with hanging walls adapted to confine heated air to the under side of said heater, and a grooved surface inclosed within said walls and with a seating groove extending entirely around said grooved surface, the other of said members being provided with a flange adapted to seat in said seating groove and with plates adapted to engage in said grooved surface, and means for securing the two members together, substantially as described.



2. A heater, having in combination two case members, one of said members being provided with a grooved central portion and with flanges projecting from the edges and with a seating groove extending entirely around the central portion and with hanging walls adapted to confine heated air to the under side thereof, the other of said members being provided with a flange adapted to engage in said seating groove and with baffle plates adapted to extend into and seat into the grooves of said central portion, the said plates being shorter than the distance across said member and arranged to produce a travel of the water many times across and back over the said grooved surface, substantially as described.

880,238. ADJUSTABLE FASTENING DEVICE FOR BEAMS. JOSEPH O'HARA and WILLIAM J. O'HARA, Auckland, New Zealand. Filed June 15, 1907. Serial No. 379,290.



1. A fastening device for use with beams, comprising two notched side irons provided with downwardly projecting legs opposite said notches, with elongated slots in said legs, bolts and nuts for tying the said side irons together, two of said bolts passing through said elongated slots, a cross piece held in said notches, a U-bolt spanning the beam and cross piece, and having a cap piece engaging the top of said cross piece with nuts for holding said cap piece on said U-bolt, substantially as described.

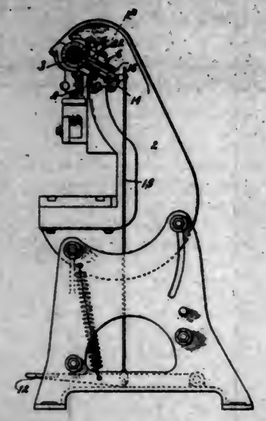
2. A fastening device for beams, comprising two side irons notched in their centers and projecting outward in reverse directions adjacent to said notches and having their ends terminating in two downwardly projecting legs, with perforations in said side irons and bolts passing through said perforations and nuts, adapted to hold the said side irons to the beam, a cross piece fitting in said notches, and a U-bolt set in the angle between said beam and said cross piece, and holding the two together, the said U-bolt being also held within the said side irons, a cap piece mounted on said U-bolt above said cross piece, and nuts holding said cap piece in place, substantially as described.

880,239. POWER-PRESS. HERMAN OSSWALD, New York, N. Y., assignor to The V. & O. Press Company, Glendale, N. Y., a Corporation of New York. Filed June 22, 1905, Serial No. 266,381. Renewed Aug. 23, 1907. Serial No. 389,872.

1. The combination with the shaft and its drive wheel, of means for locking the shaft to and releasing it from the drive wheel, means for operating said locking and releasing means and controlling means for making said operating means automatic or not, at pleasure.

2. The combination with the shaft, the drive wheel, the dog, for locking the shaft to the drive wheel and the switch plate for operating the dog, of a latch for operating the switch plate and means for throwing the latch out of

engagement with the switch plate after the switch plate has moved a predetermined distance.



3. The combination with the shaft, the drive wheel, the dog for locking the shaft to the drive wheel and the switch plate for operating the dog, of a latch for operating the switch plate and a cam for throwing the latch out of engagement with the switch plate intermediate of the limits of its stroke.

4. The combination with the shaft, the drive wheel, the dog for locking the shaft to the drive wheel and the switch plate for operating the dog, of a latch for operating the switch plate and a movable cam for throwing the latch out of engagement with the switch plate intermediate of the limits of its stroke.

5. The combination with the shaft, the drive wheel, the dog for locking the shaft to the drive wheel and the switch plate for operating the dog, of a latch for operating the switch plate and a hinged cam for throwing the latch out of engagement with the switch plate intermediate of the limits of its stroke.

[Claims 6 and 7 not printed in the Gazette.]

880,240. SCREENING DEVICE FOR SPRAY-PUMPS. ALBERT W. OVERHISER, Casco, Mich. Filed July 19, 1907. Serial No. 384,596.



1. The combination with a pump, of a suction and return pipe therefor; a strainer comprising a block having a pair of pipe openings therethrough in which said suction and return pipes are arranged; supporting legs for said block, and a screen secured to said block to form a screening chamber on the under side thereof, said pipe openings of said block being arranged at an angle to each other so that the said return pipe delivers into the screening chamber across the mouth of the suction pipe and at an angle to the bottom of the screening chamber.

2. The combination with a pump, of a suction and return pipe therefor; a strainer comprising a block having a pair of pipe openings therethrough in which said suction and return pipes are arranged; and a screen secured to said block to form a screening chamber on the under side thereof, said pipe openings of said block being arranged at an angle to each other so that the said return pipe delivers into the screening chamber across the mouth of the suction pipe and at an angle to the bottom of the screening chamber.

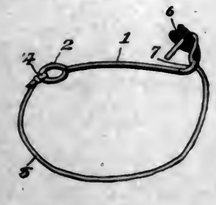
3. The combination with a pump, of a suction and return pipe therefor; a strainer comprising a block having a pair of pipe openings therethrough in which said suction and return pipes are arranged; supporting legs for said block, and a screen secured to said block to form a screening chamber on the under side thereof, said pipe openings of said block being arranged at an angle to each other so that the said return pipe delivers into the screening chamber across the mouth of the suction pipe.

4. The combination with a pump, of a suction and return pipe therefor; a strainer comprising a block having a pair of pipe openings therethrough in which said suction and return pipes are arranged; and a screen secured to said block to form a screening chamber on the under side thereof, said pipe openings of said block being arranged at an angle to each other so that the said return pipe delivers into the screening chamber across the mouth of the suction pipe.

5. The combination with a pump, of a suction and return pipe therefor; a strainer comprising a block having a pair of pipe openings therethrough in which said suction and return pipes are arranged; supporting legs for said block, and a screen secured to said block to form a screening chamber.

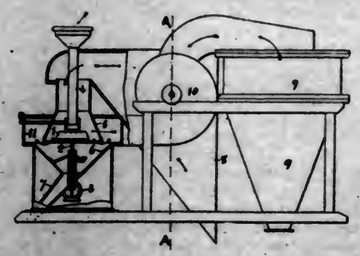
[Claims 6 to 9 not printed in the Gazette.]

880,241. PACKAGE-TIE. SPENCER PERCIVAL, North Pender Island, British Columbia, Canada. Filed Jan. 9, 1907. Serial No. 351,520.



The herein described package tie made from a single piece of wire and consisting of a shank portion having a cord-securing eye at one end, and the opposite end being flattened and provided with a V-shaped notch in the outer edge of said flattened portion, a neck between said flattened portion and the shank, said neck being rounded to provide a smooth bearing surface for adjusting the cord.

880,242. MACHINE FOR SEPARATING DUST OR OTHER PARTICLES FROM GRANULAR SUBSTANCES. CHARLES J. ROBINSON and JOHN BACKHOUSE, Rochdale, England, assignors to Thomas Robinson & Son Limited, a Joint Stock Company of Great Britain. Filed Mar. 27, 1907. Serial No. 364,847.



1. A separator comprising a hood, a rotary disk therein, means for feeding the material to said disk, an air tight chamber surrounding the lower part of the hood, a depositing chamber, a connection from the hood to the depositing chamber, a fan in said connection and a passage leading from the depositing chamber and entering the chamber surrounding the hood at a tangent for carrying the current of air from the fan to said chamber.

2. A separator comprising a hood, a rotary disk therein, means for feeding the material to said disk, an air tight chamber surrounding the lower part of the hood, a dust collector formed by the lower part of said chamber, a depositing chamber, a connection from the hood to the depositing chamber, a fan in said connection and a passage leading from the depositing chamber and entering the chamber surrounding the hood at a tangent for carrying the current of air from the fan to said chamber.

3. A separator comprising a hood, a rotating disk therein, means for feeding grain to said disk, an air tight chamber surrounding the lower part of said hood, a receiving hopper for the grain forming a downward continuation of the hood, a fan connected with the hood, a depositing chamber connected with the fan, a passage leading from the depositing chamber to the chamber surrounding the hood and entering the said chamber at a tangent and a tube having one end in communication with the latter chamber and its other end located under the disk.

880,243. VAT-SUPPORT. GEORGE S. ROMINGER, Philadelphia, Pa. Filed Oct. 11, 1906. Serial No. 338,518.



1. A vat support consisting of a vertical post, a cap vertically adjustable thereon, and one or more washers interposed between the top of the post and the base of the cap.

2. A vat support consisting of a vertical post, a cap vertically adjustable on said post and having a depending stem which engages the post and is guided thereby, and means interposed between the post and cap for supporting the latter when it is elevated.

3. A vat support consisting of a vertical post, a cap vertically adjustable thereon and having a flat top, and means carried by said cap for securing to the same a vat-supporting beam or girder, which crosses the cap.

4. A vat support consisting of a hollow post closed at the top and open at the bottom, a cap vertically adjustable on said post, and having a depending tubular stem surrounding the post, and means interposed between the post and cap for supporting the latter in an elevated position.

5. A vat support consisting of a hollow post closed at the top, a cap vertically adjustable on said post and having a depending tubular stem surrounding the post, and means interposed between the closed top of the post and the base of the cap for supporting the latter in an elevated position.

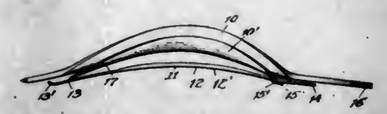
880,244. CURTAIN-POLE. ELIZABETH SAUERBURGER, Pittsburg, Pa. Filed Sept. 27, 1907. Serial No. 394,821.



1. A curtain pole embodying two hinged semi-cylindrical sections, a plurality of longitudinally alining screw pins carried by one of said sections, the other of said sections having a plurality of longitudinally alining recesses formed therein to receive the protruding ends of said pins, resilient strips carried by the lower confronting edges of said sections, caps fitting over the ends of said pole, said caps comprising arms embracing the ends of said poles, and diametrically opposed set screws for engaging the sections of said pole, and an elongated hook carried by one of said sections for supporting draperies thereon.

2. A curtain pole embodying two hinged semi-cylindrical sections, a plurality of longitudinally alining pins carried by one of said sections, the other of said sections having a plurality of longitudinally alining recesses formed therein to receive the protruding ends of said pins, resilient strips carried by the lower confronting edges of said sections, caps fitting over the ends of said pole, said caps comprising arms embracing the ends of said poles, and diametrically opposed set screws for engaging the sections of said pole.

880,245. INSTEP-ARCH SUPPORT. WILLIAM M. SCHOLL, Chicago, Ill. Filed Oct. 21, 1907. Serial No. 398,516.



1. As an article of manufacture, an instep arch supporter for insertion in foot wear, comprising an arch plate longitudinally curved to conform to the longitudinal arch of the instep, a spring plate bowed to less degree than the arch plate, secured to said arch plate at its rear end, and at its front end extending beyond the arch plate and receiving the front edge of the latter in free sliding contact, and a flexible cover piece overlying and secured to the plate structure and shaped for conformity to the rear portions of a shoe.

2. As an article of manufacture, an instep arch supporter for insertion in foot wear, comprising a bowed spring plate, an overlying arch plate, longitudinally curved to conform to the normal longitudinal arch of the instep, and transversely shaped to conform to the inside of the instep arch, and terminating at its outer edge near the middle of the transverse arch of the foot, said arch plate being secured to the spring plate at its rear end and free from and contacting with said spring plate for sliding movement at its front end, and a flexible cover piece secured to the plates, and shaped to conform to the heel and shank of a shoe.

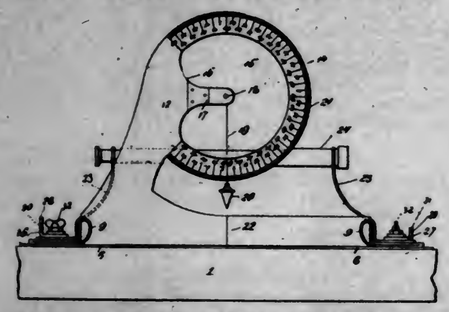
3. In an instep arch supporter, for insertion in and removal from foot-wear, the combination of an arched plate longitudinally curved to conform to the arch of the instep, and a spring plate, bowed to less degree than the arch plate, and flexibly connected to the arch plate at its rear end, and at its front end extending beyond the arch plate and receiving the front edge of the latter in free sliding relation thereto, whereby the arch plate may be straightened to an extent upon the spring plate by pressure applied to said arch, while the spring plate receives the pressure of the arch plate at its forward end at a point elevated by the bowing of the spring plate.

4. As an article of manufacture, an instep arch supporter for insertion in foot-wear, comprising a leather cover piece shaped to fit the shank and heel of a shoe, a longitudinally curved arch plate positioned by the cover piece and shaped to conform to the inner side of an instep arch, and a bowed spring plate, attached to said arch plate at one end only, and receiving the other end in sliding relation thereto, said spring plate being shaped to afford a relatively wide bearing edge at its front end, and a bearing about centrally of the heel at its rear end.

5. In an instep arch supporter, the combination of a spring plate, an arch plate overlying said spring plate and bearing thereon, and a cover piece overlying said arch plate, a rivet joining the cover piece, arch plate and spring

plate near the heel, a second rivet connecting the spring and arch plates only near the heel, and a third rivet connecting the arch plate and cover piece only near their front end, whereby the cover piece is secured to the arch plate near both ends of the latter, and the arch plate is secured to the spring plate near its rear end only and free for sliding movement on the spring plate at its front end.

880,246. PLUMB AND LEVEL. JACOB SECHLER, Economy, Pa. Filed Aug. 10, 1907. Serial No. 387,952.



1. A combined level and plumb embodying a bar, nuts embedded therein, escutcheon plates mounted over said nuts, plumb fasteners mounted upon said plates and having slotted uprights, a plumb frame carried by said uprights, said frame comprising a circular head having a central opening, an arm projecting into said opening, a plumb bob suspended from said arm, Y's arranged upon said plumb fasteners, a telescope casing carried by said Y's, and thumb screws for holding all of said attachments upon said bar, said screws passing through said attachments and engaging in said nuts.
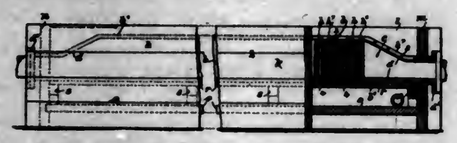
2. An instrument of the type described, embodying a bar, nuts embedded therein, slotted plumb fasteners arranged above said nuts, a plumb frame carried by said fasteners, said frame comprising a circular head, a plumb bob suspended centrally of said head, Y's arranged upon said plumb fasteners, a telescope casing carried by said Y's, sight attachments arranged above said Y's, and thumb screws engaging in said nuts for holding all of said attachments upon said bar.

3. An instrument of the type described embodying a bar, plumb fasteners arranged thereon and having slotted uprights, a plumb frame held in said slotted uprights of the fasteners, said frame comprising a graduated head, an arm projecting into the head, a plumb bob suspended from said arm centrally of the head, Y's arranged above said fasteners, a telescope carried by said Y's, and securing means common to both the Y's and the fasteners for securing the same to said bar.

4. An instrument of the type described embodying a bar, plumb fasteners mounted thereon and having slotted uprights, a plumb frame seated in said slotted uprights and having a graduated circular head, an arm projecting into the head, a telescope supported at one side of said plumb frame, sights arranged upon said bar, and securing means common to the fasteners, the telescope, and the sights for securing the same to said bar.

880,247. COOLER FOR RECLAIMED LIQUOR AND GAS IN PAPER-PULP PROCESSES. GEORGE F. SHEVLIN, Saratoga Springs, N. Y., and FERDINAND D. SMALL, Woodland, Me.; said Shevlin assignor to Baker & Shevlin Company, Saratoga Springs, N. Y., a Corporation of New York. Filed May 13, 1907. Serial No. 373,472.

1. The combination with a suitable longitudinal tank for cooling water, of an open-ended vessel having a flat bottom, an auxiliary bottom to the tank for supporting the vessel, transverse pipes formed through the vessel, there being openings through the auxiliary bottom in line with the openings of the transverse pipes so that the circulating water fills the channels of the pipes as well as the tank.



2. The combination with a suitable longitudinal tank for cooling water, of a vessel located within the tank and having a flat bottom with open ends on the same level as the bottom, vertically disposed transverse pipes formed through the vessel, contracted necks to the vessel, a support in the tank for the vessel, and inlet and exit devices for the water whereby the vessel is submerged and the channels of which pipes fill with water.

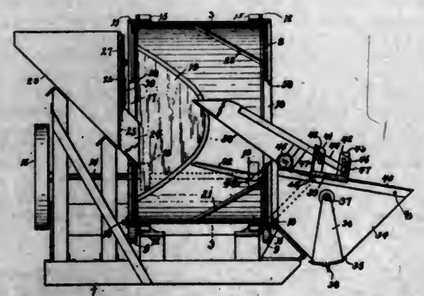
3. A device for cooling re-claimed liquor and gas in paper pulp processes, comprising a vessel formed of two longitudinal flanged sections of suitable acid resisting material, means for connecting said sections together at their flanges and for supporting the vessel, and pipes cast with the sections and disposed vertically so that the channels of the pipes open above and below the vessel.

4. A device for cooling re-claimed liquor and gas in paper pulp processes, comprising a vessel formed of two longitudinal flanged sections of suitable acid resisting material, means for connecting said sections together at their flanges and for supporting the vessel, a flat bottom to said vessel through-out its entire length, contracted neck sections along which said flanges extend and end flanges to said necks and a flat bottom to the vessel providing for draining off all the liquor therein.

5. A device for cooling re-claimed liquor and gas in paper pulp processes, comprising a vessel formed of two longitudinal flanged sections of suitable acid resisting material, means for connecting said sections together at their flanges and for supporting the vessel, pipes cast with the sections and disposed vertically so that the channels of the pipes open above and below the vessel, a suitable tank for receiving said vessel and for supporting the same, and inlet and exit devices for cooling water, so constructed that the vessel is submerged in the water of the tank.

[Claims 6 to 15 not printed in the Gazette.]

880,248. MIXING-MACHINE. THOMAS L. SMITH, Milwaukee, Wis., assignor to The T. L. Smith Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Dec. 23, 1904. Serial No. 238,084.



1. In a mixing machine, in combination with a mixing receptacle having head pieces and a connecting rim and also having a discharge opening and an interior wall independent of and extending from the head piece to the rim in the direction of the length of the axis of rotation but at an angle thereto, said wall having its outer edge joined to one of the head pieces of the receptacle, and its inwardly extending edge joined to the rim and extending to an intermediate point of said rim, whereby the space outside or back of the wall is completely cut off from the interior of the receptacle, of means for charging the receptacle, and means for rotating the receptacle.

2. In a mixing machine, in combination with a mixing receptacle having head pieces and a connecting rim and also having a discharge opening and interior walls independent of and extending, respectively, from the opposite head pieces to the rim in the direction of the length of the axis of rotation but at an angle thereto, each wall having its outer edge joined to one of the head pieces of the receptacle, and its inwardly extending edge joined to the rim and extending to an intermediate point of said rim, whereby the spaces outside or back of the walls are completely cut off from the interior of the receptacle, of means for charging the receptacle, and means for rotating the receptacle.

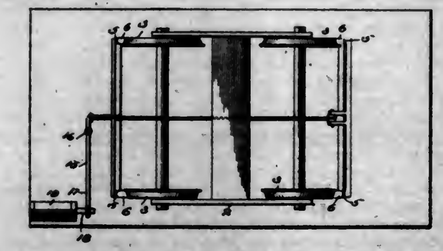
3. In a mixing machine, in combination with a mixing receptacle having head pieces and a connecting rim and also having a discharge opening and interior walls independent of and extending from one of the head pieces to the rim in the direction of the length of the axis of rotation but at an angle thereto, said walls arranged in pairs extending from the head to the rim in divergent lines, and each wall having its outer edge joined to the head piece of the receptacle and its inwardly extending edge joined to the rim and extending to an intermediate point of said rim, whereby the space outside or back of the wall is completely cut off from the interior of the receptacle, of means for charging the receptacle, and means for rotating the receptacle.

4. In a mixing machine, in combination with a mixing receptacle having head pieces and a connecting rim and also having a discharge opening and interior walls independent of and extending from the head piece to the rim in the direction of the length of the axis of rotation but at an angle thereto, said walls facing each other and extending from the head to the rim in divergent lines, and each wall having its outer edge joined to the head piece of the receptacle, and its inwardly extending edge joined to the rim and extending to an intermediate point of said rim, whereby the space outside or back of the wall is completely cut off from the interior of the receptacle, of means for charging the receptacle, and means for rotating the receptacle.

5. In a mixing machine, in combination with a mixing receptacle having head pieces and a connecting rim and also having a discharge opening and a plurality of interior walls extending from each head piece to the rim in the direction of the length of the axis of rotation but at an angle thereto, said walls extending from each head piece being arranged in pairs, one pair of said walls extending from one head piece alternating in position to a pair of walls extending from the opposite head piece, of means for charging the receptacle, and means for rotating the receptacle.

[Claims 6 to 12 not printed in the Gazette.]

880,249. ELECTROMAGNETIC BRAKE. HIRAM SNODGRASS, Oklahoma, Okla. Filed June 1, 1907. Serial No. 376,788.

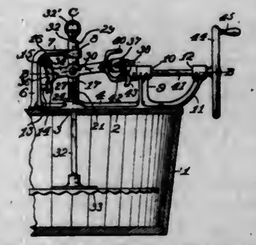


1. A braking mechanism, comprising a plurality of brake-beams, links secured to said beams, brake-shoes carried by said links, a lever carried by one of said brake-beams, means connecting one end of said lever to the other brake-beam, and a rod secured to opposite end of the lever and extending over to and through the beam, upon which is supported the opposite brake-beam, and a spring positioned between the beam and the end of the rod for normally acting upon the beams for applying the brake-shoes.

2. A braking mechanism, comprising a plurality of brake-beams, links secured to said beams, brake-shoes carried by said links, a lever carried by one of said brake-beams, means connecting one end of said lever to the other brake-beams, a rod secured to the opposite end of the lever and extending a predetermined distance beyond the same, a spring positioned between the brake beam and the end of the rod for normally acting upon the beams for applying the brake-shoes, and a solenoid in connection with a plurality of levers so positioned as to compress the spring and thereby release the braking mechanism.

3. A braking mechanism comprising a plurality of brake-beams links secured to said beams, brake-shoes carried by said links, a lever fulcrumed on one of said brake-beams, means connecting one end of said fulcrumed lever to the opposite brake-beam from that which supports said fulcrumed lever, and a rod pivoted to the opposite arm of said fulcrumed lever, said rod carrying at its extremity means for operating the same, by means of which the brakes are normally applied.

880,250. GEARING FOR WASHING-MACHINES. HARRISON L. STALEY, Martinsville, Ind. Filed Aug. 3, 1907. Serial No. 386,912.



1. Dual reciprocating motion gearing including a frame having a guide thereon, a shaft mounted movably in the frame, an oscillator having an arm pivoted to the shaft and having also a guide-bar on one end thereof and movable longitudinally on the guide, and means coöperating with the opposite end of the oscillator for imparting to the oscillator reciprocatory motion in horizontal and vertical directions alternately.

2. Dual reciprocating motion gearing including a frame comprising a standard having a pair of axles projecting horizontally therefrom, rollers mounted on the axles, a shaft journaled in the frame and movable longitudinally, an oscillator having an arm pivoted to the shaft and having also a curved guide-bar on one end thereof movable longitudinally between the rollers in contact therewith, and means coöperating with the opposite end of the arm for moving it vertically and horizontally alternately and in opposite directions.

3. Dual reciprocating motion gearing including a frame comprising a standard having a pair of axles projecting therefrom, grooved rollers movable rotatively on and longitudinally of the axles, one on either axle, a shaft journaled in the frame and movable longitudinally, an oscillator having two arms pivoted to the shaft and having also a curved guide-bar connected to one end of each one of the arms and movable longitudinally thereby in the grooves of the rollers, the rollers being guided on the axles by the guide-bar, and means coöperating with the opposite ends of the arms for movement thereof vertically and horizontally alternately and in opposite directions.

4. Dual reciprocating motion gearing including a frame having a standard provided with a guide, a shaft journaled in the frame and movable longitudinally, an oscillator having an arm pivoted to the shaft and having also a

guide-bar on one end of the arm and movable longitudinally in engagement with the guide, the opposite end of the arm having a relatively long curved guide-bar thereon and an outer guide extending about the guide-bar, pin-teeth on the guide-bar, a drive shaft journaled on the frame and having a guide-pin thereon extending between the long guide-bar and the outer guide in engagement therewith, and a pinion on the shaft engaging the pin-teeth.

5. Dual reciprocating motion gearing including a frame having a guide, a shaft journaled in the frame and movable longitudinally, an oscillator comprising two oppositely-curved arms that are pivoted to the shaft and a curved guide-bar on the ends of the arms and engaging the guide of the frame, the opposite ends of the arms having a relatively long curved guide-bar thereon about which extends an outer guide, the long guide-bar having pin-teeth thereon, and the pin-teeth having a guard-bar connected thereto, a drive shaft on the frame and having a guide-pin in engagement with the long guide-bar and the outer guide, and a pinion on the shaft to engage the pin-teeth.

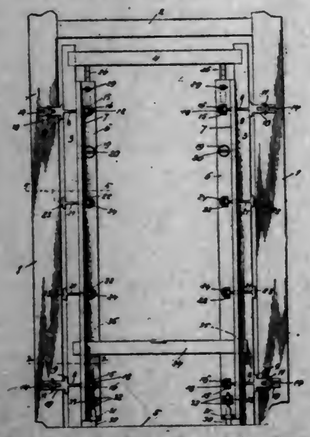
[Claims 6 and 7 not printed in the Gazette.]

880,251. LACING-HOOK. EDWIN B. STIMPSON, New York, N. Y., assignor to Edwin B. Stimpson Company, New York, N. Y., a Corporation of New York. Filed Aug. 30, 1907. Serial No. 390,811.



A lacing hook composed of a single piece of sheet metal and comprising a base plate consisting of two parallel strips having attaching prongs at their opposite ends, a narrow transverse bridge connecting said strips between the pronged ends thereof, and a hook integral with said bridge, the heading of said hook being disposed over the opening between said strips.

880,252. DOOR-JAMB SETTER. ROBERT D. TENNENT, Connellsville, Pa. Filed Oct. 8, 1907. Serial No. 396,413.



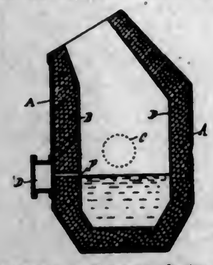
1. In a door jamb setter, the combination with wall joist, and a door jamb, of angle bars clamped to said door jamb, bolts adjustably carried by said angle bars, and adapted to clamp said jamb, said bolts having bifurcated ends, screws for adjustably holding the bifurcated ends of the bolts in engagement with said wall joist, adjustable extensions carried by the upper ends of said angle bars for engaging said jamb, spirit levels carried by said angle bars, adjustable supports carried by the lower ends of said angle bars, and a level supported between said angle bars, substantially as, and for the purpose set forth.

2. In a door jamb setter, the combination with wall joist, and a door jamb, of angle bars clamped to said door jamb, bolts adjustably carried by said angle bars and adapted to clamp said jamb, said bolts having bifurcated ends, screws for adjustably holding the bifurcated ends of the bolts in engagement with said wall joist, adjustable extensions carried by the upper ends of said angle bars for engaging said jamb, spirit levels carried by said angle bars, and adjustable supports carried by the lower ends of said angle bars.

3. In a door jamb setter, the combination with wall joist, and a door jamb, of vertically-disposed angle-irons engaging the door jamb, adjustable gage-bars or extensions carried by the upper ends of said angle-bars, adjustable-supports carried by the lower ends of said angle-bars, means for clamping the angle-bars to the door jamb, and means for clamping the door jamb to the wall joist, comprising bolts adjustably-mounted on the angle-bars and provided with heads to engage the outer faces of the door jambs and having bifurcated outer ends, screws engaging the bifurcated ends of said bolts and engaging in the wall joist, and means on said screws for securing said bifurcated ends of the bolts thereto.

4. In a door jamb setter, the combination with wall joist, and a door jamb, of vertically-disposed angle-bars engaging the door jamb, means for clamping the angle-bars to the door jamb, and means for clamping the door jamb to the wall joist, comprising bolts adjustably-mounted on the angle-bars and provided with heads to engage the outer faces of the door jambs and having bifurcated outer ends, screws engaging the bifurcated ends of said bolts and engaging in the wall joist, and means on said screws for securing said bifurcated ends of the bolts thereto.

880,253. MANUFACTURE OF STEEL BY THE PNEUMATIC PROCESS. ALEXANDRE TROPENAS, Montelimar, France. Filed Jan 29, 1907. Serial No. 354,694.



As an improvement in the manufacture of steel by the pneumatic process, blowing the charge until the appearance of the carbon flame, adding a small percentage of silicon immediately after the appearance of such flame, and continuing the blow until the carbon flame disappears, all substantially as described.

880,254. ADVERTISING DEVICE. EDWARD VAN ANTWERP, Dent, Minn. Filed Mar. 27, 1907. Serial No. 364,819.



1. In a device of the class described, a metallic track, an artificial elephant at each end thereof and having a pivoted trunk, a metallic rolling body on the track, an electromagnet operatively related with the trunk of each elephant to cause the trunk to swing and impart motion to the rolling body, means for passing an electric current to each magnet when the rolling body closes a circuit by touching the track and the trunk of either one of the elephants.

2. In a device of the class described, a metallic track, an artificial elephant at each end thereof and having a pivoted trunk, a metallic rolling body on the track, an electromagnet operatively related with the trunk of each elephant to cause the trunk to swing and impart motion to the rolling body, means for passing an electric current to each magnet when the rolling body closes a circuit by touching the track and the trunk of either one of the elephants, said track being higher in the middle than at the ends.

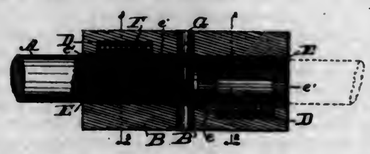
3. In a device of the class described, a metallic track, an artificial elephant at each end thereof and having a pivoted trunk, a metallic rolling body on the track, an electromagnet operatively related with the trunk of each elephant to cause the trunk to swing and impart motion to the rolling body, means for passing an electric current to each magnet when the rolling body closes a circuit by touching the track and the trunk of either one of the elephants, said rolling body being cylindrical, and having flanges to guide it along the track.

4. In a device of the class described, a metallic track, an artificial elephant at each end thereof and having a pivoted trunk, a metallic rolling body on the track, an electromagnet operatively related with the trunk of each elephant to cause the trunk to swing and impart motion to the rolling body, means for passing an electric current to each magnet when the rolling body closes a circuit by touching the track and the trunk of either one of the elephants, said rolling body resembling a cylinder or barrel, an axial shaft journaled in the ends thereof, devices fixed on the ends of the shaft outside the barrel adapted to receive an inscription or the like and a weighted arm on the shaft inside the barrel, to keep the devices in position.

5. An advertising device having a metallic track and a cylindrical or barrel-shaped metallic body adapted to roll on the track, the exhibited end of the body having an annular space and within such space a disk, said disk being revoluble at the center of the annular space and weighted so as to prevent its rolling with the barrel.

[Claims 6 and 7 not printed in the Gazette.]

880,255. SHAFT-COUPLING. THEODORE F. VANDERIFT and WILLIAM JOHNSTON, Shelbyville, Ind. Filed Aug. 1, 1907. Serial No. 386,629.

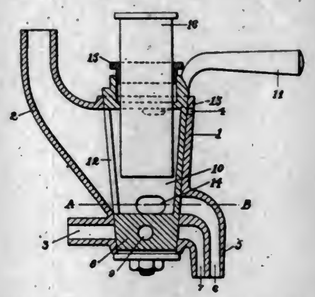


1. In a shaft coupling, a sleeve having a longitudinal bore the diameter thereof being greater than the diameter of the shafts upon which the sleeve is placed and eccentric recesses formed in the sleeve between its ends and on opposite sides of the bore, longitudinally divided bushings having end portions which encircle the shafts, said bushings being cut away at points opposite the eccentric recesses, and clamping rolls maintained within the spaces formed by the eccentric recesses, for the purpose set forth.

2. In a shaft coupling, a sleeve having a longitudinal bore and recesses on opposite sides of the bore and between the ends of the sleeve, bushings which encircle the shafts and are cut away at points opposite the recesses, and a plurality of clamping rolls of different diameters located in each of the eccentric recesses, substantially as shown.

3. In a shaft coupling, a sleeve having a longitudinal bore of greater diameter than the shafts to which the sleeve is to be applied, such sleeve having eccentric recesses formed therein, the recesses being located between the ends of the sleeve and on opposite sides of the bore therethrough, bushings which are cut away opposite the recesses, curved plates maintained in the recesses, clamping rolls between the plates and the shafts, and a disk between the ends of the shafts, substantially as shown and for the purpose set forth.

880,256. STOP AND MEASURING COCK. FRANZ VOCKE, Berlin-Schöneberg, Germany. Filed Sept. 26, 1907. Serial No. 394,752.



1. A measuring cock comprising a casing having inlets 2 and 3 and two outlets, a plug having a chamber therein and means for connecting the chamber with one of the outlets while the other outlet is closed or for simultaneously connecting the two outlets one with the chamber and one with the inlet 3.

2. A measuring cock comprising a casing having two inlets and two outlets, a plug having a chamber therein having an inlet and an outlet opening in its walls and a diametrical passage below the chamber, the outermost portions of the left hand walls of said passage and outlet opening of the chamber being in the same vertical plane and said passage having a diameter half that of the long diameter of the outlet opening of the chamber and a piston movable in the chamber.

3. A measuring cock comprising a casing, an upper inlet pipe, a lower inlet pipe, a nozzle having an upper and a lower outlet passage therein, said lower passage being diametrically opposite the lower pipe, a plug in the casing having a measuring chamber therein, a piston movable in said chamber, said plug having a passage extending through its lower part below the chamber and adapted to connect the lower inlet pipe with the lower outlet passage and the walls of the chamber having an inlet slot and an oblong outlet opening therein, said outlet opening being situated so as to uncover the upper passage in the nozzle before the lower inlet pipe is connected with the lower outlet passage by the passage in the plug.

880,257. SHOCK-ABSORBING DEVICE FOR VEHICLES. LEWIS C. WELCH, Oakland, Me. Filed Aug. 9, 1907. Serial No. 387,886.

1. In a shock absorber for vehicles, the combination of a cylinder, a piston therein, by-passes extending from one side to the other of the piston and designed to vary the resistance to the passage of liquid as the position of the piston changes, and a pneumatic cushioning device associated with the piston for assisting in absorbing the shocks.

2. In a shock absorbing device for vehicles, the combination of a cylinder provided with longitudinally extending grooves of diminishing cross section from one end to the other, a piston in the cylinder adapted to move back and forth in the grooved portion of the cylinder, ports in the piston, a valve arranged to permit a free flow of liquid through the ports when the piston moves in one direction and positively interrupts the flow when the piston moves in the opposite direction, and a pneumatic cushioning device associated with the piston for assisting in absorbing the shocks.

3. In a shock absorbing device for vehicles, the combination of a cylinder provided with longitudinally extending

grooves of diminishing cross section from one end toward the other, a piston in the cylinder adapted to move back and forth in the grooved portion of the cylinder, ports in the piston, a valve arranged to permit a free flow of liquid through the ports when the piston moves in one direction and positively interrupts the flow when the piston moves in the opposite direction, a hollow piston rod communicating with the cylinder, and pneumatic cushioning means in the rod.



4. In a shock absorbing device for vehicles, the combination of a cylinder, a piston therein provided with spaced flanges of different diameters, the flange of larger diameter having a working fit with the cylinder, and ports in the said larger flange, a valve arranged to close the space between the smaller flange and cylinder as the piston moves in one direction, and a plurality of by-passes of different lengths and resistances connecting points on opposite sides of the piston.

5. In a shock absorbing device for vehicles, the combination of a cylinder, a piston therein comprising a pair of spaced flanges of different diameters and arranged in fixed relation, the flange of larger diameter having contact with the cylinder, ports in the larger flange, and an annular valve disposed between the flanges for interrupting the flow of liquid through the ports when the piston moves in one direction, said valve being bodily removable and retained between the flanges and carried back and forth with the piston by the flanges.

[Claims 6 to 9 not printed in the Gazette.]

880,258. DOOR TRACK AND HANGER. JACOB D. WELLIVER and WILLARD G. HARRINGTON, Scranton, Pa. Filed Aug. 26, 1907. Serial No. 390,238.



1. A track comprising a metal bar having a part near one edge adapted for attachment to a car or other structure, and having its central portion inclined outwardly to form a shield and its lower portion turned inwardly and curved to form a raceway, said raceway having parallel upper edges, in combination with a hanger comprising a bar having a flat portion adapted for attachment to the upper end of a door, and having its upper portion turned outwardly and curved to form a raceway, said latter raceway having parallel lower edges opposed to the edges of the track raceway and having stops at its ends, a ball retainer comprising a flat plate arranged between the raceways of the track and hanger, and supported upon the edges of the track raceway, said plate having openings therein spaced apart a distance equal to approximately one half the width of a door, and balls within said openings between said stops.

2. A track comprising a metal bar having a part near one edge adapted for attachment to a car or other structure, and having its central portion inclined outwardly to form a shield and its lower portion turned inwardly and curved to form a raceway, said raceway having parallel upper edges the ends of which extend slightly above their intermediate portions, in combination with a hanger comprising a bar having a flat portion adapted for attachment to the upper end of a door, and having its upper portion turned outwardly and curved to form a raceway, said raceway having parallel lower edges opposed to the edges of the track raceway, and having stops at its ends, a ball retainer comprising a flat plate, shorter than the hanger, arranged between the raceways of the track and hanger, and supported upon the edges of the track raceway, said plate having openings therein spaced apart a distance equal to approximately one half the width of the door, and balls within said openings between said stops.

880,259. MAIL CATCHING AND DELIVERY SYSTEM. WALTER WENZEL, Chicago, Ill. Filed Dec. 21, 1907. Serial No. 407,494.



1. In a device of the class described, a mail car in combination with a pouch delivering device arranged near one end thereof and a pouch catching device arranged near the other end, each said device comprising an arm adapted to swing outwardly from the car, a rotary member arranged at the end of said arm, a plurality of members depending from said rotary member and adapted to engage the pouch, and means for causing said rotary member to engage said depending members with or disengage the same from the pouch at the proper time, substantially as described.

2. In a device of the class described, a mail car, in combination with mail catching and delivery devices arranged thereon and each comprising an arm hingedly mounted on the car, a depending member secured to the outer end of the arm, a ring rotatably mounted in said member and having a plurality of depending hooks, adapted to engage a like number of coacting members on the mail pouch and means for rotating said ring at the proper time to disengage or engage said hooks with the members on the pouch, substantially as described.

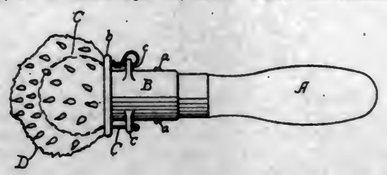
3. In a device of the class described, a crane having a pair of parallel delivery arms and a pair of parallel receiving arms arranged parallel with the track, in combination with a mail pouch having a rectangular portion adapted to fit between said arms and rest thereon and a mail car equipped with a rotary device for removing the pouch from the delivery arms and a similar device for delivering them to the receiving arms, substantially as described.

4. In a device of the class described, a crane having a pair of parallel delivery arms arranged parallel with the track, in combination with a mail pouch having a rectangular portion adapted to fit between said arms and rest thereon and a mail car equipped with means for engaging said pouch and removing the same from said arm, said means comprising an arm pivotally mounted upon the side of the car, a rotary member arranged at the end of said arm, means for rotating said member to engage said pouch, a dog normally holding said member in retracted position and means on said crane for tripping said dog, substantially as and for the purpose specified.

5. In a device of the class described, a crane having a pair of parallel receiving arms arranged parallel with the track in combination with a mail pouch having a rectangular portion adapted to fit between said arm and rest thereon and a mail car equipped with means for delivering said pouch to said arms and comprising an arm mounted upon the side of said car, a rotary member arranged at the end of said arm, suspending members depending from said rotary member and upon which the pouch is hung, means for rotating said member to disengage the suspending members from the pouch, a dog normally holding said members in engagement with said pouch and means on said crane for tripping said dog as and for the purpose specified.

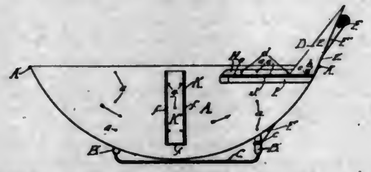
[Claim 6 not printed in the Gazette.]

880,260. SPONGE-HOLDER. JOHN S. WILLIAMS, Hurley, S. D. Filed Apr. 16, 1907. Serial No. 368,600.



A sponge holder consisting in combination of a circular head made hollow and adapted to fit over a handle, a handle for attachment to said head, means for securing the handle in the head, the head having lugs on opposite sides and an enlarged rim, and being dished in the middle to receive a sponge, and a wire or cord attached to the lugs for securing the sponge to the head, substantially as described.

880,261. WHEEL-WASHER. JOHN S. WILLIAMS, Hurley, S. D. Filed July 23, 1907. Serial No. 385,208.



A wheel washer consisting, in combination, of a semicircular box or trough, runners to support said trough in an upright position, flexible strips secured to the trough and extending over the water at one end of the trough, a guard or extension of the trough at the same end composed of side and end pieces to prevent the water from spilling, holders for brushes or sponges secured to the sides of the trough diagonally across from each other, and a handle for the operation of the trough, all as set forth.

880,262. LUBRICATOR-PROTECTOR FOR VEHICLE-WHEEL JOURNALS. WILLIAM WOLFE and WILLIAM LUCAS, Patton, Pa. Filed Nov. 20, 1907. Serial No. 402,962.

1. A protector adapted to be attached to a wheel-hub, consisting of a band having lapped free ends, clamp-straps connected to the free ends of the band, one of said straps being spaced from the band to provide a pocket for the reception of the overlapping free end of the band, and means for connecting said straps.

2. A protector consisting of a band, means for securing the same to a vehicle wheel hub, an opening through said band, a lubricant conduit arranged on the interior of the band and communicating with said opening.

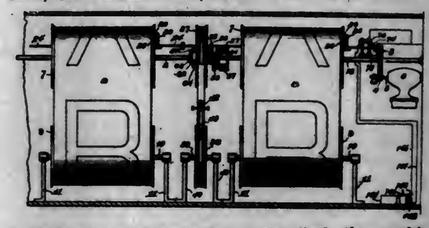
3. A protector consisting of a band, means for securing the same to a vehicle-wheel hub, an opening through said band, and an inclined lubricant conduit arranged on the interior of the band and having a discharge opening adjacent to the inner face of the wheel-hub.

4. A protector consisting of a band having lapped free ends, means for securing said band upon a vehicle-wheel hub, an opening through said band, and a lubricating attachment arranged on the interior of said band and in communication with said opening.



5. A protector consisting of a band having lapped free ends, means for securing said band upon a vehicle-wheel hub, and a plurality of openings through said band, and lubricating attachments arranged on the interior of said band and communicating with said openings.

880,263. ELECTRIC SIGN. IGNATZ YOUNG, San Francisco, Cal. Filed Nov. 7, 1903. Serial No. 180,226.



1. In a sign of the character described, the combination with a revoluble shaft, and a plurality of drums connected thereto; of electrically operated means for disengaging one or more of said drums from the shaft when desired.

2. In an apparatus of the character described, the combination with a revoluble shaft; of a plurality of drums normally revoluble with the shaft, electrically operated mechanism for unlocking one or more of the drums from the shaft, and a locking device for each drum.

3. In an apparatus of the character described, the combination with a revoluble shaft, and a plurality of drums normally revoluble therewith; of electrically operated means for unlocking one or more of the drums from the shaft, an automatically operated brake for each drum, and mechanism for releasing the brakes simultaneously.

4. In an apparatus of the character described, the combination with a revoluble shaft; of a drum loosely mounted thereon, a locking device secured to the shaft and normally engaging the drum, an armature upon the locking device, a magnet therefor, and means for energizing the magnet.

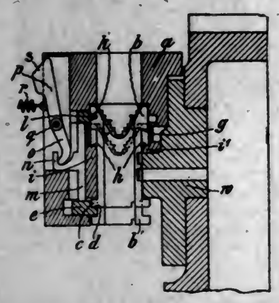
5. In an apparatus of the character described, the combination with a revoluble shaft, and a drum loosely mounted thereon; of a sleeve slidably mounted upon and revoluble with the shaft, arms upon the sleeve adapted to engage the drum, an armature connected to the sleeve, a magnet, a source of electricity electrically connected to the magnet, and means for automatically breaking and making a circuit from the source to the magnet.

[Claims 6 to 25 not printed in the Gazette.]

880,264. LINOTYPE AND OTHER TYPE-CASTING MACHINE. CHRISTIAN A. ALBRECHT, Baltimore, Md. Filed Nov. 27, 1907. Serial No. 404,125.

1. In a linotype or other type-casting machine, the combination with matrices each with two or more superposed intaglio letters and having a recess in the rear edge, of a

vertically movable yoke adapted to normally support the upper ears of said matrices, a lower rail transversely movable in said yoke and adapted to support the lower rear ears of the raised matrices, an upper rail transversely movable in said yoke and adapted to engage in the recesses of the raised matrices, and means for withdrawing said lower rail and said upper rail to release the raised matrices, substantially as described and for the purpose set forth.



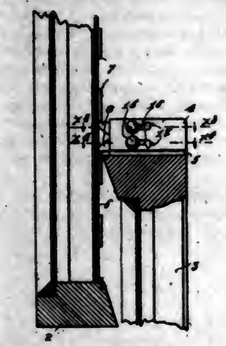
2. In a linotype or other type-casting machine, the combination with matrices each with two or more superposed intaglio letters and having a recess in the rear edge, of a vertically movable yoke adapted to normally support the upper ears of said matrices, a lower rail transversely movable in said yoke and adapted to support the lower rear ears of the raised matrices, an upper rail transversely movable in said yoke and adapted to engage in the recesses of the raised matrices, and means for simultaneously withdrawing said lower rail and said upper rail to release the raised matrices, substantially as described and for the purpose set forth.

3. In a linotype or other type-casting machine, the combination with matrices each with two or more superposed intaglio letters and having a recess in the rear edge, of a vertically movable yoke adapted to normally support the upper ears of said matrices, a lower rail transversely movable in said yoke and adapted to support the lower rear ears of the raised matrices, an upper rail transversely movable in said yoke and adapted to engage in the recesses of the raised matrices, and means for rigidly connecting said lower rail with said upper rail, substantially as described and for the purpose set forth.

4. In a linotype or other type-casting machine, the combination with matrices with two or more superposed intaglio letters and having a recess in the rear edge, of a vertically movable yoke adapted to normally support the upper ears of said matrices, a lower rail transversely movable in said yoke and adapted to support the lower rear ears of the raised matrices, an upper rail transversely movable in said yoke and adapted to engage in the recesses of the raised matrices, springs pressing said lower rail and said upper rail into the path of said matrices, and means for withdrawing said lower rail and said upper rail to release the raised matrices, substantially as described and for the purpose set forth.

5. In a linotype or other type-casting machine, the combination with matrices each with two or more superposed intaglio letters and having a recess in the rear edge, of a vertically movable yoke adapted to normally support the upper ears of said matrices, a lower rail transversely movable in said yoke and adapted to support the lower rear ears of the raised matrices, an upper rail transversely movable in said yoke and adapted to engage in the recesses of the raised matrices, parts rigidly connecting said lower rail with said upper rail, a lever mounted in said yoke to rock and pivotally connected with said parts, a spring pressing on said lever and thereby pushing said lower rail and said upper rail into the path of said matrices, and means on the machine frame for shifting said lever and thereby withdrawing said lower rail and said upper rail on said yoke reaching its uppermost position, substantially as described and for the purpose set forth.

880,265. WINDOW-LOCK. ANDREW ANDERSON, Minneapolis, Minn. Filed Oct. 31, 1907. Serial No. 399,982.

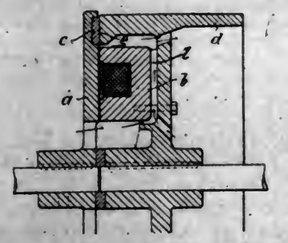


1. A window lock comprising a casing, a pair of reversely beveled spring pressed lock bolts mounted therein, which bolts are provided with means whereby they may be independently locked in inoperative position, substantially as described.

2. A window lock comprising a casing, of a pair of reversely beveled spring pressed lock bolts mounted therein, slots having lock notches formed in said casing, finger pieces carried by said lock bolts and working through said slots, and a spring acting on said lock bolts when in their inoperative position to force the finger pieces into the lock notches, substantially as described.

3. The combination with the upper and lower sash of a window, of a casing secured to one sash, a pair of reversely beveled spring pressed lock bolts mounted in said casing for independent movements, and operating on the other sash to lock the two sashes together in different adjustments, a slot having lateral lock notches formed in said casing, finger pieces carried by said lock bolts and working through said slots, and a spring secured to one of said lock bolts and adapted to bear against and slide on the other thereof to force said finger pieces into the lock notches when the lock bolts are in their inoperative position, substantially as described.

880,266. ELECTROMAGNETIC CLUTCH. HEINRICH AST, Vienna, Austria-Hungary, assignor to the Firm of Vulkan Maschinenfabriks Actien Gesellschaft, Vienna, Austria-Hungary. Filed June 15, 1906. Serial No. 321,367.



1. In electro-magnetic clutches: a clutch part provided with a friction member; a carrier provided with a friction surface adapted to engage said friction member; and a magnet member secured to said carrier.

2. In electro-magnetic clutches: a clutch part provided with a friction member; a carrier of relatively large surface provided with a friction surface or member adapted to engage with the said friction member; and a magnet member secured to and surrounded by said carrier.

3. In electro-magnetic clutches; a clutch part provided with a friction member; a carrier provided with a friction surface adapted to engage said friction member; a magnet member secured to said carrier; and means to promote

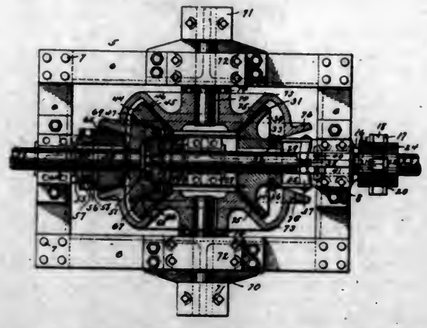
ventilation and assist in the dissipation of the heat generated between said friction member and said friction surface.

4. In electro-magnetic clutches: a clutch part; a carrier; a magnet member secured to said carrier; and air passages or channels between said carrier and said magnet member.

5. In electro-magnetic clutches: a clutch part; a carrier provided with air passages or channels; and a magnet member secured to said carrier.

[Claims 6 to 12 not printed in the Gazette.]

880,267. POWER-TRANSMISSION MECHANISM. JONATHAN U. BAKER, Stoutsville, Ohio. Filed July 19, 1907. Serial No. 384,558.



1. In a power transmission device, the combination with a driving shaft, of a driven shaft, a friction disk mounted for rotation upon each side of said shafts, a pair of friction cones mounted to rotate with the driven shaft and adapted to engage said friction disks upon opposite sides thereof, and a friction cone rotating with the driving shaft and adapted to engage and impart rotation to said disks.

2. In a power transmission device, the combination with a driving shaft, of a driven shaft, a friction disk mounted for rotation upon each side of said shafts, a pair of friction cones mounted to rotate with the driven shaft and adapted to engage said friction disks upon opposite sides thereof, one of said friction cones being slidably mounted upon the driven shaft, and a friction cone rotating with the driving shaft and adapted to engage and impart rotation to said disks.

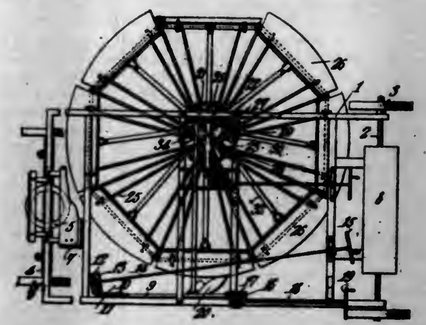
3. In a power transmission device, the combination with a driving shaft, of a driven shaft, said driven shaft being mounted for bodily endwise movement, a friction disk, a shaft upon which said friction disk is mounted, said shaft lying substantially at right angles to the driven shaft, interlocking members carried upon the adjacent ends of the driving and the driven shaft and adapted to be brought into engagement with each other by endwise movement of said shaft, the interlocking member of the driven shaft being adapted to frictionally engage a friction surface of said disk, and a friction cone rotating with the driving shaft and adapted to engage and impart rotation to said disks.

4. In a power transmission device, the combination with a driving shaft, of a driven shaft, said driven shaft being mounted for bodily endwise movement, a friction disk, a shaft upon which said friction disk is mounted, said shaft lying substantially at right angles to the driven shaft, interlocking members carried upon the adjacent ends of the driving and the driven shaft and adapted to be brought into engagement with each other by endwise movement of said shaft, the interlocking member of the driven shaft being adapted to frictionally engage a friction surface of said disk, a friction cone mounted to turn with the driven shaft and located upon the opposite sides of the friction disk from said interlocking member and a friction cone rotating with the driving shaft and adapted to engage and impart rotation to said disks.

5. In a power transmission device, the combination with a driving shaft, of a driven shaft, said driven shaft being mounted for bodily endwise movement a friction disk, a shaft upon which said friction disk is mounted, said shaft lying substantially at right angles to the driven shaft, interlocking members carried upon the adjacent ends of the driving and the driven shaft and adapted to be brought into engagement with each other by endwise movement of said shaft, the interlocking member of the driven shaft being adapted to frictionally engage a friction surface of said disk, a friction cone mounted to turn with the driven shaft and located upon the opposite side of the friction disk from said interlocking member, said cone being mounted for sliding movement upon the driven shaft and a friction cone rotating with the driving shaft and adapted to engage and impart rotation to said disks.

[Claims 6 to 9 not printed in the Gazette.]

880,268. ROAD-GRADER, LEVEE-BUILDER, DIGGER, AND CONVEYER. JOSEPH W. BAKER, Phillips Bluff, La. Filed Oct. 3, 1907. Serial No. 395,704.



1. A machine of the character described, a plow, an elevator consisting of a wheel in the form of a polyhedron and tiltable buckets mounted upon the angularly disposed sides of the wheel.

2. A machine of the character described comprising a plow, a wheel in the form of a polyhedron having tiltable buckets counter-balanced upon the angularly disposed sides of the wheel.

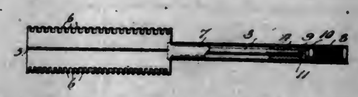
3. A machine of the character described comprising a plow, a wheel in the form of a polyhedron with tiltable buckets mounted thereon, said wheel lying in an inclined plane and having means for gradually tilting the buckets so as to maintain them level.

4. In a machine of the character indicated, a plow, a wheel supported in inclined position with relation to the digger and having tiltable buckets, an eccentric mechanism located at the center of the wheel and operating rods connecting the buckets with the eccentric mechanism.

5. A machine of the character indicated comprising a wheel mounted frame, a plow attached to the frame, a conveyer wheel supporting the frame, said conveyer wheel having tiltable buckets and means for tilting the buckets as the wheel rotates and means for moving the conveyer wheel toward and away from the digger.

[Claims 6 to 9 not printed in the Gazette.]

880,269. SAFETY-RAZOR. OSCAR V. BALL, Philadelphia, Pa. Filed Sept. 13, 1907. Serial No. 392,747.



1. A safety razor comprising a double edged blade, and a shank extending from one end of said blade, a guard for each edge of the blade, said guard comprising a single piece of sheet metal having an integral tubular handle, and

a milled head provided with a socketed plug for connecting the shank to the handle of the guard.

2. A safety razor comprising a double edged blade, a shank extending from one end of said blade, a double guard, and means for securing the blade to the guard.

3. A safety razor comprising a double edged blade, a shank extending from one end of the blade, a guard, an integral tubular handle, said handle provided with oppositely disposed notches to engage one end of the blade, a milled head provided with a socketed plug, the latter being connected to the shank of the blade to hold the same in place in the guard.

880,270. DRAW-HEAD FOR RAILWAY-CARS. CARL R. BOWEN, Fordyce, Ark. Filed May 1, 1907. Serial No. 371,341.



1. In a draw-bar, the combination of side members, a block rigidly secured at opposite ends of said members, a draw-bar extending through one of said blocks and connected at its end by means of a key to a sliding member, springs interposed between said member and said block, a buffer comprising a shank mounted in one of said blocks, and buffer springs surrounding said shank and interposed between said block and said member.

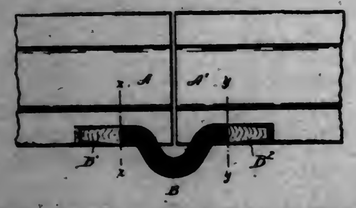
2. In a draw-head, the combination of side members, a bearing block secured to said side members, a draw-bar extending through said block, a sliding member mounted between said side members, a removable key for connecting said draw-bar to said sliding member, and springs interposed between said block and said sliding member.

3. In a draw-head, the combination of side members, blocks secured at the opposite ends of said members, a draw-bar mounted to slide through one of said blocks, a sliding member, a key for securing said draw-bar to said sliding member, buffer springs secured between said sliding member and said block, a buffer provided with a shank mounted in the other block, and springs surrounding said buffer, substantially as described.

4. In a draw-head, the combination of side members, a bearing block secured to said members, said bearing block provided with an opening therethrough for a draw-bar, said opening being wider at one end of said block than the other, in combination with a sliding member and a key for holding said draw-bar to said sliding member, and buffer springs interposed between said block and sliding member, substantially as described.

5. In a draw head, the combination of side members, a bearing block rigidly secured to said side members, a draw bar mounted to slide through said bearing block in combination with a sliding member to which said draw-bar is secured by a key.

880,271. METHOD OF FORMING RAIL-BONDS, &c. EUGENE M. BOURNONVILLE, Jersey City, N. J. Filed Sept. 20, 1907. Serial No. 393,783.



1. The method of connecting bonds to rails or the like, comprising, first—heating the metal of the bond and the rail to a point short of the melting point; second, increasing the temperature of the bond until a portion of the metal at the edge thereof melts and becomes unified with the adjacent metal of the rail to form a homogeneous connection.

2. The method of connecting rails and other metal bodies, comprising heating the metal of the parts to be connected to a point short of the melting point, then increasing the temperature of one of said parts until a portion thereof melts and becomes unified with the heated portion of the other part.

880,272. THERMO-ELECTRICAL SYSTEM. WILLIAM H. BRISTOL, New York, N. Y. Filed Nov. 11, 1907. Serial No. 401,562.



1. A thermo-electric couple, adapted to set up a temporary electro-motive force when a sudden change of temperature occurs at the ends, both ends being in the same medium, but so arranged that one assumes the said temperature more quickly than the other.

2. A thermo-electric couple, having its ends in close proximity and adapted to set up a temporary electro-motive force when a sudden change of temperature occurs at said ends, one end assuming the said temperature more quickly than the other.

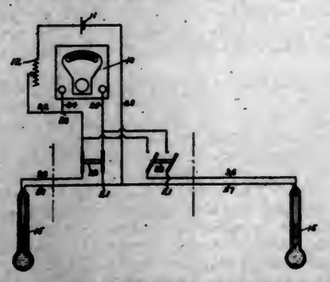
3. A thermo-electric couple, provided with means adapted to cause the same to set up a temporary electro-motive force, and only when both ends of said couple are simultaneously exposed to an appreciable and sudden change of temperature.

4. A thermo-electric couple, both ends of which are adapted to be simultaneously exposed to an appreciable and sudden change of temperature, but one of which is adapted to assume said temperature more rapidly than the other.

5. A thermo-electric couple, both ends of which are adapted to be simultaneously exposed to an appreciable and sudden change of temperature, but one of which is thermally insulated, whereby the other end assumes said temperature more rapidly than said thermally insulated end.

[Claims 6 to 19 not printed in the Gazette.]

880,273. INDICATING AND RECORDING SYSTEM. WILLIAM H. BRISTOL, New York, N. Y. Filed Sept. 1, 1906. Serial No. 332,998.



1. The combination with a source of electricity of a substantially constant potential, and a resistance and electrical apparatus in series therewith, of a shunt across said electrical apparatus including means whereby the resistance of the shunt is appreciably varied by physical changes, the whole being so arranged that the said physical changes are automatically indicated by said electrical apparatus.

2. In an electrical system: a substantially constant source of electro-motive force; a resistance and electrical apparatus in series therewith; and a shunt across said electrical apparatus including means whereby the resistance of the shunt is appreciably varied by temperature, the whole being so arranged that the said temperature changes are automatically indicated by said electrical apparatus.

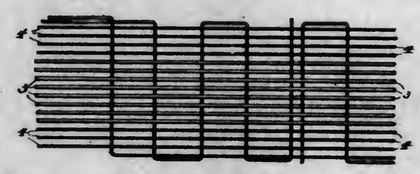
3. In an electrical indicating system: a substantially constant source of electro-motive force; a resistance and electrical indicating means in series therewith; and a shunt across said indicating means, including means whereby the resistance of the shunt is appreciably varied by physical changes, the whole being so arranged that the said physical changes are automatically indicated by said indicating means.

4. In an electrical indicating system: a substantially constant source of electro-motove force; an adjustable resistance and electrical indicating means in series therewith; and a shunt across said indicating means including means whereby the resistance of the shunt is appreciably varied by physical changes, the whole being so arranged that the said physical changes are automatically indicated by said indicating means.

5. In an electrical indicating system; a substantially constant source of electro-motive force; an adjustable resistance and indicating means in series therewith; a shunt across said indicating means including means whereby the resistance of said shunt is appreciably varied by physical changes, the whole being so arranged that the said physical changes are indicated by said indicating means; and means to cut in or out of circuit said shunt.

[Claims 6 to 14 not printed in the Gazette.]

880,274. COVER FOR PNEUMATIC TIRES. CHARLES A. BROPHY, Hinsdale, Ill. Filed Oct. 20, 1906. Serial No. 339,748.

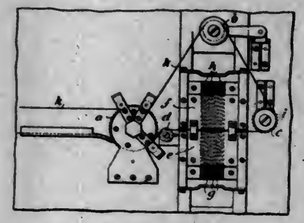


1. In a cover for pneumatic tires, an endless flat belt of textile material, having the warp threads in the middle portion thereof drawn less tightly than the warp threads at the sides thereof, said belt being thereby adapted to be stretched, by the inflation of a pneumatic tire upon which it is placed, into assuming a shape corresponding to the periphery of that portion of the pneumatic tire which it covers.

2. In a cover for pneumatic tires, an endless flat belt of textile material having the warp threads formed into parallel longitudinal loops, each corresponding approximately in length to the circumference of that portion of the tire which it is designed to surround, and having the warp threads in the middle drawn less tightly than the warp threads at the sides of the belt, said belt being thereby adapted to be stretched, by the inflation of a pneumatic tire upon which it is placed, into assuming a shape corresponding to the periphery of that portion of the pneumatic tire which it covers.

880,275. APPARATUS FOR PERFORATING FILLETS OF PAPER FOR THE AUTOMATIC TRANSMISSION OF MESSAGES, &c. CHARLES L. BUCKINGHAM, New York, and EMIL GERMANN, Brooklyn, N. Y.; said Germann assignor to said Buckingham. Filed Oct. 25, 1902. Serial No. 128,696.

1. In a perforating machine for preparing telegraphic messages or for perforating a fillet of paper for other purposes, the combination of a feed wheel having peripheral teeth, a band of paper provided with a central row of apertures, a punch head, through which said paper passes, provided with punches for perforating apertures in said fillet on either side at a definite distance from said central row of perforations, and a guide wheel *c*, having spur teeth, which is in close proximity to the punches of the punch head, for holding the central holes of said fillet in proper relation to the punches, as and for the purpose set forth.



2. In a perforating machine, the combination of a feed wheel *a*, having radial teeth, a fillet of paper *k* provided with a central row of perforations, a punch head provided with a central vertical aperture through which said fillet of paper passes, two ranges of punches, *g*, *h*, for perforating marginal apertures, and a toothed guide wheel *c*, in close proximity to the punches of the punch head whereby the central row of perforations is carried through said punch head in a line midway between said ranges of punches, as and for the purpose set forth.

880,276. CLOTH-WINDING BOARD. EUGENE CARRAINE, Philadelphia, Pa. Filed May 20, 1905. Serial No. 261,417.



A cloth winding board consisting of a hollow slab of paper, with one or more internal longitudinal reinforces, each consisting of a smaller hollow slab of paper, substantially as described.

880,277. TOOTH-BRUSH. ORVIN H. CHANDLER, Clinton, S. C., assignor of one-half to Jack H. Young, Clinton, S. C. Filed Mar. 5, 1907. Serial No. 360,684.

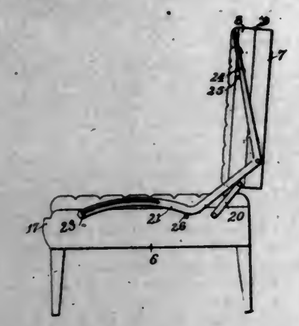


1. In a device of the class described, a cup-shaped shield having a tubular shank, a brush disposed in said shield, a stem integral at one end with the brush and fitted for rotation in the tubular shank, said stem being of greater length than the shank with its opposite end projecting beyond the rear end of said shank and formed to provide a locking member, a worm shaft having at its forward end a sleeve receiving said locking member and provided with a coacting locking member, and a worm-engaging reciprocating handle.

2. In a device of the class described, a worm shaft having a terminal sleeve, a catch operating through the sleeve, a fastening member securing the catch upon the sleeve and the latter upon the worm shaft, a cup-shaped shield having a tubular shank, a brush disposed in said shield, a stem integral at one end with the brush core and extending through and beyond the shank, the opposite projecting end of said stem fitting in said sleeve and being provided with a keeper member engaged by said catch, and a handle member slidably engaging the worm shaft to impart oscillatory movement to the latter.

3. In a device of the class described, a shield member having a tubular shank, laterally extending flanges, and an outward extending tooth engaging lug disposed intermediate the flanges, in combination with a cylindrical brush mounted in the shield and having a stem fitted for rotation in the tubular shank, a worm shaft having a terminal sleeve equipped with a catch engaging the portion of the brush stem which extends through the tubular sleeve, thus assembling the shield member, the brush member and the worm shaft; and a handle slidably engaging the worm shaft to impart oscillatory motion thereto.

880,278. DAVENPORT. RUDOLPH COOPERSMITH and CHARLES J. KINDEL, St. Louis, Mo. Filed Apr. 12, 1906. Serial No. 311,261.



1. In a davenport, the combination with the seat of a back connected thereto in such a manner that it may be brought forward into horizontal position upon the seat, said back consisting of two bed sections hinged together, one of which may be swung over into horizontal position in front of the other, means for supporting the forward edges of the latter section and a brace at the hinged edges of said sections for the purpose set forth.

2. In a davenport, the combination with the seat of a back connected thereto in such a manner that it may be brought forward into horizontal position upon the seat, said back consisting of two bed sections hinged together, one of which may be swung over into horizontal position in front of the other, a brace pivoted to one of said sections at the hinged edge, and a ledge on the seat to receive said brace and thereby support said sections at the hinge.

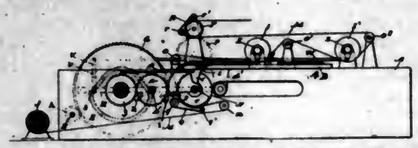
3. In a davenport, the combination with the seat of a back connected thereto in such manner that it may be brought forward into horizontal position upon the seat, said back consisting of two bed sections hinged together, one of which may be swung over into horizontal position in front of the other and a brace extending between the ends of said sections at their hinged edges and pivoted to one of them whereby it may be swung down below the said sections when in bed position thereby avoiding a ridge through the middle of the bed.

4. In a davenport, a back consisting of two box sections hinged together and each containing bed bottom fabric and together adapted to hold a mattress when the davenport is in bed form and also when in settee form, and a brace pivoted at its ends to one of said sections at the hinged edge thereof and adapted to swing across the other section when the sections are folded, whereby to form a stay for the upper edge of the settee back and to swing down below said sections when they are in bed position.

5. The combination of seat, back consisting of two sections folded upon one another and hinged together at their top edges, links connecting the forward section of the back at its lower edge to the seat near its rear edge, links connected to the rear section of the back near its lower edge and to the seat near its forward edge, and means for supporting said sections when displayed in bed form.

[Claim 6 not printed in the Gazette.]

880,279. BED-CONTROLLED WEB-FEEDING MECHANISM. PAUL F. COX, Jackson, Mich., assignor to The Jackson Printing Press Company, Jackson, Mich., a Corporation of Michigan. Filed Oct. 4, 1907. Serial No. 395,943.



1. In a web printing press, the combination of a printing couple a web feeding roll, gears on the roll shaft, and two actuating means alternately engaging with the respective gears whereby the roll is continuously rotated at varying peripheral speed.

2. In a web printing press, the combination of a printing couple a web feeding roll a reciprocating rack, a driven pinion, and two segments on the roll shaft adapted to engage respectively with the rack and with the pinion, the rack and pinion alternately engaging with their respective segments, whereby the roll is continuously rotated at varying peripheral speed.

3. In a web printing press, the combination of a printing couple a web feeding roll, a reciprocating rack, a driven pinion, and two segments on the roll shaft adapted to engage respectively with the rack and with the pinion, the rack and pinion alternately engaging with their respective segments, whereby the roll is continuously rotated at varying peripheral speed; and means for insuring registration of the rack and its segment at the time of the engagement therebetween, and for insuring registration of the pinion and its segment at the time of the engagement therebetween.

4. In a printing press, the combination of a reciprocating bed, a reciprocating rack, a driven pinion, a web feed device, and a pair of segmental gears connected with said device, one of said segments being adapted to mesh with the rack during the printing stroke of the bed, and the other of said segments adapted to mesh with the pinion during the return stroke of the bed.

5. In a printing press, the combination of a reciprocating bed, a rack connected therewith, a continuously driven pinion, a web feed roll, a pair of segmental gears on said roll, one of said segments being adapted to mesh with the rack during the printing stroke of the bed and the other of said segments adapted to mesh with the pinion during the return stroke of the bed.

[Claims 6 to 17 not printed in the Gazette.]

880,280. CONTINUOUS VARIABLE WEB-FEEDING MECHANISM. PAUL F. COX, Jackson, Mich., assignor to The Jackson Printing Press Company, Jackson, Mich., a Corporation of Michigan. Filed Oct. 4, 1907. Serial No. 395,944.



1. In a printing press, the combination of a reciprocating bed, a pair of cylinders co-acting therewith, a roll for continuously feeding the web successively between the bed and cylinders both during the after impression, one cylinder printing part of the web skipped by the other cylinder, and means for driving said feed roll so as to move the web in exact uniformity with the travel of the bed during the actual printing operations and to feed a like quantity of web on the return stroke of the bed, and means for throwing off impression during the return stroke of the bed.

2. In a printing press, the combination of a reciprocating bed, a pair of stationary cylinders co-acting therewith,

means for directing a web between the bed and cylinders, one cylinder printing parts of the web skipped by the other cylinder, a feed roll, and means for operating said feed roll during the printing stroke of the bed to feed a length of web between the bed and cylinders during the printing at a speed conformable to that of the type or printing surface and thereafter to feed a like length of the web between the bed and cylinders at a varying speed during the return stroke of the bed while the impression is thrown off.

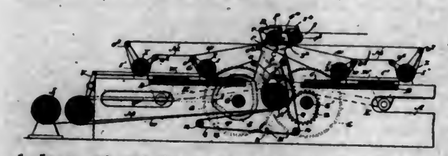
3. In a printing press, the combination of a reciprocating bed, a pair of cylinders co-acting therewith, one cylinder printing part of the web skipped by the other cylinder, means for directing a web successively between the bed and cylinders, web feeding mechanism, a web delivery mechanism, and means for operating the feed and delivery mechanisms to pass a length of the web between the bed and cylinders at a speed uniform with that of the travel of the bed during the printing operation and to pass a corresponding length of web between the bed and cylinders after each printing operation.

4. In a printing press, the combination of a reciprocating bed, a pair of cylinders co-acting with forms thereon, means for leading a web successively between the cylinders and the bed, a roll for continuously feeding a web to the press, irregular gears whereby said roll is driven at a variable peripheral speed so as to feed a length of web between the bed and cylinders at a speed uniform with that of the travel of the bed during the printing operations and to feed a like length of web between the bed and cylinders while the impression is thrown off, one cylinder printing part of the web skipped by the first cylinder.

5. In a printing press, the combination of a pair of beds, means for reciprocating them in opposite directions, a pair of cylinders co-acting with each bed, means for directing a web successively between the cylinders and beds, means for feeding a web to and from the press, and means for operating the feed and delivery devices at an irregular or variable speed so as to feed a length of web through the press during impression at a speed uniform with that of the movement of the type beds and then to feed a like length of web between the bed and cylinders while impression is thrown off.

[Claims 6 to 8 not printed in the Gazette.]

880,281. PRINTING-PRESS. PAUL F. COX, Jackson, Mich., assignor to The Jackson Printing Press Company, Jackson, Mich., a Corporation of Michigan. Filed Oct. 5, 1907. Serial No. 396,100.



1. In a web printing press, the combination of a reciprocating type bed, a cylinder co-acting therewith and means for feeding two webs between the bed and cylinder in unison with the movement of the bed during the taking of impressions and at different speeds after the taking of impressions.

2. In a web printing press, the combination of a pair of movable beds, cylinders co-acting therewith, and means for feeding two webs between the beds and cylinders to be perfected thereby, the webs being fed in unison with the movements of the type beds during the impressions and at different speeds after impressions.

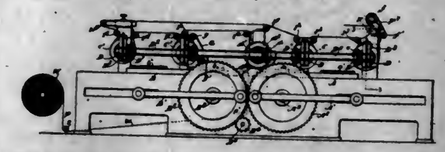
3. In a web printing press, the combination of a reciprocating bed, a cylinder co-acting therewith and means for feeding two webs between the bed and cylinder and in unison with the movement of the bed during impressions, and for additionally feeding one of said webs between the bed and cylinder while the impression is thrown off.

4. In a web printing press, the combination of a pair of movable beds, cylinders co-acting therewith, means for feeding two webs between the beds and cylinders to be perfected thereby during the taking of impression, and for feeding an additional length of one of the webs between the beds and cylinders while the impression is thrown off.

5. In a web printing press, the combination of a reciprocating type bed, a pair of cylinders co-acting therewith, means for feeding a web successively between both cylinders and bed, and means for feeding a second web between one of the cylinders and the bed the webs being fed in unison with the movements of the type bed during impressions.

[Claims 6 to 14 not printed in the Gazette.]

880,282. WEB-PRINTING PRESS. PAUL F. COX, Jackson, Mich., assignor to The Jackson Printing Press Company, Jackson, Mich., a Corporation of Michigan. Filed Oct. 9, 1907. Serial No. 396,617.



1. In a printing press, the combination of a reciprocating type bed, a cylinder coacting therewith, means for rotating the cylinder in one direction only, and at a varying speed in unison with the bed during the printing operation, and means for directing a web between the bed and cylinder, the cylinder operating to feed the web between itself and the bed both during and after impression.

2. In a printing press, the combination of a reciprocating type bed, a cylinder co-acting therewith, means for continuously rotating the cylinder and at a varying speed in unison with the bed during the printing operation, and means for directing a web between the bed and cylinder, the cylinder operating to feed the web between itself and the bed both during and after impression.

3. In a bed and cylinder web printing press, the combination of a reciprocating type bed, a cylinder co-acting therewith, means for directing a web between the bed and cylinder, means co-acting with the cylinder for feeding a length of web between the bed and cylinder at a varying speed during impression and for feeding a corresponding length of web between the bed and cylinder after impressions, and means for rotating the cylinder continually in one direction at variable speed.

4. In a printing press, the combination of a reciprocating type bed, a pair of cylinders simultaneously co-acting therewith, means for continuously rotating the cylinders in one direction and at a varying speed but uniform with the movement of the bed during impression, and means for directing a web successively between the bed and cylinders.

5. In a printing press, the combination of a reciprocating type bed, a pair of cylinders co-acting therewith, means for rotating the cylinders continuously in one direction and at a varying speed but uniform with the movement of the bed during impression, and means co-acting with the cylinders for moving the web between the bed and cylinders both during and after impression.

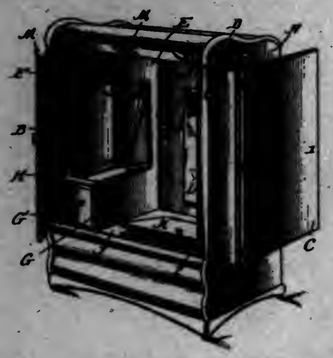
[Claims 6 to 24 not printed in the Gazette.]

880,283. HALL-RACK. FLORA M. DALE, Wilkinsburg, Pa. Filed July 15, 1907. Serial No. 383,840.

1. A hall rack consisting of a casing having a vertical slot formed in one end adjacent the front of the casing, a front door of narrow width hinged to the opposite end of the casing, and a slidable door formed of two sections hinged together, one of said sections being equal in width to the hinged door, the said door sliding in the slot as and for the purpose mentioned.

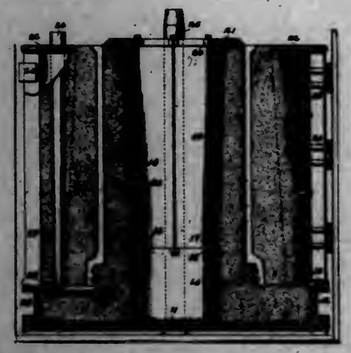
2. A device of the kind described comprising a casing, said casing being open at the front and slotted vertically at one end, corner standards carried by said casing, one of said standards forming the front edge of said slot, a

hinged door and a sliding door consisting of two hinged sections, said sliding door working through said slot, the corner standard adjacent the slot forming a guide for said door as and for the purpose described.



3. A hall rack of the kind described consisting of a casing divided into compartments, means within said casing for holding articles of wearing apparel, said casing being open at the front and vertically slotted at one end, a hinged door having a width substantially equal to one-fourth of the length of the casing, a sectional door slidable in said slot and adapted to close the remainder of the casing the sections comprising said slidable door being hinged together and one of said sections being of the same width as the hinged door and when the doors are closed resting adjacent thereto.

880,284. APPARATUS FOR CASTING PIPE. DANIEL B. DIMICK, Birmingham, Ala. Filed Apr. 25, 1907. Serial No. 370,285.



1. In apparatus for preparing a mold for casting hollow articles, the combination of means for forming the core member and an outer mold member around a sectional pattern, with a stripping plate, to aid in withdrawing the pattern, and means for securing the same on top of said core within the said pattern, substantially as described.

2. In apparatus for preparing a mold for casting hollow articles, the combination with a base support, of means for forming a core and an outer mold member said means comprising a sectional pattern, a stripping plate, to aid in withdrawing said pattern, and other means for securing said stripping plate on said core within said pattern, said other means comprising tie rods passing through said core and securing said stripping plate to said base support, substantially as described.

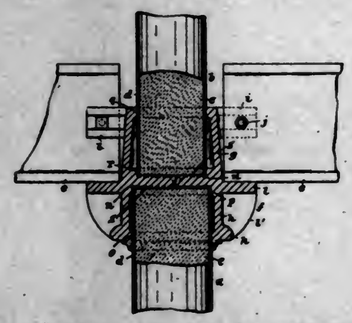
3. In apparatus for preparing a mold for casting hollow articles, the combination of means for forming a core and outer mold member said means comprising a sectional pattern, an annular stripping ring, to aid in withdrawing said pattern, and other means for securing said stripping ring on top of said mold member in substantial engagement with the exterior of the said pattern, substantially as described.

4. In apparatus for preparing a mold for casting pipe, the combination of means for forming a core and outer mold member said means comprising a sectional pattern, having a barrel portion, a stripping ring to aid in withdrawing said pattern provided adjacent its inner circumference with a depending annular portion, and means for securing said stripping ring on the top of said outer mold member with said annular depending portion in substantial engagement with the exterior of the barrel portion of said pattern to form the spigot of the mold, substantially as described.

5. In apparatus for preparing a mold for casting pipe, the combination with means for forming a core and outer mold member comprising an element a sectional pattern, having a barrel portion, a cope, a stripping plate and means for securing the same on said core within the barrel portion of said pattern, an external stripping ring surrounding the outer barrel portion of said pattern, and means for securing the same to said cope on top of said outer mold member, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

880,285. JOINT STRUCTURE FOR SUPERIMPOSED COLUMNS. CARL R. EBERHARD, Paterson, N. J. Filed Nov. 25, 1907. Serial No. 403,647.



1. In a building construction, the combination with superimposed columns, of an integral joint-structure therefor having vertically alined sockets respectively receiving the lower end of the upper column and the upper end of the lower column, said sockets each having internal continuous spaced shoulders bearing against the corresponding column laterally thereof, substantially as described.

2. In a building construction, the combination, with superimposed columns, of an integral joint-structure therefor having vertically alined sockets respectively receiving the lower end of the upper column and the upper end of the lower column, the upper socket being exteriorly conical, substantially as described.

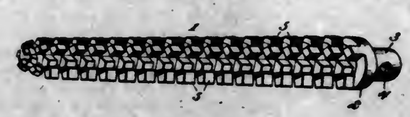
3. In a building construction, the combination with a column comprising a monolithic body part and a metallic shell incasing said body part, of a socketed structure receiving in its socket one end of said column, said structure having a projecting table bearing against the end of the body part of said column and standing free or clear of the shell thereof, substantially as described.

4. In a building construction, the combination, with a column comprising a monolithic body part and a metallic shell incasing said body part, of a joint-structure having a socket receiving the end of said column, the wall of said socket opposed to the end of said column having an annular groove substantially coinciding with the end of the shell of said column, substantially as described.

5. In a building construction, the combination, with a column comprising a monolithic body part and a metallic shell incasing said body part, of a joint-structure having a socket receiving the end of said column, the wall of said socket opposed to the end of said column having a projecting table bearing against the body part of said column and of less diameter than the shell, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

880,286. CORN-SHELLER. WILLIAM F. ELLIOTT, De Kalb, Ill. Filed Sept. 19, 1907. Serial No. 393,710.



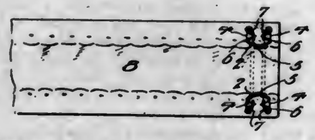
1. A hand corn sheller consisting of a solid substantially cylindrical tapering body smooth at one end and rounded at the other and provided throughout its length with blunt projecting teeth gradually decreasing in size with the diameter of the body from the smooth portion to the rounded end thereof, said body being also provided with teeth projecting from its rounded end.

2. A hand corn sheller consisting of a solid substantially cylindrical tapering body having a smooth portion at its large end and provided with longitudinal rows of blunt teeth gradually decreasing in size with the diameter of the body from the smooth portion to the small end, the teeth of each row being arranged opposite the intervals or spaces between the teeth of the contiguous rows.

3. A hand corn sheller consisting of a substantially cylindrical body provided with longitudinal rows of blunt teeth, the teeth of each row being arranged opposite the intervals or spaces between the teeth of the contiguous rows, said body being provided at one end with a smooth annular portion or collar and having a reduced extension.

4. A hand corn sheller consisting of a substantially cylindrical tapering body provided with a series of longitudinal rows of blunt tapering teeth decreasing in size from the large end of the body to the other.

880,287. GARMENT STAY AND FASTENER. LUCY W. FARRIS, Kansas City, Mo. Filed June 25, 1907. Serial No. 380,691.



1. A device of the character described comprising a stay member having prongs, and a fastening member having relatively movable spring arms to interlock with the prongs.

2. A device of the character described comprising a stay member having prongs, and a fastening member having inwardly off-set spring arms to interlock with the prongs.

3. A device of the character described comprising a stay member having inwardly bendable prongs, and a fastening member formed of a single piece of wire bent to provide a body portion having spring arms extending therefrom and off-set to interlock with the prongs, the free ends of the wire being looped to provide spring guard fingers adapted to bear upon the outer faces of the prongs on lines inside the off-set portions of the arms.

4. A device of the character described comprising a stay member provided at each end with a pair of prongs, and fastenings having arms adapted to interlock with the prongs and spring-fingers.

5. A device of the character described comprising a stay member provided with a pair of spaced prongs, and wire fastening members having inwardly offset arms adapted to interlock with the prongs and spring guard fingers adapted to overlie the prongs.

[Claim 6 not printed in the Gazette.]

880,288. SAFETY-STIRRUP. WILLIAM H. FLECKSING, MICHAEL KERCHER, and GUSTAV W. HENKE, Bozeman, Mont. Filed June 20, 1907. Serial No. 379,941.



1. A stirrup, comprising a head, side bars pivotally mounted at their upper ends in said head, a foot rest formed by the lower inwardly turned engaging ends of the side bars, means whereby said side bars and sections of the foot bar are forced apart or expanded, means to normally retain the same in an operative position, and means adapted to be engaged by the upturned toe of the rider to release said side bar retaining mechanism, substantially as described.

2. A stirrup, comprising a head, side bars pivotally mounted at their upper ends in said head, a foot rest formed by the lower inwardly turned engaging ends of the side bars, inwardly projecting overlapping fingers formed on the upper ends of said side bars, an expanding spring adapted to engage said fingers to force the side bars and sections of the foot rest apart, and means to lock said side bars and foot rest sections in an operative position, substantially as described.

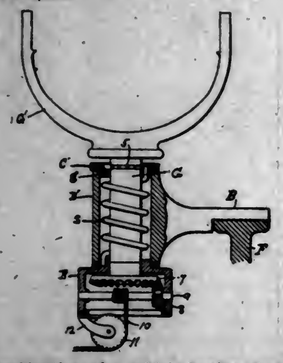
3. A stirrup, comprising a head, side bars pivotally mounted at their upper ends in said head, a foot rest formed by the lower inwardly turned engaging ends of the side bars, inwardly projecting overlapping expanding fingers formed on the upper ends of said side bars, an expanding spring arranged in said head to bear on one of said fingers, whereby the same is forced downwardly and outwardly to open or expand the lower portion of the stirrup, a locking bar secured to one of said side bars and adapted to be detachably engaged with the opposite side bar to hold the same in an operative position, and means on said locking bar whereby the other end of the same may be disengaged from said side bar, thereby permitting the expanding spring to open said stirrup, substantially as described.

4. A stirrup of the character described, comprising a head, means arranged thereon to connect the supporting straps therewith, side bars having inwardly turned upper ends pivoted in said head, a foot rest formed by the lower inwardly turned interlocking ends of said side bar, overlapping inwardly-projecting expanding fingers formed on the upper ends of said side bars, an expanding spring adapted to bear on said fingers to force the same outwardly and downwardly, thereby expanding or separating the lower ends of said side bars, a curved resilient locking bar secured at one end to one of said side bars, a locking pin arranged in a recess in the opposite side bar, and adapted to be engaged by the free apertured end of said locking bar, and a releasing pad on the outer side of said locking bar, substantially as described.

5. A safety stirrup, comprising a hollow head, side bars having inwardly turned upper ends pivoted in said head, a foot rest formed by the inwardly turned lower ends of said side bars, one of said ends having formed therein a notch or recess, a locking lug on the end of the opposite side bar and adapted to be engaged with said notch or recess to hold said ends against lateral movement, inwardly projecting curved overlapping expanding fingers formed on the upper ends of said side bars, an expanding spring arranged in said head and adapted to bear on said fingers to force the same downwardly and outwardly, and thus expand the lower end of the stirrup, a resilient locking bar secured at one end to one of said side bars and having a reduced apertured opposite end adapted to be engaged with a recess in the opposite side bar, a locking stud in said recess to enter the aperture in the end of said locking bar, and an outwardly curved

elastic releasing pad secured to the outer side of said locking bar, whereby the latter is disengaged from the locking pin and recess of said side bar by the toe of the rider when thrown from the horse and caught in the stirrup, substantially as described.

880,289. HEADLIGHT FOR AUTOMOBILES, &c. WILLIAM D. FORBES, Morristown, N. J. Filed May 18, 1907. Serial No. 374,418.

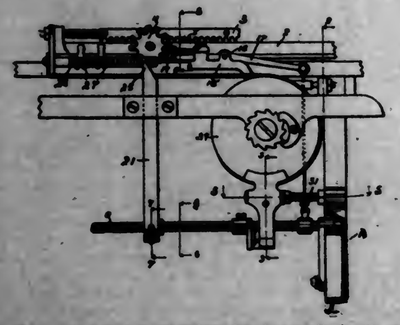


1. The combination of a vehicle having steering wheels and a swiveled headlight with a spring tending to turn the headlight in one direction and a flexible connection to the steering wheels in the opposite direction.

2. The combination of a vehicle having steering wheels and a headlight with a swiveled supporting stem for the latter, a spiral spring around the stem and tending to turn the headlight in one direction and a flexible connection to the steering wheels in the opposite direction.

3. The combination of a vehicle having steering wheels and a headlight with a swiveled supporting stem for the latter, a spiral spring tending to turn the headlight in one direction, a spindle having a cord wound on it and connected to the steering wheels and gearing between said stem and spindle.

880,290. TABULATOR FOR TYPE-WRITERS. WILLIAM R. FOX, Grand Rapids, Mich. Filed June 7, 1907. Serial No. 377,751.



1. In a tabulator mechanism for typewriters, the combination of the main frame 1 of the typewriter; a carriage 2 thereon; an escapement mechanism for the carriage; a stop bar 26 on said carriage with adjustable stops 27 thereon; a rock shaft 6 arranged transversely through the main frame; a movable stop bar 21 with tapered point arranged in guides on the frame 1 of the typewriter in position to be moved into operative relation with the stop or stops on the said carriage; a release lever or means 17 to act upon the escapement and release the carriage; an arm 18 on the rock shaft; a rod 14 connected to the lever 17 and extending through a perforation in the arm 18; adjustable stops 15 and 16 on the rod 14, whereby the release mechanism is timed to operate subsequent to the elevation of the stop bar 21; a spring drum 39 for actuating the carriage; a brake mechanism for engaging the opposite faces of the said spring drum, consisting of a pair of arms or members 32—33 supported on a fixed shaft 31 by the said shaft extending through slotted holes in said arms; adjustable spring devices for holding the said arms normally towards each other; an arm 28 on the rock shaft 6; a pivoted arm 29 on the rock shaft arm 28 carrying wedge or cam-shaped members 30—30 to act upon the arms of the brake mechanism timed to act simultaneously with the release mechanism; a downwardly-depending rock shaft arm 7 on the rock shaft 6; a spring 8 for throwing the same normally forward; a push rod 9 with a button 10 at its forward end for actuating the said tabulator mechanism; a stop collar 9' on the rod 9 for limiting its movement; and a notched lock plate 12 for engaging the stop collar 9' to secure the mechanism against accidental operation, all coacting substantially as described and for the purpose specified.

2. In a tabulator mechanism for typewriters, the combination of the main frame 1 of the typewriter; a carriage 2 thereon; an escapement mechanism for the carriage; a stop bar 26 on said carriage with adjustable stops 27 thereon; a rock shaft 6 arranged transversely through the main frame; a movable stop bar 21 with tapered point arranged in guides on the frame 1 of the typewriter in position to be moved into operative relation with the stop or stops on the said carriage; a release lever or means 17 to act upon the escapement and release the carriage; an arm 18 on the rock shaft; a rod 14 connected to the lever 17 and extending through a perforation in the arm 18; adjustable stops 15 and 16 on the rod 14, whereby the release mechanism is timed to operate subsequent to the elevation of the stop bar 21; a spring drum 39 for actuating the carriage; a brake mechanism for engaging the opposite faces of the said spring drum, consisting of a pair of arms or members 32—33 supported on a fixed shaft 31 by the said shaft extending through slotted holes in said arms; adjustable spring devices for holding the said arms normally towards each other; an arm 28 on the rock shaft 6; a pivoted arm 29 on the rock shaft arm 28 carrying wedge or cam-shaped members 30—30 to act upon the arms of the brake mechanism timed to act simultaneously with the release mechanism; a downwardly-depending rock shaft arm 7 on the rock shaft 6; a spring for throwing the same normally forward; a push rod 9 with a button 10 at its forward end for actuating the said tabulator mechanism; and a stop means for limiting its movement, all coacting substantially as described and for the purpose specified.

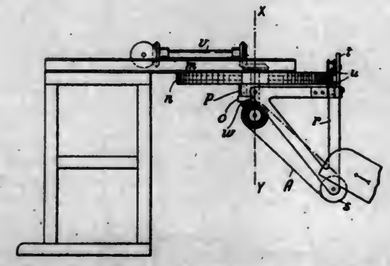
3. In a tabulator mechanism for typewriters, the combination of the main frame 1 of the typewriter; a carriage 2 thereon; an escapement mechanism for the carriage; an adjustable stop means on the said carriage; a rock shaft arranged transversely through the main frame; a movable stop means actuated from said rock shaft; a release means for the escapement; an arm on the rock shaft with connections from the release means thereto; a spring drum 39 for actuating the carriage; a brake mechanism for engaging the opposite faces of the said spring drum consisting of a pair of arms or members 32—33 supported on a fixed shaft 31 by the said shaft extending through slotted holes in said arms; adjustable spring devices for holding the said arms normally towards each other; an arm 28 on the rock shaft 6; a pivoted arm 29 on the rock shaft arm 28 carrying wedge or cam-shaped members 30—30 to act upon the arms of the brake mechanism timed to act simultaneously with the release mechanism; a downwardly-depending rock shaft arm 7 on the rock shaft 6; a spring 8 for throwing the same normally forward; a push rod 9 with a button 10 at its forward end for actuating the said tabulator mechanism; and a stop means for limiting its movement, all coacting substantially as described and for the purpose specified.

4. In a tabulator mechanism for typewriters, the combination of the main frame 1 of the typewriter; a carriage 2 thereon; an escapement mechanism for the carriage; an adjustable stop means on the said carriage; a rock shaft arranged transversely through the main frame; a movable stop means actuated from said rock shaft; a release means for the escapement; an arm on the rock shaft with connections from the release means thereto; a spring drum 39 for actuating the carriage; a brake mechanism for engaging the opposite faces of the said spring drum, consisting of a pair of arms or members 32—33 supported on a fixed shaft 31 by the said shaft extended through slotted holes in said arms; adjustable spring devices for holding the said arms normally towards each other; an arm 28 on the rock shaft 6; a pivoted arm 29 on the rock shaft arm 28 carrying wedge or cam-shaped members 30—30 to act upon the arms of the brake mechanism timed to act simultaneously with the release mechanism; a downwardly-depending rock shaft arm 7 on the rock shaft 6; a spring for throwing the same normally forward; a push rod with a button 10 at its forward end for actuating the said tabulator mechanism; and a stop means for limiting its movement, all coacting substantially as described and for the purpose specified.

5. In a tabulator mechanism for typewriters, the combination of the main frame 1 of the typewriter; a carriage 2 thereon; an escapement mechanism for the carriage; an adjustable stop means; a release means to act upon the escapement; a brake means for controlling the movement of the carriage; a rock shaft 6 arranged transversely through the main frame; connections from said rock shaft to the said stop, release and brake mechanism; a downwardly-depending rock shaft arm 7 on the rock shaft 6; a spring 8 for throwing the same normally forward; a push rod 9 with a button 10 at its forward end for actuating the said tabulator mechanism; a stop collar 9' on the rod 9 for limiting its movement; and a notched lock plate 12 for engaging the stop collar 9' to secure the mechanism against accidental operation, all coacting substantially as described and for the purpose specified.

[Claims 6 to 13 not printed in the Gazette.]

880,291. SWINGING FEED-ELEVATOR FOR MAIZE-SHELLERS AND THRESHING-MACHINES. THOMAS J. GEE, Chatteris, England. Filed Oct. 4, 1907. Serial No. 395,824.



The improved apparatus for feeding maize shellers and threshing machines comprising channel iron supports *m*, a stationary horizontal wheel-shaped frame-work *n* fixed to said supports, a bracket *p* revolving around the hub of the framework arms T connected to said bracket, a swinging elevator, carried by said arms, rollers *u* secured to said arms and rolling on the rim of said frame work, and gearing for operating said elevator, substantially as described.

880,292. RED AZO DYE AND PROCESS OF MAKING SAME. HUGO GELDERMANN, Gross-Lichterfelde-Ost, near Berlin, Germany, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Filed Nov. 6, 1907. Serial No. 400,986.

1. The hereinbefore-described new red azo-dyestuffs which may be obtained by diazotizing a para-para$_1$-diaminophenylether sulfonic acid, combining the tetrazo-compound thus obtained with two molecular proportions of beta-naphthol, which new dyestuffs dye wool from an acid bath without a mordant, and more especially from an acetic acid bath, clear and intense red tints which are fast to milling and which coloring matters when pulverized form a red powder and dissolve in water to a red solution, from which solution by the addition of mineral acids the free acid of the dyestuff is precipitated, whereas by adding some concentrated liquor ammoniæ the aqueous solution is only slightly changed, which new dye-stuffs are soluble in alcohol with a yellow coloration and dissolve in concentrated sulfuric acid to a red solution, and which new coloring matters by the action of strong reducing agents are split up, yielding a para-para$_1$-diamino-phenylether sulfonic acid besides 1.2-aminonaphthol.

2. The hereinbefore-described new red azo-dyestuff having in the shape of the sodium salt the formula:

$$(SO_3Na)_2.C_{12}H_6O\begin{matrix}N{=}N{-}C_{10}H_7.OH.\\ N{=}N{-}C_{10}H_7.OH.\end{matrix}$$

which dyestuff may be obtained by diazotizing the para-para$_1$-diaminophenylether disulfonic acid, combining the tetrazo-compound thus obtained with two molecular proportions of beta-naphthol, which new dyestuff dyes wool from an acid bath without a mordant, and more especially from an acetic acid bath, clear and intense red tints which are fast to milling, and which coloring matter when pulverized forms a red powder which dissolves in water to a red solution, which solution on the addition of some concentrated soda-lye becomes a little more bluish and darker and on the addition of some concentrated hydrochloric acid separates red flakes, whereas by adding some concentrated liquor ammoniæ it is only changed very slightly, which new coloring matter dissolves in alcohol to a yellow solution and in concentrated sulfuric acid to a red solution, which solution on the addition of ice is precipitated in red flakes, whereas a diluted solution of the dyestuff in concentrated sulfuric acid is bluish red or even blue-red, and which new dyestuff by the action of strong reducing agents is split up yielding para-para$_1$-diaminophenylether disulfonic acid besides 1.2-aminonaphthol.

880,293. YELLOW TETRAZO DYE AND PROCESS OF MAKING SAME. HUGO GELDERMANN, Gross-Lichterfelde-Ost, near Berlin, Germany, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Filed Nov. 6, 1907. Serial No. 400,987.

1. The hereinbefore-described new yellow tetrazo-dyestuffs which may be obtained by tetrazotizing thioanilin disulfonic acid, combining the tetrazo-compound thus obtained with two molecular proportions of a phenol and alkylizing the OH-groups of the tetrazo-dyestuffs thus obtained, which new dyestuffs dye wool without a mordant from an acid bath, and more especially from an acetic acid bath, clear and intense yellow tints, which are fast to milling and more especially do not bleed into the white cotton when mixed cotton and wool goods are dyed and subsequently subjected to milling, and which coloring matters when pulverized form in the shape of the sodium salt yellow powders which dissolve in water and in alcohol to a yellow solution and in concentrated sulfuric acid to a blue-red to red solution.

2. The hereinbefore-described new yellow tetrazo-dyestuff having in the shape of the sodium salt the formula:

$$(SO_3Na)_2.C_{12}H_6S\begin{matrix}N{=}N{-}C_6H_4.OC_2H_5\\ N{=}N{-}C_6H_4.OC_2H_5\end{matrix}$$

which dyestuff may be obtained by tetrazotizing thioanilin disulfonic acid, combining the tetrazo-compound thus obtained with two molecular proportions of phenol and ethylizing the OH-groups of the tetrazo-dyestuffs thus obtained by means of ethyl-bromid and soda-lye, which new dyestuff dyes wool without a mordant from an acid bath, and more especially from an acetic acid bath clear and intense yellow tints which are fast to milling and more especially do not bleed into the white cotton when mixed cotton and wool goods are dyed and subsequently

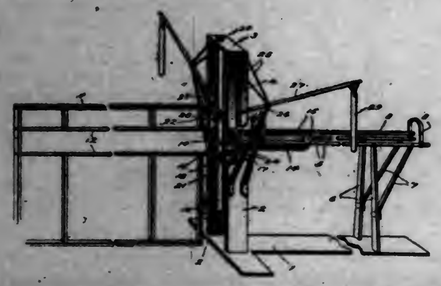
subjected to milling, and which coloring matter in the shape of the sodium salt when pulverized forms a reddish yellow powder which easily dissolves in hot water, but rather difficultly in cold water to a yellow solution, which aqueous solution on the addition of some concentrated soda-lye separates yellow flakes and on the addition of some concentrated hydrochloric acid shows a dull brown precipitate, whereas this aqueous solution by adding some concentrated liquor ammonia is scarcely changed, the liquor becoming a little lighter, and which new dyestuff dissolves in alcohol to a yellow solution and in concentrated sulfuric acid to a blue red solution, which solution on adding some ice separates a dull brown precipitate.

880,294. RIFLE-SIGHT-LIGHTING MEANS. CHESTER W. GETCHELL, Waterville, Me., assignor of one-half to Frank B. Webber, Waterville, Me. Filed Jan. 21, 1907. Serial No. 353,321.



In a device of the class described and in combination with a rifle barrel having an open sight, a support comprising a pair of arms shaped to fit upon opposite sides of the barrel and having lower terminal perforated ears, a clamping screw threaded through said ears for clamping the support to the barrel, a casing secured between the upper ends of the arms in fixed position above the sight and having in its lower end an opening centered on a line perpendicularly to the longitudinal axis on the barrel and taken immediately in rear of the sight, and a lamp fixed in and wholly inclosed by the casing, the light rays being projected through said opening in a direct path for illuminating the sight.

880,295. GATE. JAMES F. S. GOBLE, New Albin, Iowa. Filed Jan. 12, 1907, Serial No. 352,004. Renewed Aug. 30, 1907. Serial No. 390,827.



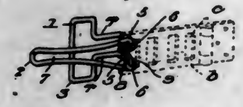
1. In a device of the class described, a frame including a slotted standard and a pair of rearwardly extending track rails, a longitudinal movable gate having a pair of vertically spaced longitudinally extending guide rails, a weight secured to and rearwardly projecting from the guide rails, rollers journaled on the weight for movement on the track rails, a guard rail, an operating wheel journaled on the track rails between the guide rails, a pinion fixed on the operating wheel, a toothed operating bar mounted on the frame for engagement with the pinion, a bracket mounted upon the standard, and an operating lever pivotally mounted upon the bracket for movement in the slot of the standard, said lever having engagement with the operating bar.

2. In a device of the class described, a standard, an operating wheel journaled thereon, a gate mounted upon the operating wheel, a track rail, a counter-balancing weight secured to the gate, a roller carried by the weight for movement on the track rail, and means by which rotary motion can be imparted to the operating wheel to open and close the gate.

3. In a device of the class described, a standard, an operating wheel journaled thereon, a gate provided with a guide rail and mounted on the operating wheel through the medium thereof, a track rail, a counter-balancing weight secured to the guide rail, a roller carried by the weight for movement on the track rail, and means by which rotary motion can be imparted to the operating wheel to open and close the gate.

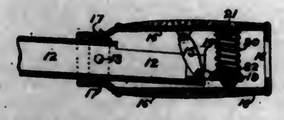
4. In a device of the class described, a standard, an operating wheel journaled thereon, a gate provided with a pair of vertically spaced guide rails and mounted upon the operating wheel through the medium thereof, a track rail, a counter-balancing weight secured to and projecting from the guide rails, a roller carried by the weight for movement on the track rail, and means by which rotary motion can be imparted to the operating wheel to open and close the gate.

880,296. FASTENER. WINNE GORDON, Sharon Springs, N. Y. Filed May 23, 1907. Serial No. 375,284.



The herein described fastener comprising a base member made of a single piece of wire bent to form a main portion, parallel arms extending from one side thereof, outturned studs projecting from said arms, and eyes at the outer ends of said studs, and a tongue also made of a single piece of wire double to form a main portion having pivot devices bent laterally through the inner corners of such main portion to engage the eyes of the base member and arms extending radially from such pivot devices to lie substantially in common plane of the studs of the base member when such tongue is turned to a closed position, substantially parallel with such base member.

880,297. SHOCK-ABSORBING DEVICE FOR CYCLES. FREDERICK R. GRAHAM-YOOLL, Leith, Scotland. Filed Apr. 3, 1907. Serial No. 366,174.



1. A shock and vibration absorbing device for cycles comprising a laterally and vertically moving part, a fixed part, an inclined link within said moving part pivoted thereto and to said fixed part, in combination with spring means between said parts, substantially as described.

2. A shock and vibration absorbing device for cycles, comprising a movable part, a fixed tubular part, a ring sliding thereon to which one end of the moving part is pivoted, an inclined link connecting between the moving part and the fixed part and a spring between the parts, as described.

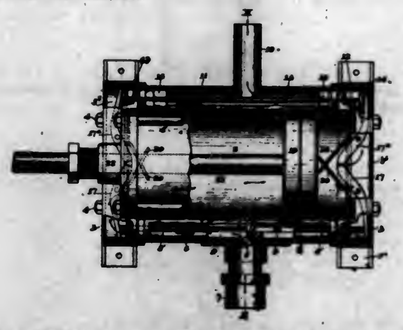
3. A shock and vibration absorbing device for cycles, comprising an ovoid tubular moving part, a fixed part embraced thereby, a sliding joint between said parts, and an inclined link pivoted to said fixed part and to one end of the moving part, in combination with spring means between said parts, as described.

4. A shock and vibration absorbing device for cycles, comprising an ovoid tubular moving part, a fixed part embraced thereby, a ring sliding thereon and to which one end of the moving part is pivoted, an inclined link connecting the other end of the moving part to the fixed part and a spring between the parts, as described.

5. A shock and vibration absorbing device for cycles, comprising a moving part, a fixed part, an inclined link connecting the moving part to the fixed part, a heel piece on the link and a spring acting between it and one of the parts, as described.

[Claims 6 and 7 not printed in the Gazette.]

880,298. HYDRAULIC MOTOR. OSCAR F. GRANT and JOHN G. MCDOWELL, Pittsburg, Pa. Filed Oct. 9, 1905. Serial No. 281,898.



1. A hydraulic motor having a cylinder, a piston arranged to reciprocate therein, an admission valve having two admission positions, an outlet valve at each end portion of the cylinder, levers arranged to operate said valves, and operated by the piston at the ends of its stroke, and springs intermediate of the piston and said levers and arranged to be compressed by the piston prior to the operation of said levers, the said outlet valves being connected so as to be operated simultaneously but in reverse directions; substantially as described.

2. In a hydraulic motor, a cylinder having an inlet port leading to each end thereof, a piston arranged to reciprocate in the cylinder, an admission valve arranged to control said ports and having a valve rod extending from both directions, levers engaging the said rods and lying partially within the cylinder for contact with the picton, springs intermediate of the levers and piston, said cylinder also having two outlet ports, connected valves for controlling said ports, and lever and spring mechanism actuated by the piston at each end portion of the stroke for simultaneously actuating said outlet valves; substantially as described.

3. In a hydraulic motor, the combination with a cylinder, a piston therein and an inlet port and valve, of outlet ports at the respective end portions of the cylinder, valves for the said ports, a rod connecting the valves, levers engaging the said valves and lying partially within the cylinder, and springs carried by the said levers and arranged to be engaged by the piston; substantially as described.

4. In a hydraulic motor, the combination with a cylinder, and a piston arranged to reciprocate therein, of an inlet passage at one side of the said cylinder and communicating with both end portions thereof, an outlet passage at the opposite side of said cylinder, and also communicating with both end portions thereof, valves for controlling the said inlet and outlet passages, the outlet valves being connected one with the other levers arranged to operate said valves, and springs arranged to act upon said levers and lying within the end portions of the cylinder; substantially as described.

5. In a hydraulic motor, the combination of a cylinder, a piston therein, and inlet and outlet ports for said cylinder, of valves for the said ports, levers pivoted within the cylinder heads, and arranged to operate the said valves, said levers having portions extending within the cylinder, and springs attached to said levers and arranged to be compressed by the piston before the latter engages said levers the outlet valves being connected to be simultaneously operated at both ends of the piston stroke; substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

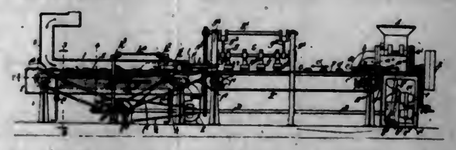
880,299. SKIRT-SUPPORTER. GERTRUDE GROMER, New York, N. Y. Filed Apr. 20, 1907. Serial No. 369,368.



1. A skirt holder comprising a head with one end of a supporting cord or the like secured thereto, means on the head for attaching the other end of the cord, a shank depending from said head, and spring arms having their upper ends connected together and attached to said shank, the lower ends of said spring arms being normally pressed together to enable a skirt to be grasped between them, for the purpose set forth.

2. A skirt holder comprising a head with one end of a supporting cord or the like secured thereto, means on the head for attaching the other end of the cord, a shank depending from said head, spring arms having their upper ends connected together and attached to said shank, the lower ends of said spring arms being normally pressed together to enable a skirt to be grasped between them, the upper portions of said spring arms being provided with teeth on their outer sides, and a band connecting the upper portions of said arms and coacting with said teeth to press the lower ends of said arms against the skirt to secure the same between them.

880,300. MANUFACTURE OF SWEETMEAT, SUCH AS CHOCOLATE. VICTOR HAIN, West Kensington, London, England, assignor of one-half to Peregrine Oliver Wilson, London, England. Filed Oct. 10, 1004. Serial No. 227,900.



1. In a machine of the class described, a shaping device, a conveying mechanism, means for imparting pressure to the material, a cooling chamber and means for controlling the speed at which the conveying mechanism passes the material through said cooling chamber.

2. In a machine of the class described having conveying mechanism, a shaping device for discharging the material on to said mechanism, a cutter, a pressure imparting device, a cooling chamber, traveling bands in said chamber, a clutch device for alternately throwing said bands into

action, means for transferring the material on to said bands, and means for cooling said chamber.

3. A machine of the class described having a conveying mechanism, a shaping device, a plurality of pressure imparting devices movable in unison, a cooling chamber, separated endless bands in said chamber, means for controlling the movement of said bands, means for cooling said chamber, and means for imparting intermittent motion to the conveying mechanism.

4. In a machine of the class described, a traveling platform, a shaping device mounted above the same and adapted to supply material to said platform, pressure devices operable on said material, a cooling chamber, separated movable bands in said chamber, means for controlling the movement of said bands, and means for imparting motion to the platform.

5. In a machine for molding and wrapping chocolate or other sweetmeat in a plastic state, the combination of a shaping machine, an endless intermittently moving platform, pressure imparting devices, a pusher or conveyer for removing the paste from the pressure imparting device, a traveling divided band, a cooling or hardening chamber, and means for operating the bands at differential speeds, substantially as herein described.

[Claims 6 to 12 not printed in the Gazette.]

880,301. HARROW. FRANK W. HARRISON, Morrison, Tenn. Filed June 26, 1907. Serial No. 380,951.



1. A harrow comprising bars having upwardly extending arms, each formed of angle metal providing a front web, a side web, the latter bearing on the bars and the front webs having downwardly extending portions secured to the front sides of said bars so that said side webs brace said angle metal arms, an adjusting lever also attached to one of said bars, means connecting such bars for angular adjustment, and an adjusting rod connected to one of such bars, such rod and such lever having coacting means to connect such rod to such lever at any desired longitudinal adjustment of such rod, for the purpose set forth.

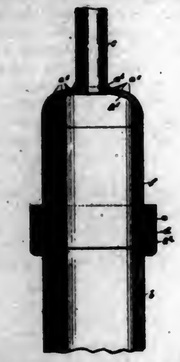
2. A harrow comprising bars having upwardly extending arms, one of such bars being also provided with an upwardly extending adjusting lever spaced from the arms of said bar, a bolt connecting such adjusting lever and said arm, means connecting such bars for angular adjustment, and an adjusting rod connected to one of such bars, such rod passing between such lever and the arm from which it is spaced and adapted to engage such bolt to connect such rod to such lever at any desired longitudinal adjustment of such rod, for the purpose set forth.

880,302. PIPE-FERRULE. CHARLES E. HEINEMAN and GEORGE H. HEINEMAN, Attica, Ind. Filed Mar. 7, 1906. Serial No. 304,667.

1. A pipe ferrule composed of ductile material having one end open with flaring edges, and the other end rounded and partially closed and provided with a central opening of relatively small diameter, and having concentric grooves formed around said opening.

2. A pipe ferrule composed of ductile metal having one end open and having its opposite end partially closed, and provided with a central opening of relatively small diameter, and having concentric grooves formed around said opening by cutting away portions of the ferrule, said grooves being spaced apart and having figures indicating the respective diameters of said grooves.

3. A pipe ferrule formed of ductile metal and provided with a lining of stiff metal, one end of the ferrule being rounded and provided with an opening of relatively small



diameter, and having concentric grooves cut in its outer face for the purpose set forth.

880,303. BUCKET ELEVATOR. FREDERICK A. HETHERINGTON, Indianapolis, Ind. Filed Apr. 26, 1907. Serial No. 370,350.



1. The combination, with an elevator-casing, of a pair of supporting-wheels mounted one in each end thereof, a pair of journal bearings for the shaft of one of said wheels, a tubular sleeve carried by each of said journal bearings substantially at right angles to the bearing, a compression spring mounted in said sleeve, and an adjustable abutment mounted on the casing and adapted to enter said sleeve and have a relative longitudinal movement therein against the spring.

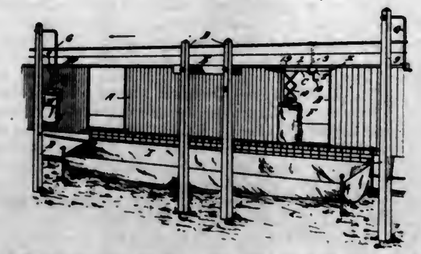
2. The combination, with an elevator casing, of a pair of supporting-wheels mounted one in each end thereof, a pair of journal bearings for the shaft of one of said wheels, a tubular sleeve carried by each of said journal bearings substantially at right angles to the bearing, a compression spring mounted in said sleeve, an adjustable abutment mounted on the casing and adapted to enter said sleeve and have a relative longitudinal movement therein against the spring, and means for preventing withdrawal of the sleeve from the abutment.

3. The combination, with an elevator casing, of a frame 21 carried at each side thereof and each provided at one end with a pair of separated cross bars, a nut arranged between said bars and held against rotation, a threaded rod passing through said nut, a journal bearing having a tubular portion adapted to receive the adjacent end of said threaded rod, a compression spring arranged in said

tubular portion beneath the inserted end of the threaded rod, a carrier-supporting wheel carried by said journal bearings within the casing, a second carrier-supporting wheel also supported within the casing, and an endless carrier mounted upon said wheels, all substantially as and for the purpose set forth.

4. The combination, with an elevator casing, of a frame 21 carried at each side thereof and each provided at one end with a pair of separated cross bars, a nut arranged between said bars and held against rotation, a threaded rod passing through said nut, a journal bearing having a tubular portion adapted to receive the adjacent end of said threaded rod, a compression spring arranged in said tubular portion beneath the inserted end of the threaded rod, means for normally preventing withdrawal of the sleeve from the rod, a carrier-supporting wheel carried by said journal bearings within the casing, a second carrier-supporting wheel also supported within the casing, and an endless carrier mounted upon said wheels, all substantially as and for the purpose set forth.

880,304. MAIL-BAG CATCHER AND DELIVERER. JOSEPH HOLLENBURGER and CHARLES WILL, New Orleans, La. Filed Oct. 17, 1907. Serial No. 397,890.



1. The combination of a mail car provided with oppositely disposed doorways, with a mail bag catching and delivering device mounted on the car to be projected through either doorway thereof, and means supporting the entire device on the roof of the car.

2. The combination of a mail car provided with oppositely arranged doorways, with a mail bag catching and delivering device pivotally mounted on and suspended from the roof of the car in a position to be projected out of either doorway.

3. The combination of a mail car provided with doorways, with mail bag catching and delivering device, said device consisting of a horizontally movable carrying member mounted to be projected out of either doorway, and means for movably supporting the member on and close to the roof of the car, and means for projecting and retracting said member.

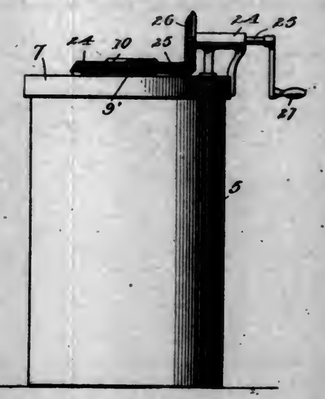
4. The combination of a mail car provided with doorways, with mail bag catching and delivering device, said device consisting of a carrying member mounted to be projected out of either doorway, means for projecting and retracting said member, and a pivot on which the member turns.

5. The combination of a mail car provided with oppositely disposed doorways, with a mail bag carrying device, said device comprising a horizontally movable member, a pivot on the top of the car for supporting the member, and means for projecting one end of the member through either doorway.

[Claims 6 to 11 not printed in the Gazette.]

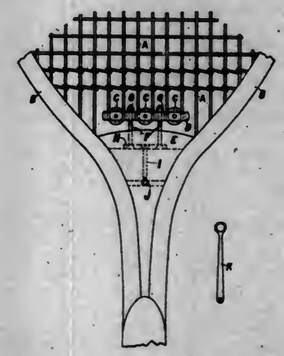
880,305. CHURN. ALBERT A. HOWELL, Powers Lake, N. D. Filed Aug. 22, 1907. Serial No. 389,741.

1. In a churn, the combination with a churn body including a cover, the churn body having longitudinally extending grooves in its side walls, of a vertically disposed shaft carried by the cover and in the center thereof, a gear carried by the shaft, diagonal dashers carried by the shaft and at the lower end thereof, a cross bar carried by the shaft and having its ends disposed within the grooves, shafts mounted in the cover and at either side of the first named shaft and having their lower ends journaled in the cross bar, dashers carried by the shaft, gears carried by the last named shaft and meshing with the first named gear, and means for operating the gears.



2. In a churn, the combination with a churn body, the body having longitudinally extending grooves, of a cross bar carried by the shaft and having its outer ends disposed within the grooves, a vertical shaft arranged within the churn body, diagonal dashers carried by the shaft, the dashers being arranged beneath the cross bar, vertical shafts disposed above the diagonal dashers and having their lower ends journaled in bearings upon the cross bar, dashers carried by the last named shafts, and operating means for the shafts.

880,306. RACKET. FRANCIS IMLACH, Liverpool, England. Filed Oct. 19, 1906. Serial No. 339,645.

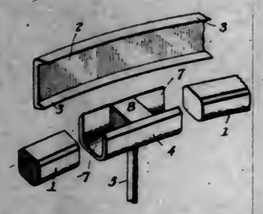


1. The combination in a racket including a frame and cords, of a block secured at the handle end of the frame, a pair of threaded pins projecting from said block, a frame or bar having openings for the passage of said pins, and rounded cord guides carried by said frame or bar, and around which the intermediate cords of the racket are guided, the frame or bar being adjustable on said pins to alter the strain on the cords; substantially as described.

2. The combination in a racket including a frame and cords, of a block forming a permanent part of the frame and provided with a depression or recess in its inner face, a plate secured therein, a pair of threaded pins extending from said plate, a frame or bar having openings for the passage of the pins, pulleys carried by said frame or bar

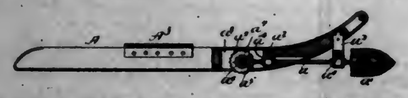
and around which the intermediate cords of the racket are guided, and nuts mounted on said pins and by which the frame or bar may be adjusted to alter the strain on the cords; substantially as described.

880,307. WAGON-WHEEL. RICHARD E. JEFFERY, Piedmont, Cal. Filed Sept. 23, 1907. Serial No. 394,158.



In a vehicle wheel, the combination of a spoke, a clip applied to the outer end thereof and having opposed end sockets, a pair of rim sections having their ends seated in said sockets and of a height greater than the depth of the sockets, and a tire applied to said rim and having flanges to rest on the edges of said clip and to bear on the side faces of said rim.

880,308. TRACK-SWEEPER. JOHN E. KELLEY, Bangor, Me. Filed May 24, 1907. Serial No. 375,387.



1. A sweeping device of the character specified having in combination a carrier, rotatable brushes carried thereby and located to operate in ruts in which said carrier is traveling, and means for turning said brushes.

2. A sweeping device of the character specified having in combination a carrier, rotatable brushes carried thereby and located to operate in separate planes parallel with the line of travel of said carrier, and means for turning said brushes.

3. A sweeping device of the character specified comprising in combination a carrier, revolving brushes located to operate in ruts in which said carrier is running, shafts projecting from said carrier bearing said brushes, and means whereby said shafts may be rotated for rotating said brushes.

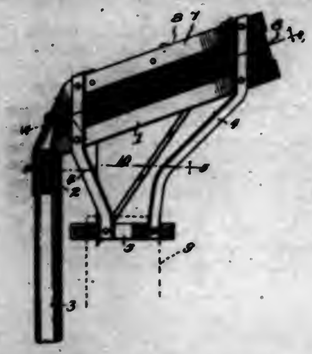
4. A sweeping device of the character specified comprising in combination a carrier, revolving brushes located to operate in ruts in which said carrier is traveling, shafts projecting from said carrier bearing said brushes, means for yieldingly supporting said shafts, and means whereby said shafts may be rotated for rotating said brushes.

5. A sweeping device of the character specified having in combination a sled, rotatable brushes carried thereby and located to operate in ruts in which said sled is traveling, rotatable shafts projecting from said sled and carrying said brushes, means for supporting said shafts, a shaft interposed between the runners of said sled, means whereby the motion thereof may be imparted to said brush-carrying shafts, and a rotatable member on said interposed shaft adapted to contact with the surface of said roadbed over which the sled is passing, substantially as and for the purposes set forth.

880,309. SPARK-ARRESTER. ROBERT B. KENNINGTON, Fitzpatrick, Ga. Filed Aug. 9, 1907. Serial No. 387,863.

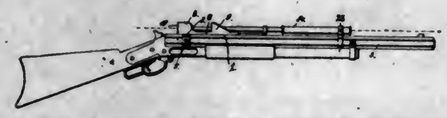
1. In a spark arrester, a horseshoe-shaped trough supported in an inclined position, a foraminous wall connected with and extending upwardly from the outer wall of the trough, a cap member connected with the upper edge of the foraminous wall, and a deflector secured upon the underside of the cap.

2. In a spark arrester, a horseshoe-shaped trough, supporting brackets connected with said trough and extending above the latter, a flanged cap member connected with the extended ends of the brackets and supported thereby above



the trough, a discharge pipe connected with the latter and a downward extending deflector secured upon the underside of the cap; said deflector being provided with a terminal point or apex at its lower extremity.

880,310. ATTACHMENT FOR FIREARMS. FRANK KLOUSNITZER, Herman, Pa., assignor of one-eighth to Vitus Krainbucher, Butler, Pa. Filed May 1, 1907. Serial No. 371,252.



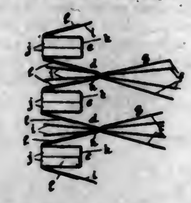
1. In an attachment for a fire arm, the combination with the barrel thereof, of a plate clamped upon said barrel, enlargements having grooves in its confronting faces and extending from said clamped plate, notched enlargements carried by said side plates, a bar slidably mounted between said grooved side plates, a sight section pivotally connected to said bar and having lugs to engage in the notches of said enlargements, a section pivotally connected to the forward end of said bar, a telescope carried by said section and having its rear end provided with pins adapted to engage in the grooves in said enlargements, and a bracket for supporting the forward end of said telescope.

2. The combination with a fire arm and a telescope, of a plate carried by the barrel of said fire arm, enlargements carried by the rear end of said plate, and having notches formed therein arranged at an inclination to said plate, grooved enlargements carried by said plate, a bar slidably mounted upon said plate, a sight section pivotally connected to said bar and adapted to be supported in the notches of said enlargements, a section pivotally connected to said bar and to said telescope, and pins carried by the rear end of said telescope and extending into said grooved enlargements.

3. An attachment for fire arms embodying a plate, a bar slidably mounted upon said plate, sections pivotally connected to said bar, a telescope pivotally connected to one of said sections, a sight carried by the other of said sections, means for supporting said sight section in an elevated position, and means for supporting the rear end of said telescope in alinement with the sight of the elevated section.

880,311. ALBUM. REINHOLD KRUMMING, Milwaukee, Wis. Filed Feb. 14, 1906. Serial No. 300,982.

1. In an album, scrap-book or the like, a leaf-element comprising one or more sheets folded in the center to form double the number of leaves, the same number of paper strips of substantially equal thickness, likewise once folded along the center, and a hinge-joint between the folds of said leaves and said strips.



2. In an album, scrap-book or the like, an element comprising a plurality of sheets each folded once along the center to form double the number of leaves, said leaf-sheets being laid together one inside the other, the same number of strips of paper of substantially equal thickness likewise folded once along the center and laid one inside the other, and a hinge-joint uniting said sheets with said strips along the folds thereof.

3. In an album, scrap-book or the like, a filling-piece consisting of a block comprising the body of the filling-piece, and a strip of paper covering the front edge and sides of said block and having its side edges extending beyond the sides of said block to form flaps hinged to the side edges of the block which constitute a means of attachment for the leaves.

4. In an album, scrap-book or the like, the combination of a plurality of leaf-elements each consisting of one or more paper sheets folded along the center to form double the number of leaves and a guard comprising an equal number of paper strips likewise folded along the center and united to said sheets by a hinge passing through said folds of said leaves and strips, and a plurality of filling-pieces alternating with said leaf-elements and each consisting of a block forming the body of the filling-piece and a paper flap projecting from and hinged to each of the back edges of said block, said paper flaps of the filling-pieces being united to the strips of the leaf-elements.

5. An album, scrap-book or the like comprising, in combination with suitable back and covers, a back-strip, a plurality of filling-pieces separately secured at their back-edges to said back-strip, a plurality of leaf-guards alternating with said filling-pieces and likewise secured by their back-edges to said back-strip and having their front edges projecting beyond said filling-pieces, said leaf-pieces and filling-pieces being disconnected from each other at the sides whereby the same open apart when the book is opened, and a plurality of signatures of leaves, each signature of leaves being secured in a hinged manner to one of the leaf guards whereby when the book is opened each signature of leaves is adapted to lie flat separately and without interference from said filling-pieces.

[Claims 6 to 10 not printed in the Gazette.]

880,312. STREET OR ROADWAY STRUCTURE. NATHANIEL LAFON, Red Jacket, W. Va. Filed May 6, 1907. Serial No. 372,102.



1. In a road structure, a suitable base, a surface laid thereon, channeled stringers laid end to end and receiving and interlocking with the side edges of the road surface, transverse ties extending through the bed in line with and between the junction ends of the stringers, and couplings interlocking with and connecting the ties with the stringers and also connecting the junction ends of the latter.

2. In a road structure, a bed, a road surface laid thereon, vertically arranged longitudinally extending channeled stringers laid end to end and receiving the side edges of the road surface, transverse ties extending through the road bed, in line with and between the junction points of the stringers and couplings connecting said ties with the stringers and said stringers with each other at and between their junction points.

3. In a road structure, a suitable bed, a road surface laid thereon, longitudinal channeled stringers receiving the edges of the road surface, transverse ties extending through the bed, couplings connecting certain of the ties with the adjacent ends of the stringers, and couplings connecting the other ties with the stringers between the junction points of the latter.

4. In a road structure, a suitable bed, a surface thereon, channeled transverse tie bars extending through the bed, channeled longitudinal stringers receiving the side edges of the bed, and coupling blocks or members seated in the channels of the tie bars and secured thereto and extending upwardly on the outer sides of the stringers and having clips projecting over the same.

5. In a road structure, a suitable base, a surface laid thereon, and a framing structure comprising opposite sets of longitudinal stays laid end to end and receiving and interlocking with the side edges of the surface material, and transverse ties extending through the bed, said ties detachably connecting the opposite sets of stays at and between their junction points.

[Claim 6 not printed in the Gazette.]

880,313. BURNER FOR EXPLOSIVE-ENGINES. JAMES S. LANG, Boston, Mass. Filed June 28, 1905. Serial No. 267,405.



1. A burner of the character specified having a casing, a valve inside said casing, gas and air supply passages extending through said casing and valve to form a combustible mixture inside the valve whereby a flame may issue from a portion thereof forming the mouth of the burner, and air supply passages admitting air to the flame beyond said mouth of the burner.

2. A burner of the character specified having a casing, a valve inside said casing having an opening therein forming the mouth of the burner, said valve having also a portion extending forward from said mouth and lying snugly adjacent to the wall of the casing, fuel and air supply passages extending through the wall of said casing and valve to connect with said mouth, and air passages extending through said casing and said extended portion of the valve beyond said mouth.

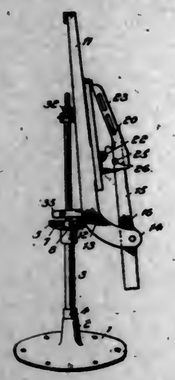
3. A burner of the character specified comprising an external valve casing, a valve contained within said casing, a mixing chamber within said valve having an outlet at the end of the valve forming the mouth of the burner and from which the flame issues, fuel and air passages extending through said valve and casing to said mixing chamber, and air passages for admitting air to the flame through said valve and casing at a point about opposite the mouth of the burner.

4. A burner of the character specified having an external casing, a valve contained therein, a mixing chamber inside said valve and connecting with the end of said valve forming the mouth of the burner, and fuel and air supply passages extending through the valve and casing to connect with said mixing chamber the air supply passage being arranged to direct a stream of air across the end of said fuel supply passage and towards said mouth of the burner.

5. A burner of the character specified having an external casing, a valve contained within said casing and with an outlet at one end thereof forming the mouth of the burner or point from which the flame issues, an entry extending through said casing and valve to connect with the valve outlet or mouth of the burner for admitting and directing thereto combustible matter, means arranged in said outlet and forming an annular orifice through which the products of combustion are adapted to be discharged and directed to issue against the interior wall of a passage beyond said mouth of the burner, said passage be-

yond the mouth of the burner, and air passages through said valve and casing admitting air to the flame between said mouth and the point where the flame contacts with the interior wall of the passage beyond said mouth.

880,314. OPERA-CHAIR. ADOLPH L. LEVIN, Denver, Colo. Filed July 10, 1907. Serial No. 383,102.



1. In an opera chair, the combination with a leaning standard, of a folding chair-frame rotatably connected to said standard, and a fixed flange having a warped surface upon which said frame rests and travels in the course of its rotation.

2. In an opera chair, the combination with a leaning standard, of a folding-chair frame rotatably connected to said standard, and a fixed flange having a warped surface on both sides of its center upon which said frame travels in the course of its rotation.

3. In an opera chair, the combination with a leaning standard, of a folding-chair frame rotatably connected to said standard having a radial bearing lug, and a flange fixed with relation to said standard having a warped surface upon which said bearing lug rests and travels.

4. In an opera chair, the combination with a leaning standard, of a folding chair-frame rotatably connected to said standard having a central bearing lug, a flanged support having a warped surface upon which said bearing lug travels, and radial depressions in said flange support for arresting said lug and frame in given positions.

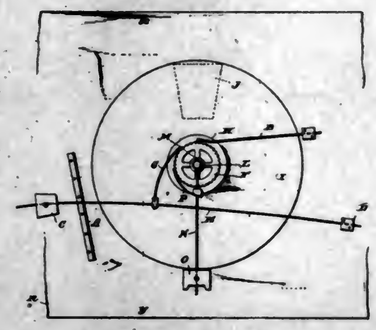
5. In an opera chair, the combination with a leaning standard, of a folding chair-frame rotatably connected to said standard, and a flanged support fixed with relation to said standard having a depressed conical surface upon which said frame rests and travels in the course of its rotation.

[Claims 6 to 15 not printed in the Gazette.]

880,315. AUTOMATICALLY-MOVING SIGN. GEORGE J. LOAD, New Orleans, La., assignor of one-half to John Edward Thorsell and one-fourth to John R. Hunter, Alexandria, La., and one-fourth to Ruth Wiggins, New York, N. Y. Filed May 20, 1907. Serial No. 374,707.

1. In an automatic sign, the combination of a suitable apertured casing, a rotatable dial therein, a ratchet, two disks one on each side of said dial, a shaft on which said dial, disks and ratchet rotate, a spring secured at one end and free to swing at its other end, a weight on the free end of said spring, a guide for said spring, a pawl carried by said spring and engaging said ratchet, and a detent pawl for preventing a backward motion of said ratchet, substantially as described.

2. In an automatic sign, the combination of a suitably apertured casing, a rotatable dial therein, a ratchet, two disks one on each side of said dial and secured to the same, a shaft on which said dial, disks and ratchet rotate, a spring pin securely holding the parts together, a spring secured at one end and free to swing at its other end, a weight adjustably secured to the free end of said spring, a slotted guide compelling said free end of said spring to move in a vertical path, a pawl carried by said spring and engaging said ratchet, and a bent detent pawl for preventing a backward motion of said ratchet, substantially as described.



3. In an automatic sign, the combination of a suitable apertured casing, a rotatable dial therein, a ratchet, two disks one on each side of said dial, a shaft on which said dial, disks and ratchet rotate, a spring secured at one end and free to swing at its other end, a weight on the free end of said spring, a guide for said spring, a pawl carried by said spring and engaging said ratchet, a rod suspended from said shaft, a weight carried by said rod, a pawl carried by said rod and engaging said ratchet, said rod and said spring being at substantially right angles to each other, and a detent pawl for preventing backward motion of said ratchet, substantially as described.

880,316. PROCESS FOR PRODUCING FAT AND OIL PREPARATIONS. KARL MANN, Zurich, Switzerland. Filed Nov. 24, 1905. Serial No. 288,952.

1. A process for producing fat- and oil-preparations, consisting in mixing fat substances with a fostering medium for "kephir", in impregnating the mixture with "kephir", in causing it to ferment at a temperature favorable to the development of the ferment and in agitating the fermenting mass.

2. A process for producing fat- and oil-preparations, consisting in mixing fat substances with a fostering medium for kephir ferments, in impregnating the mixture with kephir-like acting ferments and in causing it to ferment by agitating the mass at a temperature favorable to the development of the ferments.

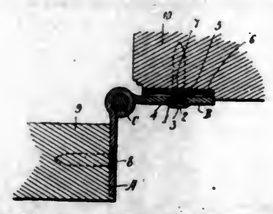
3. A process for producing fat- and oil-preparations, consisting in mixing fat substances with a fostering medium for kephir, in impregnating the mixture with kephir ferment, in causing it to ferment by agitating the mass at a temperature favorable to the development of the ferment and in separating the obtained fat preparation from the by-products of the fermentation.

4. A process for producing butter substitutes, consisting in mixing butter like fats with a fostering medium for "kephir", in impregnating the mixture obtained with kephir, and in causing the mass to ferment by agitating it at a regulated temperature favorable to the development of the ferment.

5. A process for producing butter substitutes, consisting in mixing butter fats with a fostering medium for "kephir", in impregnating the mixture obtained with kephir, and in causing the mass to ferment by agitating it at a regulated temperature favorable to the development of the ferments and in separating the obtained fat preparation from the byproducts of the fermentation.

[Claims 6 to 11 not printed in the Gazette.]

880,317. DOOR-HINGE. WALDEMAR L. VON DE MARWITZ, Los Angeles, Cal. Filed Aug. 7, 1907. Serial No. 387,545.

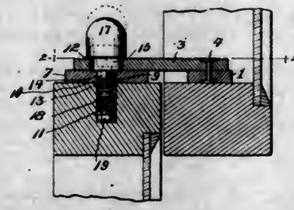


1. A door hinge, one leaf of which is provided with openings for passage of the usual fastening screws, adjusting screws threaded through said leaf, and a filling plate provided with openings for passage of the fastening screws and having swiveled connection with said adjusting screws.

2. A door hinge having a leaf provided with recessed lugs or bosses, and threaded apertures in registry therewith, in combination with adjusting screws extending through the threaded apertures and having reduced ends, and a filling plate having apertures engaging the reduced ends of the adjusting screws and connected therewith by upsetting said reduced ends.

3. In a door hinge, a leaf having openings for the passage of the usual fastening screws and provided with sockets or recesses, and a mating leaf having openings for passage of such screws and formed with lugs or bosses adapted for engagement with said sockets or recesses, in combination with adjusting screws extending through the lugs or bosses, and a filling plate carried by and having swiveled connection with said adjusting screws.

880,318. SASH-LOCK. LOUIS S. MATTOX, Plainfield, N. J. Filed June 14, 1907. Serial No. 379,016.



1. In a locking device of the class described, the combination with a movable latch bar having a lateral slot extending from one side thereof, and a broadened opening at the inner end of such slot, of a base plate having an opening and an angular recess communicating therewith, and a bolt having a stem operated in said opening of the base plate, an angular shoulder to fit in such recess to prevent the bolt from casually turning, and an enlarged portion to fit in the opening in the latch bar and having flattened sides to clear the slot thereof.

2. The combination with a pivotally mounted latch bar having a lateral slot extending from one side thereof, and a broadened opening at the inner end of such slot, of a base plate having an opening and an angular recess communicating therewith, a bolt having a stem operated in said opening, an angular shoulder to fit in such recess to prevent the bolt from casually turning, and an enlarged portion to fit in the said opening in the latch bar and having flattened sides to clear the slot thereof, and a spring to normally keep the said shoulder of the bolt in engagement with the angular recess of such base plate.

880,319. FASTENING DEVICE. CONDUCE G. MEGRUE, New York, N. Y. Filed Mar. 23, 1906. Serial No. 307,573.

1. A fastening device consisting of two members pivotally connected, one member being movable and the other stationary, a spring located betwen the two members and performing the two-fold function of normally holding the free end of the movable member in a raised position, and of clamping an article between one of its arms and the stationary member, and a lever to close the other member and hold it in such position.



2. A fastening device consisting of two members pivotally connected together near one end, means located between the two members by which their free ends are normally held apart and by which means an article may be clamped betwen it and one of the said members and a lever for closing the other member and holding it in such position.

3. A device for securing such articles as memorandum books in the pockets of articles of apparel, comprising fixed and movable members pivotally connected near one end, a spring located between said members having one long arm by which the book or other article may be clamped between it and the fixed member, and a short arm by which the free end of the movable member is normally held away from the fixed member, the free end of the movable member being adapted to extend over the edge of a pocket in an article of clothing, and means for clamping the same thereto.

4. A device for securing articles such as pocket and memorandum books in the pockets of clothing, consisting of one stationary member having a tapering prolongation at its rear end, a second member pivotally connected to the stationary member, its end to the rear of such connection being reduced in width and depressed and having a slot therein, a spring located between the fixed and stationary members and having a long loop arm by which a book or other article may be clamped between it and the fixed member, and short arms by which the free end of the movable member is normally held away from the fixed member, the free end of the movable member being adapted to extend over the edge of a pocket in an article of clothing, and a bent lever extending through the slot in the rear end of the second member, with its short arm acting upon the reduced portion at the rear of the stationary member to force the free end of the second member against the pocket and clamp and hold the same thereto when the long arm of the lever is pushed forward.

5. A fastening device comprising stationary and movable members with ears, a pivot pin connecting the same in a hinged relation, a lever at one end for operating and applying clamping force to the movable member and an interposed loop spring with coils about the pivot pin, and free ends tending to raise the movable member and the loop overlaying a free end of the stationary member under tension of the coils.

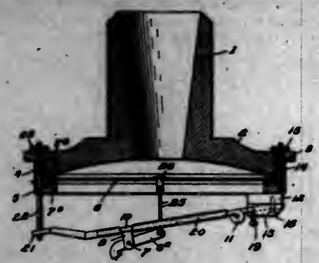
[Claim 6 not printed in the Gazette.]

880,320. REPRODUCER FOR PHONOGRAPHS. ARTHUR C. MESTRAUD, Lincoln, Nebr., assignor to Oscar J. Junge, Lincoln, Nebr. Filed June 18, 1907. Serial No. 379,617.

1. A sound reproducer for phonographs comprising a diaphragm ring, a diaphragm seated therein, a pair of springs, a supporting plate for said springs, a stylus arm pivoted to said plate and connected to said diaphragm, and adjusting screws for regulating the tension of said springs.

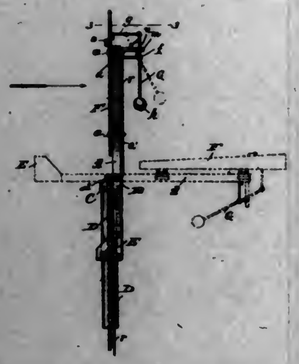
2. A reproducer for phonographs comprising an intake nipple having an annular flange, a diaphragm ring, a diaphragm seated between said flange and ring, a supporting plate, springs secured to said plate, means for supporting said springs at one side of the diaphragm ring, set screws

for adjusting the tension of said springs, a stylus arm pivotally connected to said plate, and a yoke connected to the diaphragm button and to the stylus arm.



3. In a sound box for phonographs, the combination of a supporting plate, a pair of springs connected to said plate, adjusting devices for said springs, a stylus arm pivoted to said plate and connected to the diaphragm, and a limit loop for supporting one end of the plate, said limit loop having a threaded shank fitted with a nut, and an unthreaded member seated in a recess in the diaphragm ring.

880,321. WIND-MOTOR. DANIEL D. MCINTYRE, Bucklin, Kans. Filed July 31, 1907. Serial No. 386,475.



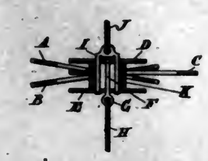
1. A vibrating wind motor, comprising an oscillating frame having a horizontal axis and two downwardly extending arms with weights on the lower ends of the same, shiftable blades on the upper end of said frame, a swinging and weighted lever fulcrumed on the upper end of the frame on an axis parallel to the series of blades to swing in a plane at right angles to the series of blades and having a direct connection with the blades to shift the same from the swing of the lever to and from the blades and a frictional restraining device for holding said lever until the latter part of the stroke.

2. A vibrating wind motor, comprising a frame with two converging side bars with weights attached to their lower converging ends, two cross bars connecting the upper ends, blades hinged at one edge to said cross bars, automatic shifting devices for the blades and an axial shaft located between the weights and the blades.

880,322. CHROMATIC TOY. ALFRED L. NEWELL, Ealing, England. Filed Aug. 23, 1907. Serial No. 389,893.

1. A device of the class described, comprising a plurality of differently colored rings interlaced with one another, and means for revolving the rings relatively to one another.

2. A device of the class described, comprising a plurality of colored rings interlaced with one another, means for revolving the rings while the latter remain substantially in fixed relation to give a certain chromatic effect, and means for revolving the rings relatively to one another to give a chromatic effect different from that first mentioned.



3. A device of the class described, comprising a plurality of differently colored rings interlaced with one another, means for revolving the rings while the latter remain in fixed relation, and means coöperating with the inner circumferences of the rings for revolving them relatively to one another.

4. A device of the class described, comprising a plurality of colored rings interlaced with one another, means arranged to engage a side of each ring for revolving the rings while in substantially fixed relation to one another, and means coöperating with the inner circumferences of the rings for revolving them relatively to one another.

5. A chromatic device of the class described, comprising a disk, means for revolving the latter, a plurality of differently colored rings interlaced with one another and having a frictional engagement at their sides with the said disk to cause rotation of the rings about the center of the disk as an axis, and a device rotatable with the disk and coöperating with the inner circumferences of the said rings for causing the latter to rotate independently about their respective geometrical axes when the speed of rotation of the disk varies relatively to the speed of rotation of the rings about the center of the disk as an axis.

[Claims 6 to 8 not printed in the Gazette.]

880,323. SHOE-LACE FASTENER. GEORGE H. NICHOLLS, Galveston, Tex. Filed Aug. 16, 1907. Serial No. 388,799.



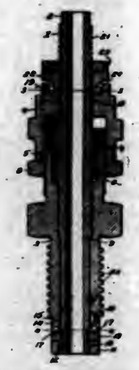
The combination with the tongue and uppers of a lacing boot or shoe, of a stud attached to and projecting outwardly from the tongue and provided with a head having a transverse opening, and a lace having a series of longitudinal slits adapted to receive the head of the stud, substantially as described.

880,324. BALL-BEARING WATER-HEAD FOR DIAMOND DRILLS. ROBERT E. PARKER, Flat River, Mo. Filed Nov. 12, 1907. Serial No. 401,895.

1. A waterhead comprising a center tube, a bearing head for the center tube having a ball race at one end thereof, a ball collar adjustable on said center tube in opposition to the bearing head, anti-friction balls interposed between the collar and head, and a ball bearing at the opposite end of the waterhead embodying collars carried by the head and center tube, and balls interposed between said collars.

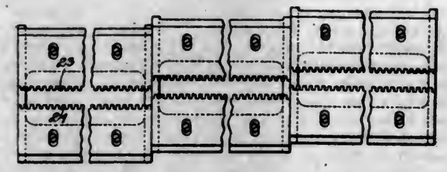
2. A waterhead comprising relatively adjustable head sections, a ball cup on one of said sections, a center tube journaled in the head sections and having a threaded portion, a ball cone adjustable on said threaded portion in opposition to the ball cup, anti-friction balls between said cone and cup on the head section, a threaded extension on the other section of the head, a ball collar connected to said extension, another ball collar fast on the center tube, and anti-friction balls interposed between the two last named collars.

3. A water head comprising a center tube, a bearing head in which said tube is mounted comprising relatively adjustable sections having their adjacent ends chambered out and threaded together, a packing collar arranged with-



in the chambered ends of said sections, ball bearings between the center tube and head at opposite ends of the latter, and means for adjusting said bearings substantially as described.

880,325. COTTON-GIN. NORMAN PEARSE, London, England. Filed Oct. 11, 1905. Serial No. 282,269.



1. In a cotton gin or the like, a ginning roll, a doctor, an opposite guard plate having a knife edge adapted to strip the seed, said plate facing said doctor opposite the roll, opposite clearers respectively adjacent said doctor and guard plate, and operating mechanisms for said clearers operating to bring them alternately into coöperation with the doctor and the guard plate respectively.

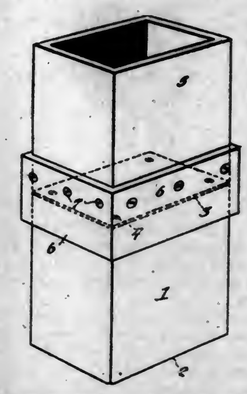
2. In a cotton gin or the like, a ginning roll, a doctor and opposite clearers moving approximately tangentially to the surface of the roll synchronously toward and from said doctor, each of said clearers being provided at its edge with teeth facing each other, said teeth being flat-ended, and the teeth of one clearer being opposite the indentations of the opposite clearer and arranged to beat the cotton with relation to said doctor forward and laterally, thereby rapidly beating and stripping the cotton from the seed.

3. In a cotton gin or the like, a ginning roll, a doctor, and opposite clearers moving approximately tangentially to the surface of the roll synchronously toward and from said doctor, each of said clearers being provided at its edge with teeth facing each other, said teeth being flat-ended, being approximately as wide as the opposite indentation, the teeth of one clearer being opposite the indentations of the opposite clearer and arranged to beat the cotton with relation to said doctor forward and laterally, thereby rapidly beating and stripping the cotton from the seed.

880,326. FEED-CHOPPER. JOHN F. RAYMOND, Scottsbluff, Nebr. Filed July 2, 1907. Serial No. 381,821.

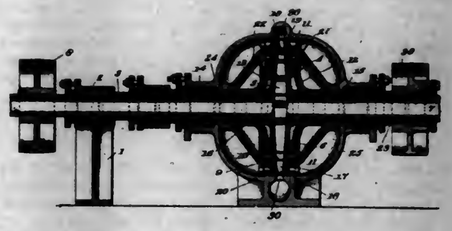
1. A device of the class described comprising a block having a wooden face at one end and a metal face at the opposite end, and a holder adapted to be applied to either end of and having means to attach it to the block.

2. A device of the class described comprising a wooden block, a metal plate, means for removably securing the plate to the block, a removable receptacle adapted to rest on either end of the block, and a collar on one end of the



holder adapted to embrace either end of the block for preventing lateral displacement of the holder.

880,327. COMPOUND CENTRIFUGAL PUMP. ERLAND W. RIGGS, Butte, Mont., assignor of one-half to Morris S. Largey, Butte, Mont. Filed May 9, 1907. Serial No. 372,700.



1. In a compound centrifugal pump, the combination of a central centrifugal pump provided with curved vanes and mounted on a hollow shaft, another centrifugal pump surrounding said first-named pump and mounted on hollow shafts, a stationary diffusion ring between said pumps, and means for driving the outer pump at a greater angular speed than the inner pump, substantially as described.

2. In a compound centrifugal pump, the combination of a central pump mounted on a hollow shaft and provided with curved vanes, an annular centrifugal pump surrounding said first-named pump and having vanes curved in the same direction as the vanes of said first-named pump, a stationary diffusion ring provided with vanes curved in the opposite direction to the vanes on the pumps, means for driving said outer pump at a greater angular speed than said inner pump, a volute shaped casing surrounding said pumps, and inlet and discharge pipes, substantially as described.

3. In a compound centrifugal pump, the combination of a central pump mounted on a hollow shaft and provided with curved vanes, a stationary diffusion ring surrounding said pump and provided with vanes curved in the opposite direction, a second annular centrifugal pump surrounding said diffusion ring mounted on a hollow shaft and provided with curved vanes, the vanes on said second pump being curved in substantially the same direction as those on the first-named pump, means for driving said outer pump at a greater angular speed than the inner pump, a volute shaped casing provided with vanes substantially parallel to the vanes on said diffusion ring, and inlet and discharge pipes, substantially as described.

880,328. COMBINED IMPRESSION-TRAY AND CHEEK-DISTENDER. RALPH E. SADLER, Cleveland, Ohio. Filed May 13, 1907. Serial No. 373,255.



1. A device for the purpose specified comprising a base plate, a pair of levers pivoted thereto, a pair of curved spreading members carried by the inner ends of said levers, and operating links connected with said levers, substantially as specified.

2. In a device for the purpose specified, the combination of a base plate, a pair of curved levers pivoted thereto, a spreading member operatively connected to each of said levers, links connected with said levers, and an operating member for said links, substantially as specified.

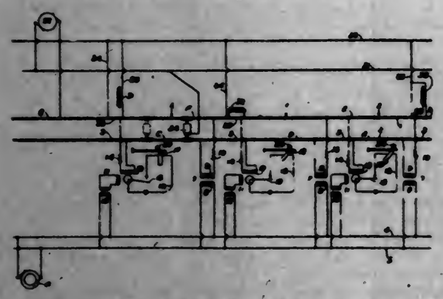
3. In a device for the purpose specified, the combination of a base plate, a pair of levers pivoted thereto, a spreading member operatively connected to each of said levers, and operating means for said levers, substantially as specified.

4. A device for the purpose specified comprising a base plate, a pair of levers pivoted thereto, distending members carried by said levers, links connected to said levers, and flanges projecting from said base plate and adapted to engage said links, substantially as specified.

5. A device for the purpose specified comprising a base plate having flanges adapted to be applied to the handle of an impression tray, a pair of levers pivoted to said base plate, distending members carried by said levers, and operating means for said levers, substantially as specified.

[Claims 6 to 14 not printed in the Gazette.]

880,329. RAILWAY SIGNALING SYSTEM. WILMER W. SALMON, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed July 3, 1907. Serial No. 382,123.



1. In a signaling system for electric railways, a track in which one rail is the return conductor for the propulsion current; a supplemental return conductor for the propulsion current; cross connections between the propulsion rail and the supplemental return conductor; a signaling circuit which includes a portion of the propulsion rail; signaling devices in said signaling circuit adapted to be energized by a current of different properties from the propulsion current; and means for preventing the operation of the signaling devices while a break exists in said portion of the propulsion rail.

2. In a signaling system for electric railways, a track in which one rail is the return conductor for the propulsion current; a supplemental return conductor for the propulsion current; cross connections between the propulsion rail and the supplemental return conductor; a signaling circuit which includes a portion of the propulsion rail; signaling devices in said signaling circuit adapted to be energized by a current of different properties from the propulsion current; and means for limiting the flow of signaling current flowing through the cross connections while a break exists in said portion of the propulsion rail.

3. In a signaling system for electric railways a track in which one rail is the return conductor for the propulsion current, a supplemental return conductor for the propulsion current; cross connections between the propulsion rail and the supplemental return conductor; a signaling circuit which includes a portion of the propulsion rail between adjacent cross-connections; signaling devices in said signaling circuit adapted to be energized by a current of different properties from the propulsion current; a reactance in series with one of said adjacent cross connections; and means for preventing access of the propulsion current to said reactance while a break exists in said portion of the propulsion rail.

4. In a signaling system for electric railways, a track in which one rail is the return conductor for the propulsion current and is divided into insulated sections; a supplemental return conductor for the propulsion current; cross connections between the ends of an insulated section of the propulsion rail and the supplemental return conductor; a signaling circuit which includes the whole or a part of said section of the propulsion rail; signaling devices in said signaling circuit adapted to be energized by a current of different properties from the propulsion current; and a reactance in series with one of said cross-connections.

5. In a signaling system for electric railways, a track in which one rail is the return conductor for the propulsion current and is divided into insulated sections; a supplemental return conductor for the propulsion current; cross-connections between the ends of an insulated section of the propulsion rail and the supplemental return conductor; a signaling circuit which includes the whole or a part of said section of the propulsion rail; signaling devices in said signaling circuit adapted to be energized by a current of different properties from the propulsion current; and means for limiting the flow of signaling current through one of said cross-connections while a break exists in said portion of the propulsion rail.

[Claims 6 to 8 not printed in the Gazette.]

880,330. WRENCH. HENRY SASKO, North Braddock, Pa. Filed July 5, 1907. Serial No. 382,331.

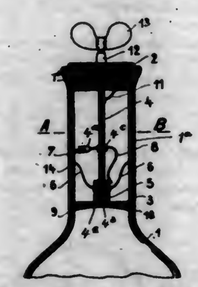


1. A wrench of the type described, embodying a movable jaw having a gripping extension, said jaw having a central opening providing a toothed socket, said jaw having its side cut away providing a pin, an adjustable jaw slidably mounted in said movable jaw and having a gripping extension confronting the first mentioned extension, a tooth movably mounted in the socket of said movable jaw and adapted to engage said adjustable jaw, a skeleton handle secured to said tooth, a lever pivotally connected to said handle and having a bifurcated end engaging the pin of said movable jaw, and a resilient rod carried by said handle and engaging said lever, substantially as described.

2. A wrench of the type described, embodying a movable jaw having a gripping extension, said jaw having a central opening formed therein providing a tooth socket, a pin carried by said jaw, an adjustable jaw slidably mounted in said movable jaw and having a gripping extension, a tooth mounted in the socket of said movable jaw and loosely engaging said adjustable jaw, a handle secured to said tooth, a lever pivotally connected to said handle and having a bifurcated end engaging the pin of said movable jaw, and a resilient rod carried by said handle and engaging said lever for normally holding said jaws at an inclination to said handle.

3. A wrench of the type described, embodying a movable jaw having a gripping extension, a pin carried by said jaw, an adjustable jaw slidably mounted in said movable jaw and having gripping extension, a tooth detachably mounted in said movable jaw for moving said adjustable jaw, a handle connecting with said tooth, a bifurcated lever pivotally connected to said handle for engaging the pin of said movable jaw, and a resilient rod carried by said handle for engaging said lever and normally holding said jaws at an inclination to said handle.

880,331. BOTTLE-STOPPER. MARTIN SCHWIND, Thalheim, Germany. Filed June 22, 1907. Serial No. 380,350.



1. A stopper comprising an inner and an outer seal, spring members carried by the inner seal, adapted to engage with the bottle neck for retaining the seals therein, a rotatable connection between the seals, and a tension cutting device carried by the connection.

2. A stopper comprising an inner and an outer seal, spring members carried by the inner seal adapted to engage with the bottle neck for retaining the seals therein, a rotatable connection between the seals, a tension cutting device carried by the connection, and means carried by the connection and engaging with the outer seal to prevent back rotation of the connection.

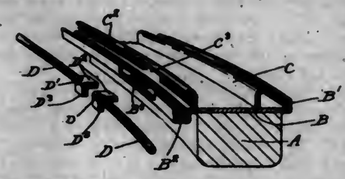
3. A bottle stopper comprising an inner and an outer seal, a rotatable spindle extending through the outer seal and provided with an enlargement bearing against the exterior face of the outer seal, said spindle having its inner end connected to the inner seal, springs carried by the inner seal and adapted to engage in the bottle neck to prevent the withdrawal of the seals, and a tension cutting device carried by the spindle.

4. A bottle stopper comprising an inner and an outer seal, a rotatable spindle extending through the outer seal and provided with an enlargement bearing against the exterior face of the outer seal, said spindle having its inner end connected to the inner seal, springs carried by the inner seal and adapted to engage in the bottle neck to prevent the withdrawal of the seals, a tension cutting device carried by the spindle, and means carried by the spindle and engaging in the outer seal to prevent the back rotation of the spindle.

5. A bottle stopper comprising an inner seal provided with a screw-threaded socket, an outer seal, a rotatable spindle extending through said outer seal and having the screw-threaded inner end engaging in the socket, said spindle having its outer end provided with an enlargement bearing against the outer seal, and a plurality of spring members carried by the inner seal and adapted to engage in the bottle neck to prevent withdrawal of the seals.

[Claims 6 and 7 not printed in the Gazette.]

880,332. WHEEL-RIM FOR PNEUMATIC TIRES. CHARLES S. SCOTT, Cadiz, Ohio, assignor to Frank A. Seiberling, Akron, Ohio. Filed Mar. 19, 1907. Serial No. 363,269.

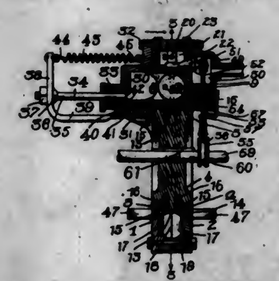


1. The combination of a vehicle wheel rim having a depressed groove near its detaching edge, an inextensible rim flange sliding over the groove onto the rim, a split locking ring sprung into the groove, and a radial projection rigidly secured to the locking ring engaging a recess in the groove to prevent circumferential motion, substantially as described.

2. The combination of a vehicle wheel rim having a depressed groove near its detaching edge, an inextensible rim flange sliding over the groove onto the rim, a split locking ring sprung into the groove, and an L-shaped lug on the end of the locking ring engaging a recess in the groove and a recess in the rim flange, substantially as described.

3. The combination of a vehicle wheel rim having a depressed groove near its detaching edge, an inextensible rim flange sliding over the groove onto the rim, a split locking ring sprung into the groove, and a pair of L-shaped lugs on the ends of the locking ring engaging with a recess in the rim and in the rim flange respectively, substantially as described.

880,333. ROTARY ENGINE. WILLIAM SEIBERT, Erie, Kans. Filed Dec. 5, 1907. Serial No. 405,255.



1. In a rotary engine; a casing having a steam chamber; a head rotatable within the casing and provided with a piston designed to travel within the steam chamber; an inlet; an exhaust for the steam; said inlet being controlled by a sliding valve; a reciprocatory steam gate adapted to open and close in front and in rear of the said piston and provided with an angled portion and a member; said gate and sliding valve being controllable by the rotatable head, said casing being formed with means to guide said member as the steam gate operates.

2. In a rotary engine; a casing having a steam chamber; a head rotatable within the casing and provided with a piston designed to travel within the steam chamber; an inlet; an exhaust for the steam; said inlet being controlled by a sliding valve; a reciprocatory steam gate

adapted to open and close in front and in rear of the said piston and provided with an angled portion and a member; said gate and sliding valve being controllable by the rotatable head; said casing having an elongated recess to guide said member as the steam gate operates and reversible means for the engine.

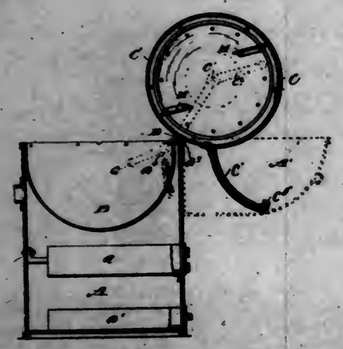
3. In a rotary engine; a casing having a steam chamber; a head rotatable within the casing and provided with a piston designed to travel within the steam chamber; an inlet; an exhaust for the steam; said inlet being controlled by a sliding valve; a reciprocatory steam gate adapted to open and close in front and in rear of said piston and provided with an angled portion and a member; said gate and sliding valve being controllable by the rotatable head; said casing having an elongated recess to guide said member as the steam gate operates and a reversible valve for the engine.

4. In a rotary engine; a casing comprising a pair of disks centrally bored, whereby when placed adjacent to and engaging one another a cylindrical open ended space is formed; said casing having a steam chamber; a rotatable head which is visible from the exterior thereof and movable within the space and provided with a piston designed to travel in said stream chamber; an inlet; reversible means therefor; reciprocating means to open and close in front and in rear of the said piston said casing having formed therein an elongated recess to assist in guiding said reciprocating means; a sliding valve for the inlet; said reciprocating means and the sliding valve being simultaneously controllable by the rotatable head.

5. In a rotary engine; a casing comprising a pair of disks centrally bored whereby when placed adjacent to one another a cylindrical open ended space is formed; said casing having a steam chamber; a rotatable head mounted in said space and provided with a piston; an inlet; reversible means therefor; reciprocating means to open and close in front and rear of said piston; said casing having means to coöperate with the reciprocating means to insure and guide said reciprocating means so as to cause the same to have an even movement; a sliding valve for the inlet; said reciprocating means and the sliding valve being simultaneously controllable by the rotatable head.

[Claims 6 to 11 not printed in the Gazette.]

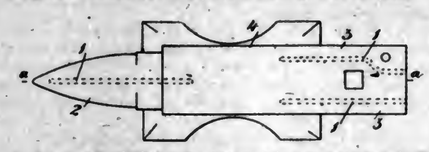
880,334. BOILER WASHING-MACHINE. JOHN W. SEIFERT, East Point, Ga. Filed July 17, 1907. Serial No. 384,204.



1. The improved washing-machine, comprising a hollow body provided with an open boiler at its upper portion, levers pivoted to the top of the body near one side thereof and having short arms extending from the pivots a reticulated drum journaled in the long arms of the levers, springs attached to the said body and connected with the short arms of the said levers, the springs being under constant tension whereby they tend to raise the drum and resist its extreme or final movement in opening and closing, the stops a^4 applied to the body in the position indicated, whereby the shorter arms of the levers are adapted for contact therewith when the drum is thrown upward and outward, as shown and described.

2. The improved washing-machine, comprising a hollow body, a boiler supported therein, a reticulated drum, levers pivoted on the body and the drum being journaled between their free ends, a cover which is hinged at one side contiguous to the pivots of the levers and adapted to be thrown over to horizontal position in which it is self-supporting, and the drum being adapted to swing upward and outwardly over the cover, substantially as described.

880,335. ANVIL. HUBERT E. SHEWARD, Upper Norwood, England. Filed Mar. 18, 1907. Serial No. 363,099.



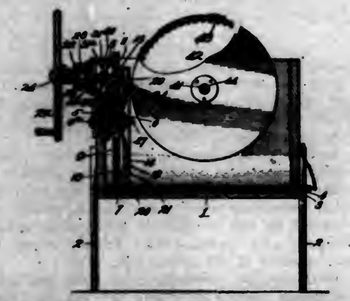
1. An anvil of the class described, comprising a hollow body, and a filling of cement and metal particles within the hollowed portion of the body.

2. An anvil of the class described, comprising a hollow body, a mass of metal particles in the hollow of said body, and means for holding the metal particles in said hollow.

3. An anvil having horns comprising a body having a core of metal particles and cement, and reinforcing members embedded in the horns of the body to strengthen the same.

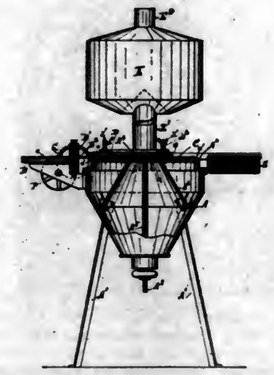
4. An anvil comprising a body having a working face partially or entirely chilled, a core of cement and metal particles in the body, and reinforcing members embedded in the body to strengthen the latter.

880,336. GEARING. CALVIN A. SHIVE, Cherryvale, Kans., assignor to The Peerless Promoting and Manufacturing Company, Cherryvale, Kans., a Corporation of Arizona. Filed Oct. 3, 1906. Serial No. 337,303.



The combination of a support, a gear wheel journaled thereon and provided with a concentric curved slot having semi-circular ends and an endless series of teeth on its ends and facing walls, a casting rigid with the inner side of said wheel and provided with a pair of concentric curved and communicating grooves, a driving shaft suitably journaled upon the receptacle, a tumbling shaft universally joined at one end to the driving shaft, and having its opposite end playing in the grooves of said casting, a pinion rigid on said shaft engaging the teeth of said curved slot in the gear wheel, a boxing journaled on the tumbling shaft, guiding means for said boxing to compel the same and the tumbling shaft to move radially of the wheel and casting as the shaft is passing from one groove of the casting to the other, a shaft geared to said gear wheel, a wheel journaled on said shaft, a spring rigid at its opposite ends with said shaft and the wheel journaled thereon, and a driven member carried by the support and geared to said wheel.

880,337. SAND-BLAST MACHINE. GEORGE S. SLOCUM, Newport, R. I.; Annie B. Slocum executrix of said George S. Slocum, deceased. Filed June 17, 1907. Serial No. 379,519.



1. In a machine in which an abradant is carried by a jet of air or like mobile vehicle through a conduit against the surface of an article to be sand-blasted, the combination with an abradant-containing chamber provided with a cover having an opening through its top and a guideway located upon the top of said cover and extending across said cover top and said opening, at opposite sides of said opening and in line therewith, of a conveyer arranged in said guideway for reciprocating movement over said opening and adapted to carry articles to be sand-blasted across the said opening and the plane of action of the abradant-carrying jet, and a jet conduit located within said abradant-containing chamber and terminating within said chamber near said opening.

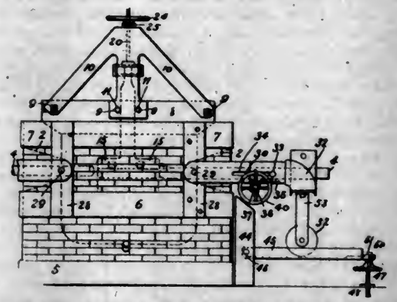
2. In a sand-blast machine the combination of a sand chamber, provided with a cover having an opening through its top and a guide-way located upon the top of said cover and extending across said cover top and said opening at opposite sides of and in line with said opening, a conduit for an abradant carrying jet located within said sand-chamber and terminating within said sand-chamber near said opening, a perforated conveyer arranged in said guideway for reciprocating movement therein across said opening and adapted to hold a plurality of articles to be sand-blasted and to be fed over said opening and across the plane of action of said abradant carrying jet, and means for actuating said conveyer.

3. In a sand-blast machine the combination of an abradant containing chamber provided with a cover having a centrally located opening through its top and a guideway extending across the top of said cover and opening, in line with said opening, a jet conduit located within said chamber and terminating therein near said opening, a conveyer arranged for both reciprocating and vertical movements in said guideway and adapted to be fed along in said guideway to carry across said opening and across the plane of action of said jet articles to be sand-blasted, packings arranged on said cover below said guideway at opposite sides of said central opening, and a packing-plate arranged and adapted for vertical movement in said guideway above said conveyer to thereby hold said conveyer in yielding contact with said packing plate and said lower packings with substantially an air-tight fit.

4. In a sand-blast machine the combination of an abradant containing chamber, a deflector extending downward from the upper interior of said chamber, and a conduit for an abradant carrying jet located within said chamber, and terminating within said deflector, with an exhaust chamber connected with the outer air and ducts connecting said exhaust and abradant containing chambers.

5. In a sand-blast machine the combination with a sand chamber, of a cover provided with an opening through its top, a guideway located on the top of said cover and extending across said top and opening in line with said opening, a packing-plate arranged for yielding vertical movement in said guideway, and means for causing such yielding movement of said packing-plate.

880,338. ELECTRIC-ARC FURNACE. SIDNEY D. SPENCE, Chattanooga, Tenn., assignor of one-fourth to Lewis Shepherd and one-fourth to David L. Snodgrass. Filed Dec. 17, 1906. Serial No. 348,281.



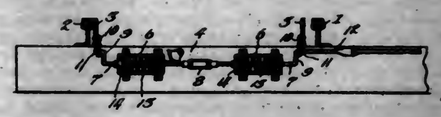
1. An electric arc furnace having a removable cover provided with openings, a fixed supporting element over said openings, a movable supporting bar, electrodes carried by said supporting bar and extending through said openings, screws connecting said supporting bar and the fixed supporting element, and connections between said screws to cause the same to turn in unison, for the purpose set forth.

2. An electric arc furnace having a removable cover, longitudinally disposed tie and reinforcing rods extending through said cover, upwardly extending brackets at the ends of the cover and to which the ends of the said rods are attached, a fixed supporting element connecting the said brackets and disposed above the cover, a movable bar, means connecting said supporting element and said supporting bar, and screws to adjust the latter, and electrodes carried by and adjustable with said supporting bar.

3. An electric arc furnace having vertically adjustable inner electrodes, side electrodes, pivotally mounted longitudinally adjustable arms carrying said side electrodes and means to raise and lower said arms and hence also said side electrodes.

4. An electric arc furnace having vertically adjustable inner electrodes, side electrodes, pivotally mounted longitudinally adjustable arms carrying said side electrodes, means to adjust said arms longitudinally, to correspondingly adjust said side electrodes, a pivotally mounted supporting element for said adjustable arms, and means to vertically adjust said supporting element, for the purpose set forth.

880,339. RAILWAY-SWITCH. PETER STANSON, Minneapolis, Minn. Filed July 2, 1907. Serial No. 381,822.



1. In a switch mechanism, and in combination with main and branch track rails, and swinging switch rails, independent casings arranged upon one of the ties of the track structure below the rails, rods slidably mounted within said casings, means adjustably connecting the rods between the casings, and springs within the casings acting on the rods to maintain the same in a prescribed position, operating means connected with one of the rods, and auxiliary operating means connected with the other rod.

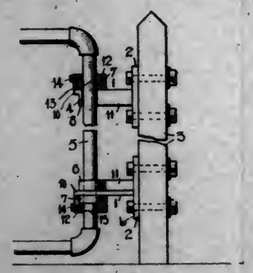
2. In a switch mechanism, and in combination with main and branch track rails, and swinging switch rails,

casings arranged upon one of the ties of the track structure below the rails, said casings being each open at one end, rods slidable longitudinally in the casings, nuts upon the rods closing the open ends of the casings, springs within the casings about the rods between said nuts and the closed ends of the casings, the outer ends of the rods being connected with the switch rails, and an adjustable connection between the rods intermediate the casings, operating means connected with one of the rods, and auxiliary operating means connected with the other rod.

3. In a railway switch, and in combination with the main and branch track rails, and swinging switch rails, casings arranged upon one of the ties of the track structure below the rails, rods slidably mounted within said casings, an adjustable connection between the inner ends of the rods, brackets connecting the outer ends of the rods to the switch rails, heads upon the rods within the casings, springs in the casings operated on said heads, and adjusting mechanism connected with one of the rods.

4. In a railway switch, and in combination with main and branch track rails, and swinging switch rails, casings upon one of the ties below the rails, spring actuated rods slidably mounted in said casings and connected at their outer ends with the switch rails, an adjustable connection between the rods intermediate the casings, one of the rods being provided with rack teeth, operating means connected with the other rod, a segment meshing with said rack teeth, and a shaft journaled upon the track structure for actuating said segment.

880,340. GATE-HINGE. DANIEL E. STETLER, Medford, Okla. Filed May 27, 1907. Serial No. 375,923.



1. In a hinge member, a bracket having a perforated base at one end and an open sided socket at the other, the socket portion being provided with oppositely extending flanges, one of said flanges terminating at the outer portion of the mouth of said socket, and the intermediate portion of the bracket being provided with a flange which extends from one end of said last-mentioned flange to the base, a collar having one end annularly recessed to fit upon one of the flanges of the bracket, and a set screw for securing it in position.

2. In a hinge, a post, two brackets secured thereto at a distance apart, the inner end of each of which is provided with a base, and the outer portion with an open sided socket, the mouths of said sockets opening in opposite directions, and each socket portion being provided with oppositely extending flanges, a rail within said sockets, two collars upon said rail, one end of each of which is recessed annularly, one of said collars being above the upper bracket, and the other collar being below the lower bracket, the recessed portion of said brackets facing each other, and each engaging with one of the flanges of its respective bracket, and set screws for securing said collars upon said rail.

880,341. ASSEMBLING ATTACHMENT FOR TYPE-SETTING MACHINES. ELAH TERRELL, Columbus, Ohio, assignor to Edward V. Gambier, trustee. Filed Mar. 18, 1905, Serial No. 249,765. Renewed July 13, 1907. Serial No. 383,622.

1. In a type assembling device, the combination of a plate for receiving the type, and a continuously rotating plate for propelling the type around a portion of said receiving plate by centrifugal force.



2. In a type assembling device, the combination of a plate for receiving the type, a continuously rotating plate for propelling the type around a portion of said receiving plate by centrifugal force, and means for moving the type receiving plate to discharge the type.

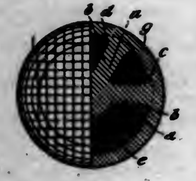
3. In a type assembling device, the combination of a plate arranged to receive and guide the type, a continuously rotating plate for propelling said type on to the said receiving plate and partially around the same by centrifugal force, and means for moving the type along the plate.

4. In a device of the character described, a type assembling table, means for rotating the table normally out of contact with the rotating means, and means for bringing the table and the rotating means into contact.

5. In a type assembling device, a receiving table, means for rotating the table, and a radial type stopping device carried by the table.

[Claims 6 to 15 not printed in the Gazette.]

880,342. GOLF-BALL. EDWARD W. THURLOW, Northcote, Victoria, Australia. Filed Jan. 2, 1907. Serial No. 350,461.

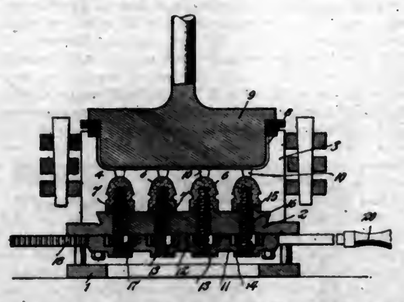


1. An article of the class described, comprising a body having independently projecting spokes, a filling, and a cover having connection with the spokes to form a shell for the filling.

2. A golf ball, comprising a core of elastic material and having radial spokes, the terminals thereof being slightly enlarged, a winding on the spokes and core forming a filling for the balls, and a covering united with the enlarged terminals of the spokes to entirely inclose the core and filling.
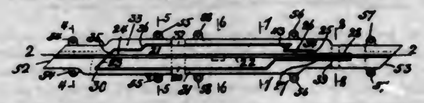
880,343. PRESS-MOLD FOR MAKING INSULATORS. HENRY WAGNER, Anderson, Ind. Filed Oct. 24, 1906, Serial No. 340,393. Renewed Jan. 9, 1908. Serial No. 410,010.

1. A mold of the character described comprising a base provided with chambers open at one side and having threaded openings below the chambers, a body supported upon the base, said body and base having coöperating portions forming mold cavities arranged above said chambers, said cavities being provided with inlets, means for forcing the plastic material through the inlets into the cavities, a series of forming screws projecting upwardly through the base and into said cavities, the screws being engaged at their lower ends with threaded openings, gear nuts engaged with the screws and arranged within the said chambers, said nuts being partially exposed through the open sides of the chambers, and a rack bar slidably supported on the base adjacent the open sides of the chambers and meshing with the gear nuts.



2. A mold of the character described comprising a base having a series of vertical openings, a mold body supported upon the base, the body and base being provided with coöperating portions forming a series of mold chambers above the openings, said mold chambers being provided at their upper ends with inlets, means for forcing the plastic material through said chambers into the inlets, a supporting plate detachably mounted below the base and provided with a series of chambers open at one side and threaded openings below and communicating with said chambers, forming screws projecting upwardly through the openings in the base, and engaging the screw threaded openings in the supporting plate, gear nuts engaging said screws and arranged in the chambers of the supporting plate, said nuts being partially exposed at the open sides of the chambers, and a rack bar slidably supported upon the supporting plate and meshing with the exposed portions of the gear nuts, whereby the latter may be turned in one direction or the other to simultaneously project or retract the forming screws.

880,344. RAIL-LIFT. THOMAS J. WASSER, Jersey City, N. J. Filed June 12, 1906. Serial No. 321,349.



1. The combination in a rail lift having a longitudinal flat upper surface and the ends thereof narrowed, a frame surrounding the lift and the lift hinged to the frame, the upper edge of the frame being on the same level with the flat upper surface of the lift.

2. The combination in a rail lift of a pair of frames surrounding said lift, a pin joining the lift with one of the frames, a pocket formed in one of the frames for supporting the swinging end of the lift, the upper edges of the frame being on the same level with the upper surface of the lift.

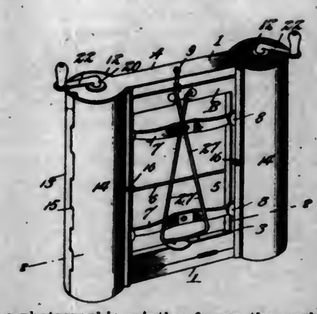
3. The combination in a rail lift of a pair of frames surrounding said lift, and the upper edges of the frames on a level with the upper surface of the lift, a pin joining one end of the lift and one of the frames, a pocket formed in one of the frames for supporting the swinging end of the lift, a lever fulcrumed in one of the frames and arranged to bear against the lift to raise the same.

4. The combination in a rail lift having a longitudinal flat upper surface and a longitudinal depression adjacent to said surface, the ends of the lift being narrowed, a pair of frames surrounding said lift with their upper surfaces on a level with the upper flat surface of the lift, a pin joining one end of the lift with one of the frames, pockets formed in the frames for supporting the swinging end of the lift, a lever fulcrumed in the frame under the lift, a roller journaled in the lever and arranged to bear up against the lift.

5. The combination in a rail lift having a longitudinal flat surface, frames surrounding the lift, a pin in one of the frames to form a hinge between the lift and said frame, joints between the lift and one of the frames formed with arcs described from the axial line of the said pin, and the upper edges of the frame on the same level with the flat upper surface of the lift.

[Claims 6 and 7 not printed in the Gazette.]

880,345. PRINTING-FRAME. ELMER R. WILLIAMS, Downers Grove, Ill. Filed Apr. 6, 1907. Serial No. 366,799.



1. In a photographic printing frame, the combination of a main section comprising a rectangular frame open at its center and provided with lateral extensions at the top and bottom, means for holding a light-admitting medium in the opening, a back section hinged at its bottom to the main section and provided with a central opening, means for locking the sections together, hingedly connected members removably clamped in the back section to form a back to bear against the film, a light-excluding casing attached to corresponding extensions, each casing being provided with a door, film-carrying spools in the casings, and means for turning the spools independently.

2. In a photographic printing frame, the combination of a main section including a light-admitting medium, casings fixed to the ends thereof and provided with doors, spools mounted in the casings for winding and unwinding a negative film and holding a portion of the film stretched across the said medium, and a back for holding the printing paper against the film and arranged to extend under the doors of the casings.

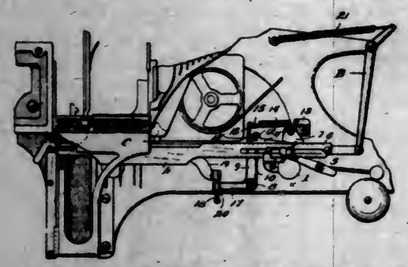
3. In a photographic printing frame, the combination of a main section comprising an open rectangular frame provided with top and bottom lateral extensions, an open rectangular back section hinged to the main section, a removable back in the back section, rollers mounted on and movable with the back section and arranged to bear on the film, sheet metal pieces secured to the extensions to form casings, a door for each casing adapted to overlap the adjacent edge of the back section, means on the back section for locking the doors closed, film-carrying spools in the casings, and means for winding and unwinding a negative film on the spools.

4. In a photographic printing frame, the combination of a front section including a light-admitting medium, film-carrying spools mounted on the ends of the section for exposing an intermediate portion of the film through the said medium, a hingedly mounted back frame on the said section and having an opening, a back adapted to be clamped in the said opening, and a device mounted on the hinged section for supporting the latter or printing frame in an inclined position.

5. In a photographic printing frame, the combination of a main section having lateral top and bottom extensions, a sheet metal casing secured to each pair of corresponding extensions, an outwardly swinging door at the rear of each

casings, spools mounted in the casing, a crank shaft extending into each casing for rotating the spool therein, means for holding the crank shaft in engagement with its respective spool, a hinged back section, rollers carried thereby and arranged parallel with the spools, means for locking the back sections in closed position, and a hinged supporting leg attached to the back section.

880,346. ASSEMBLER SLIDE-BRAKE FOR LINOTYPE-MACHINES. RICHARD F. WILSON, Albany, N. Y. Filed Nov. 21, 1907. Serial No. 403,142.



1. In a linotype machine, the combination of an assembler slide, means for guiding the slide, with a brake mechanism therefor including a wedge-shaped braking element mounted to engage the said means and to be held in gripping engagement with the slide by the said means.

2. In a linotype machine, the combination of an assembler slide, with a brake mechanism, said mechanism including a slidable wedge resting on and supported by the slide for gripping the latter, and means engaged by the wedge for holding the latter in gripping relation.

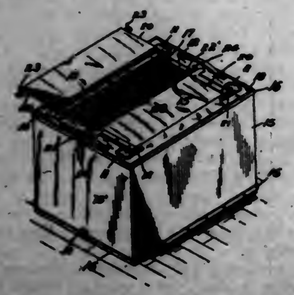
3. In a linotype machine, the combination of an assembler slide, a brake element slidably mounted on the slide, and a relatively fixed abutment for forcing the element in engagement with the slide.

4. In a linotype machine, the combination of an assembler slide, with a brake mechanism, said mechanism comprising a spring-actuated lever, a wedge-shaped brake element connected therewith, and a relatively fixed abutment between which and the slide the element is adapted to engage.

5. In a linotype machine, the combination of an assembler slide, with a brake mechanism therefor, said mechanism comprising a lever, a wedge resting on the slide, a slot and pin connection between the wedge and lever, a spring connected with the lever to yieldingly hold the wedge in gripping position, and a device disposed adjacent the slide for causing the wedge to grip the latter under the movement of the spring.

[Claims 6 to 9 not printed in the Gazette.]

880,347. FOLDING SHIPPING-BOX. WILLIAM K. ALLGIRE, Indianapolis, Ind. Filed May 13, 1907. Serial No. 373,357.



1. A collapsible receptacle comprising a pair of frames, connecting walls composed of flexible material, and movable struts each mounted upon one of said frames and adapted to be moved into and out of engagement with the other of said frames.

2. A collapsible receptacle comprising a pair of mating frames, connecting walls composed of flexible material, and movable struts each mounted within the receptacle on one of said frames and adapted to be moved into and out of supporting engagement with the other of said frames.

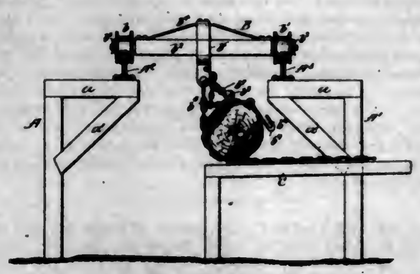
3. A collapsible receptacle comprising a pair of mating frames, one of which is provided with a central opening, a door forming a closure for said opening, movable struts mounted within the receptacle on one of said frames and adapted to be moved into and out of supporting engagement with the other of said frames, and means carried by said door for retaining the struts in supporting position.

4. A collapsible receptacle comprising a pair of mating frames, flexible walls connecting the same, and a pair of swinging struts each pivotally mounted upon one of said frames at opposite sides thereof and adapted to be swung into and out of position to hold the frames separated.

5. A collapsible receptacle comprising a pair of mating frames, flexible walls connecting the same, a pair of swinging struts each pivotally mounted upon one of said frames at opposite sides thereof and adapted to be swung into and out of position to hold the frames separated, a closure for an opening through one of said frames, and means carried by said closure for engaging the swinging struts to hold them in supporting position.

[Claims 6 to 15 not printed in the Gazette.]

880,348. ELEVATED CARRIER SYSTEM. FRED W. AYER, Bangor, Me. Filed May 24, 1907. Serial No. 375,385.



1. A system of the character specified having an elevated track extending along the line of travel, means for supporting the rails of said track in lines separate from one another with an interposed space below and between them, carriers mounted upon said track for supporting a log at either end thereof, each carrier having wheels resting upon said track, a single axle-bar connecting said wheels, and means for supporting a log from said carrier in the clearance below and between said rails whereby said log may travel in said clearance as said carriers move along said track.

2. In a system of the character specified having an elevated track extending along the line of travel, means for supporting the rails of said track in lines separate from one another with an interposed space below and between them, a carrier mounted upon said track, the same having wheels resting upon said rails, a connecting axle bar and a truss bar mounted upon said axle bar, and means connecting with said truss bar for supporting a log to travel in the clearance below and between said rails.

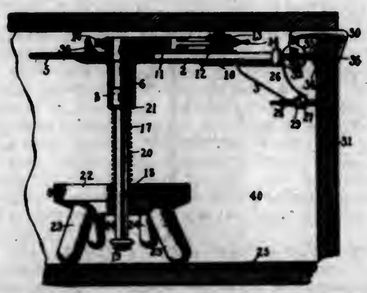
3. In a system of the character specified, a carrier having wheels, an axle bar connecting said wheels and a truss bar mounted upon said axle bar.

4. In a system of the character specified having an elevated track extending along the line of travel, means for supporting the rails of said track in lines separate from one another with an interposed space below and between them, a carrier mounted upon said track, the same having wheels resting upon said rails, a connecting axle-bar and a truss-bar mounted upon said axle-bar, and means connecting with said truss-bar for supporting a log to travel in the clearance below and between said rails and whereby said truss-bar may be maintained in a proper upright position by the weight of the log.

5. In a system of the character specified, a carrier having wheels, a single axle-bar connecting said wheels, a truss-bar mounted upon said axle-bar, and means for supporting a log from said truss-bar whereby said truss-bar may be maintained in a proper upright position by the weight of the log.

[Claims 6 and 7 not printed in the Gazette.]

880,349. WASHING-MACHINE. JOHN W. AYERS, Brooklyn, N. Y. Filed May 3, 1907. Serial No. 371,621.



1. A washing machine for attachment to a set tub, said machine comprising a frame, a movable rubber carried by said frame, means carried by said frame for operating said rubber, and means for clamping the frame to a set tub in such a position that said frame, rubber and said operating means are located within the tub and means for leveling said frame and its parts.

2. A washing machine for attachment to a set tub, said machine comprising a frame, a rotary rubber carried by said frame, means carried by said frame for rotating said rubber, means for clamping the frame to a set tub in such a position that said frame, rubber and said rotating means are located within the tub, and means for leveling said frame and its parts.

3. A washing machine for attachment to a set tub, said machine comprising a frame, a rotary rubber carried by said frame, means carried by said frame for rotating said rubber, and clamps hinged to the frame for securing the frame to a set tub in such a position that said frame, rubber and said rotating means are located within the tub.

4. A washing machine for attachment to a set tub, said machine comprising a frame, a shaft journaled in said frame, gearing at the upper side of said frame for rotating said shaft, a rubber at the lower end of said shaft, and means for clamping said frame to a set tub in such a position that said frame, rubber and gearing are located within the tub.

5. A washing machine for attachment to a set tub, said machine comprising a frame, a shaft journaled in said frame, gearing at the upper side of said frame for rotating said shaft, a rubber at the lower end of said shaft and slidable along said shaft, and means for clamping said frame to a set tub in such a position that said frame, rubber and gearing are located within the tub.

[Claim 6 not printed in the Gazette.]

880,350. SLIDING DOOR OR SASH. GEORGE P. BALCH, Lynn, Mass., assignor of one-half to John S. Balch, Lynn, Mass. Filed Sept. 19, 1906. Serial No. 335,327.

1. The combination with doors or sashes flush with one another when in a closed position, of a frame between which the doors or sashes are interposed, members affixed to the ends of said doors or sashes and contained in slots or ways formed in said frame, said slots comprising main slots or ways formed in said frame at opposite ends of the doors or sashes extending on lines outside the plane occupied by the doors or sashes when closed and parallelly therewith and slots offset therefrom arranged whereby the inside portions of either of said doors or sashes may be moved in the direction of said main slots to avoid an abutting edge, and said door or sash have clearance to slide in said main slot by the members affixed thereto.



2. The combination of doors or sashes flush with one another when in a closed position, of a frame between which the doors or sashes are interposed, members affixed to the ends of the doors or sashes and contained to run in slots or ways a^6, a^7 and a^8 formed in said frame, said slots a^6 comprising slots formed in said frame at the opposite ends of the doors or sashes and extending on lines outside the plane of said doors or sashes when closed and parallelly therewith, said slots a^7 comprising slots perpendicularly offset from the main slots a^6, and the slots a^8 comprising slots offset at an angular inclination with respect thereto and in which offset slots a^7, a^8 the members affixed to the doors or sashes are adapted to be contained when the sashes are in a closed position.

3. The combination with doors or sashes flush with one another when in a closed position, of a frame between which the sashes are interposed, slots or ways formed in said frame and extending in a direction in front of and by said doors or sashes when in a closed position, slots or ways offset from said slots or ways aforesaid extending in a direction towards and into the plane of the doors or sashes when in a closed position, members affixed to the doors or sashes adapted to be contained and run in said slots aforesaid, whereby said doors may assume a closed position or be drawn forward to slide by one another, and yielding members affixed to said frame between which the doors or sashes are interposed for holding said doors or sashes in a closed position.

880,351. PAINTING APPARATUS. MIKE G. BARRIER, Shawnee, Okla. Filed Nov. 22, 1907. Serial No. 403,283.



1. A painting apparatus, comprising a paint holder proper provided with a brush, and guides attached thereto above the brush and adapted to work in contact with the surface to be painted, and means for guiding and adjusting the paint holder substantially as described.

2. The improved painting apparatus, comprising a paint

holder provided with a brush, guide ropes connected with the holder, the latter being adapted to run on the slide ropes, and means for adjusting the paint holder substantially as described.

3. The improved painting apparatus, comprising a paint holder proper provided with a brush, means for suspending the same, and raising and lowering it, and guide ropes slidably connected with the paint holder, and means for attaching the lower ends of said ropes to a fixed object whereby the paint holder is guided vertically and held to its work with any required degree of pressure, substantially as described.

4. The improved painting apparatus, comprising a paint holder brush having a solid face, a suspending rope attached to the upper end of said face, a brush attached to the lower end of the holder and projecting therefrom, and a device arranged near the top of the holder and adapted to bear upon the surface to be painted, and means for raising and lowering the paint holder, substantially as described.

5. In a painting apparatus of the class indicated, the paint holder provided with a brush, and rollers journaled in arms rigidly connected with the upper portion of the holder and adapted to run in contact with the surface to be painted, substantially as described.

[Claim 6 not printed in the Gazette.]

880,352. LOOSE-LEAF BINDER. CHARLES S. BROADWELL, Santa Rosa, Cal. Filed Aug. 27, 1907. Serial No. 390,355.



1. A binding device comprising covers, a trough shaped back member flexibly connected with one of the covers, rigid strips flexibly connected respectively with the trough shaped back member and with the back edge of the mating cover, flexible posts secured upon the strip attached to the back edge of the mating cover and adapted to engage apertures in the strip connected with the trough shaped back member, and cap members detachably engaging the flexible posts.

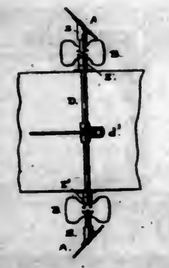
2. In a binding device comprising covers, a trough-shaped back member flexibly connected with one of the covers, rigid strips flexibly connected respectively with the trough-shaped back member and with the back edge of the mating cover, binder posts secured upon the strip attached to the back edge of the mating cover and engaging apertures in the strip connected with the trough-shaped back member, cap members detachably engaging the binder posts, and cap engaging locking means connected with the trough-shaped back member.

3. A binding device comprising covers, a trough-shaped back member flexibly connected with one of the covers, rigid strips flexibly connected respectively with the trough-shaped back member and with the back edge of the mating cover, binder posts secured upon the strip attached to the back edge of the mating cover and engaging apertures in the strip connected with the trough-shaped back member, polygonal cap members detachably engaging the binder posts and transverse braces secured in the trough-shaped back member and adapted for engagement with the side faces of the polygonal cap members.

4. In a loose leaf binder a pair of cover members, binder posts connected permanently with one of the cover members and extending through apertures in the other cover member, cap members upon the projecting ends of the binder posts, a trough-shaped back member connected with one of the cover members and adapted to be folded over the cap members at the projecting ends of the binding posts, and means connected with said trough-shaped back member for locking the cap members.

5. A binding device comprising a front cover, a rigid strip flexibly connected therewith, a rear cover, a trough-shaped back member flexibly connected therewith, a rigid strip flexibly connected with the trough-shaped back member and having apertures, flexible posts secured upon the strip connected with the front cover and having socketed ferrules engaging the apertures in the strip connected with the trough-shaped back member and cap members having shanks detachably engaging the socketed ferrules.

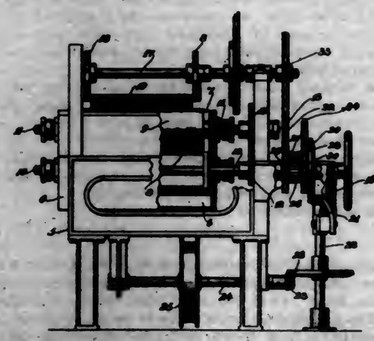
880,353. PADDLE-WHEEL. OTTO BROWN, Sacramento, Cal. Filed Jan. 29, 1906. Serial No. 298,361.



1. A propelling device for vessels, comprising a shaft, a pair of disks, A, B, mounted thereon, each formed with two blades extending out from the shaft in opposite directions and united by a narrowed portion whereby are formed recesses between the blades, the disks being oblique to the shaft and inclined at contrary angles with reference to each other, and the blades of the disk A being disposed opposite to the spaces between the blades of the disk B, substantially as set forth.

2. In a propelling-device for vessels, the combination of propelling blades arranged in pairs, a common shaft each pair composed of two sets of blades disposed on opposite sides of a common shaft in alternate manner and with the blades of the same set at an oblique angle and in contrary position to the blades of the other set, said blades being adjustable at varying angles with respect to the axis of rotation.

880,354. COMPOSITION-APPLYING MECHANISM FOR MATCH-MACHINES. CARL A. CARLSON, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed June 18, 1907. Serial No. 379,646.



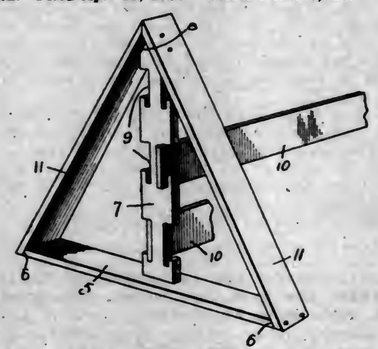
1. The combination with a composition vat, a rotary composition-applying roller, and a mixer, of gearing between said roller and mixer, a shaft for actuating said gearing, two wheels loosely mounted on said shaft, means for driving said wheels at different speeds, a ratchet fast on said shaft, and pawls on said wheels engaging the ratchet, whereby the said ratchet and shaft are driven by the pawl rotating at the higher speed, while that is turning, and by the pawl rotating at the lower speed pawl when the other stops.

2. The combination with a composition vat, a rotary composition-applying roller, and a mixer, of two intermeshing gear wheels with which the shafts of said roller and mixer are adapted to be connected, two wheels loosely mounted on the shaft of one of said gear wheels, means for driving said wheels at different speeds, a ratchet fast on said gear shaft, and pawls on said wheels engaging the ratchet, whereby the said ratchet and gear shaft are driven by the pawl rotating at the higher speed, while that is turning, and by the lower speed pawl when the other stops.

3. The combination with a composition vat, a rotary composition-applying roller, and a mixer, of two intermeshing gear wheels with which the shafts of said roller and mixer are adapted to be connected, two spaced sprocket wheels loosely mounted on the shaft of one of said gear wheels, means for driving said sprocket wheels at different speeds, a ratchet wheel fast on said gear shaft in the space between the sprocket wheels, and pawls on the inner sides of said sprocket wheels engaging the ratchet, whereby the said ratchet and gear shaft are driven by the pawl rotating at the higher speed, while that is turning, and by the lower speed pawl when the other stops.

4. The combination with a traveling carrier and actuating devices therefor, of a composition vat, a rotary composition-applying roller, and a mixer in said vat, gearing between said roller and mixer, a shaft for actuating said gearing, two spaced wheels loosely mounted on said shaft, operative connections between one of said wheels and the actuating devices for the carrier, means for constantly driving the other wheel at a relatively low rate of speed, a ratchet fast on said shaft in the space between the wheels, and pawls on said wheels engaging the ratchet.

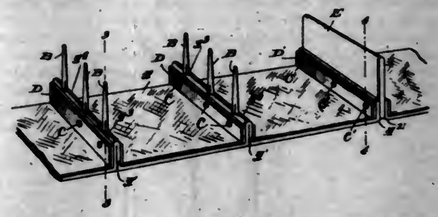
880,355. FENCE-POST. CLARENCE A. CARTER, Klein, Mich. Filed Apr. 13, 1907. Serial No. 368,018.



A triangular fence post, composed of a base portion, inclined sides attached to the ends thereof, and an upright attached to said base portion intermediate the ends thereof, said upright being provided at its upper end with oppositely-beveled surfaces forming attaching faces for said inclined sides, the opposite edges of said upright having a series of bayonet slots formed therein and adapted to receive the rails.

880,356. DISTRIBUTING AND CONVEYING BELT. THOMAS J. CARTER, Temple, Okla. Filed Aug. 24, 1907. Serial No. 390,050.

1. A conveyer belt or apron having an upturned portion, a conveyer flight held within said upturned portion and projecting at its upper edge above the same, bur plates on opposite sides of the upturned portion, and rivets passing through the upturned portions and the opposite bur plates, substantially as and for the purpose set forth.



2. A conveyer belt or apron having upturned portions, and a conveyer flight held between and projecting above the upturned portions.
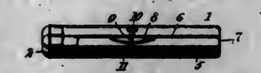
3. A conveyer belt or apron having an upturned portion in the form of a fold, whose upper folded edge is provided with perforations, pins projecting through said perforations and at their upper ends above said folded edge and fitting at their lower ends within the upturned folded portion of the belt or apron.

4. A conveyer belt or apron having an upturned portion in the form of sections of a fold, said sections being united at the upper folded edge of the upturned portion, and bur plates fitting on opposite sides of the upturned portion.

5. A conveyer belt or apron having upturned portions, and flat bur plates on opposite sides thereof and connected together securing the upturned portions of the belt whereby said upturned portions and the bur plates may be folded back or turned down in passing an obstruction.

[Claims 6 and 7 not printed in the Gazette.]

880,357. MATCH-CASE. WILLIAM L. CHAMBERS, Brookville, Ind. Filed Feb. 16, 1907. Serial No. 357,613.



1. A match case having a body with a barrel formed at the side thereof communicating with the interior of said case, a bow spring lying in said barrel and presenting its edge toward the interior of said body whereby said spring normally excludes the matches from said barrel, and means for flattening said spring against the side of said barrel to admit a match into said barrel.

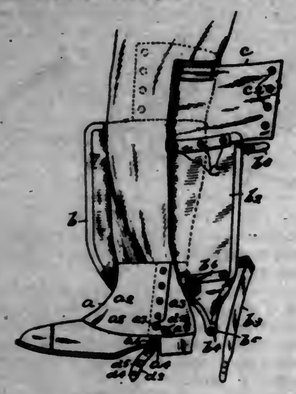
2. A match case having a body with a barrel formed at the side thereof communicating with the interior of said case, a curved spring lying in said barrel and presenting its edge toward the interior of said body whereby said spring normally operates to exclude the matches from said barrel, said barrel having a slot therein and a button having a stem passing through said slot and attached to said spring, said button affording means for flattening said spring against the side of said barrel to admit a match.

3. A match case comprising a body with a barrel formed at the side thereof communicating with the interior of said body and adapted to receive a single match, a bow spring sliding longitudinally in said barrel and normally excluding the matches therefrom, said barrel having a longitudinally disposed slot in the wall thereof, a head extending from said spring and projecting through said slot to the exterior of said barrel, said head affording means for deflecting the middle portion of said bow so as to flatten said bow in admitting a match to said barrel, said bow having teeth adapted to engage the side of the match to force the same through the end of said barrel.

880,358. COMBINATION LEG-COVERING. HYMAN COHEN and BENJAMIN NATHAN, New York, N. Y. Filed Dec. 28, 1906. Serial No. 349,788.

1. A leg covering, comprising a member encircling the leg, means for securing the same in position, a strap passed

beneath the foot and connected with said leg covering in two places on each side thereof and a lug on said covering passed between said securing points.



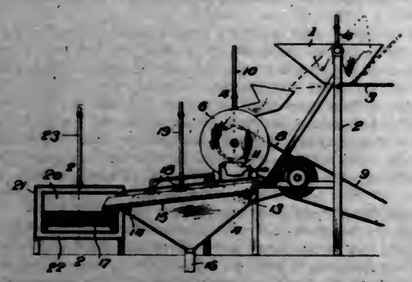
2. A leg covering, comprising a gaiter composed of two members, dependent lugs on one of said members, a longitudinally directed lug on the other of said members and adapted to be secured thereto, securing devices for said members and a strap adapted to be connected with said first named lugs above or below said last named lug.

3. A leg covering, comprising a gaiter open at one side, a strap connected with said gaiter at both sides thereof passing beneath the foot and means for holding said gaiter over a foot covering with said strap inside the same.

4. A leg covering, comprising a gaiter, a strap connected at one side thereof and passing beneath the foot and means for securing the end of said strap to the other side of said gaiter, within or without the lower edge thereof.

5. A leg covering, comprising a puttee, a gaiter, a strap detachably connected therewith at the sides thereof and either within or without the lower edge thereof, said strap being passed beneath the foot, and means for connecting said strap to said puttee at the sides thereof.

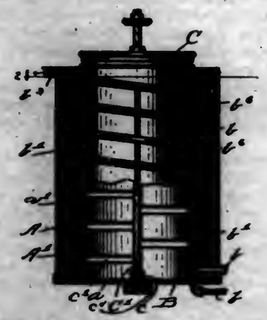
880,359. PREPARING CORN FOR TABLE USE. FREDERICK A. COLLINS, Stark, Me. Filed Nov. 15, 1906. Serial No. 343,517.



1. The herein described process of preparing corn for table use, which consists in boiling the corn in water and lye, stirring and skimming at intervals till the hulls and black specks are loosened, then hulling the corn while being agitated and separating the hulls and black specks, then screening while subjecting it to the purifying action of steam, and finally drying.

2. The herein described process of preparing corn for table use, which consists in boiling the corn in water and lye, stirring and skimming at intervals, till the hulls and black specks are loosened, then hulling the corn after the addition of a small amount of water while being agitated and rotated till the black specks and hulls are separated, then passing over a screen and subjecting the same to oscillating motion and passing steam therethrough across its direction of movement, and finally drying.

880,360. FREEZER. JESSE D. COLLINS, Chicago, Ill., assignor to The Creamery Package Mfg. Company. Filed Jan. 26, 1906. Serial No. 297,940.



1. A freezer comprising a jacketed can, an air pipe perforated on its upper side and wound around the can between the same and its jacket affording a spiral passage for the refrigerant between the turns of the air pipe, and riffles on the sides of the can for deflecting the refrigerant.

2. In a freezer, the combination, with a jacketed can, of perforated means for directing a stream of refrigerant spirally between the can and jacket and adapted to conduct air jets into said stream of refrigerant.

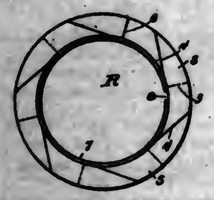
3. In a freezer the combination with a can of a jacket therefor and spaced a distance therefrom, an apertured tube coiled between the can and jacket and affording between its coils a spiral channel for refrigerant, and riffles on the side of said can adapted to deflect the refrigerant to and from the sides of the can.

4. In a freezer the combination with a can of a jacket therefor and spaced a distance therefrom, a pipe coiled in the space between the can and jacket and provided with apertures opening into the channel thus formed between the coils, an inlet and an outlet pipe opening into said channel and adapted to direct refrigerant therethrough and means for deflecting the refrigerant as it passes through said channel.

5. In a device of the class described the combination with a can of a jacket adapted to fit around the same and affording a space for the refrigerant therebetween, an apertured pipe coiled around said can and permiting air to be forced into said refrigerant and a plurality of deflectors between adjacent coils.

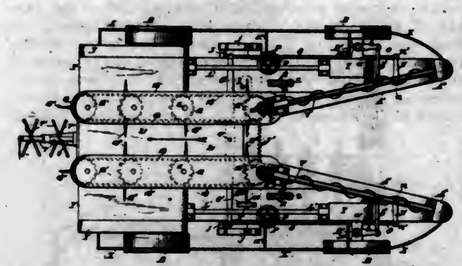
[Claims 6 to 9 not printed in the Gazette.]

880,361. PISTON FOR CYLINDERS OF STEAM-ENGINES. EDWARD M. COOK, Oberlin, Ohio. Filed Aug. 15, 1906. Serial No. 330,715.



A piston comprising the rod with a plurality of plates thereon, rings constructed in segmental form and interposed between the plates, each of said segments having their opposite ends cut-away to provide reversely arranged recesses, one of which is provided with a squared terminal and also with an inwardly inclined shoulder which extends approximately the length of the body of the segment, the recess at the other end of the segment having a squared shoulder formed in the body of the segment, the terminal of said recess being arranged downwardly and outwardly inclined with a pointed end, expansible and contracting springs arranged on the inner surfaces of the rings, and means for securing the plates and rings together, substantially as specified.

880,362. CANE-HARVESTER. JOHN D. COOPER, Grand Rapids, Mich. Filed Nov. 4, 1905. Serial No. 285,905.



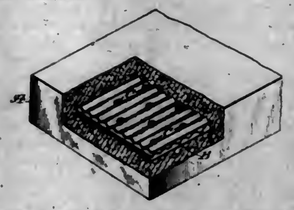
1. In a machine for harvesting cane, a body, wheels supporting said body, mechanism for raising and lowering the body, relative to the wheels, a propelling engine mounted on the body, speed and reverse gear connected with the engine, a shaft extending from said gear, a main driving shaft to which said shaft is geared, chains connecting the main driving shaft and the wheels of the machine, levers for manipulating the speed and reversing gear, front wheels journaled upon axletrees, said axletrees pivoted to the frame of the machine, levers for changing the position of the wheels to guide the machine, two arms projecting from the front of the machine, conveyers on the machine shafts having screw shaped flanges extending the length of said arms and connected with the conveyers, a reciprocating saw in said machine and an auxiliary engine connected to drive said saw.

2. In a machine for harvesting cane, a frame divided at the front end forming two forwardly projecting arms, hind wheels journaled to the body of the machine, forward wheels journaled and pivotally connected with the projecting arms, levers, connecting rods and gear for swinging the forward wheels to guide the machine, a propelling engine, speed and reversing gear connected with said engine, a shaft connected therewith, and a screw gear mounted thereon, a screw gear on the main shaft engaging said screw gear, sprocket wheels on the driving shaft, sprocket wheels on the hind wheels of the machine, sprocket chains engaging said sprocket wheels, levers and clutches for manipulating the speed and reversing gear, shafts, gear wheels, screws and reversing snaft, a reversible clutch and actuating levers for raising and lowering the body of the machine relative to the wheels, an auxiliary engine, a reciprocating saw connected with and driven by said engine, sprocket wheels, sprocket chains, and arms projecting from said chains forming an elevator to carry cane to and through the machine, shafts connecting the end of the elevator with the front end of the arms and having a screw flange coiled the length of them, and a revoluble dumping arm back of the elevator.

3. In a machine for harvesting cane, front and hind wheels, a body having the front end divided forming two forwardly projecting arms, vertically movable boxes secured to the body, at each side of both the front end and the back end thereof the hind wheels journaled directly to the boxes at the back end and the forward wheels journaled and pivotally connected to the boxes at the front end of the body, means for turning the forward wheels for guiding the machine, means for raising and lowering the boxes relative to the body of the machine, a propelling engine, speed and reversing gear connected therewith, levers and rods for manipulating these gears, a reciprocating saw, an auxiliary engine connected to drive the reciprocating saw, sprocket wheels, sprocket chains, and arms projecting from said chains in position to carry the cane through the machine, shafts having screw shaped flanges their entire length, passing from the ends of the arms of the machine to the conveyer chains, and a dumping arm having cross arms, an actuating wheel connected to said arm and having gear teeth at intervals, a driving wheel meshing therewith and having teeth to actuate said actuating wheel at intervals, driving gear connected with the driving wheel, and means for engaging, disengaging and reversing said gear.

4. In a machine for harvesting cane, wheels, a body supported on said wheels and vertically adjustable thereon, a propelling power, a saw located below the body of the machine, sprocket chains and arms for carrying the severed stalk back from the saw, and shafts having screw shaped flanges their entire length for carrying drooping plants properly to the saw.

880,363. COVERING. JOSEPH P. COSTIGAN and JOHN F. J. COSTIGAN, New York, N. Y. Filed Aug. 1, 1907. Serial No. 386,661.



1. As a new article of manufacture, a covering for boilers, pipes and the like, consisting of a body and an air space core for the same, the said body being made of a plastic non-conducting material capable of being molded while in a plastic state into a desired shape and the said core being formed of a plurality of united corrugated sheets of a stiff non-conducting material, the sheets being arranged one relative to the other to provide air spaces between them, the said core being wholly embedded in the said body and the side edges and ends of the core sections being sealed by the plastic material of the said body.

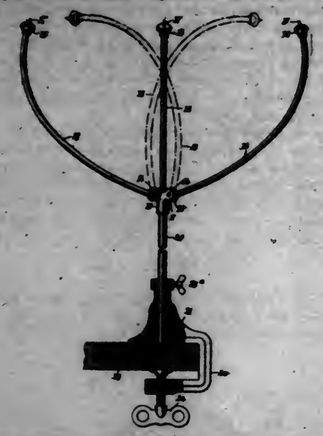
2. As a new article of manufacture, a covering for boilers, pipes and the like, consisting of a body and an air space core for the same, the said body being made of a plastic non-conducting material, capable of being molded while in a plastic state into a desired shape and the said core being formed of a plurality of united corrugated sheets of a stiff non-conducting material, the sheets being arranged one relative to the other to provide air spaces between them, the said core being wholly embedded in the said body, and the side edges and ends of the core sections being sealed by the plastic material of the said body, the said core being provided with transverse apertures filled by the plastic body material to integrally unite the body material on opposite faces of the said core.

3. A covering for boilers, pipes and the like, comprising a body of plastic asbestos capable of being molded into a desired shape within a corresponding mold, and a core of superimposed corrugated sheets of asbestos, arranged one transverse to the other and inserted in the mold to be embedded by the said body material during the process of molding, the said core being closed at its marginal edges by the said body asbestos, and forming sealed air spaces within the said body.

880,364. HAT-HOLDER. MINNIE E. CROUSE, Lawrence, Mass., and J. EDWARDS ROBERTS, New York, N. Y.; said Roberts assignor to said Crouse. Filed May 6, 1907. Serial No. 372,255.

1. A hat holder, comprising a support, a head on the support, a plurality of sustaining arms pivoted to the head, said arms being curved and being arranged with the arch of the curve outward, whereby to permit said arms

to take a crossed position with respect to each other for engaging the inner surface of a hat or a separated position to engage the outer surface of the hat and means for fixing the arms with respect to the head.



2. A hat holder comprising a support, a head on the support, a plurality of sustaining arms pivoted to the head, said arms being curved and being arranged with the arch of the curve outward, whereby to permit said arms to take a crossed position with respect to each other for engaging the inner surface of the hat, or a separated position to engage the outer surface of the hat.

880,365. ELASTIC-FLUID TURBINE. CHARLES W. DAKE, Grand Rapids, Mich., assignor to The Dake-American Steam Turbine Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Mar. 22, 1906. Serial No. 307,460.

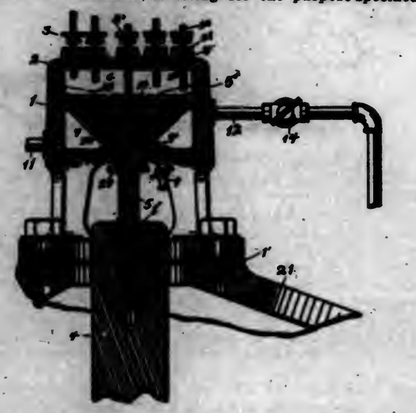


1. In an elastic fluid turbine, the combination of the disk 5; oppositely-faced segments 11 thereon, secured to the periphery of the said disk which is formed dovetailed to receive the same by suitable bolts therethrough, the said segments being separated from each other at their ends, and elastic insulating material arranged between said segments, co-acting for the purpose specified.

2. In an elastic fluid turbine engine, the combination with the turbine disk of bucket segments secured to the periphery thereof, which segments are separated from each other in relation to permit of independent expansion of the segments, and elastic insulating material arranged between said segments, coacting as specified.

880,366. GOVERNOR FOR TURBINES. CHARLES W. DAKE, Grand Rapids, Mich., assignor to The Dake-American Steam Turbine Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Mar. 22, 1906. Serial No. 307,461.

1. In a governor for turbine engines, of the vertical type, the combination of the main casing 1 secured at the top of the casing of the turbine and separated therefrom by insulating material 1'; a funnel-shaped receptacle in the upper part of said casing, surrounded by a suitable jacket for receiving and circulating the elastic fluid therethrough and to preserve an even temperature; a funnel-shaped receptacle 5' within the funnel-shaped chamber, having perforations 33 near its bottom, with a downwardly projecting shaft 5 supported on the vertical shaft 4 of the turbine and suitably insulated therefrom by the insulation 5"; a liquid such as mercury within the said chamber and receptacle, adapted to revolve freely therewith; a top-plate 2 for the casing 1, having a series of binding posts 3 insulated therefrom and projecting to different heights within the periphery of the said plate and receptacle; a central binding post 3', the screw of which projects well down into the center of the said receptacle and beneath the surface of the mercury, as it ordinarily stands therein; a generator for electrical current; a series of governor valves for controlling the supply of steam to the turbine with electro-magnetic devices for controlling the same; and independent circuits from the binding posts 3 to different ones of the series of throttling valves, whereby as the circuit closes on account of increased speed of the turbine, the governor valves will be actuated, co-acting for the purpose specified.



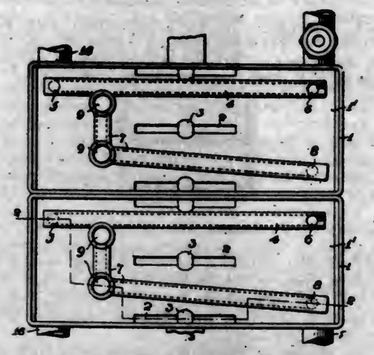
2. In a governor for turbine engines, the combination of a suitable chamber; a receptacle within the same supported on a vertical axis; connections to the engine for revolving the said receptacle; a liquid within the receptacle; independent circuits with contact points arranged towards the periphery of the said chamber, to contact with the liquid therein at different heights as the height varies at the periphery, owing to the centrifugal force developed by its rotary motion; and suitable governor valves connected to be controlled by said circuits, for the purpose specified.

3. In a governor for turbine engines, the combination of a suitable chamber; a receptacle within the same, supported on a vertical axis; connections to the engine for revolving the said receptacles; a liquid within the same; an electrical circuit with contact points arranged above the normal level of the said liquid; and a suitable governor valve, with electrical devices for controlling the same, arranged within the said electrical circuit, co-acting for the purpose specified.

4. In a governor, the combination of a suitable chamber; a receptacle within the same, supported on a vertical axis; mercury within the same; an electrical circuit with contact points within the chamber; a governing valve within the said electrical circuit, the current through the said circuit being controlled by the variations of the level of the mercury due to the rotation, co-acting for the purpose specified.

880,367. BATTERY. FRANK A. DECKER, Philadelphia, Pa., assignor, by mesne assignments, to Decker Electrical Manufacturing Company, Wilmington, Del. Filed May 9, 1905. Serial No. 259,564.

1. In a battery, a cell having a base, an insulating conduit connected with said base, a plurality of compartments connected to said conduit, electrodes in said compartments, depressions in said compartments which receive the bottoms of said electrodes, a conducting device extending through said base in registration with each of said depressions, and a conducting device attached to the exterior of said base in contact with each of said first conducting devices.



2. In a battery, a plurality of juxtaposed cells, an insulating conduit within the bottom of each cell, and an exterior main conduit having flanged branches with nuts thereon, said cells having sockets wherein said flanged branches are secured by said nuts so that said main conduit communicates with said interior conduits.

3. In a battery, a cell having a base with a set of interior depressions therein, an exterior conducting strip, conducting screws passing through said strip and base into the respective depressions, and electrodes within said cells having depending parts disposed in said depressions.

4. In a battery, a cell, a base with parallel depressions therein, electrodes having parts disposed in said depressions, a conducting strip exterior to said base, screws passing through said strip and said base into said depressions whereby said electrodes are adapted to be connected in multiple, insulating conduits within said cell, a plurality of cups connected with one of said conduits, and compartments formed by and exterior to said cups, said compartments communicating with the other of said conduits.

880,368. BATTERY. FRANK A. DECKER, Philadelphia, Pa., assignor, by mesne assignments, to Decker Electrical Manufacturing Company, Wilmington, Del. Filed Mar. 21, 1904. Serial No. 199,303.



1. In an electrochemical apparatus, an electrochemically active part having a honeycombed construction on each side thereof providing a comparatively larger fluid contact surface within comparatively limited borders, substantially as specified.

2. In an electrochemical apparatus, a plate having overlapping indentations in its opposite sides, substantially as specified.

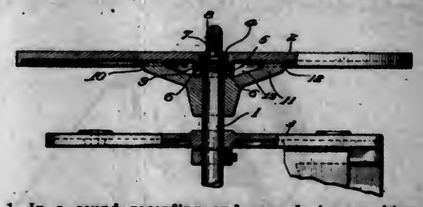
3. In an electrochemical apparatus, a plate having a group of indentations in each side thereof and unindented strips adjacent thereto, substantially as specified.

4. In a battery, a diaphragm having a bordering flange and a honeycombed body, substantially as specified.

5. In a battery, a cell comprising a pair of diaphragms one of which has a bordering flange and a honeycombed body, substantially as specified.

[Claims 6 to 10 not printed in the Gazette.]

880,369. TILTING TURN-TABLE FOR SOUND RECORDING AND REPRODUCING MACHINES. WILBURN N. DENNISON, Merchantville, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Jan. 24, 1907. Serial No. 353,775.



1. In a sound recording and reproducing machine, a record support, means for rotating the same, and a bearing for said record support rotated by said means, said record support being freely tiltable away from and towards said bearing.

2. In a sound recording and reproducing machine, a record support, means for rotating the same, a bearing for said support rotated by said means, said record support being freely movable away from and towards said bearing.

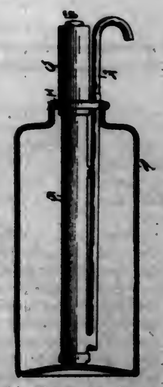
3. In a sound recording and reproducing machine, a record support, means for rotating the same, and a rigid bearing for said record support, rotated by said means, said support being freely tiltable away from and towards said bearing.

4. In a sound recording and reproducing machine, a record support provided with a central aperture, a driving spindle therefor extending through said aperture, and a bearing for said record support rotated by said spindle, said record support being freely tiltable away from and toward said bearing.

5. In a sound recording and reproducing machine, a record support provided with a doubly tapering central aperture, a driving spindle therefor extending through said aperture and a bearing for said record support rotated by said spindle, said record support being freely tiltable away from and towards said bearing.

[Claims 6 to 25 not printed in the Gazette.]

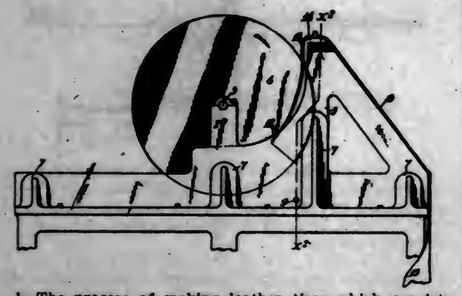
880,370. AUTOMATIC GINGER-ALE DISPENSER. JOHN H. EARL, Detroit, Mich. Filed Aug. 22, 1906. Serial No. 331,574.



In an appliance for dispensing liquids, a valved cylinder, a sleeve embracing the cylinder and slidable thereon, a spring actuated piston disposed within the cylinder with its stem projecting through the sleeve, the piston carry-

ing a projection upon its stem, a valved discharge pipe communicating with the cylinder, and a second sleeve embracing the stem of the piston and provided with a slot having communicating notches for interchangeable engagement with said projection to vary the stroke of the piston.

880,371. METHOD OF MAKING LEATHER TIRES. RAYMOND J. ELLEDGE, Los Angeles, Cal., assignor to Anti Oak Leather Company, Los Angeles, Cal., a Corporation of California. Filed May 2, 1907. Serial No. 371,547.



1. The process of making leather tires which consists of applying leather strips successively over the edge of a circular form and ironing each strip as it is applied over the edge of the form.

2. The process of making leather tires which consists of drawing a moist strip of leather on a circular form between two hot ironing plates and subsequently applying successive strips over the first strip, then removing the ring of strips from the form and uniting the ends of the ring and finishing the tire.

3. The method of making leather tires which consists of applying successive strips of damp leather to the edge of a circular form with great pressure, simultaneously stretching the leather as it is applied to the form and at the same time imparting greater heat to the outer portion of the strip than to its inner portion whereby the outer portion of each strip is stretched more than the inner portion, and subsequently finishing the tire.

880,372. CAR-MOVER. CHARLIE E. ENGBARTH, Ocean Springs, Miss. Filed Nov. 8, 1907. Serial No. 401,286.

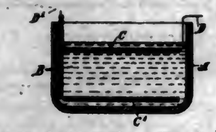


1. A device for moving cars, comprising a fulcrum block having removable sides and provided with biting teeth, an operating member pivoted between the removable sides, said member comprising a face portion and a toe portion of lesser width than the face and provided with outwardly inclined sides, and a lever arranged at an angle to the face portion.

2. A device for moving cars, comprising a fulcrum block having biting teeth and projecting sides, an operating member pivotally secured between the sides, said member having a face portion and a lever arranged at an angle to the face portion, squared projections upon two sides of the lever, and a tube having squared openings provided upon its face adapted to engage with the lever and the projections upon the sides of the lever.

3. A device for moving cars, comprising a fulcrum block having teeth on its under face and projecting sides, an operating member pivotally secured between the sides, said member comprising a face portion and a lever arranged at an angle to the face portion, a tube removably mounted upon the lever and provided with orifices near its free end, a second tube adapted to be inserted within the first tube, a bolt connecting the tubes, and a retaining collar embracing the first tube and adapted to press it tightly against the second tube.

880,373. PROCESS OF ACCELERATING THE SEPARATION OF NITROGLYCERIN FROM ACIDS. RICHARD ESCALES and MILANO NOVAK, Munich, Germany. Filed Sept. 5, 1907. Serial No. 391,492.



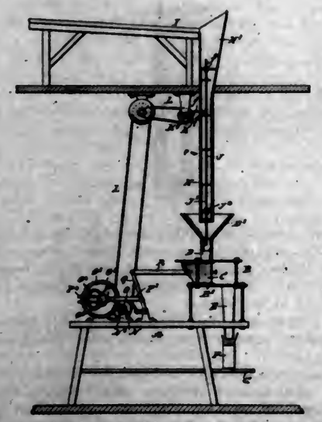
1. The process of separating nitroglycerin from mixed acids, which consists in passing an electric current between electrodes through a liquid mixture of acids and nitroglycerin, thereby causing the evolution of gas bubbles from the electrodes which carry the nitroglycerin particles upward, and then removing the nitroglycerin from the surface of the liquid.

2. The process of separating nitroglycerin from mixed acids, which consists in adding to the mixture an electrolyte which will facilitate the carrying out of the process, then passing an electric current between electrodes, through the liquid, thereby causing the evolution of gas bubbles from the electrodes which carry the nitroglycerin particles upward, and then removing the nitroglycerin from the surface of the liquid.

3. The process of separating nitroglycerin from mixed acids, which consists in adding to the mixture of acids and nitroglycerin, an aqueous electrolyte containing a soluble salt, passing an electric current from an anode to a cathode through the liquid, causing the nitroglycerin to rise to the surface by the evolution of gas from the electrodes, and removing the nitroglycerin from the top of the liquid.

4. The process of separating nitroglycerin from mixed acids, which consists in adding to the mixture of acids and nitroglycerin an aqueous electrolyte containing sodium fluorid, passing an electric current from an anode to a cathode through the liquid, causing the nitroglycerin to rise to the surface by the evolution of gas from the electrodes, and removing the nitroglycerin from the top of the liquid.

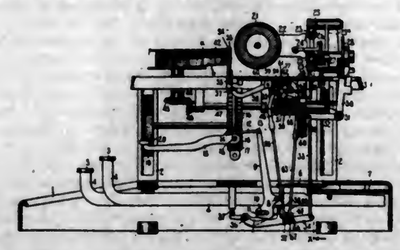
880,374. PACKAGING-MACHINE. WILLIAM A. FANNING, East Orange, N. J. Filed Apr. 27, 1907. Serial No. 370,638.



1. In a packaging machine the combination with the frame, of a guideway on the frame, a hopper provided with a chute above the guideway at one end thereof, a chute below the guideway at the other end thereof, a measuring receptacle having an open top and an open bottom resting on the guideway, means for reciprocating the receptacle between the chute of the hopper and the chute below the guideway, a feed pipe provided at its upper end with a hopper, delivering into the hopper above the guideway, a longitudinally movable agitating device in the chute, and means for moving said agitator.

2. In a packaging machine, a guideway provided at one end with a chute thereabove, and at the other end with a chute therebelow, a measuring receptacle having an open top and an open bottom resting upon the guideway, said receptacle having sides and one end hinged at their lower ends and provided with outwardly projecting flanges and set-screws engaging the sides and the end to retain them in adjusted position, and means for reciprocating the receptacle.

880,375. TYPE-WRITING MACHINE. JACOB FELBEL, New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 28, 1904. Serial No. 238,588.



1. In a typewriting machine, the combination of key levers, a ribbon vibrator, means operable by the key levers and normally connected with said vibrator for operating it, and means also operable by the key levers but normally disconnected from said vibrator; said last mentioned means being also adapted to operate the vibrator when connected therewith.

2. In a typewriting machine, the combination of a ribbon vibrator, vibrating means normally in operative engagement therewith, vibrating means normally out of engagement therewith, and means for disengaging the first mentioned vibrating means from and engaging the second mentioned vibrating means with said vibrator.

3. In a typewriting machine, the combination of key levers, a ribbon vibrator, actuating means operable by the key levers and normally in operative engagement with said vibrator, other actuating means also operable by the key levers and normally out of engagement with said vibrator, and switch mechanism for connecting the last mentioned means with the ribbon vibrator and for disconnecting the first mentioned means therefrom.

4. In a typewriting machine, the combination of a ribbon vibrator, a key actuated universal bar, and two independent means between said universal bar and said ribbon vibrator, and operable by said universal bar, either of which means is adapted to actuate said vibrator at will.

5. In a typewriting machine, the combination of a ribbon vibrator, printing keys, means operable thereby to throw said vibrator a given distance from a normal position, and other means also operable by the printing keys and adapted to be connected to said vibrator for throwing it a different distance from said position.

[Claims 6 to 73 not printed in the Gazette.]

880,376. EYELETING-MACHINE. SEYMOUR FIELD, Quincy, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 12, 1906. Serial No. 311,309.

1. In a machine for setting fasteners, the combination of upper and lower setting devices provided with means for determining the angular position of a fastener in the stock, means for feeding the fasteners into alinement with said setting devices, and actuating mechanism for said parts.



2. In a machine for setting fasteners, the combination of setting devices for receiving a fastener in one position, actuating means for causing said setting devices to set the fastener in another position, and means actuated by the movement of said setting devices to turn the fastener about its axis from the receiving position to the setting position.

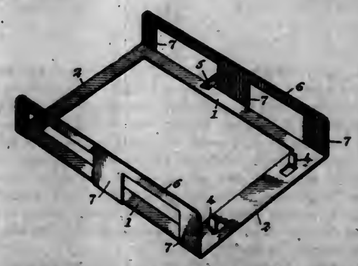
3. In a machine for setting fasteners, the combination of feeding means arranged to receive a previously formed fastener and to deliver it in alinement with the place in the stock in which it is to be inserted, means for changing the position of a fastener after it is so delivered and before the setting operation, and means for setting the fastener in the stock in said changed position.

4. In a machine for setting fasteners, the combination of setting devices; feeding means arranged to receive a previously formed fastener and to present it in alinement with the setting devices; means for changing the position of a fastener after it has been presented by the feeding means and before the setting operation; and actuating mechanism for said parts.

5. In a machine for setting fasteners, the combination of feeding means arranged to receive a previously formed elongated fastener and to deliver it in alinement with the place in the stock at which it is to be inserted with one dimension substantially perpendicular to the edge of the stock; means for changing the position of a fastener so that said dimension shall have a different angular relation with the edge of the stock; and means for setting the fastener in the stock in said changed position.

[Claims 6 to 17 not printed in the Gazette.]

880,377. DEVELOPING-TRAY. MICHAEL P. FORAN, Johannesburg, Transvaal. Filed Feb. 14, 1907. Serial No. 357,285.



A developing tray consisting of a bent sheet having an open base portion, vertical side walls partially cut away, and stops provided upon the side walls and base, respectively, the stops upon the side walls being spaced from the base portion, substantially as and for the purpose set forth.

880,378. DEVICE FOR AIMING FROM COVER. HERMANN GEIS, Regensburg, Germany, assignor to Max Haeussler, Munich, Germany. Filed Nov. 17, 1904. Serial No. 233,146.



1. A device for aiming from cover consisting of two mirrors, one in the line of sight and the other laterally of the weapon, an arm to support the same a bar detachably mounted on the weapon and means for adjustably attaching said arm on said bar.

2. A device for aiming from cover, consisting of two mirrors, an arm to carry the same, means for adjusting the angle of said mirrors on said arm, a vertical bar and means for detachably mounting the same on the weapon, and means for adjusting the said arm on the said vertical bar.

3. A device for aiming from cover consisting of two mirrors, one in the line of sight and the other laterally of the weapon, an arm to support the same, a bar mounted on the weapon, and means attaching said arm on said bar for upward and downward adjustment.

880,379. HAND-PLANTER. FRANCIS E. GRIFFETH, Athens, Ga. Filed July 15, 1907. Serial No. 383,882.



1. A hand planter consisting of a rod bifurcated at its lower end, a spring pressed plunger mounted to reciprocate in said bifurcation and having its end projecting from said rod to engage the ground and form an opening therein to receive the seed, a hopper secured to said rod and communicating with a perforation in one of the prongs of said rod, the other prong having a discharge slot in its end, said plunger provided with a perforation forming a pocket adapted to convey seed from the perforation in one prong to the discharge slot in the other as said plunger is reciprocated.

2. A hand planter consisting of a rod bifurcated at its lower end, a spring pressed plunger mounted to reciprocate in said bifurcation and having its end projecting from said rod to engage the ground and form an opening therein to receive the seed, a hopper secured on the front of said rod and communicating with a perforation in the front prong of said rod, the rear fork having a slot in its end, said plunger provided with a perforation forming a pocket adapted to convey seed from the perforation in said front prong to the discharge slot in the rear prong as said plunger is reciprocated.

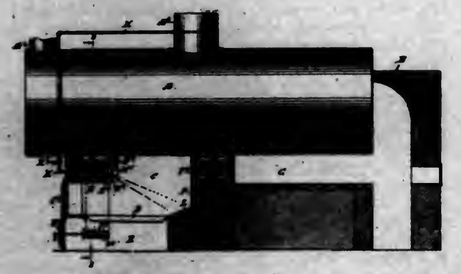
3. A hand planter consisting of a rod bifurcated at its lower end, a spring pressed plunger mounted to reciprocate in said bifurcation and having its end projecting from said rod to engage the ground and form an opening therein to receive the seed, a hopper secured on the front of said rod and communicating with a rearwardly and downwardly inclined perforation in the front prong of said rod, the rear fork having a slot in its end, said plunger provided with a rearwardly and downwardly inclined perforation forming a pocket adapted to convey seed from the perforation in said front prong to the discharge slot in the rear prong as said plunger is reciprocated.

4. A hand planter consisting of a rod bifurcated at its lower end, a spring pressed plunger mounted to reciprocate in said bifurcation and having its end projecting from said rod to engage the ground and form an opening therein to receive the seed, a hopper secured to said rod and communicating with a perforation in one of the prongs of said rod, the other prong having a discharge slot in its end, said plunger provided with a perforation forming a pocket adapted to convey seed from the perforation in one prong to the discharge slot in the other as said plunger is reciprocated, and means to limit the movement of said plunger so that when it is at the upper end of its stroke the pocket will be in line with the perforation communicating with the hopper and when at the lower end of its stroke said pocket will register with the discharge slot in the other prong.

5. A hand planter consisting of a rod bifurcated at its lower end, a spring pressed plunger mounted to reciprocate in said bifurcation and having its end projecting from said rod to engage the ground and form an opening therein to receive the seed, a hopper secured to said rod and communicating with a perforation in one of the prongs of said rod, the other prong having a discharge slot in its end, said plunger provided with a perforation forming a pocket adapted to convey seed from the perforation in one prong to the discharge slot in the other as said plunger is reciprocated, said plunger being normally held in its projected position with the pocket therein arranged opposite said discharge slot, said pocket adapted to register with the perforation in the prong of said rod leading from the hopper when the plunger is pressed inward.

[Claims 6 to 12 not printed in the Gazette.]

880,380. SMOKE-CONSUMING FURNACE. JOHN B. HARRIS, Nashville, Tenn., assignor to Edgar G. Harris, Nashville, Tenn. Filed Apr. 20, 1907. Serial No. 369,247.

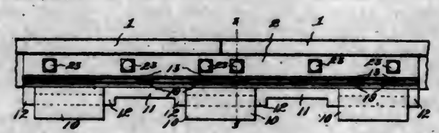


1. A furnace comprising a fire box and a plurality of concentric spaced arches at the front of the fire box, a dividing wall arranged longitudinally between the arches and dividing the space into two compartments, said fire box being provided with air ducts leading from the ash pit to the compartments and a disassociator in each compartment, said disassociator comprising a casing of relatively great length and of relatively small depth and being provided with a steam inlet pipe, and a series of outlets at its rear end, said outlets being directed downward and backward, whereby to direct the disassociated elements of the steam through the burning gases of the fuel, said fire box having a gas bench against which the said products are directed, said bench being inclined forwardly and downwardly to deflect said products upwardly through the burning gases, said lower arch being inclined downwardly at its rear edge, and the upper arch projecting beyond said inclined portion for the purpose set forth.

2. A furnace comprising a fire box, a plurality of concentric spaced arches at the front of the fire box, a dividing wall arranged longitudinally between the arches and dividing the space into two compartments said fire box being provided with air ducts leading from the ash pit to the compartments and a disassociator in each compartment, said disassociator comprising a casing of relatively great length and breadth and of relatively small depth, and being provided with a steam inlet pipe, and a series of outlets at its rear end, said outlets being directed downward and backward whereby to pass the disassociated elements of the steam through the burning gases of the fuel, said fire box having a gas bench against which the said products are directed, said bench being inclined forwardly and downwardly, whereby to deflect said disassociated elements upwardly through the burning gases for the purpose set forth.

3. A furnace comprising a fire box, a plurality of concentric spaced arches at the front thereof said fire box being provided with an air duct leading from the ash pit to the space between the arches, a disassociator between the arches, said disassociator comprising a casing of relatively great length and of relatively small depth and being provided with a steam inlet pipe, and a series of outlets at its rear end, said outlets being directed downward and backward whereby to pass the disassociated elements of the steam through the burning gases of the fuel, said fire box having a gas bench against which said products are directed, said bench being inclined forwardly and downwardly whereby to deflect said disassociated elements upwardly through the burning gases for the purpose set forth.

880,381. METAL RAIL-TIE. GEORGE L. HINDMAN, Worthington, Pa. Filed May 23, 1907. Serial No. 375,280.



1. A rail tie provided with downwardly bent ends to anchor the tie in the road-bed, a chair for said tie, splice bars, said splice bars, tie, and tie chair having registering apertures, fastening devices passed through the apertures, and keys for holding the fastening devices in place.

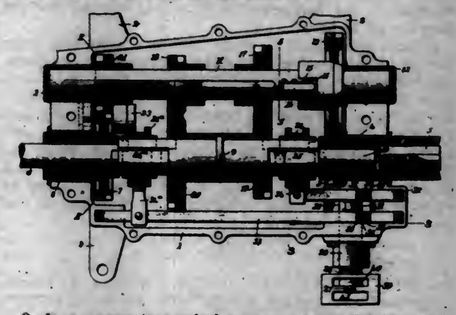
2. A rail joint comprising metal ties, a tie chair in which said ties are seated, splice bars, keys fitted in registered apertures in the splice bars, ties and tie chairs, and keys for holding the fasteners in place.

3. A rail tie comprising a bar of metal having apertures therein, spikes fitted in the apertures, keys for holding the spikes in place, a tie chair in which the ties are fitted, said tie chair being secured to the ties and to the rail flanges by the fastenings.

4. A rail joint comprising metal ties, a chair in which the ties are fitted, apertures in the ties and chair, spikes fitted through said apertures, and keys for holding the spikes in said apertures with their heads engaging the rail flanges.

880,382. POWER-TRANSMISSION APPARATUS. CHARLES R. KEITH, Tarrytown, N. Y., assignor of one-half to John William Mason, Tarrytown, N. Y. Filed Apr. 3, 1907. Serial No. 366,171.

1. In a power transmission apparatus, clutches, bars for shifting said clutches, a controlling lever operable to slide either of said bars, and a spring having a projection rigidly fixed thereto directly engaging the said bars for holding them at the forward and rearward and intermediate positions of their movement.



2. In a power transmission apparatus, a driving shaft, a driven shaft, means for positively, directly and indirectly driving the driven shaft from the driving shaft, said means comprising clutches slidably splined to one of said shafts, shifting bars for sliding said clutches, a controlling lever for operating said shifting bars, and springs having projections rigidly fixed thereto and engaging said bars for retaining said clutches in active and inactive positions.

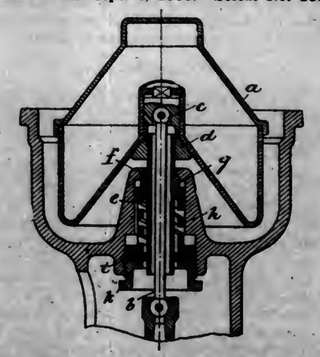
3. In a power transmission apparatus, a shifting bar, a clutch operated by said bar, and a spring having a V-shaped projection rigidly attached thereto adapted to engage with notches in said bar and retain said clutch in active and neutral position.

4. In a power transmission apparatus, a driving shaft, a driven shaft, means for driving the driving shaft from the driven shaft, comprising a clutch slidably splined to one of said shafts, and means arranged between said clutch and its spline providing for a slight, yielding relative rotation of said clutch on said shaft in one direction.

5. In a power transmission apparatus, a casing, a driving shaft, a driven shaft and a counter shaft journaled in the casing, means coöperating with the counter shaft to indirectly drive the driven shaft from the driving shaft, means for directly driving said driven shaft from the driving shaft, said means including clutches slidably splined on the driven shaft, shifting bars slidably mounted in guide-ways at opposite ends in the casing and engaged with said clutches, and a lever having means slidably and revolubly mounted in said casing for operating each of said shifting bars.

[Claim 6 not printed in the Gazette.]

880,383. GUIDING DEVICE FOR SUSPENDED SEPARATOR-DRUMS. IVAR P. B. KNUDSEN, Copenhagen, Denmark. Filed Sept. 4, 1906. Serial No. 333,095.



1. In a centrifugal separator having a separator drum carried by a vertical shaft imparting rotation to the drum,

the combination of a guide pivot for the drum, said guide-pivot being only acted upon by horizontal stresses, a fixed bearing having a ball-guide for said pivot, and retarding non-reacting means inclosing the guide-pivot in spaced relation to the ball-guide, substantially as and for the purpose set forth.

2. In a centrifugal separator having a separator drum carried by a vertical shaft imparting rotation to the drum, the combination of a guide pivot for the drum, said pivot being only acted upon by horizontal stresses, a fixed bearing having a ball-guide for said pivot, a ring surrounding the guide pivot in spaced relation to the ball-guide, and a pair of members having surfaces between which the ring is clamped in such a manner that it can move in a direction transversely to the axis of the guide pivot by overcoming the frictional resistance, substantially as and for the purpose set forth.

880,384. RAILWAY-RAIL JOINT. WALTER H. LEWIS, Madison, Miss. Filed June 7, 1907. Serial No. 377,827.



1. A rail joint splicing member comprising a base, a web rising from the base, and a head surmounting the web, at least one end of the web having a downwardly and inwardly inclined face.

2. A rail joint splicing member comprising a base, a web rising from the base, and a head surmounting the web, at least one end of the web having a downwardly and inwardly inclined face, and the head having a substantially V-shaped projecting portion.

3. A rail joint splicing member comprising a base, a web rising from the base, and a head surmounting the web, the opposite ends of the web having downwardly converging inclined faces.

4. A rail joint splicing member comprising a base, a web rising from the base, and a head surmounting the web, the opposite ends of the web having downwardly converging inclined faces, and the head being wider than the web and being provided at its ends with substantially V-shaped projections.

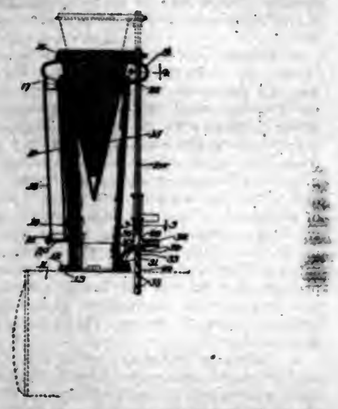
5. The combination of two rails having under-cut notches provided with inclined downwardly-converging faces and a splicing member between the ends of the rails, involving a web, the ends of which are shaped to agree with that of and to fit in said notches, said web being surmounted by a head located between the ends of the rail, the head having projecting portions and the ends of the rails having notches to receive said projecting portions.

[Claims 6 and 7 not printed in the Gazette.]

880,385. SPARK-ARRESTER. WALLACE F. MACGREGOR, Racine, Wis., assignor to J. I. Case Threshing Machine Company, Racine, Wis., a Corporation. Filed July 17, 1905. Serial No. 270,013.

1. In spark arresters, the combination with the stack and with the screen adjustable therein, of a ring frame secured to said screen, a shifter rod secured at its upper end to one side of said ring frame, fixed guides at the side of the stack for said shifter rod, said guides being spaced apart to compel the movement of said rod in straight line direction, a handle at the lower end of said rod and means for holding said rod and screen in a plurality of adjusted positions, substantially as described.

2. In spark arresters, the combination with the stack and with the inverted cone screen therein, of a ring frame fastened to the upper end of said screen, a shifter rod secured at its upper end to one side of said ring frame and extending downwardly on the outside of said stack, means on the side of said stack for guiding said shifter rod, a handle and a series of lugs at the lower end of said rod and means with which said lugs engage to hold the rod and screen in a plurality of different adjusted positions, substantially as described.



3. In spark arresters, the combination with the stack and with the inverted cone screen therein, of a ring frame fastened to the upper end of said screen, of a single shifter rod rigidly secured at its upper end to one side of said ring frame and extending downwardly on the outside of said stack, means on the side of said stack for guiding said shifter rod in straight line direction and for holding the same against rotation, a bracket at the base of the stack and a rotatable handle on the lower end of said rod having a series of lugs for engaging said bracket to hold the rod and screen at different heights, substantially as described.

4. In spark arresters, the combination with the stack and the cone screen therein, of a shifter-rod outside of said stack connected to said screen, a bracket at the base of the stack and a rotatable handle mounted in said bracket and engaging the lower end of said rod, said handle having lugs for engaging said bracket to hold the screen at different heights, and said bracket having seats in its upper face to receive said lugs and slots to permit the passage of said lugs as the screen is raised and lowered, substantially as described.

5. In spark arresters, the combination with the stack and with the inverted cone screen therein, of a ring frame fastened to the upper end of said screen, a shifter-rod secured at its upper end to one side of said ring frame, means on the side of the stack for guiding said shifter-rod and for holding the same against rotation, a rotatable handle on the lower end of said rod and a bracket at the base of the stack, said handle having lugs engaging the bracket to hold the shifter-rod and screen at different heights and said bracket having slots through which said lugs pass as the screen is raised and lowered, substantially as described.

[Claim 6 not printed in the Gazette.]

880,386. SILENT FIREARM. HIRAM P. MAXIM, Hartford, Conn. Filed Mar. 7, 1907. Serial No. 361,081.



1. A firearm including a barrel and firing mechanism, and a sliding valve mounted upon said firearm and arranged to directly receive the pressure of the gases of discharge to obstruct the bore in said firearm.

2. A firearm including a barrel and firing mechanism, and a sliding valve mounted upon said firearm and arranged to directly receive the pressure of the gases of the explosive to close the bore of said firearm.

3. A firearm including a barrel and firing mechanism, a piston valve operatively mounted on the firearm to slide on the arm and arranged to control the opening through the barrel, and means for admitting pressure of gas directly to said valve to operate it.

4. A firearm including a barrel having a chamber extending transversely of the bore through the barrel, firing mechanism, and a valve operatively connected and mounted to slide in said transversely arranged chamber and arranged to be directly operated by the pressure of gas to close the bore through the barrel.

5. A firearm including a barrel having a chamber transversely arranged to the bore therethrough, firing mechanism, and a piston valve directly operated and movable in said transversely arranged chamber to close the bore through the barrel.

[Claims 6 to 23 not printed in the Gazette.]

880,387. PLUMB-BOB. DON O. MORRILL. Spokane, Wash., assignor of one-half to Lynn W. Morrill, Spokane, Wash. Filed May 10, 1907. Serial No. 372,898.



1. The combination of a surveyor's pole having a socket at one end, a plumb bob screwed in the socket and forming a removable closure therefor, and a cord adjustably connecting the plumb bob and pole and contained in the socket when the bob is screwed therein.

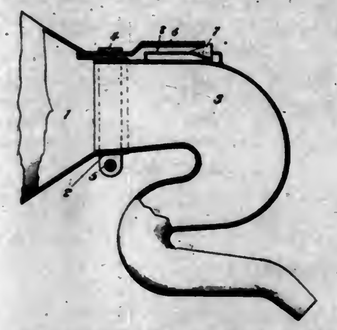
2. The combination of a pole for surveying, a tip thereon having a socket, a pole point adapted to screw into the socket and having a shank of reduced diameter adapted to enter the socket, and a cord connected centrally to the pole within the socket and to the point and serving to adjustably connect the point with the pole when the point is unscrewed.

3. The combination of a pole, a metal end piece thereon having a socket internally threaded at one end, a plumb-bob having a thread to engage the screw-thread in the socket, an extension on the bob adapted to enter the socket, a cord connected to the pole, and a removable cap on the plumb-bob extension having a central hole through which the cord is passed and knotted, serving to secure the cord to the plumb-bob.

880,388. PHONOGRAPH-HORN. FRANCIS M. MURPHY, Jersey City, N. J., assignor of one-half to Thomas Flanagan, Jersey City, N. J. Filed Mar. 11, 1907. Serial No. 361,855.

1. A horn for sound reproducing machines having an air chamber arranged upon one side thereof, one side of the said chamber communicating with the interior of the horn while the opposite side opens exteriorly, and a valve controlling the exterior opening of the chamber.

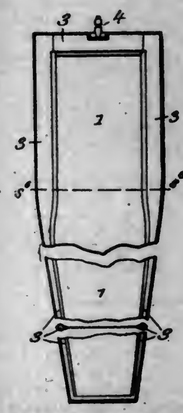
2. A horn for sound reproducing machines having an air chamber arranged upon one side thereof, one end of the chamber communicating with the interior of the horn while the opposite end opens exteriorly thereof, and a slidably mounted valve for controlling the effective size of the exterior opening of the chamber.



3. A horn for sound reproducing machines having an air chamber in communication therewith, a guide rod arranged within the chamber, and a conical valve slidably mounted upon the guide rod and operating to control the effective size of the mouth of the air chamber.

4. In a device of the character described, the combination of a tubular base, a horn detachably connected to the base, the said base carrying an air chamber communicating with the interior of the horn, and a valve controlling the effective size of the mouth of the air chamber.

880,389. SURGICAL PAD. JAMES A. MURRAY, New Haven, Conn., assignor to Seamless Rubber Company, a Corporation of Connecticut. Filed Mar. 2, 1907. Serial No. 360,288.



1. A surgical pad formed of a sheet of material shaped to provide a body portion and an apron forming a continuation of the body portion and adapted to extend downwardly at an angle thereto, said sheet having inflatable portions extending throughout its length.

2. A surgical pad formed of a sheet of material shaped to provide a body portion and an apron forming a continuation of the body portion and adapted to extend downwardly at an angle thereto, said sheet having inflatable portions extending throughout its length and breadth.

3. A surgical pad comprising a body portion provided with an inflatable edging and an apron having a similar edging of smaller diameter than that of the body portion and forming a continuation thereof.

4. A surgical pad comprising a body portion and an apron provided with an inflatable edging, the diameter of

which is reduced at the point where the apron unites with the body portion of the pad.

5. A surgical pad comprising a body portion, an apron extension movable into angular relation to the body portion, and an inflatable tube arranged as an edging about the body portion and apron.

[Claims 6 to 13 not printed in the Gazette.]

880,390. MEANS FOR PROTECTING RIVER-BANKS. ROBERT B. MCGREGOR, Sherard, Miss. Filed Nov. 9, 1907. Serial No. 401,441.



1. Means for protecting river banks consisting of a breakwater built out from the bank to be protected, and a bar former constructed behind said breakwater for the purpose specified.

2. Means for protecting river banks consisting of a breakwater built out from the bank to be protected, said breakwater being arranged obliquely and pointing down stream, and a bar former constructed behind said breakwater for the purpose specified.

3. Means for protecting river banks consisting of a plurality of breakwaters built out at intervals from the bank to be protected and a bar former constructed behind each of said breakwaters for the purpose specified.

4. Means for protecting river banks consisting of a plurality of breakwaters built out at intervals from the bank to be protected, each of said breakwaters being arranged obliquely and pointing down stream, and a bar former constructed behind each of said breakwaters for the purpose specified.

5. Means for protecting river banks consisting of a breakwater built out from the bank to be protected, said breakwater being constructed of rows of pile filled in between with brush and rock, and a bar former erected behind said breakwater for the purpose specified.

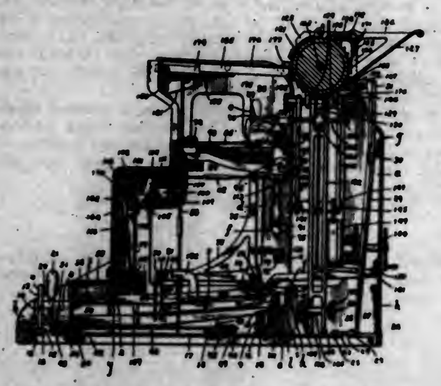
[Claim 6 not printed in the Gazette.]

880,391. TYPE-WRITING MACHINE. COLIN C. MCPHEE, Montreal, Quebec, Canada. Filed Aug. 3, 1906. Serial No. 329,110.

1. In a typewriting machine, the combination with a frame, a platen supported thereby, a plurality of pivoted type bars registering on said platen, a shifting mechanism, and a plurality of pivoted key levers, of a plurality of pivoted members associated with said type bars respectively each of said pivoted members operating a type bar on the simultaneous pressure on two of said key levers, a pair of connecting rods from each of said pivoted members to its co-related pair of key levers, as and for the purpose specified.

2. In a typewriting machine, the combination with a frame, a platen supported thereby, a plurality of pivoted type bars registering on said platen, a shifting mechanism, and a plurality of pivoted key levers, of a plurality of equilateral stirrups pivotally supported and connected with said type bars respectively, and a pair of connecting rods from each of said stirrups to its co-related pair of key levers, as and for the purpose specified.

3. In a typewriting machine, the combination with a frame, a platen supported thereby, a plurality of pivoted type bars registering on said platen, a shifting mechanism, and a plurality of pivoted key levers, of a plurality of equilateral stirrups pivotally supported and connected with said type bars respectively, a link introduced within each of said stirrups, and a pair of rods pivotally joined by said links and connecting a pair of key levers co-related with a stirrup, as and for the purpose specified.

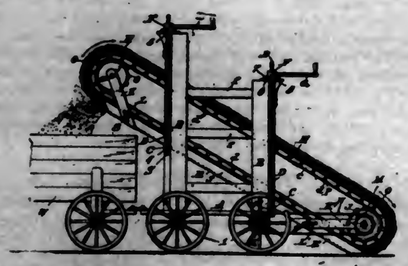


4. In a typewriting machine, the combination with a frame, a platen supported thereby, a plurality of pivoted type bars registering on said platen, a shifting mechanism, and a plurality of pivoted key levers, of a plurality of equilateral stirrups each having a straight side and two curved sides converging to an apex and an extending arm, a pair of rods connecting each of said stirrups with its co-related pair of keys, a link introduced within said stirrup pivotally connecting said rods, and a plurality of rods joining said extending arms to said type bars, as and for the purpose specified.

5. In a typewriting machine, the combination with a frame, a platen supported thereby, a plurality of pivoted type bars registering on said platen, a shifting mechanism, and a plurality of pivoted key levers, of a plurality of equilateral stirrups formed with one straight side and two curved sides converging to an apex, said stirrups being associated with said type bars, a link introduced within each of said stirrups, and a pair of rods pivotally connected to each of said links and to the co-related pair of keys to a stirrup, as and for the purpose specified.

[Claims 6 to 29 not printed in the Gazette.]

880,392. STREET-CLEANING MACHINE. OTTO NEUKIRCH, Cincinnati, Ohio. Filed Apr. 20, 1906. Serial No. 312,939.

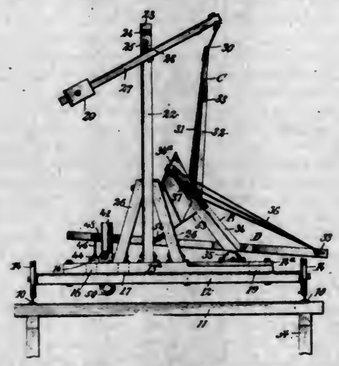


1. In a street sweeping machine a bed mounted upon transporting wheels, uprights rising from said bed and having cap plates at their upper ends, screw-threaded rods operating through said cap plates and having nuts bearing upon the latter and provided with eyes at their lower extremities, cross bars engaging said eyes and operating in slots in the uprights, a flanged floor or conveyer bed supported upon the cross bars, brackets connected adjustably with said floor near its upper and lower ends, shafts journaled in said brackets, an endless broom supported upon said shafts, and means for transmitting motion to the latter from one of the transporting wheels of the machine.

2. In a street sweeping machine a bed mounted upon transporting wheels, uprights rising from said bed and having cap plates at their upper ends, threaded rods extending through said cap plates, crank nuts mounted upon the threaded rods and having flanges, guide hooks upon the cap plates engaging the flanges of the nuts, cross bars supported by the threaded rods, an inclined floor mounted upon the cross bars, an endless broom suitably connected with and supported by the floor, and means for driving the endless broom.

3. In a street sweeping machine of the class described an adjustably supported flanged inclined floor, supporting brackets connected therewith, shafts journaled in the brackets and provided with band wheels and sprocket wheels, belts operating upon the band wheels, chains operating upon the sprocket wheels and having clips gripping and connected with the belts, and individual brooms secured upon the belts.

880,393. CURRENT-MOTOR. CARY A. NEYLAND, Spokane, Wash. Filed May 15, 1907. Serial No. 373,719.



1. In a current motor, a base, a controlling lever having a universal pivotal connection with the base, a paddle having a universal connection with the lever, a walking beam, a pendulum connection between the paddle and walking beam, a pump, and means for operating the pump by the movement of the lever.

2. In a current motor, a base, a controlling lever having pivotal and rocking movement thereon, a paddle universally connected with the lever, the blade whereof is diagonally set in a body bar, a counterbalanced walking beam, a pendulum connection between the paddle and walking beam, a pump, and means for operating the pump by the movement of the lever.

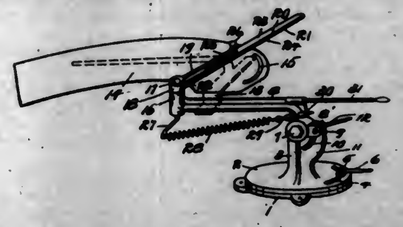
3. In a current motor, a base, a controlling lever having pivotal and rocking connections between its center and one end with the base, a paddle having universal connection with the lever at its inner end, the blade of the paddle being diagonally set in its body bar, limiting cables connected with the blade section of the paddle and the short end of the lever, operating means connected with the pump piston and the longer end of the lever, a counterbalanced walking beam, and a pendulum connection between the walking beam and the paddle.

4. In a current motor, a base, a controlling lever having pivotal and rocking connections between its center and one end with the base, a paddle having universal connection with the lever at its inner end, the blade of the paddle being diagonally set in its body bar, limiting cables connected with the blade section of the paddle and the short end of the lever, operating means connected with the pump piston and the longer end of the lever, a counterbalanced walking beam, a pendulum arm constructed in adjustable sections attached to the paddle, a swinging connection between the pendulum arm and the walking beam, and a tension connection between the paddle and the said lever.

5. In a current motor, a base, a paddle universally supported by the base, a weighted swinging element supported above the paddle, a pendulum connection between said swinging element and the paddle, a pump, and devices for operating the pump by the movement of the paddle, while in or out of the stream.

[Claim 6 not printed in the Gazette.]

880,394. TARGET-TRAP. GEORGE NICOLAI, Denver, Colo., assignor to E. E. Hairgrove, Kansas City, Mo. Filed Aug. 24, 1907. Serial No. 390,041.



1. A target trap comprising a platform adapted for the support of a target prior to and during the initial portion of the target flight, a revoluble arm adapted for engagement with a target near the arm base prior to discharge and for moving such target outwardly on said platform and along the arm during the discharge, and means for actuating said arm.

2. A target trap comprising a platform, a curved flange projecting from the face of said platform and forming the rear abutment of a forwardly unobstructed target seat, a revoluble throw arm extending across and beyond said seat, and means for actuating said throw arm.

3. A target trap comprising a target supporting platform, a throw arm revolubly mounted at one end and adapted for initial engagement with a target near the arm mounting and for longitudinally progressing engagement with the target during the arm revolution, and means for actuating said throw arm.

4. A target trap comprising a platform adapted for supporting a target in initial inert position and during a portion of the target flight, a throw arm having a revolubly mounted base and adapted for engagement with said target near the arm base when the target is in its inert position, and longitudinally progressive engagement with said target during the initial portion of the target flight, a friction inducing member on said arm, and means for actuating said arm, substantially as and for the purpose set forth.

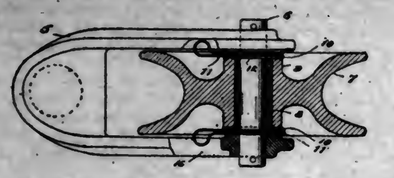
5. In a target trap, the combination with target supporting means of a target throwing arm comprising top and bottom body portions and an intermediate portion of a relatively yielding material, said intermediate portion being extended beyond the top and bottom portions at the target engaging edge, for the purpose set forth.

[Claim 6 not printed in the Gazette.]

880,395. TROLLEY-WHEEL SPRING. RALPH E. NOBLE, Chicago, Ill., assignor to Morgan-Gardner Electric Company, Chicago Ill. Original application filed Jan. 13, 1905, Serial No. 240,963. Divided and this application filed July 3, 1907. Serial No. 382,011.

1. The combination with the trolley wheel and axle, of a harp provided with arms having openings or recesses therein, centralizing springs interposed between the hub of said wheel and said arms, said springs being formed of

a folded piece of spring metal and having projecting loops extending into the apertures in said arms.



2. The combination with a trolley harp and wheel of folded springs between the wheel and harp, said springs being provided with projections engaging with said harp but not attached thereto.

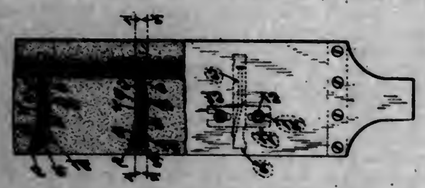
3. The combination with a trolley harp having openings or recesses in the sides thereof, of a trolley wheel, and folded springs inserted between the sides of the wheel and the ends of the harp, said springs being bent to enter into the openings in the harp.

4. In a device of the character set forth, the combination with a forked trolley wheel support, an axle having bearings in said support, a wheel mounted on said axle, washers at the ends of the hub of said wheel, and flat folded springs between the said washers and the ends of the forked arms, said springs having projections adapted to engage loosely with said arms.

5. A spring for trolleys, comprising a bent strip of suitable metal having projection formed at one side adapted to engage with the trolley harp, and having holes in the free ends for engagement with the axle of the trolley.

[Claims 6 and 7 not printed in the Gazette.]

880,396. MOLDER'S FLASK. DENNIS PARKS, St. Louis, Mo. Filed Aug. 15, 1907. Serial No. 388,588.



1. A molder's flask provided with a series of groups of sand-supports, the supports in each group being independently adjustable.

2. A molder's flask provided with a series of groups of sand-supports, the supports in each group being independently adjustable vertically.

3. A molder's flask provided with a series of rows of sand-supports, the supports in each row being independently adjustable.

4. A molder's flask provided with a series of rows of sand-supports, the supports in each row being independently adjustable vertically.

5. A molder's flask provided with sand-supports adjustable vertically and horisontally.

[Claims 6 to 20 not printed in the Gazette.]

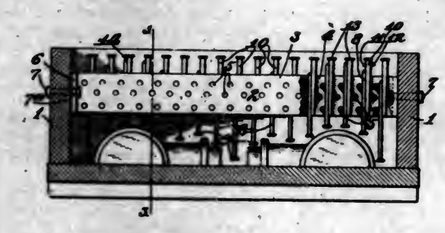
880,397. MOLDER'S FLASK. DENNIS PARKS, St. Louis, Mo. Filed Aug. 15, 1907. Serial No. 388,589.

1. A molder's flask provided with a series of supports, a series of sand-anchors adjustable in said supports, and means for locking each anchor in its adjusted position.

2. A molder's flask provided with a series of supports, a series of sand-anchors adjustable in said supports, and keys for locking each anchor in its adjusted position.

3. A molder's flask provided with a series of supports, a series of sand-anchors adjustable in said supports, and removable means for independently locking each sand-support in its adjusted position.

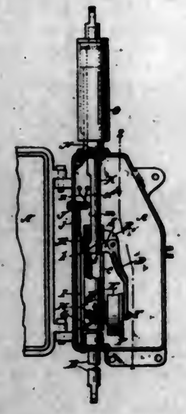
4. A molder's flask provided with a series of supports carrying locking-members, a series of sand-anchors insertible in said locking-members and adjustable therein vertically, and means coöperating with a locking-member and a sand anchor for securing the latter in said support in the desired adjusted position.



5. A molder's flask provided with a series of spaced parallel bars having locking-members, a sand-anchor insertible in each locking-member and adjustable vertically therein, and a key for locking each sand-anchor in the desired position in its bar.

[Claims 6 to 14 not printed in the Gazette.]

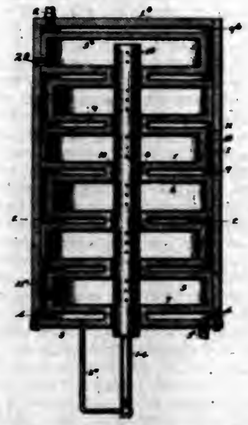
880,398. ELECTROMECHANICAL SLOT FOR SIGNALS. GEORGE S. PELASTERER, Nashville, Tenn. Filed Aug. 29, 1907. Serial No. 390,609.



1. The supporting case, the lower operating rod movable up and down therein and provided at its upper end with a sleeve, and the upper operating rod entering and movable up and down in said sleeve, in combination with the lever formed as an elbow lever pivoted at its elbow to the upper end of said sleeve having a depending longer arm and a shorter arm which enters the sleeve through a slot therein in position to engage, as a dog, the upper operating rod, an armature mounted on said longer arm, and an electro-magnet mounted on the lower portion of the sleeve and interposed between said sleeve and the armature.

2. The combination with the lower operating rod having a tubular upper portion or guide-way, and the upper operating rod entering and movable up and down therein and provided on one side with a vertical groove of a length at least equal to the drop of said rod in automatically passing from "clear" to "stop" position, of electromagnetically controlled appliances carried by the lower operating rod for interlocking the upper and lower operating rods, and a cross pin in the tubular portion of the lower operating rod extending transversely across and through said groove in the upper operating rod, substantially as and for the purposes hereinbefore set forth.

880,399. STEAM-SUPERHEATER. MOSES PRAGER and ELMER L. HAYDEN, Savannah, Ga. Filed Apr. 10, 1907. Serial No. 367,434.



1. In a superheater, the combination of an outer casing, an inner cylinder comprising a plurality of intercommunicating closed heating chambers, means for introducing a heating medium internally thereof, a recess being formed between said heating chambers and between said inner and outer cylinders forming a tortuous steam passageway through said superheater exteriorly of said heating chambers, means for introducing live steam to said passageway, and means for conducting off the superheated steam, substantially as described.

2. In a superheater, the combination of an outer casing, an inner cylinder therefor comprising a plurality of intercommunicating closed heating chambers separated from each other by spaced plates, each heating chamber being provided on the periphery of its vertical wall with a recess located at a position different from the corresponding recess of the next adjacent heating chamber, said recesses forming with the space between said spaced plates a tortuous passageway through said superheater, means for introducing live steam into said passageway, means for conducting off the superheated steam, and means for introducing a heating medium directly into each of said heating chambers, substantially as described.

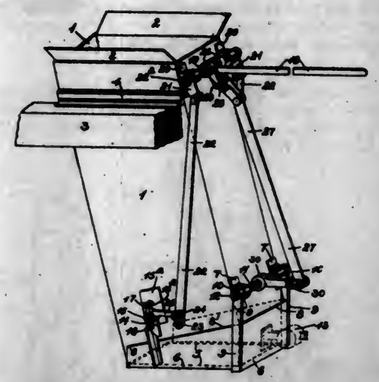
3. In a superheater, the combination of an outer casing, an inner cylinder provided with a plurality of heating chambers, and means for heating said chambers, the construction of said inner cylinder being such that passageways are formed between said heating chambers and between the walls of said inner cylinder and outer casing for conducting the passage of steam through said superheater in intimate contact with the heated walls of said chambers, substantially as described.

4. In a superheater, the combination of a cylinder comprising a plurality of superposed heating chambers formed from spaced separating plates and the wall of said cylinder opposite each heating chambers being inset at a different position than its next adjacent chamber and forming a communicating passage between the spaces of two adjacent separating plates, an outer casing for snugly inclosing said inner cylinder, means for introducing steam between said outer and inner cylinders at one end thereof, and means for conveying off the steam from between the outer and inner cylinder at the other end thereof, substantially as described.

5. In a superheater, the combination of a cylinder comprising a plurality of heating chambers formed by inwardly extending horizontal channeled separating plates, said cylinder being closed at its upper end and the periphery of said cylinder opposite each heating chamber being inset at a position different to the inset portion of its adjacent heating chamber, an outer cylinder open at one end and snugly inclosing said inner cylinder and so associated therewith as to form a space between the closed ends of said cylinder, communicating with the space formed by one of said inset portions, means for introducing steam between said cylinder at one end thereof, and means for conducting off the steam from the passage-way between said heads, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

880,400. APPARATUS FOR LOADING AND MEASURING. LESLIE PRYCE, Germiston, Transvaal. Filed Oct. 7, 1907. Serial No. 396,234.



1. In apparatus of the nature specified, a receptacle having a discharge aperture at the bottom, a cover for said aperture hinged towards one side of the receptacle in such manner that after being thrown open by the superincumbent material it swings back to its closed position, automatic latches for securing the door in its closed position, means for releasing the latches, a lever for operating said means, and means operated by the lever aforesaid for closing the door by hand, as set forth.

2. In apparatus of the nature specified, a receptacle having a discharge aperture at the bottom thereof, a cover for said aperture hinged towards one side of the receptacle in such manner that after being thrown open by the superincumbent material it swings back to its closed position, automatic latches for securing the door in its closed position, means for releasing the latches, said means comprising a shaft rotatably attached to the receptacle, a lever rigid with said shaft, arms on the extremities of said shaft and links connecting the aforesaid arms with the latches, as set forth.

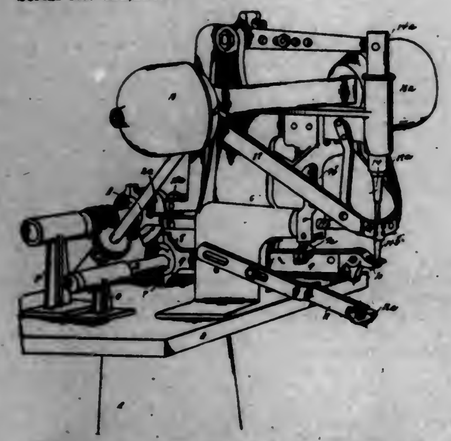
3. In apparatus of the nature specified, a receptacle having a discharge aperture at the bottom thereof, a cover for said aperture hinged towards one side of the receptacle in such manner that after being thrown open by the superincumbent material it swings back to its closed position, automatic latches for securing the door in its closed position, means for releasing the latches, said means comprising a shaft rotatably attached to the receptacle, a lever rigid with said shaft, arms on the extremities of said shaft, links connected at one extremity to the aforesaid arms and constructed at the other extremity with elongated slots, the latches having tail pieces, and pins engaging the tail pieces and elongated slots, as and for the purpose set forth.

4. In apparatus of the nature specified, a receptacle constructed to provide a discharge aperture at the bottom thereof, a cover for said aperture hinged towards one side of the receptacle in such manner that after being thrown open by the superincumbent material it swings back to its closed position, projections on the door and automatic latches secured to the receptacle and adapted to be engaged by said projections, means for releasing the latches, a lever for operating said means, means operated by the lever aforesaid for closing the door by hand, and means for locking the lever to prevent accidental movement thereof, as set forth.

5. In apparatus of the nature specified, a receptacle constructed to provide a discharge aperture in the bottom thereof, a cover for said aperture, hinged towards one side of the receptacle, latches for automatically securing the door in its closed position, means for releasing the latches, a lever for connecting said means, and means for closing the door by hand, said latter means being also adapted to lock the lever and latches in position when the door is closed, these means comprising an operating lever, a shaft therefor, arms loosely mounted on said shaft, a detachable pin carried between said arms, a toe or projection on the operating lever adapted to engage said detachable pin, an arm or lever fixed to the hinge pin of the door, and a link connecting the arms aforesaid with the lever fixed to the hinge pin, as set forth.

[Claim 6 not printed in the Gazette.]

880,401. LASTING-MACHINE. CHARLES F. PYM, Essex, Ontario, Canada, assignor of one-half to Krentler Brothers Company, Detroit, Mich. Filed June 11, 1902. Serial No. 111,116.



1. In a lasting machine, means constructed and arranged to necessarily engage the upper at the edge of the last and to push the upper forward over the edge of the last when the shoe is in proper lasting position with relation to the machine, and automatic mechanism for rapidly reciprocating said pushing means forwardly over the edge of the last and inwardly from said edge, with a speed causing said pushing movements to follow each other in such quick succession that the leather is prevented from recovering itself and is gradually pulled and pushed to fully lasted position in a succession of stretching increments, said mechanism including means to maintain said pushing means in sliding contact with the upper from the extreme edge of the last to the end of the inward movement and out of contact with the upper upon the backward movement.

2. In a lasting machine, tack driving mechanism combined with automatic reciprocatory pushing mechanism constructed and arranged to deliver a rapid series of vibratory pushing movements in contact with the upper at and over the edge of the last, said mechanism including means to deliver said pushing movements in such quick succession that the leather is prevented from fully recovering itself and is gradually pulled and pushed to fully lasted position in a succession of stretching increments, said pushing mechanism including means arranged to maintain the same hard pressure against the upper at the edge of the last and thence inward therefrom to the tacking line in all of its forward leather-stretching movements and substantially out of contact with the upper in its return or backward movement.

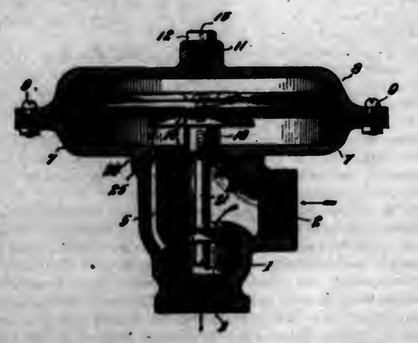
3. In a lasting machine, a workrest for positively and firmly supporting and controlling the vertical position of a lasted shoe, means for pushing the upper of said shoe forward over the edge of the last, and automatic mechanism constructed and arranged to vibrate said pushing means with a rapid series of back-and-forth movements following each other in such quick succession that the leather is prevented from recovering itself and is gradually pulled and pushed to fully lasted position in a succession of progressive stretching increments, said mechanism including means to shift said pushing means above the level of said workrest during the backward movement, for causing said pushing means to remain substantially out of contact with the upper during the backward movement and in sliding contact with the upper during the forward movement, said mechanism including means constructed and arranged to maintain said pushing means in pressing engagement with the upper from approximately the edge of the last to the tacking line, and to maintain the forward movement thereof for said distance in the plane of the upper at the bottom of the last, said workrest being arranged in position to engage the last and upper close to said pushing means when the upper is engaged by the pushing means.

4. In a lasting machine, tack driving mechanism, combined with means for pushing the upper forward over the edge of the last, and automatic mechanism for operating said pushing means, the pushing means and operating mechanism being constructed and arranged to deliver a rapid series of separate and distinct yielding pushing pressures forwardly at and over the edge of the last and inwardly from said edge to the tacking line, including means maintaining and compelling sliding contact with the upper from the extreme edge of the last throughout said entire distance forward, and out of contact with the upper upon the backward movement, constructed and arranged to permit a plurality of reciprocations of the pushing means for a single operation of the tack driving mechanism.

5. In a lasting machine, the combination of pressure-delivering and blow-delivering mechanism constructed and arranged to deliver a rapid series of forward pushing pressures adjacent the upper edge to be tacked and a series of leather-stretching blows on the upper to aid in the stretching of the leather.

[Claims 6 to 30 not printed in the Gazette.]

880,402. PRESSURE-REGULATOR. MIRON G. REYNOLDS, Anderson, Ind. Filed Sept. 23, 1907. Serial No. 394,151.



1. A pressure regulator comprising a valve casing, a regulating diaphragm and casing communicating with the outlet of the valve casing, a valve within the valve casing connected to the regulating diaphragm, and a balancing diaphragm connected to the stem of said valve and to its casing to be exposed to the inlet pressure thereof.

2. In a pressure regulator, the combination with a diaphragm and its casing, of a valve connected to said diaphragm, and a valve casing having a seat for said valve and provided with a passage extended from the delivery side of said seat to said diaphragm casing.

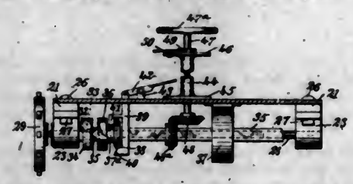
3. In a pressure regulator, the combination with a diaphragm and its casing, of a valve connected with said diaphragm and having a spherical contact face, and a valve casing having a seat disposed above said face to contact therewith and provided with a passage extending from the delivery side of said seat to said diaphragm casing.

4. In a pressure regulator, a valve casing, an abutting diaphragm casing communicating with the outlet side thereof, a plate disposed upon the under face of the diaphragm, a valve having its stem connected to said plate, and a balancing diaphragm secured between the abutting faces of the valve and regulator casings and connected to said stem.

5. In a pressure regulator, a casing provided with a diaphragm therein, a valve casing connected to said regulator casing, a plate beneath said diaphragm and secured thereto, a guiding extension from said plate having a threaded aperture, a valve communicating with a port in the valve casing and provided with a shouldered stem having a threaded end, and a balancing diaphragm clamped to said valve stem between said extension and shoulder thereon.

[Claim 6 not printed in the Gazette.]

880,403. MOTOR-VEHICLE. JAMES RITCHIE, New York, N. Y. Filed May 16, 1907. Serial No. 373,905.



1. In a motor vehicle, a driving shaft provided with a clutch section, a hollow shaft thereon a clutch section slidable on the hollow shaft for coöperation with the other clutch section, and means for moving said clutch section, comprising an annular flange in connection therewith and having oppositely beveled edges, a bracket slidable transversely of the shaft, and provided on each side of said shaft with an extension, said extensions having beveled edges and engaging the opposite beveled edges of the flange, and means for moving the bracket.

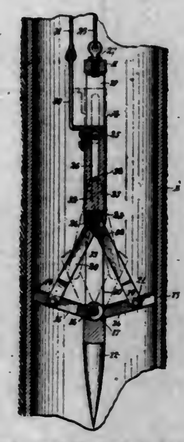
2. In a motor vehicle, a driving shaft provided with a clutch section, a hollow shaft thereon a clutch section slidable on the hollow shaft for coöperation with the other clutch section, and means for moving said clutch section, comprising an annular flange in connection therewith and having oppositely beveled edges, a bracket slidable transversely of the shaft, and provided on each side of said shaft with an extension, said extension having beveled edges and engaging the opposite beveled edges of the flange.

3. In a motor vehicle, a driving shaft provided with a clutch section, a hollow shaft thereon a clutch section slidable on the hollow shaft for coöperation with the other clutch section, and means for moving said clutch section, comprising an annular flange in connection therewith and having oppositely beveled edges, and means engaging said beveled edges for moving the clutch section whereby to engage and disengage the clutch.

880,404. PIPE-FISHING TOOL. ROBERT G. SANFORD, Yonkers, N. Y. Filed Oct. 24, 1907. Serial No. 398,928.

1. A lifting tool consisting of a slotted body, the bottom wall of the said slot being inclined from the center upward in opposite directions, opposing jaws hinged within the slotted portion of the body over the bottom wall thereof and extending outward beyond the body in opposite directions and with an upward inclination, means for lifting the body, and independent means for carrying the jaws toward the body.

2. A lifting tool consisting of a body having parallel side members connected at the top and at the bottom, and forming a longitudinal opening between the side members, jaws hinged within the opening over the bottom wall and arranged to extend outward in opposite direction, lifting means connected with the upper end of the body, a block mounted to slide in the space between the side members of the body, links pivotally connected at their lower ends with the said jaws, a pivot pin connecting the upper ends of said links with the lower end of said sliding block, the ends of said pivot pin engaging longitudinal slots in the side members of the said body, a pin secured to the side members of the body and extending through a longitudinal slot in the said block, and lifting means connected with the said block.



3. A lifting tool consisting of a slotted body, the bottom wall of the said slot being inclined from its center upward in opposite directions, arms hinged within the slotted portion of the body over the bottom wall thereof, which arms extend outward in opposite directions with a slight upward inclination, lifting means for the body, a block mounted to slide in the body, link connections between the said sliding block and the said arms, and means for controlling the movement of the sliding block independently of the lifting means for the body.

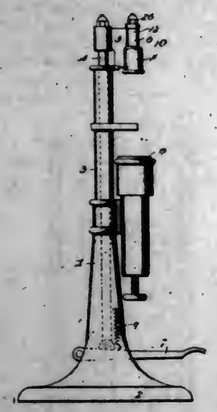
4. A lifting tool consisting of a body having a longitudinal slot or opening, the bottom wall of the said slot being inclined from its center upward in opposite directions, jaws hinged within the slotted portion of the body over the bottom wall thereof, the said jaws extending outward in opposite directions with an upward inclination, lifting means connected with the upper end of the body, a block mounted to slide in the slot in said body and having a slot in its bottom, links having bifurcated lower ends pivotally connected with the said jaws between their ends, the upper ends of said links extending within the slot in the bottom of said block and pivotally connected by a pin to said block, the ends of the pivot pin engaging longitudinal slots in the sides of the body, said block having a longitudinal slot in its upper portion, a pin secured to the sides of the body and passing through the said slot in the block to limit the movement of said block, a bracket secured to one side of the block, and lifting means connected with said bracket.

880,405. PROCESS FOR PRODUCING PORELESS AND WELL-ADHERING ELECTRODEPOSITS. HARRY SCHMIDT, Cologne, Germany. Filed Aug. 7, 1907. Serial No. 387,528.

The process for producing poreless and well adhering electrodeposits, which consists in first providing the metal to be electroplated with a coating of a metal or alloy which melts at a lower temperature than the final electrodeposit,

in then electrolytically depositing the final coating, and in melting the intermediate coating, substantially as, and for the purpose, set forth.

880,406. MACHINE FOR APPLYING BOTTLE-SEALS. EDWARD D. SCHMITT, Brooklyn, N. Y., assignor to Monarch Seal Company, New York, N. Y., a Corporation of New York. Filed May 11, 1907. Serial No. 373,076.



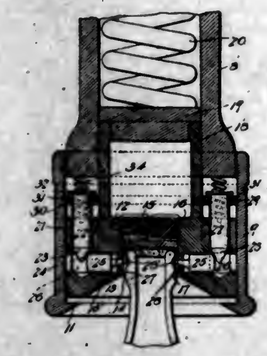
1. In a machine for applying bottle seals, a sealing head non-rotatable on its own axis a yielding seal applying plunger in said head and having a plurality of recesses therein, a seal locking lever rockably mounted in each recess, a stationary cam element, slidable devices carried by the plunger adapted to engage the stationary cam element for the purpose set forth, and a yielding means interposed between said slidable devices and the seal locking levers above their pivotal points, whereby upon the upward movement of the plunger the levers will be rocked to lock the seal.

2. In a machine for applying bottle seals, a sealing head non-rotatable on its own axis, a yielding seal applying plunger in said head and having a plurality of recesses therein, a seal locking lever rockably mounted in each recess, slidable devices carried by the plunger and provided at their inner ends with cam surfaces, yielding means interposed between said devices and the rockable seal locking levers, an adjustable cam element for operating the slidable devices, whereby the point at which in the movement of the plunger, a seal may be locked, is varied.

3. In a machine for applying bottle seals, a sealing head non-rotatable on its own axis, a yielding seal applying plunger in said head, said plunger having a seal holding cavity therein, and means for temporarily holding the seal in said cavity, said plunger being also provided with recesses, seal locking levers pivotally mounted in said recesses and formed with indenting points at their lower ends, a stationary cam element, slidable devices mounted in the plunger and having cam surfaces adapted to engage the cam element, yielding means interposed between said slidable devices in the upper ends of the seal locking levers, through which, when said devices engage the cam element, the lower ends of the locking levers are rocked into the seal cavity to indent the flange of the seal into locking engagement with the bottle.

880,407. MACHINE FOR APPLYING BOTTLE-CAPS. EDWARD D. SCHMITT, Brooklyn, N. Y., assignor to Monarch Seal Company, New York, N. Y., a Corporation of New York. Filed May 23, 1907. Serial No. 375,341.

1. In a machine for applying bottle seals, a yielding seal applying plunger formed with a seal holding cavity and a plurality of radially arranged recesses therein, said recesses having apertured walls separating them from said cavity, a slidable seal locking device in each recess formed with a seal indenting point guided in the apertures in said walls, a vertically yielding device for each locking device, each of said yielding devices having a cam surface co-acting with the locking devices, whereby when the plunger is moved upward, the seal locking devices are projected forward to bring their indenting points into engagement with the flange of a seal to lock the same at intervals upon the locking shoulder of a bottle.



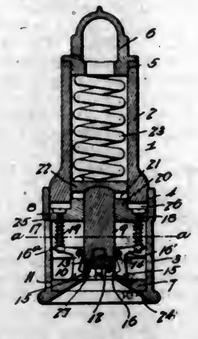
2. In a machine for applying bottle seals, a yielding seal applying plunger formed with a seal holding cavity and a plurality of substantially radially arranged recesses therein, said recesses having apertured walls separating them from said cavity, a slidable seal locking device in each recess formed with a seal indenting point guided in the apertures in said walls, a vertically operating yielding device for each locking device, each yielding device having a cam surface co-acting with the locking device, whereby when the plunger is moved upward, the seal locking devices are projected forward to bring their indenting points into engagement with the flange of a seal to lock the same at intervals upon the locking shoulder of a bottle, and means for limiting the downward movement of the yielding devices when the plunger returns to normal position, substantially as and for the purpose set forth.

3. In a machine for applying bottle seals, a yielding seal applying plunger formed with a seal holding cavity and a plurality of substantially radially arranged recesses therein, a slidable seal locking device in each recess and formed with a seal indenting point, a yielding device for each locking device, each yielding device having a cam surface co-acting with a locking device, whereby when the plunger is moved upward, the seal locking devices are projected forward to bring their indenting points into engagement with the flange of a seal to lock the same at intervals upon the locking shoulder of a bottle, a ring within the head and limited as to downward movement and surrounding the plunger and provided with a series of apertures through which the yielding devices pass, and means carried by said yielding devices adapted to engage the ring to limit the downward movement of said devices as the plunger returns to normal position.

880,408. SEALING-HEAD FOR BOTTLE-SEALING MACHINES. EDWARD D. SCHMITT, Brooklyn, N. Y., assignor to Monarch Seal Company, New York, N. Y., a Corporation of New York. Filed May 27, 1907. Serial No. 376,036.

1. A sealing head for bottle sealing machines, comprising a casing, a plunger in said casing formed in two parts capable of a movement in common, means for arresting the movement of one of said parts, seal locking devices mounted in the plunger and adapted to be operated when the movement of one of the parts is arrested.

2. A sealing head for bottle sealing machines comprising a casing, a plunger formed in two parts capable of a movement in common with each other, seal locking devices rockably mounted in the plunger, yielding connections between said devices and one part of the plunger, through which the seal operating devices are operated when the movement of one of the plunger parts is arrested.



3. A sealing head for bottle sealing machines, comprising a casing, a yielding plunger in said casing formed in two parts capable of a movement in common with each other, means for arresting the movement of the upper part of said plunger, a plurality of seal locking devices rockably mounted in the lower plunger part, yielding connections between said seal locking devices and the upper plunger part through which the said locking devices are actuated when the movement of the upper part of the plunger is arrested.

4. A sealing head for bottle sealing machines, comprising a casing, a yielding plunger, formed in two parts, the lower part having a seal holding cavity therein, the said parts being capable of a movement in common with each other, a plurality of seal locking levers pivoted in the lower plunger part, springs interposed between the upper plunger part and the arms of the seal locking levers whereby, when the movement of the upper part of the plunger is arrested, the seal locking levers will have their lower ends yieldingly projected into the seal holding cavity to lock the seal, means for arresting the movement of the upper plunger part and a sealing spring backing the lower plunger part, all substantially as and for the purpose set forth.

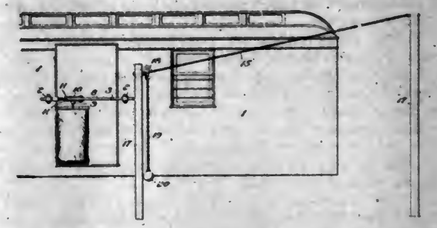
5. A sealing head for bottle sealing machines comprising a casing, a yielding seal applying plunger within said casing and formed in two parts capable of a movement in common with each other, means for arresting the movement of the upper part, the lower part having a seal holding cavity therein and a plurality of spring backed pins having their ends projected into said cavity to temporarily hold the seal, a plurality of seal locking devices rockably mounted in the lower plunger part, springs interposed between the upper plunger part and the seal locking devices, whereby, when the upper part of the plunger is arrested, the seal locking devices will be yieldingly projected into the seal cavity to lock the seal upon a bottle.

[Claims 6 and 7 not printed in the Gazette.]

880,409. APPARATUS FOR TRANSFERRING MAIL-POUCHES. ROBERT C. SHARP, Apple Creek, Ohio. Filed Oct. 31, 1907. Serial No. 400,063.

1. In an apparatus of the class described the combination with a mail bag catcher, of a detachable pouch supporting carrier mounted upon said catcher, a receiving line, and means interposed between said line and carrier for automatically releasing said carrier and transferring it to the line aforesaid, substantially as described.

2. In an apparatus of the class described the combination with a car, of a pouch-supporting carrier comprising a body member, and a detachable member, a latch for interlocking said members, a fixed receiving line and a pendant from said line for engaging said latch to automatically release and transfer said detachable pouch-carrying member to the receiving line aforesaid, substantially as described.



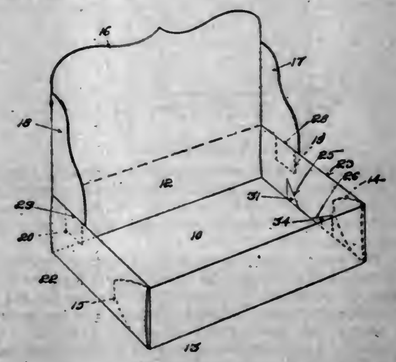
3. In an apparatus of the class described the combination with a car, of a pouch-supporting carrier comprising a body member and a detachable member, a spring-pressed latch for interlocking said members having a raised bifurcated extremity, an inclined receiving line, and a chain depending from said line in the path of said latch-extremity whereby said detachable pouch-carrying member is automatically released and transferred to the receiving line aforesaid, substantially as described.

4. In an apparatus of the class described the combination with a car having mounted thereon a mail collector and deliverer, the latter comprising relatively fixed and detachable pouch-carrying members, of a latch for interlocking said members, and means at the receiving station for disengaging said latch to release said detachable pouch-carrying member, substantially as described.

5. In an apparatus of the class described the combination with a car having mounted thereon a mail collector and deliverer, the latter comprising relatively fixed and detachable pouch-carrying members, of a latch for interlocking said members having a normally elevated bifurcated trailing extremity, and a pendant at the receiving station in the path of said latch-extremity for releasing said detachable pouch-carrying member, substantially as described.

[Claim 6 not printed in the Gazette.]

880,410. COMBINED CARTON AND DISPLAY DEVICE. JOSEPH B. SINGER, Boston, Mass., assignor to Oscar H. Hersey, trustee, Portland, Me. Filed Nov. 13, 1906. Serial No. 343,182.



1. The improved carton and display device comprising a body having folded ends and slots in the upper edge of said ends, a back display surface attached to said body, brackets on the said back display surface, and tongues on the said brackets engaging the said slots in the said ends.

2. The improved carton and display device comprising a body having folded ends, a back display surface hinged to said body, a front display surface of the same size as the

front wall of the carton and hinged to the upper edge of the said front wall, and wings attached to the said front display surface and adapted to be inserted between the contents of the carton and the ends thereof when the carton is folded and between the folded portions of the ends when the box is closed.

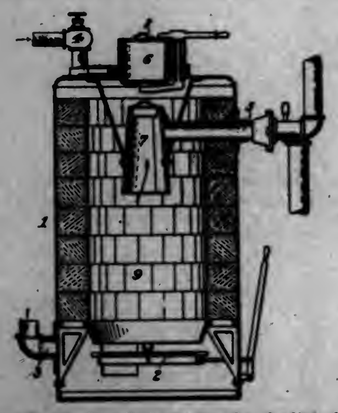
3. The improved carton and display device provided with a front display surface hinged to the top edge of the front of the box and a tongue on the end of the said front display surface to hold the front display surface when in closed position by passing between the end of the box and the contents thereof, and to hold the said display surface parallel with the front wall of the box when in open position by passing between the layers of cardboard composing the end of the box.

4. The improved carton and display device provided with a back display surface having a bracket hinged thereto and with a front display surface having hinged thereto, a tongue, the said bracket and the said tongue being adapted to pass between the end of the box and the contents thereof to maintain the back display surface and the front display surface in closed position.

5. The improved carton and display device provided with a back and a front display surface hinged to the body of the box, locking end pieces, one provided with a slot and the other with a tongue, the ends of said end pieces being vertical when in folded position, an end, and an end flap adapted to fold over said end pieces and slitted diagonally forming tongues to pass under the vertical ends of the said end pieces.

[Claim 6 not printed in the Gazette.]

880,411. PROCESS OF FEEDING FUEL INTO GAS-PRODUCERS. HARRY F. SMITH, Lexington, Ohio. Filed Mar. 29, 1907. Serial No. 365,293.



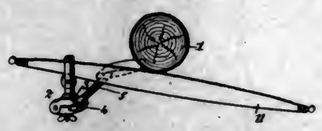
1. The herein described process for feeding fuel into gas producers, which consists in filling the producer to a level so that the upper surface of the fuel is above the gas outlet and introducing a cooling medium at a point above the gas outlet.

2. The herein described process for feeding fuel into gas producers, which consists in filling the producer to a level so that the upper surface of the fuel is above the gas outlet and introducing a cooling medium at a point above the gas outlet and causing the steam to pass down well through the unignited fuel to a point which is determined by the location of the gas outlet.

3. The herein described process for feeding fuel into gas producers, which consists in charging the fuel into the producer magazine to a point above the mouth of the gas outlet and then introducing steam above the surface of the fuel, thereby subjecting all of the fuel above the gas outlet to the action of the steam and protecting all fuel below the gas outlet from the action of the steam introduced above the fuel.

4. The herein described process for feeding fuel into gas producers, which consists in delivering steam in a regulated quantity to that portion of the fuel located above the gas outlet whereby to effectually cool the fuel as it approaches the active zone in the lower part of the producer and effectually preventing the distillation of hydro-carbons and the coking of the coal at any point above the gas outlet.

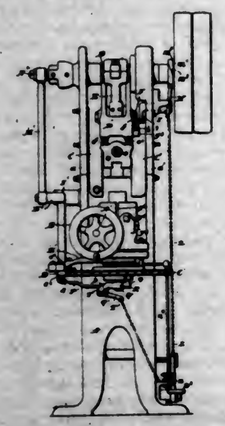
880,412. AX ATTACHMENT FOR SAWING LOGS. LEVI SMITH, Myrtle Point, Oreg. Filed Aug. 20, 1907. Serial No. 390,567.



1. A device of the class described, comprising a pair of jaws having a pivot connection therebetween and constituting a clamp, a swivel-bolt mounted on said jaws and extending in a plane transverse to the axis of said pivoted connection, and a guide for a saw formed on said swivel-bolt.

2. A device of the class described, comprising a pair of jaws having a pivot connection therebetween, a swivel-bolt connecting said jaws and carrying a nut for forcing said jaws together, said bolt being extended laterally beyond said jaws and constituting a guide for the saw blade.

880,413. NOTCHING-PRESS. OBERLIN SMITH, Bridgeton, N. J. Filed Mar. 14, 1905. Serial No. 250,066.



1. In a press, the combination of means for operating dies, a disk, spindle, means for rotating said spindle step-by-step, a brake adapted to prevent overthrow, means for moving said spindle to exact position, and means for relieving said spindle from the action of said brake during said last-mentioned movement.

2. In a press, the combination of dies, a disk spindle, a pawl-and-ratchet feed for advancing said spindle, a brake to prevent overthrow, means for moving said spindle to exact position, and means whereby said brake is prevented from acting during said last-mentioned movement.

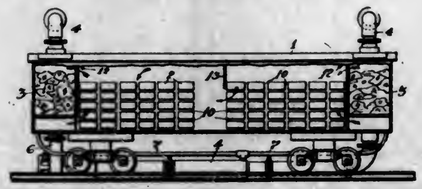
3. In a press, the combination of dies, a disk spindle, a pawl-and-ratchet feed for moving said spindle step-by-step, a brake adapted to prevent overthrow, and a stationary part engaging an opening in said brake, said opening being larger than the dimension of said part in the direction of rotation.

4. In a press, the combination of dies, a disk spindle, a pawl and ratchet adapted to move said spindle step-by-step to positions in advance of the exact positions desired, a brake adapted to prevent overthrow, means for returning said spindle to exact position, and a stationary part adapted to engage a shoulder on said brake, provision being made whereby said shoulder may retreat from said part.

5. In a press, the combination of dies, a disk spindle, a ratchet disk connected to said spindle, a pawl adapted to move said ratchet disk, a brake adapted to prevent overthrow, a stationary pin extending between shoulders on said brake, said shoulders being farther apart than the corresponding dimension of said pin, and a lock adapted to engage said ratchet disk, said lock being beveled and said ratchet disk having flaring openings adapted to receive said lock.

[Claims 6 to 31 not printed in the Gazette.]

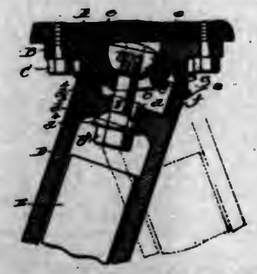
880,414. PROCESS FOR TEMPERATURE REGULATION. ALMERIN R. SPRAGUE, Sacramento, Cal., assignor, by mesne assignments, to L. H. Roy, Chicago, Ill. Filed Mar. 22, 1906. Serial No. 307,472.



1. The process of treating a perishable product, in a closed space, which consists in supplying air to said space, continuously withdrawing air from said space and intermittingly interrupting the supply of air for periodically varying the density of the air therein.

2. The process of treating a perishable product in a closed space, which consists in producing in a closed circuit of which said space forms a part, movement of a body of air, treating the air in said circuit to attemperate the same, and intermittingly varying the admission of air to said space, while maintaining a continuous outflow therefrom.

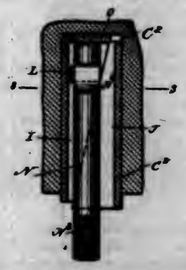
880,415. PULLEY-SUSTAINING HANGER. FRANK C. STEVENS, North Andover, Mass., assignor to Davis & Furber Machine Company, North Andover, Mass., a Corporation of Massachusetts. Filed Oct. 14, 1907. Serial No. 397,248.



1. A plate having a semi-spherical socket and provided with a circular track, a hanger having a circular track at its end adjacent the plate, two rings interposed between the tracks, the rings varying in width and contacting one with the other, a bolt having a semi-spherical portion seated in the socket of the plate, and a ball and socket connection between the bolt and the hanger.

2. A plate having a semi-spherical exterior and provided with a track, a hanger having at its upper end a circular track, and two rings interposed between said hanger and track, said rings varying in width and contacting one with the other, and a bolt entering said hanger and having a semi-spherical portion seated in said plate, said bolt being provided with a second hemi-spherical portion inside said hanger.

880,416. WIRE-SUSPENDING DEVICE. HERBERT E. STEVENS, Macdonaldton, Pa. Filed Nov. 9, 1906. Serial No. 342,614.



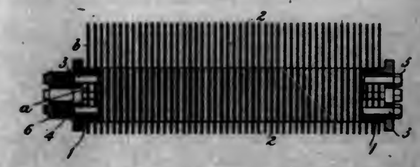
1. A wire suspending device comprising a wedge-shaped half tubular member, having a recessed lug at the inside near the upper or base end, a separable bolt held on and depending from said lug, a second wedge-shaped half tubular member capable of sliding on the first mentioned member, the said members being adapted to be inserted in a socket, and the said second member when in position on the first member partly surrounding the bolt but out of engagement therewith.

2. A wire suspending device comprising a pair of wedge-shaped tubular members adapted to be inserted in a socket and capable to slide one on the other, one of the members having a recessed lug, and a bolt having its shank recessed near the upper end for engagement with the said recessed lug.

3. A wire suspending device comprising a pair of wedge-shaped tubular members adapted to be inserted in a socket, and capable to slide one on the other, one of the members being closed at its base end and provided near this end with a recessed lug, and a bolt having its shank recessed near the upper end for engagement with the said recessed lug.

4. A wire suspending device comprising a pair of wedge-shaped half tubular members adapted to be inserted in a socket and capable of sliding one on the other, one of said members being provided near its upper or base end with a lug having a recess open at one end, and a bolt having its shank adapted for engagement with said recessed lug, the said bolt when in position in the lug extending below the lower or apex end of said member.

880,417. APPARATUS FOR TRANSMITTING HEAT FROM ONE FLUID TO ANOTHER. WILLIAM J. STILL, Ealing, England. Filed Mar. 9, 1905. Serial No. 249,327.



1. Apparatus for transmitting heat from one fluid to another, comprising a wall arranged between the two fluids and having heat conductors in connection therewith, each of said conductors having portions projecting from said wall into one of said fluids at different parts thereof to different extents and more or less according as said

parts differ respectively less or more in temperature from the conducting portions in contact therewith.

2. Apparatus for transmitting heat from one fluid to another, comprising a wall arranged between the two fluids and having heat conducting plates in connection therewith, each of said plates having portions projecting from said wall into one of said fluids at different parts thereof to different extents and more or less according as said parts differ respectively less or more in temperature from the plate portions in contact therewith.

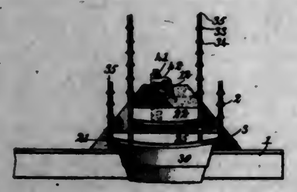
3. Apparatus for transmitting heat from one fluid to another including a wall located between said fluids and comprising heat conductors each projecting from said wall into both fluids and each having portions extending into one of said fluids at different parts thereof to different extents and more or less according as said parts differ respectively less or more in temperature from the conductor portions in contact therewith.

4. Apparatus for transmitting heat from one fluid to another including a wall located between said fluids and comprising heat conducting plates each projecting from said wall into both fluids and each having portions extending into one of said fluids at different parts thereof to different extents and more or less according as said parts differ respectively less or more in temperature from the plate portions in contact therewith.

5. For transmitting heat from one fluid to another, a tube the wall of which comprises transverse heat-conducting plates each of which projects inwards and outwards of the tube and has portions projecting into different parts of one of said fluids to different extents and more or less according as said parts differ respectively less or more in temperature from the plate portions in contact therewith.

[Claims 6 to 14 not printed in the Gazette.]

880,418. INSULATOR FOR HIGH-TENSION CONDUCTORS. SAMUEL H. SUMMERSCALES, Winnipeg, Manitoba, Canada. Filed Nov. 23, 1906. Serial No. 344,765.



1. An insulator presenting a body adapted to be mounted upon a support, and having shields disposed on opposite sides of the conductor, said shields being formed of dielectric material whereby the length of the path of leakage in the direction of said shields to the support is increased.

2. An insulator having a body adapted to be mounted upon a support, and shields attached to said body in the path of lines of leakage which might pass to said support, said shields having projecting portions adapted to prevent the formation of a continuous coating of water on said shields.

3. An insulator having a body adapted to be mounted upon a support, shields mounted upon said body on opposite sides of the conductor and presenting ribs extending longitudinally thereof, said ribs presenting protected under faces adapted to prevent the accumulation of water, and sheds disposed between said shields.

4. An insulator having a body adapted to be mounted upon a support, and having substantially parallel shields of dielectric material mounted thereupon, and sheds adapted to interlock with said shields, said sheds and said shields being adapted to intercept the lines of leakage from the conductor to the said support.

5. An insulator having a body adapted to be mounted upon a support and presenting a substantially pyramidal form with grooves in the faces thereof, shields attached in said grooves and adapted to intercept leakage currents passing across them toward said support.

[Claims 6 to 9 not printed in the Gazette.]

880,419. ATTACHMENT FOR UMBRELLAS AND THE LIKE. WILLIAM A. SWAREN, Chicago, Ill. Filed Jan. 12, 1907. Serial No. 357,914.



1. In a device of the character described, the combination with a receptacle for objects embodying a shank adapted for attaching said receptacle to the stick of an umbrella, cane, or the like, of an elastically controlled plunger within the receptacle, a pivoted member adjacent a slot, elastic means for normally holding the pivoted member within the path of objects entering the slot, and a spring controlled plunger operable from the exterior of the receptacle and adapted to coöperate with the slot and the pivoted lever.

2. In a device of the character described, the combination with a receptacle provided with a slot adapted to permit the ingress and egress of objects, of a spring controlled plunger within the receptacle, a pivoted member movable adjacent the slot, a movable member operable from the exterior of the receptacle and adapted to cooperate with the pivoted member in controlling the slot, and a shank adapted to attach the said receptacle to the stick of an umbrella, cane, or the like.

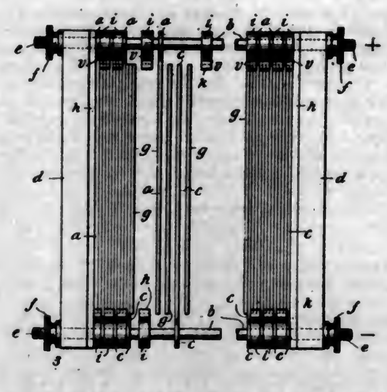
3. In a device of the character described, the combination in a receptacle for objects, of a plunger adapted to move longitudinally therein, elastic means interposed between one end of the receptacle and the plunger and adapted to hold the said plunger normally at the opposite end thereof, there being a slot adjacent to the said opposite end of the receptacle, a pivoted discharge lever mounted to move in the slot, elastic means adapted to hold the said pivoted lever normally within the path of objects entering the slot, and a plunger operable from the exterior of the receptacle and adapted to move objects from contact with said pivoted discharge lever in the direction of the interior of the receptacle.

4. In a device of the character described the combination of a receptacle provided with a slot in the wall thereof adapted to permit the ingress and egress of objects, an elastically controlled plunger normally operable to force objects within the receptacle transversely of the said slot, an elastically controlled discharge lever adjacent the slot, and a plunger operable from the exterior of the receptacle and adapted to enter the interior of the receptacle adjacent the slot and adapted to move objects transversely of the said slot toward the interior of the receptacle.

5. In a device of the character described, the combination of a receptacle for objects, there being a slot communicating with the said receptacle, an elastically controlled pivoted member adapted to oscillate adjacent to said slot and a spring controlled plunger operable from the exterior of the receptacle and adapted to move objects inserted within the slot in the direction of the interior of the receptacle.

[Claims 6 to 11 not printed in the Gazette.]

880,420. STORAGE-BATTERY PLATE. ALFRED O. TATE, Toronto, Ontario, Canada, assignor to Tate Electrolytic Company of America, a Corporation of New York. Filed Dec. 1, 1905. Serial No. 289,796.



1. A bi-functional storage battery plate of the Faure type embodying a plurality of narrow conducting anode strips electrically connected together at one end and a plurality of similar intervening cathode strips connected together at the other end; in combination with a layer of porous insulating material between each anode and cathode strip, the insulating medium being so arranged that it affords an effective protection to the active material, substantially as described.

2. A bi-functional storage battery plate embracing anodes and cathodes of narrow conducting strips or ribbons closely related mechanically and electrically; in combination with a porous insulating medium between each anode and cathode, the anodes being all connected together by a conductor at one end and the cathodes similarly connected at the other end, said anodes and cathodes being insulated on their lateral edges, whereby current charge and discharge can only be effected through the faces thereof and the intervening porous media, substantially as described.

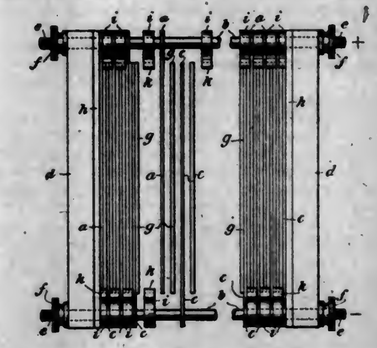
3. A bi-functional storage battery plate embracing a series of narrow strip like anodes and a series of intervening cathodes of similar structure; in combination with layers of porous insulating media between said anodes and cathodes and conducting binding means at each end of the plate constituting respectively the plus and minus poles thereof, substantially as described.

4. A bi-functional storage battery plate embracing a series of thin narrow ribbon like anodes and a series of similarly constructed cathodes connected electrically, one set to a conducting rod or bar and the other set to a similar rod or bar; said anodes and cathodes being each coated on opposite sides with active material in combination with porous insulating material between said anodes and cathodes, and means for binding all of the parts together, substantially as described.

5. A bi-functional storage battery plate embracing a series of thin narrow ribbon like anodes having lateral flanges; a series of cathodes similarly constructed, and porous insulating media between said anodes and cathodes; in combination with binding means and yielding cushions for compensating for expansion and contraction of the parts; together with active material located in the grooves between said strips, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

880,421. STORAGE-BATTERY PLATE. ALFRED O. TATE, Toronto, Ontario, Canada, assignor to Tate Electrolytic Company of America, a Corporation of New York. Filed Oct. 29, 1907. Serial No. 399,641.



1. A bifunctional storage battery plate, embracing interleaved anode and cathode strips or ribbons, and intermediate porous insulating media provided with chambers or cavities adapted to mechanically sustain or support active material within said cavities and against the faces of said strips or ribbons; the anode strips being all connected to a common conductor and the cathode strips similarly connected to another conductor, substantially as described.

2. A bifunctional storage battery plate, embracing interleaved anode and cathode strips or ribbons, and intermediate porous insulating strips of the same width; said porous strips being provided with chambers or cavities for sustaining active material within said cavities and against the faces of the anode and cathode strips, and the arrangement such that the electrolyte has access to the active material only through the lateral edges of the porous strips, substantially as described.

3. A bifunctional storage battery plate, embracing anode and cathode strips or ribbons, and intermediate porous insulating strips grooved on their opposite faces; in combination with active material located in said grooves and prevented thereby from being released, substantially as described.

4. A bifunctional storage battery plate, embracing anode and cathode strips or ribbons, and intermediate porous insulating strips provided with chambers or cavities adapted to mechanically support active material within the cavities; in combination with means for binding said parts together, substantially as described.

5. A bifunctional storage battery plate, embracing interleaved anode and cathode strips or ribbons separated from each other by insulating strips provided with chambers or cavities for mechanically sustaining or supporting active material within the cavities, the arrangement being such that the electrolyte has access to the active material only through the lateral edges of the insulating strips, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

880,422. STORAGE-BATTERY PLATE. ALFRED O. TATE, Toronto, Ontario, Canada, assignor to Tate Electrolytic Company of America, a Corporation of New York. Filed July 3, 1907. Serial No. 382,119.

1. A bifunctional storage battery plate, embracing conducting strip or ribbon like anodes and cathodes, each one of which is held or supported by an open insulating frame, substantially as described.

2. A bifunctional storage battery plate, embracing conducting anodes and cathodes of strip or ribbon like form, each supported or sustained by an open insulating frame; in combination with interleaved strips of insulating material, substantially as described.

3. A bifunctional storage battery plate, embracing strip or ribbon like conducting anodes and cathodes, each supported or sustained by an open insulating frame; in combination with interleaved strips of porous insulating material, substantially as described.

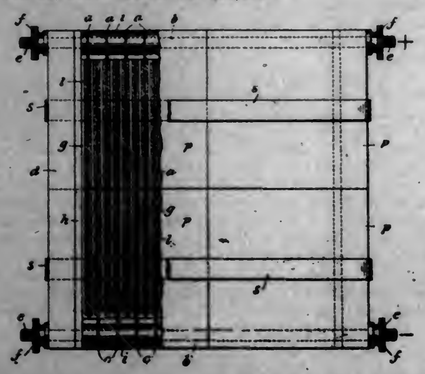


4. A bifunctional storage battery plate composed of interleaved strip or ribbon like anodes and cathodes sustained at their lateral edges by insulating frames, substantially as described.

5. A bifunctional storage battery plate composed of interleaved strip or ribbon like anodes and cathodes sustained at their lateral edges by insulating frames and coated on their opposite faces with active material, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

880,423. STORAGE-BATTERY PLATE. ALFRED O. TATE, Toronto, Ontario, Canada, assignor to Tate Electrolytic Company of America, a Corporation of New York. Filed Oct. 29, 1907. Serial No. 399,642.



1. A bifunctional storage battery plate, embracing elements comprising anode and cathode strips and interleaved porous insulating media; in combination with porous retaining plates adapted to be held against the edges of said elements, substantially as described.

2. A bifunctional storage battery plate, embracing elements comprising anode and cathode strips and interleaved porous insulating strips, all bound together in one compact mass; in combination with porous retaining plates provided with means for securing them in place against the edges of said elements, substantially as described.

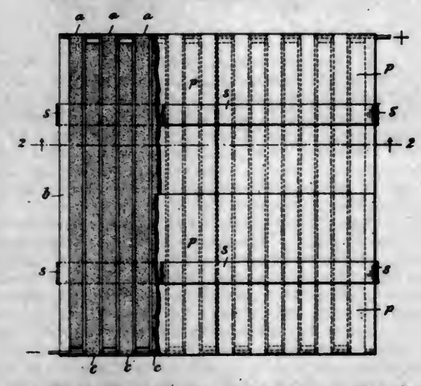
3. A bifunctional storage battery plate, embracing elements comprising anode and cathode strips separated from each other by thin porous insulating strips; in combination with active material between said sets of strips, and means for securely binding or holding the same in compact relation; together with means applied to the edges of said elements for preventing the active material from being released, substantially as described.

4. A bifunctional storage battery plate, embracing elements comprising interleaved anode and cathode strips supported each set by a separate conducting bar or rod; porous insulating strips of like width located between the first-named strips and active material located on the opposite faces of the anode and cathode strips; in combination with means for binding said strips firmly together, and means applied to the edges of the said elements for holding the active material in place, substantially as described.

5. A bifunctional storage battery plate, embracing elements comprising interleaved anode and cathode strips and similar porous insulating strips; independent conducting bars or rods for the anode and cathode strips, and means applied to the edges of said elements for preventing the active material from being released, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

880,424. STORAGE-BATTERY PLATE. ALFRED O. TATE, Toronto, Ontario, Canada, assignor to Tate Electrolytic Company of America, a Corporation of New York. Filed Oct. 29, 1907. Serial No. 399,643.



1. A bifunctional storage battery plate, embracing a rigid base provided with grooves on its opposite faces and anode and cathode strips located in said grooves in definite or fixed relation to each other, substantially as described.

2. A bifunctional storage battery plate, embracing a rigid base and a series of alternately disposed anode and cathode strips secured to the opposite faces thereof, substantially as described.

3. A bifunctional storage battery plate, embracing a rigid insulating base plate provided with means on its opposite faces for sustaining alternately disposed anode and cathode strips in a fixed relation to each other, substantially as described.

4. A bifunctional storage battery plate, embracing a rigid insulating base plate, having closely related grooves or channels on its opposite faces, and alternately disposed sets of anode and cathode strips located in said grooves, substantially as described.

5. A bifunctional storage battery plate, embracing a rigid insulating base plate grooved or channeled on its opposite faces; alternately disposed anode and cathode strips located in said grooves; the anode strips being connected at one end to a common conductor and the cathode strips similarly connected to a like conductor, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

880,425. STORAGE-BATTERY PLATE. ALFRED O. TATE, Toronto, Ontario, Canada, assignor to Tate Electrolytic Company of America, a Corporation of New York. Filed Oct. 29, 1907. Serial No. 399,644.



1. A bifunctional storage battery plate embracing anode and cathode strips sustained in grooves on the exterior faces of a hollow base plate provided with liquid conveying openings from the central opening of the base plate, substantially as described.

2. A bifunctional storage battery plate, embracing a rigid base plate with a central opening, said base plate being provided with grooves on its exterior faces in which the anodes and cathodes are sustained, and liquid conveying openings between the central opening and the grooves, substantially as described.

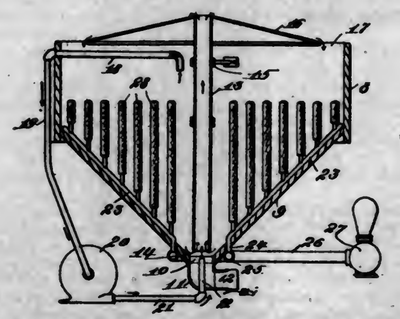
3. A bifunctional storage battery plate, embracing a hollow base plate grooved exteriorly on both faces; anodes and cathodes and active material located in said grooves, and liquid conveying openings from the central opening of the plate to the grooves or channels, substantially as described.

4. A bifunctional storage battery plate, embracing a hollow plate grooved on its exterior faces and provided with liquid conveying openings between the central opening and the grooves; anode and cathode strips and active material located in the grooves, and means secured to the faces of the plate for preventing the active material from falling out, substantially as described.

5. A hollow base or support for a bifunctional storage battery plate provided with grooves on its exterior faces for supporting the anode and cathode strips, and with liquid conveying channels between said grooves and the central opening of the plate, substantially as described.

[Claim 6 not printed in the Gazette.]

880,426. FILTERING APPARATUS. HARRY P. TAYLOR, Salt Lake City, Utah. Filed Oct. 8, 1906, Serial No. 338,003. Renewed June 19, 1907. Serial No. 379,797.



1. A filtering apparatus of the character described, embodying a filtering member, consisting of a central core having an outlet, washers surrounding said core, spacing collars for the washers, said spacing collars provided with channels, and an envelop for the spacing collars, washers and core.

2. A filtering apparatus of the character set forth, comprising a plurality of filtering members communicating with an outlet, a stand pipe, a receptacle for said members and stand pipe, and means communicating with the top and bottom of said tank and adapted to force the material up through said stand pipe, thereby causing the circulating and agitating of the material.

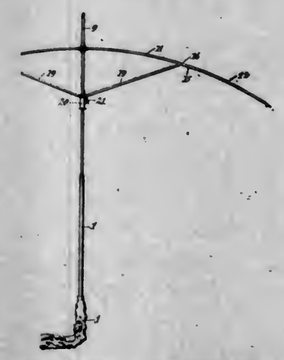
3. A filtering apparatus, comprising a tank adapted to receive the material to be treated and a suitable solution, filtering members arranged within said tank, a stand pipe supported in the tank and spaced apart from the bottom of the tank, a suction pipe communicating with the tank, a circulating device connected to said pipe, and a discharge pipe attached to the said device and opening into the tank directly below the stand pipe so that material will be forced up through the stand pipe.

4. A filtering apparatus, comprising a tank adapted to receive the material to be treated and a suitable solution, filtering members arranged within said tank, a stand pipe supported in the tank and spaced from the bottom of the tank, a suction pipe communicating with the tank, a circulating device connected to said pipe, a discharge pipe attached to the said device and opening into the tank, directly below the stand pipe so that material will be forced up through the stand pipe and a pump communicating with said filtering members.

5. A filtering apparatus for the purpose set forth comprising a tank adapted to receive the material to be treated and a suitable solution, a stand pipe within said tank, means communicating with the tank at the top thereof and with the tank at the bottom thereof for withdrawing the solution from and returning it to the tank, thereby forcing the material up through said stand pipe and causing the circulating and agitating of the material, and filtering members arranged within the tank.

[Claims 6 to 20 not printed in the Gazette.]

880,427. FOLDING UMBRELLA. WILLIAM THEDORF, St. Vincent, Minn. Filed May 18, 1907. Serial No. 374,392.



1. In a folding umbrella, a staff composed of a plurality of telescoping tubular members, a nut carried by one of said members comprising a plurality of sections and adapted to be expanded to clamp said members together, and a resilient device for holding said sections against rotation relative to the tubular member in which they are located.

2. In a folding umbrella, a staff composed of an outer tubular member with an inner tubular member telescoped therein, a nut composed of a plurality of sections slidable within the outer member, a conically-threaded device carried by the inner tubular member adapted to be threaded into the sections, of the nut, and a resilient device for forcing said sections of the nut into substantial contact with the outer tubular member, for the purpose described.

3. In a folding umbrella, a rib composed of two sections, each section being U-shaped in cross section, and one of said sections being formed with a keeper and outwardly turned flanges embracing the other section, and the other section being formed with a stop, a keeper for engaging the edges of the first-named section, and a spring catch passing under the stop, adapted to engage with said keeper and lock said sections together when the rib is extended.

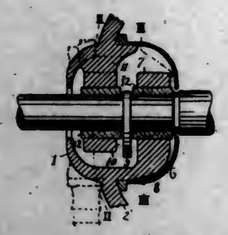
4. An umbrella rib composed of an inner and outer section substantially U-shaped in cross-section and telescoped one within the other, the inner section of said rib having

a spring catch at its outer free end and provided with a keeper for engaging said catch and the edges of the outer rib section, and the outer section of the rib having outwardly-turned flanges in embrace with the outside of the inner rib section and provided with a keeper adapted to engage said catch when the rib sections are extended.

5. An umbrella rib composed of two sections telescoped one within the other, one of said sections having a spring catch and provided with an adjacent keeper for engaging the edges of the other section, and the other section having outwardly-turned flanges in embrace with the first-named section and provided with an adjacent keeper adapted to engage with said spring catch when the rib sections are extended.

[Claims 6 and 7 not printed in the Gazette.]

880,428. SELF-OILING BEARING. ROBERT B. TREAT, Newark, N. J., assignor to Crocker-Wheeler Company, Ampere, N. J., a Corporation of New Jersey. Filed June 10, 1905. Serial No. 264,601.



1. The combination in a shaft-bearing, of a chambered supporting part, a cap covering the chambered supporting part forming a chamber with the chambered supporting part, a bearing arranged within the chamber, means for supporting the bearing from the supporting part, and an oil-conveying ring, the chambered part and bearing being so formed and arranged as to leave a passageway for inserting the oil-conveying ring between the bearing and the sides of the chambered part, substantially as described.

2. The combination in a shaft-bearing, of a chambered supporting part, a cap covering the chambered supporting part forming a chamber with the chambered supporting part, a plurality of bearings within the chamber, means for supporting the bearings from different sides of the supporting part, and an oil-conveying ring located between the bearings, the chambered part and bearings being so formed and arranged as to leave a passageway for the insertion of the oil-conveying ring between the bearings, substantially as described.

880,429. COIL-RETAINER FOR DYNAMO-ELECTRIC MACHINES. ROBERT B. TREAT, Newark, N. J., assignor to Crocker-Wheeler Company, Ampere, N. J., a Corporation of New Jersey. Filed Nov. 12, 1907. Serial No. 401,784.



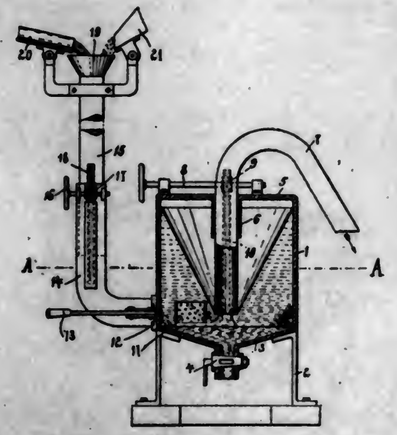
1. The combination of a slotted dynamo-electric machine element, the walls of each slot near its mouth being notched and spaced further apart at the mouth above the notches than immediately below the notches, windings located in the slots, and coil-retainers capable of passing through the mouth of a slot into line with the notches and of being expanded into engagement with the notches, substantially as described.

2. The combination of a slotted dynamo-electric machine element, the walls of each slot near its mouth being notched and one of the walls being cut away above its notch, thereby uncovering a shoulder, windings located in the slots, and coil-retainers capable of passing through the mouth of a slot into line with the notches and of being expanded into engagement with the notches, substantially as described.

3. The combination of a slotted dynamo-electric machine element, the walls of each slot near its mouth being notched and spaced further apart at the mouth above the notches than immediately below the notches, windings located in the slots, and coil-retainers capable of passing through the mouth of a slot into line with the notches and of being expanded into engagement with the notches by straightening along an element parallel with the engaging lips, substantially as described.

4. The combination of a slotted dynamo-electric machine element, the walls of each slot near its mouth being notched and one of the walls being cut away above its notch, thereby uncovering a shoulder, windings located in the slots, and coil-retainers capable of passing through the mouth of a slot into line with the notches and of being expanded into engagement with the notches by straightening along an element parallel with the engaging lips, substantially as described.

880,430. ORE-SEPARATING APPARATUS. THOMAS VEITCH, New York, N. Y., assignor to International Patent Corporation, Jersey City, N. J., a Corporation of South Dakota. Filed Nov. 12, 1906, Serial No. 343,075. Divided and this application filed Dec. 19, 1906. Serial No. 348,637.



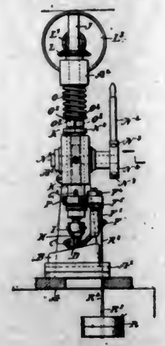
1. The combination with a closed circular receptacle, of a vertically adjustable feed-tube adapted to feed granulated material in the presence of liquid tangentially into said receptacle at or near the bottom of the same, a vertically adjustable siphon tube, the portion of the same within the receptacle being centrally located and the adjustment of the same having a range extending substantially the whole height of the receptacle, and means for lowering and raising said siphon tube.

2. The combination with a closed circular receptacle having a conical bottom adapted to hold a quantity of mercury, of a vertically adjustable feed-tube adapted to feed granulated material in the presence of liquid tangentially into said receptacle at or near the bottom of the same, a vertically adjustable siphon tube, the portion of the same within the receptacle being centrally located and

the adjustment of the same having a range extending substantially the whole height of the receptacle, and means for lowering and raising said siphon tube.

3. The combination with a closed circular receptacle, of a vertically adjustable feed-tube adapted to feed granulated material in the presence of liquid tangentially into said receptacle at or near the bottom of the same, a vertically adjustable siphon tube, the portion of the same within the receptacle being centrally located and the adjustment of the same having a range extending substantially the whole height of the receptacle, a rack on said siphon, a pinion and turning shaft on the top of the receptacle and engaging said rack and adapted to raise and lower said siphon.

880,431. AUTOMATIC BUTTON CUTTING AND SHAPING MACHINE. WINFIELD S. WATSON, Memphis, Tenn. Filed July 3, 1906. Serial No. 324,643.



1. An automatic button cutting and shaping machine, comprising a revoluble tubular cutter, a shell holder for engaging the shell at one side of the cutter only, means for adjusting the cutter and the shell holder relative to each other, to determine the depth of the kerf made by the cutter into the shell by the distance the cutter projects below the shell holder, manually controlled means for simultaneously raising both the cutter and the said shell holder, and means for moving the shell holder downward independent of the cutter.

2. An automatic button cutting and shaping machine, comprising a spring pressed cutter spindle mounted to slide and turn, a sliding member on the spindle, a shell holder carried by the sliding member, means for operating the sliding member, and means whereby when the sliding member is raised the spindle will be raised and its spring put under tension, thereby permitting the spindle to be forced downward by said spring when the sliding member is lowered.

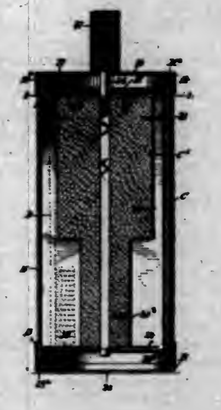
3. An automatic button cutting and shaping machine, comprising a sliding and manually controlled barrel, a spindle mounted to turn and to slide in the said barrel, a tubular cutter held on the said spindle, and a shell holder carried by the said barrel.

4. An automatic button cutting and shaping machine, comprising a sliding and manually controlled barrel, a spindle mounted to turn and to slide in the said barrel, a tubular cutter held on the said spindle, a shell holder carried by the said barrel, and a feed spring pressing the said spindle to feed the said cutter automatically into the shell material.

5. An automatic button cutting and shaping machine, comprising a sliding and manually controlled barrel, a spindle mounted to turn and to slide in the said barrel, a tubular cutter held on the said spindle, a shell holder carried by the said barrel, and means to regulate and limit the sliding motion of the said spindle in the said barrel.

[Claims 6 to 22 not printed in the Gazette.]

880,432. TOOTH-BRUSH CABINET. GUSTAVE A. WEIDHAAS, Jr., New York, N. Y. Filed June 27, 1907. Serial No. 381,057.



1. In a cabinet for tooth brushes and the like, a hollow body having an opening therein, and a carrier mounted to revolve in the body and provided with a series of cells for the reception of articles, and having a plain section between certain of the cells adapted to close said opening in the body.

2. In a cabinet for tooth brushes and the like, a hollow body having an opening therein, a carrier mounted to revolve in said body and provided with cells for the reception of articles, devices for holding the articles in said cells, and exteriorly operating means for rotating the carrier to bring the articles in front of the opening.

3. In a cabinet for tooth brushes and the like, a hollow, transparent body, opposing heads for the body, said body having an opening extending substantially from end to end, a carrier mounted to turn in the body, which carrier is provided with longitudinal cells for the reception of articles, and a section for closing the opening in said cells, a guard at one end of the body opening, and means for rotating the carrier.

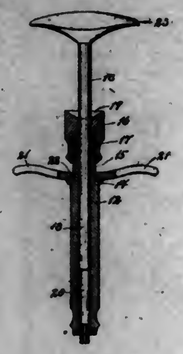
4. In a cabinet for tooth brushes and the like, a hollow, transparent body closed at its end and having an opening between its ends for access to the interior, and a carrier mounted to rotate in said body, provided with cells adapted to be successively presented at the body opening, and a section adapted to close said body opening.

5. In a cabinet for tooth brushes and the like, a hollow, transparent body, opposing heads for the said body, the upper head being hollow and apertured, the lower head being open below and likewise apertured, said body having an opening intermediate the heads, a packing of absorbent material located in the hollow head, and a carrier mounted to revolve in the said body, which carrier is provided with a series of cells of substantially the same width and length as the said body opening, and with a plain surface of corresponding dimensions adapted to normally close the said body opening, retaining devices for articles located in said cells, and means for rotating the carrier.

880,433. SYRINGE. JOHN WILSON, Belmont, Mass., assignor to The Randall-Faichney Company, Boston, Mass., a Corporation of Massachusetts. Filed Mar. 15, 1906. Serial No. 306,104.

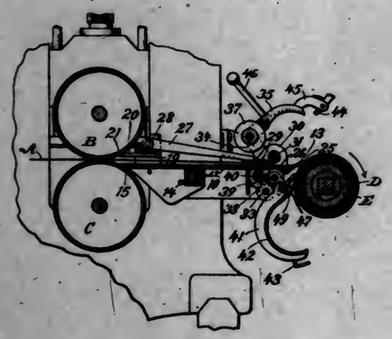
A syringe comprising a barrel having a body portion furnished with an external screw thread at its upper end, a nut internally threaded to engage said screw thread and

provided with a tapered throat to facilitate the introduction of liquid into the barrel, packing between the nut and



the end of the body portion, and a piston adapted to be removed through the nut.

880,434. AUTOMATIC BLOCKING ATTACHMENT FOR STRIP-ROLLS. WILLIAM A. WOOD, Ansonia, Conn., assignor to The Coe Brass Manufacturing Company, a Corporation of Connecticut. Filed Nov. 8, 1905. Serial No. 286,385.



1. The combination of the revolving block of a strip mill, means for directing and guiding the strip around the block as it comes from the mill, and means whereby the directing and guiding means may be withdrawn from around the block.

2. The combination of the revolving block of a strip mill, automatic means for directing and guiding the strip around the block as it comes from the mill, and manually actuated means whereby the directing and guiding means may be withdrawn from around the block.

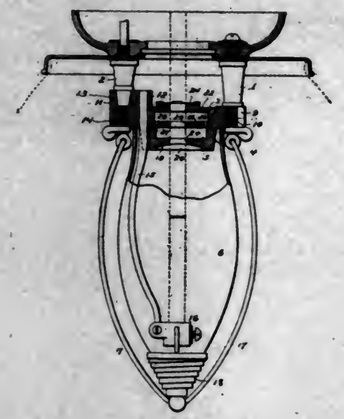
3. The combination of the revolving block of a strip mill, means comprising separable parts for directing and guiding the strip around the block as it comes from the mill, and means for simultaneously separating the parts of the directing and guiding means and moving them clear of the block.

4. The combination of the revolving block of a strip mill, and means for directing the strip passing through the mill to the surface of the block and guiding the strip around the surface of the block, said means comprising separable co-acting members which combine to partially encircle the block.

5. In combination with the revolving rolls and block of a strip mill, a directing table situated between the rolls and the block, and a removable guiding device for the strip arranged around the block.

[Claims 6 to 13 not printed in the Gazette.]

880,435. ELECTRIC-ARC LAMP. THOMAS E. ADAMS, Cleveland, Ohio. Filed Aug. 11, 1905. Serial No. 273,813.



1. A cover for an arc-inclosing globe, having a chamber therein provided in its top and bottom with carbon passages, a carbon guide supported within the gas chamber above the bottom thereof and dividing said chamber into superposed compartments, said carbon guide provided in its peripheral portion with notches coöperating with the wall of the gas chamber to form uninterrupted passages connecting the superposed compartments, said guide having an opening for the passage of the carbon.

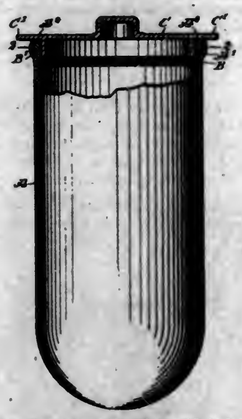
2. A cover for an arc-inclosing globe, having a gas chamber provided in its top and bottom with carbon passages, the wall of said chamber having a shoulder located intermediate of the top and bottom thereof, a disk constituting a carbon guide supported upon said shoulder, said disk having an opening for the carbon which is smaller than the carbon passages in the top and bottom of the gas chamber, and said disk also having a series of peripheral notches forming uninterrupted passages connecting the portions of the gas chamber above and below said disk.

3. A cover for an arc-inclosing globe, having a gas chamber provided in its bottom with a carbon passage, the wall of said chamber having two shoulders spaced apart, a plate resting upon the upper shoulder and having a carbon passage, a disk disposed within the chamber and resting upon the lower shoulder therein, said disk having peripheral notches forming passages connecting the portion of the chamber above the disk with the portion of the chamber below the disk, and said disk having a carbon passage which is smaller than the first-mentioned carbon passage.

880,436. DRUM-TRAP. PAUL AYRES, Ocean Side, N. Y. Filed Nov. 21, 1907. Serial No. 403,166.

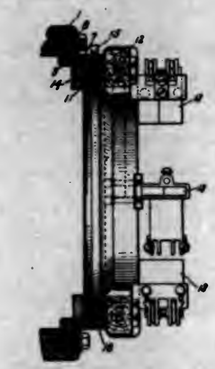
A drum trap comprising a soft metal casing, a cover, and an internally threaded ring into which screws the cover, the said ring fitting into the mouth of the casing and the casing material being spun externally over the

said ring, the said ring having an external flange provided with indentations into which extends the casing material



to hold the ring from turning the said indentations being spaced apart and begin at the lower edge of the flange.

880,437. BRUSH-HOLDER. ALBERT BALL, Claremont, N. H., assignor to Sullivan Machinery Company, Claremont, N. H., a Corporation of Maine. Filed Nov. 30, 1906. Serial No. 345,586.



1. A brush mechanism for electric motors or the like comprising a motor frame, a base support rotatably mounted upon the said frame, and means to secure the same in any desired position of circumferential adjustment, whereby the brushes may be adjusted to a non-sparking position, a rotatable brush supporting ring sustained by said base support with capacity for rotative adjustment, brushes supported thereby, and coöperating securing provisions upon said base support and said ring for maintaining said brush supporting ring in a predetermined position of rotative adjustment.

2. A brush mechanism for electric motors or the like comprising a motor frame, a base ring rotatably mounted upon said frame, and means to secure the same in any desired position of circumferential adjustment, whereby the brushes may be adjusted to a non-sparking position, a rotatable brush supporting ring sustained by said base ring with capacity for rotative adjustment brushes supported thereby, and coöperating securing provisions upon said respective rings for maintaining said brush supporting ring in a predetermined position of rotative adjustment.

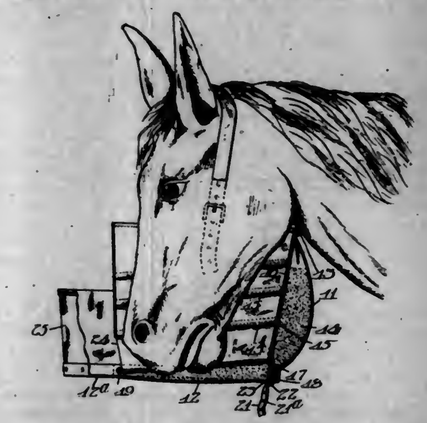
3. A brush mechanism for electric motors or the like comprising a motor frame, a base ring rotatably mounted upon said frame, and means to secure the same in any desired position of rotative adjustment, whereby a non-sparking position may be secured, a rotatable brush supporting ring sustained by said base ring with capacity for rotative adjustment, brushes supported thereby, a locking device carried by one of said rings and coöperating provisions upon the other ring so located that when brought into register with the locking device the brushes are maintained in proper position.

4. A brush mechanism for electric motors or the like comprising a motor frame, a base ring secured thereto, means to secure said base ring in any desired position of rotative adjustment to secure non-sparking, a rotatable brush supporting ring sustained by said base ring with capacity for rotative adjustment, brushes supported thereby, a set screw carried by one of said rings, the other ring having a set screw receiving socket so located that when brought into register with said set screw the brushes are maintained in proper position.

5. A brush mechanism for electric motors or the like comprising a motor frame, a base ring rotatably mounted upon said frame, said ring being circumferentially adjustable to a non-sparking position, means to secure said ring in such non-sparking position, a rotatable brush supporting ring sustained by said base ring with capacity for rotative adjustment with reference thereto, brushes supported thereby, a locking device carried by one of said rings, and coöperating provisions upon the other ring so located that when brought into register with the locking device the brushes are maintained in proper position.

[Claim 6 not printed in the Gazette.]

880,438. FEED-BAG. ROY J. BROOKS, Cassopolis, Mich. Filed July 18, 1907. Serial No. 384,320.



1. A feed bag comprising an outer bag closed at the bottom and an inner bag open at the bottom, the bottom of the outer bag being provided with an aperture for a strap and adapted to drop below the lower edge of the inner bag thereby permitting the feed to pass from the outer bag to the inner one, a strap secured to the inner bag and passing through said aperture in the bottom of the outer bag, said strap being flexible to thereby permit the lower edges of the inner and outer bags to come together without readjustment of the strap and yet limit the distance to which said edges may move apart, and means on the strap for regulating the position of the bag-bottom with reference to said strap.

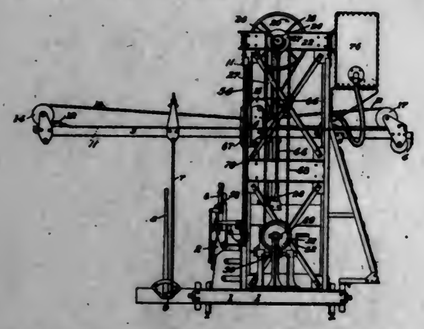
2. A feed bag for animals comprising an inner and an outer part, adapted to store feed between them, said parts being open at the bottom, and a valve-like bottom part adapted to fit over the lower edge of the inner bag part when the device is being charged and adapted to fit within the lower opening of the outer bag part to form a bottom for the device when the animal is being fed.

3. A feed bag for animals comprising an inner and an outer part adapted to store feed between them, said parts being open at the bottom, a valve-like bottom part adapted to fit over the lower edge of the inner bag part when the device is being charged and adapted to fit within the lower opening of the outer bag part when the animal is being fed, and stiffeners secured to the inner bag part to prevent the inward caving thereof, said stiffeners running approximately horizontally and being located at some distance apart to permit the bag to collapse in a vertical direction.

4. A feed bag consisting of an inner and an outer receptacle which are open at the bottom, the outer receptacle being longer than the inner one so that its lower edge may drop below the lower edge of the inner receptacle, a rib secured to the lower edge of the outer receptacle for preserving the shape thereof, and a valve-like bottom hinged to said rib and adapted to fit within the same, substantially as described.

5. A feed bag consisting of an inner and an outer receptacle which are open at the bottom, the outer receptacle being longer than the inner one so that its lower edge may drop below the lower edge of the inner receptacle, a rib secured to the lower edge of the outer receptacle for preserving the shape thereof, and a valve-like bottom hinged to said rib and adapted to fit within the same, the lower edge of said inner receptacle being also provided with a rib and said valve-like bottom being adapted to fit over it for the purpose described.

880,439. MECHANISM FOR OPERATING THE RAKE AND RAKE-CARRIAGE OF RETORT-DRAWING MACHINES. HAROLD E. CARPENTER, Sewickley, Pa., assignor to Riter-Conley Manufacturing Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 22, 1905. Serial No. 261,631.



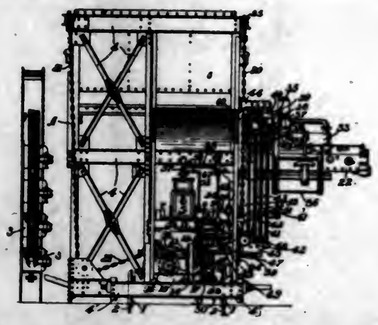
1. In a gas retort drawing machine, the combination of a rake slidably mounted in the frame of the machine, a differential drum mounted in the frame of the machine and flexible connections between said rake and said differential drum.

2. In mechanism for elevating and reciprocating the rake of a gas retort drawing machine, the combination of a drum formed in two sections, means to interlock said sections, a flexible connection secured to the outer end of said rake and carried over one of the sections of said drum in one direction, a flexible connection secured to the outer end of said rake and carried over the other section of said drum in an opposite direction, and differential gearing associated with the sections of said drum.

3. In a gas retort drawing machine, the combination of a rake slidably mounted in the frame of the machine, a differential drum mounted in the frame of the machine, flexible connections between said rake and said drum, and means to hold the rake and carriage at different positions independently of said flexible connections.

4. In mechanism for elevating and reciprocating the rake of a gas retort drawing machine, the combination of a drum formed in two sections, means to interlock said sections, a flexible connection secured to the outer end of said rake and carried over one of the sections of said drum in one direction, a flexible connection secured to the outer end of said rake and carried over the other section of said drum in an opposite direction, and means for cooling the rake.

880,440. CHARGING AND DRAWING MACHINE FOR GAS-RETORTS. HAROLD E. CARPENTER, Sewickley, Pa., assignor to Riter-Conley Manufacturing Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 22, 1905. Serial No. 261,632.



1. In a machine for charging and drawing gas retorts, the combination of a vertically-movable frame carrying the charging and drawing mechanism, a platform attached to said vertically-movable frame and movable therewith, and means in proximity to the platform to operate the machine and charging and drawing mechanism from said platform.

2. In a machine for charging and drawing gas retorts, the combination of a movable frame adapted to carry the drawing and charging mechanism, a platform, a plate secured upon said frame near said platform, levers pivotally secured to said plate, rotatable rods upon which said levers are slidable, and means to connect said rods with the operating levers.

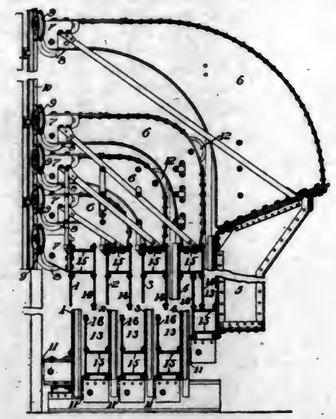
3. In a machine for charging and drawing gas retorts, the combination of a movable frame carrying the charging and drawing mechanism, a platform secured to said frame, a series of levers pivotally connected to the frame near the platform, a series of vertically disposed rotatable rods upon which said levers are slidably mounted, and means to connect the operating mechanism of the machine with said rods.

4. In a machine for charging and drawing gas retorts, the combination with a movable frame carrying the charging and drawing mechanism, of a platform attached thereto and movable therewith, mechanism to operate the machine and drawing mechanism, and means associated with said mechanism for actuating the same from said platform, said means being shiftable with the change of position of the platform without disturbing their operative relation to the mechanism for operating the machine and drawing mechanism.

880,441. GAS-HOLDER. HENRY A. CARPENTER, Sewickley, Pa., assignor to Riter-Conley Manufacturing Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 22, 1905. Serial No. 261,636.

1. In a gas holder, the combination with the several lifts, of a plurality of beams secured to the periphery thereof at their lower ends, an annular member secured to the outer side of said beams for forming an annular pocket at the lower outside of the lifts, a plurality of annular beams secured to the inner upper portion of the lifts, a plate secured to said beams, said plate being adapted to enter the pocket formed at the outer lower portion of the adjacent lift when the same is elevated.

2. In a gas holder, the combination with the lifts thereof having annular pockets at their lower portions, of a plurality of reinforcing beams secured to the upper portions of said lifts, and downwardly-extending members secured to said beams and forming projections adapted to enter the pockets at the lower portions of the lifts when the latter are elevated.



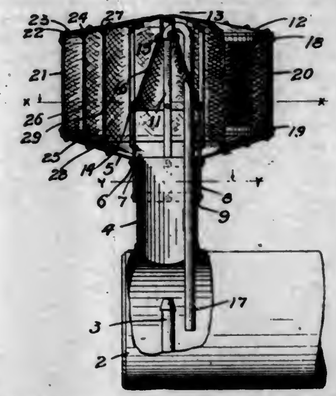
3. In a gas holder, the combination with the lifts, of a plurality of beams secured to the periphery of the lower end of each of the lifts and spaced apart to form chambers, members secured to the outer sides of said beams for forming pockets at the lower outside of the lifts, a plurality of beams secured to the inner upper portions of the lifts, and members secured to the inner sides of said beams and forming projections adapted to enter the pockets formed at the outer lower portions of the lifts when the latter are elevated.

4. In a gas holder, the combination with the lifts, of a plurality of horizontally-disposed outwardly-extending reinforcing beams secured to the periphery of the lower portion of each of the lifts, members secured to the outer sides of said beams for forming pockets at the lower outside of the lifts, a plurality of horizontally-disposed inwardly-extending beams secured to the inner upper portions of the lifts, and downwardly-extending portions secured to the inner sides of said beams and forming projections adapted to enter the pockets formed at the outer lower portions of the lifts when the latter are elevated.

880,442. SPARK-ARRESTER. KENNETH M. COLQUHOUN, Owatonna, Minn. Filed May 22, 1907. Serial No. 375,162.

1. A spark-arrester comprising a plate having an opening to receive the top of the stack and forming the bottom of the arrester, an imperforate plate corresponding substantially in size to said bottom plate and forming the top of the arrester, rings arranged in pairs between said plates, and straps connecting the lower rings with the corresponding ones above them, said straps having ears formed thereon at their ends, and bolts detachably securing said ears to said plates and said lower rings being raised above the bottom plate to form an unobstructed passage on said plate into the stack, a wire mesh arranged between each of the pairs of rings and secured thereto and said rings being arranged one within another on said plates and spaced apart and forming with the wire mesh a series of screens between the top of the stack and the peripheries of said plates, and the detachable character of said screens permitting the number of them to be increased or decreased according to the character of the fuel used, substantially as described.

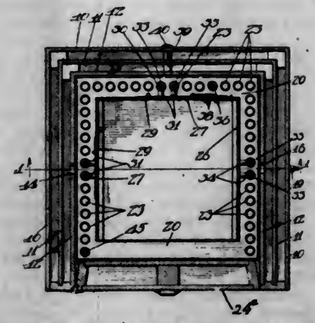
2. The combination, with a stack, of a plate having a central opening to receive the top of said stack, a second plate arranged above and spaced from said first named plate, and a series of screens arranged at intervals between said plates and between the top of said stack and the periphery of said first named plate, and said screens being detachable whereby the number in use may be increased or decreased at will, substantially as described.



3. The combination, with a stack, of a plate having an opening to receive the top of said stack, a cone-shaped hood having a screen and supported over the open top of said stack, said hood having an open upper end, a pipe having a curved end fitting within the open upper end of said hood and extending down within said stack, a plate covering the top of said hood, and screens interposed between said first and second named plates and inclosing said hood, substantially as described.

4. The combination, with a boiler having an exhaust nozzle and a stack, of a plate having a central opening to receive the top of said stack, a second plate, straps secured to the top of said stack and extending above the same and having inwardly inclined upper portions that are secured to said second plate, a screen inclosing the inwardly inclined portions of said straps and forming a cone shaped hood over said stack, a pipe leading from the top of said hood downwardly and terminating near said exhaust nozzle, and a series of removable screens located between said first and second named plates and at intervals between the top of said stack and the peripheries of said plates, substantially as described.

880,443. REFRIGERATOR. FORREST V. DETWILER, Chicago, Ill. Filed Nov. 30, 1906. Serial No. 345,709.



1. In combination, in a refrigerator, a casing comprising a hollow base, a hollow wall comprising spaced tubes supported by and communicating with the base, means whereby said casing may be supplied with a cooling fluid and air pipes within the wall, one end of said pipes projecting through the wall below the casing and the other end extending to a point above the casing.

2. In combination, in a refrigerator, a casing comprising a hollow base, a plurality of tubular members supported by and communicating with the base, a receptacle supported by and communicating with the tubular members, said receptacle having a source of supply of cooling fluid, and air pipes located in some of said members, said pipes on one side of the refrigerator extending nearly to the top of the base and on the other side terminating just below the said receptacle, one end of the pipes projecting through the side of the respective members, the other ends passing through the tops of the members and the receptacle and terminating above the receptacle, the upper end of certain of said pipes terminating short of the remaining pipes.

3. In combination, in a refrigerator, a casing comprising a hollow base, a plurality of tubular members supported by and communicating with the base, a receptacle supported by and communicating with the tubular members, said receptacle having a source of supply of cooling fluid, and air pipes located in some of said members, the external diameter of said pipes being considerably smaller than the internal diameter of the members, one end of said pipes projecting through the side of the members below the receptacle, the projecting ends on one side being located adjacent the base and on the other side adjacent the receptacle and the other ends of the pipes projecting through the members and terminating above the receptacles.

4. In combination, in a refrigerator, a casing comprising a hollow base, a plurality of tubular members supported by and communicating with the base, a receptacle supported by and communicating with the members, said receptacle having a source of supply of cooling fluid, and air circulating pipes located within some of the tubular members, one end of said pipes projecting through the side of the members, the other ends projecting through and terminating above the receptacle, the projecting end of some of said pipes being located below and adjacent the receptacle and the projecting end of the remainder of the pipes being located above and in proximity to the hollow base.

5. In combination, in a refrigerator, a casing comprising a hollow base, a plurality of tubular members supported by and communicating with the base, a receptacle supported by and communicating with the members, said receptacle having a source of supply of cooling fluid, and air circulating pipes located within some of the tubular members, one end of said pipes projecting through the side of the respective members, the other ends projecting through and terminating above the receptacle, the projecting end of the pipes on one side being located below and adjacent the receptacle and the projecting end of the pipes on the other side being located above and in close proximity to the hollow base and the upper end of the last said pipe terminating short of the upper end of the remaining pipes whereby an air circulation is obtained through the pipes.

[Claims 6 to 12 not printed in the Gazette.]

880,444. ABDOMINAL SUPPORTER. MARGARET DONALDSON, Oklahoma, Okla. Filed June 18, 1907. Serial No. 379,578.

1. In an abdominal supporter, an elastic belt adapted to fit to the person at a point below the tips of the hip bone, bandages, the forward ends of which overlap and are secured to the upper edge portion of the belt, which bandages are crossed at the front lower portion of the body extending to the rear of the body beneath the arms, being again crossed between the shoulders and over the shoulder forming shoulder loops, the said bandages being again crossed at the small of the back, means for connecting the front right-hand bandage to the rear portion of the belt at the left of its center, and the front left-hand bandage to the right-hand central portion of the belt, and perineal straps extending below the belt and connected therewith.

2. In an abdominal supporter, an elastic belt, a rear lace for the same, and bandages that cross each other at their forward ends, being attached at said crossing each to the upper central front portion of the belt, said forward ends of the bandage being widened at their front ends and gradually reduced to a uniform width, said bandages being of sufficient length to pass in opposite directions to the rear of the body beneath the arm pits, cross between the shoulders, extend forwardly in a loop over the shoulders, and cross a second time at the small of the back, independent means for attaching the rear end of the formed right-hand bandage to the belt at the left of its rear center, and the forward left-hand bandage to the said belt at the right of its rear center, and perineal straps extending from front to rear of the belt.



3. In an abdominal supporter, an elastic belt of less diameter at its lower than at its upper edge, said belt being adapted to fit the body at a point below the tips of the hips, a lacing for the rear of the said belt, and bandages crossed and widened at their forward ends, which ends are secured to the upper central front portion of the belt, said bandages being of sufficient length to cross under the arms between the shoulders and at the small of the back, means for connecting the rear ends of the bandages to the belt at each side of its rear center, and perineal straps carried by the belt.

880,445. LAND ROLLING AND PULVERIZING MACHINE. JASON S. DONNELLY, Sharon, and JOHN FREDERICK, Copley, Ohio, assignors, by direct and mesne assignments, of one-half to said Donnelly and one-half to M. D. Kilmer, Cleveland, Ohio. Filed Feb. 2, 1907. Serial No. 355,522.



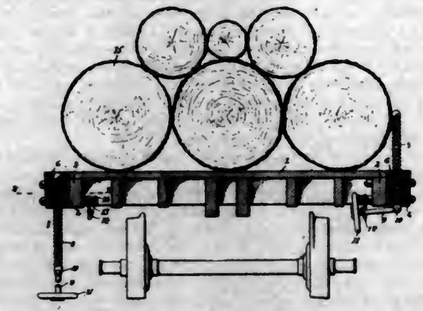
1. A land roller and pulverizer comprising a pair of side frames and rollers journaled therein and adapted to support the weight of said frames, each of said rollers consisting of an angular bar of small diameter and unbroken exterior, the angles of said bar not exceeding 90° in extent, substantially as specified.

2. A land roller comprising a pair of side frames and a rear frame, rollers journaled in said side frames and adapted to support the weight of said frames, each of said rollers consisting of an angular bar of small diameter and unbroken exterior, the angles of said bar not exceeding 90° in extent, and a smoothing board carried by said rear frame, substantially as specified.

3. A land roller and pulverizer comprising a pair of side frames and rollers supported thereby and adapted to support the weight of said frames, each of said rollers consisting of an angular bar of unbroken exterior, the angles of said bar not exceeding 90° in extent, substantially as specified.

880,446. CAR-STAKE. THADDEUS ELLIS, Tacoma, Wash. Filed June 7, 1907. Serial No. 377,726.

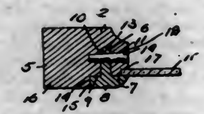
1. A pocket adapted to be attached to the side of a car, a depressible car-stake sliding longitudinally in said pocket and having an operating stem attached thereto adapted to fold under the car.



2. A depressible car stake comprising a screw adapted to become depressed through the car floor, and a stem jointed to said stake adapted to rotate the same, said stem being adapted to fold into an inoperative position.

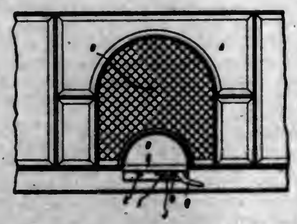
3. A depressible car stake comprising a screw, a box having a threaded bore receiving said screw, a stem pivotally attached to said screw and adapted to fold under the car and carrying a hand wheel for rotating the same, and means for supporting said stem under the car.

880,447. WINDOW-SASH. ROY C. FRY, Davis, W. Va., assignor of one-half to Markas Branan, Maysville, W. Va. Filed Aug. 13, 1907. Serial No. 388,367.



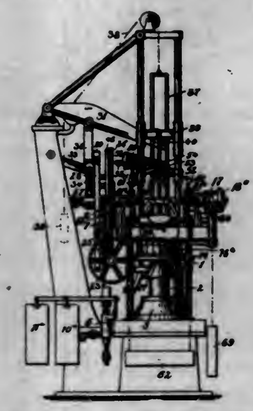
A window sash having each member thereof consisting of a base strip and a fastening strip, each base strip having an inwardly extending longitudinal glass-receiving seat formed in one edge thereof and an inwardly extending longitudinal groove formed in spaced relation to and parallel with said seat, and each fastening strip being adapted to close one side of the corresponding seat and to contact with the adjacent face of the glass, a longitudinal tongue formed on the inner face of each fastening strip and disposed at right-angles to the plane of the glass, each tongue being adapted to fit in the groove in the adjacent base strip and having a series of transverse perforations formed therethrough, said perforations registering with a series of perforations formed in the corresponding base strip, and a series of tapered pins fitted in said perforations for said pins serving as wedges, to hold the fastening strips against the glass.

880,448. CASH-DELIVERY DEVICE. JOHN GOOD, Jr., New York, N. Y., assignor to Anson Wales Hard, Jr., Lawrence, N. Y. Filed June 12, 1907. Serial No. 378,665.



The combination of a window frame provided with an opening, a ledge on one side of the window frame opposite the opening and a pivotally supported tablet on the other side of the window frame, said tablet having another or other points of support whereby pressure from above the same will not tilt said tablet, and means whereby said tablet may be tilted on its pivots.

880,449. PRESS. SAMUEL M. GREEN, Holyoke, Mass., assignor to The American Thread Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 29, 1906. Serial No. 341,084.



1. The combination of a press cover, means for removing the same by a movement in a straight line, a lever for locking and unlocking said cover, said lever engaging therewith and moving in a different direction from that in which the cover moves, a cam for withdrawing said lever, a belt shifter and a trip for actuating said belt shifter upon the locking of said cover and a common driving mechanism for actuating all of said parts.

2. The combination of a press cover, a lever for locking the same, a cam for withdrawing said lever, a belt shifter and a trip for actuating said belt shifter upon the locking of said cover, a pulp valve and means for opening said pulp valve after said cover is locked and a common driving mechanism for actuating all of said parts.

3. The combination of a press cover, a lever for locking the same, a cam for withdrawing said lever, a belt shifter and a trip for actuating said belt shifter upon the locking of said cover, a pulp valve and means for opening said pulp valve after said cover is locked and means for closing said pulp valve after a predetermined period, a hydraulic plunger and means for bringing said plunger into action upon the closing of said valve.

4. The combination of a shaft, a spring actuated cylinder thereon having a projecting lug and carrying cam surface, a belt shifter controlled by said cam surface, an escapement having stops for engaging and disengaging said lug, means carried by said shaft for causing one of said escapement stops to disengage said lug once on each revolution of said shaft, and a plunger having a means causing the other escapement stop to disengage said lug at the extreme position of said plunger.

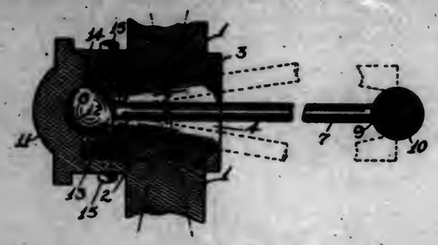
5. In a press a removable cap, locking levers adapted to engage therewith and cams for forcing said levers out of locking engagement with said cap and a common driving mechanism for moving said cap and actuating said cam.

[Claims 6 to 12 not printed in the Gazette.]

880,450. STEERING-GEAR AND AXLE FOR AUTOMOBILES. MAURICE P. HENVIS, Norfolk, Va., assignor of one-half to Ephraim Ball, Norfolk, Va. Filed Oct. 11, 1907. Serial No. 396,966.

1. A device of the class described comprising a sleeve adapted to mount the wheels for rotation outside of the

hubs and ball bearing means for said sleeve adapted to angularly position said wheels.



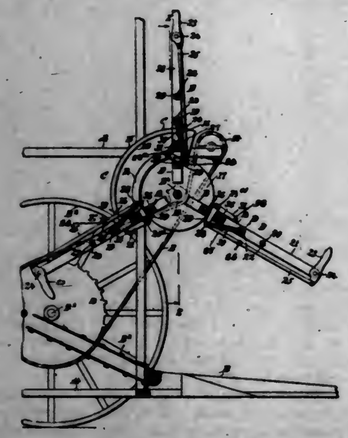
2. A device of the class described comprising a front axle having spherical enlargements thereon extending beyond the hubs, a sleeve having a tapered recess, a nut, and means for swivel mounting the wheels outside of the hubs on said balls by the sleeve and nut.

3. A device of the class described comprising a fixed axle having ball ends extending outside of the hubs a sleeve adapted to mount the wheels having a tapered slot, said sleeve having a concavity for one half of the said balls, and a concave nut adapted to cover the other half of the balls.

4. A device of the class described comprising a axle bar having enlargements on the ends thereof, a taper slotted bushing or sleeve, a nut on the outside of the hubs said sleeve and nut adapted to inclose said enlargements, and means for altering the angle of said sleeve and nut on the enlargements.

5. A device of the class described comprising a wheel bearing sleeve or bushing having a rectangular and a circular opening, a ball ended square shaft or axle bar for mounting the sleeve bushing for oscillation and a recessed nut on one end of the bushing outside of the wheel adapted to partly cover said balls on the axle.

880,451. CORN-HARVESTER. JOHN HETTRICH, Grand Island, Nebr. Filed Jan. 11, 1907. Serial No. 351,808.



1. In a corn harvester or like machine, a gathering wheel consisting of a central shaft, spokes in series carried by the shaft, a pivoted finger at the outer end of each spoke, the fingers being also in series, a shifting shaft for each series of fingers, pivoted links extending from the fingers of each series of fingers, connections between the links and the shifting shafts, and means for consecutively carrying the shifting shafts first to an operative position and then restoring them to normal position during the rotation of the wheel, whereby the series of fingers is consecutively moved at right angles to the spokes and are then brought into longitudinal alinement therewith.

2. In a corn harvester, the combination with a frame, a gathering wheel mounted to revolve in the frame, said wheel comprising a central shaft, spokes in series supported from the shaft, and fingers in corresponding series pivoted to the outer terminal portions of the spokes, of a shifting shaft for each series of fingers, a cam mounted at the end portion of the central shaft being independent of the said shaft, and a crank arm from each shifting shaft in engagement with the said cam.

3. In a corn harvester or like machine, the combination with a frame and a gathering wheel, said gathering wheel comprising a shaft mounted to revolve in the frame, spokes in series supported from the said shaft, fingers pivoted to the outer terminals of the spokes, a shifting shaft for each series of fingers, spring connections between the shifting shafts, and link connections between the shifting shafts and the said fingers, and crank arms one at the outer end portion of each shifting shaft, of a cam secured on the frame, having a flange for engagement with the crank arms at the outer ends of the shifting shafts, and means for locking the said shifting shafts and releasing them through the medium of the said cam.

4. In a corn harvester or like machine, the combination with a frame and a gathering wheel mounted to revolve in the said frame, the gathering wheel comprising a central shaft, spokes in series connected with the said shaft, a finger pivoted to the outer end portion of each spoke and a connecting bar for each series of fingers, of a shifting shaft for each series of fingers mounted to rotate, and likewise mounted for end movement, crank and link connections between the shifting shafts and the connecting shafts, tension devices controlling the movement of the shifting shafts in one direction, a crank arm at the end of each shifting shaft, and a roller also located at the same end of each shifting shaft, and a cam secured to the said frame having a flange for engagement by the outer crank arms of the shifting shafts, and a track for engagement by the wheels at the end portions of said shifting shafts.

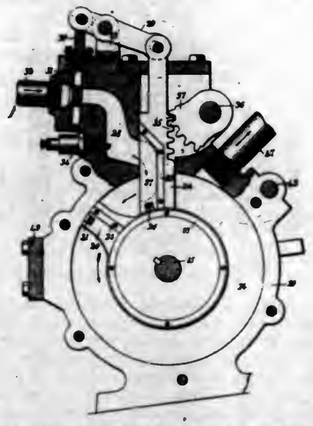
880,452. APPARATUS FOR STERILIZING FOODS. ISIDORE HISLAIRE, Brussels, Belgium, assignor to Universal Produce Preservation Company Ltd., London, England. Filed Feb. 14, 1906. Serial No. 301,075.



1. An apparatus for treating foods with sterilizing or antiseptic gases comprising a casing, a perforated partition dividing said casing into two chambers, means for generating a gas in one chamber, a piston in the other chamber for drawing the gas from the generating chamber to the piston chamber and for returning it to the generating chamber, and means for opening and closing the perforations in said partition.

2. An apparatus for treating foods with sterilising or antiseptic gases, consisting of a casing divided into two chambers, said chambers communicating with each other, means for cutting off the communication, means for generating the gas in one chamber, means for admitting air to said chamber and a reciprocating piston in the other chamber for drawing the gas therefrom into the second chamber and for returning it therefrom to the first chamber.

880,453. ROTARY INTERNAL-COMBUSTION ENGINE. JOHN HOKANSON, Newark, N. J. Filed May 7, 1907. Serial No. 372,384.



1. A rotary engine, having an annular chamber, a piston operating therein, an explosion chamber, means for supplying a fuel charge thereto, an igniter within said explosion chamber, and a sliding abutment movable into said annular chamber and having a passage therethrough establishing communication between said annular chamber and said explosion chamber.

2. A rotary engine, having an annular chamber, a piston operating therein, an explosion chamber, an igniter mounted therein, and a sliding abutment movable into said annular chamber, said abutment having a recess in one face thereof to permit the passage of gas from the explosion chamber into the annular chamber when the abutment is in its innermost one of two limiting positions.

3. In a rotary engine, the combination of a casing having a curved working chamber, a rotatable piston operating therein, an explosion chamber, having an igniter therein, a conduit for supplying a fuel charge thereto, a sliding abutment movable into said working chamber, and means for simultaneously withdrawing said abutment and opening communication between said conduit and said explosion chamber.

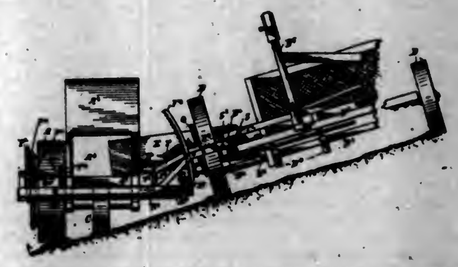
4. In a rotary engine, the combination of a casing having a curved working chamber, a rotatable piston operating therein, a sliding abutment movable into said working chamber, an explosion chamber, an igniter therein, a sliding valve controlling the admission of fuel charge to said explosion chamber, and means for simultaneously withdrawing said abutment from the working chamber and opening said sliding valve.

5. In a rotary engine, the combination of a casing having a curved working chamber, a rotatable piston operating therein, a sliding abutment movable into said chamber, an explosion chamber, a slide valve controlling the admission of fuel charge thereto, a link connecting said abutment and said slide valve whereby the slide valve is opened upon the withdrawal of the abutment, and means operatively connected to the engine for moving said abutment.

[Claims 6 to 12 not printed in the Gazette.]

880,454. COMBINED HEADER AND THRESHER. FRANK S. HOLLEY and JOHN C. WHITFORD, Stockton, Cal., assignors to Daniel Best, San Leandro, Cal. Filed Feb. 17, 1903. Serial No. 143,853.

1. A machine of the character described comprising a thresher, a wheel carrying most of the weight thereof, an auxiliary and inclined support located adjacent to said thresher and having means to sustain part of the weight of said thresher, a header having an outer fixed support and a pivoted connection to said inclinable support, means for flexibly connecting the thresher to said auxiliary and inclined support, and means for holding the thresher in a vertical position while the auxiliary and inclinable support and header may be adjusted to the trend of the ground.



2. A machine of the character described comprising a header, a thresher, an auxiliary and inclinable support between said header and thresher and having a separate and independent carrying means, and means for properly and flexibly holding the inner end of the header and the adjacent end of the thresher on said auxiliary support.

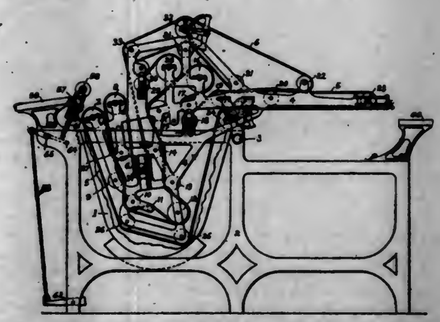
3. A machine of the character described comprising a header, a thresher frame, an auxiliary and intermediate support having an independent carrying wheel or support, means for flexibly connecting said intermediate support, with both the header and thresher frame, and means for elevating or depressing the inner side of said thresher frame.

4. A machine of the character described comprising a thresher, a header, an auxiliary and intermediate frame for supporting both the thresher and the header and having an independent carrying wheel or support, and flexible connections joining the thresher and the header each with said support and separately with each other.

5. A machine of the character described comprising a header, a thresher, an auxiliary and intermediate support between and flexibly connected to the said header and thresher, said thresher and intermediate support each having an independent supporting or carrying means which operate independently and respectively the mechanism of the thresher and header.

[Claims 6 to 37 not printed in the Gazette.]

880,455. STARCHING-MACHINE. BYRON W. JONES, Troy, N. Y., assignor of three-fourths to Grace May Beattie, Cohoes, N. Y. Filed May 6, 1907. Serial No. 371,980.



1. A starching machine consisting of a vat adapted to hold liquid starch; a series of rollers, some of which are adapted to be located in the liquid contained in said vat, and others above the liquid; two endless aprons adapted to fit upon said rollers and to be operated thereby and adapted to carry the goods to be starched between them through the liquid in said vat, said aprons adapted

to separate after emerging from the liquid in said vat, one of the said endless aprons adapted to pass between two cleaning rollers located outside of the liquid in said vat; the other endless apron adapted to pass between two other cleaning rollers located outside of the liquid in said vat; said endless aprons adapted to carry the goods out of said liquid without carrying the goods between either set of cleaning rollers, said endless aprons adapted to come together again on each side of the goods after each separate apron has passed between cleaning rollers; and two sets of cleaning rollers located outside of said vat adapted to cleanse the surplus starch from each of said endless aprons passing between them separately; substantially as described and for the purposes set forth.

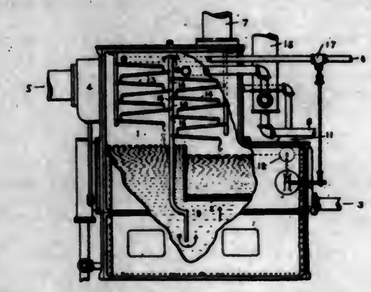
2. In a starching machine, a vat adapted to hold liquid starch; a series of rollers some of which are adapted to be located in the liquid contained in said vat and some of which are located above said liquid; two endless aprons adapted to fit upon and be operated by said rollers and adapted to carry the goods to be starched between them through the liquid in said vat; said rollers which are located above the liquid being so arranged and adjusted that said endless aprons will separate after emerging from said liquid and each apron pass separately between different sets of cleaning rollers adapted to cleanse the surplus starch therefrom; one of said rollers so located in said vat that one endless apron will pass over and the endless apron carrying the goods will pass under it one of said endless aprons, carrying the goods being starched from the liquid being adapted to pass over and partly around a roller located above the cleaning rollers adapted to cleanse that apron and then between said cleaning rollers and then up again near said higher roller whereby the goods being starched will fall from a portion of said apron before it is cleansed while passing around said higher roller upon a portion of said apron after it has been cleansed, in combination with said cleaning rollers, adapted to cleanse each of said aprons separately, and means for adjusting the same substantially, as described and for the purpose set forth.

3. In a starching machine, a vat adapted to hold liquid starch; a series of rollers some of which are adapted to be located in the liquid contained in said vat and some of which are located above said liquid; two endless aprons adapted to fit upon and be operated by said rollers and adapted to carry the goods to be starched between them through the liquid in said vat; said rollers which are located above the liquid being so arranged and adjusted that said endless aprons will separate after emerging from said liquid and each apron pass separately between different sets of cleaning rollers adapted to cleanse the surplus starch therefrom; one of said endless aprons carrying the goods being starched from the liquid being adapted to pass over and partly around a roller located above the cleaning rollers adapted to cleanse that apron and then between said cleaning rollers and then up again near said higher roller whereby the goods being starched will fall from a portion of said apron before it is cleansed while passing around said higher roller upon a portion of said apron after it has been cleansed, in combination with said cleaning rollers, adapted to cleanse each of said aprons separately, and means for keeping said endless aprons true upon said rollers, substantially as described and for the purposes set forth.

880,456. METHOD OF HEATING AND PURIFYING WATER. JOHN C. JONES, Wynnewood, Pa., assignor to Joseph S. Lovering Wharton, William S. Hallowell, and John C. Jones, Philadelphia, Pa., doing business under the firm-name of Harrison Safety Boiler Works. Filed Apr. 15, 1907. Serial No. 368,259.

1. The method of heating and supplying feed water which consists in introducing steam to a supply of raw water, thereafter bringing the steam in contact with finely divided water of condensation, purifying the raw water and bringing the water from both sources into the same outlet and thereafter uniting the two supplies.

2. The method of heating feed water, which consists in introducing steam to a supply of raw water, thereafter bringing the steam in contact with finely divided and disintegrated water of condensation.



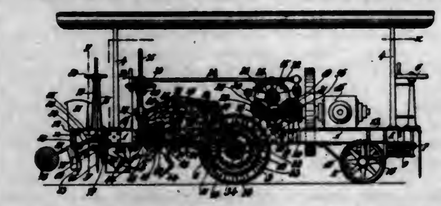
3. The method of heating, purifying and supplying feed water which consists in bringing steam into contact with finely divided and disintegrated cold raw and hot condensed water successively; purifying the raw water and mixing the water from both sources.

4. The method of heating feed water which consists in successively submitting separate supplies of raw and condensed water in broken and divided particles to a current of steam.

5. The method of heating feed water which consists in introducing a current of steam to a supply of sprayed cold raw water and a separate supply of sprayed warm condensed water.

[Claims 6 to 8 not printed in the Gazette.]

880,457. MOTOR-DRIVEN CULTIVATING-MACHINE. KARL KÖSZEGI, Baja, Austria-Hungary, assignor of two-thirds to Julius Böhm and Samuel Gelb, Budapest, Austria-Hungary. Filed Feb. 27, 1907. Serial No. 359,626.



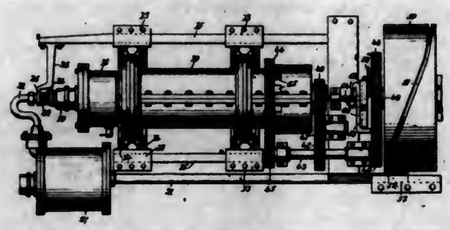
1. A motor driven cultivating machine, comprising a shaft 41, hoes eccentrically mounted on said shaft at an angle, and means for successively oscillating said hoes, substantially as described.

2. A motor driven cultivating machine comprising a shaft 41, angularly disposed eccentrics mounted on said shaft, rings 43 mounted on said eccentrics, a hoe connected to each ring, a crank shaft 47, pitman rods connecting the cranks of said shaft with the rings 43 whereby said hoes will be successively operated on the rotation of the crank shaft, substantially as described.

3. A motor driven cultivating machine, comprising a main axle, a frame having one end swiveled thereon, means for engaging the other end of said frame for adjusting it vertically, a crank shaft 47 in said frame, means for driving the same, a shaft 41 also mounted in said frame, angularly disposed eccentrics 42 on said shaft 41, a ring 43 mounted on each eccentric, a hoe carried by each ring, and a pitman rod connecting each ring to a shaft on the crank shaft, whereby the hoes will be successively oscillated, substantially as described.

880,458. INTERNAL-COMBUSTION TURBINE. PAUL KRAUSE, Babylon, N. Y. Filed Apr. 10, 1907. Serial No. 367,350.

1. In combination, an outer casing, an inner casing forming therewith an annular space, blades or vanes carried by said casings and extending into said annular space, a combustion chamber rigidly secured to the outer casing and adapted to deliver gases under pressure into contact with said vanes or blades, a valve for controlling the flow of said gases, a valve operating rod extending through the inner casing, and means adjacent the outer end of said rod for intermittently moving said rod longitudinally.



2. In combination, two casings, each having vanes or blades carried thereby, and extending into proximity to each other, a combustion chamber adapted to deliver the products of combustion against said vanes or blades, a valve controlling the flow of said products, a valve operating rod extending through one of the casings and movable longitudinally thereof and having an oil passage therethrough, and means in engagement with the outer end of said rod for intermittently moving said rod to open the valve.

3. In combination, two concentric casings adapted to rotate in opposite directions and having an annular space therebetween, vanes or blades carried by said casings and extending into said annular space, a combustion chamber adjacent one end of said casings and adapted to communicate with the annular space, a valve adapted to control said communication, said valve being rotatable in one of the casings, a valve stem supporting said valve, and a non-rotatable longitudinally movable valve-operating rod extending through the inner casing and into engagement with the end of said valve stem.

4. In combination, two concentric casings adapted to rotate in opposite directions and having an annular space therebetween, vanes or blades carried by said casings and extending into said annular space, a combustion chamber adjacent one end of said casings and adapted to communicate with the annular space, a valve adapted to control said communication, said valve being rotatable in one of said casings, a valve stem supporting said valve, and a non-rotatable longitudinally movable valve-operating rod extending through the inner casing and into engagement with the end of said valve stem, said valve stem and valve operating rod each being provided with an oil passage extending longitudinally thereof.

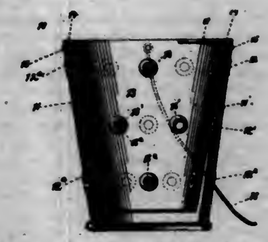
5. In combination, two concentric casings having an annular space therebetween, vanes or blades extending into said annular space, a combustion chamber adjacent one end of said casings and adapted to communicate with the annular space, a valve for controlling said communication, a longitudinally movable valve-operating rod concentric with one of said casings and unattached to said valve, and a longitudinally movable bar having a resiliently supported cam surface adapted to engage with said rod adjacent the end thereof for intermittently moving said rod longitudinally to operate the valve.

[Claims 6 to 10 not printed in the Gazette.]

880,459. FEED-BAG. HERBERT W. MORRIS, New York, N. Y. Filed Aug. 22, 1907. Serial No. 389,610.

1. A feed bag comprising an outer bag having apertures therein, an inner bag open at its base, secured along its upper edge to said outer bag, and provided with apertures arranged intermediate the apertures in the outer bag, substantially as specified.

2. A feed bag comprising a bag having a plurality of circumferential rows of apertures therein, an inner tubular section supported at its upper edge along the upper edge of said bag at a distance therefrom, and provided with a plurality of circumferential rows of apertures, substantially as specified.



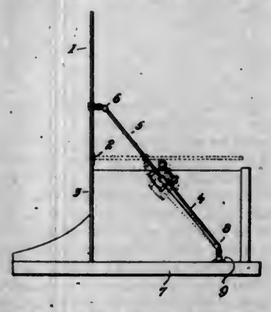
3. A feed bag comprising a bag having a plurality of circumferential rows of apertures therein, and a series of studs upon its inner surface along its upper edge, a tapered, tubular section of smaller diameter than said bag secured along its upper edge to the studs on said bag, and provided with a plurality of circumferential apertures arranged in the same horizontal plane with the rows of apertures in said bag; the apertures in said tubular section being arranged intermediate the apertures in said bag, substantially as specified.

4. A feed bag comprising an outer bag having apertures therein, a tubular, apertured section secured along its upper edge to the upper edge of said bag, and a retaining section secured to said tubular section along a portion of its upper edge, substantially as specified.

5. A feed bag comprising a bag having apertures in the side thereof, a tubular section of smaller outline than said bag secured thereto along its upper edge and provided with apertures in its side, and a crescent-shaped retaining section secured along one of its edges to the upper edge of said tubular section, substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

880,460. CLAMPING DEVICE. HENRY H. MCGIFFIN and EDWARD H. MCCAULEY, Pittsburg, Pa., assignors of one-third to James P. Brennan, Braddock, Pa., and one-third to W. L. Elford and one-third to said McGiffin, Pittsburg, Pa. Filed June 26, 1907. Serial No. 380,924.



1. In a brace for wind guards, telescoping members, a clamping device mounted on said members and comprising opposite gripping plates connected by a spring portion to normally dispose them out of parallelism, and a connecting bolt extending through the free ends of said plates and having a threaded end mounted in one plate for bringing them into parallelism to release the grip thereof.

2. A clamping device comprising opposite gripping plates normally held out of parallelism by a connecting spring portion, and a bolt pivoted in one of said plates and threaded into the other plate for drawing said plates into parallelism.

3. In a gripping device, telescoping members, oppositely disposed apertured plates surrounding each of said members, means for normally holding said plates in gripping contact, a bolt swiveled at its head in one of said plates

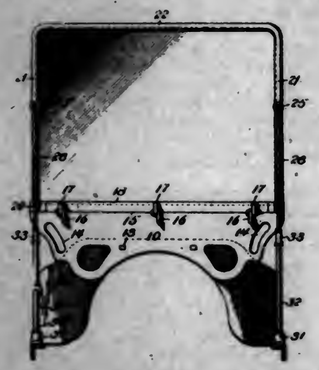
and having its opposite end threaded into the opposite plate, and an operating device carried by said bolt between said plates.

4. In a device of the class described, the combination with the pivotally mounted wind guard of an automobile, of telescoping members connecting said guard to the base of the machine, clamping plates connected to each other at one end by a spring portion and each embracing one of said telescoping members, and means mounted in the plates for adjusting said plates toward and from each other.

5. In a device of the class described, the combination with the pivotally mounted wind guard of an automobile, of telescoping members connecting said guard to the base of the machine, clamping plates connected to each other at one end by a spring portion and embracing said telescoping members, a connecting bolt mounted in the free ends of the plates for adjusting said plates toward and from each other, a pivotal connection between one of said telescoping members and the wind guard, and a pivoted connection between the opposite member and the base of the machine.

[Claims 6 and 7 not printed in the Gazette.]

880,461. WIND-GUARD. HENRY H. MCGIFFIN and EDWARD H. MCCAULEY, Pittsburg, Pa., assignors of one-third to James P. Brennan, Braddock, Pa., and one-third to W. L. Elford and one-third to said McGiffin, Pittsburg, Pa. Filed Aug. 28, 1907. Serial No. 390,536.



1. In a wind guard, a U-shaped glass frame grooved on its inner face, a grooved bottom bar having sockets for the ends of said frame, an attaching plate, and means for pivoting said bottom bar to the upper edge of said plate.

2. In a wind guard, a U-shaped glass frame, a bottom bar for said frame, an attaching plate having spaced parallel members to embrace a portion of a vehicle and pivoting lugs thereon at its upper edge, downwardly extending lugs upon said bottom bar pivoted to said plate lugs, a brace rod disposed at the front of said guard, and a ball and socket joint between said rod and frame.

3. In a wind guard, an attaching frame provided with separated plates forming an embracing portion at its lower edge and a straight upper edge, lateral pivoting lugs disposed at the upper edge, a grooved cross bar provided with lateral lugs pivoted to those of the attaching frame, sockets at the opposite ends of said cross bar, and a continuous bent glass frame having a grooved inner face and its free ends seated in said sockets.

4. In a wind guard, an attaching frame, a grooved cross bar pivoted to the attaching frame, sockets at the opposite ends of said cross bar, a glass frame comprising a continuous U-shaped metal bar grooved throughout its inner face and seated at its free ends in said sockets, and securing pins extending through said sockets and free ends.

5. In a wind guard, an attaching plate, a glass frame secured thereto and provided upon one face with a fixed socket, a packing cushion in said socket, a supporting block secured to a fixed part, a brace rod provided with a ball at one end disposed in contact with the cushion in said socket, and a cap threaded upon said socket and embracing a portion of said ball.

880,462. SAND PUMP AND BAIL. VICTOR H. PALM, Butler, Pa., assignor to T. W. Phillips Manufacturing Company, Butler, Pa., a Corporation of Pennsylvania. Filed Apr. 19, 1907. Serial No. 369,066.



1. The combination with a sand pump having a cylindrical body, of a sleeve adapted to fit therein, a collar carried by said sleeve and adapted to engage said body, said sleeve having an annular groove formed therein, a head carried by said sleeve and having slots formed therein providing projecting lugs, resilient arms secured to said body, blocks carried by the ends of said arms and adapted to engage in said annular recess, and the slots of said head, and means to hold said arms beneath said overhanging lugs.

2. The combination with a sand pump having a cylindrical body, of a sleeve adapted to fit therein, a collar carried by said sleeve and engaging the end of said body, a head carried by said sleeve, overhanging lugs carried by said head and having recesses formed therein, resilient arms carried by said body, blocks fixed upon the ends of said arms and adapted to seat in said overhanging lugs and engage said collar.

880,463. GATE-VALVE. ANDREW G. PAUL, Boston, Mass., assignor to Pakin Company, a Corporation of New York. Filed May 19, 1898. Serial No. 681,128.



1. In a gate valve, comprising a valve casing having a port, a movable gate, a lip integral with the casing around the inner wall of the port and projecting toward the gate chamber, a removable seat constructed so that it may be slipped over said projection and fit around the same, said seat provided with a shoulder extending partly around its outer periphery, and means for holding said seat locked to said casing, comprising parts for engaging the said shoulder, the movement of one of said parts serving to unlock the seat and permit its removal.

2. In a gate valve, comprising a valve casing having a port, a movable gate, a lip in the casing around the inner wall of the port, and projecting toward the gate chamber, a removable seat constructed so that it may be slipped over said projection and fit around the same, said seat provided with a shoulder, and means for holding said seat locked to the said casing, comprising movable parts engaging the seat, the movement of one of said parts serving to unlock the seat and readily permit its rotation and subsequent removal from the casing.

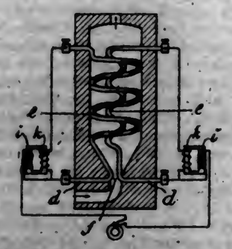
3. A gate valve comprising a suitable valve casing, a port in the casing adapted to be closed by the gate, a lip around the inner edge of the wall of the port projecting in towards the gate chamber provided with an undercut groove, and one or more openings into said groove, a renewable seat adapted to be slipped over the lip and to surround and fit the same and provided with one or more projecting parts adapted to pass through the openings in the lip and to slide in the groove in the lip, and a gate and means for operating the gate, substantially as set forth.

4. A gate valve comprising a suitable valve casing, a port in the casing adapted to be closed by the gate, a lip around the inner edge of the wall of the port projecting in towards the gate chamber provided with an undercut groove, and one or more openings into said groove, a renewable seat adapted to be slipped over the lip and to surround and fit the same and provided with one or more projecting parts adapted to pass through the openings in the lip and to slide in the groove in the lip, means for locking the seat in place, and a gate and means for operating the gate, substantially as set forth.

5. A gate valve comprising a suitable valve casing, a port in the casing adapted to be closed by the gate, the lip 4 provided with the groove 17 and the openings 18, the renewable seat provided with the projecting parts 19, and the recess 20, the locking plate 21, and a gate and means for operating the gate, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

880,464. APPARATUS FOR TREATING GASES AND GAS MIXTURES BY MEANS OF VOLTAIC ARCS. ALBERT J. PETERSSON, Alby, Sweden. Original application filed Aug. 23, 1904, Serial No. 221,907. Divided and this application filed Sept. 6, 1905. Serial No. 277,260.

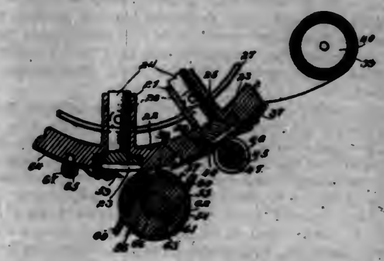


1. In an apparatus for treating gases by means of voltaic arcs the combination, of a furnace chamber, electrodes extending in the same general direction in the said furnace chamber, a source of electric current connected to the said electrodes for creating the said arcs between the latter, and means for creating electrodynamic forces for strengthening the displacing action on the arcs exerted by the currents flowing through the electrodes to the said arcs, substantially as and for the purpose set forth.

2. In an apparatus for treating gases by means of voltaic arcs the combination, of a furnace chamber, electrodes extending in the same general direction in the said furnace chamber, a source of electric current connected to the said electrodes for creating the said arcs between the latter, closed circuits of which each of the said electrodes form parts, and means for generating currents in the said closed circuits, substantially as and for the purpose set forth.

3. In an apparatus for treating gases by means of voltaic arcs the combination, of a furnace chamber, electrodes extending in the same general direction in the said furnace chamber, a source of electric current connected to the said electrodes for creating the said arcs between the latter, closed circuits of which the said electrodes form parts, and transformers the secondary members of which are connected in the said closed circuits and the primary members of which are connected to the said source of electric current, substantially as and for the purpose set forth.

880,465. CUTTING MECHANISM FOR WRAPPING-MACHINES. ALBERT M. PRICE, Elgin, Ill., assignor, by mesne assignments, to Adolph E. Brion, New York, N. Y. Original application filed Sept. 13, 1905, Serial No. 278,338. Divided and this application filed Feb. 11, 1907. Serial No. 356,806.



1. A machine for severing blanks from the end of a strip of paper, the combination with a member having transverse grooves over which the paper is fed, of a knife actuated to enter a groove and sever a blank, and means for retaining the blank upon the grooved member after it is severed from the strip.

2. In a machine for severing blanks from the end of a strip of paper, the combination with a member having transverse grooves over which the paper is fed, of a knife actuated to enter a groove and sever a blank, means for holding the strip taut across said groove, and means for retaining the blank upon the grooved member after it is severed from the strip.

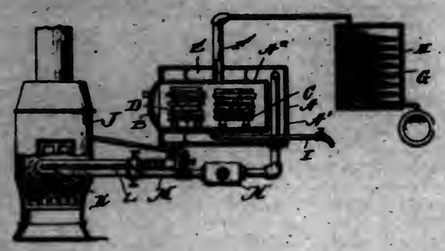
3. In a machine for severing blanks from the end of a strip of paper, the combination with a moving member provided with transverse grooves spaced apart to suit the length of the blank to be severed, means for severing the blanks actuated through the strip into said grooves, and means for retaining both ends of the blank taut upon the grooved member after it is severed from the strip.

4. In a machine for severing blanks from the end of a strip of paper, the combination with a moving member provided with transverse grooves spaced apart to suit the length of the blank to be severed, means for severing the blanks actuated through the strip into said grooves, means for retaining the strip taut across said grooves until a blank is severed, and means for retaining both ends of the blank taut upon the grooved member after it is severed from the strip.

5. In a machine for severing blanks from the end of a strip of paper, the combination with a feeding wheel provided with transverse grooves spaced apart to suit the length of the blank to be severed, means for severing the blanks actuated through the strip into said grooves, and means for retaining both ends of the blank taut upon the grooved member after it is severed from the strip.

[Claims 6 to 24 not printed in the Gazette.]

880,466. PROCESS OF DESTRUCTIVE DISTILLATION OF WOOD. THOMAS W. PRITCHARD, Wilmington, N. C., assignor of one-fourth to Hugh MacRae, Washington, D. C., and H. M. Chase, Wilmington, N. C. Filed Aug. 9, 1906. Serial No. 329,929.



1. The within process for the distillation of wood to extract turpentine and resin consisting in subjecting the wood in a closed retort or still to a degree of heat sufficient to extract the turpentine and resin and less than will cause the creosote and pyroligneous acid of the wood to combine with the turpentine to an appreciable degree, said heat being derived from a non-congealable heated fluid having a boiling point in excess of the temperature necessary to extract the turpentine and positively circulating said fluid out of contact with the wood, substantially as described.

2. The within process for the distillation of wood to extract turpentine and resin consisting in subjecting the wood in a closed retort or still to a degree of heat sufficient to extract the turpentine and resin and less than will cause the creosote and pyroligneous acid of the wood to combine with the turpentine to an appreciable degree, said heat being derived from a non-congealable heated fluid having a boiling point in excess of the temperature necessary to extract the turpentine, circulating said fluid out of contact with the wood, and regulating the temperature of the retort by regulating the speed of circulation of the fluid substantially as described.

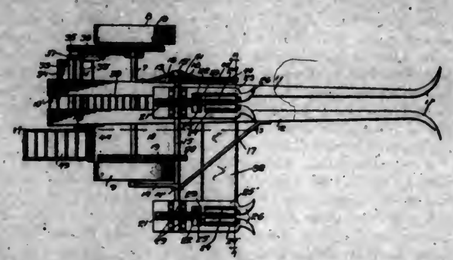
3. The within process for the distillation of wood to extract turpentine and resin consisting in subjecting the wood in a closed retort to a degree of heat sufficient to extract the turpentine and resin and less than will cause the creosote and pyroligneous acid to combine with the turpentine to an appreciable degree, said heat being derived from a non-congealable heated fluid having a boiling point in excess of 400 degrees F. and positively circulating said fluid out of contact with the wood, substantially as described.

4. A process for the recovery of turpentine and other volatile oils from wood, consisting in placing the wood in a retort, heating the contents of the retort equably throughout by a positively moved heated stream of liquid which is non-volatile at the temperatures necessary to effect the distillation, first raising the contents of the retort to a regulated temperature sufficient to drive off the turpentine without vaporizing the less volatile oils, and maintaining such temperature until the turpentine is driven off, and increasing the heat to a temperature sufficient to drive off the lighter oils without vaporizing the tar oils and maintaining such temperature until such lighter oils are driven off.

5. A process for the recovery of turpentine and other volatile oils from wood consisting in placing the wood in a retort, heating the contents of the retort equably throughout by a positively moved heated stream of liquid which is non-volatile at the temperature necessary for the destructive distillation of wood, first raising the contents of the retort to a regulated temperature sufficient to drive off the turpentine without vaporizing the less volatile oils and maintaining such temperature until the turpentine is substantially driven off, increasing the heat to a temperature sufficient to drive off the lighter oils without vaporizing the tar oils and maintaining such temperature until such lighter oils are driven off, and finally increasing the heat to a temperature sufficient to drive off the tar oils.

[Claims 6 and 7 not printed in the Gazette.]

880,467. CORN HARVESTING AND HUSKING MACHINE. WALTER O. POWELL, Henderson, Ky., assignor of one-half to E. A. Eckert, Henderson, Ky. Filed Oct. 30, 1906. Serial No. 341,261.



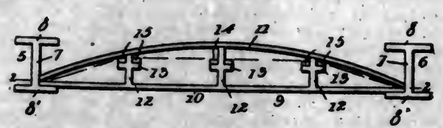
1. In a corn harvesting and husking machine, a main frame including an axle, and traction wheels carried by the latter; a shaft carried by said frame in advance of said axle and extending beyond said frame at one side thereof; an auxiliary frame mounted upon said main frame and connected with said shaft; an auxiliary frame at the extended end of said shaft; means secured to the under face of said pivoted frame for supporting the same; a pair of snapping rolls mounted in each of said auxiliary frames; a pair of husking rolls mounted on the rear end of the main frame; means for driving the several rolls; a single conveyer for feeding the ears of corn discharged from said snapping rolls onto said husking rolls; and means for discharging the ears of corn after being husked by said last-mentionad rolls.

2. In a corn harvesting and husking machine, a main frame, including an axle and traction wheels carried by the latter; a shaft carried by said frame in advance of said axle and extending beyond said frame at one side thereof; an auxiliary frame mounted upon said main frame and connected with said shaft; an auxiliary frame at the extended end of said shaft; a pair of wheels secured to the under face of said pivoted frame for supporting the same; a pair of snapping rolls, mounted in each of said auxiliary frames; a pair of husking rolls mounted on the rear end of the main frame; means for driving the several rolls; a single conveyer for feeding the ears of corn discharged from said snapping rolls onto said husking rolls; and means for discharging the ears of corn after being husked by said last-mentioned rolls.

3. In a corn harvesting and husking machine, a main frame including spaced longitudinal beams, an axle connecting said beams, and traction wheels carried by said axle; a shaft carried by said frame in advance of said axle and extending beyond said frame at one side thereof; a U-shaped auxiliary frame mounted upon said main frame and connected with said shaft, the members of said auxiliary frame being disposed directly above the spaced beams of the main frame; a U-shaped auxiliary frame at the extended end of said shaft; means secured to the under face of said pivoted frame for supporting the same; a pair of snapping rolls mounted in each of said auxiliary frames; a pair of husking rolls mounted on the rear end of the main frame; means for driving the several rolls; a single conveyer for feeding the ears of corn discharged from said snapping rolls onto said husking rolls; and means for discharging the ears after being husked by said last-mentioned rolls.

880,468. BRACE FOR CONCRETE STRUCTURES. ALBERT J. ROBINSON, Washington, D. C. Filed June 27, 1907. Serial No. 381,097.

1. The combination with spaced beams of braces between the beams, said braces including upper and lower members and connecting uprights, and bridge plates having bifurcated ends disposed with the uprights in their bifurcations, said bridge plates extending between the braces.



2. The combination with spaced beams, of braces located between the beams, said braces including vertical portions having lateral projections, and bridge plates having bifurcated ends and resultant spaced portions disposed between the braces with the vertical portions thereof in their bifurcations and with their spaced portions upon the projections.

880,469. MEDICATED-SILK PROTECTOR. SVEN ROLFSON-SCHMIDT, New Dorp, N. Y., assignor, by mesne assignments, to Richard F. Woodward, Huntington, N. Y. Filed June 17, 1905, Serial No. 265,775. Renewed Jan. 18, 1907. Serial No. 352,963.



1. A medical device comprising a plurality of threads, and means for confining the threads at a point intermediate their ends, the threads projecting through said means and extending beyond the ends thereof, the respective ends of the confining means being of different diameters to correspondingly limit the spread of the threads.

2. A medical device comprising a plurality of soft threads, and a soft tube surrounding said threads intermediate their ends, said tube being formed with flared ends, and said threads being spread into radial formations at the ends of said tube.

3. A medical device comprising a mass of absorbent material, and an integral means for confining said material at a point intermediate its ends, said material projecting beyond said means, the respective ends of the confining means being of different diameters to correspondingly limit the spread of the absorbent material.

880,470. CARBID-CARTRIDGE. EDWIN M. ROSENBLUTH, Philadelphia, Pa. Original application filed Mar. 9, 1907, Serial No. 361,562. Divided and this application filed Aug. 6, 1907. Serial No. 387,279.

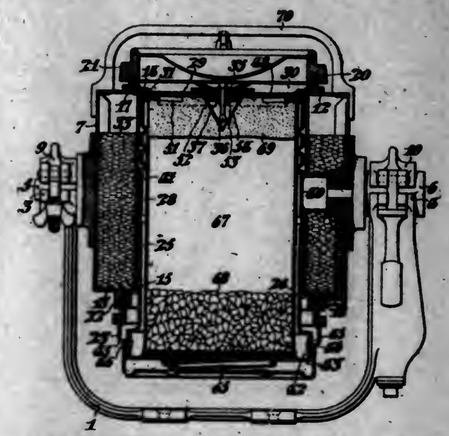
1. In an acetylene gas generator, the combination with a casing; of a carbid chamber; and, a removable carbid receptacle having a chamber provided with an enlarged region arranged to prevent the improper insertion of said receptacle in said casing, substantially as set forth.

2. In an acetylene gas generator, the combination with a removable carbid receptacle; of a perforated cap for said receptacle; and, a removable carbid cartridge having a removable lid and arranged to fit into said receptacle with its lid removed, substantially as set forth.

3. In an acetylene gas generator, the combination with a removable carbid receptacle; of a removable carbid cartridge, having notches in its open edge, and arranged to fit in said receptacle, substantially as set forth.

4. In an acetylene gas generator, the combination with a removable carbid cartridge having an opening provided with a notched rim; of a removable lid for said opening; a carbid receptacle arranged to inclose said cartridge without its lid; and a perforated cap for said receptacle, substantially as set forth.

5. In an acetylene gas generator, the combination with a removable carbid cartridge having an opening provided with a notched rim; of a removable imperforate lid, arranged to close said opening; and, a perforated cap arranged to be substituted for said imperforate lid, substantially as set forth.



[Claims 6 to 15 not printed in the Gazette.]

880,471. MUFFLER CUT-OUT. WILLIAM G. SCHAEFFER, Reading, Pa., assignor, by mesne assignments, to Reading Standard Company, a Corporation of Pennsylvania. Filed Apr. 30, 1906. Serial No. 314,405.

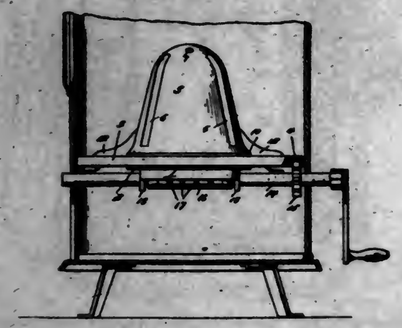
A muffler cut-out comprising a fitting having parallel inlet and outlet ports, a swinging valve adapted to close the outlet port, a muffler port located between and substantially perpendicular to said inlet and outlet ports, all of said ports being substantially the same area, said fitting having a channel leading from the inlet port to the outlet ports, said channel being bent at an intermediate point and inclined at an angle to said parallel ports and then curved arcuately into alinment with said muffler port, whereby the outlet port is relieved of the direct pressure or impact of the exhaust entering the inlet valve.

880,472. STOVE-GRATE. THOMAS J. STAFFORD, Brooklyn, Iowa. Filed July 8, 1907. Serial No. 382,728.

1. A stove grate comprising a circular supporting ring, an annular grate mounted on said ring an apertured dome above said grate, an annular rack formed on said grate, a revolubly mounted operating shaft, a gear pinion on said shaft to engage said rack, whereby said grate is oscillated, and a grate section revolubly mounted in said supporting ring and adapted to serve as a fan to force air up through said dome, substantially as described.

2. A stove grate comprising a circular supporting ring,

an annular grate revolubly mounted on said ring, said grate having formed therein a series of radially disposed openings, a slotted air-conducting dome secured to said ring and projecting upwardly into the fire box, means on said dome to coact with said circular grate whereby the cinders and clinkers are crushed or broken up, means to oscillate said grate, and a fan adapted to force air through said slotted dome into the center of the fire, substantially as described.



3. A stove grate comprising a supporting ring, a circular grate revolubly mounted on said ring, an annular rack formed on the underside of said grate, an upwardly projecting air-conducting dome secured to the upper side of the ring above said grate, cinder-crushing lugs formed on said dome to co-act with the bars of said circular grate to reduce the cinders and clinkers in the fire, an operating shaft journaled in the lower side of said supporting ring, a spur gear pinion mounted on said shaft and adapted to engage the annular rack on said grate whereby the latter is oscillated, substantially as described.

4. A stove grate comprising a centrally disposed supporting ring, a circular grate revolubly mounted on said ring, an annular rack formed on the underside of said grate, a slotted dome mounted on the upper side of said ring, a grate retaining flange formed on the lower end of said dome, oppositely disposed cinder crushing lugs formed on the lower end of the dome to co-act with said grate, an operating shaft revolubly mounted in the lower sides of said ring, a spur gear pinion on said shaft to engage the rack on the underside of said grate, a fan mounted on said shaft within said supporting ring, said fan comprising a plate, a series of oppositely projecting fingers formed on opposite sides of the same, whereby when said shaft is operated, said plate will be oscillated or revolved to force a current of air through said dome and into the center of the fire, substantially as described.

880,473. TEMPORARY BINDER. HERMAN WIEDEMAN, Chicago, Ill., assignor to J. S. McDonald Company, Chicago, Ill., a Corporation of Illinois. Filed June 17, 1907. Serial No. 379,389.



1. The combination with a loose leaf holder comprising an upper and lower cover suitably hinged together, of a spring-clamp consisting of a flexible sheet steel strip bent transversely its entire length and inclosing the rear portions of said covers, and having one of its lapping portions wider than the other.

2. The combination with a loose leaf holder comprising an upper and lower cover suitably hinged together and one of which is provided with a transverse channel, of a spring-clamp consisting of a flexible sheet steel strip bent transversely its entire length and inclosing the rear portions of said covers, one of its lapping portions being wider than the other and one of said lapping portions having its edge engaging said channel.

3. A loose leaf holder comprising a tablet having its rear edge rolled upwards to form the back of the holder, an upper cover having a suitably hinged connection with said upwardly rolled edge, and a spring-clamp consisting of a flexible sheet steel strip bent transversely its entire length having its upper lapping portion wider than its lower lapping portion, and inclosing and normally pressing the rear hinged edge of said cover and the rear portion of the tablet together.

4. A loose leaf holder comprising a tablet having its rear edge rolled upwards and back over itself, an upper cover consisting of a cover section, and a back section which is hinged to the overhanging upwardly rolled rear edge of the tablet, and has the cover section hinged to its forward edge, and a spring-clamp consisting of a flexible sheet steel strip bent transversely its entire length having its upper portion lapping portion wider than its lower lapping portion, and inclosing and normally pressing said back section and rear portion of the tablet together.

5. A loose leaf holder comprising a tablet having its rear edge rolled upwards and back over itself and having a transverse channel in its under surface near said rolled edge, an upper cover consisting of a cover section, and a back section which is hinged to the overhanging upwardly rolled rear edge of the tablet, and has the cover section hinged to its forward edge, and a spring clamp consisting of a flexible sheet steel strip bent transversely its entire length, having one longitudinal edge seated in said channel and inclosing and normally pressing said back section and rear portion of the tablet together.

[Claim 6 not printed in the Gazette.]

880,474. WAVE-MOTOR. ALFRED ALLEN, Oakland, Cal. Filed May 8, 1907. Serial No. 372,496.



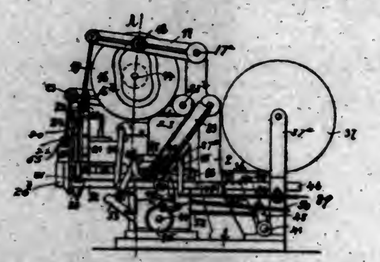
1. In a wave motor, the combination of a hull, a lever pivotally mounted thereon for oscillatory movement in vertical planes and extending from the said pivot overboard, a shaft mounted in the hull, a toothed wheel thereon in close proximity to the pivoted end of the lever, and pawls pivoted to the said lever on opposite sides of its pivot for engaging the toothed wheel and thereby moving the wheel by the oscillations of the lever.

2. In a wave-power the combination, of a hull, a lever pivotally mounted on each end of the hull for oscillatory movement in an arc longitudinally of the hull, and extending from the said pivotal points fore and aft overboard; floats on the outer ends of the said levers; pawls on the inner ends of the levers; and toothed wheels mounted on the hull in position to be engaged and rotated by the pawl-carrying ends of the levers.

3. The herein described wave-power comprising a hull; levers pivotally mounted on the hull for oscillatory movement in vertical arcs, said levers extending fore and aft beyond the hull, and having floats on their outer ends; toothed wheels mounted on the hull for rotation in planes longitudinally of the hull; and means operatively connecting the inner ends of the levers with the toothed wheels, to rotate them from the oscillations of the said levers.

4. In a wave motor, the combination of a hull provided with a longitudinal opening extending from end to end thereof, booms pivotally mounted in said opening and extending fore and aft of the hull, a wheel rotatively mounted in the hull, and connections between the booms and the wheel for giving movement to the latter.

880,475. MACHINE FOR MAKING BRUSHES. JOSEF BAER, Weingarten, Germany, assignor to Charles Poulet, Liege, Belgium. Filed May 15, 1901. Serial No. 60,891.



1. In a machine of the class described, a bristle receiver having a movable side, means for actuating said movable side for loosening the bunch, a tuft separator, and means for pushing the separated tuft forward.

2. In a machine of the class described, a bristle receiver having a movable side, means for keeping the tuft of bristles compact and preventing separation thereof, a nozzle with a cone-shaped lower end, means for actuating said movable side and means for pushing the separated tuft forward.

3. In a machine of the class described, a bristle receiver having a movable side, means for keeping the tuft of bristles compact and preventing separation thereof, a nozzle with a cone-shaped lower end, means for actuating said movable side and means for pushing the separated tuft forward, a tuft separator and means for placing a staple over each tuft before they are driven through each nozzle.

4. In a machine of the class described, a bristle receiver having a movable side, means for actuating said movable side for loosening the bunch, a tuft separator, means for pushing the separated tuft forward, and means for keeping the bunch of bristles compact and preventing its separating.

5. In a machine of the class described, a bristle receiver having a movable side, means for actuating said movable side for loosening the bunch, a tuft separator, means for pushing the separated tuft forward, means for keeping the bunch of bristles compact and preventing its separating, a nozzle with a cone-shaped lower end a plunger, and means for guiding a staple beneath the plunger and over the bristles.

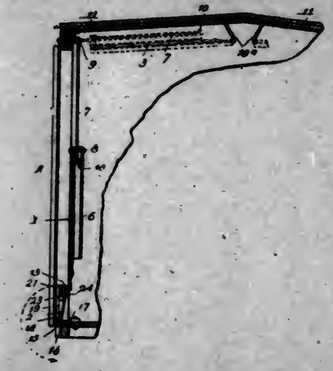
[Claim 6 not printed in the Gazette.]

880,476. GRAIN-DOOR FOR BOX-CARS. JACOB S. BENDER, Kansas City, Mo. Filed Dec. 8, 1906. Serial No. 346,862.

1. A grain door for cars having a hinged section, loops secured to said section, a bar pivoted to the section for locking the same, the ends of said bar extending through the loops, keepers adapted to be engaged by said ends and a latch pivoted to the section adapted to be turned into one of the loops beneath and hold the bar in a locked position.

2. A grain door for cars consisting of an upper section, a hinged lower section provided at its upper ends with inturned flanges, castings secured to the door posts of the car and provided with pockets for the reception of the flanges and with reversely disposed keepers, and a locking bar pivoted to the outer face of said lower section with its ends adapted to engage behind said keepers.

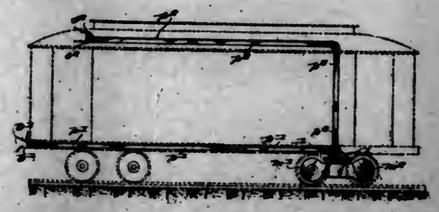
3. A grain door for cars consisting of an upper section, a lower section provided along its upper edge with an outturned reinforcing flange and along its lower edge with hinge members, a threshold plate to which the hinge members are pivotally secured on a line outside the plane of the upper section, castings secured to the door posts of the car and provided with inclines and means for locking the lower section against said inclines.



4. A grain door for cars consisting of an upper section, a lower section provided along its upper edge with an outturned reinforcing flange and along its lower edge with hinge members, a threshold plate to which the hinge members are pivotally secured on a line outside the plane of the upper section, inturned flanges at the ends of said lower section, castings on the door posts provided with inclined pockets adapted to receive said flanges and with oppositely disposed keepers laterally beyond said pockets, and a locking bar centrally pivoted to the lower section with its extremities adapted to engage between said keepers when said flanges are in place.

5. A grain door consisting of a lower section, an upper section provided with vertical sheaths, slotted links arranged in said sheath and provided with inturned hooks for engaging the lower ends thereof after the upper section has been slid upwardly, bolts passing through the upper ends of the sheaths, the slots in the links, and the section, means above the doorway to which the links are pivotally secured so that they may swing upwardly with the upper section, and hooks for supporting said upper section in a raised position.

880,477. CONDUCTING-CONDUIT FOR VEHICLES. FRANCIS M. BRINCKERHOFF, New York, N. Y. Filed Mar. 12, 1907. Serial No. 361,920.



1. In combination with a vehicle, including operating mechanism, of a horizontally movable conduit consisting of flanged members interposed between the vehicle body and said operating mechanism.

2. In combination with a vehicle, including operating mechanism, of a vertically movable conduit consisting of flanged members interposed between the vehicle body and said operating mechanism.

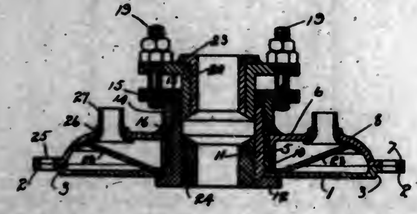
3. In combination with a vehicle, of motors, a conduit, between the vehicle body and said motors, said conduit consisting of flanged members and having a universal movement in relation to the vehicle body and said motors.

4. In a vehicle, a conduit comprising a plurality of flanged connected sections, and means for maintaining the conduit substantially air tight at the points of connection of the sections.

5. In electric vehicles the combination of a motor, a chamber containing said motor, means for causing a current of air at substantially atmospheric pressure to flow through said chamber and a conduit, consisting of flanged members having a universal movement in relation to the vehicle body and said motor, for conveying the air so heated to and from the chamber.

[Claim 6 to 18 not printed in the Gazette.]

880,478. CYLINDER-HEAD. HENRY A. BUCK, Providence, R. I., assignor to Charles D. Wainwright, Marblehead, Mass. Filed Jan. 30, 1907. Serial No. 354,863.



1. A cylinder head constructed of a plurality of sheet metal plates, said plates being so formed as to engage and support each other.

2. A cylinder head constructed of a plurality of sheet metal plates, said plates being bent to engage and support each other at a plurality of points.

3. A cover or head constructed of a plurality of sheet metal plates, said plates being bent to engage and support each other, and means for securing said plates together.

4. A cover or head constructed of a plurality of plates, said plates being bent and secured together so as to form a chamber between them, said plates being also bent so as to reinforce and support each other.

5. A cylinder head constructed of a plurality of sheet metal plates, said plates being bent to engage and support each other at a plurality of points so that when in their operative position they form a hollow head, and means for securing said plates together.

[Claims 6 to 20 not printed in the Gazette.]

880,479. TURBINE-ENGINE. HENRY A. BUCK, Providence, R. I., assignor to Charles D. Wainwright, Marblehead, Mass. Filed Mar. 15, 1907. Serial No. 362,478.



1. A turbine engine comprising a casing, a series of stationary and rotatable plates alternately arranged within said casing, a shaft, said rotatable plates mounted on said shaft, each of said plates being provided with a plurality of ports, and a lip integral with its plate projecting over each port whereby the driving medium may be deflected substantially parallel with the face of the plate.

2. In a turbine engine, a casing, a head at either end thereof, a series of alternate stationary and rotatable plates within said casing, a shaft, said rotatable plates mounted on said shaft, means for retaining the stationary plates, each of said plates being provided with a plurality of ports, and lips formed integral with the plates overhanging said ports whereby the driving medium is deflected as it passes through the ports.

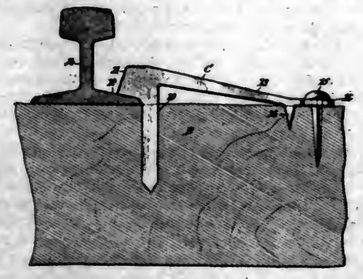
3. In a turbine engine, a casing, a head at either end thereof, a shaft in said casing, a series of rotatable plates mounted on said shaft, a series of stationary plates arranged alternately with said rotatable plates, each of said plates being provided with a plurality of ports, and a lip raised from the stock in the plate to overhang each port whereby the driving medium is deflected as it passes through the ports.

4. A turbine engine comprising a casing, a series of alternate stationary and rotatable plates within said casing all cut or stamped from sheet or plate material, a shaft, said rotatable plates mounted on said shaft, each of said plates being provided with a plurality of ports, and a lip over each port formed from the stock punched out to form said port.

5. A turbine engine comprising a casing, a series of alternate stationary and rotatable plates within said casing all cut or stamped from sheet or plate material, a shaft, said rotatable plates mounted on said shaft, each of said plates being provided with a plurality of ports, and a lip projecting over each port the same being formed from the stock raised from the body of the plate in forming the port whereby the driving medium may be deflected in a plane with the face of the plate as it passes through the ports.

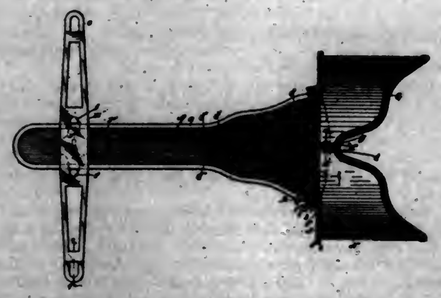
[Claims 6 to 31 not printed in the Gazette.]

880,480. RAILWAY-SPIKE. THOMAS W. CAREY, Jr., New Orleans, La. Filed Mar. 7, 1907. Serial No. 361,007.



A railway spike, consisting of a body having a head for engaging the flange of a rail, said head being of increased thickness, a tang projecting from the upper portion of the head, the tang being of less thickness than that of the head and standing at an acute angle to the body, forming an inclined brace, the tang or brace terminating in a flat horizontal portion adapted to rest upon a tie and apertured to receive a spike, and a wedge-shaped spur on the underside of the inclined tang or brace adjacent to the horizontal portion.

880,481. STEREOSCOPE. ELLSWORTH E. CLARK and HARRY A. DOUGLAS, Kalamazoo, Mich., assignors to Royal Supply Company, Chicago, Ill. Filed May 18, 1906. Serial No. 317,590.



1. In a stereoscope, the combination of a shaft formed of a single piece of sheet metal, having a continuous bead formed on its side and forward edges; a hood formed of a single piece of sheet metal, having an outwardly turned flange on its forward edge and forwardly projecting extensions on its under side, resting on said shaft, said hood having retaining tongues on its meeting edges, arranged through said shaft; a sheet metal lens-plate having its edge folded or seamed over the out-turned flange on said hood, and having retaining tongues on its lower edge, arranged through said shaft and said extensions on said hood; a sheet metal septum having retaining tongues on its bottom and rear edges, arranged through said shaft, and lens-plate, for the purpose specified.

2. In a stereoscope, the combination of a sheet metal shaft; a sheet metal hood, having a forwardly projecting extension on its under side, resting on said shaft, and retaining tongues on its meeting edges, arranged through said shaft; a sheet metal lens-plate having a retaining tongue on its lower edge, arranged through said shaft and said extension on said hood; a sheet metal septum; a sheet metal cross-piece therefor arranged at the forward end thereof, having retaining tongues on its lower end, arranged through said shaft, said septum having retaining tongues on its bottom, forward and rear edges, arranged through said shaft, lens-plate and cross-piece; for the purpose specified.

3. In a stereoscope, the combination of a sheet metal shaft; a sheet metal hood having a forwardly projecting extension on its under side, resting on said shaft, and retaining tongues on its meeting edges, arranged through said shaft; a sheet metal lens-plate having a retaining tongue on its lower edge, arranged through said shaft and said extension on said hood; a sheet metal septum; a sheet metal cross-piece therefor arranged at the forward end thereof, having retaining tongues on its lower end, arranged through said shaft, said septum having retaining tongues on its bottom, forward and rear edges, arranged through said shaft, lens-plate and cross-piece; for the purpose specified.

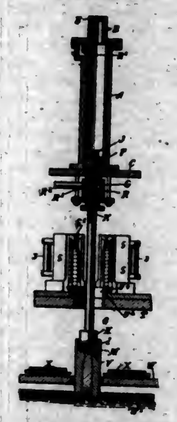
4. In a stereoscope, the combination of a sheet metal shaft; a sheet metal hood, having a forwardly projecting extension on its under side, resting on said shaft, and retaining tongues on its meeting edges, arranged through said shaft; a sheet metal lens-plate having a retaining tongue on its lower edge, arranged through said shaft and said extension on said hood; a sheet metal septum having retaining tongues on its bottom and rear edges, arranged through said shaft and lens-plate; lens frames, consisting of suitable lens sockets punched up from said lens-plate, said sockets having inturned flanges at their outer edges; and retainers having inturned flanges at their rear edges and retaining tongues on their forward edges, arranged through the flanges on said lens-sockets, for the purpose specified.

5. In a stereoscope, the combination of a sheet metal shaft; a sheet metal hood having a forwardly projecting extension on its under side, resting on said shaft, and retaining tongues on its meeting edges, arranged through said shaft; a sheet metal lens-plate having a retaining tongue on its lower edge, arranged through said shaft and said extension on said hood; a sheet metal septum having retaining tongues on its bottom and rear edges, arranged through said shaft and lens-plate, for the purpose specified.

[Claims 6 to 18 not printed in the Gazette.]

880,482. APPARATUS FOR THE MANUFACTURE OF HOLLOW GLASSWARE. CHARLES F. COX, Bridgeton, N. J. Original application filed Nov. 18, 1905, Serial No. 287,917. Divided and this application filed Apr. 20, 1907. Serial No. 369,303.

1. In apparatus for manufacturing hollow glassware, a blank mold, a finishing mold located at a different level from the blank mold, and a neck mold vertically relatively to both of said first-named molds, to transfer the blank from the blank mold to the finishing mold, all of said molds being located in alinement.



2. In apparatus for making hollow glassware, a finishing mold, a blank mold movable vertically beneath the finishing mold and a neck mold movable through the finishing mold to transfer the blank from the blank mold to the finishing mold.

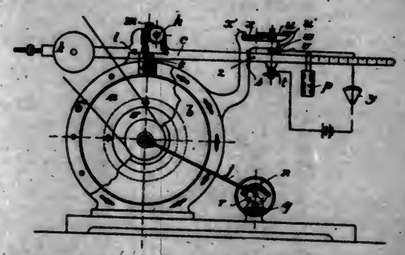
3. In apparatus for making hollow glassware, a finishing mold, a blank mold movable vertically beneath the neck mold or blank carrier movable through the finishing mold to transfer the blank from the blank mold to the finishing mold all of said molds being located in alinement.

4. In apparatus for making hollow glassware, a blank mold, a cushioning device tending to keep said mold in its upper position, means for forcing the blank mold down to contact with the molten glass, and means for drawing glass into the said mold by suction.

5. In apparatus for manufacturing hollow glassware, a horizontally separate blank mold provided with an opening in its bottom for the introduction of the molten glass, a neck mold movable vertically in relation to said blank mold, and a horizontally separable finishing mold located at a higher level than the blank mold, and arranged to receive the blank which has been lifted from the blank mold by the vertical movement of the neck mold.

[Claims 6 to 18 not printed in the Gazette.]

880,483. MACHINE FOR TESTING THE WEAR OF METALS. MARTIN DERIHON, Liege, Belgium. Original application filed Mar. 9, 1907, Serial No. 361,532. Divided and this application filed June 24, 1907. Serial No. 380,541.



1. In a machine of the character described, the combination of a revoluble disk, a lever adapted to constantly press the body to be tested against the disk, a relatively stationary scale, a pointer carried by the lever and cooperating with said scale to indicate the extent of movement of the lever and consequent wear of the body tested,

a second scale, and adjustable means coöperating with the second scale to indicate movements of the lever of less extent than those indicated by the first said scale.

2. In a machine of the character described, the combination of a revoluble disk, a lever adapted to press the body to be tested against the disk, a weight adjustable on said lever to vary the pressure exerted thereby, a scale extending transversely of the lever, a pointer carried by the lever and coöperating with said scale to indicate the extent of movement of the lever, and supplemental means coöperating with the lever and having a definite relation to said scale for indicating movements of the lever less than those corresponding to graduations on said scale.

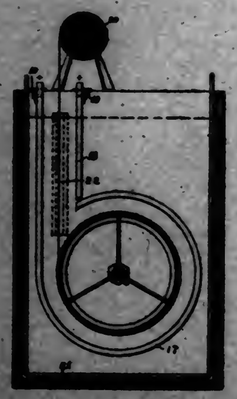
3. In a machine of the character described, the combination of a revoluble disk, a lever adapted to press the body to be tested against the disk, a scale, a pointer moving with the lever and coöperating with said scale to indicate the extent of movement of the lever, a screw movable toward and from the lever, and means controlled by turning said screw for indicating movements of the lever of less extent than those indicated by said scale.

4. In a machine of the character described, the combination of a revoluble disk, a lever adapted to press the body to be tested against the disk, a scale, a pointer moving with the lever and coöperating with said scale to indicate the extent of movement of the lever, a screw movable toward and from the lever, an adjustable contact on the lever in the path of said screw, said contact and screw being adjusted into contact relation at the beginning of a test, and means, controlled by turning said screw to again bear on said contact on the lever, for indicating movements of the lever of less extent than those indicated by said scale.

5. In a machine of the character described, the combination of a revoluble disk, a lever adapted to press the body to be tested against the disk, a scale, a pointer moving with the lever and coöperating with said scale to indicate the extent of movement of the lever, a screw movable toward and from the lever, a second scale, and a graduated disk connected with said screw and coöperating with said second scale when the screw is adjusted to contact with the lever after the latter has moved from its initial position to indicate movements of the lever of less extent than those indicated by the first said scale.

[Claims 6 to 8 not printed in the Gazette.]

880,484. PROCESS OF PRODUCING VERY THIN SHEET METAL. THOMAS A. EDISON, Llewellyn Park, Orange, N. J., assignor to Edison Storage Battery Company, West Orange, N. J., a Corporation of New Jersey. Filed June 29, 1904. Serial No. 214,651.



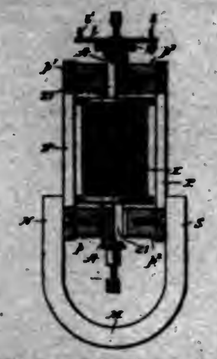
1. An improved process for producing metallic sheets or foils, which consists in electrolytically depositing a thin metal film on a polished surface of an aluminium-copper alloy in which the percentage of copper largely predominates, and in finally stripping the film from said surface, substantially as set forth.

2. The process of producing thin sheets or foils of iron, which consists in electrolytically depositing iron from an iron solution upon a polished surface of an aluminium copper alloy in which the percentage of copper largely predominates, and finally in stripping the deposited film from said surface, substantially as set forth.

3. An improved process for producing metallic sheets or foils which consists in electrolytically depositing a thin metallic film upon an endless polished cathode, in continuously moving said cathode in the electrolytic bath and in continuously stripping the deposited film from said cathode below the surface of the bath, substantially as set forth.

4. An improved process for producing metallic sheets or foils which consists in electrolytically depositing a thin metallic film upon an endless polished cathode situated entirely below the surface of the electrolytic bath, in continuously moving said cathode in the bath and in continuously stripping the deposited film therefrom, substantially as set forth.

880,485. MAGNETO-ELECTRIC INDUCTOR. MARTIN FISCHER, Zurich, Switzerland, assignor to Actiengesellschaft "Magneta", Zurich, Switzerland. Original application filed July 5, 1900, Serial No. 22,582. Divided and this application filed Jan. 10, 1905. Serial No. 240,441.



1. A permanent magnet forming an open magnetic circuit, soft iron extensions secured to the magnet ends and pole pieces at the ends of the extensions a coil between the pole pieces and extensions, a soft iron bar extending through the coil and means to operate the bar to close the magnetic circuit between diagonally opposite poles, substantially as described.

2. A permanent magnet having two pairs of pole pieces, a coil arranged between them and a soft iron bar passing through the coil to close the magnetic circuit first between one pair of diagonally opposite pole pieces and then between the other pair of diagonally opposite pole pieces, substantially as described.

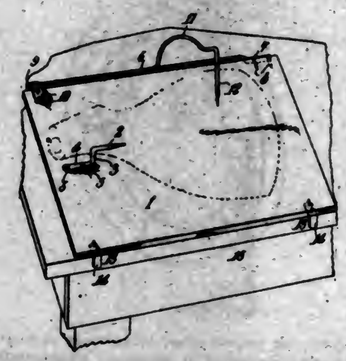
3. A permanent magnet having soft iron pole extensions secured thereto, pole pieces secured to the ends of the extensions, a coil between the extensions and pole pieces, and a bar having oppositely directed faces at its ends, each face to coöperate with a pole piece, whereby the magnet circuit will be closed thereby between diagonally opposite pole pieces, substantially as described.

4. In a generator, the combination of a permanent magnet provided with forked pole pieces, a metallic block rotatably mounted between said forked pole pieces and a winding arranged in inductive relation to said forked pole pieces and said metallic block, substantially as described.

5. A permanent magnet forming an open magnetic circuit, soft iron extensions of said magnet and a pole piece at each end of said extensions thereby forming four poles, a coil extending between the pairs of poles, a soft iron bar of suitable form extending through the coil, and means to rotate the bar to close the magnetic circuit between diagonally opposite poles, substantially as described.

[Claim 6 not printed in the Gazette.]

880,486. MEAT-HOLDER. WILLIAM L. GROFF, Lancaster, Pa., assignor of one-half to William H. Lenker, Susquehanna township, Pa. Filed July 9, 1907. Serial No. 382,850.

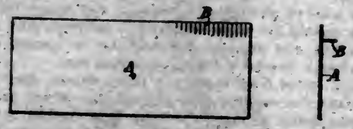


1. A meat holder comprising a flat board, an immovable impaling pin at one end of said board directed inwardly, and a pivoted hook mounted on a fixed offset rod on the rear of the board and slidable toward and away from said impaling pin.

2. A meat holder comprising a flat board, a fixed horizontally disposed impaling pin at one end thereof, a straight rod secured immovably to the rear side of said board and spaced a short distance therefrom, and a hook pivoted to said rod and adapted to slide longitudinally thereon.

3. A meat holder comprising a flat board adapted to be placed upon a fixed support, downwardly projecting lugs attached to the front of said board and adapted to bear against the front edge of said fixed support, a horizontally disposed immovable impaling pin secured to one end of said board, a rod on the rear edge of said board and fixed thereto by an offset at one end and mounted in a plate at the other end, and a hook, curving upwardly from said rod and provided with a pointed impaling end, pivoted to said rod and adapted to move longitudinally thereon.

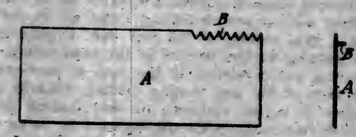
880,487. CIGARETTE-TUBE. JULIEN GUERNIVET, ANATOLE BENOIT, and JULES NICAULT, Paris, France. Original application filed May 9, 1901, Serial No. 59,476. Divided and this application filed Jan. 21, 1904. Serial No. 190,091.



1. A cigarette mouthpiece having a diaphragm formed of substantially parallel-sided tongues bent inward from one edge.

2. A cigarette mouthpiece having a diaphragm formed of substantially parallel-sided tongues bent inward from one edge, said tongues being bent up at different distances from the edge so that they will readily overlie one another in the finished diaphragm.

880,488. CIGARETTE TUBE OR MOUTHPIECE. JULIEN GUERNIVET, ANATOLE BENOIT, and JULES NICAULT, Paris, France. Original application filed May 9, 1901, Serial No. 59,476. Divided and this application filed Mar. 29, 1905. Serial No. 252,744.



1. A cigarette mouthpiece having a diaphragm formed of a series of tongues bent inward toward the center from the surrounding portion of the mouthpiece.

2. A cigarette tube provided with a mouthpiece inserted within the same, said mouthpiece having a diaphragm formed of a series of tongues bent inward from the surrounding portion of the mouthpiece.

3. A cigarette tube provided with a mouthpiece and having located in the interior thereof a series of inwardly-projecting pointed tongues arranged to prevent the tobacco from passing into the mouthpiece.

880,489. PROCESS OF PRODUCING MAGNESIUM. FRANZ VON KUGELGEN and GEORGE O. SEWARD, Holcombs Rock, Va., assignors to Virginia Laboratory Company, New York, N. Y., a Corporation of New York. Filed June 9, 1905. Serial No. 264,505.

1. The process of producing magnesium which consists in dissolving magnesium oxid in a fused bath of mixed fluorids whose decomposition voltage is higher than that of magnesium oxid, subjecting the same to electrolysis, and feeding magnesium oxid to replace that which is decomposed.

2. The process of producing magnesium which consists in dissolving magnesium oxid in a fused bath of magnesium fluorid and another fluorid whose decomposition voltage is higher than that of magnesium oxid, subjecting the same to electrolysis, and feeding magnesium oxid to replace that which is decomposed.

3. The process of producing magnesium which consists in dissolving magnesium oxid in a fused bath of magnesium fluorid and one or more alkaline fluorids, subjecting the same to electrolysis, and feeding magnesium oxid to replace that which is decomposed.

4. The process of producing magnesium by dissolving magnesium oxid in a fused bath of magnesium fluorid and one or more fluorids of metals more electro-positive than magnesium, and subjecting the same to electrolysis.

5. The process of producing magnesium by dissolving magnesium oxid in a fused bath containing magnesium fluorid and one or more alkali fluorids, and subjecting the same to electrolysis.

[Claim 6 not printed in the Gazette.]

880,490. SEALING-HEAD FOR BOTTLE-SEALING MACHINES. EDWARD D. SCHMITT, Brooklyn, N. Y., assignor to Monarch Seal Company, New York, N. Y., a Corporation of New York. Filed July 16, 1907. Serial No. 384,093.

1. In a head for bottle sealing machines, a yielding seal applying plunger having a plurality of substantially radially arranged recesses therein, a slidable pin in each recess formed with a seal indenting point at its forward end and a cam surface at its rear end, a plurality of laterally yielding devices independent of the plunger, each device having a cam surface in the path of movement of the rear ends of the seal locking devices, whereby, when the

plunger is moved upward, the seal locking devices will be simultaneously projected forward to bring their seal indenting points into engagement with the flange of a seal to lock the same at intervals upon the locking shoulder of a bottle.

2. In a head for bottle sealing machines, a yielding seal applying plunger having a plurality of substantially radially arranged recesses therein, a slidable pin in each recess formed with a seal indenting point at its forward end, and a cam surface at its rear end, a plurality of laterally yielding devices carried by the head casing, each device having a cam surface in the path of movement of the rear ends of the seal locking devices, whereby when the plunger is moved upward, the seal locking devices will be simultaneously projected forward to bring their seal indenting points into engagement with the flange of a seal to lock the same at intervals upon the locking shoulder of a bottle.

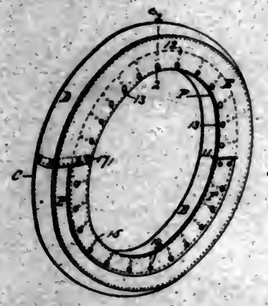


3. In a head for bottle sealing machines, a yielding seal applying plunger formed with a seal holding cavity and a plurality of substantially radially arranged recesses therein, and a vertical groove opposite each radial recess, a seal locking device in each radial recess formed with an indenting point on its forward end and a cam surface on its rear end, the cam surfaces on the rear ends of said locking devices extending into the vertical grooves in the plunger, a plurality of laterally movable spring backed pins mounted in the head casing, one for each locking device, each pin having a cam portion extending into the vertical grooves of the plunger in the path of movement of the cam ends of the locking devices, whereby when the plunger is moved upward, the locking devices are simultaneously projected forward into engagement with the flange of a seal to indent it at intervals into locking engagement with the locking shoulder of a bottle.

REISSUES.

12,754. TIRE-COVER. WILLIAM A. ALLEN, New York, N. Y. Filed Jan. 17, 1908. Serial No. 411,875. Original No. 822,701, dated Aug. 14, 1906, Serial No. 298,880.

1. A covering for vehicle tires, constructed of a weather proof material consisting of connected substantially parallel strips, one for the inner face of the tire, one for each of the side faces of the same, one for the tread, and a flap connected with the inner facing strip, and adapted for lapping engagement with one of the side strips, one only of the parts thus lapped being transversely divided, and one portion of the flap being arranged to extend beneath said side strip and the other portion outside said side strip, and means for securing the flap to the side strip with which it engages.



2. A cover for vehicle tires, constructed of a weather-proof material consisting of connected substantially parallel strips, one for the inner face of the tire, one for each of the outer side faces, and a flap connected with the inner facing strip, adapted for lapping engagement with a side strip, the said side strip which is to lap the flap section being transversely cut between its ends, one portion of the flap strip being carried beneath the said side strip and the other portion over the side strip, and means for securing the said flap to the side strip with which it engages and means for securing the ends of all the strips together.

3. A covering for vehicle tires constructed of a weather-proof material and consisting of connected parallel strips, one for the inner face of the tire, one for each of the outer side faces, one for the tread, and a flap connected with the inner facing strip, the side section which is to lap the flap section being provided with a transverse cut between its ends, stud sections of separable buttons arranged in multiple series in transverse rows and carried by one portion of the said flap section, and socket members for the said studs arranged in a longitudinal row and carried by the outer side section of the cover at the same end thereof, and duplicate stud and socket sections of separable buttons located at the opposite end portion of the cover but in reverse order, and means for attaching the ends of the cover together.

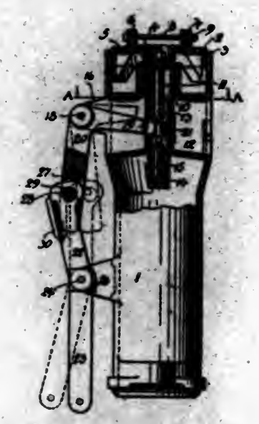
12,755. THROTTLE-VALVE. JOHN S. CHAMBERS, Wilmington, N. C. Filed Feb. 19, 1907. Serial No. 358,334. Original No. 816,217, dated Mar. 27, 1906, Serial No. 254,947.

1. In a stand pipe, a valve, its seat, and means for opening and closing the valve arranged to automatically reduce its leverage and thereby increase the movement of the valve after it has been started from its seat.

2. In a stand pipe, inner and outer valves, their seats, and means for opening and closing the valves arranged to automatically reduce its leverage and thereby raise the valve rapidly after the inner valve has been started from its seat.

3. In a vertical stand pipe, inner and outer valves, their seats, an inner valve rod, a rocking lever engaging the inner valve rod at a point within the stand pipe beneath the inner valve and means for operating the rocking lever to primarily lift the inner valve and secondarily lift the outer valve.

4. In a stand pipe, a valve, a seat therefor, a valve rod, a rocking lever engaging the rod and an operating lever arranged to shift its connection with the rocking lever after the valve has been started from its seat to increase the movement of the valve.



5. In a stand pipe, inner and outer valves, their seats, an inner valve rod, a rocking lever engaging the same, and an operating lever arranged to shift its connection with the rocking lever to increase its speed after the inner valve has been started from its seat.

[Claims 6 and 7 not printed in the Gazette.]

DESIGNS.

39,155. EMBLEM. FRANK A. MILLER, Riverside, Cal. Filed June 24, 1907. Serial No. 380,628. Term of patent 14 years.



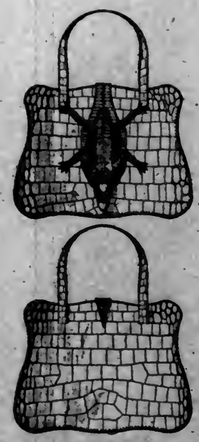
The ornamental design for an emblem, as shown.

39,156. VESSEL. JOHN J. HENDY, Moundsville, W. Va., assignor to Fostoria Glass Company, Moundsville, W. Va., a Corporation of West Virginia. Filed Dec. 14, 1907. Serial No. 406,569. Term of patent 14 years.



The ornamental design for a vessel, as shown.

39,157. HAND-BAG. HENRY GROSSMAN, New York, N. Y. Filed Jan. 18, 1908. Serial No. 411,543. Term of patent 7 years.



The ornamental design for a hand-bag as shown.

39,158. VENDING-MACHINE CASE. MARK S. HAGEN and GORDON B. TOWNSEND, Chicago, Ill., assignors to National Penny Sales Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 10, 1908. Serial No. 410,274. Term of patent 7 years.



The ornamental design for a vending machine case, as shown.

39,159. CASING FOR MUSCLE-TESTING MACHINES. ALCIBIADE A. BRODEUR, Worcester, Mass. Filed Dec. 14, 1907. Serial No. 406,568. Term of patent 7 years.



The ornamental design for a casing for muscle testing machines, as shown.

39,160. STOVE. GEORGE M. COKE, Milwaukee, Wis., assignor to The Fuller-Warren Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Dec. 12, 1907. Serial No. 406,240. Term of patent 7 years.





The ornamental design for a stove, as shown.

39,161. HAMMOCK. ISAAC E. PALMER, Middletown, Conn. Filed Dec. 26, 1907. Serial No. 408,201. Term of patent 14 years.



The ornamental design for a hammock, as shown.

39,162. PILLOW-COVER. LEOPOLD L. LANGROCK and JOSEPH H. LANGROCK, New York, N. Y. Filed Dec. 4, 1907. Serial No. 405,129. Term of patent 3½ years.



The ornamental design for a pillow cover, as shown.

39,163. PILE FABRIC. SIDNEY BLUMENTHAL, New York, N. Y. Filed Jan. 15, 1908. Serial No. 411,025. Term of patent 3½ years.



The ornamental design for a pile fabric, as shown.

TRADE-MARKS

PUBLISHED FEBRUARY 25, 1908.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 2,814. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIFFIN & SKELLEY CO., San Francisco, Cal. Filed Apr. 24, 1905.



Particular description of goods.—Hermetically-Sealed Fruits and Vegetables.

Ser. No. 2,815. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIFFIN & SKELLEY COMPANY, San Francisco, Cal. Filed Apr. 24, 1905.



Particular description of goods.—Hermetically-Sealed Fruits.

Ser. No. 2,816. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIFFIN & SKELLEY CO., San Francisco, Cal. Filed Apr. 24, 1905.



Particular description of goods.—Hermetically-Sealed Fruits.

Ser. No. 4,747. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIFFIN & SKELLEY CO., San Francisco, Cal. Filed May 8, 1905.

COMET

Particular description of goods.—Dried Fruits and Evaporated Fruits.

Ser. No. 5,798. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE HAYWARD COMPANY, New York, N. Y. Filed May 16, 1905.

"TWO-IN-ONE"

Particular description of goods.—Hoisting-Engine Drums.

Ser. No. 5,799. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE HAYWARD COMPANY, New York, N. Y. Filed May 16, 1905.



Particular description of goods.—Hoisting-Engine Drums.

Ser. No. 6,945. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) PETER STUBS LIMITED, Warrington and Rotherham, England. Filed May 29, 1905. Used ten years.

STUBS

Particular description of goods.—Files, Saw-Blades, Joint-Tools with Cutting Edges, Comprising Cutting-Pliers and Nippers; Sculptors' and Engravers' Tools, and Screw-Plates—*i. e.*, Plates for Cutting Screws.

Ser. No. 6,946. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) PETER STUBS LIMITED, Warrington and Rotherham, England. Filed May 29, 1905. Used ten years.

STUBS

Particular description of goods.—Files, Saw-Blades, Joint-Tools with Cutting Edges, Comprising Cutting-Pliers and Nippers; Sculptors' and Engravers' Tools, and Screw-Plates—*i. e.*, Plates for Cutting Screws.

Ser. No. 7,540. (CLASS 13. AGRICULTURAL AND DAIRY MACHINERY AND PARTS THEREOF.) BATEMAN MANUFACTURING COMPANY, Grenloch, N. J. Filed June 6, 1905.

IRON AGE

Particular description of goods.—Seeding and Fertilizing Machines, Wheel Hoes and Plows, Cultivators, Harrows, Plant-Spraying Machines, and Potato Planters and Diggers.

Ser. No. 9,822. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE S. S. WHITE DENTAL MFG. CO., Philadelphia, Pa.; Chicago, Ill.; New York, Brooklyn, and Rochester, N. Y.; Boston, Mass.; Atlanta, Ga.; New Orleans, La.; Toronto, Canada; Buenos Ayres, Argentina; Berlin, Germany, and St. Petersburg, Russia. Filed July 6, 1905.

SS

Particular description of goods.—Dental Engines and Lathes and Parts Thereof, Dental Excavating, Cutting, Scraping, Drilling, Filing, Polishing, Exploring, Burnishing, Drying, Measuring, Carving, Mixing, Filling, and Nerve Instruments and Appliances, Dental Forceps, Pliers, and Scissors, Dental Fillings and Filling Appliances, Materials and Appliances for Making and Mounting Crowns, Plates, and Bridges, Rubber Dam and Appliances Used Therewith, Artificial Teeth, Dental Absorbents and Holders Therefor, Teeth Separating, Regulating, and Extracting Appliances, Impression, Articulating, Modeling, and Investing Materials and Appliances, Anesthetic Apparatus and Appliances, Dental Sterilizers, Annealers, and Heaters, Dental Mouth Mirrors and Illuminators, Dental Syringes and Disk-Moisteners, Dental Tongue, Lip, Cheek, and Jaw Appliances, Dental Bench-Blocks, Dental Parting Fluid, Dental Chairs, Stools, Stands, Brackets, Spittoons, Bracket-Tables, Instrument cases and Racks and Cabinets, Saliva-Ejectors.

Ser. No. 12,572. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRIFFIN & SKELLEY CO., San Francisco, Cal. Filed Sept. 14, 1905.

COMET BRAND

Particular description of goods.—Hermetically-Sealed Fruits and Vegetables and Dried and Evaporated Fruits.

Ser. No. 12,786. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) S. LAFEBVOTS & CO., St. Fons and Lyon, France, and New York, N. Y. Filed Sept. 19, 1905.

Lafebvots IMPERIAL G

Particular description of goods.—Gelatin.

Ser. No. 12,787. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) S. LAFEBVOTS & CO., St. Fons and Lyon, France and New York, N. Y. Filed Sept. 19, 1905.

Lafebvots ROYAL G

Particular description of goods.—Gelatin.

Ser. No. 12,867. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE S. S. WHITE DENTAL MFG. CO., Philadelphia, Pa.; Chicago, Ill.; New York, Brooklyn, and Rochester, N. Y.; Boston, Mass.; Atlanta, Ga.; New Orleans, La.; Toronto, Canada; Buenos Ayres, Argentina; Berlin, Germany, and St. Petersburg, Russia. Filed Sept. 21, 1905.

MOSS

Particular description of goods.—A Crystalline Gold Tooth-Filling.

Ser. No. 13,031. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ELECTRIC APPLIANCE COMPANY, Chicago, Ill. Filed Sept. 26, 1905.

JAXON

Particular description of goods.—Dry Batteries.

Ser. No. 15,608. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) ORIVIT ACTIENGESELLSCHAFT, Köln-Braunsfeld, Germany. Filed Dec. 23, 1905.

OAG

Particular description of goods.—Coffee and Tea Services, Wine, Beer, and Liquor Services, Tableware, Comprising Plates, Spoons, Forks, Knives, Meat, Fish, and Vegetable Platters or Dishes, Soup-Tureens, Sauce-Dishes, Cruet-Stands, Knife-Rests, Toothpick-Holders, Menu-Holders, Bottle-Holders, Bottle-Stoppers, Fruit-Trays, Bread-Trays, Cake-Trays, Confectionery-Trays, Compote-Dishes, Tablets, Cabarets, Bowls, Cake-Boxes, Napkin-Rings, Punch and Tea Glasses, Table-Crumbing Scrapers and Brushes, Tart-Knives, Butter and Honey Dishes, Tea-Boxes, Wine-Coolers, Beakers, Cups, Bowls, Water, Wine, Beer, and Chocolate Pitchers, Beer-Glasses, Beer-Mugs; Writing-Table Furnishings, Including Writing Materials, Holders for Blotting-Paper, Seals, Paper-Folders, Candlesticks, Tinder-Boxes, Penholders, Envelop-Openers, Letter-Presses, Ash-Trays; Toilet Articles, Comprising Mirrors, Brushes, Vials, Boxes, Glove-Boxes, Handkerchief-Boxes, Card-Trays, Photograph-Frames, Bonbon-Dishes, Candelabra, Vases, Jardinières, Smoking Services, Cigar-Lighters, Cigar and Cigarette Cases, Card-Stands; Flower-Pots, Palm-Tubs, Wall-Pockets, Tea-Kettles, Statues, Busts, Statuettes, All Composed in Whole or in Part of Precious or Semiprecious Metal.

Ser. No. 15,609. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) ORIVIT ACTIENGESELLSCHAFT, Köln-Braunsfeld, Germany. Filed Dec. 23, 1905.

OAG

Particular description of goods.—Coffee and Tea Services, Wine, Beer, and Liquor Services, Tableware, Comprising Plates, Spoons, Forks, Knives, Meat, Fish, and Vegetable Platters or Dishes, Soup-Tureens, Sauce-Dishes, Cruet-Stands, Knife-Rests, Toothpick-Holders, Menu-Holders, Bottle-Holders, Bottle-Stoppers, Fruit-Trays, Bread-Trays, Cake-Trays, Confectionery-Trays, Compote-Dishes, Tablets, Cabarets, Bowls, Cake-Boxes, Napkin-Rings, Punch and Tea Glasses, Table-Crumbing Scrapers and Brushes, Tart-Knives, Butter and Honey Dishes, Tea-Boxes, Wine-Coolers, Beakers, Cups, Bowls, Water, Wine, Beer, and Chocolate Pitchers, Beer-Glasses, Beer-Mugs; Writing-Table Furnishings, Including Writing Materials, Holders for Blotting-Paper, Seals, Paper-Folders, Candlesticks, Tinder-Boxes, Penholders, Envelop-Openers, Letter-Presses, Ash-Trays; Toilet Articles, Comprising Mirrors, Brushes, Vials, Boxes, Glove-Boxes, Handkerchief-Boxes, Card-Trays, Photograph-Frames, Bonbon-Dishes, Candelabra, Vases, Jardinières, Smoking Services, Cigar-Lighters, Cigar and Cigarette Cases, Card-Stands; Flower-Pots, Palm-Tubs, Wall-Pockets, Tea-Kettles, Statues, Busts, Statuettes, All Composed in Whole or in Part of Precious or Semiprecious Metal.

Ser. No. 15,953. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JAMES M. HERRON, New York, N. Y., assignor, by mesne assignments, to Ceylon Cocoa & Coffee Company, a Corporation of New York. Filed Jan. 6, 1906.

LIQUOR
COFFEE-LATE.

Particular description of goods.—A Preparation for Flavoring and Coating Ice-Cream, Candies, Cakes, and Articles of Food Generally for Confectioners' and Pastry-Makers' Use.

Ser. No. 17,321. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ST. MARY'S INCANDESCENT LAMP COMPANY, St. Marys, Pa. Filed Feb. 24, 1906.

Eureka

Particular description of goods.—Electric Incandescent Lamps.

Ser. No. 17,322. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPLIES.) ST. MARY'S INCANDESCENT LAMP COMPANY, St. Marys, Pa. Filed Feb. 24, 1906.



Particular description of goods.—Electric Incandescent Lamps.

Ser. No. 17,323. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ST. MARY'S INCANDESCENT LAMP CO., St. Marys, Pa. Filed Feb. 24, 1906.

Aurora

Particular description of goods.—Electric Incandescent Lamps.

Ser. No. 19,597. (CLASS 37. PAPER AND STATIONERY.) A. W. FABER, Stein, near Nürnberg and Berlin, Germany. Filed May 16, 1906.

"CASTELL"

Particular description of goods.—Lead-Pencils and Colored Pencils.

Ser. No. 20,481. (CLASS 37. PAPER AND STATIONERY.) A. W. FABER, Stein, near Nürnberg and Berlin, Germany. Filed June 22, 1906.



Particular description of goods.—Pencils, Pencil-Cases, Crayons, Copying-Pencils, Chalk for Writing, Chalk-Holders, Slate-Pencils, Penholders, Fountain-Pens, Pen-Cases, Rubber Erasers, Paper-Folders, and Pencil-Pointers.

Ser. No. 21,678. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE CINCINNATI TOOL CO., Norwood, Ohio. Filed Aug. 20, 1906.



Particular description of goods.—Drills, Coopers' Dowel-Bits, Pliers Having a Cutting Edge, Splicing-Clamps, Augers, Hollow Augers, Pointers, Screw and Plug Bits, Plug-Cutters, Band-Setters, Spoke-Shaves, Box-Scrapers, Cooper-Shaves, Shaves, Countersinks, Washer-Cutters.

Ser. No. 21,744. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) RALPH P. KINNEY, Huntington, N. Y. Filed Aug. 25, 1906.

PDQ

Particular description of goods.—Tire-Repair Plugs.

Ser. No. 21,881. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOSHUA GEORGE SMITH, St. Paul, Minn. Filed Sept. 4, 1906. Used ten years.



Particular description of goods.—Candies.

Ser. No. 22,270. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) FELICIA V. MORSE, Canton, Mass. Filed Sept. 24, 1906.



Particular description of goods.—Lubricants and Lubricating Material, Comprising Black Lead, Plumbago, or Graphité.

Ser. No. 22,922. (CLASS 48. MALT EXTRACTS AND LIQUORS.) JOHN BUEHLER, Steubenville, Ohio. Filed Oct. 26, 1906.

Steuben Brew

Particular description of goods.—Beer.

Ser. No. 23,299. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE AUTO-SAFETY ELECTRIC SWITCH CO., Montreal, Quebec, Canada. Filed Nov. 12, 1906.

AUTO

Particular description of goods.—Electric Switches.

Ser. No. 23,555. (CLASS 46. FOODS AND INGREDIENTS OF FOOD.) GEORGE F. GAIRING, Cleveland, Ohio. Filed Nov. 23, 1906.

Particular description of goods.—A Coffee Substitute.

Ser. No. 24,143. (CLASS 48. MALT EXTRACTS AND LIQUORS.) TRUE W. JONES BREWING COMPANY, Manchester, N. H. Filed Dec. 10, 1906.



The annular band being red.

Particular description of goods.—Ale and Lager-Beer.

Ser. No. 25,230. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WILLIAM M. DUDGEON, New York, N. Y., executor of the estate of Richard Dudgeon. Filed Feb. 11, 1907. Used ten years.

R. DUDGEON'S IMPROVED

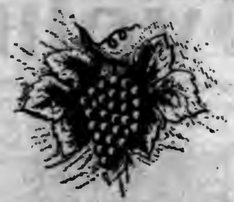
Particular description of goods.—Hydraulic Jacks.

Ser. No. 26,963. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HELENE LECLAIRE, New York, N. Y. Filed Apr. 27, 1907. Used ten years.

Leclaire

Particular description of goods.—Perfumes, Lotions, Creams for Application to the Skin, and Face-Powder.

Ser. No. 27,210. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GRAPE CAPSULE COMPANY, Allentown, Pa. Filed May 8, 1907.



Particular description of goods.—Medicines Composed of Oil or Oils with Powders or Tablets Intermixed and Manufactured in the Form of Capsules.

Ser. No. 27,795. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HARTMAN FURNITURE & CARPET CO., Chicago, Ill. Filed May 31, 1907.

IMPERIAL MONARCH



Particular description of goods.—Rugs.

Ser. No. 28,011. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) RHADOONIT-WERKE GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Dohna, near Dresden, Germany. Filed June 10, 1907.

Rhadoonit.

Particular description of goods.—Insulating Materials for Electrical Purposes.

Ser. No. 28,208. (CLASS 47. WINES, EXCEPT MEDICATED.) FATHERLAND WINE CO., St. Paul, Minn. Filed June 17, 1907.

Fatherland

Particular description of goods.—Wine.

Ser. No. 28,643. (CLASS 37. PAPER AND STATIONERY.) J. W. BUTLER PAPER CO., Chicago, Ill. Filed July 8, 1907.

PAMPHLET

Particular description of goods.—Writing-Paper.

Ser. No. 28,710. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany. Filed July 11, 1907.

MERCÉDÈS

Particular description of goods.—Leather-Dressing and Leather-Blacking.

Ser. No. 28,713. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany. Filed July 11, 1907.

MERCÉDÈS

Particular description of goods.—Ignition-Batteries, Accumulators, Transformers, Inductors, Magnets, Electromagnets, Dynamo-Generators, Magnetos, Motors, Ignition-Plugs, and Parts and Attachments Thereof.

Ser. No. 28,715. (CLASS 39. CLOTHING.) DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany. Filed July 11, 1907.

MERCÉDÈS

Particular description of goods.—Hats, Dust-Hoods, Jackets, Waistcoats, Cloaks, Fur-Lined Dresses, Chest-Protectors, Collars, Dust-Guards, Knee-Coats, Foot-Protectors, Foot-Bags, Leggings, Protection-Flaps, Caps, Gloves, Undergarments.

Ser. No. 29,165. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE COLUMBIA FLOURING MILLS COMPANY, LTD., Enderby, British Columbia, Canada. Filed Aug. 1, 1907.

PREMIER

Particular description of goods.—Wheat-Flour.

Ser. No. 29,255. (CLASS 12. MASONRY MATERIALS.) LIEBERT & MEYERHOF, Hamburg, Germany. Filed Aug. 6, 1907.



Particular description of goods.—Cement for Filling Fissures in Metals.

Ser. No. 29,467. (CLASS 39. CLOTHING.) THE KRIPPENDORF-O'NEAL CO., Cincinnati, Ohio. Filed Aug. 19, 1907.

THE K-O BRAND

Particular description of goods.—Leather Shoes.

Ser. No. 29,668. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STANARD-TILTON MILLING COMPANY, St. Louis, Mo. Filed Aug. 29, 1907.

STANARD-TILTON MILLING CO. 100 KILOS PROEZA HARD WHEAT PATENT ST. LOUIS, MO.

Particular description of goods.—Wheat-Flour.

Ser. No. 29,743. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. J. WENHAM'S SONS, Cleveland, Ohio. Filed Sept. 3, 1907.

EUCLID



Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 29,757. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM FERDINAND EBERLE, Zurich, Switzerland, Filed Sept. 5, 1907.

Ovolin

Particular description of goods.—An Alimentary Product to be Used as a Substitute for Eggs.

Ser. No. 29,758. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM FERDINAND EBERLE, Zurich, Switzerland, Filed Sept. 5, 1907.



Particular description of goods.—An Alimentary Product to be Used as a Substitute for Eggs.

Ser. No. 29,762. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LONG ISLAND PHARMACEUTICAL CO., New York, N. Y. Filed Sept. 5, 1907.

Particular description of goods.—Remedies for Dyspepsia and Diseases of the Blood.

Ser. No. 29,842. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MEAGHER, NESBITT, BURWELL CO., Minneapolis, Minn. Filed Sept. 9, 1907.

Grape=Nut

Particular description of goods.—A Coffee Substitute.

Ser. No. 29,890. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) A. STEIN & COMPANY, Chicago, Ill. Filed Sept. 12, 1907.

THE SIGN OF THE RUBBER TREE

Particular description of goods.—Garment-Supporters, Hose-Supporters, and Arm-Bands.

Ser. No. 29,909. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) SIMMONS HARDWARE COMPANY, St. Louis, Mo. Filed Sept. 16, 1907. Used ten years.

KEEN KUTTER

Particular description of goods.—Razor-Strops.

Ser. No. 30,492. (CLASS 12. MASONRY MATERIALS.) IDEAL CONCRETE, LIMITED, Montreal, Quebec, Canada. Filed Oct. 3, 1907.



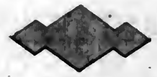
Particular description of goods.—Mortar.

Ser. No. 30,507. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) BROWNELL SPECIALTY MFG. CO., Cincinnati, Ohio. Filed Oct. 9, 1907.

ROCKAWAY

Particular description of goods.—A Roller-Coaster.

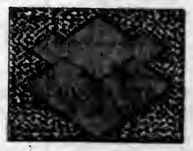
Ser. No. 30,640. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MOORE & HANDLEY HARDWARE COMPANY, Birmingham, Ala. Filed Oct. 17, 1907.



The same being printed in red.

Particular description of goods.—Hammers, Hatchets, Shovels, Spades, Pickaxes, Hoes, Rakes, Forks, Adzes, and Handles Therefor.

Ser. No. 30,641. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MOORE & HANDLEY HARDWARE COMPANY, Birmingham, Ala. Filed Oct. 17, 1907.



The upper figure being printed in red, the lower in green, and the background in yellow.

Particular description of goods.—Machine-Tools, Nail-Hammers, Auger-Bits, Shingling-Hatchets, Bench-Hatchets, Handsaws, Drawing-Knives, Chisels, and Firmer-Chisels.

Ser. No. 30,642. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MOORE & HANDLEY HARDWARE COMPANY, Birmingham, Ala. Filed Oct. 17, 1907.



The upper figure is printed in red and the lower in green.

Particular description of goods.—Pocket-Knives, Butcher-Knives, Razors, Scissors, Shears, Carving-Knives, and Table Knives and Forks.

Ser. No. 30,813. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN HOFFMANN'S SONS, Cincinnati, Ohio. Filed Oct. 26, 1907.



Particular description of goods.—Sugar-Cured Meats, Fresh Pork, All Kinds of Sausages, Breakfast-Bacon, Tongues, Dried Beef, and Leaf-Lard.

Ser. No. 30,966. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE CASTLE BRAID COMPANY, New York, N. Y. Filed Nov. 2, 1907.

CASTLEPIN

Particular description of goods.—Hat-Pins.

Ser. No. 31,075. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) EDWARD GOODRICH ACHESON, Niagara Falls, N. Y. Filed Nov. 8, 1907.

AQUADAG

Particular description of goods.—Lubricants Containing Graphite and Water.

Ser. No. 31,076. (CLASS 15. OILS AND GREASES NOT INTENDED FOR FOOD.) EDWARD GOODRICH ACHESON, Niagara Falls, N. Y. Filed Nov. 8, 1907.

Oildag

Particular description of goods.—Lubricants Containing Oil and Graphite.

Ser. No. 31,132. (CLASS 39. CLOTHING.) DAVENPORT WOOLEN MILLS CO., Davenport, Iowa. Filed Nov. 11, 1907.



Particular description of goods.—Ladies' Walking-Skirts and Petticoats.

Ser. No. 31,174. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) GEORGE A. RUTHERFORD, Saranac Lake, N. Y. Filed Nov. 14, 1907.



Particular description of goods.—Pocket-Books, Coin-Purses, Portfolios, Bill-Folders, Shopping-Bags, Card-Cases, Medicine-Cases, Wallets, Postage-Stamp Cases, Cuff-Cases, Music-Haversacks, Purses, and Photograph-Cases of Leather.

Ser. No. 31,177. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) SEYMOUR W. BONSALL, New York, N. Y. Filed Nov. 14, 1907.

CLEA-POL

Particular description of goods.—Furniture and Metal Polish.

Ser. No. 31,223. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) HAROLD A. SEYD, Maywood, N. J. Filed Nov. 18, 1907.



Particular description of goods.—A Non-Alcoholic Liquid Flavoring for Beverages.

Ser. No. 31,224. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) HAROLD A. SEYD, Maywood, N. J. Filed Nov. 18, 1907.

PUNCH

AND

JUDY

Particular description of goods.—A Non-Alcoholic Liquid Flavoring for Beverages.

Ser. No. 31,239. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM A. HINCKLE, Peoria, Ill. Filed Nov. 18, 1907.

Transpirine

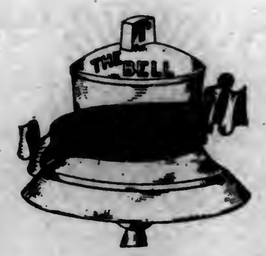
Particular description of goods.—An Aromatic Liquid Used Locally for Preventing and Remedying Excessive Perspiration.

Ser. No. 31,327. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HALSTED BURNET, St. Louis, Mo. Filed Nov. 23, 1907.



Particular description of goods.—Candy.

Ser. No. 31,358. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) DRUCK BROTHERS, St. Paul, Minn. Filed Nov. 25, 1907.



Particular description of goods.—Suspenders and Neckties.

Ser. No. 31,392. (CLASS 33. GLASSWARE.) ARTHUR EUGÈNE FRANTZ, Verdun-sur-Meuse, France. Filed Nov. 27, 1907.

FRIGIDA

Particular description of goods.—Refrigerating-Decanters.

Ser. No. 31,454. (CLASS 46. FOODE AND INGREDIENTS OF FOODS.) SAUERS MILLING CO., Evansville, Ill. Filed Nov. 29, 1907.

Invincible

Particular description of goods.—Wheat-Flour.

Ser. No. 31,489. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) NOILLY PRAT & CIE., Marseille, France. Filed Nov. 30, 1907.



Particular description of goods.—Vermuth.

Ser. No. 31,490. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) AMERICAN SHEET & TIN PLATE CO., Pittsburg, Pa. Filed Nov. 30, 1907. Used ten years.

APOLLO

Particular description of goods.—Iron and Steel Sheets and Plates and Tin and Terne Plates.

Ser. No. 31,513. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ILLINOIS SEWING MCH. CO., Chicago, Ill. Filed Dec. 2, 1907.

New Royal

Particular description of goods.—Sewing-Machine Needles Used in Family Sewing-Machines.

Ser. No. 31,549. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) W. H. STOKES MILLING CO., Watertown, S. D. Filed Dec. 4, 1907. Used ten years.

GARLAND

Particular description of goods.—Wheat-Flour.

Ser. No. 31,550. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) W. H. STOKES MILLING CO., Watertown, S. D. Filed Dec. 4, 1907.

Particular description of goods.—Wheat-Flour.

Ser. No. 31,551. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) W. H. STOKES MILLING CO., Watertown, S. D. Filed Dec. 4, 1907.

SUNSHINE

Particular description of goods.—Wheat-Flour.

Ser. No. 31,552. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) W. H. STOKES MILLING CO., Watertown, S. D. Filed Dec. 4, 1907. Used ten years.

KAMPESKA

Particular description of goods.—Wheat-Flour.

Ser. No. 31,555. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) W. H. STOKES MILLING CO., Watertown, S. D. Filed Dec. 4, 1907.



Particular description of goods.—Wheat-Flour.

Ser. No. 31,614. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) SUPPLEMENTARY SPIRAL SPRING COMPANY, St. Louis, Mo. Filed Dec. 7, 1907.



Particular description of goods.—Automobile, Carriage, and Wagon Springs.

Ser. No. 31,670. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) FREDERICK AVARD SECORD, St. John, New Brunswick, Canada. Filed Dec. 11, 1907.

Ebony

Particular description of goods.—Boot and Shoe Polish.

Ser. No. 31,682. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM WRIGLEY JR. & COMPANY, Chicago, Ill. Filed Dec. 12, 1907. Used ten years.

SPEARMINT

Particular description of goods.—Chewing-Gum.

Ser. No. 31,700. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) W. T. WAGNER'S SONS, Cincinnati, Ohio. Filed Dec. 13, 1907.

SNAP

Particular description of goods.—Ginger-Ale.

Ser. No. 31,701. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE CRONK & CARRIER MFG. CO., Elmira, N. Y. Filed Dec. 13, 1907. Used ten years.

CRONK

Particular description of goods.—Pruning-Shears, Pliers, Garden-Hoes, Mattocks, and Rakes.

Ser. No. 31,709. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) RECKITT & SONS, LIMITED, Hull, England. Filed Dec. 13, 1907.



Particular description of goods.—Metal-Polish.

Ser. No. 31,720. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) DETROIT LUBRICATOR CO., Detroit, Mich. Filed Dec. 14, 1907.



Particular description of goods.—Valves and Low-Water Indicators.

Ser. No. 31,724. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) PHILIP LEVI, Philadelphia, Pa. Filed Dec. 14, 1907. Used ten years.

CAN'T BE BEAT

Particular description of goods.—Polish for Pianos, Furniture, and Floors.

Ser. No. 31,726. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) W. F. MANGELS COMPANY, New York, N. Y. Filed Dec. 14, 1907.

"The Tickler"

Particular description of goods.—Pleasure-Railways and Rolling-Stock for the Same.

Ser. No. 31,727. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) PENBERTHY INJECTOR COMPANY, Detroit, Mich. Filed Dec. 14, 1907. Used ten years.

PENBERTHY

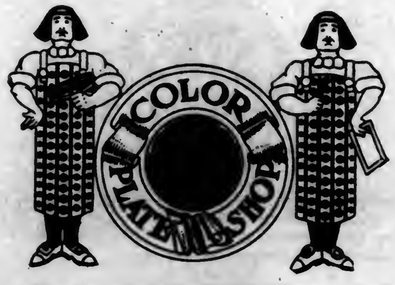
Particular description of goods.—Steam-Boiler Injectors.

Ser. No. 31,729. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) H. W. JOHNS-MANVILLE COMPANY, New York, N. Y. Filed Dec. 14, 1907.

MOBILENE

Particular description of goods.—Asbestos Engine and Machinery Packing.

Ser. No. 31,759. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) HENRY A. MUELLER, Chicago, Ill. Filed Dec. 16, 1907.



Particular description of goods.—Etched Zinc Plates for Color Plate-Printing.

Ser. No. 31,774. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) FRANK GAIUS BURKE, New York, N. Y. Filed Dec. 17, 1907.



Particular description of goods.—Toilet and Laundry Soaps and Washing-Powders.

Ser. No. 31,807. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MANUFACTURING COMPANY OF AMERICA, Philadelphia, Pa. Filed Dec. 18, 1907.



Particular description of goods.—Candy.

Ser. No. 31,808. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MANUFACTURING COMPANY OF AMERICA, Philadelphia, Pa. Filed Dec. 18, 1907.



Particular description of goods.—Candy.

Ser. No. 31,812. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM H. MINER, Chicago, Ill. Filed Dec. 18, 1907.



Particular description of goods.—Maple-Syrup and Maple-Sugar.

Ser. No. 31,818. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FOSTER-MCCLELLAN COMPANY, Buffalo, N. Y. Filed Dec. 18, 1907.



Particular description of goods.—Cathartic Pills.

Ser. No. 31,854. (CLASS 37. PAPER AND STATIONERY.) R. D. RISING PAPER COMPANY, Housatonic, Mass. Filed Dec. 20, 1907.



Particular description of goods.—Fine Writing-Paper.

Ser. No. 31,858. (CLASS 39. CLOTHING.) J. A. LAMY MANUFACTURING COMPANY, Sedalia, Mo. Filed Dec. 20, 1907.

Knitocrat

Particular description of goods.—Undershirts, Drawers, Hose, and Stockings.

Ser. No. 31,860. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) SMITH & KAUFMANN, New York, N. Y. Filed Dec. 20, 1907.

DOROTHY DAINTY

Particular description of goods.—Sash and Hair Bow Sets and Hair-Bow Sets.

Ser. No. 31,872. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE LIPPS-MURRACH CO. OF BALTIMORE CITY, Baltimore, Md. Filed Dec. 21, 1907.

Adonis

Particular description of goods.—Candy.

Ser. No. 31,873. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) MANHATTAN ELECTRICAL SUPPLY COMPANY, Jersey City, N. J.; New York, N. Y., and Chicago, Ill. Filed Dec. 21, 1907.



Particular description of goods.—Annunciators and Parts Thereof, Electric Burglar-Alarms, Cut-Outs, Electric Door-Openers, Electric Batteries, Electric Bells and Buzzers, Electrical Connectors, Rosettes, Tape, and Plugs, Electric Fans, Electric Indicators, Electric Lamps, Electric Motors, Electric Gas-Lighting Apparatus, Induction-Coils and Parts Thereof, Lightning-Arresters, Polarity-Indicators, Push-Buttons, Electric Switches, Telegraph Instruments and Parts Thereof, Telephone Instruments and Apparatus, Electric Time-Alarms, and Electric Time-Switches.

Ser. No. 31,886. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) CHARLES A. BROOMALL, Philadelphia, Pa. Filed Dec. 23, 1907.

VELVET-TIPS

Particular description of goods.—Matches.

Ser. No. 31,887. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) W. & J. SLOANE, New York, N. Y. Filed Dec. 23, 1907.



Particular description of goods.—Fiber Carpets and Rugs.

Ser. No. 31,892. (CLASS 33. GLASSWARE.) GILL BROTHERS COMPANY, Steubenville, Ohio. Filed Dec. 23, 1907.



Particular description of goods.—Glass Chimneys, Lantern Globes and Reflectors, Electric-Arc-Light Globes, Globes for Incandescent Electric Lamps, and Glass Bulbs for Incandescent Electric Lamps.

Ser. No. 31,894. (CLASS 37. PAPER AND STATIONERY.) THE AMERICAN NEWS COMPANY, New York, N. Y. Filed Dec. 23, 1907.

TEXTINE

Particular description of goods.—Writing-Paper, Writing Tablets and Pads, and Envelops.

Ser. No. 31,900. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WILLIAM TREVOR, New York, N. Y. Filed Dec. 23, 1907.



The seal being green, with the border, quoted word "Wyvern," and under lines in yellow.

Particular description of goods.—Ladies' Neckties.

Ser. No. 31,901. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WILLIAM TREVOR, New York, N. Y. Filed Dec. 23, 1907.



Particular description of goods.—Ladies' Neckties.

Ser. No. 31,907. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE C. E. CONOVER CO., New York, N. Y. Filed Dec. 24, 1907.

NAIAD

Particular description of goods.—Textile Fabrics Coated with Waterproof Material.

Ser. No. 31,938. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AUTOMATIC UTILITIES COMPANY, New York, N. Y. Filed Dec. 27, 1907.

ALL-WAYS

Particular description of goods.—Razors.

Ser. No. 31,939. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) COLGATE & CO., New York, N. Y. Filed Dec. 27, 1907.

OCTAGON

Particular description of goods.—Soap Powders.

Ser. No. 31,942. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RIDENOUR-BAKER GROCERY CO., Kansas City, Mo. Filed Dec. 27, 1907.

Ozonch

Particular description of goods.—Condensed Milk and Cheese.

Ser. No. 31,954. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HIRES CONDENSED MILK CO., Philadelphia, Pa. Filed Dec. 28, 1907.

SQUARE H BRAND

Particular description of goods.—Condensed Skimmed Milk.

Ser. No. 31,956. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) BUFFALO LITHIA SPRINGS WATER CO., Buffalo Lithia Springs, Va. Filed Dec. 28, 1907.



Particular description of goods.—Mineral Water.

Ser. No. 31,963. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SCHWABACHER HARDWARE CO., Seattle, Wash. Filed Dec. 28, 1907.

Colonial

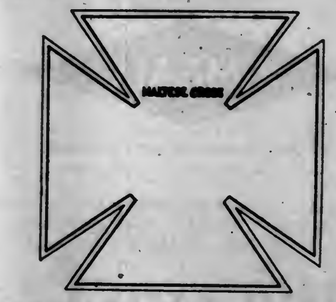
Particular description of goods.—Razors, Knives, Scissors, and Shears.

Ser. No. 31,964. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SCHWABACHER HARDWARE CO., Seattle, Wash. Filed Dec. 28, 1907.

Superba

Particular description of goods.—Hand and Buck Saws, Drawing-Knives, Auger and Drill Bits, Hatchets, Axes, Picks, Mattocks, and Chisels.

Ser. No. 31,975. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIS PIKE, Fresno, Cal. Filed Dec. 30, 1907.



Particular description of goods.—Raisins and Dried Fruits.

Ser. No. 31,995. (CLASS 48. MALT EXTRACTS AND LIQUORS.) SPRINGFIELD BREWERIES COMPANY, Springfield, Mass. Filed Jan. 2, 1908.



Particular description of goods.—Ale.

Ser. No. 31,997. (CLASS 37. PAPER AND STATIONERY.) THE KEUFFEL & ESSER COMPANY, Hoboken, N. J. Filed Jan. 2, 1908.

K&E

Particular description of goods.—Ledger-Paper, Bond-Paper, and Drawing-Paper.

Ser. No. 32,000. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) WM. L. DELLHEIM & CO., Birmingham, Ala. Filed Jan. 2, 1908.



Particular description of goods.—Ginger-Ale.

Ser. No. 32,004. (CLASS 48. MALT EXTRACTS AND LIQUORS.) FRANKLIN & HAYNES BREWING CO., Pocatello, Idaho. Filed Jan. 2, 1908.



Particular description of goods.—Beer.

Ser. No. 32,013. (CLASS 37. PAPER AND STATIONERY.) A. KIMBALL CO., New York, N. Y. Filed Jan. 2, 1908.

KIMBALL

Particular description of goods.—Pin-Tickets.

Ser No. 32,016. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BERNARD MILLER, Chicago, Ill. Filed Jan. 2, 1908.

URALINE

Particular description of goods.—A Rheumatic Medicine.

Ser. No. 32,029. (CLASS 39. CLOTHING.) PARKER HOLMES & COMPANY, Boston, Mass. Filed Jan. 2, 1908.

SIADEM

Particular description of goods.—Leather Boots, Shoes, and Slippers.

Ser. No. 32,033. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE ST. LOUIS, ROCKY MOUNTAIN & PACIFIC COMPANY, Raton, N. Mex. Filed Jan. 2, 1908.



Particular description of goods.—Coal and Coke.

Ser. No. 32,034. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE ST. LOUIS, ROCKY MOUNTAIN & PACIFIC COMPANY, Raton, N. Mex. Filed Jan. 2, 1908.

SWASTIKA

Particular description of goods.—Coal.

Ser. No. 32,035. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE ST. LOUIS, ROCKY MOUNTAIN & PACIFIC COMPANY, Raton, N. Mex. Filed Jan. 2, 1908.

SWASTIKA COKE

Particular description of goods.—Coke.

Ser. No. 32,042. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) HENRY W. WORTCHER, Baltimore, Md. Filed Jan. 3, 1908.



Particular description of goods.—Brass and Composition-Metal Valves and Valve-Fittings.

Ser. No. 32,045. (CLASS 5. ADHESIVES.) MYER WILKENFELD, Brooklyn, N. Y. Filed Jan. 3, 1908.

WILKENFELD'S
CRYSTAL CEMENT



Particular description of goods.—Cements and Glues.

Ser. No. 32,059. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DAVIES-WILLIAMS COMPANY, Akron, Ohio. Filed Jan. 4, 1908.



Particular description of goods.—Candies.

Ser. No. 32,109. (CLASS 43. THREAD AND YARN.) THE AMERICAN THREAD COMPANY, Jersey City, N. J. Filed Jan. 7, 1908. Used ten years.

PARKER BRO.

Particular description of goods.—Spool-Cotton, Sewing-Cotton, and Thread.

Ser. No. 32,110. (CLASS 43. THREAD AND YARN.) THE AMERICAN THREAD COMPANY, Jersey City, N. J. Filed Jan. 7, 1908.

M&K

Particular description of goods.—Spool-Cotton, Sewing-Cotton, Knitting and Embroidery Cotton, and Thread.

Ser. No. 32,112. (CLASS 43. THREAD AND YARN.) THE AMERICAN THREAD COMPANY, Jersey City, N. J. Filed Jan. 7, 1908.

GEM

Particular description of goods.—Spool-Cotton, Sewing-Cotton, and Thread.

Ser. No. 32,115. (CLASS 43. THREAD AND YARN.) THE AMERICAN THREAD COMPANY, Jersey City, N. J. Filed Jan. 7, 1908. Used ten years.

BLACK CARD

Particular description of goods.—Spool-Cotton, Sewing-Cotton, Knitting-Yarns, and Thread.

Ser. No. 32,119. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE PAGE MILK COMPANY, Ubly, Mich. Filed Jan. 7, 1908.

Elite

Particular description of goods.—Evaporated and Condensed Milk.

Ser. No. 32,135. (CLASS 39. CLOTHING.) SOMMER & KAUFMANN, INC., San Francisco, Cal. Filed Jan. 8, 1908.



Particular description of goods.—Leather and Canvas Boots and Shoes.

Ser. No. 32,149. (CLASS 40. FANCY GOODS, FURNISHINGS. AND NOTIONS.) MORITZ KALMUS & NEFFEN, New York, N. Y. Filed Jan. 9, 1908.

KLEANET

Particular description of goods.—Hair-Nets and Hair-Rolls.

Ser. No. 32,156. (CLASS 12. MASONRY MATERIALS.) BERKSHIRE WHITE PORTLAND CEMENT COMPANY, Portland, Me.; Clayton, Mass., and New York, N. Y. Filed Jan. 10, 1908.



Particular description of goods.—Portland Cement.

Ser. No. 32,166. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS). ROBERT W. NEFF, Boston, Mass. Filed Jan. 10, 1908.

IMPERIAL

Particular description of goods.—Starch Size for Textile Manufactures.

Ser. No. 32,167. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS). ROBERT W. NEFF, Boston, Mass. Filed Jan. 10, 1908.

COLONIAL

Particular description of goods.—Starch Size for Textile Manufactures.

Ser. No. 32,172. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) A. C. LAWRENCE LEATHER CO., Boston, Mass. Filed Jan. 10, 1908.

HUB
HUB

Particular description of goods.—Pigskin.

Ser. No. 32,173. (CLASS 39. CLOTHING.) W. L. DOUGLAS SHOE CO., Portland, Me. Filed Jan. 10, 1908.

THE BROCKTON QUALITY $3.00 CITY HALL SHOE SHOE CO

Particular description of goods—Leather Boots and Shoes.

Ser. No. 32,192. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS. WILLIAM SHAKESPEARE JR. COMPANY, Kalamazoo, Mich. Filed Jan. 13, 1908.

"INDIAN"

Particular description of goods.—Fishing-Lines.

Ser. No. 32,200. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANK CHESTER FOWLER, New London, Conn. Filed Jan. 13, 1908.

Florimel

Particular description of goods.—Skin-Lotion and Toilet Cream.

Ser. No. 32,208. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE STROBEL & WILKEN CO., New York, N. Y. Filed Jan. 14, 1908.

RUBBER-NECK

Particular description of goods.—Tops.

Ser. No. 32,213. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) UNGARISCHE GUMMIWAARENFABRIKS ACTIENGESELLSCHAFT, Budapest, Hungary. Filed Jan. 14, 1908.

"TAURIL"

Particular description of goods.—Rubber and Asbestos Packing.

Ser. No. 32,220. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) COLGATE & CO., New York, N. Y. Filed Jan. 14, 1908.

Particular description of goods.—Soap and Soap Powders.

Ser. No. 32,223. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) ALFRED PAUL GARDINER, New York, N. Y. Filed Jan. 15, 1908.

HESSIAN HILL

Particular description of goods—Bottled Spring-Water.

Ser. No. 32,239. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STUYVESANT CHOCOLATE COMPANY, New York, N. Y. Filed Jan. 13, 1908.

Mayfair Sweets

Particular description of goods.—Chocolates and Candies.

Ser. No. 32,248. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EDWIN J. GILLIES & CO., New York, N. Y. Filed Jan. 16, 1908.

J-M-M

Particular description of goods.—Roasted Coffee.

Ser. No. 32,270. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE AMERICAN WRINGER COMPANY, Providence, R. I., and New York, N. Y. Filed Jan. 16, 1908.

AWC

Particular description of goods.—Clothes-Wringers.

Ser. No. 32,271. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE AMERICAN WRINGER COMPANY, Providence, R. I., and New York, N. Y. Filed Jan. 16, 1908.

Particular description of goods.—Clothes-Wringers.

Ser. No. 32,275. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE WARNER BROS. CO., Bridgeport, Conn. Filed Jan. 17, 1908. Used ten years.

STERLING

Particular description of goods—Hose-supporters.

Ser. No. 32,291. (CLASS 38. PUBLICATIONS.) JNO. C. HAGAN, Richmond, Va. Filed Jan. 18, 1908.

Modern Farming

Particular description of goods.—A Monthly Periodical Devoted to the Interests of Agriculture.

Ser. No. 32,295. (CLASS 47. WINES, EXCEPT MEDICATED.) CALIFORNIA WINE ASSOCIATION, San Francisco, Cal. Filed Jan. 18, 1908.

CAL-SICILIANO

Particular description of goods.—Wine.

Ser. No. 32,299. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WESTERN BLOCK CO., Lockport, N. Y. Filed Jan. 18, 1908. Used ten years.



Particular description of goods.—Tackle-Blocks and Sheaves.

Ser. No. 32,306. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) W. J. JENNISON COMPANY, Minneapolis, Minn. Filed Jan. 18, 1908.

BULAH

Particular description of goods.—Wheat-Flour.

Ser. No. 32,327. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE PLUME & ATWOOD MFG. CO., Waterbury, Conn. Filed Jan. 20, 1908.

Cupid

Particular description of goods.—Safety-Pins.

Ser. No. 32,328. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE PLUME & ATWOOD MFG. CO., Waterbury, Conn. Filed Jan. 20, 1908.



Particular description of goods.—Pins, Both Straight Solid-Head Pins and Safety-Pins.

Ser. No. 32,390. (CLASS 17. TOBACCO PRODUCTS.) PHILIP MORRIS & CO., LTD., New York, N. Y. Filed Jan. 23, 1908.

MORISCO

Particular description of goods.—Cigarettes.

TRADE-MARKS

REGISTERED FEBRUARY 25, 1908.

67,848. CERTAIN TOOLS. A. BALDWIN & CO. LTD., New Orleans, La.
Filed November 2, 1907. Serial No. 30,968. PUBLISHED DECEMBER 24, 1907.

67,849. WITHDRAWN.

67,850. CERTAIN TOOLS. THE CHILLINGTON TOOL COMPANY LIMITED, Wolverhampton, England.
Filed December 1, 1906. Serial No. 23,705. PUBLISHED DECEMBER 24, 1907.

67,851. SOLDERING PASTE, SALTS, AND STICKS. COMMERCIAL ELECTRICAL SUPPLY COMPANY, St. Louis, Mo.
Filed November 14, 1907. Serial No. 31,173. PUBLISHED DECEMBER 24, 1907.

67,852. SAFETY-MATCH IGNITION-STRIPS. CAMPBELL M. HUNTER, London, England.
Filed October 7, 1907. Serial No. 30,465. PUBLISHED DECEMBER 24, 1907.

67,853. CERTAIN COMPRESSES. THE PHILADELPHIA DRYING MACHINERY COMPANY, Philadelphia, Pa.
Filed November 21, 1907. Serial No. 31,283. PUBLISHED DECEMBER 24, 1907.

67,854. MACHINERY FOR DRYING, COOLING, ORDERING, OR TREATING TOBACCO. THE PHILADELPHIA DRYING MACHINERY COMPANY, Philadelphia, Pa.
Filed November 21, 1907. Serial No. 31,284. PUBLISHED DECEMBER 24, 1907.

67,855. CERTAIN MACHINERY. THE PHILADELPHIA DRYING MACHINERY COMPANY, Philadelphia, Pa.
Filed November 21, 1907. Serial No. 31,285. PUBLISHED DECEMBER 24, 1907.

67,856. CERTAIN TOOLS. SIMMONS HARDWARE COMPANY, St. Louis, Mo.
Filed June 10, 1907. Serial No. 28,016. PUBLISHED DECEMBER 24, 1907.

67,857. LEATHER BOOTS AND SHOES. W. B. COSGRAVE SHOE CO., Zanesville, Ohio.
Filed September 11, 1907. Serial No. 29,861. PUBLISHED DECEMBER 24, 1907.

67,858. DRILL-GRINDING MACHINES. WILMARTH & MORMAN CO., Grand Rapids, Mich.
Filed June 24, 1907. Serial No. 28,364. PUBLISHED DECEMBER 24, 1907.

67,859. SPOOL-COTTON, SEWING-COTTON, AND THREAD. THE AMERICAN THREAD COMPANY, Jersey City, N. J.
Filed November 15, 1907. Serial No. 31,190. PUBLISHED DECEMBER 24, 1907.

67,860. SPOOL-COTTON, SEWING-COTTON, AND THREAD. THE AMERICAN THREAD COMPANY, Jersey City, N. J.
Filed November 15, 1907. Serial No. 31,191. PUBLISHED DECEMBER 24, 1907.

67,861. SPOOL-COTTON, SEWING-COTTON, AND THREAD. THE AMERICAN THREAD COMPANY, Jersey City, N. J.
Filed November 15, 1907. Serial No. 31,192. PUBLISHED DECEMBER 24, 1907.

67,862. WASHBOARDS. THE AMERICAN WASHBOARD COMPANY, Cleveland, Ohio, assignor, by mesne assignments, to The National Washboard Company, a Corporation of Illinois.
Filed August 15, 1906. Serial No. 21,564. PUBLISHED DECEMBER 24, 1907.

67,863. CERTAIN ELECTRICAL APPARATUS. ROBERT BOSCH, Stuttgart, Germany.
Filed September 10, 1907. Serial No. 29,857. PUBLISHED DECEMBER 24, 1907.

67,864. SPRING-HINGES AND SPRING-HINGE BLANKS. THE COLUMBIAN HARDWARE COMPANY, Cleveland, Ohio.
Filed March 21, 1906. Serial No. 18,060. PUBLISHED DECEMBER 24, 1907.

67,865. FIRE-EXTINGUISHERS. THE CONQUEROR FIRE EXTINGUISHER COMPANY, Portland, Me.
Filed November 7, 1907. Serial No. 31,068. PUBLISHED DECEMBER 24, 1907.

67,866. SHOE-POLISH. CORBY CHEMICAL CO., Corry, Pa.
Filed November 12, 1907. Serial No. 31,144. PUBLISHED DECEMBER 24, 1907.

67,867. CERTAIN CHEMICALS. FARBENFABRIKEN OF ELBERFELD CO., New York, N. Y.
Filed November 11, 1907. Serial No. 31,117. PUBLISHED DECEMBER 24, 1907.

67,868. CERTAIN METAL MANUFACTURES. THE GILLETTE-VIBBER CO., New London, Conn.
Filed November 20, 1907. Serial No. 31,260. PUBLISHED DECEMBER 24, 1907.

67,869. LUBRICATORS AND MECHANICAL OILERS. INTERNATIONAL PATENT CORPORATION, Pierre, S. D., and Jersey City, N. J.
Filed November 20, 1906. Serial No. 23,494. PUBLISHED DECEMBER 24, 1907.

67,870. BROOMS. LEE BROOM & DUSTER COMPANY, Lincoln, Nebr.
Filed November 15, 1907. Serial No. 31,189. PUBLISHED DECEMBER 24, 1907.

67,871. WIRE FENCE. THOMAS LITWILLER, Tremont, Ill.
Filed November 5, 1907. Serial No. 31,027. PUBLISHED DECEMBER 24, 1907.

67,872. INK-DIVIDING BANDS. N-M-C-R COMPANY, New York, N. Y.
Filed October 9, 1907. Serial No. 30,498. PUBLISHED DECEMBER 24, 1907.

67,873. MATCHES. NITEDALS TÆNDSTIKFABRIK, Östre Aker, near Christiania, Norway.
Filed December 21, 1906. Serial No. 24,180. PUBLISHED DECEMBER 24, 1907.

67,874. CUTLERY IN GENERAL, AND OTHER HAND-TOOLS HAVING A CUTTING EDGE. SAML. OSBORN & Co., Sheffield, England, assignor to Samuel Osborn & Co. Limited, Sheffield, England, a Corporation.
Filed September 14, 1905. Serial No. 12,580. PUBLISHED DECEMBER 24, 1907.

67,875. STEEL AND IRON. SAML. OSBORN & Co., Sheffield, England, assignor to Samuel Osborn & Co. Limited, Sheffield, England, a Corporation.
Filed September 14, 1905. Serial No. 12,581. PUBLISHED DECEMBER 24, 1907.

67,876. LIME AND READY-MIXED MORTAR. ROCKLAND-ROCKPORT LIME CO., Rockland, Me.
Filed November 7, 1907. Serial No. 31,067. PUBLISHED DECEMBER 24, 1907.

67,877. PASTE FOR DESTROYING RATS, MICE, AND ROACHES. AARON WALTER ROSEMAN, Philadelphia, Pa.
Filed July 26, 1907. Serial No. 29,045. PUBLISHED DECEMBER 24, 1907.

67,878. LAWN TRIMMERS AND EDGERS. HARRY O. SECREST, Cleveland, Ohio.
Filed September 19, 1907. Serial No. 30,076. PUBLISHED DECEMBER 24, 1907.

67,879. CERTAIN CHEMICALS. STEVENSON & HOWELL, LIMITED, London, England.
Filed September 9, 1907. Serial No. 29,840. PUBLISHED DECEMBER 24, 1907.

67,880. INSECTICIDES. STRAWSONS, London, England.
Filed July 25, 1907. Serial No. 29,035. PUBLISHED DECEMBER 24, 1907.

67,881. CERTAIN FURNITURE. JOHN L. TANDY, Kansas City, Mo.
Filed September 3, 1907. Serial 29,735. PUBLISHED DECEMBER 24, 1907.

67,882. HOES. WITHINGTON & COOLEY MANUFACTURING COMPANY, Jackson, Mich.
Filed November 14, 1907. Serial No. 31,161. PUBLISHED DECEMBER 24, 1907.

67,883. HOES. WITHINGTON & COOLEY MANUFACTURING COMPANY, Jackson, Mich.
Filed November 14, 1907. Serial No. 31,162. PUBLISHED DECEMBER 24, 1907.

67,884. CERTAIN PAINTERS' MATERIALS. THE CLEVELAND VARNISH COMPANY, Cleveland, Ohio.
Filed October 14, 1907. Serial No. 30,587. PUBLISHED DECEMBER 24, 1907.

67,885. CERTAIN PAINTERS' MATERIALS. THE CLEVELAND VARNISH COMPANY, Cleveland, Ohio.
Filed October 14, 1907. Serial No. 30,589. PUBLISHED DECEMBER 24, 1907.

67,886. CERTAIN PAINTERS' MATERIALS. THE CLEVELAND VARNISH COMPANY, Cleveland, Ohio.
Filed October 14, 1907. Serial No. 30,590. PUBLISHED DECEMBER 24, 1907.

67,887. CERTAIN HARNESS. COVERT MANUFACTURING CO., Watervliet, N. Y.
Filed August 3, 1907. Serial No. 29,195. PUBLISHED DECEMBER 24, 1907.

67,888. PAINT. ALBERT E. KIRK, Hoopeston, Ill.
Filed September 11, 1907. Serial No. 29,864. PUBLISHED DECEMBER 24, 1907.

67,889. LEATHER BOOTS AND SHOES. W. B. COSGRAVE SHOE CO., Zanesville, Ohio.
Filed September 11, 1907. Serial No. 29,862. PUBLISHED DECEMBER 24, 1907.

67,890. STOMACHIC POWDER. P. F. W. BARELLA, Berlin, Germany.
Filed September 21, 1905. Serial No. 12,876. PUBLISHED DECEMBER 24, 1907.

67,891. CERTAIN IRON COMPOUND. CHRISTIAN CEDERROTH, Gefle, Sweden.
Filed July 19, 1907. Serial No. 28,883. PUBLISHED DECEMBER 24, 1907.

67,892. TONIC BEVERAGE. H. AND T. DAILEY, Fall River, Mass.
Filed November 9, 1907. Serial No. 31,106. PUBLISHED DECEMBER 24, 1907.

67,893. CERTAIN REMEDY. JOSEPH FRIEDLANDER, New York, N. Y.
Filed November 9, 1907. Serial No. 31,101. PUBLISHED DECEMBER 24, 1907.

67,894. STEAM OR MACHINERY PACKING. KUSCHNITZKY & GRÜNHUT, Vienna, Austria-Hungary.
Filed October 29, 1907. Serial No. 30,861. PUBLISHED DECEMBER 24, 1907.

67,895. VEHICLE-LAMPS. ROBERTS & MATHEWS, Ansonia Ohio.
Filed November 13, 1907. Serial No. 31,152. PUBLISHED DECEMBER 24, 1907.

67,896. MEDICINAL AND TOILET COLOGNE. ROBINSON BROS. & COMPANY, INCORPORATED, Portland, Me., and Malden, Mass.
Filed November 15, 1907. Serial No. 31,196. PUBLISHED DECEMBER 24, 1907.

67,897. COSMETICS FOR THE HAIR. HANS SCHWARZKOPF, Charlottenburg, Germany.
Filed November 6, 1907. Serial No. 31,029. PUBLISHED DECEMBER 24, 1907.

67,898. MINERAL WATERS. LYCURGUS SMITH, Mineral Wells, Tex.
Filed November 4, 1907. Serial No. 30,995. PUBLISHED DECEMBER 24, 1907.

67,899. COLD-CREAM AND POMADES. VEREINIGTE CHEMISCHE WERKE AKTIENGESELLSCHAFT, Charlottenburg, Germany.
Filed November 29, 1905. Serial No. 15,061. PUBLISHED DECEMBER 24, 1907.

67,900. MASSAGE-CREAM. ACME CHEMICAL CO., Detroit, Mich.
Filed November 7, 1907. Serial No. 31,040. PUBLISHED DECEMBER 24, 1907.

67,901. STOVES AND RANGES. BRIDGE & BEACH MANUFACTURING COMPANY, St. Louis, Mo.
Filed November 11, 1907. Serial No. 31,126. PUBLISHED DECEMBER 24, 1907.

67,902. STOVES. BRIDGE & BEACH MANUFACTURING COMPANY, St. Louis, Mo.
Filed November 11, 1907. Serial No. 31,129. PUBLISHED DECEMBER 24, 1907.

67,903. REMEDY FOR CROUP, COUGHS, AND COLDS. CAMPHO CROUP CO., Wheeling, W. Va.
Filed November 4, 1907. Serial No. 31,008. PUBLISHED DECEMBER 24, 1907.

67,904. PRESS-BOARDS. CASE BROTHERS, Highland Park, Conn.
Filed November 13, 1907. Serial No. 31,157. PUBLISHED DECEMBER 24, 1907.

67,905. CERTAIN MEDICINES. PAUL CHEVREUX, Goubenans, (Haute-Saône,) France.
Filed November 11, 1907. Serial No. 31,116. PUBLISHED DECEMBER 24, 1907.

67,906. TOILET CREAM AND FRECKLE-ERADICATOR. DE MIRACLE CHEMICAL CO., New York, N. Y.
Filed November 7, 1907. Serial No. 31,069. PUBLISHED DECEMBER 24, 1907.

67,907. REMEDIES FOR THE CORRECTION OF STOMACH, LIVER, AND BOWEL DISORDERS. THE FERMO COMPANY, Cincinnati, Ohio.
Filed September 30, 1907. Serial No. 30,306. PUBLISHED DECEMBER 24, 1907.

67,908. MANTLES FOR GAS-LAMPS. GENERAL GAS LIGHT CO., Kalamazoo, Mich.
Filed November 18, 1907. Serial No. 31,237. PUBLISHED DECEMBER 24, 1907.

67,909. MINERAL WATER. GLENN SPRINGS COMPANY, Spartanburg, S. C.
Filed October 19, 1907. Serial No. 30,679. PUBLISHED DECEMBER 24, 1907.

67,910. PILE REMEDY. C. H. HOTT & Co., Toledo, Ohio.
Filed November 14, 1907. Serial No. 31,176. PUBLISHED DECEMBER 24, 1907.

67,911. COLD-CREAM. CHARLES E. KEELER, Atlantic City, N. J.
Filed October 29, 1907. Serial No. 30,865. PUBLISHED DECEMBER 24, 1907.

67,912. CERTAIN MEDICINAL PREPARATION. MARIANI & Co., New York, N. Y.
Filed November 14, 1907. Serial No. 31,168. PUBLISHED DECEMBER 24, 1907.

67,913. REMEDY FOR WHOOPING-COUGH AND ALL COLDS. HARRY MOLE, Pottstown, Pa.
Filed November 7, 1907. Serial No. 31,066. PUBLISHED DECEMBER 24, 1907.

67,914. CARBONATED BEER FREE OF ALCOHOL. CHARLES NEUNSINGER, Baltimore, Md.
Filed October 31, 1907. Serial No. 30,894. PUBLISHED DECEMBER 24, 1907.

67,915. OINTMENT. ROBINSON BROS. & COMPANY, INCORPORATED, Portland, Me., and Malden, Mass.
Filed November 15, 1907. Serial No. 31,194. PUBLISHED DECEMBER 24, 1907.

67,916. CERTAIN MEDICINES. SOCIÉTÉ ANONYME DES PRODUITS CHIMIQUES SPÉCIAUX, Lyon-Monplaisir, France.
Filed June 16, 1906. Serial No. 20,331. PUBLISHED DECEMBER 24, 1907.

67,917. CERTAIN MEDICINES AND PLASTERS. SOCIÉTÉ ANONYME DES PRODUITS CHIMIQUES SPÉCIAUX, Lyon-Monplaisir, France.
Filed June 16, 1906. Serial No. 20,332. PUBLISHED DECEMBER 24, 1907.

67,918. CERTAIN MEDICINES. SOCIÉTÉ ANONYME DES PRODUITS CHIMIQUES SPÉCIAUX, Lyon-Monplaisir, France.
Filed June 16, 1906. Serial No. 20,333. PUBLISHED DECEMBER 24, 1907.

67,919. CERTAIN MEDICINES. SOCIÉTÉ ANONYME DES PRODUITS CHIMIQUES SPÉCIAUX, Lyon-Monplaisir, France.
Filed June 16, 1906. Serial No. 20,334. PUBLISHED DECEMBER 24, 1907

67,920. LINIMENTS. THEOLINE CHEMICAL COMPANY, New York, N. Y., and Bridgeport, Conn.
Filed November 16, 1907. Serial No. 31,208. PUBLISHED DECEMBER 24, 1907.

67,921. NON-ALCOHOLIC TONIC BEVERAGE. WAKE CHEMICAL COMPANY, Raleigh, N. C.
Filed July 20, 1907. Serial No. 28,913. PUBLISHED DECEMBER 24, 1907.

67,922. CERTAIN FOODS. HULMAN & Co., Terre Haute, Ind.
Filed November 11, 1907. Serial No. 31,111. PUBLISHED DECEMBER 24, 1907.

67,923. WHEAT-FLAKES. PACIFIC MILLING COMPANY INCORPORATED, San Francisco, Cal.
Filed April 15, 1907. Serial No. 26,722. PUBLISHED DECEMBER 24, 1907.

67,924. LOOSE-LEAF BINDERS. CHARLES E. SHEPPARD, New York, N. Y.
Filed May 21, 1906. Serial No. 19,736. PUBLISHED DECEMBER 24, 1907.

67,925. COFFEE. THE W. W. HARPER CO., Zanesville, Ohio.
Filed October 3, 1907. Serial No. 30,411. PUBLISHED DECEMBER 24, 1907.

67,926. CERTAIN CLOTHING. BARTH & MYER, Oklahoma, Okla.
Filed June 24, 1907. Serial No. 28,347. PUBLISHED DECEMBER 24, 1907.

67,927. TEA. THE C. S. MOREY MERCANTILE COMPANY, Denver, Colo.
Filed November 16, 1907. Serial No. 31,202. PUBLISHED DECEMBER 24, 1907.

67,928. COCOA AND CHOCOLATE. CADBURY BROTHERS, LIMITED, near Birmingham, England.
Filed November 8, 1907. Serial No. 31,086. PUBLISHED DECEMBER 24, 1907.

67,929. CRAYONS. BENJAMIN FRANKLIN CALLENDER, Rochester, N. Y.
Filed October 15, 1907. Serial No. 30,620. PUBLISHED DECEMBER 24, 1907.

67,930. MEN'S COATS, VESTS, TROUSERS, AND OVERCOATS. JACOB COHEN SON & CO., New York, N. Y.
Filed May 7, 1907. Serial No. 27,194. PUBLISHED DECEMBER 24, 1907.

67,931. CHICORY AND COFFEE SUBSTITUTE. EMIL SEELIG A.-G., Heilbronn, Germany, and Jersey City, N. J.
Filed October 3, 1906. Serial No. 22,447. PUBLISHED DECEMBER 24, 1907.

67,932. FOOD FOR INFANTS AND INVALIDS. FAIRCHILD BROS. & FOSTER, New York, N. Y.
Filed November 16, 1907. Serial No. 31,232. PUBLISHED DECEMBER 24, 1907.

67,933. INKS AND INK-PADS. FOUNTAIN INK PAD COMPANY, Chicago, Ill.
Filed November 4, 1907. Serial No. 31,007. PUBLISHED DECEMBER 24, 1907.

67,934. CERTAIN FOODS. H. J. HEINS COMPANY, Allegheny, Pa.
Filed October 21, 1907. Serial No. 30,609. PUBLISHED DECEMBER 24, 1907.

67,935. GARTERS. HARRIS SUSPENDER COMPANY, New York, N. Y.
Filed November 4, 1907. Serial No. 30,974. PUBLISHED DECEMBER 24 1907.

67,936. CERTAIN CLOTHING. WILLIAM A. KRAEMER, Los Angeles, Cal.
Filed December 27, 1905. Serial No. 16,561. PUBLISHED DECEMBER 24, 1907.

67,937. MILK. THE LACTO-BACILLINE COMPANY OF NEW YORK, New York, N. Y.
Filed September 12, 1907. Serial No. 29,918. PUBLISHED DECEMBER 24, 1907.

67,938. MILK. THE LACTO-BACILLINE COMPANY OF NEW YORK, New York, N. Y.
Filed September 12, 1907. Serial No. 29,919. PUBLISHED DECEMBER 24, 1907.

67,939. HOSE-SUPPORTERS AND GARTERS. MINTON COMPANY, INC., Rochester, N. Y.
Filed November 9, 1907. Serial No 31,103. PUBLISHED DECEMBER 24, 1907.

67,940. WHEAT-FLOUR. RIPPE GRAIN & MILLING CO., Fairmont, Minn.
Filed May 31, 1907. Serial No. 27,805. PUBLISHED DECEMBER 24, 1907.

67,941. PLASTIC TIRE-FILLER. WILLIAM H. STERLING, New York, N. Y.
Filed September 30, 1907. Serial No. 30,319. PUBLISHED DECEMBER 24, 1907.

67,942. FLAVORING ESSENCES AND FLAVORING EXTRACTS. STEVENSON & HOWELL, LIMITED, London, England.
Filed July 23, 1907. Serial No. 28,996. PUBLISHED DECEMBER 24, 1907.

67,943. SPICES. THE W. W. HARPER CO., Zanesville, Ohio.
Filed October 3, 1907. Serial No. 30,409. PUBLISHED DECEMBER 24, 1907.

67,944. LADIES' CORSETS. JOHN WANAMAKER, Philadelphia, Pa.
Filed November 13, 1907. Serial No. 31,145. PUBLISHED DECEMBER 24, 1907.

67,945. CANNED FISH. WARFIELD PRATT HOWELL CO., Des Moines, Iowa.
Filed November 16, 1907. Serial No. 31,203. PUBLISHED DECEMBER 24, 1907.

67,946. BEER, ALE, PORTER, AND STOUT. BEADLESTON & WOERZ, New York, N. Y.
Filed November 5, 1907. Serial No. 31,025. PUBLISHED DECEMBER 24, 1907.

67,947. CHIFFONS. L. ERSTEIN & BRO., New York, N. Y.
Filed October 23, 1907. Serial No. 30,747. PUBLISHED DECEMBER 24, 1907.

67,948. VELVETEENS. MECHANISCHE WEBEREI ZU LINDEN, Hanover-Linden, Germany.
Filed July 6, 1905. Serial No. 9,810. PUBLISHED DECEMBER 24, 1907.

67,949. CHEWING AND SMOKING TOBACCO. THE AMERICAN TOBACCO COMPANY, New York, N. Y.
Filed July 6, 1907. Serial No. 28,610. PUBLISHED AUGUST 20, 1907.

67,950. WATER-METERS. BUILDERS IRON FOUNDRY, Providence, R. I.
Filed November 15, 1907. Serial No. 31,180. PUBLISHED DECEMBER 24, 1907.

67,951. RINGS, CHAINS, BRACELETS, AND JEWELRY. ADOLPH ROSENBERG, Newark, N. J.
Filed April 29, 1907. Serial No. 26,991. PUBLISHED DECEMBER 24, 1907

67,952. CIGARETTES AND CIGARS. DANIEL W. SIMMONS, Seattle, Wash.
Filed September 30, 1907. Serial No. 30,297. PUBLISHED DECEMBER 24, 1907.

67,953. CERTAIN FLAT WARE, TABLEWARE, AND HOLLOW WARE. THE WILKINSON SWORD COMPANY, LIMITED, London and Sheffield, England.
Filed April 21, 1906. Serial No. 18,965. PUBLISHED DECEMBER 24, 1907.

67,954. WHISKY. THE COOK & BERNHEIMER CO., New York, N. Y.
Filed June 27, 1905. Serial No. 9,266. PUBLISHED DECEMBER 24, 1907.

67,955. COCKTAILS. THE COOK & BERNHEIMER CO., New York, N. Y.
Filed June 27, 1905. Serial No. 9,267. PUBLISHED DECEMBER 24, 1907.

67,956. GIN. THE COOK & BERNHEIMER CO., New York, N. Y.
Filed June 27, 1905. Serial No. 9,269. PUBLISHED DECEMBER 24, 1907.

67,957. CORDIAL COMPOSED OF DILUTE ALCOHOL, SUGAR, AND FRUIT EXTRACT. LOUIS PELOSI, Washingtonville, N. Y.
Filed April 10, 1907. Serial No. 26,617. PUBLISHED DECEMBER 24, 1907.

67,958. WHISKY. JOHN QUACK and GERHARD H. SANDHEGER, Cincinnati, Ohio, executors of C. Sandheger, deceased.
Filed July 22, 1907. Serial No. 28,924. PUBLISHED DECEMBER 24, 1907.

67,959. WATCHES SOUTH BEND WATCH COMPANY, South Bend, Ind.
Filed October 29, 1907. Serial No. 30,857. PUBLISHED DECEMBER 24, 1907.

67,960. HAMES AND TRIMMINGS THEREFOR. U. S. HAME COMPANY, Buffalo, N. Y.
Filed November 5, 1907. Serial No. 31,016. PUBLISHED DECEMBER 24, 1907.

67,961. MOVING-PICTURE MACHINES, FILMS, AND ATTACHMENTS. THE VIASCOPE MFG. CO., Chicago, Ill.
Filed October 19, 1907. Serial No. 30,665. PUBLISHED DECEMBER 24, 1907.

LABELS

REGISTERED FEBRUARY 25, 1908.

14,055.—*Title:* "EXTRA FINA." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed December 27, 1907.

14,056.—*Title:* "BONNY BRAWN." (For Scotch Whisky.) THE HOCHSTADTER CO., New York, N. Y. Filed January 11, 1908.

14,057.—*Title:* "JANICE." (For Candy.) THE NATIONAL CANDY COMPANY, Jersey City, N. J., and St. Louis, Mo. Filed January 23, 1908.

14,058.—*Title:* "LILAC GIRL." (For Candy.) THE NATIONAL CANDY COMPANY, Jersey City, N. J., and St. Louis, Mo. Filed January 23, 1908.

14,059.—*Title:* "S. S. BORDEN CO'S CREAMERY BUTTER XXXX BRAND." (For Creamery Butter.) S. S. BORDEN Co., Chicago, Ill. Filed September 25, 1907.

14,060.—*Title:* "SCHILLING'S BEST." (For Pepper.) A. SCHILLING & COMPANY, San Francisco, Cal. Filed September 25, 1907.

14,061.—*Title:* "SCHILLING'S BEST." (For Cream Tartar.) A. SCHILLING & COMPANY, San Francisco, Cal. Filed September 25, 1907.

14,062.—*Title:* "SCHILLING'S BEST." (For Soda.) A. SCHILLING & COMPANY, San Francisco, Cal. Filed September 25, 1907.

14,063.—*Title:* "DEXTEROSE." (For a Prepared Food for Infants and Invalids.) THE DEXTEROSE FOOD CO., Barton Heights, Va. Filed January 22, 1908.

14,064.—*Title:* "STAR FEED." (For Stock and Poultry Feed.) RALSTON PURINA CO., St. Louis, Mo. Filed January 27, 1908.

14,065.—*Title:* "BASSETT'S EGG SHAMPOO CREAM." (For a Toilet Preparation for Shampooing the Hair.) BASSETT SUPPLY CO., Rochester, N. Y. Filed January 25, 1908.

14,066.—*Title:* "FIRE PROOF STOVE POLISH—NO MORE RED STOVE LIDS." (For a Stove-Polish.) GEORGE ARIENS, Jeffersonville, Ind. Filed January 9, 1908.

14,067.—*Title:* "ART FILET EMBROIDERY." (For Embroidered Lace.) THE KURSHEEDT MANUF'G CO., New York, N. Y. Filed December 14, 1907.

14,068.—*Title:* "SUPERIOR PORTLAND CEMENT." (For Cement.) THE SUPERIOR PORTLAND CEMENT COMPANY, Superior, Ohio, and Charleston, W. Va. Filed January 8, 1908.

14,069.—*Title:* "THE BOILER." (For Wash boilers.) MYER KAMENSTEIN, New York, N. Y. Filed January 27, 1908.

PRINTS

REGISTERED FEBRUARY 25, 1908.

2,226.—*Title:* "OUR 'SCHOOLMASTER' SERIES NO. 5." (For Men's and Boys' Coats, Vests, and Trousers.) ED. V. PRICE & Co., Chicago, Ill. Filed January 27, 1908.

2,227.—*Title:* "'OUR SCHOOLMASTER' SERIES NO. 6." (For Men's and Boys' Coats, Vests, and Trousers.) ED. V. PRICE & Co., Chicago, Ill. Filed January 27, 1908.

2,228.—*Title:* "'OUR SCHOOLMASTER' SERIES NO. 7." (For Men's and Boys' Coats, Vests, and Trousers.) ED. V. PRICE & Co., Chicago, Ill. Filed January 27, 1908.

2,229.—*Title:* "OUR 'SCHOOLMASTER' SERIES NO. 8." (For Men's and Boys' Coats, Vests, and Trousers.) ED. V. PRICE & Co., Chicago, Ill. Filed January 27, 1908

2,230.—*Title:* "OUR CUTTER." (For Men's and Boys' Coats, Vests, and Trousers.) ED. V. PRICE & Co., Chicago, Ill. Filed January 27, 1908.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

PAPENDELL *v.* BUNNELL *v.* REIZENSTEIN *v.* GAISMAN *v.* GILLETTE.

PATENT INTERFERENCE.

Decided January 15, 1908.

INTERFERENCE—MOTION TO DISSOLVE—DELAY IN BRINGING.

The fact that an appeal had been taken from a decision refusing to transmit a former motion to dissolve and that applicant was awaiting a decision thereon *Held* insufficient to excuse delay in bringing a second motion.

APPEAL on motion.

SAFETY-RAZOR.

Messrs. Redding, Kiddle & Greeley for Papendell.

Messrs. Redding, Kiddle & Greeley and *Mr. Arthur P. Greeley* for Bunnell.

Messrs. Wiedersheim & Fairbanks for Reizenstein.

Mr. T. F. Bourne for Gaisman.

Mr. E. D. Chadwick and *Messrs. Bacon & Milans* for Gillette.

MOORE, *Commissioner:*

This is an appeal by Bunnell from a decision of the Examiner of Interferences refusing to transmit a motion to dissolve.

It appears that on July 26, 1907, an order was issued against Bunnell to show cause why judgment on the record should not be rendered against him. On August 22, 1907, Bunnell brought a motion to dissolve, which the Examiner of Interferences, in a decision rendered August 26, 1907, refused to transmit, on the ground that the allegations upon which the motion was based were not sufficiently specific. Upon appeal this decision was affirmed by the Assistant Commissioner on October 29, 1907. On November 21, 1907, Bunnell brought another motion to dissolve, which was denied by the Examiner of Interferences in a decision rendered November 29, 1907, on the ground that the motion was brought long after the time allowed for bringing such motions and that the facts set up in excuse of the delay did not cover the whole period of delay. It is from this decision that the present appeal was taken.

The excuse offered for the delay is that the present attorney was not actively called into the case till after the first decision of the Examiner of Interferences; that it seemed to him that an appeal from that decision was proper; that the decision of the Assistant Commissioner indicated that a second motion might be filed if accompanied by a sufficient excuse for the delay; that the present motion was filed as soon as it could be prepared thereafter.

The decision of the Examiner of Interferences, holding this excuse insufficient was correct. As pointed out in *Rockstroh* v. *Warnock*, (132 O. G., 234,) where a motion to dissolve is refused transmission as being not sufficiently specific an amended motion curing the informalities of the first may be transmitted if filed within the limit of appeal. If filed thereafter, it can be transmitted only when accompanied by a sufficient excuse for the delay. Clearly the fact that an appeal had been taken from the first decision and that applicant was awaiting a decision on the appeal before he began to prepare the amendment is not a sufficient excuse for the delay.

The decision of the Examiner of Interferences is affirmed.

EX PARTE DILG AND FOWLER, JR.

APPLICATION FOR PATENT.

Decided January 30, 1908.

ABANDONMENT OF APPLICATION—DELAY NOT UNAVOIDABLE.

Where an applicant delays action on an application beyond the statutory period in order to prevent another party from securing access thereto by reason of its being the parent case of an application involved in interference with such party, *Held* that the failure to act was not unavoidable within the meaning of section 4894 of the Revised Statutes and that the application is abandoned.

ON PETITION.

SOAP-SUPPLIER.

Mr. J. Odell Fowler, Jr., for the applicants

MOORE, *Commissioner:*

This is a petition requesting that an application be held not abandoned although action therein was delayed beyond the statutory period of one year.

It appears that petitioners have a copending application covering matter disclosed in this application and which was divided out for the purposes of interference. During the progress of the interference the opposing party requested access to the present or parent application, which was refused. Petitioners aver that they understood from the decision denying access that the matter was not determined by such action, but that a final decision would be later rendered by the Commissioner.

The year allowed for action in this case expired on December 26, 1907. Petitioners state that they did not wish to amend the application until after the question of access thereto was finally determined, because if they did amend and access was granted the opposing party would have knowledge of such amendment contrary to their desires. It is averred that the amendment, which it is now sought to have considered in the case, was prepared long before the expiration of the year and that petitioners were ready to file the same as soon as the question of access was finally determined.

It is believed that the delay in this case was not unavoidable within the meaning of section 4894 of the Revised Statutes. Although petitioners were aware that action was required on or before December 26, 1907, they deliberately let this time pass without action in order to prevent the possibility of an opposing party to a related interference securing access to such amendment. Petitioners' understanding regarding the determination of the motion for access in the interference proceeding has nothing to do with this case and cannot affect the decision herein. Even if petitioners' understanding were correct and the Commissioner had, in fact, taken up the petition for access and determined the questions presented they could not have deferred action in this case beyond the year whether such decision had been rendered before or after the expiration of the year. If the Commissioner had decided the matter before the expiration of the year, action would have keen necessary before the end of that period and if he had decided it after such period petitioners could not successfully excuse inaction because the matter was not decided earlier.

The petition is denied.

CHURCHILL v. GOODWIN.

PATENT INTERFERENCE.

Decided February 10, 1908.

1. INTERFERENCE—PRELIMINARY STATEMENT—EXTENDING TIME FOR FILING.

Where the time for filing preliminary statements had been extended several months in view of the mental condition of one of the parties, *Held* that a motion for further extension was properly denied where the only showing in support of the motion is the affidavit of a physician stating that in his opinion the applicant will in a few months be sufficiently recovered to be reliable as to his recollection of past occurrences.

2. SAME—SAME—EQUITABLE ASSIGNEE.

An order permitting an alleged equitable assignee to file a preliminary statement will not be entered where the assignment is not of record and ample opportunity has been given to file a statement in accordance with Rule 131 and the failure to do so is not sufficiently excused.

APPEAL on motion.

ON PETITION.

LOCK FOR LOCKER-DOORS.

Messrs. Brown, Darby & Hopkins for Churchill.
Mr. Robert C. Mitchell for Goodwin.

MOORE, *Commissioner:*

This case comes up on an appeal by Churchill from a decision of the Examiner of Interferences denying his motion for thirty days for additional time in which to file his preliminary statement, and also upon a petition by Churchill that the Examiner of Interferences be instructed to allow the petitioner, who is alleged to be mentally incapacitated, sufficient time in which to have his case placed under the care of a legal representative, or that an order be entered permitting Churchill's equitable assignee of a half interest to make a preliminary statement in the latter's stead, and that in the latter event thirty days be allowed the assignee in which to file a preliminary statement.

It is noted that a paper purporting to be a preliminary statement by the alleged assignee was presented February 6, 1908.

The record shows that this interference was declared March 12, 1907, and the time for filing preliminary statements was originally fixed for April 9, 1907. Since that time seven motions for extensions of time for filing his preliminary statement have been granted to Churchill in view of certain affidavits by counsel and by the physician attending Churchill. In the last motion for extension, which was granted October 8, 1907, giving Churchill three months in which to file a preliminary statement, the Examiner of Interferences said:

> I am of the opinion that the affidavit sets forth the present incapacity of Churchill to make the statement with sufficient certainty to justify the extension now asked. It must be obvious, however, to counsel for Churchill that there must be some limit to the time in which the case of the opposing party in the interference can be tied up through Churchill's sickness. It is therefore advised that every reasonable effort be made to file a statement for Churchill in the time now allowed. No further extension of time will be granted except upon a satisfactory showing that this has been done.

The present motion is accompanied by an affidavit by the physician that Churchill is still mentally incapacitated for making a reliable statement as to past occurrences and that in the opinion of the deponent he will within a few months be sufficiently recovered to be reliable as to his recollection of past occurrences.

It is believed that the showing made in support of this motion is insufficient. It does not appear that there is any greater likelihood of obtaining the preliminary statement of the applicant within the period asked for than in any previous time, since the affidavit of the physician is substantially the same as his prior affidavits, nor does it appear that any effort has been made to have a legal representative appointed for the applicant at any time during the period of nine months which has already been allowed to Churchill to file his preliminary statement.

In view of these facts the decision of the Examiner of Interferences is affirmed.

The first prayer of the petition covers substantially the same ground as the appeal and is denied for the same reason.

In respect to the request that an order be entered permitting Churchill's equitable assignee of one-half interest to make the preliminary statement in Churchill's stead it may be said that this Office has no record of any assignment to the alleged assignee. No reason, therefore, appears for recognizing said party in this case. Ample opportunity has been given to the applicant and his assigns to present a preliminary statement in accordance with Rule 131, and the failure to do so is not sufficiently excused.

The petition is denied.

EX PARTE HAVANA-AMERICAN COMPANY.

APPLICATION FOR REGISTRATION OF TRADE-MARK.

Decided February 18, 1908.

TRADE-MARKS—PRACTICE—REGISTRATIONS UNDER THE INVALID ACT OF 1870 WILL BE DISREGARDED.

In view of the fact that notice of the application for registration of a trade-mark is published in the OFFICIAL GAZETTE and since the act of 1905 provides that any person who believes he will be damaged may file an opposition, *Held* that the burden should not be placed upon an applicant for registration to show the abandonment or non-use of a mark registered under the act of 1870, and that registration under the Invalid Act of 1870 should no longer be held a bar to the registration of a trade-mark.

ON APPEAL.

TRADE-MARK FOR CIGARS.

Messrs. Meyers, Cushman & Rea for the applicant.

BILLINGS, *Assistant Commissioner:*

This is an appeal from the Examiner of Trade-Marks refusing registration of trade-mark "Antonia Y Cleopatra" for cigars in view of the trade-mark registration of C. G. Peterson, No. 6,737, dated October 22, 1878.

This registration was effected under the act of 1870, which was declared invalid by the Supreme Court of the United States in *The Trade-Mark Cases*, 100 U. S. 82.

It is contended on behalf of the appellant that since this law was declared unconstitutional the registrations granted under the same are of no effect and that the reference cited in this case should therefore be withdrawn and registration granted to this applicant..

The Examiner of Trade-Marks refused registration of the applicant's mark upon the ground that Peterson's registration, while not *prima facie* evidence of ownership of the trade-mark in controversy, is evidence of a known mark, and that under the well-established practice it is incumbent upon the applicant, if he is to be granted registration, to overcome the known mark by the presentation of evidence by affidavit or otherwise showing that the mark is not in use or has been abandoned.

In the case of *ex parte Lyon, Dupuy & Co.* (C. D., 1884, 28, 33) the applicant sought to register the word "Triumphant" for wheat-flour, and registration was refused in view of a prior registration of Imbs, Meyer & Co., No. 3,472, dated February 29, 1876. In passing upon the question of the validity of the registration under the act of 1870 Acting Commissioner Dyrenforth said:

> The registration of Imbs, Meyer & Co. was complete under the law of 1870, and established not only title to the trade-mark in controversy, but that they had been using it for ten years. There is no pretense that that record does not disclose the exact truth. The point made is that the law under which that solemn act took place and the record of it was made up was unconstitutional, and, ergo, I must shut my eyes to what that record discloses. But the statute says that applicant shall not be entitled to registration of a trade-mark which is identical, or substantially identical, with the registered or known trade-mark of another. This record discloses to me that applicants are seeking to register substantially the known trade-mark of another—to wit, that of Imbs, Meyer & Co. It is true that these parties may have abandoned their trade-mark, but abandonment is not to be presumed. If it had become worthless, no other person would have sought to appropriate it, or that which is substantially identical with it.

This position has been generally adhered to by the Office since that time. In *ex parte Star Distillery Company* (119 O. G., 964) Commissioner Allen said in respect to registrations under the act of 1870 that—

> The act of 1870 was declared unconstitutional by the Supreme Court, and consequently registrations thereunder were invalid and furnished no protection to the parties securing them. They constitute publications, however, in which the registrants made public claim and affidavit to ownership of the marks disclosed therein. They made that claim, furthermore, before the present applicant entered the field and long before it made claim to ownership. While those registrations do not constitute legal *proof* of ownership, they constitute evidence, and it is believed that this Office is warranted in accepting it as making out a *prima facie* case until overcome in some way by the applicant.

The decision in *Schneider* v. *The Union Distilling Co.* (121 O. G., 1676) is to the same effect. Under these decisions it has been the practice of the Office to require an applicant to show by affidavit or otherwise a prior claim to the trade-mark sought to be registered or that the registrant under the act of 1870 has ceased to use the mark or has abandoned the same.

It is urged by the appellant that since registrations effected under the act of 1870 are invalid the burden should not be placed upon an applicant of overcoming such registrations; that either they should be disregarded or that an interference should be declared therewith in order that the applicant should not be put to the expense of procuring and presenting testimony which must from the very nature of the case be negative in its character and unconvincing.

The contention of the appellant is believed to be well founded. This position was recognized in *ex parte American Lead Pencil Company*, (C. D., 1892, 199,) in which case Commissioner Simonds said:

> The Examiner declines to institute the interference on the ground that the registrations under the act of 1870 are known to be null and void through the decision of the United States Supreme Court, and he declines to grant registration because, although the previous registration is void, yet it makes the trade-mark in question known to the Patent Office.
>
> Under such circumstances the proper and equitable thing seems to be to give the registrant under the act of 1870 opportunity to file an application under the existing act and become an interference contestant if that party so chooses.
>
> Notice will be issued to the registrant under the act of 1870 that an application for registry is pending with which the said registry would interfere if it were a registry under the existing act, and that sixty days will be allowed wherein such registrant may make application under the existing act with a view to interference.

By the procedure indicated in this decision it appears that the registrant was duly notified of the conflicting claim of the applicant and was given an opportunity to contest the same if he so desired. The burden in such case was not placed upon the applicant to present evidence of a negative character showing that the registrant had no valid title to his trade-mark.

The act of 1881 contained no provision for the notification of the public of the pendency of applications for registration of trade-marks. The act of 1905, however, provides in section 6 that if after examination—

> * * * it shall appear that the applicant is entitled to have his trade-mark registered under the provisions of this act, the Commissioner shall cause the mark to be published at least once in the OFFICIAL GAZETTE of the Patent Office.

This section further provides that—

> Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered etc.

It is clear that by this provision the public at large is notified of the pendency of an application for the registration of a trade-mark in the Patent Office, and any person who believes that he has a superior title to said mark has the right to delay registration of the mark by the interposition of a notice of opposition and finally prevent the registration should he succeed in establishing legal grounds for the refusal of the registration for which application was made.

Furthermore, section 13 of the act of 1905 provides—

That whenever any person shall deem himself injured by the registration of a trade-mark in the Patent Office he may at any time apply to the Commissioner of Patents to cancel the registration thereof.

In view of these provisions of the present Trade-Mark Act it is believed that registrants under the act of 1870, as well as parties who have no registration, are sufficiently advised of the presentation of the claim of an applicant for registration and that the burden is upon them, if they desire to contest the right to such registration, to either present an application for interference or to file notice of opposition, or if such time has elapsed that neither can be done the right of cancelation is adequate to protect their interests.

It is to be noted that after the Trade-Mark Act of 1870 was declared invalid registrants under that act had the right under the act of 1881 to register such marks as were used in commerce with foreign nations or with Indian tribes. By the act of February 20, 1905, the right to registration was extended to trade-marks used in interstate commerce. It is believed that where a registrant under the act of 1870 has not availed himself of the right to register his mark under the act of 1881 or under the provisions of the present act, which has already been in force for three years, the burden should not be placed upon another applicant for registration of the same mark or one resembling the same to present evidence to overcome a mark registered under the invalid act of 1870 as a prerequisite to registration of his mark.

As above stated, registrants under the act of 1870 are, by the publication of the mark sought to be registered, given notice of the applicant's claim, and ample remedies are provided for contesting the right of ownership of such mark. In view of these facts I am of the opinion that registrations under the invalid act of 1870 should no longer be held a bar to the registration of a trade-mark presented under the provisions of the act of 1905. The decisions in *ex parte Star Distillery Company* and in *Schneider* v. *The Union Distilling Co.*, *supra*, are overruled to the extent indicated.

The decision of the Examiner of Trade-Marks is reversed.

CORRESPONDENCE RELATIVE TO THE WORKING OF PATENTED INVENTIONS IN SWITZERLAND.

No. 117.]

AMERICAN LEGATION,
BERNE, SWITZERLAND, *January 31, 1908.*

Hon. ELIHU ROOT,
Secretary of State, Washington, D. C.

SIR: I have the honor to acknowledge the receipt of your Instruction No. 68, of January 3, 1908, File No. 1060-1, with inclosed copies of letters from William W. White, December 19, 1907, and from Acting Secretary of the Interior, December 27, 1907, authorizing me to inform the Swiss Government that under the patent laws of the United States no patent may be annulled for failure to put the invention covered thereby into practice, and by so doing to obtain, if possible, for American citizens reciprocal rights such as are mentioned in article 18, second paragraph, of the Federal Patent Law of June 21, 1907.

In compliance with your instructions, I, on the 17th instant, addressed a note on the subject to the President of the Swiss Confederation, an answer to which, granting the United States the reciprocal rights in question, has now been received by me.

A copy of my note of the 17th of January to the Swiss Government, as well as a copy, with translation, of the Swiss Government's reply thereto is inclosed herewith.

I have the honor to be, sir,

Your obedient servant,

BRUTUS J. CLAY,
American Minister.

AMERICAN LEGATION,
BERNE, *17th January, 1908.*

HIS EXCELLENCY, MR. BRENNER,
President of the Swiss Confederation, Berne.

SIR: Respectfully referring to the new Swiss Patent Law which became effective on December 1, 1907, and which, in its article 18, contains a provision for the annulment of patents for failure to utilize them adequately in Switzerland within three years, and also provides for the setting aside of such provision in favor of States granting reciprocal right, I have the honor to inform your Excellency that I am instructed by my Government to declare: "That under the patent laws of the United States no patent may be annulled for failure to put the invention covered thereby into practice."

In communicating to your Excellency the above declaration, I respectfully request that the reciprocal benefit referred to in article 18 of the new Swiss Patent Law be granted the citizens of the United States.

I take this occasion to renew to your Excellency the assurance of my highest consideration.

BRUTUS J. CLAY,
American Minister.

[Translation.]

BERNE, *28th January, 1908.*

MR. MINISTER: By a note of the 17th instant, your Excellency communicated to us a declaration from your Government stating that, according to the patent laws of the United States of America no patent may be annulled owing to the failure to put into practice a patented invention. In view of this declaration, we have the honor to inform you that, in accordance with article 18, second paragraph, of the Federal Patent Law of June 21, 1907, we declare the dispositions of the first paragraph of article 18 inapplicable as regards the United States of America, with the understanding that the execution of an invention in the United States is equivalent to its execution in Switzerland.

We are greatly obliged to your Excellency if you will inform your Government of this decision.

Please accept, Mr. Minister, etc., etc., etc.

In the name of the Swiss Federal Council,
The President of the Confederation:
BRENNER.
The Chancellor of the Confederation:
RINGIER.

His Excellency Mr. BRUTUS J. CLAY, *Envoy Extraordinary & Minister Plenipotentiary of the U. S. of A., Berne.*

Changes in Classification.

(ORDER No. 1,744.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., November 18, 1907.

The following changes in the classification of patents are hereby directed, to take effect this day:

In Division VIII, class 5, Beds, establish the following subclass:

Bedsteads—
Folding—
60. Berths and bunks.

In Division XXIV, class 128, Surgery, abolish subclass—
19. Nursing-bottles.

The patents contained therein to be transferred to a new subclass, hereinafter established.

In Division XXXVIII, class 215, Bottles and Jars, establish the following subclass:

Bottles—
117. Nursing.

E. B. MOORE,
Commissioner.

ISSUE OF FEBRUARY 25, 1908.

Patents	646	No. 879,845 to No. 880,490,	inclusive.
Designs	9	No. 39,155 to No. 39,163,	inclusive.
Trade-Marks	114	No. 67,848 to No. 67,961,	inclusive.
Labels	15	No. 14,055 to No. 14,069,	inclusive.
Prints	5	No. 2,226 to No. 2,230,	inclusive.
Reissues	2	No. 12,754 to No. 12,755,	inclusive.
Total	791		

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	4	.....	Montana	4	.....
Arizona Territory	1	.....	Nebraska	6	1
Arkansas	2	.....	New Hampshire	2	.....
California	29	5	New Jersey	30	8
Colorado	6	1	New York	84	28
Connecticut	12	3	North Carolina	3	1
Delaware	1	.....	North Dakota	6	.....
District of Columbia	9	.....	Ohio	35	14
Florida	1	.....	Oklahoma	8	1
Georgia	5	.....	Oregon	3	.....
Idaho	2	.....	Pennsylvania	58	9
Illinois	58	10	Rhode Island	6	1
Indiana	18	3	South Carolina	4	1
Iowa	10	1	South Dakota	2	.....
Kansas	11	.....	Tennessee	8	.....
Kentucky	3	.....	Texas	6	1
Louisiana	6	1	Utah	2	.....
Maine	7	4	Virginia	6	1
Maryland	1	1	Washington	7	1
Massachusetts	23	1	West Virginia	6	2
Michigan	24	5	Wisconsin	12	.....
Minnesota	12	1			
Mississippi	3	.....	Total to citizens of the United States	557	111
Missouri	11	6			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Austria-Hungary	3	1	Roumania	1	.....
Belgium	3	.....	Scotland	4	.....
British West Indies	.....	.....	Sweden	5	1
Canada	14	.....	Switzerland	4	.....
Denmark	1	.....	Transvaal, South Africa	2	.....
England	23	9	Victoria	1	.....
France	9	5	Western Australia	1	.....
Germany	22	6			
Ireland	1	.....			
New Zealand	4	.....	Total to citizens of foreign countries	98	23
Norway	.....	1			

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 17, 1908.

Jacob Balz, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The German-American Coffee Company, of 406 Greenwich street, New York, N. Y., for registration of a trade-mark and a trade-mark registered to Jacob Balz, of 102 Front street, New York, N. Y., and the notice of said declaration sent by registered mail to the said Jacob Balz having been returned undelivered, notice is hereby given to the said Jacob Balz, his assigns or legal representatives, that if he or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 13, 1908.

Thomas W. Farnsworth, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Kahn Mfg. Company, of No. 416 Dauphin street, Mobile, Ala., for registration of a trade-mark and a trade-mark registered to Thomas W. Farnsworth, of 81 Summer street, Boston, Mass., and the notice of said declaration sent by registered mail to the said Thomas W. Farnsworth having been returned undelivered, notice is hereby given to the said Thomas W. Farnsworth, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 13, 1908.

George Riggs, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The Old Bleach Linen Company, Limited, of Randalstown, Ireland, for registration of a trade-mark and a trade-mark registered to George Riggs, of Newark, N. J., and the notice of said declaration sent by registered mail to the said George Riggs has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to George Riggs, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 8, 1908.

Robert G. McCorkle & Company, their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of Charles Shaffner & Company, of Chicago, Ill., for registration of a trade-mark and a trade-mark registered to Robert G. McCorkle & Company, of Louisville, Ky., and it appears from the record of the case that the registrant, Robert G. McCorkle & Company, cannot be located.

Notice is therefore hereby given to said Robert G. McCorkle & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 8, 1908.

Mariano Sanz, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the applications of Bennett Sloan & Company, National Grocer Company, and Mariano Sanz for registration of a trade-mark, a letter having been received from the attorney of record for said Mariano

Sanz stating that he is informed and believes that Sanz is dead and that he cannot say whether or not there is a successor to the business, and the Office having been unable to obtain any communication from said Mariano Sanz, notice is hereby given to the said Mariano Sanz, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 8, 1908.

Thomas N. Dwyer, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of James E. Moroney, of Philadelphia, Pa., for registration of a trade-mark and a trade-mark registered to Thomas N. Dwyer, whose known address is 36 South William street, New York, N. Y., and it appears from the record of the case that the registrant, Thomas N. Dwyer, cannot be located.

Notice is therefore hereby given to said Thomas N. Dwyer, his assigns or legal representatives, that if they or any of them desire to contest said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 29, 1908.

Weber & Schillinger, their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The George Wiedemann Brewing Company, of Newport, Ky., for registration of a trade-mark and a trade-mark registered to Weber & Schillinger, of Louisville, Ky., and it appears from the record of the case that the registrant, Weber & Schillinger, cannot be located.

Notice is therefore hereby given to said Weber & Schillinger, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., Jan. 29, 1908.

Helen Ryan & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The A. Spiegel Company, of Milwaukee, Wis., for registration of a trade-mark and a trade-mark registered to Helen Ryan & Company, of 12 South Elliott place, borough of Brooklyn, New York, N. Y., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Helen Ryan & Company having been returned undelivered, notice is hereby given to the said Helen Ryan & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 22, 1908.

D. L. Wing & Company, their assigns or legal representatives take notice:

An interference having been declared by this Office between the application of J. F. Meyer & Sons' Milling Company, of 172-174 Laclede Bldg., St. Louis, Mo., for registration of a trade-mark and a trade-mark registered March 14, 1882, to D. L. Wing & Company, of St. Louis, Mo., and the notice of said declaration mailed by the Patent Office in the usual manner to the said D. L. Wing & Company having been returned undelivered, notice is hereby given to the said D. L. Wing & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notice of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner*

DEPARTMENT OF THE INTERIOR
UNITED STATES PATENT OFFICE,
Washington, D. C., January 23, 1908.

Joseph H. Brown, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of Kingan & Company, Limited, of Indianapolis, Ind., for registration of a trade-mark and a trade-mark registered to Joseph H. Brown, of Fort Worth, Tex., and a letter has been filed in the case by the attorney of record for said Brown stating that he is unable to locate his client.

Notice is therefore hereby given to said Joseph H. Brown, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 18, 1908.

The heirs, executor, or administrator of Siman Miyata, take notice:

An interference has been declared by this Office between an application of the Standard Import Company, Limited, of New Orleans, La., and an application of Siman Miyata, of West Orange, N. J., both for registration of a trade-mark, and a letter has been filed in the case from the attorney of record for said Miyata stating that Miyata has died.

Notice is therefore hereby given to the heirs, executor, or administrator of the said Siman Miyata that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

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DIGEST OF DECISIONS

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DIGEST OF DECISIONS.

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ABANDONMENT OF APPLICATIONS.

(See Interference, 13.)

DELAY NOT UNAVOIDABLE.

Where an applicant delays action on an application beyond the statutory period in order to prevent another party from securing access thereto by reason of its being the parent case of an application involved in interference with such party, *Held* that the failure to act was not unavoidable within the meaning of section 4894 of the Revised Statutes and that the application is abandoned. [*Ex parte* Dig and Fowler, Jr., 1837.]

ABANDONMENT OF INVENTION.

(See Interference, 13.)

ACT OF 1870.

(See Trade-Marks, 18.)

AGENT.

(See Payment of Final Fees, 2, 3; Reduction to Practice, 5.)

ALLEGATIONS.

(See Interference 1, 4; Reduction to Practice, 1, 2.)

ALTERNATIVENESS.

(See Claims; Interference, 1.)

AMENDMENTS.

(See Motion to Dissolve Interference, 2, 3.)

AMENDMENT TO PRELIMINARY STATEMENT.

(See Preliminary Statement, 1.)

APPEAL FROM FAVORABLE DECISION.

(See Interference, 7, 8.)

APPLICANT AND REGISTRANT.

(See Trade-Marks, 15.)

APPLICATIONS.

(See Abandonment of Application; Claims; Division of Applications; Examination of Applications; Payment of Final Fees; Trade-Marks.)

APPOINTMENT OF REPRESENTATIVE IN UNITED STATES.

(See Trade-Marks, 7.)

ASSIGNEES.

(See Preliminary Statement, 3; Priority of Invention, 6.)

ATTORNEYS.

(See Trade-Marks, 7.)

BAR TO REGISTRATION.

(See Trade-Marks, 18.)

CANCELATION OF TRADE-MARK REGISTRATION.

(See Trade-Marks, 3, 4, 5, 6.)

CLAIMS.

ALTERNATIVE EXPRESSIONS.

Alternative expressions in claims are not generally permitted; but where two terms are employed to designate a particular element, both of which terms describe the element correctly, the claim is not objectionable, as the alternativeness is of language rather than of structure. (*Ex parte Holder*, C. D., 1903, 442; 107 O. G., 833.) [Phillips *v.* Sensenich, 677.

CONCESSION OF PRIORITY.

(See Priority of Invention, 6.)

CONSTRUCTION OF RULES.

(See Interference, 7, 8, 10; Motion to Amend Applications; Motion to Dissolve Interference 1; Preliminary Statement, 3; Testimony, 1.)

CONSTRUCTION OF STATUTES.

(See Abandonment of Applications; Payment of Final Fees.)

CONSTRUCTION OF TRADE-MARK STATUTES.

(See Trade-Marks, 3, 4, 6, 7, 16, 17, 18.)

COURT OF APPEALS OF THE DISTRICT OF COLUMBIA.

APPEAL—REVIEW BY COURT OF CONCURRENT DECISIONS OF PATENT OFFICE TRIBUNALS.

To justify the court of appeals in reversing the concurrent decisions of the Patent Office tribunals on a conclusion of facts, plain error must be shown.

[*Ries *v.* Kirkegaard and Jebsen, 845.

CROSS-EXAMINATION.

(See Interference, 5.)

DECISIONS OF PATENT OFFICE TRIBUNALS.

(See Court of Appeals of the District of Columbia.)

DELAY IN FILING MOTIONS.

(See Motion to Amend Applications, 2; Motion to Dissolve Interference, 4, 5.)

DEPOSITION.

(See Testimony, 1.)

DESCRIPTIVE TERMS.

(See Trade-Marks, 1, 2, 6, 13, 14.)

DILIGENCE.

(See Interference, 11, 12; Preliminary Statement, 1; Priority of Invention, 3, 4.)

DIVISION OF APPLICATIONS.

REQUIREMENT OF—CURSORY EXAMINATION.
Where a requirement of division is made, the most pertinent references readily available should be cited in order that the applicant may be able to intelligibly divide his application.
[*Ex parte* Moorhead, 1586.

EARLIER DATES.

(See Reduction to Practice, 1; Testimony, 2.)

EMPLOYER AND EMPLOYEE.

(See Testimony, 3.)

EVIDENCE.

(See Interference, 5; Payment of Final Fees, 5, 6; Testimony, 3; Trade-Marks, 10, 11, 12, 15.)

INTERFERENCE—ORAL TESTIMONY.
Where witnesses have an independent recollection of events and the dates of their occurrence, the records of which are accessible to opposing counsel, it is unnecessary that documentary evidence be produced as a means of refreshing their recollection. [Ebersole *v.* Durkin, 842.

EXAMINATION OF APPLICATIONS.

(See Claims; Division of Applications.)

FINAL REJECTION—PREMATURE.
Where an Examiner finds it necessary to give reasons explaining the applicability of a reference, a final rejection should not be entered in the letter in which these reasons are stated for the first time. [*Ex parte* Jackson, 1324.

EXPERIMENTAL PROSECUTION.

(See Motion to Dissolve Interference, 3.)

FINAL FEES.

(See Payment of Final Fees.)

FIRST AND ORIGINAL INVENTOR.

(See Interference, 9.)

FORFEITED CASES.

(See Payment of Final Fees, 1, 3, 4.)

FORMER DECISIONS CITED.

(See Claims; Interference, 4; Trade-Marks, 10, 12.)

FORMER DECISIONS DISTINGUISHED.

(See Reduction to Practice, 5.)

HARDSHIP.

(See Motion to Dissolve Interference, 4.)

INTERFERENCE.

(See Evidence; Motion to Amend Application; Motion to Dissolve Interference; Preliminary Statement; Priority of Invention; Reduction to Practice; Supplemental Oath; Testimony; Trade-Marks, 8 10, 15.)

1. DISSOLUTION—MOTION ALTERNATIVE—INDEFINITE.
A motion to dissolve alleging that each of the counts of the issue is anticipated or necessarily limited, so as to prevent them from being read upon the devices of both of the parties in view of seven enumerated patents, is indefinite, because the allegation that the counts are anticipated or limited is in the alternative and the motion does not state which counts are to be urged as anticipated and which limited, nor does it state which of the patents are relied upon for anticipation and which for restriction.
[Murphy *v.* Borland, 231.

2. REDECLARED—MOTION TO DISSOLVE RELATING TO OLD AND NEW COUNTS.
A motion to dissolve filed after the redeclaration of an interference with additional counts directed to the old as well as the new counts *Held* to have been properly refused transmission so far as it related to the old counts, no showing being made why this part of the motion was not brought in the proper time.
[Id.

3. DISSOLUTION—MOTION COVERING TRANSMISSIBLE AND NON-TRANSMISSIBLE GROUNDS.
The fact that a statement of a ground for dissolution of an interference covers two sets of counts, as to one set of which it is proper to transmit the motion and as to the other of which transmission is improper, is not a sufficient reason for refusing transmission of the motion as a whole. The motion should be transmitted as to the set of counts which would be otherwise transmitted.
[Id.

4. SAME—MOTION ALLEGING BAR OF PRIOR KNOWLEDGE AND USE.
A motion to dissolve alleging the bar of prior knowledge and use should not be transmitted. (*Thomson and Unbehend* v. *Hisley*, 66 O. G., 1596; *Davis* v. *Swift*, 96 O. G., 2409; *Shrum* v. *Baumgarten*, 104 O. G., 577; *Cory et al.* v. *Blakey*, 115 O. G., 1328.)
[Id.

5. EVIDENCE—CROSS-EXAMINATION OF PARTY TO PROCEEDING—RANGE ALLOWABLE.
Where a party to an interference, relying upon certain specified installations as a reduction to practice, is asked upon cross-examination whether any other installations had been made, the question should be answered, as a wider range is allowable in the cross-examination of a party to the proceeding; but if such general questions were followed up by further questions clearly showing an intention to elicit information relating to the business of such party irrelevant to the questions at issue the witness might well refuse to answer under the advice of counsel.
[*Jansson *v.* Larsson, 477.

6. APPEAL ON PRIORITY—SUPERVISORY AUTHORITY OF COMMISSIONER.
A petition to dismiss an appeal from a decision of the Examiner of Interferences on priority rendered on the record will not be considered by the Commissioner in the exercise of his supervisory authority since petitioner has adequate remedies provided by the rules. [Brown *v.* Gammeter, 679.

7. PRACTICE—RULE 109.
No appeal lies from a favorable decision rendered on a motion to amend under Rule 109 whether rendered by the Examiner or the Examiners-in-Chief. [Josleyn *v.* Hulse, 844.

8. SAME—RULE 130.
The fact that a party cannot under the provisions of Rule 109 bring a motion to dissolve as to counts added to the issue of the interference will not of itself prevent him from urging under the provisions of Rule 130 the right of his opponent to make the claims. [Id.

9. ORIGINALITY—ACTS INCONSISTENT WITH CLAIM TO ORIGINATION.
Where R., who was a patent solicitor, familiar with the patent law, both as inventor and solicitor, entered into a contract with K. and J., joint claimants of the invention in issue, according to the terms of which he was to attempt the sale of the invention and if he was successful he was to have one-third of the proceeds, *Held* to constitute a substantial acknowledgment that the invention was made by K. and J.
[*Ries *v.* Kirkegaard and Jebsen, 845.

10. RULE 109—APPEAL.
Where an Examiner rejects claims presented by a party for interference under Rule 109, he should set a limit of appeal from his decision whether the claims had been allowed to the other party or had been made for the first time by the moving party.
[Mattice *v.* Langworthy, 1073.

11. PRIORITY—DILIGENCE.
Where McA. conceived the invention in the summer of 1903, but did practically nothing toward reduction to practice until April 21, 1904, when he wrote to his patent attorney instructing him to file an application, which was prepared promptly and sent to McA., but was not filed until September 19, 1904, *Held* that he was not diligent as against M., who entered the field on March 1, 1904. [McArthur *v.* Mygatt, 1585.

12. SAME—SAME—ALLEGED POVERTY.
A claim by McA. of poverty as an excuse for failure to reduce to practice is not sustained by evidence showing that it was not until six months after his business was established that he could afford to move from a place for which the rental was eleven dollars per month to a place for which the rental was thirty-five dollars per month, where it appeared that the old place was retained and business carried on at both places for about three months before his opponent entered the field; nor does the fact that he sustained a financial loss by the peculation of an employee affect the question where such loss occurred some months after the beginning of the period to be covered by the showing.
[Id.

13. ABANDONMENT OF INVENTION—NOT CONSIDERED ON PETITION.
A petition that a rule be issued against an opposing party to show cause why it should not be held that he has abandoned his invention and that petitioner be permitted to offer testimony upon such question will not be entertained under the Commissioner's supervisory authority where petitioner has other remedies and is, in fact, pursuing another remedy before the Examiner of Interferences. [Barber *v.* Wood, 1588.

INVENTION.

(See Priority of Invention.)

LIMIT OF APPEAL.

(See Interference, 10; Motion to Dissolve Interference, 2.)

LIMIT OF TIME.

(See Motion to Amend Applications; Motion to Dissolve Interference, 1; Preliminary Statement, 2.)

MOTION TO AMEND APPLICATIONS.

(See Interference, 7, 8.)

1. INTERFERENCE—MOTIONS UNDER RULE 109—PRACTICE.
Where a motion to amend under Rule 109 by the addition of two claims was transmitted, the Primary Examiner properly refused to consider two other claims presented for the first time at the hearing of the motion. [Mattice *v.* Langworthy, 678.

2. SAME—SAME—DELAY IN BRINGING.
A motion to amend under Rule 109 brought after the thirty days allowed by the rules and accompanied by no excuse for the delay is entitled to no consideration and should not be transmitted.
[Id.

MOTION TO DISSOLVE INTERFERENCE.

(See Interference, 1, 2, 3, 8; Trade-Marks, 9.)

1. TIME FOR BRINGING.
A party may under Rule 122 wait till the thirtieth day after the approval of the preliminary statements to bring a motion to dissolve; but if he brings it before the thirtieth day he waives his right to the remainder of the period.
[Rockstroh *v.* Warnock, 234.

2. AMENDED MOTION—TRANSMISSION.
Where a party acting in good faith, files a motion which is held to be indefinite and an amended motion curing the informalities is promptly filed within the limit of appeal set from the previous decision, the amended motion should be transmitted. [Id.

3 SAME—EXPERIMENTAL PROSECUTION.
A party cannot be permitted to prosecute a case experimentally, and where the amended motion does not cure the informalities pointed out in the first decision a third motion is entitled to no consideration. [Id.

4. DELAY IN FILING—TRANSMISSION.
A delay of seven weeks in the filing of a motion to dissolve will not be excused on a showing that counsel called applicant's attention to the advisability of filing the motion, that it was applicant's intention to visit Washington for the purpose of consulting his attorney regarding the motion, but that before a meeting could be arranged business of great importance called him to other places, especially in view of a vigorous protest by the opposing party against delay and a showing that such delay would result in hardship to him. [Blackmore *v.* Hall, 1587.

5. SAME—SAME.
The fact that an appeal had been taken from a decision refusing to transmit a former motion to dissolve and that applicant was awaiting a decision thereon *Held* insufficient to excuse delay in bringing a second motion.
[Papendell *v.* Bunnell *v.* Reizenstein *v.* Gaisman *v.* Gillette, 1837.

MOTION TO SUPPRESS EVIDENCE.

(See Trade-Marks, 10.)

OPPOSITION TO REGISTRATION.

(See Trade-Marks, 16, 17, 18.)

ORAL TESTIMONY.

(See Evidence.)

OWNERSHIP.

(See Trade-Marks, 11.)

PAYMENT OF FINAL FEES.

1. FINAL FEE—DELAY IN FILING—NOT ACCEPTED.
A final fee which was inclosed in a letter registered at a substation of the post-office of Washington, D. C., at about half-past ten o'clock of the last day for payment, but which was not delivered to the Office until the second day thereafter because of an intervening holiday, will not be accepted and applied, as it was filed outside of the period fixed by law.
[*Ex parte* Dempsey, 1072.

2. POSTAL AUTHORITIES AGENTS OF SENDER.
The postal authorities are the agents of the sender and not of the Patent Office, and a delay by them must be charged to the principal. [Id.

3. FINAL FEE RECEIVED LATE—CONSIDERATION OF METHODS OF DELIVERING MAIL.
A final fee which is filed too late cannot be received on the ground that if the post-office instead of an agent of the Patent Office had delivered the same or if the agent of the Patent Office had called at the post-office late in the day instead of the middle thereof the fee would have reached the Patent Office in time. The Patent Office is required to send for its mail, and it cannot control this matter, and experience has shown that it is necessary to the security of those having business with the Office and is most convenient to the Office and the public to collect the registered mail shortly after midday, and no good reason is seen for departing from the practice. [Id.

4. SAME—DELAY IN FILING—NOT ACCEPTED.
A final fee which was inclosed in a letter registered at a substation of the post-office of Washington, D. C., on the last day allowed for payment thereof and which reached the city post-office at about 2.30 p. m. of said day, but was not delivered to the Patent Office until the second day thereafter because of an intervening holiday, should not be accepted and applied, as it was filed outside of the period fixed by law.
[†*In re* Dempsey, 1074.

5. SAME—CONSTRUCTIVE DELIVERY TO PATENT OFFICE—EVIDENCE.
The contention that a final fee which was placed in a receptacle set apart for the Patent Office by the city post-office on the last day allowed for payment is constructively a delivery to the Patent Office has no basis in the absence of proof that the fee was so set apart. [†Id.

6. EVIDENCE—RECORD OF POST-OFFICE CONCLUSIVE.
The records of the city post-office as to the time when a registered package was placed in a receptacle set apart for the use of the Patent Office will be accepted as conclusive. [†Id.

PETITION TO THE COMMISSIONER.

(See Interference, 6, 13.)

POVERTY.

(See Interference, 12.)

PRELIMINARY STATEMENT.

(See Reduction to Practice, 1, 2; Testimony, 2.)

1. AMENDMENT AFTER TESTIMONY TAKEN.
Where a party gave notice at the conclusion of the taking of his testimony that he proposed to bring a motion to amend his preliminary statement to conform to his proofs, but failed to bring the motion until after the testimony of the opposing party was taken and filed, although the error to be corrected by such amendment was known to him at least two months before notice of the proposed amendment was given, *Held* that amendment will not be permitted, as no excuse is offered for the delay, and it does not appear that the evidence on which the motion was based was not accessible or would not have been discovered before preparing the original statement had proper care and diligence been exercised. [Green *v.* Farley, 235.

2. EXTENDING TIME FOR FILING.
Where the time for filing preliminary statements had been extended several months in view of the mental condition of one of the parties, *Held* that a motion for further extension was properly denied where the only showing in support of the motion is the affidavit of a physician stating that in his opinion the applicant will in a few months be sufficiently recovered to be reliable as to his recollection of past occurrences.
[Churchill *v.* Goodwin, 1836.

3. SAME—EQUITABLE ASSIGNEE.
An order permitting an alleged equitable assignee to file a preliminary statement will not be entered where the assignment is not of record and ample opportunity has been given to file a statement in accordance with Rule 131 and the failure to do so is not sufficiently excused. [Id.

PRIOR USE.

(See Interference, 4.)

PRIORITY OF ADOPTION AND USE.

(See Trade-Marks, 15.)

PRIORITY OF INVENTION.

(See Interference, 6, 11, 12; Supplemental Oath.)

1. DECISION ON—TESTIMONY AS TO PUBLIC USE.
Where after a decision on priority in favor of G. has become final public-use proceedings are instituted in view of a protest of W. and O., the decision on priority will not be set aside in view of the testimony taken in that proceeding.
[*Ex parte* Wenzelmann and Overholt, 232.

2. INTERFERENCE AND PUBLIC-USE PROCEEDINGS—MATTERS AT ISSUE DIFFERENT.
The matters at issue in an interference and in public-use proceedings are different, and the testimony taken in the latter cannot be held conclusive of the question of priority of invention.
[Id.

3. LACK OF DILIGENCE.
Evidence held to show that B., while the first to conceive the invention in issue, was the last to reduce to practice and was not exercising diligence at the time H. entered the field and subsequently thereto and priority properly awarded to H.
[Hamm v. Black, 841.

4. SAME—WORK ON OTHER INVENTIONS.
Where an inventor has a conception of a device which can be put to practical use upon devices existing in the art, delay in reducing the invention to practice for the purpose of perfecting other inventions to be used in connection therewith cannot be considered as an exercise of due diligence where another has in the meantime entered the field and reduced the invention to practice.
[Id.

5. INVENTION BY THIRD PARTY.
The question whether a third party not involved in an interference is the real inventor of the subject-matter in issue is not pertinent to the question of priority of invention.
[Id.

6. CONCESSION—SIGNATURE OF APPLICANT NECESSARY.
A concession of priority should be signed by the applicant, if living, or, if not, by his executor or administrator, even though both the applications involved in the interference are assigned to the same party.
[Alt v. Carpenter, 1587.

PROOF.

(See Reduction to Practice, 1, 2.)

PUBLIC-USE PROCEEDINGS.

(See Priority of Invention, 1, 2.)

REBUTTAL TESTIMONY.

(See Testimony, 1, 2; Trade-Marks, 5.)

REDUCTION TO PRACTICE.

(See Evidence, 1; Interference, 11; Priority of Invention, 3, 4.)

1. INTERFERENCE—PROOFS RESTRICTED BY ALLEGATIONS OF PRELIMINARY STATEMENT.
Where the preliminary statement of a party alleges reduction to practice in January, 1905, evidence showing the construction of an alleged model in 1895 cannot be accepted as proving an earlier date of reduction to practice.
[Phillips v. Sensenich, 677.

2. SAME—ISSUE—CONSTRUCTION.
The terms of an interference issue will not be given a strained or unnatural meaning or be construed to refer to something not disclosed by either party in order to include within the issue an early device made by one of the parties.
[Id.

3. SAME—EVIDENCE.
The statement of witnesses who were thoroughly familiar with the construction of a device that it operated successfully *Held* sufficient to establish a successful test where the operation of the deivce is easily understood and the device itself is in evidence and found to satisfactorily perform the intended functions.
[Ebersole v. Durkin, 842.

4. SAME—CHARACTER OF TESTS.
Where devices of the kind involved were well understood and the only point to be determined by a test was whether upon the operation of the controller-handle the dog which was attached thereto would move in the way stated, *Held* that it was not necessary that a test be performed under conditions of actual service in order to establish a reduction to practice.
[Id.

5. SAME—AGENT.
An inventor conceived an invention and embodied it in a model which was submitted to the company that controlled the sale of the machine for which the improvement was designed, but the company refused to purchase the invention and returned the model to the inventor. An officer of such company disclosed it to the foreman of the factory of a subsidiary corporation, who set about adapting it to the machine made by them for the parent company, and a completed machine was built embodying such invention. *Held* that such reduction to practice does not inure to the inventor, as such companies were not acting as the inventor's agents, and the fact that they subsequently purchased and procured an assignment of the invention does not affect the question. (*Hunter* v. *Stikeman*, 85 O. G., 610; 13 App. D. C., 214, 226; *Robinson* v. *McCormick*, 128 O. G., 3289; 29 App. D. C., 98, 111; *Shuman* v. *Beall*, 123 O. G., 1664; 27 App. D. C., 324, 328, distinguished.) [*Howell, Jr., v. Hess, 1074.

REFERENCES.

(See Division of Applications; Examination of Applications.)

REGISTRABILITY.

(See Trade-Marks, 1, 2.)

REGISTRATION.

(See Trade-Marks, 13, 14, 17, 18.)

REJECTION OF CLAIMS.

(See Examination of Applications.)

SUPERVISORY AUTHORITY OF THE COMMISSIONER OF PATENTS.

(See Interference, 6, 13; Trade-Marks, 9, 10.)

SUPPLEMENTAL OATH.

EX PARTE MATTER.
The question whether or not a supplemental oath should be required has been uniformly held by the Office to be an *ex parte* matter upon which the propet determination of priority is not dependent, and the absence of such an oath furnishes no ground for holding that the issue is not patentable to the party in whose case the same is required.
[Phillips v. Sensenich, 677.

TESTIMONY.

(See Evidence; Priority of Invention, 1, 2; Trade-Marks, 5.)

1. INTERFERENCE—SUPPRESSION.
Testimony should not be suppressed on account of the failure of a witness to read his deposition before signing the same where it does not appear that such notice was given to the opposite party, as is required by Rule 159.
[Rhodes v. Rhodes, 680.

2. SAME—REBUTTAL.
When G., the junior party, alleges in his preliminary statement disclosure to others in 1904 and neither he nor his witness, M., in his testimony-in-chief, refers to an earlier disclosure, *Held* that the testimony of M. in rebuttal that G. disclosed the invention to him in 1903 is not to be given credence.
[Gould v. Barnard, 1071.

3. SAME—ORIGINALITY—EMPLOYER AND EMPLOYEE.
Evidence considered and *Held* to show that B. originated the invention and that no such relation of employer and employee was shown to exist as would cause the invention to inure to the benefit of G.
[Id.

TESTS.

(See Reduction to Practice, 3, 4.)

TRADE-MARKS.

1. DESCRIPTIVE—NOT REGISTRABLE.
A word or phrase which is not descriptive of the ingredients or characteristics of an article of merchandise to which it is applied is not registrable if it is descriptive of the uses to which the same may be put.
[*Ex parte* The Cobb Manufacturing Company, 233.

2. "SILVER DIP"—DESCRIPTIVE.
The words "Silver Dip" as a trade-mark for a preparation in which silver articles may be dipped or immersed for the purpose of cleaning them is descriptive, and hence not registrable.
[Id.

3. CANCELATION—SHOWING THAT REGISTRANT WAS NOT THE SOLE USER INSUFFICIENT.
Where a mark was registered under the "ten-years" clause of section 5 of the Trade-Mark Act of 1905, a showing that the registrant was not the sole user of the mark during the ten years next preceding the passage of that act is not sufficient to justify the cancelation of the mark.
[Whittemore Bros. & Co. v. C. L. Hauthaway & Sons, Incorporated, 233.

4. SAME—"EXCLUSIVE USE."
The phrase "exclusive use" in the "ten-years" clause of section 5 of the act of 1905 does not mean "sole use," but the right to exclude others from using.
[Id.

5. SAME—TESTIMONY IMPROPER REBUTTAL.
Testimony tending to show use of the mark in issue by parties other than the parties to the controversy *Held* to be improper rebuttal.
[Id.

6. SAME—USE OF DESCRIPTIVE TERM.
Where the registrant has shown exclusive use of the word "Hauthaway's" for ten years next preceding the passage of the act of 1905, *Held* that it is entitled to register the mark "Hauthaway's Lynn Burnishing Ink" even if the term "Lynn Burnishing Ink" has become the name of an article of commerce.
[Id.

7. APPOINTMENT OF REPRESENTATIVE IN UNITED STATES.
The appointment of a representative in the United States required by section 3 of the Trade-Mark Act of 1905 must be made by the applicant for registration. Authority to appoint such representative may not be delegated to an attorney.
[*Ex parte* E. Wertheimer & Cie., 679.

8. INTERFERENCE IN FACT.
An interference in fact exists between the words "Boraxine" and "Boraxaid," since they look alike and sound alike.
[Larkin Company v. Pacific Coast Borax Company, 679.

9. MOTION TO DISSOLVE—PRACTICE.
Questions cannot be urged on appeal which have not been raised in the motion and passed on below except under circumstances which would warrant supervisory action being taken.
[Id.

10. INTERFERENCE—MOTION TO SUPPRESS EVIDENCE—APPEAL NOT ENTERTAINED BEFORE FINAL HEARING.
Where upon motion to suppress evidence on the ground that it is irrelevant the Examiner of Interferences postpones consideration of the question until final hearing, his decision will not be reviewed and reversed upon appeal prior to final hearing except in a clear case of abuse of discretion. (*Royce* v. *Kempshall*, 119 O. G., 338.)
[Greene, Tweed & Co. v. Manufacturers' Belt Hook Co., 680.

11. TRADE-MARK USE—EVIDENCE.
That a particular brand of cards was known to the trade as "Stage" cards does not prove use of the name "Stage" as a trade-mark to indicate origin and ownership.
[*United States Playing Card Co. v. C. M. Clark Publishing Co., 681.

12. ADDITIONAL MARK USED AS A TRADE-MARK.
Evidence considered and held to show that the ace of spades bearing a conventional figure of Columbia was adopted, used, and advertised as a trade-mark for playing-cards and that the word "Stage" was used in addition thereto merely for the purpose of indicating style, class, and grade. (*Manufacturing Co.* v. *Trainer*, 17 O. G., 1217; 101 U. S., 51, 54; *Columbia Mill Co.* v. *Alcorn*, 65 O. G., 1916; 150 U. S., 460, 463; *Burton* v. *Stratton*, 12 Fed. Rep., 676, 700.)
[*Id.

13. "NEVERFAIL"—DESCRIPTIVE.
The word "Neverfail" as a trade-mark for stock and poultry food properly refused registration, since it is descriptive of the character or quality of the goods to which it is applied.
[*Ex parte* Empire Grain & Elevator Co., 844.

14. "NUTTY CORN"—DESCRIPTIVE.
The words "Nutty Corn" held to be descriptive of a mixture of candied nuts, corn, and cocoanut and registration of the same properly refused. *Ex parte* C. Shenkberg Co., 1073.

15. INTERFERENCE—APPLICANT AND REGISTRANT.
Where in an interference between an applicant and a registrant the latter takes no testimony and the former establishes a date of adoption and use prior to the date of registration, it is unnecessary to consider whether there is an interference in fact or whether the testimony shows actual conflict in trade.
[Dunlevy & Brother v. Nelson Morris & Co., 1588.

16. OPPOSITION—SUFFICIENCY OF PROOF TO NEGATIVE EXCLUSIVE USE.
In a trade-mark opposition proceeding opposing registration of a mark under the "ten-year" proviso of section 5 of the Trade-Mark Act proof of contemporaneous use by the opposer after the passage of the act is not sufficient to negative the "exclusive" use required by the statute. In order to negative exclusive use, contemporaneous use within the ten years next preceding the passage of the act must be shown.
[Oswego Maize Products Company v. National Starch Company, 1589.

17. SAME—GROUNDS FOR REFUSING REGISTRATION.
While the statute provides that any one who believes he would be damaged by the registration of a mark may oppose registration of the same, registration cannot be refused by the Office unless the opposer shows that the mark does not come within the registrable marks specified in section 5 of the Trade-Mark Act.
[Id.

18. PRACTICE—REGISTRATIONS UNDER THE INVALID ACT OF 1870 WILL BE DISREGARDED.
In view of the fact that notice of the application for registration of a trade-mark is published in the OFFICIAL GAZETTE and since the act of 1905 provides that any person who believes he will be damaged may file an opposition, *Held* that the burden should not be placed upon an applicant for registration to show the abandonment or non-use of a mark registered under the act of 1870, and that registration under the Invalid Act of 1870 should no longer be held a bar to the registration of a trade-mark.
Ex parte Havana-American Company, 1839.

TRANSMISSION OF MOTIONS.

(See Interference, 1, 2, 3; Motion to Amend Application; Motion to Dissolve Interference, 2, 4, 5.)

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF JANUARY, 1908.

[Abbreviations: "Sp."=Monthly Volume of Specifications; "Dr."=Monthly Volume of Drawings; "Gaz."=Official Gazette.]

A. Schrader's Son. (See Schweinert and Kraft, assignors.)
Abendroth Brothers. (See Haskins, E. O., assignor.)
Abrahamson, M. A., Copenhagen, Denmark. Fire-alarm system. No. 876,512; Jan. 14; Sp. p. 1676; Dr. pp. 365-6; Gaz. vol. 132; p. 305.
Abrams, F., and W. A. Doyle, Minden, Nebr. Wagon-tongue supporter. No. 876,760; Jan. 14; Sp. p. 2187; Dr. p. 480; Gaz. vol. 132; p. 388.
Absolute Disinfecting Company. (See Goodhue and Henry, assignors.)
Acheson, E. G., Stamford township, Welland county, Ontario, Canada. Disintegrating graphite. No. 875,881; Jan. 7; Sp. p. 379; Dr. p. 83; Gaz. vol. 132; p. 70.
Acheson, J. M., Portland, Oreg. Display-cabinet. No. 877,751; Jan. 28; Sp. p. 4218; Dr. pp. 914-15; Gaz. vol. 132; p. 774.
Ackerman, E. S., assignor of one-half to W. E. Cunningham, Cleveland, Ohio. Vehicle-brake. No. 877,031; Jan. 21; Sp. p. 2778; Dr. p. 601; Gaz. vol. 132; p. 519.
Acme Door and Glass Company. (See Stockwell, M. E., assignor.)
Acme Manufacturing Company. (See Hachmann and Ericksen, assignors.)
Adams, A. H., Antwerp, Belgium, assignor to Western Electric Company, Chicago, Ill. Designation-plug for telephone-switch-boards. No. 875,882; Jan. 7; Sp. p. 380; Dr. p. 84; Gaz. vol. 132; p. 70.
Adams, F. E., Boston, Mass., and C. W. Kragh, Madison, Wis., assignors to Coffin Valve Company. Device for indicating the position of water or sluice gate valves. No. 876,423; Jan. 14; Sp. p. 1486; Dr. pp. 319-20; Gaz. vol. 132; p. 274.
Adams, G. A., *et al.* (See Crepar, T. M., assignor.)
Adams, H. W., assignor of one-half to P. W. Farnham, Fargo, N. D. Internal-combustion engine. No. 877,818; Jan. 28; Sp. p. 4326; Dr. p. 940; Gaz. vol. 132; p. 795.
Adams, P. O., Cameron, Tex. Rail-joint. No. 877,279; Jan. 21; Sp. p. 3288; Dr. p. 711; Gaz. vol. 132; p. 602.
Adamson, F. M. (See Miller and Adamson.)
Adt, L. F., Troy, N. Y. Lens-mount for eyeglasses. No. 875,883; Jan. 7; Sp. p. 381; Dr. p. 84; Gaz. vol. 132; p. 70.
Adt, L. F., Troy, N. Y. Nose-guard for eyeglasses. No. 877,625; Jan. 28; Sp. p. 3989; Dr. p. 862; Gaz. vol. 132; p. 735.
Adt, L. F., Albany, N. Y. Mounting. No. 877,626; Jan. 28; Sp. p. 3992; Dr. p. 862; Gaz. vol. 132; p. 735.
Aermotor Company. (See Scholes, D. R., assignor.)
Agnew, L. P., Wapanucka, Okla. Baling-press. No. 877,819; Jan. 28; Sp. p. 4330; Dr. pp. 940-1; Gaz. vol. 132; p. 795.
Aiken, H., Pittsburg, Pa. Truck side frame. No. 877,280; Jan. 21; Sp. p. 3290; Dr. pp. 711-12; Gaz. vol. 132; p. 603.
Ajax Valve Company. (See Ricksecker, A. C., Jr., assignor.)
Akers, M. K. (See Brooks and Akers.)
Albers, J. B., Los Angeles, Cal. Ore-crushing machine. No. 876,892; Jan. 14; Sp. p. 2447; Dr. p. 533; Gaz. vol. 132; p. 431.
Albrecht, J. J., Syracuse, N. Y. Combination-tool. No. 876,675; Jan. 14; Sp. p. 2038; Dr. p. 444; Gaz. vol. 132; p. 362.
Albright, W. L. (See Couper and Albright.)
Alderson, J. W., San Francisco, Cal. Eye-shade. No. 876,676; Jan. 14; Sp. p. 2039; Dr. p. 445; Gaz. vol. 132; p. 362.
Alexander, J. S., New York, N. Y. Railway and other ticket. No. 875,765; Jan. 7; Sp. p. 168; Dr. pp. 36-7; Gaz. vol. 132; p. 33.
Alexanderson, E. F. W., Schenectady, N. Y., assignor to General Electric Company. Starting motor-converter. No. 876,923; Jan. 21; Sp. p. 2529; Dr. p. 553; Gaz. vol. 132; p. 481.
Alexanderson, E. F. W., Schenectady, N. Y., assignor to General Electric Company. Compensated motor. No. 876,924; Jan. 21; Sp. p. 2530; Dr. p. 553; Gaz. vol. 132; p. 481.
Allen, A. J., St. Joseph, Mo. Wheel-block. No. 876,424; Jan. 14; Sp. p. 1488; Dr. p. 320; Gaz. vol. 132; p. 274.
Allen, D. W., Osakis, Minn. Thill-coupling. No. 877,281; Jan. 21; Sp. p. 3291; Dr. p. 712; Gaz. vol. 132; p. 603.
Allen, F. R., Passaic, N. J. Vehicle attachment. No. 875,766; Jan. 7; Sp. p. 171; Dr. p. 37; Gaz. vol. 132; p. 33.
Allen, W. G., assignor to Globe Screw Company, Hartford, Conn. Manufacture of wood-screws. No. 877,157; Jan. 21; Sp. p. 3033; Dr. p. 657; Gaz. vol. 132; p. 561.
Allen, W. H., and W. J. Weaver, assignors to Detroit White Lead Works, Detroit, Mich. Substance for removing varnish or paint. No. 876,251; Jan. 7; Sp. p. 1362; Gaz. vol. 132; p. 185.
Allen, W. R., *et al.* (See Brown and Cardoza, assignors.)
Alling, F. H., New Haven, Conn., assignor to Pollard-Alling Manufacturing Company, New York, N. Y. Clutch for reliefographs. No. 875,679; Jan. 7; Sp. p. 1; Dr. p. 1; Gaz. vol. 132; p. 3.
Allis-Chalmers Company *et al.* (See Cheney, H. W., assignor.)
Allis-Chalmers Company *et al.* (See Schley, G. B., assignor.)
Allison, J. W. (See Meyer, A., assignor.)
Althen, W. C., assignor of one-sixth to W. F. Miesse, one-sixth to W. N. Gearhart, one-sixth to B. F. Hirt, and one-fourth to J. T. Dunnick, Columbus, Ohio. Wire-retrieving attachment for trolley-wheels. No. 877,877; Jan. 28; Sp. p. 4442; Dr. p. 968; Gaz. vol. 132; p. 814.
Amborn, G., New York, assignor to J. H. Williams & Co., Brooklyn, N. Y. Chain pipe-wrench. No. 876,925; Jan. 21; Sp. p. 2532; Dr. p. 553; Gaz. vol. 132; p. 481.
Amborn, G., New York, assignor to J. H. Williams & Co., Brooklyn, N. Y. Chain pipe-wrench. No. 876,926; Jan. 21; Sp. p. 2534; Dr. p. 554; Gaz. vol. 132; p. 482.
Amborn, G., New York, assignor to J. H. Williams & Co., Brooklyn, N. Y. Chain pipe-wrench. No. 876,927; Jan. 21; Sp. p. 2536; Dr. p. 554; Gaz. vol. 132; p. 482.
American Can Company. (See Rudolphi, F., assignor.)
American Can Company. (See Tevander, S., assignor.)
American Can Company. (See Townsend, C. P., assignor.)
American Car & Foundry Company. (See Ostrander, A. E., assignor.)
American Chemical Manufacturing & Mining Company. (See La May, F. B., assignor.)
American Coin Register Company. (See Powell and Ellis, assignors.)
American Combustion Company. (See Stringham and Elmendorf, assignors.)
American Cutlery Company. (See Blessing, J. G., assignor.)
American Flange Frog and Railway Improvement Company. (See Graham, J. E., assignor.)
American Graphophone Company. (See Macdonald, T. H., assignor.)
American Locomotive Company. (See Sague and Cole, assignors.)
American Pad & Textile Co. (See McClain, E. L., assignor.)
American Pulley Company. (See Brinley, C. A., assignor.)
American Sheet & Tin Plate Company. (See Bray, C. W., assignor.)
American Ship Windlass Company. (See Bryant, E. B., assignor.)
American Silver Company. (See Trewhella, C. E., assignor.)
American Sintering Company. (See Bergquist, J. G., assignor.)
American Steam Gauge & Valve Manufacturing Company. (See Jerauld, W. E., assignor.)
American Steel Foundries. (See Floyd, G. G., assignor.)
American Steel Foundries. (See Houser, J. W., assignor.)
American Tobacco Company. (See Campbell, D. J., assignor.)

Ammerman, W. M., assignor to E. J. Toof, New Haven, Conn. Tuck-marking attachment for sewing-machines. No. 877,475; Jan. 28; Sp. p. 3061; Dr. p. 794; Gaz. vol. 132; p. 685.
Anderson, A. L. (See Anderson, T. J. and A. L.)
Anderson, C., Rock Island, Ill. Corn-planter. No. 877,693; Jan. 28; Sp. p. 4116; Dr. p. 891; Gaz. vol. 132; p. 757.
Anderson, C. R. (See Farnum and Anderson.)
Anderson, C. S., Columbus, Ohio. Stamp. No. 876,677; Jan. 14; Sp. p. 2040; Dr. p. 445; Gaz. vol. 132; p. 362.
Anderson, E. J., and S. Hanson, Houston, Minn. Pipe-lifter. No. 877,282; Jan. 21; Sp. p. 3292; Dr. p. 712; Gaz. vol. 132; p. 603.
Anderson, J., *et al.* (See Norstrom, N. E., assignor.)
Anderson, O., Kearny, N. J. Centrifugal cream-separator. No. 877,158; Jan. 21; Sp. p. 3038; Dr. pp. 657–8; Gaz. vol. 132; p. 561.
Anderson, T. J. and A. L., Rockdale, Wis. Horseshoe. No. 876,928; Jan. 21; Sp. p. 2538; Dr. p. 555; Gaz. vol. 132; p. 482.
Anderson, U., assignor to Giddings & Lewis Manufacturing Company, Fond du Lac, Wis. Gang-edger. No. 877,878; Jan. 28; Sp. p. 4444; Dr. pp. 968–9; Gaz. vol. 132; p. 815.
Anderson, W. P., and L. H. Nolte, assignors to Ferro-Concrete Construction Company, Cincinnati, Ohio. Reinforced concrete flooring. No. 875,975; Jan. 7; Sp. p. 564; Dr. p. 121; Gaz. vol. 132; p. 98.
Andlauer, R., Kansas City, Kans., assignor to J. H. Fink, deceased, (E. H. Patton, executrix,) Kansas City, Mo., G. A. Patton, Denver, Colo., and J. H. Schmidt, Kansas City, Mo. Poultry-crate. No. 877,032; Jan. 21; Sp. p. 2779; Dr. p. 601; Gaz. vol. 132; p. 520.
Andres, J. F., St. Louis, Mo. Carbureter. No. 876,678; Jan. 14; Sp. p. 2042; Dr. pp. 445–6; Gaz. vol. 132; p. 363.
Andriano, A. K., assignor to Direct-Line General Telephone Company, San Francisco, Cal. Switching mechanism for telephone-circuits. No. 877,033; Jan. 21; Sp. p. 2782; Dr. pp. 601–2; Gaz. vol. 132; p. 520.
Aniline Colour and Extract Works, formerly J. R. Geigy. (See Conzetti, A., assignor.)
Annas, B. U., Sawmill, N. C. Railway-joint. No. 877,604; Jan. 28; Sp. p. 4117; Dr. p. 891; Gaz. vol. 132; p. 757.
Anschütz-Kaempfe, H., Kiel, Germany. Gyroscope. No. 877,054; Jan. 21; Sp. p. 2786; Dr. p. 602; Gaz. vol. 132; p. 520.
Anthony, J., Attleboro, Mass. Hand-bag or purse. No. 876,123; Jan. 7; Sp. p. 869; Dr. p. 186; Gaz. vol. 132; p. 147.
Archdeacon, J., Carlisle, Ky. Storm-hood. No. 877,752; Jan. 28; Sp. p. 4219; Dr. p. 915; Gaz. vol. 132; p. 775.
Argerbright, D., Troy, Ohio. Storm-front for vehicles. No. 876,288; Jan. 7; Sp. p. 1182; Dr. p. 257; Gaz. vol. 132; p. 199.
Arithmograph Company. (See Heuser, P., assignor.)
Armstrong, J., assignor of one-half to W. G. Newlands, Denver, Colo. Displaying and measuring device for oil-cloth. No. 875,680; Jan. 7; Sp. p. 7; Dr. p. 2; Gaz. vol. 132; p. 3.
Arnold, W. R., Chicago, Ill. Fire-escape. No. 876,883; Jan. 14; Sp. p. 2449; Dr. p. 533; Gaz. vol. 132; p. 431.
Arrow Electric Company. (See York, J. A., assignor.)
Asbury, D. F., Washington, D. C. Manicuring implement. No. 875,681; Jan. 7; Sp. p. 9; Dr. p. 2; Gaz. vol. 132; p. 4.
Ash, H. B., assignor of one-fifth to H. G. Conrad, St. Louis, Mo. Templet. No. 877,879; Jan. 28; Sp. p. 4447; Dr. p. 970; Gaz. vol. 132; p. 815.
Ash, W. H., Bay Shore, N. Y. Gas-engine. No. 877,753; Jan. 28; Sp. p. 4221; Dr. pp. 915–16; Gaz. vol. 132; p. 775.
Atherton, F. L., Paterson, N. J. Spooling-machine. No. 876,761; Jan. 14; Sp. p. 2183; Dr. pp. 480–1; Gaz. vol 132; p. 388.
Atkinson, J. (See Crossley and Atkinson.)
Aumen, W. J., Allentown, Pa. Grain-harvester. No. 875,682; Jan. 7; Sp. p. 11; Dr. p. 2; Gaz. vol. 132; p. 4.
Aurora Automatic Machinery Company. (See Ottaway, W., assignor.)
Auto Accessories Manufacturing Company. (See Hoskyns, W. J., assignor.)
Auto-Manual Piano Action Company. (See Wuest, P., Jr., assignor.)
Auto-Mosquito Mask Company. (See Harrison and O'Brien, assignors.)
Automobile Wheel & Rim Co. (See Hodgson, L., assignor.)
Autopiano Company. (See Keeley, W. J., assignor.)
Autopiano Company. (See Laughlin, S. J., assignor.)
Babcock, G. E., Fort Plain, N. Y. Front running-gear. No. 877,150; Jan. 21; Sp. p. 3042; Dr. p. 659; Gaz. vol. 132; p. 561.
Bach, R. B., New York, N. Y. Needle. No. 877,476; Jan. 28; Sp. p. 3663; Dr. p. 794; Gaz. vol. 132; p. 685.
Badger, B. M., Dillon, S. C. Bicycle attachment. No. 877,820; Jan. 28; Sp. p. 4333; Dr. p. 941; Gaz. vol. 132; p. 795.
Badische Anilin & Soda Fabrik. (See Bally and Wolff, assignors.)
Badische Anilin & Soda Fabrik. (See Isler, M. H., assignor.)
Badische Anilin & Soda Fabrik. (See Kunz, M. A., assignor.)
Badische Anilin & Soda Fabrik. (See Pummerer, R., assignor.)
Ballor, S. E., Tarkio, Mo. Cultivator. No. 876,513; Jan. 14; Sp. p. 1680; Dr. pp. 366–7; Gaz. vol. 132; p. 306
Baker, G. A., South Bend, Ind. Card-index. No. 876,252; Jan. 7; Sp. p. 1092; Dr. p. 238; Gaz. vol. 132; p. 185.
Baker, J. G., Philadelphia, Pa. Bench-vise. No. 822,695; Jan. 28; Sp. p. 4118; Dr. p. 891; Gaz. vol. 132; p. 757.
Baker, W., Aberdeen, S. D., assignor of four-fifths to J. McCabe, Minneapolis, Minn., and F. Crane, Cummings, N. D. Fork for loading apparatus. No. 877,477; Jan. 28; Sp. p. 3664; Dr. p. 794; Gaz. vol. 132; p. 685.
Baldwin, R. A., New Haven, Conn., assignor to Baldwin & Rowland Switch & Signal Co. Electric track-switch. No. 877,458; Jan. 21; Sp. p. 3622; Dr. p. 784; Gaz. vol. 132; p. 659.
Baldwin & Rowland Switch & Signal Co. (See Baldwin, R. A., assignor.)
Ball, C. W. (See Dion and Ball.)
Ball, E., Norfolk, Va. Fireproof and protecting garment. No. 875,976; Jan. 7; Sp. p. 565; Dr. p. 121; Gaz. vol. 132; p. 99.
Ball, T., New Castle, Pa. Poultry crate or coop. No. 877,393; Jan. 21; Sp. p. 3499; Dr. p. 759; Gaz. vol. 132; p. 638.
Ball, W. R. A., St. Thomas, N. D. Box-cover holder. No. 876,514; Jan. 14; Sp. p. 1668; Dr. p. 367; Gaz. vol. 132; p. 306.
Ballard, G. L., assignor to Wildman Manufacturing Company, Norristown, Pa. Needle-protector for knitting-machines. No. 875,767; Jan. 7; Sp. p. 172; Dr. p. 37; Gaz. vol. 132; p. 33.
Ballard, H. M. (See Smith, H. W., assignor.)
Bally, O., Mannheim, and H. Wolff, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Nitrobenzanthrone compound and making same. No. 876,679; Jan. 14; Sp. p. 2045; Gaz. vol. 132; p. 363.
Balzer, W. F. (See Rupe and Balzer.)
Banana Steel Crate Co. (See Ruddiman, T. H., assignor.)
Band-Industrie-Gesellschaft mit beschränkter Haftung. (See Mann, M., assignor.)
Banker, A. M., Johnstown, and F. Curtin, Gloversville, N. Y. Glove-tipping machine. No. 876,129; Jan. 7; Sp. p. 869; Dr. p. 187; Gaz. vol. 132; p. 147.
Barabasz, M., Baltimore, Md. Buckle. No. 877,035; Jan. 21; Sp. p. 2791; Dr. p. 603; Gaz. vol. 132; p. 521.
Barber Asphalt Paving Company. (See Forrest, C. N., assignor.)
Barber, F., Grand Rapids, Mich. Butter-cutter. No. 876,130; Jan. 7; Sp. p. 873; Dr. p. 198; Gaz. vol. 132; p. 148.
Barber, G. D., trustee. (See Fontaine, J. B., assignor.)
Barcalow, H., Philadelphia, Pa. Folding washbasin. No. 876,425; Jan. 14; Sp. p. 1489; Dr. p. 320; Gaz. vol. 132; p. 274.
Barclay, J. C., New York, N. Y. Perforating-machine. No. 877,821; Jan. 28; Sp. p. 4335; Dr. pp. 941–3; Gaz. vol. 132; p. 796.
Barclay, J. C., New York, N. Y. Printing-telegraph. No. 877,822; Jan. 28; Sp. p. 4341; Dr. p. 943; Gaz. vol. 132; p. 796.
Barclay, J. C., New York, N. Y. Perforator. No. 877,823; Jan. 28; Sp. p. 4347; Dr. pp. 943–4; Gaz. vol. 132; p. 797.
Barks, F. S. (See McKeen and Barks.)
Barna, A., Puritan, Pa. Detaching device. No. 876,762; Jan. 14; Sp. p. 2190; Dr. p. 481; Gaz. vol. 132; p. 389.
Barnard, W. N., Ithaca, N. Y. Temporary binder. No. 877,473; Jan. 28; Sp. p. 3665; Dr. p. 795; Gaz. vol. 132; p. 686.
Barnd, N. J., Chokio, Minn. Registering apparatus. No. 877,542; Jan. 28; Sp. p. 3827; Dr. pp. 827–8; Gaz. vol. 132; p. 708.
Barnes, B. L., Providence, R. I. Electrical binding-clip. No. 876,515; Jan. 14; Sp. p. 1669; Dr. p. 368; Gaz. vol 132; p. 307.
Barnes, R. P., Schenectady, N. Y. Electrically-controlled releasing device. No. 876,030; Jan. 7; Sp. p. 677; Dr. p. 145; Gaz. vol. 132; p. 117.
Barnett, S. D., Newark, N. J. Train-service coupling. No. 876,929; Jan. 21; Sp. p. 2539; Dr. pp. 555–6; Gaz. vol. 132; p. 482.
Barr, W. J., Cleveland, Ohio. Electric sad-iron. No. 876,253; Jan. 7; Sp. p. 1094; Dr. p. 238; Gaz. vol. 132; p. 186.
Barrath, E., assignor of one-third to O. F. Newman, New York, N. Y. Camera attachment. No. 877,283; Jan. 21; Sp. p. 3293; Dr. p. 713; Gaz. vol. 132; p. 603.
Barrett, E. H., Dunlap, Iowa. Rotary engine. No. 876,763; Jan. 14; Sp. p. 2191; Dr. pp. 481–2; Gaz. vol 132; p. 389.
Barri, J. G. assignor of two-thirds to M. A. King and C. G. Houston, Denver, Colo. Lawn-mower. No. 875,977; Jan. 7; Sp. p. 566; Dr. pp. 121–2; Gaz. vol. 132; p. 99.
Barrie, A. (See Harrington and Barrie.)
Bartholomay, J. P., Roxbury, Mass. Ratchet screw-driver. No. 876,690; Jan. 14; Sp. p. 2047; Dr. p. 446; Gaz. vol. 132; p. 363.
Bartholomew P. L., Aurora, Ill. Gripping and folding device for paper-bag-manufacturing machines. No. 875,884; Jan. 7; Sp. p. 383; Dr. p. 84; Gaz. vol. 132; p. 71.
Bartholomew, W., Chicago, Ill., assignor to Troy Laundry Machinery Company, Limited, Troy, N. Y. Dampening attachment for dry-room conveyers. No. 877,824; Jan. 28; Sp. p. 4332; Dr. p. 945; Gaz. vol. 132; p. 797.
Basalli, A. (See Bischler and Basalli.)
Bashford, J. C., Yonkers, N. Y. Vehicle-gear. No. 877,479; Jan. 28; Sp. p. 3666; Dr. p. 795; Gaz. vol. 132; p. 686.
Bass, O. (See Hatfield and Bass.)
Batcheller, F. R., assignor to Mills Woven Cartridge Belt Company, Worcester, Mass. Bandoleer. No. 876,131; Jan. 7; Sp. p. 875; Dr. p. 198; Gaz. vol. 132; p. 148.

Batcheller, G. C. (See Meyer, S. M., assignor.)
Bates, A., Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Inseam-trimming machine. No. 877,036; Jan. 21; Sp. p. 2793; Dr. p. 603; Gaz. vol. 132; p. 521.
Bates, G., *et al.* (See Myers, C. D., assignor.)
Batke, C., Watertown, S. D., and G. F. Batke, Ohaton, Alberta, Canada. Combined thresher and separator. No. 876,681; Jan. 14; Sp. p. 2046; Dr. p. 446; Gaz. vol. 132; p. 364.
Batke, G. F. (See Batke, C. and G. F.)
Baughman, S. A., Marysville, Kans. Hay-rack. No. 877,696; Jan. 28; Sp. p. 4119; Dr. p. 892; Gaz. vol. 132; p. 757.
Baulino C. (See Bibolini and Baulino.)
Baum, F. G., San Francisco, Cal. Electric switch. No. 875,978; Jan. 7; Sp. p. 569; Dr. pp. 122–3; Gaz. vol. 132; p. 99.
Baum, J. B., assignor of one-half to G. R. and R. A. Hill, one-sixth to J. A. Cannell and A. Eggers, one-sixth to A. A. Miller and P. Moeser, Grand Junction, one-twelfth to T. P. McGuire, and one-twelfth to J. Mettras, Mesa county, Colo. Rail-joint and nut-lock therefor. No. 875,768; Jan. 7; Sp. p. 174; Dr. p. 37; Gaz. vol. 132; p. 33.
Baumfalk, H. D., Bant, Germany. Method and means for preparing the backs of books for binding. No. 876,516; Jan. 14; Sp. p. 1691; Dr. pp. 368–9; Gaz. vol. 132; p. 307.
Bausch, G., Syracuse, N. Y. Mounting for eyeglasses. No. 877,160; Jan. 21; Sp. p. 3044; Dr. p. 659; Gaz. vol. 132; p. 562.
Bavlis, G. W., Brooklyn, N. Y. Packing-receptacle. No. 877,161; Jan. 21; Sp. p. 3045; Dr. p. 659; Gaz. vol. 132; p. 562.
Baynard, W. H., Boston, assignor to A. E. Little & Company, Lynn, Mass. Heel rest or support for displaying shoes. No. 876,254; Jan. 7; Sp. p. 1101; Dr. p. 230; Gaz. vol. 132; p. 186.
Beale, A. W., Boston, Mass. Hot-air furnace. No. 876,682; Jan. 14; Sp. p. 2050; Dr. p. 447; Gaz. vol. 132; p. 364.
Bean, R., Berea, assignor to W. B. White, Cleveland, Ohio. Repeating torpedo-cane. No. 876,683; Jan. 14; Sp. p. 2055; Dr. p. 447; Gaz. vol. 132; p. 364.
Beardsley, F. W., New York, N. Y. Apparatus for consuming gas. No. 877,162; Jan. 21; Sp. p. 3046; Dr. p. 660; Gaz. vol. 132; p. 562.
Beatty, A. H. C. (See Oblinger, B. C., assignor.)
Bechman, H. F., assignor to Duplex Printing Press Company, Battle Creek, Mich. Throw-off mechanism for printing machinery. No. 876,132; Jan. 7; Sp. p. 876; Dr. p. 188; Gaz. vol. 132; p. 148.
Becker, F. (See Schramm and Becker.)
Becker, H., Baltimore, Md. Outlet-box. No. 877,880; Jan. 28; Sp. p. 4448; Dr. p. 970; Gaz. vol. 132; p. 815.
Becket, F. M., Niagara Falls, N. Y. Reducing metallic sulfids and producing vanadium. No 876,313; Jan. 14; Sp. p. 1245; Gaz. vol. 132; p. 239.
Bedortha, A. C. and G. Q., Windsor, Conn. Treatment of tobacco. No. 877,607; Jan. 28; Sp. p. 4120; Dr. p. 892; Gaz. vol. 132; p. 757.
Bedortha, A. C. and G. Q., Windsor, Conn. Treatment of tobacco. No. 877,698; Jan. 28; Sp. p. 4121; Dr. p. 892; Gaz. vol. 132; p. 758.
Bedortha, G. Q. (See Bedortha, A. C. and G. Q.)
Beebe, A. E., Mayville, N. D. Marine propulsion. No. 876,133; Jan. 7; Sp. p. 878; Dr. p. 189; Gaz. vol. 132; p. 148.
Beebe, C. S., Peru, Ind. Fence-post. No. 875,769; Jan. 7; Sp. p. 175; Dr. p. 38; Gaz. vol. 132; p. 34.
Beerbower, C. W., *et al.* (See Watt, W. H., assignor.)
Beers, J. O., Jr. (See Cantwell, T., assignor.)
Beers, W. R., Judd, Iowa. Device for converting windmill-power. No. 877,543; Jan. 28; Sp. p. 3830; Dr. p. 828; Gaz. vol. 132; p. 709.
Bell, E. L., Norfolk, Va. Combined bottle and rolling-pin. No. 875,683; Jan. 7; Sp. p. 13; Dr. p. 3; Gaz. vol. 132; p. 4.
Bell, G. W., Liverpool, England. Pneumatic suspension device for vehicle-bodies. No. 876,426; Jan. 14; Sp. p. 1492; Dr. pp. 320–1; Gaz. vol. 132; p. 275.
Bellamy, F. H., assignor to J. C. Perkins, Big Sandy, Tenn. Horse-collar. No. 876,289; Jan. 7; Sp. p. 1183; Dr. p. 258; Gaz. vol. 132; p. 199.
Bellens, C. (See Lentz and Bellens.)
Benedick, J. J., Oakland, Cal. Steam-shovel. No. 876,517; Jan. 14; Sp. p. 1694; Dr. p. 369; Gaz. vol. 132; p. 307.
Bennett, P. E., Roseton, N. Y. Grate for brick-kilns. No. 877,825; Jan. 28; Sp. p. 4354; Dr. p. 945; Gaz. vol. 132; p. 798.
Bennington, A. L. (See Bennington, J. F., J. S., Jr., and A. L.)
Bennington, J. F., J. S., Jr., and A. L., La Harpe, Ill. Washing-machine. No. 877,627; Jan. 28; Sp. p. 3993; Dr. pp. 862–3; Gaz. vol. 132; p. 736.
Bennington, J. S., Jr. (See Bennington, J. F., J. S., Jr., and A. L.)
Bennum, G. W., Georgetown, Del. Escapement. No. 877,881; Jan. 28; Sp. p. 4449; Dr. p. 970; Gaz. vol. 132; p. 816.
Benscheidt, C., Alfeld, Germany. Support for use in finishing lasts. No. 877,826; Jan. 28; Sp. p. 4355; Dr. p. 945; Gaz. vol. 132; p. 798.
Benson, G. T., Port Huron, assignor of one-fourth to H. L. Nelson, Detroit, Mich. Combined can-top and sample-carrier. No. 876,427; Jan. 14; Sp. p. 1493; Dr. p. 321; Gaz. vol. 132; p. 275.
Benson, S., assignor of two-thirds to W. B. Hutton and R. J. Parker, Spring Valley, Minn. Nut-lock. No. 877,628; Jan. 28; Sp. p. 3994; Dr. p. 863; Gaz. vol. 132; p. 736.
Bentley, H. G., Denver, Colo. Self-locking seal. No. 876,255; Jan. 7; Sp. p. 1103; Dr. p. 239; Gaz. vol. 132; p. 187.
Bentley, W. F., Baltimore, Md. Railway journal-box appliance. No. 876,764; Jan. 14; Sp. p. 2193; Dr. p. 482; Gaz. vol. 132; p. 389.
Benton, C. R., Vergennes, Vt. Speed-indicator. No. 876,256; Jan. 7; Sp. p. 1104; Dr. p 239; Gaz. vol. 132; p. 187.
Berg, C. O., assignor to J. S. Wilson, Chelsea, Mass. Machine for making flexible tubing. No. 876,257; Jan. 7; Sp. p 1107; Dr. pp. 239–40; Gaz. vol. 132; p. 187.
Berg, L. J., Chicago, Ill., assignor to Metallic Sheathing Company. Metallic sheathing. No. 876,134; Jan. 7; Sp. p. 880; Dr. p. 189; Gaz. vol. 132; p. 149.
Bergerson, H. E. (See Bergren, J. A., assignor.)
Berglund, O. R. P., W. A. W. E. Hjorth, and C. E. Ljungman, Stockholm, Sweden. Electric apparatus for the ignition of mines. No. 877,284; Jan. 21; Sp. p. 3294; Dr. p. 713; Gaz. vol. 132; p. 604.
Bergman, S. R., Lynn, Mass., assignor to General Electric Company. Dynamo-electric machine. No. 876,930; Jan. 21; Sp. p. 2545; Dr. p. 556; Gaz. vol. 132; p. 483.
Bergquist, J. G., Chicago, Ill., assignor to American Sintering Company. Sintering blue-billy. No. 877,394; Jan. 21; Sp. p. 3500; Gaz. vol. 132; p. 638.
Bergren, J. A., assignor of one-half to H. E. Bergerson, Lake Park, Minn. Sleigh-knee No. 877,285; Jan. 21; Sp. p. 3296; Dr. p. 713; Gaz. vol. 132; p. 604.
Bernard, L., Prague, Austria-Hungary. Apparatus for impregnating fire-igniters. No. 877,037; Jan. 21; Sp. p. 2796; Dr. pp. 603–4; Gaz. vol. 132; p. 522.
Berninghaus, E., Cincinnati, Ohio. Barber's chair. No. 875,885; Jan. 7; Sp. p. 387; Dr. p. 85; Gaz. vol. 132; p. 72.
Bernstrom, E. (See Edlund, C. A., assignor.)
Bertram, J., St. Louis Mo. Mold. No. 876,135; Jan. 7; Sp. p. 882; Dr. pp. 189–90; Gaz. vol. 132; p. 149.
Bertsch, C. A., Cambridge City, Ind. Bending-rolls. No. 877,038; Jan. 21; Sp. p. 2797; Dr. p. 604; Gaz. vol. 132; p. 522.
Besser, H. Alpena, Mich. Centrifugal mill. No. 876,765; Jan. 14; Sp. p. 2196; Dr. pp. 482–3; Gaz. vol. 132; p. 390.
Bethel, R. H. (See Eastman and Bethel.)
Beuhne, F. R., Tooborac, Victoria, Australia. Apparatus for rendering beeswax. No. 877,544; Jan. 28; Sp. p. 3831; Dr. p. 828; Gaz. vol. 132; p. 709.
Bevan, A., Providence, R. I. Block-signal apparatus. No. 876,684; Jan. 14; Sp. p. 2057; Dr. p. 448; Gaz. vol. 132; p. 365.
Bevier, P. H., New York, N. Y. Reinforced terra-cotta arch. No. 877,545; Jan. 28; Sp. p. 3832; Dr. p. 829; Gaz. vol. 132; p. 710.
Beyer, A., Chicago, Ill. Portable watchman's clock. No. 877,546; Jan. 28; Sp. p. 3835; Dr. pp. 829–30; Gaz. vol. 132; p. 710.
Beyer, O. S., East Rutherford, N. J., assignor to E. W. Bliss Company. Seaming-machine. No. 877,480; Jan. 28; Sp. p. 3668; Dr. pp. 795–7; Gaz. vol. 132; p. 686.
Beyer, O. S., East Rutherford, N. J., assignor to E. W. Bliss Company. Transmission mechanism. No. 877,481; Jan. 28; Sp. p. 3675; Dr. p. 797; Gaz. vol. 132; p. 687.
Bibolini, G. B., and C. Baulino, Taranto, Italy. Means for recovering and regenerating lubricating-oils of marine engines. No. 877,163; Jan. 21; Sp. p. 3048; Dr. pp. 660–1; Gaz. vol. 132; p. 563.
Bicknell, C. H., Moline, Ill. Nut-lock. No. 876,314; Jan. 14; Sp. p. 1246; Dr. p. 271; Gaz. vol. 132; p. 239.
Bierbaum, C. H. (See North, Knapp, and Bierbaum.)
Bierend, J. F., Los Angeles, Cal. Show-case. No. 876,617; Jan. 14; Sp. p. 1922; Dr. p. 419; Gaz. vol. 132; p. 343.
Biersach, L., Freeport, Ill. Fish-hook. No. 875,684; Jan. 7; Sp. p. 15; Dr. p. 3; Gaz. vol. 132; p. 5.
Biggert, F. C., Jr., assignor to United Engineering & Foundry Company, Pittsburg, Pa. Table-operating mechanism for rolling-mills. No. 876,894; Jan. 14; Sp. p. 2450; Dr. pp. 534–5; Gaz. vol. 132; p. 432.
Bighouse, H. H., assignor to C. O. Bartlett & Snow Company, Cleveland, Ohio. Feeder for car-hauls, &c. No. 875,685; Jan. 7; Sp. p. 16; Dr. p. 3; Gaz. vol. 132; p. 5.
Bilgram, H., Philadelphia, Pa., assignor to Comas Cigarette Machine Company, Baltimore, Md. Cigarette-machine. No. 877,827; Jan. 28; Sp. p. 4356; Dr. pp. 945–6; Gaz. vol. 132; p. 798.
Billington, C., Attleboro, Mass. Nose-guard for eyeglasses. No. 875,686; Jan. 7; Sp. p. 19; Dr. p. 4; Gaz. vol. 132; p. 5.
Billman, W. A., Colorado Springs, Colo. Automatic card-printing press. No. 875,886; Jan. 7; Sp. p. 390; Dr. p. 85; Gaz. vol. 132; p. 72.
Bilms, A. (See Rounsevill and Bilms.)
Bingham, H. N., McTaggart, Saskatchewan, Canada. Straw-press. No. 876,037; Jan. 7; Sp p. 678; Dr. p. 146; Gaz. vol. 132; p. 117.

Binns, D., Camp Chase, assignor of one-half to D. B. Ong, Columbus, Ohio. Wave-motor. No. 877,459; Jan. 21; Sp. p. 3625; Dr. p. 784; Gaz. vol. 132; p. 699.
Birch, J. H., and J. S. Foley, West Bromwich, near Birmingham, England. Type-writing machine. No. 876,136; Jan. 7; Sp. p. 884; Dr. pp. 190–1; Gaz. vol. 132; p. 150.
Birch, J. H., and J. S. Foley, West Bromwich, England. Type-writing machine. No. 876,685; Jan. 14; Sp. p. 2064; Dr. p. 449; Gaz. vol. 132; p. 365.
Birnbaum, S., Boston, Mass. Theatrical appliance. No. 877,286; Jan. 21; Sp. p. 3297; Dr. p. 714; Gaz. vol. 132; p. 604.
Bischler, A., and A. Baselli, assignors, by mesne assignments, to J. Basler & Cie., Basel, Switzerland. Making camphene. No. 876,137; Jan. 7; Sp. p. 883; Gaz. vol. 132; p. 150.
Bischler, A., and A. Baselli, assignors, by mesne assignments, to J Basler & Cie., Basel, Switzerland. Manufacture of isobornyl oxalates from camphene. No. 876,310; Jan. 7; Sp. p. 1236; Gaz. vol. 132; p. 207.
Bissell Carpet Sweeper Company. (See Mason and Shanahan, assignors.)
Bixel, M., Pandora, Ohio. Barrel-truck. No. 877,237; Jan. 21; Sp. p. 3300; Dr. p. 714; Gaz. vol. 132; p. 604.
Bjerregaard, A. P., Minocqua, assignor to E. Calman & Company, New York, N. Y. Varnish and producing same. No. 877,482; Jan. 28; Sp. p. 3670; Gaz. vol. 132; p. 687.
Bjork, E. D., Henriette, Minn. Miter-box. No. 876,315; Jan. 14; Sp. p. 1247; Dr. p. 271; Gaz. vol. 132; p. 239.
Black, J. L. (See Lanham, H., assignor.)
Black, W. G. (See Hoffman, J. A., assignor.)
Blackhall, F. W., Fort Erie, Ontario, Canada, assignor of one-half to G. B. Hinkley, Buffalo, N. Y. Printer's quoin. No. 877,039; Jan. 21; Sp. p. 2799; Dr. p. 604; Gaz. vol. 132; p. 522.
Blackiston, G. P., Pittsburg, Pa. Vise. No. 877,090; Jan. 28; Sp. p. 4123; Dr. p. 893; Gaz. vol. 132; p. 758.
Blackman, G. L., Whitesville, N. Y. Shoe-blacking box. No. 877,164; Jan. 21; Sp. p. 3051; Dr. p. 661; Gaz. vol. 132; p. 563.
Blackwell, J. B., Darlington, S. C. Ratchet-drill. No. 877,288; Jan. 21; Sp. p. 3301; Dr. pp. 714–15; Gaz. vol. 132; p. 605.
Bladh, S. G., Carlskrona, Sweden. Boiler-flue cleaner. No. 877,395; Jan. 21; Sp. p. 3502; Dr. p. 750; Gaz. vol. 132; p. 638.
Blair, R., Chicago, Ill. Fertilizer-sower. No. 877,040; Jan. 21; Sp. p. 2800; Dr. pp. 604–5; Gaz. vol. 132; p. 522.
Blair, R. S., New Rochelle, N. Y. Water-bottle. No. 877,396; Jan. 21; Sp. p. 3503; Dr. p. 760; Gaz. vol. 132; p. 638.
Blaisdell, H. W., and H. A. Brooks, Los Angeles, Cal. Filter-leaf. No. 875,887; Jan. 7; Sp. p. 20; Dr. p. 4; Gaz. vol. 132; p. 5.
Blaisdell, W. F., Brooklyn, N. Y. Horse-cleaning implement. No. 876,766; Jan. 14; Sp. p. 2199; Dr. p. 453; Gaz. vol. 132; p. 390.
Blakeslee, M. D., assignor of one-fourth to H. Burden, 2d, Cazenovia, N. Y. Can-righting machine. No. 876,290; Jan. 7; Sp. p. 1184; Dr. p. 258; Gaz. vol. 132; p. 200.
Blakeslee, M. D., assignor of one-fourth to H. Burden, 2d, Cazenovia, N. Y. Mechanical can-roller. No. 876,291; Jan. 7; Sp. p. 1187; Dr. p. 258–9; Gaz. vol. 132; p. 200.
Blanchard, S. R., assignor to Ottawa Banking & Trust Company, Ottawa, Ill. Pump. No. 876,618; Jan. 14; Sp. p. 1924; Dr. p. 420; Gaz. vol. 132; p. 343.
Blasius, L., Philadelphia, Pa. Attachment for levers for automatic-playing musical instruments. No. 875,887; Jan. 7; Sp. p. 393; Dr. p. 86; Gaz. vol. 132; p. 72.
Blase, G., Caternberg, Germany. Solidifying fats, oils, tar, resin, &c. No. 877,280; Jan. 21; Sp. p. 3302; Gaz. vol. 132; p. 605.
Blatter, U., assignor to L. E. Knott Apparatus Company, Boston, Mass. Projection apparatus. No. 877,041; Jan. 21; Sp. p. 2802; Dr. p. 605; Gaz. vol. 132; p. 523.
Blaxter, G. H., New Brighton, Pa. Manufacture of seamless tubing. No. 876,856; Jan. 14; Sp. p. 2362; Dr. p. 517; Gaz. vol. 132; p. 418.
Blaxter, A. G., Newark, N. J. Clamp. No. 876,931; Jan. 21; Sp. p. 2546; Dr. p. 556; Gaz. vol. 132; p. 483.
Bleichert & Company, Firm of Adolf. (See Pfaffenbach, R., assignor.)
Blessing, J. G., New Britain, Conn., assignor to American Cutlery Company, Chicago, Ill. Fluid-pressure-operated grinding-machine. No. 876,428; Jan. 14; Sp. p. 1496; Dr. pp. 321–2; Gaz. vol. 132; p. 276.
Bleyer, F. H., Brooklyn, N. Y. Sash-fastener. No. 876,429; Jan. 14; Sp. p. 1498; Dr. p. 322; Gaz. vol. 132; p. 276.
Bliemeister, L. P., assignor of one-half to W. R. Jeseph, Buffalo, N. Y. Junction-box for electric wires. No. 876,619; Jan. 14; Sp. p. 1928; Dr. pp. 420–21; Gaz. vol. 132; p. 343.
Bliley, C. A. (See Sunderlin and Bliley.)
Blood, L. H., Hartford, assignor to Blood Machine Company, Incorporated, Winchester, Conn. Metal-working machine. No. 876,932; Jan. 21; Sp. p. 2547; Dr. pp. 557–8; Gaz. vol. 132; p. 483.
Blood Machine Company. (See Blood, L. H., assignor.)
Bloom, E. J., Tiffin, Ohio. Valve. No. 876,316; Jan. 14; Sp. p. 1249; Dr. pp. 271–2; Gaz. vol. 132; p. 239.
Blum, G. J., Chicago, Ill. Lathe-dog. No. 877,882; Jan. 28; Sp. p. 4450; Dr. p. 970; Gaz. vol. 132; p. 816.
Blum, M., and J. Stein, Elizabethport, N. J. Rope-clamp. No. 876,138; Jan. 7; Sp. p. 889; Dr. p. 191; Gaz. vol. 132; p. 150.
Bocorselski, F. E., Springfield, Mass. Multiple drilling-machine. No. 875,979; Jan. 7; Sp. p. 570; Dr. p. 123; Gaz. vol. 132; p. 100.
Bodmer, C., New Britain, Conn. Hinge-butt gage. No. 875,688; Jan. 7; Sp. p. 21; Dr. p. 4; Gaz. vol. 132; p. 5.
Boenning, W. M., Manitowoc, Wis. assignor to Veneer Machinery Company, Grand Rapids, Mich. Edge-trimmer. No. 876,292; Jan. 7; Sp. p. 1191; Dr. pp. 259–60; Gaz. vol. 132; p. 200.
Boggs, G. W., Philadelphia, Pa. Index for books. No. 876,767; Jan. 14; Sp. p. 2200; Dr. pp. 483–4; Gaz. vol. 132; p. 390.
Bohnenberger, W. D., East Orange, N. J. Stringed musical instrument. No. 876,430; Jan. 14; Sp. p. 1499; Dr. p. 322; Gaz. vol. 132; p. 277.
Bolus, W. G., Peoria, Ill., assignor to Hearst Foundry & Manufacturing Company. Seed-feed device. No. 877,547; Jan. 28; Sp. p. 3840; Dr. p. 831; Gaz. vol. 132; p. 710.
Booth, A. C., Burlington, Vt. Handle of brushes and other manicuring articles. No. 876,317; Jan. 14; Sp. p. 1251; Dr. p. 272; Gaz. vol. 132; p. 240.
Borgerding, H. H., New Albany, Ind. Device for inserting drawer-stops. No. 877,165; Jan. 21; Sp. p. 3052; Dr. p. 661; Gaz. vol. 132; p. 563.
Borgerding, H. H., New Albany, Ind. Machine for inserting drawer-stops. No. 877,166; Jan. 21; Sp. p. 3054; Dr. p. 661; Gaz. vol. 132; p. 564.
Born, G. W., Champaign, Ill. Rein-guard. No. 876,139; Jan. 7; Sp. p. 889; Dr. p. 191; Gaz. vol. 132; p. 151.
Bornstein, M., *et al.* (See Schwartz, M., assignor.)
Borsch, J. L., Jr., Philadelphia, Pa., assignor, by mesne assignments, to Kryptok Company. Bifocal lens. No. 876,933; Jan. 21; Sp. p. 2557; Dr. p. 558; Gaz. vol. 132; p. 484.
Borzykowski, B., Berlin, Germany. Pattern-paper linen. No. 875,770; Jan. 7; Sp. p. 180; Dr. pp. 38–9; Gaz. vol. 132; p. 34.
Bosed, G., Rome, Italy, assignor to G. Mazzacorati, New York, N. Y. Railway-tie. No. 877,042; Jan. 21; Sp. p. 2804; Dr. p. 605; Gaz. vol. 132; p. 523.
Boston Safety Switch Company. (See McManama, J. W., assignor.)
Botsford, A. K. (See Kaspis, A. von, assignor.)
Bourn, A. O., Bristol, R. I. Vulcanization. No. 876,431; Jan. 14; Sp. p. 1501; Dr. p. 323; Gaz. vol. 132; p. 277.
Bowdoin, H. L., New York, N. Y. Theatrical apparatus. No. 877,167; Jan. 21; Sp. p. 3055; Dr. p. 662; Gaz. vol. 132; p. 564.
Bowen, A. L., assignor to C. K. Pevey, Worcester, Mass. Extension top or canopy for vehicles. No. 876,768; Jan. 14; Sp. p. 2202; Dr. p. 484; Gaz. vol. 132; p. 390.
Bowers, J., Caldwell, N. J. Valve operated by air. No. 877,043; Jan. 21; Sp. p. 2805; Dr. p. 606; Gaz. vol. 132; p. 523.
Bowman, R. H., Canon City, Colo. Clutch mechanism. No. 876,318; Jan. 14; Sp. p. 1252; Dr. p. 272; Gaz. vol. 132; p. 240.
Bowser, A. A., assignor to S. F. Bowser & Company, Fort Wayne, Ind. Cap for fill-pipes, &c. No. 875,689; Jan. 7; Sp. p. 23; Dr. p. 4; Gaz. vol. 132; p. 6.
Boyd, D. R. L., Bumrall, Miss. Railway cross-tie. No. 876,140; Jan. 7; Sp. p. 891; Dr. p. 192; Gaz. vol. 132; p. 151.
Boye, J. H., assignor to Boye Needle Company, Chicago, Ill. Commodity-cabinet. No. 877,290; Jan. 21; Sp. p. 3304; Dr. p. 715; Gaz. vol. 132; p. 606.
Boye Needle Company. (See Boye, J. H., assignor.)
Boyer, A. P. (See Myers, H. A., assignor.)
Boyer, A. P., Goshen, Ind. Swing. No. 876,934; Jan. 21; Sp. p. 2559; Dr. pp. 558–9; Gaz. vol. 132; p. 484.
Boyer, A. P., Goshen, Ind. Carrier. No. 876,935; Jan. 21; Sp. p. 2561; Dr. p. 559; Gaz. vol. 132; p. 484.
Boyer, F. W., New York, N. Y. Chart-holder. No. 876,141; Jan. 7; Sp. p. 892; Dr. p. 192; Gaz. vol. 132; p. 151.
Boyer, W. L., Kansas City, Kans. Explosive-engine. No. 877,483; Jan. 28; Sp. p. 3677; Dr. p. 798; Gaz. vol. 132; p. 687.
Bradford, C., and G. L. Chatfield, Indianapolis, Ind.; said Chatfield assignor to said Bradford. Grain elevator and weigher. No. 875,771; Jan. 7; Sp. p. 182; Dr. pp. 39–40; Gaz. vol. 132; p. 34.
Bradford, C., and G. L. Chatfield, Indianapolis, Ind.; said Chatfield assignor to said Bradford. Elevator. No. 876,432; Jan. 14; Sp. p. 1502; Dr. p. 323; Gaz. vol. 132; p. 277.
Bradley, C. C., Syracuse, N. Y. Thill-coupling. No. 876,620; Jan. 14; Sp. p. 1930; Dr. p. 421; Gaz. vol. 132; p. 344.
Bradley, H. W., Ashton-under-Lyne, England. Controlling means for gas-engines. No. 877,044; Jan. 21; Sp. p. 2807; Dr. pp. 606–7; Gaz. vol. 132; p. 524.
Bradley, J. H. Kenyon, Minn. Carrier-stop. No. 875,886; Jan. 7; Sp. p. 304; Dr. p. 86; Gaz. vol. 132; p. 73.
Bradshaw, A. T., Philadelphia, Pa. Cooking apparatus. No. 875,889; Jan. 7; Sp. p. 305; Dr. p. 86; Gaz. vol. 132; p. 73.
Bradshaw, G. R. (See Davis, D. G., assignor.)
Bradshaw, R. Y., Chicago, Ill. Automatic weighing-machine. No. 877,168; Jan. 21; Sp. p. 3062; Dr. pp. 663–4; Gaz. vol. 132; p. 563.
Bradway, R. E., Strongha, Ind. Starting-clutch for explosive-engines. No. 876,934; Jan. 21; Sp. p. 2564; Dr. p. 559; Gaz. vol. 132; p. 485.

Bradway, S. S., Watertown, N. Y. Card-index system. No. 876,319; Jan. 14; Sp. p. 1254; Dr. p. 273; Gaz. vol. 132; p. 241.
Brady, J. W., assignor of one-half to E. N. Walker, Neodesha, Kans. Track-sanding device. No. 877,828; Jan. 28; Sp. p. 4359; Dr. p. 947; Gaz. vol. 132; p. 798.
Bramall, J. A. (See Bramall, W. A. and J. A.)
Bramall, W. A. and J. A., Moore, Pa. Loom-picker. No. 875,772; Jan. 7; Sp. p. 189; Dr. p. 40; Gaz. vol. 132; p. 35.
Brandt, H. O., Manchester, England. Weft-case for automatic weft-replenishing looms. No. 875,890; Jan. 7; Sp. p. 307; Dr. p. 87; Gaz. vol. 132; p. 74.
Branham, J. M., Springfield, Ill. Rural-mail-delivery apparatus. No. 876,433; Jan. 14; Sp. p. 1504; Dr. pp. 323–4; Gaz. vol. 132; p. 277.
Bray, C. W., assignor to American Sheet & Tin Plate Company, Pittsburg, Pa. Tandem mill. No. 876,895; Jan. 14; Sp. p. 2453; Dr. pp. 535–6; Gaz. vol. 132; p. 432.
Breeze, H. J., assignor of one-half to C. N. Runnels, Port Huron, Mich. Match-box. No. 875,773; Jan. 7; Sp. p. 191; Dr. p. 40; Gaz. vol. 132; p. 35.
Bremner, D. A., London, England. Mortar-box for stamp-mills. No. 877,291; Jan. 21; Sp. p. 3305; Dr. pp. 715–16; Gaz. vol. 132; p. 605.
Breslauer, M., Charlottenburg, assignor to Firm of W. Graaff & Compagnie, Ges. mit beschr. Haftung, Berlin, Germany. Chemical fire-extinguisher. No. 876,320; Jan. 14; Sp. p. 1256; Gaz. vol. 132; p. 241.
Breslauer, M., Charlottenburg, assignor to Firm of W. Graaff & Compagnie, Ges. mit beschr. Haftung, Berlin, Germany. Chemical fire-extinguisher. No. 876,321; Jan. 14; Sp. p. 1257; Gaz. vol. 132; p. 241.
Brinley, C. A., assignor to American Pulley Company, Philadelphia, Pa. Reel. No. 877,397; Jan. 21; Sp. p. 3506; Dr. p. 760; Gaz. vol. 132; p. 639.
Brinley, C. A., assignor to American Pulley Company, Philadelphia, Pa. Sheet-metal spool. No. 877,398; Jan. 21; Sp. p. 3508; Dr. p. 760; Gaz. vol. 132; p. 639.
Briscoe, B. (See Schultz, G. J., assignor.)
Brissenden, W. W., assignor to National Steam Specialty Company, Chicago, Ill. Relief-valve for radiators. No. 877,399; Jan. 21; Sp. p. 3509; Dr. p. 761; Gaz. vol. 132; p. 639.
Brock, F. W., Chatham, Ill. Electric time-switch. No. 876,293; Jan. 7; Sp. p. 1194; Dr. p. 260; Gaz. vol. 132; p. 201.
Brock, H. M., London, Ky. Spring-mattress. No. 877,548; Jan. 28; Sp. p. 3842; Dr. p. 831; Gaz. vol. 132; p. 711.
Brock, W. F. (See Richardson, F. L., assignor.)
Brockelhurst, C., Maquon, Ill. Handle for crosscut-saws. No. 877,169; Jan. 21; Sp. p. 3067; Dr. p. 664; Gaz. vol. 132; p. 565.
Brockmann, E. C., assignor of one-half to M. Silberstein, Davenport, Iowa. Receptacle for tobacco wrappers. No. 877,700; Jan. 28; Sp. p. 4124; Dr. p. 893; Gaz. vol. 132; p. 758.
Broderson, G. C. (See Hageman and Broderson.)
Brodie, L. H. K., Brooklyn, N. Y. Molding-machine. No. 876,322; Jan. 14; Sp. p. 1259; Dr. p. 273; Gaz. vol 132; p. 241.
Brooks, C. R., Little Falls, Minn. Ventilator. No. 876,258; Jan. 7; Sp. p. 1110; Dr. pp. 240–1; Gaz. vol. 132; p. 188.
Brooks, E. W., Chicago, Ill. Centrifugal pump. No. 877,484; Jan. 28; Sp. p. 3679; Dr. p. 798; Gaz. vol. 132; p. 687.
Brooks, E. W., Chicago, Ill. Compound-piston centrifugal pump. No. 877,485; Jan. 28; Sp. p. 3683; Dr. p. 799; Gaz. vol. 132; p. 688.
Brooks, H. A. (See Blaisdell and Brooks.)
Brooks, M., and M. K. Akers, Urbana, Ill. Means for operating alternating-current machines in parallel. No. 876,686; Jan. 14; Sp. p. 2068; Dr. p. 449; Gaz. vol. 132; p. 366.
Brooks, R. A., Chicago, Ill. Flushing-valve. No. 876,518; Jan. 14; Sp. p. 1696; Dr. pp. 369–70; Gaz. vol. 132; p. 308.
Brooks, R. A., assignor to W. A. Christiansen, Chicago, Ill. Spray. No. 877,045; Jan. 21; Sp. p. 2810; Dr. p. 608; Gaz. vol. 132; p. 524.
Brooks, R. F., Lake City, Iowa. Incubator-heater. No. 876,142; Jan. 7; Sp. p. 894; Dr. p. 192; Gaz. vol. 132; p. 151.
Brothers, W., Cly, assignor of one-half to E. W. Spangler, (deceased,) York, Pa.; M. F. Spangler, Security Title and Trust Company, and York Trust Company, executors. Charge-forming device for internal-combustion engines. No. 876,519; Jan. 14; Sp. p. 1701; Dr. p. 370; Gaz. vol. 132; p. 308.
Brown, A., Carnegie, and A. W. Lawrence, Duquesne, Pa. Vending-machine. No. 876,143; Jan. 7; Sp. p. 895; Dr. p. 193; Gaz. vol. 132; p. 152.
Brown, A. T., assignor to Brown-Lipe Gear Company, Syracuse, N. Y. Power-transmitting mechanism. No. 876,937; Jan. 21; Sp. p. 2566; Dr. p. 560; Gaz. vol. 132; p. 486.
Brown, F. R., Rural Retreat, Va. Chuck. No. 877,046; Jan. 21; Sp. p. 2814; Dr. p. 608; Gaz. vol. 132; p. 524.
Brown, H. A., Lehigh, Iowa. Pneumatic wheel and hub. No. 877,629; Jan. 28; Sp. p. 3995; Dr. p. 863; Gaz. vol. 132; p. 736.
Brown, H. E., Goldthwaite, Tex. Gearing for windmills. No. 877,701; Jan. 28; Sp. p. 4126; Dr. p. 893; Gaz. vol. 132; p. 759.
Brown, H. N., Philadelphia, Pa., and J. B. N. Cardoza, assignors of one-half to E. C. Hathaway and W. R. Allen, Norfolk, Va. Railway-fare receipt-ticket. No. 876,294; Jan. 7; Sp. p. 1195; Dr. p. 261; Gaz. vol. 132; p. 201.
Brown, J. R., Moultrie, Ga. Caster. No. 877,486; Jan. 28; Sp. p. 3685; Dr. p. 799; Gaz. vol. 132; p. 689.
Brown-Lipe Gear Company. (See Brown, A. T., assignor.)
Brown, M., Richmond, Mo. Grain-binder attachment. No. 876,520; Jan. 14; Sp. p. 1704; Dr. p. 370; Gaz. vol. 132; p. 309.
Brown, M. A., Savannah, Ga. Non-refillable bottle. No. 876,259; Jan. 7; Sp. p. 1112; Dr. p. 241; Gaz. vol. 132; p. 188.
Brown, M. A., Savannah, Ga. Non-refillable bottle. No. 876,260; Jan. 7; Sp. p. 1114; Dr. p. 241; Gaz. vol. 132; p. 188.
Brown, R. R., Livermore, Cal. Motor for automobiles. No. 876,769; Jan. 14; Sp. p. 2203; Dr. p. 484; Gaz. vol. 132; p. 391
Brown, S., London, England. Flexible form for holding and assembling type. No. 876,521; Jan. 14; Sp. p. 1706; Dr. p. 370; Gaz. vol. 132; p. 309.
Brown, S., London, England. Flexible-strip form for holding type. No. 876,522; Jan. 14; Sp. p. 1707; Dr. p. 371; Gaz. vol. 132; p. 309.
Brown, S., St. Louis, Mo. Surface-trimming machine. No. 876,938; Jan. 21; Sp. p. 2572; Dr. pp. 560–1; Gaz. vol. 132; p. 486.
Brown & Sharpe M'f'g Co. (See Ljunglof, L., assignor.)
Brown, W. R., La Fayette, Ind., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Non-interfering party-line telephone system. No. 876,434; Jan. 14; Sp. p. 1506; Dr. p. 324; Gaz. vol. 132; p. 278.
Brown, W. S., *et al.* (See Martin, G., assignor.)
Brown, W. V., Berwick, Nova Scotia, Canada. Lock or latch. No. 876,323; Jan. 14; Sp. p. 1260; Dr. pp. 273–4; Gaz. vol. 132; p. 241.
Brown, W. Z., Peoria, Ill. Water cut-off. No. 876,687; Jan. 14; Sp. p. 2069; Dr. p. 450; Gaz. vol. 132; p. 366.
Brucker, J., New York, N. Y. Game apparatus. No. 876,324; Jan. 14; Sp. p. 1262; Dr. p. 274; Gaz. vol. 132; p. 242.
Brun, M., Lyon, France. Elastic tire. No. 877,471; Jan. 21; Sp. p. 3646; Dr. p. 790; Gaz. vol. 132; p. 663.
Brundell, W., Portland, Oreg. Rope-holding device. No. 876,770; Jan. 14; Sp. p. 2205; Dr. p. 485; Gaz. vol. 132; p. 391.
Brunner, K., and O. Bühring, Mannheim, Germany. Apparatus for separating liquids from gases or vapors. No. 877,400; Jan. 21; Sp. p. 3626; Dr. p. 785; Gaz. vol. 132; p. 659.
Bryan, E. E., and W. E. Taylor, Paonia, Colo. Fruit-picker's bucket. No. 876,038; Jan. 7; Sp. p. 682; Dr. p. 146; Gaz. vol. 132; p. 118.
Bryan, J. P., Baltimore, Md., assignor, by mesne assignments, to D. M. Ludington and A. S. Goldsborough, trustees. Addressing-machine. No. 877,400; Jan. 21; Sp. p. 3511; Dr. p. 761; Gaz. vol. 132; p. 640.
Bryant, E. B., East Providence, assignor to American Ship Windlass Company, Providence, R. I. Winding-machine. No. 876,261; Jan. 7; Sp. p. 1116; Dr. pp. 241–2; Gaz. vol. 132; p. 189.
Bryant Electric Company. (See Goodridge, G. W., assignor.)
Bryk, E. (See Schmidt and Bryk.)
Bryk, E., assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Making arylthioglycollic-orthocarboxylic acids. No. 877,702; Jan. 28; Sp. p. 4128; Gaz. vol. 132; p. 759.
Buchanan, C. H., Washington, D. C. Heater. No. 875,891; Jan. 7; Sp. p. 398; Dr. p. 87; Gaz. vol. 132; p. 74.
Buchanan, J. J., assignor to Waterbury Buckle Company, Waterbury, Conn. Suspender cast-off. No. 876,262; Jan. 7; Sp. p. 1118; Dr. p. 242; Gaz. vol. 132; p. 189.
Buchanan, J. J., assignor to Waterbury Buckle Company, Waterbury, Conn. Suspender cast-off. No. 876,263; Jan. 7; Sp. p. 1119; Dr. p. 242; Gaz. vol. 132; p. 189.
Buchanan, S. M., Hubbard, Oreg. Deodorizing compound. No. 877,401; Jan. 21; Sp. p. 3514; Gaz. vol. 132; p. 640.
Buchet, F., and E. A. Mullinix, Walla Walla, Wash. Disk harrow and weeder. No. 876,145; Jan. 7; Sp. p. 900; Dr. p. 194; Gaz. vol. 132; p. 153.
Buchholtz, G. A., Waterford, Wis. Repair-buckle. No. 876,688; Jan. 14; Sp. p. 2071; Dr. p. 450; Gaz. vol. 132; p. 366.
Buck, F., Saginaw, Mich., assignor to Marshall-Wells Hardware Company, Duluth, Minn. Ax-head-locking device. No. 877,549; Jan. 28; Sp. p. 3844; Dr. p. 831; Gaz. vol. 132; p. 711.
Buck, H. W., Niagara Falls, N. Y. Insulator. No. 876,939; Jan. 21; Sp. p. 2573; Dr. p. 561; Gaz. vol. 132; p. 486.
Buckwalter, T. V., Altoona, Pa. Mechanical movement. No. 875,892; Jan. 7; Sp. p. 400; Dr. p. 88; Gaz. vol. 132; p. 74.
Buckwalter, T. V., Altoona, Pa. Electrically-operated baggage-truck. No. 875,893; Jan. 7; Sp. p. 401; Dr. p. 88; Gaz. vol. 132; p. 75.
Bucyrus Company. (See Knox, S. L. G., assignor.)
Buda Foundry & Manufacturing Company. (See Gard, J. J., assignor.)
Budde, C. C. L. G., Copenhagen, Denmark. Sterilizing foods or organic compounds. No. 877,703; Jan. 28; Sp. p. 4128; Gaz. vol. 132; p. 759.
Buffalo Pitts Company. (See Vraalstad, E. J., assignor.)
Bugbee, F. M., North Kingsville, Ohio. Ironing-board. No. 876,857; Jan. 14; Sp. p. 2363; Dr. p. 517; Gaz. vol. 132; p. 418.
Bühring, O. (See Brunner and Bühring.)
Bullard, E. P., Jr., assignor to Bullard Machine Tool Company, Bridgeport, Conn. Vertical turret-lathe. No. 877,402; Jan. 21; Sp. p. 3515; Dr. pp. 761–3; Gaz. vol. 132; p. 640.

Bullard, E. P., Jr., assignor to Bullard Machine Tool Company, Bridgeport, Conn. Combined changeable-speed and brake mechanism. No. 877,404; Jan. 21; Sp. p. 3524; Dr. p. 764; Gaz. vol. 132; p. 642.
Bullard, E. P., and E. Henrikson, assignors to Bullard Machine Tool Company, Bridgeport, Conn. Rapid-traverse device for boring-mills. No. 877,403; Jan. 21; Sp. p. 3521; Dr. p. 763; Gaz. vol. 132; p. 641.
Bullard Machine Tool Company. (See Bullard, E. P., Jr., assignor.)
Bullard Machine Tool Company. (See Bullard and Henrikson, assignors.)
Bullock Electric Manufacturing Company *et al.* (See Cheney, H. W., assignor.)
Bullock Electric Manufacturing Company. (See Lord, C. E., assignor.)
Bullock Electric Manufacturing Company *et al.* (See Schley, G. B., assignor.)
Bullock, H. E., Chicago, Ill. Cotton-picking machine. No. 877,754; Jan. 28; Sp. p. 4223; Dr. p. 916; Gaz. vol. 132; p. 775.
Burden, H., 2d. (See Blakeslee, M. D., assignor.)
Burger, F., Fort Wayne, assignor of three-fourths to H. M. Williams, Allen, Ind. Revolving grate. No. 877,487; Jan. 28; Sp. p. 3686; Dr. p. 799; Gaz. vol. 132; p. 689.
Burgess, J. D., Tucson, Ariz. Ter., assignor of two-thirds to A. and W. H. Taylor, Jr., San Francisco, Cal. Bessemerizing or conversion of copper mattes into blister copper. No. 877,202; Jan. 21; Sp. p. 3308; Dr. pp. 716–17; Gaz. vol. 132; p. 606.
Burgess, P. V., Greenwood, Mo. Device for holding plowshares. No. 876,325; Jan. 14; Sp. p. 1263; Dr. p. 274; Gaz. vol. 132; p. 242.
Burhans, R. D., Keokuk, Iowa. Account-keeping device. No. 875,774; Jan. 7; Sp. p. 192; Dr. p. 41; Gaz. vol. 132; p. 35.
Burhorn, E., Hoboken, N. J. Floor. No. 875,775; Jan. 7; Sp. p. 195; Dr. p. 41; Gaz. vol. 132; p. 36.
Burke, J. F., *et al.* (See De Martino, J., assignor.)
Burke, W., Millburn, N. J. Spool-molding machine. No. 876,144; Jan. 7; Sp. p. 898; Dr. pp. 103–4; Gaz. vol. 132; p. 152.
Burkholder, J. H., Ashland, Ohio. Door-hanger. No. 876,621; Jan. 14; Sp. p. 1931; Dr. pp. 421–2; Gaz. vol. 132; p. 344.
Burley, I. E., assignor of one-half to J. Henry, Highwood, Mont. Measuring instrument. No. 876,264; Jan. 7; Sp. p. 1120; Dr. p. 243; Gaz. vol. 132; p. 190.
Burnett, F. A., Holyoke, Mass. Envelop-machine. No. 876,689; Jan. 14; Sp. p. 2072; Dr. pp. 450–1; Gaz. vol. 132; p. 367.
Burns, A. J., Oswego, N. Y. Automatic electrical release-starter. No. 876,326; Jan. 14; Sp. p. 1264; Dr. pp. 274–5; Gaz. vol. 132; p. 242.
Burns, J. F., Philadelphia, Pa. Can-filler. No. 876,940; Jan. 21; Sp. p. 2574; Dr. p. 561; Gaz. vol. 132; p. 487.
Burrell, H., Sheffield, England: Hand-mirror. No. 876,039; Jan. 7; Sp. p. 683; Dr. p. 146; Gaz. vol. 132; p. 118.
Burrows, E. W., Warren, Pa. Wick attachment for lamps and other burners. No. 876,523; Jan. 14; Sp. p. 1708; Dr. p. 371; Gaz. vol. 132; p. 310.
Burson, G., Winamac, Ind. Machine for making bricks. No. 875,776; Jan. 7; Sp. p. 195; Dr. pp. 41–2; Gaz. vol. 132; p. 36.
Burson Knitting Company. (See Burson, W. W., assignor.)
Burson, W. W., Chicago, assignor to Burson Knitting Company Rockford, Ill. Singeing-machine. No. 875,980; Jan. 7; Sp. p. 572; Dr. pp. 123–4; Gaz. vol. 132; p. 100.
Burt, A. H., Buffalo, N. Y., assignor to National Candy Company, Jersey City, N. J. Display-box. No. 876,146; Jan. 7; Sp. p. 901; Dr. p. 194; Gaz. vol. 132; p. 153.
Bushby, J. C. (See Sander, F. W., assignor.)
Bussman, P. F., Buffalo, N. Y. Roller-bearing. No. 877,630; Jan. 28; Sp. p. 3996; Dr. p. 863; Gaz. vol. 132; p. 736.
Butcher C. C. assignor of one-third to E. L. Russell, Urbana, Mo. Check-row planter. No. 875,690; Jan. 7; Sp. p. 24; Dr. p. 5; Gaz. vol. 132; p. 6.
Butler, A. J., Boston, Mass. Clothes-hanger. No. 877,047; Jan. 21; Sp. p. 2815; Dr. p. 609; Gaz. vol. 132; p. 525.
Buttrey, M. M., *et al.* (See Gray, H., assignor.)
Butts, W. R., assignor of four-fifths to F. C. Loomis, E. and C. N. Geiser, and W. J. Wise, New Philadelphia, Ohio. Pneumatic mining-machine. No. 877,883; Jan. 28; Sp. p. 4451; Dr. p. 971; Gaz. 132; p. 883.
C. O. Bartlett & Snow Company. (See Bighouse, H. H., assignor.)
Cadman, A. W., Pittsburg, Pa. Valve-disk. No. 876,147; Jan. 7; Sp. p. 902; Dr. p. 195; Gaz. vol. 132; p. 153.
Calliet, J., assignor to Société Anonyme des Automobiles Peugeot, Paris, France. Friction-clutch. No. 877,405; Jan. 21; Sp. p. 3527; Dr. p. 764; Gaz. vol. 132; p. 642.
Caine, F. J., Hounslow, and G. H. Mitton, Wimbledon, assignors to Linotype & Machinery Limited, London, England. Adjustable trimming-knife for linotype-machines. No. 876,524; Jan. 14; Sp. p. 1709; Dr. p. 371; Gaz. vol. 132; p. 310.
Caldwell, E., Burlington, Wis. Horse-blanket. No. 876,435; Jan. 14; Sp. p. 1508; Dr. p. 324; Gaz. vol. 132; p. 278.
Callahan, J. R., Millville, N. J. Fish-hook. No. 875,777; Jan. 7; Sp. p. 197; Dr. p. 42; Gaz. vol. 132; p. 36.
Callender, J. H., *et al.* (See Gray, H., assignor.)
Callihan, W. H., Beaumont, Tex. Heater. No. 877,406; Jan. 21; Sp. p. 3528; Dr. p. 765; Gaz. vol. 132; p. 642.
Callison, A. F., Gage, Okla. Loading and unloading mechanism. No. 876,941; Jan. 21; Sp. p. 2576; Dr. pp. 561–2; Gaz. vol. 132; p. 487.
Calman & Company, Emil. (See Bjerregaard, A. F., assignor.)
Cameron Septic Tank Company. (See Commin, F. J., assignor.)
Campbell, C. A., Philadelphia, Pa. Horseshoe. No. 876,265; Jan. 7; Sp. p. 1121; Dr. p. 243; Gaz. vol. 132; p. 190.
Campbell, D. J., New York, N. Y., assignor to American Tobacco Company. Cigarette-machine. No. 876,327; Jan. 14; Sp. p. 1269; Dr. pp. 275–7; Gaz. vol. 132; p. 242.
Campbell, W. R., Little York, Ill. Draft-equalizer. No. 876,942; Jan. 21; Sp. p. 2578; Dr. p. 562; Gaz. vol. 132; p. 488.
Canby, W. W. (See McRae and Canby.)
Canfield, C. E., Norwood, Ohio, assignor to Stanley Electric Manufacturing Company, Pittsfield, Mass. Dynamo-electric machine. No. 876,943; Jan. 21; Sp. p. 2581; Dr. p. 562; Gaz. vol. 132; p. 488.
Cannell, J. A., *et al.* (See Baum, J. B., assignor.)
Cannon, A. J., Wilkinsburg, Pa. Curtain and shade fixture. No. 877,704; Jan. 28; Sp. p. 4129; Dr. p. 894; Gaz. vol. 132; p. 759.
Cantwell, T., New York, assignor of one-half to J. O. Beers, Jr., Brooklyn, N. Y. Floor. No. 876,436; Jan. 14; Sp. p. 1509; Dr. p. 324; Gaz. vol. 132; p. 278.
Cardell, E. F., Providence, R. I. Cover and drain attachment for sprinkler-heads. No. 876,771; Jan. 14; Sp. p. 2206; Dr. p. 485; Gaz. vol. 132; p. 391.
Carden, G. M., *et al.* (See Crepar, T. M., assignor.)
Cardoza, J. B. N. (See Brown and Cardoza.)
Carlson, J. F., Worcester, Mass. Grinding-machine. No. 877,170; Jan. 21; Sp. p. 3068; Dr. p. 664; Gaz. vol. 132; p. 565.
Carlton, H. A. (See Lau, C. H., assignor.)
Carnegie Steel Company. (See Davis, C., assignor.)
Carney, T., assignor, by mesne assignments, to National Cash Register Company, Dayton, Ohio. Cash-register. No. 876,295; Jan. 7; Sp. p. 1196; Dr. pp. 261–3; Gaz. vol. 132; p. 202.
Carroll, C. B., East St. Louis, Ill. Kite attachment. No. 876,690; Jan. 14; Sp. p. 2078; Dr. p. 451; Gaz. vol. 132; p. 367.
Carroll, C. F. (See Dorward, E. P., assignor.)
Carroll, T., Anaheim, Cal. Combination dump and hopper. No. 876,896; Jan. 14; Sp. p. 2455; Dr. p. 536; Gaz. vol. 132; p. 432.
Carson, G. C., Denver, Colo. Gas-converting process. No. 876,437; Jan. 14; Sp. p. 1511; Dr. p. 325; Gaz. vol. 132; p. 279.
Carstens, E., Nuremberg, Germany. Cutter-head for planing-machines. No. 877,407; Jan. 21; Sp. p. 3529; Dr. p. 765; Gaz. vol. 132; p. 642.
Cassity, O., Sturgeon, Mo. Miter-box. No. 876,266; Jan. 7; Sp. p. 1123; Dr. pp. 243–4; Gaz. vol. 132; p. 190.
Catel, L., Lyon, France. Gearing. No. 877,293; Jan. 21; Sp. p. 3311; Dr. p. 717; Gaz. vol. 132; p. 606.
Cavanagh, M., New York, N. Y. Gage for skiving-machines. No. 876,772; Jan. 14; Sp. p. 2208; Dr. p. 485; Gaz. vol. 132; p. 392.
Cazin, F. M. F., Hoboken, N. J. Manufacturing metallized electric-incandescent-lamp filaments. No. 877,171; Jan. 21; Sp. p. 3071; Dr. p. 665; Gaz. vol. 132; p. 566.
Cazin, F. M. F., Hoboken, N. J. Producing filaments for electric incandescent lamps and the product thereof. No. 877,172; Jan. 21; Sp. p. 3076; Dr. p. 666; Gaz. vol. 132; p. 566.
Cazin, F. M. F., Hoboken, N. J. Manufacture of electric incandescent lamps. No. 877,406; Jan. 21; Sp. p. 3531; Dr. p. 765; Gaz. vol. 132; p. 643.
Chadeloid Chemical Company. (See Ellis, C., assignor.)
Chadick, E. D. (See Shallenberger, S. L., assignor.)
Chamberlain, W. F. (See Pressey, H. F., assignor.)
Chamberlin, J. H., Kalamazoo, Mich. Hitching weight or anchor. No 876,328; Jan. 14; Sp. p. 1279; Dr. p. 277; Gaz. vol. 132; p. 243.
Chambers, J. M., assignor of one-half to M. Meyer, Boulder, Colo. Gravity signal-bell. No. 877,409; Jan. 21; Sp. p. 3538; Dr. p. 765; Gaz. vol. 132; p. 643.
Champeny, C. (See Hines, Champeny, and Crisler.)
Chandelier & Art Brass Works. (See Rupe and Balzer, assignors.)
Chapin, F. B. (See Faris, W. D., assignor.)
Chase, F. L., and B. M. Young, Jamestown, N. Y.; said Young assignor to said Chase. Multiple-cylinder engine. No. 877,294; Jan. 21; Sp. p. 3312; Dr. pp. 717–18; Gaz. vol. 132; p. 606.
Chase, M. F. (See Heins and Chase.)
Chatfield, G. L. (See Bradford and Chatfield.)
Chein, J. (See Heyman, D., assignor.)
Chemical Reduction Company. (See Sperry, E. A., assignor.)

Chemical Reduction Company. (See Townsend, C. P., assignor.)
Cheney, K. S., Haywards, Cal. Mount. No. 875,691; Jan. 7; Sp. p. 27; Dr. pp. 5–6; Gaz. vol. 132; p. 7.
Cheney, H. W., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Motor-controlling mechanism. No. 876,981; Jan. 7; Sp. p. 574; Dr. p. 124; Gaz. vol. 132; p. 100.
Cheney, H. W., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Motor-controlling mechanism. No. 875,982; Jan. 7; Sp. p. 580; Dr. p. 125; Gaz. vol. 132; p. 101.
Chichester, F., Poughkeepsie, N. Y. Chair-iron. No. 876,525; Jan. 14; Sp. p. 1711; Dr. pp. 371–2; Gaz. vol. 132; p. 310.
Chlan, F. C. (See Herting and Chlan.)
Cholinsky, O., Prague, Austria-Hungary. Dental extractor. No. 876,526; Jan. 14; Sp. p. 1713; Dr. p. 372; Gaz. vol. 132; p. 311.
Christiansen, W. A. (See Brooks, H. A., assignor.)
Christiansson, P., Carlos, Minn. Corn-planter. No. 875,894; Jan. 7; Sp. p. 402; Dr. pp. 89–90; Gaz. vol. 132; p. 75.
Christiansson, P., Carlos, Minn. Hill-marker. No. 876,296; Jan. 7; Sp. p. 1208; Dr. pp. 263–4; Gaz. vol. 132; p. 202.
Christiansson, P., Carlos, Minn. Frame for agricultural machines. No. 876,297; Jan. 7; Sp. p. 1211; Dr. p. 264; Gaz. vol. 132; p. 202.
Church, M., Washington, D. C. Roll of paper. No. 877,755; Jan. 28; Sp. p. 4225; Dr. p. 916; Gaz. vol. 132; p. 776.
Churchman, J. E., Orange, and J. F. Ochard, East Orange, N. J. Undertaker's crape-holder. No. 877,293; Jan. 21; Sp. p. 3315; Dr. p. 718; Gaz. vol. 132; p. 607.
Clark, A. F., Cashion, Okla. Running-gear. No. 877,488; Jan. 28; Sp. p. 3688; Dr. p. 800; Gaz. vol. 132; p. 689.
Clark, C. H., assignor to W. H. Laird, New York, N. Y. Potato-peeler. No. 877,550; Jan. 28; Sp. p. 3845; Dr. p. 832; Gaz. vol. 132; p. 711.
Clark, E. A., Alexandria, Nebr. Washboard. No. 877,048; Jan. 21; Sp. p. 2816; Dr. p. 609; Gaz. vol. 132; p. 525.
Clark, E. E., Kalamazoo, Mich. Stereoscope. No. 876,329; Jan 14; Sp. p. 1279; Dr. p. 278; Gaz. vol. 132; p. 243.
Clark, E. M., assignor to Edwin M. Clark Slime Filter Company, Los Angeles, Cal. Slimes-filter apparatus. No. 877,631; Jan. 28; Sp. p. 3997; Dr. p. 864; Gaz. vol. 132; p. 737.
Clark, G. H., Boston, Mass. Shoe-form. No. 877,049; Jan. 21; Sp. p. 2818; Dr. p. 609; Gaz. vol. 132; p. 525.
Clark, M., Chicago, Ill. Automatic piano. No. 876,438; Jan. 14; Sp. p. 1513; Dr. p. 325; Gaz. vol. 132; p. 279.
Clark, W. G. (See Parker and Clark.)
Clark, W. G., assignor to Parker-Clark Electric Company, New York, N. Y. Making incandescent-lamp filaments. No. 876,330; Jan. 14; Sp. p. 1282; Dr. p. 278; Gaz. vol. 132; p. 243.
Clark, W. G., assignor to Parker-Clark Electric Company, New York, N. Y. Making incandescent-lamp filaments. No. 876,332; Jan. 14; Sp. p. 1285; Gaz. vol. 132; p. 244.
Clark, W. G., and H. C. Parker, assignors to Parker-Clark Electric Company, New York, N. Y. Making electric-lamp filaments. No. 876,331; Jan. 14; Sp. p. 1283; Gaz. vol. 132; p. 244.
Claunch, J. E., Collins, Miss. Wrench. No. 877,632; Jan. 28; Sp. p. 3999; Dr. p. 864; Gaz. vol. 132; p. 737.
Claypool, O. C., Prineville, Oreg. Clothes-line reel. No. 875,778; Jan. 7; Sp. p. 199; Dr. p. 43; Gaz. vol. 132; p. 36.
Clayton, J. B., Kirkwood, Mo. Concrete construction. No. 875,983; Jan. 7; Sp. p. 584; Dr. p. 125; Gaz. vol. 132; p. 101.
Cleveland, F. A., New York, N. Y. Rotary engine. No. 876,691; Jan. 14; Sp. p. 2078; Dr. pp. 451–2; Gaz. vol. 132; p. 367.
Cleveland Hardware Company. (See Hickok, L. E., assignor.)
Clingen, W. C., Lake Bluff, assignor to Fireless Cooker Company, Chicago, Ill. Fireless cooker. No. 876,858; Jan. 14; Sp. p. 2365; Dr. p. 518; Gaz. vol. 132; p. 418.
Clopton, W. G., assignor of one-half to J. C. Moser, Baltimore, Md. Low-cut shoe. No. 876,897; Jan. 14; Sp. p. 2457; Dr. p. 536; Gaz. vol. 132; p. 433.
Close, E. C. L., London, England. Fireplace or stove. No. 876,692; Jan. 14; Sp. p. 2081; Dr. p. 452; Gaz. vol. 132; p. 368.
Cloud, A. D., *et al.* (See Latimer, J. B., assignor.)
Cloud, G. K., Mobile, Ala. Net-casting apparatus. No. 876,148; Jan. 7; Sp. p. 903; Dr. p. 195; Gaz. vol. 132; p. 153.
Clover, G. C., Charlevoix, Mich. Railway-spike. No. 875,779; Jan. 7; Sp. p. 200; Dr. p. 43; Gaz. vol. 132; p. 37.
Coats, A. W., assignor to R. M. Thompson, Tacoma, Wash. Folding crate. No. 875,780; Jan. 7; Sp. p. 201; Dr. p. 43; Gaz. vol. 132; p. 37.
Coffin Valve Company. (See Adams and Kragh, assignors.)
Cokely, E. W., Coalinga, Cal. Walking-beam truss-rod. (Reissue.) No. 12,743; Jan. 28; Sp. p. 4492; Dr. p. 978; Gaz. vol. 132. p. 821.
Colbert, L. R., Massaponax, Va. Sawing-machine. No. 877,410; Jan. 21; Sp. p. 3539; Dr. p. 766; Gaz. vol. 132; p. 644.
Colburn, I. W., and E. Washburn, assignors to Colburn Machine Glass Company, Franklin, Pa. Process and apparatus for the continuous production of sheet-glass. No. 876,267; Jan. 7; Sp. p. 1125; Dr. pp. 244–46; Gaz. vol. 132; p. 191.
Colburn Machine Glass Company. (See Colburn and Washburn, assignors.)
Coldwell, G. H., Rockton, Pa. Floor-jack. No. 876,693; Jan. 14; Sp. p. 2082; Dr. p. 452; Gaz. vol. 132; p. 368.
Cole, B. A., assignor of one-half to F. H. Gray, Fergus Falls, Minn. Envelop. No. 877,050; Jan. 21; Sp. p. 2820; Dr. p. 610; Gaz. vol. 132; p. 526.
Cole, B. E., *et al.* (See Secrest, J. A., assignor.)
Cole, F. J. (See Sague and Cole.)
Cole, F. J., New York, N. Y. Steam-boiler superheater. No. 875,895; Jan. 7; Sp. p. 409; Dr. pp. 90–1; Gaz. vol. 132; p. 75.
Coleman, J. H., Tottenham, Ontario, Canada. Automatic fare-collector. No. 875,781; Jan. 7; Sp. p. 203; Dr. p. 781; Gaz. vol. 132; p. 37.
Coldewelh. D. F., Coalinga, Cal. Oil-pump. No. 876,622; Jan. 14; Sp. p. 1932; Dr. p. 422; Gaz. vol. 132; p. 344.
Colley Company. (See Colley, E. S., assignor.)
Colley, E. S., assignor to Colley Company, Portland, Me. Hoisting apparatus. No. 876,040; Jan. 7; Sp. p. 685; Dr. p. 147; Gaz. vol. 132; p. 118.
Collins, M. R., assignor to Taisey Pneumatic Service Company, Indianapolis, Ind. Pneumatic carrier. No. 876,859; Jan. 14; Sp. p. 2363; Dr. p. 518; Gaz. vol. 132; p. 419.
Collins, W. H., assignor of one-half to J. L. Holmes, Indianapolis, Ind. Bridle-bit. No. 877,296; Jan. 21; Sp. p. 3317; Dr. p 719; Gaz. vol. 132; p. 607.
Collins, W. L., assignor of one-half to E. L. Montague, Baldwinsville, N. Y. Dump-wagon. No. 877,884; Jan. 28; Sp. p. 4454; Dr. p. 972; Gaz. vol. 132; p. 817.
Collis, J., Des Moines, Iowa, assignor to W. P. Collis, New York, N. Y. Packless radiator-valve. No. 877,051; Jan. 21; Sp. p. 2821; Dr. p. 610; Gaz. vol. 132; p. 526.
Collis, W. P. (See Collis, J., assignor.)
Cöln-Müsener Bergwerks Actien Verein. (See Dresler, H., assignor.)
Colomb, B. A. (See Delph, F. A., assignor.)
Colson, A. G., Des Moines, Iowa. Pig-forceps. No. 877,633; Jan. 28; Sp. p. 4000; Dr. p. 864; Gaz. vol. 132; p. 737.
Comas Cigarette Machine Company. (See Bilgram, H., assignor.)
Comings, W. R., Wimbledon, England. Paper or cardboard box. No. 877,757; Jan. 28; Sp. p. 4226; Dr. p. 917; Gaz. vol. 132; p. 776.
Comings, W. R., Wimbledon, England. Box making and covering machine. No. 877,820; Jan. 28; Sp. p. 4360; Dr. pp. 947–8; Gaz. vol. 132; p. 799.
Comitot, F. N., Chicago, Ill. Reinforced concrete construction. No. 876,694; Jan. 14; Sp. p. 2083; Dr. p. 453; Gaz. vol. 132; p. 368.
Commercial Storage Battery Company. (See Gardiner, W., assignor.)
Commin, F. J., Exeter, England, assignor to Cameron Septic Tank Company. Portable apparatus for liquefying and purifying sewage. No. 875,984; Jan. 7; Sp. p. 585; Dr. p. 125; Gaz. vol. 132; p. 101.
Compagnone, V., Naples, Italy. Brick molded for walls with a monolithic internal skeleton. No. 876,298; Jan. 7; Sp. p. 1213; Dr. p. 265; Gaz. vol. 132; p. 203.
Conery, A. F., Jr., Newark, N. J. Soap cake. No. 875,985; Jan. 7; Sp. p. 587; Dr. p. 126; Gaz. vol. 132; p. 102.
Coney, E. (See Hard and Coney.)
Conkey, L. L., Grand Rapids, Mich. Veterinary dental speculum. No. 875,692; Jan. 7; Sp. p. 28; Dr. p. 6; Gaz. vol. 132; p. 7.
Conley, C. M., assignor of one-half to I. W. Pence and A. Rogers, Cleveland, Ohio. Show-window and show-case construction. No. 876,299; Jan. 7; Sp. p. 1215; Dr. p. 265; Gaz. vol. 132; p. 203.
Conly, M. S., Los Angeles, Cal. Oil-burner. No. 876,986; Jan. 14; Sp. p. 2459; Dr. p. 537; Gaz. vol. 132; p. 433.
Connell, L., Jr., Portland, Oreg. Quadruplex or multiplex telegraphy. No. 876,312; Jan. 7; Sp. p. 1240; Dr. p. 270; Gaz. vol. 132; p. 207.
Conner, G. F., Port Huron, Mich. Guide for row-cultivating and root-harvesting machines. No. 876,623; Jan. 14; Sp. p. 1934; Dr. p. 422; Gaz. vol. 132; p. 345.
Connor, G. G., South Bend, Ind. Skid and truck. No. 877,758; Jan. 28; Sp. p. 4228; Dr. p. 917; Gaz. vol. 132; p. 776.
Conrad, H. G. (See Ash, H. B., assignor.)
Continuous Glass Press Company. (See Shuman, F., assignor.)
Converse, A. D., Winchendon, Mass. Drum. No. 877,830; Jan. 28; Sp. p. 4362; Dr. p. 948; Gaz. vol. 132; p. 799.
Conzetti, A., assignor to Aniline Colour and Extract Works, formerly J. R. Geigy, Basel, Switzerland. Triphenylmethane dye and making same. No. 877,052; Jan. 21; Sp. p. 2823; Gaz. vol. 132; p. 526.
Conzetti, A., assignor to Aniline Colour and Extract Works, formerly J. R. Geigy. Basel, Switzerland. Triphenylmethane dye and making same. No. 877,053; Jan. 21; Sp. p. 2825; Gaz. vol. 132; p. 527.
Conzetti, A., assignor to Aniline Colour and Extract Works, formerly J. R. Geigy, Basel, Switzerland. Triphenylmethane dye and making same. No. 877,054; Jan. 21; Sp. p. 2826; Gaz. vol. 132; p. 527.
Cook, B. W., Poseyville, Mich., assignor to Cook Clevis Co., Chicago, Ill. Clevis. No. 876,333; Jan. 14; Sp. p. 1286; Dr. p. 278; Gaz. vol. 132; p. 244.
Cook, C. E. (See Rounds and Cook.)

Cook, C. W., Evansville, Ind. Bottle-cap. No. 876,149; Jan. 7; Sp. p. 905; Dr. p. 195; Gaz. vol. 132; p. 154.
Cook Clevis Co. (See Cook, B. W., assignor.)
Cook, E. E., assignor to Randolph Paper Box Company, Richmond, Va. Collaring-machine. No. 877,297; Jan. 21; Sp. p. 3318; Dr. pp. 719-21; Gaz. vol. 132; p. 607.
Cook, E. M., Indianapolis, Ind. Automatic sprinkler-head. No. 877,551; Jan. 28; Sp. p. 3847; Dr. p. 832; Gaz. vol. 132; p. 712.
Cook, E. M., Indianapolis, Ind. Dry-pipe valve. No. 877,552; Jan. 28; Sp. p. 3848; Dr. p. 832; Gaz. vol. 132; p. 712.
Cook, J., Philadelphia, Pa. Reinforced brake-shoe. No. 877,055; Jan. 21; Sp. p. 2827; Dr. p. 610; Gaz. vol. 132; p. 527.
Cook, J. H., assignor to Detroit Wire Spring Co., Detroit, Mich. Spring-seat structure. No. 876,527; Jan. 14; Sp. p. 1714; Dr. p. 372; Gaz. vol. 132; p. 311.
Cook, W. H., London, England. Fast nut. No. 875,782; Jan. 7; Sp. p. 206; Dr. p. 44; Gaz. vol. 132; p. 38.
Cookson, C. L., assignor to Panama Hay Press Co., Kansas City, Mo. Baling-press. No. 877,173; Jan. 21; Sp. p. 3079; Dr. p. 666; Gaz. vol. 132; p. 566.
Cooper, F. J., assignor of one-half to J. M. Skinner, Toledo, Ohio. Wheel. No. 876,334; Jan. 14; Sp. p. 1287; Dr. p. 278; Gaz. vol. 132; p. 244.
Cooper Hewitt Electric Company. (See Thomas, P. H., assignor.)
Coover, A. J., Medway, Ohio. Railway-track brace. No. 877,759; Jan. 28; Sp. p. 4229; Dr. p. 918; Gaz. vol. 132; p. 777.
Copeland, R. J., Toronto, Ontario, Canada. Binder. No. 876,624; Jan. 14; Sp. p. 1935; Dr. p. 422; Gaz. vol. 132; p. 345.
Copp, C. S., and L. Frank, Jacksonville, Ill. Display-rack. No. 877,760; Jan. 28; Sp. p. 4231; Dr. p. 918; Gaz. vol. 132; p. 777.
Coppée, E., Brussels, Belgium. Regenerative coke-oven. No. 875,896; Jan. 7; Sp. p. 415; Dr. p. 92; Gaz. vol. 132; p. 76.
Corbett, W. H., Portland, Oreg. Friction-clutch. No. 877,489; Jan. 28; Sp. p. 3691; Dr. p. 800; Gaz. vol. 132; p. 690.
Corey, F. B., Schnectady, N. Y., assignor to General Electric Company. Railway-signal. No. 876,944; Jan. 21; Sp. p. 2584; Dr. p. 563; Gaz. vol. 132; p. 488.
Cornwell, P. W., Brockton, Mass. Heat regulating and controlling apparatus. No. 877,056; Jan. 21; Sp. p. 2828; Dr. p. 611; Gaz. vol. 132; p. 528.
Cossor, F., London, England. Mercurial thermostatic circuit-closer. No. 876,773; Jan. 14; Sp. p. 2209; Dr. p. 486; Gaz. vol. 132; p. 392.
Côté, N., Montreal, Quebec, Canada. Proportional dividers. No. 875,783; Jan. 7; Sp. p. 207; Dr. p. 45; Gaz. vol. 132; p. 38.
Cottrell, H., Newark, N. J. Vehicle-spring check. No. 875,693; Jan. 7; Sp. p. 29; Dr. p. 6; Gaz. vol. 132; p. 7.
Councilor, J. W. Waterloo, Iowa. Storm-window hinge. No. 875,807; Jan. 7; Sp. p. 416; Dr. p. 92; Gaz. vol. 132; p. 76.
Couper, J. H., Atlanta, Ga., and W. L. Albright, Cincinnati, Ohio, said Couper assignor to said Albright. Kitchen-cabinet. No. 876,335; Jan. 14; Sp. p. 1288; Dr. p. 279; Gaz. vol. 132; p. 245.
Couret, J. S., assignor of one-half to E. Montagnet, New Orleans, La. Blind-fastening. No. 876,300; Jan. 7; Sp. p. 1217; Dr. p. 265; Gaz. vol. 132; p. 203.
Covington Machine Company. (See Garner, S., assignor.)
Covington Machine Company. (See Ham, J. S., assignor.)
Cowan, A. S. (See Holmes and Cowan.)
Cowley, P. J. (See Harkins, Rickard, and Cowley.)
Cowper-Coles, S. O., London, England. Apparatus for the manufacture of copper electrotypes. No. 875,784; Jan. 7; Sp. p. 208; Dr. p. 45; Gaz. vol. 132; p. 38.
Craig, A., Blackley, England. Razor-strop or device for stropping razors or blades. No. 876,528; Jan. 14; Sp. p. 1715; Dr. p. 372; Gaz. vol. 132; p. 311.
Cramer, H., Jr. (See Inch and Cramer.)
Crampton, H. B., assignor of one-half to C. B. Hawver, Syracuse, N. Y. Sweat-band for hats. No. 877,885; Jan. 28; Sp. p. 4457; Dr. p. 972; Gaz. vol. 132; p. 817.
Crandall, H. F., Milwaukee, Wis. Fishing-reel. No. 875,694; Jan. 7; Sp. p. 30; Dr. p. 6; Gaz. vol. 132; p. 8.
Crandall, N. W., assignor to Perkins Corporation, Hartford, Conn. Press. No. 876,899; Jan. 14; Sp. p. 2460; Dr. pp. 537-8; Gaz. vol. 132; p. 433.
Crane Buckle Company. (See Crane, N., assignor.)
Crane Company. (See Hayden, J. T., assignor.)
Crane Company. (See Paulson, M., assignor.)
Crane, F., *et al.* (See Baker, W., assignor.)
Crane, N., Boston, Mass., assignor to Crane Buckle Company, Portland, Me. Fastener. No. 877,174; Jan. 21; Sp. p. 3082; Dr. p. 667; Gaz. vol. 132; p. 567.
Cravens, G. W., Schenectady, N. Y., assignor to General Electric Company. Arc-lamp. No. 876,945; Jan. 21; Sp. p. 2586; Dr. p. 563; Gaz. vol. 132; p. 489.
Crea, H. H., Decatur, Ill. Fireless cooker. No. 875,695; Jan. 7; Sp. p. 33; Dr. p. 7; Gaz. vol. 132; p. 8.
Creedon, P. J. (See Parry and Creedon.)
Creedon, P. J., Peterborough, Ontario, Canada. Auger-bit. No. 877,831; Jan. 28; Sp. p. 4364; Dr. p. 948; Gaz. vol. 132; p. 800.
Creegan, J. P., *et al.* (See Martin, G., assignor.)
Creek, R. A., Indianapolis, Ind. Book having a pocket. No. 877,553; Jan. 28; Sp. p. 3849; Dr. p. 833; Gaz. vol. 132; p. 712.
Crepar, T. M., Jamestown, assignor of one-half to G. A. Adams, Stutsman, F. C. Defield, Fargo, N. D., F. W. Washickek, Pasco, Wash., and G. M. Carden, Blackstone, Va. Combination stock-car. No. 876,774; Jan. 14; Sp. p. 2211; Dr. p. 486; Gaz. vol. 132; p. 392.
Crisler, J. L. (See Hines, Champeny, and Crisler.)
Crittenden, I. O., Cleveland, Ohio. Veterinary dilator and impregnator. No. 876,775; Jan. 14; Sp. p. 2213; Dr. p. 486; Gaz. vol. 132; p. 393.
Cromer, H. I., Chicago, Ill. Turbine-engine. No. 876,860; Jan. 14; Sp. p. 2370; Dr. p. 518; Gaz. vol. 132; p. 419.
Crompton & Knowles Loom Works. (See Holmes and Cowan, assignors.)
Crompton & Knowles Loom Works. (See Steele, A. H., assignor.)
Crompton & Knowles Loom Works. (See Wyman, H., assignor.)
Crooker, W. W., Lynn, assignor to F. E. Wachtler, Boston, Mass. Finishing surfaces of heels, soles, &c. No. 876,861; Jan. 14; Sp. p. 2377; Gaz. vol. 132; p. 420.
Crosno, A. O., Mode, Ill. Table attachment for bedsteads. No. 876,041; Jan. 7; Sp. p. 687; Dr. p. 147; Gaz. vol. 132; p. 119.
Crossley, W. J., Openshaw, Manchester, and J. Atkinson, Mellor, England. Governing-gear for internal-combustion engines. No. 876,430; Jan. 14; Sp. p. 1517; Dr. p. 326; Gaz. vol. 132; p. 280.
Crowder, D. W., assignor of one-half to D. G. Morgan, Hillham, Ind. Riding-spur. No. 877,886; Jan. 28; Sp. p. 4458; Dr. p. 972; Gaz. vol. 132; p. 817.
Cukier, X., New York, N. Y. Cabinet for holding phonograph disk records. No. 877,832; Jan. 28; Sp. p. 4364; Dr. p. 948; Gaz. vol. 132; p. 800.
Culbertson, F., assignor of one-third to J. Mosal, Jackson, Miss. Oil attachment for handsaws and the like. No. 876,695; Jan 14; Sp. p. 2064; Dr. p. 453; Gaz. vol. 132; p. 368.
Cummer, W. M., Cleveland, Ohio. Drying-cylinder. No. 876,440; Jan 14; Sp. p. 1520; Dr. p. 326; Gaz. vol. 132; p. 280.
Cummings, G. H., Waterbury, Conn. Anchor. No. 877,761; Jan. 28; Sp. p. 4232; Dr. pp. 913-19; Gaz. vol. 132; p. 777.
Cunniff, J., Wylam, Ala. Indicator. No. 877,298; Jan. 21; Sp. p. 3327; Dr. p. 721; Gaz. vol. 132; p. 608.
Cunningham, S., Lockport, N. Y. Washer for fire-hose. No. 876,301; Jan. 7; Sp. p. 1218; Dr. p. 266; Gaz. vol. 132; p. 204.
Cunningham, W. E. (See Ackerman, E. S., assignor.)
Curran, M. T., St. Louis, Mo. Grass-catcher for lawn-mowers. No. 877,299; Jan. 21; Sp. p. 3328; Dr. p. 721; Gaz. vol. 132; p. 608.
Curtain Supply Company. (See Davis, G. H., assignor.)
Curtain Supply Company. (See Hopkins, C. L., assignor.)
Curtain Supply Company. (See Hotaling, I. L., assignor.)
Curtain Supply Company. (See Keeler, H. E., assignor.)
Curtin, F. (See Banker and Curtin.)
Custer, A., deceased, Monroe, Iowa; J. Custer, administrator. Ore-separator. No. 877,411; Jan. 21; Sp. p. 3542; Dr. p. 766; Gaz. vol. 132; p. 644.
Custer, E. A., Philadelphia, Pa. Apparatus for casting metal pipes. No. 876,946; Jan. 21; Sp. p. 2589; Dr. p. 564; Gaz. vol. 132; p. 489.
Custer, J., administrator. (See Custer, A.)
Cutler, C. B., Stanhope, N. J., assignor to H. H. Richardson, Brooklyn, N. Y. Machine for cleaning printers' rollers and the like. No. 876,336; Jan. 14; Sp. p. 1293; Dr. p. 280; Gaz. vol. 132; p. 245.
Cutler-Hammer Manufacturing Company. (See Date, W. E., assignor.)
Czigler, P., Székes-Fejérvár, Austria-Hungary. Kiln for burning brick, lime, and similar material. No. 877,300; Jan. 21; Sp. p. 3329; Dr. p. 722; Gaz. vol. 132; p. 608.
D'Ollier, H., Jr. (See Elkins, G. W., assignor.)
D'Ollier, H., Jr., Philadelphia, assignor of one-half to G. W. Elkins, Elkins Park, Pa. Electric heater. No. 877,177; Jan. 21; Sp. p. 3087; Dr. pp. 667-8; Gaz. vol. 132; p. 568.
Dahl, C., Brooklyn, N. Y. Incubator. No. 877,833; Jan. 28; Sp. p. 4366; Dr. p. 949; Gaz. vol. 132; p. 800.
Dale, J. H., New York, N. Y. Wall-switch. No. 877,301; Jan. 21; Sp. p. 3331; Dr. p. 722; Gaz. vol. 132; p. 608.
Dalton, G. F., Jr., Cleveland, Ohio. Blackboard composition. No. 877,554; Jan. 28; Sp. p. 3849; Gaz. vol. 132; p. 712.
Dalton, P. J., Joliet, Ill., assignor to Rail Joint Company, New York, N. Y. Insulated-rail joint. No. 877,057; Jan. 21; Sp. p. 2830; Dr. pp. 611-12; Gaz. vol. 132; p. 528.

Daniel, P., New York, N. Y. Internal-combustion engine. No. 877,834; Jan. 28; Sp. p. 4367; Dr. p. 949; Gaz. vol. 132; p. 801.
Daniel, P., New York, N. Y. Combined steering and driving axle. No. 877,835; Jan. 28; Sp. p. 4370; Dr. p. 950; Gaz. vol. 132; p. 801.
Darr, A. L., Carroll, Iowa. Transformable protractor, square, &c. No. 876,042; Jan. 7; Sp. p. 688; Dr. p. 147; Gaz. vol. 132; p. 119.
Darracq, P. A., assignor to Société A. Darracq & Cie. (1905) Ltd., Suresnes, France. Operating device for motor-vehicles. No. 877,762; Jan. 28; Sp. p. 4233; Dr. p. 919; Gaz. vol. 132; p. 778.
Date, W. E., Westfield, N. J., assignor to Cutler-Hammer Manufacturing Company, Milwaukee, Wis. Motor-controlling device. No. 876,441; Jan. 14; Sp. p. 1522; Dr. pp. 327-8; Gaz. vol. 132; p. 280.
Dauner, C. J., and C. A. Werrmann, Cincinnati, Ohio. Jeweler's gage. No. 876,696; Jan. 14; Sp. p. 2066; Dr. p. 453; Gaz. vol. 132; p. 369.
Davies, C. W. T., London, England. Collar. No. 877,302; Jan. 21; Sp. p. 3334; Dr. p. 723; Gaz. vol. 132; p. 609.
Davies, E. T., Portland, Oreg. Band sawing-machine. No. 876,302; Jan. 7; Sp. p. 1219; Dr. p. 266; Gaz. vol. 132; p. 204.
Davis, C., U. S. Navy, assignor, by mesne assignments, to Carnegie Steel Company, Pittsburg, Pa. Cementation of steel. No. 876,862; Jan. 14; Sp. p. 2379; Dr. p. 519; Gaz. vol. 132; p. 420.
Davis, C. B., *et al.* (See De Martino, J., assignor.)
Davis, D. G., assignor of one-half to G. R. Bradshaw, Ellensburg, Wash. Lawn-mower grass-receptacle. No. 876,697; Jan. 14; Sp. p. 2068; Dr. p. 454; Gaz. vol. 132; p. 369.
Davis & Furber Machine Company. (See Stevens, F. C., assignor.)
Davis, G. H., Portland, Me., assignor to Curtain Supply Company, Newark, N. J. Frictional curtain-holding device. No. 877,412; Jan. 21; Sp. p. 3544; Dr. p. 767; Gaz. vol. 132; p. 644.
Davis, J. F., Sag Harbor, N. Y. Refrigerator-guard. No. 875,785; Jan. 7; Sp. p. 209; Dr. p. 45; Gaz. vol. 132; p. 39.
Davis, M. C., Wallowa, Oreg. Bench-dog. No. 875,786; Jan. 7; Sp. p. 210; Dr. p. 45; Gaz. vol. 132; p. 39.
Davis & Roesch Temperature Controlling Company. (See Saugstad, O., assignor.)
Davis, S. E., Elgin, Ill. Egg-candling machine. No. 877,490; Jan. 28; Sp. p. 3692; Dr. p. 801; Gaz. vol. 132; p. 690.
Davis Sewing Machine Company. (See Green, L. D., assignor.)
Davis, T. A., Warsaw, Ill. Tooth-crown. No. 876,043; Jan. 7; Sp. p. 689; Dr. p. 148; Gaz. vol. 132; p. 119.
Dawley, C. A., New York, N. Y. Channeler. No. 876,863; Jan. 14; Sp. p. 2381; Dr. p. 519; Gaz. vol. 132; p. 420.
Dawson, J. B., Pioneer, Mont. Mail-bag catching and delivering apparatus. No. 876,864; Jan. 14; Sp. p. 2383; Dr. p. 520; Gaz. vol. 132; p. 421.
Day, S. A., Paris, France. Flying or air car. No. 875,787; Jan. 7; Sp. p. 211; Dr. p. 46; Gaz. vol. 32; p. 39.
De Fore, S. C., Kansas City, Mo., assignor to Standard Speedometer Company. Speed-indicating apparatus. No. 877,175; Jan. 21; Sp. p. 3084; Dr. p. 667; Gaz. vol. 132; p. 567.
De Fore, S. C., Kansas City, Mo., assignor to Standard Speedometer Company. Speed-indicating device. No. 877,176; Jan. 21; Sp. p. 3085; Dr. p. 667; Gaz. vol. 132; p. 568.
De Forest, L., New York, N. Y., assignor to G. K. Woodworth, Boston, Mass. Wireless-telegraph transmitting system. No. 876,165; Jan. 7; Sp. p. 930; Dr. p. 200; Gaz. vol. 132; p. 158.
De Forest, L., New York, N. Y., assignor to G. K. Woodworth, Boston, Mass. Magnetic detector. No. 877,069; Jan. 21; Sp. p. 2849; Dr. p. 615; Gaz. vol. 132; p. 531.
De Kleist, E., North Tonawanda, N. Y. Pneumatic musical instrument. No. 877,203; Jan. 21; Sp. p. 3135; Dr. p. 680; Gaz. vol. 132; p. 577.
De La Vergne Machine Company. (See Doelling, L. K., assignor.)
De La Vergne Machine Company. (See Goldingham, A. H., assignor.)
De La Vergne Machine Company. (See Schmaltz, P., assignor.)
De Long, J. W., Ironton, Ohio, assignor of one-third to H. Ketterer, Russell, Ky. Safety means for locomotive turn-tables. No. 876,698; Jan. 14; Sp. p. 2069; Dr. p. 454; Gaz. vol. 132; p. 369.
De Martino, J., assignor of seven-tenths to C. B. Davis and C. H. Kinley, Breesport, N. Y., and J. F. Burke, Pittsburg, Pa. Electric lamp. No. 876,922; Jan. 14; Sp. p. 2521; Dr. p. 551; Gaz. vol. 132; p. 441.
De Moulin, E. and U. S., Greenville, Ill. Trick-telephone. No. 876,947; Jan. 21; Sp. p. 2594; Dr. p. 564; Gaz. vol. 132; p. 490.
De Moulin, U. S. (See De Moulin, E. and U. S.)
De Remer, J. R., Glenwood Springs, Colo. Gate-valve. No. 876,625; Jan. 14; Sp. p. 1939; Dr. p. 423; Gaz. vol. 132; p. 345.
De Young, T., Jr., South Holland, Ill. Mechanism for cleaning excavator-buckets. No. 875,789; Jan. 7; Sp. p. 217; Dr. p. 47; Gaz. vol. 132; p. 40.
Dean, W. W., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Telephone system. No. 877,058; Jan. 21; Sp. p. 2833; Dr. p. 612; Gaz. vol. 132; p. 528.
Deason, A. E., assignor of one-fourth to C. D. Hill, Poteau, Okla. Wrench. No. 877,763; Jan. 28; Sp. p. 4235; Dr. p. 919; Gaz. vol. 132; p. 778.
Decker, A. C., Keokuk, Iowa. Bull-ring. No. 877,634; Jan. 28; Sp. p. 4001; Dr. p. 864; Gaz. vol. 132; p. 738.
Deeley, M. J., and A. E. Quinlan, Sheboygan Falls, Wis. Gearing. No. 875,898; Jan. 7; Sp. p. 417; Dr. p. 93; Gaz. vol. 132; p. 76.
Defield, F. C., *et al.* (See Crepar, T. M., assignor.)
Degenhardt, F. and R., New York, N. Y. Cash-register. No. 876,776; Jan. 14; Sp. p. 2214; Dr. pp. 486-7; Gaz. vol. 132; p. 393.
Degenhardt, R. (See Degenhardt, F. and R.)
Delany, P. B., South Orange, N. J. Telegraphy. No. 877,555; Jan. 28; Sp. p. 3850; Dr. p. 833; Gaz. vol. 132; p. 712.
Delph, F. A., New Orleans, assignor of one-half to B. A. Colomb, Colomb, La. Heating attachment for grates and fireplaces. No. 877,303; Jan. 21; Sp. p. 3335; Dr. p. 723; Gaz. vol. 132; p. 609.
Delzeit, B. J. (See Dever and Delzeit.)
Dempster, D. A., Los Angeles, Cal. Means for effecting escape of occupants from sunken vessels. No. 876,777; Jan. 14; Sp. p. 2217; Dr. p. 487; Gaz. vol. 132; p. 393.
Denenny, C. C., Felton, Minn. Hay-stacker. No. 876,778; Jan. 14; Sp. p. 2219; Dr. pp. 487-8; Gaz. vol. 132; p. 394.
Deune, M. T., Rushden, England. Machine for separating or indenting stitches on boots and shoes. No. 876,699; Jan. 14; Sp. p. 2090; Dr. pp. 454-5; Gaz. vol. 132; p. 370.
Dennison, R. H. (See Derr, T. L., assignor.)
Denovan, R. A., Dalkeith, Ontario, Canada. Phonographic-record cabinet. No. 876,865; Jan. 14; Sp. p. 2385; Dr. p. 520; Gaz. vol. 132; p. 421.
Derr, T. L., assignor of one-half to R. H. Dennison, Reading, Pa. Gage-cock. No. 875,986; Jan. 7; Sp. p. 589; Dr. p. 126; Gaz. vol. 132; p. 102.
Dessolle, E. L. (See Jullien and Dessolle.)
Detroit White Lead Works. (See Allen and Weaver, assignors.)
Detroit Wire Spring Co. (See Cook, J. H., assignor.)
Dever, B. J., and B. J. Delzeit, Philadelphia, Pa. Puzzle. No. 876,779; Jan. 14; Sp. p. 2221; Dr. p. 488; Gaz. vol. 132; p. 394
Deverell, W. P., Decatur, Ill. Compression stop and waste cock. No. 875,696; Jan. 7; Sp. p. 35; Dr. p. 7; Gaz. vol. 132; p. 8.
Devine, J. J. (See Rappleye and Devine.)
Dewey, F. L. (See Graham and Dewey.)
Dexter, F. K., Weld, Me. Memorandum-tablet. No. 876,948; Jan. 21; Sp. p. 2596; Dr. p. 565; Gaz. vol. 132; p. 490.
Diamond Match Company. (See Williams, W. E., assignor.)
Dick, J., Canton, Ohio. Silage-distributer. No. 877,304; Jan. 21; Sp. p. 3337; Dr. pp. 723-4; Gaz. vol. 132; p. 609.
Dick, W. C., assignor of three-fourths to H. C. Eich, Freeport, Ill. Adjusting device for locomotive driving-boxes. No. 877,059; Jan. 21; Sp. p. 2837; Dr. p. 612; Gaz. vol. 132; p. 529.
Dickerson, M., assignor of one-half to F. L. Luz, Newark, N. J. Armature-banding. No. 876,949; Jan. 21; Sp. p. 2597; Dr. p. 565; Gaz. vol. 132; p. 490.
Diebolt, L. T., assignor of one-half to F. L. Hartwick, Logansport, Ind. Safety-stop for trains. No. 877,305; Jan. 21; Sp. p. 3340; Dr. p. 724; Gaz. vol. 132; p. 610.
Diescher, A. J., Pittsburg, Pa. Apparatus for washing coal, ore, &c. No. 876,268; Jan. 7; Sp. p. 1137; Dr. pp. 247-8; Gaz. vol. 132; p. 191.
Dietz, J., Cincinnati, Ohio. Water-motor. No. 877,635; Jan. 28; Sp. p. 4003; Dr. p. 865; Gaz. vol. 132; p. 738.
Digby, M. L., Rising Star, Tex. Plow-clevis. No. 877,413; Jan. 21; Sp. p. 3540; Dr. p. 767; Gaz. vol. 132; p. 645.
Dill, T. C., Philadelphia, Pa. Variable-speed mechanism. No. 877,491; Jan. 28; Sp. p. 3694; Dr. p. 801; Gaz. vol. 132; p. 690.
Dillard, W. E., Petersburg, Va. Oil-can. No. 875,697; Jan. 7; Sp. p. 36; Dr. p. 7; Gaz. vol. 132; p. 9.
Dimitry, E. L., New Orleans, La. Bottle. No. 876,150; Jan. 7; Sp. p. 906; Dr. p. 196; Gaz. vol. 132; p. 154.
Dinsmoor, W. L., Longbeach, Cal. Repair-tool. No. 877,306; Jan. 21; Sp. p. 3344; Dr. p. 725; Gaz. vol. 132; p. 610.
Dion, A. E., and C. W. Ball, Ottawa, Ontario, Canada. Electric-current controller. No. 877,705; Jan. 28; Sp. p. 4131; Dr. p. 894; Gaz. vol. 132; p. 759.
Direct-Line General Telephone Company. (See Andriano, A. K., assignor.)
Dittmann, H., Lübeck, Germany. Cover for kegs. No. 877,636; Jan. 28; Sp. p. 4005; Dr. p. 865; Gaz. vol. 132; p. 739.
Dixon, E., Bristol, R. I. Top-roll saddle. No. 876,950; Jan. 21; Sp. p. 2599; Dr. p. 565; Gaz. vol. 132; p. 491.
Dodge, C. R., Wonder, Nev. Vehicle-axle lubricator. No. 876,151; Jan. 7; Sp. p. 911; Dr. p. 196; Gaz. vol. 132; p. 154.
Doelling, L. K., New Rochelle, N. Y., assignor to De La Vergne Machine Company. Pump. No. 877,492; Jan 28; Sp. p. 3698; Dr. p. 802; Gaz. vol. 132; p. 691.
Dogura, T. (See Inouye and Dogura.)

Doherty, G. V., Boston, Mass. Non-refillable bottle. No. 875,987; Jan. 7; Sp. p. 589; Dr. p. 126; Gaz. vol. 132; p. 102.
Dolezal, F. M., Chicago, Ill. Holder for hooks and eyes. No. 877,637; Jan. 28; Sp. p. 4006; Dr. p. 865; Gaz. vol. 132; p. 739.
Dollison, C. C., Lancaster, Ohio. Combined roller and harrow. No. 876,951; Jan. 21; Sp. p. 2600; Dr. pp. 565-6; Gaz. vol. 132; p. 491.
Donner, W. H. (See Macfarren, W. W., assignor.)
Donovan, J. P., San Francisco, Cal. Crude-oil burner. No. 877,178; Jan. 21; Sp. p. 3091; Dr. p. 668; Gaz. vol. 132; p. 568.
Dorman, M. B., Mill Hall, Pa. Fruit-conveyer. No. 876,529; Jan. 14; Sp. p. 1718; Dr. p. 373; Gaz. vol. 132; p. 312.
Dorward, E. P., assignor of one-fourth to C. F. Carroll, Marion, Ohio. Music-holder. No. 876,303; Jan. 7; Sp. p. 1222; Dr. p. 266; Gaz. vol. 132; p. 204.
Dorward, E. P., assignor of one-fourth to C. F. Carroll, Marion, Ohio. Music-leaf turner. No. 876,781; Jan. 14; Sp. p. 2225; Dr. p. 489-90; Gaz. vol. 132; p. 395.
Double Body Bolster Company. (See Howard and Pflager, assignors.)
Double Pointed Safety Pin Mfg. Co. (See Kaspar and Krejci, assignors.)
Douds, F. C., S. H., and R. A., New Castle, Pa. Combined turbine water-motor and fan-blower. No. 876,152; Jan. 7; Sp. p. 912; Dr. p. 197; Gaz. vol. 132; p. 155.
Douds, R. A. (See Douds, F. C., S. H., and R. A.)
Douds, S. H. (See Douds, F. C., S. H., and R. A.)
Dougherty, C. S., Milwaukee, Wis. Fence-post. No. 877,638; Jan. 28; Sp. p. 4007; Dr. p. 865; Gaz. vol. 132; p. 739.
Dougherty, W. G., Pocatello, Idaho. Water-elevator. No. 876,780; Jan. 14; Sp. p. 2222; Dr. pp. 488-9; Gaz. vol. 132; p. 304.
Douglass, C. H., Philadelphia, Pa. Holder for gramophone disk records. No. 877,060; Jan. 21; Sp. p. 2838; Dr. p. 613; Gaz. vol. 132; p. 529.
Douse, F. A., Seattle, Wash. Steam-turbine. No. 876,530; Jan. 14; Sp. p. 1718; Dr. p. 373; Gaz. vol. 132; p. 312.
Downey, J. H., Gainesville, Ga. Operating-table. No. 876,044; Jan. 7; Sp. p. 690; Dr. p. 148; Gaz. vol. 132; p. 119.
Downing, W. A., and J. T. McHugh, Pittsburg, Pa. Ticket-holder. No. 876,866; Jan. 14; Sp. p. 2387; Dr. p. 520; Gaz. vol. 132; p. 422.
Doyle, W. A. (See Abrams and Doyle.)
Draper Company. (See Murphy, H., assignor.)
Draper Company. (See Rhoades, A. E., assignor.)
Draper, F. W., assignor to Starr Piano Company, Richmond, Ind. Accenting device for automatic players for instruments. No. 876,442; Jan. 14; Sp. p. 1526; Dr. pp. 328-9; Gaz. vol. 132; p. 281.
Dreger, O., Philadelphia Pa. Pedal connection for musical instruments. No. 876,443; Jan. 14; Sp. p. 1529; Dr. p. 329; Gaz. vol. 132; p. 282.
Dresler, H., assignor to Cöln-Müsener Bergwerks Actien Verein, Creuzthal, Germany. Manufacture of artificial stone. No. 876,782; Jan. 14; Sp. p. 2229; Gaz. vol. 132; p. 395.
Dresler, H., assignor to Cöln-Müsener Bergwerks Actien Verein, Creuzthal, Germany. Making molded articles. No. 876,783; Jan. 14; Sp. p. 2230; Gaz. vol. 132; p. 395.
Dresser, B. L., Uxbridge, Mass. Trolley-harp. No. 876,700; Jan. 14; Sp. p. 2093; Dr. p. 455; Gaz. vol. 132; p. 370.
Drewell, H., Charlottenburg, Germany. Electric switch. No. 876,701; Jan. 14; Sp. p. 2094; Dr. p. 456; Gaz. vol. 132; p. 370.
Drewry, G. (See Fritch and Drewry.)
Driscoll, J. B., Louisville, Ky. Hose-band clamp. No. 876,702; Jan. 14; Sp. p. 2096; Dr. p. 456; Gaz. vol. 132; p. 371.
Drosin, L. (See Levin, M., assignor.)
Du Mazuel, E. G., New York, N. Y. Means for reinforcing concrete. No. 876,471; Jan. 14; Sp. p. 1586; Dr. p. 341; Gaz. vol. 132; p. 290.
Dubs, E., Oerlikon, Zurich, Switzerland. Electric time-alarm. No. 875,698; Jan. 7; Sp. p. 37; Dr. p. 8; Gaz. vol. 132; p. 9.
Duchesne, R., assignor to La Société "La Sténophile Bivort," Paris, France. Stenographing-machine. No. 877,179; Jan. 21; Sp. p. 3091; Dr. pp. 668-9; Gaz. vol. 132; p. 568.
Ducretet, E., Paris, France. Release mechanism for Morse telegraphs. No. 876,952; Jan. 21; Sp. p. 2602; Dr. p. 566; Gaz. vol. 132; p. 491.
Dudgeon, H. C. (See Weeks, J., assignor.)
Dudley, F. A. (See Hearing and Dudley.)
Dudley, W. R. (See Dudley, W. W. and W. R.)
Dudley, W. W. and W. R., Lancaster, Pa. Adjustable escapement for clocks and watches. No. 876,153; Jan. 7; Sp. p. 913; Dr. p. 197; Gaz. vol. 132; p. 155.
Duffy, F., Chicago, Ill. Piston-rod packing. No. 877,706; Jan. 28; Sp. p. 4132; Dr. p. 894; Gaz. vol. 132; p. 760.
Duggan, T. A., New Orleans, La. Valve. No. 876,867; Jan. 14; Sp. p. 2389; Dr. p. 520; Gaz. vol. 132; p. 422.
Dukesmith Air Brake Company. (See Dukesmith, F. H., assignor.)
Dukesmith, F. H., Meadville, assignor to Dukesmith Air Brake Company, Pittsburg, Pa. Engineer's brake-valve. No. 876,703; Jan. 14; Sp. p. 2097; Dr. pp. 456-7; Gaz. vol. 132; p. 371.
Dumais, P. T. C., Hull, Quebec, Canada. Reinforced composite structure. No. 875,699; Jan. 7; Sp. p. 38; Dr. pp. 8-9; Gaz. vol. 132; p. 9.
Dumais, P. T. C., Hull, Quebec, Canada. Mold. No. 875,700; Jan. 7; Sp. p. 41; Dr. p. 9; Gaz. vol. 132; p. 10.
Dumond, G., Paris, France. Shock-deadener for vehicles. No. 876,154; Jan. 7; Sp. p. 914; Dr. p. 197; Gaz. vol. 132; p. 155.
Duncan, G. W., Chicago, Ill. Graphophone-horn. No. 875,790; Jan. 7; Sp. p. 218; Dr. p. 48; Gaz. vol. 132; p. 40.
Duncan, H. T., Enon Valley, Pa. Wrench. No. 876,704; Jan. 14; Sp. p. 2101; Dr. p. 457; Gaz. vol. 132; p. 371.
Duncan, J. L., *et al.* (See Secrest, J. A., assignor.)
Dunfee, J. W., Fremont, Ohio. Combined cooker and washer. No. 877,493; Jan. 28; Sp. p. 3707; Dr. p. 803; Gaz. vol. 132; p. 691.
Dunham Manufacturing Company. (See Thurber, E. L., assignor.)
Dünhölter, H., Berlin, Germany. Change-speed gear. No. 876,337; Jan. 14; Sp. p. 1295; Dr. p. 280; Gaz. vol. 132; p. 245.
Dunn, E. W., San Jose, Cal. Water-heater. No. 876,868; Jan. 14; Sp. p. 2390; Dr. p. 521; Gaz. vol. 132; p. 422.
Dunn, H. F., Elwood, assignor to Dunn Manufacturing Company, Anderson, Ind. Computing cheese-cutter. No. 876,045; Jan. 7; Sp. p. 693; Dr. p. 149; Gaz. vol. 132; p. 120.
Dunn Manufacturing Company. (See Dunn, H. F., assignor.)
Dunn, W. C., Kansas City, Mo. Air-ship. No. 877,307; Jan. 21; Sp. p. 3345; Dr. p. 725; Gaz. vol. 132; p. 610.
Dunnick, J. T., *et al.* (See Althen, W. C., assignor.)
Duo Motor Company. (See Oulton, D. L., assignor.)
Duplex Printing Press Company. (See Bechman, H. F., assignor.)
Dupont, J. A., Paris, France. Paper-making machine. No. 877,836; Jan. 28; Sp. p. 4372; Dr. p. 950; Gaz. vol. 132; p. 801.
Durkin Controller Handle Company. (See Durkin, J. P., assignor.)
Durkin, J. P., assignor to Durkin Controller Handle Company, Philadelphia, Pa. Controller-regulator. No. 875,791; Jan. 7; Sp. p. 219; Dr. p. 48; Gaz. vol. 132; p. 40
Durso, G., New York, N. Y. Dumping-wagon. No. 877,180; Jan. 21; Sp. p. 3093; Dr. p. 669; Gaz. vol. 132; p. 568.
Duryea, O. C., Los Angeles, Cal. Double-acting gas or vapor engine. No. 876,899; Jan. 7; Sp. p. 418; Dr. p. 93; Gaz. vol. 132; p. 77.
Dustin, J. F., Springfield, Mass. Pile-fabric loom. No. 875,793; Jan. 7; Sp. p. 220; Dr. p. 48; Gaz. vol. 132; p. 41.
Dzur, W. F., Chicago, Ill. Valve-trap. No. 877,181; Jan. 21; Sp. p. 3094; Dr. p. 670; Gaz. vol. 132; p. 569.
E. Goldman & Co. (See Paul, J. T. H., assignor.)
E. Jenckes Manufacturing Company. (See Groupe, A. V., assignor.)
E. I. du Pont de Nemours Powder Company. (See Holmes, F. B., assignor.)
E. W. Bliss Company. (See Beyer, O. S., assignor.)
Eachus, I., Philadelphia, Pa. Device for operating ventilators. No. 876,338; Jan. 14; Sp. p. 1297; Dr. p. 280; Gaz. vol. 132; p. 246.
Eagle Pencil Company. (See Kenny, J. S., assignor.)
Eagon, H. M., New Comerstown, Ohio. Incandescent gas-lamp. No. 876,444; Jan. 14; Sp. p. 1530; Dr. p. 329; Gaz. vol. 132; p. 282.
Ean, A. J. (See Whitehurst, D., assignor.)
Earnest, J. D., Rutledge, Ga. Bolt. No. 877,061; Jan. 21; Sp. p. 2840; Dr. p. 613; Gaz. vol. 132; p. 529.
Easterwood, J. M., Eupora, Miss. Stirrup. No. 877,062; Jan. 21; Sp. p. 2840; Dr. p. 613; Gaz. vol. 132; p. 529.
Eastman, C. A., and R. H. Bethel, Charlotte, N. C. Commode or closet seat. No. 876,705; Jan. 14; Sp. p. 2102; Dr. p. 457; Gaz. vol. 132; p. 372.
Eastman Kodak Company. (See Gray, H. L., assignor.)
Eastwood, A. C., Cleveland, Ohio. Reversing-switch. No. 875,900; Jan. 7; Sp. p. 421; Dr. p. 93; Gaz. vol. 132; p. 77.
Eastwood, A. C., Cleveland, Ohio. System of control for electric motors. No. 875,901; Jan. 7; Sp. p. 423; Dr. p. 94; Gaz. vol. 132; p. 77
Eaton, C. L., Worcester, Mass. Shoe-sewing machine. No. 877,556; Jan. 28; Sp. p. 3852; Dr. pp. 833-4; Gaz. vol. 132; p. 712.
Eberhardt, G. W. (See Maxwell, W. T., assignor.)
Ebersole, C. P., Keokuk, Iowa, assignor, by mesne assignments, to Electric Service Supplies Company, Philadelphia, Pa. Controller-regulator. No. 877,887; Jan. 28; Sp. p. 4460; Dr. p. 973; Gaz. vol. 132; p. 818.
Eddy, C. F. A., San Bernardino, Cal., assignor of one-half to B. H. Norton, New York, N. Y. Foldable box. No. 876,531; Jan. 14; Sp. p. 1721; Dr. p. 374; Gaz. vol. 132; p. 313.
Edes, L. P. (See Edes, W. F. and L. P.)
Edes, W. F., Lynn, and L. P. Edes, Cambridge, Mass. Automatic ball-cock. No. 877,063; Jan. 21; Sp. p. 2841; Dr. p. 613; Gaz. vol. 132; p. 529.
Edgington, G. F., Jeffersonville, Ind. Box-seal. No. 877,494; Jan. 28; Sp. p. 3710; Dr. p. 803; Gaz. vol. 132; p. 692.

Edison Storage Battery Company. (See Edison, T. A., assignor.)
Edison, T. A., Llewellyn Park, Orange, assignor to Edison Storage Battery Company, West Orange, N. J. Electrolyte for alkaline storage batteries. No. 876,445; Jan. 14; Sp. p. 1532; Gaz. vol. 132; p. 282.
Edlund, C. A., assignor of one-half to E. Bernstrom, Providence, R. I. Grinding and polishing roll. No. 875,701; Jan. 7; Sp. p. 48; Dr. p. 9; Gaz. vol. 132; p. 10.
Edlund, C. A., deceased, (H. Edlund, administratrix,) assignor of one-half to E. Bernstrom, Providence, R. I. Surfacing-machine. No. 876,155; Jan. 7; Sp. p. 915; Dr. p. 198; Gaz. vol. 132; p. 155.
Edlund, H., administratrix. (See Edlund, C. A.)
Edsell, C. W., Otsego, Mich. Phonograph-record case. No. 877,064; Jan. 21; Sp. p. 2842; Dr. p. 614; Gaz. vol. 132; p. 530.
Edstrom, A. W., Red Oak, Iowa. Neck-yoke ring. No. 876,046; Jan. 7. Sp. p. 695, Dr. p. 149; Gaz. vol. 132; p. 120.
Edwards, M. N., Glenwood Springs, Colo. Box or crate. No. 876,900; Jan. 14; Sp. p. 2464; Dr. p. 538; Gaz. vol. 132; p. 434.
Edwards, O. C., Jr., Rensselaer, N. Y. Pneumatic caisson. No. 877,308; Jan. 21; Sp. p. 3347; Dr. p. 725; Gaz. vol. 132; p. 611.
Edwards, W. E., Irvington, N. J. Cigar-cutter. No. 876,156; Jan. 7; Sp. p. 918; Dr. p. 198; Gaz. vol. 132; p. 156.
Edwin M. Clark Slime Filter Company. (See Clark, E. M., assignor.)
Eggers, A., *et al.* (See Baum, J. B., assignor.)
Egnér, C. E., Stockholm, Sweden. Means for insulating the supports of electric conduits. No. 875,902; Jan. 7; Sp. p. 428; Dr. p. 94; Gaz. vol. 132; p. 78.
Ehlers, R. J. (See Gundelach, E., assignor.)
Eiben, A., and A. Gyurcso, Cleveland, Ohio. Sewing-machine attachment. No. 877,837; Jan. 28; Sp. p. 4373; Dr. pp. 950-1; Gaz. vol. 132; p. 802.
Eich, H. C. (See Dick, W. C., assignor.)
Electrelle Company. (See Smith, I. B., assignor.)
Electric Service Supplies Company. (See Ebersole, C. P., assignor.)
Electric Service Supplies Company. (See Weyand, P. A., assignor.) (Reissue.)
Elfreth, H. D. (See Elfreth, J. R. and H. D.)
Elfreth, J. R. and H. D., Philadelphia, Pa. Sand or strainer valve for filters. No. 877,182; Jan. 21; Sp. p. 3096; Dr. p. 670; Gaz. vol. 132; p. 569.
Eli Lilly & Company. (See Lilly, J. K., assignor.)
Elkins, G. W. (See D'Olier, H., Jr., assignor.)
Elkins, G. W., Elkins Park, assignor of one-half to H. D'Olier, Jr., Philadelphia, Pa. Electric heater. No. 877,183; Jan. 21; Sp. p. 3097; Dr. pp. 670-1; Gaz. vol. 132; p. 569.
Elliott, A. D., deceased; M. E. Elliott, executrix, Lawrence, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for inserting nails. No. 876,626; Jan. 14; Sp. p. 1941; Dr. p. 423; Gaz. vol. 132; p. 346.
Elliott, M. E., executrix. (See Elliott, A. D.)
Ellis, C., Larchmont, assignor to Chadeloid Chemical Company, New York, N. Y. Finish-remover. No. 876,304; Jan. 7; Sp. p. 1223; Gaz. vol. 132; p. 205.
Ellis, C., Larchmont, assignor to Chadeloid Chemical Company, New York, N. Y. Finish-remover. No. 876,532; Jan. 14; Sp. p. 1722; Gaz. vol. 132; p. 313.
Ellis, C., Larchmont, N. Y., assignor to Ellis-Foster Company. Waste-sulfite-liquor disinfectant. No. 877,414; Jan. 21; Sp. p. 3547; Gaz. vol. 132; p. 645.
Ellis, C. S. (See Powell and Ellis.)
Ellis-Foster Company. (See Ellis, C., assignor.)
Ellis, H., Brownville, Me. Lamp-filler. No. 876,784; Jan. 14; Sp. p. 2231; Dr. p. 490; Gaz. vol. 132; p. 395.
Ellis, J. W., Portland, Me. Tag for phonographic-record cases. No. 876,785; Jan. 14; Sp. p. 2232; Dr. p. 490; Gaz. vol. 132; p. 396.
Elmendorf, J. B. (See Stringham and Elmendorf.)
Elsea, C., *et al.* (See Hatfield and Bass, assignors.)
Ely, A. G., New York, N. Y. Wrench. No. 875,702; Jan. 7; Sp. p. 46; Dr. p. 10; Gaz. vol. 132; p. 11.
Ely, W. S., assignor to Van Kannel Revolving Door Company, New York, N. Y. Metal-covered door. No. 877,415; Jan. 21; Sp. p. 3548; Dr. p. 767; Gaz. vol. 132; p. 645.
Emerick, G. S., Nazareth, Pa. Air-separator. No. 877,557; Jan. 28; Sp. p. 3854; Dr. p. 834; Gaz. vol. 132; p. 713.
Emerson, R. B., Jackson, Mich. Deodorizer-receptacle. No. 877,309; Jan. 21; Sp. p. 3351; Dr. p. 726; Gaz. vol. 132; p. 611.
Emmer, N. W., Gas, Kans. Corn-popper. No. 876,786; Jan. 14; Sp. p. 2233; Dr. p. 491; Gaz. vol. 132; p. 396.
Emmons Loom Harness Company. (See Wingate, W. E., assignor.)
Empfield, B., Indiana, Pa. Spool-holder. No. 876,157; Jan. 7; Sp. p. 919; Dr. p. 198; Gaz. vol. 132; p. 156.
Emrich, J. O., Allegheny, Pa. Fireproof door. No. 876,787; Jan. 14; Sp. p. 2234; Dr. p. 491; Gaz. vol. 132; p. 396.
Emrich, J. O., Allegheny, Pa. Metallic door. No. 876,788; Jan. 14; Sp. p. 2236; Dr. p. 491; Gaz. vol. 132; p. 396.
Enderlein, C., Cassel, Germany. Railway signaling system. No. 876,953; Jan. 21; Sp. p. 2603; Dr. pp. 566-7; Gaz. vol. 132; p. 492.
Engelsman, M., New York, N. Y. Jewelry-stand. No. 877,838; Jan. 28; Sp. p. 4374; Dr. p. 951; Gaz. vol. 132; p. 802.
Engi, G., assignor to Firm of Society of Chemical Industry in Basle, Basel, Switzerland. Vat-dye derived from indirubin and making same. No. 876,158; Jan. 7; Sp. p. 920; Gaz vol. 132; p. 156.
English, J. C., Camden, N. J., assignor to Victor Talking Machine Company. Sound-box for talking-machines. No. 877,184; Jan. 21; Sp. p. 3099; Dr. p. 671; Gaz. vol. 132; p. 570.
Ennis, B. F., Syracuse, N. Y. Separator for collated articles. No. 876,627; Jan. 14; Sp. p. 1943; Dr. pp. 423-4; Gaz. vol. 132; p. 346.
Erdmann, W., Madison, Wis. Scraper. No. 876,789; Jan. 14; Sp. p. 2238; Dr. p. 492; Gaz. vol. 132; p. 397.
Ericksen, W. (See Hachmann and Ericksen.)
Erickson, P., Whitehall, Mich. Drawer attachment. No. 876,159; Jan. 7; Sp. p. 921; Dr. p. 199; Gaz. vol. 132; p. 157.
Esmeling, J. P., Buitenzorg, Java. Apparatus for removing mud from channels. No. 876,790; Jan. 14; Sp. p. 2239; Dr. p. 492; Gaz. vol. 132; p. 397.
Ernst, C. A., Lansdowne, assignor to S. W. Pettit, Philadelphia, Pa. Producing and forming twisted filaments from viscose or similar material. No. 876,533; Jan. 14; Sp. p. 1724; Dr. p. 374; Gaz. vol. 132; p. 313.
Ernst, C. A., and G. O. Hamlin, Lansdowne, assignors to S. W. Pettit, Philadelphia, Pa. Filtering viscose and similar viscous substances. No. 876,901; Jan. 14; Sp. p. 2465; Dr. p. 538; Gaz. vol. 132; p. 434.
Ernst, W., San Francisco, Cal. Bake-oven. No. 877,310; Jan. 21; Sp. p. 3352; Dr. p. 726; Gaz. vol. 132; p. 611.
Eustace, E. C. (See Lacomme, G., assignor.)
Evershed, S., assignor to himself and Evershed and Vignoles Limited, London, England. Electric signaling apparatus. No. 877,311; Jan. 21; Sp. p. 3354; Dr. p. 727; Gaz. vol. 132; p. 611.
Evershed, S., Chiswick, assignor to himself, and Evershed and Vignoles Limited, London, England. Electrical transmission apparatus. No. 877,312; Jan. 21; Sp. p. 3357; Dr. pp. 727-8; Gaz. vol. 132; p. 612.
Evershed and Vignoles. (See Evershed, S., assignor.)
Everts, J. P., Sayre, Pa. Garment-fastener. No. 876,954; Jan. 21; Sp. p. 2611; Dr. p. 567; Gaz. vol. 132; p. 492.
Ewer, J. B., Chicago, Ill. Coffee-pot. No. 875,793; Jan. 7; Sp. p. 224; Dr. p. 49; Gaz. vol. 132; p. 41.
Excelsior Shoe & Slipper Company. (See Schleifer, C. R., assignor.)
Expansion Sprinkler Syndicate. (See Fiddes and Watt, assignors.)
Eynon, E., Jr., *et al.* (See Taylor, C. R., assignor.)
Faehrmann, J. M., Houston, Tex. Tourist's glass. No. 877,313; Jan. 21; Sp. p. 3362; Dr. p. 728; Gaz. vol. 132; p. 612.
Fahrney, A. G. (See Lovell and Fahrney.)
Failing, G., Tulsa, Okla. Bottle-washer. No. 876,706; Jan. 14; Sp. p. 2103; Dr. p. 458; Gaz. vol. 132; p. 372.
Fanta, T., Chicago, Ill. Undershirt. No. 877,416; Jan. 21; Sp. p. 3549; Dr. p. 767; Gaz. vol. 132; p. 646.
Farbenfabriken vorm. Friedr. Bayer & Co. (See Günther and Hesse, assignors.)
Farbwerke, vorm. Meister, Lucius & Brüning. (See Bryk, E., assignor.)
Farbwerke, vorm. Meister, Lucius & Brüning. (See Schmidt and Bryk, assignors.)
Faris, W. D., assignor of one-half to F. B. Chapin, Medicine Lodge, Kans. Clamp. No. 876,160; Jan. 7; Sp. p. 923; Dr. p. 199; Gaz. vol. 132; p. 157.
Farley, J., Waukesha, Wis. Planter. No. 875,794; Jan. 7; Sp. p. 225; Dr. p. 49; Gaz. vol. 132; p. 41.
Farman, W., Philadelphia, assignor of two-thirds to J. F. Valentine, Woodlyn, Pa. Carpet-cleaning machine. No. 876,446; Jan. 14; Sp. p. 1533; Dr. p. 330; Gaz. vol. 132; p. 282.
Farmer, L. C., assignor of one-half to W. A. Mather, Minneapolis, Minn. Measure. No. 876,330; Jan. 14; Sp. p. 1298; Dr. p. 281; Gaz. vol. 132; p. 246.
Farnham, P. W. (See Adams, H. W., assignor.)
Farnum, D., and C. R. Anderson, Denver, Colo. Machine for aging and agitating whisky. No. 876,534; Jan. 14; Sp. p. 1726; Dr. p. 375; Gaz. vol. 132; p. 313.
Farr, H. G., Melrose Highlands, Mass. Self-lubricating trolley-wheel. No. 877,558; Jan. 28; Sp. p. 3856; Dr. p. 834; Gaz. vol. 132; p. 713.
Farrell, B. H., Deadwood, S. D. Waiter's cabinet. No. 877,065; Jan. 21; Sp. p. 2844; Dr. p. 614; Gaz. vol. 132; p. 530.
Farrell, T. M. (See Whitehead, J. B., assignor.)
Fay, A., Louisville, Ky. Cream and butter separator. No. 877,066; Jan. 21; Sp. p. 2846; Dr. p. 614; Gaz. vol. 132; p. 531.
Federal Ice Company. (See Holden, D. L., assignor.)

Fee, P., Providence, R. I. Registering attachment for pressure-gages. No. 877,314; Jan. 21; Sp. p. 3364; Dr. p. 729; Gaz. vol. 132; p. 612.
Fehr, W., assignor to Steel Heddle Manufacturing Company, Philadelphia, Pa. Metal-swaging machine. No. 877,315; Jan. 21; Sp. p. 3366; Dr. p. 729; Gaz. vol. 132; p. 613.
Feicht, R. S., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Dynamo-electric machine. No. 876,955; Jan. 21; Sp. p. 2613; Dr. p. 567; Gaz. vol. 132; p. 493.
Fells, N., New York, N. Y. Pane-securing means. No. 876,791; Jan. 14; Sp. p. 2241; Dr. p. 493; Gaz. vol. 132; p. 397.
Felts, T. R., Selma, Ala. Animal-trainer. No. 876,047; Jan. 7; Sp. p. 696; Dr. p. 149; Gaz. vol. 132; p. 120.
Fenton, P., and F. W. Waechter, Knoxville, Iowa. Earth-boring machine. No. 876,048; Jan. 7; Sp. p. 697; Dr. p. 150; Gaz. vol. 132; p. 121.
Fenwick, C. (See Musgrove, J. A., Jr., assignor.)
Ferguson, H. B., *et al.* (See Secrest, J. A., assignor.)
Ferriott, C. L., Temple, Tex., assignor to Temple Cotton Chopping Machine Co. Cotton chopper or cultivator. No. 877,470; Jan. 21; Sp. p. 3645; Dr. p. 790; Gaz. vol. 132; p. 663.
Ferro-Concrete Construction Company. (See Anderson and Nolte, assignors.)
Fessler, M., Pforzheim, Germany. Making chains. No. 876,792; Jan. 14; Sp. p. 2242; Gaz. vol. 132; p. 398.
Fialcofsky, D., Sorel, Quebec, Canada. Cork-extracting device. No. 876,049; Jan. 7; Sp. p. 699; Dr. p. 150; Gaz. vol. 132; p. 121.
Fiddes, J., and J. F. Watt, assignors to Expansion Sprinkler Syndicate, Limited, Aberdeen, Scotland. Automatic transmitter for fire-alarm and sprinkler systems. No. 877,067; Jan. 21; Sp. p. 2847; Dr. p. 615; Gaz. vol. 132; p. 531.
Fiddes, J., and J. F. Watt, assignors to Expansion Sprinkler Syndicate Limited, Aberdeen, Scotland. Automatic sprinkler system. No. 877,707; Jan. 28; Sp. p. 4135; Dr. p. 895; Gaz. vol. 132; p. 760.
Field, I. M., Chicago, Ill. Piano-case. No. 877,839; Jan. 28; Sp. p. 4375; Dr. p. 951; Gaz. vol. 132; p. 802.
Fielding, J., Gloucester, England. Suction gas-generator. No. 877,068; Jan. 21; Sp. p. 2848; Dr. p. 615; Gaz. vol. 132; p. 531.
Fields, J. W., assignor of one-half to J. N. Standish, H. Pearsall, Bridgeport, and F. R. White, Waterbury, Conn. Gas cut-off. No. 877,417; Jan. 21; Sp. p. 3550; Dr. p. 768; Gaz. vol. 132; p. 646.
Findon, F. H., Jr., Freeport, Pa. Compound for smoothing plate-glass. No. 876,447; Jan. 14; Sp. p. 1535; Gaz. vol. 132; p. 283.
Fink, J. H. *et al.* (See Andlauer, R., assignor.)
Finney, W. C., Washington, D. C. Clasp. No. 876,161; Jan. 7; Sp. p. 924; Dr. p. 199; Gaz. vol. 132; p. 157.
Fireless Cooker Company. (See Clingen, W. C., assignor.)
Fischer, A., Augsburg, Germany. Butter-kneading machine. No. 877,559; Jan. 28; Sp. p. 3858; Dr. p. 835; Gaz. vol. 132; p. 714.
Fischer, W., Jr. (See Rees and Fischer.)
Fish, C., Muncie, Ind. Safety device for cleaning-machines or rumbles. No. 876,269; Jan. 7; Sp. p. 1141; Dr. p. 248; Gaz. vol. 132; p. 192.
Fisher, E. F., Atkinson, Nebr. Fertilizer-distributer. No. 877,316; Jan. 21; Sp. p. 3368; Dr. p. 729; Gaz. vol. 132; p. 613.
Flaum, S., *et al.* (See Schwartz, M., assignor.)
Fleming, R., Lynn, Mass., assignor to General Electric Company. Gas-cap. No. 876,956; Jan. 21; Sp. p. 2614; Dr. p. 568; Gaz. vol. 132; p. 493.
Flemming, R., New Orleans, La. Extension-chair. No. 875,903; Jan. 7; Sp. p. 429; Dr. p. 95; Gaz. vol. 132; p. 78.
Flemming, R., Jr., New Orleans, La. Sash-fastener. No. 875,904; Jan. 7; Sp. p. 430; Dr. p. 95; Gaz. vol. 132; p. 78.
Fletcher, G., Houghton, Mich. Skate. No. 875,905; Jan. 7; Sp. p. 431; Dr. p. 95; Gaz. vol. 132; p. 78.
Flexible Steel Lacing Company. (See Tevander, O. N., assignor.)
Flintkote Manufacturing Company. (See Overbury, F. C., assignor.)
Flood, J. A., Boston, Mass. Gage for sewing-machines. No. 876,162; Jan. 7; Sp. p. 925; Dr. p. 199; Gaz. vol. 132; p. 157.
Florsheim & Son, S. (See Gardner, M. B., assignor.)
Floto, M. W., Chicago, Ill. Wire fabric and attaching means therefor. No. 876,340; Jan. 14; Sp. p. 1299; Dr. p. 281; Gaz. vol. 132; p. 246.
Floyd, G. G., Granite, Ill., assignor to American Steel Foundries, New York, N. Y. Cast-metal car-bolster. No. 876,448; Jan 14; Sp. p. 1536; Dr. p. 330; Gaz. vol. 132; p. 283.
Floyd, G. G., Granite, Ill., assignor to American Steel Foundries, New York, N. Y. Car-truck. No. 877,185; Jan. 21; Sp. p. 3101; Dr. p. 671; Gaz. vol. 132; p. 570.
Floyd, G. G., Granite, Ill., assignor to American Steel Foundries, New York, N. Y. Spring-plank seat for car-trucks. No. 877,495; Jan. 28; Sp. p. 3711; Dr. p. 803; Gaz. vol. 132; p. 692.
Foldvik, H., Denver, assignor of one-half to T. Rendahl, Georgetown, and C. Hultberg, Denver, Colo. Pole-climber. No. 877,418; Jan. 21; Sp. p. 3552; Dr. p. 768; Gaz. vol. 132; p. 646.
Foley, J. S. (See Birch and Foley.)
Foltz, G. T., Wytheville, Va. Shoulder-brace. No. 877,560; Jan. 28; Sp. p. 3859; Dr. p. 835; Gaz. vol. 132; p. 714.
Foltz, H. J., Akron, Ohio. Convertible window-sash. No. 876,050; Jan. 7; Sp. p. 700; Dr. p. 150; Gaz. vol. 132; p. 121.
Fontaine, J. B., Marlboro, assignor to G. D. Barber, trustee, Worcester, Mass. Polishing-wheel. No. 876,163; Jan. 7; Sp. p. 926; Dr. p. 200; Gaz. vol. 132; p. 157.
Ford, A. F., Winona, Wash. Rotary engine. No. 876,707; Jan. 14; Sp. p. 2104; Dr. p. 458; Gaz. vol. 132; p. 372.
Ford, A. J., assignor to Fuchs & Lang Mf'g. Co., New York, N. Y. Coating-machine. No. 877,186; Jan. 21; Sp. p. 3103; Dr. pp. 671-2; Gaz. vol. 132; p. 571.
Ford, T. B., New York, N. Y. Automatic controller for the speed of antovehicles. No. 876,164; Jan. 7; Sp. p. 927; Dr. p. 200; Gaz. vol. 132; p. 158.
Forman, W. E., Centergrove, Ala. Penholder. No. 876 708; Jan. 14; Sp. p. 2105; Dr. p. 458; Gaz. vol. 132; p. 372.
Forrest, C. N., Brooklyn, N. Y., assignor to Barber Asphalt Paving Company, Philadelphia, Pa. Brewers' pitch. No. 877,888; Jan. 28; Sp. p. 4462; Gaz. vol. 132; p. 818.
Forstner, T., New Ulm, Minn. Rein-coupling. No. 876,341; Jan. 14; Sp. p. 1302; Dr. p. 281; Gaz. vol. 132; p. 247.
Fosgate, D. O., Chicago, Ill. Stethoscope. No. 875,795; Jan. 7; Sp. p. 228; Dr. p. 49; Gaz. vol. 132; p. 42.
Fosgate, D. O., Chicago, Ill. Auriphone. No. 877,317; Jan. 21; Sp. p. 3369; Dr. p. 730; Gaz. vol. 132; p. 613.
Fossel, A., Gilbert Station, Iowa. Attachment for spades, shovels, and handles. No. 876,793; Jan. 14; Sp. p. 2243; Dr. p. 493; Gaz. vol. 132; p. 398.
Fosston Manufacturing Co. (See Helgerson, T. O., assignor.)
Fosston Manufacturing Company. (See Lund, H., assignor.)
Foster, A. T., Chillicothe, Ohio. Shade-roller. No. 877,070; Jan. 21; Sp. p. 2851; Dr. p. 616; Gaz. vol. 132; p. 532.
Fowler, J. E. (See Owens, J. N., assignor.)
Fox, G. M. (See Starbird and Fox.)
Fraher, C. W. (See Snapp and Fraher.)
Frame, R. E., assignor of one-half to H. W. Wolff, St. Louis Mo. Dust-guard for car-axle journal-boxes. No. 877,318; Jan. 21; Sp. p. 3371; Dr. p. 730; Gaz. vol. 132; p. 614.
Frank, G., Jefferson, Tex. Refrigerator. No. 877,496; Jan. 28; Sp. p. 3714; Dr. p. 804; Gaz. vol. 132; p. 692.
Frank, L. (See Copp and Frank.)
Franklin Cotton Mill Company. (See Innes, H. C., assignor.)
Franks, O. G., assignor to Seng Company, Chicago, Ill. Short rail for beds. No. 875,703; Jan. 7; Sp. p. 47; Dr. p. 10; Gaz. vol. 132; p. 11.
Frantz, J. F., Rock Island, Ill. Incubator-tray. No. 876 051; Jan. 7; Sp. p. 702; Dr. p. 151; Gaz. vol. 132; p. 121.
Frazier, E. C. (See Myers, W. D., assignor.)
Frech, T. W., Jr., Cleveland, Ohio. Lamp-base. No. 875,796; Jan. 7; Sp. p. 230; Dr. p. 50; Gaz. vol. 132; p. 42.
Freeble, B. F., Brownsville, Pa. Railway-car. No. 875,906; Jan. 7; Sp. p. 433; Dr. pp. 95-6; Gaz. vol. 132; p. 79.
French, J. R., assignor to Lacy Manufacturing Company, Los Angeles, Cal. Punching and riveting machine. No. 877,419; Jan. 21; Sp. p. 3554; Dr. pp. 768-9; Gaz. vol. 132; p. 647.
Frick, C. H., San Antonio, Tex. Groove-rail cleaner. No. 876,957; Jan. 21; Sp. p. 2616; Dr. p. 568; Gaz. vol. 132; p. 493.
Fritch, E. D., Chicago, Ill., and G. Drewry, Washington, D. C. Ticket. No. 876,794; Jan. 14; Sp. p. 2244; Dr. p. 493; Gaz. vol. 132; p. 398.
Fromsdorf, R., assignor to Ludwig Hupfeld, Aktiengesellschaft, Leipzig, Germany. Piano. No. 876,535; Jan. 14; Sp. p. 1728; Dr. p. 376; Gaz. vol. 132; p. 314.
Fry, J. E., Denver, Colo., assignor of one-half to M. H. Van Sickien, Chicago, Ill. Grinding-machine. No. 876,449; Jan. 14; Sp. p. 1537; Dr. p. 330; Gaz. vol. 132; p. 283.
Fry, S. D., Indianapolis, Ind. Gate. No. 876,342; Jan. 14; Sp. p. 1302; Dr. p. 281; Gaz. vol. 132; p. 247.
Fuchs & Lang Mf'g. Co. (See Ford, A. J., assignor.)
Fuller, A., Amsterdam, N. Y. Folding step for railway-cars. No. 877,708; Jan. 28; Sp. p. 4136; Dr. p. 895; Gaz. vol. 132; p. 761.
Fuller, F. S., Greeley, Colo. Plow. No. 875,988; Jan. 7; Sp. p. 501; Dr. p. 126; Gaz. vol. 132; p. 103.
Fuller, J. A., assignor to Hamilton & Hamilton, Jr., Providence, R. I. Locket and similar article. No. 876,902; Jan. 14; Sp. p. 2467; Dr. p. 530; Gaz. vol. 132; p. 434.
Fulmer, H. B., Los Angeles, Cal. Turbine-engine. No. 876,628; Jan. 14; Sp. p. 1947; Dr. pp. 424-5; Gaz. vol. 132; p. 347.
Fulton, J. D. B., Newbridge, Ireland. Artillery-director. No. 876,343; Jan. 14; Sp. p. 1304; Dr. p. 282; Gaz. vol. 132; p. 248.
Fulton, R. B., Red Cloud, Nebr. Concrete-mixer. No. 876,270; Jan. 7; Sp. p. 1143; Dr. pp. 248-9; Gaz. vol. 132; p. 192.
Fulton, W. M., Waterloo, Iowa. Range. No. 876,536; Jan. 14; Sp. p. 1730; Dr. p. 376; Gaz. vol. 132; p. 314.
Furness, A. A., Guildford, England. Tobacco-pipe. No. 877,071; Jan. 21; Sp. p. 2853; Dr. p. 616; Gaz. vol. 132; p. 532.
Gadf, T. T. (See Gent, J. F., assignor.)
Gage, W. M. (See Gee, W. L., assignor.)

Gahler, W. A., Janesville, Minn. Shears for cutting iron. No. 877,764; Jan. 28; Sp. p. 4237; Dr. p. 920; Gaz. vol. 132; p. 778.
Gaiffe, G. E., Paris, France. Transformer employed in high-frequency-current circuits. No. 877,319; Jan. 21; Sp. p. 3372; Dr. p. 730; Gaz. vol. 132; p. 614.
Galbraith, J. F., Shelbyville, Tenn. Sheet-metal roofing. No. 877,630; Jan. 28; Sp. p. 4008; Dr. p. 866; Gaz. vol. 132; p. 740.
Galentine, C. C., Redondo, Cal. Miter-box. No. 876,795; Jan. 14; Sp. p. 2245; Dr. pp. 493-4; Gaz. vol. 132; p. 398.
Gamble, J. W., assignor to Harrison Safety Boiler Works, Philadelphia, Pa. Apparatus for feeding, purifying, and regulating feed-water. No. 877,497; Jan. 28; Sp. p. 3717; Dr. p. 804; Gaz. vol. 132; p. 693.
Garner, C., Fort Worth, Tex. Gas-producing furnace. No. 876,903; Jan. 14; Sp. p. 2468; Dr. p. 539; Gaz. vol. 132; p. 435.
Garchey, L. A., Paris, France. Elastic wheel. No. 876,537; Jan. 14; Sp. p. 1731; Dr. pp. 376-7; Gaz. vol. 132; p. 314.
Gard, J. J., Harvey, assignor to Buda Foundry & Manufacturing Company, Chicago, Ill. Crossing-gate. No. 876,166; Jan. 7; Sp. p. 936; Dr. p. 201; Gaz. vol. 132; p. 159.
Gardiner, D. R., assignor to Neepawa Manufacturing Company, Neepawa, Manitoba, Canada. Chaff-blower. No. 877,320; Jan. 21; Sp. p. 3374; Dr. pp. 730-1; Gaz. vol. 132; p. 614.
Gardiner, W., assignor, by mesne assignments, to Commercial Storage Battery Company, Chicago, Ill. Storage battery. No. 877,889; Jan. 28; Sp. p. 4464; Dr. pp. 973-4; Gaz. vol. 132; p. 818.
Gardner, F. B., and J. E. Grosjean, assignors to Humane Horseshoe Co., Lima, Ohio. Horseshoe. No. 876,629; Jan. 14; Sp. p. 1951; Dr. p. 425; Gaz. vol. 132; p. 347.
Gardner, J. H., Dalton, Ga. Seed-planter. No. 876,538; Jan. 14; Sp. p. 1733; Dr. p. 377; Gaz. vol. 132; p. 315.
Gardner, M. B., Aurora, assignor to S. Florsheim & Son, Chicago, Ill. Garment-clasp. No. 875,797; Jan. 7; Sp. p. 231; Dr. p. 50; Gaz. vol. 132; p. 42.
Gardner, M. B., Aurora, assignor to S. Florsheim & Son, Chicago, Ill. Garment-clasp. No. 875,798; Jan. 7; Sp. p. 232; Dr. p. 50; Gaz. vol. 132; p. 43.
Garland, W. H., assignor of one-half to R. M. Havens, Kansas City, Mo. Loose-leaf-book device. No. 877,187; Jan. 21; Sp. p. 3104; Dr. p. 672; Gaz. vol. 132; p. 571.
Garner, S., Covington, Va., assignor to Covington Machine Company. Coke-extracting machine. No. 875,989; Jan. 7; Sp. p. 502; Dr. p. 127; Gaz. vol. 132; p. 103.
Garrett, C. B., assignor to Globe Automatic Sprinkler Company, Minneapolis, Minn. Wet-pipe alarm-valve. No. 876,869; Jan. 14; Sp. p. 2393; Dr. p. 521; Gaz. vol. 132; p. 423.
Garton, W. R., Chicago Ill. Edge-binding for garments. No. 877,072; Jan. 21; Sp. p. 2854; Dr. p. 616; Gaz. vol. 132; p. 532.
Garver, A. (See Hare, W. W. and H. H., assignors.)
Garver, A. J., assignor to himself and J. McAssey, Clarkston, Wash. Revolving ore-tank. No. 876,539; Jan. 14; Sp. p. 1739; Dr. pp. 377-8; Gaz. vol. 132; p. 315.
Garvin Machine Company. (See McClellan, E. J., assignor.)
Gay, G. L., Jr. (See Smith and Gay.)
Gaylord, H. J. (See Gaylord, W. E. and H. J.)
Gaylord, W. E. and H. J., Syracuse, N. Y. Bookbinding. No. 877,188; Jan. 21; Sp. p. 3106; Dr. p. 672; Gaz. vol. 132; p. 571.
Gaynor, A. C., Bridgeport, Conn. Means for locking caps to socket shells, canisters, &c. No. 876,630; Jan. 14; Sp. p. 1953; Dr. p. 425; Gaz. vol. 132; p. 347.
Gearhart, W. N., *et al.* (See Althen, W. C., assignor.)
Gearing, C. W., and W. J. McGee, Franklin, Pa. Automobile-lift. No. 877,709; Jan. 28; Sp. p. 4138; Dr. pp. 895-6; Gaz. vol. 132; p. 761.
Gebler, J. H. W., Pirna, Germany. Manufacturing sheet-iron vessels. No. 877,321; Jan. 21; Sp. p. 3376; Dr. p. 731; Gaz. vol. 132; p. 615.
Gebler, J. H. W., Pirna, Germany. Seamless sheet-metal spout for vessels. No. 877,322; Jan. 21; Sp. p. 3377; Dr. p. 731; Gaz. vol. 132; p. 615.
Gee, W. L., assignor to W. M. Gage, Saratoga Springs, N. Y. Muffler. No. 877,840; Jan. 28; Sp. p. 4376; Dr. p. 952; Gaz. vol. 132; p. 803.
Geiser, C. N., *et al.* (See Butts, W. R., assignor.)
Geiser, E., *et al.* (See Butts, W. R., assignor.)
Geipke, V., Lucerne, Switzerland, and P. Kugel, Dusseldorf, Germany. Regulating-nozzle for turbines. No. 877,323; Jan. 21; Sp. p. 3377; Dr. p. 731; Gaz. vol. 132; p. 615.
General Electric Company. (See Alexanderson, E. F. W., assignor.)
General Electric Company. (See Bergman, S. R., assignor.)
General Electric Company. (See Corey, F. B., assignor.)
General Electric Company. (See Cravens, G. W., assignor.)
General Electric Company. (See Fleming, R., assignor.)
General Electric Company. (See Herman, R., assignor.)
General Electric Company. (See Junggren, O., assignor.)
General Electric Company. (See Knight, A. F., assignor.)
General Electric Company. (See Lemp, H., assignor.)
General Electric Company. (See Mackintosh, F., assignor.)
General Electric Company. (See Moody, W. S., assignor.)
General Electric Company. (See Pauly, K. A., assignor.)
General Electric Company. (See Persson, O. F., assignor.)
General Electric Company. (See Priest, E. D., assignor.)
General Electric Company. (See Schwarz, R., assignor.)
General Electric Company. (See Swan, A., assignor.)
General Electric Company. (See Thomson, E., assignor.)
General Electric Company. (See Tirrill, L. A., assignor.)
General Electric Company. (See Weintraub, E., assignor.)
General Electric Company. (See White, H. E., assignor.)
General Electric Company. (See Zix, C. E., assignor.)
General Specialty Manufacturing Company. (See Smith, R. R., assignor.)
Gent, J. F., Terre Haute, Ind., assignor of two-thirds to T. T. Gaff, Barnstable, Mass. Apparatus for the degermination of Indian corn. No. 877,640; Jan. 28; Sp. p. 4000; Dr. pp. 865-7; Gaz. vol. 132; p. 740.
Gent, J. F., Terre Haute, Ind., assignor of two-thirds to T. T. Gaff, Barnstable, Mass. Degerming maize or Indian corn. No. 877,641; Jan. 28; Sp. p. 4014; Dr. p. 867; Gaz. vol. 132; p. 740.
Geometric Tool Company. (See Leonard, W. A., assignor.)
George, L. S. S., Kamloops, British Columbia, Canada. Mortise-lock. No. 876,167; Jan. 7; Sp. p. 937; Dr. p. 201; Gaz. vol. 132; p. 159.
Gerber, G. H., and A. Welland, Reading, Pa.; said Welland assignor to said Gerber. Vaporizer. No. 877,890; Jan. 28; Sp. p. 4467; Dr. p. 974; Gaz. vol. 132; p. 819.
Gerbsch, H. J., Wausau, Wis. Drier. No. 875,704; Jan. 7; Sp. p. 49; Dr. p. 10; Gaz. vol. 132; p. 11.
Gerlach, E., New York, N. Y. Nozzle. No. 876,796; Jan. 14; Sp. p. 2247; Dr. p. 494; Gaz. vol. 132; p. 399.
Gevers, K., Osterode-in-the-Harz, Germany. Apparatus for grinding wood-pulp. No. 875,705; Jan. 7; Sp. p. 52; Dr. p. 11; Gaz. vol. 132; p. 12.
Ghegan, J. J., Newark, N. J. Telegraph system. (Reissue.) No. 12,739; Jan. 14; Sp. p. 2523; Dr. p. 552; Gaz. vol. 132; p. 442.
Giddings, H., Chicago, Ill. Heater. No. 875,990; Jan. 7; Sp. p. 504; Dr. p. 127; Gaz. vol. 132; p. 103.
Giddings & Lewis Manufacturing Company. (See Anderson, U., assignor.)
Gilbert, E. T., Rochester, N. Y. Pipe-cleaner. No. 877,324; Jan. 21; Sp. p. 3379; Dr. p. 732; Gaz. vol. 132; p. 616.
Gilbert, G. H., Germantown, Pa. Manufacture of hosiery. No. 876,797; Jan. 14; Sp. p. 2248; Dr. p. 494; Gaz. vol. 132; p. 399.
Gilbert, O. O., San Francisco, Cal. Propeller. No. 875,799; Jan. 7; Sp. p. 234; Dr. pp. 50-1; Gaz. vol. 132; p. 43.
Gilbert, W. N., assignor to Osgood Scale Company, Binghamton, N. Y. Recording weigh-beam for scales. No. 876,958; Jan. 21; Sp. p. 2617; Dr. p. 568; Gaz. vol. 132; p. 493.
Gilbough, B. G., Chicago, Ill. Sparking device. No. 875,907; Jan. 7; Sp. p. 434; Dr. pp. 96-7; Gaz. vol. 132; p. 79.
Gillespie, R. T., Bloomfield, N. J. Cleaning-brush. No. 876,540; Jan. 14; Sp. p. 1741; Dr. pp. 378-9; Gaz. vol. 132; p. 316.
Gillette-Vibber Co. (See Vibber, W. H., assignor.)
Gilman, J. P., Riceville, Iowa. Moistener. No. 877,498; Jan. 28; Sp. p. 3720; Dr. p. 805; Gaz. vol. 132; p. 693.
Gilson, J., assignor to Gilson Manufacturing Company, Port Washington, Wis. Friction clutch-pulley. No. 875,800; Jan. 7; Sp. p. 237; Dr. p. 51; Gaz. vol. 132; p. 44.
Gilson, J. E., assignor to Gilson Manufacturing Company, Port Washington, Wis. Air-cooling apparatus for explosive-engines. No. 875,991; Jan. 7; Sp. p. 505; Dr. p. 127; Gaz. vol. 132; p. 104.
Gilson Manufacturing Company. (See Gilson, J., assignor.)
Gilson Manufacturing Company. (See Gilson, J. E., assignor.)
Gin, G., Paris, France. Construction of induction electric furnaces. No. 875,801; Jan. 7; Sp. p. 239; Dr. p. 51; Gaz. vol. 132; p. 44.
Giriot, J., Lacken, Belgium. Machine for forging and welding metallic rings. No. 876,709; Jan. 14; Sp. p. 2106; Dr. p. 458; Gaz. vol. 132; p. 373.
Glas, F., assignor to himself and E. B. Towl, South Omaha, Nebr. Machine for cleaning intestines. No. 876,344; Jan. 14; Sp. p. 1307; Dr. p. 282; Gaz. vol. 132; p. 248.
Globe Automatic Sprinkler Company. (See Garrett, C. B., assignor.)

Globe Screw Company. (See Allen, W. G., assignor.)
Glover, S. (See Young and Glover.)
Goerz, C. P., Grunewald, near Berlin, Germany. Device for successively exposing sensitive sheets. No. 877,499; Jan. 28; Sp. p. 3721; Dr. p. 805; Gaz. vol. 132: p. 604.
Goff, F. C., Denver, Colo. Apparatus for treating live stock. No. 876,631; Jan. 14; Sp. p. 1955; Dr. p. 426; Gaz. vol. 132; p. 348.
Goff, F. C., Denver, Colo. Treating animals. No. 876,632; Jan. 14; Sp. p. 1960; Dr. p. 427; Gaz. vol. 132; p. 348.
Goggin, E. F., Schenectady, N. Y. Garment gage and cutter. No. 877,325; Jan. 21; Sp. p. 3380; Dr. p. 732; Gaz. vol. 132; p. 616.
Goldberg Calculating Machine Company. (See Goldberg, H. E., assignor.)
Goldberg, H. E., Chicago, Ill., assignor to Goldberg Calculating Machine Company. Calculating-machine. No. 876,450; Jan. 14; Sp. p. 1538; Dr. p. 331; Gaz. vol. 132; p. 283.
Goldingham, A. H., assignor to De La Vergne Machine Company, New York, N. Y. Internal-combustion engine. No. 877,500; Jan. 28; Sp. p. 3724; Dr. p. 806; Gaz. vol. 132; p. 604.
Goldsborough, A. S., *et al.* (See Bryan, J. F., assignor.)
Goldsborough, R. H., Washington, D. C. Turbine. No. 876,710; Jan. 14; Sp. p. 2107; Dr. p. 459; Gaz. vol. 132; p. 373.
Goldsmith, C. assignor of one-fifth to C. Pinelli, Denver, Colo. Electric alarm attachment for clocks. No. 877,501; Jan. 28; Sp. p. 3728; Dr. pp. 805–7; Gaz. vol. 132; p. 604.
Goldsmith, E. J. and H., assignors to P. Goldsmith's Sons, Cincinnati, Ohio. Catcher's mitt or glove. No. 877,561; Jan. 28; Sp. p. 3840; Dr. p. 835; Gaz. vol. 132; p. 714.
Goldsmith, H. (See Goldsmith, E. J. and H.)
Goldsmith's Sons, P. (See Goldsmith, E. J. and H., assignors.)
Gollobin, H. A., Newark, N. J. Dental tool. No. 875,992; Jan 7; Sp. p. 597; Dr. p. 128; Gaz. vol. 132; p. 104.
Good, E. E., Waterloo, Iowa. Pulsating device for milking apparatus. No. 875,706; Jan. 7; Sp. p. 55; Dr. p. 11; Gaz. vol. 132; p. 12.
Good, E. E., Waterloo, Iowa. Teat-cup for milking apparatus. No. 875,802; Jan. 7; Sp. p. 240; Dr. p. 51; Gaz. vol. 132; p. 44.
Goodale, F. R., Exeter, N. H. Ellipsograph. No. 877,710; Jan. 28; Sp. p. 4139; Dr. p. 896; Gaz. vol. 132; p. 761.
Goodhue, J. C., and H. K. Henry, assignors to Absolute Disinfecting Company. Vaporizer for disinfectants. No. 876,904; Jan. 14; Sp. p. 2470; Dr. pp. 539–40; Gaz. vol. 132; p. 435.
Goodrich, I. L., Cupertino, Cal. Vehicle-wheel. No. 876,168; Jan. 7; Sp. p. 940; Dr. p. 202; Gaz. vol. 132; p. 159.
Goodridge, G. W., assignor to Bryant Electric Company, Bridgeport, Conn. Receptacle for incandescent lamps. No. 876,169; Jan. 7; Sp. p. 941; Dr. p. 202; Gaz. vol. 132; p. 160.
Gordon, F. C., Asotin, Wash. Internal-combustion engine. No. 876,870; Jan. 14; Sp. p. 2398; Dr. pp. 522–3; Gaz. vol. 132; p. 423.
Gordon, T. B. (See Mercer, A., assignor.)
Goss, J. C., and A. T. Hansen, Detroit, Mich. Canvas-stretcher. No. 876,345; Jan. 14; Sp. p. 1308; Dr. p. 283; Gaz. vol. 132; p. 248.
Goss, J. H., assignor to Scovill Manufacturing Company, Waterbury, Conn. Electric-light-socket cap. No. 877,326; Jan. 21; Sp. p. 3381; Dr. p. 732; Gaz. vol. 132; p. 616.
Grafe, W., Viola, Idaho. Whiffletree. No. 876,711; Jan. 14; Sp. p. 2110; Dr. pp. 459–60; Gaz. vol. 132; p. 373.
Graham, C. F., near Sellersburg, Ind. Sound-producing mechanism. No. 877,327; Jan. 21; Sp. p. 3383; Dr. p. 733; Gaz. vol. 132; p. 617.
Graham, G. M., assignor to G. A. E. Kohler, Chicago, Ill. Wire-splicer. No. 875,803; Jan. 7; Sp. p. 241; Dr. p. 52; Gaz. vol. 132; p. 44.
Graham, G. M., assignor to G. A. E. Kohler, Chicago, Ill. Reinforced concrete building. No. 875,804; Jan. 7; Sp. p. 242; Dr. p. 52; Gaz. vol. 132; p. 45.
Graham, J. E., Salem, Va., assignor to American Flange Frog and Railway Improvement Company, Gainesville, Fla. Double-spring frog. No. 877,562; Jan. 28; Sp. p. 3862; Dr. p. 835; Gaz. vol. 132; p. 715.
Graham, J. R. (See Robertson and Graham.)
Graham, W. S., and F. L. Dewey, assignors to Parlin & Orendorff Company, Canton, Ill. Reversible disk harrow. No. 875,805; Jan. 7; Sp. p. 244; Dr. pp. 52–3; Gaz. vol. 132; p. 45.
Grandy, C. F. (See Grandy, J. F. and C. F.)
Grandy, J. F. and C. F., Greenville, S. C. Cross-tie. No. 877,328; Jan. 21; Sp. p. 3384; Dr. p. 733; Gaz. vol. 132; p. 617.
Grant, C. E., Allendale, Cal. Floating pier. No. 876,170; Jan. 7; Sp. p. 942; Dr. p. 202; Gaz. vol. 132; p. 160.
Grant, J. P., Berkeley, Cal. Grinding attachment for bicycles. No. 875,806; Jan. 7; Sp. p. 246; Dr. p. 53; Gaz. vol. 132; p. 46.
Graszynski, P. W., Tempelhof, near Berlin, Germany. Fireproof building. No. 876,171; Jan. 7; Sp. p. 943; Dr. pp. 202–3; Gaz. vol. 132; p. 160.
Gratze, E. V., Leytonstone, England. Instrument for indicating speeds, distances covered, and the like. No. 877,711; Jan. 28; Sp. p. 4140; Dr. p. 896; Gaz. vol. 132; p. 761.
Gray, F. H. (See Cole, B. A., assignor.)
Gray, H., assignor of one-third to M. M. Buttrey, Dickson, one-third to J. Tucker, Brentwood, and one-sixth to J. H. Callender, Nashville, Tenn. Bumping-post. No. 877,472; Jan. 21; Sp. p. 3647; Dr. pp. 790–1; Gaz. vol. 132; p. 663.
Gray, H. L., assignor to Eastman Kodak Company, Rochester, N. Y. Photographic-film cartridge. No. 876,271; Jan. 7; Sp. p. 1146; Dr. p. 240; Gaz. vol. 132; p. 192.
Gray, M. E. (See Gray, W. and M. E.)
Gray, N. O. (See Kirby, H. A., assignor.)
Gray, W. and M. E., Rochester, N. Y. Mixing and kneading machine. No. 876,633; Jan. 14; Sp. p. 1963; Dr. p. 428; Gaz. vol. 132; p. 348.
Green, F. D., Florence, Ala. Variable-speed gearing. No. 877,765; Jan. 28; Sp. p. 4238; Dr. p. 920; Gaz. vol. 132; p. 779.
Green, L. D., assignor to Davis Sewing Machine Company, Dayton, Ohio. Mechanical movement. No. 875,807; Jan. 7; Sp. p. 248; Dr. pp. 53–4; Gaz. vol. 132; p. 46.
Greenawalt, J. E., Denver, Colo. Precipitating metals. No. 876,346; Jan. 14; Sp. p. 1310; Dr. p 283; Gaz. vol. 132; p. 248.
Greene, F. C., Cleveland, and C. G. Palmer, East Cleveland, Ohio, assignors, by mesne assignments, to said Greene. Weigh-pan. No. 876,541; Jan. 14; Sp. p. 1744; Dr. pp. 378–9; Gaz. vol. 132; p. 316.
Greenfield, E. T., Kiamesha, N. Y. Machine for making metal tubing. No. 877,073; Jan. 21; Sp. p. 2855; Dr. pp. 616–17; Gaz. vol. 132; p. 532.
Greenwood, W. (See Peirano and Greenwood.)
Greer, J. W., Mount Pleasant, Tex. Bottle-washing machine. No. 876,798; Jan. 14; Sp. p. 2249; Dr. p. 495; Gaz. vol. 132; p. 399.
Gregory, H. S., Tufnell Park, London, England. Means for cleansing casks. No. 877,074; Jan. 21; Sp. p. 2858; Dr. p. 617; Gaz. vol. 132; p. 533.
Grellick, C. L., assignor to Traverse City Chair Co., Traverse City, Mich. Hinge for Morris chairs, &c. No. 877,766; Jan. 28; Sp. p. 4240; Dr. p. 920; Gaz. vol. 132; p. 779.
Grellick, C. L., assignor to J. E. Grellick Company, Traverse City, Mich. Corner-fastening for cupboards, &c. No. 877,767; Jan. 28; Sp. p. 4241; Dr. p. 821; Gaz. vol. 132; p. 779.
Grey, I. A., New York, N. Y. Buckle. No. 876,799; Jan. 14; Sp. p. 2251; Dr. p. 495; Gaz. vol. 132; p. 399.
Gribble, T. L., *et al.* (See Watt, W. H., assignor.)
Griesbach, R. C. (See Venner and Griesbach.)
Griffin, F. W., *et al.* (See Myers, C. D., assignor.)
Griffin, W. M., Manchester, N. H. Shoe-upper. No. 877,075; Jan. 21; Sp. p. 2859; Dr. p. 617; Gaz. vol. 132; p. 533.
Griffith, C. E., Philadelphia, Pa. Car vestibule-door and trap. No. 876,871; Jan. 14; Sp. p. 2401; Dr. p. 523; Gaz. vol. 132; p. 424.
Griswold, E., Erie, Pa. Hydraulic-pump regulator. No. 877,563; Jan. 28; Sp. p. 3864; Dr. p. 836; Gaz. vol. 132; p. 715.
Gröndal, G., Djursholm, assignor to Metallurgiska Aktiebolaget, Stockholm, Sweden. Method of and means for utilizing the heat in furnaces of the channel type. No. 876,712; Jan. 14; Sp. p. 2110; Dr. pp. 460–2; Gaz. vol. 132; p. 374.
Grosjean, J. E. (See Gardner and Grosjean.)
Grossgebauer, J., Paterson, N. J. Necktie attachment. No. 876,172; Jan. 7; Sp. p. 945; Dr. p. 203; Gaz. vol. 132; p. 161.
Groupe, A. V., Philadelphia, Pa., assignor to E. Jenckes Manufacturing Company, Pawtucket, R. I. Knitting-machine. No. 875,707; Jan. 7; Sp. p. 57; Dr. pp. 11–12; Gaz. vol. 132; p. 13.
Grundeen, E. A., Carney, Mich. Stump-puller. No. 875,808; Jan. 7; Sp. p. 253; Dr. p. 54; Gaz. vol. 132; p. 47.
Guidenarm, A. A., Buffalo, N. Y. Cheese-cutter. No. 877,642; Jan. 28; Sp. p. 4015; Dr. p. 867; Gaz. vol. 132; p. 740.
Gulick, E. J., Mishawaka, Ind. Means for flexibly connecting parts of a vehicle to a frame. No. 876,272; Jan. 7; Sp. p. 1147; Dr. p. 240; Gaz. vol. 132; p. 193.
Gundelach, E., assignor of one-half to R. J. Ehlers, New York, N. Y. Carbureter. No. 876,800; Jan. 14; Sp. p. 2252; Dr. p. 495; Gaz. vol. 132; p. 400.
Gunn, C. H., Marysville, Cal. Dredger and scraper. No. 876,634; Jan. 14; Sp. p. 1966; Dr. p. 428; Gaz. vol. 132; p. 349.
Gunn, F. (See Mitchell and Gunn.)
Günther, O., and L. Hesse, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Azo dye. No. 877,643; Jan. 28; Sp. p. 4019; Gaz. vol. 132; p. 741.
Günther, O., and L. Hesse, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Azo dye. No. 877,644; Jan. 28; Sp. p. 4020; Gaz. vol. 132; p. 741.
Guttman, F., New York, N. Y. Catamenial drawers. No. 876,173; Jan. 7; Sp. p. 946; Dr. p. 204; Gaz. vol. 132; p. 161.
Gyurcso, A. (See Eiben and Gyurcso.)
H. B. Smith Machine Company. (See Perry, J. L., assignor.)
Haapala, A. (See Newman and Haapala.)
Habermas, H. J., Detroit, Mich. Costumer. No. 877,189; Jan. 21; Sp. p. 3107; Dr. p. 672; Gaz. vol. 132; p. 571.
Hachenberg, L., New York, N. Y. Turbine-engine. No. 877,502; Jan. 28; Sp. p. 3731; Dr. p. 807; Gaz. vol. 132; p. 605.

Hachmann, F., and W. Ericksen, Minneapolis, assignors to Acme Manufacturing Company, St. Paul, Minn. Car-axle-box lid. No. 875,809; Jan. 7; Sp. p. 254; Dr. pp. 54–5; Gaz. vol. 132; p. 47.
Hacker, L. P., Beaumont, Tex. Fusible plug. No. 877,329; Jan. 21; Sp. p. 3385; Dr. p. 733; Gaz. vol. 132; p. 617.
Hackney, L. S., St. Paul, Minn. Ventilating device. No. 877,420; Jan. 21; Sp. p. 3557; Dr. p. 709; Gaz. vol. 132; p. 647.
Hageman, R. C., and G. E. Broderson, San Francisco, Cal. Steam-drier. No. 876,347; Jan. 14; Sp. p. 1312; Dr. p. 283; Gaz. vol. 132; p. 249.
Hageman, S. S., Abilene, Kans. Column. No. 877,076; Jan. 21; Sp. p. 2861; Dr. p. 617; Gaz. vol. 132; p. 533.
Haight, H. V., Sherbrooke, Quebec, Canada, assignor to Ingersoll-Rand Company, New York, N. Y. Channeling-machine. No. 876,542; Jan. 14; Sp. p. 1747; Dr. pp. 379–80; Gaz. vol. 132; p. 316.
Hall, A. E., Williamstown, Mass. Corn-husking device. No. 877,461; Jan. 21; Sp. p. 3628; Dr. pp. 785–6; Gaz. vol. 132; p. 659.
Hall, B. C. and F. W., Elmwood, Ill. Automatic fire-alarm. No. 875,810; Jan. 7; Sp. p. 256; Dr. p. 55; Gaz. vol. 132; p. 47.
Hall, F. B., Wheeling, W. Va. Fuse device. No. 876,273; Jan. 7; Sp. p. 1148; Dr. p. 250; Gaz. vol. 132; p. 193.
Hall, F. W. (See Hall, B. C. and F. W.)
Hall, I. H., Jr., Lyndon, assignor to Telephone Toll meter Company, St. Johnsbury, Vt. Time-glass. No. 877,421; Jan. 21; Sp. p. 3559; Dr. p. 709; Gaz. vol. 132; p. 648.
Hall, L., Kansas City, Mo. Erasing-shield for draftsmen. No. 876,451; Jan. 14; Sp. p. 1546; Dr. p. 331; Gaz. vol. 132; p. 284.
Hall, M., De Funiak Springs, Fla. Sap-collector. No. 876,174; Jan. 7; Sp. p. 948; Dr. p. 204; Gaz. vol. 132; p. 161.
Hall, T., New York, N. Y. Lock and latch. No. 876,348; Jan. 14; Sp. p. 1313; Dr. p. 284; Gaz. vol. 132; p. 249.
Hallenbrook, B. (See Söderlund and Hallenbrook.)
Hallwood, H. S., assignor to International Register Company, Columbus, Ohio. Cash-register. No. 876,635; Jan. 14; Sp. p. 1969; Dr. pp. 428–9; Gaz. vol. 132; p. 349.
Ham, J. S., Covington, Va., assignor to Covington Machine Company. Coke-leveling machine. No. 876,175; Jan. 7; Sp. p. 949; Dr. pp. 204–5; Gaz. vol. 132; p. 162.
Hamilton, F. G. (See Holley, C. H., assignor.)
Hamilton & Hamilton, Jr. (See Fuller, J. A., assignor.)
Hamlin, G. O. (See Ernst and Hamlin.)
Hammersley, R. (See Vermilyea and Hammersley.)
Hammond, B. W., Oakland, Cal. Pulley-block. No. 876,176; Jan. 7; Sp. p. 952; Dr. p. 205; Gaz. vol. 132; p. 162.
Hammond, L. W., North Plainfield, assignor of one-half to L. Molederky, Plainfield, N. J. Stove. No. 877,190; Jan. 21; Sp. p. 3109; Dr. p. 673; Gaz. vol. 132; p. 572.
Handlan, A. H., Jr., St. Louis, Mo. Combined base-frame and bracket for signal-lamps. No. 877,841; Jan. 28; Sp. p. 4377; Dr. p. 952; Gaz. vol. 122; p. 803.
Hanhart, L. J. (See Robinson and Hanhart.)
Hansen, A. T. (See Goss and Hansen.)
Hanson, B., Schroyer, Kans. Engine-valve. (Reissue.) No. 12,738. Jan. 14; Sp. p. 2522; Dr. p. 552; Gaz. vol. 132; p. 441.
Hanson, B. M. W., assignor to Pratt & Whitney Company, Hartford, Conn. Friction-clutch. No. 876,543; Jan. 14; Sp. p. 1750; Dr. p. 380; Gaz. vol. 132; p. 317.
Hanson, H., Hartford, Conn. Two-way full-stroke device for key-levers. No. 876,959; Jan. 21; Sp. p. 2618; Dr. p. 569; Gaz. vol. 132; p. 494.
Hanson, N. K. F., Svanö, Frankö, Sweden. Centrifugal pump, blower, and the like. No. 877,191; Jan. 21; Sp. p. 3110; Dr. p. 673; Gaz. vol. 132; p. 572.
Hanson, S. (See Anderson and Hanson.)
Harbaugh, A. H. (See Porter and Harbaugh.)
Hard, M., and E. Coney, assignors to Ohio Blower Company, Cleveland, Ohio. Ventilator. No. 875,708; Jan. 7; Sp. p. 60; Dr. p. 12; Gaz. vol. 132; p. 13.
Harden, E. W., Frankfort, Ky. Farm-gate. No. 876,177; Jan. 7; Sp. p. 955; Dr. p. 206; Gaz. vol. 132; p. 162.
Härdén, P., assignor to Metallurgiska Aktiebolaget, Stockholm, Sweden. Ore-concentrator. No. 876,713; Jan. 14; Sp. p. 2113; Dr. pp. 462–3; Gaz. vol. 132; p. 374.
Harder, W. T., New Bedford, Mass. Trunk-piston closure. No. 876,636; Jan. 14; Sp. p. 1974; Dr. p. 429; Gaz. vol. 132; p. 349.
Hardie, R. W., New York, N. Y. Shaping metal bodies. No. 877,077; Jan. 21; Sp. p. 2862; Dr. p. 618; Gaz. vol. 132; p. 533.
Hardman, P., Willimantic, Conn. Spool. No. 875,993; Jan. 7; Sp. p. 598; Dr. p. 128; Gaz. vol. 132; p. 104.
Hare, H. H. (See Hare, W. W. and H. H.)
Hare, J. R., Baltimore, Md. Kaleidoscope. No. 877,645; Jan. 28; Sp. p. 4022; Dr. p. 868; Gaz. vol. 132; p. 741.
Hare, W. W. and H. H., Noblesville, assignors of one-third to A. Garver, Otisco, Ind. Mower. No. 876,637; Jan. 14; Sp. p. 1975; Dr. p. 429; Gaz. vol. 132; p. 350.
Harkins, M. J., M. J. Rickard, and P. J. Cowley, New York, N. Y. Radiator mounting and connection. No. 876,714; Jan. 14; Sp. p. 2114; Dr. p. 463; Gaz. vol. 132; p. 374.
Harmes, L. D. (See Higgins and Harmes.)
Harmon, W. (See Lacey, E. M., assignor.)
Harrington, C. N., Avon, Minn. Cuspidor-carrier. No. 875,709; Jan. 7; Sp. p. 61; Dr. p. 12; Gaz. vol. 132; p. 13.
Harrington, C. N., Avon, Minn. Trap. No. 876,638; Jan. 14; Sp. p. 1977; Dr. p. 430; Gaz. vol. 132; p. 350.
Harrington, T. A., and A. Barrie, Natick, R. I. Spinning-machine. No. 876,960; Jan. 21; Sp. p. 2620; Dr. p. 569; Gaz. vol. 132; p. 494.
Harris, C. J., *et al.* (See Sumner, W. A., assignor.) (Reissue.)
Harris, F. P., *et al.* (See Miller and Adamson, assignors.)
Harris Tire & Rubber Co. (See Harris, W. D., assignor.)
Harris, W. D., assignor to Harris Tire & Rubber Co., Philadelphia, Pa. Tire. No. 875,994; Jan. 7; Sp. p. 599; Dr. p. 128; Gaz. vol. 132; p. 104.
Harrison, E. C., assignor to Hine Box and Printing Co., Danbury, Conn. Bandbox-stay for hats. No. 875,995; Jan. 7; Sp. p. 600; Dr. p. 128; Gaz. vol. 132; p. 105.
Harrison, H. C., and W. M. O'Brien, assignors to Auto-Mosquito Mask Company, Salt Lake City, Utah. Head-screen. No. 876,452; Jan. 14; Sp. p. 1547; Dr. p. 332; Gaz. vol. 132; p. 284.
Harrison Safety Boiler Works. (See Gamble, J. W., assignor.)
Hart, G. B., Rochester, N. Y. Detachable ball for flower-pots. No. 876,872; Jan. 14; Sp. p. 2403; Dr. p. 523; Gaz. vol. 132; p. 424.
Hartmann Trunk Company. (See Hawley and Wheary, assignors.)
Hartness, J., Springfield, Vt. Engine-lathe. No. 876,305; Jan. 7; Sp. p. 1224; Dr. p. 267; Gaz. vol. 132; p. 205.
Hartwick, F. L. (See Diebolt, L. T., assignor.)
Harvey, G. W., Adin, Cal. Envelop. No. 877,330; Jan. 21; Sp. p. 3386; Dr. pp. 733–4; Gaz. vol. 132; p. 618.
Harward, J. H. *et al.* (See Woodbury, S. W., assignor.) (Reissue.)
Harwood, S., *et al.* (See Woodbury, S. W., assignor.) (Reissue.)
Harwood, W. M., Ontario, Cal. Electric sad-iron. No. 876,639; Jan. 14; Sp. p. 1978; Dr. p. 430; Gaz. vol. 132; p. 350.
Haskins, E. O., Rutherford, N. J., assignor to Abendroth Brothers, Port Chester, N. Y. Hood for hot-air furnaces. No. 876,873; Jan 14; Sp. p. 2404; Dr. p. 524; Gaz. vol. 132; p. 424.
Haskins, U., Chattanooga, Tenn. Coupling. No. 876,052; Jan. 7; Sp. p. 703; Dr. p. 151; Gaz. vol. 132; p. 122.
Hassel, G. A., McKeesport, assignor to Pittsburgh Steel Foundry, Pittsburg, Pa. Furnace charging-box. No. 876,640; Jan. 14; Sp. p. 1980; Dr. p. 430; Gaz. vol. 132; p. 351.
Hassler, R. P., Luverne, Minn. Fertilizer-distributer. No. 877,712; Jan. 28; Sp. p. 4141; Dr. pp. 896–7; Gaz. vol. 132; p. 762.
Hatfield, H. S., Hove, England. Voltameter. No. 876,641; Jan. 14; Sp. p. 1981; Dr. p. 431; Gaz. vol. 132; p. 351.
Hatfield, J. D., *et al.* (See Hatfield and Bass, assignors.)
Hatfield, J. M., and O. Bass, Yarrow, assignors to said Hatfield, C. Elsea, Connellsville, and J. D. Hatfield, Yarrow, Mo. Washing-machine. No. 877,503; Jan. 28; Sp. p. 3732; Dr. p. 807; Gaz. vol. 132; p. 605.
Hathaway, D. B., Moosup, Conn., assignor to Whitin Machine Works, Whitinsville, Mass. Stop-motion. No. 876,349; Jan. 14; Sp. p. 1314; Dr. p. 284; Gaz. vol. 132; p. 249.
Hathaway, E. C., *et al.* (See Brown and Cardoza, assignors.)
Hauptle, C. H., and J. J. Scheuerer, Philadelphia, Pa. Non-refillable bottle. No. 876,961; Jan. 21; Sp. p. 2622; Dr. p. 570; Gaz. vol. 132; p. 494.
Hausfelder, J. A., Los Angeles, Cal. Slack-pulling skidding device. No. 876,874; Jan. 14; Sp. p. 2407; Dr. p. 524; Gaz. vol. 132; p. 425.
Havenhill, M. H., and E. A. Jenkinson, Jacksonville, Ill. Photographic-print box. No. 877,078; Jan. 21; Sp. p. 2864; Dr. p. 618; Gaz. vol. 132; p. 534.
Havens, R. M. (See Garland, W. H., assignor.)
Haverstick, G. W., St. Louis, Mo. Fowl or meat holder. No. 877,331; Jan. 21; Sp. p. 3387; Dr. p. 734; Gaz. vol. 132; p. 618.
Hawk, E. I., Divide, Colo. Pencil-box. No. 876,178; Jan. 7; Sp. p. 957; Dr. p. 206; Gaz. vol. 132; p. 163.
Hawk, S. D., Minneapolis, Kans. Bridle. No. 876,715; Jan. 14; Sp. p. 2115; Dr. p. 464; Gaz. vol. 132; p. 374.
Hawley, E. W., Milwaukee, and G. H. Wheary, assignors to Hartmann Trunk Company, Racine, Wis. Garment-supporter attachment for receptacles. No. 875,811; Jan. 7; Sp. p. 258; Dr. p. 55; Gaz. vol. 132; p. 48.
Hawver, C. B. (See Crampton, H. B., assignor.)
Hay, A. T., *et al.* (See Miller & Adamson, assignors.)
Hayden, E. J., Minneapolis, Minn. Adjustable suspenders. No. 877,332; Jan. 21; Sp. p. 3389; Dr. p. 734; Gaz. vol. 132; p. 618.

Hayden, J. T., assignor to Crane Company, Chicago, Ill. Quick-opening valve. No. 875,812; Jan. 7; Sp. p. 259; Dr. p. 56; Gaz. vol. 132; p. 48.
Hayes, S. W., Geneva, N. Y. Portable derailer. No. 875,996; Jan. 7; Sp. p. 601; Dr. p. 129; Gaz. vol. 132; p. 105.
Haynes, J. H., De Leon, Tex. Compound implement. No. 877,333; Jan. 21; Sp. p. 3300; Dr. p. 734; Gaz. vol. 132; p. 618.
Head, F., Philadelphia, Pa. Form for stack construction. No. 877,768; Jan. 28; Sp. p. 4242; Dr. p. 921; Gaz. vol. 132; p. 780.
Heady, T. (See Mylor and Heady.)
Heard, W. H., London, Ontario, Canada. Safety-clutch for power-driving pumps. No. 876,053; Jan. 7; Sp. p. 704; Dr. p. 151; Gaz. vol. 132; p. 122.
Heard, W. H., London, Ontario, Canada. Spray-nozzle. No. 876,453; Jan. 14; Sp. p. 1548; Dr. p. 332; Gaz. vol. 132; p. 284.
Hearing, E., and F. A. Dudley, Kellogg, Idaho. Centrifugal concentrator. No. 876,642; Jan. 14; Sp. p. 1962; Dr. p. 431; Gaz. vol. 132; p. 351.
Hearst Foundry & Manufacturing Company. (See Bolus, W. G., assignor.)
Heberling, J., Rochester, N. Y. Dumping-wagon. No. 875,908; Jan. 7; Sp. p. 439; Dr. pp. 97-8; Gaz. vol. 132; p. 79.
Hecht, F., Tegel, Germany. Steam-generator. No. 877,334; Jan. 21; Sp. p. 3301; Dr. p. 735; Gaz. vol. 132; p. 619.
Heermance, C. S., San Francisco, Cal. Water-color printing. No. 876,643; Jan. 14; Sp. p. 1964; Dr. p. 431; Gaz. vol. 132; p. 352.
Heermans, T. W., Evanston, Ill. Power-driven elevator-engine. No. 877,713; Jan. 28; Sp. p. 4142; Dr. pp. 897-8; Gaz. vol. 132; p. 762.
Heermans, T. W., Evanston, Ill. Combined power-transmission and automatic braking mechanism for motor-driven vehicles. No. 877,714; Jan. 28; Sp. p. 4147; Dr. pp. 898-9; Gaz. vol. 132; p. 762.
Heim, C. A., Brownsville, Ind. Lacing-loop. No. 877,564; Jan. 28; Sp. p. 3866; Dr. p. 836; Gaz. vol. 132; p. 715.
Heinrici, W., Halle-on-the-Saale, Germany. Stable solution of hydrogen peroxid and making same. No. 876,179; Jan. 7; Sp. p. 958; Gaz. vol. 132; p. 163.
Heinz, C., Görlitz, Germany. Gas-generator. No. 875,813; Jan. 7; Sp. p. 260; Dr. p. 56; Gaz. vol. 132; p. 48.
Heinz, N. L., La Salle, Ill., and M. F. Chase, Mineral Point, Wis. Manufacture of sulfuric acid. No. 875,909; Jan. 7; Sp. p. 443; Dr. p. 98; Gaz. vol. 132; p. 80.
Heithersay, J. S., Adelaide, South Australia, Australia. Mechanical perpetual calendar. No. 877,335; Jan. 21; Sp. p. 3302; Dr. p. 735; Gaz. vol. 132; p. 619.
Helberger, H., Munich, Germany. Electric chain-welding machine. No. 875,910; Jan. 7; Sp. p. 445; Dr. p. 98; Gaz. vol. 132; p. 80.
Helgerson, T. O., Minneapolis, assignor of one-half to Fosston Manufacturing Co., St. Paul, Minn. Fanning-mill. No. 877,336; Jan. 21; Sp. p. 3304; Dr. pp. 735-6; Gaz. vol. 132; p. 619.
Hemberg, A. M., Minneapolis, Minn. Grain-binder. No. 875,710; Jan. 7; Sp. p. 62; Dr. p. 13; Gaz. vol. 132; p. 14.
Hemenway, C. V., and L. F. Kirk, Pocantico Hills, N. Y. Leaf-burning cart. No. 876,180; Jan. 7; Sp. p. 958; Dr. pp. 206-7; Gaz. vol. 132; p. 163.
Henderson, H., New York, N. Y. Mold-ramming apparatus. No. 876,054; Jan. 7; Sp. p. 706; Dr. pp. 151-2; Gaz. vol. 132; p. 122.
Hendrickson, H. M., Granville, N. D. Gearing for steam-engines. No. 877,079; Jan. 21; Sp. p. 2863; Dr. pp. 618-19; Gaz. vol. 132; p. 534.
Henke, C., Witten, Germany. Protector against skidding. No. 877,760; Jan. 28; Sp. p. 4247; Dr. p. 922; Gaz. vol. 132; p. 780.
Hennessey, J. J., Milwaukee, Wis. Car-frame construction. No. 876,644; Jan. 14; Sp. p. 1986; Dr. p. 432; Gaz. vol. 132; p. 352.
Hennessey, J. W., *et al.* (See Smith, G. A., assignor.)
Henning, C. E. (See Henning, T., C. E., and W. J.)
Henning, T., C. E., and W. J., Pasadena, Cal. Gas-meter. No. 876,875; Jan. 14; Sp. p. 2408; Dr. pp. 524-5; Gaz. vol. 132; p. 425.
Henning, W. J. (See Henning, T., C. E., and W. J.)
Henrikson, E. (See Bullard and Henrikson.)
Henry Disston & Sons. (See King, E. A., assignor.)
Henry, H. K. (See Goodhue and Henry.)
Henry, H. W., assignor of one-half to W. H. Woolland, Cortland, N. Y. Egg-washing machine. No. 876,181; Jan. 7; Sp. p. 961; Dr. p. 207; Gaz. vol. 132; p. 164.
Henry, J. (See Burley, I. E., assignor.)
Henry, J. J., Greenview, Ill. Barrel. No. 876,801; Jan. 14; Sp. p. 2255; Dr. p. 496; Gaz. vol. 132; p. 400.
Herman, R., Crafton, Pa., assignor to General Electric Company. Semaphore-signal. No. 876,962; Jan. 21; Sp. p. 2623; Dr. p. 570; Gaz. vol. 132; p. 495.
Herman, W. E., Allegheny, assignor of one-half to R. MacGregor, Knoxville borough, Pa. Machine for cutting ovals. No. 877,422; Jan. 21; Sp. p. 3560; Dr. p. 770; Gaz. vol. 132; p. 648.
Hermann, W. F. (See Hoffman, R. V., assignor.)
Herr, J. C., Middletown, Ohio. Bicycle. No. 877,337. Jan. 21; Sp. p. 3305; Dr. p. 736; Gaz. vol. 132; p. 620.
Herrick, J. A., Philadelphia, Pa. Annealing-furnace. No. 876,182; Jan. 7; Sp. p. 962; Dr. pp. 207-8; Gaz. vol. 132; p. 164.
Herrick, J. A., Philadelphia, Pa. Annealing-furnace. No. 876,183; Jan. 7; Sp. p. 964; Dr. p. 208; Gaz. vol. 132; p. 164.
Herting, W. F., and F. C. Chian, Baltimore, Md. Safety-signal system for railways. No. 875,911; Jan. 7; Sp. p. 447; Dr. p. 99; Gaz. vol. 132; p. 81.
Hess, E. G., Buffalo, N. Y. Furniture. No. 877,423; Jan. 21; Sp. p. 3562; Dr. p. 770; Gaz. vol. 132; p. 648.
Hesse, L. (See Günther and Hesse.)
Hestand, H., and J. W. Willis, Comanche, Okla. Stalk-cutter attachment for cultivators. No. 877,192; Jan. 21; Sp. p. 3112; Dr. p. 673; Gaz. vol. 132; p. 573.
Hettrich, J., Grand Island, Nebr. Corn-husking machine. No. 876,802; Jan. 14; Sp. p. 2255; Dr. p. 496; Gaz. vol. 132; p. 400.
Heuser, F., assignor to Arithmograph Company, Chicago, Ill. Ribbon mechanism for type-writing machines. No. 876,454; Jan. 14; Sp. p. 1550; Dr. pp. 332-3; Gaz. vol. 132; p. 285.
Heyman, D., assignor of one-half to J. Chein, New York, N. Y. Fish-horn. No. 877,715; Jan. 28; Sp. p. 4152; Dr. p. 899; Gaz. vol. 132; p. 763.
Heymann, B., Millers, Nev. Turbine. No. 875,912; Jan. 7; Sp. p. 451; Dr. p. 100; Gaz. vol. 132; p. 81.
Hibbard, W. R., Chicago, Ill. Undershirt. No. 876,455; Jan. 14; Sp. p. 1553; Dr. p. 333; Gaz. vol. 132; p. 285.
Hickman, W. N. (See New and Hickman.)
Hickok, L. E., Brooklyn, N. Y., assignor of one-half to Cleveland Hardware Company, Cleveland, Ohio. Head-block plate and perch connection. No. 876,544; Jan. 14; Sp. p. 1752; Dr. p. 380; Gaz. vol. 132; p. 317.
Hickok, L. E., Brooklyn, N. Y., assignor of one-half to Cleveland Hardware Company, Cleveland, Ohio. Antirattler for fifth-wheels. No. 876,545; Jan. 14; Sp. p. 1753; Dr. p. 381; Gaz. vol. 132; p. 317.
Hickok, L. E., Brooklyn, N. Y., assignor of one-half to Cleveland Hardware Company, Cleveland, Ohio. Vehicle-gear. No. 876,546; Jan. 14; Sp. p. 1754; Dr. p. 381; Gaz. vol. 132; p. 318.
Hickok, L. E., Brooklyn, N. Y., assignor of one-half to Cleveland Hardware Company, Cleveland, Ohio. Antirattler for fifth-wheels of vehicles. No. 876,547; Jan. 14; Sp. p. 1755; Dr. p. 381; Gaz. vol. 132; p. 318.
Hickok, L. E., Brooklyn, N. Y., assignor of one-half to Cleveland Hardware Company, Cleveland, Ohio. King-bolt connection for vehicles. No. 876,548; Jan. 14; Sp. p. 1756; Dr. p. 382; Gaz. vol. 132; p. 318.
Hicks, J. B., Wolf Pit township, Richmond county, N. C. Combined plow and fertilizer-distributer. No. 877,424; Jan. 21; Sp. p. 3564; Dr. p. 770; Gaz. vol. 132; p. 649.
Higginbotham, R. H., Village Springs, Ala. Rotary engine. No. 876,184; Jan. 7; Sp. p. 967; Dr. p. 209; Gaz. vol. 132; p. 164.
Higgins, P. M., and L. D. Harmes, Houston, Tex. Street or station indicator. No. 876,803; Jan. 14; Sp. p. 2256; Dr. pp. 496-7; Gaz vol. 132; p. 401.
Higginson, J., Jr., Stockport, England. Gassing-machine for yarn and thread. No. 875,711; Jan. 7; Sp. p. 65; Dr. pp. 13-14; Gaz. vol. 132; p. 14.
Higham, D., Bridgeport, Conn. Graphophone. No. 876,350; Jan. 14; Sp. p. 1316; Dr. pp. 284-5; Gaz. vol. 132; p. 250.
Higley, J. M., Niles, Cal. Talking-machine-disk protector. No. 877,842; Jan. 28; Sp. p. 4378; Dr. p. 952; Gaz. vol. 132; p. 803.
Hilbert Machine Company. (See Mill, A., assignor.)
Hildebrandt, H., Halle-on-the-Saale, Germany. Manufacturing condensation products from formaldehyde, tannin, and aromatic monohydroxyl compounds. No. 876,311; Jan. 7; Sp. p. 1238; Gaz. vol. 132; p. 207.
Hill, C. D. (See Deason, A. E., assignor.)
Hill, G. R., *et al.* (See Baum, J. B., assignor.)
Hill, H. A., Delafield, Wis. Electric safety system. No. 876,804; Jan. 14; Sp p. 2259; Dr. p. 497; Gaz. vol. 132; p. 401.
Hill, R. A., *et al.* (See Baum, J. B., assignor.)
Hill, W. H., and H. B. Wright, Chicago, Ill. Dump-wagon. No. 877,338; Jan. 21; Sp. p. 3306; Dr. pp. 736-7; Gaz. vol. 132; p. 620.
Hillman, C. T., Rochester, Pa. Tooth-brush. No. 876,185; Jan. 7; Sp. p. 969; Dr. p. 209; Gaz. vol. 132; p. 165.
Hillman, E. B., and L. E. Roberts, Chico, Cal., said Roberts assignor to said Hillman. Automatic pressure retaining and graduating release device for air-brakes. No. 876,876; Jan. 14; Sp. p. 2410; Dr. pp. 525-6; Gaz. vol. 132; p. 425.
Hilzinger, W., Stuttgart, Germany. Letter-press copying-block. No. 877,565; Jan. 28; Sp. p. 3867; Dr. p. 836; Gaz. vol. 132; p. 716.
Himbury, W. H. (See Hutton and Himbury.)
Hine Box and Printing Co. (See Harrison, E. C., assignor.)
Hines, A., C. Champeny, Lyons, and J. L. Crisler, Wellington, Kans. Folding sink or tub. No. 877,770; Jan. 28; Sp. p. 4248; Dr. p. 922; Gaz. vol. 132; p. 780.
Hines, J. M., Albany, N. Y. Brake-applying mechanism. No. 876,456; Jan. 14; Sp. p. 1554; Dr. p. 333; Gaz. vol. 132; p. 285.
Hinkley, G. B. (See Blackhall, F. W., assignor.)

Hinton, J. R., Cashmere, Wash. Railway-gate. No. 875,814; Jan. 7; Sp. p. 261; Dr. p. 56; Gaz. vol. 132; p. 48.
Hirsch, M. A., Franklin, Pa. Clip or elastic-band attachment for books. No. 877,771; Jan. 28; Sp. p. 4249; Dr. p. 922; Gaz. vol. 132; p. 781.
Hirsch, M. A., Franklin, Pa. Fastener. No. 877,772; Jan. 28; Sp. p. 4251; Dr. p. 923; Gaz. vol. 132; p. 781.
Hirt, B. F., *et al.* (See Althen, W. C., assignor.)
Hjorth, W. A. W. E. (See Berglund, Hjorth, and Ljungman.)
Hoak, H. D., Grass Valley, Cal. Combination-tool. No. 876,963; Jan. 21; Sp. p. 2626; Dr. p. 570; Gaz. vol. 132; p. 495.
Hobart, F. E., Dallas, Tex., assignor to International Conservatory of Music. Music-indicator. No. 877,339; Jan. 21; Sp. p. 3308; Dr. p. 737; Gaz. vol. 132; p. 620.
Hodgson, I., assignor to Automobile Wheel & Rim Co., Minneapolis, Minn. Spring-cushioned tire. No. 876,645; Jan. 14; Sp. p. 1967; Dr. p. 432; Gaz. vol. 132; p. 352.
Hoe, R. (See Spalckhaver, W., assignor.)
Hoedt, A., Peterawe, near Oberwitzko, Germany. Motor-wagon. No. 876,251; Jan. 14; Sp. p. 1318; Dr. p. 285; Gaz. vol. 132; p. 250.
Hofbaur, J. C., West Hoboken, N. J. Keyboard for musical instruments. No. 875,815; Jan. 7; Sp. p. 262; Dr. p. 57; Gaz. vol. 132; p. 49.
Hoffman, J. A., assignor of one-half to W. G. Black, Cleveland, Ohio. Egg-beater. No. 876,549; Jan. 14; Sp. p. 1757; Dr. p. 382; Gaz. vol. 132; p. 318.
Hoffman, R. V., assignor of one-half to W. F. Hermann, Brenham, Tex. Hydrocarbon-burner. No. 876,457; Jan. 14; Sp. p. 1557; Dr. p. 334; Gaz. vol. 132; p. 286.
Hofheinz, B. J., Los Angeles, Cal. Combination door-lock. No. 876,550; Jan. 14; Sp. p. 1758; Dr. p. 382; Gaz. vol. 132; p. 319.
Hoglund, B. A., New York, N. Y. Mechanical musical-instrument player. No. 877,080; Jan. 21; Sp. p. 2866; Dr. p. 619; Gaz. vol. 132; p. 534.
Holden, D. L., assignor to Federal Ice Company, New York, N. Y. Ice-machine press. No. 876,352; Jan. 14; Sp. p. 1320; Dr. p. 286; Gaz. vol. 132; p. 251.
Holden, D. L., New York, N. Y., assignor to Federal Ice Company. Hydraulic-electric ice-machine. No. 877,193; Jan. 21; Sp. p. 3113; Dr. p. 674; Gaz. vol. 132; p. 573.
Holland, C. L., Minneapolis, Minn. Ear-trumpet. No. 877,566; Jan. 28; Sp. p. 3868; Dr. p. 837; Gaz. vol. 132; p. 716.
Holley, C. H., assignor of one-half to F. G. Hamilton, Visalia, Cal. Switch. No. 876,055; Jan. 7; Sp. p. 706; Dr. p. 152; Gaz. vol. 132; p. 123.
Hollis, R. W., Atlanta, Ga. Wall-box for electric switches No. 876,877; Jan. 14; Sp. p. 2415; Dr. p. 526; Gaz. vol. 132; p. 426.
Holloway, J., Doe Run, Mo. Folding and adjustable chair. No. 877,646; Jan. 28; Sp. p. 4023; Dr. p. 868; Gaz. vol. 132; p. 741.
Hollowell, H., Whitewater township, Franklin county, Ind. Automatic spraying device for stock. No. 876,458; Jan. 14; Sp. p. 1559; Dr. p. 334; Gaz. vol. 132; p. 286.
Holm, J. C., Cape Scott, British Columbia, Canada. Wrench. No. 877,773; Jan. 28; Sp. p. 4253; Dr. p. 923; Gaz. vol. 132; p. 781.
Holmes, A., Eureka, Cal. Window-shade fixture. No. 877,425; Jan. 21; Sp. p. 3565; Dr. p. 771; Gaz. vol. 132; p. 649.
Holmes, E. R., and A. S. Cowan, Worcester, Mass., assignors to Crompton & Knowles Loom Works. Loom shedding mechanism. No. 876,353; Jan. 14; Sp. p. 1322; Dr. pp. 286-7; Gaz. vol. 132; p. 251.
Holmes, F. B., Woodbury, N. J., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Stabilized nitrated starch. No. 875,913; Jan. 7; Sp. p. 453; Gaz. vol. 132; p. 81.
Holmes, F. B., Woodbury, N. J., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Stabilized nitrated starch. No. 875,914; Jan. 7; Sp. p. 454; Gaz. vol. 132; p. 81.
Holmes, F. B., Woodbury, N. J., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Stabilized nitrated starch. No. 875,915; Jan. 7; Sp. p. 454; Gaz. vol. 132; p. 82.
Holmes, F. B., Woodbury, N. J., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Stabilized nitrated starch. No. 875,916; Jan. 7; Sp. p. 455; Gaz. vol. 132; p. 82.
Holmes, F. B., Woodbury, N. J., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Stabilized nitrated starch. No. 875,917; Jan. 7; Sp. p. 456; Gaz. vol. 132; p. 82.
Holmes, F. B., Woodbury, N. J., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Stabilized nitrated starch. No. 875,918; Jan. 7; Sp. p. 457; Gaz. vol. 132; p. 82.
Holmes, F. B., Woodbury, N. J., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Stabilized nitrated starch. No. 875,919; Jan. 7; Sp. p. 457; Gaz. vol. 132; p. 82.
Holmes, F. B., Woodbury, N. J., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Stabilized nitrated starch. No. 875,920; Jan. 7; Sp. p. 458; Gaz. vol. 132; p. 82.
Holmes, F. B., Woodbury, N. J., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Stabilized nitrated starch. No. 875,921; Jan. 7; Sp. p. 459; Gaz. vol. 132; p. 82.
Holmes, F. B., Woodbury, N. J., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Stabilized nitrated starch. No. 875,922; Jan. 7; Sp. p. 459; Gaz. vol. 132; p. 82.
Holmes, F. B., Woodbury, N. J., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Stabilized nitrated starch. No. 875,923; Jan 7; Sp. p. 460; Gaz. vol. 132; p. 83.
Holmes, F. B., Woodbury, N. J., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Stabilized nitrated starch. No. 875,924; Jan. 7; Sp. p. 461; Gaz. vol. 132; p. 83.
Holmes, F. B., Woodbury, N. J., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Stabilized nitrated starch. No. 875,925; Jan. 7; Sp. p. 461; Gaz. vol. 132; p. 83.
Holmes, F. B., Woodbury, N. J., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Stabilized nitrated starch. No. 875,926; Jan. 7; Sp. p. 462; Gaz. vol. 132; p. 83.
Holmes, F. B., Woodbury, N. J., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Stabilized nitrated starch. No. 875,927; Jan. 7; Sp. p. 462; Gaz. vol. 132; p. 83.
Holmes, F. B., Woodbury, N. J., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Stabilized nitrated starch. No. 875,928; Jan. 7; Sp. p. 463; Gaz. vol. 132; p. 83.
Holmes, G. A., Newton Center, assignor to United States Fastener Company, Boston, Mass. Snap-fastener. No. 875,816; Jan. 7; Sp. p. 263; Dr. p. 57; Gaz. vol. 132; p. 49
Holmes, J. G., and G. Puffer, Waupun, Wis. Valve-reseating device. No. 876,964; Jan. 21; Sp p 2627; Dr. p. 570; Gaz. vol. 132; p. 495.
Holmes, J. L. (See Collins, W. H., assignor.)
Holtmann, H. F., Indianapolis, Ind. Joiner's hand-clamp. No. 877,426; Jan. 21; Sp. p. 3567; Dr. p. 771; Gaz. vol. 132; p. 649.
Holton, C. J. (See Rouech, E. E., assignor.)
Holtz, M., Peoria, Ill. Bed-tightener. No. 877,774; Jan. 28; Sp. p. 4255; Dr. p. 923; Gaz. vol. 132; p. 782.
Holzwarth, H., Hamilton, Ohio, assignor of one-half to E. Junghans, Sr., Schramberg, Germany. Gas-turbine. No. 877,194; Jan. 21; Sp. p. 3115; Dr. pp. 674-5; Gaz. vol. 132; p. 573.
Hood, A. J., Muscoda, Wis. Printing-press attachment. No. 877,195; Jan. 21; Sp. p. 3118; Dr. pp. 675-6; Gaz. vol. 132; p. 574.
Hooper, W. H., and F. S. Hutchins, San Francisco, Cal. Explosive-engine. No. 876,878; Jan. 14; Sp. p. 2416; Dr. pp. 526-7; Gaz. vol. 132; p. 426.
Hoover, O. C., Johnstown, Ohio. Soldering compound. No. 877,505; Jan. 28; Sp. p. 3735; Gaz. vol. 132; p. 696.
Hoover, L., Narka, Kans. Apparatus for breaking or training animals. No. 877,504; Jan. 28; Sp. p. 3733; Dr. p. 808; Gaz. vol. 132; p. 695.
Hopkins, C. E., Worcester, Mass. Apparatus for finishing stereotype-plates. No. 877,775; Jan. 28; Sp. p. 4256; Dr. pp. 923-5; Gaz. vol. 132; p. 782.
Hopkins, C. L., Chicago, Ill., assignor to Curtain Supply Company, Newark, N. J. Curtain-holding device. No. 875,997; Jan. 7; Sp. p. 603; Dr. p. 129; Gaz. vol. 132; p. 105.
Hopkins, F. E., Sterling, N. Y. Extension car-step. No. 876,186; Jan. 7; Sp. p. 969; Dr. p. 209; Gaz. vol. 132; p. 165.
Hopkins, M. K., assignor to H. D. Pulsifer, Chicago, Ill. Sprinkler-head for automatic fire-extinguishers. No. 875,920; Jan. 7; Sp. p. 464; Dr. p. 100; Gaz. vol. 132; p. 83.
Hoppe, A., Leavenworth, Kans. Crate-cover for wagon-bodies. No. 876,551; Jan. 14; Sp. p. 1761; Dr. p. 383; Gaz. vol. 132; p. 319.
Hornsby, H. H., New York, N. Y. Junction-box. No. 876,187; Jan. 7; Sp. p. 971; Dr. p. 210; Gaz. vol. 132; p. 165.
Horton Basket Machine Company of West Virginia. (See Horton, E., assignor.)
Horton, E., Elmira, N. Y., assignor to Horton Basket Machine Company of West Virginia. Basket-machine. No. 877,891; Jan. 28; Sp. p. 4470; Dr. pp. 974-5; Gaz. vol. 132; p. 819.
Hosford, F., Sterrett, Tex. Harrow. No. 877,647; Jan. 28; Sp. p. 4024; Dr. p. 868; Gaz. vol. 132; p. 742.
Hoskin, E. F., Evanston, assignor to Hoskins Company, Chicago, Ill. Electric heater. No. 877,843; Jan. 28; Sp. p. 4379; Dr. pp. 952-3; Gaz. vol. 132; p. 803.
Hoskins Company. (See Hoskin, E. F., assignor.)
Hoskyns, W. J., assignor to Auto Accessories Manufacturing Company, Detroit, Mich. Carriage-top. No. 876,905; Jan. 14; Sp. p. 2472; Dr. p. 540; Gaz. vol. 132; p. 436.
Hosmer, A., Fort Worth, Tex. Railway-crossing. No. 877,340; Jan. 21; Sp. p. 3400; Dr. pp. 737-8; Gaz. vol. 132; p. 621.
Hotaling, I. L., Riverton, assignor to Curtain Supply Company, Newark, N. J. Curtain-fixture. No. 876,965; Jan. 21; Sp. p. 2629; Dr. p. 571; Gaz. vol. 132; p. 496.
Houghton, D., Petersburg, Ill. Dump and elevator. No. 876,056; Jan. 7; Sp. p. 710; Dr. pp. 152-3; Gaz. vol. 132; p. 123.

Houghton, T. M., London, England. Ladder and trap-door mechanism. No. 876,354; Jan. 14; Sp. p. 1324; Dr. p. 287; Gaz. vol. 132; p. 251.
Houser, J. W., Hammond, Ind., assignor to American Steel Foundries, New York, N. Y. Two-part reversible brake-beam fulcrum. No. 876,057; Jan. 7; Sp. p. 711; Dr. p. 153; Gaz. vol. 132; p. 123.
Houston, C. G., *et al.* (See Barri, J. G., assignor.)
Hovey, A., Sun Prairie, Wis. Tobacco-spearing machine. No. 875,998; Jan. 7; Sp. p. 605; Dr. pp. 129–30; Gaz. vol. 132; p. 106.
Hovey, W. S., assignor to Sheffield Car Company, Three Rivers, Mich. Railway motor-velocipede. No. 876,068; Jan. 7; Sp. p. 713; Dr. pp. 133–4; Gaz. vol. 132; p. 124.
Hovey, W. S., assignor to Sheffield Car Company, Three Rivers, Mich. Transmission-gear. No. 876,355; Jan. 14; Sp. p. 1325; Dr. p. 287; Gaz. vol. 132; p. 252.
Hovis, J. T., Clintonville, Pa. Clamp for motion-rods for oil-wells. No. 876,966; Jan. 21; Sp. p. 2630; Dr. p. 571; Gaz. vol. 132; p. 496.
Howard, C. H., assignor to Railroad Weed Burner Company, St. Louis, Mo. Vegetation-destroyer. No. 875,817; Jan. 7; Sp. p. 265; Dr. p. 58; Gaz. vol. 132; p. 49.
Howard, C. H., and H. M. Pflager, assignors to Double Body Bolster Company, St. Louis, Mo. Car-bolster. No. 875,818; Jan. 7; Sp. p. 266; Dr. p. 58; Gaz. vol. 132; p. 50.
Howard, L. (See Turner and Howard.)
Howard, L. F., Edgewood Park, assignor to Union Switch and Signal Company, Swissvale, Pa. Circuit-controller. No. 877,427; Jan. 21; Sp. p. 3559; Dr. p. 771; Gaz. vol. 132; p. 650.
Howard Miniature Lamp Company. (See Plass, H. E., assignor.)
Howard, R. H., Riverside, Cal. Irrigation-gate box. No. 876,879; Jan. 14; Sp. p. 2418; Dr. pp. 527–8; Gaz. vol. 132; p. 426.
Howell, G. R. (See Ullman and Howell.)
Howell, J. E., Spearfish, S. D. Potato sorter and cleaner. No. 877,462; Jan. 21; Sp. p. 3631; Dr. p. 786; Gaz. vol. 132; p. 660.
Hubbard, S. P. (See White, W., assignor.)
Hubbell, H., Bridgeport, Conn. Socket-shell. No. 876,552; Jan. 14; Sp. p. 1762; Dr. p. 383; Gaz. vol. 132; p. 319.
Hubert, P. G., Los Angeles, Cal. Extension-room. No. 877,196; Jan. 21; Sp. p. 3121; Dr. p. 676; Gaz. vol. 132; p. 574.
Huberty, P., Le Sueur, Minn. Device for culling and discharging apples, potatoes, &c. No. 876,805; Jan. 14; Sp. p. 2261; Dr. p. 498; Gaz. vol. 132; p. 402.
Huegi, H., New York, N. Y. Dough-shaping machine. No. 875,930; Jan. 7; Sp. p. 455; Dr. p. 100; Gaz. vol. 132; p. 84.
Hughes, A. D., Laketon, Ind. Miter-box. No. 875,819; Jan. 7; Sp. p. 268; Dr. p. 58; Gaz. vol. 132; p. 50.
Hughes, J., Hartford, Conn. Pipe-wrench. No. 876,716; Jan. 14; Sp. p. 2116; Dr. p. 464; Gaz. vol. 132; p. 375.
Hughes, T. C., Kansas City, Mo. Mixing-machine. No. 876,356; Jan. 14; Sp. p. 1327; Dr. p. 288; Gaz. vol. 132; p. 252.
Hugo, C. V., St. Louis, Mo. Cord-fastener. No. 877,428; Jan. 21; Sp. p. 3570; Dr. p. 772; Gaz. vol. 132; p. 650.
Huhsman, A. W., Staunton, Ill. Trolley. No. 877,844; Jan. 28; Sp. p. 4381; Dr. p. 953; Gaz. vol. 132; p. 804.
Hull, M. R., assignor to Rex Buggy Company, Connersville, Ind. Vehicle-body. No. 875,999; Jan. 7; Sp. p. 607; Dr. p. 130; Gaz. vol. 132; p. 106.
Hultberg, C., *et al.* (See Foldvik, H., assignor.)
Humane Horseshoe Co. (See Gardner and Grosjean, assignors.)
Humbard, S. (See Miller and Humbard.)
Humphrey, E. H., Battle Creek, Mich., assignor to Lakewood Caster Co., and T. Jennings, Rochester, N. Y. Caster. No. 877,081; Jan. 21; Sp. p. 2868; Dr. p. 619; Gaz. vol. 132; p. 535.
Humphrey, J. H., Boston, Mass. Cuff-holder. No. 877,429; Jan. 21; Sp. p. 3571; Dr. p. 772; Gaz. vol. 132; p. 650.
Hunnel, J. M., Colorado Springs, Colo. Metal railway-tie. No. 877,567; Jan. 28; Sp. p. 3869; Dr. p. 837; Gaz. vol. 132; p. 716.
Hunt, B., San Francisco, Cal. Continuous filter for cyaniding and the like. No. 877,197; Jan. 21; Sp. p. 3122; Dr. pp. 676–7; Gaz. vol. 132; p. 574.
Hunter, R., Atlanta., Ga. Registering device. No. 877,430; Jan. 21; Sp. p. 3573; Dr. pp. 772–3; Gaz. vol. 132; p. 650.
Hupfeld, Aktiengesellschaft, L. (See Frömsdorf, R., assignor.)
Hupfeld, L., Leipzig, Germany. Regulation of tone in mechanical musical instruments. No. 877,082; Jan. 21; Sp. p. 2870; Dr. p. 619; Gaz. vol. 132; p. 535.
Hurd, W. W. (See Mather, G. C., assignor.)
Hurt, G. F., Atlanta, Ga. Coke bin and chute. No. 876,450; Jan. 14; Sp. p. 1562; Dr. p. 335; Gaz. vol. 132; p. 287.
Hutchings, J., London, England. Auxiliary engine. No. 877,776; Jan. 28; Sp. p. 4261; Dr. p. 925; Gaz. vol. 132; p. 782.
Hutchings, M. C., Bozeman, Mont. Safety-clutch for elevators. No. 876,188; Jan. 7; Sp. p. 972; Dr. p. 210; Gaz. vol. 132; p. 165.
Hutchins, F. S. (See Hooper and Hutchins.)
Hutchinson, W. B., trustee. (See Rector, A., assignor.)
Hutton, J. A., Woodlands, and W. H. Himbury, Springfield, Cheadle, England. Baling-press. No. 876,553; Jan. 14; Sp. p. 1763; Dr. pp. 384–5; Gaz. vol. 132; p. 320.
Hutton, W. B., *et al.* (See Benson, S., assignor.)
Huyette, W. S., Chicago, Ill., assignor to Wickes Brothers, Saginaw, Mich. Gas-producer. No. 876,967; Jan. 21; Sp. p. 2632; Dr. p. 571; Gaz. vol. 132; p. 496.
Hyatt Roller Bearing Company. (See Sloan, A. P., Jr., assignor.)
Hyatt, W. F., Brooklyn, N. Y. Closure for cans. No. 876,000; Jan. 7; Sp. p. 608; Dr. p. 130; Gaz. vol. 132; p. 106.
Hyde, A. H. (See Webb, H. H., assignor.)
Hyde, D. B., Santa Ana, Cal. Safety-collar for abrasive wheels. No. 875,931; Jan. 7; Sp. p. 468; Dr. p. 101; Gaz. vol. 132; p. 84.
Hygienic Chemical Company of New Jersey. (See Wadman, W. E., assignor.)
Ikonograph Company of America. (See Lagergren, J. E., assignor.)
Imperial Art Press Co. (See Seaman, A. J. assignor.)
Inch, R., and H. Cramer, Jr., Sonora, Cal. Perpetual daily calendar. No. 876,554; Jan. 14; Sp. p. 1766; Dr. p. 385; Gaz. vol. 132; p. 320.
Ingersoll, F. A., New York, N. Y. Combined corn harvester and husker. No. 876,189; Jan. 7; Sp. p. 974; Dr. pp. 210–11; Gaz. vol. 132; p. 166.
Ingersoll-Rand Company. (See Haight, H. V., assignor.)
Ingleby, J. C. B., Leeds, England. Dust-shield for self-moving road-vehicles. No. 877,083; Jan. 21; Sp. p. 2871; Dr. p. 620; Gaz. vol. 132; p. 535.
Ingoldsby Automatic Car Company. (See Ingoldsby, F. S., assignor.)
Ingoldsby, F. S., assignor to Ingoldsby Automatic Car Company, St. Louis, Mo. Dump-car. No. 875,820; Jan. 7; Sp. p. 269; Dr. p. 59; Gaz. vol. 132; p. 50.
Innes, H. C., Hartwell, assignor of one-half to Franklin Cotton Mill Company, Cincinnati, Ohio. Mattress. No. 877,568; Jan. 28; Sp. p. 3870; Dr. p. 837; Gaz. vol. 132; p. 716.
Inouye, J., Minamiku, and T. Dogura, Kawakami, Japan. Tanning hides and skins. No. 877,341; Jan. 21; Sp. p. 3402; Gaz. vol. 132; p. 621.
Insinger, A., Philadelphia, Pa. Device for supporting motors. No. 875,821; Jan. 7; Sp. p. 271; Dr. p. 59; Gaz. vol. 132; p. 50.
International Cash Register Company. (See Hallwood, H. S., assignor.)
International Conservatory of Music. (See Hobart, F. E., assignor.)
International Conservatory of Music. (See Thrash, W. E., assignor.)
Irons, W. H., Beaver, Pa. Split knob. No. 876,059; Jan. 7; Sp. p. 721; Dr. p. 154; Gaz. vol. 132; p. 125.
Irving-Pitt Mfg. Co. (See Pitt, W. P., assignor.)
Isler, M. H., Mannheim, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Anthracene dye and making same. No. 876,190; Jan. 7; Sp. p. 973; Gaz. vol. 132; p. 166.
Ives, E. F., Wallingford, Conn. Jar-wrench. No. 876,001; Jan. 7; Sp. p. 609; Dr. p. 130; Gaz. vol. 132; p. 106.
J. Rasler & Cie. (See Bischler and Basalli, assignors.)
J. A. Fay & Egan Company. (See Robinson and Hanhart, assignors.)
J. B. Timberlake & Sons. (See Timberlake, P. J., assignor.)
J. E. Grellick Company. (See Grellick, C. L., assignor.)
J. H. Williams & Co. (See Amborn, G., assignor.)
J. S. McDonald Company. (See Wiedeman, H., assignor.)
Jackson, C. W., and W. A. McVicker, Reidsville, N. C. Traveler-ring for spinning-machines. No. 877,084; Jan. 21; Sp. p. 2874; Dr. pp 620–1; Gaz. vol. 132; p. 536.
Jackson, J., Gregory, Mich. Vehicle-wheel tire. No. 876,191; Jan. 7; Sp. p. 979; Dr. p. 211; Gaz. vol. 132; p. 166.
Jackson, W. S., Detroit, Mich. Reversible magazine for stoves. No. 877,342; Jan. 21; Sp. p. 3403; Dr. p. 736; Gaz. vol. 132; p. 621.
Jakobsson, H. G., Bethlehem, Pa. Coin sorting and counting machine. No. 875,712; Jan. 7; Sp. p. 67; Dr. p. 14; Gaz. vol. 132; p. 15.
James, F. R., London, England. Receptacle or container for semifluid or other like substances. No. 876,968; Jan 21; Sp. p. 2634; Dr. pp. 571–2; Gaz. vol. 132; p. 497.
Jamieson, F. C., Montreal, Quebec, Canada. Tag and label printing press. No. 876,646; Jan. 14; Sp. p. 1989; Dr. pp. 432–3; Gaz. vol. 132; p. 353.
Janitsky, E., Pymble, near Sydney, New South Wales, Australia. Preserving. No. 876,806; Jan. 14; Sp. p. 2263; Gaz. vol. 132; p. 402.
Jaros, L. A., Chicago, Ill. Device for illustrating the transposition of musical scales. No. 876,060; Jan. 7; Sp. p. 722; Dr. p. 154; Gaz. vol. 132; p. 125.

Jeantet, M., St. Claude, France. Tobacco-pipe. No. 877,777; Jan. 28; Sp. p. 4262; Dr. p. 925; Gaz. vol. 132; p. 783.
Jeffrey Manufacturing Company. (See Willson, F. R., Jr., assignor.)
Jenkins, R. E. L. (See Tullock, J. T., assignor.)
Jenkinson, E. A. (See Havenhill and Jenkinson.)
Jennings, A. E. and J. W., Central City, Ky., assignors of one-third to G. Jennings, Lima, Ohio. Drill. No. 877,892; Jan. 28; Sp. p. 4478; Dr. p. 976; Gaz. vol. 132; p. 819.
Jennings, G. (See Jennings, A. E. and J. W., assignors.)
Jennings, J. W. (See Jennings, A. E. and J. W.)
Jennings, T., *et al.* (See Humphrey, E. H., assignor.)
Jerauld, W. E., assignor to American Steam Gauge & Valve Manufacturing Company, Boston, Mass. Automatic recording-gage. No. 877,198; Jan. 21; Sp. p. 3125; Dr. p. 677; Gaz. vol. 132; p. 575.
Jeseph, W. R. (See Bliemeister, L. P., assignor.)
Job, L. K., Notting Hill, London, England. Automatic switching device for use in flash advertising. No. 876,555; Jan. 14; Sp. p. 1767; Dr. pp. 385–6; Gaz. vol. 132; p. 320.
Johnson, E. H., Los Angeles, Cal. Metallic window-sash. No. 876,556; Jan. 14; Sp. p. 1769; Dr. p. 386; Gaz. vol. 132; p. 320.
Johnson, H. F., Bristow, Okla. Detachable-leaf check and pass book. No. 876,969; Jan. 21; Sp. p. 2637; Dr. p. 572; Gaz. vol. 132; p. 497.
Johnson, J., Floreffe, Pa. Lubrication of cross-heads. No. 876,717; Jan. 14; Sp. p. 2117; Dr. p. 464; Gaz. vol. 132; p. 375.
Johnson, J. C. (See Watt, J. R., assignor.)
Johnson, L. J., Terre Haute, Ind. Valve mechanism. No. 876,890; Jan. 14; Sp. p. 2420; Dr. p. 528; Gaz. vol. 132; p. 427.
Johnson, O. J., Wheeling, W. Va. Can-testing machine. No. 876,557; Jan. 14; Sp. p. 1771; Dr. pp. 386–7; Gaz. vol. 132; p. 321.
Johnson, O. J., Wheeling, W. Va. Can-testing machine. No. 876,558; Jan. 14; Sp. p. 1773; Dr. p. 387; Gaz. vol. 132; p. 321.
Johnson, R., Worcester, Mass., assignor to Miller Speed Meter Company, New York, N. Y. Speed-meter. No. 877,506; Jan. 28; Sp. p. 3736; Dr. p. 808; Gaz. vol. 132; p. 696.
Johnson, W. W., assignor to Spirella Company, Meadville, Pa. Garment-supporting clasp. No. 876,881; Jan. 14; Sp. p. 2421; Dr. p. 528; Gaz. vol. 132; p. 427.
Johnston, H. A., Toronto, Ontario, Canada. Starting mechanism for internal-combustion engines. No. 876,460; Jan. 14; Sp. p. 1563; Dr. p. 335; Gaz. vol. 132; p. 287.
Jolly, J., Bolton, and P. E. Willis, Atherton, England. Combing-machine for cotton. No. 875,932; Jan. 7; Sp. p. 469; Dr. p. 101; Gaz. vol. 132; p. 84.
Jones, A. L., Lynchburg, Va. Combined screen and washstand. No. 876,807; Jan. 14; Sp. p. 2264; Dr. p. 498; Gaz. vol. 132; p. 402.
Jones, B. H., St. Louis, Mo. Corner-fastening for beds. No. 877,716; Jan. 28; Sp. p. 4152; Dr. p. 899; Gaz. vol. 132; p. 768.
Jones, F. A., *et al.* (See Larsson, T., assignor.)
Jones, H. S. (See Kelley, W. V. D., assignor.)
Jones, J., Ottumwa, Iowa. Animal-shackle. No. 877,717; Jan. 28; Sp. p. 4153; Dr. p. 899; Gaz. vol. 132; p. 763.
Jones, J. C., Wynnewood, Pa. Feed-water heater and purifier. No. 876,357; Jan. 14; Sp. p. 1331; Dr. p. 289; Gaz. vol. 132; p. 252.
Jones, J. H., Morrilton, Ark. Washboard. No. 876,906; Jan. 14; Sp. p. 2473; Dr. p. 540; Gaz. vol. 132; p. 436.
Jones, L. A., Cambridge, Mass. Exhaust-condenser. No. 877,431; Jan. 21; Sp. p. 3577; Dr. p. 773; Gaz. vol. 132; p. 651.
Jones, W. F., Eccles, near Manchester, England, assignor to Westinghouse Electric & Manufacturing Company. Electric switch. No. 876,970; Jan. 21; Sp. p. 2637; Dr. pp. 572–3; Gaz. vol. 132; p. 497.
Jones, W. L., assignor of one-half to F. M. Snyder, San Francisco, Cal. Steam-generator. No. 877,343; Jan. 21; Sp. p. 3403; Dr. p. 738; Gaz. vol. 132; p. 621.
Jordan, W. C. (See Searelle, L., assignor.)
Jorgensen, M. C., Chicago, Ill. Hog-scraper. No. 877,432; Jan. 21; Sp. p. 3579; Dr. pp. 773–5; Gaz. vol. 132; p. 651.
Jörgensen, S. J. E., Melbourne, Victoria, Australia. Gear for lifting and transporting cargo and the like goods. No. 876,559; Jan. 14; Sp. p. 1776; Dr. p. 387; Gaz. vol. 132; p. 322.
Joseph, A. I., Sydney, New South Wales, Australia. Apparatus for treating sewage. No. 877,569; Jan. 28; Sp. p. 3872; Dr. p. 838; Gaz. vol. 132; p. 717.
Jowett, R., Pawtucket, R. I. Manufacturing cotton-combs. No. 876,358; Jan. 14; Sp. p. 1333; Dr. pp. 289–90; Gaz. vol. 132; p. 253.
Joy, C. L., New Haven, Conn. Cutlery-grinding machine. No. 877,199; Jan. 21; Sp. p. 3127; Dr. p. 678; Gaz. vol. 132; p. 595.
Joy, J. M., assignor to Page Machine Company, New York, N. Y. Circuit-controller for electric motors. No. 876,882; Jan. 14; Sp. p. 2422; Dr. p. 528; Gaz. vol. 132; p. 427.
Jullien, M. A., and E. L. Dessolle, Levallois-Perret, France. Lithographic printing. No. 877,433; Jan. 21; Sp. p. 3583; Gaz. vol. 132; p. 652.
Jungermann, G. F., Kansas City, Mo. Bridle-bit. No. 876,461; Jan. 14; Sp. p. 1565; Dr. p. 335; Gaz. vol. 132; p. 287.
Junggren, O., Schenectady, N. Y., assignor to General Electric Company. Bucket-securing means for turbines. No. 876,971; Jan. 21; Sp. p. 2640; Dr. p. 573; Gaz. vol. 132; p. 498.
Junghans, E., Sr. (See Holzwarth, H., assignor.)
Kaar, I. J., Hartelock, Nebr. Corn and potato planter. No. 877,344; Jan. 21; Sp. p. 3405; Dr. p. 739; Gaz. vol. 132; p. 622.
Kaiser, O. B., Norwood, Ohio, assignor of one-half to W. S. and W. S. Ludlow, Jr. Signal-alarm system. No. 876,192; Jan. 7; Sp. p. 980; Dr. p. 212; Gaz. vol. 132; p. 167.
Kampfe, O., New York, N. Y. Implement-handle. No. 876,718; Jan. 14; Sp. p. 2118; Dr. p. 465; Gaz. vol. 132; p. 375.
Kandó, C. de, Budapest, Austria-Hungary, assignor, by mesne assignments, to Westinghouse Machine Company. Pressure device for electric-current collectors. No. 875,788; Jan. 7; Sp. p. 214; Dr. pp. 46–7; Gaz. vol. 132; p. 39.
Kandó, C. de, Budapest, Austria-Hungary, assignor, by mesne assignments, to Westinghouse Machine Company. Pressure device for electric-current collectors. No. 875,822; Jan. 7; Sp. p. 272; Dr. pp. 59–60; Gaz. vol. 132; p. 51.
Kapp, E. W., Los Angeles, Cal. Wave-motor. No. 876,193; Jan. 7; Sp. p. 983; Dr. p. 212; Gaz. vol. 132; p. 167.
Kappelmann, J. H., Washington, Kans. Windmill. No. 877,434; Jan. 21; Sp. p. 3584; Dr. p. 775; Gaz. vol. 132; p. 652.
Karger, L., Ehrenfeld, Germany. Pressure-regulator for compressed-gas plants. No. 876,359; Jan. 14; Sp. p. 1335; Dr. p. 290; Gaz. vol. 132; p. 253.
Kaspar, H., and J. Krejci, assignors to Double Pointed Safety Pin Mfg. Co., Tyndall, S. D. Safety-pin. No. 877,085; Jan 21; Sp. p. 2875; Dr. p. 621; Gaz. vol. 132; p. 536.
Kaspis, A. von, Pittsfield, Mass., assignor of one-half to A. K. Botsford, Saranac Lake, N. Y. Cigar cutter and lighter. No. 876,883; Jan. 14; Sp. p. 2425; Dr. p. 529; Gaz. vol. 132; p. 428.
Katzenbach, A. M., Greenup, Ill. Jar-support. No. 877,507; Jan. 28; Sp. p. 3737; Dr. p. 808; Gaz. vol. 132; p. 696.
Katzenmeyer, W. S. Lakewood, Ohio. Horse-blanket. No. 876,560; Jan. 14; Sp. p. 1777; Dr. p. 388; Gaz. vol. 132; p. 322.
Katzenstein, G. B., Sacramento, Cal. Fruit-crate. No. 876,061; Jan. 7; Sp. p. 724; Dr. p. 155; Gaz. vol. 132; p. 125.
Kauffman, E. W. C., Keyser, W. Va. Gun-cleaner. No. 877,778; Jan. 28; Sp. p. 4263; Dr. p. 926; Gaz. vol. 132; p. 783.
Keane, J. P., Wallace, Idaho. Tunneling in rock. No. 877,779; Jan. 28; Sp. p. 4264; Dr. p. 926; Gaz. vol. 132; p. 783.
Keating, H., *et al.* (See Norstrom, N. E., assignor.)
Keck, C., Crescent Springs, Ky. Cloth-refinishing device. No. 877,086; Jan. 21; Sp. p. 2877; Dr. p. 621; Gaz. vol. 132; p. 536.
Keefe, P. T., New York, N. Y. Drying-reel for fishing-lines. No. 877,200; Jan. 21; Sp. p. 3129; Dr. p. 679; Gaz. vol. 132; p. 576.
Keeler, H. E., New York, N. Y., assignor to Curtain Supply Company, Chicago, Ill. Curtain-fixture. No. 877,893; Jan. 28; Sp. p. 4479; Dr. p. 976; Gaz. vol. 132; p. 819.
Keeley, W. J., assignor to Autopiano Company, New York, N. Y. Means for opening and closing panels of musical instruments. No. 875,823; Jan. 7; Sp. p. 275; Dr. p. 60; Gaz. vol. 132; p. 51.
Keelor, H. C. (See Watt and Keelor.)
Keeran, C. R., Champaign, Ill. Detachable spout. No. 877,435; Jan 21; Sp. p. 3586; Dr. p. 776; Gaz. vol. 132; p. 652.
Kehoe, J., *et al.* (See Metz, E. C., assignor.)
Keighley, W. G. M., and H. Netherwood, Huddersfield, England. Machine for cutting the pile of weft pile fabrics. No. 876,462; Jan. 14; Sp. p. 1566; Dr. pp. 335–7; Gaz. vol. 132; p. 288.
Kelser, A., Greensburg, Pa. Railway-conductor's folder and car-record. No. 876,062; Jan. 7; Sp. p. 726; Dr. p. 155; Gaz. vol. 132; p. 126.
Keith, J., London, England. Centrifugal fan. No. 877,648; Jan. 28; Sp. p. 4026; Dr. p. 809; Gaz. vol. 132; p. 742.
Keller, J. F., New York, N. Y. Machine for engraving and sinking dies. No. 877,436; Jan. 21; Sp. p. 3587; Dr. pp. 776–7; Gaz. vol. 132; p. 652.
Kelley, G. L., assignor, by mesne assignments, to Stevenson Machine Company, Buffalo, N. Y. Routing-machine. No. 877,894; Jan. 28; Sp. p. 4483; Dr. pp. 976–7; Gaz. vol. 132; p. 820.
Kelley, W. V. D., Newark, N. J., assignor of one-half to H. S. Jones, Brooklyn, N. Y. Exhibiting device. No. 876,907; Jan. 14; Sp. p. 2473; Dr. p. 541; Gaz. vol. 132; p. 436.
Kellhofer, H. J., Chillicothe, Ohio. Ventilator. No. 876,972; Jan. 21; Sp. p. 2642; Dr. p. 574; Gaz. vol. 132; p. 498.
Kellner, A. F., Omaha, Nebr. Current-deflector. No. 877,201; Jan. 21; Sp. p. 3132; Dr. p. 679; Gaz. vol. 132; p. 576.
Kellogg Switchboard and Supply Company. (See Brown, W. R., assignor.)
Kellogg Switchboard and Supply Company. (See Dean, W. W., assignor.)
Kellogg Switchboard & Supply Company. (See Koch, F. S., assignor.)
Kellogg Switchboard and Supply Company. (See Post, H. M., assignor.)
Kelly, C. E., Providence, R. I. Twine-take-up motion. No. 877,718; Jan. 28; Sp. p. 4154; Dr. p. 900; Gaz. vol. 132; p. 764.
Kennedy, J. W., Burke, N. Y. Spring washing-machine. No. 877,087; Jan. 21; Sp. p. 2880; Dr. p. 622; Gaz. vol. 132; p. 537.

Kenny, J., Amherst, Nova Scotia, Canada. Broom-protector. No. 876,884; Jan. 14; Sp. p. 2427; Dr. p. 539; Gaz. vol. 132; p. 428.
Kenny, J. S., assignor to Eagle Pencil Company, New York, N. Y.. Assortment-box or display-rack for lead-pencils, penholders, or the like. No. 877,649; Jan. 28; Sp. p. 4027; Dr. pp. 869-70; Gaz. vol. 132; p. 742.
Kerr, E., and J. Smith, Pittsburg, Pa. Mold for hollow articles. No. 876,719; Jan. 14; Sp. p. 2120; Dr. pp. 465-6; Gaz. vol. 132; p. 376.
Kersey, R., Lexington, Ky., assignor of one-half to W. T. Robards, Decatur, Tex. Track and carriage for swing-scaffolds. No. 876,194; Jan. 7; Sp. p. 964; Dr. p. 213; Gaz. vol. 132; p. 167.
Ketterer, H. (See De Long, J. W., assignor.)
Keystone Forging Company. (See Weekes, J. D., assignor.)
Kilbury, A., Elkhart, Ind. Floor-scraper. No. 876,885; Jan. 14; Sp. p. 2429; Dr. pp. 529-30; Gaz. vol. 132; p. 428.
Kimes, W. E., Alliance, Ohio. Follower and holder for files. No. 875,933; Jan. 7; Sp. p. 470; Dr. p. 101; Gaz. vol. 132; p. 85.
Kinert, L. T., Boise, Idaho. Cereal-dish. No. 876,806; Jan. 14; Sp. p. 2265; Dr. p. 498; Gaz. vol. 132; p. 403.
King, C. B., assignor to Northern Motor Car Company, Detroit, Mich. Clutch. No. 877,437; Jan. 21; Sp. p. 3590; Dr. p. 778; Gaz. vol. 132; p. 553.
King, C. W. G., assignor to United States Metallic Packing Company, Philadelphia, Pa. Rod-packing. No. 875,934; Jan. 7; Sp. p. 471; Dr. p. 102; Gaz. vol. 132; p. 85.
King, E. A., assignor to Henry Disston & Sons Incorporated, Philadelphia, Pa. Level. No. 876,720; Jan. 14; Sp. p. 2121; Dr. p. 466; Gaz. vol. 132; p. 376.
King, M. A., *et al.* (See Barri, J. G., assignor.)
King, R. B. (See McVoy, V. P., assignor.)
Kingston, W. H., Newark, N. J., assignor of one-half to G. A. Weld, Winchester, Mass. Machine for setting lacing-hooks. No. 876,063; Jan. 7; Sp. p. 728; Dr. p. 156; Gaz. vol. 132; p. 126.
Kinley, C. H., *et al.* (See De Martino, J., assignor.)
Kinsey, C. M., King, Tex. Window-lock. No. 877,088; Jan. 21; Sp. p. 2881; Dr. p. 622; Gaz. vol. 132; p. 537.
Kinsman, F. E., Plainfield, N. J. Single-track signaling and train-controlling system for railways. No. 876,064; Jan. 7; Sp. p. 731; Dr. pp. 156-7; Gaz. vol. 132; p. 126.
Kintner, C. J., New York, N. Y. Electrically-controlled releasing device. No. 876,274; Jan. 7; Sp. p. 1150; Dr. p. 250; Gaz. vol. 132; p. 193.
Kirby, H. A., Cleveland, Ohio, assignor to N. O. Gray, Indianapolis, Ind. Attachment for type-writers. No. 877,719; Jan. 28; Sp. p. 4158; Dr. p. 900; Gaz. vol. 132; p. 764.
Kirchhoff, F. R., Detroit, Mich. Pipe-coupling and valve. No. 877,720; Jan. 28; Sp. p. 4157; Dr. p. 900; Gaz. vol. 132; p. 764.
Kirk, L. F. (See Hemenway and Kirk.)
Kitsee, I., Philadelphia, Pa. Electric switch or cut-out. No. 876,809; Jan. 14; Sp. p. 2266; Dr. p. 499; Gaz. vol. 132; p. 403.
Kitsee, I., Philadelphia, Pa. Phonography. No. 877,845; Jan. 28; Sp. p. 4382; Dr. p. 953; Gaz. vol. 132; p. 804.
Kitsee, I., assignor of one-half to W. J. Latta, Philadelphia, Pa. Cable telegraphy. No. 876,886; Jan. 14; Sp. p. 2430; Dr. p. 530; Gaz. vol. 132; p. 429.
Kitterman, W. B., Lynchburg, Va. Gage for scissors. No. 876,065; Jan. 7; Sp. p. 745; Dr. p. 157; Gaz. vol. 132; p. 127.
Kittleson, O. O., Lee, Ill. Metal hanger-blank. No. 876,195; Jan. 7; Sp. p. 986; Dr. p. 213; Gaz. vol. 132; p. 168.
Klaber, A. D. (See Klaber, E. H., assignor.)
Klaber, A. D., London, England. Copying-machine. No. 876,561; Jan. 14; Sp. p. 1778; Dr. p. 388; Gaz. vol. 132; p. 322.
Klaber, E. H., assignor to A. D. Klaber, London, England. Mechanically-operated musical instrument. No. 877,721; Jan. 28; Sp. p. 4158; Dr. pp. 900-1; Gaz. vol. 132; p. 764.
Klauser, O., London, England, assignor to L. Schweiger and R. Meixner, Vienna, Austria-Hungary. Fastening device for hair-combs. No. 876,463; Jan. 14; Sp. p. 1573; Dr. p. 337; Gaz. vol. 132; p. 288.
Kleese, W. W., assignor of one-half to D. B. Loy, Aurora, Mo. Reversing-lever and quadrant-bar. No. 877,202; Jan. 21; Sp. p. 3133; Dr. p. 679; Gaz. vol. 132; p. 576.
Kleinhan, J. W., Alexander, N. D. Governor for steam-engines. No. 876,647; Jan. 14; Sp. p. 1993; Dr. p. 434; Gaz. vol. 132; p. 353.
Klemm, H. A., New York, N. Y., assignor to Singer Manufacturing Company. Sewing-machine. No. 877,508; Jan. 28; Sp. p. 3739; Dr. pp. 809-10; Gaz. vol. 132; p. 696.
Klepetko, F. (See Sulliot, M. R., assignor.)
Kleutgen, F., Benel, Germany. Machinery for embroidering a fabric with pile-threads in patterns. No. 876,562; Jan. 14; Sp. p. 1783; Dr. pp. 388-90; Gaz. vol. 132; p. 323.
Klever, A., Hannibal, Mo. Automatic fluid-pressure regulator. No. 876,066; Jan. 7; Sp. p. 745; Dr. p. 157; Gaz. vol. 132; p. 127.
Klima, W. W., Hutchinson, Minn. Sash-fastener. No. 877,722; Jan. 28; Sp. p. 4162; Dr. p. 901; Gaz. vol. 132; p. 765.
Klinsman, H. J., Rochester, Minn. Journal-box for railway-cars. No. 877,780; Jan. 28; Sp. p. 4266; Dr. p. 926; Gaz. vol. 132; p. 783.
Klumb, A. J., and A. W. Krahn, Milwaukee, Wis. Adding-machine. No. 876,196; Jan. 7; Sp. p. 963; Dr. p. 214; Gaz. vol. 132; p. 168.
Knab, E. L., Rochester, N. Y. Hanger. No. 876,197; Jan. 7; Sp. p. 990; Dr. p. 215; Gaz. vol. 132; p. 168.
Knapp, W. L. (See North, Knapp, and Bierbaum.)
Knight, A. F., Schenectady, N. Y., assignor to General Electric Company. Motor-cooling device. No. 876,973; Jan. 21; Sp. p. 2643; Dr. p. 574; Gaz. vol. 132; p. 498.
Knight, J. M., Baltimore, Md. Faucet. No. 877,650; Jan. 28; Sp. p. 4028; Dr. p. 870; Gaz. vol. 132; p. 743.
Knisely, D. O., Topeka, Kans. Veterinary float. No. 875,824; Jan. 7; Sp. p. 276; Dr. p. 60; Gaz. vol. 132; p. 51.
Knoeppel, J. C., Belmont, N. Y. Furnace. No. 875,825; Jan. 7; Sp. p. 277; Dr. pp. 60-1; Gaz. vol. 132; p. 52.
Knowles, C. A., Friend, Oreg. Saw-swage. No. 876,198; Jan. 7; Sp. p. 992; Dr. p. 215; Gaz. vol. 132; p. 169.
Knowles, C. H., Fairfield, Me. Window-screen. No. 875,826; Jan. 7; Sp. p. 280; Dr. p. 61; Gaz. vol. 132; p. 52.
Knox, H. A., Springfield, Mass. Piston. No. 876,974; Jan. 21; Sp. p. 2644; Dr. p. 574; Gaz. vol. 132; p. 499.
Knox, S. L. G., Milwaukee, assignor to Bucyrus Company, South Milwaukee, Wis. Dredge-bucket. No. 877,345; Jan. 21; Sp. p. 3407; Dr. p. 739; Gaz. vol. 132; p. 622.
Knudson, J., Des Moines, Iowa. Miter-box. No. 877,651; Jan. 28; Sp. p. 4029; Dr. p. 870; Gaz. vol. 132; p. 743.
Kobler, V., Rorschach, assignor to Firm of A. Saurer, Arbon, Switzerland. Shuttle embroidering-machine. No. 876,975; Jan. 21; Sp. p. 2645; Dr. pp. 574-5; Gaz. vol. 132; p. 499.
Koch, A., Hanover-List, Germany. Smelting-furnace with oil fire. No. 876,275; Jan. 7; Sp. p. 1153; Dr. pp. 250-1; Gaz. vol. 132; p. 194
Koch, F. S., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Making electric condensers. No. 877,089; Jan. 21; Sp. p. 2882; Dr. p. 623; Gaz. vol. 132; p. 537.
Koch, W. F., Newbern, N. C. Appliance for sawmill set-works. No. 877,090; Jan. 21; Sp. p. 2884; Dr. p. 623; Gaz. vol. 132; p. 537.
Koeller, R. A., Colvinpark, Ill. Harrow. No. 875,827; Jan. 7; Sp. p. 282; Dr. p. 61; Gaz. vol. 132; p. 52.
Koenig, C. J., Alton, Ill. Mechanism for producing hollow glassware. No. 877,091; Jan. 21; Sp. p. 2886; Dr. pp. 623-6; Gaz. vol. 132; p. 538.
Koffskey, G., New Orleans, La. Micrometer attachment for measuring-tools. No. 877,846; Jan. 28; Sp. p. 4383; Dr. p. 953; Gaz. vol. 132; p. 804.
Koger, J. H. (See Parcels, L. H., assignor.)
Kohler, G. A. E. (See Graham, G. M., assignor.)
Kolb, F. S., Columbus, Ohio. Fly-front for garments. No. 876,067; Jan. 7; Sp. p. 746; Dr. p. 158; Gaz. vol. 132; p. 127.
Kollander, J., Chicago, Ill. Curtain-stretcher. No. 877,723; Jan. 28; Sp. p. 4164; Dr. p. 902; Gaz. vol. 132; p. 765.
Kountz, A. G., Pittsburg, Pa. Winding-indicator for timepieces. No. 876,721; Jan. 14; Sp. p. 2122; Dr. p. 466; Gaz. vol. 132; p. 376.
Kraft, H. P. (See Schweinert and Kraft.)
Kraft, H. P., New York, N. Y. Feeding mechanism for lathes or other devices. No. 876,360; Jan. 14; Sp. p. 1338; Dr. pp. 290-1; Gaz. vol. 132; p. 253.
Kraft, H. P., New York, N. Y., and M. C. Schweinert, West Hoboken, N. J. Water-bottle stopper. No. 876,002; Jan. 7; Sp. p. 610; Dr. p. 131; Gaz. vol. 132; p. 107.
Kraft, H. P., New York, N. Y., and M. C. Schweinert, West Hoboken, N. J. Making socket members for hot-water bottles or the like. No. 876,361; Jan. 14; Sp. p. 1341; Dr. p. 291; Gaz. vol. 132; p. 254.
Kragh, C. W. (See Adams and Kragh.)
Krahn, A. W. (See Klumb and Krahn.)
Kreimer, P. F., Norwood, Ohio. Hame-holder. No. 877,781; Jan. 28; Sp. p. 4267; Dr. p. 926; Gaz. vol. 132; p. 784.
Krejci, J. (See Kaspar and Krejci.)
Krie, A., Chicago, Ill. Chimney-ventilator. No. 877,092; Jan. 21; Sp. p. 2896; Dr. p. 626; Gaz. vol. 132; p. 538.
Krieta, A. J., Ashersville, Kans. Letter-clasp. No. 877,782; Jan. 28; Sp. p. 4268; Dr. p. 927; Gaz. vol. 132; p. 784.
Kroder, J., New York, N. Y. Curtain-pole rings. No. 876,199; Jan. 7; Sp. p. 993; Dr. p. 215; Gaz. vol. 132; p. 169.
Kroen, J. H., Monaca, Pa. Trolley. No. 876,722; Jan. 14; Sp. p. 2124; Dr. p. 466; Gaz. vol. 132; p. 376.
Kroesert, C. F. M., Altona, Germany. Machine for printing tapestry. No. 877,570; Jan. 28; Sp. p. 3873; Dr. pp. 838-9; Gaz. vol. 132; p. 717.
Kryptok Company. (See Borsch, J. L., Jr., assignor.)
Kugel, P. (See Geipke and Kugel.)
Kugel, P., Duesseldorf, Germany. Stuffing-box. No. 877,093; Jan. 21; Sp. p. 2897; Dr. pp. 626-7; Gaz. vol. 132; p. 538.
Kuhl, C. B., Sioux City, Iowa. Reel-clamp. No. 876,648; Jan. 14; Sp. p. 1994; Dr. p. 434; Gaz. vol. 132; p. 354
Kuns, M. A., Mannheim, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Anthracene dye and making same. No. 876,810; Jan. 14; Sp. p. 2268; Gaz. vol. 132; p. 403.

L. E. Knott Apparatus Company. (See Blatter, U., assignor.)
La Fave, J. H., Defiance, Ohio. Metallic barrel. No. 876,563; Jan. 14; Sp. p. 1789; Dr. p. 390; Gaz. vol. 132; p. 323.
La May, F. B., assignor to American Chemical Manufacturing & Mining Company, Rochester, N. Y. Powder-blower. No. 876,362; Jan. 14; Sp. p. 1342; Dr. p. 291; Gaz. vol. 132; p. 254.
La Rue, C., New York, N. Y. Device for filing papers and cards. No. 875,829; Jan. 7; Sp. p. 285; Dr. p. 62; Gaz. vol. 132; p. 53.
La Salle Machine & Tool Company. (See Matthews, R. C., assignor.)
La Société "La Sténophile Bivort." (See Duchesne, R., assignor.)
Lacey, E. M., assignor of one-half to W. Harmon, Tonawanda, N. Y. Washing-machine. No. 877,004; Jan. 21; Sp. p. 2899; Dr. p. 627; Gaz. vol. 132; p. 539.
Lacomme, G., assignor of one-half to E. C. Eustace, New York, N. Y. Mount for amusement race-tracks. No. 876,976; Jan. 21; Sp. p. 2647; Dr. p. 575; Gaz. vol. 132; p. 499.
Lacy Manufacturing Company. (See French, J. R., assignor.)
Laechle, W. C., Chicago, Ill. Burial-vault. No. 877,095; Jan. 21; Sp. p. 2900; Dr. p. 627; Gaz. vol. 132; p. 539.
Laflin, F. S., Sears, Ill. Attachment for mowing-machines. No. 877,652; Jan. 28; Sp. p. 4032; Dr. p. 871; Gaz. vol. 132; p. 743.
Laioon, R. S., Richmond, Va. Manuscript-holder. No. 875,828; Jan. 7; Sp. p. 284; Dr. p. 62; Gaz. vol. 132; p. 53.
Lagergren, J. E., assignor, by mesne assignments, to Ikonograph Company of America, New York, N. Y. Moving-picture machine. No. 877,346; Jan. 21; Sp. p. 3409; Dr. pp. 739-40; Gaz. vol. 132; p. 622.
Laird, W. H. (See Clark, C. H., assignor.)
Lake, S., Berlin, Germany. Torpedo-boat. No. 876,564; Jan. 14; Sp. p. 1790; Dr. pp. 390-1; Gaz. vol. 132; p. 323.
Lakewood Caster Co. *et al.* (See Humphrey, E. H., assignor.)
Lamb Knitting Machine Co. (See Parker, C. W., assignor.)
Lambert, J. W., Anderson, Ind. Friction driving mechanism for automobiles. No. 877,438; Jan. 21; Sp. p. 3592; Dr. p. 778; Gaz. vol. 132; p. 553.
Lambertson, C. E., assignor to St. Louis Malleable Casting Company, St. Louis, Mo. Molding-machine. No. 877,783; Jan. 28; Sp. p. 4269; Dr. pp. 927-8; Gaz. vol. 132; p. 784.
Landan, K., Waterloo, Iowa. Gate. No. 876,565; Jan. 14; Sp. p. 1794; Dr. p. 391; Gaz. vol. 132; p. 324.
Landes, D. W., assignor to F. E. Landes, Boise, and E. E. Sims, Meridian, Idaho. Gun-cleaner. No. 876,276; Jan. 7; Sp. p. 1155; Dr. p 251; Gaz. vol. 132; p. 194.
Landes, F. E., *et al.* (See Landes, D. W., assignor.)
Landis, E. F., La Salle, N. Y. Abrading-wheel. No. 875,935; Jan. 7; Sp. p. 474; Dr. p. 102; Gaz. vol. 132; p. 85.
Landis, E. F., La Salle, N. Y. Abrading material. No. 875,936; Jan. 7; Sp. p. 475; Dr. p. 102; Gaz. vol. 132; p. 85.
Lang, G. H., Boston, Mass. Numbering or marking machine. No. 877,653; Jan. 28; Sp. p. 4033; Dr. p. 871; Gaz. vol. 132; p. 744.
Lang, P. B., Pittsburg, Pa. Cutter. No. 876,200; Jan. 7; Sp. p. 994; Dr. p. 216; Gaz. vol. 132; p. 169.
Lange, O., Camden, N. J. Trimming attachment for looping-machines. No. 875,713; Jan. 7; Sp. p. 69; Dr. p. 15; Gaz. vol. 132; p. 15.
Langstaff, L. G., New York, N. Y. Liquid-dispensing vessel. No. 877,509; Jan. 28; Sp. p. 3743; Dr. p. 810; Gaz. vol. 132; p. 697.
Lanham, H., assignor to J. L. Black, Rome, Ga. Self-registering lock. No. 876,201; Jan. 7; Sp. p. 995; Dr. p. 216; Gaz. vol. 132; p. 169.
Lansden, T. M., Bethany, Ill. Lock. No. 877,654; Jan. 28; Sp. p. 4035; Dr. pp. 871-2; Gaz. vol. 132; p. 744.
Lapointe, J. N., Boston, Mass. Key-seat-broaching machine. No. 876,277; Jan. 7; Sp. p. 1156; Dr. pp. 252-3; Gaz. vol. 132; p. 195.
Lappin, J. W., assignor of one-half to C. A. Styer, Kokomo, Ind. Combined mop head and wringer. No. 877,895; Jan. 28; Sp. p. 4488; Dr. p. 977; Gaz. vol. 132; p. 820.
Larson, J. E. and J. P., Silver Creek, Nebr. Corn gatherer and picker. No. 876,464; Jan. 14; Sp. p 1574; Dr. p. 338; Gaz. vol. 132; p. 288.
Larson, J. P. (See Larson, J. E. and J. P.)
Larson, O. A., Grove City, Minn. Automatic mail-box. No. 876,811; Jan. 14; Sp. p. 2269; Dr. p. 499; Gaz. vol. 132; p. 403.
Larson, T., Bricelyn, Minn. Wrench. No. 877,571; Jan. 28; Sp. p. 3874; Dr. p. 839; Gaz. vol. 132; p. 717.
Larsson, T., assignor to himself, F. A. Jones, Worcester, Mass., and W. E. D. Stokes, New York, N. Y. Plunger-packing. No. 876,977; Jan. 21; Sp. p. 2648; Dr. p. 576; Gaz. vol. 132; p. 499.
Larsson, T., Worcester, Mass., assignor to himself, W. E. D. Stokes, New York, N. Y., and F. A. Jones, Worcester, Mass. Drilling machine. No. 877,572; Jan. 28; Sp. p. 3875; Dr. pp. 839-40; Gaz. vol. 132; p. 717.
Latimer, J. B., assignor to A. D. Cloud, F. M. Patterson, and F. W. Rizer, Chicago, Ill. Switch-point lock. No. 877,096; Jan. 21; Sp. p. 2902; Dr. pp. 627-8; Gaz. vol. 132; p. 539.
Latta, W. J. (See Kitsee, I., assignor.)
Lau, C. H., Renova, assignor of one-fourth to H. A. Carlton, Harrisburg, Pa. Rivet-cutter and punch. No. 876,068; Jan. 7; Sp. p. 748; Dr. pp. 158-9; Gaz. vol. 132; p. 128.
Lauerman, V. J., Mineral Wells, Tex. Apparatus for extracting oil. No. 876,363; Jan. 14; Sp. p. 1343; Dr. p. 291; Gaz. vol. 132; p. 254.
Laughlin, S. J., Rochester, N. Y., assignor to Autopiano Company, Automatic piano. No. 877,573; Jan. 28; Sp. p. 3877; Dr. p. 840; Gaz. vol. 132; p. 718.
Laurence, E. A. (See McKiernan and Patrick, assignors.)
Lavagnino, J., Irvine, Cal. Mortar for pulverizing-mills. No. 876,812; Jan. 14; Sp. p. 2271; Dr. p. 499; Gaz. vol. 132; p. 404.
Lawless, P. C., Hampstead, England. Internal-combustion engine. No. 876,003; Jan. 7; Sp. p. 613; Dr. p. 131; Gaz. vol. 132; p. 107.
Lawrence, A. W. (See Brown and Lawrence.)
Lazar, S., *et al.* (See Lazar, W., assignor.)
Lazar, W., San Francisco, assignor to H. I. Nager, Oakland, and S. Lazar, San Francisco, Cal. Toilet-paper holder. No. 877,347; Jan. 21; Sp. p. 3410; Dr. p. 740; Gaz. vol. 132; p. 623.
Le Vasseur-Belisle, J. N., Manchester, N. H. Shuttle-threader. No. 876,465; Jan. 14; Sp. p. 1575; Dr. p. 338; Gaz. vol. 132; p. 289.
Lechner, F. W., Wenona, Ill. Brake-handle. No. 877,097; Jan. 21; Sp. p. 2904; Dr. p. 628; Gaz. vol. 132; p. 540.
Lee, A. D., Brookline, Mass. Furnace for roasting ores. No. 876,567; Jan. 14; Sp. p. 1797; Dr. pp. 392-3; Gaz. vol. 132; p. 324.
Lee, C. A. (See Wetmore, W. H., assignor.)
Lee, C. E., Chicago, Ill., and L. K. Miller, Brooklyn, N. Y. Telegraph-transmitter. No. 876,069; Jan. 7; Sp. p. 752; Dr. p. 159; Gaz. vol. 132; p. 128.
Légé, A. J. B., Barnsbury, London, England. Motion-transmitting device for motive-power engines. No. 876,202; Jan. 7; Sp. p. 999; Dr. pp. 216-17; Gaz. vol. 132; p. 170.
Legge, W. D., assignor to Universal Bottle Wrapper Company, Chicago, Ill. Bottle-wrapper machine. No. 876,364; Jan. 14; Sp. p. 1344; Dr. pp. 292-3; Gaz. vol. 132; p. 254.
Legge, W. D., and L. N. Weil, assignors to Universal Bottle Wrapper Company, Chicago, Ill. Bottle-wrapper. No. 876,365; Jan. 14; Sp. p. 1349; Dr. p. 293; Gaz. vol. 132; p. 255.
Lehman, A. J., Columbus, Ohio. Automobile-axle. No. 876,978; Jan. 21; Sp. p. 2649; Dr. p. 576; Gaz. vol. 132; p. 500.
Lehman, F. J., Toledo, Ohio. Car-fender. No. 877,008; Jan. 21; Sp. p. 2906; Dr. p. 628; Gaz. vol. 132; p. 540.
Lehnert, F. H., Dresden-Plauen, Germany. Tube and flue cleaner. No. 876,566; Jan. 14; Sp. p. 1795; Dr. p. 392; Gaz. vol. 132; p. 324.
Lehr, E., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Potential-regulator. No. 876,979; Jan. 21; Sp. p. 2650; Dr. p. 576; Gaz. vol. 132; p. 500.
Leighton, G., Paris, France. Spring-hook. No. 875,714; Jan. 7; Sp. p. 71; Dr. p. 15; Gaz. vol. 132; p. 15.
Leighton, H., Seattle, Wash. Apparatus for magnetically concentrating ores. No. 877,439; Jan. 21; Sp. p. 3595; Dr. p. 779; Gaz. vol. 132; p. 654.
Lemp, H., Lynn, Mass., assignor to General Electric Company. Flue construction for self-propelled vehicles. No. 876,980; Jan. 21; Sp. p. 2653; Dr. pp. 576-7; Gaz. vol. 132; p. 500.
Lenox, R. K., New York, N. Y. Hand-loom. No. 876,813; Jan. 14; Sp. p. 2271; Dr. p. 499; Gaz. vol. 132; p. 404.
Lentz, H., Halensee, Germany, and C. Bellens, Neuilly-sur-Seine, France. Fluid-pressure engine. No. 877,847; Jan. 28; Sp. p. 4384; Dr. p. 954; Gaz. vol. 132; p. 805.
Leonard, H. R. (See Mershon and Leonard.)
Leonard, W. A., assignor to Geometric Tool Company, New Haven, Conn. Tap-holder. No. 876,723; Jan. 14; Sp. p. 2125; Dr. p. 467; Gaz. vol. 132; p. 377.
Lepage, J. E., Two Harbors, Minn. Non-refillable bottle. No. 876,981; Jan. 21; Sp. p. 2656; Dr. p. 577; Gaz. vol. 132; p. 501.
Lepard, W. W., Otsego, Mich. Convertible chair. No. 877,204; Jan. 21; Sp. p. 3139; Dr. pp. 680-1; Gaz. vol. 132; p. 577.
Lerro, A. R., Philadelphia, Pa. Barber's chair. No. 876,982; Jan. 21; Sp. p. 2658; Dr. pp. 577-8; Gaz. vol. 132; p. 501.
Lesser, F., assignor to Lesser Manufacturing Company, Portland, Oreg. Non-refillable bottle. No. 875,937; Jan. 7; Sp. p. 476; Dr. p. 103; Gaz. vol. 132; p. 86.
Lesser Manufacturing Company. (See Lesser, F., assignor.)
Lester, H. B., West Hartford, Conn. Automatic screw-machine. No. 876,814; Jan. 14; Sp. p. 2272; Dr. pp. 500-1; Gaz. vol. 132; p. 404.
Letts, A., *et al.* (See Smith, G. A., assignor.)
Levin, M., assignor of three-fourths to L. Drosin, New York, N. Y. Automatic door check and closer. No. 877,440; Jan. 21; Sp. p. 3596; Dr. p. 779; Gaz. vol. 132; p. 654.
Levy, D., assignor to Mason Monogram Company, New York, N. Y. Interchangeable electric display apparatus. No. 875,715; Jan. 7; Sp. p. 71; Dr. pp. 15-16; Gaz. vol. 132; p. 15.
Lewis, B. E., Palouse, Wash. Fluid-pressure turbine. No. 877,848; Jan. 28; Sp. p. 4386; Dr. p. 955; Gaz. vol. 132; p. 805.
Lewis, D. B., Bisbee, Ariz. Ter. Miner's shovel. No. 877,574; Jan. 28; Sp. p. 3880; Dr. p. 841; Gaz. vol. 132; p. 718.
Lewis, E. B., Pacific Grove, Cal. Shade for incandescent lamps. No. 877,784; Jan. 28; Sp. p. 4271; Dr. p. 928; Gaz. vol. 132; p. 785.

Lewis, J. D., St. Paul, Minn. Meat-roaster. No. 877,463; Jan. 21; Sp. p. 3632; Dr. p. 786; Gaz. vol. 132; p. 660.
Leyerle, L., Cleveland, Ohio. Car lifting and replacing device. No. 877,099; Jan. 21; Sp. p. 2907; Dr. pp. 628-9; Gaz. vol. 132; p. 540.
Liberty, E., New York, N. Y. Fire-escape. No. 876,004; Jan. 7; Sp. p. 616; Dr. pp. 131-2; Gaz. vol. 132; p. 106.
Lidvall, J. A., Gefle, Sweden. Radiator. No. 877,575; Jan. 28; Sp. p. 3880; Dr. p. 841; Gaz. vol. 132; p. 718.
Lierman, F. W., San Francisco, Cal. Erasing-machine. No. 877,348; Jan. 21; Sp. p. 3411; Dr. p. 740; Gaz. vol. 132; p. 623.
Lilly, J. K., assignor to Eli Lilly & Company, Indianapolis, Ind. Composition for the production of ferrous carbonate. No. 876,366; Jan. 14; Sp. p. 1350; Gaz. vol. 132; p. 255.
Lincks, G., Jersey City, N. J. Safety device for jewelry. No. 876,983; Jan. 21; Sp. p. 2660; Dr. p. 578; Gaz. vol. 132; p. 502.
Lincoln, E. S., Brookline, Mass. Ignition-circuit connection. No. 876,203; Jan. 7; Sp. p. 1002; Dr. pp. 217-18; Gaz. vol. 132; p. 170.
Lincoln, E. S., Brookline, Mass. Series-parallel polarity-changing switch. No. 877,576; Jan. 28; Sp. p. 3881; Dr. pp. 841-2; Gaz. vol. 132; p. 719.
Lindeman, J. A., Chicago, Ill. Combined chalk-sharpener and paper-weight. No. 872,204; Jan. 7; Sp. p. 1004; Dr. p. 218; Gaz. vol. 132; p. 171.
Lindow, E., Toledo, Ohio. Folding seat. No. 876,367; Jan. 14; Sp. p. 1350; Dr. p. 293; Gaz. vol. 132; p. 255.
Linhoff, W., Pasadena, Cal., assignor of one-half to D. M. Stout, Bloomfield, N. J. Fender for lawn-sprinklers. No. 877,785; Jan. 28; Sp. p. 4272; Dr. p. 928; Gaz. vol. 132; p. 785.
Link, J. C., Highbridge, Wis. Railway-signal. No. 877,464; Jan. 21; Sp. p. 3634; Dr. p. 787; Gaz. vol. 132; p. 661.
Linotype and Machinery, Limited. (See Caine and Mitton, assignors.)
Lippitt, E., Philadelphia, Pa. Knitting-machine. No. 876,815; Jan. 14; Sp. p. 2285; Dr. pp. 501-3; Gaz. vol. 132; p. 405.
Lippmann, E. C., and R. McKinney, Simmons Switch, Ark. Roller-guide for band-saws. No. 876,816; Jan. 14; Sp. p. 2292; Dr. p. 523; Gaz. vol. 132; p. 405.
Litchfield, C. T., assignor to Mono-Cycle Gas Engine and Manufacturing Company, Spokane, Wash. Gas-engine. No. 875,938; Jan. 7; Sp. p. 477; Dr. p. 103; Gaz. vol. 132; p. 86.
Little & Company, A. E. (See Baynard, W. H., assignor.)
Little, J. C. (See Stillwell, C. B., assignor.)
Little, W., Ballarat, Victoria, Australia. Culinary-vessel heat-economizing and flame-protecting casing. No. 877,349; Jan. 21; Sp. p. 3412; Dr. p. 740; Gaz. vol. 132; p. 623.
Ljunglof, L., Newark, N. J., assignor to Brown & Sharpe M'f'g. Co., Providence, R. I. Clamp. No. 876,908; Jan. 14; Sp. p. 2475; Dr. p. 541; Gaz. vol. 132; p. 436.
Ljungman, C. E. (See Berglund, Hjorth, and Ljungman.)
Llewellyn, M., *et al.* (See Senter, J. F., assignor.)
Locke, J. C., Westmount, Quebec, Canada. Horseshoe-creaser. No. 877,577; Jan. 28; Sp. p. 3884; Dr. p. 842; Gaz. vol. 132; p. 719.
Lockwood, H. A., Kansas City, Mo. Pleasure-railway. No. 877,100; Jan. 21; Sp. p. 2908; Dr. p. 629; Gaz. vol. 132; p. 541.
Lockwood, V., *et al.* (See Shumate, J. W., assignor.)
Loebe, H. E., Jersey City, N. J. Pipe and gas connection. No. 877,849; Jan. 28; Sp. p. 4389; Dr. p. 955; Gaz. vol. 132; p. 80 .
Loewenthal, M., Newark, N. J. Socket-key clamp. No. 875,830; Jan. 7; Sp. p. 298; Dr. p. 62; Gaz. vol. 132; p. 53.
Logan, J. B., Ina, Ill. Carpet-stretcher. No. 876,817; Jan. 14; Sp. p. 2293; Dr. p. 504; Gaz. vol. 132; p. 406.
Long, A. E., Brooklyn, N. Y. Perambulator. No. 877,350; Jan. 21; Sp. p. 3414; Dr. pp. 741-2; Gaz. vol. 132; p. 623.
Long, C. A., Spokane, Wash. Hoe. No. 876,649; Jan. 14; Sp. p. 1906; Dr. pp. 434-5; Gaz. vol. 132; p. 354.
Longnaker, M. S., Pleasant Hill, Ohio. Excavating-machine. No. 877,578; Jan. 28; Sp. p. 3885; Dr. pp. 842-3; Gaz. vol. 132; p. 719.
Longstreet, J. C., Jackson, Miss. Pea and bean harvester. No. 875,831; Jan. 7; Sp. p. 297; Dr. pp. 62-3; Gaz. vol. 132; p. 53.
Longuemare, A. A., Paris, France. Carbureter for explosive-engines. No. 875,716; Jan. 7; Sp. p. 76; Dr. p. 16; Gaz. vol. 132; p. 16.
Loomis, F. C., *et al.* (See Butts, W. R., assignor.)
Lord, C. E., Norwood, Ohio, assignor to Bullock Electric Manufacturing Company. Dynamo-electric machine. No. 876,568; Jan. 14; Sp. p. 1801; Dr. p. 393; Gaz. vol. 132; p. 325.
Lord, E. E., Springvale, Me. Rotary engine. No. 876,818; Jan. 14; Sp. p. 2294; Dr. p. 504; Gaz. vol. 132; p. 406.
Lorenz, W. A., Hartford, Conn., assignor to Union Paper Bag Machine Company, Philadelphia, Pa. Paper-bag machine. No. 877,205; Jan. 21; Sp. p. 3142; Dr. p. 681; Gaz. vol. 132; p. 578.
Lorenz, W. A., assignor of one-half to J. Marritt, Hartford, Conn. Apparatus for molding pulp articles. No. 877,579; Jan. 28; Sp. p. 3887; Dr. pp. 843-4; Gaz. vol. 132; p. 720.
Lorey, W., Philadelphia, Pa. Filter. No. 877,206; Jan. 21; Sp. p. 3145; Dr. p. 682; Gaz. vol. 132; p. 578.
Loughin, W. T., Ballard, Wash. Non-refillable bottle. No. 876,205; Jan. 7; Sp. p. 1005; Dr. p. 218; Gaz. vol. 132; p. 171.
Lovell, R. M., Baltimore, and A. G. Fahrney, Highlandtown, Md. Solder-wiping machine. No. 876,650; Jan. 14; Sp. p. 1997; Dr. p. 435; Gaz. vol. 132; p. 354.
Low, A. A., Horseshoe, N. Y. Cutting implement. No. 875,717; Jan. 7; Sp. p. 77; Dr. p. 16; Gaz. vol. 132; p. 17.
Low, A. A., Horseshoe, N. Y. Cutting implement. No. 875,939; Jan. 7; Sp. p. 482; Dr. p. 104; Gaz. vol. 132; p. 87.
Low, A. A., Horseshoe, N. Y. Ventilator for motor-boats. No. 877,655; Jan. 28; Sp. p. 4037; Dr. p. 872; Gaz. vol. 132; p. 745.
Lowe, F. W., Boston, Mass. Hair-waver. No. 876,569; Jan. 14; Sp. p. 1806; Dr. p. 394; Gaz. vol. 132; p. 325.
Loy, D. B. (See Kleese, W. W., assignor.)
Lubke, E. F., and E. C. Reed, near Arlington, Tex. Pipe-wrench. No. 876,651; Jan. 14; Sp. p. 2002; Dr. p. 436; Gaz. vol. 132; p. 355.
Ludington, D. M., *et al.* (See Bryan, J. P., assignor.)
Ludlow, W. S., *et al.* (See Kaiser, O. B., assignor.)
Ludlow, W. S., Jr., *et al.* (See Kaiser, O. B., assignor.)
Ludt, J. P. (See Murdoch and Ludt.)
Lumiere, A. and L., Lyon, France. Sensitive plate for color photography. No. 877,351; Jan. 21; Sp. p. 3422; Dr. p. 742; Gaz. vol. 132; p. 624.
Lumiere, L. (See Lumiere, A. and L.)
Lund, H., Grafton, N. D., assignor to Fosston Manufacturing Company, St. Paul, Minn. Cylinder-wrench. No. 877,352; Jan. 21; Sp. p. 3423; Dr. p. 742; Gaz. vol. 132; p. 624.
Lund, H., Grafton, N. D., assignor to Fosston Manufacturing Company, St. Paul, Minn. Cylinder-wrench. No. 877,465; Jan. 21; Sp. p. 3635; Dr. p. 787; Gaz. vol. 132; p. 661.
Lundgard, A. M., *et al.* (See Wintherlich, H. J., assignor.)
Lundgren, L. J., assignor, by mesne assignments, to Mechanical Advertising Sign Company, St. Paul, Minn. Advertising-sign. No. 876,570; Jan. 14; Sp. p. 1807; Dr. pp. 394-5; Gaz. vol. 132; p. 325.
Luschka, A. R., assignor to Motor Specialty Manufacturing Company, Chicago, Ill. Spark-coil. No. 877,656; Jan. 28; Sp. p. 4039; Dr. p. 872; Gaz. vol. 132; p. 745.
Luschka, A. R., assignor to Motor Specialty Manufacturing Company, Chicago, Ill. Vibrator. No. 877,896; Jan. 28; Sp. p. 4489; Dr. p. 977; Gaz. vol. 132; p. 820.
Luz, F. L. (See Dickerson, M., assignor.)
Lynch, T. E., Jr. (See Voelker and Lynch.)
Lynchburg Foundry Company. (See McWane, C. W., assignor.)
MacGregor, R. (See Herman, W. E., assignor.)
Macdonald, T. H., assignor to American Graphophone Company, Bridgeport, Conn. Graphophone. No. 877,207; Jan. 21; Sp. p. 3147; Dr. pp. 682-3; Gaz. vol. 132; p. 579.
Macek, J., Vienna, Austria-Hungary. Clip for fixing conducting-wires to insulators. No. 877,101; Jan. 21; Sp. p. 2913; Dr p. 630; Gaz. vol. 132; p. 541.
Macfarlane, W. A., Cathcart, Scotland. Apparatus for driving centrifugal machines. No. 876,368; Jan. 14; Sp. p. 1352; Dr. pp. 294-5; Gaz. vol. 132; p. 256.
Macfarren, W. W. (See Martin and Macfarren.)
Macfarren, W. W., assignor to W. H. Donner, Pittsburg, Pa. Automobile. No. 876,070; Jan. 7; Sp. p. 755; Dr. pp. 160-6; Gaz. vol. 132, p. 128.
Mackim, T., Amherst, Nova Scotia, Canada. Mail-bag-delivery apparatus for railways. No. 875,718; Jan. 7; Sp. p. 79; Dr. pp. 16-17; Gaz. vol. 132; p. 17.
Mackintosh, F., Schenectady, N. Y., assignor to General Electric Company. Electric fuse. No. 876,984; Jan. 21; Sp. p. 2661; Dr. p. 579; Gaz. vol. 132; p. 502.
Magee, W. J., St. Louis, Mo. Pressure and suction blower. No. 877,102; Jan. 21; Sp. p. 2914; Dr. p. 630; Gaz. vol. 132; p. 541.
Magens, J. H., Hamburg, Germany. Preparing and storing concrete. No. 876,466; Jan. 14; Sp. p. 1576; Gaz. vol. 132; p. 289.
Magwire, H. H., Montpelier, Idaho. Furnace-door. No. 876,819; Jan. 14; Sp. p. 2296; Dr. p. 505; Gaz. vol. 132; p. 406.
Mahony, W. F., *et al.* (See Taylor, C. R., assignor.)
Malançon, R., London, England. Lock-joint for wall-slabs, bricks, tiles, or the like. No. 876,985; Jan. 21; Sp. p. 2662; Dr. p. 579; Gaz. vol. 132; p. 502.
Malone, F. M., *et al.* (See Wilson, G. W., assignor.)
Maltbie, W. H., Baltimore, Md. Puzzle. No. 876,820; Jan. 14; Sp. p. 2296; Dr. p. 505; Gaz. vol. 132; p. 406.
Mancia, T., Iglau, Austria-Hungary. Apparatus for the automatic discharge of firearms on attaining a predetermined elevation. No. 877,889; Jan. 28; Sp. p. 4391; Dr. p. 966; Gaz. vol. 132; p. 805.
Manford, J. E., Frankfort, Ky. Farm-gate. No. 876,208; Jan. 7; Sp. p. 1003; Dr. p. 218; Gaz. vol. 132; p. 171.

Manley, T., Prince Albert, Saskatchewan, Canada. Single-tooth dog for gripping logs. No. 877,208; Jan. 21; Sp. p. 3150; Dr. p. 683; Gaz. vol. 132; p. 579.
Mann, C. E., Hoopeston, Ill. Cleaning attachment for feed-water pipes. No. 875,832; Jan. 7; Sp. p. 299; Dr. p. 63; Gaz. vol. 132; p. 54.
Mann, M., assignor to Band-Industrie Gesellschaft mit beschränkter Haftung, Barmen, Germany. Collar-stiffener. No. 876,369; Jan. 14; Sp. p. 1353; Dr. p. 295; Gaz. vol. 132; p. 256.
Mann, W. G., assignor to Perkins Electric Switch Mfg. Company, Bridgeport. Conn. Push-button electric switch. No. 876,207; Jan. 7; Sp. p. 1008; Dr. p. 219; Gaz. vol. 132; p. 172.
Manufacturers Machine Company. (See Plant, T. G., assignor.)
Mapp, T. H., Surry Hills, near Sydney, New South Wales, Australia. Hydraulic press. No. 876,821; Jan. 14; Sp. p. 2299; Dr. p. 505; Gaz. vol. 132; p. 407.
Marer, H., assignor to Monitory Scale Company, Incorporated, Louisville, Ky. Monitory combination weighing-scale. No. 876,966; Jan. 21; Sp. p. 2664; Dr. p. 579; Gaz. vol. 132; p. 502.
Margileth, A. W. (See Stumpf, I. E., assignor.)
Mariner, A. L., Medford, assignor of three-fourths to S. W. Marvin, H. C. Whittemore, Cambridge, and C. G. Wells, Jamaica Plain, Mass. Eyeglass-case. No. 877,441; Jan. 21; Sp. p. 3599; Dr. p. 779; Gaz. vol. 132; p. 654.
Marker, S. A., Newark, N. J. Golf-bag. No. 877,353; Jan. 21; Sp. p. 3423; Dr. pp. 742-3; Gaz. vol. 132; p. 624.
Markham Air Rifle Company. (See Markham and Roe, assignors.)
Markham, W. F., and E. S. Roe, assignors to Markham Air Rifle Company, Plymouth, Mich. Combined frame and false barrel for guns. No. 876,370; Jan. 14; Sp. p. 1354; Dr. p. 295; Gaz. vol. 132; p. 256.
Marsden, J., Greenheys, Manchester, England. Rotary engine. No. 877,103; Jan. 21; Sp. p. 2915; Dr. p. 630; Gaz. vol. 132; p. 542.
Marsh, E. O., Seattle, Wash. Trolley-ear clencher. No. 877,510; Jan. 28; Sp. p. 3744; Dr. p. 811; Gaz. vol. 132; p. 697.
Marsh, S. P., Wolseley, Saskatchewan, and N. Timson, Winnipeg, Manitoba, Canada. Slough-filler. No. 876,467; Jan. 14; Sp. p. 1576; Dr. pp. 338-9; Gaz. vol. 132; p. 289.
Marshall-Wells Hardware Company. (See Buck, F., assignor.)
Martens, T., Davenport, Iowa. Mouthpiece for wind instruments. No. 877,786; Jan. 28; Sp. p. 4275; Dr. p. 928; Gaz. vol. 132; p. 785.
Martin, A. R., Columbus, Ohio. Combined window shield and screen. No. 877,209; Jan. 21; Sp. p. 3152; Dr. p. 683; Gaz. vol. 132; p. 580.
Martin, C. W., Dunkirk, N. Y., assignor to Martin Car Heating Company, Chicago, Ill. Hose-coupling. No. 876,071; Jan. 7; Sp. p. 759; Dr. p. 161; Gaz. vol. 132; p. 129.
Martin Car Heating Company. (See Martin, C. W., assignor.)
Martin, G., Rochester, N. Y., assignor of forty-two-and-one-half one-hundredths to W. S. Brown and fifteen one-hundredths to J. P. Creegan. Non-refillable bottle. No. 876,468; Jan. 14; Sp. p. 1579; Dr. p. 339; Gaz. vol. 132; p. 289.
Martin, H. F., West Pike, Pa. Logging-grab. No. 876,652; Jan. 14; Sp. p. 2002; Dr. p. 436; Gaz. vol. 132; p. 355.
Martin, J. H., *et al.* (See Norstrom, N. E., assignor.)
Martin & Ogden Wrench Company. (See Martin and Ogden, assignors.)
Martin, R. L., Jr., and W. W. Macfarren, assignors of three-fourths to said Martin and one-fourth to said Macfarren. Conveyer. No. 877,210; Jan. 21; Sp. p. 3155; Dr. pp. 684-5; Gaz. vol. 132; p. 580.
Martin, W. C., Mansfield, and L. H. Ogden, South Boston, Mass., assignors to Martin & Ogden Wrench Company. Strap pipe-wrench. No. 876,469; Jan. 14; Sp. p. 1580; Dr. p. 339; Gaz. vol. 132; p. 290.
Martindale, W. B., Chicago, Ill., assignor to Time Marking Machine Company. Postmarking and canceling machine. No. 877,851; Jan. 28; Sp. p. 4393; Dr. pp. 956-7; Gaz. vol. 132; p. 806.
Martrano, J. V. (See Rulli and Martrano.)
Marvin, S. W., *et al.* (See Mariner, A. L., assignor.)
Mason, D. L., Louisville, Ky. Percussively-driven tool. No. 875,940; Jan. 7; Sp. p. 483; Dr. p. 104; Gaz. vol. 132; p. 87.
Mason, F. C., and J. W. Shanahan, assignors to Bissell Carpet Sweeper Company, Grand Rapids, Mich. Carpet-sweeper. No. 877,852; Jan. 28; Sp. p. 4397; Dr. p. 957; Gaz. vol. 132; p. 806.
Mason Monogram Company. (See Levy, D., assignor.)
Mason, W., Pawtucket, R. I. Shuttle-check for looms. No. 876,005; Jan. 7; Sp. p. 618; Dr. p. 132; Gaz. vol. 132; p. 108.
Mason, W., assignor to Winchester Repeating Arms Co., New Haven, Conn. Gas-operated gun. No. 877,657; Jan. 28; Sp. p. 4040; Dr. pp. 872-4; Gaz. vol. 132; p. 745.
Mast, L. L., West Milton, Ohio. Lightning-rod. No. 877,442; Jan. 21; Sp. p. 3600; Dr. p. 780; Gaz. vol. 132; p. 655.
Matchette, F. J., and C. Moukos, Milwaukee, Wis.; said Moukos assignor to said Matchette. Pneumatic brush. No. 876,371; Jan. 14; Sp. p. 1355; Dr. p. 295; Gaz. vol. 132; p. 256.
Mather, G. C., assignor of one-half to W. W. Hurd, Chicago, Ill. Roll toilet-paper. No. 877,853; Jan. 28; Sp. p. 4399; Dr. p. 957; Gaz. vol. 132; p. 807.
Mather, W. A. (See Farmer, L. C., assignor.)
Matthews, R. C., Peru, assignor to La Salle Machine & Tool Company, La Salle, Ill. Surface-grinding machine. No. 876,372; Jan. 14; Sp. p. 1357; Dr. p. 296; Gaz. vol. 132; p. 257.
Mattress, B., Yager, Cal. Clipper. No. 877,658; Jan. 28; Sp. p. 4047; Dr. p. 875; Gaz. vol. 132; p. 745.
Matzke, T., Distein, assignor to Sieg-Rheinische Hütten Actiengesellschaft, Freidrich-Wilhelms-Hütte, Germany. Rope-drum of hoisting-engines. No. 876,072; Jan. 7; Sp. p. 760; Dr. p. 162; Gaz. vol. 132; p. 129.
Mauck, C. K., *et al.* (See Secrest, J. A., assignor.)
Maus, Daniel, Worcester, Mass. Device for turning the primary folds for hems. No. 877,659; Jan. 28; Sp. p. 4048; Dr. p. 875; Gaz. vol. 132; p. 746.
Maus, M. F., Lynbrook, N. Y. Means for propelling vessels. No. 876,470; Jan. 14; Sp. p. 1581; Dr. pp. 339-40; Gaz. vol. 132; p. 290.
Mawhinney, F., Topeka, Kans. Bouquet-holder. No. 875,719; Jan. 7; Sp. p. 81; Dr. p. 17; Gaz. vol. 132; p. 18.
Max, J., Mile End, London, England. Portable ladder or inclined way for raising and lowering barrels, &c. No. 876,373; Jan. 14; Sp. p. 1358; Dr. p. 296; Gaz. vol. 132; p. 257.
Maxfield, S., assignor of one-half to J. Neahr, Gloversville, N. Y. Device for exhibiting memoranda. No. 877,443; Jan. 21; Sp. p. 3601; Dr. p. 780; Gaz. vol. 132; p. 655.
Maxsted, C. H., Oakland, Windermere, England. Narrow-ware loom. No. 877,511; Jan. 28; Sp. p. 3746; Dr. pp. 811-12; Gaz. vol. 132; p. 697.
Maxwell, E. B., Pinckneyville, Ill. Fence construction. No. 876,208; Jan. 7; Sp. p. 1010; Dr. p. 219; Gaz. vol. 132; p. 172.
Maxwell, J., Oneida, N. Y. Burial-case. No. 876,822; Jan. 14; Sp. p. 2300; Dr. p. 506; Gaz. vol. 132; p. 407.
Maxwell, W. T., assignor of one-half to G. W. Eberhardt, Pittsburg, Pa. Antislipping device for tires. No. 877,512; Jan. 28; Sp. p. 3750; Dr. p. 812; Gaz. vol. 132; p. 698.
May, H. H., New Albin, Iowa. Trap. No. 877,787; Jan. 28; Sp. p. 4276; Dr. p. 929; Gaz. vol. 132; p. 785.
Maveric, G., San Francisco, Cal. Card-exhibiting device. No. 876,278; Jan. 7; Sp. p. 1159; Dr. p. 253; Gaz. vol. 132; p. 195.
Mayo, R. D., Conneaut, Ohio. Power-transmitting mechanism. No. 876,571; Jan. 14; Sp. p. 1809; Dr. p. 395; Gaz. vol. 132; p. 326.
Mayr, A., and J. Wallace, Bombay, India. Hot-air engine. No. 876,374; Jan. 14; Sp. p. 1360; Dr. p. 296; Gaz. vol. 132; p. 257.
Mays, J. B., Chicago, Ill. Railway-switch. No. 877,788; Jan. 28; Sp. p. 4278; Dr. p. 929; Gaz. vol. 132; p. 786.
Mazzacorati, G. (See Bossi, G., assignor.)
Mazzatenta, V., Turin, Italy. Means for fastening mail-bags, &c. No. 875,720; Jan. 7; Sp. p. 81; Dr. p. 17; Gaz. vol. 132; p. 18.
McAssey, J. (See Garver, A. J., assignor.)
McAvity, J. A., St. John, New Brunswick, Canada. Water-closet. No. 877,514; Jan. 28; Sp. p. 3752; Dr. p. 813; Gaz. vol. 132; p. 699.
McCabe, J., *et al.* (See Baker, W., assignor.)
McCalmont, G. E., President, Pa. Bottle-cleaner. No. 876,220; Jan. 7; Sp. p. 1046; Dr. p. 226; Gaz. vol. 132; p. 176.
McCarthy, T. J., Los Angeles, Cal. Wheel-tire. No. 876,826; Jan. 14; Sp. p. 2306; Dr. pp. 507-8; Gaz. vol. 132; p. 408.
McCarthy, T. J., Los Angeles, Cal. Spring-tire. No. 877,856; Jan. 28; Sp. p. 4403; Dr. p. 958; Gaz. vol. 132; p. 807.
McClain, F. L., assignor to American Pad & Textile Co., Greenfield, Ohio. Horse-pad hook. No. 876,077; Jan. 7; Sp. p. 771; Dr. p. 164; Gaz. vol. 132; p. 131.
McClain, H. N., Chicago, Ill. Temporary binder for papers. No. 876,078; Jan. 7; Sp. p. 772; Dr. p. 165; Gaz. vol. 132; p. 131.
McClellan, E. J., New York, N. Y., assignor to Garvin Machine Company. Indexing or dividing head. No. 876,574; Jan. 14; Sp. p. 1818; Dr. p. 396; Gaz. vol. 132; p. 327.
McClintock, W., New York, N. Y. Sewage-ejector. No. 877,794; Jan. 28; Sp. p. 4288; Dr. p. 931; Gaz. vol. 132; p. 788.
McClurg, W. J., Pittsburg, Pa. Gas-producer. No. 876,575; Jan. 14; Sp. p. 1820; Dr. pp. 397-8; Gaz. vol. 132; p. 327.
McConnell, N., Pittsburg, Pa. Gas-producer. No. 876,079; Jan. 7; Sp. p. 773; Dr. p. 165; Gaz. vol. 132; p. 131.
McCrary, O. F., Hendersonville, N. C. Can-opener. No. 877,109; Jan. 21; Sp. p. 2926; Dr. p. 633; Gaz. vol. 132; p. 544.
McDaniel, D. N., Millwood, Ga. Spring-propelled hand-car. No. 875,943; Jan. 7; Sp. p. 488; Dr. p. 105; Gaz. vol. 132; p. 88.
McDonald, C. D., assignor to McDonald Machine Company, Chicago, Ill. Can-heading machine. No. 877,358; Jan. 21; Sp. p. 3435; Dr. pp. 745-6; Gaz. vol. 132; p. 626.
McDonald, D. (See Ross and McDonald.)
McDonald, D., Louisville, Ky. Coupling. No. 876,484; Jan. 14; Sp. p. 1607; Dr. p. 346; Gaz. vol. 132; p. 295.
McDonald, J. R., Charlotte, N. C., and S. G. Miller, Philadelphia, Pa. Apparatus for cleaning waste. No. 876,576; Jan. 14; Sp. p. 1823; Dr. p. 398; Gaz. vol. 132; p. 328.
McDonald Machine Company. (See McDonald, C. D., assignor.)
McDowell, V. H., Lynn, Mass. Vehicle-wheel and tire therefor. No. 875,726; Jan. 7; Sp. p. 91; Dr. p. 19; Gaz. vol. 132; p. 20.

McGee, W. J. (See Gearing and McGee.)
McGill, J. P., Chicago, Ill. Mechanical toy. No. 876,992; Jan. 21; Sp. p. 2983; Dr. p. 583; Gaz. vol. 132; p. 505.
McGuire, T. P., *et al.* (See Baum, J. B., assignor.)
McHugh, J. T. (See Downing and McHugh.)
McIlwee, J. A., Cripple Creek, Colo. Propelling apparatus for boats. No. 876,265; Jan. 14; Sp. p. 1395; Dr. p. 301; Gaz. vol. 132; p. 261.
McInnis, L. H., Montrose, Miss. Mechanism for ringing bells. No. 875,836; Jan. 7; Sp. p. 299; Dr. p. 64; Gaz. vol. 132; p. 55.
McIntyre, F., Chicago, Ill. Machine for feeding sheets of metal, &c. No. 875,837; Jan. 7; Sp. p. 300; Dr. pp. 65–6; Gaz. vol. 132; p. 55.
McKean, W. R., Jr., Omaha, Nebr., and F. S. Barks, assignors to Railroad Weed Burner Company, St. Louis, Mo. Vegetation-destroyer. No. 877,515; Jan. 28; Sp. p. 3755; Dr. pp. 813–14; Gaz. vol. 132; p. 699.
McKenzie, C., Port Huron, Mich. Spacing-tool. No. 877,795; Jan. 28; Sp. p. 4291; Dr. p. 931; Gaz. vol. 132; p. 788.
McKiernan, J. H., and E. A. Patrick, Sharpsburg, assignors to E. A. Laurence, Bellevue, Pa. Show-case. No. 875,838; Jan. 7; Sp p. 304; Dr. p. 66; Gaz. vol. 132; p. 56.
McKinney, R. (See Lippmann and McKinney.)
McLaughlin, D. M., Louisville, Ky. Balanced pump. No. 877,583; Jan. 28; Sp. p. 3906; Dr. p. 845; Gaz. vol. 132; p. 721.
McLeod, A. Z., New York, N. Y. Caisson construction. No. 876,527; Jan. 14; Sp. p. 2309; Dr. p. 508; Gaz. vol. 132; p. 408.
McManama, J. W., Waltham, assignor to Boston Safety Switch Company, Boston, Mass. Safety appliance for railway-switches. No. 876,577; Jan. 14; Sp. p. 1825; Dr. p. 399; Gaz. vol. 132; p. 328.
McMartin, D. C., Allegheny, Pa. Clothes-line holder. No. 876,221; Jan. 7; Sp. p. 1047; Dr. p. 226; Gaz. vol. 132; p. 176.
McMaster, M. E., Quincy, Ill. Printing-ink. No. 877,219; Jan. 21; Sp. p. 3179; Gaz. vol. 132; p. 583.
McMaster, S. B., Columbia, S. C. Wheel. No. 876,336; Jan. 14; Sp. p. 1206; Dr. p. 301; Gaz. vol. 132; p. 261.
McNamee, J. J., Norwood, Ohio. Brake-setting apparatus for railways. No. 876,387; Jan. 14; Sp. p. 1398; Dr. p. 302; Gaz. vol. 132; p. 262.
McNutt, R. C., Mendota, Ill. Insulator. No. 876,328; Jan. 14; Sp. p. 2313; Dr. p. 508; Gaz. vol. 132; p. 409.
McPherson, W. B., assignor to Non Acid Copper Extracting Company, Los Angeles, Cal. Oxidizing means for solutions. No. 877,445; Jan. 21; Sp. p. 3604; Dr. p. 780; Gaz. vol. 132; p. 655.
McRae, W. T., and W. W. Canby, Philadelphia, Pa., assignors to Universal Box Machine Company, Camden, N. J. Box-making machine. No. 876,485; Jan. 14; Sp. p. 1609; Dr. pp. 346–51; Gaz. vol. 132; p. 295.
McVicker, W. A. (See Jackson and McVicker.)
McVoy, V. P., assignor of one-half to R. B. King, Pensacola, Fla. Bottle-valve. No. 877,584; Jan. 28; Sp. p. 3908; Dr. p. 845; Gaz. vol. 132; p. 721.
McWane, C. W., assignor to Lynchburg Foundry Company, Lynchburg, Va. Plow-point. No. 877,359; Jan. 21; Sp. p. 3440; Dr. p. 746; Gaz. vol. 132; p. 627.
Meaher, J. A., Cleveland, Ohio. Electric-arc lamp. No. 875,833; Jan. 7; Sp. p. 291; Dr. p. 63; Gaz. vol. 132; p. 54.
Mechanical Advertising Sign Company. (See Lundgren, L. J., assignor.)
Meehan, D. C., Columbus, Ohio. Fire-resisting structure. No. 877,354; Jan. 21; Sp. p. 3425; Dr. p. 743; Gaz. vol. 132; p. 625.
Meier, F. H. H., New York, N. Y. Table. No. 877,104; Jan. 21; Sp. p. 2917; Dr. p. 631; Gaz. vol. 132; p. 542.
Meikle, J., Glasgow, Scotland. Making vegetable extracts. No. 877,660; Jan. 28; Sp. p. 4051; Dr. p. 876; Gaz. vol. 132; p. 746.
Meisel, F., Dover, N. H. Winding-machine. No. 875,941; Jan. 7; Sp. p. 484; Dr. p. 104; Gaz. vol. 132; p. 87.
Meixner, R., *et al.* (See Klauser, O., assignor.)
Meldau, C., New York, N. Y. Controlling stop-cock for beer apparatus. No. 876,724; Jan. 14; Sp. p. 2126; Dr. p. 467; Gaz. vol. 132; p. 377.
Meldau, C., New York, N. Y. Cooling-coil for beer apparatus. No. 876,823; Jan. 14; Sp. p. 2302; Dr. p. 506; Gaz. vol. 132; p. 407.
Melland, W., Altrincham, and W. H. Nield, Heaton Mersey, England. Rope-splicing device. No. 876,572; Jan. 14; Sp. p. 1811; Dr. pp. 395–6; Gaz. vol. 132; p. 326.
Mercer, A., assignor of one-half to T. B. Gordon, Norfolk, Va. Rotary engine. No. 877,354; Jan. 28; Sp. p. 4400; Dr. pp. 957–8; Gaz. vol. 132; p. 807.
Merkels, J. B., Chicago, Ill. Closure for envelops or bags. No. 877,789; Jan. 28; Sp. p. 4280; Dr. p. 929; Gaz. vol. 132; p. 786.
Merritt, J. (See Lorenz, W. A., assignor.)
Mershon, W. R., Newark, N. J., and H. R. Leonard, Wayne, Pa. Locking device for drawbridge rail-joints. No. 876,073; Jan. 7; Sp. p. 761; Dr. p. 162; Gaz. vol. 132; p. 129.
Mershon, W. R., Newark, N. J. Safety device for rail connections of drawbridges. No. 876,074; Jan. 7; Sp. p. 765; Dr. p. 163; Gaz. vol 132; p. 130.
Mertes N. H., Hartford, Wis. Thill-coupling. No. 875,721; Jan. 7; Sp. p. 83; Dr. p. 17; Gaz. vol. 132; p. 18.
Mesaick, C. H., Mesic, N. C. Sash-fastener. No. 876,209; Jan. 7; Sp. p. 1012; Dr. p. 220; Gaz. vol. 132; p. 172.
Mestitz, A., Raudnitz-on-the-Elbe, Austria-Hungary. Filter for dust-suction apparatus. No. 877,580; Jan. 28; Sp. p. 3903; Dr. p. 844; Gaz. vol. 132; p. 720.
Metallic Sheathing Company. (See Berg, L. J., assignor.)
Metallurgiska Aktiebolaget. (See Gröndal, G., assignor.)
Metallurgiska Aktiebolaget. (See Hårdén, P., assignor.)
Metropolitan Sewing Machine Company. (See Weis, J. P., assignor.)
Mettras, J., *et al.* (See Baum, J. B., assignor.)
Metz, E. C., *et al.* (See Metz, E. C., assignor.)
Metz, E. C., assignor to J. Kehoe and E. C. Metz, Newark, N. J. Device for heating crucibles and hot water. No. 877,513; Jan. 28; Sp. p. 3752; Dr. p. 813; Gaz. vol. 132; p. 698.
Meyer, A., assignor of fifty-one one-hundredths to J. W. Allison, St. Louis, Mo. Wire-glass-rolling apparatus. No. 876,653; Jan. 14; Sp. p. 2004; Dr. pp. 436–7; Gaz. vol. 132; p. 355.
Meyer, A. W., Roselle, N. J. Urn. No. 877,211; Jan. 21; Sp. p. 3162; Dr. pp. 685–6; Gaz. vol. 132; p. 581.
Meyer, M. (See Chambers, J. M., assignor.)
Meyer, O., Göttingen, Germany. Coin-feed mechanism. No. 877,212; Jan. 21; Sp. p. 3165; Dr. pp. 686–7; Gaz. vol. 132; p. 581.
Meyer, S. M., assignor to G. C. Batcheller, New York, N. Y. Acetylene-lamp and lighting device for automobiles and other vehicles. No. 875,942; Jan. 7; Sp. p. 486; Dr. p. 105; Gaz. vol. 132; p. 88.
Miami Cycle & Manufacturing Company. (See Schenck, M., assignor.)
Miesse, W. F., *et al.* (See Althen, W. C., assignor.)
Miles, J. F., Paris, Tex. Auxiliary water-heater and smoke-consumer. No. 877,444; Jan. 21; Sp. p. 3602; Dr. p. 780; Gaz. vol. 132; p. 655.
Mill, A., assignor to Hilbert Machine Company, Cincinnati, Ohio. Speed-changing mechanism. No. 877,213; Jan. 21; Sp. p. 3168; Dr. p. 667; Gaz. vol. 132; p. 581.
Millar, J., Cincinnati, Ohio, and S. Humbard, Knoxville, Tenn.; said Humbard assignor of one-half of his right to said Millar. Horse-collar protector. No. 876,279; Jan. 7; Sp. p. 1160; Dr. p. 253; Gaz. vol. 132; p. 195.
Miller, A. A., *et al.* (See Baum, J. B., assignor.)
Miller, C. F., *et al.*, executors. (See Shone and Rauber.)
Miller, H. A., *et al.* (See Miller and Adamson, assignors.)
Miller, H. A., and F. M. Adamson, assignors to F. P. Harris, Pasadena, A. T. Hay and H. A. Miller, Los Angeles, Cal. Internal-combustion engine. No. 876,472; Jan. 14; Sp. p. 1588; Dr. p. 341; Gaz. vol. 132; p. 291.
Miller, H. C., Waterford, N. Y. Stopping mechanism for sewing-machines. No. 876,211; Jan 7; Sp. p. 1017; Dr. pp. 220–1; Gaz. vol. 132; p. 173.
Miller, J. H., Bridgeport, Conn. Carburetor. No. 876,210; Jan. 7; Sp. p. 1013; Dr. p. 220; Gaz. vol. 132; p. 172.
Miller, J. J. A., Denver, Colo. Collar and necktie fastener for shirt-bands. No. 876,375; Jan. 14; Sp. p. 1362; Dr. p. 297; Gaz. vol. 132; p. 258.
Miller, L. K. (See Lee and Miller.)
Miller, S. G. (See McDonald and Miller.)
Miller Speed Meter Company. (See Johnson, R., assignor.)
Miller, W. J., Coffeyville, Kans. Mold. No. 876,212; Jan. 7; Sp. p. 1024; Dr. p. 221; Gaz. vol. 132; p. 173.
Mills, H. S., Chicago, Ill. Phonograph and other sound-producing machine. No. 876,006; Jan. 7; Sp. p. 619; Dr. pp. 132–3; Gaz. vol. 132; p. 108.
Mills Woven Cartridge Belt Company. (See Batcheider, F. R., assignor.)
Milne, J., Brooklyn, N. Y. Steam-generating apparatus. No. 877,355; Jan. 21; Sp. p. 3426; Dr. pp. 743–4; Gaz. vol. 132; p. 625.
Miner, W. H., and J. F. O'Connor, assignors to W. H. Miner Company, Chicago, Ill. Friction spring draft-rigging for railway-cars. No. 877,466; Jan. 21; Sp. p. 3636; Dr. pp. 787–8; Gaz. vol. 132; p. 661.
Mintz, M., Rock Island, Ill. Automatic electric switch. No. 877,790; Jan. 28; Sp. p. 4281; Dr. p. 930; Gaz. vol. 132; p. 787.
Mitchell, G. E., Joliet, Ill. Sectional-stay wire fence. No. 877,214; Jan. 21; Sp. p. 3172; Dr. p. 668; Gaz. vol. 132; p. 582.
Mitchell, A. J. (See Mitchell, G. A., A. J., and E. E.)
Mitchell, E. E. (See Mitchell, G. A., A. J., and E. E.)
Mitchell, F., and F. Gunn, Manchester, England. Clamp for securing planks of scaffolds together, applicable also for use in connection with planks for other purposes. No. 876,376; Jan. 14; Sp. p. 1363; Dr. p. 297; Gaz. vol. 132; p. 258.
Mitchell, G. A., A. J., and E. E., London, England. Roadway. No. 876,377; Jan. 14; Sp. p. 1365; Gaz. vol. 132; p. 258.
Mitchell, J., Detroit, assignor to Mitchell Shoe-Lining Company, Royal Oak, Mich. Shoe lining, backstay, and counter. No. 876,473; Jan. 14; Sp. p. 1589; Dr. p. 341; Gaz. vol. 132; p. 291.

Mitchell Shoe-Lining Company. (See Mitchell, J., assignor.)
Mittmann, W., Essen-West, Germany. Device for automatically locking doors of railway-cars while the train travels. No. 877,724. Jan. 28; Sp. p. 4165; Dr. p. 902; Gaz. vol. 132; p. 765.
Mitton, G. H. (See Caine and Mitton.)
Mix, A. H., assignor to Porter Screen Manufacturing Company, Burlington, Vt. Ventilator. No. 877,725; Jan. 28; Sp. p. 4166; Dr. p. 902; Gaz. vol. 132; p. 766.
Moeser, P., *et al.* (See Baum, J. B., assignor.)
Mold, J., Sunrise, Minn. Potato-digger. No. 876,075; Jan. 7; Sp. p. 767; Dr. pp. 163–4; Gaz. vol. 132; p. 130.
Moledezky, L. (See Hammond, L. W., assignor.)
Molinar, S., Chihuahua, Mexico. Feed and delivery attachment for printing-presses. No. 876,987; Jan. 21; Sp. p. 2665; Dr. pp. 579–80; Gaz. vol. 132; p. 503.
Möller, W., Hamburg, Germany. Tubular boiler. No. 876,378; Jan. 14; Sp. p. 1366; Dr. pp. 297–8; Gaz. vol. 132; p. 258.
Monarch Typewriter Company. (See Steele, H. H., assignor.)
Monitory Scale Company. (See Marer, H., assignor.)
Mono-Cycle Gas Engine and Manufacturing Company. (See Litchfield, C. T., assignor.)
Montagnet, E. (See Couret, J. B., assignor.)
Montague, E. L. (See Collins, W. L., assignor.)
Montambo, D. J., Marinette, Wis. Stovepipe and chimney cleaner. No. 877,215; Jan. 21; Sp. p. 3173; Dr. p. 688; Gaz. vol. 132; p. 582.
Moody, W. S., Schenectady, N. Y., assignor to General Electric Company. Transformer for electric vehicles. No. 876,988; Jan. 21; Sp. p. 2670; Dr. pp. 580–1; Gaz. vol. 132; p. 503.
Moody, W. S., Schenectady, N. Y., assignor to General Electric Company. Cooling system for electric-railway apparatus. No. 877,467; Jan. 21; Sp. p. 3638; Dr. p. 788; Gaz. vol. 132; p. 661.
Moore, C. S., Lexington, Ky. Automatic high and low boiler-pressure alarm. No. 877,581; Jan. 28; Sp. p. 3904; Dr. p. 845; Gaz. vol. 132; p. 720.
Moore, D. M., Newark, N. J., assignor to Moore Electrical Co., New York, N. Y. Glass-blower's clamp. No. 877,105; Jan. 21; Sp. p. 2919; Dr. pp. 631–2; Gaz. vol. 132; p. 542.
Moore Electrical Co. (See Moore, D. M., assignor.)
Moore, F. B., Detroit, Mich. Knockdown sectional bookcase. No. 875,722; Jan. 7; Sp. p. 85; Dr. p. 18; Gaz. vol. 132; p. 19.
Moore, H. W., Atchison, Kans. Chair or seat. No. 877,216; Jan. 21; Sp. p. 3174; Dr. p. 688; Gaz. vol. 132; p. 582.
Moore, J. C., Cedar Rapids, Iowa. Automobile-jack. No. 876,824; Jan. 14; Sp. p. 2303; Dr. p. 506; Gaz. vol. 132; p. 407.
Moore, W. B., Miami, Fla. Combined ice-tongs and weighing-scale. No. 876,213; Jan. 7; Sp. p. 1026; Dr. p. 221; Gaz. vol. 132; p. 174.
Moorrees, H. P., Weehawken, assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 876,379; Jan 14; Sp. p. 1367; Dr. p. 298; Gaz. vol. 132; p. 259.
Moorrees, H. P., Weehawken, assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 876,380; Jan. 14; Sp. p. 1377; Dr. pp. 298–9; Gaz. vol. 132; p. 259.
Morcher, F., Tiffin, Ohio. Concrete-block machine. No. 876,280; Jan. 7; Sp. p. 1161; Dr. p. 254; Gaz. vol. 132; p. 195
Morden, L. M., Waterbury, Conn. Loose-leaf ledger or temporary binder. No. 875,834; Jan. 7; Sp. p. 295; Dr. p. 64; Gaz. vol. 132; p. 55.
Morden, L. M., Waterbury, Conn. File-ring. No. 876,474; Jan. 14; Sp. p. 1590; Dr. p. 342; Gaz. vol. 132; p. 291.
Moreau, J., St. Germain de Grantham, Quebec, Canada. Potato-digger. No. 877,356; Jan. 21; Sp. p. 3430; Dr. p. 744; Gaz. vol. 132; p. 625.
Morgan, A. D., West Roxbury, Mass. Emergency-brake for motor-vehicles. No. 876,475; Jan 14; Sp. p. 1591; Dr. p. 342; Gaz. vol. 132; p. 291.
Morgan, D. G. (See Crowder, D. W., assignor.)
Morgan, R. L., Worcester, Mass. Wheel-rim fastener. No. 877,217; Jan. 21; Sp. p. 3176; Dr. p. 689; Gaz. vol. 132; p. 583.
Morgan, W. E., San Francisco, Cal. Rule-gage. No. 877,218; Jan. 21; Sp. p. 3178; Dr. p. 689; Gaz. vol. 132; p. 583.
Morris, C. B., administratrix. (See Morris, S.)
Morris, J. H., Omaha, Nebr. Vehicle-wheel. No. 876,214; Jan. 7; Sp. p. 1027; Dr. p. 222; Gaz. vol. 132; p. 174.
Morris, N. E., Jr., Murfreesboro, assignor of one-half to W. A. Roberts, Franklin, Tenn. Cash register and indicator. No. 876,215; Jan. 7; Sp. p. 1029; Dr. pp. 222–4; Gaz. vol. 132; p. 174.
Morris, S., (deceased,) Newark, Ohio; C. B. Morris, administratrix. Hydrocarbon-burner. No. 876,476; Jan. 14; Sp. p. 1593; Dr. p. 342; Gaz. vol. 132; p. 292.
Morton, F. B., Pasadena, Cal. Drainage-fitting. (Reissue.) No. 12,741; Jan. 21; Sp. p. 3658; Dr. p. 793; Gaz. vol. 132; p. 664.
Mosal, J. (See Culbertson, F., assignor.)
Mosby, G. M., Red Bank, N. J. Device for honing and stropping razors. No. 876,825; Jan. 14; Sp. p. 2304; Dr. p. 507; Gaz. vol. 132; p. 408.
Moscrop, J., Manchester, England. Yarn-testing machine. No. 876,216; Jan 7; Sp. p. 1039; Dr. pp. 224–5; Gaz vol, 132; p. 175.
Moser, J. C., (See Clopton, W. G., assignor.)
Mosher, C. D., New York, N. Y. Steam-boiler. No. 876,477; Jan. 14; Sp. p. 1594; Dr. p. 343; Gaz. vol. 132; p. 292.
Mosher, C. D., New York, N. Y. Steam-boiler. No. 876,478; Jan. 14; Sp. p. 1597; Dr. p. 343; Gaz. vol. 132; p. 293.
Mosher, C. D., New York, N. Y. Steam-boiler. No. 876,479; Jan. 14; Sp. p. 1599; Dr. p. 344; Gaz. vol. 132; p. 293.
Mosley, A. M., Guelph, Ontario, Canada. Pencil-sharpener. No. 877,357; Jan. 21; Sp. p. 3433; Dr. p. 745; Gaz. vol. 132; p. 626.
Moss, C. E., Boston, Mass. Machine for drying sheet material. No. 876,007; Jan. 7; Sp. p. 626; Dr. pp. 133–4; Gaz. vol 132; p. 109.
Motor Specialty Manufacturing Company. (See Luschka, A. R., assignor.)
Moukos, C. (See Matchette and Moukos.)
Moulié, E., Jacksonville, Fla. Pollen-collecting device. No. 877,791; Jan. 28; Sp. p. 4283; Dr. p. 930; Gaz. vol. 132; p. 787.
Mouradick, T., Mojave, Cal. Sled. No. 875,723; Jan. 7; Sp. p. 87; Dr. p. 18; Gaz. vol. 132; p. 19.
Mowrer, W., Bloomfield, Nebr. Gas-generator. No. 876,217; Jan. 7; Sp. p. 1042; Dr. p. 225; Gaz. vol. 132; p. 175.
Mowry, J. B., Mansfield, Ohio. Feed-water governor. No. 876,725; Jan. 14; Sp. p. 2128; Dr. p. 467; Gaz. vol. 132; p. 377.
Moya, H., Leicester, England. Type-writer. No. 876,989; Jan. 21; Sp. p. 2673; Dr. pp. 581–2; Gaz. vol. 132; p. 503.
Mueller, F., assignor to Standard Stopper Company, New York, N.Y. Equalizing mechanism. No. 876,381; Jan. 14; Sp. p. 1386; Dr. p. 299; Gaz. vol. 132; p. 259.
Mueller, F., assignor to Standard Stopper Company, New York, N. Y. Feeding mechanism. No. 876,382; Jan. 14; Sp. p. 1390; Dr. p. 300; Gaz. vol. 132; p. 260.
Mueller, O. N., Indianapolis, Ind. Reinforcing concrete. No. 876,480; Jan. 14; Sp. p. 1600; Dr. p. 344; Gaz. vol. 132; p. 293.
Mueller, P. J., Lamotte, Iowa. Speed-regulator for spring-motors. No. 875,835; Jan. 7; Sp. p. 298; Dr. p. 64; Gaz. vol. 132; p. 55.
Mullinix, E. A. (See Buchet and Mullinix.)
Mullinix, E. E., Burlington, Kans. Combination-tool. No. 875,724; Jan 7; Sp. p. 88; Dr. p. 18; Gaz. vol. 132; p. 19.
Munson, A. J., Garretson, S. D. Car-door. No. 877,792; Jan. 28; Sp. p. 4285; Dr. p. 930; Gaz. vol. 132; p. 787.
Munson, H. H., Truro, Iowa. Gearing for washing-machines. No. 877,106; Jan. 21; Sp. p. 2922; Dr. p. 632; Gaz. vol. 132; p. 543.
Murdoch, A., Ottawa, Ontario, Canada. Stock-car. No. 876,990; Jan. 21; Sp. p. 2677; Dr. p. 582; Gaz. vol. 132; p. 504.
Murdoch, M. J., and J. P. Ludt, Youngstown, Ohio. Hot-air furnace. No. 876,481; Jan. 14; Sp. p. 1601; Dr. p. 345; Gaz. vol. 132; p. 294.
Murgas, J., Wilkes-Barre, Pa. Means for producing electromagnetic waves. No. 876,383; Jan. 14; Sp. p. 1392; Dr. p. 300; Gaz. vol. 132; p. 260.
Murnane, D. J., Kirkwood, Mo. Device for connecting glass plates together. No. 877,107; Jan. 21; Sp. p. 2923; Dr. pp. 632–3; Gaz. vol. 132; p. 543.
Murphy, C., Kingman, Kans. Fish-hook attachment. No. 877,793; Jan. 28; Sp. p. 4287; Dr. p. 931; Gaz. vol. 132; p. 787.
Murphy, C. A., Chicago, Ill. Needle-threader. No. 875,725; Jan. 7; Sp. p. 89; Dr. p. 19; Gaz. vol. 132; p. 20.
Murphy, H., Lowell, assignor to Draper Company, Hopedale, Mass. Loom-shuttle. No. 877,108; Jan. 21; Sp. p. 2926; Dr. p. 633; Gaz. vol. 132; p. 543.
Murphy, H. M., Chicago, Ill. Reversible turbine. No. 876,218; Jan. 7; Sp. p. 1043; Dr. p. 225; Gaz. vol. 132; p. 175.
Murphy, N. H., Hopkinton, and G. H. Putnam, Westboro, assignors of one-half to D. H. O'Connell, Marlboro, Mass. Sewing-machine for boots and shoes. No. 876,482; Jan. 14; Sp. p. 1604; Dr. p. 345; Gaz. vol. 132; p. 294.
Murray Engineering and Manufacturing Company. (See Murray, W. B., assignor.)
Murray, S., Dublin, Ontario, Canada. Automatic fire-alarm. No. 876,384; Jan. 14; Sp. p. 1394; Dr. p. 301; Gaz. vol. 132; p. 261.
Murray, W. B., Washington, D. C., assignor to Murray Engineering and Manufacturing Company. Device for holding, alining, and punching metal tubes. No. 877,855; Jan. 28; Sp. p. 4402; Dr. p. 958; Gaz. vol. 132; p. 807.
Musgrove, J. A., Jr., assignor of one-half to C. Fenwick, Kilsyth, W. Va. Car-operating device. No. 876,219; Jan. 7; Sp. p. 1044; Dr. p. 225; Gaz. vol. 132; p. 176.
Myers, C. D., assignor of one thirty-second to F. W. Griffin, one sixty-fourth to F. R. Williams, and one sixty-fourth to G. Bates, Cleveland, Ohio. Knot-tying apparatus for bags, &c. No. 876,573; Jan. 14; Sp. p. 1813; Dr. p. 396; Gaz. vol. 132; p. 327.
Myers, H. A., assignor to A. P. Boyer, Goshen, Ind. Hoisting-pulley. No. 876,991; Jan. 21; Sp. p. 2679; Dr. p. 583; Gaz. vol. 132; p. 504.
Myers, J., Fitzlen, Okla. Combined lamp-font and match-holding device. No. 877,582; Jan. 28; Sp. p. 3905; Dr. p. 845; Gaz. vol. 132; p. 721.
Myers, W. D., assignor of one-half to E. C. Frazier, Canton, Okla. Beer-tap. No. 876,483; Jan. 14; Sp. p. 1605; Dr. pp. 345–6; Gaz. vol. 132; p. 294.

Mylor, B., and T. Heady, Warsaw, Ky. Tobacco-seeder. No. 876,076; Jan. 7; Sp. p. 769; Dr. p. 164; Gaz. vol. 132; p. 130.
Nagor, H. I., *et al.* (See Lazar, W., assignor.)
Nash, M. A., Palmyra, Nebr. Pan. No. 875,944; Jan. 7; Sp. p. 490; Dr. p. 106; Gaz. vol. 132; p. 89.
National Candy Company. (See Burt, A. H., assignor.)
National Cash Register Company. (See Carney, T., assignor.)
National Interlocking Steel Sheeting Company. (See Nye, G. E., assignor.)
National Steam Specialty Company. (See Brisbanden, W. W., assignor.)
Neagle, E. D., Cleveland, Ohio. Toy. No. 877,360; Jan. 21; Sp. p. 3441; Dr. p. 746; Gaz. vol. 132; p. 627.
Neahr, J. (See Maxfield, S., assignor.)
Needham, W. J., Myra, Tex. Cutting apparatus for mowers. No. 876,654; Jan. 14; Sp. p. 2007; Dr. p. 437; Gaz. vol. 132; p. 355.
Neepawa Manufacturing Company. (See Gardiner, D. R., assignor.)
Neffen, W. H. (See Siever and Neffen.)
Nelsingh, R., Excelsior, Minn. Hitching-strap fastener. No. 875,830; Jan. 7; Sp. p. 305; Dr. p. 66; Gaz. vol. 132; p. 56.
Neller, A. H., Fairfield, Iowa. Elevated carrier. No. 876,578; Jan. 14; Sp. p. 1827; Dr. p. 399; Gaz. vol. 132; p. 329.
Nelson, F. E., and G. W. Tribbey, Marshfield, Oreg. Gate. No. 877,361; Jan. 21; Sp. p. 3442; Dr. pp. 746–7; Gaz. vol. 132; p. 627.
Nelson, H. L. (See Benson, G. T., assignor.)
Nelson, J. L., Colona, Colo. Power-transmission mechanism. No. 875,945; Jan. 7; Sp. p. 491; Dr. p. 106; Gaz. vol. 132; p. 89.
Nelson, L., Oakland, Cal. Meat-roasting apparatus. No. 876,579; Jan. 14; Sp. p. 1830; Dr. p. 400; Gaz. vol. 132; p. 329.
Nelson, N. H., Willmar, Minn. Brace. No. 877,110; Jan. 21; Sp. p. 2928; Dr. pp. 633–4; Gaz. vol. 132; p. 544.
Nelson, N. P., Lexington, Oreg. Weeder or cultivator. No. 875,946; Jan. 7; Sp. p. 493; Dr. pp. 106–7; Gaz. vol. 132; p. 89.
Nelson, T., Starbuck, Minn. Interlocking clevis. No. 876,829; Jan.14; Sp. p. 2314; Dr. p. 508; Gaz. vol. 132; p. 409.
Netherwood, H. (See Keighley and Netherwood.)
New, A. L., Los Angeles; and W. N. Hickman, Avalon, Cal.; said Hickman assignor of one-half of his right to said New. Combination sending and receiving wireless-telegraph apparatus. No. 876,261; Jan. 7; Sp. p. 1163; Dr. p. 254; Gaz. vol. 132; p. 196.
"New Way" Motor Company. (See Way, C. H., assignor.)
Newburgh, A. G., Superior, Wis. Rail-handling truck. No. 877,111; Jan. 21; Sp. p. 2931; Dr. p. 634; Gaz. vol. 132; p. 544.
Newhall, G. M., Philadelphia, Pa. Water distribution for the prevention of fire. No. 876,222; Jan. 7; Sp. p. 1048; Dr. p. 226; Gaz. vol. 132; p. 176.
Newland, F. M., Alger, Ohio. Weeder. No. 876,580; Jan. 14; Sp. p. 1832; Dr. p. 400; Gaz. vol. 132; p. 329.
Newlands, W. G. (See Armstrong, J., assignor.)
Newman, A. A., Chicago, Ill. Watchman's clock. No. 876,655; Jan. 14; Sp. p. 2008; Dr. p. 437; Gaz. vol. 132; p. 356.
Newman, J. A., and A. Haapala, Ashtabula Harbor, Ohio. Automatic magazine-pencil. No. 876,223; Jan. 7; Sp. p. 1050; Dr. p. 226; Gaz. vol. 132; p. 177.
Newman, O. F. (See Barrath, E., assignor.)
Nicolai, L. J. F., assignor to "Phateco" Gesellschaft mit beschränkter Haftung, Dresden, Germany. Rubbing apparatus for the gums. No. 877,585; Jan. 28; Sp. p. 3911; Dr. p. 846; Gaz. vol. 132; p. 722.
Nicolay, W. H., New York, N. Y. Sign-illuminating device. No. 877,362; Jan. 21; Sp. p. 3444; Dr. p. 747; Gaz. vol. 132; p. 628.
Nield, W. H. (See Meiland and Nield.)
Nielsen, I., New Rochelle, N. Y. Fire-escape. No. 877,363; Jan. 21; Sp. p. 3445; Dr. p. 747; Gaz. vol. 132; p. 628.
Niemann, F. W., Chicago, Ill. Sanding tables. No. 877,112; Jan. 21; Sp. p. 2932; Dr. p. 634; Gaz. vol. 132; p. 545.
Nieters, J. J., St. Louis, Mo. Brick-press. No. 876,388; Jan. 14; Sp. p. 1400; Dr. pp. 302–3; Gaz. vol. 132; p. 262.
Nikolai, J. M., Madison, Minn. Feed-packing machine. No. 876,389; Jan. 14; Sp. p. 1404; Dr. p. 303; Gaz. vol. 132; p. 263.
Niles-Bement-Pond Company. (See Reiss, G. T., assignor.)
Nilsson, G. F., Pasadena, Cal. Averruncator. No. 877,220; Jan. 21; Sp. p. 3180; Dr. p. 689; Gaz. vol. 132; p. 583.
Nix, J. L., Homer City, Pa. Heating apparatus for incubators. No. 877,586; Jan. 28; Sp. p. 3912; Dr. p. 846; Gaz. vol. 132; p. 722.
Nolte, L. H. (See Anderson and Nolte.)
Non Acid Copper Extracting Company. (See McPherson, W. B., assignor.)
Nordlund, W. J., Oakland, Cal. Vehicle-rim. No. 877,726; Jan. 28; Sp. p. 4167; Dr. p. 903; Gaz. vol. 132; p. 766.
Norris, F. A., Curwensville, Pa. Envelop-sealing machine. No. 877,221; Jan. 21; Sp. p. 3181; Dr. pp. 689–90; Gaz. vol. 132; p. 584.
Norstrom, N. E., Chicago, Ill., assignor of one-third to J. Anderson, Salina, one-third to M. E. Richardson, Sterling, Kans., and one-third to J. H. Martin and H. Keating. Telephone-exchange. No. 877,727; Jan. 28; Sp. p. 4169; Dr. pp. 903–4; Gaz. vol. 132; p. 766.
North American Railway Construction Company. (See Sheehan, D. F., assignor.)
North, E. C., and W. L. Knapp, Palmyra, and C. H. Bierbaum, Buffalo, N. Y. Dumping wagon or car. No. 875,727; Jan. 7; Sp. p. 93; Dr. pp. 19–20; Gaz. vol. 132; p. 20.
Northern Motor Car Company. (See King, C. B., assignor.)
Norton, B. H. (See Eddy, C. F. A., assignor.)
Noxon, J. W., Valley City, N. D. Draft-regulator and ventilator. No. 877,364; Jan. 21; Sp. p. 3446; Dr. p. 748; Gaz. vol. 132; p. 628.
Noyes, L. W., Chicago, Ill. Machine for drawing lapweld-pipe. No. 875,728; Jan. 7; Sp. p. 94; Dr. pp. 20–1; Gaz. vol. 132; p. 21.
Noyes, L. W., Chicago, Ill. Skeleton tower. No. 877,587; Jan. 28; Sp. p. 3913; Dr. pp. 846–7; Gaz. vol. 132; p. 722.
Nye, G. E., assignor to National Interlocking Steel Sheeting Company, Chicago, Ill. Interlocking sheet-piling. No. 877,588; Jan. 28; Sp. p. 3916; Dr. p. 847; Gaz. vol. 132; p. 723.
O'Brien, D. F., Newark, N. J. Connecting branch sleeve. No. 875,729; Jan. 7; Sp. p. 100; Dr. p. 21; Gaz. vol. 132; p. 21.
O'Brien, M., Port Leyden, N. Y. Hame-strap. No. 877,728; Jan. 28; Sp. p. 4173; Dr. p. 904; Gaz. vol. 132; p. 767.
O'Brien, W. M. (See Harrison and O'Brien.)
O'Connell, D. H. (See Murphy and Putnam, assignors.)
O'Connor, J., New York, N. Y. Tempo device for mechanical musical instruments. No. 876,060; Jan. 7; Sp. p. 775; Dr. p. 166; Gaz. vol. 132; p. 131.
O'Connor, J. F. (See Miner and O'Connor.)
O'Neill, D., Lucinda, Pa. Calk-grinder. No. 876,224; Jan. 7; Sp. p. 1051; Dr. p. 227; Gaz. vol. 132; p. 177.
O'Neill, E. I. (See Paxton and O'Neill.)
O'Reardon, T., Detroit, Mich. Car-fender. No. 875,731; Jan. 7; Sp. p. 104; Dr. p. 22; Gaz. vol. 132; p. 22.
Oberbayerische Kokswerke und Fabrik Chemische Produkte Akt.-Gesellschaft. (See Ziegler, M., assignor.)
Oblinger, B. C., assignor of one-half to A. H. C. Beatty, Independence, Mo. Heat-reflector. No. 876,909; Jan. 14; Sp. p. 2477; Dr. p. 541; Gaz. vol. 132; p. 437.
Ochard, J. F. (See Churchman and Ochard.)
Odenkirk, H. C., Cleveland, Ohio. Switch-stand and signaling device therefor. No. 876,830; Jan. 14; Sp. p. 2315; Dr. p. 509; Gaz. vol. 132; p. 409.
Ogden, L. H. (See Martin and Ogden.)
Ohio Blower Company. (See Hard and Coney, assignors.)
Ohio Cultivator Company. (See Tuttle, J. S., assignor.)
Oliver Chilled Plow Works. (See Paul, W. L., assignor.)
Olsen, C. A., Sherman, S. D. Ironing-board. No. 875,840; Jan. 7; Sp. p. 306; Dr. p. 67; Gaz. vol. 132; p. 56.
Olsen, T., Philadelphia, Pa. Testing-machine. No. 875,730; Jan. 7; Sp. p. 103; Dr. pp. 21–2; Gaz. vol. 132; p. 21.
Olson, E., *et al.* (See Olson, J. A., assignor.)
Olson, E. C., Chicago, Ill. Cake-hive. No. 877,796; Jan. 28; Sp. p. 4293; Dr. p. 932; Gaz. vol. 132; p. 788.
Olson, G., *et al.* (See Olson, J. A., assignor.)
Olson, J. A., Minneapolis, Minn., assignor of three-fourths to G. and E. Olson and P. D. Sherwin. Adjustable magazine-binder. No. 875,947; Jan. 7; Sp. p. 495; Dr. p. 107; Gaz. vol. 132; p. 90.
Olson, S., Walworth, Wis. Door-fastener. No. 876,831; Jan. 14; Sp. p. 2317; Dr. p. 509; Gaz. vol. 132; p. 410.
Ong, D. B. (See Binns, D., assignor.)
Oppenheimer, W. R., Philadelphia, Pa. Suspenders. No. 877,516; Jan. 28; Sp. p. 3758; Dr. p. 814; Gaz. vol. 132; p. 700.
Oppenheimer's Sons, L. (See Sametz, H., assignor.)
Orr, F. L., Thurman, Iowa. Gas-engine cooler. No. 876,832; Jan. 14; Sp. p. 2318; Dr. p. 509; Gaz. vol. 132; p. 410.
Orr, G. H., Toledo, Ohio. Nut-lock. No. 876,081; Jan. 7; Sp. p. 778; Dr. p. 166; Gaz. vol. 132; p. 132.
Osgood, E. J., Oakland, Cal. Inkstand. No. 876,228; Jan. 7; Sp. p. 1052; Dr. p. 227; Gaz. vol. 132; p. 177.
Osgood Scale Company. (See Gilbert, W. N., assignor.)
Oster, W., Caldwell county, Mo. Clamp for holding woven-wire fencing while stretching. No. 877,222; Jan. 21; Sp. p. 3182; Dr. p. 690; Gaz. vol. 132; p. 584.
Ostrander, A. E., Paterson, N. J., assignor to American Car & Foundry Company, St. Louis, Mo. Passenger-car. No. 877,474; Jan. 21; Sp. p. 3053; Dr. pp. 791–2; Gaz. vol. 132; p. 664.
Ostul, M. J., Minneota, Minn. Latch. No. 876,581; Jan. 14; Sp. p. 1833; Dr. pp. 400–1; Gaz. vol. 132; p. 330.
Ott, F., South Bethlehem, Pa. Shuttle checking and releasing mechanism for looms. No. 877,223; Jan. 21; Sp. p. 3183; Dr. p. 690; Gaz. vol. 132; p. 584.
Otteson, T., assignor of one-half to W. G. and A. H. Shaffer, New Hampton, Iowa. Jointed tongue. No. 876,082; Jan. 7; Sp. p. 779; Dr. p. 166; Gaz. vol. 132; p. 132.
Ottawa Banking & Trust Company. (See Blanchard, S. R., assignor.)

Ottaway, W., assignor to Aurora Automatic Machinery Company, Aurora, Ill. Inlet-valve mechanism for explosive-engines. No. 876,582; Jan. 14; Sp. p. 1834; Dr. p. 401; Gaz. vol. 132; p. 330.
Otto Gas Engine Works. (See Reinshagen, H., assignor.)
Oulton, D. L., Everett, assignor to Duo Motor Company, Boston, Mass. Two-cycle hydrocarbon-engine. No. 877,589; Jan. 28; Sp. p. 3918; Dr. pp. 847–8; Gaz. vol. 132; p. 723.
Oulton, D. L., assignor to Duo Motor Company, Boston, Mass. Two-cycle hydrocarbon-engine. No. 877,590; Jan. 28; Sp. p. 3921; Dr. pp. 848–9; Gaz. vol. 132; p. 723.
Overbury, F. C., New York, N. Y., assignor to Flintkote Manufacturing Company, Rutherford, N. J. Method of and means for making roofing material. No. 876,008; Jan. 7; Sp. p. 629; Dr. p. 134; Gaz. vol. 132; p. 109.
Overbury, F. C., New York, N. Y., assignor to Flintkote Manufacturing Company, Rutherford, N. J. Roofing-strip. No. 876,009; Jan. 7; Sp. p. 630; Dr. p. 134; Gaz. vol. 132; p. 109.
Overbury, F. C., New York, N. Y., assignor to Flintkote Manufacturing Company, Rutherford, N. J. Method of and means for making roofing material. No. 876,010; Jan. 7; Sp. p. 631; Dr. p. 135; Gaz. vol. 132; p. 109.
Overkamp, C. H., assignor to Triumph Manufacturing Company, Cincinnati, Ohio. Egg and sponge beater. No. 877,468; Jan. 21; Sp. p. 3641; Dr. p. 789; Gaz. vol. 132; p. 662.
Owens, J. N., assignor of one-half to J. E. Fowler, Youngstown, Ohio. Shaft-coupling. No. 877,113; Jan. 21; Sp. p. 2933; Dr. pp. 634–5; Gaz. vol. 132; p. 545.
Owens, M. J., assignor to Toledo Glass Company, Toledo, Ohio. Making sheet-glass. No. 877,729; Jan. 28; Sp. p. 4174; Dr. p. 904; Gaz. vol. 132; p. 767.
Owens, W. W., Glencoe, Ohio. Ink-well. No. 876,726; Jan. 14; Sp. p. 2129; Dr. p. 468; Gaz. vol. 132; p. 378.
Paddleford, F., *et al.* (See Stanley, G. E., assignor.)
Page Machine Company. (See Joy, J. M., assignor.)
Pain, F., Allston, Mass. Cable or telegraph code. No. 877,797; Jan. 28; Sp. p. 4294; Dr. p. 932; Gaz. vol. 132; p. 789.
Palen, W. D. (See Schwartz and Palen.)
Palmer, C. G. (See Greene and Palmer.)
Palmer, C. M., Aurora, Ill. Shearing-machine. No. 877,517; Jan. 28; Sp. p. 3759; Dr. p. 814; Gaz. vol. 132; p. 700.
Palmer, E. E., Wooster, Ohio. Shade and curtain fixture. No. 877,591; Jan. 28; Sp. p. 3923; Dr. p. 849; Gaz. vol. 132; p. 724.
Palmer, H. R., Cleveland, assignor to Palmer Oil Engine Company, East Cleveland, Ohio. Explosive-engine. No. 877,730; Jan. 28; Sp. p. 4176; Dr. pp. 905–6; Gaz. vol. 132; p. 767.
Palmer Oil Engine Company. (See Palmer, H. R., assignor.)
Palmer, W. A., St. Louis, Mo. Automatic car-coupling. No. 877,365; Jan. 21; Sp. p. 3449; Dr. p. 748; Gaz. vol. 132; p. 629.
Panama Hay Press Co. (See Cookson, C. L., assignor.)
Pape, H., Hamburg, Germany. Obtaining oxid fumes from ores and furnace products. No. 877,114; Jan. 21; Sp. p. 2935; Gaz. vol. 132; p. 545.
Parcels, L. H., Hiawatha, assignor of one-half to J. H. Koger, Willis, Kans. Telegraph-switch. No. 877,857; Jan. 28; Sp. p. 4405; Dr. p. 959; Gaz. vol. 133; p. 808.
Paris Lamp Manufacturing Company. (See Zierlein and Riechmann, assignors.)
Parker, C. W., Springfield, assignor to Lamb Knitting Machine Co., Chicopee Falls, Mass. Transmission-gearing. No. 876,083; Jan. 7; Sp. p. 780; Dr. pp. 166–7; Gaz. vol. 132; p. 132.
Parker, C. W., Springfield, assignor to Lamb Knitting Machine Co., Chicopee Falls, Mass. Transmission-gearing. No. 876,084; Jan. 7; Sp. p. 783; Dr. p. 167; Gaz. vol. 132; p. 133.
Parker-Clark Electric Company. (See Clark, W. G., assignor.)
Parker-Clark Electric Company. (See Clark and Parker, assignors.)
Parker, H. C. (See Clark and Parker.)
Parker, H. C., and W. G. Clark, New York, N. Y., assignors to Parker-Clark Electric Company, Jersey City, N. J. Incandescent electric lamp. No. 876,390; Jan. 14; Sp. p. 1406; Dr. p. 304; Gaz. vol. 132; p. 263.
Parker, R. J., *et al.* (See Benson, S., assignor.)
Parks, G., Harrison Valley, Pa. Switch mechanism and train-carried actuating means therefor. No. 877,224; Jan. 21; Sp. p. 3184; Dr. pp. 690–1; Gaz. vol. 132; p. 585.
Parlin & Orendorff Company. (See Graham and Dewey, assignors.)
Parmenter, O. L., Racine, Wis. Dispensing-container. No. 876,282; Jan. 7; Sp. p. 1166; Dr. p. 254; Gaz. vol. 132; p. 196.
Parry, W. G., and P. J. Creedon, Peterborough, Ontario, Canada. Head for boring-bits. No. 877,592; Jan. 28; Sp. p. 3925; Dr. p. 849; Gaz. vol. 132; p. 724.
Paterson, G., Barre, Vt. Pipe-wrench. No. 877,225; Jan. 21; Sp. p. 3186; Dr. p. 691; Gaz. vol. 132; p. 585.
Patrick, E. A. (See McKiernan and Patrick.)
Patterson, F. E., Bucyrus, Ohio. Water-heater. No. 877,115; Jan. 21; Sp. p. 2937; Dr. p. 635; Gaz. vol. 132; p. 546.
Patterson, F. M., *et al.* (See Latimer, J. B., assignor.)
Patterson, M. (See Patterson, R. K., assignor.)
Patterson, O. M., Canton, Ohio. Pump. No. 877,661; Jan. 28; Sp. p. 4051; Dr. p. 876; Gaz. vol. 132; p. 746.
Patterson, R. K., assignor of one-half to M. Patterson, Chicago, Ill. Telegraphic key. No. 876,391; Jan. 14; Sp. p. 1408; Dr. p. 304; Gaz. vol. 132; p. 263.
Patterson, S., and J. W. Wiseman, Gonzales county, Tex., assignors of one-third to O. T. Payne, Lavaca county, Tex. Signal-lock for mail-boxes. No. 875,841; Jan. 7; Sp. p. 308; Dr. p. 67; Gaz. vol. 132; p. 57.
Patton, E. H., executrix. (See Andlauer, R., assignor.)
Patton, G. A., *et al.* (See Andlauer, R., assignor.)
Paul, J. T. H., assignor to E. Goldman & Company, Chicago, Ill. Washing-machine. No. 876,656; Jan. 14; Sp. p. 2009; Dr. pp. 437–8; Gaz. vol. 132; p. 356.
Paul, J. T. H., assignor to E. Goldman & Co., Inc., Chicago, Ill. Bottle-washer. No. 876,657; Jan. 14; Sp. p. 2011; Dr. pp. 438–9; Gaz. vol. 132; p. 356.
Paul, W. L., assignor to Oliver Chilled Plow Works, South Bend, Ind. Seeding-machine or cotton-planter. No. 877,116; Jan. 21; Sp. p. 2939; Dr. pp. 635–6; Gaz. vol. 132; p. 546.
Paul, W. L., assignor to Oliver Chilled Plow Works, South Bend, Ind. Seeding-machine. No. 877,469; Jan. 21; Sp. p. 3643; Dr. p. 789; Gaz. vol. 132; p. 662.
Pauling, H., assignor to Firm of Salpetersäure-Industrie-Gesellschaft, Ges. M. B. H., Gelsenkirchen, Germany. Apparatus for manufacturing nitric acid or oxid from air. No. 877,446; Jan. 21; Sp. p. 3605; Dr. p. 781; Gaz. vol. 132; p. 656.
Pauling, H., assignor to Firm of Salpetersäure-Industrie-Gesellschaft, G. M. B. H., Gelsenkirchen, Germany. Production of pure nitric acid. No. 877,447; Jan. 21; Sp. p. 3606; Gaz. vol. 132; p. 656.
Pauling, H., assignor to Firm of Salpetersäure-Industrie-Gesellschaft, G. M. B. H., Gelsenkirchen, Germany. Production of voltaic strong-current arcs. No. 877,448; Jan. 21; Sp. p. 3607; Dr. p. 781; Gaz. vol. 132; p. 656.
Paulson, M., assignor to Crane Company, Chicago, Ill. Adjustable taper tap. No. 875,842; Jan. 7; Sp. p. 308; Dr. p. 67; Gaz. vol. 132; p. 57.
Pauly, K. A., Schenectady, N. Y., assignor to General Electric Company. Motor control. No. 876,903; Jan. 21; Sp. p. 2684; Dr. p. 563; Gaz. vol. 132; p. 505.
Pavia, G., Allentown, Pa. Shuttle. No. 876,065; Jan. 7; Sp. p. 787; Dr. p. 168; Gaz. vol. 132; p. 133.
Paxton, J. B., and E. I. O'Neill, Philadelphia, Pa. Circular-knitting machine. No. 876,283; Jan. 7; Sp. p. 1168; Dr. p. 255; Gaz. vol. 132; p. 197.
Payne, O. T. (See Patterson and Wiseman, assignors.)
Peabody, J. A., Evanston, Ill. Apparatus for track-circuit control. No. 875,843; Jan. 7; Sp. p. 310; Dr. pp. 67–8; Gaz. vol. 132; p. 75.
Peacock, M. R., Oakland, Cal. Flexible joint for dredger-pipes. No. 875,844; Jan. 7; Sp. p. 311; Dr. p. 68; Gaz. vol. 132; p. 57.
Pearl, S. S., Stehekin, Wash. Drag-saw guide. No. 876,226; Jan. 7; Sp. p. 1054; Dr. p. 227; Gaz. vol. 132; p. 178.
Pearsall, H., *et al.* (See Fields, J. W., assignor.)
Pearson, M., Robbinsdale, Minn. Nailing-tool. No. 876,066; Jan. 7; Sp. p. 788; Dr. p. 168; Gaz. vol. 132; p. 133.
Pell, J., Bloomer, Wis. Insect-destroying machine. No. 877,117; Jan. 21; Sp. p. 2942; Dr. pp. 636–7; Gaz. vol. 132; p. 547.
Peirano, A., and W. Greenwood, Wilson, Kans. Grain-car door. No. 877,593; Jan. 28; Sp. p. 3927; Dr. p. 849; Gaz. vol. 132; p. 724.
Peirce, J. E., assignor to Royden Marble Machinery Company, New York, N. Y. Stone-cutting machine. No. 876,067; Jan. 7; Sp. p. 790; Dr. p. 168; Gaz. vol. 132; p. 134.
Peirce, R. S., Chicago, Ill. Fastening device for masonry. No. 877,118; Jan. 21; Sp. p. 2946; Dr. p. 637; Gaz. vol. 132; p. 547.
Pelham, J. H., Scranton, Miss. Fire-kindler. No. 876,227; Jan. 7; Sp. p. 1055; Dr. p. 228; Gaz. vol. 132; p. 178.
Pence, I. W., *et al.* (See Conley, C. M., assignor.)
Pendleton, G. H., Busch, Okla. Tanning. No. 876,583; Jan. 14; Sp. p. 1837; Gaz. vol. 132; p. 331.
Percival, S., North Pender Island, British Columbia, Canada. Poultry-roost. No. 876,833; Jan. 14; Sp. p. 2319; Dr. p. 510; Gaz. vol. 132; p. 410.
Perdue, B. M., Franklin, Ky. Vehicle-thill support. No. 877,449; Jan. 21; Sp. p. 3607; Dr. p. 781; Gaz. vol. 132; p. 656.
Perales, A. J., Pittsburg, Pa. Vise. No. 876,228; Jan. 7; Sp. p. 1057; Dr. p. 228; Gaz. vol. 132; p. 178.
Perham, C. F., Lowell, Mass. Picking mechanism for looms. No. 876,011; Jan. 7; Sp. p. 633; Dr. p. 135; Gaz. vol. 132; p. 110.

Perkins, C. G., assignor to Perkins Corporation, Hartford, Conn. Electric switch. No. 876,910; Jan. 14; Sp. p. 2479; Dr. p. 542; Gaz. vol. 132; p. 437.
Perkins Corporation. (See Crandall, N. W., assignor.)
Perkins Corporation. (See Perkins, C. G., assignor.)
Perkins, E. E., Beaver Bay, Minn. Sexual armor. No. 875,845; Jan. 7; Sp. p. 314; Dr. pp. 68–9; Gaz. vol. 132; p. 58.
Perkins Electric Switch Mfg. Company. (See Mann, W. G., assignor.)
Perkins, J. C. (See Bellamy, F. H., assignor.)
Perry, C. J., Perth Amboy, N. J. Combined scrubbing-brush, mop, and wringer. No. 877,119; Jan. 21; Sp. p. 2947; Dr. p. 637; Gaz. vol. 132; p. 547.
Perry, J. L., assignor to H. B. Smith Machine Company, Smithville, N. J. Means for lubricating sandpapering-machines. No. 876,911; Jan. 14; Sp. p. 2480; Dr. p. 542; Gaz. vol. 132; p. 437.
Perry, R. W., Stoneham, assignor of one-half to G. H. Stevens, Melrose, Mass. Cushion-heel. No. 877,450; Jan. 21; Sp. p. 3609; Dr. p. 781; Gaz. vol. 132; p. 656.
Persoda, O. F., Lynn, Mass., assignor to General Electric Company. Motion-checking device. No. 876,994; Jan. 21; Sp. p. 2685; Dr. p. 584; Gaz. vol. 132; p. 506.
Peter, P., Pittsburg, Pa. Torpedo-placer. No. 876,229; Jan. 7; Sp. p. 1058; Dr. p. 228; Gaz. vol. 132; p. 179.
Peters, F., Cold Spring, Minn. Game-board. No. 877,594; Jan. 28; Sp. p. 3928; Dr. p. 850; Gaz. vol. 132; p. 725.
Peters, J. C., Fort Wayne, Ind. Driving mechanism for washing-machines. No. 875,732; Jan. 7; Sp. p. 105; Dr. pp. 22–3; Gaz. vol. 132; p. 22.
Peterson, A., Waubay, S. D. Riding attachment for harrows. No. 876,230; Jan. 7; Sp. p. 1059; Dr. pp. 228–9; Gaz. vol. 132; p. 179.
Peterson, A. G., Wahpeton, N. D. Cistern. No. 876,392; Jan. 14; Sp. p. 1411; Dr. p. 304; Gaz. vol. 132; p. 264.
Peterson, J., St. Paul, Minn. Hay and manure gatherer and loader. No. 875,846; Jan. 7; Sp. p. 315; Dr. pp. 69–70; Gaz. vol. 132; p. 58.
Peterson, J. N., and F. P. Wernli, Hazelton, N. D. Bag-holder. No. 875,547; Jan. 7; Sp. p. 317; Dr. p. 70; Gaz. vol. 132; p. 58.
Peterson, W. V., Minneapolis, Minn., assignor to Wyckoff, Seamans & Benedict, Illon, N. Y. Type-writing machine. No. 876,393; Jan. 14; Sp. p. 1412; Dr. p. 305; Gaz. vol. 132; p. 264.
Pettit, R. L., Great Falls, Mont. Combined potato digger and separator. No. 876,834; Jan. 14; Sp. p. 2321; Dr. p. 510; Gaz. vol. 132; p. 411.
Pettit, S. W. (See Ernst, C. A., assignor.)
Pettit, S. W. (See Ernst and Hamlin, assignors.)
Pevey, C. K. (See Bowen, A. L. assignor.)
Pevey, C. K., Worcester, Mass. Street-sweeper. No. 876,727; Jan. 14; Sp. p. 2130; Dr. p. 468; Gaz. vol. 132; p. 378.
Pfaff, R. H., Ashtabula, Ohio. Carriage-bow. No. 876,995; Jan. 21; Sp. p. 2689; Dr. p. 584; Gaz. vol. 132; p. 506.
Pfaffenbach, R., Leipzig, Germany, assignor to Firm of Adolf Bleichert & Company, Leipzig-Gohlis, Germany. Trolley-car for wire-rope or suspension railways. No. 876,486; Jan. 14; Sp. p. 1621; Dr. p. 351; Gaz. vol. 132; p. 296.
Pfeil, E. O., New York, N. Y. Electric pistol. No. 876,068; Jan. 7; Sp. p. 791; Dr. p. 169; Gaz. vol. 132; p. 134.
Pfender, C. E., Evansville, Ind. Pump. No. 876,231; Jan. 7; Sp. p. 1060; Dr. p. 229; Gaz. vol. 132; p. 179.
Pflager, H. M. (See Howard and Pflager.)
"Phatsco" Gesellschaft mit Beschränkter Haftung. (See Nicolai, L. J. F., assignor.)
Phelps, F., Wellston, Okla. Cotton-cleaner. No. 876,304; Jan. 14; Sp. p. 1417; Dr. p. 305; Gaz. vol. 132; p. 264.
Philadelphia Textile Machinery Company. (See Schwartz and Palen, assignors.)
Phillips, A. D., Waynesburg, Pa. Display apparatus. No. 876,089; Jan. 7; Sp. p. 793; Dr. p. 169; Gaz. vol. 132; p. 134.
Phillips, G. T., Voluntown, Conn. Cartridge-crimper. No. 876,584; Jan. 14; Sp. p. 1838; Dr. p. 401; Gaz. vol. 132; p. 331.
Phillips, S. F., Ashboro, N. C. Wheel for wheelbarrows. No. 876,585; Jan. 14; Sp. p. 1840; Dr. p. 402; Gaz. vol. 132; p. 331.
Pickard, G. W., Amesbury, Mass. Intelligence intercommunication by magnetic-wave components. No. 876,996; Jan. 21; Sp. p. 2691; Dr. p. 585; Gaz. vol. 132; p. 506.
Pickard, G. W., Amesbury, Mass. Means for receiving intelligence communicated by electric waves. No. 877,451; Jan. 21; Sp. p. 3610; Dr. p. 782; Gaz. vol. 132; p. 657.
Pierce, C. E., Edmore, N. D. Whip-socket. No. 876,658; Jan. 14; Sp. p. 2014; Dr. p. 439; Gaz. vol. 132; p. 357.
Pifer, G. N., Cleveland, Ohio. Coating-machine. No. 877,120; Jan. 21; Sp. p. 2950; Dr. p. 638; Gaz. vol. 132; p. 548.
Pike Adding Machine Company. (See Pike, W. H., Jr., assignor.)
Pike, H. A., New York, N. Y. Flexible stay-bolt. No. 876,912; Jan. 14; Sp. p. 2481; Dr. p. 542; Gaz. vol. 132; p. 437.
Pike, W. H., Jr., South Orange, assignor to Pike Adding Machine Company, Orange, N. J. Operating device for calculating-machines. No. 876,232; Jan. 7; Sp. p. 1062; Dr. pp. 229–30; Gaz. vol. 132; p. 180.
Piland, E., Toppenish, Wash. Mail-bag catcher. No. 876,835; Jan. 14; Sp. p. 2324; Dr. p. 511; Gaz. vol. 132; p. 411.
Pinelli, C. (See Goldsmith, C., assignor.)
Pitt, W. P., Independence, assignor to Irving-Pitt Mfg. Co., Kansas City, Mo. Loose-leaf book. No. 876,395; Jan. 14; Sp. p. 1418; Dr. p. 305; Gaz. vol. 132; p. 265.
Pittsburgh Equipment Company. (See Richardson, W. P., assignor.)
Pittsburgh Steel Foundry. (See Hassel, G. A., assignor.)
Plant, T. G., Boston, Mass., assignor to Manufacturers Machine Company, Montclair, N. J. Welt and thread cutting means for sewing-machines. No. 877,858; Jan. 28; Sp. p. 4406; Dr. pp. 959–60; Gaz. vol. 132; p. 808.
Plant, T. G., Boston, Mass., assignor to Manufacturers Machine Company, Montclair, N. J. Welt-measuring means for sewing-machines. No. 877,859; Jan. 28; Sp. p. 4410; Dr. p. 960; Gaz. vol. 132; p. 809.
Plass, A., New York, N. Y. Device for opening and closing window-sashes. No. 876,487; Jan. 14; Sp. p. 1622; Dr. pp. 351–2; Gaz. vol. 132; p. 296.
Plass, H. E., assignor to Howard Miniature Lamp Company, Newark, N. J. Electric-lamp receptacle. No. 876,233; Jan. 7; Sp. p. 1064; Dr. p. 230; Gaz. vol. 132; p. 180.
Plaut, J., Cincinnati, Ohio. Shirt attachment. No. 877,366; Jan. 21; Sp. p. 3452; Dr. p. 748; Gaz. vol. 132; p. 629.
Plaut, J., Cincinnati, Ohio. Separable button. No. 877,367; Jan. 21; Sp. p. 3453; Dr. p. 749; Gaz. vol. 132; p. 629.
Pleukharp, C. W., assignor of two-thirds to C. D. Saviers and C. Staiger, Columbus, Ohio. Device for tapping beer-kegs. No. 875,848; Jan. 7; Sp. p. 318; Dr. p. 70; Gaz. vol. 132; p. 59.
Plice, T. V. (See Topping and Plice.)
Plimpton, H. R., 2d, Newton Center, Mass. Antifriction-bearing. No. 876,836; Jan. 14; Sp. p. 2325; Dr. p. 511; Gaz. vol. 132; p. 411.
Poindexter, W. A., Allegheny, Pa. Appliance for opening and closing switches on car-lines. No. 875,733; Jan. 7; Sp. p. 107; Dr. p. 23; Gaz. vol. 132; p. 22.
Pollard-Ailing Manufacturing Company. (See Ailing, F. H., assignor.)
Porter, F. T., Morristown, Ind. Incubator. No. 877,731; Jan. 28; Sp. p. 4180; Dr. p. 906; Gaz. vol. 132; p. 768.
Porter, S. E., and A. H. Harbaugh, Casstown, Ohio. Adjustable headlight. No. 876,488; Jan. 14; Sp. p. 1624; Dr. p. 352; Gaz. vol. 132, p. 296.
Porter Screen Manufacturing Company. (See Mix, A. H., assignor.)
Post, H. M., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Telephone system. No. 877,121; Jan. 21; Sp. p. 2952; Dr. p. 638; Gaz. vol. 132; p. 548.
Potts, W. E., Dunedin, New Zealand. Bucket-cleaning save-all. No. 876,837; Jan. 14; Sp. p. 2328; Dr. p. 511; Gaz. vol. 132; p. 412.
Pou, E. W. (See Robertson, W. A., assignor.)
Powell, F. D., and C. S. Ellis, assignors to American Coin Register Company, Chicago, Ill. Coin-registering mechanism. No. 876,586; Jan. 14; Sp. p. 1841; Dr. pp. 402–4; Gaz. vol. 132; p. 332.
Powell, H. S., Clinton, assignor to Powell Muffler & Timer Company, Utica, N. Y. Muffler for explosive-engines. No. 877,860; Jan. 28; Sp. p. 4413; Dr. p. 961; Gaz. vol. 132; p. 809.
Powell Muffler & Timer Company. (See Powell, H. S., assignor.)
Poyneer, P., Decatur, Ind. Fanning-mill. No. 876,012; Jan. 7; Sp. p. 634; Dr. pp. 135–6; Gaz. vol. 132; p. 110.
Pratt & Whitney Company. (See Hanson, B. M. W., assignor.)
Prescott, A. J., Rochester, N. Y. Lather-brush. No. 876,090; Jan. 7; Sp. p. 795; Dr. p. 169; Gaz. vol. 132; p. 135.
Prescott, O. D., New York, N. Y. Electric railway. No. 876,659; Jan. 14; Sp. p. 2015; Dr. p. 439; Gaz. vol. 132; p. 357.
Pressey, H. F., assignor of one-third to W. F. Chamberlain, Bridgeport, Conn. Electrical dental and surgical appliance. No. 876,997; Jan. 21; Sp. p. 2699; Dr. p. 585; Gaz. vol. 132; p. 507.
Preston, G. L., Townville, Pa. Spoke-puller. No. 876,234; Jan. 7; Sp. p. 1065; Dr. p. 231; Gaz. vol. 132; p. 180.
Preston, W. A., Roe, Ark. Harrow. No. 877,452; Jan. 21; Sp. p. 3615; Dr. p. 782; Gaz. vol. 132; p. 657.
Priebe, H. C., Blue Island, Ill. Rocker-bottom car. No. 876,587; Jan. 14; Sp. p. 1849; Dr. p. 404; Gaz. vol. 132; p. 332.
Priest, E. D., Schenectady, N. Y., assignor to General Electric Company. Means for supporting brush-holders. No. 876,998; Jan 21; Sp. p. 2701; Dr. p. 586; Gaz. vol. 132; p. 507.
Prior, E. S., Omaha, Nebr. Car-seal. No. 876,838; Jan. 14; Sp. p. 2329; Dr. p. 512; Gaz. vol. 132; p. 412.
Pritchard, A. R., Rochester, N. Y. Pail-supporting device. No. 877,595; Jan. 28; Sp. p. 3929; Dr. p. 850; Gaz. vol. 132; p. 725.
Prollius, B. A. O., Copenhagen, Denmark. Liner-plate. No. 877,732; Jan. 28; Sp. p. 4182; Dr. p. 906; Gaz. vol. 132; p. 768.
Puffer, G. (See Holmes and Puffer.)
Pulsifer, H. D. (See Hopkins, M. K., assignor.)

Pummerer, R., assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Red dye and making same. No. 876,839; Jan. 14; Sp. p. 2330; Gaz. vol. 132; p. 412.
Purtle, A. D., and I. E. Rowland, Salem, W. Va. Apparatus for producing carbon-black. No. 877,596; Jan. 28; Sp. p. 3930; Dr. p. 850; Gaz. vol. 132; p. 725.
Putnam, G. H. (See Murphy and Putnam.)
Putney, H. S., Sandusky, Mich. Pipe-coupling. No. 877,368; Jan. 21; Sp. p. 3454; Dr. p. 749; Gaz. vol. 132; p. 630.
Pyle, J. T., Amarillo, Tex. Sheet-piling. No. 876,306; Jan. 7; Sp. p. 1227; Dr. pp. 267–8; Gaz. vol. 132; p. 205.
Quackenboss, L. G., Chicago, Ill. Adjustable flower-box. No. 876,235; Jan. 7; Sp. p. 1066; Dr. p. 231; Gaz. vol. 132; p. 181.
Quinlan, A. E. (See Deeley and Quinlan.)
Quinn, M. V., Seattle, Wash. Device for supporting umbrellas, canes, and the like. No. 877,453; Jan. 21; Sp. p. 3616; Dr. p. 783; Gaz. vol. 132; p. 657.
Racouillat, F. L., and T. P. Reid, assignors of one-sixth to F. Shuia, San Francisco, Cal. Measuring device. No. 875,948; Jan. 7; Sp. p. 496; Dr. p. 107; Gaz. vol. 132; p. 90.
Radu, J. W., assignor of one-half to P. C. Wild, Rochester, N. Y. Portable tire-inflator. No. 877,861; Jan. 28; Sp. p. 4414; Dr. p. 961; Gaz. vol. 132; p. 809.
Rail Joint Company. (See Dalton, F. J., assignor.))
Rail Joint Company. (See Wolhaupter, B., assignor.)
Railroad Weed Burner Company. (See Howard, C. H., assignor.)
Railroad Weed Burner Company. (See McKeen and Barks, assignors.)
Rakestraw, W. H., Bloomington, Ill. Reach-bar. No. 876,013; Jan. 7; Sp. p. 636; Dr. p. 136; Gaz. vol. 132; p. 110.
Rakestraw, W. H., Bloomington, Ill. Vehicle-shaft. No. 876,014; Jan. 7; Sp. p. 637; Dr. p. 136; Gaz. vol. 132; p. 110.
Randall, G. A., Philadelphia, Pa. Sensitized-paper holder. No. 877,454; Jan. 21; Sp. p. 3617; Dr. p. 783; Gaz. vol. 132; p. 658.
Randolph Paper Box Company. (See Cook, E. E., assignor.)
Rankin, W. K., assignor to J. E. Reyburn, Philadelphia, Pa. Electropneumatic machine. No. 877,369; Jan. 21; Sp. p. 3455; Dr. pp. 740–50; Gaz. vol. 132; p. 630.
Rappleye, S. B., and J. J. Devine, Philadelphia, Pa. Electric-railway system. No. 876,489; Jan. 14; Sp. p. 1625; Dr. p. 352; Gaz. vol. 132; p. 297.
Rasmussen, L. T., Nevada, Iowa. Cattle-stanchion. No. 876,588; Jan. 14; Sp. p. 1850; Dr. pp. 404–5; Gaz. vol. 132; p. 332.
Rasor, H. F., Barberton, Ohio. Joint. No. 876,490; Jan. 14; Sp. p. 1627; Dr. p. 353; Gaz. vol. 132; p. 297.
Rauber, J. N. (See Shone and Rauber.)
Ray, C. H., Fayetteville, Ark. Rail-joint. No. 877,455; Jan. 21; Sp. p. 3618; Dr. p. 783; Gaz. vol. 132; p. 658.
Ray, T. H., Somerville, Mass. Ice-making machine. No. 876,015; Jan. 7; Sp. p. 638; Dr. pp. 136–7; Gaz. vol. 132; p. 110.
Read & Sons, William. (See Ridlon, G. H., assignor.)
Reagan Bale Company. (See Reagan, E., assignor.)
Reagan, E., assignor, by mesne assignments, to Reagan Bale Company, San Antonio, Tex. Bale-forming apparatus. No. 877,122; Jan. 21; Sp. p. 2959; Dr. pp. 638–40; Gaz. vol. 132; p. 549.
Reagan, J., Philadelphia, Pa. Grate. No. 876,728; Jan. 14; Sp. p. 2131; Dr. p. 468; Gaz. vol. 132; p. 378.
Reckendorfer, S. J., New York, N. Y. Lead-pencil. No. 877,370; Jan. 21; Sp. p. 3457; Dr. p. 750; Gaz. vol. 132; p. 630.
Rector, A., assignor to W. B. Hutchinson, trustee, New York, N. Y. Alcohol-lamp. No. 877,862; Jan. 28; Sp. p. 4415; Dr. pp. 961–2; Gaz. vol. 132; p. 809.
Redfield, R. S., East Orange, N. J., assignor to Robert S. Redfield & Company. Reducing-tank. No. 877,371; Jan. 21; Sp. p. 3458; Dr. p. 751; Gaz. vol. 132; p. 630.
Reed, E. C. (See Lubke and Reed.)
Reed, F. C., Paonia, Colo. Rubber-holder. No. 876,091; Jan. 7; Sp. p. 796; Dr. p. 170; Gaz. vol. 132; p. 135.
Reed, W. H., Sawtelle, Cal. Bicycle package-carrier. No. 875,949; Jan. 7; Sp. p. 498; Dr. p. 107; Gaz. vol. 132; p. 90.
Rees C. S., Philadelphia, Pa., and W. Fischer, Jr., Paterson, N. J.; said Fischer assignor to said Rees. Broom-holder. No. 876,589; Jan. 14; Sp. p. 1851; Dr. p. 405; Gaz. vol. 132; p. 333.
Reid, C. R., Heidelberg, Miss. Rotary engine. No. 877,733; Jan. 28; Sp. p. 4182; Dr. p. 907; Gaz. vol. 132; p. 768.
Reid, J., New York, N. Y. Ship. No. 875,734; Jan. 7; Sp. p. 107; Dr. p. 23; Gaz. vol. 132; p. 22.
Reid, T. P. (See Racouillat and Reid.)
Reinshagen, H., Cologne, Germany, assignor to Otto Gas Engine Works, Philadelphia, Pa. Inlet-valve mechanism for internal-combustion engines. No. 876,236; Jan. 7; Sp. p. 1067; Dr. p. 231; Gaz. vol. 132; p. 181.
Reiss, G. T., Hamilton, Ohio, assignor to Niles-Bement-Pond Company, Jersey City, N. J. Facing-tool. No. 876,999; Jan. 21; Sp. p. 2703; Dr. p. 586; Gaz. vol. 132; p. 508.
Rendahl, T., *et al.* (See Foldvik, H., assignor.)
Reuter, A., New York, N. Y. Fire-escape. No. 876,840; Jan. 14; Sp. p. 2332; Dr. p. 512; Gaz. vol. 132; p. 412.
Reuter, J. C., New York, N. Y., assignor to Reuter Manufacturing Company, Pleasantville, N. J. Rotary motor. No. 876,396; Jan. 14; Sp. 1419; Dr. pp. 306–7; Gaz. vol. 132; p. 265.
Reuter Manufacturing Company. (See Reuter, J. C., assignor.)
Reuther, R. G., Detroit, Mich. Reinforced concrete construction. No. 877,734; Jan. 28; Sp. p. 4185; Dr. p. 907; Gaz. vol. 132; p. 769.
Rex Buggy Company. (See Hull, M. R., assignor.)
Rexer, W. H., Degraff, Ohio. Dipper. No. 877,372; Jan. 21; Sp. p. 3459; Dr. p. 751; Gaz. vol. 132; p. 631.
Reyburn, J. E. (See Rankin, W. K., assignor.)
Reynolds, A. L. and G. A., Huntington Beach, Cal. Wave-power apparatus. No. 875,950; Jan. 7; Sp. p. 499; Dr. p. 108; Gaz. vol. 132; p. 91.
Reynolds, C. H., Alpena, Mich. Bag filling and weighing machine. No. 876,092; Jan. 7; Sp. p. 797; Dr. p. 170; Gaz. vol. 132; p. 135.
Reynolds, F. C., Columbus, Ohio. Vestibule-door and platform controlling mechanism. No. 876,397; Jan. 14; Sp. p. 1429; Dr. p. 307; Gaz. vol. 132; p. 265.
Reynolds, G. A. (See Reynolds, A. L. and G. A.)
Rhoades, A. E., assignor to Draper Company, Hopedale, Mass. Slasher. No. 877,863; Jan. 28; Sp. p. 4416; Dr. p. 962; Gaz. vol. 132; p. 816.
Rhoades, L. J., Fond du Lac, Wis. Adjustable and extensible bracket. No. 877,373; Jan. 21; Sp. p. 3460; Dr. p. 751; Gaz. vol. 132; p 631.
Rice, N. E., Zenia, Cal. Sawmill set-works. No. 877,602; Jan. 28; Sp. p. 4053; Dr. pp. 876–7; Gaz. vol. 132; p. 747.
Rice, O., San Francisco, Cal. Door-check. No. 877,123; Jan. 21; Sp. p. 2964; Dr. p. 641; Gaz. vol. 132; p. 549.
Rich, A. R., East Eddington, Me. Rail-joint. No. 875,735; Jan. 7; Sp. p. 111; Dr. p. 24; Gaz. vol. 132; p. 23.
Rich, G. R., Chicago, Ill., assignor to Whitman & Barnes Manufacturing Company, Akron, Ohio. Drill-chuck. No. 876,016; Jan. 7; Sp. p. 642; Dr. p. 137; Gaz. vol. 132; p. 111.
Rich, S. M., Altadena, Cal. Floor polishing and finishing machine. No. 875,736; Jan. 7; Sp. p. 112; Dr. p. 24; Gaz. vol. 132; p. 23.
Richardson, F. L., Rockland, assignor of one-half to W. F. Brock, Abington, Mass. Gage for shoemakers' use. No. 877,864; Jan. 28; Sp. p. 4422; Dr. p. 962; Gaz. vol. 132; p. 810.
Richardson, H. H. (See Cutler, C. B., assignor.)
Richardson, M. E., *et al.* (See Norstrom, N. E., assignor.)
Richardson, P., Bryan, Ohio. Device for supporting paint-pails. No. 877,798; Jan. 28; Sp. p. 4295; Dr. p. 932; Gaz. vol. 132; p. 789.
Richardson, W. P., Beaver, assignor to Pittsburgh Equipment Company, Pittsburg, Pa. Side-frame construction. No. 877,735; Jan. 28; Sp. p. 4187; Dr. p. 908; Gaz. vol. 132; p. 769.
Rickard, M. J. (See Harkins, Rickard, and Cowley.)
Ricketts, O. J., *et al.* (See Taylor, C. R., assignor.)
Rickles, J. N., Altoona, Ala. Coal-drilling machine. No. 877,597; Jan. 28; Sp. p. 3932; Dr. p. 850; Gaz. vol. 132; p. 726.
Rickli, J., Carrollton, Ohio. Door-controlling means. No. 877,374; Jan. 21; Sp. p. 3461; Dr. pp. 751–2; Gaz. vol. 132; p. 631.
Ricksecker, A. C., Jr., assignor, by mesne assignments, to Ajax Valve Company, Chicago, Ill. Valve. No. 877,865; Jan. 28; Sp. p. 4422; Dr. p. 963; Gaz. vol. 132; p. 810.
Rider, C. E., Myrtle Point, Oreg. Planing-saw. No. 877,799; Jan. 28; Sp. p. 4296; Dr. p. 932; Gaz. vol. 132; p. 789.
Riemer, W. L., assignor of two-thirds to J. Schmelzeinger and R. Scanlon, Baltimore, Md. Railway fare and transfer ticket. No. 876,729; Jan. 14; Sp. p. 2134; Dr. p. 468; Gaz. vol. 132; p. 378.
Ridgway, G., Kalgoorlie, Western Australia, Australia. Filter. No. 877,000; Jan. 21; Dr. p. 2704; Dr. pp. 586–7; Gaz. vol. 132; p. 508.
Ridlon, G. H., Revere, assignor to W. Read & Sons, Boston, Mass. Chest-protector. No. 876,237; Jan. 7; Sp. p. 1069; Dr. p. 232; Gaz. vol. 132; p. 181.
Riechmann, W. (See Zierlein and Riechmann.)
Rike, B. I., Dayton, Ohio. Paper vessel. No. 877,001; Jan. 21; Sp. p. 2709; Dr. p. 587; Gaz. vol. 132; p. 508.
Riley, J., Southampton, and F. A. Spiers, London, England. Automatic coupling. No. 877,663; Jan. 28; Sp. p. 4056; Dr. pp. 877–8; Gaz. vol. 132; p. 747.
Riley, J., Southampton, and F. A. Spiers, Hampstead, England. Automatic coupling. No. 877,664; Jan. 28; Sp. p. 4058; Dr. pp. 878–9; Gaz. vol. 132; p. 748.
Rimailho, E. (See Schneider and Rimailho.)
Ripley, J. R., Memphis, Tenn. Dry kiln. No. 877,736; Jan. 28; Sp. p. 4189; Dr. p. 908; Gaz. vol. 132; p. 770.

Rishel, G. R., and E. H. Wykoff, Alexandria, Pa. Bark-peeler. No. 875,962; Jan. 7; Sp. p. 320; Dr. p. 70; Gaz. vol. 132; p. 89.
Ritch, W. S., New York, N. Y. Observation-swing. No. 876,841; Jan. 14; Sp. p. 2324; Dr. p. 512; Gaz. vol. 132; p. 413.
Ritchie, J. P., New Tazewell, Tenn. Apparatus for cooking canned goods. No. 876,693; Jan. 14; Sp. p. 2017; Dr. p. 440; Gaz. vol. 132; p. 257.
Rivas, D., Philadelphia, Pa. Bottle and stopper therefor. No. 877,229; Jan. 21; Sp. p. 3192; Dr. p. 692; Gaz. vol. 132; p. 587.
Riser, F. W., *et al.* (See Latimer, J. B., assignor.)
Robards, W. T. (See Kersey, R., assignor.)
Robert S. Redfield & Company. (See Redfield, R. S., assignor.)
Roberts, C. E. and O. W., Chicago, Ill. Machine for cutting butter or the like material. No. 875,737; Jan. 7; Sp. p. 114; Dr. p. 25; Gaz. vol. 132; p. 24.
Roberts, C. E. and O. W., Chicago, Ill. Machine for cutting butter, &c. No. 875,738; Jan. 7; Sp. p. 118; Dr. pp. 25–6; Gaz. vol. 132; p. 24.
Roberts, C. E. and O. W., Chicago, Ill. Machine for cutting butter, &c. No. 875,739; Jan. 7; Sp. p. 131; Dr. p. 26; Gaz. vol. 132; p. 24.
Roberts, E., Iahpeming, Mich. Mail-bag catcher and deliverer. No. 877,800; Jan. 28; Sp. p. 4297; Dr. p. 933; Gaz. vol. 132; p. 780.
Roberts, G. X., Brattleboro, Vt. Artificial limb. No. 876,017; Jan. 7; Sp. p. 643; Dr. p. 137; Gaz. vol. 132; p. 111.
Roberts, J. G., assignor to Western Electric Company, Chicago, Ill. Controlling mechanism for automatic exchanges. No. 875,951; Jan. 7; Sp. p. 502; Dr. pp. 108–10; Gaz. vol. 132; p. 91.
Roberts, L. E. (See Hillman and Roberts.)
Roberts Lumber Company. (See Ware, J. L., assignor.)
Roberts, O. W. (See Roberts, C. E. and O. W.)
Roberts, R. W., Washington, D. C. Inking-pad receptacle. No. 876,398; Jan. 14; Sp. p. 1431; Dr. p. 307; Gaz. vol. 132; p 266.
Roberts, T. A., Sutherland, Nebr. Beet-chopper. No. 877,737; Jan. 28; Sp. p. 4191; Dr. pp. 908–9; Gaz. vol. 132; p. 770.
Roberts, W. A. (See Morris, N. E., Jr., assignor.)
Robertson, H. S., and J. R. Graham, Walthamstow, assignors to Robgrey & Company Limited, London, England. Production of artificial fuel and coke. No. 877,738; Jan. 28; Sp. p. 4194; Gaz. vol. 132; p. 770.
Robertson, W. A., Newbern, assignor of one-fourth to E. W. Pou, Smithfield, N. C. Automatic pipe-coupling for cars. No. 877,866; Jan. 28; Sp. p. 4424; Dr. p. 963; Gaz. vol. 132; p. 811.
Robgrey & Company. (See Robertson and Graham, assignors.)
Robinson, C. L., assignor of one-third to F. S. Streep, New York, N. Y. Reciprocating-motion printing-press. No. 876,590; Jan. 14; Sp. p. 1852; Dr. p. 405; Gaz. vol. 132; p. 333.
Robinson, H. L., Lake Charles, La. Tile-fastener. No. 876,399; Jan. 14; Sp. p. 1432; Dr. p. 307; Gaz. vol. 132; p. 266.
Robinson, L. G., Newport, Ky., and L. J. Hanhart, assignors to J. A. Fay & Egan Company, Cincinnati, Ohio. Board-edging machine. No. 877,124; Jan. 21; Sp. p. 2967; Dr. pp. 641–2; Gaz. vol. 132; p. 550.
Robinson, L. S., Alameda, Cal. Dental tool. No. 876,842; Jan. 14; Sp. p 2326; Dr. p. 513; Gaz. vol. 132; p. 413.
Roche, W. J., New Bethlehem, Pa. Interest-calculator. No. 877,230; Jan. 21; Sp. p. 3194; Dr. p. 693; Gaz. vol. 132; p. 587.
Röchling, H., and W. Rodenhauser, Völklingen-on-the-Saar, Germany. Means for obtaining thin liquid dross in electric furnaces for metallurgical purposes. No. 877,739; Jan. 28; Sp. p. 4197; Dr. p. 909; Gaz. vol. 132; p. 771.
Rockhill, C., New York, N. Y. Projectile. No. 875,982; Jan. 7; Sp. p. 519; Dr. p. 111; Gaz. vol. 132; p. 91.
Röd, L., Montreal, Quebec, Canada. Bag-closing device. No. 875,963; Jan. 7; Sp. p. 521; Dr. p. 111; Gaz. vol. 132; p. 91.
Rode, R., Kragerö, Norway. Bed for the sick. No. 876,238; Jan. 7; Sp. p. 1070; Dr. p. 232; Gaz. vol. 132; p. 181.
Rodenhauser, W. (See Röchling and Rodenhauser.)
Roe, E. S. (See Markham and Roe.)
Roever, A. E., Buffalo, N. Y. Fastener for roofing. No. 876,843; Jan. 14; Sp. p. 2337; Dr. p. 513; Gaz. vol. 132; p. 413.
Rogers, A., *et al.* (See Conley, C. M., assignor.)
Rogers Addresser Company. (See Rogers, R. N., assignor.)
Rogers, C. P., Jr., Corry, Pa. Crutch-tip. No. 877,231; Jan. 21; Sp. p. 3195; Dr. p. 693; Gaz. vol. 132; p. 587.
Rogers, R. N., assignor to Rogers Addresser Company, Chicago, Ill. Envelop-addresser. No. 876,913; Jan. 14; Sp. p. 2483; Dr. pp. 542–3; Gaz. vol. 132; p. 438.
Rogers, R. N., assignor to Rogers Addresser Company, Chicago, Ill. Self-feeder for addressing-machines and the like. No 876,914; Jan. 14; Sp. p. 2493; Dr. p. 544; Gaz. vol. 132; p. 438.
Rohde, W., Cincinnati, Ohio. Vending-machine. No. 876,284; Jan. 7; Sp. p. 1170; Dr. pp. 255–6; Gaz. vol. 132; p. 197.
Rohwer, C. F., Hot Springs, Ark. Antisnoring device. No. 876,491; Jan. 14; Sp. p. 1625; Dr. p. 353; Gaz. vol. 132; p. 297.
Roland, A. A., Greenville, Ohio. Candlestick. No. 876,401; Jan. 14; Sp. p. 1436; Dr. p. 308; Gaz. vol. 132; p. 267.
Rolfe, C. A., Adrian, Mich., assignor, by mesne assignments, to Rolfe Electric Co., Rochester, N. Y. Electrical distributing-rack. No. 876,400; Jan. 14; Sp. p. 1434; Dr. p. 308; Gaz. vol. 132; p. 266.
Rolfe Electric Co. (See Rolfe, C. A., assignor.)
Rolland, F. W., Jr., Chicago, Ill. Web-controller for presses. No. 877,232; Jan. 21; Sp. p. 3196; Dr. p. 693; Gaz. vol. 132; p. 587.
Rollins, H. S., Sterling, Colo. Refuse-separator for beets. No. 876,230; Jan. 7; Sp. p. 1071; Dr. pp. 232–3; Gaz. vol. 132; p. 182.
Rollins, J. L., Colfax, Cal. Jar-sealing and vacuum-releasing device. No. 876,591; Jan. 14; Sp. p. 1854; Dr. p. 406; Gaz. vol. 132; p. 333.
Rose, A. A., Bellevue, Ky. Automatic musical instrument. No. 877,125; Jan. 21; Sp. p. 2972; Dr. p. 642; Gaz. vol. 132; p. 550.
Rose Manufacturing Company. (See Rose, S. S., assignor.)
Rose, S. S., Santa Clara, assignor to Rose Manufacturing Company, San Jose, Cal. Gearing. No. 876,018; Jan. 7; Sp. p. 646; Dr. p. 138; Gaz. vol. 132; p. 111.
Ross, G. D., Glasgow, Scotland. Wheel for motor-vehicles. No. 877,233; Jan. 21; Sp. p. 3199; Dr. p. 693; Gaz. vol. 132; p. 588.
Ross, J., Tiburon, Cal. Bucket elevator. No. 876,019; Jan. 7; Sp. p. 648; Dr. p. 138; Gaz. vol. 132; p. 112.
Ross, O. A., Chicago, Ill. Trolley-pole controller. No. 876,402; Jan. 14; Sp. p. 1628; Dr. pp. 253–4; Gaz. 132; p. 298.
Ross, O. A., Chicago, Ill. Trolley-pole controller. No. 877,126; Jan. 21; Sp. p. 2975; Dr. pp. 642–3; Gaz. vol. 132; p. 551.
Ross, W. G., and D. McDonald, Montreal, Quebec, Canada. Passenger-car. No. 875,740; Jan. 7; Sp. p. 122; Dr. p. 27; Gaz. vol. 132; p. 25.
Rossi, A. J., assignor to Titanium Alloy Manufacturing Company, New York, N. Y. Producing alloys or mixtures of metals with purifying or seasoning elements. No. 877,518; Jan. 28; Sp. p. 3762; Gaz. vol. 132; p. 701.
Rouech, E. E., assignor, by mesne assignments, to C. J. Holton, Detroit, Mich. Doll. No. 875,954; Jan. 7; Sp. p. 522; Dr. p. 111; Gaz vol. 132; p. 92.
Rounds, D., and C. E. Cook, Portland, Me. Repair-last. No. 877,519; Jan. 28; Sp. p. 3765; Dr. p. 814; Gaz. vol. 132; p. 701.
Rounsevill, J., and A. Bilms, Cuxhaven, Germany. Time-indicator for telephones. No. 876,494; Jan. 14; Sp. p. 1632; Dr. p. 354; Gaz. vol. 132; p. 298.
Rountree, H. W., Richmond, Va. Garment-hanger. No. 877,598; Jan. 28; Sp. p. 3933; Dr. p. 851; Gaz. vol. 132; p. 726.
Row, G. S., Indianapolis, Ind. Lens-fastening for nose-glasses. No. 875,955; Jan. 7; Sp. p. 523; Dr. p. 111; Gaz. vol. 132; p. 92.
Rowe, T., Dollar Bay, Mich. Water-economizer for jigs. No. 875,850; Jan. 7; Sp. p. 321; Dr. p. 71; Gaz. vol. 132; p. 59.
Rowland, I. E. (See Purtle and Rowland.)
Roydan Marble Machinery Company. (See Peirce, J. R., assignor.)
Ruddiman, T. H., assignor to Banana Steel Crate Co., Detroit, Mich. Banana-crate. No. 876,592; Jan. 14; Sp. p. 1856; Dr. p. 406; Gaz. vol. 132; p. 334.
Rudolphi, F., Chicago, Ill., assignor to American Can Company, New York, N. Y. Stationary-can double-seaming machine. No. 877,375; Jan. 21; Sp. p. 3463; Dr. pp. 752–3; Gaz. vol. 132; p. 632.
Rufty, H. and M., Fremont, Ohio. Vegetable cutter and trimmer. No. 876,915; Jan. 14; Sp. p. 2497; Dr. p. 544; Gaz. vol. 132; p. 439.
Rufty, M. (See Rufty, H. and M.)
Rugh, H. O., Sandwich, Ill. Telegraph system. No. 877,002; Jan. 21; Sp. p. 2710; Dr. p. 588; Gaz. vol. 132; p. 509.
Rulli, P. M., and J. V. Martrano, New Haven, Pa. Roller-skate. No. 876,093; Jan. 7; Sp. p. 798; Dr. p. 170; Gaz. vol. 132; p. 135.
Rumberg, P. S., Norway, Mich. Hat-pin. No. 876,094; Jan. 7; Sp. p. 799; Dr. p. 171; Gaz. vol. 132; p. 136.
Runnels, C. N. (See Breeze, H. J., assignor.)
Rupe, J. R., and W. F. Halzer, assignors to Chandelier & Art Brass Works, Richmond, Ind. Step-ladder. No. 877,867; Jan. 28; Sp. p. 4426; Dr. p. 964; Gaz. vol. 132; p. 811.
Ruppel, W., Evanston, Wyo. Fruit-press. No. 876,095; Jan. 7; Sp. p. 800; Dr. p. 171; Gaz. vol. 132; p. 136.
Rush, A., Columbus, Ohio. Flexible or rolling metallic shutter. No. 876,808; Jan. 14; Sp. p. 1857; Dr. p. 406; Gaz. vol. 132; p. 334.
Rusha, N., Rankin, Pa. Car-brake-operating mechanism. No. 876,730; Jan. 14; Sp. p. 2133; Dr. p. 469; Gaz. vol. 132; p. 379.
Rushmore, S. W., Plainfield, N. J. Acetylene-generator. No. 877,234; Jan. 21; Sp. p. 3200; Dr. p. 694; Gaz. vol. 132; p. 588.
Russell, E. L. (See Butcher, C. C., assignor.)
Russell, F., Llamore, New South Wales, Australia. Field-gate. No. 877,235; Jan. 21; Sp. p. 3204; Dr. p. 694; Gaz. vol. 132; p. 588.
Russell, R., Stephen, Minn. Traction-engine. No 875,851; Jan. 7; Sp. p. 322; Dr. pp. 71–2; Gaz. vol. 132; p. 60.
Ryan, E., Clinton, Iowa. Bed-spring support. No. 876,095; Jan. 7; Sp. p. 801; Dr. p. 171; Gaz. vol. 132; p. 136.
Ryan, M. M., Oberlin, Ohio. Ball-caster. No. 877,236; Jan. 21; Sp. p. 3206; Dr. p. 695; Gaz. vol. 132; p. 589.
S. Y. Bowser & Company. (See Bowser, A. A., assignor.)
Sadlar, J. F., Los Angeles, Cal. Sample-holder. No. 877,599; Jan. 28; Sp. p. 3935; Dr. p. 851; Gaz. vol. 132; p. 726.
Sadtler, P. B. and S. P., Philadelphia, Pa. Making alkali hydroxide. No. 877,376; Jan. 21; Sp. p. 3468; Gaz. vol. 132; p. 632.
Sadtler, S. P. (See Sadtler, P. B. and S. P.)

Safety Door Hanger Co. (See Topping and Plice, assignors.)
Sague, J. E., and F. J. Cole; said Cole assignor to American Locomotive Company, New York, N. Y. By-pass valve for locomotives. No. 877,868; Jan. 28; Sp. p. 4428; Dr. p. 964; Gaz. vol. 132; p. 811.
Salisbury, A. E., Toledo, Ohio. Ailning means. No. 876,097; Jan. 7; Sp. p. 803; Dr. p. 172; Gaz. vol. 132; p. 136.
Salisbury, L. E., Providence, R. I. Means for producing selvage in loom-woven fabrics. No. 876,494; Jan. 14; Sp. p. 1634; Dr. p. 354; Gaz. vol. 132; p. 298.
Salpetersäure-Industrie-Gesellschaft, Ges. M. B. H., Firm of. (See Pauling, H., assignor.)
Salter, W. A., Cedar Point, Kans. Two-cycle gas-engine. No. 876,030; Jan. 7; Sp. p. 649; Dr. p. 139; Gaz. vol. 132; p. 112.
Sametz, H., assignor to L. Oppenheimer's Sons, Philadelphia, Pa. Box. No. 876,741; Jan. 7; Sp. p. 125; Dr. p. 28; Gaz. vol. 132; p. 25.
Sander, F. W., assignor of one-half to J. C. Buahby, New York, N. Y. Leader-pipe protector for buildings. No. 877,456; Jan. 21; Sp. p. 3619; Dr. p. 784; Gaz. vol. 132; p. 658.
Sandford, W. E., Zanesville, Ohio. Tongs-carrier. No. 876,661; Jan. 14; Sp. p. 2018; Dr. p. 440; Gaz. vol. 132; p. 358.
Sanford, D. B., Watertown, N. Y. Handle for bottle-stoppers. No. 875,956; Jan. 7; Sp. p. 524; Dr. p. 112; Gaz. vol. 132; p. 92.
Sangstad, O., Plainfield, N. J., assignor to Davis & Roesch Temperature Controlling Company, New York, N. Y. Thermostat. No. 875,957; Jan. 7; Sp. p. 526; Dr. p. 112; Gaz. vol. 132; p. 92.
Saurer, Firm of A. (See Kobler, V., assignor.)
Saurer, H., Arbon, Switzerland. Starting device for explosion-engines with four cylinders. No. 877,377; Jan. 21; Sp. p. 3470; Dr. pp. 733–4; Gaz. vol. 132; p. 632.
Sauvage, W. H., New York, N. Y. Valve for fluid-pressure brakes. No. 875,958; Jan. 7; Sp. p. 527; Dr. pp. 112–13; Gaz. vol. 132; p. 93.
Sauvageau, E., Peabody, Mass. Screen-fastener. No. 877,127; Jan. 21; Sp. p. 2978; Dr. p. 643; Gaz. vol. 132; p. 551.
Savelsberg, J., Papenburg, Germany. Treating ores. No. 875,852; Jan. 7; Sp. p. 325; Gaz. vol. 132; p. 60.
Savery, B. F., Ann Arbor, Mich. Metallic sheathing. No. 876,096; Jan. 7; Sp. p. 804; Dr. p. 172; Gaz. vol. 132; p. 136.
Saviers, C. D., *et al.* (See Pleukharp, C. W., assignor.)
Sawyer, C. W., Marion, Ohio. File-case. No. 877,600; Jan. 28; Sp. p. 3936; Dr. p. 851; Gaz. vol. 132; p. 727.
Sawyer, F., Brighton, Mich. Evaporator. No. 877,665; Jan. 28; Sp. p. 4061; Dr. p. 880; Gaz. vol. 132; p. 748.
Sayre, C. E., Rockford, Ill. Mixer for gas-machines. No. 877,740; Jan. 28; Sp. p. 4198; Dr. p. 909; Gaz. vol. 132; p. 771.
Scanlon, R., *et al.* (See Riemer, W. L., assignor.)
Schacht, W. F., Goshen, Ind. Hair-curler. No. 876,402; Jan. 14; Sp. p. 1436; Dr. p. 308; Gaz. vol. 132; p. 267.
Schaller, A., Perrysburg, Ohio. Wrench. No. 877,741; Jan. 28; Sp. p. 4199; Dr. p. 909; Gaz. vol. 132; p. 771.
Schallow, P., St. Clair, Minn. Rein-guide. No. 877,128; Jan. 21; Sp. p. 2979; Dr. p. 643; Gaz. vol. 132; p. 551.
Schenck, M., assignor to Miami Cycle & Manufacturing Company, Middletown, Ohio. Spring-fork. No. 876,021; Jan. 7; Sp. p. 654; Dr. p. 139; Gaz. vol. 132; p. 113.
Scheuerer, J. J. (See Hauptle and Scheuerer.)
Schiffer, P. J., Detroit, Mich. Letter-box. No. 877,742; Jan. 28; Sp. p. 4200; Dr. p. 910; Gaz. vol. 132; p. 771.
Schiffhauer, J. H., Pittsburg, Pa. Shield for enlarged joints. No. 876,022; Jan. 7; Sp. p. 655; Dr. p. 140; Gaz. vol. 132; p. 113.
Schinneller, J., Pittsburg, Pa. Registering mechanism. No. 877,668; Jan. 28; Sp. p. 4067; Dr. pp. 881–2; Gaz. vol. 132; p. 749.
Schlamb, L. P., Dull, Ohio. Starter for engines. No. 876,240; Jan. 7; Sp. p. 1074; Dr. pp. 233–4; Gaz. vol. 132; p. 182.
Schleifer, C. R., assignor to Excelsior Shoe & Slipper Company, Cedarburg, Wis. Shoe. No. 877,869; Jan. 28; Sp. p. 4429; Dr. p. 964; Gaz. vol. 132; p. 812.
Schley, G. B., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Control system. No. 876,594; Jan. 14; Sp. p. 1858; Dr. p. 407; Gaz. vol. 132; p. 334.
Schloming, R. J., New York, N. Y. Turbine-engine. No. 877,237; Jan. 21; Sp. p. 3208; Dr. p. 695; Gaz. vol. 132; p. 589.
Schloss, J. W., New York, N. Y. Garment-supporter. No. 877,238; Jan. 21; Sp. p. 3208; Dr. p. 695; Gaz. vol. 132; p. 589.
Schmaltz, P., assignor to De La Vergne Machine Company, New York, N. Y. Fluid-cooling apparatus. No. 877,520; Jan. 28; Sp. p. 3766; Dr. pp. 815–16; Gaz. vol. 132; p. 701.
Schmeizolnger, J., *et al.* (See Andlauer, R., assignor.)
Schmidt, A., and E. Bryk, assignors to Farbwerke vorm. Meister, Lucius & Brüning, Höchst-on-the-Main, Germany. Violet dye and making same. No. 877,743; Jan. 28; Sp. p. 4201; Gaz. vol. 132; p. 772.
Schmidt, F. M., Jacksonville, Fla. Combined waistband and fly-front. No. 876,099; Jan. 7; Sp. p. 805; Dr. p. 172; Gaz. vol. 132; p. 137.
Schmidt, F. W., Philadelphia, Pa. Amusement novelty or theatrical device. No. 876,731; Jan. 14; Sp. p. 2136; Dr. p. 469; Gaz. vol. 132; p. 379.
Schmidt, H. A., Milwaukee, Wis. Automatic fishing-tackle. No. 876,732; Jan. 14; Sp. p. 2137; Dr. p. 469; Gaz. vol. 132; p. 379
Schmidt, H. E. O., Buffalo, N. Y. Grinding, sawing, and turning machine. No. 877,666; Jan. 28; Sp. p. 4064; Dr. p. 880; Gaz. vol. 132; p. 749.
Schmidt, J. H., *et al.* (See Andlauer, R., assignor.)
Schmidt, L. A., Chicago, Ill. Electrical register and system therefor. No. 876,595; Jan. 14; Sp. p. 1862; Dr. pp. 407–8; Gaz. vol. 132; p. 335.
Schmitz, W., Hamburg, Germany. Incandescent gas-burner. No. 877,667; Jan. 28; Sp. p. 4066; Dr. p. 880; Gaz. vol. 132; p. 749.
Schneider, B., Berlin, Germany. Odometer for use in connection with fare-indicators. No. 876,100; Jan. 7; Sp. p. 807; Dr. pp. 173–4; Gaz. vol. 132; p. 137.
Schneider, C. P. E., Le Creurot, and E. Rimailho, Neuilly-sur-Seine, France. Gun-carriage for recoiling guns. No. 877,521; Jan. 28; Sp. p. 3771; Dr. p. 816; Gaz. vol. 132; p. 702.
Schneider, R. F., New York, assignor to C. J. Tagliabue, Brooklyn, N. Y. Clinical-thermometer attachment. No. 875,742; Jan. 7; Sp. p. 126; Dr. p. 28; Gaz. vol. 132; p. 25.
Schneider, S., Charlottenburg, Germany. Ball-guiding casing. No. 877,129; Jan. 21; Sp. p. 2980; Dr. p. 644; Gaz. vol. 132; p. 551.
Schnek, H. (See Wahle, O., assignor.)
Schoenner, G., Nuremberg, Germany. Compass-head. No. 877,239; Jan. 21; Sp. p. 3209; Dr. p. 695; Gaz. vol. 132; p. 590.
Scholes, D. R., assignor to Aermotor Company, Chicago, Ill. Transmission-tower. No. 876,596; Jan. 14; Sp. p. 1870; Dr. p. 409; Gaz. vol. 132; p. 335.
Schotten, J. J., St. Louis, Mo. Machine for pasting and folding cartons. No. 877,744; Jan. 28; Sp. p. 4202; Dr. p. 910; Gaz. vol. 132; p. 772.
Schramm, W., and F. Becker, New York, N. Y. Heating apparatus. No. 876,495; Jan. 14; Sp. p. 1637; Dr. p. 355; Gaz. vol. 132; p. 299.
Schreiber, W., Munich, Germany. Underground system of laying electrical conductors. No. 876,241; Jan. 7; Sp. p. 1077; Dr. pp. 234–5; Gaz. vol. 132. p. 183.
Schroeder, M. F. H., Chicago, Ill. Work-holder. No. 877,522; Jan. 28; Sp. p. 3773; Dr. p. 817; Gaz. vol. 132; p. 702.
Schryer, P. F., and D. C. Stover, assignors to Stover Engine Works, Freeport, Ill. Internal-combustion engine. No. 877,378; Jan. 21; Sp. p. 3474; Dr. p. 754; Gaz. vol. 132; p. 633.
Schultz, A. G., New Orleans, La. Design-transferring apparatus. No. 876,733; Jan. 14; Sp. p. 2139; Dr. p. 469; Gaz. vol. 132; p. 380.
Schultz, G. J., New York, assignor to B. Briscoe, Tarrytown, N. Y. Igniter. No. 877,130; Jan. 21; Sp. p. 2981; Dr. p. 644; Gaz. vol. 132; p. 552.
Schulze, W., Detmold, Germany. Safety-valve for gas-conduits. No. 877,003; Jan. 21; Sp. p. 2716; Dr. p. 588; Gaz. vol. 132; p. 509.
Schurger, J. J., Jr., and J. Takacs, Cleveland, Ohio. Combination stool and music-stand. No. 876,023; Jan. 7; Sp. p. 656; Dr. p. 140; Gaz. vol. 132; p. 113.
Schuster, K., Oakmont, Pa. Button. No. 876,242; Jan. 7; Sp. p. 1080; Dr. p. 236; Gaz. vol. 132; p. 183.
Schwartz, M., assignor of two-thirds to S. Flaum and M. Bornstein, New York, N. Y. Sound recorder and reproducer. No. 875,853; Jan. 7; Sp. p. 325; Dr. p. 72; Gaz. vol. 132; p. 60.
Schwartz, W. M., and W. D. Palen, assignors to Philadelphia Textile Machinery Company, Philadelphia, Pa. Conveying apparatus for drying-machines. No. 877,801; Jan. 28; Sp. p. 4299; Dr. p. 933; Gaz. vol. 132; p. 790.
Schwartzman, J., assignor of two-thirds to S. and A. Shifman, Newark, N. J. Bed-spring. No. 877,004; Jan. 21; Sp. p. 2717; Dr. pp. 588–9; Gaz. vol. 132; p. 509.
Schwarz, R., Schenectady, N. Y., assignor to General Electric Company. Electric locomotive. No. 877,005; Jan. 21; Sp. p. 2722; Dr. p. 589; Gaz. vol. 132; p. 510.
Schweiger, L., *et al.* (See Klauser, O., assignor.)
Schweinert, M. C. (See Kraft and Schweinert.)
Schweinert, M. C., West Hoboken, N. J., and H. P. Kraft, assignors, by mesne assignments, to A. Schrader's Son, Incorporated, New York, N. Y. Water-bottle stopper. No. 876,101; Jan. 7; Sp. p. 809; Dr. p. 174; Gaz. vol. 132; p. 138.
Scobee, J. M., Bagdad, Ky. Mail-box. No. 877,006; Jan. 21; Sp. p. 2722; Dr. p. 589; Gaz. vol. 132; p. 510.
Scott, C. A., and A. F. Whipple, Fort Bragg, Cal. Detachable ferrule. No. 876,734; Jan. 14; Sp. p. 2140; Dr. p. 470; Gaz. vol. 132; p. 380.
Scott, C. H., Minneapolis, Minn. Brush-drive for grain-cleaning machines. No. 875,854; Jan. 7; Sp. p. 328; Dr. pp. 72–3; Gaz. vol. 132; p. 60.
Scott, J. A., St. Louis, Mo. Rail-joint. No. 877,007; Jan. 21; Sp. p. 2724; Dr. p. 590; Gaz. vol. 132; p. 510.
Scott, L. S., Rochester, N. Y. Annunciator. No. 876,735; Jan. 14; Sp. p. 2141; Dr. pp. 470–1; Gaz. vol. 132; p. 380.
Scott, W. E., Montreal, Quebec, Canada. Vessel-hull scraper. No. 877,745; Jan. 28; Sp. p. 4205; Dr. p. 911; Gaz. vol. 132; p. 772.
Scovill Manufacturing Company. (See Goss, J. H., assignor.)
Seaman, A. J., Faneuil, Mass., assignor to Imperial Art Press Co. Platen-locking mechanism. No. 876,496; Jan. 14; Sp. p. 1638; Dr. p. 355; Gaz. vol. 132; p. 299.
Seaman, G. Q., New York, N. Y. Trolley-replacer. No. 877,379; Jan. 21; Sp. p. 3475; Dr. p. 755; Gaz. vol. 132; p. 633.
Searelle, L., London, England, assignor to W. C. Jordan, New York, N. Y. Screw. No. 877,131; Jan. 21; Sp. p. 2983; Dr. p. 644; Gaz. vol. 132; p. 552.

Secrest, J. A., assignor of four-fifths to J. L. Duncan, C. K. Mauck, B. E. Cole, and H. B. Ferguson, Langdon, Kans. Poultry-nest. No. 876,916; Jan. 14; Sp. p. 2496; Dr. p. 545; Gaz. vol. 132; p. 439.
Security Title and Trust Company *et al.*, executors. (See Brothers, W.)
See, F. B., Gem, Kans. Locomotive-tender loader. No. 876,736; Jan. 14; Sp. p. 2150; Dr. pp. 471–2; Gaz. vol. 132; p. 381.
Sealye, B. T., Bloomington, Ill. Voting-machine. No. 877,380; Jan. 21; Sp. p. 3477; Dr. p. 755; Gaz. vol. 132; p. 634.
Selberling, F. A., Akron, Ohio. Vehicle-tire. No. 876,597; Jan. 14; Sp. p. 1872; Dr. p. 409; Gaz. vol. 132; p. 335.
Seidel, C., Youngstown, Ohio. Lubricating journal-box. No. 876,403; Jan. 14; Sp. p. 1437; Dr. p. 309; Gaz. vol. 132; p. 267.
Selleck, W. J., Riverside, Conn. System for automatically loading cars. No. 876,737; Jan. 14; Sp. p. 2151; Dr. pp. 472–3; Gaz. vol. 132; p. 381.
Seng Company. (See Franks, O. G., assignor.)
Senter, J. F., assignor of one-half to M. Llewellyn, M. G. Weidner, and J. H. Street, Chattanooga, Tenn. Steam-boiler indicator. No. 876,497; Jan. 14; Sp. p. 1640; Dr. pp. 355–6; Gaz. vol. 132; p. 300.
Shade, G. W. (See Van Nostran, J. E., assignor.)
Shafer, W. H., Cincinnati, Ohio. Traction fire-engine. No. 876,404; Jan. 14; Sp. p. 1438; Dr. p. 309; Gaz. vol. 132; p. 267.
Shafer, W. H., Cincinnati, Ohio. Steam-boiler. No. 877,601; Jan. 28; Sp. p. 3937; Dr. p. 851; Gaz. vol. 132; p. 727.
Shaffer, A. H. *et al.* (See Ottason, T., assignor.)
Shaffer, O., Van Wert, Ohio. Mail-bag catcher. No. 877,240; Jan. 21; Sp. p. 3210; Dr. p. 696; Gaz. vol. 132; p. 590.
Shaffer, W. G., *et al.* (See Ottason, T., assignor.)
Shanahan, J. W. (See Mason and Shanahan.)
Shannon, H., Cyclone, Pa. Pipe-derrick. No. 876,243; Jan. 7; Sp. p. 1081; Dr. p. 236; Gaz. vol. 132; p. 183.
Sharp & Smith. (See Tietz, C., assignor.)
Sharples, D. T., West Chester, Pa. Milking-machine. No. 876,598; Jan. 14; Sp. p. 1874; Dr. p. 410; Gaz. vol. 132; p. 336.
Shaw, L. M., Chicago, Ill. Elevator. No. 876,599; Jan. 14; Sp. p. 1878; Dr. p. 410; Gaz. vol. 132; p. 336.
Sheehan, C. W., Lubec, Me. Trolley-guard. No. 876,600; Jan. 14; Sp. p. 1880; Dr. p. 411; Gaz. vol. 132; p. 337.
Sheehan, D. P., assignor to North American Railway Construction Company, Chicago, Ill. Machine for driving railway screw-spikes. No. 877,669; Jan. 28; Sp. p. 4077; Dr. p. 882; Gaz. vol. 132; p. 749.
Sheffield Car Company. (See Hovey, W. S., assignor.)
Shellenberger, S. L., assignor of one-half to E. D. Chadick, South McAlester, Okla. Railway-switch. No. 875,959; Jan. 7; Sp. p. 530; Dr. p. 113; Gaz. vol. 132; p. 93.
Shepard, C. H., New York, assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y. Type-writing machine. No. 877,241; Jan. 21; Sp. p. 3212; Dr. p. 696; Gaz. vol. 132; p. 590.
Shermer, G. F., Columbus, Ohio. Adjustable shade or curtain holder. No. 876,738; Jan. 14; Sp. p. 2156; Dr. p. 473; Gaz. vol. 132; p. 382.
Sherwin, P. D., *et al.* (See Olson, J. A., assignor.)
Shevill, T. E., New York, N. Y. Curtain-hanging apparatus. No. 876,405; Jan. 14; Sp. p. 1440; Dr. p. 310; Gaz. vol. 132; p. 268.
Shevlin, P. F., South Boston, Mass. Electric hoist or draft apparatus. No. 875,855; Jan. 7; Sp. p. 329; Dr. p. 33; Gaz. vol. 132; p. 61.
Shifman, A., *et al.* (See Schwartzman, J., assignor.)
Shifman, S., *et al.* (See Schwartzman, J., assignor.)
Shigon, N. A., New York, N. Y. Chuck. No. 876,244; Jan. 7; Sp. p. 1082; Dr. p. 236; Gaz. vol. 132; p. 184.
Shires, J. A., Denver, Colo. Sleeper attachment for day-coaches. No. 876,887; Jan. 14; Sp. p. 2435; Dr. pp. 530–1; Gaz. vol. 132; p. 429.
Shone, J. W., deceased, and J. N. Rauber, Rochester, N. Y.; W. V. Whitmore and C. F. Miller, executors. Apparatus for molding artificial-stone blocks. No. 877,870; Jan. 28; Sp. p. 4430; Dr. p. 965; Gaz. vol. 132; p. 812.
Shufelt, W. R., Niverville, N. Y. Vegetable-topping machine. No. 877,670; Jan. 28; Sp. p. 4079; Dr. p. 883; Gaz. vol. 132; p. 750.
Shula, F. (See Racouillat and Reid, assignors.)
Shuman, A. F., Chicago, Ill. Railway-tie. No. 875,856; Jan. 7; Sp. p. 331; Dr. p. 74; Gaz. vol. 132; p. 61.
Shuman, F., assignor to Continuous Glass Press Company, Philadelphia, Pa. Manufacture of wire-glass. No. 875,857; Jan. 7; Sp. p. 332; Dr. p. 74; Gaz. vol. 132; p. 61.
Shuman, F., assignor to Continuous Glass Press Company, Philadelphia, Pa. Machine for the manufacture of wire-glass. No. 876,307; Jan. 7; Sp. p. 1230; Dr. p. 268; Gaz. vol. 132; p. 206.
Shumate, J. W., assignor to G. W. White, Minneapolis, and V. Lockwood, Motley, Minn. Device for preventing flies from entering open doorways. No. 877,602; Jan. 28; Sp. p. 3939; Dr. p. 852; Gaz. vol. 132; p. 727.
Shuster, A. E., North Bend, Oreg. Device for supporting umbrellas and the like. No. 877,802; Jan. 28; Sp. p. 4301; Dr. pp. 933–4; Gaz. vol. 132; p. 790.

Smith, R. R., assignor, by mesne assignments, to General Specialty Manufacturing Company, Philadelphia, Pa. Tack and nail lifter. No. 877,526; Jan. 28; Sp. p. 3777; Dr. p. 818; Gaz. vol. 132; p. 703.
Smith, S. W., Douglasville, Ga. Road-machine. No. 876,846; Jan. 14; Sp. p. 2343; Dr. p. 514; Gaz. vol. 132; p. 414.
Smith, W. F., Coshocton, Ohio. Match-safe. No. 877,527; Jan. 28; Sp. p. 3778; Dr. p. 818; Gaz. vol. 132; p. 703
Smith, W. J., Redboiling Springs, Tenn. Cotton chopper and cultivator. No. 876,664; Jan. 14; Sp. p. 2021; Dr. p. 441; Gaz. vol. 132; p. 358.
Smith, W. R., *et al.* (See Wintherlich, H. J., assignor.)
Smothers, E. A., Mills, Nebr. Dough-raiser. No. 877,675; Jan. 28; Sp. p. 4087; Dr. p. 885; Gaz. vol. 132; p. 751.
Snapp, D. V., Holdrege, and C. W. Fraher, Lincoln, Nebr. Insulator-pin. No. 877,242; Jan. 21; Sp. p. 3215; Dr. p. 697; Gaz. vol. 132; p. 591.
Sneed, D. H., Stonewall, Okla. Machine for sharpening plowshares, disks, &c. No. 876,742; Jan. 14; Sp. p. 2161; Dr. pp. 474–5; Gaz. vol. 132; p. 383.
Snitjer, E. N., Pittsburg, Pa. Furnace. No. 877,871; Jan. 28; Sp. p. 4432; Dr

Stevens, R. L., Hartwell, Ohio. Combination of means for surveying and navigation. No. 876,604; Jan. 14; Sp. p. 1891; Dr. pp. 413–14; Gaz. vol. 132; p. 338.
Stevenson Machine Company. (See Kelley, G. L., assignor.)
Stevic, T. M., West Toledo, Ohio. Buggy-wrench. No. 877,611; Jan. 28; Sp. p. 3967; Dr. pp. 856–7; Gaz. vol. 132; p. 730.
Steward, G. R., London, England. Apparatus for the rapid generation of steam. No. 875,745; Jan. 7; Sp. p. 130; Dr. p. 29; Gaz. vol. 132; p. 26.
Stewart, A. (See Stewart, J. S., assignor.)
Stewart, A. C., Los Angeles, Cal. Carbureter. No. 877,136; Jan. 21; Sp. p. 2993; Dr. p. 647; Gaz. vol. 132; p. 554.
Stewart, J. S., assignor to A. Stewart, New York, ~~N. Y.~~ Outdoor lamp-receptacle. No. 876,964; Jan. 7; Sp. p. 539; Dr. p. 115; Gaz. vol. 132; p. 95.
Stickney, B. C., Elizabeth, assignor to Union Typewriter Company, Jersey City, N. J. Combined type-writing and adding machine. No. 876,409; Jan. 14; Sp. p. 1446; Dr. p. 311; Gaz. vol. 132; p. 269.
Still, W. J., Ealing, England. Electrical measuring instrument. No. 877,251; Jan. 21; Sp. p. 3236; Dr. pp. 700–1; Gaz vol. 132; p. 594.
Stillwell, C. B., assignor to himself and J. C. Little, Jacksonville, Fla. Closure. No. 877,805; Jan. 28; Sp. p. 4306; Dr. p. 935; Gaz. vol. 132; p. 791.
Stockwell, M. E., Grand Rapids, Mich., assignor to Acme Door and Glass Company, Los Angeles, Cal. Metal furniture. No. 876,888; Jan. 14; Sp. p. 2437; Dr. p. 531; Gaz. vol. 132; p. 429.
Stokely, W. R., St. Augustine, Fla. Shipping-crate. No. 877,612; Jan. 28; Sp. p. 3968; Dr. p. 857; Gaz. vol. 132; p. 730.
Stokes & Smith Company. (See Smith, I. B., assignor.)
Stokes, W. E. D., *et al.* (See Larsson, T., assignor.)
Stolp, F. H., Chicago, Ill. Machine for making radiators. No. 875,746; Jan. 7; Sp. p. 131; Dr. pp. 29–30; Gaz. vol. 132; p. 26.
Stolp, F. H., Chicago, Ill. Radiator-tubing. No. 877,252; Jan. 21; Sp. p. 3238; Dr. p. 701; Gaz. vol. 132; p. 504.
Stoltenberg, J., Durant, Iowa. Sweeping compound. No. 877,137; Jan. 21; Sp. p. 2997; Gaz. vol. 132; p. 554.
Stone, D., North Liberty, Iowa. Horseshoe-calk. No. 876,666; Jan. 14; Sp. p. 2025; Dr. p. 442; Gaz. vol. 132; p. 359.
Stone, E., Chicago, Ill. Cover for ironing-boards. No. 876,410; Jan. 14; Sp. p. 1450; Dr. pp. 311–12; Gaz. vol. 132; p. 269.
Stone, W. G., Knoxville, Ill. Animal-trap. No. 877,138; Jan. 21; Sp. p. 2997; Dr. p. 647; Gaz. vol. 132; p. 554.
Stout, D. M. (See Linhoff, W., assignor.)
Stout, J. F., Clayton, Ind. Mail-delivery system. No. 875,864; Jan. 7; Sp. p. 346; Dr. p. 77; Gaz. vol. 132; p. 64.
Stout, W. H. A., Philadelphia, Pa. Trunk. No. 876,025; Jan. 7; Sp. p. 657; Dr. p. 141; Gaz. vol. 132; p. 114.
Stover, D. C. (See Schryer and Stover.)
Stover Engine Works. (See Schryer and Stover, assignors.)
Stratton, F., Buffalo, N. Y. Body for vehicles. No. 876,026; Jan. 7; Sp. p. 658; Dr. pp. 141–2; Gaz. vol. 132; p. 114.
Streep, F. S. (See Robinson, C. L., assignor.)
Street, J. and J. H., Chattanooga, Tenn. Heading and shingle machine. No. 876,502; Jan. 14; Sp. p. 1651; Dr. p. 358; Gaz. vol. 132; p. 301.
Street, J. H. (See Street, J. and J. H.)
Street, J. H., *et al.* (See Senter, J. F., assignor.)
Streng, J. F., Stewardson, Ill. Sliding-door lock. No. 875,747; Jan. 7; Sp. p. 135; Dr. p. 30; Gaz. vol. 132; p. 27.
Stringham, J. H., Jersey City, N. J., and J. B. Elmendorf, New York, N. Y., assignors to American Combustion Company. Nebulizer of the heavier liquid hydrocarbons. No. 876,108; Jan. 7; Sp. p. 826; Dr. p. 178; Gaz. vol. 132; p. 140.
Strom, J. A., Pullman, Ill. Radiator. No. 877,011; Jan. 21; Sp. p. 2732; Dr. pp. 591–2; Gaz. vol. 132; p. 512.
Stuart, J., Allegheny, Pa. Gearing. No. 877,678; Jan. 28; Sp. p. 4091; Dr. p. 885; Gaz. vol. 132; p. 752.
Stübgen, G., Erfurt, Germany. Storm-lantern. No. 876,109; Jan. 7; Sp. p. 832; Dr. p. 178; Gaz. vol. 132; p. 141.
Stuke, E., Meridian, Miss. Internal-combustion engine. No. 875,865; Jan. 7; Sp. p. 348; Dr. p. 78; Gaz. vol. 132; p. 65.
Stukes, J. M., Austin, Tex., assignor to Texas Pure Food Company. Flavoring compound. No. 877,806; Jan. 28; Sp. p. 4307; Gaz. vol. 132; p. 791.
Stump, I. E., assignor to A. W. Margileth, Cleveland, Ohio. Ticket-holder. No. 877,253; Jan. 21; Sp. p. 3240; Dr. p. 701; Gaz. vol. 132; p. 504.
Styer, C. A. (See Lappin, J. W., assignor.)
Sullot, M. R., Salem, Ohio, assignor of one-half to F. Klepetko, New York, N. Y. Safety device for electric cranes. No. 876,503; Jan. 14; Sp. p. 1655; Dr. p. 359; Gaz. vol. 132; p. 302.
Sullivan Insulation Company. (See Sullivan, M., assignor.)
Sullivan, J. D., Salt Lake City, Utah. Fireproof wall and partition. No. 876,605; Jan. 14; Sp. p. 1898; Dr. p. 414; Gaz. vol. 132; p. 338.
Sullivan, M., New York, N. Y., assignor to Sullivan Insulation Company. Pipe-covering. No. 876,606; Jan. 14; Sp. p. 1899; Dr. p. 414; Gaz. vol. 132; p. 339.
Sullivan, T. J., Detroit, Mich. Hose-carrier. No. 877,012; Jan. 21; Sp. p. 2734; Dr. p. 592; Gaz. vol. 132; p. 512.
Sulman, H. L., London, England. Obtaining zinc oxid from zinc ores. No. 875,866; Jan. 7; Sp. p. 350; Dr. p. 78; Gaz. vol. 132; p. 65.
Sumner, W. A., Fairfield, Nebr., assignor of two-thirds to H. E. Spencer and C. J. Harris. Incubator-heater. (Reissue.) No. 12,742; Jan. 28; Sp. p. 4460; Dr. p. 977; Gaz. vol. 132; p. 821.
Sunderlin, R. H., and C. A. Bliley, Cripple Creek, Colo. Toy windmill. No. 877,382; Jan. 21; Sp. p. 3480; Dr. p. 755; Gaz. vol. 132; p. 634.
Svensen, A. A., Evanston, Ill. Key-fastener. No. 875,965; Jan. 7; Sp. p. 543; Dr. p. 116; Gaz. vol. 132; p. 95.
Svenson, S., La Crosse, Wis. Bottle-holder. No. 877,807; Jan. 28; Sp. p. 4308; Dr. p. 935; Gaz. vol. 132; p. 792.
Swan, A., New York, N. Y., assignor to General Electric Company. Machine for making incandescent lamps. No. 877,013; Jan. 21; Sp. p. 2736; Dr. pp. 592–4; Gaz. vol. 132; p. 513.
Swan, F. A., Cliftondale, Mass. Means for securing cords to lamp-sockets. No. 877,383; Jan. 21; Sp. p. 3482; Dr. p. 756; Gaz. vol. 132; p. 634.
Swan, F. A., Cliftondale, Mass. Electrical fitting. No. 877,384; Jan. 21; Sp. p. 3484; Dr. p. 756; Gaz. vol. 132; p. 635.
Swanson, M. M., Albia, Iowa. Wire-fence-laying machine. No. 877,254; Jan. 21; Sp. p. 3241; Dr. p. 701; Gaz. vol. 132; p. 595.
Sweeney, F. P., Fayette City, Pa. Check-holding device. No. 876,745; Jan. 14; Sp. p. 2165; Dr. p. 475; Gaz. vol. 132; p. 383.
Symons, W. E., Chicago, Ill. Cast-steel truck. No. 877,014; Jan. 21; Sp. p. 2742; Dr. p. 594; Gaz. vol. 132; p. 513.
Tabler, G. T., Royse City, Tex. Closure for oil-cans, jugs, &c. No. 876,504; Jan. 14; Sp. p. 1657; Dr. p. 359; Gaz. vol. 132; p. 303.
Tacchi, P. G., Acton, London, England. Driving-gear for motor road-vehicles. No. 877,613; Jan. 28; Sp. p. 3971; Dr. pp. 857–8; Gaz. vol. 132; p. 731.
Tagliabue, C. J. (See Schneider, R. F., assignor.)
Talsey Pneumatic Service Company. (See Collins, M. R., assignor.)
Takacs, J. (See Schurger and Takacs.)
Tanner, B., Sturgis, Mich. Fence-post mold. No. 876,027; Jan. 7; Sp. p. 663; Dr. p. 143; Gaz. vol. 132; p. 114.
Tarbell, C. B., Tombstone, Ariz. Ter. Extensible water-tower or stand-pipe. No. 877,255; Jan. 21; Sp. p. 3242; Dr. p. 702; Gaz. vol. 132; p. 595.
Tartarinoff, W., St. Petersburg, Russia. Hydraulic press. No. 877,139; Jan. 21; Sp. p 2999; Dr. p. 648; Gaz. vol. 132; p. 555.
Tatum, J. W., Durham, N. C. Curtain-shade bracket. No. 876,411; Jan. 14; Sp. p. 1452; Dr. p. 312; Gaz. vol. 132; p. 269.
Taylor, A., *et al.* (See Burgess, J. D., assignor.)
Taylor, C. R., assignor of one-sixth to O. J. Ricketts, one-sixth to E. Eynon, Jr., and one-third to W. F. Mahony, Washington, D. C. Ink-fountain. No. 877,679; Jan. 28; Sp. p. 4092; Dr. p. 886; Gaz. vol. 132; p. 752.
Taylor, W. E. (See Bryan and Taylor.)
Taylor, W. H., assignor to Yale & Towne Manufacturing Company, Stamford, Conn. Spindle for dial-locks. No. 876,028; Jan. 7; Sp. p. 665; Dr. p. 143; Gaz. vol. 132; p. 115.
Taylor, W. H., Jr., *et al.* (See Burgess, J. D., assignor.)
Teal, A. M., St. John, Wash. Truck. No. 875,867; Jan. 7; Sp. p. 352; Dr. p. 78; Gaz. vol. 132; p. 65.
Telephone Toll-meter Company. (See Hall, I. H., Jr., assignor.)
Temple Cotton Chopping Machine Co. (See Ferriott, C. L., assignor.)
Templeton, W. G., Colorado Springs, Colo. Scale. No. 877,680; Jan. 28; Sp. p. 4094; Dr. p. 886; Gaz. vol. 132; p. 753.
Terry, C. A., New York, N. Y. Lifting-shackle. No. 876,506; Jan. 14; Sp. p. 1658; Dr. p. 360; Gaz. vol. 132; p. 303.
Terry, C. A., New York, N. Y. Core-drilling apparatus. No. 877,528; Jan. 28; Sp. p. 3779; Dr. p. 818; Gaz. vol. 132; p. 703.
Terry, E. C., assignor to Terry Steam Turbine Company, Hartford, Conn. Steam-turbine. No. 877,873; Jan. 28; Sp. p. 4437; Dr. pp. 986–7; Gaz. vol. 132; p. 813.
Terry Steam Turbine Company. (See Terry, E. C., assignor.)
Teutsch, R., Berlin, Germany. Fly-catcher. No. 877,256; Jan. 21; Sp. p. 3243; Dr. p. 702; Gaz. vol. 132; p. 595.
Tevander, O. N., Chicago, Ill., assignor, by mesne assignments, to Flexible Steel Lacing Company. Belt-coupling. No. 876,607; Jan. 14; Sp. p. 1900; Dr. p. 414; Gaz. vol. 132; p. 339.
Tevander, S., Maywood, Ill., assignor to American Can Company, New York, N. Y. Can-body-flanging machine. No. 877,257; Jan. 21; Sp. p. 3244; Dr. pp. 702–3; Gaz. vol. 132; p. 595.
Texas Pure Food Company. (See Stukes, J. M., assignor.)
Thayer, C. F., Erie, Pa. Vehicle propelling mechanism. No. 875,748; Jan. 7; Sp. p. 137; Dr. p. 30; Gaz. vol. 132; p. 27.
Thiele, J. H., New York, N. Y. Safety-valve. No. 876,746; Jan. 14; Sp. p. 2167; Dr. p. 476; Gaz. vol. 132; p. 384.
Thoens, B., New York, N. Y. Cotton-gin. No. 876,412; Jan. 14; Sp. p. 1453; Dr. p. 312; Gaz. vol. 132; p. 270.

Thomas, A. O., Kearney, Nebr. Gang-mold. No. 877,140; Jan. 21; Sp. p. 3001; Dr. p. 648; Gaz. vol. 132; p. 555.
Thomas, P. H., Montclair, N. J., assignor to Cooper Hewitt Electric Company, New York, N. Y. Circuit-breaker. No. 876,918; Jan. 14; Sp. p. 2501; Dr. p. 545; Gaz. vol. 132; p. 439.
Thomas, P. H., Montclair, N. J., assignor to Cooper Hewitt Electric Company, New York, N. Y. Automatic regulating device. No. 877,258; Jan. 21; Sp. p. 3246; Dr. p. 703; Gaz. vol. 132; p. 596.
Thomas, W. D., New York, N. Y. Eyeglass-frame. No. 875,966; Jan. 7; Sp. p. 544; Dr. p. 116; Gaz. vol. 132; p. 95.
Thompson, M. E., Port Allegany, Pa. Paper-clip. No. 876,667; Jan. 14; Sp. p. 2026; Dr. p. 442; Gaz. vol. 132; p. 359.
Thompson, R. M. (See Coats, A. W., assignor.)
Thompson, T. C., Roberts, Ill. Conveyer. No. 877,141; Jan. 21; Sp. p. 3002; Dr. pp. 648–9; Gaz. vol. 132; p. 555.
Thompson, T. J., Vang, N. D. Combined shovel and brush. No. 877,614; Jan. 28; Sp. p. 3972; Dr. p. 858; Gaz. vol. 132; p. 731.
Thompson, W. N., Tucson, Ariz. Ter. Railway-signal. No. 877,385; Jan. 21; Sp. p. 3486; Dr. p. 756; Gaz. vol. 132; p. 635.
Thomson, E., Swampscott, Mass., assignor to General Electric Company. Tongue-regulating mechanism. No. 877,473; Jan. 21; Sp. p. 3649; Dr. p. 791; Gaz. vol. 132; p. 663.
Thomson, H. G., New York, N. Y. Artificial post. No. 876,247; Jan. 7; Sp. p. 1087; Dr. p. 237; Gaz. vol. 132; p. 184.
Thomson, R. W. (See Wallace, J. M., assignor.)
Thordarson, C. H., Chicago, Ill. Polarized relay. No. 876,413; Jan. 14; Sp. p. 1455; Dr. p. 313; Gaz. vol. 132; p. 270.
Thorp, C. E., Cleveland, Ohio. Vehicle. No. 877,681; Jan. 28; Sp. p. 4096; Dr. pp. 886–7; Gaz. vol. 132; p. 753.
Thrash, W. E., Kansas City, Mo., assignor to International Conservatory of Music, Dallas, Tex. Music-indicator. No. 877,259; Jan. 21; Sp. p. 3253; Dr. p. 704; Gaz. vol. 132; p. 596.
Thurber, E. L., New York, N. Y., assignor to Dunham Manufacturing Company. Box-making machine. No. 876,506; Jan. 14; Sp. p. 1659; Dr. pp. 360–1; Gaz. vol. 132; p. 303.
Thurmond, E. (See Thurmond, G. W. and E.)
Thurmond, G. W. and E., Woodlawn, S. C. Level-indicator for plows. No. 876,747; Jan. 14; Sp. p. 2168; Dr. p. 476; Gaz. vol. 132; p. 384.
Tiedeman, C. H., La Fayette, Ind. Corner-post and brace for fences. No. 876,248; Jan. 7; Sp. p. 1088; Dr. p. 237; Gaz. vol. 132; p. 185.
Tiefenbacher, T. B., New York, N. Y. Pneumatic tire. No. 877,260; Jan. 21; Sp. p. 3258; Dr. p. 705; Gaz. vol. 132; p. 597.
Tietz, C., assignor to Sharp & Smith, Chicago, Ill. Veterinary surgical float. No. 875,967; Jan. 7; Sp. p. 545; Dr. p. 116; Gaz. vol. 132; p. 96.
Tilson, W. H., Plainview, Tex. Cutting apparatus for corn-harvesters. No. 875,749; Jan. 7; Sp. p. 138; Dr. p. 30; Gaz. vol. 132; p. 27.
Timberlake, P. J., Jackson, Mich., assignor to J. B. Timberlake & Sons. Shirt-drier. No. 877,226; Jan. 21; Sp. p. 3187; Dr. p. 691; Gaz. vol. 132; p. 585.
Time Marking Machine Company. (See Martindale, W. B., assignor.)
Timson, N. (See Marsh and Timson.)
Tippit, W. P., Fayette, Mo. Animal-trap. No. 876,414; Jan. 14; Sp. p. 1459; Dr. p. 313; Gaz. vol. 132; p. 270.
Tirrill, L. A., Lynn, Mass., assignor to General Electric Company. Friction-gear. No. 877,015; Jan. 21; Sp. p. 2746; Dr. p. 595; Gaz. vol. 132; p. 513.
Tirrill, L. A., Lynn, Mass., assignor to General Electric Company. Electric motor. No. 877,016; Jan. 21; Sp. p. 2749; Dr. p. 595; Gaz. vol. 132; p. 514.
Tisdale, W. L., McNeill, Miss. Inkstand. No. 876,668; Jan. 14; Sp. p. 2028; Dr. p. 442; Gaz. vol. 132; p. 360.
Titanium Alloy Manufacturing Company. (See Rossi, A. J., assignor.)
Tkatzschenko, P. T., Schenectady, N. Y. Air-ship. No. 877,529; Jan. 28; Sp. p. 3781; Dr. p. 819; Gaz. vol. 132; p. 704.
Tobin, T. C., Adams, Wis. Riding attachment for harrows. No. 876,748; Jan. 14; Sp. p. 2170; Dr. p. 476; Gaz. vol. 132; p. 384.
Toledo Glass Company. (See Owens, M. J., assignor.)
Toof, E. J. (See Ammerman, W. M., assignor.)
Toomey, J. A., Chicago, Ill. Car-stake and attaching means therefor. No. 876,415; Jan. 14; Sp. p. 1460; Dr. pp. 313–14; Gaz. vol. 132; p. 271.
Topf and Soehne, J. A., Firm of. (See Wettig, H., assignor.)
Topp, T. M., Richmond, Cal. Stamping and grinding mill. No. 877,615; Jan. 28; Sp. p. 3974; Dr. p. 858; Gaz. vol. 132; p. 731.
Topping, E. W., and T. V. Plice, assignors to Safety Door Hanger Co., Ashland, Ohio. Lifting-jack. No. 877,386; Jan. 21; Sp. p. 3487; Dr. p. 757; Gaz. vol. 132; p. 635.
Torda, L., Chiswick, England. Dynamo-electric machine with compensating windings. No. 877,017; Jan. 21; Sp. p. 2750; Dr. p. 595; Gaz. vol. 132; p. 514.
Torrey, G. R., Washington, D. C. Means for increasing and promoting the combustion of fuel. No. 877,142; Jan. 21; Sp. p. 3004; Dr. p. 649; Gaz. vol. 132; p. 555.
Tower, J. W., Crooked Lake, Mich. Machine for connecting wire ends. No. 877,808; Jan. 28; Sp. p. 4309; Dr. p. 935; Gaz. vol. 132; p. 792.
Towl, E. B. (See Glas, F., assignor.)
Townsend, C. P., Washington, D. C., assignor, by mesne assignments, to American Can Company. Producing stannic chlorid. No. 877,261; Jan. 21; Sp. p. 3259; Dr. p. 705; Gaz. vol. 132; p. 597.
Townsend, C. P., Washington, D. C., assignor to Chemical Reduction Company, New York, N. Y. Purifying stannic chlorid. No. 877,262; Jan. 21; Sp. p. 3261; Dr. p. 705; Gaz. vol. 132; p. 597.
Townsend, C. P., Washington, D. C., assignor to Chemical Reduction Company, New York, N. Y. Apparatus for producing stannic chlorid. No. 877,263; Jan. 21; Sp. p. 3263; Dr. p. 706; Gaz vol. 132; p. 597.
Tracy, J. H., Philadelphia, Pa. Operation of storage batteries in connection with alternating-current systems. No. 877,018; Jan. 21; Sp. p. 2752; Dr. p. 596; Gaz. vol. 132; p. 514.
Tracy, S., Topeka, Kans. Shaft-supporter. No. 876,029; Jan. 7; Sp. p. 665; Dr. p. 143; Gaz. vol. 132; p. 115.
Traverse City Chair Co. (See Grellick, C. L., assignor.)
Traxel, G. H., Maysville, Ky. Valve. No. 877,264; Jan. 21; Sp. p. 3265; Dr. p. 706; Gaz. vol. 132; p. 597.
Trent, C. E., Redfield, Iowa. Corn-husker. No. 877,143; Jan. 21; Sp. p. 3006; Dr. pp. 650–1; Gaz. vol. 132; p. 556.
Trewhella, C. E., New Britain, assignor to American Silver Company, Bristol, Conn. Percolator. No. 876,110; Jan. 7; Sp. p. 833; Dr. pp. 178–9; Gaz. vol. 132; p. 141.
Tribbey, G. W. (See Nelson and Tribbey.)
Trice, J. E., Clay Center, Kans. Flour-sifter. No. 875,868; Jan. 7; Sp. p. 354; Dr. p. 79; Gaz. vol. 132; p. 66.
Tripp, H. C., assignor, by mesne assignments, to Under-Feed Stoker Company of America, Chicago, Ill. Conveying mechanism. No. 876,608; Jan. 14; Sp. p. 1903; Dr. p. 415; Gaz. vol. 132; p. 339.
Triumph Manufacturing Company. (See Overkamp, C. H., assignor.)
Troeger, J. W., La Grange, Ill. Shingle. No. 877,019; Jan. 21; Sp. p. 2753; Dr. p. 596; Gaz. vol. 132; p. 515.
Troth, D. S., Fruitvale, Cal. Telegraphic transmitter. No. 876,669; Jan. 14; Sp. p. 2029; Dr. pp. 442–3; Gaz. vol. 132; p. 360.
Trott, R. S., Denver, Colo. Rock-drill. No. 875,869; Jan. 7; Sp. p. 355; Dr. p. 79; Gaz. vol. 132; p. 66.
Troy Laundry Machinery Company. (See Bartholomew, W., assignor.)
Tsanoff, S. V., New York, N. Y. Mold for cement blocks. No. 877,874; Jan. 28; Sp. p. 4439; Dr. p. 967; Gaz. vol. 132; p. 814.
Tucker, J., *et al.* (See Gray, H., assignor.)
Tullock, J. T., assignor of one-half to R. E. L. Jenkins, Houston, Tex. Switch-lock. No. 877,616; Jan. 28; Sp. p. 3975; Dr. p. 858; Gaz. vol. 132; p. 732.
Turcotte, J. H., Indian Orchard, Mass. Saddle for spinning-frames. No. 877,020; Jan. 21; Sp. p. 2754; Dr. p. 596; Gaz. vol. 132; p. 515.
Turman, W. B., Waldron, Ark. Permutation-lock. No. 877,632; Jan. 28; Sp. p. 4099; Dr. p. 887; Gaz. vol. 132; p. 753.
Turner, A., and L. Howard, Stillwell, Ill. Manure-spreading attachment for wagons. No. 877,227; Jan. 21; Sp. p. 3188; Dr. pp. 691–2; Gaz. vol. 132; p. 586.
Turner, B. B., Berthoud, Colo. Sash-fastener. No. 877,809; Jan. 28; Sp. p. 4310; Dr. pp. 935–6; Gaz. vol. 132; p. 792.
Turner, J. W., Reelsville, Ind. Attachment for steam-shovel scoops. No. 876,111; Jan. 7; Sp. p. 835; Dr. p. 179; Gaz. vol. 132; p. 141.
Turner, W. V., assignor to Westinghouse Air Brake Company, Wilmerding, Pa. Air-brake. No. 877,530; Jan. 28; Sp. p. 3782; Dr. p. 820; Gaz. vol. 132; p. 704.
Turner, W. V., assignor to Westinghouse Air Brake Company, Wilmerding, Pa. Brake. No. 877,531; Jan. 28; Sp. p. 3784; Dr. pp. 820–1; Gaz. vol. 132; p. 704.
Turney, H. L., Portland, Oreg. Clutch-operating mechanism. No. 876,609; Jan. 14; Sp. p. 1904; Dr. p. 415; Gaz vol. 132; p. 339.
Tuttle, J. S., Kansas City, Mo., assignor to Ohio Cultivator Company, Bellevue, Ohio. Baling-press. No. 877,228; Jan. 21; Sp. p. 3190; Dr. p. 692; Gaz. vol. 132; p. 586.
Tuttle, W. A., Graymont, Ill. Corn-planter. No. 877,810; Jan. 28; Sp. p. 4312; Dr. p. 936; Gaz. vol. 132; p. 792.
Tydings, J., Philadelphia, Pa. Wave-motor. No. 877,021; Jan. 21; Sp. p. 2756; Dr. p. 597; Gaz. vol. 132; p. 515.
Tygart, J. B., Whitwell, Tenn. Expansion-drill. No. 877,265; Jan. 21; Sp. p. 3266; Dr. p. 706; Gaz. vol. 132; p. 598.
Tyler, G. P. (See West, S. E., assignor.)
Tyson, F. B., Randolph, Kans. Alternating rotary gearing. No. 876,112; Jan. 7; Sp. p. 837; Dr. p. 179; Gaz. vol. 132; p. 142.
Uhden, C., Spokane, Wash. Receptacle. No. 877,811; Jan. 28; Sp. p. 4314; Dr. p. 937; Gaz. vol. 132; p. 792.
Ullman, J. A., and G. R. Howell, New York, N. Y., assignor to Sigmund Ullman Company. Rotary tube-closing machine. No. 877,266; Jan. 21; Sp. p. 3267; Dr. p. 707; Gaz. vol. 132; p. 598.
Ullmann, A., assignor of one-half to J. J. Waxelbaum, Macon, Ga. Regulating-valve. No. 876,285; Jan. 7; Sp. p. 1174; Dr. p. 256; Gaz. vol. 132; p. 198.

Under-Feed Stoker Company of America. (See Tripp, H. C., assignor.)
Underwood Typewriter Company. (See Wagner, F. X., assignor.)
Union Paper Bag Machine Company. (See Lorenz, W. A., assignor.)
Union Switch and Signal Company. (See Howard, L. F., assignor.)
Union Typewriter Company. (See Moorrees, H. P., assignor.)
Union Typewriter Company. (See Stickney, B. C., assignor.)
Union Typewriter Company. (See Woodward, O., assignor.)
United Engineering & Foundry Company. (See Biggert, F. C., Jr., assignor.)
United Shoe Machinery Company. (See Bates, A., assignor.)
United Shoe Machinery Company. (See Elliott, A. D., assignor.)
United States Fastener Company. (See Holmes, G. A., assignor.)
United States Marine Signal Company. (See Willson, T. L., assignor.)
United States Metallic Packing Company. (See King, C. W. G., assignor.)
Universal Bottle Wrapper Company. (See Legge, W. D., assignor.)
Universal Bottle Wrapper Company. (See Legge and Weil, assignors.)
Universal Box Machine Company. (See McRae and Canby, assignors.)
Urquhart Brake Shoe & Brake Head Company. (See Urquhart, H. H., assignor.)
Urquhart, H. H., assignor to Urquhart Brake Shoe & Brake Head Company, Paducah, Ky. Brake-shoe for locomotives. No. 877 748; Jan. 28; Sp. p. 4212; Dr. p. 912; Gaz. vol. 132; p. 774.
Vail, R. W., New York, N. Y. Safety-envelop. No. 877,532; Jan. 28; Sp. p. 3785; Dr. p. 821; Gaz. vol. 132; p. 704.
Vail, R. W., New York, N. Y. Safety-envelop. No. 877,533; Jan. 28; Sp. p. 3791; Dr. p. 821; Gaz. vol. 132; p. 705.
Valbreuse, R. de, assignor to Société de Constructions de Véhicules Automobiles, Levallois-Perret, France. Gearing. No. 877,267; Jan. 21; Sp. p. 3269; Dr. p. 707; Gaz. vol. 132; p. 598.
Valentine, J. F. (See Farman, W., assignor.)
Van Brocklin, W. A., Alden, N. Y. Display-case. No. 876,889; Jan. 14; Sp. p. 2479; Dr. p. 532; Gaz. vol. 132; p. 430.
Van Buren, D. C., Grangeville, Idaho. Pole-brace. No. 877,268; Jan. 21; Sp. p. 3270; Dr. pp. 707–8; Gaz. vol. 132; p. 599.
Van de Wiele, W. L., Yonkers, N. Y. Post-binder. No. 876,749; Jan. 14; Sp. p. 2171; Dr. p. 476; Gaz. vol. 132; p. 385.
Van Denbark, C., Lincoln, Nebr. Harness-trace. No. 877,683; Jan. 28; Sp. p. 4102; Dr. p. 887; Gaz. vol. 132; p. 754.
Van Horn, C. B., Philadelphia, Pa. Wheel. No. 877,617; Jan. 28; Sp. p. 3976; Dr. p. 859; Gaz. vol. 132; p. 732.
Van Horn, W., Piqua, Ohio. Weather-strip. No. 876,850; Jan. 14; Sp. p. 2354; Dr. p. 516; Gaz. vol. 132; p. 416.
Van Kannel Revolving Door Company. (See Ely, W. S., assignor.)
Van Nort, E. C., Jr., St. Louis, Mo. Carbon brush for commutators and preparing same. No. 875,750; Jan. 7; Sp. p. 139; Dr. p. 31; Gaz. vol. 132; p. 28.
Van Nostran, J. E., assignor of one-half to G. W. Shade, Canton, Ohio. Stop-cock. No. 877,875; Jan. 28; Sp. p. 4441; Dr. p. 968; Gaz. vol. 132; p. 814.
Van Orden, A. A., Gallilee, Pa. Douche-protector. No. 877,618; Jan. 28; Sp. p. 3978; Dr. p. 859; Gaz. vol. 132; p. 733.
Van Sicklen, M. H. (See Fry, J. E., assignor.)
Van Vliet, W. C., New York, N. Y. Stamp-affixing machine. No. 875,968; Jan. 7; Sp. p. 546; Dr. pp. 116–19; Gaz. vol. 132; p. 96.
Van Zandt, E. G., St. Louis, Mo. Gas-burner. No. 876,507; Jan. 14; Sp. p. 1662; Dr. p. 361; Gaz. vol. 132; p. 304.
Vannette, J., assignor of one-half to C. J. and G. S. Yingling, Tiffin, Ohio. Under-thread mechanism for sewing-machines. No. 875,751; Jan 7; Sp. p. 140; Dr. pp. 31–3; Gaz. vol. 132; p. 28.
Vanvactor, D. E., Plymouth, Ind. Staved wooden structure and constructing it. No. 877,534; Jan. 28; Sp. p. 3795; Dr. p. 822; Gaz. vol. 132; p. 705.
Vasey, J., Emeryville, Cal. Combination hay-bale hook and wire cutter. No. 877,619; Jan. 28; Sp. p. 3979; Dr. p. 859; Gaz. vol. 132; p. 733.
Veneer Machinery Company. (See Boenning, W. M., assignor.)
Venner, R. F. S., and R. C. Griesbach, London, England. Electric time-switch. No. 876,416; Jan. 14; Sp. p. 1465; Dr. pp. 314–15; Gaz. vol. 132; p. 271.
Vermilyea, E., and R. Hammersley, Waterford, N. Y. Fabric. No. 876,750; Jan. 14; Sp. p. 2172; Dr. p. 477; Gaz. vol. 132; p. 385.
Vertriebscentrale für Haushaltsartikel (Triebert & Wessel) G. M. B. H. (See Wessel, A., assignor.)
Vibber, W. H., assignor to Gillette-Vibber Co., New London, Conn. Electric-installation outlet-box. No. 877,684; Jan. 28; Sp. p. 4103; Dr. p. 887; Gaz. vol. 132; p. 754.
Victor Talking Machine Company. (See English, J. C., assignor.)
Vigier, W. von, Subingen, Switzerland. Apparatus for washing brushes. No. 877,269; Jan. 21; Sp. p. 3273; Dr. p. 708; Gaz. vol. 132; p. 599.
Villette, E. P. A., Lille, France. Device for retarding and stopping the motion of ships. No. 875,752; Jan. 7; Sp. p. 150; Dr. p. 33; Gaz. vol. 132; p. 28.
Voelker, G. H., and T. E. Lynch, Jr., New Orleans, La. Whip-lock. No. 875,753; Jan. 7; Sp. p. 151; Dr. p. 33; Gaz. vol. 132; p. 29.
Vogelsang, M., Frankfort-on-the-Main, Bockenheim, assignor to Firm of Voigt & Haeffner, Aktiengesellschaft, Frankfort-on-the-Main, Germany. Synchronizing apparatus for alternators. No. 877,144; Jan. 21; Sp. p. 3011; Dr. pp. 651–2; Gaz. vol. 132; p. 557.
Vogler, H., assignor of one-half to J. H. Wolf, St. Louis, Mo. Serving-table. No. 877,812; Jan. 28; Sp. p. 4315; Dr. p. 937; Gaz. vol. 132; p. 793.
Voigt & Haeffner, Aktiengesellschaft, Firm of. (See Vogelsang, M., assignor.)
Volby, G. A., Wentworth, S. D. Spark-arrester. No. 876,417; Jan. 14; Sp. p. 1470; Dr. p. 316; Gaz. vol. 132; p. 272.
Volts, G. M., St. Joseph, Mo. Fireproof window-sash. No. 876,113; Jan. 7; Sp. p. 838; Dr. p. 179; Gaz. vol. 132; p. 142.
Vosper, W. W., Toledo, Ohio. Taper-thread-cutting machine. No. 876,114; Jan. 7; Sp. p. 839; Dr. p. 180; Gaz. vol. 132; p. 142.
Vraalstad, E. J., assignor of one-half to Buffalo Pitts Company, Buffalo, N. Y. Pneumatic stacker. No. 876,115; Jan. 7; Sp. p. 841; Dr. p. 180; Gaz. vol. 132; p. 142.
Vrestenka, F., Protivin, Iowa. Wire-working tool. No. 876,116; Jan. 7; Sp. p. 842; Dr. p. 180; Gaz. vol. 132; p. 143.
W. Graaff & Compagnie, Ges. mit Beschr. Haftung, Firm of. (See Breslauer, M., assignor.)
W. H. Miner Company. (See Miner and O'Connor, assignors.)
Wachtler, F. E. (See Crooker, W. W., assignor.)
Waddell, H. E., Chicago, Ill. Flower-holder. No. 877,145; Jan. 21; Sp. p. 3017; Dr. p. 652; Gaz. vol. 132; p. 557.
Wade, E. M., Los Angeles, Cal. Scale. No. 876,286; Jan. 7; Sp. p. 1179; Dr. pp. 256–7; Gaz. vol. 132; p. 198.
Wadman, W. E., Bayonne, N. J., assignor to Hygienic Chemical Company of New Jersey. Preparing pure lithium compounds. No. 876,851; Jan. 14; Sp. p. 2355; Gaz. vol. 132; p. 416.
Waechter, F. W. (See Fenton and Waechter.)
Wagner, A., St. Louis, Mo. Sliding-door pocket. No. 875,870; Jan. 7; Sp. p. 350; Dr. p. 79; Gaz. vol. 132; p. 66.
Wagner, F. X., assignor to Underwood Typewriter Company, New York, N. Y. Ribbon mechanism for type-writers. No. 876,309; Jan. 7; Sp. p. 1234; Dr. pp. 269–70; Gaz. vol. 132; p. 206.
Wagner, S., Allegheny, Pa. Ink-well. No. 876,751; Jan. 14; Sp. p. 2174; Dr. p. 477; Gaz. vol. 132; p. 385.
Wagner, W. H., Hebron, Nebr. Incubator-heater. No. 875,871; Jan. 7; Sp. p. 361; Dr. p. 80; Gaz. vol. 132; p. 66.
Wahle, O., Deutsch-Brod, assignor to H. Schnek, Vienna, Austria-Hungary. Gripper-needle for looms. No. 877,270; Jan. 21; Sp. p. 3274; Dr. p. 708; Gaz. vol. 132; p. 600.
Wahle, O., Deutsch-Brod, assignor to H. Schnek, Vienna, Austria-Hungary. Mechanism for inserting separate-weft threads, such as horsehair and the like, in the shed. No. 877,271; Jan. 21; Sp. p. 3276; Dr. pp. 708–9; Gaz. vol. 132; p. 600.
Waldorf, J. W., St. Louis, Mo. Motor-vehicle. No. 877,022; Jan. 21; Sp. p. 2758; Dr. p. 597; Gaz. vol. 132; p. 516.
Waldron, W. E., Newcastle, Pa. Automatic pawl-operating mechanism. No. 876,752; Jan. 14; Sp. p. 2174; Dr. p. 477; Gaz. vol. 132; p. 385.
Walker, A., assignor to What Cheer Tool Co., What Cheer, Iowa. Drilling-machine. No. 877,749; Jan. 28; Sp. p. 4213; Dr. p. 913; Gaz. vol. 132; p. 774.
Walker, C. E., Louisville, Ky. Penholder. No. 875,754; Jan. 7; Sp. p. 152; Dr. p. 34; Gaz. vol. 132; p. 29.
Walker, E. N. (See Brady, J. W., assignor.)
Walker, H. M., Maplesville, Ala. Fireplace. No. 876,670; Jan. 14; Sp. p. 2032; Dr. p. 443; Gaz. vol. 132; p. 361.
Walker, J., Canonsburg, Pa. Postal card. No. 876,117; Jan. 7; Sp. p. 844; Dr. p. 181; Gaz. vol. 132; p. 143.
Walker, W. F., York, Pa. Safety-spring for steam and compressed-air hammers. No. 877,387; Jan. 21; Sp. p. 3490; Dr. p. 757; Gaz. vol. 132; p. 636.
Wallace, J. (See Mayr and Wallace.)
Wallace, J. M., assignor of one-half to R. W. Thomson, Spartanburg, S. C. Combination-tool. No. 876,919; Jan. 14; Sp. p. 2502; Dr. p. 548; Gaz. vol. 132; p. 442.
Wallace, W., Bakersfield, Cal. Oil-well pump. No. 876,118; Jan. 7; Sp. p. 844; Dr. p. 181; Gaz. vol. 132; p. 143.
Waller, J. B., Kansas City, Mo. Cutting-tool. No. 877,813; Jan. 28; Sp. p. 4316; Dr. p. 937; Gaz. vol. 132; p. 793.
Wallstein, F., New York, N. Y. Game apparatus. No. 877,814; Jan. 28; Sp. p. 4316; Dr. p. 937; Gaz. vol. 132; p. 793.
Walsh, J. J., assignor to Yonkers Specialty Company, Yonkers, N. Y. Wire-connector. No. 875,872; Jan. 7; Sp. p. 362; Dr. p. 80; Gaz. vol. 132; p. 67.
Walsh, W. J., Ferris, Tex. Acetylene-gas generator. No. 876,119; Jan. 7; Sp. p. 847; Dr. p. 181; Gaz. vol. 132; p. 144.

Wance, W., Red Bluff, Cal. Hand-truck. No. 876,753; Jan. 14; Sp. p. 2175; Dr. p. 478; Gaz. vol. 132; p. 386.
Wanner, E. P., New York, N. Y. Table. No. 875,755; Jan. 7; Sp. p. 154; Dr. p. 34; Gaz. vol. 132; p. 29.
Ward, E. G., Philadelphia, Pa. Saw. No. 877,146; Jan. 21; Sp. p. 3018; Dr. p. 652; Gaz. vol. 132; p. 557.
Ward, F. H., *et al.* (See Smith, G. A., assignor.)
Ware, J. L., St. Paul, Minn., assignor, by mesne assignments, to Roberts Lumber Company. Knockdown box. No. 876,120; Jan. 7; Sp. p. 849; Dr. pp. 181–2; Gaz. vol. 132; p. 144.
Warlick, J. E., Lagrange, Ga. Burglar-proof blind-lock. No. 877,272; Jan. 21; Sp. p. 3280; Dr. p. 709; Gaz. vol. 132; p. 600.
Warmbrodt, E. (See Sprague and Warmbrodt.)
Warner, A. M., Almont, Mich. Tongue for vehicles. No. 876,610; Jan. 14; Sp. p. 1906; Dr. p. 415; Gaz. vol. 132; p. 340.
Warner, A. O., Denver, Colo. Street-sign. No. 876,754; Jan. 14; Sp. p. 2177; Dr. p. 478; Gaz. vol. 132; p. 386.
Warner, D. W., Edmonton, Alberta, Canada. Disk harrow. No. 877,685; Jan. 28; Sp. p. 4104; Dr. p. 888; Gaz. vol. 132; p. 754.
Warner, F. E., Binghamton, N. Y. Plaiting-machine. No. 876,611; Jan. 14; Sp. p. 1907; Dr. p. 416; Gaz. vol. 132; p. 340.
Warnock, W. S., Chicago, Ill. Printer's furniture. No. 876,030; Jan. 7; Sp. p. 667; Dr. p. 143; Gaz. vol. 132; p. 115.
Warren, F. W., San Francisco, Cal. Stenographer's note-book. No. 875,756; Jan. 7; Sp. p. 155; Dr. p. 34; Gaz. vol. 132; p. 29.
Warren, H. E., Ashland, Mass. Mechanism for preventing racing in prime motors. No. 875,909; Jan. 7; Sp. p. 555; Dr. p. 119; Gaz. vol. 132; p. 96.
Washburn, E. (See Colburn and Washburn.)
Washicker, F. W., *et al.* (See Crepar, T. M., assignor.)
Waterbury Buckle Company. (See Buchanan, J. J., assignor.)
Watkins, G. W., Rosebud, Tex. Boll-weevil exterminator. No. 876,612; Jan. 14; Sp. p. 1908; Dr. p. 416; Gaz. vol. 132; p. 340.
Watrous, E. G., Chicago, Ill. Self-closing basin-cock. No. 875,873; Jan. 7; Sp. p. 362; Dr. p. 80; Gaz. vol. 132; p. 67.
Watson, T. S., Milwaukee, Wis. Magnetic clutch. No. 875,757; Jan. 7; Sp. p. 156; Dr. p. 34; Gaz. vol. 132; p. 30.
Watson, W. S., Memphis, Tenn. Cutting and facing tool. No. 876,852; Jan. 14; Sp. p. 2356; Dr. p. 516; Gaz. vol. 132; p. 417.
Watt, F. N., and H. C. Keelor, Richmond, Ind. Burial-casket. No. 876,031; Jan. 7; Sp. p. 669; Dr. p. 144; Gaz. vol. 132; p. 115
Watt, J. F. (See Fiddes and Watt.)
Watt, J. R., assignor of one-half to J. C. Johnson, Detroit, Mich. Safety scaffold-bracket. No. 876,970; Jan. 7; Sp. p. 557; Dr. p. 119; Gaz. vol. 132; p. 97.
Watt, W. H., assignor of one-half to C. W. Beerbower and T. L. Gribble, Greensburg, Pa. Coke-loader. No. 877,147; Jan. 21; Sp. p. 3019; Dr. p. 653; Gaz. vol. 132; p. 558.
Waxelbaum, J. J. (See Ullmann, A., assignor.)
Way, C. H., assignor to "New Way" Motor Company, Lansing, Mich. Engine. No. 877,023; Jan. 21; Sp. p. 2761; Dr. p. 597; Gaz. vol. 132; p. 516.
Way, C. H., assignor to "New Way" Motor Company, Lansing, Mich. Governor for explosion-engines. No. 877,024; Jan. 21; Sp. p. 2763; Dr. p. 598; Gaz. vol. 132; p. 517.
Weaver, W. J. (See Allen and Weaver.)
Webb, B. F., Sistersville, W. Va. Wrench. No. 877,273; Jan. 21; Sp. p. 3280; Dr. p. 710; Gaz. vol. 132; p. 600.
Webb, G. B., Westfield, N. J., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y. Type-writing machine. No. 876,508; Jan. 14; Sp. p. 1663; Dr. pp. 361–2; Gaz. vol. 132; p. 304.
Webb, H. H., assignor of one-half to A. H. Hyde, Yonkers, N. Y. Wire-coating machine. No. 876,755; Jan. 14; Sp. p. 2179; Dr. pp. 478–9; Gaz. vol. 132; p. 386.
Weber, H. E., Canton, Ohio. Arm-rest. No. 877,274; Jan. 21; Sp. p. 3281; Dr. p. 710; Gaz. vol. 132; p. 601.
Weber, L., Darmstadt, Germany. Pyrimidin derivative. (Reissue.) No. 12,745; Jan. 28; Sp. p. 4498; Gaz. vol. 132; p. 822.
Webster, D., Baton Rouge, La. Device for hanging wall-paper. No. 877,025; Jan. 21; Sp. p. 2765; Dr. p. 598; Gaz. vol. 132; p. 517.
Weckbaugh, J. V., Denver, Colo. Stamping instrument. No. 877,148; Jan. 21; Sp. p. 3020; Dr. pp. 653–4; Gaz. vol. 132; p. 558.
Weekes, J. D., assignor to Keystone Forging Company, Northumberland, Pa. Running-gear for vehicles. No. 876,032; Jan. 7; Sp. p. 671; Dr. p. 144; Gaz. vol. 132; p. 115.
Weeks, J., assignor of one-half to H. C. Dudgeon, Locust Valley, N. Y. Hydraulic jack, punch, and similar machines. No. 876,920; Jan. 14; Sp. p. 2503; Dr. p. 546; Gaz. vol. 132; p. 440.
Weidner, M. G., *et al.* (See Senter, J. F., assignor.)
Weil, L. N. (See Legge and Weil.)
Weiland, A. (See Gerber and Weiland.)
Weintraub, E., Schenectady, N. Y., assignor to General Electric Company. Transforming the energy of electric currents. No. 877,026; Jan. 21; Sp. p. 2767; Dr. p. 598; Gaz. vol. 132; p. 518.
Weintz, J., Cleveland, Ohio. Drier. No. 875,874; Jan. 7; Sp. p. 365; Dr. pp. 80–1; Gaz. vol. 132; p. 67.
Weis, J. F., Brooklyn, N. Y., assignor, by mesne assignments, to Metropolitan Sewing Machine Company. Seam for sewed articles. No. 877,275; Jan. 21; Sp. p. 3282; Dr. p. 710; Gaz. vol. 132; p. 601.
Weld, G. A. (See Kingston, W. H., assignor.)
Welding, O. P., Sioux City, Iowa. Tread-power. No. 877,388; Jan. 21; Sp. p. 3491; Dr. pp. 757–8; Gaz. vol. 132; p. 636.
Wells, C. G., *et al.* (See Mariner, A. L., assignor.)
Wells, F. E. (See Wells, W. C., and F. E.)
Wells, W. C. and F. E., Columbus, Ohio. Refining, fractionating, and reducing oils. No. 877,620; Jan. 28; Sp. p. 3979; Dr. p. 860; Gaz. vol. 132; p. 733.
Wenger, S. B., Goshen, Ind. Attachment for wagon-beds. No. 877,535; Jan. 28; Sp. p. 3796; Dr. p. 822; Gaz. vol. 132; p. 706.
Wentworth Company. (See Wentworth, S. J., assignor.)
Wentworth, S. J., Newport, Ky., assignor to Wentworth Company, Cincinnati, Ohio. Shoe-ironer. No. 876,249; Jan. 7; Sp. p. 1089; Dr. p. 238; Gaz. vol. 132; p. 185.
Werd, W. E., Deer Lodge, Mont. Tongs. No. 877,389; Jan. 21; Sp. p. 3492; Dr. p. 758; Gaz. vol. 132; p. 636.
Wernicke, C. G. W., Minneapolis, Minn. Cylinder and concave tooth straightener. No. 875,971; Jan. 7; Sp. p. 558; Dr. pp. 119–20; Gaz. vol. 132; p. 97.
Wernli, F. P. (See Peterson and Wernli.)
Werrmann, C. A. (See Dauner and Werrmann.)
Weser, J. A., New York, N. Y. Mechanical musical instrument. No. 877,027; Jan. 21; Sp. p. 2770; Dr. p. 599; Gaz. vol. 132; p. 518.
Wessel, A., assignor to Vertriebscentrale für Haushaltsartikel (Triebert & Wessel) G. M. B. H., Hanover, Germany. Vessel for cooking and like purposes. No. 875,972; Jan. 7; Sp. p. 559; Dr. p. 120; Gaz. vol. 132; p. 97.
West, A. J., Pittsburg, Pa., assignor to Westinghouse Machine Company. Gas-engine mixing-valve. No. 876,509; Jan. 14; Sp. p. 1669; Dr. pp. 362–3; Gaz. vol. 132; p. 304.
West, G., Syracuse, N. Y. Garment. No. 877,686; Jan. 28; Sp. p. 4105; Dr. p. 888; Gaz. vol. 132; p. 754.
West, S. E., Pawtucket, assignor of one-half to G. P. Tyler, East Greenwich, R. I. Tobacco-pipe. No. 877,536; Jan. 28; Sp. p. 3798; Dr. p. 822; Gaz. vol. 132; p. 706.
Westerman, T. J., Olalla, Wash. Gearing. No. 877,815; Jan. 28; Sp. p. 4319; Dr. p. 938; Gaz. vol. 132; p. 793.
Western Electric Company. (See Adams, A. H., assignor.)
Western Electric Company. (See Roberts, J. G., assignor.)
Westfahl, F. C., Milwaukee, Wis. Cam. No. 877,087; Jan. 28; Sp. p. 4106; Dr. p. 888; Gaz. vol. 132; p. 755.
Westinghouse Air Brake Company. (See Turner, W. V., assignor.)
Westinghouse Electric & Manufacturing Company. (See Feicht, R. S., assignor.)
Westinghouse Electric & Manufacturing Company. (See Jones, W. F., assignor.)
Westinghouse Electric & Manufacturing Company. (See Lehr, E., assignor.)
Westinghouse Machine Company. (See Kandó, C. de, assignor.)
Westinghouse Machine Company. (See West, A. J., assignor.)
Wetmore, W. H., assignor to C. A. Lee, Oneida, N. Y. Mop-wringer. No. 877,149; Jan. 21; Sp. p. 3023; Dr. p. 654; Gaz. vol. 132; p. 558.
Wettig, H., assignor to Firm of J. A. Topf and Soehne, Erfurt, Germany. Malt-kiln. No. 876,756; Jan. 14; Sp. p. 2181; Dr. p. 479; Gaz. vol. 132; p. 387.
Wevand, P. A., Maywood, Ill., assignor to Electric Service Supplies Company, Camden, N. J. Electric-motor-controller regulator. (Reissue.) No. 12,744; Jan. 28; Sp. p. 4494; Dr. p. 978; Gaz. vol. 132; p. 822.
What Cheer Tool Co. (See Walker, A., assignor.)
Wheary, G. H. (See Hawley and Wheary.)
Wheeler, H. T., Washington, D. C. Firing mechanism for ordnance. No. 876,510; Jan. 14; Sp. p. 1671; Dr. pp. 363–5; Gaz. vol. 132; p. 305.
Wheeler, J. A., New York, N. Y. Fireproof door. No. 876,121; Jan. 7; Sp. p. 850; Dr. p. 182; Gaz. vol. 132; p. 145.
Whipple, A. F. (See Scott and Whipple.)
Whitaker, C. B., Ubee, Ind. Printing-press. No. 875,758; Jan. 7; Sp. p. 158; Dr. p. 35; Gaz. vol. 132; p. 30.
Whitcomb, L., Brookline, Mass. Shock-absorber. No. 875,759; Jan. 7; Sp. p. 160; Dr. p. 35; Gaz. vol. 132; p. 31.
White, F. R., *et al.* (See Fields, J. W., assignor.)
White, G. M., Pittsburg, Pa. Bed-pan. No. 876,671; Jan. 14; Sp. p. 2034; Dr. p. 443; Gaz. vol. 132; p. 361.
White, G. W., *et al.* (See Shumate, J. W., assignor.)
White, H. C., Canton, Ohio. Hay-elevating device. No. 877,688; Jan. 28; Sp. p. 4108; Dr. p. 889; Gaz. vol. 132; p. 755.

White, H. E., Schenectady, N. Y., assignor to General Electric Company. Motor control. No. 877,028; Jan. 21; Sp. p. 2772; Dr. pp. 599-600; Gaz. vol. 132; p. 518.
White, J. B., *et al.* (See Stanley, G. E., assignor.)
White, W., assignor of one-half to S. P. Hubbard, Cleveland, Ohio. Reclining-chair. No. 875,760; Jan. 7; Sp. p. 161; Dr. p. 35; Gaz. vol. 132; p. 31.
White, W. B. (See Bean, R., assignor.)
Whitehead, B. S., assignor to Whitehead & Hoag Company, Newark, N. J. Paper-weight. No. 877,150; Jan. 21; Sp. p. 3024; Dr. p. 654; Gaz. vol. 132; p. 559.
Whitehead & Hoag Company. (See Whitehead, B. S., assignor.)
Whitehead, J. B., Salt Lake City, Utah, assignor to himself, and T. M. Farrell, Pocatello, Idaho. Shipping-can. No. 877,816; Jan. 28; Sp. p. 4221; Dr. p. 938; Gaz. vol. 132; p. 794.
Whitehurst, D., assignor of one-half to A. J. Ean, New York, N. Y. Mop-wringer. No. 877,621; Jan. 28; Sp. p. 3982; Dr. p. 860; Gaz. vol. 132; p. 733.
Whitin Machine Works. (See Hathaway, D. B., assignor.)
Whiting, J., Niagara Falls, N. Y. Electrolyzing salts. No. 877,537; Jan. 28; Sp. p. 3799; Dr. pp. 822-3; Gaz. vol. 132; p. 706.
Whiting, L. D., Milldale, Conn. Lantern attachment. No. 876,033; Jan. 7; Sp. p. 672; Dr. p. 144; Gaz. vol. 132; p. 116.
Whitman & Barnes Manufacturing Company. (See Rich, G. R., assignor.)
Whitmer, J. C., Lordsburg, Cal. Pump driving mechanism. No. 877,276; Jan. 21; Sp. p. 3284; Dr. p. 710; Gaz. vol. 132; p. 601.
Whitmore, W. V., *et al.*, executors. (See Shone and Ranber.)
Whittemore, H. C., *et al.* (See Mariner, A. L., assignor.)
Wiborgh, J. A., Stockholm, Sweden. Drop-target. No. 877,622; Jan. 28; Sp. p. 3984; Dr. p. 861; Gaz. vol. 132; p. 734.
Wickes Brothers. (See Huyette, W. S., assignor.)
Wickwire, F. R., Cortland, N. Y. Clamp for compressing springs. No. 875,761; Jan. 7; Sp. p. 162; Dr. p. 36; Gaz. vol. 132; p. 31.
Wiedeman, H., assignor to J. S. McDonald Company, Chicago, Ill. Loose-leaf binder. No. 876,250; Jan. 7; Sp. p. 1090; Dr. p. 238; Gaz. vol. 132; p. 185.
Wild, P. C. (See Radu, J. W., assignor.)
Wilde, O. W., Wichita, Kans. Combined whip, rein, and lap-robe lock for vehicles. No. 877,623; Jan. 28; Sp. p. 3986; Dr. p. 861; Gaz. vol. 132; p. 734.
Wildman Manufacturing Company. (See Ballard, G. L., assignor.)
Wilkinson, J., Providence, R. I., assignor to Wilkinson Turbine Company, Birmingham, Ala. Turbine bucket-wheel. No. 876,123; Jan. 7; Sp. p. 852; Dr. p. 182; Gaz. vol. 132; p. 145.
Wilkinson, J., Providence, R. I., assignor to Wilkinson Turbine Company, Birmingham, Ala. Shaft-packing. No. 876,613; Jan. 14; Sp. p. 1910; Dr. p. 416; Gaz. vol. 132; p. 341.
Wilkinson Turbine Company. (See Wilkinson, J., assignor.)
Wille, H. V., Philadelphia, Pa. Bolt. No. 877,390; Jan. 21; Sp. p. 3494; Dr. p. 758; Gaz. vol. 132; p. 637.
Wille, P. A., New York, N. Y. Piston. No. 876,853; Jan. 14; Sp. p. 2358; Dr. p. 516; Gaz. vol. 132; p. 417.
Willett, G. P., Bristol, Wis. Machine for slitting plastic tubes. No. 877,151; Jan. 21; Sp. p. 3026; Dr. p. 655; Gaz. vol. 132; p. 559.
Williams, C. B., Ontario, Cal. Automatic feeder. No. 877,538; Jan. 28; Sp. p. 3806; Dr. pp. 823-4; Gaz. vol. 132; p. 707.
Williams, F. R., *et al.* (See Myers, C. D., assignor.)
Williams, H. M. (See Burger, F., assignor.)
Williams, I. N., Foltz, Ind. Gate. No. 876,122; Jan. 7; Sp. p. 851; Dr. p. 182; Gaz. vol. 132; p. 145.
Williams, J., Allegheny, Pa. Curtain-pole. No. 876,672; Jan. 14; Sp. p. 2035; Dr. p. 444; Gaz. vol. 132; p. 361.
Williams, M. F., assignor to Williams Patent Crusher & Pulverizer Company, St. Louis, Mo. Shredding-machine. No. 877,689; Jan. 28; Sp. p. 4109; Dr. p. 889; Gaz. vol. 132; p. 755.
Williams, M. F., assignor to Williams Patent Crusher & Pulverizer Company, St. Louis, Mo. Shredding-machine. No. 877,690; Jan. 28; Sp. p. 4112; Dr. p. 890; Gaz. vol. 132; p. 756.
Williams, M. F., assignor to Williams Patent Crusher & Pulverizer Company, St. Louis, Mo. Crusher and pulverizer. No. 877,876; Jan. 28; Sp. p. 4442; Dr. p. 968; Gaz. vol. 132; p. 814.
Williams, M. L., Philadelphia, Pa. Carbureter. No. 876,287; Jan. 7; Sp. p. 1180; Dr. p. 257; Gaz. vol. 132; p. 199.
Williams Patent Crusher & Pulverizer Company. (See Williams, M. F., assignor.)
Williams, W. E., Chicago, Ill., assignor to Diamond Match Company, New York, N. Y. Match-machine. No. 876,921; Jan. 14; Sp. p. 2505; Dr. pp. 546-51; Gaz. vol. 132; p. 440.
Willis, J. W. (See Hestand and Willis.)
Willis, P. E. (See Jolly and Willis.)
Willson, F. R., Jr., Worthington, Ohio, assignor, by mesne assignments, to Jeffrey Manufacturing Company. Car-loading apparatus. No. 877,539; Jan. 28; Sp. p. 3809; Dr. p. 824; Gaz. vol. 132; p. 707.
Willson, T. L., Ottawa, Ontario, Canada, assignor, by mesne assignments, to United States Marine Signal Company, Jersey City, N. J. Buoy. No. 875,575; Jan. 7; Sp. p. 368; Dr. pp. 81-2; Gaz. vol. 132; p. 68.
Wilson, D., *et al.* (See Wilson, G. W., assignor.)
Wilson, E. A., Niles, Ohio. Metal structure. No. 876,124; Jan. 7; Sp. p. 854; Dr. p. 183; Gaz. vol. 132; p. 146.
Wilson, G. M., Los Angeles, Cal. Shock-absorber. No. 877,391; Jan. 21; Sp. p. 3495; Dr. p. 758; Gaz. vol. 132; p. 637.
Wilson, G. W., assignor of two-thirds to F. M. Malone and D. Wilson, Cayuga, Ind. Engine. No. 876,800; Jan. 14; Sp. p. 2441; Dr. p. 532; Gaz. vol. 132; p. 430.
Wilson, J. S. (See Berg, C. O., assignor.)
Wilson, M., Garrison, Iowa. Traction-wheel. No. 877,152; Jan. 21; Sp. p. 3028; Dr. p. 655; Gaz. vol. 132; p. 559.
Wilson, T. P. and W. W., Longbeach, Cal. Steering device for automobiles. No. 876,034; Jan. 7; Sp. p. 674; Dr. p. 145; Gaz. vol. 132; p. 116.
Wilson W. W. (See Wilson, T. P. and W. W.)
Winans, H. E., and F. Sinnock, Newark, N. J. Spreader for shells. No. 875,762; Jan. 7; Sp. p. 164; Dr. p. 36; Gaz. vol. 132; p. 32.
Winchell, H. H. (See Winchell, J. C., and H. H.)
Winchell, J. C. and H. H., Monte Vista, Colo. Apparatus for automatically discharging ore-pulp sands and other material from tanks. No. 875,876; Jan. 7; Sp. p. 369; Dr. p. 82; Gaz. vol. 132; p. 68.
Winchester Repeating Arms Co. (See Mason, W., assignor.)
Windham, W. G., London, England. Motor-vehicle. No. 877,750; Jan. 28; Sp. p. 4214; Dr. pp. 913-14; Gaz. vol. 132; p. 774.
Wingate, W. E., assignor of one-half to Emmons Loom Harness Company, Lawrence, Mass. Machine for making false reeds for looms. No. 876,614; Jan. 14; Sp. p. 1915; Dr. pp. 417-18; Gaz. vol. 132; p. 341.
Winthertich, H. J., Omaha, Nebr., assignor of two-thirds to W. R. Smith and A. M. Lundgard, Council Bluffs, Iowa. Apparatus for preserving eggs. No. 876,757; Jan. 14; Sp. p. 2181; Dr. p. 479; Gaz. vol. 132; p. 387.
Wise, H., Namacpacan, Philippine Islands. Capitalizing typoscript letters. No. 875,877; Jan. 7; Sp. p. 373; Dr. p. 82; Gaz. vol. 132; p. 69.
Wise, W. J., *et al.* (See Butts, W. R., assignor.)
Wiseman, J. W. (See Patterson and Wiseman.)
Witt, O., Macon, Mo. Shears. No. 877,691; Jan. 28; Sp. p. 4114; Dr. p. 890; Gaz. vol. 132; p. 756.
Wolf, H. C. and L. S., Catawissa, Pa. Steam-engine. No. 876,758; Jan. 14; Sp. p. 2183; Dr. p. 479; Gaz. vol. 132; p. 387.
Wolf, J. H. (See Vogler, H., assignor.)
Wolf, L. S. (See Wolf, H. C. and L. S.)
Wolff, H. (See Bally and Wolff.)
Wolff, H. W. (See Frame, R. E., assignor.)
Wolfrey, R., West Alexandria, Ohio. Tool. No. 877,153; Jan. 21; Sp. p. 3029; Dr. p. 656; Gaz. vol. 132; p. 560.
Wolfrom, E. J., Salida, Colo. Cutter-bar. No. 875,878; Jan. 7; Sp. p. 374; Dr. p. 83; Gaz. vol. 132; p. 69.
Wolhaupter, B., assignor to Rail Joint Company, New York, N. Y. Insulated compromise rail-joint. No. 877,817; Jan. 28; Sp. p. 4223; Dr. p. 939; Gaz. vol. 132; p. 794.
Woodra, Franz, Schenectady, N. Y. Flying-machine. No. 876,125; Jan. 7; Sp. p. 850; Dr. pp. 183-5; Gaz. vol. 132; p. 146.
Wood, E. L., New York, N. Y. Faucet. No. 877,540; Jan. 28; Sp. p. 3813; Dr. p. 824; Gaz. vol. 132; p. 708.
Wood, F. O., South Pasadena, Cal. Garment-supporting belt. No. 875,973; Jan. 7; Sp. p. 560; Dr. p. 120; Gaz. vol. 132; p. 98.
Wood, H. D., Jr., Minneapolis, Minn. Electrical abdominal heater. No. 877,154; Jan. 21; Sp. p. 3030; Dr. p. 656; Gaz. vol. 132; p. 560.
Wood, H. D., Jr., Minneapolis, Minn. Electrical face-steamer. No. 877,155; Jan. 21; Sp. p. 3031; Dr. p. 656; Gaz. vol. 132; p. 560.
Wood, R. A., New York, N. Y. Recorder. No. 876,854; Jan. 14; Sp. p. 2359; Dr. pp. 516-17; Gaz. vol. 132; p. 417.
Woodbury, S. W., Newton Highlands, assignor to S. Harwood, Newton, and J. H. Harwood, Brookline, Mass. Fibrous-stock feeder. (Reissue.) No. 12,740; Jan. 14; Sp. p. 2525; Dr. p. 552; Gaz. vol. 132; p. 442.
Woods, S. E., Lockwood, Okla. Corn-topper. No. 876,615; Jan. 14; Sp. p. 1918; Dr. pp. 418-19; Gaz. vol. 132; p. 341.
Wooster, W. W., Berlin, N. J. Speed regulator and indicator. No. 876,673; Jan. 14; Sp. p. 2035; Dr. p. 444; Gaz. vol. 132; p. 361.
Woodward, O., New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 877,541; Jan. 28; Sp. p. 3814; Dr. pp. 825-6; Gaz. vol. 132; p. 708.
Woodworth, G. K. (See De Forest, L., assignor.)

Woolland, W. H. (See Henry, H. W., assignor.)
Wright, H. B. (See Hill and Wright.)
Wruck, E. A., Norwalk, Wis. Arch-iron for hay-racks. No. 877,156; Jan. 21; Sp. p. 3032; Dr. p. 656; Gaz. vol. 132; p. 560.
Wuest, P., Jr., assignor to Auto-Manual Piano Action Company, Philadelphia, Pa. Rhythm-indicator for mechanical musical instruments. No. 875,974; Jan. 7; Sp. p. 562; Dr. p. 121; Gaz. vol. 132; p. 98.
Wyant, C. E., Chicago, Ill. Suspender-end. No. 876,855; Jan. 14; Sp. p. 2361; Dr. p. 517; Gaz. vol. 132; p. 418.
Wyckoff, Seamans & Benedict. (See Petersen, W. V., assignor.)
Wyckoff, Seamans & Benedict. (See Shepard, C. H., assignor.)
Wyckoff, Seamans & Benedict. (See Webb, G. B., assignor.)
Wyher, J. F., Pittsburg, Pa. Whisk and broom holder. No. 877,277; Jan. 21; Sp. p. 3285; Dr. p. 711; Gaz. vol. 132; p. 601.
Wykes, E. C. (See Spencer and Wykes.)
Wykoff, E. H. (See Rishel and Wykoff.)
Wyman, H., Worcester, Mass., assignor to Crompton & Knowles Loom Works. Weft-replenishing loom. No. 876,418; Jan. 14; Sp. p. 1471; Dr. p. 316; Gaz. vol. 132; p. 272.
Wyman, W. F., Oshkosh, Wis. Mattress. No. 877,692; Jan. 28; Sp. p. 4115; Dr. p. 890; Gaz. vol. 132; p. 756.
Yale & Towne Manufacturing Company. (See Taylor, W. H., assignor.)
Yingling, C. J., *et al.* (See Vannette, J., assignor.)
Yingling, G. S., *et al.* (See Vannette, J., assignor.)
Yocum, G. C., Scranton, Pa. Vending-machine. No. 876,126; Jan. 7; Sp. p. 862; Dr. pp. 185-6; Gaz. vol. 132; p. 146.
Yonkers Specialty Company. (See Walsh, J. J., assignor.)
York, J. A., assignor to Arrow Electric Company, Hartford, Conn. Push-button snap-switch. No. 876,511; Jan. 14; Sp. p. 1675; Dr. p. 365; Gaz. vol. 132; p. 305.
York Trust Company, *et al.*, executors. (See Brothers, W.)
Yorke, P., Washington, Pa. Derrick. No. 877,624; Jan. 28; Sp. p. 3988; Dr. p. 862; Gaz. vol. 132; p. 735.
Young, B. M. (See Chase and Young.)
Young, E., Frederick, Ill. Wire-splicer. No. 876,674; Jan. 14; Sp. p. 2037; Dr. p. 444; Gaz. vol. 132; p. 362.
Young, J. B., Halliday, Ark. Coon and mink trap. No. 876,750; Jan. 14; Sp. p. 2186; Dr. p. 480; Gaz. vol. 132; p. 388.
Young, S. M., New York, N. Y. System of automatic block signaling for railways. No. 876,419; Jan. 14; Sp. p. 1474; Dr. p. 316; Gaz. vol. 132; p. 272.
Young, W., Peebles, Scotland, and S. Glover, St. Helens, England. Carbonizing coal. No. 876,420; Jan. 14; Sp. p. 1477; Dr. p. 317; Gaz. vol. 132; p. 273.
Young, W. W., Springfield, Mass. Sound reproducing and modifying device. No. 876,035; Jan. 7; Sp. p. 675; Dr. p. 145; Gaz. vol. 132; p. 117.
Yount, C. E., Sr., Harrisburg, Pa. Sunbonnet. No. 877,029; Jan. 21; Sp. p. 2775; Dr. p. 600; Gaz. vol. 132; p. 519.
Zegien, C., Chicago, Ill. Cushion-tire. No. 876,616; Jan. 14; Sp. p. 1920; Dr. p. 419; Gaz. vol. 132; p. 342.
Zeigler, E. H., Stewartstown, Pa. Attachment for brick-machines. No. 875,879; Jan. 7; Sp. p. 376; Dr. p. 83; Gaz. vol. 132; p. 69.
Zeitinger, C. J., St. Louis, Mo. Double-cutting rotary sawmill. No. 877,392; Jan. 21; Sp. p. 3496; Dr. p. 759; Gaz. vol. 132; p. 637.
Ziegler, M., assignor to Oberbayerische Kokswerke und Fabrik Chemischer Produkte Akt. Gesellschaft, Beuerberg, Germany. Kiln for coking peat or similar material. No. 876,421; Jan. 14; Sp. p. 1479; Dr. pp. 317-18; Gaz. vol. 132; p. 273.
Zierlein, R. W., and W. Riechmann, assignors, by mesne assignments, to Paris Lamp Manufacturing Company, St. Louis, Mo. Gas-lamp. No. 875,763; Jan. 7; Sp. p. 165; Dr. p. 36; Gaz. vol. 132; p. 32.
Ziesing, R., Cleveland, Ohio. Regenerative retort-furnace. No. 876,891; Jan. 14; Sp. p. 2444; Dr. p. 532; Gaz. vol. 132; p. 431.
Zimmerman, F. M., Aurora, Ill. Anchor for guys. No. 876,127; Jan. 7; Sp. p. 868; Dr. p. 186; Gaz. vol. 132; p. 147.
Zimmermann, A. J., New Orleans, La. Combined hammer and screw-driver. No. 875,880; Jan. 7; Sp. p. 378; Dr. p. 83; Gaz. vol. 132; p. 70.
Zix, C. E., Berlin, Germany, assignor to General Electric Company. Motor control. No. 877,030; Jan. 21; Sp. p. 2776; Dr. p. 600; Gaz. vol. 132; p. 519.
Zoeller, F. (See Zoeller, O. and F.)
Zoeller, O. and F., Hancock, Iowa. Four-horse equalizer. No. 877,278; Jan. 21; Sp. p. 3286; Dr. p. 711; Gaz. vol. 132; p. 602.
Zoeller, A., Dresden, Germany. Composition for production of aromatic baths. No. 875,764; Jan. 7; Sp. p. 167; Gaz. vol. 132; p. 32.
Zvonicek, J., Brünn, Austria-Hungary. Elastic-fluid turbine. No. 876,422; Jan. 14; Sp. p. 1482; Dr. pp. 318-19; Gaz. vol. 132; p. 273.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF JANUARY, 1908.

[Abbreviations: "Sp."=Monthly Volume of Specifications; "Dr."=Monthly Volume of Drawings; "Gaz."=Official Gazette.]

Abdominal heater, Electrical. H. D. Wood, Jr. No. 877,154; Jan. 21; Sp. p. 3030; Dr. p. 656; Gaz. vol. 132; p. 560.
Abrading material. E. F. Landis. No. 875,936; Jan. 7; Sp. p. 475; Dr. p. 102; Gaz. vol. 132; p. 85.
Abrading-wheel. E. F. Landis. No. 875,935; Jan. 7; Sp. p. 474; Dr. p. 102; Gaz. vol. 132; p. 85.
Abrasive wheels, Safety-collar for. D. B. Hyde. No. 875,931; Jan. 7; Sp. p. 468; Dr. p. 101; Gaz. vol. 132; p. 84.
Account-keeping device. R. D. Burhans. No. 875,774; Jan. 7; Sp. p. 192; Dr. p. 41; Gaz. vol. 132; p. 35.
Acetylene-generator. S. W. Rushmore. No. 877,234; Jan. 21; Sp. p. 3200; Dr. p. 694; Gaz. vol. 132; p. 588.
Acid, Manufacture of sulfuric. N. L. Heinz and M. F. Chase. No. 875,909; Jan. 7; Sp. p. 443; Dr. p. 98; Gaz. vol. 132; p. 80.
Acid or oxid from air, Apparatus for manufacturing nitric. H. Pauling. No. 877,446; Jan. 21; Sp. p. 3005; Dr. p. 781; Gaz. vol. 132; p. 656.
Acid, Production of pure nitric. H. Pauling. No. 877,447; Jan. 21; Sp. p. 3606; Gaz. vol. 132; p. 656.
Acids, Making arylthioglycollic-orthocarboxylic. E. Bryk. No. 877,702; Jan. 28; Sp. p. 4128; Gaz. vol. 132; p. 759.
Adding-machine. A. J. Klumb and A. W. Krahn. No. 876,196; Jan. 7; Sp. p. 988; Dr. p. 214; Gaz. vol. 132; p. 168.
Addresser, Envelop-. R. N. Rogers. No. 876,913; Jan. 14; Sp. p. 2483; Dr. pp. 542–3; Gaz. vol. 132; p. 438.
Addressing-machine. J. P. Bryan. No. 877,400; Jan. 21; Sp. p. 3511; Dr. p. 761; Gaz. vol. 132; p. 640.
Addressing-machines and the like, Self-feeder for. R. N. Rogers. No. 876,914; Jan. 14; Sp. p. 2493; Dr. p. 544; Gaz. vol. 132; p. 438.
Adjustable and extensible bracket. L. J. Rhoades. No. 877,373; Jan. 21; Sp. p. 3460; Dr. p. 751; Gaz. vol. 132; p. 631.
Advertising, Automatic switching device for use in flash. L. K. Job. No. 876,555; Jan. 14; Sp. p. 1767; Dr. pp. 385–6; Gaz. vol. 132; p. 320.
Agricultural-machine frame. P. Christiansson. No. 876,297; Jan. 7; Sp. p. 1211; Dr. p. 264; Gaz. vol. 132; p. 202.
Air-brake. W. V. Turner. No. 877,530; Jan. 28; Sp. p. 3782; Dr. p. 820; Gaz. vol. 32; p. 704.
Air-brakes, Automatic pressure retaining and graduating release device for. E. B. Hillman and L. E. Roberts. No. 876,876; Jan. 14; Sp. p. 2410; Dr. pp. 525–6; Gaz. vol. 132; p. 425.
Air-separator. G. S. Emerick. No. 877,557; Jan. 28; Sp. p. 3854; Dr. p. 834; Gaz. vol. 132; p. 713.
Air-ship. W. C. Dunn. No. 877,307; Jan. 21; Sp. p. 3345; Dr. p. 725; Gaz. vol. 132; p. 610.
Air-ship. P. T. Tkatzschenko. No. 877,529; Jan. 28; Sp. p. 3781; Dr. p. 819; Gaz. vol. 132; p. 704.
Alarm: *See* Boiler-pressure alarm; Electric time-alarm; Fire-alarm.
Alarm system, Signal. O. B. Kaiser. No. 876,192; Jan. 7; Sp. p. 980; Dr. p. 212; Gaz. vol. 132; p. 167.
Alining means. A. E. Salisbury. No. 876,097; Jan. 7; Sp. p. 803; Dr. p. 172; Gaz. vol. 132; p. 136.
Alkali hydroxids, Making. P. B. and S. P. Sadtler. No. 877,376; Jan. 21; Sp. p. 3468; Gaz. vol. 132; p. 632.
Alloys or mixtures of metals with purifying or seasoning elements, Producing. A. J. Rossi. No. 877,518; Jan. 28; Sp. p. 3762; Gaz. vol. 132; p. 701.
Amusement novelty or theatrical device. F. W. Schmidt. No. 876,731; Jan. 14; Sp. p. 2136; Dr. p. 469; Gaz. vol. 132; p. 379.
Amusement race-tracks, Mount for. G. Lacomme. No. 876,976; Jan. 21; Sp. p. 2647; Dr. p. 575; Gaz. vol. 132; p. 499.
Anchor. G. H. Cummings. No. 877,761; Jan. 28; Sp. p. 4232; Dr. pp. 918–19; Gaz. vol. 132; p. 777.
Anchor, Guy-. F. M. Zimmerman. No. 876,127; Jan. 7; Sp. p. 868; Dr. p. 186; Gaz. vol. 132; p. 147.
Animal-trainer. T. R. Folts. No. 876,047; Jan. 7; Sp. p. 696; Dr. p. 149; Gaz. vol. 132; p. 120.
Animal-trap. W. P. Tippit. No. 876,414; Jan. 14; Sp. p. 1459; Dr. p. 313; Gaz. vol. 132; p. 270.
Animal-trap. J. H. Sprague and E. Warmbrodt. No. 877,134; Jan. 21; Sp. p. 2987; Dr. p. 645; Gaz. vol. 132; p. 553.
Animal-trap. W. G. Stone. No. 877,138; Jan. 21; Sp. p. 2997; Dr. p. 647; Gaz. vol. 132; p. 554.
Animals, Apparatus for breaking or training. L. Hoover. No. 877,504; Jan. 28; Sp. p. 3733; Dr. p. 808; Gaz. vol. 132; p. 695.
Animals, Treating. F. C. Goff. No. 876,632; Jan. 14; Sp. p. 1960; Dr. p. 427; Gaz. vol. 132; p. 348.
Annealing-furnace. J. A. Herrick. No. 876,182; Jan. 7; Sp. p. 962; Dr. pp. 207–8; Gaz. vol. 132; p. 164.
Annealing-furnace. J. A. Herrick. No. 876,183; Jan. 7; Sp. p. 964; Dr. p. 208; Gaz. vol. 132; p. 164.
Annunciator. L. S. Scott. No. 876,735; Jan. 14; Sp. p. 2141; Dr. pp. 470–1; Gaz. vol. 132; p. 380.
Antisnoring device. C. F. Rohwer. No. 876,491; Jan. 14; Sp. p. 1628; Dr. p. 353; Gaz. vol. 132; p. 297.
Apples, potatoes, &c., Device for culling and discharging. P. Huberty. No. 876,805; Jan. 14; Sp. p. 2261; Dr. p. 498; Gaz. vol. 132; p. 402.
Arch, Reinforced terra-cotta. P. H. Bevier. No. 877,545; Jan. 28; Sp. p. 3832; Dr. p. 829; Gaz. vol. 132; p. 710.
Arm-rest. H. E. Weber. No. 877,274; Jan. 21; Sp. p. 3281; Dr. p. 710; Gaz. vol. 132; p. 601.
Armature-banding. M. Dickerson. No. 876,949; Jan. 21; Sp. p. 2597; Dr. p. 565; Gaz. vol. 132; p. 490.
Artificial post. H. G. Thomson. No. 876,247; Jan. 7; Sp. p. 1087; Dr. p. 237; Gaz. vol. 132; p. 184.
Artillery-director. J. D. B. Fulton. No. 876,343; Jan. 14; Sp. p. 1304; Dr. p. 282; Gaz. vol. 132; p. 247.
Auger-bit. P. J. Creedon. No. 877,831; Jan. 28; Sp. p. 4364; Dr. p. 948; Gaz. vol. 132; p. 800.
Auriphone. D. O. Fosgate. No. 877,317; Jan. 21; Sp. p. 3369; Dr. p. 730; Gaz. vol. 132; p. 613.
Automatic coupling. J. Riley and F. A. Spiers. No. 877,663; Jan. 28; Sp. p. 4056; Dr. pp. 877–8; Gaz. vol. 132; p. 747.
Automatic coupling. J. Riley and F. A. Spiers. No. 877,664; Jan. 28; Sp. p. 4058; Dr. pp. 878–9; Gaz. vol. 132; p. 748.
Automobile. W. W. Macfarren. No. 876,070; Jan. 7; Sp. p. 755; Dr. pp. 160–1; Gaz. vol. 132; p. 128.
Automobile-jack. J. C. Moore. No. 876,824; Jan. 14; Sp. p. 2303; Dr. p. 506; Gaz. vol. 132; p. 407.
Automobile-lift. C. W. Gearing and W. J. McGee. No. 877,709; Jan. 28; Sp. p. 4138; Dr. pp. 895–6; Gaz. vol. 132; p. 761.
Automobile-motor. R. R. Brown. No. 876,700; Jan. 14; Sp. p. 2203; Dr. p. 484; Gaz. vol. 132; p. 391.
Automobile-radiator. M. Steiner. No. 877,609; Jan. 28; Sp. p. 3963; Dr. p. 855; Gaz. vol. 132; p. 730.
Automobile steering device. T. P. and W. W. Wilson. No. 876,034; Jan. 7; Sp. p. 674; Dr. p. 145; Gaz. vol. 132; p. 116.
Automobiles, Friction driving mechanism for. J. W. Lambert. No. 877,438; Jan. 21; Sp. p. 3592; Dr. p. 778; Gaz. vol. 132; p. 653.
Automobiles, Steering-knuckle for. H. Smith. No. 876,104; Jan. 7; Sp. p. 815; Dr. p. 175; Gaz. vol. 132; p. 139.
Autovehicles, Automatic controller for the speed of. T. B. Ford. No. 876,164; Jan. 7; Sp. p. 927; Dr. p. 200; Gaz. vol. 132; p. 158.
Auxiliary engine. J. Hutchings. No. 875,776; Jan. 28; Sp. p. 4261; Dr. p. 925; Gaz. vol. 132; p. 752.
Averruncator. G. F. Nilsson. No. 877,220; Jan. 21; Sp. p. 3180; Dr. p. 680; Gaz. vol. 132; p. 583.
Ax-head-locking device. F. Buck. No. 877,549; Jan. 28; Sp. p. 3844; Dr. p. 831; Gaz. vol. 132; p. 711.
Axle, Automobile-. A. J. Lehman. No. 876,978; Jan. 21; Sp. p. 2649; Dr. p. 576; Gaz. vol. 132; p. 500.
Axle-box lid, Car-. F. Hachmann and W. Ericksen. No. 875,809; Jan. 7; Sp. p. 254; Dr. pp. 54–5; Gaz. vol. 132; p. 47.
Axle, Combined steering and driving. P. Daniel. No. 877,835; Jan. 28; Sp. p. 4370; Dr. p. 950; Gaz. vol. 132; p. 801.
Axle journal boxes, Dust guard for car-. R. E. Frame. No. 877,318; Jan. 21; Sp. p. 3371; Dr. p. 730; Gaz. vol. 132; p. 614.
Axle lubricator, Vehicle-. C. R. Dodge. No. 876,151; Jan. 7; Sp. p. 911; Dr. p. 196; Gaz. vol. 132; p. 154.
Bag: *See* Golf-bag.
Bag-closing device. L. Röd. No. 875,953; Jan. 7; Sp. p. 521; Dr. p. 111; Gaz. vol. 132; p. 91.
Bag filling and weighing machine. C. H. Reynolds. No. 876,092; Jan. 7; Sp. p. 797; Dr. p. 170; Gaz. vol. 132; p. 135.
Bag-holder. J. N. Peterson and F. P. Wernli. No. 875,847; Jan. 7; Sp. p. 317; Dr. p. 70; Gaz. vol. 132; p. 58.
Ball for flower-pots, Detachable. G. B. Hart. No. 876,872; Jan. 14; Sp. p. 2403; Dr. p. 523; Gaz. vol. 132; p. 424.
Bale-forming apparatus. E. Reagan. No. 877,122; Jan. 21; Sp. p. 2956; Dr. pp. 638–40; Gaz. vol. 132; p. 540.
Bale hook and wire cutter, Combination hay-. J. Vasey. No. 877,619; Jan. 28; Sp. p. 3979; Dr. p. 859; Gaz. vol. 132; p. 733.
Baling-press. J. A. Hutton and W. H. Himbury. No. 876,553; Jan. 14; Sp. p. 1763; Dr. pp. 384–5; Gaz. vol. 132; p. 320.
Baling-press. C. L. Cookson. No. 877,173; Jan. 21; Sp. p. 3079; Dr. p. 666; Gaz. vol. 132; p. 566.
Baling-press. J. S. Tuttle. No. 877,228; Jan. 21; Sp. p. 3190; Dr. p. 692; Gaz. vol. 132; p. 586.

Baling-press. L. P. Agnew. No. 877,819; Jan. 28; Sp. p. 4330; Dr. pp. 940-1; Gaz. vol. 132; p. 795.
Ball-guiding casing. S. Schneider. No. 877,129; Jan. 21; Sp. p. 2980; Dr. p. 644; Gaz. vol. 132; p. 551.
Bandbox-stay for hats. E. C. Harrison. No. 875,995; Jan. 7; Sp. p. 600; Dr. p. 128; Gaz. vol. 132; p. 105.
Bandoleer. F. R. Batchelder. No. 876,131; Jan. 7; Sp. p. 875; Dr. p. 188; Gaz. vol. 132; p. 148.
Bar: *See* Cutter-bar; Lever and quadrant-bar; Reach-bar.
Barber's chair. E. Berninghaus. No. 875,885; Jan. 7; Sp. p. 387; Dr. p. 85; Gaz. vol. 132; p. 72.
Barber's chair. A. R. Lerro. No. 876,982; Jan. 21; Sp. p. 2658; Dr. pp. 577-8; Gaz. vol. 132; p. 501.
Bark-peeler. G. R. Rishel and E. H. Wykoff. No. 875,849; Jan. 7; Sp. p. 320; Dr. p. 70; Gaz. vol. 132; p. 59.
Barrel. J. J. Henry. No. 876,801; Jan. 14; Sp. p. 2253; Dr. p. 496; Gaz. vol. 132; p. 400.
Barrel, Metallic. J. H. La Fave. No. 876,563; Jan. 14; Sp. p. 1780; Dr. p. 390; Gaz. vol. 132; p. 323.
Basin, Folding wash-. H. Barcalow. No. 876,425; Jan. 14; Sp. p. 1489; Dr. p. 320; Gaz vol. 132; p. 274.
Basket-machine. E. Horton. No. 877,991; Jan. 28; Sp. p. 4470; Dr. p. 975; Gaz. vol. 132; p. 819.
Baths, Composition for production of aromatic. A. Zucker. No. 875,754; Jan. 7; Sp. p. 167; Gaz. vol. 132; p. 32.
Batteries, Electrolyte for alkaline storage. T. A. Edison. No. 876,445; Jan. 14; Sp. p. 1532; Gaz. vol. 132; p. 282.
Batteries in connection with alternating-current systems, Operation of storage. J. H. Tracy. No. 877,018; Jan. 21; Sp. p. 2752; Dr. p. 566; Gaz. vol. 132; p. 514.
Battery: *See* Storage battery.
Bearing. Antifriction-. H. R. Plimpton. 2d. No. 876,836; Jan. 14; Sp. p. 2325; Dr. p. 511; Gaz. vol. 132; p. 411.
Bearing, roller-. P. F. Bussman. No. 877,630; Jan. 28; Sp. p. 3996; Dr. p. 803; Gaz. vol. 132; p. 736.
Bearing, Spindle-. F. C. Stevens. No. 876,246; Jan. 7; Sp. p. 1065; Dr. p. 237; Gaz. vol. 132; p. 184.
Bearing, Steel-lined roller-. A. P. Sloan, Jr. No. 876,499; Jan. 14; Sp. p. 1645; Dr. p. 357; Gaz. vol. 132; p. 300.
Bed corner-fastening. B. H. Jones. No. 877,716; Jan. 28; Sp. p. 4152; Dr. p. 899; Gaz. vol. 132; p. 763.
Bed, Folding. N. Silverson. No. 876,498; Jan. 14; Sp. p. 1642; Dr. p. 356; Gaz. vol. 132; p. 300.
Bed for the sick. R. Rode. No. 876,238; Jan. 7; Sp. p. 1070; Dr. p. 232; Gaz. vol. 132; p. 181.
Bed-pan. G. M. White. No. 876,671; Jan. 14; Sp. p. 2034; Dr. p. 443; Gaz. vol. 132; p. 361.
Bed-spring. J. Schwartzman. No. 877,004; Jan. 21; Sp. p. 2717; Dr. pp. 588-9; Gaz. vol. 132; p. 509.
Bed-spring support. E. Ryan. No. 876,096; Jan. 7; Sp. p. 801; Dr. p. 171; Gaz. vol. 132; p. 136.
Bed-tightener. M. Holts. No. 877,774; Jan. 28; Sp. p. 4255; Dr. p. 923; Gaz. vol. 132; p. 782.
Beds, Short rail for. O. G. Franks. No. 875,703; Jan. 7; Sp. p. 47; Dr. p. 10; Gaz. vol. 132; p. 11.
Bedsteads, Table attachment for. A. O. Crosno. No. 876,041; Jan. 7; Sp. p. 687; Dr. p. 147; Gaz. vol. 132; p. 119.
Beer apparatus. Cooling-coil for. C. Meidau. No. 876,823; Jan. 14; Sp. p. 2302; Dr. p. 506; Gaz. vol. 123; p. 407.
Beeswax-rendering apparatus. F. R. Beuhne. No. 877,544; Jan. 28; Sp. p. 3831; Dr. p. 828; Gaz. vol. 132; p. 709.
Beet-chopper. T. A. Roberts. No. 877,737; Jan. 28; Sp. p. 4191; Dr. pp. 908-9; Gaz. vol. 132; p. 770.
Beets, Refuse-separator for. H. S. Rollins. No. 876,239; Jan. 7; Sp. p. 1071; Dr. pp. 232-3; Gaz. vol. 132; p. 182.
Bell, Gravity signal-. J. M. Chambers. No. 877,409; Jan. 21; Sp. p. 3538; Dr. p. 765; Gaz. vol. 132; p. 643.
Bell-ringing mechanism. L. H. McInnis. No. 875,836; Jan. 7; Sp. p. 299; Dr. p. 64; Gaz. vol. 132; p. 55.
Belt-coupling. O. N. Tevander. No. 876,607; Jan. 14; Sp. p. 1900; Dr. p. 414; Gaz. vol. 132; p. 330.
Belt, Garment-supporting. F. O. Wood. No. 875,973; Jan. 7; Sp. p. 560; Dr. p. 120; Gaz. vol. 132; p. 98.
Bench dog. M. C. Davis. No. 875,786; Jan. 7; Sp. p. 210; Dr. p. 45; Gaz. vol. 132; p. 39.
Bending-rolls. C. A. Bertsch. No. 877,038; Jan. 21; Sp. p. 2797; Dr. p. 604; Gaz. vol. 132; p. 522.
Bicycle. J. C. Herr. No. 877,337; Jan. 21; Sp. p. 3395; Dr. p. 736; Gaz. vol. 132; p. 620.
Bicycle attachment. B. M. Badger. No. 877,820; Jan. 28; Sp. p. 4333; Dr. p. 941; Gaz. vol. 132; p. 795.
Bicycle package-carrier. W. H. Reed. No. 875,949; Jan. 7; Sp. p. 498; Dr. p. 107; Gaz. vol. 132; p. 90.
Bicycles, Grinding attachment for. J. P. Grant. No. 875,806; Jan. 7; Sp. p. 246; Dr. p. 53; Gaz. vol. 132; p. 46.
Bill-head or statement, Self-inclosing. J. Souder. No. 876,743; Jan. 14; Sp. p. 2162; Dr. p. 475; Gaz. vol. 132; p. 383.
Bin: *See* Coke-bin.
Binder. R. J. Copeland. No. 876,624; Jan. 14; Sp. p. 1935; Dr. p. 422; Gaz. vol. 132; p. 345.
Binder, Adjustable magazine-. J. A. Olson. No. 875,947; Jan. 7; Sp. p. 495; Dr. p. 107; Gaz. vol. 132; p. 90.
Binder for papers, Temporary. H. N. McClain. No. 876,073; Jan. 7; Sp. p. 772; Dr. p. 165; Gaz. vol. 132; p. 131.
Binder, Loose-leaf. H. Wiedeman. No. 876,250; Jan. 7; Sp. p. 1090; Dr. p. 238; Gaz. vol. 132; p. 185.
Binder, Temporary. W. N. Barnard. No. 877,478; Jan. 28; Sp. p. 3665; Dr. p. 795; Gaz. vol. 132; p. 686.
Binding-clip, Electrical. B. L. Barnes. No. 876,515; Jan. 14; Sp. p. 1689; Dr. p. 368; Gaz. vol. 132; p. 307.
Bit: *See* Auger-bit; Bridle-bit.
Blackboard composition. G. F. Dalton, Jr. No. 877,554; Jan. 28; Sp. p. 3849; Gaz. vol. 132; p. 712.
Blacking box, Shoe-. G. L. Blackman. No. 877,164; Jan. 21; Sp. p. 3051; Dr. p. 661; Gaz. vol. 132; p. 563.
Blind-fastening. J. S. Couret. No. 876,300; Jan. 7; Sp. p. 1217; Dr. p. 265; Gaz. vol. 132; p. 203.
Blind-lock, Burglar-proof. J. E. Warlick. No. 877,272; Jan. 21; Sp. p. 3280; Dr. p. 709; Gaz. vol. 132; p. 600.
Block: *See* Copying-block; Pulley-block; Wheel-block.
Block-signal apparatus. A. Bevan. No. 876,684; Jan. 14; Sp. p. 2057; Dr. p. 448; Gaz. vol. 132; p. 365.
Blower, Chaff-. D. R. Gardiner. No. 877,320; Jan. 21; Sp. p. 3374; Dr. pp. 730-1; Gaz. vol. 132; p. 614.
Blower, Powder-. F. B. La May. No. 876,362; Jan. 14; Sp. p. 1342; Dr. p. 291; Gaz. vol. 132; p. 254.
Blower, Pressure and suction. W. J. Magee. No. 877,102; Jan. 21; Sp. p. 2914; Dr. p. 630; Gaz. vol. 132; p. 541.
Board: *See* Game-board; Ironing-board.
Board-edging machine. L. G. Robinson and L. J. Hanhart. No. 877,124; Jan. 21; Sp. p. 2967; Dr. pp. 641-2; Gaz. vol. 132; p. 550.
Boat, Torpedo-. S. Lake. No. 876,564; Jan. 14; Sp. p. 1790; Dr. pp. 390-1; Gaz. vol. 132; p. 323.
Boat ventilator, Motor-. A. A. Low. No. 877,655; Jan. 28; Sp. p. 4037; Dr. p. 872; Gaz. vol. 132; p. 745.
Boiler: *See* Steam-boiler; Tubular boiler.
Boiler-flue cleaner. S. G. Bladh. No. 877,395; Jan. 21; Sp. p. 3502; Dr. p. 759; Gaz. vol. 132; p. 638.
Boiler indicator, Steam-. J. F. Senter. No. 876,497; Jan. 14; Sp. p. 1640; Dr. pp. 355-6; Gaz. vol. 132; p. 300.
Boiler-pressure alarm, Automatic high and low. C. S. Moore. No. 877,581; Jan. 28; Sp. p. 3904; Dr. p. 845; Gaz. vol. 132; p. 720.
Boiler superheater, Steam-. F. J. Cole. No. 875,895; Jan. 7; Sp. p. 409; Dr. pp. 90-1; Gaz. vol. 132; p. 75.
Boll-weevil exterminator. G. W. Watkins. No. 876,612; Jan. 14; Sp. p. 1908; Dr. p. 416; Gaz. vol. 132; p. 340
Bolt: *See* Stay-bolt.
Bolt. J. D. Earnest. No. 877,061; Jan. 21; Sp. p. 2840; Dr. p. 613; Gaz. vol. 132; p. 529.
Bolt. H. V. Wille. No. 877,390; Jan. 21; Sp. p. 3494; Dr. p. 758; Gaz. vol. 132; p. 637.
Book, Detachable-leaf check and pass. H. F. Johnson. No. 876,969; Jan. 21; Sp. p. 2637; Dr. p. 572; Gaz. vol. 132; p. 497.
Book device, Loose-leaf-. W. H. Garland. No. 877,187; Jan. 21; Sp. p. 3104; Dr. p. 672; Gaz. vol. 132; p. 571.
Book having a pocket. R. A. Creek. No. 877,553; Jan. 28; Sp. p. 3849; Dr. p. 833; Gaz. vol. 132; p. 712.
Book, Loose-leaf. W. P. Pitt. No. 876,305; Jan. 14; Sp p. 1413; Dr. p. 305; Gaz. vol. 132; p. 265.
Book, Stenographer's note-. F. W. Warren. No. 875,756; Jan. 7; Sp. p. 155; Dr. p. 34; Gaz. vol. 132; p. 29.
Books, Clip or elastic-band attachment for. M. A. Hirsch. No. 877,771; Jan. 28; Sp. p. 4240; Dr. p. 922; Gaz. vol. 132; p. 781.
Books for binding, Method and means for preparing the backs of. H. D. Baumfalk. No. 876,516; Jan. 14; Sp. p. 1691; Dr. pp. 368-9; Gaz. vol. 132; p. 307.
Bookbinding. W. E. and H. J. Gaylord. No. 877,188; Jan. 21; Sp. p. 3106; Dr. p. 672; Gaz. vol. 132; p. 571.
Bookcase, Knockdown sectional. F. B. Moore. No. 875,722; Jan. 7; Sp. p. 85; Dr. p. 18; Gaz. vol. 132; p. 19.
Boots and shoes, Machine for separating or indenting stitches on. M. T. Denne. No. 876,699; Jan. 14; Sp. p. 2000; Dr. pp. 454-5; Gaz. vol. 132; p. 370.
Boring-bit head. W. G. Parry and P. J. Creedon. No. 877,592; Jan. 28; Sp. p. 3925; Dr. p. 840; Gaz. vol. 132; p. 724.
Boring machine, Earth-. P. Fenton and F. W. Waechter. No. 876,048; Jan. 7; Sp. p. 697; Dr. p. 150; Gaz. vol. 132; p. 121.
Boring-mills, Rapid-traverse device for. E. P. Bullard and E. Henrikson. No. 877,403; Jan. 21; Sp. p. 3521; Dr. p. 763; Gaz. vol. 132; p. 641.
Bottle. E. L. Dimitry. No. 876,150; Jan. 7; Sp. p. 906; Dr. p. 196; Gaz. vol. 132; p. 154.
Bottle and rolling-pin, Combined. E. L. Bell. No. 875,683; Jan. 7; Sp. p. 13; Dr. p. 3; Gaz. vol. 132; p. 4.
Bottle and stopper therefor. D. Rivas. No. 877,229; Jan. 21; Sp. p. 3192; Dr. p. 692; Gaz. vol. 132; p. 587.
Bottle-cap. C. W. Cook. No. 876,149; Jan. 7; Sp. p. 905; Dr. p. 195; Gaz. vol. 132; p. 154.
Bottle-cleaner. G. E. McCalmont. No. 876,230; Jan. 7; Sp. p. 1046; Dr. p. 226; Gaz. vol. 132; p. 176.
Bottle-holder. S. Svenson. No. 877,507; Jan. 28; Sp. p. 4306; Dr. p. 935; Gaz. vol. 133; p. 792.
Bottle, Non-refillable. P. Lesser. No. 875,937; Jan. 7; Sp. p. 476; Dr. p. 103; Gaz. vol. 132; p. 86.
Bottle, Non-refillable. G. V. Doherty. No. 875,957; Jan. 7; Sp. p. 580; Dr. p. 126; Gaz. vol. 132; p. 102.
Bottle, Non-refillable. W. T. Loughlin. No. 876,205; Jan. 7; Sp. p. 1005; Dr. p. 218; Gaz. vol. 132; p. 171.
Bottle, Non-refillable. M. A. Brown. No. 876,259; Jan. 7; Sp. p. 1112; Dr. p. 241; Gaz. vol. 132; p. 185.
Bottle, Non-refillable. M. A. Brown. No. 876,260. Jan. 7; Sp. p. 1114; Dr. p. 241; Gaz. vol. 132; p. 186.
Bottle, Non-refillable. G. Martin. No. 876,468; Jan. 14; Sp. p. 1570; Dr. p. 330; Gaz. vol. 132; p. 289.
Bottle, Non-refillable. C. H. Hauptin and J. J. Schauerer. No. 876,961; Jan. 21; Sp. p. 2622; Dr. p. 570; Gaz. vol. 132; p. 494.
Bottle, Non-refillable. J. E. Lepage. No. 876,981; Jan. 21; Sp. p. 2656; Dr. p. 577; Gaz. vol. 132; p. 501.
Bottle, Non-refillable. S. M. Spryszynski. No. 877,249; Jan. 21; Sp. p. 3233; Dr. p. 700; Gaz. vol. 132; p. 603.

Bottle, Non-refillable. J. R. Smith. No. 877,674; Jan. 28; Sp. p. 4086; Dr. p. 884; Gaz. vol. 132; p. 751.
Bottle, Non-refillable. J. A. Southwell. No. 877,677; Jan. 28; Sp. p. 4090; Dr. p. 885; Gaz. vol. 132; p. 752.
Bottle-stopper handle. D. B. Sanford. No. 875,956; Jan. 7; Sp. p. 524; Dr. p. 112; Gaz. vol. 132; p. 92.
Bottle stopper, Water-. H. P. Kraft and M. C. Schweinert. No. 876,002; Jan. 7; Sp. p. 610; Dr. p. 131; Gaz. vol. 132; p. 107.
Bottle stopper, Water-. M. C. Schweinert and H. P. Kraft. No. 876,101; Jan. 7; Sp. p. 809; Dr. p. 174; Gaz. vol. 132; p. 138.
Bottle-washer. J. T. H. Paul. No. 876,657; Jan. 14; Sp. p. 2011; Dr. pp. 438-9; Gaz. vol. 132; p. 356.
Bottle-washer. G. Falling. No. 876,706; Jan. 14; Sp. p. 2103; Dr. p. 458; Gaz. vol. 132; p. 372.
Bottle-washing machine. J. W. Greer. No 876,798; Jan. 14; Sp. p. 2249; Dr. p. 495; Gaz. vol. 132; p. 399.
Bottle, Water-. R. S. Blair. No. 877,396; Jan. 21; Sp. p. 3503; Dr. p. 760; Gaz. vol. 132; p. 638.
Bottle-wrapper. W. D. Legge and L. N. Well. No. 876,365; Jan. 14; Sp. p. 1340; Dr. p. 293; Gaz. vol. 132; p. 255.
Bottle-wrapper machine. W. D. Legge. No. 876,364; Jan. 14; Sp. p. 1344; Dr. pp. 292-3; Gaz. vol. 132; p. 254.
Bouquet-holder. F. Mawhinney. No. 875,719; Jan. 7; Sp. p. 81; Dr. p. 17; Gaz. vol. 132; p. 18.
Box: *See* Flower-box; Foldable box; Furnace-charging box; Irrigation-gate box; Journal-box; Junction-box; Knockdown box; Letter-box; Mail-box; Match-box; Miter-box; Outlet-box; Paper or cardboard box; Pencil-box; Photographic-print box; Stamp-mill mortar-box; Stuffing-box; Talking-machine sound-box.
Box. H. Sametz. No. 875,741; Jan. 7; Sp. p. 125; Dr. p. 28; Gaz. vol. 132; p. 25.
Box-cover holder. W. R. A. Ball. No. 876,514; Jan. 14; Sp. p. 1688; Dr. p. 367; Gaz. vol. 132; p. 306.
Box making and covering machine. W. R. Comings. No. 877,529; Jan. 28; Sp. p. 4300; Dr. pp. 947-8; Gaz. vol. 132; p. 799
Box-making machine. A. T. Spencer and E. C. Wykes. No. 876,106. Jan. 7; Sp. p. 821; Dr. pp. 176-7; Gaz. vol. 132; p. 140.
Box-making machine. W. T. McRae and W. W. Canby. No. 876,485; Jan. 14; Sp. p. 1609; Dr. pp. 346-51; Gaz vol 132; p. 295.
Box-making machine. E. L. Thurber. No. 876 506; Jan. 14; Sp. p. 1659; Dr. pp. 360-1; Gaz. vol. 132; p. 303.
Box or crate. M. N. Edwards. No. 876,900; Jan. 14; Sp. p. 2464; Dr. p. 538; Gaz. vol. 132; p. 434.
Brace: *See* Pole-brace; Railway-track brace; Shoulder-brace.
Brace. N. H. Nelson. No. 877,110; Jan. 21; Sp. p. 2928; Dr. pp. 633-4; Gaz. vol. 132; p. 544.
Bracket: *See* Adjustable and extensible bracket; Curtain-shade bracket; Scaffold-bracket.
Brake: *See* Air-brake; Vehicle-brake; Vehicle emergency-brake; Wagon-brake.
Brake. W. V. Turner. No. 877,531; Jan. 28; Sp. p. 3784; Dr. pp. 820-1; Gaz. vol. 132; p. 704.
Brake-applying mechanism. J. M. Hines. No. 876,456; Jan. 14; Sp. p. 1554; Dr. p. 333; Gaz. vol. 132; p. 285.
Brake-beam fulcrum, Two-part reversible. J. W. Houser. No. 876,057; Jan. 7; Sp. p. 711; Dr. p. 153; Gaz. vol. 132; p. 123.
Brake-handle. F. W. Lechner. No. 877,097; Jan. 21; Sp. p. 2904; Dr. p. 628; Gaz. vol. 132; p. 540.
Brake-shoe, Reinforced. J. Cook. No. 877,055; Jan. 21; Sp. p. 2827; Dr. p. 610; Gaz. vol. 132; p. 527.
Brewer's pitch. C. N. Forrest. No. 877,888; Jan. 28; Sp. p. 4462; Gaz. vol. 132; p. 818.
Brick-kiln grate. P. E. Bennett. No. 877,825; Jan. 28; Sp. p. 4354; Dr. p. 945; Gaz. vol. 132; p. 798.
Brick, lime, and similar material, Kiln for burning. P. Czigler. No. 877,300; Jan. 21; Sp. p. 3329; Dr. p. 722; Gaz. vol. 132; p. 608.
Brick-machine attachment. E. H. Zeigler. No. 875,879; Jan. 7; Sp. p. 376; Dr. p. 83; Gaz. vol. 132; p. 69.
Brick-making machine. G. Burson. No. 875,776; Jan. 7; Sp. p. 195; Dr. pp. 41-2; Gaz. vol. 132; p. 36.
Brick molded for walls with a monolithic internal skeleton. V. Compagnone. No. 876,298; Jan. 7; Sp. p. 1213; Dr. p. 265; Gaz. vol. 132; p. 203.
Brick-press. J. J. Nieters. No. 876,388; Jan. 14; Sp. p. 1400; Dr. pp. 302-3; Gaz. vol. 132; p. 262.
Bridge rail-joints, Locking device for draw-. W. R. Mershon and H. R. Leonard. No. 876,073; Jan. 7; Sp. p. 761; Dr. p. 162; Gaz. vol. 132; p. 129.
Bridges, Safety device for rail connections of draw-. W. R. Mershon. No. 876,074; Jan. 7; Sp. p. 765; Dr. p. 163; Gaz. vol. 132; p. 130.
Bridle. S. D. Hawk. No. 876,715; Jan. 14; Sp. p. 2115; Dr. p. 464; Gaz. vol. 132; p. 374.
Bridle-bit. G. F. Jungermann. No. 876,461; Jan. 14; Sp. p. 1565; Dr. p. 335; Gaz. vol. 132; p. 287.
Bridle-bit. W. H. Collins. No. 877,296; Jan. 21; Sp. p. 3317; Dr. p. 719; Gaz. vol. 132; p. 607.
Broom-holder. C. Rees and W. Fischer, Jr. No. 876,589; Jan. 14; Sp. p. 1851; Dr. p. 405; Gaz. vol. 132; p. 333.
Broom-protector. J. Kenny. No. 876,884; Jan. 14; Sp. p. 2427; Dr. p. 529; Gaz. vol. 132; p. 428.
Brush, Cleaning-. R. T. Gillespie. No. 876,540; Jan. 14; Sp. p. 1741; Dr. p. 378; Gaz. vol. 132; p. 316.
Brush-holders, Means for supporting. E. D. Priest. No. 876,998; Jan. 21; Sp. p. 2701; Dr. p. 586; Gaz. vol. 132; p. 507.
Brush, Lather-. A. J. Prescott. No. 876,090; Jan. 7; Sp. p. 795; Dr. p. 169; Gaz. vol. 132; p. 135.
Brush, mop, and wringer, Combined scrubbing-. C. J. Perry. No. 877,119; Jan. 21; Sp. p. 2947; Dr. p. 637; Gaz. vol. 132; p. 547.
Brush, Pneumatic. F. J. Matchette and C. Moukos. No. 876,371; Jan. 14; Sp. p. 1355; Dr. p. 295; Gaz. vol. 132; p. 256.
Brush-washing apparatus. W. von Vigier. No. 877,269; Jan. 21; Sp. p. 3273; Dr. p. 708; Gaz. vol. 132; p. 599.
Brush, Tooth-. C. T. Hillman. No. 876,185; Jan. 7; Sp. p. 969; Dr. p. 209; Gaz. vol. 132; p. 165.
Brushes and other manicuring articles, Handle of. A. C. Booth. No. 876,317; Jan. 14; Sp. p. 1251; Dr. p. 272; Gaz vol 132; p. 240.
Bucket-cleaning save-all. W. E. Potts. No. 876,837; Jan. 14; Sp. p. 2328; Dr. p. 511; Gaz. vol. 132; p 412.
Bucket-elevator. J. Ross. No. 876,019; Jan. 7; Sp. p. 648; Dr. p. 138; Gaz. vol. 132; p. 112.
Buckle. I. A. Grey. No. 876,799; Jan. 14; Sp. p. 2251; Dr. p. 495; Gaz. vol. 132; p. 399.
Buckle. M. Barabasz. No. 877,035; Jan. 21; Sp. p. 2791; Dr. p. 603; Gaz. vol. 132; p. 521.
Buckle, Repair-. G. A. Buchholtz. No. 876,688; Jan. 14; Sp p. 2071; Dr. p. 450; Gaz. vol. 132; p. 366.
Buggy-wrench. T. M. Stevic. No. 877,611; Jan. 28; Sp. p. 3967; Dr. pp. 856-7; Gaz. vol. 132; p. 730.
Bull-ring. A. C. Decker. No. 877,634; Jan. 28; Sp. p. 4001; Dr. p. 864; Gaz. vol. 132; p. 738.
Bumping-post. H. Gray. No. 877,472; Jan. 21; Sp. p. 3647; Dr. pp. 790-1; Gaz. vol. 132; p. 663.
Buoy. T. L. Willson. No. 875,875; Jan. 7; Sp. p. 368; Dr. pp. 81-2; Gaz. vol. 132; p. 68.
Burial-case. J. Maxwell. No. 876,822; Jan. 14; Sp. p. 2300; Dr. p. 506; Gaz. vol. 132; p. 407.
Burial-casket. F. N. Watt and H. C. Keelor. No. 876,031; Jan. 7; Sp. p. 669; Dr. p. 144; Gaz. vol. 132; p. 115.
Burner: *See* Gas-burner; Hydrocarbon-burner; Oil-burner.
Butter-cutter. F. Barber. No. 876,130; Jan. 7; Sp. p. 873; Dr. p. 188; Gaz. vol. 132; p. 148.
Butter, &c., Machine for cutting. C. E. and O. W. Roberts. No. 875,737; Jan. 7; Sp. p. 114; Dr. p. 25; Gaz. vol. 132; p. 24.
Butter, &c., Machine for cutting. C. E. and O. W. Roberts. No. 875,738; Jan. 7; Sp. p. 118; Dr. pp. 25-6; Gaz. vol. 132; p. 24.
Butter, &c., Machine for cutting. C. E. and O. W. Roberts. No. 875,739; Jan. 7; Sp. p. 121; Dr. p. 26; Gaz. vol. 132; p. 24.
Button. K. Schuster. No. 876,242; Jan. 7; Sp. p. 1080; Dr. p. 236; Gaz. vol. 132; p. 183.
Button, Separable. J. Plaut. No. 877,367; Jan. 21; Sp. p. 3453; Dr. p. 749; Gaz. vol. 132; p. 629.
Cabinet, Commodity-. J. H. Boye. No. 877,200; Jan. 21; Sp. p. 3304; Dr. p. 715; Gaz. vol. 132; p. 605.
Cabinet, Kitchen-. J. H. Couper and W. L. Albright. No. 876,335; Jan. 14; Sp. p. 1288; Dr. p. 279; Gaz. vol. 132; p. 245.
Cabinet, Waiter's. B. H. Farrell. No. 877,065; Jan. 21; Sp. p. 2844; Dr. p. 614; Gaz. vol. 132; p. 530.
Caisson construction. A. Z. McLeod. No. 876,827; Jan. 14; Sp. p. 2309; Dr. p. 508; Gaz. vol. 132; p. 408.
Caisson, Pneumatic. O. C. Edwards, Jr. No. 877,308; Jan. 21; Sp. p. 3347; Dr. p. 725; Gaz. vol. 132; p. 611.
Cake-cutter. B. B. Smith and G. L. Gay, Jr. No. 875,960; Jan. 7; Sp. p. 532; Dr. p. 114; Gaz. vol. 132; p. 93.
Cake-hive. E. C. Olson. No. 877,796; Jan. 28; Sp. p. 4293; Dr. p. 932; Gaz. vol. 132; p. 788.
Calculating-machine. H. E. Goldberg. No. 876,450; Jan. 14; Sp. p. 1538; Dr. p. 331; Gaz. vol. 132; p. 283.
Calculating-machines, Operating device for. W. H. Pike, Jr. No. 876,232; Jan. 7; Sp. p. 1062; Dr. pp. 229-30; Gaz. vol. 132; p. 180.
Calculator, Interest-. W. J. Roche. No. 877,230; Jan. 21; Sp. p. 3194; Dr. p. 693; Gaz. vol. 132; p. 587.
Calendar, Mechanical perpetual. J. S. Heithersay. No. 877,335; Jan. 21; Sp. p. 3392; Dr. p. 735; Gaz. vol. 132; p. 619.
Calendar, Perpetual daily. R. Inch and H. Cramer, Jr. No. 876,554; Jan. 14; Sp. p. 1766; Dr. p. 385; Gaz. vol. 132; p. 320.
Calk-grinder. D. O'Neill. No. 876,224; Jan. 7; Sp. p. 1051; Dr. p. 227; Gaz. vol. 132; p. 177.
Cam. F. C. Westfahl. No. 877,687; Jan. 28; Sp. p. 4106; Dr. p. 888; Gaz. vol. 132; p. 755.
Camera attachment. E. Barrath. No. 877,283; Jan. 21; Sp. p. 3293; Dr. p. 713; Gaz. vol. 132; p. 603.
Camphene, Making. A. Bischler and A. Baselli. No. 876,137; Jan. 7; Sp. p. 888; Gaz. vol. 132; p. 150.
Can: *See* Oil-can; Shipping-can.
Can-body-flanging machine. S. Tevander. No. 877,257; Jan. 21; Sp. p. 3244; Dr. pp. 702-3; Gaz. vol. 132; p. 595.
Can-closure. W. F. Hyatt. No. 876,000; Jan. 7; Sp. p. 608; Dr. p. 130; Gaz. vol. 132; p. 106.
Can-filler. J. F. Burns. No. 876,940; Jan. 21; Sp. p. 2574; Dr. p. 561; Gaz. vol. 132; p. 487.
Can-heading machine. C. D. McDonald. No. 877,558; Jan. 21; Sp. p. 3435; Dr. pp. 745-6; Gaz. vol. 132; p. 626.
Can-making machines, Solder-feeding device for. C. W. Sleeper. No. 877,673; Jan. 28; Sp. p. 4082; Dr. p. 884; Gaz. vol. 132; p. 750.
Can-opener. O. F. McCrary. No. 877,109; Jan. 21; Sp. p. 2928; Dr. p. 633; Gaz. vol. 132; p. 544.
Can-righting machine. M. D. Blakeslee. No. 876,290; Jan. 7; Sp. p. 1184; Dr. p. 258; Gaz. vol. 132; p. 200.
Can-roller, Mechanical. M. D. Blakeslee. No. 876,291; Jan. 7; Sp. p. 1187; Dr. pp. 258-9; Gaz. vol. 132; p. 200.
Can-testing machine. O. J. Johnson. No. 876,557; Jan. 14; Sp. p. 1771; Dr. pp. 386-7; Gaz. vol. 132; p. 321.
Can-testing machine. O. J. Johnson. No. 876,558; Jan. 14; Sp. p. 1773; Dr. p. 387; Gaz. vol. 132; p. 321.
Can-top and sample-carrier, Combined. G. T. Benson. No. 876,427; Jan. 14; Sp. p. 1493; Dr. p. 321; Gaz. vol. 132; p. 275.
Cans, jugs, &c., Closure for oil-. G. T. Tabler. No. 876,504; Jan. 14; Sp. p. 1657; Dr. p. 350; Gaz. vol. 132; p. 303.
Candlestick. A. A. Roland. No. 876,401; Jan. 14; Sp. p. 1436; Dr. p. 308; Gaz. vol. 132; p. 267.
Cane, Repeating torpedo- R. Bean. No. 876,683; Jan. 14; Sp. p. 2055; Dr. p. 447; Gaz. vol. 132; p. 364.
Canvas-stretcher. J. C. Goss and A. T. Hansen. No. 876,345; Jan. 14; Sp. p. 1308; Dr. p. 283; Gaz. vol. 132; p. 248.
Car-bolster. C. H. Howard and H. M. Pflager. No. 875,818; Jan. 7; Sp. p. 266; Dr. p. 58; Gaz. vol. 132; p. 50.

Car-bolster, Cast-metal. G. G. Floyd. No. 876,448; Jan. 14; Sp. p. 1536; Dr. p. 330; Gaz. vol. 132; p. 283.
Car-brake-operating mechanism. N. Rushe. No. 876,730; Jan. 14; Sp. p. 2135; Dr. p. 469; Gaz. vol. 132; p. 379.
Car, Combination stock-. T. M. Crepar. No. 876,774; Jan. 14; Sp. p. 2211; Dr. p. 486; Gaz. vol. 132; p. 392.
Car-coupling. G. E. Starbird and G. M. Fox. No. 876,500; Jan. 14; Sp p. 1647; Dr. p. 357; Gaz. vol. 132; p. 301.
Car-coupling, Automatic. W. A. Palmer. No. 877,365; Jan. 21; Sp. p. 3449; Dr. p. 748; Gaz. vol. 132; p. 629.
Car-door. A. J. Munson. No. 877,792; Jan. 28; Sp. p. 4285; Dr. p. 930; Gaz. vol. 132; p. 787.
Car door, Grain-. A. Peirano and W. Greenwood. No. 877,503; Jan. 28; Sp. p. 3927; Dr. p. 849; Gaz. vol. 132; p. 724.
Car, Dump-. F. S. Ingoldsby. No. 875,820; Jan. 7; Sp. p. 269; Dr. p. 59; Gaz. vol. 132; p. 50.
Car-fender. T. O'Reardon. No. 875,731; Jan. 7; Sp. p. 104; Dr. p. 22; Gaz. vol. 132; p. 22.
Car-fender. F. J. Lehman. No. 877,098; Jan. 21; Sp. p. 2906; Dr. p. 628; Gaz. vol. 132; p. 540.
Car, Flying or air. S. A. Day. No. 875,787; Jan. 7; Sp. p. 211; Dr. p. 46; Gaz. vol. 132; p. 39.
Car for wire-rope or suspension railways, Trolley-. R. Pfaffenbach. No. 876,486; Jan. 14; Sp. p. 1621; Dr. p. 351; Gaz. vol. 132; p. 296.
Car-frame construction. J. J. Hennessey. No. 876,444; Jan. 14; Sp. p. 1986; Dr. p. 432; Gaz. vol. 132; p. 352.
Car-hauls, &c., Feeder for. H. H. Bighouse. No. 875,685; Jan. 7; Sp. p. 16; Dr. p. 3; Gaz. vol. 132; p. 5.
Car lifting and replacing device. L. Leyerle. No. 877,099; Jan. 21; Sp. p. 2907; Dr. pp. 628-9; Gaz. vol. 132; p. 540.
Car-lines, Appliance for opening and closing switches on. W. A. Poindexter. No. 875,733; Jan. 7; Sp. p. 107; Dr. p. 23; Gaz. vol. 132; p. 22.
Car-loading apparatus. F. R. Willson, Jr. No. 877,539; Jan. 28; Sp. p. 3909; Dr. p. 824; Gaz. vol. 132; p. 707.
Car, Passenger-. W. G. Ross and D. McDonald. No. 875,740; Jan. 7; Sp. p. 122; Dr. p. 27; Gaz. vol. 132; p. 25.
Car, Passenger-. A. E. Ostrander. No. 877,474; Jan. 21; Sp. p. 3653; Dr. pp. 791-2; Gaz. vol. 132; p. 664.
Car pipe-coupling, Automatic. W. A. Robertson. No. 877,866; Jan. 28; Sp. p. 4424; Dr. p. 963; Gaz. vol. 132; p. 811.
Car, Railway-. B. F. Freeble. No. 875,906; Jan. 7; Sp. p. 433; Dr. pp. 95-6; Gaz. vol. 132; p. 79.
Car, Rocker-bottom. H. C. Priebe. No. 876,587; Jan. 14; Sp. p. 1840; Dr. p. 404; Gaz. vol. 132; p. 332.
Car, Spring-propelled hand-. D. N. McDaniel. No. 875,943; Jan. 7; Sp. p. 488; Dr. p. 105; Gaz. vol. 132; p. 88.
Car-stake and attaching means therefor. J. A. Toomey. No. 876,415; Jan. 14; Sp. p. 1460; Dr. pp. 313-14; Gaz. vol. 132; p. 271.
Car-step, Extension. F. E. Hopkins. No. 876,186; Jan. 7; Sp. p. 969; Dr. p. 209; Gaz. vol. 132; p. 165.
Car, Stock-. A. Murdoch. No. 876,990; Jan. 21; Sp. p. 2677; Dr. p. 582; Gaz. vol. 132; p. 504.
Car, vestibule-door and trap. C. E. Griffith. No. 876,871; Jan. 14; Sp. p. 2401; Dr. p. 523; Gaz. vol. 132; p. 424.
Cars, Folding step for railway-. A. Fuller. No. 877,706; Jan. 28; Sp. p. 4136; Dr. p. 895; Gaz. vol. 132; p. 761.
Cars, Friction spring draft-rigging for railway-. W. H. Miner and J. F. O'Connor. No. 877,466; Jan. 21; Sp. p. 3636; Dr. pp. 787-8; Gaz. vol. 132; p. 661.
Cars, System for automatically loading. W. J. Selleck. No. 876,737; Jan. 14; Sp. p. 2151; Dr. pp. 472-3; Gaz. vol. 132; p. 381.
Cars while the train travels, Device for automatically locking doors of railway-. W. Mittmann. No. 877,724; Jan. 28; Sp. p. 4165; Dr. p. 902; Gaz. vol. 132; p. 765.
Carbon-black-producing apparatus. A. D. Purtle and I. E. Rowland. No. 877,596; Jan. 28; Sp. p. 3930; Dr. p. 850; Gaz. vol. 132; p. 725.
Carbureter. J. H. Miller. No. 876,210; Jan. 7; Sp. p. 1013; Dr. p. 220; Gaz. vol. 132; p. 172.
Carbureter. M. L. Williams. No. 876,287; Jan. 7; Sp. p. 1180; Dr. p. 257; Gaz. vol. 132; p. 199.
Carbureter. J. F. Andres. No. 876,678; Jan. 14; Sp. p. 2042; Dr. pp. 445-6; Gaz. vol. 132; p. 363.
Carbureter. E. Gundelach. No. 876,800; Jan. 14; Sp. p. 2252; Dr. p. 495; Gaz. vol. 132; p. 400.
Carbureter. A. C. Stewart. No. 877,136; Jan. 21; Sp. p. 2993; Dr. p. 647; Gaz. vol. 132; p. 554.
Carbureter for explosive-engines. A. A. Longuemare. No. 875,716; Jan. 7; Sp. p. 76; Dr. p. 16; Gaz. vol. 132; p. 16.
Card-exhibiting device. G. Mayerle. No. 876,278; Jan. 7; Sp. p. 1159; Dr. p. 253; Gaz. vol. 132; p. 195.
Carpet-cleaning machine. W. Farman. No. 876,446; Jan 14; Sp. p. 1533; Dr. p. 330; Gaz. vol. 132; p. 282.
Carpet-stretcher. J. B. Logan. No. 876,817; Jan. 14; Sp. p. 2293; Dr. p. 504; Gaz. vol. 132; p. 406.
Carpet-sweeper. F. C. Mason and J. W. Shanahan. No. 877,852; Jan. 28; Sp. p. 4397; Dr. p. 957; Gaz. vol. 132; p. 806.
Carriage-bow. R. H. Pfaff. No. 876,995; Jan. 21; Sp. p. 2689; Dr. p. 584; Gaz. vol. 132; p. 506.
Carriage-top. W. J. Hoskyns. No. 876,905; Jan. 14; Sp. p. 2472; Dr. p. 540; Gaz. vol. 132; p. 436.
Carrier: *See* Bicycle package-carrier; Cuspidor-carrier; Elevated carrier; Hose-carrier; Pneumatic carrier; Tongs-carrier.
Carrier. A. P. Boyer. No. 876,935; Jan. 21; Sp. p. 2561; Dr. p. 559; Gaz. vol. 132; p. 484.
Carrier-stop. J. H. Bradley. No. 875,888; Jan. 7; Sp. p. 394; Dr. p. 86; Gaz. vol. 132; p. 73.
Cart, Leaf-burning. C. V. Hemenway and L. F. Kirk. No. 876,180; Jan. 7; Sp. p. 958; Dr. pp. 206-7; Gaz. vol. 132; p. 163.
Carton pasting and folding machine. J. J. Schotten. No. 877,744; Jan. 28; Sp. p. 4202; Dr. p. 910; Gaz. vol. 132; p. 772.
Cartridge-crimper. G. T. Phillips. No. 876,594; Jan. 14; Sp. p. 1838; Dr. p. 401; Gaz. vol. 132; p. 331.
Case: *See* Bookcase; Burial-case; Display-case; Eyeglass-case; File-case; Phonograph-record case; Piano-case; Show-case.
Cash-register. T. Carney. No. 876,295; Jan. 7; Sp. p. 1198; Dr. pp. 261-3; Gaz. vol. 132; p. 202.
Cash-register. H. S. Hallwood. No. 876,635; Jan. 14; Sp. p. 1909; Dr. pp. 428-9; Gaz. vol. 132; p. 349.
Cash-register. F. and R. Degenhardt. No. 876,776; Jan. 14; Sp. p. 2214; Dr. pp. 486-7; Gaz. vol. 132; p. 393.
Cash register and indicator. N. E. Morris, Jr. No. 876,215; Jan. 7; Sp. p. 1029; Dr. pp. 222-4; Gaz. vol. 132; p. 174.
Casks, Means for cleansing. H. S. Gregory. No. 877,074; Jan. 21; Sp. p. 2858; Dr. p. 617; Gaz. vol. 132; p. 533.
Caster. E. H. Humphrey. No. 877,081; Jan. 21; Sp. p. 2868; Dr. p. 619; Gaz. vol. 132; p. 535.
Caster. J. R. Brown. No. 877,486; Jan. 28; Sp. p. 3685; Dr. p. 799; Gaz. vol. 132; p. 689.
Caster, Ball-. M. M. Ryan. No. 877,236; Jan. 21; Sp. p. 3206; Dr. p. 695; Gaz. vol. 132; p. 580.
Cement-block mold. S. V. Tsanoff. No. 877,574; Jan. 28; Sp. p. 4430; Dr. p. 967; Gaz. vol. 132; p. 814.
Cement-burning furnace. W. E. Snyder. No. 876,602; Jan. 14; Sp. p. 1882; Dr. pp. 411-12; Gaz. vol. 132; p. 337.
Centrifugal machines, Apparatus for driving. W. A. Macfarlane. No. 876,368; Jan. 14; Sp. p. 1352; Dr. pp. 294-5; Gaz. vol. 132; p. 256.
Centrifugal mill. -H. Besser. No. 876,765; Jan. 14; Sp. p. 2196; Dr. pp. 482-3; Gaz. vol. 132; p. 390.
Chains, Making. M. Fessler. No. 876,792; Jan. 14; Sp. p. 2242; Gaz. vol. 132; p. 398.
Chair: *See* Barber's chair; Convertible chair; Extension-chair; Folding and adjustable chair; Reclining-chair.
Chair-iron. F. Chichester. No. 876,525; Jan. 14; Sp. p. 1711; Dr. pp. 371-2; Gaz. vol. 132; p. 310.
Chair or seat. H. W. Moore. No. 877,216; Jan. 21; Sp. p. 3174; Dr. p. 688; Gaz. vol. 132; p. 582.
Chalk-sharpener and paper-weight Combined. J. A. Lindeman. No. 876,204; Jan. 7; Sp. p. 1004; Dr. p. 218; Gaz. vol. 132; p. 171.
Channeler. C. A. Dawley. No. 876,863; Jan. 14; Sp. p. 2381; Dr. p. 519; Gaz. vol. 132; p. 420.
Channeling-machine. H. V. Haight. No. 876,542; Jan. 14; Sp. p. 1747; Dr. pp. 379-80; Gaz. vol. 132; p. 316.
Channels, Apparatus for removing mud from. J. P. Ermeling. No. 876,790; Jan. 14; Sp. p. 2230; Dr. p. 492; Gaz. vol. 132; p. 397.
Chart-holder. F. W. Boyer. No. 876,141; Jan. 7; Sp. p. 892; Dr. p. 192; Gaz. vol. 132; p. 151.
Check-holding device. F. P. Sweeney. No. 876,745; Jan. 14; Sp. p. 2165; Dr. p. 475; Gaz. vol. 132; p. 383.
Cheese-cutter. A. A. Guldenarm. No. 877,642; Jan. 28; Sp. p. 4015; Dr. p. 867; Gaz. vol. 132; p. 740.
Cheese-cutter, Computing. H. F. Dunn. No. 876,045; Jan. 7; Sp. p. 693; Dr. p. 149; Gaz. vol. 132; p. 120.
Chest-protector. G. H. Ridlon. No. 876,237; Jan. 7; Sp. p. 1069; Dr. p. 232; Gaz. vol. 132; p. 181.
Chimney-ventilator. A. Kric. No. 877,092; Jan. 21; Sp. p. 2896; Dr. p. 626; Gaz. vol. 132; p. 538.
Chopper: *See* Beet-chopper; Cotton-chopper.
Chuck. N. A. Shigon. No. 876,244; Jan. 7; Sp. p. 1062; Dr. p. 236; Gaz. vol. 132; p. 184.
Chuck. F. R. Brown. No. 877,046; Jan. 21; Sp. p. 2814; Dr. p. 608; Gaz. vol. 132; p. 524.
Chuck, Drill-. G. R. Rich. No. 876,016; Jan. 7; Sp. p. 642; Dr. p. 137; Gaz. vol. 132; p. 111.
Cigar-cutter. W. E. Edwards. No. 876,156; Jan. 7; Sp. p. 918; Dr. p. 198; Gaz. vol. 132; p. 156.
Cigar cutter and lighter. A. von Kaspis. No. 876,883; Jan. 14; Sp. p. 2425; Dr. p. 529; Gaz. vol. 132; p. 428.
Cigar-lighting apparatus. A. Söderlund and B. Hallenbrook. No. 875,743; Jan. 7; Sp. p. 127; Dr. p. 28; Gaz. vol. 132; p. 25.
Cigarette-machine. D. J. Campbell. No. 876,327; Jan. 14; Sp. p. 1269; Dr. pp. 275-7; Gaz. vol. 132; p. 242.
Cigarette-machine. H. Bilgram. No. 877,827; Jan. 28; Sp. p. 4356; Dr. pp. 945-6; Gaz. vol. 132; p. 798.
Circuit-breaker. P. H. Thomas. No. 876,918; Jan. 14; Sp. p. 2501; Dr. p. 545; Gaz. vol. 132; p. 439.
Circuit-closer, Mercurial thermostatic. F. Cossor. No. 876,773; Jan. 14; Sp. p. 2209; Dr. p. 486; Gaz. vol. 132; p. 392.
Circuit connection, Ignition-. E. S. Lincoln. No. 876,203; Jan. 7; Sp. p. 1002; Dr. pp. 217-18; Gaz. vol. 132; p. 170.
Circuit control, Apparatus for track-. J. A. Peabody. No. 875,843; Jan. 7; Sp. p. 310; Dr. pp. 67-8; Gaz. vol. 132; p. 57.
Circuit-controller. L. F. Howard. No. 877,427; Jan. 21; Sp. p. 3569; Dr. p. 771; Gaz. vol. 132; p. 650.
Circuit-controller, Electric-motor. J. M. Joy. No. 876,882; Jan. 14; Sp. p. 2422; Dr. p. 528; Gaz. vol. 132; p. 427.
Cistern. A. G. Peterson. No. 876,392; Jan. 14; Sp. p. 1411; Dr. p. 304; Gaz. vol. 132; p. 264.
Clamp: *See* Glass-blower's clamp; Hose-band clamp; Joiner's hand-clamp; Reel-clamp; Rope-clamp; Socket-key clamp; Spring-compressing clamp.
Clamp. W. D. Faris. No. 876,160; Jan. 7; Sp. p. 923; Dr. p. 199; Gaz. vol. 132; p. 157.
Clamp. L. Ljunglof. No. 876,908; Jan. 14; Sp. p. 2475; Dr. p. 541; Gaz. vol. 132; p. 436.
Clamp. A. G. Blazier. No. 876,931; Jan. 21; Sp. p. 2546; Dr. p. 556; Gaz. vol. 132; p. 483.
Clamp for securing planks of scaffolds together, applicable also for use in connection with planks for other purposes F. Mitchell and F. Gunn. No. 876,376; Jan. 14; Sp. p. 1363; Dr. p. 297; Gaz. vol. 132; p. 258.
Clasp: *See* Garment-clasp; Garment-supporting clasp; Letter-clasp.
Clasp. W. C. Finney. No. 876,161; Jan. 7; Sp. p. 924; Dr. p. 199; Gaz. vol. 132; p. 157.
Cleaner: *See* Boiler-flue cleaner; Bottle-cleaner; Cotton-cleaner; Gun-cleaner; Pen-cleaner; Pipe-cleaner; Rail-cleaner; Stovepipe and chimney cleaner; Tube and flue cleaner.

Cleaning-machines or rumbles, Safety device for. C. Fish. No. 876,269; Jan. 7; Sp. p. 1141; Dr. p. 248; Gaz. vol. 132; p. 192.
Clevis. B. W. Cook. No. 876,333; Jan. 14; Sp. p. 1286; Dr. p. 278; Gaz. vol. 132; p. 244.
Clevis, Interlocking. T. Nelson. No. 876,829; Jan. 14; Sp. p. 2314; Dr. p. 508; Gaz. vol. 132; p. 400.
Clevis, Plow-. M. L. Digby. No. 877,413; Jan. 21; Sp. p. 3546; Dr. p. 767; Gaz. vol. 132; p. 645.
Clip: *See* Binding-clip; Paper-clip.
Clipper. B. Mattress. No. 877,658; Jan. 28; Sp. p. 4047; Dr. p. 875; Gaz. vol. 132; p. 745.
Clock, Portable watchman's. A. Beyer. No. 877,546; Jan. 28; Sp. p. 3835; Dr. pp. 829-30; Gaz. vol. 132; p. 710.
Clock, Watchman's. A. A. Newman. No. 876,655; Jan. 14; Sp. p. 2008; Dr. p. 437; Gaz. vol. 132; p. 356.
Clocks and watches, Adjustable escapement for. W. W. and W. R. Dudley. No. 876,153; Jan. 7; Sp. p. 913; Dr. p. 197; Gaz. vol. 132; p. 155.
Clocks, Electric-alarm attachment for. C. Goldsmith. No. 877,501; Jan. 28; Sp. p. 3728; Dr. pp. 806-7; Gaz. vol. 132; p. 694.
Closet: *See* Water-closet.
Closure. C. B. Stillwell. No. 877,805; Jan. 28; Sp. p. 4306; Dr. p. 935; Gaz. vol. 132; p. 791.
Cloth-refinishing device. C. Keck. No. 877,086; Jan. 21; Sp. p. 2877; Dr. p. 621; Gaz. vol. 132; p. 536.
Clothes-hanger. A. J. Butler. No. 877,047; Jan. 21; Sp. p. 2815; Dr. p. 609; Gaz. vol. 132; p. 525.
Clothes-line holder. D. C. McMarlin. No. 876,221; Jan. 7; Sp. p. 1047; Dr. p. 226; Gaz. vol. 132; p. 176.
Clothes-line reel. O. C. Claypool. No. 875,778; Jan. 7; Sp. p. 199; Dr. p. 43; Gaz. vol. 132; p. 36.
Clutch. C. B. King. No. 877,437; Jan. 21; Sp. p. 3590; Dr. p. 778; Gaz. vol. 132; p. 653.
Clutch for reliefographs. F. H. Alling. No. 875,679; Jan. 7; Sp. p. 1; Dr. p. 1; Gaz. vol. 132; p. 3.
Clutch, Friction-. B. M. W. Hanson. No. 876,543; Jan. 14; Sp. p. 1750; Dr. p. 380; Gaz. vol. 132; p. 317.
Clutch Friction-. J. Caillet. No. 877,405; Jan. 21; Sp. p. 3527; Dr. p. 764; Gaz. vol. 132; p. 642.
Clutch, Friction-. W. H. Corbett. No. 877,489; Jan. 28; Sp. p. 3691; Dr. p. 800; Gaz. vol. 132; p. 690.
Clutch Magnetic. T. S. Watson. No. 875,757; Jan. 7; Sp. p. 156; Dr. p. 34; Gaz. vol. 132; p. 30.
Clutch mechanism. R. H. Bowman. No. 876,318; Jan. 14; Sp. p. 1252; Dr. p. 272; Gaz. vol. 132; p. 240.
Clutch-operating mechanism. H. L. Turney. No. 876,600; Jan. 14; Sp. p. 1904; Dr. p. 415; Gaz. vol. 132; p. 339.
Coal, Carbonizing. W. Young and S. Glover. No. 876,420; Jan. 14; Sp. p. 1477; Dr. p. 317; Gaz. vol. 132; p. 273.
Coal-drilling machine. J. N. Rickles. No. 877,597; Jan. 28; Sp. p. 3932; Dr. p. 850; Gaz. vol. 132; p. 726.
Coal, ore, &c., Apparatus for washing. A. J. Diescher. No. 876,268; Jan. 7; Sp. p. 1137; Dr. pp. 247-8; Gaz. vol. 132; p. 191.
Coating-machine. G. N. Pifer. No. 877,120; Jan. 21; Sp. p. 2950; Dr. p. 638; Gaz. vol. 132; p. 548.
Coating-machine. A. J. Ford. No. 877,186; Jan. 21; Sp. p. 3103; Dr. pp. 671-2; Gaz. vol. 132; p. 571.
Cock, Automatic ball-. W. F. and L. P. Edes. No. 877,063; Jan. 21; Sp. p. 2841; Dr. p. 613; Gaz. vol. 132; p. 529.
Cock, Compression stop and waste. W. P. Deverell. No. 875,696; Jan. 7, Sp. p. 35; Dr. p. 7; Gaz. vol. 132; p. 8.
Cock for beer apparatus, Controlling stop-. C. Meldau. No. 876,724; Jan. 14; Sp. p. 2126; Dr. p. 467; Gaz. vol. 132; p. 377.
Cock, Gage-. T. L. Derr. No. 875,986; Jan. 7; Sp. p. 589; Dr. p. 126; Gaz. vol. 132, p. 102.
Cock, Self-closing basin-. E. G. Watrous. No. 875,873; Jan. 7; Sp. p. 362; Dr. p. 80, Gaz. vol. 132; p. 67.
Cock, Stop-. J. E. Van Nostran. No. 877,875; Jan. 28; Sp. p. 4441; Dr. p. 968; Gaz. vol. 132; p. 814.
Code, Cable or telegraph. F. Pain. No. 877,797; Jan. 28; Sp. p. 4294; Dr. p. 932; Gaz. vol. 132; p. 789.
Coffee-pot. J. B. Ewer. No. 875,793; Jan. 7; Sp. p. 224; Dr. p. 49; Gaz. vol. 132, p. 41.
Coin-freed mechanism. O. Meyer. No. 877,212; Jan. 21; Sp. p. 3165; Dr. pp. 686-7; Gaz. vol. 132; p. 581.
Coin-registering mechanism. F. D. Powell and C. S. Ellis. No. 876,586; Jan. 14; Sp. p. 1841; Dr. pp. 402-4; Gaz. vol. 132; p. 332.
Coin sorting and counting machine. H. G. Jokobsson. No. 875,712; Jan. 7; Sp. p. 67; Dr. p. 14; Gaz. vol. 132, p. 15.
Coke bin and chute. G. F. Hurt. No. 876,459; Jan. 14; Sp. p. 1562; Dr. p. 335; Gaz. vol. 132; p. 287.
Coke-extracting machine. S. Garner. No. 875,989; Jan. 7; Sp. p. 592; Dr. p. 127; Gaz. vol. 132, p. 103.
Coke-leveling machine. J. S. Ham. No. 876,175; Jan. 7; Sp. p. 949; Dr. pp. 204-5; Gaz. vol. 132; p. 162.
Coke-oven, Regenerative. E Coppée. No. 875,896; Jan. 7; Sp. p. 415; Dr. p. 92; Gaz. vol. 132; p. 76.
Collar. C. W. T. Davies. No. 877,302; Jan. 21; Sp. p. 3334; Dr. p. 723; Gaz. vol. 132; p. 609.
Collar and necktie fastener for shirt-bands. J. J. A. Miller. No. 876,375; Jan. 14; Sp. p. 1362; Dr. p. 297; Gaz. vol. 132; p 258.
Collar, Horse-. F. H. Bellamy. No. 876,289; Jan. 7; Sp. p. 1183; Dr. p. 258; Gaz. vol. 132; p. 199.
Collar protector, Horse-. J. Millar and S. Humbard. No. 876,279; Jan. 7; Sp. p. 1160; Dr. p. 253; Gaz. vol. 132; p. 195.
Collar-stiffener. M. Mann. No. 876,369; Jan. 14; Sp. p. 1353; Dr. p. 295; Gaz. vol. 132; p. 256.
Collaring-machine. E. E. Cook. No. 877,297; Jan. 21; Sp. p. 3318; Dr. pp. 719-21; Gaz. vol. 132; p. 607.
Column. S. S. Hageman. No. 877,076; Jan. 21; Sp. p. 2861; Dr. p. 617; Gaz. vol. 132; p. 533.
Comb-fastening device, Hair-. O. Klauser. No. 876,463; Jan. 14; Sp. p. 1573; Dr. p. 337; Gaz. vol. 132; p. 288.
Combs, Manufacturing cotton-. R. Jowett. No. 876,358; Jan. 14; Sp. p. 1333; Dr. pp. 289-90; Gaz. vol. 132; p. 253.
Combing-machine for cotton. J. Jolly and P. E. Willis. No. 875,932; Jan. 7; Sp. p. 469; Dr. p. 101; Gaz. vol. 132; p. 84.
Commode or closet seat. C. A. Eastman and R. H. Bethel. No. 876,705; Jan. 14; Sp. p. 2102; Dr. p. 457; Gaz. vol. 132; p. 372.
Commutators and preparing same. Carbon brush for. E. C. Van Nort. Jr. No. 875,750, Jan. 7; Sp. p. 139; Dr. p. 31; Gaz. vol. 132, p. 28.
Compass-head. G. Schoenner. No. 877,239; Jan. 21; Sp. p. 3209; Dr. p. 695; Gaz. vol. 132; p. 590.
Compensated motor. E. F. W. Alexanderson. No. 876,924; Jan. 21; Sp. p. 2530; Dr. p. 553; Gaz. vol. 132; p. 481.
Composite structure, Reinforced. P. T. C. Dumais. No. 875,609; Jan. 7; Sp. p. 38; Dr. pp. 8-9; Gaz. vol. 132; p. 9.
Concentrator, Centrifugal. E. Hearing and F. A. Dudley. No. 876,642; Jan. 14; Sp. p. 1982; Dr. p. 431; Gaz. vol. 132; p. 351.
Concrete-block machine. F. Morcher. No. 876,280; Jan. 7; Sp. p. 1161; Dr. p. 254; Gaz. vol. 132; p. 195.
Concrete building, Reinforced. G. M. Graham. No. 875,804; Jan. 7; Sp. p. 242; Dr. p. 52; Gaz. vol. 132; p. 45.
Concrete construction. J. B. Clayton. No. 875,983; Jan. 7; Sp. p. 584; Dr. p. 125; Gaz. vol. 132; p. 101.
Concrete construction, Reinforced. F. N. Comitot. No. 876,694; Jan. 14; Sp. p. 2063; Dr. p. 453; Gaz. vol. 132; p. 368.
Concrete construction, Reinforced. R. G. Reuther. No. 877,734; Jan. 28; Sp. p. 4185; Dr. p. 907; Gaz. vol. 132; p. 768.
Concrete flooring, Reinforced. W. P. Anderson and L. H. Nolte. No. 875,975; Jan. 7; Sp. p. 564; Dr. p. 121; Gaz. vol. 132; p. 98.
Concrete, Means for reinforcing. E. G. Du Mazuel. No. 876,471; Jan. 14; Sp. p. 1586; Dr. p. 341; Gaz. vol. 132; p. 290.
Concrete-mixer. R. B. Fulton. No. 876,270; Jan. 7; Sp. p. 1143; Dr. pp. 248-9; Gaz. vol. 132; p. 192.
Concrete, Preparing and storing. J. H. Magens. No. 876,466; Jan. 14; Sp. p. 1576; Gaz. vol. 132; p. 289.
Concrete, Reinforcing. O. N. Mueller. No. 876,480; Jan. 14; Sp. p. 1600; Dr. p. 344; Gaz. vol. 132; p. 293
Condenser, Exhaust-. L. A. Jones. No. 877,431; Jan. 21; Sp. p. 3577; Dr. p. 773; Gaz. vol. 132; p. 651.
Control system. G. B. Schley. No. 876,594; Jan. 14; Sp. p. 1858; Dr. p. 407; Gaz. vol. 132; p. 334.
Controller-regulator. J. P. Durkin. No. 875,791; Jan. 7; Sp. p. 219; Dr. p. 48; Gaz. vol. 132; p. 40.
Controller-regulator. C. P. Ebersole. No. 877,887; Jan. 28; Sp. p. 4460; Dr. p. 973; Gaz. vol. 132; p. 818.
Controlling mechanism for automatic exchanges. J. G. Roberts. No. 875,951; Jan. 7; Sp. p. 502; Dr. pp. 108-10; Gaz. vol. 132; p. 91.
Convertible chair. W. W. Lepard. No. 877,204; Jan. 21; Sp. p. 3139; Dr. pp. 680-1; Gaz. vol. 132; p. 577.
Conveyer. T. C. Thompson. No. 877,141; Jan. 21; Sp. p. 3002; Dr. pp. 648-9; Gaz. vol. 132; p. 555.
Conveyer. R. L. Martin, Jr. and W. W. Macfarren. No. 877,210; Jan. 21; Sp. p. 3153; Dr. pp. 684-5; Gaz. vol. 132; p. 580.
Conveying mechanism. H. C. Tripp. No. 876,608; Jan. 14; Sp. p. 1903; Dr. p. 415; Gaz. vol. 132; p. 339.
Cooker and washer, Combined. J. W. Dunfee. No. 877,493; Jan. 28; Sp. p. 3707; Dr. p. 803; Gaz. vol. 132; p. 691.
Cooker, Fireless. H. H. Crea. No. 875,095; Jan. 7; Sp. p. 33; Dr. p. 7; Gaz. vol. 132; p. 8.
Cooker, Fireless. W. C. Clingen. No. 876,858; Jan. 14; Sp. p. 2365; Dr. p. 518; Gaz. vol. 132; p. 418.
Cooking and like purposes, Vessel for. A. Wessel. No. 875,972; Jan. 7; Sp. p. 550; Dr. p. 120; Gaz. vol. 132; p. 97.
Cooking apparatus. A. T. Bradshaw. No. 875,889; Jan. 7; Sp. p. 395; Dr. p. 86; Gaz. vol. 132; p. 73.
Cooking canned goods, Apparatus for. J. P. Ritchie. No. 876,660; Jan. 14; Sp. p. 2017; Dr. p. 440; Gaz. vol. 132; p. 357.
Cooler: *See* Engine-cooler.
Coon and mink trap. J. B. Young. No. 876,759; Jan. 14; Sp. p. 2186; Dr. p. 480; Gaz. vol. 132; p. 388.
Copper mattes into blister copper, Bessemerizing or conversion of. J. D. Burgess. No. 877,292; Jan. 21; Sp. p. 3308; Dr. pp. 716-17; Gaz. vol. 132; p. 606.
Copying-block, Letter-press. W. Hilzinger. No. 877,565; Jan. 28; Sp. p. 3867; Dr. p. 836; Gaz. vol. 132; p. 716.
Copying-machine. A. D. Klaber. No. 876,561; Jan. 14; Sp. p. 1778; Dr. p. 388; Gaz. vol. 132; p. 322.
Cord-fastener. C. V. Hugo. No. 877,428; Jan. 21; Sp. p. 3570; Dr. p. 772; Gaz. vol. 132; p. 650.
Cork-extracting device. D. Fialcofsky. No. 876,049; Jan. 7; Sp. p. 699; Dr. p. 150; Gaz. vol. 132; p. 121.
Corn, Apparatus for the degermination of Indian. J. F. Gent. No. 877,640; Jan. 28; Sp. p. 4009; Dr. pp. 866-7; Gaz. vol. 132; p. 740.
Corn gatherer and picker. J. E. and J. P. Larson. No. 876,464; Jan. 14; Sp. p. 1574; Dr. p. 338; Gaz. vol. 132; p. 288.
Corn-husker. C. E. Trent. No. 877,143; Jan. 21; Sp. p. 3006; Dr. pp. 650-1; Gaz. vol. 132; p. 556.
Corn-husking device. A. E. Hall. No. 877,461; Jan. 21; Sp. p. 3628; Dr. pp. 785-6; Gaz. vol. 132; p. 659.
Corn-husking machine. J. Hettrich. No. 876,802; Jan. 14; Sp. p. 2255; Dr. p. 496; Gaz. vol. 132; p. 400.
Corn-popper. N. W. Emmer. No. 876,786; Jan. 14; Sp. p. 2233; Dr. p. 491; Gaz. vol. 132; p. 396.
Corn-topper. S. E. Woods. No. 876,615; Jan. 14; Sp. p. 1918; Dr. pp. 418-19; Gaz. vol. 132; p. 341.
Cornmeal product. E. W. Simons. No. 876,662; Jan. 14; Sp. p. 2019; Gaz. vol. 132; p. 358.
Corner-fastening for cupboards, &c. C. L. Grellick. No. 877,767; Jan. 28; Sp. p. 4241; Dr. p. 921; Gaz. vol. 132; p. 779.
Costumer. H. J. Habermas. No. 877,189; Jan. 21; Sp. p. 3107; Dr. p. 672; Gaz. vol. 132; p. 571.
Cotton chopper and cultivator. W. J. Smith. No. 876,664; Jan. 14; Sp. p. 2021; Dr. p. 441; Gaz. vol. 132; p. 358.

Cotton chopper or cultivator. C. L. Ferriott. No. 877,470; Jan. 21; Sp. p. 3645; Dr. p. 790; Gaz. vol. 132; p. 663.
Cotton-cleaner. F. Phelps. No. 876,394; Jan. 14; Sp. p. 1417; Dr. p. 305; Gaz. vol. 132; p. 264.
Cotton-gin. B. Thoens. No. 876,412; Jan. 14; Sp. p. 1453; Dr. p. 312; Gaz. vol. 132; p. 270.
Cotton-picking machine. H. E. Bullock. No. 877,754; Jan. 28: Sp. p. 4223; Dr. p. 916; Gaz. vol. 132; p. 775.
Coupling: *See* Automatic coupling; Belt-coupling; Car-coupling; Car-pipe coupling; Hose-coupling; Pipe-coupling; Rein-coupling; Shaft-coupling; Thill-coupling; Train-service coupling.
Coupling. U. Hoskins. No. 876,052; Jan. 7; Sp. p. 703; Dr. p. 151; Gaz. vol. 132; p. 122.
Coupling. D. McDonald. No. 876,484; Jan. 14; Sp. p. 1607; Dr. p. 346; Gaz. vol. 132; p. 295.
Cranes, Safety device for electric. M. R. Sullot. No. 876,508; Jan. 14; Sp. p. 1655; Dr. p. 359; Gaz. vol. 132; p. 302.
Crate, Banana-. T. H. Ruddiman. No. 876,502; Jan. 14; Sp. p. 1636; Dr. p. 405; Gaz. vol. 132; p. 334.
Crate, Folding. A. W. Coats. No. 875,780; Jan. 7; Sp. p. 201; Dr. p. 43; Gaz. vol. 132; p. 37.
Crate, Fruit-. G. B. Katzenstein. No. 876,061; Jan. 7; Sp. p. 724; Dr. p. 155; Gaz. vol. 132; p. 125.
Crate or coop, Poultry. T. Ball. No. 877,303; Jan. 21; Sp. p. 3499; Dr. p. 759; Gaz. vol. 132; p. 638.
Crate, Poultry-. R. Andlauer. No. 877,032; Jan. 21; Sp. p. 2779; Dr. p. 601; Gaz. vol. 132; p. 520.
Crate, Shipping-. W. R. Stokely. No. 877,612; Jan. 28; Sp. p. 3068; Dr. p. 857; Gaz. vol. 132; p. 730.
Cream and butter separator. A. Fay. No. 877,066; Jan. 21; Sp. p. 2846; Dr. p. 614; Gaz. vol. 132; p. 531.
Cream-separator, Centrifugal. O. Anderson. No. 877,158; Jan. 21; Sp. p. 3038; Dr. pp. 657–8; Gaz. vol. 132; p. 561.
Cross-heads, Lubrication of. J. Johnson. No. 876,717; Jan. 14; Sp. p. 2117; Dr. p. 464; Gaz. vol. 132; p. 375.
Cross-tie. J. F. and C. F. Grandy. No. 877,328; Jan. 21; Sp. p. 3384; Dr. p. 733; Gaz. vol. 132; p. 617.
Crossing-gate. J. J. Gard. No. 876,166; Jan. 7; Sp. p. 936; Dr. p. 201; Gaz. vol. 132; p. 159.
Crucibles and hot water, Device for heating. E. C. Metz. No. 877,513; Jan. 28; Sp. p. 3752; Dr. p. 813; Gaz. vol. 132; p. 698.
Crusher and pulverizer. M. F. Williams. No. 877,876; Jan. 28; Sp. p. 4442; Dr. p. 968; Gaz. vol. 132; p. 814.
Crutch-tip. C. P. Rogers, Jr. No. 877,231; Jan. 21; Sp. p. 3195; Dr. p. 693; Gaz. vol. 132; p. 587.
Cuff-holder. J. H. Humphrey. No. 877,429; Jan. 21; Sp. p. 3571; Dr. p. 772; Gaz. vol. 132; p. 650.
Culinary-vessel heat-economizing and flame-protecting casing. W. Little. No. 877,349; Jan. 21; Sp. p. 3412; Dr. p. 740; Gaz. vol. 132; p. 623.
Cultivating and root harvesting machines, Guide for row. G. F. Conner. No. 876,623; Jan. 14; Sp. p. 1934; Dr. p. 422; Gaz. vol 132; p. 345.
Cultivator. S. E. Ballor. No. 876,513; Jan. 14; Sp. p. 1680; Dr. pp. 366–7; Gaz. vol. 132; p. 306.
Cultivator stalk-cutter attachment. H. Hestand and J. W. Willis. No. 877,192; Jan. 21; Sp. p. 3112; Dr. p. 673; Gaz. vol. 132; p. 573.
Current-deflector. A. F. Kellner. No. 877,201; Jan. 21; Sp. p. 3132; Dr. p. 679; Gaz. vol. 132; p. 576.
Current machines in parallel. Means for operating alternating-. M. Brooks and M. K. Akers. No. 876,686; Jan. 14; Sp. p. 2068; Dr. p. 449; Gaz. vol 132; p. 366.
Curtain and shade fixture. A. J. Cannon. No. 877,704; Jan. 28; Sp. p. 4129; Dr. p. 894; Gaz. vol. 132; p. 759.
Curtain, Drop-. M. L. Sickles. No. 876,844; Jan. 14; Sp. p. 2340; Dr. p. 513; Gaz. vol. 132; p. 414.
Curtain-fixture. I. L. Hotaling. No. 876,965; Jan. 21; Sp. p. 2629; Dr. p. 571; Gaz. vol. 132; p. 496.
Curtain-fixture. H. E. Keeler. No. 877,993; Jan. 28; Sp. p. 4479; Dr. p. 976; Gaz. vol. 132; p. 819.
Curtain-hanging apparatus. T. E. Shevill. No. 876,405; Jan. 14; Sp. p. 1440; Dr. p. 310; Gaz. vol. 132; p. 268
Curtain-holding device. C. L. Hopkins. No. 875,997; Jan. 7; Sp. p. 603; Dr. p. 129; Gaz. vol. 132; p. 105.
Curtain-holding device, Frictional. G. H. Davis. No. 877,412; Jan. 21; Sp. p. 3544; Dr. p. 767; Gaz. vol. 132; p. 644.
Curtain-pole. J. Williams. No. 876,672; Jan. 14; Sp. p. 2035; Dr. p. 444; Gaz. vol. 132; p. 361.
Curtain-pole ring. J. Kroder. No. 876,199; Jan. 7; Sp. p. 993; Dr. p. 215; Gaz. vol. 132; p. 169.
Curtain-shade bracket. J. W. Tatum. No. 876,411; Jan. 14; Sp. p. 1452; Dr. p. 312; Gaz. vol. 132; p. 269.
Curtain-stretcher. J. Kollander. No. 877,723; Jan. 28; Sp. p. 4164; Dr. p. 902; Gaz vol. 132; p. 765.
Cuspidor-carrier. C. N. Harrington. No. 875,709; Jan. 7; Sp. p. 61; Dr. p. 12; Gaz. vol. 132; p. 13.
Cut-off, Water. W. Z. Brown. No. 876,687; Jan. 14; Sp. p. 2069; Dr. p. 450; Gaz. vol. 132; p. 366.
Cutter: *See* Butter-cutter; Cake-cutter; Cheese-cutter; Cigar-cutter; Rivet-cutter; Vegetable-cutter.
Cutter. P. B. Lang. No. 876,200; Jan. 7; Sp. p. 994; Dr. p. 216; Gaz. vol. 132; p. 169.
Cutter-bar. E. J. Wolfrom. No. 875,878; Jan. 7; Sp. p. 374; Dr. p. 82; Gaz. vol. 132; p. 69.
Cutting and facing tool. W. S. Watson. No. 876,882; Jan. 14; Sp. p. 2356; Dr. p. 516; Gaz. vol. 132; p. 417.
Cutting implement. A. A. Low. No. 875,717; Jan. 7; Sp. p. 77; Dr. p. 16; Gaz. vol. 132; p. 17.
Cutting implement. A. A. Low. No. 875,939; Jan. 7; Sp. p. 482; Dr. p. 104; Gaz. vol. 132; p. 87.
Cutting-tool. J. B. Waller. No. 877,813; Jan. 28; Sp. p. 4316; Dr. p. 937; Gaz. vol. 132; p. 793.
Cylinder-wrench. H. Lund. No. 877,352; Jan. 21; Sp. p. 3422; Dr. p. 742; Gaz. vol. 132; p. 624.
Cylinder-wrench. H. Lund. No. 877,465; Jan. 21; Sp. p. 3635; Dr. p. 787; Gaz. vol. 132; p. 661.
Dental and surgical appliance, Electrical. H. F. Pressey. No. 876,997; Jan. 21; Sp. p. 2699; Dr. p. 585; Gaz. vol. 132; p. 507.
Dental extractor. O. Cholinsky. No. 876,526; Jan. 14; Sp. p. 1713; Dr. p. 372; Gaz. vol. 132; p. 311.
Dental tool. H. A. Gollobin. No. 875,992; Jan. 7; Sp. p. 597; Dr. p. 128; Gaz. vol. 132; p. 104.
Dental tool. L. S. Robinson. No. 876,842; Jan. 14; Sp. p. 2336; Dr. p. 513; Gaz. vol. 132; p. 413.
Deodorizer-receptacle. R. B. Emerson. No. 877,309; Jan. 21; Sp. p. 3351; Dr. p. 726; Gaz. vol. 132; p. 611.
Deodorizing compound. S. M. Buchanan; No. 877,401; Jan. 21: Sp. p. 3514; Gaz. vol. 132; p. 640.
Derailer, Portable. S. W. Hayes. No. 875, 996; Jan. 7; Sp. p. 601; Dr. p. 129; Gaz. vol. 132; p. 105.
Derrick. P. Yorke. No. 877,624; Jan. 28; Sp. p. 3988; Dr. p. 862; Gaz. vol. 132; p. 735.
Derrick-pipe. H. Shannon. No. 876,243; Jan. 7; Sp. p. 1081; Dr. p. 236; Gaz. vol. 132; p. 183.
Design-transferring apparatus. A. G. Schultz. No. 876,733; Jan. 14; Sp. p. 2130; Dr. p. 469; Gaz. vol. 132; p. 380.
Detaching device. A. Barns. No. 876,762; Jan. 14; Sp. p. 2190; Dr. p. 481; Gaz. vol. 132; p. 389.
Detector: *See* Magnetic detector.
Digger: *See* Potato-digger.
Dipper. W. H. Rexer. No. 877,372; Jan. 21; Sp. p. 3459; Dr. p. 751; Gaz. vol. 132; p. 631.
Dish, Cereal-. L. T. Kinert. No. 876,808; Jan. 14; Sp. p. 2265; Dr. p. 498; Gaz. vol. 132; p. 403.
Disinfectant, Waste-sulfite-liquor. C. Ellis. No. 877,414; Jan. 21; Sp. p. 3547; Gaz. vol. 132; p. 645.
Dispensing-container. O. L. Parmenter. No. 876,282; Jan. 7; Sp. p. 1166; Dr. p. 254; Gaz. vol. 132; p. 196.
Display apparatus. A. D. Phillips. No. 876,089; Jan. 7; Sp. p. 793; Dr. p. 166; Gaz. vol. 132; p. 134.
Display apparatus, Interchangeable electric. D. Levy. No. 875,715; Jan. 7; Sp. p. 71; Dr. pp. 15–16; Gaz. vol. 132; p. 15.
Display-box. A. H. Burt. No. 876,146; Jan. 7; Sp. p. 901; Dr. p. 194; Gaz. vol. 132; p. 155.
Display-cabinet. J. M. Acheson. No. 877,751; Jan. 28; Sp. p. 4218; Dr. pp. 914–15; Gaz. vol. 132; p. 774.
Display-case. W. A. Van Brocklin. No. 876,889; Jan. 14; Sp. p. 2430; Dr. p. 532; Gaz. vol. 132; p. 430
Display-rack. C. S. Copp and L. Frank. No. 877,760; Jan. 28; Sp. p. 4231; Dr. p. 918; Gaz. vol. 132; p. 777.
Displaying and measuring device for oil-cloth. J. Armstrong. No. 875,680; Jan. 7; Sp. p. 7; Dr. p. 2; Gaz. vol. 132; p. 3.
Displaying shoes. Heel rest or support for. W. H. Baynard. No. 876,254; Jan. 7; Sp. p. 1101; Dr. p. 239; Gaz. vol. 132; p. 186.
Dividers, Proportional. N. Côté. No. 875,783; Jan. 7; Sp. p. 207; Dr. p. 45; Gaz. vol. 132; p. 38.
Doll. E. E. Rouech. No. 875,954; Jan. 7; Sp. p. 522; Dr. p. 111; Gaz. vol. 132; p. 92.
Door-check. O. Rice. No. 877,123; Jan. 21; Sp. p. 2964; Dr. p. 641; Gaz. vol. 132; p. 549.
Door check and closer, Automatic. M. Levin. No. 877,440; Jan. 21; Sp. p. 3598; Dr. p. 779; Gaz. vol. 132; p. 654.
Door-controlling means. J. Rickli. No. 877,374; Jan. 21; Sp. p. 3461; Dr. pp. 751–2; Gaz. vol. 132; p. 631.
Door-fastener. S. Olson. No. 876,831; Jan. 14; Sp. p. 2317; Dr. p. 509; Gaz. vol. 132; p. 410.
Door-hanger. J. H. Burkholder. No. 876 621; Jan. 14; Sp. p. 1931; Dr. pp. 421–2; Gaz. vol. 132; p. 344.
Door-lock, Combination. R. J. Hofheins. No. 876,550; Jan. 14; Sp. p. 1758; Dr. p. 382; Gaz. vol. 132; p. 319.
Door lock, Sliding-. J. F. Streng. No. 875,747; Jan. 7; Sp. p. 135; Dr. p. 30; Gaz. vol. 132; p. 27.
Door, Metal-covered. W. S. Ely. No. 877,415; Jan. 21; Sp. p. 3549; Dr. p. 767; Gaz. vol. 132; p. 645.
Door, Metallic. J. O. Emrich. No. 876,788; Jan. 14; Sp. p. 2236; Dr. p. 491; Gaz. vol. 132; p. 396.
Door pocket, Sliding-. A. Wagner. No. 877,870; Jan. 7; Sp. p. 359; Dr. p. 79; Gaz. vol. 132; p. 66.
Douche-protector. A. A. Van Orden. No. 877,618; Jan. 28; Sp. p. 3978; Dr. p. 859; Gaz. vol. 132; p. 733.
Dough-raiser. E. A. Smothers. No. 877,575; Jan. 28; Sp. p. 4067; Dr. p. 885; Gaz. vol. 132; p. 751.
Dough-shaping machine. H. Hueg. No. 875,930; Jan. 7; Sp. p. 465; Dr. p. 100; Gaz. vol. 132; p. 84.
Draft-equalizer. W. R. Campbell. No. 876,942; Jan. 21; Sp. p. 2578; Dr. p. 562; Gaz. vol. 132; p. 488.
Draft regulator and ventilator. J. W. Noxon. No. 877,364; Jan. 21; Sp. p. 3446; Dr. p. 748; Gaz. vol. 132; p. 628.
Drainage-fitting. F. B. Morton. (Reissue.) No. 12,741; Jan. 21; Sp. p. 3658; Dr. p. 793; Gaz. vol. 132; p. 664.
Drawer attachment. P. Erickson. No. 876,150; Jan. 7; Sp. p. 921; Dr. p. 190; Gaz. vol. 132; p. 157.
Drawer-stop-inserting device. H. H. Borgerding. No. 877,165; Jan. 21; Sp. p. 3052; Dr. p. 661; Gaz. vol. 132; p. 563.
Drawer-stop-inserting machine. H. H. Borgerding. No. 877,166; Jan. 21; Sp. p. 3054; Dr. p. 661; Gaz. vol. 132; p. 564.
Drawers, Catamenial. F. Guttman. No. 876,173; Jan. 7; Sp. p. 946; Dr. p. 204; Gaz. vol. 132; p. 161.
Dredge-bucket. S. L. G. Knox. No. 877,345; Jan. 21; Sp. p. 3407; Dr. p. 739; Gaz. vol. 132; p. 622.
Dredger and scraper. C. H. Gunn. No. 876,634; Jan. 14; Sp. p. 1966; Dr. p. 428; Gaz. vol. 132; p. 349.
Drier: *See* Shirt-drier; Steam-drier.
Drier. H. J. Gerbsch. No. 878,764; Jan. 7; Sp. p. 49; Dr. p. 10; Gaz. vol. 132; p. 11.

Drier. J. Weintz. No. 875,874; Jan. 7; Sp. p. 365; Dr. pp. 80–1; Gaz. vol. 132; p. 67.
Dry-kiln. J. R. Ripley. No. 877,736; Jan. 28; Sp. p. 4189; Dr. p. 908; Gaz. vol. 132; p. 770.
Dry-room conveyers, Dampening attachment for. W. Bartholomew. No 877,824; Jan. 28; Sp. p. 4352; Dr. p. 945; Gaz. vol. 132; p. 797.
Drying-cylinder. W. M. Cummer. No. 876,440; Jan. 14; Sp. p.1520; Dr. p. 326; Gaz. vol. 132; p. 280.
Drying-machines, Conveying apparatus for. W. M. Schwartz and W. D. Palen. No. 877,801; Jan. 28; Sp. p. 4299; Dr. p. 933; Gaz. vol. 132; p. 790.
Drying sheet material, Machine for. C. E. Moss. No. 876,007; Jan. 7; Sp. p. 626; Dr. pp. 133–4; Gaz. vol. 132; p. 109.
Drill: *See* Expansion-drill; Pneumatic drill; Ratchet-drill; Rock-drill.
Drill. A. E. and J. W. Jennings. No. 877,892; Jan. 28; Sp. p. 4478; Dr. p. 976; Gaz. vol. 132; p. 819.
Drilling apparatus, Core-. C. A. Terry. No. 877,528. Jan. 28; Sp. p. 3779; Dr. p. 818; Gaz. vol. 132; p. 703.
Drilling-machine. T. Larsson. No. 877,572; Jan. 28; Sp. p. 3875; Dr. pp. 839–40; Gaz. vol. 132; p. 717.
Drilling-machine. A. Walker. No. 877,749; Jan. 28; Sp. p. 4213; Dr. p. 913; Gaz. vol. 132; p. 774.
Drilling-machine, Multiple. F. E. Bocorselski. No. 875,979; Jan. 7; Sp. p. 570; Dr. p. 123; Gaz. vol. 132; p. 100.
Drum. A. D. Converse. No. 877,830; Jan. 28; Sp. p. 4302; Dr. p. 948; Gaz. vol. 132; p. 799.
Dump and elevator. D. Houghton. No. 876,056; Jan. 7; Sp. p. 710; Dr. pp. 152–3; Gaz. vol. 132; p. 123.
Dump and hopper, Combination. T. Carroll. No. 876,896; Jan. 14; Sp. p. 2455; Dr. p. 536; Gaz. vol. 132; p. 432.
Dust-suction apparatus, Filter for. A. Mestitz. No. 877,580; Jan. 28; Sp. p. 3903; Dr. p. 844; Gaz. vol. 132; p. 720.
Dye and making same, Anthracene. M. H. Isler. No. 876,190; Jan. 7; Sp. p. 978; Gaz. vol. 132; p. 166.
Dye and making same, Anthracene. M. A. Kunz. No. 876,810; Jan. 14; Sp. p. 2268; Gaz. vol. 132; p. 403.
Dye and making same, Red. R. Pummerer. No. 876,839; Jan. 14; Sp. p. 2330; Gaz. vol. 132; p. 412.
Dye and making same, Triphenylmethane. A. Conzetti. No. 877,052; Jan. 21; Sp. p. 2823; Gaz. vol. 132; p. 526.
Dye and making same, Triphenylmethane. A. Conzetti. No. 877,053; Jan. 21; Sp. p. 2825; Gaz. vol. 132; p. 527.
Dye and making same, Triphenylmethane. A. Conzetti. No. 877,054; Jan. 21; Sp. p. 2826; Gaz. vol. 132; p. 527.
Dye and making same, Violet. A. Schmidt and E. Bryk. No. 877,743; Jan. 28; Sp. p. 4201; Gaz. vol. 132; p. 772.
Dye, Azo. O. Günther and L. Hesse. No. 877,643; Jan. 28; Sp. p. 4019; Gaz. vol. 132; p. 741.
Dye, Azo. O. Günther and L. Hesse. No. 877,644; Jan. 28: Sp. p. 4020; Gaz. vol. 132; p. 741.
Dye derived from indirubin and making same, Vat-. G. Engi. No. 876,158; Jan. 7; Sp. p. 920; Gaz. vol. 132; p. 156.
Ear-trumpet. C. L. Holland. No. 877,566; Jan. 28; Sp. p. 3868; Dr. p. 837; Gaz. vol. 132; p. 716.
Edge-trimmer. W. M. Boenning. No. 876,292; Jan. 7; Sp. p. 1191; Dr. pp. 259–60; Gaz. vol. 132; p. 200.
Edger, Gang-. U. Anderson. No. 877,878; Jan. 28; Sp. p. 4444; Dr. pp. 968–9; Gaz. vol. 132; p. 815.
Egg and sponge beater. C. H. Overkamp. No. 877,468; Jan. 21; Sp. p. 3641; Dr. p. 789; Gaz. vol. 132; p. 662.
Egg-beater. J. A. Hoffman. No. 876,540; Jan. 14; Sp. p. 1757; Dr. p. 382; Gaz. vol. 132; p. 318.
Egg-candling machine. S. E. Davis. No. 877,490; Jan. 28; Sp. p. 3692; Dr. p. 801; Gaz. vol. 132; p. 690.
Egg-preserving apparatus. H. J. Wintherlich. No. 876,757; Jan. 14; Sp. p. 2181; Dr. p. 479; Gaz. vol. 132; p. 387.
Egg-washing machine. H. W. Henry. No. 876,181; Jan. 7; Sp. p. 961; Dr. p. 207; Gaz. vol. 132; p. 164.
Elastic wheel. L. A. Garchey. No. 876,537; Jan. 14; Sp. p. 1731; Dr. pp. 376–7; Gaz. vol. 132; p. 314.
Electric condensers, Making. F. S. Koch. No. 877,089; Jan. 21; Sp. p. 2882; Dr. p. 623; Gaz. vol. 132; p. 537.
Electric-current collectors, Pressure device for. C. de Kandó. No. 875,788; Jan. 7; Sp. p. 214; Dr. pp. 46–7; Gaz. vol. 132; p. 39.
Electric current collectors, Pressure device for. C. de Kandó. No. 875,822; Jan. 7; Sp. p. 272; Dr. pp. 59–60; Gaz. vol. 132; p. 51.
Electric-current controller. A. E. Dion and C. W. Ball. No. 877,705; Jan. 28; Sp. p. 4131; Dr. p. 894; Gaz. vol. 132; p. 759.
Electric currents, Transforming the energy of. E. Weintraub. No. 877,026; Jan. 21; Sp. p. 2767; Dr. p. 598; Gaz. vol. 132; p. 518.
Electric heater. H. D'Olier, Jr. No. 877,177; Jan. 21; Sp. p. 3087; Dr. pp. 667–8; Gaz. vol. 132; p. 568.
Electric heater. G. W. Elkins. No. 877,183; Jan. 21; Sp. p. 3097; Dr. pp. 670–1; Gaz. vol. 132; p. 569.
Electric heater. E. F. Hoskin. No. 877,843; Jan. 28; Sp. p. 4379; Dr. pp. 952–3; Gaz. vol. 132; p. 803.
Electric-light-socket cap. J. H. Goss. No. 877,326; Jan. 21; Sp. p. 3381; Dr. p. 732; Gaz. vol. 132; p. 616.
Electric machine, Dynamo-. C. E. Lord. No. 876,508; Jan. 14; Sp. p. 1801; Dr. p. 393; Gaz. vol. 132; p. 325.
Electric machine, Dynamo-. S. R. Bergman. No. 876,930; Jan. 21; Sp. p. 2545; Dr. p. 556; Gaz. vol. 132; p. 483.
Electric machine, Dynamo-. C. E. Canfield. No. 876,943; Jan. 21; Sp. p. 2581; Dr. p. 562; Gaz. vol. 132; p. 488.
Electric machine, Dynamo-. R. S. Feicht. No. 876,955; Jan. 21; Sp. p. 2613; Dr. p. 567; Gaz. vol. 132; p. 493.
Electric machine with compensating windings, Dynamo-. L. Torda. No. 877,017; Jan. 21; Sp. p. 2750; Dr. p. 595; Gaz. vol. 132; p. 514.
Electric motor. L. A. Tirrill. No. 877,016; Jan. 21; Sp. p. 2749; Dr. p. 595; Gaz. vol. 132; p. 514.
Electric switch. F. G. Baum. No. 875,978; Jan. 7; Sp. p. 569; Dr. pp. 122–3; Gaz. vol. 132; p. 99.
Electric switch. H. Drewell. No. 876,701; Jan. 14; Sp. p. 2094; Dr. p. 456; Gaz. vol. 132; p. 370.
Electric switch. C. G. Perkins. No. 876,910; Jan. 14; Sp. p. 2479; Dr. p 542; Gaz. vol. 132; p. 437.
Electric switch. W. F. Jones. No. 876,970; Jan. 21; Sp. p. 2637; Dr. pp. 572–3; Gaz. vol. 132; p. 497.
Electric switch, Automatic. M. Mintz. No. 877,790; Jan. 28; Sp. p. 4281; Dr. p. 930; Gaz. vol. 132; p. 787.
Electric switch or cut-out. I. Kitsee. No. 876,809; Jan. 14; Sp. p. 2266; Dr. p. 499; Gaz. vol. 132; p. 403.
Electric switch, Push-button. W. G. Mann. No. 876,207; Jan. 7; Sp. p. 1008; Dr. p. 219; Gaz. vol. 132; p. 172.
Electric time-alarm. E. Dubs. No. 875,698; Jan. 7; Sp. p. 37; Dr. p. 8; Gaz. vol. 132; p. 9.
Electric time-switch. F. W. Brock. No. 876,293; Jan. 7; Sp. p. 1194; Dr. 260; Gaz. vol. 132; p. 201.
Electric time-switch. R. F. S. Venner and R. C. Griesbach. No. 876,416; Jan. 14; Sp. p. 1465; Dr. pp. 314–15; Gaz. vol. 132; p. 271.
Electric waves, Means for receiving intelligence communicated by. G. W. Pickard. No. 877,451; Jan. 21; Sp. p. 3610; Dr. p 782; Gaz. vol. 132; p. 657.
Electric wires, Junction-box for. L. P. Bliemeister. No. 876,619; Jan. 14; Sp. p. 1928; Dr. pp. 420–1; Gaz. vol. 132; p. 343.
Electrical conductors, Underground system of laying. W. Schreiber. No. 876,241; Jan. 7; Sp. p. 1077; Dr. pp. 234–5; Gaz. vol. 132; p. 183.
Electrical distributing-rack. C. A. Rolfe. No. 876,400; Jan. 14: Sp. p. 1434; Dr. p. 308; Gaz. vol. 132; p. 266.
Electrical fitting. F. A. Swan. No. 877,384; Jan. 21; Sp. p. 3484; Dr. p. 756; Gaz. vol. 132; p. 635.
Electrical register and system therefor. L. A. Schmidt. No. 876,595; Jan. 14; Sp. p. 1862; Dr. pp. 407–8; Gaz. vol. 132; p. 335.
Electrical transmission apparatus. S. Evershed. No. 877,312; Jan. 21; Sp. p. 3357; Dr. pp. 727–8; Gaz. vol. 132; p. 612.
Electromagnetic waves, Means for producing. J. Murgas. No. 876,383; Jan. 14: Sp. p. 1392; Dr. p. 300; Gaz. vol. 132; p. 260.
Electropneumatic machine. W. K. Rankin. No. 877,369; Jan. 21; Sp. p. 3455; Dr. pp. 749–50; Gaz. vol. 132; p. 630.
Electrotypes, Apparatus for the manufacture of copper. S. O. Cowper-Coles. No. 875,784; Jan. 7; Sp. p. 208; Dr. p. 45; Gaz. vol. 132; p. 38.
Elevated carrier. A. H. Neller. No. 876,573; Jan. 14: Sp. p. 1827; Dr. p. 399; Gaz. vol. 132; p. 329.
Elevator: *See* Bucket-elevator; Grain-elevator; Water-elevator.
Elevator. C. Bradford and G. L. Chatfield. No. 876,432; Jan. 14; Sp. p. 1502; Dr. p. 323; Gaz. vol. 132; p. 277.
Elevator. L. M. Shaw. No. 876,599; Jan. 14; Sp. p. 1878; Dr. p. 410; Gaz. vol. 132; p. 336.
Elevator-engine, Power-driven. T. W. Heermans. No. 877,713; Jan. 28; Sp. p. 4142; Dr. pp. 897–8; Gaz. vol. 132; p. 762.
Elevator safety-clutch. M. C. Hutchings. No. 876,188; Jan. 7; Sp. p. 972; Dr. p. 210; Gaz. vol. 132; p. 165.
Ellipsograph. F. R. Goodale. No. 877,710; Jan. 28; Sp. p. 4139; Dr. p. 896; Gaz. vol. 132; p. 761.
Embroidering a fabric with pile-threads in patterns, Machinery for. F. Kleutgen. No. 876,562; Jan. 14; Sp. p. 1783; Dr. pp. 388–90; Gaz. vol. 132; p. 323.
Embroidering-machine, Shuttle. V. Kobler. No. 876,975; Jan. 21; Sp. p. 2645; Dr. pp. 574–5; Gaz. vol. 132; pp. 499.
Engine: *See* Auxiliary engine; Elevator-engine; Explosive-engine; Fire-engine; Fluid-pressure engine; Gas-engine; Gas or vapor engine; Hot-air engine; Hydrocarbon-engine; Internal-combustion engine; Multiple-cylinder engine; Oscillating engine; Rotary engine; Steam-engine; Traction-engine; Turbine-engine.
Engine. G. W. Wilson. No. 876,890; Jan. 14: Sp. p. 2441; Dr. p. 532; Gaz. vol. 132; p. 430.
Engine. C. H. Way. No. 877,023; Jan. 21; Sp. p. 2761; Dr. p. 597; Gaz. vol. 132; p. 516.
Engine controlling means, Gas-. H. W. Bradley. No. 877,044; Jan. 21; Sp. p. 2807; Dr. pp. 606–7; Gaz. vol. 132; p. 524.
Engine cooler, Gas-. F. L. Orr. No. 876,832; Jan. 14: Sp. p. 2318; Dr. p. 509; Gaz. vol. 132; p. 410.
Engine gearing, Steam-. H. M. Hendrickson. No. 877,079; Jan. 21; Sp. p. 2865; Dr. pp. 618–19; Gaz. vol. 132; p. 534.
Engine-starter. L. P. Schlamb. No. 876,240; Jan. 7; Sp. p. 1074; Dr. pp. 233–4; Gaz. vol. 132; p. 182.
Engine starting mechanism, Internal-combustion-. H. A. Johnston. No. 876,460; Jan. 14; Sp. p. 1563; Dr. p. 335; Gaz. vol. 132; p. 287.
Engines, Air-cooling apparatus for explosive-. J. E. Gilson. No. 875,991; Jan. 7; Sp. p. 595; Dr. p. 127; Gaz. vol. 132; p. 104.
Engines, Charge-forming device for internal-combustion. W. Brothers. No. 876,519; Jan. 14; Sp. p. 1701; Dr. p. 370; Gaz. vol. 132; p. 308.
Engines, Motion-transmitting device for motive-power. A. J. B. Lège. No. 876,202; Jan. 7; Sp. p. 999; Dr. pp. 216–17; Gaz. vol. 132; p. 170.
Engines, Starting-clutch for explosive-. R. E. Bradway. No. 876,936; Jan. 21; Sp. p. 2564; Dr. p. 559; Gaz. vol. 132; p. 495.
Engines with four cylinders, Starting device for explosion-. H. Saurer. No. 877,377; Jan. 21; Sp. p. 3470; Dr. pp. 753–4; Gaz. vol. 132; p. 632.
Engraving or sinking dies, Machine for. J. F. Keller. No. 877,436; Jan. 21; Sp. p. 3587; Dr. pp. 776–7; Gaz. vol. 132; p. 652.
Envelop. B. A. Cole. No. 877,050; Jan. 21; Sp. p. 2820; Dr. p. 610; Gaz. vol. 132; p. 526.
Envelop. G. W. Harvey. No. 877,330; Jan. 21; Sp. p. 3386; Dr. pp. 733–4; Gaz. vol. 132; p. 618.
Envelop-machine. F. A. Burnett. No. 876,689; Jan. 14; Sp. p. 2072; Dr. pp. 450–1; Gaz. vol. 132; p. 367.
Envelop or bag closure. J. B. Merkels. No. 877,789; Jan. 28; Sp. p. 4280; Dr. p. 929; Gaz. vol. 132; p. 786.
Envelop, Safety-. R. W. Vail. No. 877,532; Jan. 28; Sp. p. 3785; Dr. p. 821; Gaz. vol. 132; p. 704.

Envelop, Safety-. R. W. Vail. No. 877,533; Jan. 28: Sp. p. 3791: Dr. p. 821; Gaz. vol. 132; p. 705.
Equaliser, Four-horse. O. and F. Zoeller. No. 877,278; Jan. 21; Sp. p. 3286; Dr. p. 711; Gaz. vol. 132; p. 602.
Equalising mechanism. F. Mueller. No. 876,381; Jan. 14; Sp. p. 1386; Dr. p. 299; Gaz. vol. 132; p. 259.
Erasing-machine. F. W. Lierman. No. 877,346; Jan. 21; Sp. p. 3411; Dr. p. 740; Gaz. vol. 132; p. 623.
Erasing-shield for draftsmen. L. Hall. No. 876,451; Jan. 14; Sp. p. 1546; Dr. p. 331; Gaz. vol. 132; p. 284.
Escapement. G. W. Bennum. No. 877,881; Jan. 28; Sp. p. 4449; Dr. p. 970; Gaz. vol. 132; p. 816.
Evaporator. F. Sawyer. No. 877,665; Jan. 28; Sp. p. 4061; Dr. p. 880; Gaz. vol. 132; p. 748.
Excavating-machine. M. S. Longnaker. No. 877,573; Jan. 28; Sp. p. 3885: Dr. pp. 842–3; Gaz. vol. 132; p. 719.
Excavator-buckets, Mechanism for cleaning. T. De Young, Jr. No. 875,789; Jan. 7; Sp. p. 217; Dr. p. 47; Gaz. vol. 132; p. 40.
Exhibiting device. W. V. D. Kelley. No. 876,907; Jan. 14; Sp. p. 3473; Dr. p. 541; Gaz. vol. 132; p. 436.
Expansion-drill. J. B. Tygart. No. 877,265; Jan. 21; Sp. p. 3266; Dr. p. 706; Gaz. vol. 132; p. 598.
Explosive-engine. W. H. Hooper and F. S. Hutchins. No. 876,878; Jan. 14; Sp. p. 2416; Dr. pp. 526–7; Gaz. vol. 132; p. 426.
Explosive-engine. W. L. Boyer. No. 877,483; Jan. 28; Sp. p. 3677; Dr. p. 798; Gaz. vol. 132; p. 687.
Explosive-engine. H. R. Palmer. No. 877,730; Jan. 28; Sp. p. 4176; Dr. pp. 905–6; Gaz. vol. 132; p. 767
Extension-chair. R. Flemming. No. 875,903; Jan. 7; Sp. p. 429; Dr. p. 95; Gaz. vol. 132; p. 78.
Extractor: *See* Dental extractor.
Extracts, Making vegetable. J. Meikle. No. 877,660; Jan. 28; Sp. p. 4051; Dr. p. 876; Gaz. vol. 132; p. 746.
Eye-shade. J. W. Alderson. No. 876,676; Jan. 14; Sp. p. 2099; Dr. p. 445; Gaz. vol. 132; p. 362.
Eyeglass-case. A. L. Mariner. No. 877,441; Jan. 21; Sp. p. 3599; Dr. p. 779; Gaz. vol. 132; p. 654.
Eyeglass-frame. W. D. Thomas. No. 875,906; Jan. 7; Sp. p. 544; Dr. p. 116; Gaz. vol 132; p. 95.
Eyeglass lens-mount. L. F. Adt. No. 875,883; Jan. 7; Sp. p. 381; Dr. p. 84; Gaz. vol. 132; p. 70.
Eyeglass-mounting. G. Bausch. No. 877,160; Jan. 21; Sp. p. 3044; Dr. p. 659; Gaz. vol. 132; p. 502.
Eyeglass nose-guard. C. Billington. No. 875,686; Jan. 7; Sp. p. 19; Dr. p. 4; Gaz. vol. 132; p. 5.
Eyeglass nose-guard. L. F. Adt. No. 877,625; Jan. 28; Sp. p. 3969; Dr. p. 862; Gaz. vol. 132; p. 735.
Fabric: *See* Wire fabric.
Fabric. E. Vermilyea and R. Hammersley. No. 876,750; Jan. 14; Sp. p. 2172; Dr. p. 477; Gaz. vol. 132; p. 385.
Fabrics, Means for producing selvage in loom-woven. L. E. Sallsbury. No. 876,494; Jan. 14; Sp. p. 1634; Dr. p. 354; Gaz. vol. 132; p. 298.
Face-steamer, Electrical. H. D. Wood, Jr. No. 877,155; Jan. 21; Sp. p. 3031; Dr. p. 656; Gaz. vol. 132; p. 560.
Facing-tool. G. T. Reiss. No. 876,999; Jan. 21; Sp. p. 2703; Dr. p. 586; Gaz. vol. 132; p. 508.
Fan, Centrifugal. J. Keith. No. 877,648; Jan. 28: Sp. p. 4026; Dr. p. 869; Gaz. vol. 132; p. 742.
Fanning-mill. P. Poyneer. No. 876,012; Jan. 7; Sp. p. 634; Dr. pp. 135–6; Gaz. vol. 132; p. 110.
Fanning-mill. T. O. Helgerson. No. 877,336; Jan. 21; Sp. p. 3394; Dr. pp. 735–6; Gaz. vol. 132; p. 619.
Fare-collector, Automatic. J. H. Coleman. No. 875,781; Jan. 7; Sp. p. 203; Dr. p. 44; Gaz. vol. 132; p. 37.
Fare-indicators, Odometer for use in connection with. B. Schneider. No. 876,100; Jan. 7; Sp. p. 807; Dr. pp. 173–4; Gaz. vol. 132; p. 137.
Farm-gate. E. W. Harden. No. 876,177; Jan. 7; Sp. p. 955; Dr. p. 206; Gaz. vol. 132; p. 162.
Farm-gate. J. E. Manford. No. 876,206; Jan. 7; Sp. p. 1006; Dr. p. 218; Gaz. vol. 132; p. 171.
Fastener. N. Crane. No. 877,174; Jan. 21; Sp. p. 3082; Dr. p. 667; Gaz. vol. 132; p. 567.
Fastener. M. A. Hirsch. No. 877,772; Jan. 28; Sp. p. 4251: Dr. p. 923; Gaz. vol. 132; p. 781.
Fats, oils, tar, resin, &c., Solidifying. G. Blass. No. 877,289; Jan. 21; Sp. p. 3302; Gaz. vol. 132; p. 605.
Faucet. E. L. Wood. No. 877,540; Jan. 28; Sp. p. 3813; Dr. p. 824; Gaz. vol. 132; p. 708.
Faucet. J. M. Knight. No. 877,650; Jan. 28; Sp. p. 4028; Dr. p. 870; Gaz. vol. 132; p. 743.
Feed-packing machine. J. M. Nikolai. No. 876,389; Jan. 14; Sp. p. 1404; Dr. p. 303; Gaz. vol. 132; p. 263.
Feed-water feeding, purifying, and regulating apparatus. J. W. Gamble. No. 877,497; Jan. 28; Sp. p. 3717; Dr. p. 804; Gaz. vol. 132; p. 693.
Feed-water governor. J. B. Mowry. No. 876,725; Jan. 14; Sp. p. 2128; Dr. p. 467; Gaz. vol. 132; p. 377.
Feed-water heater and purifier. J. C. Jones. No. 876,357; Jan. 14; Sp. p. 1331; Dr. p. 289; Gaz. vol. 132; p. 252.
Feed-water pipes, Cleaning attachment for. C. E. Mann. No. 875,832; Jan. 7; Sp. p. 290; Dr. p. 63; Gaz. vol. 132; p. 54.
Feeder, Automatic. C. B. Williams. No. 877,538; Jan. 28: Sp. p. 3806; Dr. pp. 823–4; Gaz. vol. 132; p. 707.
Feeding mechanism. F. Mueller. No. 876,382; Jan 14; Sp. p. 1390; Dr. p 300; Gaz. vol. 132; p. 260.
Fence construction. E. B. Maxwell. No. 876,208; Jan. 7; Sp. p. 1010; Dr. p. 219; Gaz. vol. 132; p. 172.
Fence corner-post and brace. C. H. Tiedeman. No. 876,248; Jan. 7; Sp. p. 1068; Dr. p. 237; Gaz. vol. 132; p. 185.
Fence-laying machine, Wire-. M. M. Swanson. No. 877,254; Jan. 21; Sp. p. 3241; Dr. p. 701; Gaz. vol. 132; p. 595.
Fence machine, Wire-. P. W., J. W., and W. Sommer. No. 875,859; Jan. 7; Sp. p. 336; Dr. pp. 74–5; Gaz. vol. 132; p. 62.
Fence-post. C. S. Beebe. No. 875,769; Jan. 7; Sp. p. 175; Dr. p. 38; Gaz. vol. 132; p. 34.
Fence-post. C. S. Dougherty. No. 877,638; Jan. 28; Sp. p. 4007; Dr. p. 865; Gaz. vol. 132; p. 739.
Fence-post mold. B. Tanner. No. 876,027; Jan. 7; Sp. p. 663; Dr. p. 143; Gaz. vol. 132; p. 114.
Fence, Sectional-stay wire. G. E. Mirfield. No. 877,214; Jan. 21; Sp. p. 3172; Dr. p. 688; Gaz. vol. 132; p. 582.
Fencing while stretching, Clamp for holding woven-wire. W. Oster. No. 877,222; Jan. 21; Sp. p. 3182; Dr. p. 690; Gaz. vol. 132; p. 584.
Fender: *See* Car-fender.
Ferrous carbonate, Composition for the production of. J. K. Lilly. No. 876,366; Jan. 14; Sp. p. 1350; Gaz. vol. 132; p. 255
Ferrule, Detachable. C. A. Scott and A. F. Whipple. No. 876,734; Jan. 14; Sp. p. 2140; Dr. p. 470; Gaz. vol. 132; p. 380.
Fertilizer-distributer. E. F. Fisher. No. 877,316; Jan. 21; Sp. p. 3368; Dr. p. 729; Gaz. vol. 132; p. 613.
Fertilizer-distributer. R. P. Hassler. No. 877,712; Jan. 28; Sp. p. 4141: Dr. p. 896–7: Gaz. vol. 132: p. 762.
Fibrous-stock feeder. S. W. Woodbury. (Reissue.) No. 12,740; Jan. 14; Sp. p. 2525; Dr. p. 552; Gaz. vol. 132; p. 442.
Field-gate. F. Russell. No. 877,235; Jan. 21; Sp. p. 3204; Dr. p. 694; Gaz. vol. 132; p. 588.
Fifth-wheel antirattler. L. E. Hickok. No. 876,545; Jan. 14; Sp. p. 1753; Dr. p. 381; Gaz. vol. 132; p. 317.
Fifth-wheel antirattler vehicle. L. E. Hickok. No. 876,547; Jan. 14; Sp. p. 1755; Dr. p. 381; Gaz. vol. 132; p. 318.
Filaments from viscose or similar material, Producing and forming twisted. C. A. Ernst. No. 876,533; Jan. 14; Sp. p. 1724; Dr. p 374; Gaz. vol. 132; p. 313.
File-case. C. W. Sawyer. No. 877,600; Jan. 28; Sp. p. 3936; Dr. p. 851; Gaz. vol. 132; p. 727.
File-ring. L. M. Morden. No. 876,474; Jan. 14; Sp. p. 1590; Dr. p. 342; Gaz. vol. 132; p. 291.
Files, Follower and holder for. W. E. Kimes. No. 875,933; Jan. 7; Sp. p. 470; Dr. p. 101; Gaz. vol. 132; p. 85.
Filing papers and cards, Device for. C. La Rue. No. 875,829; Jan. 7; Sp. p. 285; Dr. p. 62; Gaz. vol. 132; p. 53.
Fill-pipes, &c., Cap for. A. A. Bowser. No. 875,689; Jan. 7; Sp. p. 23; Dr. p. 4; Gaz. vol. 132; p. 6.
Filter. G. Ridgway. No. 877,000; Jan. 21; Sp. p. 2704; Dr. pp. 586–7; Gaz. vol. 132; p. 508.
Filter. W. Lorey. No. 877,206; Jan. 21; Sp. p. 3145; Dr. p. 682; Gaz. vol. 132; p. 578.
Filter for cyaniding and the like, Continuous. B. Hunt. No. 877,197; Jan. 21; Sp. p. 3122; Dr. pp. 676-7; Gaz. vol. 132; p. 574.
Filter-leaf. H. W. Blaisdell and H. A. Brooks. No. 875,687; Jan. 7; Sp. p. 20; Dr. p. 4; Gaz. vol. 132; p. 5.
Filtering viscose and similar viscous substances. C. A. Ernst and G. O. Hamlin. No. 876,901; Jan. 14; Sp. p. 2465; Dr. p. 538; Gaz. vol. 132; p. 434.
Finish-remover. C. Ellis. No. 876,304; Jan. 7; Sp. p. 1223; Gaz. vol. 132; p. 205.
Finish-remover. C. Ellis. No. 876,532; Jan. 14; Sp. p. 1722; Gaz. vol. 132; p. 313
Fire-alarm and sprinkler systems, Automatic transmitter for. J. Fiddes and J. F. Watt. No. 877,067; Jan. 21; Sp. p. 2847; Dr. p. 615; Gaz. vol. 132; p. 531.
Fire-alarm, Automatic. B. C. and F. W. Hall. No. 875,810; Jan. 7: Sp. p. 256; Dr. p. 55; Gaz. vol. 132; p. 47.
Fire-alarm, Automatic. S. Murray. No. 876,384; Jan. 14: Sp. p. 1394; Dr. p. 301; Gaz. vol. 132; p. 261.
Fire-alarm system. M. A. Abrahamson. No. 876,512; Jan. 14; Sp. p. 1676; Dr. pp. 365–6; Gaz. vol. 132; p. 305.
Fire-engine, Traction. W. H. Shafer. No. 876,404; Jan. 14: Sp. p. 1438; Dr. p. 309; Gaz. vol. 132; p. 267.
Fire-escape. E. Liberty. No. 876,004; Jan. 7; Sp. p. 616; Dr. pp. 131–2; Gaz. vol. 132; p. 108.
Fire-escape. A. Reuter. No. 876,840; Jan. 14; Sp. p. 2332; Dr. p. 512; Gaz. vol. 132; p. 412.
Fire-escape. W. R. Arnold. No. 876,893; Jan. 14; Sp. p. 2449; Dr. p. 533; Gaz. vol. 132; p. 431.
Fire-escape. I. Nielsen. No. 877,363; Jan. 21; Sp. p. 3445; Dr. p. 747; Gaz. vol. 132; p. 625.
Fire-extinguisher. H. Sieben. No. 876,917; Jan. 14; Sp. p. 2499; Dr. p. 545; Gaz. vol. 132; p. 439.
Fire-extinguisher, Chemical. M. Breslauer. No. 876,320; Jan. 14: Sp. p. 1256; Gaz. vol. 132; p. 241.
Fire-extinguisher, Chemical. M. Breslauer. No. 876,321; Jan. 14: Sp. p. 1257; Gaz. vol. 132; p. 241.
Fire-extinguishers, Sprinkler-head for automatic. M. K. Hopkins. No. 875,929; Jan. 7; Sp. p. 464; Dr. p. 100; Gaz. vol. 132; p. 83.
Fire-hose washer. S. Cunningham. No. 876,301: Jan. 7; Sp. p. 1218; Dr. p. 205; Gaz. vol. 132; p. 204.
Fire-igniters, Apparatus for impregnating. L. Bernard. No. 877,037; Jan. 21; Sp. p. 2796; Dr. pp. 603–4; Gaz. vol. 132; p. 522.
Fire-kindler. J. H. Pelham. No. 876,227; Jan. 7; Sp. p. 1055; Dr. p. 228; Gaz. vol. 132; p. 178.
Fire-resisting structure. D. C. Meehan. No. 877,354; Jan. 21; Sp. p. 3425: Dr. p. 743; Gaz. vol. 132; p. 625.
Fire, Water distribution for the prevention of. G. M. Newhall. No. 876,222; Jan. 7; Sp. p. 1046; Dr. p. 226; Gaz. vol. 132; p. 176.
Fireplace. H. M. Walker. No. 876,670; Jan. 14; Sp. p. 2032; Dr. p. 443; Gaz. vol. 132; p. 361.
Fireplace or stove. E. C. L. Close. No. 876,692; Jan. 14; Sp. p. 2081; Dr. p. 452; Gaz. vol. 132; p. 368.
Fireproof and protecting garment. E. Ball. No. 875,976; Jan. 7; Sp. p. 555; Dr. p. 121; Gaz. vol. 132; p. 99.
Fireproof building. P. W. Grzesynski. No. 876,171; Jan. 7; Sp. p. 943; Dr. pp. 202–3; Gaz. vol. 132; p. 160.

Fireproof door. J. A. Wheeler. No. 876,121; Jan. 7; Sp. p. 850; Dr. p. 182; Gaz. vol. 132; p. 145.
Fireproof door. J. O. Emrich. No. 876,787; Jan. 14; Sp. p. 2234; Dr. p. 491; Gaz. vol. 132; p. 396.
Fireproof wall and partition. J. D. Sullivan. No. 876,805; Jan. 14; Sp. p. 1808; Dr. p. 414; Gaz. vol. 132; p. 338.
Fireproof window-sash. G. M. Voltz. No. 876,113; Jan. 7; Sp. p. 838; Dr. p. 179; Gaz. vol. 132; p. 142.
Firearms on attaining a predetermined elevation, Apparatus for the automatic discharge of. T. Manchu. No. 877,850; Jan. 28; Sp. p. 4391; Dr. p. 966; Gaz. vol. 132; p. 806.
Fish-hook. L. Biersach. No. 875,684; Jan. 7; Sp. p. 16; Dr. p. 3; Gaz. vol. 132; p. 5.
Fish-hook. J. R. Callahan. No. 875,777; Jan. 7; Sp. p. 197; Dr. p. 42; Gaz. vol. 132; p. 36.
Fish-hook attachment. C. Murphy. No. 877,793; Jan. 28: Sp. p. 4287; Dr. p. 931; Gaz. vol. 132; p. 787.
Fishing-line drying-reel. P. T. Keefe. No. 877,200; Jan. 21; Sp. p. 3129; Dr. p. 679; Gaz. vol. 132; p. 576.
Fishing-reel. H. F. Crandall. No. 875,694; Jan. 7; Sp. p. 30; Dr. p. 6; Gaz. vol. 132; p. 8.
Fishing-tackle, Automatic. H. A. Schmidt. No. 876,732; Jan. 14; Sp. p. 2137; Dr. p. 469; Gaz. vol. 132; p. 379.
Flanging-machine. C. Stecher. No. 877,135; Jan. 21; Sp. p. 2988; Dr. pp. 646-7; Gaz. vol. 132; p. 553.
Flavoring compound. J. M. Stukes. No. 877,806; Jan. 28: Sp. p. 4307; Gaz. vol. 132; p. 791.
Flies, Device for attracting. B. W. Sims. No. 876,740; Jan. 14; Sp. p. 2159; Dr. p. 474; Gaz. vol. 132; p. 382.
Flies from entering open doorways, Device for preventing. J. W. Shumate. No. 877,602; Jan. 28; Sp. p. 3939; Dr. p. 852; Gaz. vol. 132; p. 727.
Floor. E. Burhorn. No. 875,775; Jan. 7; Sp. p. 195; Dr. p. 41; Gaz. vol. 132; p. 36.
Floor. T. Cantwell. No. 876,436; Jan. 14; Sp. p. 1509; Dr. p. 324; Gaz. vol. 132; p. 278.
Floor-jack. G. H. Coldwell. No. 876,693; Jan. 14; Sp. p. 2082; Dr. p. 452; Gaz. vol. 132; p. 368.
Floor polishing and finishing machine. S. M. Rich. No. 875,736; Jan. 7; Sp. p. 112; Dr. p. 24; Gaz. vol. 132; p. 23.
Flour-packer. E. G. Staude. No. 876,603; Jan. 14; Sp. p. 1887; Dr. pp. 412-13; Gaz. vol. 132; p. 338.
Flower-box, Adjustable. L. G. Quackenboss. No. 876,235; Jan. 7; Sp. p. 1066; Dr. p. 231; Gaz. vol. 132; p. 181.
Flower-holder. H. E. Waddell. No. 877, 145; Jan. 21; Sp. p. 3017; Dr. p. 652; Gaz. vol. 132; p. 557.
Fluid-cooling apparatus. P. Schmaltz. No. 877,520; Jan. 28; Sp. p. 3766; Dr. pp. 815–16; Gaz. vol. 132; p. 701.
Fluid-pressure engine. H. Lentz and C. Bellens. No. 877,847; Jan. 28; Sp. p. 4384; Dr. p. 954; Gaz. vol. 132; p. 805.
Fluid-pressure regulator, Automatic. A. Klever. No. 876,066; Jan. 7; Sp. p. 745; Dr. p. 157; Gaz. vol. 132; p. 127.
Fly-catcher. R. Teutsch. No. 877,256; Jan. 21; Sp. p. 3243; Dr. p. 702; Gaz. vol. 132; p. 595.
Fly-escape. G. W. Stein. No. 877,250; Jan. 21; Sp. p. 3234; Dr. p. 700; Gaz. vol. 132; p. 593.
Flying-machine. F. Wondra. No. 876,125; Jan. 7; Sp. p. 856; Dr. pp. 183–5; Gaz. vol. 132; p. 146.
Foldable box. C. F. A. Eddy. No. 876,531; Jan. 14; Sp. p. 1721; Dr. p. 374; Gaz. vol. 132; p. 313.
Folding and adjustable chair. J. Holloway. No. 877,646; Jan. 28; Sp. p. 4023; Dr. p. 868; Gaz. vol. 132; p. 741.
Folding seat. E. Lindow. No. 876,367; Jan. 14; Sp. p. 1350; Dr. p. 293; Gaz. vol. 132; p. 255.
Forceps, Pig-. A. G. Colson. No. 877,633; Jan. 28; Sp. p. 4000; Dr. p. 864; Gaz. vol. 132; p. 737.
Forging and welding metallic rings, Machine for. J. Giriot. No. 876,709; Jan. 14; Sp. p. 2106; Dr. p. 458; Gaz. vol. 132; p. 373.
Fork: *See* Loading-apparatus fork; Spring-fork.
Formaldehyde, tannin, and aromatic monohydroxyl compounds, Manufacturing condensation products from. H. Hildebrandt. No. 876,311; Jan. 7; Sp. p. 1238; Gaz. vol. 132; p. 207.
Fountain: *See* Ink-fountain.
Fowl or meat holder. G. W. Haverstick. No. 877,331; Jan. 21; Sp. p. 3387; Dr. p. 734; Gaz. vol. 132; p. 618.
Frame: *See* Agricultural-machine frame; Tuck-side frame; Typewriter-frame.
Frame construction, Side-. W. P. Richardson. No. 877,735; Jan. 28; Sp. p. 4187; Dr. p. 908; Gaz. vol. 132; p. 769.
Frog, Double-spring. J. E. Graham. No. 877,562; Jan. 28; Sp. p. 3862; Dr. p. 835; Gaz. vol. 132; p. 715.
Fruit-conveyer. M. B. Dorman. No. 876,529; Jan. 14; Sp. p. 1718; Dr. p. 373; Gaz. vol. 132; p. 312.
Fruit-picker's bucket. E. E. Bryan and W. E. Taylor. No. 876,038; Jan. 7; Sp. p. 682; Dr. p. 146; Gaz. vol. 132; p. 118.
Fruit-press. W. Ruppel. No. 876,095; Jan. 7; Sp. p. 800; Dr. p. 171; Gaz. vol. 132; p. 136.
Fuel and coke, Production of artificial. H. S. Robertson and J. R. Graham. No. 877,738; Jan. 28; Sp. p. 4194: Gaz. vol. 132; p. 770.
Fuel, Means for increasing and promoting the combustion of. G. R. Torrey. No. 877,142; Jan. 21; Sp. p. 3004; Dr. p. 649; Gaz. vol. 132; p. 555.
Furnace: *See* Annealing-furnace; Cement-burning furnace; Gas-producing furnace; Hot-air furnace; Ore-roasting furnace; Retort-furnace; Smelting-furnace.
Furnace. J. C. Knoeppel. No. 875,825; Jan. 7; Sp. p. 277; Dr. pp. 60–1; Gaz. vol. 132; p. 52.
Furnace. E. N. Snitjer. No. 877,871; Jan. 28; Sp. p. 4432; Dr. p. 965; Gaz. vol. 132; p. 812.
Furnace charging-box. G. A. Hassel. No. 876,640; Jan. 14; Sp. p. 1980; Dr. p. 430; Gaz. vol. 132; p. 351.
Furnace-door. H. H. Magwire. No. 876,819; Jan. 14; Sp. p. 2296; Dr. p. 505; Gaz. vol. 132; p. 406.
Furnaces, Construction of induction electric. G. Gin. No. 875,801; Jan. 7; Sp. p. 239; Dr. p. 51; Gaz. vol. 132; p. 44.
Furnaces for metallurgical purposes, Means for obtaining thin liquid dross in electric. H. Röchling and W. Rodenhauser. No. 877,739; Jan. 28; Sp. p. 4197; Dr. p. 909; Gaz. vol. 132; p. 771.
Furnaces, Hood for hot-air. E. O. Haskins. No. 876,873; Jan. 14; Sp. p. 2404; Dr. p. 524; Gaz. vol. 132; p. 424.
Furnaces of the channel type, Method of and means for utilizing the heat in. G. Gröndal. No. 876,712; Jan. 14; Sp. p. 2110; Dr. pp. 460–2; Gaz. vol. 132; p. 374.
Furniture. E. G. Hess. No. 877,423; Jan. 21; Sp. p. 3562; Dr. p. 770; Gaz. vol. 132; p. 648.
Furniture, Metal. M. E. Stockwell. No. 876,888; Jan. 14; Sp. p. 2437; Dr. p. 531; Gaz. vol. 132; p. 429.
Fuse device. F. B. Hall. No. 876,273; Jan. 7; Sp. p. 1148; Dr. p. 250; Gaz. vol. 132; p. 193.
Fuse, Electric. F. Mackintosh. No. 876,984; Jan. 21; Sp. p. 2661; Dr. p. 579; Gaz. vol. 132; p. 502.
Gage: *See* Garment-gage; Hinge-butt gage; Jeweler's gage; Recording-gage; Rule-gage; Scissors-gage; Sewing-machine gage; Shoemaker's gage; Skiving-machine gage.
Gages, Registering attachment for pressure-. P. Fee. No. 877,314; Jan. 21; Sp. p. 3364; Dr. p. 729; Gaz. vol. 132; p. 612.
Game apparatus. J. Brucker. No. 876,324; Jan. 14; Sp. p. 1262; Dr. p. 274; Gaz. vol. 132; p. 242.
Game apparatus. F. Wallstein. No. 877,814; Jan. 28; Sp. p. 4318; Dr. p. 937; Gaz. vol. 132; p. 793.
Game-board. F. Peters. No. 877,594; Jan. 28; Sp. p. 3928; Dr. p. 850; Gaz. vol. 132; p. 725.
Gang-mold. A. O. Thomas. No. 877,140; Jan. 21; Sp. p. 3001; Dr. p. 648; Gaz. vol. 132; p. 555.
Garment. G. West. No. 877,686; Jan. 28; Sp. p. 4105; Dr. p. 888; Gaz. vol. 132; p. 754.
Garment, Child's. F. H. Sprague. No. 877,607; Jan. 28; Sp. p. 3953; Dr. p. 854; Gaz. vol. 132; p. 729.
Garment-clasp. M. B. Gardner. No. 875,797; Jan. 7; Sp. p. 231; Dr. p. 50; Gaz. vol. 132; p. 42.
Garment-clasp. M. B. Gardner. No. 875,798; Jan. 7; Sp. p. 232; Dr. p. 50; Gaz. vol. 132; p. 43.
Garment edge-binding. W. R. Garton. No. 877,072; Jan. 21; Sp. p. 2854; Dr. p. 616; Gaz. vol. 132; p. 532.
Garment-fastener. J. P. Everitts. No. 876,954; Jan. 21; Sp. p. 2611; Dr. p. 567; Gaz. vol. 132; p. 492.
Garment gage and cutter. E. F. Goggin. No. 877,325; Jan. 21; Sp. p. 3380; Dr. p. 732; Gaz. vol. 132; p. 616.
Garment-hanger. H. W. Rountree. No. 877,598; Jan. 28; Sp. p. 3933; Dr. p. 851; Gaz. vol. 132; p. 726.
Garment-supporter. J. W. Schloss. No. 877,238; Jan. 21; Sp. p. 3208; Dr. p. 695; Gaz. vol. 132; p. 589.
Garment-supporter attachment for receptacles. E. W. Hawley and G. H. Wheary. No. 875,811; Jan. 7; Sp. p. 258; Dr. p. 55; Gaz. vol. 132; p. 48.
Garment-supporting clasp. W. W. Johnson. No. 876,881; Jan. 14; Sp. p. 2421; Dr. p 528; Gaz. vol. 132; p. 427.
Garments, Fly-front for. F. S. Kolb. No. 876,067; Jan. 7; Sp. p. 746; Dr. p. 158; Gaz. vol. 132; p. 127.
Gas-burner. E. G. Van Zandt. No. 876,507; Jan. 14; Sp. p. 1662; Dr. p. 361; Gaz. vol. 132; p. 304.
Gas-burner, Incandescent. W. Schmitz. No. 877,667; Jan. 28; Sp. p. 4066; Dr. p. 880; Gaz. vol. 132; p. 749.
Gas-cap. R. Fleming. No. 876,956; Jan. 21; Sp. p. 2614; Dr. p. 568; Gaz. vol. 132; p. 493.
Gas-conduit safety-valve. W. Schulze. No. 877,003; Jan. 21; Sp. p. 2716; Dr. p. 583; Gaz. vol. 132; p. 509.
Gas-consuming apparatus. F. W. Beardsley. No. 877,162; Jan. 21; Sp. p. 3046; Dr. p. 660; Gaz. vol. 132; p. 562.
Gas-converting process. G. C. Carson. No. 876,437; Jan. 14; Sp. p. 1511; Dr. p. 325; Gaz. vol. 132; p. 279.
Gas cut-off. J. W. Fields. No. 877,417; Jan. 21; Sp. p. 3550; Dr. p. 768; Gaz. vol. 132; p. 646.
Gas-engine. C. T. Litchfield. No. 875,938; Jan. 7; Sp. p. 477; Dr. p. 103; Gaz. vol. 132; p. 86.
Gas-engine. W. H. Ash. No. 877,753; Jan. 28; Sp. p. 4221; Dr. pp. 915–16; Gaz. vol. 132; p. 775.
Gas-engine, Two-cycle. W. A. Salter. No. 876,020; Jan. 7; Sp. p. 649; Dr. p. 139; Gaz. vol. 132; p. 112.
Gas, Furnace for the production of. G. Steinl. No. 877,610; Jan. 28: Sp. p. 3964; Dr. pp. 855–6; Gaz. vol. 132; p. 720.
Gas-generator. C. Heinz. No. 875,813; Jan. 7; Sp. p. 260; Dr. p. 56; Gaz. vol. 132; p. 48.
Gas-generator. W. Mowrer. No. 876, 217; Jan. 7; Sp. p. 1042; Dr. p. 225; Gaz. vol. 132; p. 175.
Gas generator, Acetylene-. W. J. Walsh. No. 876,119; Jan. 7; Sp. p. 847; Dr. p. 181; Gaz. vol. 132; p. 144.
Gas-generator, Suction. J. Fielding. No. 877,068; Jan. 21; Sp. p. 2848; Dr. p. 615; Gaz. vol. 132; p. 531.
Gas-machine mixer. C. E. Sayre. No. 877,740; Jan. 28: Sp. p. 4198; Dr. p. 909; Gaz. vol. 132; p. 771.
Gas-meter. T., C. E., and W. J. Henning. No. 876,875; Jan 14: Sp. p. 2408; Dr. pp. 524–5; Gaz. vol. 132; p. 425.
Gas or vapor engine, Double-acting. O. C. Duryea. No. 875,899; Jan. 7; Sp. p. 418; Dr. p. 93; Gaz. vol. 132; p. 77.
Gas plants, Pressure-regulator for compressed-. L. Karger. No. 876,350; Jan. 14; Sp. p. 1335; Dr. p. 290; Gaz. vol. 132; p. 253.
Gas-producer. N. McConnell. No. 876,079; Jan. 7; Sp. p. 773; Dr. p. 165; Gaz. vol. 132; p. 131.
Gas-producer. W. J. McClurg. No. 876,575; Jan. 14; Sp. p. 1820; Dr. pp. 397–8; Gaz. vol. 132; p. 327.

Gas-producer. W. S. Huyette. No. 876,987; Jan. 21; Sp. p. 2632; Dr. p. 571; Gaz. vol. 132; p. 406.
Gas-producing furnace. C. Garner. No. 876,903; Jan. 14; Sp. p. 2468; Dr. p. 530; Gaz. vol. 132; p. 435.
Gate: *See* Crossing-gate; Farm-gate; Field-gate; Railway-gate.
Gate. I. N. Williams. No. 876,122; Jan. 7; Sp. p. 851; Dr. p. 182; Gaz. vol. 132; p. 145.
Gate. S. D. Fry. No. 876,342; Jan. 14; Sp. p. 1302; Dr. p. 281; Gaz. vol. 132; p. 247.
Gate. K. Landan. No. 876,565; Jan. 14; Sp. p. 1794; Dr. p. 391; Gaz. vol. 133; p. 324.
Gate. F. E. Nelson and G. W. Tribbey. No. 877,361; Jan. 21; Sp. p. 3443; Dr. pp. 746-7; Gaz. vol. 132; p 627.
Gear, Change-speed. H. Dünhölter. No. 876,337; Jan. 14; Sp. p. 1296; Dr. p. 280; Gaz. vol. 132; p. 245.
Gear, Differential. P. Steinhauer. No. 876,501; Jan. 14; Sp. p. 1649; Dr. p. 357; Gaz. vol. 132; p. 301.
Gear for lifting and transporting cargo and the like goods. S. J. E. Jörgensen. No. 876,550; Jan. 14; Sp. p. 1776; Dr. p. 387; Gaz. vol. 132; p. 322.
Gear, Friction-. L. A. Tirrill. No. 877,015; Jan. 21; Sp. p. 2746; Dr. p. 595; Gaz. vol. 132; p. 513.
Gear, Friction transmission-. G. T. Stamm. No. 876,547; Jan. 14; Sp. p. 2347; Dr. p. 515; Gaz. vol. 132; p. 415.
Gear, Transmission-. W. S. Hovey. No. 876,356; Jan. 14; Sp. p. 1325; Dr. p. 287; Gaz. vol. 132; p. 252.
Gear, Variable-speed driving-. G. E. Stanley. No. 875,962; Jan. 7; Sp. p. 534; Dr. p. 114; Gaz. vol. 132; p. 94.
Gearing. M. J. Desley and A. E. Quinlan. No. 875,898; Jan. 7; Sp. p. 417; Dr. p. 93; Gaz. vol. 132; p. 76.
Gearing. S. S. Ross. No. 876,013; Jan. 7; Sp. p. 646; Dr. p. 138; Gaz. vol. 132; p. 111.
Gearing. R. de Valbreuze. No. 877,267; Jan. 21; Sp. p. 3269; Dr. p. 707; Gaz. vol. 132; p. 598.
Gearing. L. Catel. No. 877,293; Jan. 21; Sp. p. 3311; Dr. p. 717; Gaz. vol. 132; p. 606.
Gearing. J. Stuart. No. 877,678; Jan. 28; Sp. p. 4091; Dr. p. 885; Gaz. vol. 132; p. 752.
Gearing. T. J. Westerman. No. 877,815; Jan. 28; Sp. p. 4319; Dr. p. 938; Gaz. vol. 132; p. 793.
Gearing, Alternating rotary. F. B. Tyson. No. 876,112; Jan. 7; Sp. p. 837; Dr. p. 179; Gaz. vol. 132; p. 142.
Gearing, Transmission-. C. W. Parker. No. 876,063; Jan. 7; Sp. p. 780; Dr. pp. 166-7; Gaz. vol. 132; p. 132.
Gearing, Transmission-. C. W. Parker. No. 876,064; Jan. 7; Sp. p. 783; Dr. p. 167; Gaz. vol. 132; p. 133.
Gearing, Variable-speed. F. D. Green. No. 877,765; Jan. 28; Sp. p. 4238; Dr. p. 920; Gaz. vol. 132; p. 779.
Generator: *See* Acetylene-generator; Gas-generator; Steam-generator.
Gland or swab holder. W. Slaydon. No. 876,601; Jan. 14; Sp. p. 1882; Dr. p. 411; Gaz. vol. 132; p. 337.
Glass: *See* Time-glass; Tourist's glass.
Glass-blower's clamp. D. M. Moore. No. 877,105; Jan. 21; Sp. p. 2919; Dr. pp. 631-2; Gaz. vol. 132; p. 542.
Glass lamp-shades, Method and means for making. C. C. Sibley. No. 876,102. Jan. 7; Sp. p. 812; Dr. p. 175; Gaz. vol. 132; p. 138.
Glass, Machine for the manufacture of wire-. F. Shuman. No. 876,307; Jan. 7; Sp. p. 1230; Dr. p. 268; Gaz. vol 132; p. 200.
Glass, Making sheet-. M. J. Owens. No. 877,729; Jan. 28; Sp. p. 4174; Dr. p. 904; Gaz. vol. 132; p. 767.
Glass, Manufacture of wire-. F. Shuman. No. 875,857; Jan. 7; Sp. 332; Dr. p. 74; Gaz. vol. 132; p. 61.
Glass plates, Device for connecting. D. J. Murnane. No. 877,107; Jan. 21; Sp. p. 2923; Dr. pp. 632-3; Gaz. vol. 132; p. 543.
Glass, Process and apparatus for the continuous production of sheet-. I. W. Colburn and F. Washburn. No. 876,267; Jan. 7; Sp. p. 1125; Dr. pp. 244-6; Gaz. vol. 132; p. 191.
Glass-rolling apparatus, Wire-. A. Meyer. No. 876,653; Jan. 14; Sp. p. 2004; Dr. pp. 436-7; Gaz. vol. 132; p. 355.
Glass-smoothing compound, Plate-. F. H. Findon, Jr. No. 876,447; Jan. 14; Sp. p. 1535; Gaz. vol. 132; p. 283.
Glassware, Mechanism for producing hollow. C. J. Koenig. No. 877,091; Jan. 21; Sp. p. 2886; Dr. pp. 623-6; Gaz. vol. 132; p. 538.
Glove-tipping machine. A. M. Banker and F. Curtin. No. 876,129; Jan. 7; Sp. p. 869; Dr. p. 187; Gaz. vol. 132; p. 147.
Golf-bag. S. A. Marker. No. 877,352; Jan. 21; Sp. p. 3423; Dr. pp. 742-3; Gaz. vol. 132; p. 624.
Governing-gear for internal-combustion engines. W. J. Crossley and J. Atkinson. No. 876,439; Jan. 14; Sp. p. 1517 Dr. p. 326; Gaz. vol. 132; p. 280.
Governor, Explosion-engine. C. H. Way. No. 877,024; Jan. 21: Sp. p. 2763; Dr. p. 598; Gaz. vol. 132; p. 517.
Governor, Steam-engine. J. W. Kleinhan. No. 876,647; Jan. 14; Sp. p. 1993; Dr. p. 434; Gaz. vol. 132; p. 353.
Grain-binder. A. M. Hemberg. No. 875,710; Jan. 7; Sp. p. 62; Dr. p. 13; Gaz. vol. 132; p. 14.
Grain-binder attachment. M. Brown. No. 876,520; Jan. 14; Sp. p. 1704; Dr. p. 370; Gaz. vol. 132; p. 309.
Grain-cleaning machines, Brush-drive for. C. H Scott. No. 875,854; Jan. 7; Sp. p. 328; Dr. pp. 72-3; Gaz. vol. 132; p. 60.
Grain elevator and weigher. C. Bradford and G. L. Chatfield. No. 875,771; Jan. 7; Sp. p. 182; Dr. pp. 39-40; Gaz. vol. 132; p. 34.
Gramophone-disk-record holder. C. H. Douglass. No. 877,000; Jan. 21; Sp. p. 2838; Dr. p. 613; Gaz. vol. 132; p. 529.
Graphite, Disintegrating. E. G. Acheson. No. 875,881; Jan. 7; Sp. p. 379; Dr. p. 83; Gaz. vol. 132; p. 70.
Graphophone. D. Higham. No. 876,350; Jan. 14; Sp. p. 1316; Dr. pp. 284-5; Gaz. vol. 132; p. 250.
Graphophone. T. H. Macdonald. No. 877,207; Jan. 21; Sp. p. 3147; Dr. pp. 682-3; Gaz. vol. 132; p. 579.
Graphophone-horn. G. W. Duncan. No. 875,790; Jan. 7; Sp. p. 218; Dr. p. 48; Gaz. vol. 132; p. 40.
Grate. J. Reagan. No. 876,728; Jan. 14; Sp. p. 2131; Dr. p. 468; Gaz. vol. 132; p. 378.
Grate and fireplace heating attachment. F. A. Delph. No. 877,303; Jan. 21; Sp. p. 3335; Dr. p. 723; Gaz. vol. 132; p. 609
Grate, Revolving. F. Burger. No. 877,487; Jan. 28; Sp. p. 3686; Dr. p. 799; Gaz. vol. 132; p. 689.
Grinding and polishing roll. C. A. Edlund. No. 875,701; Jan. 7; Sp. p. 43; Dr. p. 9; Gaz. vol. 132; p. 10.
Grinding-machine. J. E. Fry. No. 876,449; Jan. 14; Sp. p. 1537; Dr. p. 330; Gaz. vol. 132; p. 283.
Grinding-machine. J. F. Carlson. No. 877,170; Jan. 21; Sp. p. 3068; Dr. p. 664; Gaz. vol. 132; p. 565.
Grinding machine, Cutlery-. C. L. Joy. No. 877,199; Jan. 21; Sp. p. 3127; Dr. p. 678; Gaz. vol. 132; p. 575.
Grinding-machine, Fluid-pressure-operated. J. G. Blessing. No. 876,428; Jan. 14; Sp. p. 1495; Dr. pp. 321-2; Gaz. vol. 132; p. 276.
Grinding machine, Surface-. R. C. Matthews. No. 876,372; Jan. 14; Sp. p. 1357; Dr. p. 296; Gaz. vol. 132; p. 257.
Grinding, sawing, and turning machine. H. E. O. Schmidt. No. 877,666; Jan. 28; Sp. p. 4064; Dr. p. 880; Gaz. vol. 132; p. 749.
Gums, Rubbing apparatus for the. L. J. F. Nicolai. No. 877,585; Jan. 28; Sp. p. 3911; Dr. p. 846; Gaz. vol. 132; p. 722.
Gun-carriage for recoiling guns. C. P. E. Schneider and E. Rimailho. No. 877,521; Jan. 28; Sp. p. 3771; Dr. p. 816; Gaz. vol. 132; p. 702.
Gun-cleaner. D. W. Landes. No. 876,276; Jan. 7; Sp. p. 1155; Dr. p. 251; Gaz. vol. 132; p. 194.
Gun-cleaner. E. W. O. Kaufman. No. 877,778; Jan. 28; Sp. p. 4263; Dr. p. 926; Gaz. vol. 132; p. 783.
Gun, Gas-operated. W. Mason. No. 877,657; Jan. 28; Sp. p. 4040; Dr. pp. 872-4; Gaz. vol. 132; p. 745.
Guns, Combined frame and false barrel for. W. F. Markham and E. S. Roe. No. 876,370; Jan. 14; Sp. p. 1354; Dr. p. 295; Gaz. vol. 132; p. 256.
Gyroscope. H. Anschütz-Kaempfe. No. 877,034; Jan. 21: Sp. p. 2786; Dr. p. 602; Gaz. vol. 132; p. 520.
Hair-curler. W. F. Schacht. No. 876,402; Jan. 14; Sp. p. 1436; Dr. p. 306; Gaz. vol. 132; p. 267.
Hair-waver. F. W. Lowe. No. 876,569; Jan. 14; Sp. p. 1806; Dr. p. 394; Gaz. vol. 132; p. 325.
Hame-holder. P. F. Kretmer. No. 877,781; Jan. 28; Sp. p. 4267; Dr. p. 928; Gaz. vol. 132; p. 784.
Hame-strap. M. O'Brien. No. 877,728; Jan. 28; Sp. p. 4173; Dr. p. 904; Gaz. vol. 132; p. 767.
Hammer and screw-driver, Combined. A. J. Zimmermann. No. 875,880; Jan. 7; Sp. p. 378; Dr. p. 83; Gaz. vol. 132; p. 70.
Hammers, Safety-spring for steam and compressed-air. W. F. Walker. No. 877,357; Jan. 21; Sp. p. 3489; Dr. p. 757; Gaz. vol. 132; p. 638.
Hand-bag or purse. J. Anthony. No. 876,123; Jan. 7; Sp. p. 869; Dr. p. 186; Gaz. vol. 132; p. 147.
Handle: *See* Bottle-stopper handle; Brake-handle; Implement-handle; Saw-handle.
Hanger: *See* Clothes-hanger; Door-hanger; Garment-hanger.
Hanger. E. L. Knab. No. 876,197; Jan. 7; Sp. p. 990; Dr. p. 215; Gaz. vol.132; p. 168.
Hanger-blank, Metal. O. O. Kittleson. No. 876,195; Jan. 7; Sp. p. 988; Dr. p. 213; Gaz. vol. 132; p. 168.
Harrow. R. A. Koeller. No. 875,827; Jan. 7; Sp. p. 292; Dr. p. 61; Gaz. vol. 132; p. 52.
Harrow. W. A. Preston. No. 877,433; Jan. 21; Sp. p. 3615; Dr. p. 782; Gaz. vol. 132; p. 657.
Harrow. F. Hosford. No. 877,647; Jan. 28; Sp. p. 4024; Dr. p. 868; Gaz. vol. 132; p. 742.
Harrow and weeder, Disk. F. Bushet and E. A. Mullinix. No. 876,145; Jan. 7; Sp. p. 900; Dr. p. 194; Gaz. vol. 132; p. 155.
Harrow, Disk. D. W. Warner. No. 877,685; Jan. 28; Sp. p. 4104; Dr. p. 888; Gaz. vol. 132; p. 754.
Harrow, Reversible disk. W. S. Graham and F. L. Dewey. No. 875,806; Jan. 7; Sp. p. 244; Dr. pp. 52-3; Gaz. vol. 132; p. 45.
Harrow riding attachment. A. Peterson. No. 876,230; Jan. 7; Sp. p. 1059; Dr. pp. 228-9; Gaz. vol. 132; p. 179.
Harrow riding attachment. T. C. Tobin. No. 876,748; Jan. 14; Sp. p. 2170; Dr. p. 476; Gaz. vol. 132; p. 384.
Harvester and husker, Combined corn. F. A. Ingersoll. No. 876,180; Jan. 7; Sp. p. 974; Dr. pp. 210-11; Gaz. vol. 132; p. 166.
Harvester cutting apparatus, Corn-. W. H. Tilson. No. 875,749; Jan. 7; Sp. p. 138; Dr. p. 31; Gaz. vol. 132; p. 27.
Harvester, Grain-. W. J. Aumen. No. 875,982; Jan. 7; Sp. p. 11; Dr. p. 2; Gaz. vol. 132; p. 4.
Harvester, Pea and bean. J. C. Longstreet. No. 875,831; Jan. 7; Sp. p. 287; Dr. pp. 62-3; Gaz. vol. 132; p. 53.
Hat-pin. P. S. Rumberg. No. 876,694; Jan. 7; Sp. p. 799; Dr. p. 171; Gaz. vol. 132; p. 136.
Hat sweat-band. H. B. Crampton. No. 877,595; Jan. 28; Sp. p. 4457; Dr. p. 972; Gaz. vol. 132; p. 817.
Hay and manure gatherer and loader. J. Peterson. No. 875,846; Jan. 7; Sp. p. 315; Dr. pp. 69-70; Gaz. vol. 132; p. 58.
Hay-elevating device. H. C. White. No. 877,696; Jan. 28; Sp. p. 4108; Dr. p. 889; Gaz. vol. 132; p. 755.
Hay-rack. S. A. Baughman. No. 877,696; Jan. 28; Sp. p. 4119; Dr. p. 892; Gaz. vol. 132; p. 757.
Hay-rack arch-iron. E. A. Wreck. No. 877 156; Jan. 21; Sp. p. 3062; Dr. p. 656; Gaz. vol. 132; p. 560.
Head-block plate and perch connection. L. E. Hickok. No. 876,544; Jan. 14; Sp. p. 1782; Dr. p. 390; Gaz. vol. 132; p. 317.
Head-screen. H. C. Harrison and W. M. O'Brien. No. 876,452; Jan. 14; Sp. p. 1547; Dr. p. 332; Gaz. vol. 132; p. 284.
Heading and shingle machine. J. and J. H. Street. No. 876,502; Jan. 14; Sp. p. 1661; Dr. p. 358; Gaz. vol. 132; p. 301.
Headlight, Adjustable. S. E. Porter and A. H. Harbaugh. No. 876,495; Jan. 14; Sp. p. 1624; Dr. p. 352; Gaz. vol. 132; p. 296.

Heat regulating and controlling apparatus. P. W. Cornwell. No. 877,056; Jan. 21; Sp. p. 2828; Dr. p. 611; Gaz. vol. 132; p. 538
Heater: *See* Abdominal heater; Electric heater; Feed-water heater; Incubator-heater; Water-heater.
Heater. C. H. Buchanan. No. 875,891; Jan. 7; Sp. p. 398; Dr. p. 87; Gaz. vol. 132; p. 74.
Heater. H. Giddings. No. 876,990; Jan. 7; Sp. p. 594; Dr. p. 127; Gaz. vol. 132; p. 103.
Heater. W. H. Callihan. No. 877,406; Jan. 21; Sp. p. 3528; Dr. p. 765; Gaz. vol. 132; p. 642.
Heating apparatus. W. Schramm and F. Becker. No. 876,495; Jan. 14; Sp. p. 1637; Dr. p. 355; Gaz. vol. 132; p. 299.
Heel, Cushion-. R. W. Perry. No. 877,450; Jan. 21; Sp. p. 3609; Dr. p. 781; Gaz. vol. 132; p. 656.
Heels, soles, &c., Finishing surfaces of. W. W. Crooker. No. 876,861; Jan. 14; Sp. p. 2377; Gaz. vol. 132; p. 420
Hems, Device for turning the primary folds for. D. Maus. No. 877,650; Jan. 28; Sp. p. 4048; Dr. p. 875; Gaz. vol. 132; p. 746.
Hinge-butt gage. C. Bodmer. No. 875,688; Jan. 7; Sp. p. 21; Dr. p. 4; Gaz. vol. 132; p. 5.
Hinge for Morris chairs, &c. C. L. Greilick. No. 877,766; Jan. 28; Sp. p. 4240; Dr. p. 920; Gaz. vol. 132; p. 779.
Hinge, Storm-window. J. W. Councilor. No. 875,897; Jan. 7; Sp. p. 416; Dr. p. 92; Gaz. vol. 132; p. 76.
Hitching-strap fastener. R. Neisingh. No. 875,839; Jan. 7; Sp. p. 305; Dr. p. 66; Gaz. vol. 132; p. 56.
Hitching weight or anchor. J. H. Chamberlin. No. 876,328; Jan. 14; Sp. p. 1279; Dr. p. 277; Gaz. vol. 132; p. 242.
Hoe. C. A. Long. No. 876,649; Jan. 14; Sp. p. 1996; Dr. pp. 434-5; Gaz. vol. 132; p. 354.
Hog-scraper. M. C. Jorgensen. No. 877,432; Jan. 21; Sp. p. 3579; Dr. pp. 773-5; Gaz. vol. 132; p. 651.
Hoist or draft apparatus, Electric. P. F. Shevlin. No. 875,855; Jan. 7; Sp. p. 329; Dr. p. 73; Gaz. vol. 132; p. 61.
Hoisting apparatus. E. S. Colley. No. 876,040; Jan. 7; Sp. p. 685; Dr. p. 147; Gaz. vol. 132; p. 118.
Hoisting-engines, Rope-drum of. T. Matzke. No. 876,072; Jan. 7; Sp. p. 760; Dr. p. 162; Gaz. vol. 132; p. 129.
Hollow-article mold. E. Kerr and J. Smith. No. 876,719; Jan. 14; Sp. p. 2120; Dr. pp. 465-6; Gaz. vol. 132; p. 376.
Hook: *See* Bale-hook; Fish-hook; Horse-pad hook; Spring-hook.
Hook and eye holder. F. M. Dolezal. No. 877,637; Jan. 28; Sp. p. 4006; Dr. p. 865; Gaz. vol. 132; p. 739.
Horn, Fish-. D. Heyman. No. 877,715; Jan. 28; Sp. p. 4152; Dr. p. 899; Gaz. vol. 132; p. 763.
Horse-blanket. E. Caldwell. No. 876,435; Jan. 14; Sp. p. 1508; Dr. p. 324; Gaz. vol. 132; p. 278.
Horse-blanket. W. S. Katzenmeyer. No. 876,560; Jan. 14; Sp. p. 1777; Dr. p. 388; Gaz. vol. 132; p. 322.
Horse-cleaning implement. W. F. Blaisdell. No. 876,766; Jan. 14; Sp. p. 2199; Dr. p. 483; Gaz. vol. 132; p. 390.
Horse-pad hook. E. L. McClain. No. 876,077; Jan. 7; Sp. p. 771; Dr. p. 164; Gaz. vol. 132; p. 131.
Horseshoe. C. A. Campbell. No. 876,265; Jan. 7; Sp. p. 1121; Dr. p. 243; Gaz. vol. 132; p. 190.
Horseshoe. F. B. Gardner and J. E. Grosjean. No. 876,629; Jan. 14; Sp. p. 1951; Dr. p. 425; Gaz. vol. 132; p. 347.
Horseshoe. T. J. and A. L. Anderson. No. 876,928; Jan. 21; Sp. p. 2538; Dr. p. 555; Gaz. vol. 132; p. 482.
Horseshoe-calk. D. Stone. No. 876,666; Jan. 14; Sp. p. 2025; Dr. p. 442; Gaz. vol. 132; p. 359.
Horseshoe-creaser. J. C. Locke. No. 877,577; Jan. 28; Sp. p. 3884; Dr. p. 842; Gaz. vol. 132; p. 719.
Hose-band clamp. J. B. Driscoll. No. 876,702; Jan. 14; Sp. p. 2066; Dr. p. 456; Gaz. vol. 132; p. 371.
Hose-carrier. T. J. Sullivan. No. 877,012; Jan. 21; Sp. p. 2734; Dr. p. 592; Gaz. vol. 132; p. 512.
Hose-coupling. C. W. Martin. No. 876,071; Jan. 7; Sp. p. 759; Dr. p. 161; Gaz. vol. 132; p. 129.
Hosiery, Manufacture of. G. H. Gilbert. No. 876,797; Jan. 14; Sp. p. 2248; Dr. p. 494; Gaz. vol. 132; p. 399.
Hot-air engine. A. Mayr and J. Wallace. No. 876,374; Jan. 14; Sp. p. 1360; Dr. p. 296; Gaz. vol. 132; p. 257.
Hot-air furnace. M. J. Murdoch and J. P. Ludt. No. 876,481; Jan. 14; Sp. p. 1601; Dr. p. 345; Gaz. vol. 132; p. 294.
Hot-air furnace. A. M. Beale. No. 876,682; Jan. 14; Sp. p. 2050; Dr. p. 447; Gaz. vol. 132; p. 364.
Hot-water bottles or the like, Making socket members for. H. P. Kraft and M. C. Schweinert. No. 876,361; Jan. 14; Sp. p. 1341; Dr. p. 291; Gaz. vol. 132; p. 254.
Husking-machine. S. Steinmetz. No. 875,863; Jan. 7; Sp. p 344; Dr. p. 77; Gaz. vol. 132; p. 64.
Hydraulic jack, punch, and similar machine. J. Weeks. No. 876,920; Jan. 14; Sp. p. 2503; Dr. p. 546; Gaz. vol. 132; p. 440.
Hydraulic press. T. H. Mapp. No. 876,821; Jan. 14; Sp. p. 2299; Dr. p. 506; Gaz. vol. 132; p. 407.
Hydraulic press. W. Tatarinoff. No. 877,139; Jan. 21; Sp. p. 2999; Dr. p. 648; Gaz. vol. 132; p. 555.
Hydrocarbon-burner. R. V. Hoffman. No. 876,457; Jan. 14; Sp. p. 1557; Dr. p. 334; Gaz. vol. 132; p. 286.
Hydrocarbon-burner. S. Morris. No. 876,476; Jan. 14; Sp. p. 1583; Dr. p. 342; Gaz. vol. 132; p. 292.
Hydrocarbon-engine, Two-cycle. D. L. Oulton. No. 877,589; Jan. 28; Sp. p. 3918; Dr. pp. 847-8; Gaz. vol. 132; p. 723.
Hydrocarbon-engine. Two-cycle. D. L. Oulton. No. 877,590; Jan. 28; Sp. p. 3921; Dr. pp. 848-9; Gaz. vol. 132; p. 723.
Hydrocarbons, Nebulizer of the heavier liquid. J. H. Stringham and J. B. Elmendorf. No. 876,108; Jan. 7; Sp. p. 826; Dr. p. 178; Gaz. vol. 132; p. 140.
Hydrogen peroxid and making same, Stable solution of. W. Heinrici. No. 876,179; Jan. 7; Sp. p. 958; Gaz. vol. 132; p. 163.
Ice-machine, Hydraulic-electric. D. L. Holden. No. 877,193; Jan. 21; Sp. p. 3113; Dr. p. 674; Gaz. vol. 132; p. 573.
Ice-machine press. D. L. Holden. No. 876,352; Jan. 14; Sp. p. 1320; Dr. p. 286; Gaz. vol. 132; p. 251.
Ice-making machine. T. H. Ray. No. 876,015; Jan. 7; Sp. p. 638; Dr. pp. 136-7; Gaz. vol. 132; p. 110.
Ice-tongs and weighing-scale, Combined. W. B. Moore. No. 876,213; Jan. 7; Sp. p. 1026; Dr. p. 221; Gaz. vol. 132; p. 174.
Igniter. G. J. Schultz. No. 877,130; Jan. 21; Sp. p. 2981; Dr. p. 644; Gaz. vol. 132; p. 552.
Implement, Compound. J. H. Haynes. No. 877,333; Jan. 21; Sp. p. 3390; Dr. p. 734; Gaz. vol. 132; p. 618.
Implement-handle. O. Kampfe. No. 876,718; Jan. 14; Sp. p. 2118; Dr. p. 465; Gaz. vol. 132; p. 375.
Incubator. F. T. Porter. No. 877,731; Jan. 28; Sp. p. 4180; Dr. p. 906; Gaz. vol. 132; p. 768.
Incubator. C. Dahl. No. 877,833; Jan. 28; Sp. p. 4366; Dr. p. 940; Gaz. vol. 132; p. 800.
Incubator-heater. W. H. Wagner. No. 875,871; Jan. 7; Sp. p. 361; Dr. p. 80; Gaz. vol. 132; p. 66.
Incubator-heater. R. F. Brooks. No. 876,142; Jan. 7; Sp. p. 894; Dr. p. 192; Gaz. vol. 132; p. 162.
Incubator-heater. W. A. Sumner. (Reissue.) No. 12,742; Jan. 28; Sp. p. 4490; Dr. p. 977; Gaz. vol. 132; p. 821.
Incubator heating apparatus. J. L. Nix. No. 877,586; Jan. 21; Sp. p. 3912; Dr. p. 846; Gaz. vol. 132; p. 722.
Incubator-tray. J. E. Frantz. No. 876,051; Jan. 7; Sp. p. 702; Dr. p. 151; Gaz. vol. 132; p. 121.
Index, Card- G. A. Baker. No. 876,252; Jan. 7; Sp. p. 1002; Dr. p. 238; Gaz. vol. 132; p. 185.
Index for books. G. W. Boggs. No. 876,767; Jan. 14; Sp. p. 2200; Dr. pp. 483-4; Gaz. vol. 132; p. 390.
Index system, Card-. S. S. Bradway. No. 876,319; Jan. 14; Sp. p. 1254; Dr. p. 272; Gaz. vol. 132; p. 241.
Indexing or dividing head. E. J. McClellan. No. 876,574; Jan. 14; Sp. p. 1818; Dr. p. 396; Gaz. vol. 132; p. 327.
Indicator: *See* Music-indicator; Speed-indicator; Street or station indicator.
Indicator. J. Cunniff. No. 877,298; Jan. 21; Sp. p. 3327; Dr. p. 721; Gaz. vol. 132; p. 608.
Ink-fountain. C. R. Taylor. No. 877,679; Jan. 28; Sp. p. 4092; Dr. p. 886; Gaz. vol. 132; p. 752.
Ink, Printing-. M. E. McMaster. No. 877,219; Jan. 21; Sp. p. 3179; Gaz. vol. 132; p. 583.
Ink-well. W. W. Owens. No. 876,726; Jan. 14; Sp. p. 2129; Dr. p. 468; Gaz. vol. 132; p. 378.
Ink-well. S. Wagner. No. 876,751; Jan. 14; Sp. p. 2174; Dr. p. 477; Gaz. vol. 132; p. 385.
Inking-pad receptacle. R. W. Roberts. No. 876,398; Jan. 14; Sp. p. 1431; Dr. p. 307; Gaz. vol. 132; p. 266.
Inkstand. E. J. Osgood. No. 876,225; Jan. 7; Sp. p. 1052; Dr. p. 227; Gaz. vol. 132; p. 177.
Inkstand. W. I. Tisdale. No. 876,608; Jan. 14; Sp. p. 2028; Dr. p. 442; Gaz. vol. 132; p. 360.
Inseam-trimming machine. A. Bates. No. 877,036; Jan. 21; Sp. p. 2793; Dr. p. 603; Gaz. vol. 132; p. 521.
Insect-destroying machine. J. Feil. No. 877,117; Jan. 21; Sp. p. 2942; Dr. pp. 636-7; Gaz. vol. 132; p. 547.
Insulating the supports of electric conduits, Means for. C. E. Egnér. No. 875,902; Jan. 7; Sp. p. 428; Dr. p. 94; Gaz. vol. 132; p. 78.
Insulator. R. C. McNutt. No. 876,828; Jan. 14; Sp. p. 2313; Dr. p. 508; Gaz. vol. 132; p. 409.
Insulator. H. W. Buck. No. 876,930; Jan. 21; Sp. p. 2573; Dr. p. 561; Gaz. vol. 132; p. 486.
Insulator for heavy conductors. L. Steinberger. No. 877,804; Jan. 28; Sp. p. 4304; Dr. p. 934; Gaz. vol. 132; p. 791.
Insulator-pin. D. V. Snapp and C. W. Fraher. No. 877,242; Jan. 21; Sp. p. 3215; Dr. p. 697; Gaz. vol. 132; p. 501.
Insulators, Clip for fixing conducting-wires to. J. Macek. No. 877,101; Jan. 21; Sp. p. 2913; Dr. p. 630; Gaz. vol. 132; p. 541.
Instruments, Accenting device for automatic players for. F. W. Draper. No. 876,442; Jan. 14; Sp. p. 1526; Dr. pp. 328-9; Gaz vol. 132; p. 281.
Internal-combustion engine. E. Stuke. No: 875,865; Jan. 7; Sp. p. 348; Dr. p. 78; Gaz. vol. 132; p. 65.
Internal-combustion engine. P. C. Lawless. No. 876,003; Jan. 7; Sp. p. 613; Dr. p. 131; Gaz. vol. 132; p. 107.
Internal-combustion engine. H. A. Miller and F. M. Adamson. No. 876,472; Jan. 14; Sp. p. 1588; Dr. p. 341; Gaz. vol. 132; p. 291
Internal-combustion engine. F. C. Gordon. No. 876,870; Jan. 14; op. p. 2396; Dr. pp. 522-3; Gaz. vol. 132; p. 423.
Internal-combustion engine. P. F. Schryer and D. C. Stover. No. 877,378; Jan. 21; Sp. p. 3474; Dr. p. 754; Gaz. vol. 132; p. 633.
Internal-combustion engine. A. H. Goldingham. No. 877,500; Jan. 28; Sp. p. 3724; Dr. p. 806; Gaz. vol. 132; p. 694.
Internal-combustion engine. H. W. Adams. No. 877,818; Jan. 28; Sp. p. 4326; Dr. p. 940; Gaz. vol. 132; p. 795.
Internal-combustion engine. P. Daniel. No. 877,834; Jan. 28; Sp. p. 4367; Dr. p. 949; Gaz. vol. 132; p. 801.
Intestine-cleaning machine. F. Glas. No. 876,344; Jan. 14; Sp. p. 1307; Dr. p. 282; Gaz. vol. 132; p. 248.
Iron: *See* Hay-rack arch-iron; Sad-iron.
Ironing-board. C. A. Olsen. No. 875,840; Jan. 7; Sp. p. 306; Dr. p. 67; Gaz. vol. 132; p. 56.
Ironing-board. F. M. Bugbee. No. 876,857; Jan. 14; Sp. p. 2363; Dr. p. 517; Gaz. vol. 132; p. 418.
Ironing-board cover. E. Stone. No. 876,410; Jan. 14; Sp. p. 1450; Dr. pp. 311-12; Gaz. vol. 132; p. 269.
Irrigation-gate box. R. H Howard. No. 876,879; Jan. 14; Sp. p. 2418; Dr. pp. 527-8; Gaz. vol. 132; p. 426.
Isobornyl oxalates from camphene, Manufacture of. A. Bischler and A. Baselli. No. 876,310; Jan. 7; Sp. p. 1236; Gaz. vol. 132; p. 237.
Jack: *See* Automobile-jack; Floor-jack; Hydraulic jack; Lifting-jack.
Jar-support. A. M. Katzenbach. No. 877,507; Jan. 28; Sp. p. 3737; Dr. p. 808; Gaz. vol. 132; p. 696.

Jar-wrench. E. F. Ives. No. 876,001; Jan. 7; Sp. p. 609; Dr. p. 130; Gaz. vol. 132; p. 106.
Jeweler's gage. C. J. Danner and C. A. Werrmann. No. 876,666; Jan. 14; Sp. p. 2086; Dr. p. 453; Gaz. vol. 132; p. 309.
Jewelry safety device. G. Lincks. No. 876,963; Jan. 21; Sp. p. 2660; Dr. p. 578; Gaz. vol. 132; p. 502.
Jewelry-stand. M. Engelsman. No. 877,838; Jan. 28; Sp. p. 4374; Dr. p. 951; Gaz. vol. 132; p. 502.
Joiner's hand-clamp. H. F. Holtmann. No. 877,426; Jan. 21; Sp. p. 3567; Dr. p. 771; Gaz. vol. 132; p. 649.
Joint: *See* Insulated rail-joint; Lock-joint; Rail-joint; Railway-joint.
Joint. H. F. Rasor. No. 876,490; Jan. 14; Sp. p. 1627; Dr. p. 353; Gaz. vol. 132; p. 297.
Journal-box, Lubricating. C. Seidel. No. 876,403; Jan. 14; Sp. p. 1437; Dr. p. 309; Gaz. vol. 132; p. 267.
Journal-box, Railway-car. H. J. Klinsman. No. 877,780; Jan. 28; Sp. p. 4266; Dr. p. 926; Gaz. vol. 132; p. 783.
Junction-box. H. H. Hornsby. No. 876,187; Jan. 7; Sp. p. 971; Dr. p. 210; Gaz. vol. 132; p. 105.
Kaleidoscope. J. R. Hare. No. 877,645; Jan. 28; Sp. p. 4022; Dr. p. 868; Gaz. vol. 132; p. 741.
Keg-cover. H. Dittmann. No. 877,436; Jan. 28; Sp. p. 4005; Dr. p. 865; Gaz. vol. 132; p. 739.
Key-fastener. A. A. Svensen. No. 875,965; Jan. 7; Sp. p. 843; Dr. p. 116; Gaz. vol. 132; p. 95.
Key-lovers, Two-way full-stroke device for. H. Hanson. No. 876,959; Jan. 21; Sp. p. 2618; Dr. p. 569; Gaz. vol 132; p. 494.
Key-seat-broaching machine. J. N. Lapointe. No. 876,277; Jan. 7; Sp. p. 1156; Dr. pp. 252–3; Gaz. vol. 132; p. 195.
Kiln: *See* Dry-kiln; Malt-kiln.
Kiln for coking peat or similar material. M. Zeigler. No. 876,421; Jan. 14; Sp. p. 1479; Dr. pp. 317–18; Gaz. vol. 132; p. 273.
Kite attachment. C. B. Carroll. No. 876,690; Jan. 14; Sp. p. 2078; Dr. p. 451; Gaz. vol. 132; p. 307.
Kneading machine, Butter-. A. Fischer. No. 877,559; Jan. 28; Sp. p. 3858; Dr. p. 835; Gaz. vol. 132; p. 714.
Knitting-machine. A. V. Groupe. No. 875,707; Jan. 7; Sp. p. 87; Dr. pp. 11–12; Gaz. vol. 132; p. 13.
Knitting machine. E. Lippitt. No. 876,815; Jan. 14; Sp. p. 2285; Dr. pp. 501–3; Gaz. vol. 132; p. 405.
Knitting machine, Circular-. J. B. Paxton and E. I. O'Neill. No. 876,283; Jan. 7; Sp. p. 1168; Dr. p. 255; Gaz. vol. 132; p. 197.
Knitting-machine needle-protector. G. L. Ballard. No. 875,767; Jan. 7; Sp. p. 172; Dr. p. 37; Gaz. vol. 132; p. 33.
Knob fastening, Door-. J. F. Smart. No. 876,845; Jan. 14; Sp. p. 2341; Dr. p. 514; Gaz. vol. 132; p. 414.
Knob, Split. W. H. Irons. No. 876,069; Jan. 7; Sp. p. 721; Dr. p. 154; Gaz. vol. 132; p. 125.
Knockdown box. J. L. Ware. No. 876,120; Jan. 7; Sp. p. 849; Dr. pp. 181–2; Gaz. vol. 132; p. 144.
Knot-tying apparatus for bags, &c. C. D. Myers. No. 876,573; Jan. 14; Sp. p. 1813; Dr. p. 396; Gaz. vol. 132; p. 327.
Lacing-hook-setting machine. W. H. Kingston. No. 876,063; Jan. 7; Sp. p. 728; Dr. p. 156; Gaz. vol. 132; p. 126.
Lacing-loop. C. A. Helm. No. 877,564; Jan. 28; Sp. p. 3866; Dr. p. 836; Gaz. vol. 132; p. 715.
Ladder and trap-door mechanism. T. M. Houghton. No. 876,354; Jan. 14; Sp. p. 1324; Dr. p. 287; Gaz. vol. 132; p. 251.
Ladder or inclined way for raising and lowering barrels, &c., Portable. J. Max. No. 876,373; Jan. 14; Sp. p. 1358; Dr. p. 296; Gaz. vol. 132; p. 257.
Ladder, Step-. J. R. Rupe and W. F. Balzer. No. 877,867; Jan. 28; Sp. p. 4426; Dr. p. 964; Gaz. vol. 132; p. 811.
Lamp, Alcohol-. A. Rector. No. 877,862; Jan. 28; Sp. p. 4415; Dr. pp. 961–2; Gaz. vol. 132; p. 809.
Lamp and lighting device for automobiles and other vehicles, Acetylene-. S. M. Meyer. No. 875,942; Jan. 7; Sp. p. 486; Dr. p. 105; Gaz. vol. 132; p. 88.
Lamp, Arc-. G. W. Cravens. No. 876,945; Jan. 21; Sp. p. 2586; Dr. p. 563; Gaz. vol. 132; p. 499.
Lamp-base. T. W. Frech, Jr. No. 875,706; Jan. 7; Sp. p. 230; Dr. p. 50; Gaz. vol. 132; p. 42.
Lamp, Electric. J. De Martino. No. 876,922; Jan. 14; Sp. p. 2521; Dr. p. 551; Gaz. vol. 132; p. 441.
Lamp, Electric-arc. J. A. Meaher. No. 875,833; Jan. 7; Sp. p. 291; Dr. p. 63; Gaz. vol. 132; p. 54.
Lamp filaments and the product of such method, Method of producing electric-incandescent-. F. M. F. Cazin. No. 877,172; Jan. 21; Sp. p. 3077; Dr. p. 666; Gaz. vol. 132; p. 565.
Lamp filaments, Making electric-. W. G. Clark and H. C. Parker. No. 876,331; Jan. 14; Sp. p. 1293; Gaz. vol. 132; p. 244.
Lamp filaments, Making incandescent-. W. G. Clark. No. 876,330; Jan. 14; Sp. p. 1282; Dr. p. 278; Gaz. vol. 132; p. 243.
Lamp filaments, Making incandescent-. W. G. Clark. No. 876,332; Jan. 14; Sp. p. 1285; Gaz. vol. 132; p. 244.
Lamp filaments, Manufacturing metallized electric-incandescent-. F. M. F. Cazin. No. 877,171; Jan. 21; Sp. p. 3071; Dr. p. 665; Gaz. vol. 132; p. 564.
Lamp-filler. H. Ellis. No. 876,784; Jan. 14; Sp. p. 2231; Dr. p. 490; Gaz. vol. 132; p. 395.
Lamp-font and match-holding device, Combined. J. Myers. No. 877,582; Jan. 28; Sp. p. 3905; Dr. p. 845; Gaz. vol. 132; p. 721.
Lamp, Gas-. R. W. Zierlein and W. Riechmann. No. 875,763; Jan. 7; Sp. p. 165; Dr. p. 36; Gaz. vol. 132; p. 32.
Lamp, Incandescent electric. H. C. Parker and W. G. Clark. No. 876,390; Jan. 14; Sp. p. 1406; Dr. p. 304; Gaz. vol. 132; p. 263.
Lamp, Incandescent gas-. H. M. Eagon. No. 876,444; Jan. 14; Sp. p. 1530; Dr. p. 329; Gaz. vol. 132; p. 282.
Lamp receptacle, Electric-. H. E. Plass. No. 876,233; Jan. 7; Sp. p. 1084; Dr. p. 230; Gaz. vol. 132; p. 180.
Lamp receptacle, Incandescent-. G. W. Goodridge. No. 876,169; Jan. 7; Sp. p. 941; Dr. p. 202; Gaz. vol. 132; p. 160.
Lamp-receptacle, Outdoor. J. S. Stewart. No. 875,964; Jan. 7; Sp. p. 530; Dr. p. 115; Gaz. vol. 132; p. 95.
Lamp shade, Incandescent-. E. B. Lewis. No. 877,784; Jan. 28; Sp. p. 4271; Dr. p. 928; Gaz. vol. 132; p. 785.
Lamp-sockets, Means for securing cords to. F. A. Swan. No. 877,383; Jan. 21; Sp. p. 3482; Dr. p. 756; Gaz. vol. 132; p. 634.
Lamps and other burners, Wick attachment for. E. W. Burrows. No. 876,523; Jan. 14; Sp. p. 1708; Dr. p. 371; Gaz. vol. 132; p. 310.
Lamps, Combined base-frame and bracket for signal-. A. H. Handlan, Jr. No. 877,841; Jan. 28; Sp. p. 4377; Dr. p. 952; Gaz. vol. 132; p. 803.
Lamps, Machine for making incandescent. A. Swan. No. 877,013; Jan. 21; Sp. p. 2736; Dr. pp. 592–4; Gaz. vol. 132; p. 513.
Lamps, Manufacture of electric incandescent. F. M. F. Cazin. No. 877,408; Jan. 21; Sp. p. 3531; Dr. p. 765; Gaz. vol. 132; p. 643.
Lantern attachment. L. D. Whiting. No. 876,033; Jan. 7; Sp. p. 672; Dr. p. 144; Gaz. vol. 132; p. 116.
Lantern, Storm-. G. Stübgen. No. 876,109; Jan. 7; Sp. p. 832; Dr. p. 178; Gaz. vol. 132; p. 141.
Last, Repair-. D. Rounds and C. E. Cook. No. 877,519; Jan. 28; Sp. p. 3765; Dr. p. 814; Gaz. vol. 132; p. 701.
Lasts, Support for use in finishing. C. Benschaidt. No. 877,826; Jan. 28; Sp. p. 4355; Dr. p. 945; Gaz. vol. 132; p. 798.
Latch. M. J. Ostul. No. 876,581; Jan. 14; Sp. p. 1853; Dr. pp. 400–1; Gaz. vol. 132; p. 330.
Lathe-dog. G. J. Blum. No. 877,883; Jan. 28; Sp. p. 4450; Dr. p. 970; Gaz. vol. 132; p. 816.
Lathe, Engine-. J. Hartness. No. 876,305; Jan. 7; Sp. p. 1224; Dr. p. 267; Gaz. vol. 132; p. 205.
Lathe, Vertical turret-. E. P. Bullard, Jr. No. 877,402; Jan. 21; Sp. p. 3518; Dr. pp. 761–3; Gaz. vol. 132; p. 640.
Lathes or other devices, Feeding mechanism for. H. P. Kraft. No. 876,360; Jan. 14; Sp. p. 1338; Dr. pp. 290–1; Gaz. vol. 132; p. 253.
Ledger or temporary binder, Loose-leaf. L. M. Morden. No. 875,834; Jan. 7; Sp. p. 295; Dr. p. 64; Gaz. vol. 132; p. 55.
Lens, Bifocal. J. L. Borach, Jr. No. 876,933; Jan. 21; Sp. p. 2557; Dr. p. 558; Gaz. vol. 132; p. 494.
Lens-fastening for nose-glasses. G. S. Row. No. 875,955; Jan. 7; Sp. p. 523; Dr. p. 111; Gaz. vol. 132; p. 92.
Letter-box. P. J. Schiffer. No. 877,742; Jan. 28; Sp. p. 4200; Dr. p. 910; Gaz. vol. 132; p. 771.
Letter-clasp. A. J. Kriete. No. 877,782; Jan. 28; Sp. p. 4268; Dr. p. 927; Gaz. vol. 132; p. 784.
Letters, Capitalizing typescript. H. Wise. No. 875,877; Jan. 7; Sp. p. 373; Dr. p. 82; Gaz. vol. 132; p. 69.
Level. E. A. King. No. 876,720; Jan. 14; Sp. p. 2121; Dr. p. 466; Gaz. vol. 132; p. 376.
Lever and quadrant-bar, Reversing-. W. W. Kleese. No. 877,302; Jan. 21; Sp. p. 3133; Dr. p. 679; Gaz. vol. 132; p. 576.
Lifter: *See* Pipe-lifter; Tack and nail lifter.
Lifting-jack. E. W. Topping and T. V. Plies. No. 877,386; Jan. 21; Sp. p. 3487; Dr. p. 757; Gaz. vol. 132; p. 635.
Lightning-rod. L. L. Mast. No. 877,442; Jan. 21; Sp. p. 3600; Dr. p. 780; Gaz. vol. 132; p. 655.
Limb, Artificial. G. X. Roberts. No. 876,017; Jan. 7; Sp. p. 643; Dr. p. 137; Gaz. vol. 132; p. 111.
Liner-plate. B. A. O. Prollius. No. 877,732; Jan. 28; Sp. p. 4182; Dr. p. 906; Gaz. vol. 132; p. 768.
Linotype-machines, Adjustable trimming-knife for. F. J. Caine and G. H. Mitton. No. 876,524; Jan. 14; Sp. p. 1709; Dr. p. 371; Gaz. vol. 132; p. 310.
Liquid-dispensing vessel. L. G. Langstaff. No. 877,509; Jan. 28; Sp. p. 3743; Dr. p. 810; Gaz. vol. 132; p. 697.
Liquids from gases or vapors, Apparatus for separating. K. Brünner and O. Bühring. No. 877,460; Jan. 21; Sp. p. 3626; Dr. p. 785; Gaz. vol. 132; p. 659.
Lithium compounds, Preparing pure. W. E. Wadman. No. 876,851; Jan. 14; Sp. p. 2355; Gaz. vol. 132; p. 416.
Loader, Coke-. W. H. Watt. No. 877,147; Jan. 21; Sp. p. 3019; Dr. p. 653; Gaz. vol. 132; p. 558.
Loading and unloading mechanism. A. F. Callison. No. 876,941; Jan. 21; Sp. p. 2576; Dr. pp. 561–2; Gaz. vol. 132; p. 497.
Loading-apparatus for. W. Baker. No. 877,477; Jan. 28; Sp. p. 3694; Dr. p. 794; Gaz. vol. 132; p. 685.
Lock: *See* Blind-lock; Door-lock; Mail-box signal-lock; Mortise-lock; Nut-lock; Padlock; Permutation-lock; Self-registering lock; Switch-lock; Switch-point lock; Whip-lock; Window-lock.
Lock. T. M. Lansden. No. 877,654; Jan. 28; Sp. p. 4035; Dr. pp. 871–2; Gaz. vol. 132; p. 744.
Lock and latch. T. Hall. No. 876,248; Jan. 14; Sp. p. 1313; Dr. p. 284; Gaz. vol. 132; p. 249.
Lock-joint for wall-slabs, bricks, tiles, or the like. R. Malançon. No. 876,985; Jan. 21; Sp. p. 2662; Dr. p. 579; Gaz. vol. 132; p. 502.
Lock or latch. W. V. Brown. No. 876,323; Jan. 14; Sp. p. 1260; Dr. pp. 273–4; Gaz. vol. 132; p. 241.
Lock spindle, Dial-. W. H. Taylor. No. 876,026; Jan. 7; Sp. p. 665; Dr. p. 143; Gaz. vol. 132; p. 115.
Locket and similar article. J. A. Fuller. No. 876,902; Jan. 14; Sp. p. 2467; Dr. p. 539; Gaz. vol. 132; p. 434.
Locomotive brake-shoe. H. H. Urquhart. No. 877,746; Jan. 28; Sp. p. 4212; Dr. p. 912; Gaz. vol. 132; p. 774.
Locomotive-driving-box adjusting device. W. C. Dick. No. 877,060; Jan. 21; Sp. p. 2637; Dr. p. 612; Gaz. vol. 132; p. 529.
Locomotive, Electric. R. Schwarz. No. 877,005; Jan. 21; Sp. p. 2722; Dr. p. 589; Gaz. vol. 132; p. 510.
Locomotive-tender loader. F. S. See. No. 876,736; Jan. 14; Sp. p. 2140; Dr. pp. 471–2; Gaz. vol. 132; p. 381.
Locomotive turn-tables, Safety means for. J. W. De Long. No. 876,668; Jan. 14; Sp. p. 2089; Dr. p. 454; Gaz. vol. 132; p. 309.

Locomotives, By-pass valve for. J. E. Sague and F. J. Cole. No. 877,868; Jan. 28; Sp. p. 4428; Dr. p. 964; Gaz. vol. 132; p. 811.
Legging-grab. H. F. Martin. No. 876,652; Jan. 14; Sp. p. 2002; Dr. p. 436; Gaz. vol. 132; p. 355.
Logs, Single-tooth dog for gripping. T. Manley. No. 877,208; Jan. 21; Sp. p. 3150; Dr. p. 683; Gaz. vol. 132; p. 579.
Loom gripper-needle. O. Wahle. No. 877,270; Jan. 21; Sp. p. 3274; Dr. p. 706; Gaz. vol. 132; p. 600.
Loom, Hand-. R. K. Lenox. No. 876,813; Jan. 14; Sp. p. 2271; Dr. p. 499; Gaz. vol. 132; p. 404.
Loom, Narrow-ware. C. H. Maxsted. No. 877,511; Jan. 28; Sp. p. 3746; Dr. pp. 811–12; Gaz. vol. 132; p. 697.
Loom-picker. W. A. and J. A. Bramall. No. 875,772; Jan. 7; Sp. p. 189; Dr. p. 40; Gaz. vol. 132; p. 35.
Loom picking mechanism. C. F. Perham. No. 876,011; Jan. 7; Sp. p. 633; Dr. p. 135; Gaz. vol. 132; p. 110.
Loom, Pile-fabric. J. F. Dustin. No. 875,792; Jan. 7; Sp. p. 220; Dr. p. 48; Gaz. vol. 132; p. 41.
Loom-shedding mechanism. E. R. Holmes and A. S. Cowan. No. 876,353; Jan. 14; Sp. p. 1322; Dr. pp. 286–7; Gaz. vol. 132; p. 251.
Loom-shuttle. H. Murphy. No. 877,106; Jan. 21; Sp. p. 2936; Dr. p. 633; Gaz. vol. 132; p. 543.
Loom shuttle-check. W. Mason. No. 876,005; Jan. 7; Sp. p. 618; Dr. p. 132; Gaz. vol. 132; p. 108.
Loom shuttle checking and releasing mechanism. F. Ott. No. 877,223; Jan. 21; Sp. p. 3183; Dr. p. 690; Gaz. vol. 132; p. 584.
Loom, Weft-replenishing. H. Wyman. No. 876,418; Jan. 14; Sp. p. 1471; Dr. p. 316; Gaz. vol. 132; p. 272.
Looms, Individual take-up mechanism for narrow-ware. A. H. Steele. No. 876,407; Jan. 14; Sp. p. 1444; Dr. p. 310; Gaz. vol. 132; p. 268.
Looms, Machine for making false reeds for. W. E. Wingate. No. 876,614; Jan. 14; Sp. p. 1915; Dr. pp. 417–18; Gaz. vol. 132; p. 341.
Looms, Weft-case for automatic weft-replenishing. H. O. Brandt. No. 875,890; Jan. 7; Sp. p. 397; Dr. p. 87; Gaz. vol. 132; p. 74.
Looping-machines, Trimming attachment for. O. Lange. No. 875,713; Jan. 7; Sp. p. 60; Dr. p. 15; Gaz. vol. 132; p. 15.
Lubricator: *See* Axle-lubricator.
Magnetic detector. L. de Forest. No. 877,069; Jan. 21; Sp. p. 2849; Dr. p. 615; Gaz. vol. 132; p. 531.
Magnetic-wave components, Intelligence intercommunication by. G. W. Pickard. No. 876,990; Jan. 21; Sp. p. 2691; Dr. p. 585; Gaz. vol. 132; p. 506.
Mail-bag catcher. E. Piland. No. 876,835; Jan. 14; Sp. p. 2324; Dr. p. 511; Gaz. vol. 132; p. 411.
Mail-bag catcher. O. Shaffer. No. 877,240; Jan. 21; Sp. p. 3210; Dr. p. 696; Gaz. vol. 132; p. 590.
Mail-bag catcher and deliverer. E. Roberts. No. 877,800; Jan. 28; Sp. p. 4297; Dr. p. 933; Gaz. vol. 132; p. 789.
Mail-bag catching and delivering apparatus. J. B. Dawson. No. 876,864; Jan. 14; Sp. p. 2383; Dr. p. 520; Gaz. vol. 132; p. 421.
Mail-bag-delivery apparatus for railways. T. Mackim. No. 875,718; Jan. 7; Sp. p. 70; Dr. pp. 16–17; Gaz. vol. 132; p. 17.
Mail-bags, &c., Means for fastening. V. Mazzatenta. No. 875,720; Jan. 7; Sp. p. 81; Dr. p. 17; Gaz. vol. 132; p. 18.
Mail-box. J. M. Scobee. No. 877,006; Jan. 21; Sp. p. 2722; Dr. p. 589; Gaz. vol. 132; p. 510.
Mail-box, Automatic. O. A. Larson. No. 876,811; Jan. 14; Sp. p. 2269; Dr. p. 499; Gaz. vol. 132; p. 403.
Mail-box signal-lock. S. Patterson and J. W. Wiseman. No. 875,841; Jan. 7; Sp. p. 308; Dr. p. 67; Gaz. vol. 132; p. 57.
Mail-box signaling apparatus. T. H. Sparks. No. 875,860; Jan. 7; Sp. p. 340; Dr. p. 76; Gaz. vol. 132; p. 63.
Mail-delivery apparatus, Rural-. J. M. Branham. No. 876,433; Jan. 14; Sp. p. 1504; Dr. pp. 323–4; Gaz. vol. 132; p. 277.
Mail-delivery system. J. F. Stout. No. 875,864; Jan. 7; Sp. p. 346; Dr. p. 77; Gaz. vol. 132; p. 64.
Maize or Indian corn, Degerming. J. F. Gent. No. 877,641; Jan. 28; Sp. p. 4014; Dr. p. 867; Gaz. vol. 132; p. 740.
Malt-kiln. H. Wettig. No. 876,795; Jan. 14; Sp. p. 2181; Dr. p. 479; Gaz. vol. 132; p. 387.
Manicuring implement. D. F. Asbury. No. 875,681; Jan. 7; Sp. p. 9; Dr. p. 2; Gaz. vol. 132; p. 4.
Manure-spreading attachment for wagons. A. Turner and L. Howard. No. 877,227; Jan. 21; Sp. p. 3188; Dr. pp. 691–2; Gaz. vol. 132; p. 586.
Manuscript-holder. R. S. Lafoon. No. 875,828; Jan. 7; Sp. p. 284; Dr. p. 62; Gaz. vol. 132; p. 53.
Marker, Hill-. P. Christiansson. No. 876,296; Jan. 7; Sp. p. 1208; Dr. pp. 263–4; Gaz. vol. 132; p. 202.
Masonry-fastening device. R. S. Peirce. No. 877,118; Jan. 21; Sp. p. 2946; Dr. p. 637; Gaz. vol. 132; p. 547.
Massage apparatus. H. W. Smith. No. 876,103; Jan. 7; Sp. p. 813; Dr. p. 175; Gaz. vol. 132; p. 138.
Match-box. H. J. Breeze. No. 875,773; Jan. 7; Sp. p. 191; Dr. p. 40; Gaz. vol. 132; p. 35.
Match-machine. W. E. Williams. No. 876,921; Jan. 14; Sp. p. 2505; Dr. pp. 546–51; Gaz. vol. 132; p. 440.
Match-safe. W. F. Smith. No. 877,527; Jan. 28; Sp. p. 3778; Dr. p. 818; Gaz. vol. 132; p. 703.
Mattress. H. C. Innes. No. 877,568; Jan. 28; Sp. p. 3870; Dr. p. 837; Gaz. vol. 132; p. 716.
Mattress. W. F. Wyman. No. 877,692; Jan. 28; Sp. p. 4115; Dr. p. 890; Gaz. vol. 132; p. 770.
Mattress, Spring-. H. M. Brock. No. 877,548; Jan. 28; Sp. p. 3842; Dr. p. 831; Gaz. vol. 132; p. 711.
Measure. L. C. Farmer. No. 876,339; Jan. 14; Sp. p. 1296; Dr. p. 281; Gaz. vol. 132; p. 246.
Measuring device. F. L. Racouillat and T. P. Reid. No. 875,948; Jan. 7; Sp. p. 416; Dr. p. 107; Gaz. vol. 132; p. 90.
Measuring instrument. I. E. Burley. No. 876,264; Jan. 7; Sp. p. 1120; Dr. p. 243; Gaz. vol. 132; p. 190.
Measuring instrument, Electrical. W. J. Still. No. 877,251; Jan. 21; Sp. p. 3236; Dr. pp. 700–1; Gaz. vol. 132; p. 594.
Measuring-tools, Micrometer attachment for. G. Koffskey. No. 877,846; Jan. 28; Sp. p. 4383; Dr. p. 953; Gaz. vol. 132; p. 804.
Mechanical movement. L. D. Green. No. 875,807; Jan. 7; Sp. p. 248; Dr. pp. 53–4; Gaz. vol. 132; p. 46.
Mechanical movement. T. V. Buckwalter. No. 875,892; Jan. 7; Sp. p. 400; Dr. p. 88; Gaz. vol. 132; p. 74.
Memoranda-exhibiting device. S. Maxfield. No. 877,443; Jan. 21; Sp. p. 3601; Dr. p. 780; Gaz. vol. 132; p. 655.
Metal bodies, Shaping. R. W. Hardie. No. 877,077; Jan. 21; Sp. p. 2862; Dr. p. 618; Gaz. vol. 132; p. 533.
Metal, &c., Machine for feeding sheets of. F. McIntyre. No. 875,837; Jan. 7; Sp. p. 300; Dr. pp. 65–6; Gaz. vol. 132; p. 55.
Metal structure. E. A. Wilson. No. 876,124; Jan. 7; Sp. p. 854; Dr. p. 183; Gaz. vol. 132; p. 146.
Metal-swaging machine. W. Fehr. No. 877,315; Jan. 21; Sp. p. 3366; Dr. p. 729; Gaz. vol. 132; p. 613.
Metal-working machine. L. H. Blood. No. 876,932; Jan. 21; Sp. p. 2547; Dr. pp. 557–8; Gaz. vol. 132; p. 483.
Metals, Precipitating. J. E. Greenawalt. No. 876,346; Jan. 14; Sp. p. 1310; Dr. p. 283; Gaz. vol. 132; p. 248.
Meter: *See* Gas-meter; Speed-meter.
Milking apparatus, Pulsating device for. E. E. Good. No. 875,706; Jan. 7; Sp. p. 55; Dr. p. 11; Gaz. vol. 132; p. 12.
Milking apparatus, Teat-cup for. E. E. Good. No. 875,802; Jan. 7; Sp. p. 240; Dr. p. 51; Gaz. vol. 132; p. 44.
Milking-machine. O. T. Sharples. No. 876,598; Jan. 14; Sp. p. 1874; Dr. p. 410; Gaz. vol. 132; p. 336.
Mill: *See* Centrifugal mill; Fanning-mill; Sawmill; Stamping and grinding mill; Tandem mill; Windmill.
Miner's shovel. D. B. Lewis. No. 877,574; Jan. 28; Sp. p. 3880; Dr. p. 841; Gaz. vol. 132; p. 718.
Mines, Electric apparatus for the ignition of. O. R. P. Bergiund, W. A. W. E. Hjorth, and C. E. Ljungman. No. 877,284; Jan. 21; Sp. p. 3294; Dr. p. 713; Gaz. vol. 132; p. 604.
Mining-machine, Pneumatic. W. R. Butts. No. 877,883; Jan. 28; Sp. p. 4451; Dr. p. 971; Gaz. vol. 132; p. 816.
Mirror, Hand. H. Burrell. No. 876,039; Jan. 7; Sp. p. 683; Dr. p. 146; Gaz. vol. 132; p. 118.
Miter-box. A. D. Hughes. No. 875,819; Jan. 7; Sp. p. 268; Dr. p. 58; Gaz. vol. 132; p. 50.
Miter-box. O. Cassity. No. 876,266; Jan. 7; Sp. p. 1123; Dr. pp. 243–4; Gaz. vol. 132; p. 190.
Miter-box. E. D. Bjork. No. 876,315; Jan. 14; Sp. p. 1247; Dr. p. 271; Gaz. vol. 132; p. 239.
Miter-box. C. C. Galentine. No. 876,795; Jan. 14; Sp. p. 2245; Dr. pp. 493–4; Gaz. vol. 132; p. 398.
Miter-box. J. Knudson. No. 877,651; Jan. 28; Sp. p. 4029; Dr. p. 870; Gaz. vol. 132; p. 743.
Mitt or glove, Catcher's. E. J. and H. Goldsmith. No. 877,561; Jan. 28; Sp. p. 3860; Dr. p. 835; Gaz. vol. 132; p. 714.
Mixer: *See* Concrete-mixer; Gas-machine mixer.
Mixing and kneading machine. W. and M. E. Gray. No. 876,633; Jan. 14; Sp. p. 1963; Dr. p. 428; Gaz. vol. 132; p. 348.
Mixing-machine. T. C. Hughes. No. 876,356; Jan. 14; Sp. p. 1327; Dr. p. 288; Gaz. vol. 132; p. 252.
Mixing-machine. A. Stein. No. 876,406; Jan. 14; Sp. p. 1445; Dr. p. 311; Gaz. vol. 132; p. 268.
Moistener. J. P. Gilman. No. 877,498; Jan. 28; Sp. p. 3720; Dr. p. 805; Gaz. vol. 132; p. 693.
Mold: *See* Cement-block mold; Fence-post mold; Gang-mold; Hollow-article mold.
Mold. F. T. C. Dumais. No. 875,700; Jan. 7; Sp. p. 41; Dr. p. 9; Gaz. vol. 132; p. 10.
Mold. J. Bertram. No. 876,135; Jan. 7; Sp. p. 882; Dr. pp. 189–90; Gaz. vol. 132; p. 149.
Mold. W. J. Miller. No. 876,212; Jan. 7; Sp. p. 1024; Dr. p. 221; Gaz. vol. 132; p. 173.
Mold-ramming apparatus. H. Henderson. No. 876,054; Jan. 7; Sp. p. 706; Dr. pp. 151–2; Gaz. vol. 137; p. 122.
Molded articles, Making. H. Dresler. No. 876,783; Jan. 14; Sp. p. 2230; Gaz. vol. 132; p. 395.
Molding-machine. L. H. K. Brodie. No. 876,322; Jan. 14; Sp. p. 1259; Dr. p. 273; Gaz. vol. 132; p. 241.
Molding-machine. C. E. Lambertson. No. 877,783; Jan. 28; Sp. p. 4269; Dr. pp. 927–8; Gaz. vol. 132; p. 784.
Molding machine, Sand-. A. P. Smith. No. 877,746; Jan. 28; Sp. p. 4207; Dr. pp. 911–12; Gaz. vol. 132; p. 772.
Mop head and wringer, Combined. J. W. Lappin. No. 877,895; Jan. 28; Sp. p. 4488; Dr. p. 977; Gaz. vol. 132; p. 820.
Mop-wringer. W. H. Wetmore. No. 877,149; Jan. 21; Sp. p. 3023; Dr. p. 654; Gaz. vol. 132; p. 558.
Mop-wringer. D. Whitehurst. No. 877,621; Jan. 28; Sp. p. 3982; Dr. p. 860; Gaz. vol. 132; p. 733.
Mortise-lock. L. S. S. George. No. 876,167; Jan. 7; Sp. p. 937; Dr. p. 201; Gaz. vol. 132; p. 159.
Motion-checking device. O. F. Persson. No. 876,994; Jan. 21; Sp. p. 2685; Dr. p. 584; Gaz. vol. 132; p. 506.
Motion, Twine-take-up. C. E. Kelly. No. 877,718; Jan. 28; Sp. p. 4154; Dr. p. 900; Gaz. vol. 132; p. 764.
Motor: *See* Automobile-motor; Compensated motor; Electric motor; Rotary motor; Water-motor; Wave-motor.
Motor control. K. A. Pauly. No. 876,993; Jan. 21; Sp. p. 2684; Dr. p. 583; Gaz. vol. 132; p. 505.
Motor control. H. E. White. No. 877,028; Jan. 21; Sp. p. 2772; Dr. pp. 599–600; Gaz. vol. 132; p. 518.
Motor control. C. E. Zix. No. 877,030; Jan. 21; Sp. p. 2776; Dr. p. 600; Gaz. vol. 132; p. 519.
Motor control system, Electric-. A. C. Eastwood. No. 875,901; Jan. 7; Sp. p. 423; Dr. p. 94; Gaz. vol. 132; p. 77.
Motor-controller regulator, Electric-. P. A. Weyand. (Reissue.) No. 12,744; Jan. 28; Sp. p. 4494; Dr. p. 978; Gaz. vol. 132; p. 822.
Motor-controlling device. W. E. Date. No. 876,441; Jan. 14; Sp. p. 1522; Dr. pp. 327–8; Gaz. vol. 132; p. 280.

Motor-controlling mechanism. H. W. Cheney. No. 875,981; Jan. 7; Sp. p. 574; Dr. p. 124; Gaz. vol. 132; p. 100.
Motor-controlling mechanism. H. W. Cheney. No. 875,982; Jan. 7; Sp. p. 580; Dr. p. 125; Gaz. vol. 132; p. 101.
Motor converter, Starting-. E. F. W. Alexanderson. No. 876,923; Jan. 21; Sp. p. 2529; Dr. p. 553; Gaz. vol. 132; p. 481.
Motor-cooling device. A. F. Knight. No. 876,973; Jan. 21; Sp. p. 2643; Dr. p. 574; Gaz. vol. 132; p. 498.
Motor speed-regulator, Spring-. P. J. Mueller. No. 875,835; Jan. 7; Sp. p. 208; Dr. p. 64; Gaz. vol. 132; p. 55.
Motor-supporting device. A. Insinger. No. 875,821; Jan. 7; Sp. p. 271; Dr. p. 59; Gaz. vol. 132; p. 50.
Motors, Mechanism for preventing racing in prime. H. E. Warren. No. 875,969; Jan. 7; Sp. p. 555; Dr. p. 119; Gaz. vol. 132; p. 96.
Mount. E. S. Cheney. No. 875,981; Jan. 7; Sp. p. 27; Dr. pp. 5–6; Gaz. vol. 132; p. 7.
Mounting. L. F. Adt. No. 877,626; Jan. 28; Sp. p. 3992; Dr. p. 862; Gaz. vol. 132; p. 735.
Mower. W. W. and H. H. Hare. No. 876,637; Jan. 14; Sp. p. 1975; Dr. p. 429; Gaz. vol. 132; p. 350.
Mower grass-catcher, Lawn-. M. T. Curran. No. 877,299; Jan. 21; Sp. p. 3328; Dr. p. 721; Gaz. vol. 132; p. 608.
Mower grass-receptacle, Lawn-. D. G. Davis. No. 876,607; Jan. 14; Sp. p. 2088; Dr. p. 454; Gaz. vol. 132; p. 369.
Mower, Lawn-. J. G. Barri. No. 875,977; Jan. 7; Sp. p. 566; Dr. pp. 121–2; Gaz. vol. 132; p. 99.
Mower, Lawn-. E. M. Stapleton. No. 876,665; Jan. 14; Sp. p. 2023; Dr. p. 441; Gaz. vol. 132; p. 359.
Mowers, Cutting apparatus for. W. J. Needham. No. 876,654; Jan. 14; Sp. p. 2007; Dr. p. 437; Gaz. vol. 132; p. 355.
Mowing-machine attachment. F. S. Laflin. No. 877,662; Jan. 28; Sp. p. 4062; Dr. p. 871; Gaz. vol. 132; p. 743.
Muffler. W. L. Gee. No. 877,840; Jan. 28; Sp. p. 4376; Dr. p. 952; Gaz. vol. 132; p. 803.
Muffler for explosive-engines. H. S. Powell. No. 877,800; Jan. 28; Sp. p. 4413; Dr. p. 961; Gaz. vol. 132; p. 809.
Multiple-cylinder engine. F. L. Chase and B. M. Young. No. 877,204; Jan. 21; Sp. p. 3312; Dr. pp. 717–18; Gaz. vol. 132; p. 606.
Music-holder. E. P. Dorward. No. 876,393; Jan. 7; Sp. p. 1222; Dr. p. 266; Gaz. vol. 132; p. 204.
Music-indicator. W. E. Thrash. No. 877,259; Jan. 21; Sp. p. 3253; Dr. p. 704; Gaz. vol. 132; p. 596.
Music-indicator. F. E. Hobart. No. 877,339; Jan. 21; Sp. p. 3398; Dr. p. 737; Gaz. vol. 132; p. 620.
Music-leaf turner. L. R. Stanton. No. 875,744; Jan. 7; Sp. p. 129; Dr. p. 29; Gaz. vol. 132; p. 26.
Music-leaf turner. E. P. Dorward. No. 876,781; Jan. 14; Sp. p. 2225; Dr. pp. 489–90; Gaz. vol. 132; p. 395.
Musical instrument, Automatic. A. A. Rose. No. 877,125; Jan. 21; Sp. p. 2972; Dr. p. 642; Gaz. vol. 132; p. 550.
Musical-instrument keyboard. J. C. Hofbauer. No. 875,815; Jan. 7; Sp. p. 262; Dr. p. 57; Gaz. vol. 132; p. 49.
Musical instrument, Mechanical. J. A. Weser. No. 877,027; Jan. 21; Sp. p. 2770; Dr. p. 599; Gaz. vol. 132; p. 518.
Musical instrument, Mechanically-operated. E. H. Klaber. No. 877,721; Jan. 28; Sp. p. 4158; Dr. pp. 900–1; Gaz. vol. 132; p. 764.
Musical-instrument player, Mechanical. B. A. Hoglund. No. 877,080; Jan. 21; Sp. p. 2866; Dr. p. 619; Gaz. vol. 132; p. 534.
Musical instrument, Pneumatic. E. de Kleist. No. 877,203; Jan. 21; Sp. p. 3135; Dr. p. 680; Gaz. vol. 132; p. 577.
Musical instrument, Stringed. W. D. Bohnenberger. No. 876,430; Jan. 14; Sp. p. 1499; Dr. p. 322; Gaz. vol. 132; p. 277.
Musical instruments, Attachment for levers for automatic-playing. L. Blasius. No. 875,887; Jan. 7; Sp. p. 393; Dr. p. 86; Gaz. vol. 132; p. 72.
Musical instruments, Means for opening and closing panels of. W. J. Keeley. No. 875,823; Jan. 7; Sp. p. 275; Dr. p. 60; Gaz. vol. 132; p. 51.
Musical instruments, Note-sheet for automatic. I. B. Smith. No. 875,858; Jan. 7; Sp. p. 334; Dr. p. 74; Gaz. vol. 132; p. 62.
Musical instruments, Pedal connection for. O. Dreger. No. 876,443; Jan. 14; Sp. p. 1520; Dr. p. 329; Gaz. vol. 132; p. 282.
Musical instruments, Pianissimo device for. I. B. Smith. No. 877,603; Jan. 28; Sp. p. 3940; Dr. p. 852; Gaz. vol. 132; p. 727.
Musical instruments, Regulation of tone in mechanical. L. Hupfeld. No. 877,082. Jan. 21; Sp. p. 2870; Dr. p. 619; Gaz. vol. 132; p. 535.
Musical instruments, Rhythm-indicator for mechanical. P. Wuest, Jr. No. 875,974; Jan. 7; Sp. p. 562; Dr. p. 121; Gaz. vol. 132; p. 98.
Musical instruments, Tempo device for mechanical. J. O'Connor. No. 876,080; Jan. 7; Sp. p. 775; Dr. p. 166; Gaz. vol. 132; p. 131.
Musical scales, Device for illustrating the transposition of. L. A. Jaros. No. 876,060; Jan. 7; Sp. p. 722; Dr. p. 154; Gaz. vol. 132; p. 125.
Nail-inserting machine. A. D. Elliott. No. 876,626; Jan. 14; Sp. p. 1941; Dr. p. 423; Gaz. vol. 132; p. 346.
Nailing-tool. M. Pearson. No. 876,066; Jan. 7; Sp. p. 788; Dr. p. 168; Gaz. vol. 132; p. 133.
Necktie attachment. J. Grossgebauer. No. 876,172; Jan. 7; Sp. p. 945; Dr. p. 203; Gaz. vol. 132; p. 161.
Needle. R. B. Bach. No. 877,476; Jan. 28; Sp. p. 3663; Dr. p. 794; Gaz. vol. 132; p. 685.
Needle-threader. C. A. Murphy. No. 875,725; Jan. 7; Sp. p. 89; Dr. p. 19; Gaz. vol. 132; p. 20.
Nest, Poultry-. J. A. Secrest. No. 876,916; Jan. 14; Sp. p. 2496; Dr. p. 545; Gaz. vol. 132; p. 439.
Net-casting apparatus. G. K. Cloud. No. 876,146; Jan. 7; Sp. p. 903; Dr. p. 195; Gaz. vol. 132; p. 155.
Nitrobenzanthrone compound and making same. O. Bally and H. Wolff. No. 876,679; Jan. 14; Sp. p. 2045; Gaz. vol. 132; p. 363.
Nozzle. E. Gerlach. No. 876,796; Jan. 14; Sp. p. 2247; Dr. p. 494; Gaz. vol. 132; p. 399.
Nozzle, Spray-. W. H. Heard. No. 876,453; Jan. 14; Sp. p. 1548; Dr. p. 332; Gaz vol. 132; p. 284.
Numbering or marking machine. G. H. Lang. No. 877,653; Jan. 28; Sp. p. 4033; Dr. p. 871; Gaz. vol. 132; p. 744.
Nut, Fast. W. H. Cook. No. 875,782; Jan. 7; Sp. p. 206; Dr. p. 44; Gaz. vol. 132; p. 38.
Nut-lock. G. H. Orr. No. 876,081; Jan. 7; Sp. p. 778; Dr. p. 166; Gaz. vol. 132; p. 132.
Nut-lock. C. H. Bicknell. No. 876,314; Jan. 14; Sp. p. 1246; Dr. p. 271; Gaz. vol. 132; p. 230.
Nut-lock. F. R. Smith. No. 876,741; Jan. 14; Sp. p. 2160; Dr. p. 474; Gaz. vol. 132; p. 382.
Nut-lock. S. Benson. No. 877,628; Jan. 28; Sp. p. 3994; Dr. p. 863; Gaz. vol. 132; p. 736.
Oar-operating device. J. A. Musgrove, Jr. No. 876,219; Jan 7; Sp. p. 1044; Dr. p. 225; Gaz. vol. 132; p. 176.
Oil attachment for handsaws and the like. F. Culbertson. No. 876,695; Jan. 14; Sp. p. 2084; Dr. p. 453; Gaz. vol. 132; p. 368.
Oil-burner. M. S. Conly. No. 876,598; Jan. 14; Sp. p. 2459; Dr. p. 537; Gaz. vol. 132; p. 433.
Oil burner, Crude-. J. P. Donovan. No. 877,178; Jan. 21; Sp. p. 3091; Dr. p. 668; Gaz. vol. 132; p. 568.
Oil-can. W. E. Dillard. No. 875,697; Jan. 7; Sp. p. 36; Dr. p. 7; Gaz. vol. 132; p. 9.
Oil-extracting apparatus. V. J. Lauerman. No. 876,363; Jan. 14; Sp. p. 1343; Dr. p. 291; Gaz. vol. 132; p. 254.
Oils of marine engines, Means for recovering and regenerating lubricating-. G. B. Bibolini and C. Baulino. No. 877,163; Jan. 21; Sp. p. 3068; Dr. pp. 660–1; Gaz. vol. 132; p. 563.
Oils, Refining, fractionating, and reducing. W. C. and F. E. Wells. No. 877,620; Jan. 28; Sp. p. 3979; Dr. p. 860; Gaz. vol. 132; p. 733.
Operating-table. J. H. Downey. No. 876,044; Jan. 7; Sp. p. 690; Dr. p. 148; Gaz. vol. 132; p. 119.
Ordnance, Firing mechanism for. H. T. Wheeler. No. 876,510; Jan. 14; Sp. p. 1671; Dr. pp. 363–5; Gaz. vol. 132; p. 305.
Ore-concentrator. P. Härden. No. 876,713; Jan. 14; Sp. p. 2113; Dr. pp. 462–3; Gaz. vol. 132; p. 374.
Ore-crushing machine. J. B. Albers. No. 876,892; Jan. 14; Sp. p. 2447; Dr. p. 533; Gaz. vol. 132; p. 431.
Ore-roasting furnace. A. D. Lee. No. 876,567; Jan. 14; Sp. p. 1797; Dr. pp. 392–3; Gaz. vol. 132; p. 324
Ore-separator. A. Custer. No. 877,411; Jan. 21; Sp. p. 3542; Dr. p. 766; Gaz. vol. 132; p. 644.
Ore-tank, Revolving. A. J. Garver. No. 876,539; Jan. 14; Sp. p. 1739; Dr. pp. 377–8; Gaz. vol. 132; p. 315
Ores, Apparatus for magnetically concentrating. H. Leighton. No. 877,439; Jan. 21; Sp. p. 3595; Dr. p. 779; Gaz. vol. 132; p. 654.
Ores, Treating. J. Savelsberg. No. 875,852; Jan. 7; Sp. p. 325; Gaz. vol. 132; p. 60.
Oscillating engine. J. Smith. No. 877,132; Jan. 21; Sp. p. 2964; Dr. pp. 644–5; Gaz. vol. 132; p. 552.
Outlet-box. H. Becker. No. 877,887; Jan. 28; Sp. p. 4448; Dr. p. 970; Gaz. vol. 132; p. 815.
Outlet-box, Electric-installation. W. H. Vibber. No. 877,684; Jan. 28; Sp. p. 4103; Dr. p. 887; Gaz. vol. 132, p. 754.
Oval-cutting machine. W. E. Herman. No. 877,422; Jan. 21; Sp. p. 3560; Dr. p. 770; Gaz. vol. 132; p. 648.
Oven, Bake-. W. Ernst. No. 877,310; Jan. 21; Sp. p. 3352; Dr. p. 726; Gaz. vol. 132; p. 611.
Oxid fumes from ores and furnace products, Obtaining. H. Pape. No. 877,114; Jan. 21; Sp. p. 2935; Gaz. vol. 132; p. 545.
Oxidizing means for solutions. W. B. McPherson. No. 877,445; Jan. 21; Sp. p. 3604; Dr. p. 780; Gaz. vol. 132; p. 655.
Packing, Piston-rod. F. Duffy. No. 877,706; Jan. 28; Sp. p. 4132; Dr. p. 894; Gaz. vol. 132; p. 760.
Packing, Plunger-. T. Larson. No. 876,977; Jan. 21; Sp. p. 2648; Dr. p. 576; Gaz. vol. 132; p. 490.
Packing-receptacle. G. W. Baylis. No. 877,161; Jan. 21; Sp. p. 3045; Dr. p. 659; Gaz. vol. 132; p. 562.
Packing, Rod-. C. W. G. King. No. 875,994; Jan. 7; Sp. p. 471; Dr. p. 102; Gaz. vol. 132; p. 85.
Packing, Shaft-. J. Wilkinson. No. 876,813; Jan. 14; Sp. p. 1910; Dr. p. 416. Gaz. vol. 132; p. 341.
Padlock. F. G. Snook. No. 877,676; Jan. 28; Sp. p. 4083; Dr. p. 885; Gaz. vol. 132; p. 761.
Pail-supporting device. A. B. Pritchard. No. 877,895; Jan. 28; Sp. p. 3929; Dr. p. 850; Gaz. vol. 132; p. 725.
Pail-supporting device, Paint-. P. Richardson. No. 877,706; Jan. 28; Sp. p. 4366; Dr. p. 932; Gaz. vol. 132; p. 789.
Pan: *See* Weigh-pan.
Pan. M. A. Nash. No. 875,944; Jan. 7; Sp. p. 490; Dr. p. 106; Gaz. vol. 132; p. 89.
Pane-securing means. N. Fells. No. 876,791; Jan 14; Sp. p. 2241; Dr. p. 493; Gaz. vol. 132; p. 397.
Paper-bag machine. W. A. Lorenz. No. 877,205; Jan. 21; Sp. p. 3142; Dr. p. 681; Gaz. vol. 132; p. 578.
Paper-bag-manufacturing machines, Gripping and folding device for. P. L. Bartholomew. No. 875,884; Jan. 7; Sp. p. 383; Dr. p. 84; Gaz. vol. 132; p. 71.
Paper-clip. M. E. Thompson. No. 876,667; Jan. 14; Sp. p. 2026; Dr. p. 442; Gaz. vol. 132; p. 359.
Paper-hanging device, Wall-. D. Webster. No. 877,025; Jan. 21; Sp. p. 2765; Dr. p. 598; Gaz. vol. 132; p. 517.
Paper holder, Basettised-. G. A. Randall. No. 877,454; Jan. 21; Sp. p. 3617; Dr. p. 783; Gaz. vol. 132; p. 658.
Paper holder, Toilet-. W. Lazar. No. 877,347; Jan. 21; Sp. p. 3410; Dr. p. 740; Gaz. vol. 132; p. 623.
Paper-making machine. J. A. Dupont. No. 877,326; Jan. 21; Sp. p. 4372; Dr. p. 950; Gaz. vol. 132; p. 801.
Paper or cardboard box. W. R. Comings. No. 877,757; Jan. 28; Sp. p. 4226; Dr. p. 917; Gaz. vol. 132; p. 776.
Paper-roll. M. Church. No. 877,758; Jan. 28; Sp. p. 4226; Dr. p. 918; Gaz. vol. 132; p. 776.
Paper, Roll toilet-. G. C. Mather. No. 877,883; Jan. 28; Sp. p. 4300; Dr. p. 967; Gaz. vol. 132; p. 807.

Paper-sack holder. I. J. Simmons. No. 877,671; Jan. 28; Sp. p. 4060; Dr. p. 883; Gaz. vol. 132; p. 750.
Paper vessel. B. I. Rike. No. 877,001; Jan. 21; Sp. p. 2709; Dr. p. 587; Gaz. vol. 132; p. 508.
Paper-weight. B. S. Whitehead. No. 877,150; Jan. 21; Sp. p. 3024; Dr. p. 654; Gaz. vol. 132; p. 559.
Pattern-paper linen. B. Borzykowski. No. 875,770; Jan. 7; Sp. p. 180; Dr. pp. 38–9; Gaz. vol. 132; p. 34.
Pawl-operating mechanism, Automatic. W. E. Waldron. No. 876,752; Jan. 14; Sp. p. 2174; Dr. p. 477; Gaz. vol. 132; p. 385
Peeler, Potato- C. H. Clark. No. 877,550; Jan. 28; Sp. p. 3845; Dr. p. 832; Gaz. vol. 132; p. 711.
Pen cleaner, Drafting-. W. A. Steineman. No. 876,024; Jan. 7; Sp. p. 657; Dr. p. 140; Gaz. vol. 132; p. 113.
Penholder. C. E. Walker. No. 875,754; Jan. 7; Sp. p. 162; Dr. p. 34; Gaz. vol. 132; p. 29.
Penholder. W. E. Forman. No. 876,708; Jan. 14; Sp. p. 2105; Dr. p. 458; Gaz. vol. 132; p. 372.
Pencil, Automatic magazine-. J. A. Newman and A. Haapala. No. 876,223; Jan. 7; Sp. p. 1050; Dr. p. 226; Gaz. vol. 132; p. 177.
Pencil-box. E. I. Hawk. No. 876,178; Jan. 7; Sp. p. 957; Dr. p. 206; Gaz. vol. 132; p. 163.
Pencil, Lead-. S. J. Reckendorfer. No. 877,370; Jan. 21; Sp. p. 3457; Dr. p. 750; Gaz. vol. 132; p. 630.
Pencil-sharpener. C. Spiro. No. 876,744; Jan. 14; Sp. p. 2163; Dr. p. 475; Gaz. vol. 132; p. 383.
Pencil-sharpener. A. M. Moaley. No. 877,357; Jan. 21; Sp. p. 3433; Dr. p. 745; Gaz. vol. 132; p. 626.
Pencils, penholders, or the like, Assortment-box or display-rack for lead-. J. S. Kenay. No. 877,649; Jan. 28; Sp. p. 4027; Dr. pp. 869–70; Gaz. vol. 132; p. 742.
Perambulator. A. E. Long. No. 877,350; Jan. 21; Sp. p. 3414; Dr. pp. 741–2; Gaz. vol. 132; p. 623.
Percolator. C. E. Trewhella. No. 876,110; Jan. 7; Sp. p. 833; Dr. pp. 178–9; Gaz. vol. 132; p. 141.
Perforating-machine. J. C. Barclay. No. 877,821; Jan. 28; Sp. p. 4335; Dr. pp. 941–3; Gaz. vol. 132; p. 796.
Perforator. J. C. Barclay. No. 877,823; Jan. 28; Sp. p. 4347; Dr. pp. 943–4; Gaz. vol. 132; p. 797.
Permutation-lock. W. B. Turman. No. 877,682; Jan. 28; Sp. p. 4099; Dr. p. 887; Gaz. vol. 132; p. 753.
Petticoat. L. Sittig. No. 877,672; Jan. 28; Sp. p. 4061; Dr. pp. 883–4; Gaz. vol. 132; p. 750.
Phonograph and other sound-producing machine. H. S. Mills. No. 876,006; Jan. 7; Sp. p. 619; Dr. pp. 132–3; Gaz. vol. 132; p. 108.
Phonograph disk records, Cabinet for holding. X. Cukier. No. 877,832; Jan. 28; Sp. p. 4364; Dr. p. 948; Gaz. vol. 132; p. 800.
Phonograph-record case. C. W. Edsell. No. 877,064; Jan. 21; Sp. p. 2842; Dr. p. 614; Gaz. vol. 132; p. 530.
Phonographic-record cabinet. R. A. Denovan. No. 876,865; Jan. 14; Sp. p. 2385; Dr. p. 520; Gaz. vol. 132; p. 421.
Phonography. I. Kitsee. No. 877,845; Jan. 28; Sp. p. 4382; Dr. p. 953; Gaz. vol. 132; p. 804.
Photographic-film cartridge. H. L. Gray. No. 876,271; Jan. 7; Sp. p. 1146; Dr. p. 249; Gaz. vol. 132; p. 192.
Photographic-print box. M. H. Havenhill and E. A. Jenkinson. No. 877,078; Jan. 21; Sp. p. 2864; Dr. p. 618; Gaz. vol. 132; p. 534.
Photography, Sensitive plate for color. A. and L. Lumiere. No. 877,351; Jan. 21; Sp. p. 3422; Dr. p. 742; Gaz. vol. 132; p. 624.
Pianissimo device or expression-governor. I. B. Smith. No. 877,604; Jan. 28; Sp. p. 3943; Dr. pp. 852–3; Gaz. vol. 132; p. 728.
Piano. R. Frömsdorf. No. 876,535; Jan. 14; Sp. p. 1728; Dr. p. 376; Gaz. vol. 132; p. 314.
Piano, Automatic. M. Clark. No. 876,438; Jan. 14; Sp. p. 1513; Dr. p. 325; Gaz. vol. 132; p. 279.
Piano, Automatic. S. J. Laughlin. No. 877,573; Jan. 28; Sp. p. 3877; Dr. p. 840; Gaz. vol. 132; p. 718.
Piano-case. I. M. Field. No. 877,839; Jan. 28; Sp. p. 4375; Dr. p. 951; Gaz. vol. 132; p. 802.
Picker: *See* Loom-picker.
Picture machine, Moving-. J. E. Lagergren. No. 877,346; Jan. 21; Sp. p. 3409; Dr. pp. 739–40; Gaz. vol. 132; p. 622.
Pier, Floating. C. E. Grant. No. 876,170; Jan. 7; Sp. p. 942; Dr. p. 202; Gaz. vol. 132; p. 160.
Pile-fabric-cutting machine, Weft-. W. G. M. Keighley and H. Netherwood. No. 876,402; Jan. 14; Sp. p. 1566; Dr. pp. 335–7; Gaz. vol. 132; p. 288.
Piling, Interlocking sheet-. G. E. Nye. No. 877,588; Jan. 28; Sp. p. 3916; Dr. p. 847; Gaz. vol. 132; p. 723.
Piling, Sheet-. J. T. Pyle. No. 876,306; Jan. 7; Sp. p. 1227; Dr. pp. 267–8; Gaz. vol. 132; p. 205.
Piling, Sheet-metal. F. W. Skinner. No. 877,008; Jan. 21; Sp. p. 2726; Dr. p. 590; Gaz. vol. 132; p. 511.
Pin: *See* Hat-pin; Insulator-pin; Safety-pin.
Pipe: *See* Tobacco-pipe.
Pipe and gas connection. H. E. Loebe. No. 877,849; Jan. 28; Sp. p. 4389; Dr. p. 955; Gaz. vol. 132; p. 805.
Pipe-casting apparatus, Metal-. E. A. Custer. No. 876,946; Jan. 21; Sp. p. 2589; Dr. p. 564; Gaz. vol. 132; p. 489.
Pipe-cleaner. E. T. Gilbert. No. 877,324; Jan. 21; Sp. p. 3379; Dr. p. 732; Gaz. vol. 132; p. 616.
Pipe-coupling. H. S. Putney. No. 877,368; Jan. 21; Sp. p. 3454; Dr. p. 749; Gaz. vol. 132; p. 630.
Pipe-coupling and valve. F. R. Kirchhoff. No. 877,720; Jan. 28; Sp. p. 4157; Dr. p. 900; Gaz. vol. 132; p. 764.
Pipe-covering. M. Sullivan. No. 876,606; Jan. 14; Sp. p. 1899; Dr. p. 414; Gaz. vol. 132; p. 339.
Pipe-drawing machine, Lapweld. L. W. Noyes. No. 875,728; Jan. 7; Sp. p. 96; Dr. pp. 20–1; Gaz. vol. 132; p. 21.
Pipe-lifter. E. J. Anderson and S. Hanson. No. 877,282; Jan. 21, Sp. p. 3292; Dr. p. 712; Gaz. vol. 132; p. 603.
Pipe protector for buildings, Leader-. F. W. Sander. No. 877,456; Jan. 21; Sp. p. 3619; Dr. p. 784; Gaz. vol. 132; p. 658.
Pipe-wrench. E. F. Lubke and E. C. Reed. No. 876,651; Jan. 14; Sp. p. 2002; Dr. p. 436; Gaz. vol. 132; p. 355.
Pipe-wrench. J. Hughes. No. 876,716; Jan. 14; Sp. p. 2116; Dr. p. 464; Gaz. vol. 132; p. 375.
Pipe-wrench. G. Paterson. No. 877,225; Jan. 21; Sp. p. 318b; Dr. p. 691; Gaz. vol. 132; p. 585.
Pipe-wrench, Chain. G. Amborn. No. 876,925; Jan. 21; Sp. p. 2532; Dr. p. 553; Gaz. vol. 132; p. 481.
Pipe-wrench, Chain. G. Amborn. No. 876,926; Jan. 21; Sp. p. 2534; Dr. p. 554; Gaz. vol. 132; p. 482.
Pipe-wrench, Chain. G. Amborn. No. 876,927; Jan. 21; Sp. p. 2536; Dr. p. 554; Gaz. vol. 132; p. 482.
Pipe-wrench, Strap. W. C. Martin and L. H. Ogden. No. 876,409; Jan. 14; Sp. p. 1580; Dr. p. 330; Gaz. vol. 132; p. 290.
Pipes, Flexible joint for dredger-. M. R. Peacock. No. 875,844; Jan. 7; Sp. p. 311; Dr. p. 68; Gaz. vol. 132; p. 57.
Pistol, Electric. E. O. Pfeil. No. 876,068; Jan. 7; Sp. p. 791; Dr. p. 169; Gaz. vol. 132; p. 134.
Piston. P. A. Wille. No. 876,853; Jan. 14; Sp. p. 2358; Dr. p. 516; Gaz. vol. 132; p. 417.
Piston. H. A. Knox. No. 876,974; Jan. 21; Sp. p. 2644; Dr. p. 574; Gaz. vol. 132; p. 499.
Piston closure, Trunk-. W. T. Harder. No. 876,636; Jan. 14; Sp. p. 1974; Dr. p. 429; Gaz. vol. 132; p. 349.
Plaiting-machine. F. E. Warner. No. 876,611; Jan 14; Sp. p. 1907; Dr. p. 416; Gaz. vol. 132; p. 340.
Planing-machine cutter-head. E. Carstens. No. 877,407; Jan. 21; Sp. p. 3529; Dr. p. 765; Gaz. vol. 132; p. 642.
Planter. M. Farley. No. 875,794; Jan. 7; Sp. p. 225; Dr. p. 49; Gaz. vol. 132; p. 41.
Planter, Check-row. C. C. Butcher. No. 875,890; Jan. 7; Sp. p. 24; Dr. p. 5; Gaz. vol. 132; p. 6.
Planter, Corn-. P. Christiansson. No. 875,894; Jan. 7; Sp. p. 402; Dr. pp. 89–90; Gaz. vol. 132; p. 75.
Planter, Corn-. C. Anderson. No. 877,693; Jan. 28; Sp. p. 4116; Dr. p. 891; Gaz. vol. 132; p. 757.
Planter, Corn-. W. A. Tuttle. No. 877,810; Jan. 28; Sp. p. 4312; Dr. p. 936; Gaz. vol. 132; p. 792.
Planter, Corn and potato. I. J. Kaar. No. 877,344; Jan. 21; Sp. p. 3405; Dr. p. 739; Gaz. vol. 132; p. 622.
Planter, Seed-. J. H. Gardner. No. 876,538; Jan. 14; Sp. p. 1733; Dr. p. 377; Gaz. vol. 132; p. 315.
Platen-locking mechanism. A. J. Seaman. No. 876,406; Jan. 14; Sp. p. 1638; Dr. p. 355; Gaz. vol. 132; p. 290.
Plow. F. S. Fuller. No. 875,988; Jan. 7; Sp. p. 591; Dr. p. 126; Gaz. vol. 132; p. 103
Plow and fertilizer-distributer, Combined. J. B. Hicks. No. 877,424; Jan. 21; Sp. p. 3564; Dr. p. 770; Gaz. vol. 132; p. 649.
Plow-point. C. W. McWane. No. 877,359; Jan. 21; Sp. p. 3440; Dr. p. 746; Gaz. vol. 132; p. 627.
Plows, Level-indicator for. G. W. and E. Thurmond. No. 876,747; Jan. 14; Sp. p. 2168; Dr. p. 476; Gaz. vol. 132; p. 384.
Plowshares, Device for holding. P. V. Burgess. No. 876,325; Jan. 14; Sp. p. 1263; Dr. p. 274; Gaz. vol. 132; p. 242.
Plug, Fusible. L. P. Hacker. No. 877,329; Jan. 21; Sp. p. 3385; Dr. p. 733; Gaz. vol. 132; p. 617.
Pneumatic carrier. M. R. Collins. No. 876,850; Jan. 14; Sp. p. 2368; Dr. p. 518; Gaz. vol. 132; p. 419.
Pneumatic drill. J. W. Smith. No. 877,523; Jan. 28; Sp. p. 3774; Dr. p. 817; Gaz. vol. 132; p. 702.
Pneumatic wheel and hub. H. A. Brown. No. 877,620; Jan. 28; Sp. p. 3995; Dr. p. 863; Gaz. vol. 132; p. 736.
Polarity-changing switch, Series-parallel. E. S. Lincoln. No. 877,576; Jan. 28; Sp. p. 3881; Dr. pp. 841–2; Gaz. vol. 132; p. 719.
Pole-brace. D. C. Van Buren. No. 877,268; Jan. 21; Sp. p. 3270; Dr. pp. 707–8; Gaz. vol. 132; p. 599.
Pole-climber. H. Foldvik. No. 877,418; Jan. 21; Sp. p. 3552; Dr. p. 765; Gaz. vol. 132; p. 646.
Polishing-wheel. J. B. Fontaine. No. 876,165; Jan. 7; Sp. p. 926; Dr. p. 200; Gaz. vol. 132; p. 157.
Pollen-collecting device. E. Moulté. No. 877,791; Jan. 28; Sp. p. 4283; Dr. p. 930; Gaz. vol. 132; p. 787.
Post: *See* Artificial post; Bumping-post; Fence-post; Fence corner-post.
Post-binder. W. L. Van de Wiele. No. 876,749; Jan. 14; Sp. p. 2171; Dr. p. 476; Gaz. vol. 132; p. 385.
Postal card. J. Walker. No. 876,117; Jan. 7; Sp. p. 844; Dr. p. 181; Gaz. vol. 132; p. 143.
Postmarking and canceling machine. W. B. Martindale. No. 877,851; Jan. 28; Sp. p. 4393; Dr. pp. 956–7; Gaz. vol. 132; p. 806.
Pot: *See* Coffee-pot.
Potato-digger. J. Mold. No. 876,075; Jan. 7; Sp. p. 767; Dr. p. 164; Gaz. vol. 132; p. 130.
Potato-digger. J. Moreau. No. 877,356; Jan. 21; Sp. p. 3430; Dr. p. 744; Gaz. vol. 132; p. 625.
Potato digger and separator, Combined. R. L. Pettit. No. 876,834; Jan. 14; Sp. p. 2321; Dr. p. 510; Gaz. vol. 132; p. 411.
Potato sorter and cleaner. J. E. Howell. No. 877,462; Jan. 21; Sp. p. 3631; Dr. p. 786; Gaz. vol. 132; p. 660.
Potential-regulator. E. Lehr. No. 876,979; Jan. 21; Sp. p. 2650; Dr. p. 576; Gaz. vol. 132; p. 500.
Power: *See* Tread-power.
Power-converting device, Windmill-. W. R. Beers. No. 877,543; Jan. 28; Sp. p. 3830; Dr. p. 828; Gaz. vol. 132; p. 709.
Power-transmission mechanism. J. L. Nelson. No. 875,945; Jan. 7; Sp. p. 491; Dr. p. 103; Gaz. vol. 132; p. 90.
Power-transmitting mechanism. R. D. Mayo. No. 876,571; Jan. 14; Sp. p. 1800; Dr. p. 395; Gaz. vol. 132; p. 326.
Power-transmitting mechanism. A. T. Brown. No. 876,937; Jan. 21; Sp. p. 2566; Dr. p. 560; Gaz. vol. 132; p. 495.

Preserving. E. Janitzky. No. 876,806; Jan. 14; Sp. p. 2263; Gaz. vol. 132; p. 402.
Press: *See* Baling-press; Brick-press; Fruit-press; Hydraulic press; Ice-machine press; Printing-press; Straw-press.
Press. N. W. Crandall. No. 876,890; Jan. 14; Sp. p. 2460; Dr. pp. 537–8; Gaz. vol. 132; p. 433.
Press web-controller. P. W. Rolland, Jr. No. 877,232; Jan. 21; Sp. p. 3196; Dr. p. 693; Gaz. vol. 132; p. 587.
Printer's furniture. W. S. Warnock. No. 876,030; Jan. 7; Sp. p. 697; Dr. p. 143; Gaz. vol. 132; p. 115.
Printer's quoin. F. W. Blackhall. No. 877,036; Jan. 21; Sp. p. 2790; Dr. p. 604; Gaz. vol. 132; p. 522.
Printers' rollers and the like, Machine for cleaning. C. B. Cutler. No. 876,336; Jan. 14; Sp. p. 1293; Dr. p. 280; Gaz. vol. 132; p. 245.
Printing, Lithographic. M. A. Jullien and E. L. Desseille. No. 877,433; Jan. 21; Sp. p. 3583; Gaz. vol. 132; p. 652.
Printing-machine cutting mechanism. W. Spalckhaver. No. 877,010; Jan. 21; Sp. p. 2731; Dr. p. 591; Gaz. vol. 132; p. 512.
Printing-machinery throw-off mechanism. H. F. Bechman. No. 876,132; Jan. 7; Sp. p. 876; Dr. p. 188; Gaz. vol 132; p 148.
Printing-press. C. B. Whitaker. No. 875,758; Jan. 7; Sp. p. 158; Dr. p. 35; Gaz. vol. 132; p. 30.
Printing-press attachment. A. J. Hood. No. 877,195; Jan. 21; Sp. p. 3118; Dr. pp. 675–6; Gaz. vol. 132; p. 574.
Printing press, Automatic card-. W. A. Billman. No. 875,886; Jan. 7; Sp. p. 300; Dr. p. 85; Gaz. vol. 132; p. 72.
Printing-press feed and delivery attachment. S. Molinar. No. 876,987; Jan. 21; Sp. p. 2665; Dr. pp. 579–80; Gaz. vol. 132; p. 503.
Printing-press, Reciprocating-motion. C. L. Robinson. No. 876,590; Jan. 14; Sp. p. 1852; Dr. p. 405; Gaz. vol. 132; p. 333.
Printing press, Tag and label. F. C. Jamieson. No. 876,646; Jan. 14; Sp. p. 1989; Dr. pp. 432–3; Gaz. vol. 132; p. 353.
Printing tapestry, Machine for. C. F. M. Kroenert. No. 877,570; Jan. 28; Sp. p. 3873; Dr. pp. 838–9; Gaz. vol. 132; p. 717.
Printing, Water-color. C. S. Heermance. No. 876,643; Jan. 14; Sp. p. 1984; Dr. p. 431; Gaz. vol. 132; p. 352.
Projectile. C. Rockhill. No. 875,962; Jan. 7; Sp. p. 519; Dr. p. 111; Gaz. vol. 132; p. 91.
Projection apparatus. U. Blatter. No. 877,041; Jan. 21; Sp. p. 2802; Dr. p. 605; Gaz. vol. 132; p. 523.
Propeller. O. O. Gilbert. No. 875,799; Jan. 7; Sp. p. 234; Dr. pp. 50–1; Gaz. vol. 132; p. 43.
Propelling apparatus, Boat-. J. A. McIlwee. No. 876,385; Jan. 14; Sp. p. 1395; Dr. p. 301; Gaz. vol. 132; p. 261.
Propelling vessels, Means for. M. F. Maus. No. 876,470; Jan. 14; Sp. p. 1581; Dr. pp. 339–40; Gaz. vol. 132; p. 290.
Propulsion, Marine. A. E. Beebe. No. 876,133; Jan. 7; Sp. p. 873; Dr. p. 189; Gaz. vol. 132; p. 148.
Protractor, square, &c., Transformable. A. L. Darr. No. 876,042; Jan. 7; Sp. p. 688; Dr. p. 147; Gaz. vol. 132; p. 119.
Puller: *See* Spoke-puller; Stump-puller; Tack and nail puller.
Pulley-block. B. W. Hammond. No. 876,176; Jan. 7; Sp. p. 952; Dr. p. 205; Gaz. vol. 132; p. 162.
Pulley, Friction clutch-. J. Gilson. No. 875,800; Jan. 7; Sp. p. 237; Dr. p. 51; Gaz. vol. 132; p. 44.
Pulley, Hoisting-. H. A. Myers. No. 876,991; Jan. 21; Sp. p. 2679; Dr. p. 583; Gaz. vol. 132; p. 504.
Pulp articles, Apparatus for molding. W. A. Lorenz. No. 877,579; Jan. 28; Sp. p. 3887; Dr. pp. 843–4; Gaz. vol. 132; p. 720.
Pulp-grinding apparatus, Wood-. K. Gevers. No. 875,705; Jan. 7; Sp. p. 52; Dr. p. 11; Gaz. vol. 132; p. 12.
Pulverizing-mills, Mortar for. J. Lavagnino. No. 876,812; Jan. 14; Sp. p. 2271; Dr. p. 499; Gaz. vol. 132; p. 404.
Pump. C. E. Pfender. No. 876,231; Jan. 7; Sp. p. 1060; Dr. p. 229; Gaz. vol. 131; p. 179.
Pump. S. R Blanchard. No. 876,618; Jan. 14; Sp. p. 1924; Dr. p. 420; Gaz. vol. 132; p. 343.
Pump. L. K. Doelling. No. 877,492; Jan. 28; Sp. p. 3698; Dr. p. 802; Gaz. vol. 132; p. 691.
Pump. O. M. Patterson. No. 877,661; Jan. 28; Sp. p. 4051; Dr. p. 876; Gaz. vol. 132; p. 746.
Pump, Balanced. D. M. McLaughlin. No. 877,583; Jan. 28; Sp. p. 3906; Dr. p. 845; Gaz. vol. 132; p. 721.
Pump, blowar, and the like, Centrifugal. N. K. F. Hanson. No. 877,191; Jan. 21; Sp. p. 3110; Dr. p. 673; Gaz. vol. 132; p. 572.
Pump, Centrifugal. E. W. Brooks. No. 877,484; Jan. 28; Sp. p. 3679; Dr. p. 798; Gaz. vol. 132; p. 687.
Pump, Compound-piston centrifugal. E. W. Brooks. No. 877,485; Jan. 28; Sp. p. 3683; Dr. p. 799; Gaz. vol. 132; p. 688.
Pump driving mechanism. J. C. Whitmer. No. 877,276; Jan. 21; Sp. p. 3284; Dr. p. 710; Gaz. vol. 132; p. 601.
Pump, Oil-. D. F. Colldewelh. No. 876,622; Jan. 14; Sp. p. 1932; Dr. p. 422; Gaz. vol. 132; p. 344.
Pump, Oil-well. W. Wallace. No. 876,118; Jan. 7; Sp. p. 844; Dr. p. 181; Gaz. vol. 132; p. 143.
Pump operated by compressed air. D. W. Starrett. No. 876,845; Jan. 14; Sp. p. 2351; Dr. p. 515; Gaz. vol. 132; p. 415.
Pump operated by compressed air. D. W. Starrett. No. 876,846; Jan. 14; Sp. p. 2352; Dr. p. 515; Gaz. vol. 132; p. 416.
Pump regulator, Hydraulic-. E. Griswold. No. 877,563; Jan. 28; Sp. p. 3864; Dr. p. 836; Gaz. vol. 132; p. 715.
Pumps, Safety clutch for power-driving. W. H. Heard. No. 876,053; Jan. 7; Sp. p. 704; Dr. p. 151; Gaz. vol. 132; p. 122.
Punching and riveting machine J. R. French. No. 877,419; Jan. 21; Sp. p. 3554; Dr. pp. 768–9; Gaz. vol. 132; p. 647.
Push-button snap-switch. J. A. York. No. 876,511; Jan. 14; Sp. p. 1675; Dr. p. 365; Gaz. vol. 132; p. 305.
Puzzle. B. J. Dever and B. J. Delzeit. No. 876,779; Jan. 14; Sp. p. 2221; Dr. p. 488; Gaz. vol. 132; p. 394.
Puzzle. W. H. Maltbie. No. 876,820; Jan. 14; Sp. p. 2298; Dr. p. 505; Gaz. vol. 132; p. 406.
Pyrimidin derivative. L. Weber. (Reissue.) No. 12,745; Jan. 28; Sp. p. 4496; Gaz. vol. 132; p. 822.
Rack: *See* Display-rack; Electrical distributing-rack; Hay-rack.
Radiator. J. A. Strom. No. 877,011; Jan. 21; Sp. p. 2732; Dr. pp. 591–2; Gaz. vol. 132; p. 512.
Radiator. J. A. Lidvall. No. 877,575; Jan. 28; Sp. p. 3880; Dr. p. 841; Gaz. vol. 132; p. 718.
Radiator-making machine. F. H. Stoip. No. 875,746; Jan. 7; Sp. p. 131; Dr. pp. 29–30; Gaz. vol. 132; p. 26.
Radiator mounting and connection. M. J. Harkins, M. J. Rickard, and P. J. Cowley. No. 876,714; Jan. 14; Sp. p. 2114; Dr. p. 463; Gaz. vol. 132; p. 374.
Radiator-tubing. F. H. Stoip. No. 877,252; Jan. 21; Sp. p. 3238; Dr. p. 701; Gaz. vol. 132; p. 594.
Radiator-valve, Packless. J. Collis. No. 877,051; Jan. 21; Sp. p. 2821; Dr. p. 610; Gaz. vol. 132; p. 526.
Radiators, Relief-valve for. W. W. Brissenden. No. 877,309. Jan. 21; Sp. p. 3509; Dr. p. 761; Gaz. vol. 132; p. 639.
Rail cleaner, Groove-. C. H. Frick. No. 876,957; Jan. 21; Sp. p. 2616; Dr. p. 568; Gaz. vol. 132; p. 493.
Rail-joint. A. R. Rich. No. 875,735; Jan. 7; Sp. p. 111; Dr. p. 24; Gaz. vol. 132; p. 23.
Rail-joint. J. A. Scott. No. 877,007; Jan. 21; Sp. p. 2724; Dr. p. 590; Gaz. vol. 132; p. 510.
Rail-joint. P. O. Adams. No. 877,379; Jan. 21; Sp. p. 3288; Dr. p. 711; Gaz. vol. 132; p. 602.
Rail-joint. C. H. Ray. No. 877,455; Jan. 21; Sp. p. 3613; Dr. p. 783; Gaz. vol. 132; p. 658.
Rail-joint and nut-lock therefor. J. B. Baum. No. 875,768; Jan. 7; Sp. p. 174; Dr. p. 37; Gaz. vol. 132; p. 33.
Rail-joint, Insulated. P. J. Dalton. No. 877,057; Jan. 21; Sp. p. 2830; Dr. pp. 611–12; Gaz. vol. 132; p. 528.
Rail-joint, Insulated compromise. B. Wolhaupter. No. 877,817; Jan. 28; Sp. p. 4323; Dr. p. 930; Gaz. vol. 132; p. 794.
Railway apparatus, Cooling system for electric-. W. S. Moody. No. 877,467; Jan. 21; Sp. p. 3638; Dr. p. 788; Gaz. vol. 132; p. 661.
Railway block-signaling system, Automatic. S. M. Young. No. 876,419; Jan. 14; Sp. p. 1474; Dr. p. 316; Gaz. vol. 132; p. 272.
Railway brake-setting apparatus. J. J. McNamee. No. 867,357; Jan. 14; Sp. p. 1306; Dr. p. 302; Gaz. vol. 132; p. 262.
Railway-conductor's folder and car-record. A. Keiser. No. 876,062; Jan. 7; Sp. p. 726; Dr. p. 155; Gaz. vol. 132; p. 126.
Railway cross-tie. D. R. L. Boyd. No. 876,140; Jan. 7; Sp. p. 891; Dr. p. 192; Gaz. vol. 132; p. 151.
Railway-crossing. A. Hosmer. No. 877,340. Jan. 21; Sp. p. 3400; Dr. pp. 737–8; Gaz. vol. 132; p. 621.
Railway, Electric. O. D. Prescott. No. 876,659; Jan. 14; Sp. p. 2015; Dr. p. 439; Gaz. vol. 132; p. 357.
Railway-gate. J. R. Hinton. No. 875,814; Jan. 7; Sp. p. 261; Dr. p. 56; Gaz. vol. 132; p. 45.
Railway-joint. B. U. Annas. No. 877,604; Jan. 28; Sp. p. 4117; Dr. p. 891; Gaz. vol. 132; p. 757.
Railway journal-box appliance. W. F. Bentley. No. 876,764; Jan. 14; Sp. p. 2193; Dr. p. 482; Gaz. vol. 132; p. 389.
Railway, Pleasure- H. A. Lockwood. No. 877,106; Jan. 21; Sp. p. 2906; Dr. p. 629; Gaz. vol. 132; p. 541.
Railway-rail joint. J. M. Steele. No. 876,107; Jan. 7; Sp. p. 825; Dr. p. 177; Gaz. vol. 132; p. 140.
Railway screw-spikes, Machine for driving. D. P. Sheehan. No. 877,669; Jan. 28; Sp. p. 4077; Dr. p. 882; Gaz. vol. 132; p. 749.
Railway-signal. F. B. Corey. No. 876,944; Jan. 21; Sp. p. 2584; Dr. p. 563; Gaz. vol. 132; p. 488.
Railway-signal. W. N. Thompson. No. 877,385; Jan. 21; Sp. p. 3486; Dr. p. 756; Gaz. vol. 132; p. 635.
Railway-signal. J. C. Link. No. 877,464; Jan. 21; Sp. p. 3634; Dr. p. 787; Gaz. vol. 132; p. 661.
Railway signaling system. C. Enderlein. No. 876,953; Jan. 21; Sp. p. 2603; Dr. pp. 566–7; Gaz. vol. 132; p. 492.
Railway-spike. G. C. Dover. No. 875,779; Jan. 7; Sp. p. 200; Dr. p. 43; Gaz. vol. 132; p. 37.
Railway-switch. S. L. Shellenberger. No. 875,959; Jan. 7; Sp. p. 530; Dr. p. 113; Gaz. vol. 132; p. 93.
Railway-switch. J. B. Maya. No. 877,736; Jan. 28; Sp. p. 4276; Dr. p. 929; Gaz. vol. 132; p. 786.
Railway-switch safety appliance. J. W. McManama. No. 876,577; Jan. 14; Sp. p. 1825; Dr. p. 399; Gaz. vol. 132; p. 328.
Railway system, Electric-. S. B. Rappleye and J. J. Devine. No. 876,498; Jan. 14; Sp. p. 1625; Dr. p. 352; Gas. vol. 132; p. 297.
Railway-tie. A. F. Shuman. No. 875,856; Jan. 7; Sp. p. 331; Dr. p. 74; Gaz. vol. 132; p. 61.
Railway-tie. G. Bossi. No. 877,042; Jan. 21; Sp. p. 2804; Dr. p. 605; Gaz. vol. 132; p. 523.
Railway-tie, Metal. J. M. Hunnel. No. 877,567; Jan. 28; Sp. p. 3869; Dr. p. 837; Gaz. vol. 132; p. 716.
Railway-track brace. A. J. Coover. No. 877,759; Jan. 28; Sp. p. 4220; Dr. p. 918; Gaz. vol. 132; p. 777.
Railways, Safety-signal system for. W. F. Herting and F. C. Chlan. No. 876,911; Jan. 7; Sp. p. 447; Dr. p. 90; Gaz. vol. 132; p. 81.
Railways, Single-track signaling and train-controlling system for. F. E. Kinsman. No. 876,664; Jan. 7; Sp. p. 731; Dr. pp. 156–7; Gaz. vol. 132; p. 126.
Range. W. M. Fulton. No. 876,536; Jan. 14; Sp. p. 1730; Dr. p. 376; Gaz. vol. 132; p. 314.
Rarkes-drill. J. B. Blackwell. No. 877,268; Jan. 21; Sp. p. 2301; Dr. pp. 714–15; Gaz. vol. 132; p. 605.
Razor honing and stropping device. G. W. Mosby. No. 876,825; Jan. 14; Sp. p. 2304; Dr. p. 507; Gaz. vol. 132; p. 408.
Razor-strop or device for stropping razors or blades. A. Craig. No. 876,526; Jan. 14; Sp. p. 1715; Dr. p. 372; Gaz. vol. 132; p. 311.
Reach-bar. W. H. Ralmstraw. No. 876,613; Jan. 7; Sp. p. 635; Dr. p. 138; Gaz. vol. 132; p. 110.
Reactions, Apparatus for effecting. E. A. Sperry. No. 877,245; Jan. 21; Sp. p. 3221; Dr. p. 696; Gaz. vol. 132; p. 592
Reactions between solids and gases, Effecting. E. A. Sperry. No. 877,248; Jan. 21; Sp. p. 3224; Dr. p. 696; Gaz. vol. 132; p. 592.

Receptacle. C. Uhden. No. 877,811; Jan. 28; Sp. p. 4314; Sp. p. 937; Gaz. vol. 132; p. 792.
Receptacle or container for semifluid or other like substances. F. R. James. No. 876,968; Jan. 21; Sp. p. 2634; Dr. pp. 571–3; Gaz. vol. 132; p. 497.
Reclining-chair. W. White. No. 875,760; Jan. 7; Sp. p. 161; Dr. p. 35; Gaz. vol. 132; p. 31.
Recorder: *See* Sound-recorder.
Recorder. R. A. Wood. No. 876,854; Jan. 14; Sp. p. 2359; Dr. pp. 516–17; Gaz. vol. 132; p. 417.
Recording-gage, Automatic. W. E. Jerauld. No. 877,198; Jan. 21; Sp. p. 3125; Dr. p. 677; Gaz. vol. 132; p. 575.
Reducing-tank. R. S. Redfield. No. 877,371; Jan. 21; Sp. p. 3458; Dr. p. 751; Gaz. vol. 132; p. 630.
Reel: *See* Clothes-line reel; Fishing-reel; Fishing-line drying-reel.
Reel. C. A. Brinley. No. 877,397; Jan. 21; Sp. p. 3506; Dr. p. 760; Gaz. vol. 132; p. 639.
Reel-clamp. C. B. Kuhl. No. 876,648; Jan. 14; Sp. p. 1994; Dr. p. 434; Gaz. vol. 132; p. 354.
Reflector, Heat-. B. C. Oblinger. No. 876,909; Jan. 14; Sp. p. 2477; Dr. p. 541; Gaz. vol. 132; p. 437.
Refrigerator. G. Frank. No. 877,496; Jan. 28; Sp. p. 3714; Dr. p. 804; Gaz vol. 132; p. 692.
Refrigerator-guard. J. F. Davis. No. 875,785; Jan. 7; Sp. p. 209; Dr. p. 45; Gaz. vol. 132; p. 39.
Register: *See* Cash-register; Electrical register.
Registering apparatus. N. J. Barnd. No. 877,542; Jan. 28; Sp. p. 3827; Dr. pp. 827–8; Gaz. vol. 132; p. 708.
Registering device. R. Hunter. No. 877,420; Jan. 21; Sp. p. 3573; Dr. pp. 772–3; Gaz vol. 132; p. 650.
Registering mechanism. J. Schinneller. No. 877,668; Jan. 28; Sp. p. 4067; Dr. pp. 881–2; Gaz. vol. 132; p. 749.
Regulating device, Automatic. P. H. Thomas. No. 877,258; Jan. 21; Sp. p. 3246; Dr. p. 703; Gaz. vol. 132; p. 596.
Regulator: *See* Controller-regulator; Draft-regulator; Fluid-pressure regulator; Motor-controller regulator; Motor speed-regulator; Potential-regulator; Pump-regulator; Speed-regulator.
Rein-coupling. T. Forstner. No. 876,341; Jan. 14; Sp. p. 1302; Dr. p. 281; Gaz. vol. 132; p. 247.
Rein-guard. G. W. Born. No. 876,139; Jan. 7; Sp. p. 889; Dr. p. 191; Gaz. vol. 132; p. 161.
Rein-guide. P. Schallow. No. 877,128; Jan. 21; Sp. p. 2979; Dr. p. 643; Gaz. vol. 132; p. 551.
Relay, Polarized. C. H. Thordarson. No. 876,413; Jan. 14; Sp. p. 1455; Dr. p. 313; Gaz. vol. 132; p. 270.
Release-starter, Automatic electrical. A. J. Burne. No. 876,326; Jan. 14; Sp. p. 1264; Dr. pp. 274–5; Gaz. vol. 132; p. 242.
Releasing device, Electrically-controlled. R. P. Barnes. No. 876,036; Jan. 7; Sp. p. 677; Dr. p. 145; Gaz. vol. 132; p. 117.
Releasing device, Electrically-controlled. C. J. Kintner. No. 876,274; Jan. 7; Sp. p. 1150; Dr. p. 250; Gaz. vol. 132; p. 193.
Retort-furnace, Regenerative. R. Ziesing. No. 876,891; Jan. 14; Sp. p. 2444; Dr. p. 532; Gaz. vol. 132; p. 431.
Reversing-switch. A. C. Eastwood. No. 875,900; Jan. 7; Sp. p. 421; Dr. p. 93; Gaz. vol. 132; p. 77.
Ring: *See* Bull-ring; Curtain-pole ring; File-ring; Spinning-machine traveler-ring; Yoke-ring.
Rivet-cutter and punch. C. H. Lau. No. 876,068; Jan. 7; Sp. p. 748; Dr. pp. 158–9; Gaz. vol. 132; p. 128.
Road-machine. S. W. Smith. No. 876,846; Jan. 14; Sp. p. 2343; Dr. p. 514; Gaz. vol. 132; p. 414.
Roadway. G. A., A. J. and E. E. Mitchell. No. 876,377; Jan. 14; Sp. p. 1365; Gaz. vol. 132; p. 258.
Roaster, Meat-. J. D. Lewis. No. 877,463; Jan. 21; Sp. p. 3632; Dr. pp. 786–7; Gaz. vol. 132; p. 660.
Roasting apparatus, Meat-. L. Nelson. No. 876,579; Jan. 14; Sp. p. 1830; Dr. p. 400; Gaz. vol. 132; p. 329.
Rock-drill. R. S. Trott. No. 872,869; Jan. 7; Sp. p. 355; Dr. p. 79; Gaz. vol. 132; p. 66.
Rod: *See* Lightning-rod.
Roller: *See* Can-roller; Shade-roller.
Roller and barrow, Combined. C. C. Dollison. No. 876,951; Jan. 21; Sp. p. 2600; Dr. pp. 565–6; Gaz. vol. 132; p. 491.
Rolling-mills, Table-operating mechanism for. F. C. Biggert, Jr. No. 876,894; Jan. 14; Sp. p. 2450; Dr. pp. 534–5; Gaz. vol. 132; p. 432.
Roofing construction, Metallic. C. Spornhauer. No. 877,133; Jan. 21; Sp. p. 2985; Dr. p. 645; Gaz. vol. 132; p. 553.
Roofing-fastener. A. E. Roever. No. 876,843; Jan. 14; Sp. p. 2337; Dr. p. 513; Gaz. vol. 132; p. 413.
Roofing material, Method of and means for making. F. C. Overbury. No. 876,005; Jan. 7; Sp. p. 629; Dr. p. 134; Gaz. vol. 132; p. 109.
Roofing material, Method of and means for making. F. C. Overburry. No. 876,010; Jan. 7; Sp. p. 631; Dr. p. 135; Gaz. vol. 132; p. 109.
Roofing, Sheet-metal. J. F. Galbraith. No. 877,539; Jan. 28; Sp. p. 4008; Dr. p. 866; Gaz. vol. 132; p. 740.
Roofing-strip. F. C. Overbury. No. 876,009; Jan. 7; Sp. p. 630; Dr. p. 134; Gaz. vol. 132; p. 109.
Room, Extension-. P. G. Hubert. No. 877,190; Jan. 21; Sp. p. 3121; Dr. p. 676; Gaz. vol. 132; p. 574.
Roost, Poultry-. S. Percival. No. 876,833; Jan. 14; Sp. p. 2319; Dr. p. 510; Gaz. vol. 132; p. 410.
Rope-clamp. M. Blum and J. Stein. No. 876,138; Jan. 7; Sp. p. 889; Dr. p. 191; Gaz. vol. 132; p. 150.
Rope-holding device. W. Brundell. No. 876,770; Jan. 14; Sp. p. 2205; Dr. p. 485; Gaz. vol. 132; p. 391.
Rope-splicing device. W. Melland and W. H. Nield. No. 876,572; Jan. 14; Sp. p. 1811; Dr. pp. 395–6; Gaz. vol. 132; p. 326.
Rotary engine. R. H. Higginbotham. No. 876,184; Jan. 7; Sp. p. 967; Dr. p. 209; Gaz. vol. 132; p. 164.
Rotary engine. F. A. Cleveland. No. 876,691; Jan. 14; Sp. p. 2078; Dr. pp. 451–2; Gaz. vol. 132; p. 367.
Rotary engine. A. F. Ford. No. 876,707; Jan. 14; Sp. p. 2104; Dr. p. 458; Gaz. vol. 132; p. 372.
Rotary engine. E. H. Barrett. No. 876,763; Jan. 14; Sp. p. 2191; Dr. pp. 481–2; Gaz. vol. 132; p. 389.
Rotary engine. E. E. Lord. No. 876,818; Jan. 14; Sp. p. 2294; Dr. p. 504; Gaz. vol. 132; p. 406.
Rotary engine. J. Marsden. No. 877,103; Jan. 21; Sp. p. 2915; Dr. p. 630; Gaz. vol. 132; p. 542.
Rotary engine. C. R. Reid. No. 877,733; Jan. 28; Sp. p. 4182; Dr. p. 907; Gaz. vol. 132; p. 768.
Rotary engine. A. Mercer. No. 877,854; Jan. 28; Sp. p. 4400; Dr. pp. 957–8; Gaz. vol. 132; p. 807.
Rotary engine. E. Srnec. No. 877,872; Jan. 28; Sp. p. 4433; Dr. pp. 965–6; Gaz. vol. 132; p. 813.
Rotary motor. J. C. Reuter. No. 876,396; Jan. 14; Sp. p. 1419; Dr. pp. 306–7; Gaz. vol. 132; p. 265.
Rotary screen. G. F. Smallee. No. 877,803; Jan. 28; Sp. p. 4303; Dr. p. 934; Gaz. vol. 132; p. 790.
Routing-machine. G. L. Kelley. No. 877,894; Jan. 28; Sp. p. 4483; Dr. pp. 976–7; Gaz. vol. 132; p. 820.
Running-gear. A. F. Clark. No. 877,488; Jan. 28; Sp. p. 3688; Dr. p. 800; Gaz. vol. 132; p. 689.
Rubber-holder. F. C. Reed. No. 876,091; Jan. 7; Sp. p. 796; Dr. p. 170; Gaz. vol. 132; p. 135.
Rule-gage. W. E. Morgan. No. 877,218; Jan. 21; Sp. p. 3178; Dr. p. 680; Gaz. vol. 132; p. 583.
Running-gear, Front-. G. B. Babcock. No. 877,150; Jan. 21; Sp. p. 3042; Dr. p. 650; Gaz. vol. 132; p. 561.
Sad-iron, Electric. W. J. Barr. No. 876,953; Jan. 7; Sp. p. 1094; Dr. p. 238; Gaz. vol. 132; p. 186.
Sad-iron, Electric. W. M. Harwood. No. 876,630; Jan. 14; Sp. p. 1976; Dr. p. 430; Gaz. vol. 132; p. 350.
Saddle, Top-roll. E. Dixon. No. 876,950; Jan. 21; Sp. p. 2599; Dr. p. 565; Gaz. vol. 132; p. 491.
Safety-pin. H. Kaspar and J. Krejci. No. 877,085; Jan. 21; Sp. p. 2875; Dr. p. 621; Gaz. vol. 132; p. 536.
Safety system, Electric. H. A. Hill. No. 876,804; Jan. 14; Sp. p. 2250; Dr. p. 497; Gaz. vol. 132; p. 401.
Salts, Electrolyzing. J. Whiting. No. 877,537; Jan. 28; Sp. p. 3799; Dr. pp. 822–3; Gaz. vol. 132; p. 706.
Sample-holder. J. F. Sadler. No. 877,599; Jan. 28; Sp. p. 3935; Dr. p. 851; Gaz. vol. 132; p. 726.
Sanding tables. F. W. Niemann. No. 877,112; Jan. 21; Sp. p. 2932; Dr. p. 634; Gaz. vol. 132; p. 545.
Sandpapering-machines, Means for lubricating. J. L. Perry. No. 876,911; Jan. 14; Sp. p. 2480; Dr. p. 542; Gaz. vol. 132; p. 437.
Sap-collector. M. Hall. No. 876,174; Jan. 7; Sp. p. 948; Dr. p. 204; Gaz. vol. 132; p. 161.
Sash, Convertible window-. H. J. Foltz. No. 876,050; Jan. 7; Sp. p. 700; Dr. p. 150; Gaz. vol. 132; p. 121.
Sash-fastener. R. Flemming, Jr. No. 875,904; Jan. 7; Sp. p. 430; Dr. p. 95; Gaz. vol. 132; p. 78.
Sash-fastener. C. H. Messick. No. 876,200; Jan. 7; Sp. p. 1012; Dr. p. 220; Gaz. vol. 132; p. 172.
Sash-fastener. F. H Bleyer. No. 876,420; Jan. 14; Sp. p. 1466; Dr. p. 322; Gaz. vol. 132; p. 276.
Sash-fastener. W. W. Klima. No. 877,722; Jan. 28; Sp. p. 4102; Dr. p. 901; Gaz. vol. 132; p. 765.
Sash-fastener. B. B.Turner. No. 877,809; Jan. 28; Sp. p. 4310; Dr. pp. 935–6; Gaz. vol. 132; p. 792.
Sash, Metallic window-. E. H. Johnson. No. 876,556; Jan. 14; Sp. p. 1769; Dr. p. 386; Gaz. vol. 132; p. 320.
Sash opening and closing device, Window-. A. Plass. No. 876,467; Jan. 14; Sp. p. 1622; Dr. pp. 351–2; Gaz. vol. 132; p. 296.
Saw. E. G. Ward. No. 877,146; Jan. 21; Sp. p. 3018; Dr. p. 682; Gaz. vol. 132; p. 557.
Saw-guide, Drag-. S. S. Pearl. No. 876,226; Jan. 7; Sp. p. 1054; Dr. p. 227; Gaz. vol. 132; p. 178.
Saw handle, Crosscut-. C. Brockelhurst. No. 877,166; Jan. 21; Sp. p. 3067; Dr. p. 664; Gaz. vol. 132; p. 565.
Saw, Planing-. C. E. Rider. No. 877,760; Jan. 28; Sp. p. 4296; Dr. p. 932; Gaz. vol. 132; p. 789.
Saw-swage. C. A. Knowles. No. 876,196; Jan. 7; Sp. p. 992; Dr. p. 215; Gaz. vol. 132; p. 169.
Saws, Roller-guide for band-. E. C. Lippmann and R. McKinney. No. 876,816; Jan. 14; Sp. p. 2292; Dr. p. 503; Gaz. vol. 132; p. 405.
Sawing-machine. L. R. Colbert. No. 877,410; Jan. 21; Sp. p. 3539; Dr. p. 766; Gaz. vol. 132; p. 644.
Sawing-machine, Band. E. T. Davies. No. 876,302; Jan. 7; Sp. p. 1219; Dr. p. 266; Gaz. vol. 132; p. 204.
Sawmill, Double-cutting rotary. C. J. Zeltinger. No. 877,392; Jan. 21; Sp. p. 3496; Dr. p. 759; Gaz. vol. 132; p. 637.
Sawmill set-works. N. E. Rice. No. 877,662; Jan. 28; Sp. p. 4053; Dr. pp. 876–7; Gaz. vol. 132; p. 747.
Sawmill set-works, Appliance for. W. F. Koch. No. 877,090; Jan. 21; Sp. p. 2894; Dr. p. 623; Gaz. vol. 132; p. 537.
Scaffold-bracket, Safety. J. R. Watt. No. 875,970; Jan. 7; Sp. p. 557; Dr. p. 119; Gaz. vol. 132; p. 97.
Scaffolds, Track and carriage for swing-. R. Kersey. No. 876,194; Jan. 7; Sp. p. 984; Dr. p. 213; Gaz. vol. 132; p. 167.
Scale. E. M. Wade. No. 876,288; Jan. 7; Sp. p. 1179; Dr. pp. 256–7; Gaz. vol. 132; p. 198.
Scale. W. G. Templeton. No. 877,680; Jan. 28; Sp. p. 4094; Dr. p. 886; Gaz. vol. 132; p. 753.
Scale, Monitory combination weighing-. H. Marer. No. 876,996; Jan. 21; Sp. p. 2664; Dr. p. 579; Gaz. vol. 132; p. 502.
Scales, Recording weight-beam for. W. N. Gilbert. No. 876,058; Jan. 21; Sp. p. 2617; Dr. p. 568; Gaz. vol. 132; p. 493.
Scissors-gage. W. B. Kitterman. No. 876,085; Jan. 7; Sp. p. 745; Dr. p. 157; Gaz. vol. 132; p. 127.
Scoops, Attachment for steam-shovel. J. W. Turner. No. 876,111; Jan. 7; Sp. p. 836; Dr. p. 179; Gaz. vol. 132; p. 141.
Scoring device. M. F. Stanley. No. 875,882; Jan. 7; Sp. p. 342; Dr. p. 76; Gaz. vol. 132; p. 63.

Scraper. W. Erdmann. No. 876,789; Jan. 14; Sp. p. 2238; Dr. p. 492; Gaz. vol. 132; p. 397.
Scraper, Floor-. A. Kilbury. No. 876,885; Jan. 14; Sp. p. 2429; Dr. pp. 529-30; Gaz. vol. 132; p. 428.
Screen: *See* Head-screen; Rotary screen; Window-screen.
Screen and washstand, Combined. A. L. Jones. No. 876,807; Jan. 14; Sp. p. 2264; Dr. p. 496; Gaz. vol. 132; p. 402.
Screen-fastener. E. Sauvageau. No. 877,127; Jan. 21; Sp. p. 2978; Dr. p. 643; Gaz. vol. 132; p. 551.
Screw. L. Searelle. No. 877,131; Jan. 21; Sp. p. 2983; Dr. p. 644; Gaz. vol. 132; p. 552.
Screw-driver, Ratchet. J. P. Bartholomay. No. 876,880; Jan. 14; Sp. p. 2047; Dr. p. 446; Gaz. vol. 132; p. 363.
Screw-machine, Automatic. H. B Lester. No. 876,814; Jan. 14; Sp. p. 2272; Dr. pp. 500-1; Gaz. vol. 132; p. 404.
Screws, Manufacture of wood-. W. G. Allen. No. 877,157; Jan. 21; Sp. p. 3033; Dr. p. 657; Gaz. vol. 132; p. 561.
Seal, Box-. G. F. Edgington. No. 877,494; Jan. 28; Sp. p. 3710; Dr. p. 803; Gaz. vol. 132; p. 692.
Seal, Car-. E. S Prior. No. 876,838; Jan. 14; Sp. p. 2329; Dr. p. 512; Gaz. vol. 132; p. 412.
Seal, Self-locking. H. G. Bentley. No. 876,255; Jan. 7; Sp. p. 1103; Dr. p. 239; Gaz. vol. 132; p. 187.
Sealing and vacuum-releasing device, Jar-. J. L. Rollins. No. 876,591; Jan. 14; Sp. p. 1854; Dr. p. 406; Gaz. vol. 132; p. 333.
Sealing machine, Envelop-. F. A. Norris. No. 877,221; Jan. 21; Sp. p. 3181; Dr. pp. 689-90; Gaz. vol. 132; p. 584.
Seaming-machine. O. S. Beyer. No. 877,480; Jan. 28; Sp. p. 3668; Dr. pp. 795-7; Gaz. vol. 132; p. 686.
Seaming machine, Stationary-can double-. F. Rudolphi. No. 877,375; Jan. 21; Sp. p. 3463; Dr. pp. 752-3; Gaz. vol. 132; p. 632.
Seat: *See* Folding seat.
Seat structure, Spring-. J. H. Cook. No. 876,527; Jan. 14; Sp. p. 1714; Dr. p. 372; Gaz. vol. 132; p. 311.
Seed-feed device. W. G. Bolus. No. 877,547; Jan. 28; Sp. p. 3840; Dr. p. 831; Gaz. vol. 132; p. 710.
Seeder, Tobacco-. B. Mylor and T. Heady. No. 876,076; Jan. 7; Sp. p. 769; Dr. p. 164; Gaz. vol. 132; p. 130.
Seeding-machine. W. L. Paul. No. 877,469; Jan. 21; Sp. p. 3643; Dr. p. 789; Gaz. vol. 132; p. 662.
Seeding-machine or cotton-planter. W. L. Paul. No. 877,116; Jan. 21; Sp. p. 2939; Dr. pp. 635-6; Gaz. vol. 132; p. 546.
Self-reristering lock. H. Lanham. No. 876,201; Jan. 7; Sp. p. 995; Dr. p. 216; Gaz. vol. 132; p. 169.
Semaphore-signal. R. Herman. No. 876,962; Jan. 21; Sp. p. 2623; Dr. p. 570; Gaz. vol. 132; p. 495.
Sensitive sheets, Device for successively exposing. C. P. Goerz. No. 877,499; Jan. 28; Sp. p. 3721; Dr. p. 805; Gaz. vol. 132; p. 694.
Separator: *See* Air-separator; Cream-separator; Cream and butter separator; Ore-separator.
Separator for collated articles. B. F. Ennis. No. 876,627; Jan. 14; Sp. p. 1943; Dr. pp. 423-4; Gaz. vol. 132; p. 346.
Serving-table. H. Vogler. No. 877,812; Jan. 28; Sp. p. 4315; Dr. p. 937; Gaz. vol. 132; p. 793.
Sewage-ejector. W. McClintock. No. 877,794; Jan. 28; Sp. p. 4283; Dr. p. 931; Gaz. vol. 132; p. 788.
Sewage liquefying and purifying apparatus, Portable. F. J. Commin. No. 875,984; Jan. 7; Sp. p. 585; Dr. p. 125; Gaz. vol. 132; p. 101.
Sewage-treating apparatus. A. I. Joseph. No. 877,569; Jan. 28; Sp. p. 3872; Dr. p. 837; Gaz. vol. 132; p. 717.
Sewed articles, Seam for. J. P. Weis. No. 877,275; Jan. 21; Sp. p. 3282; Dr. p. 710; Gaz. vol. 132; p. 601.
Sewing-machine. H. A. Klemm. No. 877,508; Jan. 28; Sp. p. 3739; Dr. pp. 809-10; Gaz. vol. 132; p. 696.
Sewing-machine attachment. A. Elben and A. Gyurcso. No. 877,537; Jan. 28; Sp. p. 4373; Dr. pp. 950-1; Gaz. vol. 132; p. 802.
Sewing machine, Boot and shoe. N. H. Murphy and G. H. Putnam. No. 876,482; Jan. 14; Sp. p. 1604; Dr. p. 345; Gaz. vol. 132; p. 294.
Sewing-machine gage. J. A. Flood. No. 876,162; Jan. 7; Sp. p. 925; Dr. p. 199; Gaz. vol. 132; p. 157.
Sewing machine, Shoe-. C. L. Eaton. No. 877,556; Jan. 28; Sp. p. 3852; Dr. pp. 833-4; Gaz. vol. 132; p. 712.
Sewing-machine stopping mechanism. H. C. Miller. No. 876,211; Jan. 7; Sp. p. 1017; Dr. pp. 220-1; Gaz. vol. 132; p. 173.
Sewing-machine tuck-marking attachment. W. M. Ammerman. No. 877,475; Jan. 28; No. 3661; Dr. p. 794; Gaz. vol. 132; p. 685.
Sewing-machine tucker and gatherer. P. T. Smith. No. 876,105; Jan. 7; Sp. p. 818; Dr. pp. 175-6; Gaz. vol. 132; p. 139.
Sewing-machines, Under-thread mechanism for. J. Vannette. No. 875,751; Jan. 7; Sp. p. 140; Dr. pp. 31-3; Gaz. vol. 132; p. 28.
Sewing-machines, Welt and thread cutting means for. T. G. Plant. No. 877,858; Jan. 28; Sp. p. 4406; Dr. pp. 859-60; Gaz. vol. 132; p. 808.
Sewing-machines, Welt-measuring means for. T. G. Plant. No. 877,859; Jan. 28; Sp. p. 4410; Dr. p. 960; Gaz. vol. 132; p. 809.
Sexual armor. E. E. Perkins. No. 875,845; Jan. 7; Sp. p. 314; Dr. pp. 68-9; Gaz. vol. 132; p. 58.
Shackle, Animal-. J. Jones. No. 877,717; Jan. 28; Sp. p. 4153; Dr. p. 899; Gaz. vol. 132; p. 765.
Shackle, Lifting-. C. A. Terry. No. 876,505; Jan. 14; Sp. p. 1658; Dr. p. 360; Gaz. vol. 132; p. 303.
Shade and curtain fixture. E. E. Palmer. No. 877,591; Jan. 28; Sp. p. 3923; Dr. p. 849; Gaz. vol. 132; p. 724.
Shade fixture, Window-. A. Holmes. No. 877,425; Jan. 21; Sp. p. 3565; Dr. p. 771; Gaz. vol. 132; p. 649.
Shade or curtain holder, Adjustable. G. F. Shermer. No. 876,738; Jan. 14; Sp. p. 2156; Dr. p. 473; Gaz. vol. 132; p. 382.
Shade-roller. A. T. Foster. No. 877,070; Jan. 21; Sp. p. 2851; Dr. p. 616; Gaz. vol. 132; p. 532.
Shaft-coupling. J. N. Owens. No. 877,113; Jan. 21; Sp. p. 2933; Dr. pp. 634-5; Gaz. vol. 132; p. 545.
Shaft-supporter. S. Tracy. No. 876,029; Jan. 7; Sp. p. 665; Dr. p. 143; Gaz. vol. 132; p. 115.
Shaft, Vehicle. W. H. Rakestraw. No. 876,014; Jan. 7; Sp. p. 637; Dr. p. 136; Gaz. vol. 132; p. 110.
Sharpening plowshares, disks, &c., Machine for. D. H. Sneed. No. 876,742; Jan. 14; Sp. p. 2161; Dr. pp. 474-5; Gaz. vol. 132; p. 383.
Shearing-machine. C. M. Palmer. No. 877,517; Jan. 28; Sp. p. 3759; Dr. p. 814; Gaz. vol. 132; p. 700.
Shears. O. Witt. No. 877,601; Jan. 28; Sp. p. 4114; Dr. p. 890; Gaz. vol. 132; p. 756.
Shears for cutting iron. W. A. Gahler. No. 877,764; Jan. 28; Sp. p. 4237; Dr. p. 920; Gaz. vol. 132; p. 778.
Sheathing, Metallic. B. F. Savery. No. 876,088; Jan. 7; Sp. p. 804; Dr. p. 172; Gaz. vol. 132; p. 136.
Sheathing, Metallic. L. J. Berg. No. 876,134; Jan. 7; Sp. p. 840; Dr. p. 189; Gaz. vol. 132; p. 149.
Sheet-iron vessels, Manufacturing. J. H. W. Gebler. No. 877,321; Jan. 21; Sp. p. 3376; Dr. p. 731; Gaz. vol. 132; p. 615.
Shells, Spreader for. H. E. Winans and F. Sinnock. No. 875,762; Jan. 7; Sp. p. 164; Dr. p. 36; Gaz. vol. 132; p. 32.
Shield for enlarged joints. J. H. Schiffhauer. No. 876,022; Jan. 7; Sp. p. 655; Dr. p. 140; Gaz. vol. 132; p. 113.
Shingle. J. W. Troeger. No. 877,019; Jan. 21; Sp. p. 2753; Dr. p. 596; Gaz. vol. 132; p. 515.
Ship. J. Reid. No. 875,734; Jan. 7; Sp. p. 107; Dr. p. 23; Gaz. vol. 132; p. 22.
Ship, Device for retarding and stopping the motion of. E. P. A. Villette. No. 875,752; Jan. 7; Sp. p. 150; Dr. p. 33; Gaz.vol. 132; p. 28.
Shipping-can. J. B. Whitehead. No. 877,516; Jan. 28; Sp. p. 4321; Dr. p. 938; Gaz. vol. 132; p. 794.
Shirt attachment. J. Plaut. No. 877,366; Jan. 21; Sp. p. 3452; Dr. p. 748; Gaz. vol. 132; p. 629.
Shirt-drier. P. J. Timberlake. No. 877,226; Jan. 21; Sp. p. 3187; Dr. p. 691; Gaz. vol. 132; p. 585.
Shock-absorber. L. Whitcomb. No. 875,759; Jan. 7; Sp. p. 160; Dr. p. 35; Gaz. vol. 132; p. 31.
Shock-absorber G. M. Wilson. No. 877,301; Jan. 21; Sp. p. 3495; Dr. p. 758; Gaz. vol. 132; p. 637.
Shoe. C. R. Schleifer. No. 877,809; Jan. 28; Sp. p. 4429; Dr. p. 964; Gaz. vol. 132; p. 812.
Shoe-form. G. H. Clark. No. 877,049; Jan. 21; Sp. p. 2818; Dr. p. 609; Gaz. vol. 132; p. 525.
Shoe-ironer. S. J. Wentworth. No. 876,249; Jan. 7; Sp. p. 1089; Dr. p. 238; Gaz. vol. 132; p. 185.
Shoe lining, backstay, and counter. J. Mitchell. No. 876,473; Jan. 14; Sp. p. 1589; Dr. p. 341; Gaz. vol. 132; p. 291.
Shoe, Low-cut. W. G. Clopton. No. 876,897; Jan. 14; Sp. p. 2457; Dr. p. 530; Gaz. vol. 132; p. 433.
Shoe-upper. W. M. Griffin. No. 877,075; Jan. 21; Sp. p. 2859; Dr. p. 617; Gaz. vol. 132; p. 533.
Shoemaker's gage. F. L. Richardson. No. 877,864; Jan. 28; Sp. p. 4422; Dr. p. 962; Gaz. vol. 132; p. 810.
Shoulder-brace. G. T. Folts. No. 877,560; Jan. 28; Sp. p. 3859; Dr. p. 835; Gaz. vol. 132; p. 714.
Shovel: *See* Miner's shovel; Steam-shovel.
Shovel and brush, Combined. T. J. Thompson. No. 877,614; Jan. 28; Sp. p. 3972; Dr. p. 858; Gaz. vol. 132; p. 731.
Show-case. J. H. McKiernan and E. A. Patrick. No. 875,838; Jan. 7; Sp. p. 304; Dr. p. 66; Gaz. vol. 132; p. 56.
Show-case. J. F. Blerend. No. 876,617; Jan. 14; Sp. p. 1922; Dr. p. 419; Gaz. vol. 132; p. 343.
Shredding-machine. M. F. Williams. No. 877,600; Jan. 28; Sp. p. 4109; Dr. p. 889; Gaz. vol. 132; p. 755.
Shredding-machine. M. F. Williams. No. 877,600; Jan. 28; Sp. p. 4112; Dr. p. 889; Gaz. vol. 132; p. 756.
Shutter, Flexible or rolling metallic. A. Rush. No. 876,903; Jan. 14; Sp. p. 1857; Dr. p. 406; Gaz. vol. 132; p. 334
Shuttle. G. Pavia. No. 876,065; Jan. 7; Sp. p. 757; Dr. p. 168; Gaz. vol. 132; p. 133.
Shuttle-threader. J. N. Le Vasseur-Belisle. No. 876,465; Jan. 14; Sp. p. 1575; Dr. p. 358; Gaz. vol. 132; p. 289.
Sifter, Flour-. J. E. Trice. No. 872,868; Jan. 7; Sp. p. 364; Dr. p. 79; Gaz. vol. 132; p. 66.
Sign, Advertising-. L. J. Lundgren. No. 876,570; Jan. 14; Sp. p. 1807; Dr. pp. 394-5; Gaz. vol. 132; p. 325.
Sign-illuminating device. W. H. Nicolay. No. 877,362; Jan. 21; Sp. p. 3444; Dr. p. 747; Gaz. vol. 132; p. 628.
Sign, Street-. A. O. Warner. No. 876,754; Jan. 14; Sp. p. 2177; Dr. p. 478; Gaz. vol. 132; p. 388.
Signal: *See* Railway-signal.
Signaling apparatus, Electric. S. Evershed. No. 877,311; Jan. 21; Sp. p. 3354; Dr. p. 727; Gaz. vol. 132; p. 611.
Silage-distributer. J. Dick. No. 877,304; Jan. 21; Sp. p. 3337; Dr. pp. 723-4; Gaz. vol. 132; p. 609.
Singeing-machine. W. W. Burson. No. 875,980; Jan. 7; Sp. p. 572; Dr. pp. 123-4; Gaz. vol. 132; p. 100.
Sink or tub, Folding. A. Hines, C. Champeny, and J. L. Crisler. No. 877,770; Jan. 28; Sp. p. 4248; Dr. p. 922; Gaz. vol. 132; p. 780.
Sintering blue-billy. J. G. Bergquist. No. 877,304; Jan. 21; Sp. p. 3500; Gaz. vol. 132; p. 638.
Skate. G. Fletcher. No. 875,905; Jan. 7; Sp. p. 431; Dr. p. 95; Gaz. vol. 132; p. 78.
Skate, Combined roller and ice. T. Spacie. No. 876,245; Jan. 7; Sp. p. 1083; Dr. p. 237; Gaz. vol. 132; p. 184.
Skate, Roller-. P. M. Rulli and J. V. Martrano. No. 876,093; Jan. 7; Sp. p. 798; Dr. p. 170; Gaz. vol. 132; p. 135.
Skid and truck. G. G. Connor. No. 877,758; Jan. 28; Sp. p. 4228; Dr. p. 917; Gaz. vol. 132; p. 776.
Skidding device, Slack-pulling. J. A. Hanseleder. No. 876,574; Jan. 14; Sp. p. 2407; Dr. p. 524; Gaz. vol. 132; p. 425.
Skidding, Projector against. C. Henke. No. 877,760; Jan. 28; Sp. p. 4247; Dr. p. 922; Gaz. vol. 132; p. 780.
Skiving-machine gage. M. Cavanagh. No. 876,772; Jan. 14; Sp. p. 2208; Dr. p. 486; Gaz. vol. 132; p. 392.
Slasher. A. E. Rhoades. No. 877,463; Jan. 28; Sp. p. 4416; Dr. p. 963; Gaz. vol. 132; p. 810.
Sled. T. Mouradick. No. 876,723; Jan. 7; Sp. p. 87; Dr. p. 18; Gaz. vol. 132; p. 19.

Sleeper attachment for day-coaches. J. A. Shires. No. 876,887; Jan. 14; Sp. p. 2435; Dr. pp. 530-1; Gaz. vol. 132; p. 429.
Sleeve, Connecting branch. D. F. O'Brien. No. 875,729; Jan. 7; Sp. p. 100; Dr. p. 21; Gaz. vol. 132; p. 21.
Sleigh-knee. J. A. Bergren. No. 877,285; Jan. 21; Sp. p. 3296; Dr. p. 713; Gaz. vol. 132; p. 604.
Slimes-filter apparatus. E. M. Clark. No. 877,631; Jan. 28; Sp. p. 3997; Dr. p. 804; Gaz. vol. 132; p. 737.
Slough-filler. S. P. Marsh and N. Timson. No. 876,467; Jan. 14; Sp. p. 1576; Dr. pp. 338-9; Gaz. vol. 132; p. 289.
Smelting-furnace with oil fire. A. Koch. No. 876,275; Jan. 7; Sp. p. 1153; Dr. pp. 250-1; Gaz. vol. 132; p. 194.
Snap-fastener. G. A. Holmes. No. 875,816; Jan. 7; Sp. p. 263; Dr. p. 57; Gaz. vol. 132; p. 49.
Soap cake. A. F. Conery, Jr. No. 875,985; Jan. 7; Sp. p. 587; Dr. p. 126; Gaz. vol. 132; p. 102.
Socket-key clamp. M. Loewenthal. No. 875,830; Jan. 7; Sp. p. 286; Dr. p. 52; Gaz. vol. 132; p. 53.
Socket shell. H. Hubbell. No. 876,552; Jan. 14; Sp. p. 1762; Dr. p. 383; Gaz. vol. 132; p. 319.
Socket shells, cannisters, &c., Means for locking caps to. A. C. Gaynor. No. 876,630; Jan. 14; Sp. p. 1953; Dr. p. 425; Gaz. vol. 132; p. 347.
Solder-wiping machine. R. M. Lovell and A. G. Fahrney. No. 876,650; Jan. 14; Sp. p. 1997; Dr. p. 435; Gaz. vol. 132; p. 354.
Soldering compound. O. C. Hoover. No. 877,505; Jan. 28; Sp. p. 3735; Gaz. vol. 132; p. 696.
Sound-producing mechanism. C. F. Graham. No. 877,327; Jan. 21; Sp. p. 3383; Dr. p. 733; Gaz. vol. 132; p. 617.
Sound recorder and reproducer. M. Schwartz. No. 875,853; Jan. 7; Sp. p. 325; Dr. p. 72; Gaz. vol. 132; p. 60.
Sound reproducing and modifying device. W. W. Young. No. 876,035; Jan. 7; Sp. p. 675; Dr. p. 145; Gaz. vol. 132; p. 117
Sower, Fertilizer-. R. Blair. No. 877,040; Jan. 21; Sp. p. 2800; Dr. pp. 604-5; Gaz. vol. 132; p. 522.
Spacing-tool. C. McKenzie. No. 877,795; Jan. 28; Sp. p. 4291; Dr. p. 931; Gaz. vol. 132; p. 788.
Spades, shovels, and handles, Attachment for. A. Fossel. No. 876,793; Jan. 14; Sp. p. 2243; Dr. p. 493; Gaz. vol. 132; p. 398.
Spark-arrester. G. A. Volby. No. 876,417; Jan. 14; Sp. p. 1470; Dr. p. 316; Gaz. vol. 132; p. 272.
Spark-coil. A. R. Luschka. No. 877,656; Jan. 28; Sp. p. 4039; Dr. p. 872; Gaz. vol. 132; p. 745.
Sparking device. B. G. Gilbough. No. 875,907; Jan. 7; Sp. p. 434; Dr. pp. 96-7; Gaz. vol. 132; p. 79.
Speed and brake mechanism, Combined changeable-. E. P. Bullard, Jr. No. 877,404; Jan. 21; Sp. p. 3524; Dr. p. 764; Gaz. vol. 132; p. 642.
Speed-changing mechanism. A. Mill. No. 877,213; Jan. 21; Sp. p. 3168; Dr. p. 687; Gaz. vol. 132; p. 581.
Speed-indicating apparatus. S. C. De Fore. No. 877,175; Jan. 21; Sp. p. 3064; Dr. p. 667; Gaz. vol. 132; p. 567.
Speed-indicating device. S. C. De Fore. No. 877,176; Jan. 21; Sp. p. 3065; Dr. p. 667; Gaz. vol. 132; p. 568.
Speed-indicator. C. R. Benton. No. 876,256; Jan. 7; Sp. p. 1104; Dr. p. 239; Gaz. vol. 132; p. 187.
Speed mechanism, Variable-. T. C. Dill. No. 877,491; Jan. 28; Sp. p. 3694; Dr. p. 801; Gaz. vol. 132; p. 690.
Speed-meter. R. Johnson. No. 877,506; Jan. 28; Sp. p. 3736; Dr. p. 808; Gaz. vol. 132; p. 696.
Speed regulator and indicator. W. W. Wooster. No. 876,673; Jan. 14; Sp. p. 2035; Dr. p. 444; Gaz. vol. 132; p. 361.
Speeds, distances covered, and the like, Instrument for indicating. E. V. Gratze. No. 877,711; Jan. 28; Sp. p. 4140; Dr. p. 896; Gaz. vol. 132; p. 761.
Spindle: *See* Lock-spindle.
Spinning-frame saddle. J. H. Turcotte. No. 877,020; Jan. 21; Sp. p. 2754; Dr. p. 596; Gaz. vol. 132; p. 515.
Spinning-machine. T. A. Harrington and A. Barrie. No. 876,900; Jan. 21; Sp. p. 2620; Dr. p. 569; Gaz. vol. 132; p. 494.
Spinning-machine traveler-ring. C. W. Jackson and W. A. McVicker. No. 877,084; Jan. 21; Sp. p. 2874; Dr. pp. 620-1; Gaz. vol. 132; p. 536.
Spoke-puller. G. L. Preston. No. 876,234; Jan. 7; Sp. p. 1065; Dr. p. 231; Gaz. vol. 132; p. 180.
Spool. P. Hardman. No. 875,993; Jan. 7; Sp. p. 598; Dr. p. 128; Gaz. vol. 132; p. 104.
Spool-holder. B. Empfield. No. 876,157; Jan. 7; Sp. p. 919; Dr. p. 198; Gaz. vol. 132; p. 156.
Spool-molding machine. W. Burke. No. 876,144; Jan. 7; Sp. p. 898; Dr. p. 194; Gaz. vol. 132; p. 152.
Spool, Sheet-metal. C. A. Brinley. No. 877,308; Jan. 21; Sp. p. 3506; Dr. p. 760; Gaz. vol. 132; p. 639.
Spooling-machine. F. L. Atherton. No. 876,761; Jan. 14; Sp. p. 2188; Dr. pp. 480-1; Gaz. vol. 132; p. 388.
Spout, Detachable. C. R. Keenan. No. 877,435; Jan. 21; Sp. p. 3586; Dr. p. 776; Gaz. vol. 132; p. 652.
Spout for vessels, Seamless sheet-metal. J. H. W. Gebler. No. 877,322; Jan. 21; Sp. p. 3377; Dr. p. 731; Gaz. vol. 132; p. 615.
Spray. R. A. Brooks. No. 877,045; Jan. 21; Sp. p. 2810; Dr. p. 606; Gaz. vol. 132; p. 524.
Spraying device for stock, Automatic. H. Hollowell. No. 876,458; Jan. 14; Sp. p. 1559; Dr. p. 334; Gaz. vol. 132; p. 286.
Spring: *See* Bed-spring.
Spring-compressing clamp. F. R. Wickwire. No. 875,761; Jan. 7; Sp. p. 162; Dr. p. 36; Gaz. vol. 132; p. 31.
Spring-fork. M. Schenck. No. 876,021; Jan. 7; Sp. p. 654; Dr. p. 139; Gaz. vol. 132; p. 113.
Spring-hook. G. Leighton. No. 875,714; Jan. 7; Sp. p. 71; Dr. p. 15; Gaz. vol. 132; p. 15.
Sprinkler fender, Lawn-. W. Linhoff. No. 877,785; Jan. 28; Sp. p. 4272; Dr. p. 928; Gaz. vol. 132; p. 785.
Sprinkler-head, Automatic. E. M. Cook. No. 877,551; Jan. 28; Sp. p. 3847; Dr. p. 832; Gaz. vol. 132; p. 712.
Sprinkler-heads, Cover and drain attachment for. E. F. Cardell. No. 876,771; Jan. 14; Sp. p. 2206; Dr. pp. 485; Gaz. vol. 132; p. 391.
Sprinkler system, Automatic. J. Fiddes and J. F. Watt. No. 877,707; Jan. 28; Sp. p. 4135; Dr. p. 895; Gaz. vol. 132; p. 700
Spur, Riding-. D. W. Crowder. No. 877,886; Jan. 28; Sp. p. 4458; Dr. p. 972; Gaz. vol. 132; p. 817.
Stack construction, Form for. F. Head. No. 877,768; Jan. 28; Sp. p. 4242; Dr. p. 921; Gaz. vol. 132; p. 780.
Stacker, Hay-. C. C. Denenny. No. 876,778; Jan. 14; Sp. p. 2219; Dr. pp. 487-8; Gaz. vol. 132; p. 394.
Stacker, Pneumatic. E. J. Vraalstad. No. 876,115; Jan. 7; Sp. p. 841; Dr. p. 180; Gaz. vol. 132; p. 143.
Stamp. C. S. Anderson. No. 876,677; Jan. 14; Sp. p. 2040; Dr. p. 445; Gaz. vol. 132; p. 362.
Stamp-affixing machine. W. C. Van Vliet. No. 875,966; Jan. 7; Sp. p. 546; Dr. pp. 116-19; Gaz. vol. 132; p. 96.
Stamp-mill mortar-box. D. A. Bremner. No. 877,291; Jan. 21; Sp. p. 3305; Dr. pp. 715-16; Gaz. vol. 132; p. 605.
Stamping and grinding mill. T. M. Topp. No. 877,615; Jan. 28; Sp. p. 3974; Dr. p. 858; Gaz. vol. 132; p. 731.
Stamping instrument. J. V. Weckbaugh. No. 877,148; Jan. 21; Sp. p. 3020; Dr. pp. 653-4; Gaz. vol. 132; p. 558.
Stanchion, Cattle-. L. T. Rasmussen. No. 876,688; Jan. 14; Sp. p. 1850; Dr. pp. 404-5; Gaz. vol. 132; p. 332.
Stand: *See* Jewelry-stand; Switch-stand.
Stannic chlorid, Apparatus for making. E. A. Sperry. No. 877,243; Jan. 21; Sp. p. 3216; Dr. p. 697; Gaz. vol. 132; p. 591.
Stannic chlorid, Apparatus for producing. C. P. Townsend. No. 877,263; Jan. 21; Sp. p. 3263; Dr. p. 706; Gaz. vol. 132; p. 597.
Stannic chlorid, Making. E. A. Sperry. No. 877,247; Jan. 21; Sp. p. 3227; Dr. p. 699; Gaz. vol. 132; p. 592.
Stannic chlorid, Making. E. A. Sperry. No. 877,248; Jan. 21; Sp. p. 3231; Dr. p. 700; Gaz. vol. 132; p. 593.
Stannic chlorid, Producing. C. P. Townsend. No. 877,261; Jan. 21; Sp. p. 3259; Dr. p. 705; Gaz. vol. 132; p. 597.
Stannic chlorid, Purifying. E. A. Sperry. No. 877,244; Jan. 21; Sp. p. 3220; Dr. p. 697; Gaz. vol. 132; p. 591.
Stannic chlorid, Purifying. C. P. Townsend. No. 877,262; Jan. 21; Sp. p. 3261; Dr. p. 705; Gaz. vol. 132; p. 597.
Starch, Stabilized nitrated. F. B Holmes. No. 875,913; Jan. 7; Sp. p. 453; Gaz. vol. 132; p. 81.
Starch, Stabilized nitrated. F. B. Holmes. No. 875,914; Jan. 7; Sp. p. 454; Gaz. vol. 132; p. 81.
Starch, Stabilized nitrated. F. B. Holmes. No. 875,915; Jan. 7; Sp. p. 454; Gaz. vol. 132; p. 82.
Starch, Stabilized nitrated. F. B. Holmes. No. 875,916; Jan. 7; Sp. p. 455; Gaz. vol. 132; p. 82.
Starch, Stabilized nitrated. F. B. Holmes. No. 875,917; Jan. 7; Sp. p. 456; Gaz. vol. 132; p. 82.
Starch, Stabilized nitrated. F. B. Holmes. No. 875,918; Jan. 7; Sp. p. 457; Gaz. vol. 132; p. 82.
Starch, Stabilized nitrated. F. B. Holmes. No. 875,919; Jan. 7; Sp. p. 457; Gaz. vol. 132; p. 82.
Starch, Stabilized nitrated. F. B. Holmes. No. 875,920; Jan. 7; Sp. p. 458; Gaz. vol. 132; p. 82.
Starch, Stabilized nitrated F. B. Holmes. No. 875,921; Jan. 7; Sp. p. 459; Gaz. vol. 132; p. 82.
Starch, Stabilized nitrated. F. B. Holmes No. 875,922; Jan. 7; Sp. p. 459; Gaz. vol. 132; p. 82
Starch, Stabilized nitrated. F. B. Holmes. No. 875,923; Jan. 7; Sp. p. 460; Gaz. vol. 132; p. 83
Starch Stabilized nitrated. F. B. Holmes. No. 875 924; Jan. 7; Sp. p. 461; Gaz. vol. 132; p. 83
Starch, Stabilized nitrated. F. B. Holmes. No. 875,925; Jan. 7; Sp. p. 461; Gaz. vol. 132; p. 83.
Starch, Stabilized nitrated. F. B. Holmes. No. 875,926; Jan. 7; Sp. p. 462; Gaz. vol. 132; p. 83.
Starch, Stabilized nitrated. F. B. Holmes. No. 875,927; Jan. 7; Sp. p. 462; Gaz. vol. 132; p. 83.
Starch, Stabilized nitrated. F. B. Holmes. No. 875,928; Jan. 7; Sp. p. 463; Gaz. vol. 132; p. 83.
Stay-bolt, Flexible. H. A. Pike. No. 876,912; Jan. 14; Sp. p. 2481; Dr. p. 542; Gaz. vol. 132; p. 437
Steam, Apparatus for the rapid generation of. G. R. Steward. No. 875,745; Jan. 7; Sp. p. 130; Dr. p. 29; Gaz. vol. 132; p. 26
Steam-boiler. C. D. Mosher. No. 876,477; Jan. 14; Sp. p. 1594; Dr. p. 343; Gaz. vol. 132; p. 292.
Steam-boiler. C. D. Mosher. No. 876,478; Jan. 14; Sp. p. 1597; Dr. p. 343; Gaz. vol. 132; p. 293.
Steam-boiler. C. D. Mosher. No. 876,479; Jan. 14; Sp. p. 1599; Dr. p. 344; Gaz. vol. 132; p. 293.
Steam-boiler. W. H. Shafer. No. 877,601; Jan. 28; Sp. p. 3937; Dr. p. 851; Gaz. vol. 132; p. 727.
Steam-drier. R. C. Hageman and G. C. Broderson. No. 876,347; Jan. 14; Sp. p. 1312; Dr. p. 283; Gaz. vol. 132; p. 249.
Steam-engine. H. C. and L. S. Wolf. No. 876,758; Jan. 14; Sp. p. 2183; Dr. p. 479; Gaz. vol. 132; p. 387.
Steam-generating apparatus. J. Milne. No. 877,355; Jan. 21; Sp. p. 3426; Dr. pp. 743-4; Gaz. vol. 132; p. 625.
Steam-generator. F. Hecht. No. 877,324; Jan. 21; Sp. p. 3391; Dr. p. 735; Gaz. vol. 132; p. 619.
Steam-generator. W. L. Jones. No. 877,343; Jan. 21; Sp. p. 3403; Dr. p. 738; Gaz. vol. 132; p. 621.
Steam-shovel. J. J. Benedick. No. 876,517; Jan. 14; Sp. p. 1694; Dr. p. 369; Gaz. vol. 132; p. 307.
Steel, Cementation of. C. Davis. No. 876,562; Jan. 14; Sp. p. 2379; Dr. p. 519; Gaz. vol. 132; p. 420.
Stenographing-machine. R. Ducheme. No. 877,179; Jan. 21; Sp. p. 3091; Dr. pp. 668-9; Gaz. vol. 132; p. 568.
Stereoscope. E. E. Clark. No. 876,339; Jan. 14; Sp. p. 1279; Dr. p. 278; Gaz. vol. 132; p. 243.

Stereotype-plates, Apparatus for finishing. C. E. Hopkins. No. 877,775; Jan. 28; Sp. p. 4256; Dr. pp. 923–5; Gaz. vol. 132; p. 782.
Sterilizing foods or organic compounds. C. C. L. G. Budde. No. 877,703; Jan. 28; Sp. p. 4128; Gaz. vol. 132; p. 750.
Stethoscope. D. O. Fosgate. No. 875,795; Jan. 7; Sp. p. 228; Dr. p. 49; Gaz. vol. 132; p. 42.
Still. L. V. Sone. No. 877,606; Jan. 28; Sp. p. 3947; Dr. p. 853; Gaz. vol. 132; p. 728.
Still. L. V. Sone. No. 877,606; Jan. 28; Sp. p. 3950; Dr. p. 854; Gaz. vol. 132; p. 729.
Stirrup. J. M. Easterwood. No. 877,062; Jan. 21; Sp. p. 2940; Dr. p. 613; Gaz. vol. 132; p. 529.
Stock-treating apparatus, Live-. F. C. Goff. No. 876,631. Jan. 14; Sp. p. 1955; Dr. p. 426; Gaz. vol. 132; p. 348.
Stone blocks, Apparatus for molding artificial-. J. W. Shone and J. N. Rauber. No. 877,870; Jan. 28; Sp. p. 4430; Dr. p. 965; Gaz. vol. 132; p. 812.
Stone-cutting machine. J. R. Peirce. No. 876,087; Jan. 7; Sp. p. 790; Dr. p. 168; Gaz. vol. 132; p. 134.
Stone, Manufacture of artificial. H. Dresler. No. 876,782; Jan. 14; Sp. p. 2229; Gaz. vol. 132; p. 305.
Stool and music-stand, Combination. J. J. Schurger, Jr., and J. Takacs. No. 876,023; Jan. 7; Sp. p 656; Dr. p. 140; Gaz. vol. 132; p. 113.
Stop-motion. D. B. Hathaway. No. 876,349. Jan. 14; Sp. p. 1314; Dr. p. 284; Gaz. vol. 132; p. 249.
Stopper: *See* Bottle-stopper.
Storage battery. W. Gardiner. No. 877,880; Jan. 28; Sp. p. 4464; Dr. pp. 973–4; Gaz. vol. 132; p. 818.
Storm-hood. J. Archdeacon. No. 877,752; Jan. 28; Sp. p. 4219; Dr. p. 915; Gaz. vol. 132; p. 775.
Stove. L. W. Hammond. No. 877,190; Jan. 21; Sp. p. 3109; Dr. p. 673; Gaz. vol. 132; p. 572.
Stove-magazine, Reversible. W. S. Jackson. No. 877,342; Jan. 21; Sp. p. 3403; Dr. p. 738; Gaz. vol. 132; p. 621.
Stovepipe and chimney cleaner. D. J. Montambo. No. 877,215; Jan. 21; Sp. p. 3173; Dr. p. 688; Gaz. vol. 132; p. 582.
Strap: *See* Hame-strap.
Straw-press. H. N. Bingham. No. 876,037; Jan. 7; Sp. p. 678; Dr. p. 146; Gaz. vol. 132; p. 117.
Street or station indicator. P. M. Higgins and L. D. Harmes. No. 876,803; Jan. 14; Sp. p. 2256; Dr. pp. 496–7; Gaz. vol. 132; p. 401.
Street-sweeper. C. K. Pevey. No. 876,727; Jan. 14; Sp. p. 2130; Dr. p. 468; Gaz. vol. 132; p. 378.
Stuffing-box. P. Kugel. No. 877,093; Jan. 21; Sp. p. 2897; Dr. pp. 626–7; Gaz. vol. 132; p. 538.
Stump-puller. E. A. Grundeen. No. 875,808; Jan. 7; Sp. p. 253; Dr. p. 54; Gaz. vol. 132; p. 47.
Sulfids and producing vanadium, Reducing metallic. F. M. Becket. No. 876,313; Jan. 14; Sp. p. 1245; Gaz. vol. 132; p. 239.
Sunbonnet. C. E. Yount, Sr. No. 877,029; Jan. 21; Sp. p. 2775; Dr. p. 600; Gaz. vol. 132; p. 519.
Surface-trimming machine. S. Brown. No. 876,938; Jan. 21; Sp. p. 2572; Dr. pp. 500–1; Gaz. vol. 132; p. 486.
Surfacing-machine. C. A. Edlund. No. 876,155; Jan. 7; Sp. p. 915; Dr. p. 198; Gaz. vol. 132; p. 155.
Surveying and navigation, Combination of means for. R. L. Stevens. No. 876,604; Jan. 14; Sp. p. 1891; Dr. pp. 413–14; Gaz. vol. 132; p. 338.
Suspender cast-off. J. J. Buchanan. No. 876,262; Jan. 7; Sp. p. 1118; Dr. p. 242; Gaz. vol. 132; p. 189
Suspender cast-off. J. J. Buchanan. No. 876,263; Jan. 7; Sp. p. 1118; Dr. p. 242; Gaz. vol. 132; p. 189.
Suspender-end. C. E. Wyant. No. 876,855; Jan. 14; Sp. p. 2361; Dr. p. 517; Gaz. vol. 132; p. 418.
Suspenders, Adjustable. E. J. Hayden. No. 877,332; Jan. 21; Sp. p. 3389; Dr. p. 734; Gaz. vol. 132; p. 618.
Suspenders. W. R. Oppenheimer. No. 877,516; Jan. 28; Sp. p. 3758; Dr. p. 814; Gaz. vol. 132; p. 700.
Sweeping compound. J. Stoltenberg. No. 877,137; Jan. 21; Sp. p. 2997; Gaz. vol. 132; p. 554.
Swing. A. P. Boyer. No. 876,934; Jan. 21; Sp. p. 2559; Dr. pp. 558–9; Gaz. vol. 132; p. 484.
Swing, Observation-. W. S. Ritch. No. 876,841; Jan. 14; Sp. p. 2334; Dr. p. 512; Gaz. vol. 132; p. 413.
Switch: *See* Electric switch; Electric time-switch; Push-button snap-switch; Railway-switch; Reversing-switch; Telegraph-switch; Track-switch; Wall-switch.
Switch. C. H. Holley. No 876 055; Jan. 7; Sp. p. 708; Dr. p. 152; Gaz. vol. 132; p. 123.
Switch-lock. J. T. Tulloch. No. 877,616; Jan. 28; Sp. p. 3975; Dr. p. 858; Gaz. vol. 132; p. 732.
Switch mechanism and train-carried actuating means therefor. G. Parks. No. 877,224; Jan. 21; Sp. p. 3184; Dr. pp. 690–1; Gaz. vol. 132; p. 585.
Switch-point lock. J. B. Latimer. No. 877,096; Jan. 21; Sp. p. 2902; Dr. pp. 627–8; Gaz. vol. 132; p. 539.
Switch-stand. F. G. Snook. No. 877,747; Jan. 28; Sp. p. 4208; Dr. p. 912; Gaz. vol. 132; p. 773.
Switch-stand and signaling device therefor. H. C. Odenkirk. No. 876,530; Jan. 14; Sp. p. 2315; Dr. p. 509; Gaz. vol. 132; p. 409.
Switches. Wall-box for electric. R. W. Hollis. No. 876,877; Jan. 14; Sp. p. 2415; Dr. p. 526; Gaz. vol. 132; p. 426.
Synchronizing apparatus for alternators. M. Vogelsang. No. 877,144; Jan. 21; Sp. p. 3011; Dr. pp. 651–2; Gaz. vol. 132; p. 557.
Table: *See* Operating-table; Serving-table.
Table. E. P. Wanner. No. 875,755; Jan. 7; Sp. p. 154; Dr. p. 34; Gaz. vol. 132; p. 29.
Table. F. H. H. Meier. No. 877,104; Jan. 21; Sp. p. 2917; Dr. p. 631; Gaz. vol. 132; p. 542.
Tablet, Memorandum-. F. K. Dexter. No. 876,948; Jan. 21; Sp. p. 2566; Dr. p. 565; Gaz. vol. 132; p. 490.
Tack and nail lifter. R. R. Smith. No. 877,525; Jan. 28; Sp. p. 3776; Dr. p. 817; Gaz. vol. 132; p. 703.
Tack and nail lifter. R. R. Smith. No. 877,526; Jan. 28; Sp. p. 3777; Dr. p. 818; Gaz. vol. 132; p. 703.
Tack and nail puller. R. R. Smith. No. 877,524; Jan. 28; Sp. p. 3776; Dr. p. 817; Gaz. vol. 132; p. 702.
Tag for phonographic-record cases. J. W. Ellis. No. 876,785; Jan. 14; Sp. p. 2232; Dr. p. 490; Gaz. vol. 132; p. 396.
Talking-machine-disk protector. J. M. Higley. No. 877,842; Jan. 28; Sp. p. 4378; Dr. p. 952; Gaz. vol. 132; p. 803.
Talking-machine sound-box. J. C. English. No. 877,184; Jan. 21; Sp. p. 3099; Dr. p. 671; Gaz. vol. 132; p. 570.
Tandem mill. C. W. Bray. No. 876,895; Jan. 14; Sp. p. 2453; Dr. pp. 535–6; Gaz. vol. 132; p. 432.
Tank: *See* Ore-tank; Reducing-tank.
Tanks, Apparatus for automatically discharging ore-pulp sands and other material from. J. C. and H. H. Winchell. No. 875,876; Jan. 7; Sp. p. 309; Dr. p. 82; Gaz. vol. 132; p. 68.
Tanning. G. H. Pendleton. No. 876,583; Jan. 14; Sp. p. 1837; Gaz. vol. 132; p. 331.
Tanning hides and skins. J. Inouye and T. Dogura. No. 877,341; Jan. 21; Sp. p. 3402; Gaz. vol. 132; p. 621.
Tap, Beer-. W. D. Myers. No. 876,483; Jan. 14; Sp. p. 1605; Dr. pp. 345–6; Gaz. vol. 132; p. 294.
Tap-holder. W. A. Leonard. No. 876,723; Jan. 14; Sp. p. 2125; Dr. p. 467; Gaz. vol. 132; p. 377.
Taper tap, Adjustable. M. Paulson. No. 875,842; Jan. 7; Sp. p. 308; Dr. p. 67; Gaz. vol. 132; p. 57.
Tapping device, Beer-keg-. C. W. Pleukharp. No. 875,848; Jan. 7; Sp. p. 318; Dr. p. 70; Gaz. vol. 132; p. 59.
Target, Drop-. J. A. Wiborgh. No. 877,622; Jan. 28; Sp. p. 3984; Dr. p. 861; Gaz. vol. 132; p. 734.
Telegraph apparatus, Combination sending and receiving wireless-. A. L. New and W. N. Hickman. No. 876,281; Jan. 7; Sp. p. 1163; Dr. p. 254; Gaz. vol. 132; p. 196.
Telegraph, Printing-. J. C. Barclay. No. 877,822; Jan. 28; Sp. p. 4341; Dr. p. 943; Gaz. vol. 132; p. 796.
Telegraph-switch. L. H. Parcels. No. 877,857; Jan. 28; Sp. p. 4405; Dr. p. 959; Gaz. vol. 132; p. 808.
Telegraph system. J. J. Ghegan. (Reissue.) No. 12,739; Jan. 14; Sp. p. 2823; Dr. p. 552; Gaz. vol. 132; p. 442.
Telegraph system. H. O. Rugh. No. 877,002; Jan. 21; Sp. p. 2710; Dr. p. 588; Gaz. vol. 132; p. 509.
Telegraph-transmitter. C. E. Lee and L. K. Miller. No. 876,009; Jan. 7; Sp. p. 752; Dr. p. 159; Gaz. vol. 132; p. 128.
Telegraph transmitting system, Wireless-. L. De Forest. No. 876,165; Jan. 7; Sp. p. 930; Dr. p. 200; Gaz. vol. 132; p. 158.
Telegraphs, Release mechanism for Morse. E. Ducretet. No. 876,952; Jan. 21; Sp. p. 2602; Dr. p. 566; Gaz. vol. 132; p. 491.
Telegraphic key. R. K. Patterson. No. 876,301; Jan. 14; Sp. p. 1408; Dr. p. 304; Gaz. vol. 132; p. 263.
Telegraphic transmitter. D. S. Troth. No. 876,609; Jan. 14; Sp. p. 2029; Dr. pp. 442–3; Gaz. vol. 132; p. 360.
Telegraphy. P. B. Delany. No. 877,555; Jan. 28; Sp. p. 3850; Dr. p. 839; Gaz. vol. 132; p. 712.
Telegraphy, Cable. I. Kitsee. No. 876,556; Jan. 14; Sp. p. 2430; Dr. p. 530; Gaz. vol. 132; p. 429.
Telegraphy, Quadruplex or multiple. L. Connell, Jr. No. 876,312; Jan. 7; Sp. p. 1240; Dr. p. 270; Gaz. vol. 132; p. 207.
Telephone-circuit switching mechanism. A. K. Andriano. No. 877,033; Jan. 21; Sp. p. 2782; Dr. pp. 601–2; Gaz. vol. 132; p. 520.
Telephone-exchange. N. E. Norstrom. No. 877,727; Jan. 28; Sp. p. 4169; Dr. pp. 903–4; Gaz. vol. 132; p. 766.
Telephone-switchboards, Designation-plug for. A. H. Adams. No. 875,882; Jan. 7; Sp. p. 330; Dr. p. 84; Gaz. vol. 132; p. 70.
Telephone system. W. W. Dean. No. 877,058; Jan. 21; Sp. p. 2833; Dr. p. 612; Gaz. vol. 132; p. 528.
Telephone system. H. M. Post. No. 877,121; Jan. 21; Sp. p. 2952; Dr. p. 638; Gaz. vol. 132; p. 548.
Telephone system, Non-interfering party-line. W. R. Brown. No. 876,434; Jan. 14; Sp. p. 1506; Dr. p. 324; Gaz. vol. 132; p. 278.
Telephone, Trick. E. and U. S. De Moulin. No. 876,947; Jan. 21; Sp. p. 2594; Dr. p. 564; Gaz. vol. 132; p. 490.
Telephones, Time-indicator for. J. Rousseuil and A. Blims. No. 876,493; Jan. 14; Sp. p. 1632; Dr. p. 354; Gaz. vol. 132; p. 298.
Templet. H. B. Ash. No. 877,579; Jan. 28; Sp. p. 4447; Dr. p. 970; Gaz. vol. 132; p. 815.
Testing-machine. T. Olsen. No. 875,730; Jan. 7; Sp. p. 103; Dr. pp. 21–2; Gaz. vol. 132; p. 21.
Theatrical apparatus. H. L. Bowdoin. No. 877,167; Jan. 21; Sp. p. 3055; Dr. p. 662; Gaz. vol. 132; p. 564.
Theatrical appliance. S. Birnbaum. No. 877,295; Jan. 21; Sp. p. 3297; Dr. p. 714; Gaz. vol. 132; p. 604.
Thermometer attachment, Clinical-. R. F. Schneider. No. 875,742; Jan. 7; Sp. p. 126; Dr. p. 26; Gaz. vol. 132; p. 25.
Thermostat. O. Saugstad. No. 875,957; Jan. 7; Sp. p. 536; Dr. p. 112; Gaz. vol. 132; p. 92.
Thill-coupling. N. H. Mertes. No. 875,721; Jan. 7; Sp. p. 83; Dr. p. 17; Gaz. vol. 132; p. 18.
Thill-coupling. C. C. Bradley. No. 876,620; Jan. 14; Sp. p. 1930; Dr. p. 421; Gaz. vol. 132; p. 344.
Thill-coupling. D. W. Allen. No. 877,381; Jan. 21; Sp. p. 3391; Dr. p. 712; Gaz. vol. 132; p. 603.
Thill support, Vehicle-. B. M. Perdue. No. 877,449; Jan. 21; Sp. p. 3607; Dr. p. 781; Gaz. vol. 132; p. 656.
Thread-cutting machine, Taper-. W. W. Vosper. No. 876,114; Jan. 7; Sp. p. 839; Dr. p. 180; Gaz. vol. 132; p. 142.
Thresher and separator, Combined. C. and G. F. Batka. No. 876,081; Jan. 14; Sp. p. 2048; Dr. p. 446; Gaz. vol. 132; p. 364.
Ticket. E. D. Fritch and G. Drewry. No. 876,704; Jan. 14; Sp p. 2244; Dr. p. 493; Gaz. vol. 132; p. 308

Ticket-holder. W. A. Downing and J. T. McHugh. No. 876,866; Jan. 14; Sp. p. 2387; Dr. p. 520; Gaz. vol. 132; p. 422.
Ticket-holder. T. E. Stump. No. 877,253; Jan. 21; Sp. p. 3240; Dr. p. 701; Gaz. vol. 132; p. 594.
Ticket, Railway and other. J. S. Alexander. No. 875,765; Jan. 7; Sp. p. 168; Dr. pp. 36–7; Gaz. vol. 132; p. 33.
Ticket, Railway fare and transfer. W. L. Riemer. No. 876,729; Jan. 14; Sp. p. 2134; Dr. p. 468; Gaz. vol. 132; p. 378.
Ticket, Railway-fare receipt-. H. N. Brown and J. B. N. Cardoza. No. 876,294; Jan. 7; Sp. p. 1195; Dr. p. 261; Gaz. vol. 132; p. 201.
Tie: *See* Cross-tie; Railway-tie; Railway cross-tie.
Tile-fastener. H. L. Robinson. No. 876,390; Jan. 14; Sp. p. 1432; Dr. p. 307; Gaz. vol. 132; p. 206.
Time-glass. I. H. Hall, Jr. No. 877,421; Jan. 21; Sp. p. 3550; Dr. p. 769; Gaz. vol. 132; p. 648.
Timepieces, Winding-indicator for. A. G. Kountz. No. 876,721; Jan. 14; Sp. p. 2122; Dr. p. 466; Gaz. vol. 132; p. 376.
Tire. W. D. Harris. No. 875,994; Jan. 7; Sp. p. 599; Dr. p. 128; Gaz. vol. 132; p. 104.
Tire antislipping device. W. T. Maxwell. No. 877,512; Jan. 28; Sp. p. 3750; Dr. p. 812; Gaz. vol. 132; p. 698.
Tire, Cushion-. C. Zeglen. No. 876,616; Jan. 14; Sp. p. 1920; Dr. p. 419; Gaz. vol. 132; p. 342.
Tire, Elastic. M. Brun. No. 877,471; Jan. 21; Sp. p. 3646; Dr. p. 790; Gaz. vol. 132; p. 663.
Tire-inflator, Portable. J. W. Radu. No. 877,861; Jan. 28; Sp. p. 4414; Dr. p. 961; Gaz. vol. 132; p. 809.
Tire, Pneumatic. T. B. Tiefenbacher. No. 877,260; Jan. 21; Sp. p. 3258; Dr. p. 705; Gaz. vol. 132; p. 596.
Tire, Spring-. T. J. McCarthy. No. 877,856; Jan. 28; Sp. p. 4403; Dr. p. 958; Gaz. vol. 132; p. 807.
Tire, Spring-cushioned. I. Hodgson. No. 876,645; Jan. 14; Sp. p. 1967; Dr. p. 432; Gaz. vol. 132; p. 352.
Tire, Vehicle-. F. A. Selberling. No. 876,597; Jan. 14; Sp. p. 1872; Dr. p. 400; Gaz. vol. 132; p. 335.
Tire, Vehicle-wheel. J. Jackson. No. 876,191; Jan. 7; Sp. p. 979; Dr. p. 211; Gaz. vol. 132; p. 166.
Tire, Wheel-. T. J. McCarthy. No. 876,826; Jan. 14; Sp. p. 2306; Dr. pp. 507–8; Gaz. vol. 132; p. 408.
Tobacco-pipe. A. A. Furness. No. 877,071; Jan. 21; Sp. p. 2853; Dr. p. 616; Gaz. vol. 132; p. 532.
Tobacco-pipe. S. E. West. No. 877,536; Jan. 28; Sp. p. 3798; Dr. p. 822; Gaz. vol. 132; p. 706.
Tobacco-pipe. M. Jeantet. No. 877,777; Jan. 28; Sp. p. 4262; Dr. p. 925; Gaz. vol. 132; p. 783.
Tobacco-spearing machine. A. Hovey. No. 875,996; Jan. 7; Sp. p. 605; Dr. pp. 129–30; Gaz. vol. 132; p. 100.
Tobacco, Treatment of. A. C. and G. Q. Bedortha. No. 877,697; Jan. 28; Sp. p. 4120; Dr. p. 892; Gaz. vol. 132; p. 757.
Tobacco, Treatment of. A. C. and G. Q. Bedortha. No. 877,698; Jan. 28; Sp. p. 4121; Dr. p. 892; Gaz. vol. 132; p. 758.
Tobacco-wrapper receptacle. E. C. Brockmann. No. 877,700; Jan. 28; Sp. p. 4124; Dr. p. 893; Gaz. vol. 132; p. 758.
Tongs. W. E. Werd. No. 877,389; Jan. 21; Sp. p. 3492; Dr. p. 758; Gaz. vol. 132; p. 636.
Tongs-carrier. W. E. Sandford. No. 876,661; Jan. 14; Sp. p. 2018; Dr. p. 440; Gaz. vol. 132; p. 358.
Tongue, Jointed. T. Ottason. No. 876,062; Jan. 7; Sp. p. 779; Dr. p. 166; Gaz. vol. 132; p. 132.
Tongue supporter, Wagon-. F. Abrams and W. A. Doyle. No. 876,760; Jan. 14; Sp. p. 2187; Dr. p. 480; Gaz. vol. 132; p. 388.
Tongue, Vehicle-. A. M. Warner. No. 876,610; Jan. 14; Sp. p. 1906; Dr. p. 415; Gaz. vol. 132; p. 340.
Tool. R. Wolfrey. No. 877,153; Jan. 21; Sp. p. 3029; Dr. p. 656; Gaz. vol. 132; p. 560.
Tool, Combination-. E. E. Mullinix. No. 875,724; Jan. 7; Sp. p. 88; Dr. p. 18; Gaz. vol. 132; p. 19.
Tool, Combination-. J. J. Albrecht. No. 876,675; Jan. 14; Sp. p. 2038; Dr. p. 444; Gaz. vol. 132; p. 362.
Tool, Combination-. J. M. Wallace. No. 876,919; Jan. 14; Sp. p. 2502; Dr. p. 546; Gaz. vol. 132; p. 440.
Tool, Combination-. H. D. Hoak. No. 876,963; Jan. 21; Sp. p. 2626; Dr. p. 570; Gaz. vol. 132; p. 495.
Tool, Percussively-driven. D. L. Mason. No. 875,940; Jan. 7; Sp. p. 483; Dr. p. 104; Gaz. vol. 132; p. 87.
Tool, Repair-. W. L. Dinsmoor. No. 877,306; Jan. 21; Sp. p. 3344; Dr. p. 725; Gaz. vol. 132; p. 610.
Tooth-crown. T. A. Davis. No. 876,043; Jan. 7; Sp. p. 689; Dr. p. 148; Gaz. vol. 132; p. 119.
Tooth straightener, Cylinder and concave. C. G. W. Wernicke. No. 875,971; Jan. 7; Sp. p. 558; Dr. pp. 119–20; Gaz. vol. 132; p. 97.
Torpedo-placer. P. Peter. No. 876,229; Jan. 7; Sp. p. 1059; Dr. p. 228; Gaz. vol. 132; p. 179.
Torque-regulating mechanism. E. Thomsen. No. 877,473; Jan. 21; Sp. p. 3649; Dr. p. 791; Gaz. vol. 132; p. 663.
Tourist's glass. J. M. Faehrmann. No. 877,313; Jan. 21; Sp. p. 3362; Dr. p. 728; Gaz. vol. 132; p. 612.
Tower, Skeleton. L. W. Noyes. No. 877,587; Jan. 28; Sp. p. 3913; Dr. pp. 846–7; Gaz. vol. 132; p. 722.
Toy. E. D. Neagle. No. 877,360; Jan. 21; Sp. p. 3441; Dr. p. 746; Gaz. vol. 132; p. 627.
Toy, Illuminated. J. F. Siever and W. H. Neffen. No. 876,739; Jan. 14; Sp. p. 2157; Dr. p. 474; Gaz. vol. 132; p. 382.
Toy, Mechanical. J. P. McGill. No. 876,992; Jan. 21; Sp. p. 2683; Dr. p. 583; Gaz. vol. 132; p. 505.
Toy windmill. R. H. Sunderlin and C. A. Billey. No. 877,382; Jan. 21; Sp. p. 3480; Dr. p. 755; Gaz. vol. 132; p. 634.
Trace, Harness-. C. Van Denbark. No. 877,683; Jan. 28; Sp. p. 4102; Dr. p. 887; Gaz. vol. 132; p. 754.
Track-sanding device. J. W. Brady. No. 877,828; Jan. 28; Sp. p. 4359; Dr. p. 947; Gaz. vol. 132; p. 798.
Track-switch, Electric. R. A. Baldwin. No. 877,458; Jan. 21; Sp. p. 3622; Dr. p. 784; Gaz. vol. 132; p. 659.
Traction-engine. R. Russell. No. 875,851; Jan. 7; Sp. p. 322; Dr. pp. 71–2; Gaz. vol. 132; p. 60.
Traction-wheel. M. Wilson. No. 877,152; Jan. 21; Sp. p. 3028; Dr. p. 655; Gaz. vol. 132; p. 559.
Train safety-stop. L. T. Dieboit. No. 877,305; Jan. 21; Sp. p. 3340; Dr. p. 724; Gaz. vol. 132; p. 610.
Train-service coupling. S. D. Barnett. No. 876,929; Jan. 21; Sp. p. 2539; Dr. pp. 555–6; Gaz. vol. 132; p. 482.
Transformer, Electric-vehicle . W. S. Moody. No. 876,988; Jan. 21; Sp. p. 2670; Dr. pp. 580–1; Gaz. vol. 132; p. 503.
Transformer employed in high-frequency-current circuits. G. E. Gaiffe. No. 877,319; Jan. 21; Sp. p. 3372; Dr. p. 730; Gaz. vol. 132; p. 614.
Transmission mechanism. O. S. Beyer. No. 877,481; Jan. 28; Sp. p. 3675; Dr. p. 797; Gaz. vol. 132; p. 687.
Transmission-tower. D. R. Scholes. No. 876,596; Jan. 14; Sp. p. 1870; Dr. p. 409; Gaz. vol. 132; p. 335.
Trap: *See* Animal-trap; Coon and mink trap; Valve-trap.
Trap. C. N. Harrington. No. 876,638; Jan. 14; Sp. p. 1977; Dr. p. 430; Gaz. vol. 132; p. 350.
Trap. H. H. May. No. 877,787; Jan. 28; Sp. p. 4276; Dr. p. 929; Gaz. vol. 132; p. 785.
Tread-power. O. P. Welding. No. 877,388; Jan. 21; Sp. p. 3491; Dr. pp. 757–8; Gaz. vol. 132; p. 636.
Trimmer: *See* Edge-trimmer.
Trolley. J. H. Kroen. No. 876,722; Jan. 14; Sp. p. 2124; Dr. p. 466; Gaz. vol. 132; p. 376.
Trolley. A. W. Huhsman. No. 877,844; Jan. 28; Sp. p. 4381; Dr. p. 953; Gaz. vol. 132; p. 804.
Trolley-ear clencher. E. O. Marsh. No. 877,510; Jan. 28; Sp. p. 3744; Dr. p. 811; Gaz. vol. 132; p. 697.
Trolley-guard. C. W. Sheehan. No 876,600; Jan. 14; Sp. p. 1880; Dr. p. 411; Gaz. vol. 132; p. 337.
Trolley-harp. B. L. Dresser. No. 876,700; Jan. 14; Sp. p. 2093; Dr. p. 455; Gaz. vol. 132; p. 370.
Trolley-pole controller. O. A. Ross. No. 876,492; Jan. 14; Sp. p. 1628; Dr. pp. 353–4; Gaz. vol. 132; p. 298.
Trolley-pole controller. O. A. Ross. No. 877,126; Jan. 21; Sp. p. 2975; Dr. pp. 642–3; Gaz. vol. 132; p. 551.
Trolley-replacer. G. Q. Seaman. No. 877,379; Jan. 21; Sp. p. 3475; Dr. p. 755; Gaz. vol. 132; p. 633.
Trolley-wheel, Self-lubricating. H. G. Farr. No. 877,558; Jan. 28; Sp. p. 3856; Dr. p. 834; Gaz. vol. 132; p. 713.
Trolley-wheels, Wire-retrieving attachment for. W. C. Althen. No. 877,877; Jan. 28; Sp. p. 4442; Dr. p. 968; Gaz. vol. 132; p. 814.
Truck. A. M. Teal. No. 872,987; Jan. 7; Sp. p. 352; Dr. p. 78; Gaz. vol. 132; p. 65.
Truck, Barrel-. M. Bixel. No. 877,257; Jan. 21; Sp. p. 3300; Dr. p. 714; Gaz. vol. 132; p. 604.
Truck, Car-. G. G. Floyd. No. 877,185; Jan. 21; Sp. p. 3101; Dr. p. 671; Gaz. vol. 132; p. 570.
Truck, Cast-steel. W. E. Symons. No. 877,014; Jan. 21; Sp. p. 2742; Dr. p. 594; Gaz. vol. 132; p. 513.
Truck, Electrically-operated baggage-. T. V. Buckwalter. No. 875,893; Jan. 7; Sp. p. 401; Dr. p. 88; Gaz. vol. 132; p. 75.
Truck, Hand-. W. Wanee. No. 876,753; Jan. 14; Sp. p. 2175; Dr. p. 478; Gaz. vol. 132; p. 386.
Truck, Rail-handling. A. G. Newburgh. No. 877,111; Jan. 21; Sp. p. 2931; Dr. p. 634; Gaz. vol. 132; p. 544.
Truck side frame. H. Aiken. No. 877,280; Jan. 21; Sp. p. 3290; Dr. pp. 711–12; Gaz. vol. 132; p. 603.
Trucks, Spring-plank seat for car-. G. G. Floyd. No. 877,495; Jan. 28; Sp. p. 3711; Dr. p. 803; Gaz. vol. 132; p. 692.
Trunk. W. H. A. Stout. No. 876,025; Jan. 7; Sp. p. 657; Dr. p. 141; Gaz. vol. 132; p. 114.
Tube and flue cleaner. F. H. Lehnert. No. 876,566; Jan. 14; Sp. p. 1795; Dr. p. 392; Gaz. vol. 132; p. 324.
Tube-closing machine, Rotary. J. A. Ullman and G. R. Howell. No. 877,266; Jan. 21; Sp. p. 3267; Dr. p. 707; Gaz. vol. 132; p. 598.
Tube-slitting machine, Plastic-. G. P. Willett. No. 877,151; Jan. 21; Sp. p. 3026; Dr. p. 655; Gaz. vol. 132; p. 559.
Tubes, Device for holding, slitting, and punching metal. W. B. Murray. No. 877,855; Jan. 28; Sp. p. 4402; Dr. p. 958; Gaz. vol. 132; p. 807.
Tubing, Machine for making flexible. C. O. Berg. No. 876,257; Jan. 7; Sp. p. 1107; Dr. pp. 239–40; Gaz. vol. 132; p. 187.
Tubing, Machine for making metal. E. T. Greenfield. No. 877,073; Jan. 21; Sp. p. 2855; Dr. pp. 616–17; Gaz. vol. 132; p. 532.
Tubing, Manufacture of seamless. G. H. Baxter. No. 876,856; Jan. 14; Sp. p. 2362; Dr. p. 517; Gaz. vol. 132; p. 418.
Tubular boiler. W. Möller. No. 876,378; Jan. 14; Sp. p. 1366; Dr. pp. 297–8; Gaz. vol. 132; p. 258.
Tunneling in rock. J. P. Keane. No. 877,779; Jan. 28; Sp. p. 4264; Dr. p. 926; Gaz. vol. 132; p. 783.
Turbine. B. Heymann. No. 875,912; Jan. 7; Sp. p. 451; Dr. p. 100; Gaz. vol. 132; p. 81.
Turbine. R. H. Goldsborough. No. 876,710; Jan. 14; Sp. p. 2107; Dr. p. 459; Gaz. vol. 132; p. 373.
Turbine bucket-wheel. J. Wilkinson. No. 876,123; Jan. 7; Sp. p. 852; Dr. p. 182; Gaz. vol. 132; p. 145.
Turbine, Elastic-fluid. J. Zvonicek. No. 876,422; Jan. 14; Sp. p. 1482; Dr. pp. 318–19; Gaz. vol. 132; p. 273.
Turbine-engine. H. B. Fulmer. No. 876,628; Jan. 14; Sp. p. 1947; Dr. pp. 424–5; Gaz. vol. 132; p. 347.
Turbine-engine. H. I. Cromer. No. 876,860; Jan. 14; Sp. p. 2370; Dr. p. 518; Gaz. vol. 132; p. 419.
Turbine-engine. R. J. Schloming. No. 877,237; Jan. 21; Sp. p. 3206; Dr. p. 695; Gaz. vol. 132; p. 589.
Turbine-engine. L. Hachenberg. No. 877,502; Jan. 28; Sp. p. 3731; Dr. p. 807; Gaz. vol. 132; p. 695.
Turbine, Fluid-pressure. B. E. Lewis. No. 877,848; Jan. 28; Sp. p. 4396; Dr. p. 955; Gaz. vol. 132; p. 805.

Turbine, Gas-. H. Holzwarth. No. 877,194; Jan. 21; Sp. p. 3118; Dr. pp. 674-5; Gaz. vol. 132; p. 573.
Turbine, Reversible. H. M. Murphy. No. 876,218; Jan. 7; Sp. p. 1043; Dr. p. 226; Gaz. vol. 132; p. 175.
Turbine, Steam-. F. A. Douse. No. 876,530; Jan. 14; Sp. p. 1718; Dr. p. 373; Gaz. vol. 132; p. 312.
Turbine, Steam-. E. C. Terry. No. 877,873; Jan. 28; Sp. p. 4437; Dr. pp. 906-7; Gaz. vol. 132; p. 813.
Turbines, Bucket-securing means for. O. Junggren. No. 876,971; Jan. 21; Sp. p. 2640; Dr. p. 573; Gaz. vol. 132; p. 468.
Turbines, Regulating-nozzle for. V. Gelpke and P. Kugel. No. 877,323; Jan. 21; Sp. p. 3377; Dr. p. 731; Gaz. vol. 132; p. 615.
Type, Flexible form for holding and assembling. S. Brown. No. 876,521; Jan. 14; Sp. p. 1706; Dr. p. 370; Gaz. vol. 132; p. 309.
Type, Flexible-strip form for holding. S. Brown. No. 876,522; Jan. 14; Sp. p. 1707; Dr. p. 371; Gaz. vol. 132; p. 309.
Type-writer. H. Moyn. No. 876,986; Jan. 21; Sp. p. 2673; Dr. pp. 581-2; Gaz. vol. 132; p. 503.
Type-writer attachment. H. A. Kirby. No. 877,719; Jan. 28; Sp. p. 4156; Dr. p. 900; Gaz. vol. 132; p. 764.
Type-writer frame. G. A. Smith. No. 876,308; Jan. 7; Sp. p. 1225; Dr. pp. 268-9; Gaz. vol. 132; p. 208.
Type-writer ribbon mechanism. F. X. Wagner. No. 876,309; Jan. 7; Sp. p. 1234; Dr. pp. 269-70; Gaz. vol. 132; p. 208.
Type-writing and adding machine, Combined. B. C. Stickney. No. 876,409; Jan. 14; Sp. p. 1446; Dr. p. 311; Gaz. vol. 132; p. 269.
Type-writing machine. J. H. Birch and J. S. Foley. No. 876,136; Jan. 7; Sp. p. 884; Dr. p. 190; Gaz. vol. 132; p. 150.
Type-writing machine. H. P. Moorrees. No. 876,379; Jan. 14; Sp. p. 1367; Dr. p. 296; Gaz. vol. 132; p. 259.
Type-writing machine. H. P. Moorrees. No. 876,380; Jan. 14; Sp. p. 1377; Dr. pp. 296-9; Gaz. vol. 132; p. 259.
Type-writing machine. W. V. Peterson. No. 876,393; Jan. 14; Sp. p. 1412; Dr. p. 305; Gaz. vol. 132; p. 264.
Type-writing machine. G. B. Webb. No. 876,508; Jan. 14; Sp. p. 1663; Dr. pp. 361-2; Gaz. vol. 132; p. 304.
Type-writing machine. J. H. Birch and J. S. Foley. No. 876,685; Jan. 14; Sp. p. 2064; Dr. p. 449; Gaz. vol. 132; p. 365.
Type-writing machine. C. H. Shepard. No. 877,241; Jan. 21; Sp. p. 3212; Dr. p. 696; Gaz. vol. 132; p. 500.
Type-writing machine. O. Woodward. No. 877,541; Jan. 28; Sp. p. 3814; Dr. pp. 825-6; Gaz. vol. 132; p. 708.
Type-writing machine. H. H. Steele. No. 877,608; Jan. 28; Sp. p. 3954; Dr. pp. 854-5; Gaz. vol. 132; p. 729.
Type-writing machine ribbon mechanism. F. Heuser. No. 876,454; Jan. 14; Sp. p. 1550; Dr. pp. 332-3; Gaz. vol. 132; p. 285.
Umbrellas and the like, Device for supporting. A. E. Shuster. No. 877,802; Jan. 28; Sp. p. 4301; Dr. pp. 933-4; Gaz. vol. 132; p. 790.
Umbrellas, canes, and the like, Device for supporting. M. V. Quinn. No. 877,453; Jan. 21; Sp. p. 3616; Dr. p. 783; Gaz. vol. 132; p. 657.
Undershirt. W. R. Hibbard. No. 876,455; Jan. 14; Sp. p. 1553; Dr. p. 333; Gaz. vol. 132; p. 285.
Undershirt. T. Fanta. No. 877,416; Jan. 21; Sp. p. 3549; Dr. p. 767; Gaz. vol. 132; p. 646.
Undertaker's crape-holder. J. E. Churchman and J. F. Ochard. No. 877,295; Jan. 21; Sp. p. 3315; Dr. p. 718; Gaz. vol. 132; p. 607.
Urn. A. W. Meyer. No. 877,211; Jan. 21; Sp. p. 3162; Dr. pp. 685-6; Gaz. vol. 132; p. 581.
Valve. E. J. Bloom. No. 876,316; Jan. 14; Sp. p. 1249; Dr. pp. 271-2; Gaz. vol. 132; p. 239.
Valve. T. A. Duggan. No. 876,967; Jan. 14; Sp. p. 2389; Dr. p. 520; Gaz. vol. 132; p. 422.
Valve. G. H. Traxel. No. 877,264; Jan. 21; Sp. p. 3265; Dr. p. 706; Gaz. vol. 132; p. 507.
Valve. A. C. Rickseeker, Jr. No. 877,865; Jan. 28; Sp. p. 4422; Dr. p. 963; Gaz. vol. 132; p. 810.
Valve, Bottle-. V. P. McVoy. No. 877,584; Jan. 28; Sp. p. 3908; Dr. p. 845; Gaz. vol. 132; p. 721.
Valve-disk. A. W. Cadman. No. 876,147; Jan. 7; Sp. p. 902; Dr. p. 196; Gaz. vol. 132; p. 155.
Valve, Dry-pipe. E. M. Cook. No. 877,552; Jan. 28; Sp. p. 3848; Dr. p. 832; Gaz. vol. 132; p. 712.
Valve, Engine-. B. Hanson. (Reissue.) No. 12,738; Jan. 14; Sp. p. 2522; Dr. p. 552; Gaz. vol. 132; p. 441.
Valve, Engineer's brake-. F. H. Dukesmith. No. 876,703; Jan. 14; Sp. p. 2097; Dr. pp. 456-7; Gaz. vol. 132; p. 371.
Valve, Flushing-. R. A. Brooks. No. 876,518; Jan. 14; Sp. p. 1696; Dr. pp. 369-70; Gaz. vol. 132; p. 308.
Valve for filters, Sand or strainer. J. R. and H. D. Elfreth. No. 877,182; Jan. 21; Sp. p. 3096; Dr. p. 670; Gaz. vol. 132; p. 569.
Valve for fluid-pressure brakes. W. H. Sauvage. No. 875,958; Jan. 7; Sp. p. 527; Dr. pp. 112-13; Gaz. vol. 132; p. 93.
Valve, Gas-engine mixing-. A. J. West. No. 876,500; Jan. 14; Sp. p. 1669; Dr. pp. 362-3; Gaz. vol. 132; p. 304.
Valve, Gate-. J. R. De Remer. No. 876,625; Jan. 14; Sp. p. 1939; Dr. p. 423; Gaz. vol. 132; p. 345.
Valve mechanism. L. J. Johnson. No. 876,880; Jan. 14; Sp. p. 2420; Dr. p. 528; Gaz. vol. 132; p. 427.
Valve mechanism for explosive-engines, Inlet-. W. Ottaway. No. 876,582; Jan. 14; Sp. p. 1834; Dr. p. 401; Gaz. vol. 132; p. 330.
Valve mechanism for internal-combustion engines, Inlet-. H. Reinshagen. No. 876,236; Jan. 7; Sp. p. 1067; Dr. p. 231; Gaz. vol. 132; p. 181.
Valve operated by air. J. Bowers. No. 877,043; Jan. 21; Sp. p. 2805; Dr. p. 606; Gaz. vol. 132; p. 523.
Valve, Quick-opening. J. T. Hayden. No. 875,812; Jan. 7; Sp. p. 259; Dr. p. 58; Gaz. vol. 132; p. 48.
Valve, Regulating-. A. Ullmann. No. 876,285; Jan. 7; Sp. p. 1174; Dr. p. 256; Gaz. vol. 132; p. 198.
Valve-reseating device. J. G. Holmes and G. Puffer. No. 876,964; Jan. 21; Sp. p. 2627; Dr. p. 570; Gaz. vol. 132; p. 495.
Valve, Safety-. J. H. Thiele. No. 876,746; Jan. 14; Sp. p. 2167; Dr. p. 476; Gaz. vol. 132; p. 384.
Valve-trap. W. F. Dzur. No. 877,181; Jan. 21; Sp. p. 3094; Dr. p. 670; Gaz. vol. 132; p. 569.
Valve, Wet-pipe alarm-. C. B. Garrett. No. 876,309; Jan. 14; Sp. p. 2393; Dr. p. 521; Gaz. vol. 132; p. 423.
Valves, Device for indicating the position of water or sluice-gate. F. E. Adams and C. W. Kragh. No. 876,423; Jan. 14; Sp. p. 1496; Dr. pp. 319-20; Gaz. vol. 132; p. 274.
Vaporizer. G. H. Gerber and A. Welland. No. 877,890; Jan. 28; Sp. p. 4467; Dr. p. 974; Gaz. vol. 132; p. 819.
Vaporizer for disinfectants. J. G. Goodhue and H. K. Henry. No. 876,904; Jan. 14; Sp. p. 2470; Dr. pp. 539-40; Gaz. vol. 132; p. 435.
Varnish and producing same. A. P. Bjerregaard. No. 877,482; Jan. 28; Sp. p. 3676; Gaz. vol. 132; p. 687.
Varnish or paint, Substance for removing. W. H. Allen and W. J. Weaver. No. 876,251; Jan. 7; Sp. p. 1092; Gaz. vol. 132; p. 185.
Vault, Burial-. W. C. Laschie. No. 877,095; Jan. 21; Sp. p. 2900; Dr. p. 627; Gaz. vol. 132; p. 539.
Vegetable cutter and trimmer. H. and M. Rufty. No. 876,915; Jan. 14; Sp. p. 2497; Dr. p. 544; Gaz. vol. 132; p. 439.
Vegetable-topping machine. W. R. Shufelt. No. 877,670; Jan. 28; Sp. p. 4079; Dr. p. 883; Gaz. vol. 132; p. 750.
Vegetation-destroyer. C. H. Howard. No. 875,817; Jan. 7; Sp. p. 265; Dr. p. 58; Gaz. vol. 132; p. 49.
Vegetation-destroyer. W. R. McKeen, Jr., and F. S. Barks. No. 877,515; Jan. 28; Sp. p. 3755; Dr. pp. 813-14; Gaz. vol. 132; p. 699.
Vehicle. C. E. Thorp. No. 877,681; Jan. 28; Sp. p. 4096; Dr. pp. 886-7; Gaz. vol. 132; p. 753.
Vehicle attachment. F. R. Allen. No. 875,766; Jan. 7; Sp. p. 171; Dr. p. 37; Gaz. vol. 132; p. 33.
Vehicle-bodies, Pneumatic suspension device for. G. W. Ball. No. 876,426; Jan. 14; Sp. p. 1402; Dr. pp. 320-1; Gaz. vol. 132; p. 275.
Vehicle-body. M. R. Hull. No. 876,999; Jan. 7; Sp. p. 607; Dr. p. 130; Gaz. vol. 132; p. 106.
Vehicle-body. F. Stratton. No. 876,026; Jan. 7; Sp. p. 658; Dr. pp. 141-2; Gaz. vol. 132; p. 114.
Vehicle-brake. E. S. Ackerman. No. 877,031; Jan. 21; Sp. p. 2778; Dr. p. 601; Gaz. vol. 132; p. 519.
Vehicle driving-gear, Motor-road-. P. G. Tacchi. No. 877,613; Jan. 28; Sp. p. 3971; Dr. pp. 857-8; Gaz. vol. 132; p. 731.
Vehicle emergency-brake, Motor-. A. D. Morgan. No. 876,475; Jan. 14; Sp. p. 1591; Dr. p. 342; Gaz. vol. 132; p. 291.
Vehicle extension top or canopy. A. L. Bowen. No. 876,768; Jan. 14; Sp. p. 2202; Dr. p. 484; Gaz. vol. 132; p. 390.
Vehicle-gear. L. E. Hickok. No. 876,545; Jan. 14; Sp. p. 1754; Dr. p. 381; Gaz. vol. 132; p. 315.
Vehicle-gear. J. C. Bashford. No. 877,479; Jan. 28; Sp. p. 3666; Dr. p. 795; Gaz. vol. 132; p. 696.
Vehicle king-bolt connection. L. E. Hickok. No. 876,546; Jan. 14; Sp. p. 1756; Dr. p. 382; Gaz. vol. 132; p. 318.
Vehicle, Motor-. J. C. Simonson. No. 876,406; Jan. 14; Sp. p. 1442; Dr. p. 310; Gaz. vol. 132; p. 268.
Vehicle, Motor-. J. W. Waldorf. No. 877,022; Jan. 21; Sp. p. 2758; Dr. p. 597; Gaz. vol. 132; p. 516.
Vehicle, Motor-. W. G. Windham. No. 877,750; Jan. 28; Sp. p. 4214; Dr. pp. 913-14; Gaz. vol. 132; p. 774.
Vehicle operating device, Motor-. P. A. Darraco. No. 877,762; Jan. 28; Sp. p. 4233; Dr. p. 919; Gaz. vol. 132; p. 778.
Vehicle propelling mechanism. C. F. Thayer. No. 875,748; Jan. 7; Sp. p. 137; Dr. p. 30; Gaz. vol. 132; p. 27.
Vehicle-rim. W. J. Nordlund. No. 877,726; Jan. 28; Sp. p. 4167; Dr. p. 903; Gaz. vol. 132; p. 766.
Vehicle running-gear. J. D. Weakes. No. 876,082; Jan. 7; Sp. p. 671; Dr. p. 144; Gaz. vol. 132; p. 115.
Vehicle shock-deadener. G. Dumond. No. 876,154; Jan. 7; Sp. p. 914; Dr. p. 197; Gaz. vol. 132; p. 155.
Vehicle-spring check. H. Cottrell. No. 875,693; Jan. 7; Sp. p. 29; Dr. p. 6; Gaz. vol. 132; p. 7.
Vehicle storm-front. D. Argerbright. No. 876,286; Jan. 7; Sp. p. 1182; Dr. p. 257; Gaz. vol. 132; p. 199.
Vehicle to a frame, Means for flexibly connecting parts of a. E. J. Gulick. No. 876,272; Jan. 7; Sp. p. 1147; Dr. p. 249; Gaz. vol. 132; p. 193.
Vehicle-wheel. I. L. Goodrich. No. 876,166; Jan. 7; Sp. p. 949; Dr. p. 202; Gaz. vol. 132; p. 159.
Vehicle-wheel. J. H. Morris. No. 876,214; Jan. 7; Sp. p. 1037; Dr. p. 223; Gaz. vol. 132; p. 174.
Vehicle-wheel and tire therefor. V. H. McDowell. No. 875,726; Jan. 7; Sp. p. 91; Dr. p. 19; Gaz. vol. 132; p. 20.
Vehicle wheel, Motor-. G. D. Rose. No. 877,233; Jan. 21; Sp. p. 3159; Dr. p. 693; Gaz. vol. 132; p. 588.
Vehicles, Combined power-transmission and automatic braking mechanism for motor-driven. T. W. Heermans. No. 877,714; Jan. 28; Sp. p. 4147; Dr. pp. 896-9; Gaz. vol. 132; p. 762.
Vehicles, Combined whip, rein and lap-robe lock for. O. W. Wilde. No. 877,623; Jan. 28; Sp. p. 3986; Dr. p. 861; Gaz. vol. 132; p. 734.
Vehicles, Dust-shield for self-moving road-. J. C. B. Ingleby. No. 877,083; Jan. 21; Sp. p. 2871; Dr. p. 620; Gaz. vol. 132; p. 535.
Vehicles, Flue construction for self-propelled. H. Lamp. No. 876,960; Jan. 21; Sp. p. 2653; Dr. pp. 576-7; Gaz. vol. 132; p. 500.
Velocipede, Railway motor-. W. S. Hovey. No. 876,068; Jan. 7; Sp. p. 713; Dr. pp. 153-4; Gaz. vol. 132; p. 124.
Vending-machine. G. C. Yocum. No. 876,126; Jan. 7; Sp. p. 862; Dr. pp. 185-6; Gaz. vol. 132; p. 146.
Vending-machine. A. Brown and A. W. Lawrence. No. 876,143; Jan. 7; Sp. p. 896; Dr. p. 193; Gaz. vol. 132; p. 152.
Vending-machine. W. Rohde. No. 876,284; Jan. 7; Sp. p. 1170; Dr. pp. 255-6; Gaz. vol. 132; p. 197.
Ventilating device. L. S. Hackney. No. 877,420; Jan. 21; Sp. p. 3557; Dr. p. 769; Gaz. vol. 132; p. 647.
Ventilator. *See* Boat-ventilator; Chimney-ventilator.
Ventilator. M. Hard and E. Coney. No. 875,703; Jan. 7; Sp. p. 60; Dr. p. 12; Gaz. vol. 132; p. 13.

Ventilator. C. R. Brooks. No. 876,258; Jan. 7; Sp. p. 1110; Dr. pp. 240-1; Gaz. vol. 132; p. 188.
Ventilator. H. J. Kellhofer. No. 876,972; Jan. 21; Sp. p. 2642; Dr. p. 574; Gaz. vol. 132; p. 498.
Ventilator. A. H. Mix. No. 877,725; Jan. 28; Sp. p. 4166; Dr. p. 902; Gaz. vol. 132; p. 766.
Ventilator-operating device. I. Eschus. No. 876,338; Jan. 14; Sp. p. 1297; Dr. p. 280; Gaz. vol. 132; p. 246.
Vessel-hull scraper. W. E. Scott. No. 877,745; Jan. 28; Sp. p. 4205; Dr. p. 911; Gaz. vol. 132; p. 772.
Vessels, Means for effecting escape of occupants from sunken. D. A. Dempster. No. 876,777; Jan. 14; Sp. p. 2217; Dr. p. 487; Gaz. vol. 132; p. 393.
Vestibule door and platform controlling mechanism. F. C. Reynolds. No. 876,397; Jan. 14; Sp. p. 1429; Dr. p. 307; Gaz. vol. 132; p. 265.
Veterinary dental speculum. L. L. Conkey. No. 875,602; Jan. 7; Sp. p. 28; Dr. p. 6; Gaz. vol. 132; p. 7.
Veterinary dilator and impregnator. I. O. Crittenden. No. 876,775; Jan. 14; Sp. p. 2213; Dr. p. 486; Gaz. vol. 132; p. 393.
Veterinary float. D. O. Knisely. No. 875,824; Jan. 7; Sp. p. 276; Dr. p. 60; Gaz. vol. 132; p. 51.
Veterinary surgical float. C. Tietz. No. 875,967; Jan. 7; Sp. p. 545; Dr. p. 116; Gaz. vol. 132; p. 96.
Vibrator. A. R. Luschka. No. 877,890; Jan. 28; Sp. p. 4489; Dr. p. 977; Gaz. vol. 132; p. 820.
Vise. A. J. Pereles. No. 876,228; Jan. 7; Sp. p. 1057; Dr. p. 228; Gaz. vol. 132; p. 178.
Vise. G. P. Blackiston. No. 877,609; Jan. 28; Sp. p. 4123; Dr. p. 893; Gaz. vol. 132; p. 758.
Vise, Bench-. J. G. Baker. No. 877,695; Jan. 28; Sp. p. 4118; Dr. p. 891; Gaz. vol. 132; p. 757.
Voltaic strong-current arcs, Production of. H. Pauling. No. 877,448; Jan. 21; Sp. p. 3607; Dr. p. 781; Gaz. vol. 132; p. 656.
Voltameter. H. S. Hatfield. No. 876,641; Jan. 14; Sp. p. 1981; Dr. p. 431; Gaz. vol. 132; p. 351.
Voting-machine. B. T. Seelye. No. 877,380; Jan. 21; Sp. p. 3477; Dr. p. 755; Gaz. vol. 132; p. 634.
Vulcanization, Process of. A. O. Bourn. No. 876,431; Jan. 14; Sp. p. 1501; Dr. p. 323; Gaz. vol. 132; p. 277.
Wagon-bed attachment. S. B. Wenger. No. 877,535; Jan. 28; Sp. p. 3796; Dr. p. 822; Gaz. vol. 132; p. 706.
Wagon-bodies, Crate-cover for. A. Hoppe. No. 876,551; Jan. 14; Sp. p. 1761; Dr. p. 383; Gaz. vol. 132; p. 319.
Wagon-brake. F. M. Smith. No. 877,009; Jan. 21; Sp. p. 2728; Dr. pp. 590-1; Gaz. vol. 132; p. 511.
Wagon, Dump-. W. H. Hill and H. B. Wright. No. 877,338; Jan. 21; Sp. p. 3396; Dr. pp. 736-7; Gaz. vol. 132; p. 620.
Wagon, Dump-. W. L. Collins. No. 877,884; Jan. 28; Sp. p. 4454; Dr. p. 972; Gaz. vol. 132; p. 817.
Wagon, Dumping-. J. Herberling. No. 875,908; Jan. 7; Sp. p. 439; Dr. pp. 97-8; Gaz. vol. 132; p. 79.
Wagon, Dumping-. G. Durso. No. 877,180; Jan. 21; Sp. p. 3093; Dr. p. 669; Gaz. vol. 132; p. 568.
Wagon, Motor-. A. Hoedt. No. 876,351; Jan. 14; Sp. p. 1318; Dr. p. 285; Gaz. vol. 132; p. 250.
Wagon or car, Dumping. E. C. North, W. L. Knapp, and C. H. Bierbaum.. No. 875,727; Jan. 7; Sp. p. 93; Dr. pp. 19-20; Gaz. vol. 132; p. 20.
Waistband and fly-front, Combined. F. M. Schmidt. No. 876,099; Jan. 7; Sp. p. 805; Dr. p. 172; Gaz. vol. 132; p. 137.
Walking-beam truss-rod. E. W. Cokely. (Reissue.) No. 12,743; Jan. 28; Sp. p. 4492; Dr. p. 978; Gaz. vol. 132; p. 821.
Wall-switch. J. H. Dale. No. 877,301; Jan. 21; Sp. p. 3331; Dr. p. 722; Gaz. vol. 132; p. 608.
Washer: *See* Bottle-washer; Fire-hose washer.
Washing-machine. J. T. H. Paul. No. 876,656; Jan. 14; Sp. p. 2009; Dr. pp. 437-8; Gaz. vol. 132; p. 356.
Washing-machine. E. M. Lacey. No. 877,094; Jan. 21; Sp. p. 2899; Dr. p. 627; Gaz. vol. 132; p. 539.
Washing-machine. J. M. Hatfield and O. Bass. No. 877,503; Jan. 28; Sp. p. 3732; Dr. p. 807; Gaz. vol. 132; p. 695.
Washing-machine. J. F., J. S., Jr., and A. L. Bennington. No. 877,627; Jan. 28; Sp. p. 3993; Dr. pp. 862-3; Gaz. vol. 132; p. 736.
Washing-machine driving mechanism. J. C. Peters. No. 875,732; Jan. 7; Sp. p. 105; Dr. pp. 22-3; Gaz. vol. 132; p. 22.
Washing-machine gearing. H. H. Munson. No. 877,106; Jan. 21; Sp. p. 2922; Dr. p. 632; Gaz. vol. 132; p. 543.
Washing-machine, Spring. J. W. Kennedy. No. 877,067; Jan. 21; Sp. p. 2880; Dr. p. 622; Gaz. vol. 132; p. 537.
Washboard. J. H. Jones. No. 876,906; Jan. 14; Sp. p. 2473; Dr. p. 540; Gaz. vol. 132; p. 436.
Washboard. E. A. Clark. No. 877,048; Jan. 21; Sp. p. 2816; Dr. p. 609; Gaz. vol. 132; p. 525.
Waste-cleaning apparatus. J. R. McDonald and S. G. Miller. No. 876,576; Jan. 14; Sp. p. 1823; Dr. p. 398; Gaz. vol. 132; p. 328.
Water-closet. J. A. McAvity. No. 877,514; Jan. 28; Sp. p. 3752; Dr. p. 813; Gaz. vol. 132; p. 699.
Water-economizer for jigs. T. Rowe. No. 875,850; Jan. 7; Sp. p. 321; Dr. p. 71; Gaz. vol. 132; p. 59.
Water-elevator. W. G. Dougherty. No. 876,780; Jan. 14; Sp. p. 2222; Dr. pp. 488-9; Gaz. vol. 132; p. 394.
Water-heater. E. W. Dunn. No. 876,868; Jan. 14; Sp. p. 2390; Dr. p. 521; Gaz. vol. 132; p. 422.
Water-heater. F. E. Patterson. No. 877,115; Jan. 21; Sp. p. 2937; Dr. p. 635; Gaz. vol. 132; p. 546.
Water-heater and smoke-consumer, Auxiliary. J. F. Miles. No. 877,444; Jan. 21; Sp. p. 3602; Dr. p. 780; Gaz. vol. 132; p. 655.
Water-motor. J. Dietz. No. 877,635; Jan. 28; Sp. p. 4003; Dr. p. 865; Gaz. vol. 132; p. 738.
Water-motor and fan-blower, Combined turbine. F. C., S. H., and R. A. Douds. No. 876,152; Jan. 7; Sp. p. 912; Dr. p. 197; Gaz. vol. 132; p. 155.
Water-tower or stand-pipe, Extensible. C. B. Tarbell. No. 877,255; Jan. 21; Sp. p. 3242; Dr. p. 702; Gaz. vol. 132; p. 595.
Wave-motor. E. W. Kapp. No. 876,193; Jan. 7; Sp. p. 983; Dr. p. 212; Gaz. vol. 132; p. 167.
Wave-motor. J. Tydings. No. 877,021; Jan. 21; Sp. p. 2756; Dr. p. 597; Gaz. vol. 132; p. 515.
Wave-motor. D. Binns. No. 877,459; Jan. 21; Sp. p. 3625; Dr. p. 784; Gaz. vol. 132; p. 659.
Wave-power apparatus. A. L. and G. A. Reynolds. No. 875,950; Jan. 7; Sp. p. 490; Dr. p. 108; Gaz. vol. 132; p. 91.
Weather-strip. W. Van Horn. No. 876,550; Jan. 14; Sp. p. 2354; Dr. p. 516; Gaz. vol. 132; p. 416.
Weeder. F. M. Newland. No. 876,590; Jan. 14; Sp. p. 1832; Dr. p. 400; Gaz. vol. 132; p. 329.
Weeder or cultivator. N. P. Nelson. No. 875,946; Jan. 7; Sp. p. 493. Dr. pp. 106-7; Gaz. vol. 132; p. 89.
Weft-threads, such as horse hair and the like, In the shed, Mechanism for inserting separate. O. Wahle. No. 877,271; Jan. 21; Sp. p. 3276; Dr. pp. 708-9; Gaz. vol. 132; p. 600.
Weigh-pan. F. C. Greene and C. G. Palmer. No. 876,541; Jan. 14; Sp. p. 1744; Dr. pp. 378-9; Gaz. vol. 132; p. 316.
Weighing-machine, Automatic. R. Y. Bradshaw. No. 877,168; Jan. 21; Sp. p. 3062; Dr. pp. 663-4; Gaz. vol. 132; p. 565.
Weight-compensator. W. C. Stephen. No. 875,963; Jan. 7; Sp. p. 536; Dr. p. 115; Gaz. vol. 132; p. 94.
Welding machine, Electric chain-. H. Helberger. No. 875,910; Jan. 7; Sp. p. 445; Dr. p. 98; Gaz. vol. 132; p. 80.
Welis, Clamp for motion-rods for oil-. J. T. Hovis. No. 876,906; Jan. 21; Sp. p. 2630; Dr. p. 571; Gaz. vol. 132; p. 496.
Wheel: *See* Abrading-wheel; Elastic wheel; Fifth-wheel; Pneumatic wheel; Polishing-wheel; Traction-wheel; Trolley-wheel; Turbine bucket-wheel; Vehicle-wheel; Wheelbarrow-wheel.
Wheel. F. J. Cooper. No. 876,334; Jan. 14; Sp. p. 1287; Dr. p. 278; Gaz. vol. 132; p. 244.
Wheel. S. B. McMaster. No. 876,386; Jan. 14; Sp. p. 1306; Dr. p. 301; Gaz. vol. 132; p. 261.
Wheel. C. B. Van Horn. No. 877,617; Jan. 28; Sp. p. 3976; Dr. p. 859; Gaz. vol. 132; p. 732.
Wheel-block. A. J. Allen. No. 876,424; Jan. 14; Sp. p. 1488; Dr. p. 320; Gaz. vol. 132; p. 274.
Wheel-rim fastener. R. L. Morgan. No. 877,217; Jan. 21; Sp. p. 3176; Dr. p. 696; Gaz. vol. 132; p. 583.
Wheelbarrow-wheel. S. F. Phillips. No. 876,585; Jan. 14; Sp. p. 1840; Dr. p. 402; Gaz. vol. 132; p. 331.
Whiffletree. W. Grafe. No. 876,711; Jan. 14; Sp. p. 2110; Dr. pp. 459-60; Gaz. vol. 132; p. 373.
Whip-lock. G. H. Voelker and T. E. Lynch, Jr. No. 875,753; Jan. 7; Sp. p. 151; Dr. p. 33; Gaz. vol. 132; p. 29.
Whip-socket. C. E. Pierce. No. 876,633; Jan. 14; Sp. p. 2014; Dr. p. 439; Gaz. vol. 132; p. 357.
Whisk and broom holder. J. F. Wyher. No. 877,277; Jan. 21; Sp. p. 3285; Dr. p. 711; Gaz. vol. 132; p. 601.
Whisky aging and agitating machine. D. Farnum and C. R. Anderson. No. 876,534; Jan. 14; Sp. p. 1726; Dr. p. 375; Gaz. vol. 132; p. 313.
Wick-hook, Lamp-. M. O. Smith. No. 876,663; Jan 14; Sp. p. 2020; Dr. p. 441; Gaz. vol. 132; p. 358.
Wind-instrument mouthpiece. T. Martens. No. 877,786; Jan. 28; Sp. p. 4275; Dr. p. 928; Gaz. vol. 132; p. 785.
Windmill. J. H. Kappelmann. No. 877,434; Jan. 21; Sp. p. 3584; Dr. p. 775; Gaz. vol. 132; p. 652.
Windmill-gearing. H. E. Brown. No. 877,701; Jan. 28; Sp. p. 4126; Dr. p. 893; Gaz. vol. 132; p. 759.
Winding-machine. F. Meisel. No. 875,941. Jan. 7; Sp. p. 484; Dr. p. 104; Gaz. vol. 132; p. 87.
Winding-machine. E. B. Bryant. No. 876,261; Jan. 7; Sp. p. 1116; Dr. pp. 241-2; Gaz. vol. 132; p. 189.
Window and show-case construction, Show-. C. M. Conley. No. 876,299; Jan. 7; Sp. p. 1215; Dr. p. 265; Gaz. vol. 132; p. 203.
Window-lock. C. M. Kinsey. No. 877,088; Jan. 21; Sp. p. 2881; Dr. p. 622; Gaz. vol. 132; p. 537.
Window-screen. C. H. Knowles. No. 875,826; Jan. 7; Sp. p. 280; Dr. p. 61; Gaz. vol. 132; p. 52.
Window-screen. M. Solmson. No. 875,961; Jan. 7; Sp. p. 533; Dr. p. 114; Gaz. vol. 132; p. 94.
Window-screen, Automatic folding. E. S. Stanclift. No. 875,861; Jan. 7; Sp. p. 341; Dr. p. 76; Gaz. vol. 132; p. 63.
Window shield and screen, Combined. A. R. Martin. No. 877,209; Jan. 21; Sp. p. 3182; Dr. p. 683; Gaz. vol. 132; p. 580.
Wire-coating machine. H. H. Webb. No. 876,755; Jan. 14; Sp. p. 2179; Dr. pp. 478-9; Gaz. vol. 132; p. 386.
Wire-connector. J. J. Walsh. No. 875,872; Jan. 7; Sp. p. 362; Dr. p. 80; Gaz. vol. 132; p. 67.
Wire ends, Machine for connecting. J. W. Tower. No. 877,806; Jan. 28; Sp. p. 4309; Dr. p. 935; Gaz. vol. 132; p. 792.
Wire fabric and attaching means therefor. M. W. Floto. No. 876,340; Jan. 14; Sp. p. 1299; Dr. p. 281; Gaz. vol. 132; p. 246.
Wire-splicer. G. M. Graham. No. 875,803; Jan. 7; Sp. p. 241; Dr. p. 52; Gaz. vol. 132; p. 44.
Wire-splicer. E. Young. No. 876,674; Jan. 14; Sp. p. 2037; Dr. p. 444; Gaz. vol. 132; p. 362.
Wire-working tool. F. Vestecka. No. 876,116; Jan. 7; Sp. p. 842; Dr. p. 180; Gaz. vol. 132; p. 143.
Wooden structure and constructing the same, Staved. D. E. Vanvactor. No. 877,534; Jan. 28; Sp. p. 3795; Dr. p. 822; Gaz. vol. 132; p. 705.
Work-holder. M. P. H. Schroeder. No. 877,522; Jan. 28; Sp. p. 3773; Dr. p. 817; Gaz. vol. 132; p. 702.
Wrench: *See* Buggy-wrench; Cylinder-wrench; Jar-wrench; Pipe-wrench.

Wrench. A. G. Ely. No. 878,702; Jan. 7; Sp. p. 46; Dr. p. 10; Gaz. vol. 132; p. 11.
Wrench. H. T. Duncan. No. 876,704; Jan. 14; Sp. p. 2101; Dr. p. 457; Gaz. vol. 132; p. 371.
Wrench. B. F. Webb. No. 877,273; Jan. 21; Sp. p. 3280; Dr. p. 710; Gaz. vol. 132; p. 600.
Wrench. C. W. Sievert. No. 877,457; Jan. 21; Sp. p. 2621; Dr. p. 784; Gaz. vol. 132; p. 658.
Wrench. T. Larson. No. 877,571; Jan. 28; Sp. p. 3574; Dr. p. 839; Gaz. vol. 132; p. 717.
Wrench. J. E. Claunch. No. 877,632; Jan. 28; Sp. p. 3999; Dr. p. 864; Gaz. vol. 132; p. 737.
Wrench. A. Schaller. No. 877,741; Jan. 28; Sp. p. 4199; Dr. p. 909; Gaz. vol. 132; p. 771.
Wrench. A. E. Deason. No. 877,763; Jan. 28; Sp. p. 4235; Dr. p. 919; Gaz. vol. 132; p. 778.
Wrench. J. C. Holm. No. 877,773; Jan. 28; Sp. p. 4253; Dr. p. 923; Gaz. vol. 132; p. 781.
Wringer: *See* Mop-wringer.
Yarn and thread gassing-machine. J. Higginson, Jr. No. 875,711; Jan. 7; Sp. p. 65; Dr. pp. 13–14; Gaz. vol. 132; p. 14.
Yarn-testing machine. J. Moscrop. No. 876,216; Jan. 7; Sp. p. 1039; Dr. pp. 234–5; Gaz. vol. 132; p. 175.
Yoke ring, Neck-. A. W. Edstrom. No. 876,946; Jan. 7; Sp. p. 695; Dr. p. 149; Gaz. vol. 132; p. 120.
Zinc oxid from zinc ores, Obtaining. H. L. Sulman. No. 875,806; Jan. 7; Sp. p. 350; Dr. p. 78; Gaz. vol. 132; p. 65.

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF FEBRUARY, 1908.

[Abbreviations: "Sp."=Monthly Volume of Specifications; "Dr."=Monthly Volume of Drawings; "Gaz."=Official Gazette.]

A. B. Dick Company. (See Dick, A. B., assignor.)
A. B. Feigtmaker Erie Organ Company. (See Kent, A. E., assignor.)
A. C. Lawrence Leather Company. (See Johnstone, R. K., assignor.)
A. F. Meisselbach & Brother. (See Meisselbach, A. F., assignor.)
A. F. Meisselbach & Brother. (See Meisselbach and Catucci, assignors.)
A. O. Norton Incorporated. (See Gormley, F. L., assignor.)
Aalborg, C., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Electric-circuit controller. No. 879,234; Feb. 18; Sp. p. 2746; Dr. p. 574; Gaz. vol. 132; p. 1360.
Abadie-Leotard, E., Paris, France. Corset. No. 878,446; Feb. 4; Sp. p. 1100; Dr. p. 225; Gaz. vol. 132; p. 1030.
Abbott, H., assignor to Calculagraph Company, New York, N. Y. Time-printing mechanism. No. 878,447; Feb. 4; Sp. p. 1102; Dr. pp. 225–7; Gaz. vol. 132; p. 1030.
Abe, I. L. and J., Alaska, W. Va. Lock-nut. No. 879,714; Feb. 18; Sp. p. 3755; Dr. p. 787; Gaz. vol. 132; p. 1517.
Abe, J. (See Abe, I. L. and J.)
Abel, K., and F. Pervesler, Vienna, Austria-Hungary. Switch device. No. 878,591; Feb. 11; Sp. p. 1510; Dr. p. 307; Gaz. vol. 132; p. 1113.
Abelson, W. C., Plaza, N. D. Shoe for sleds. No. 878,326; Feb. 4; Sp. p. 881; Dr. p. 176; Gaz. vol. 132; p. 990.
Abts, W. H., Belden, Nebr. Fork-scraper. No. 879,134; Feb. 18; Sp. p. 2565; Dr. p. 534; Gaz. vol. 132; p. 1327.
Acme Automatic Street Indicating Company. (See Small, T. W., assignor.)
Actien Gesellschaft für Anilin Fabrikation. (See Geidermann, H., assignor.)
Actiengesellschaft "Magneta." (See Fischer, M., assignor.)
Adams, A. L., Bridgeport, Conn. Machine for winding and cutting cloth rolls. No. 878,705; Feb. 11; Sp. p. 1728; Dr. pp. 357–8; Gaz. vol. 132; p. 1150.
Adams, F., Pawtucket, R. I. Curtain-bracket and shade-roller support. No. 878,448; Feb. 4; Sp. p. 1108; Dr. p. 227; Gaz. vol. 132; p. 1031.
Adams, F. L., Prophetstown, Ill. Journal-bearing. No. 878,031; Feb. 4; Sp. p. 288; Dr. p. 61; Gaz. vol. 132; p. 895.
Adams, J. A., Woodville, Okla. Seed-cotton-drying apparatus. No. 879,715; Feb. 18; Sp. p. 3757; Dr. p. 788; Gaz. vol. 132; p. 1517.
Adams, J. L., Tacoma, Wash. Rotary engine. No. 878,327; Feb. 4; Sp. p. 882; Dr. pp. 176–7; Gaz. vol. 132; p. 991.
Adams-Randall, C., New York, N. Y. Wheel. No. 878,502; Feb. 11; Sp. p. 1511; Dr. p. 307; Gaz. vol. 132; p. 1114.
Adams, T. E., Cleveland, Ohio. Electric-arc lamp. No. 880,435; Feb. 25; Sp. p. 5250; Dr. p. 1104; Gaz. vol. 132; p. 1780.
Adams, W. H., Sound Beach, Conn. Drill attachment. No. 879,430; Feb. 18; Sp. p. 3160; Dr. pp. 657–8; Gaz. vol. 132; p. 1425.
Adams, W. S., assignor to J. G. Brill Company, Philadelphia, Pa. Brake mechanism for car-trucks. No. 879,606; Feb. 18; Sp. p. 3530; Dr. pp. 741–2; Gaz. vol. 132; p. 1481.
Adder Machine Company. (See McFarland, C. N., assignor.)
Adder Machine Company. (See McFarland and Wales, assignors.)
Ahlders, B. E., Indianapolis, Ind. Railway-signal. No. 879,431; Feb. 18; Sp. p. 3162; Dr. p. 658; Gaz. vol. 132; p. 1425.
Ahrens, J. F., New York, N. Y. Bottle-label. No. 880,115; Feb. 25; Sp. p. 4567; Dr. p. 966; Gaz. vol. 132; p. 1681.
Aiken, E. L., East Orange, assignor to New Jersey Patent Company, West Orange, N. J. Phonograph. No. 878,032; Feb. 4; Sp. p. 289; Dr. p. 61; Gaz. vol. 132; p. 895.
Akehurst, G. W. T., White Marsh, Md. Vehicle-wheel. No. 878,206; Feb. 4; Sp. p. 769; Dr. p. 154; Gaz. vol. 132; p. 972.
Akerly, F. F., and W. Borchert, Reno, Nev. Machine for feeding and affixing laundry-tags. No. 878,593; Feb. 11; Sp. p. 1513; Dr. p. 308; Gaz. vol. 132; p. 1114.
Aktiebolaget B. A. Hjorth & Co. (See Larsson, D., assignor.)
Aktiebolaget L. M. Ericsson & Co. (See Wedelin, C. R., assignor.)
Aktiengesellschaft Arnold B. Heine & Co., Firm of. (See Bossha:d, A., assignor.)
Albrecht, C. A., Baltimore, Md. Linotype and other type-casting machine. No. 880,264; Feb. 25; Sp. p. 4906; Dr. p. 1037; Gaz. vol. 132; p. 1731.
Aldrich, A., Beloit, Wis. Steam fitting or joint for journals of rotary steam-cylinders or other revolving bodies. No. 879,845; Feb. 25; Sp. p. 4019; Dr. p. 843; Gaz. vol. 132; p. 1563.
Alexander, G., State Center, Iowa. Duplex road-grader drag. No. 879,805; Feb. 18; Sp. p. 3921; Dr. p. 821; Gaz. vol. 132; p. 1547.
Allday, D. H. (See Allday, R. E., assignor.)
Allday, R. E., assignor to D. H. Allday, Atlanta, Tex. Fish-trap. No. 879,432; Feb. 18; Sp. p. 3163; Dr. p. 658; Gaz. vol. 132; p. 1425.
Allen, A., Oakland, Cal. Wave-motor. No. 880,474; Feb. 25; Sp. p. 5332; Dr. pp. 1122–3; Gaz. vol. 132; p. 1802.
Allen, A. B., Pueblo, Colo. Switch-operating mechanism. No. 878,927; Feb. 11; Sp. p. 2154; Dr. pp. 449–50; Gaz. vol. 132; p. 1221.
Allen, J. H., East Orange, N. J., assignor to W. R. Davis, trustee, New York, N. Y. Railway offset-joint. No. 879,938; Feb 25; Sp. p. 4252; Dr. p. 899; Gaz. vol. 132; p. 1625.
Allen, J. L., Chicago, Ill. Stuffing-machine. No. 878,761; Feb. 11; Sp. p. 1837; Dr. pp. 379–80; Gaz. vol. 132; p. 1168.
Allen, W. A., New York, N. Y. Tire-cover. (Reissue.) No. 12,754; Feb. 25; Sp. p. 5373; Dr. p. 1132; Gaz. vol. 132; p. 1808.
Allen, W. E., Toledo, Ohio. Fountain bath-brush. No. 878,594; Feb. 11; Sp. p. 1517; Dr. p. 308; Gaz. vol. 132; p. 1115.
Alley, F. L., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Rough-rounding and channeling machine. No. 878,475; Feb. 4; Sp. p. 1174; Dr. p. 238; Gaz. vol. 132; p. 1041.
Aligire, W. K., Indianapolis, Ind. Folding shipping-box. No. 880,347; Feb. 25; Sp. p. 5054; Dr. p. 1068; Gaz. vol. 132; p. 1758.
Allis-Chalmers Company. (See Hinkley, G. M., assignor.)
Almy, D., Providence, R. I. Spark-timer. No. 878,176; Feb. 4; Sp. p. 598; Dr. p. 123; Gaz. vol. 132; p. 942.
Alsop, H., Chicago, Ill. Grain-car and door therefor. No. 879,716; Feb. 18; Sp. p. 3759; Dr. p. 788; Gaz. vol. 132; p. 1518.
Alston, J. S., Atlantic City, N. J. Bottle-stopper. No. 878,175; Feb. 4; Sp. p. 597; Dr. p. 123; Gaz. vol. 132; p. 942.
Ambrose, H. T. (See Donning, G. W., assignor.)
American Acetylene Company. (See O'Keefe, D., assignor.)
American Automatic Telephone Company. (See Bruce, W. M., Jr., assignor.)
American Bank Protection Company. (See Grass, J. L., assignor.)
American Box and Veneer Company. (See Feild, A. J., assignor.)
American Can Company. (See Breckenridge, K. S., assignor.)
American Can Company. (See Draper, C. T., assignor.)
American Can Company. (See Mullaley and Schenck, assignors.)
American Can Company. (See Stollberg, C., assignor.)
American Car and Foundry Company. (See Ames, J. M., assignor.)
American Cutlery Company. (See Blessing, J. G., assignor.)
American Graphophone Company. (See Emerson, V. H., assignor.)
American Graphophone Company. (See Macdonald, T. H., assignor.)
American Hard Rubber Company. (See Kiel, W., assignor.)
American Steel Foundries. (See Floyd, G. G., assignor.)
American Thread Company. (See Green, S. M., assignor.)
American Tobacco Company. (See Patterson, R. L., assignor.)
American Woven Lath Company. (See Carpenter, H. W., assignor.)
American Woven Lath Company. (See Robinson, W. E., assignor.)

Ames, A. R. (See Filstead, D. W., assignor.)
Ames, F. L., Eastbourne, England. Berth for ships. No. 878,852; Feb. 11; Sp. p. 2011; Dr. p. 416; Gaz. vol. 132; p. 1197.
Ames, J. M., Dongan Hills, N. Y. Double body-bolster for railway-cars. No. 878,595; Feb. 11; Sp. p. 1519; Dr. p. 309; Gaz. vol. 132; p. 1115.
Ames, J. M., Dongan Hills, N. Y. Double body-bolster for railway-cars. No. 878,596; Feb. 11; Sp. 1521; Dr. pp. 309-10; Gaz. vol. 132; p. 1115.
Ames, J. M., Dongan Hills, N. Y., assignor to American Car and Foundry Company, St. Louis, Mo. Car-underframe. No. 879,996; Feb. 25; Sp. p. 4355; Dr. p. 913; Gaz. vol. 132; p. 1643.
Ammerman, W. M., assignor to E. J. Toof, New Haven, Conn. Ruffler attachment for sewing-machines. No. 879,433; Feb. 18; Sp. p. 3165; Dr. p. 668; Gaz. vol. 132; p. 1426.
Anderson, A., Minneapolis, Minn. Window-lock. No. 882,265; Feb. 25; Sp. p. 4908; Dr. p. 1038; Gaz. vol. 132; p. 1732.
Anderson, A. S., Naughton, N. D. Automatic throttle-operator. No. 880,061; Feb. 25; Sp. p. 4497; Dr. pp. 944-5; Gaz. vol. 132; p. 1664.
Anderson, D. C., St. Louis, Mo. Adjustable leaf and binder. No. 879,135; Feb. 18; Sp. p. 2566; Dr. p. 534; Gaz. vol. 132; p. 1327.
Anderson, E., Hastings, Nebr. Strain-equalizer for grain-shakers. No. 878,597; Feb. 11; Sp. p. 1524; Dr. p. 310; Gaz. vol. 132; p. 1116.
Anderson, E. C., *et al.* (See Corcilius, A. B., assignor.)
Anderson, G., Wakefield, Nebr. Seed-corn magnifier. No. 879,717; Feb. 18; Sp. p. 3761; Dr. p. 789; Gaz. vol. 132; p. 1518.
Anderson, H., Peekskill, N. Y. Water-heater. No. 878,108; Feb. 4; Sp. p. 432; Dr. p. 91; Gaz. vol. 132; p. 918.
Anderson, L., assignor to Triplex Gas Engine Company, New York, N. Y. Carbureter. No. 878,706; Feb. 11; Sp. p. 1733; Dr. pp. 358-9; Gaz. vol. 132; p. 1151.
Anderson, M., Jr., New York, N. Y. Bottle-stopper. No. 879,024; Feb. 11; Sp. p. 2324; Dr. p. 486; Gaz. vol. 132; p. 1251.
Anderson, O., Kearny, N. J. Clutch. No. 878,177; Feb. 4; Sp. p. 600; Dr. pp. 123-4; Gaz. vol. 132; p. 942.
Angel, J. W., Rising Star, Tex. Fish-trap. No. 879,136; Feb. 18; Sp. p. 2567; Dr. p. 534; Gaz. vol. 132; p. 1327.
Angus, A. A., assignor of one-half to H. D. Elwell, New York, N. Y. Comb. No. 879,126; Feb. 11; Sp. p. 2544; Dr. p. 529; Gaz. vol. 132; p. 1283.
Anti Oak Leather Company. (See Elledge, R. J., assignor.)
Apple, B. K., Sterling, Ill. Canopy. No. 880,183; Feb. 25; Sp. p. 4731; Dr. p. 1001; Gaz. vol. 132; p. 1704.
Archibald, W. M., Jacksonville, Fla. Chair-roller. No. 879,351; Feb. 18; Sp. p. 2970; Dr. p. 620; Gaz. vol. 132; p. 1308.
Arents, G., Jr., *et al.* (See Prescott, S. I., assignor.)
Aretz, A., Tarentum, Pa. Automatic signal for railway-crossings. No. 879,718; Feb. 18; Sp. p. 3762; Dr. p. 789; Gaz. vol. 132; p. 1518.
Armitage, A., Fairport, and W. P. Thistlethwaite, Macedon, assignors to Ontario Drill Company, Despatch, N. Y. Disk drill. No. 879,831; Feb. 18; Sp. p. 3987; Dr. p. 834; Gaz. vol. 132; p. 1556.
Armstrong, E. P., Portland, Oreg. Saw-swage. No. 879,352; Feb. 18; Sp. p. 2971; Dr. p. 621; Gaz. vol. 132; p. 1309.
Arning, C., Syracuse, N. Y. Towel-holder. No. 879,719; Feb. 18; Sp. p. 3763; Dr. p. 789; Gaz. vol. 132; p. 1518.
Arnold, C. T., Wilkes-Barre, Pa. Car-axle journal-box. No. 878,328; Feb. 4; Sp. p. 886; Dr. p. 177; Gaz. vol. 132; p. 991.
Arnow, M. D., Boston, Mass. Clasp. No. 880,116; Feb. 25; Sp. p. 4789; Dr. p. 997; Gaz. vol. 132; p. 1681.
Arras, J. D., Rawson, Ohio. Breaking-plow. No. 878,033; Feb. 4; Sp. p. 290; Dr. p. 62; Gaz. vol. 132; p. 895.
Arthur, D., New York, N. Y. Steam-trap. No. 879,997; Feb. 25; Sp. p. 4357; Dr. p. 913; Gaz. vol. 132; p. 1643.
Ashby, F. M., Princeton, Ind. Safety appliance for elevators. No. 878,489; Feb. 11; Sp. p. 1227; Dr. p. 254; Gaz. vol. 132; p. 1079.
Asper, A., South Seattle, Wash. Arm-rest for penmanship pupils. No. 879,353; Feb. 18; Sp. p. 2974; Dr. p. 621; Gaz. vol. 132; p. 1309.
Ast, H., assignor to Vulkan Maschinenfabriks Actien Gesellschaft, Vienna, Austria-Hungary. Electromagnetic clutch. No. 880,266; Feb. 25; Sp. p. 4909; Dr. pp. 1038-9; Gaz. vol. 132; p. 1732.
Auble, S. R. (See Van Duyke, M., assignor.)
Augir, V. J., Brooklyn, N. Y. Novelty device. No. 879,998; Feb. 25; Sp. p. 4359; Dr. p. 914; Gaz. vol. 132; p. 1644.
Aumen, W. J., Allentown, Pa. Shutter-worker. No. 878,178; Feb. 4; Sp. p. 603; Dr. p. 124; Gaz. vol. 132; p. 943.
Austin Manufacturing Company. (See Bunnell, M. G., assignor.)
Auto Stopper Company. (See Hicks, J. A., assignor.)
Autocoil Company. (See Varley, R., assignor.)
Automatic Fire Protection Company *et al.* (See Nolen, J. G., assignor.)
Automatic Utilities Company. (See Heissenberger, J., assignor.)
Axtell, F. C., Short Hills, N. J. Motor. No. 877,977; Feb. 4; Sp. p. 158; Dr. pp. 35-6; Gaz. vol. 132; p. 876.
Ayer, F. W., Bangor, Me. Elevated carrier system. No. 880,348; Feb. 25; Sp. p. 5056; Dr. p. 1068; Gaz. vol. 132; p. 1758.
Ayers, J. W., Brooklyn, N. Y. Washing-machine. No. 880,349; Feb. 25; Sp. p. 5058; Dr. p. 1068; Gaz. vol. 132; p. 1759.
Aylsworth, J. W., East Orange, and F. L. Dyer, Montclair, N. J. Apparatus for distilling coal. No. 878,490; Feb. 11; Sp. p. 1228; Dr. p. 254; Gaz. vol. 132; p. 1079.
Ayres, P., Ocean Side, N. Y. Drum-trap. No. 880,436; Feb. 25; Sp. p. 5252; Dr. p. 1104; Gaz. vol. 132; p. 1788.
B. G. Volger Manufacturing Company. (See Volger, B. G., assignor.)
B. H. Steif Jewelry Co. (See Faller, L. A., assignor.)
Bachrach, S. L., New York, N. Y. Display-box. No. 879,235; Feb. 18; Sp. p. 2750; Dr. pp. 574-5; Gaz. vol. 132; p. 1361.
Bachura, M., Collyer, Kans. Corset. No. 877,978; Feb. 4; Sp. p. 161; Dr. p. 36; Gaz. vol. 132; p. 876.
Backhouse, J. (See Robinson and Backhouse.)
Backus Water Motor Company. (See Clasel, R. B., assignor.)
Badische Anilin & Soda Fabrik. (See Boech and Mittasch, assignors.)
Badische Anilin & Soda Fabrik. (See Julius and Fussenegger, assignors.)
Baer, J., Weingarten, Germany, assignor to C. Poulet, Liege, Belgium. Machine for making brushes. No. 880,475; Feb. 25; Sp. p. 5334; Dr. pp. 1123-4; Gaz. vol. 132; p. 1803.
Bagley, B. E., Gantt, Ala. Cane-stripper. No. 878,928; Feb. 11; Sp. p. 2157; Dr. p. 450; Gaz. vol. 132; p. 1222.
Bahr, R., *et al.* (See Preston, W. M., assignor.)
Bahr, W., *et al.* (See Preston, W. M., assignor.)
Bailey, F., Hoboken, N. J. Device for buttoning collars. No. 878,593; Feb. 11; Sp. p. 1525; Dr. p. 310; Gaz. vol. 132; p. 1116.
Bailey, J. A., Brooklyn, N. Y. Baking-pan. No. 879,434; Feb. 18; Sp. p. 3167; Dr. p. 659; Gaz. vol. 132; p. 1426.
Bailey, W. E., and W. A. Kelsey, Paragould, Ark. Store furniture. No. 878,853; Feb. 11; Sp. p. 2012; Dr. p. 416; Gaz. vol. 132; p. 1198.
Baker, J. E., New York, N. Y. Chair. No. 878,267; Feb. 4; Sp. p. 770; Dr. p. 154; Gaz. vol. 132; p. 972.
Baker, J. F. (See Gutridge and Baker.)
Baker, J. U., Stoutsville, Ohio. Power-transmission mechanism. No. 880,267; Feb. 25; Sp. p. 4911; Dr. pp. 1039-40; Gaz. vol. 132; p. 1733.
Baker, J. W., Phillips Bluff, La. Road-grader, levee-builder, digger, and conveyer. No. 880,268; Feb. 25; Sp. p. 4915; Dr. p. 1040; Gaz. vol. 132; p. 1733.
Baker & Shevlin Company. (See Shevlin and Small, assignors.)
Baker, W., Birmingham, England. Drop-down small-arms. No. 879,025; Feb. 11; Sp. p. 2325; Dr. p. 487; Gaz. vol. 132; p. 1251.
Balch, G. P., assignor of one-half to J. S. Balch, Lynn, Mass. Sliding door or sash. No. 880,350; Feb. 25; Sp. p. 5060; Dr. p. 1069; Gaz. vol. 132; p. 1759.
Balch, J. S. (See Balch, G. P., assignor.)
Ball, A., assignor to Sullivan Machinery Company, Claremont, N. H. Brush-holder. No. 885,437; Feb. 25; Sp. p. 5253; Dr. p. 1105; Gaz. vol. 132; p. 1789.
Ball, C. H., and J. F. Rogers, Cleveland, Ohio. Compensating mechanism for automobiles. No. 880,117; Feb. 25; Sp. p. 4500; Dr. p. 967; Gaz. vol. 132; p. 1682.
Ball, E. (See Henvis, M. P., assignor.)
Ball, O. V., Philadelphia, Pa. Safety-razor. No. 880,209; Feb. 25; Sp. p. 4917; Dr. p. 1041; Gaz. vol. 132; p. 1733.
Ballard, G. L., assignor to Wildman Manufacturing Company, Norristown, Pa. Cam-adjusting mechanism for knitting-machines. No. 879,720; Feb. 18; Sp. p. 3764; Dr. p. 789; Gaz. vol. 132; p. 1519.
Ballard, H. A., Ashland, assignor, by mesne assignments, to Boyiston Manufacturing Company, Boston, Mass. Lasting and tacking machine for shoes. No. 878,354; Feb. 11; Sp. p. 2013; Dr. pp. 416-17; Gaz. vol. 132; p. 1198.
Ballot, J. (See Sulman, Kirkpatrick-Picard, and Ballot.)
Baranek, P. F. (See Zoldowski and Baranek.)
Barber, E. A., Watertown, N. Y. Street-car-motor mounting. No. 878,179; Feb. 4; Sp. p. 604; Dr. p. 124; Gaz. vol. 132; p. 943.
Barber, E. A., Watertown, N. Y. Car. No. 878,180; Feb. 4; Sp. p. 605; Dr. p. 124; Gaz. vol. 132; p. 943.
Barber, E. A., Watertown, N. Y. Single-truck car. No. 878,181; Feb. 4; Sp. p. 607; Dr. p. 125; Gaz. vol. 132; p. 944.
Barber, H. M., Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Collecting and folding machine. No. 879,721; Feb. 18; Sp. p. 3766; Dr. pp. 790-1; Gaz. vol. 132; p. 1519.
Barclay, C. C., and F. Hachmann, assignors to Barclay Manufacturing Co., St. Paul, Minn. Car-axle-box lid. No. 879,137; Feb. 18; Sp. p. 2568; Dr. pp. 534-5; Gaz. vol. 132; p. 1328.
Barclay Manufacturing Co. (See Barclay and Hachmann, assignors.)
Barker, E., Batavia, N. Y. Gluing-clamp. No. 878,491; Feb. 11; Sp. p. 1230; Dr. pp. 254-5; Gaz. vol. 132; p. 1079.
Barker, E., Batavia, N. Y. Clamp-bar. No. 878,492; Feb. 11; Sp. p. 1232; Dr. p. 255; Gaz. vol. 132; p. 1080.
Barker, I., assignor of one-half to W. D. Ryan, Springfield, Ill. Nut-lock. No. 878,476; Feb. 4; Sp. p. 1176; Dr. p. 239; Gaz. vol. 132; p. 1041.

Barkley, R. W., trustee. (See Rothermel, S. W., assignor.)
Barnes, C. S. (See Fowler, Barnes, and Peters.)
Barnes, E. P. (See Gerdon, L. W., assignor.)
Barnes, H. B., Leadville, Colo. Tool for electric wires. No. 878,493; Feb. 11; Sp. p. 1233; Dr. p. 255; Gaz. vol. 132; p. 1080.
Barnes, J. M., Idaho Springs, assignor, by mesne assignments, to Barnes Mining, Milling and Machinery Company, Denver, Colo. Amalgamator. No. 879,999; Feb. 25; Sp. p. 4360; Dr. p. 914; Gaz. vol. 132; p. 1644.
Barnes Mining, Milling and Machinery Company. (See Barnes, J. M., assignor.)
Barnes, T., Tulip, Mo. Load-binder. No. 878,034; Feb. 4; Sp. p. 295; Dr. p. 62; Gaz. vol. 132; p. 896.
Barnett, S., Tipton, R. Hadlington and S. Hinton, West Bromwich, England. Continuous brick-kiln. No. 879,354; Feb. 18; Sp. p. 2975; Dr. p. 621; Gaz. vol. 132; p. 1309.
Barnum, T. E., assignor to Cutler-Hammer Mfg. Co., Milwaukee, Wis. System for controlling the operation of electric motors. No. 878,855; Feb. 11; Sp. p. 2016; Dr. p. 417; Gaz. vol. 132; p. 1198.
Barr, S. U., New York, N. Y. Window. No. 879,832; Feb. 18; Sp. p. 3989; Dr. p. 835; Gaz. vol. 132; p. 1556.
Barrett, J. B., Niagara Falls, N. Y. Steam cooking-range. No. 878,449; Feb. 4; Sp. p. 1109; Dr. p. 227; Gaz. vol. 132; p. 1031.
Barrier, M. G., Shawnee, Okla. Painting apparatus. No. 880,351; Feb. 25; Sp. p. 5062; Dr. p. 1069; Gaz. vol. 132; p. 1759.
Barry, D. K., Newport, N. H. Model or guide wheel for lathes. No. 877,979; Feb. 4; Sp. p. 162; Dr. p. 37; Gaz. vol. 132; p. 877.
Bartholomew, W. H., East Orange, N. J., assignor to C. B. Hill, trustee, Montgomery, N. Y. Distilling apparatus. No. 879,236; Feb. 18; Sp. p. 2751; Dr. pp. 575-6; Gaz. vol. 132; p. 1361.
Barton, J. H., Brownsville, Tenn. Sash-lock. No. 879,078; Feb. 11; Sp. p. 2425; Dr. p. 508; Gaz. vol. 132; p. 1267.
Basom, O. H. P., Chitwood, Mo. Gas-burning furnace. No. 880,090; Feb. 25; Sp. p. 4362; Dr. p. 914; Gaz. vol. 132; p. 1644.
Basse, G. D., Milwaukee, Wis. Vine-trellis. No. 878,494; Feb. 11; Sp. p. 1235; Dr. p. 255; Gaz. vol. 132; p. 1080.
Batcheider, C. A., Brockton, Mass., assignor to O. A. Miller Treeing Machine Company, Portland, Me. Shoe-form. No. 877,980; Feb. 4; Sp. p. 163; Dr. p. 37; Gaz. vol. 132; p. 877.
Bates, S. W., assignor to General Hydrocarbon Company, Portland, Me. Hydrocarbon-burner. No. 877,897; Feb. 4; Sp. p. 1; Dr. p. 1; Gaz. vol. 132; p. 849.
Bates, S. W., assignor to General Hydrocarbon Company, Portland, Me. Hydrocarbon-burner. No. 877,898; Feb. 4; Sp. p. 2; Dr. p. 1; Gaz. vol. 132; p. 849.
Batese, W. (See Rollenhagen, C. G., assignor.)
Batt, H. G., Parnell, Mo. Washing-machine. No. 878,495; Feb. 11; Sp. p. 1236; Dr. p. 256; Gaz. vol. 132; p. 1081.
Batten-Hayes Company. (See Kip and Smith, assignors.)
Batten-Hayes Company. (See Martin, F., assignor.)
Battey, S. B., New York, N. Y. Safety-razor and stropping device. No. 878,450; Feb. 4; Sp. p. 1111; Dr. p. 228; Gaz. vol. 132; p. 1031.
Bauer, F., New York, N. Y. Railway signaling device. No. 879,138; Feb. 18; Sp. p. 2571; Dr. p. 535; Gaz. vol. 132; p. 1328.
Bauman, E. E. (See Nienstadt, A. E., assignor.)
Baumann, E. K. A., and F. W. Seyboth, Zwickau, Germany. Suction cleaning apparatus. No. 878,109; Feb. 4; Sp. p. 434; Dr. p. 92; Gaz. vol. 132; p. 919.
Baumbach, O. L., and A. Klitsche, assignors to Eugene Dietzgen Company, Chicago, Ill. Slide-rule. No. 879,237; Feb. 18; Sp. p. 2755; Dr. p. 577; Gaz. vol. 132; p. 1362.
Baumgartner-Mica, H., Basel, Switzerland. Cone friction-coupling. No. 878,035; Feb. 4; Sp. p. 296; Dr. p. 63; Gaz. vol. 132; p. 896.
Bausch, G., Syracuse, N. Y. Eyeglasses or spectacles. No. 878,599; Feb. 11; Sp. p. 1526; Dr. p. 311; Gaz. vol. 132; p. 1116.
Bausch, Lomb, Saegmuller Co. (See Saegmuller, G. N., assignor.)
Bausher, T. D., Reading, Pa. Thawing-furnace truck. No. 879,930; Feb. 25; Sp. p. 4254; Dr. p. 889; Gaz. vol. 132; p. 1625.
Baxter, W., Jr., Jersey City, N. J. System for controlling the motion of electrically-operated elevators by means of a switch. No. 878,496; Feb. 11; Sp. p. 1237; Dr. pp. 256-60; Gaz. vol. 132; p. 1081.
Bay State Last Company. (See Hamblin, S. M., assignor.)
Bayer, F., New York, N. Y. Fly-catcher. No. 878,268; Feb. 4; Sp. p. 771; Dr. p. 155; Gaz. vol. 132; p. 972.
Bayless, T. B. (See Bayless, W. K. and T. B.)
Bayless, W. K. and T. B., Lexington, Ky. Cloth-measuring device. No. 879,846; Feb. 25; Sp. p. 4021; Dr. p. 843; Gaz. vol. 132; p. 1593.
Bayne, E. D. C., and L. A. Subers, Cleveland, Ohio. Flexible tire-frame. No. 879,509; Feb. 18; Sp. p. 3222; Dr. p. 694; Gaz. vol. 132; p. 1451.
Beach, H. L., Coshocton, Ohio. Match-safe. No. 878,762; Feb. 11; Sp. p. 1842; Dr. p. 380; Gaz. vol. 132; p. 1169.
Beach, W. N., New York, N. Y. Feeder-head for rotary tube-mills. No. 879,435; Feb. 18; Sp. p. 3168; Dr. p. 659; Gaz. vol. 132; p. 1426.
Bear, S. E. (See Fister, W. S., assignor.)
Beardsley, F. W., New York, N. Y. Carbureter. No. 880,062; Feb. 25; Sp. p. 4498; Dr. pp. 945-6; Gaz. vol. 132; p. 1664.
Beasley, B. F. (See Beasley, R. N. and B. F.)
Beasley, M. (See Martin and Beasley.)
Beasley, R. N., Paint Lick, and B. F. Beasley, Lexington, Ky. Coin-controlled vending apparatus. No. 879,722; Feb. 18; Sp. p. 3770; Dr. p. 791; Gaz. vol. 132; p. 1519.
Beattie, G. M. (See Jones, B. W., assignor.)
Beaumont, R., Leeds, and T. Hollis, Shipley, England. Loom for producing textile fabrics. No. 878,707; Feb. 11; Sp. p. 1736; Dr. pp. 359-60; Gaz. vol. 132; p. 1151.
Bechman, H. F., assignor to Duplex Printing Press Company, Battle Creek, Mich. Folding mechanism for printing-presses. No. 879,510; Feb. 18; Sp. p. 3323; Dr. pp. 694-5; Gaz. vol. 132; p. 1451.
Bechman, H. F., assignor to Duplex Printing Press Company, Battle Creek, Mich. Traveling-cylinder web-printing press. No. 880,001; Feb. 25; Sp. p. 4363; Dr. p. 915; Gaz. vol. 132; p. 1645.
Beck, N. D. S. K., assignor to L. Broz, Chicago, Ill. Floor-finishing apparatus. No. 878,269; Feb. 4; Sp. p. 772; Dr. p. 155; Gaz. vol. 132; p. 972.
Beecher, L. W. (See Sandahl, V., assignor.)
Beemer, E. A. W., Scotland, Ontario, Canada. Hay-rack. No. 880,118; Feb. 25; Sp. p. 4592; Dr. p. 967; Gaz. vol. 132; p. 1682.
Beemer, F., assignor to A. C. Buzby, Philadelphia, Pa. Grease-cup. No. 879,026; Feb. 11; Sp. p. 2327; Dr. p. 487; Gaz. vol. 132; p. 1251.
Beeson, A. W., assignor of one-half to G. W. Henning, Washington, Pa. Glass pressing and blowing machine. No. 877,981; Feb. 4; Sp. p. 166; Dr. pp. 37-8; Gaz. vol. 132; p. 877.
Beilfuss, G. A., Chicago, Ill. Tripod. No. 880,063; Feb. 25; Sp. p. 4502; Dr. p. 946; Gaz. vol. 132; p. 1664.
Beldiman, A., Berlin, Germany. Earth-boring tool. No. 878,856; Feb. 11; Sp. p. 2020; Dr. p. 417; Gaz. vol. 132; p. 1199.
Beier, A., assignor to Beier Water Heater Co., Pittsburg, Pa. Pressure-regulator. No. 879,127; Feb. 11; Sp. p. 2544; Dr. p. 529; Gaz. vol. 132; p. 1283.
Beier Water Heater Co. (See Beier, A., assignor.)
Bell, D. J., Chicago, Ill. Moving-picture machine. No. 879,355; Feb. 18; Sp. p. 2978; Dr. pp. 622-3; Gaz. vol. 132; p. 1400.
Bell, E. H., assignor to Railroad Supply Company, Chicago, Ill. Manufacturing tie-plates. No. 879,238; Feb. 18; Sp. p. 2757; Dr. p. 577; Gaz. vol. 132; p. 1362.
Bell, J. B., Wilmington, Del. Linotype-machine. No. 879,239; Feb. 18; Sp. p. 2759; Dr. pp. 577-8; Gaz. vol. 132; p. 1362.
Bell, T. R., New York, N. Y. Safety controlling mechanism. No. 879,847; Feb. 25; Sp. p. 4023; Dr. p. 843; Gaz. vol. 132; p. 1593.
Bemis, W. L., Brockton, Mass. Eyeglasses. No. 880,002; Feb. 25; Sp. p. 4367; Dr. p. 915; Gaz. vol. 132; p. 1645.
Ben Steele Weigher Manufacturing Company. (See Steele, B. M., assignor.)
Bender, J. S., Kansas City, Mo. Grain-door for box-cars. No. 880,476; Feb. 25; Sp. p. 5337; Dr. pp. 1124-5; Gaz. vol. 132; p. 1803.
Benedict, G. H., Chicago, Ill. Aeroplane. No. 879,848; Feb. 25; Sp. p. 4025; Dr. p. 894; Gaz. vol. 132; p. 1593.
Benjamin Electric Manufacturing Company. (See Benjamin, R. B., assignor.)
Benjamin Electric Manufacturing Company. (See Froelich, H. C., assignor.)
Benjamin Electric Manufacturing Company. (See Horton, B. D., assignor.)
Benjamin Electric Manufacturing Company. (See Webb, D. L., assignor.)
Benjamin, R. B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Attachment-plug. No. 879,723; Feb. 18; Sp. p. 3773; Dr. pp. 791-2; Gaz. vol. 132; p. 1520.
Benjamin, R. B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Electric-lamp socket. No. 879,724; Feb. 18; Sp. p. 3776; Dr. p. 792; Gaz. vol. 132; p. 1520.
Benjamin, R. B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Attachment-plug. No. 879,725; Feb. 18; Sp. p. 3778; Dr. p. 792; Gaz. vol. 132; p. 1521.
Benjamin, W. R., Granite City, Ill. Check-controlled display mechanism. No. 879,139; Feb. 18; Sp. p. 2572; Dr. p. 535; Gaz. vol. 132; p. 1328.
Bennett, T. S., Attleboro, Mass. Riveting-machine. No. 877,982; Feb. 4; Sp. p. 171; Dr. p. 38; Gaz. vol. 132; p. 878.
Bennum, G. W., Georgetown, Del. Fountain-pen. No. 879,436; Feb. 18; Sp. p. 3169; Dr. p. 659; Gaz. vol. 132; p. 1426.
Benoit, A. (See Guéniffet, Benoit, and Nicault.)
Benson, J. S., Iowa City, Iowa. Gas-engine. No. 879,726; Feb. 18; Sp. p. 3781; Dr. p. 792; Gaz. vol. 132; p. 1521.
Bentley, T., assignor of one-half to M. V. Phipps, Hopkinton, and S. K. Paige, Brookline, Mass. Device for preventing singles in roving and similar frames. No. 878,451; Feb. 4; Sp. p. 1113; Dr. p. 228; Gaz. vol. 132; p. 1032.
Berg, C., New York, N. Y. Heated steering-wheel. No. 878,708; Feb. 11; Sp. p. 1740; Dr. p. 360; Gaz. vol. 132; p. 1152.

Bergener, C., assignor to C. T. Ham Manufacturing Company, Rochester, N. Y. Lamp and lantern. No. 880,184; Feb. 25; Sp. p. 4731; Dr. p. 1001; Gaz. vol. 132; p. 1704.
Bergien, E., Glenbeulah, Wis. Stock water-tank. No. 878,929; Feb. 11; Sp. p. 2158; Dr. p. 450; Gaz. vol. 132; p. 1222.
Bergmann, O. (See Dirr and Bergmann.)
Berlin Machine Works. (See Stevens, B. D., assignor.)
Berlin Machine Works. (See Thoresby, A., assignor.)
Berliner, E., Moscow, Russia. Extracting fats, oils, and the like. No. 878,930; Feb. 11; Sp. p. 2158; Gaz. vol. 132; p. 1222.
Berliner, H. S., Washington, D. C. Making gramophone-record tablets. No. 878,931; Feb. 11; Sp. p. 2161; Dr. p. 451; Gaz. vol. 132; p. 1222.
Berns, A. H. and H. A., Chebanse, Ill. Cob-gate for corn-shellers. No. 878,037; Feb. 4; Sp. p. 299; Dr. p. 63; Gaz. vol. 132; p. 806.
Berns, H. A. (See Berns, A. H. and H. A.)
Berrenberg, R., Boston, Mass. Rotary pump. No. 878,600; Feb. 11; Sp. p. 1527; Dr. pp. 311-12; Gaz. vol. 132; p. 1118.
Berry, G. E., De Land, Fla. Window-shade fixture. No. 879,140; Feb. 18; Sp. p. 2575; Dr. p. 536; Gaz. vol. 132; p. 1329.
Besser, H., Alpena, Mich. Antifriction grinding-roller. No. 879,807; Feb. 18; Sp. p. 3023; Dr. p. 822; Gaz. vol. 132; p. 1547.
Besser, H., Alpena, Mich. Concrete-mixer. No. 879,808; Feb. 18; Sp. p. 3024; Dr. pp. 822-3; Gaz. vol. 132; p. 1547.
Best, D. (See Holley and Whitford, assignors.)
Best, W. N., New York, N. Y., assignor to International Calorific Company, Los Angeles, Cal. Boiler-furnace. No. 879,806; Feb. 18; Sp. p. 3022; Dr. p. 822; Gaz. vol. 132; p. 1547.
Beusse, O. R., and M. P. Jackson, Montezuma, Ga. Machine for thinning cotton-plants. No. 880,003; Feb. 25; Sp. p. 4368; Dr. pp. 915-16; Gaz. vol. 132; p. 1645.
Beverly, R., Mella, Va. Kitchen-cabinet. No. 880,185; Feb. 25; Sp. p. 4733; Dr. p. 1002; Gaz. vol. 132; p. 1704.
Bevier, L. C., Logan, Mont. Adjustable sight for guns. No. 878,857; Feb. 11; Sp. p. 2022; Dr. p. 417; Gaz. vol. 132; p. 1199.
Beyer, B. E., Paterson, N. J. Shutter-bower. No. 880,064; Feb. 25; Sp. p. 4503; Dr. p. 946; Gaz. vol. 132; p. 1665.
Bickal, H. F., Plainfield, N. J., assignor to New York Air Brake Company. Air-brake apparatus. No. 878,601; Feb. 11; Sp. p. 1528; Dr. p. 312; Gaz. vol. 132; p. 1116.
Biette, H. C., Toronto, Ontario, Canada. Pencil-printing machine. No. 879,849; Feb. 25; Sp. p. 4028; Dr. pp. 844-5; Gaz. vol. 132; p. 1504.
Biggar, L. A., Oneida, N. Y. Split sheet-metal pulley. No. 878,602; Feb. 11; Sp. p. 1530; Dr. p. 312; Gaz. vol. 132; p. 1117.
Billouez, A., Anderlecht, near Brussels, Belgium. Automatic water-level controller for water-separators of gas-conduits. No. 878 868; Feb. 11; Sp. p. 2024; Dr. p. 418; Gas. vol. 132; p 1199.
Bilodeau, J. E. (See Blais, O., assignor.)
Bim, J., assignor to Union Bank, Vienna, Austria-Hungary. Weft-replenishing mechanism for looms. No. 878,763; Feb. 11; Sp. p. 1844; Dr. pp. 250-1; Gaz. vol. 132; p. 1169.
Bimm, G. R., Paris, France. Dust-collecting apparatus. No. 878,329; Feb. 4; Sp. p. 888; Dr. p. 178; Gaz. vol. 132; p. 992.
Binninger, F. (See Blake and Kretzer, assignors.)
Bixby, D., Los Angeles, Cal. Buckle. No. 878,764; Feb. 11; Sp. p. 1848; Dr. p. 382; Gaz. vol. 132; p. 1170.
Bixby, M., Salt Lake City, Utah. Cigar-clipper. No. 878,110; Feb. 4; Sp. p. 435; Dr. p. 92; Gaz. vol. 132; p. 919.
Blackburn, J. M., Baltimore, Md. Stretcher for trousers, belts, &c. No. 879,028; Feb. 11; Sp. p. 2330; Dr. p. 488; Gaz. vol. 132; p. 1252.
Blackburn, J. M., Baltimore, Md. Regulator. No. 879,029; Feb. 11; Sp. p. 2333; Dr. p. 488; Gaz. vol. 132; p. 1252.
Blackford, J. C., Chicago, Ill. Seed-corn tree. No. 878,271; Feb. 4; Sp. p. 776; Dr. p. 155; Gaz. vol. 132; p. 973.
Blais, O., assignor of one-half to J. E. Bilodeau, Bromptonville, Quebec, Canada. Nut-lock. No. 879,833; Feb. 18; Sp. p. 3090; Dr. p. 835; Gaz. vol. 132; p. 1556.
Blake, A., and P. Kretzer, assignors of one-third to F. Binninger, Indianapolis, Ind. Umbrella or parasol frame. No. 878,270; Feb. 4; Sp. p. 774; Dr. p. 155; Gaz. vol. 132; p. 973.
Blake, C. C., Brookline, Mass. Soldering appliance. No. 878,182; Feb. 4; Sp. p. 606; Dr. p. 125; Gaz. vol. 132; p. 944.
Blake, J., assignor of one-half to J. W. Macdonald, Silvertown, England. Steam-generator. No. 878,330; Feb. 4; Sp. p. 889; Dr. p. 178; Gaz. vol. 132; p. 992.
Blakeslee, M. D., assignor of one-fourth to H. Burden, Second, Cazenovia, N. Y. Can feeding and righting machine. No. 878,103; Feb. 11; Sp. p. 1531; Dr. pp. 312-13; Gaz. vol. 132; p. 1117.
Blakeslee, M. D., assignor of one-fourth to H. Burden, Second, Cazenovia, N. Y. Can feeding and righting machine. No. 880,119; Feb. 25; Sp. p. 4504; Dr. pp. 967-8; Gaz. vol. 132; p. 1682.
Blakeslee, M. D., assignor of one-fourth to H. Burden, Second, Cazenovia, N. Y. Can-righting machine. No. 880,186; Feb. 25; Sp. p. 4734; Dr. p. 1002; Gaz. vol. 132; p. 1705.
Blakney, R. I., Seattle, Wash. Hydraulic air-compressor. No. 880,187; Feb. 25; Sp. p. 4738; Dr. p. 1003; Gaz. vol. 132; p. 1705.
Bleakney, C. R., Sidney, Ohio. Paper clip or fastener. No. 878,497; Feb. 11; Sp. p. 1291; Dr. p. 260; Gaz. vol. 132; p. 1082.
Bleckley, F. W., assignor to Pressed Steel Wagon Bolster Co., Hazleton, Pa. Wagon-Bolster. No. 878,038; Feb. 4; Sp. p. 300; Dr. p. 64; Gaz. vol. 132; p. 897.
Bleckley, F. W., assignor to Pressed Steel Wagon Bolster Co., Hazleton, Pa. Wagon. No. 878,452; Feb. 4; Sp. p. 1117; Dr. p 229; Gaz. vol. 132; p. 1032.
Blessing, J. G., assignor to American Cutlery Company, Chicago, Ill. Grinding-machine. No. 880,120; Feb. 25; Sp. p. 4000; Dr. pp. 969-70; Gaz. vol. 132; p. 1683.
Blessing, J. G., assignor to American Cutlery Company, Chicago, Ill. Grinding-machine. No. 880,188; Feb. 25; Sp. p. 4740; Dr. pp. 1003-4; Gaz. vol. 132; p. 1706.
Bliss Electric Car Lighting Company. (See McGary and Jepson, assignors.)
Blood, W. H., Jr., Wellesley, Mass. Ground-connection clamp. No. 879,940; Feb. 25; Sp. p. 4254; Dr. p. 889; Gaz. vol. 132; p. 1625.
Bloom, N. H., Nashua, Iowa. Vehicle. No. 879,437; Feb. 18; Sp. p. 3171; Dr. pp. 660-1; Gaz. vol. 132; p. 1427.
Bloomberg, C. (See Paneth, B. E., assignor.)
Bloomer, C. T., Newark, N. Y. Wire handle for paper vessels. No. 878,331; Feb. 4; Sp. p. 892; Dr. p. 178; Gaz. vol. 132; p. 993.
Blundell, W. J., New York, N. Y. Collapsible ladder. No. 878,332; Feb. 4; Sp. p. 893; Dr. p. 179; Gaz. vol. 132; p. 993.
Boda, J., assignor to Independent Harvester Company, Plano, Ill. Tripping and bundle-counting mechanism for grain-shockers. No. 879,834; Feb. 18; Sp. p. 3091; Dr. pp. 835-6; Gaz. vol. 132; p. 1557.
Boda, J., assignor to Independent Harvester Company, Plano, Ill. Grain-shocker. No. 879,850; Feb. 25; Sp. p. 4032; Dr. pp. 845-7; Gaz. vol. 132; p. 1504.
Boehm, H. J., Dueren, Germany. Ramie-decorticator. No. 877,983; Feb. 4; Sp. p. 173; Dr. pp. 38-9; Gaz. vol. 132; p. 878.
Boehm, H. J., Dueren, Germany. Machine for divesting parts of plants of their fleshy substance. No. 877,984; Feb. 4; Sp. p. 174; Dr. p. 39; Gaz. vol. 132; p. 878.
Böhm, J., *et al.* (See Kőszegi, K., assignor.)
Bohn, M., Pueblo, Colo. Cylinder relief-valve. No. 880,004; Feb. 25; Sp. p. 4369; Dr. p. 916; Gaz. vol. 132; p. 1645.
Bohr, N. C., Boston, Mass., assignor to Manufacturers Machine Company, Montclair, N. J. Insole. No. 878,453; Feb. 4; Sp. p. 1118; Dr. p. 229; Gaz. vol. 132; p. 1032.
Bollaro and Engineering Company. (See Del Mar, H., assignor.)
Bök, N. S., Stockholm, Sweden. Elastically-articulated shaft and journaling device. No. 878,859; Feb. 11; Sp. p. 2025; Dr. p. 418; Gaz. vol. 132; p. 1200.
Bök, N. S., Stockholm, Sweden. Journaling device. No. 878,860; Feb. 11; Sp. p. 2026; Dr. p. 418; Gaz. vol. 132; p. 1200.
Bolan, P. E., Cloquet, Minn. Switch-signal. No. 879,240; Feb. 18; Sp. p. 2762; Dr. pp. 578-9; Gaz. vol. 132; p. 1363.
Bolsy, E. H. (See Yates, Devey, Richan and Devey, assignors.)
Bolton, D. G., Camden, N. J. Electrical insulator. No. 880,121; Feb. 25; Sp. p. 4005; Dr. p. 970; Gaz. vol. 132; p. 1683.
Bon, J. A., Vincennes, France. Projectile. No. 879,079; Feb. 11; Sp. p. 2426; Dr. p. 508; Gaz. vol. 132; p. 1268.
Bond, J. J., Reading, Mass. Tire and luggage carrier for automobiles, &c. No. 879,511; Feb. 18; Sp. p. 3326; Dr. p. 695; Gaz. vol. 132; p. 1451.
Bonn, H., Jr., Scranton, Pa. Clarinet. No. 878,333; Feb. 4; Sp. p. 895; Dr. pp. 179-80; Gaz. vol. 132; p. 993.
Bonnell, H. D., Norfolk, Va. Combined tobacco-reservoir and cigarette-filler. No. 879,851; Feb. 25; Sp. p. 4045; Dr. p. 847; Gaz. vol. 132; p. 1505.
Bonner Maschinenfabrik & Eisengiesserei Fr. Mönkemöller & Cie. (See Liebtig, I., assignor.)
Borchert, W. (See Akarly and Borchert.)
Borrise, F. W. A. von, deceased; T. W. Worsdell, Carnforth, R. H. Lapage, Walmer, and J. C. Taite, London, England, assignees. Compound locomotive. (Reissue.) No. 12,751; Feb. 11; Sp. p. 2559; Dr. p. 533; Gaz. vol. 132; p. 1286.
Bosch, K., and A. Mittasch, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Production of barium cyanid. No. 879,092; Feb. 11; Sp. p. 2394; Gaz. vol. 132; p. 1253.
Bosa, M. P., San Francisco, Cal. Concentrator. No. 878,861; Feb. 11; Sp. p. 2027; Dr. pp. 418-19; Gaz. vol. 132; p. 1200.
Bosshard, A., assignor to Firm of Aktiengesellschaft Arnold B. Heine & Co., Arbon, Switzerland. Appliance for severing embroidered web. No. 878,111; Feb. 4; Sp. p. 437; Dr. pp. 92-3; Gaz. vol. 132; p. 920.
Boston Machine Works Company. (See Dunn, G. F., assignor.) (Reissue.)
Boston Machine Works Company. (See Illingworth, H. I., assignor.)
Botkin, I. M., Carlos, Ind. Wire splice or coupling. No. 879,941; Feb. 25; Sp. p. 4256; Dr. p. 890; Gaz. vol. 132; p. 1625.
Boughton, F. M., Reno, Nev. Camp-stove. No. 878,962; Feb. 11; Sp. p. 2030; Dr. p. 419; Gaz. vol. 132; p. 1201.

Bourdereaux, G. C., assignor to M. W. Swartz and J. Bourdereaux, Peoria, Ill. Pattern for casting cylinders. No. 879,942; Feb. 25; Sp. p. 4257; Dr. p. 890; Gaz. vol. 132; p. 1628.
Bourdereaux, J., *et al.* (See Bourdereaux, G. C., assignor.)
Bourdon, C., Paris, France. Multitubular boiler. No. 880,189; Feb. 25; Sp. p. 4744; Dr. p. 1004; Gaz. vol. 132; p. 1706.
Bourne, N. F., Ferryville, Wis. Binder. No. 879,356; Feb. 18; Sp. p. 2981; Dr. p. 623; Gaz. vol. 132; p. 1400.
Bournonville, E. M., Jersey City, N. J. Forming rail-bonds, &c. No. 880,271; Feb. 25; Sp. p. 4919; Dr. p. 1041; Gaz. vol. 132; p. 1734.
Bowen, C. R., Fordyce, Ark. Draw-head for railway-cars. No. 880,270; Feb. 25; Sp. p. 4918; Dr. p. 1041; Gaz. vol. 132; p. 1734.
Bowen, C. R., Jr., Jones county, Ga. Cotton-scrape. No. 877,899; Feb. 4; Sp. p. 4; Dr. p. 1; Gaz. vol. 132; p. 849.
Bowers, S. D., Bridgeport, Conn. Game apparatus. No. 878,334; Feb. 4; Sp. p. 899; Dr. p. 180; Gaz. vol. 132; p. 994.
Bowman, H. E., *et al.* (See Squires, A. C., assignor.)
Boyden, G. A. (See Brown, Hanrahan, and Boyden.)
Boye, J. H., assignor to Boye Needle Company, Chicago, Ill. Needle-threader. No. 878,767; Feb. 11; Sp. p. 1852; Dr. p. 382; Gaz. vol. 132; p. 1170.
Boye Needle Company. (See Boye, J. H., assignor.)
Boyer, A. P., Goshen, Ind. Hoisting apparatus. No. 878,335; Feb. 4; Sp. p. 900; Dr. p. 180; Gaz. vol. 132; p. 994.
Boyle, J. H. B. (See Loos, G. J., assignor.)
Boylston Manufacturing Company. (See Ballard, H. A., assignor.)
Brachett, E. W., assignor to Dean Electric Company, Elyria, Ohio. Electromechanical switchboard-signal. No. 878,112; Feb. 4; Sp. p. 439; Dr. p. 93; Gaz. vol. 132; p. 920.
Brackney, J. W., Fullerton, Cal. Casing-tongs. No. 879,809; Feb. 18; Sp. p. 3026; Dr. p. 823; Gaz. vol. 132; p. 1548.
Brady, F. W., Englewood, N. J. Vaporizing device for internal-combustion engines. No. 878,932; Feb. 11; Sp. p. 2162; Dr. p. 451; Gaz. vol. 132; p. 1222.
Brady, F. W., Englewood, N. J. Fuel-feeding mechanism for internal-combustion engines. No. 878,933; Feb. 11; Sp. p. 2164; Dr. p. 452; Gaz. vol. 132; p. 1223.
Brady, F. W., Englewood, N. J. Fuel-feeding mechanism for internal-combustion engines. No. 878,934; Feb. 11; Sp. p. 2168; Dr. p. 453; Gaz. vol. 132; p. 1223.
Brain, C., Parsons, Kans. Telegraphic transmitter. No. 879,357; Feb. 18; Sp. p. 2983; Dr. pp. 624-6; Gaz. vol. 132; p. 1401.
Bramley-Moore, S., Bloomsbury, England. Liquid-meter. No. 879,141; Feb. 18; Sp. p. 2576; Dr. pp. 536-7; Gaz. vol. 132; p. 1329.
Branan, M. (See Fry, R. C., assignor.)
Brandon, W., Hillsboro, assignor of one-half to J. Miller, Greenwood, Wis. Nut and pipe wrench. No. 879,810; Feb. 18; Sp. p. 3028; Dr. p. 823; Gaz. vol. 132; p. 1548.
Brant, J. S., assignor to Cory & Reynolds Company, Providence, R. I. Pierceless ear-drop. No. 879,358; Feb. 18; Sp. p. 2995; Dr. p. 626; Gaz. vol. 132; p. 1401.
Brant, J. S., assignor to Cory & Reynolds Company, Providence, R. I. Cuff-pin and other analogous article of jewelry. No. 879,359; Feb. 18; Sp. p. 2996; Dr. p. 626; Gaz. vol. 132; p. 1401.
Brauner, H., Jägerndorf, Austria-Hungary. Valve. No. 878,183; Feb. 4; Sp. p. 609; Dr. p. 125; Gaz. vol. 132; p. 944.
Bräunlich, G., Nuremberg, Germany. Apparatus for applying ribbon gold-leaf and the like. No. 878,184; Feb. 4; Sp. p. 610; Dr. p. 125; Gaz. vol. 132; p. 945.
Braunwalder, J., Chicago, Ill. Internal-combustion engine. No. 879,512; Feb. 18; Sp. p. 3328; Dr. p. 695; Gaz. vol. 132; p. 1452.
Braxton, J. M., Key West, Fla. Concrete pile. No. 878,765; Feb. 11; Sp. p. 1850; Dr. p. 382; Gaz. vol. 132; p. 1170.
Brazill, J. M., Rochester, N. Y. Stairway for fire-escapes, &c. No. 878,863; Feb. 11; Sp. p. 2032; Dr. p. 420; Gaz. vol. 132; p. 1201.
Breckenridge, K. S., Chicago, Ill., assignor to American Can Company, New York, N. Y. Friction-top can. No. 878,766; Feb. 11; Sp. p. 1850; Dr. p. 382; Gaz. vol. 132; p. 1170.
Brehaut, H. B., Cottage Grove, Oreg. Carbonated liquid. No. 879,031; Feb. 11; Sp. p. 2335; Gaz. vol. 132; p. 1253.
Brennan, J. B., Sherman, Tex. Apparatus for bleaching cotton. No. 880,005; Feb. 25; Sp. p. 4371; Dr. p. 916; Gaz. vol. 132; p. 1646.
Brennan, J. P., *et al.* (See McGlinn and McCauley, assignors.)
Bresiauer, M. D., and S. W. Clark, Norfolk, Va. Railway safety appliance. No. 878,113; Feb. 4; Sp. p. 441; Dr. pp. 93-4; Gaz. vol. 132; p. 920.
Brewer, R. B., assignor of one-half to S. R. Payne, Oxford, Kans. Corn-harvester. No. 878,477; Feb. 4; Sp. p. 1177; Dr. p. 239; Gaz. vol. 132; p. 1041.
Brewster, S. M. (See Zimmerman, R. E., assignor.)
Briggs, G. E., *et al.* (See Mayo, W. C., assignor.)
Briggs, G. E. (See Mayo and Houlehan, assignors.)
Brinckerhoff, F. M., New York, N. Y. Conducting-conduit for vehicles. No. 880,477; Feb. 25; Sp. p. 5339; Dr. pp. 1125-6; Gaz. vol. 132; p. 1803.
Brinkman, L. H., assignor to Whitlock Coil Pipe Company, West Hartford, Conn. Machine for bending pipe. No. 878,604; Feb. 11; Sp. p. 1535; Dr. p. 313; Gaz. vol. 132; p. 1117.
Brion, A. E. (See Price, A. M., assignor.)
Bristol, W. H., New York, N. Y. Thermo-electrical system. No. 880,272; Feb. 25; Sp. p. 4920; Dr. p. 1041; Gaz. vol. 132; p. 1734.
Bristol, W. H., New York, N. Y. Indicating and recording system. No. 880,273; Feb. 25; Sp. p. 4923; Dr. p. 1043; Gaz. vol. 132; p. 1734.
Broadley, J., Fairoaks, Cal. Automatic framing-spacer. No. 878,605; Feb. 11; Sp. p. 1536; Dr. p. 313; Gaz. vol. 132; p. 1118.
Broadwell, C. S., Santa Rosa, Cal. Loose-leaf binder. No. 880,352; Feb. 25; Sp. p. 5063; Dr. p. 1069; Gaz. vol. 132; p. 1760.
Broady, C. M., South Bend, Ind. Artificial hand. No. 879,360; Feb. 18; Sp. p. 2997; Dr. p. 627; Gaz. vol. 132; p. 1402.
Brodie, W. M., assignor to Edison Manufacturing Company, West Orange, N. J. Battery-plate. No. 879,361; Feb. 18; Sp. p. 2998; Dr. p. 627; Gaz. vol. 132; p. 1402.
Brooks, M., Urbana, Ill. Telephony. No. 879,438; Feb. 18; Sp. p. 3173; Dr. p. 661; Gaz. vol. 132; p. 1427.
Brooks, R. J., Cassopolis, Mich. Feed-bag. No. 880,438; Feb. 25; Sp. p. 5255; Dr. p. 1105; Gaz. vol. 132; p. 1789.
Brophy, C. A., Hinsdale, Ill. Cover for pneumatic tires. No. 880,274; Feb. 25; Sp. p. 4925; Dr. p. 1042; Gaz. vol. 132; p. 1735.
Brophy, L. V., Fort Wayne, Ind., assignor to Indiana Road Machine Company. Elevating-grader. No. 879,607; Feb. 18; Sp. p. 3545; Dr. p. 742; Gaz. vol. 132; p. 1481.
Brothers, W. H., Dedham, Mass., assignor, by mesne assignments, to Crompton & Knowles Loom Works. Weft-replenishing loom. No. 878,337; Feb. 4; Sp. p. 907; Dr. p. 181; Gaz. vol. 132; p. 995.
Broughton, C. W., Carlton, Ill. Mail-pouch receiving and delivery apparatus for railway-cars. No. 880,008; Feb. 25; Sp. p. 4375; Dr. p. 918; Gaz. vol. 132; p. 1647.
Brouwers, J., Zeeland, Mich. Curd-mill. No. 878,114; Feb. 4; Sp. p. 445; Dr. p. 94; Gaz. vol. 132; p. 921.
Brown, B. F., Bridgeton, Ind. Dumping-cart. No. 878,115; Feb. 4; Sp. p. 446; Dr. p. 94; Gaz. vol. 132; p. 921.
Brown Bag-Filling Machine Company. (See Brown J. R., assignor.)
Brown, C. F., trustee. (See Reeve, S. A., assignor.)
Brown, F. H., J. E. Hanrahan, Baltimore, and G. A. Boyden, Mount Washington, assignors to National Compositype Company, Baltimore, Md. Means for casting type. No. 878,185; Feb. 4; Sp. p. 612; Dr. p. 126; Gaz. vol. 132; p. 945.
Brown, G. W., Lexington, Ky. Headlight. No. 879,727; Feb. 18; Sp. p. 3782; Dr. p. 793; Gaz. vol. 132; p. 1521.
Brown, J. F., Toledo, Ohio. Swinging electric bracket. No. 878,498; Feb. 11; Sp. p. 1292; Dr. p. 261; Gaz. vol. 132; p. 1082.
Brown, J. H., Independence, Kans. Door-latch. No. 880,006; Feb. 25; Sp. p. 4372; Dr. p. 917; Gaz. vol. 132; p. 1646.
Brown, J. E. Washington, D. C., assignor to Brown Bag-Filling Machine Company, Fitchburg, Mass. Assembling apparatus. No. 877,900; Feb. 4; Sp. p. 6; Dr. p. 1; Gaz. vol. 132; p. 850.
Brown, L. W., Bakersfield, Cal. Oil-cleaning apparatus. No. 879,728; Feb. 18; Sp. p. 3783; Dr. pp. 793-4; Gaz. vol. 132; p. 1522.
Brown, M., assignor to Hazen-Brown Company, Brockton, Mass. Cement. No. 879,241; Feb. 18; Sp. p. 2763; Gaz. vol. 132; p. 1363.
Brown, N. S., Wigan, England. Clearer for preparing frames for cotton and other fibers. No. 880,007; Feb. 25; Sp. p. 4374; Dr. p. 917; Gaz. vol. 132; p. 1646.
Brown, O., Sacramento, Cal. Paddle-wheel. No. 880,353; Feb. 25; Sp. p. 5066; Dr. p. 1070; Gaz. vol. 132; p. 1760.
Brown and Sharpe Manufacturing Company. (See Thacher, J. J., assignor.)
Brown, T. G., Buckland, Va. Mail-box signal. No. 878,036; Feb. 4; Sp. p. 297; Dr. p. 63; Gaz. vol. 132; p. 896.
Brown, W. H., Minneapolis, Minn. Feed-water heater. No. 879,362; Feb. 18; Sp. p. 3000; Dr. p. 627; Gaz. vol. 132; p. 1402.
Brown, Z. R., Lodi, N. Y. Bag-holder. No. 878,336; Feb. 4; Sp. p. 906; Dr. p. 181; Gaz. vol. 132; p. 995.
Browning, C., Jr., Sacramento, Cal. Device for the inspection of car-wheels. No. 878,499; Feb. 11; Sp. p. 1293; Dr. pp. 261-2; Gaz. vol. 132; p. 1082.
Browning, C., Jr., Sacramento, Cal. Device for the inspection of car-wheels. No. 878,500; Feb. 11; Sp. p. 1299; Dr. pp. 262-3; Gaz. vol. 132; p. 1082.
Browning, R. G. (See Hughes and Browning.)
Brox, L. (See Beck, N. D. S. K., assignor.)
Bruce, W. M., Jr., Springfield, Ohio, assignor, by mesne assignments, to American Automatic Telephone Company, Rochester, N. Y. Lock-out device for party-line telephones. No. 877,901; Feb. 4; Sp. p. 8; Dr. p. 2; Gaz. vol. 132; p. 850.
Bruce, W. M., Jr., Springfield, Ohio, assignor, by mesne assignments, to American Automatic Telephone Company, Rochester, N. Y. Telephone-switch. No. 877,902; Feb. 4; Sp. p. 10; Dr. p. 2; Gaz. vol. 132; p. 850.
Brunello, J. J., Bluefield, W. Va. Nut-lock. No. 880,063; Feb. 25; Sp. p. 4504; Dr. p. 946; Gaz. vol. 132; p. 1665.
Brunswick-Balke-Collender Company. (See McIntire, J. N., assignor.)

Bryan, J. H. B., assignor of two-thirds to N. J. and N. Kelly, Buffalo, N. Y. Pipe-tapping device. No. 879,513; Feb. 18; Sp. p. 3330; Dr. p. 695; Gaz. vol. 132; p. 1452.
Bryant Electric Company. (See Goodridge, G. W., assignor.)
Bryant, F. L. (See Morrison and Bryant.)
Bryant R. C., Farce, Miss. Brush. No. 878,606; Feb. 11; Sp. p. 1338; Dr. p. 314; Gaz. vol. 132; p. 1118.
Bucey, G. M., East Springfield, Ohio. Wheel. No. 880,122; Feb. 25; Sp. p. 4606; Dr. pp. 970-1; Gaz. vol. 132; p. 1683.
Buchanan, G. G., Dubois, Pa. Trolley-pole head. No. 879,729; Feb. 18; Sp. p. 3786; Dr. p. 794; Gaz. vol. 132; p. 1522.
Buck, H. A., Providence, R. I., assignor to C. D. Wainwright, Marblehead, Mass. Cylinder-head. No. 880,478; Feb. 25; Sp. p. 5342; Dr. pp. 1126-7; Gaz. vol. 132; p. 1804.
Buck, H. A., Providence, R. I., assignor to C. D. Wainwright, Marblehead, Mass. Turbine-engine. No. 880,479; Feb. 25; Sp. p. 5345; Dr. p. 1127; Gaz. vol. 132; p. 1804.
Buckeye Manufacturing Company. (See Lambert, J. W., assignor.)
Buckham, G. T. (See Dawson and Buckham.)
Buckingham, C. L., New York, and E. Germann, Brooklyn, N. Y.; said Germann assignor to said Buckingham. Apparatus for perforating fillets of paper for the automatic transmission of messages, &c. No. 880,275; Feb. 25; Sp. p. 4927; Dr. p. 1042; Gaz. vol. 132; p. 1735.
Bucknam, E. S., assignor, by mesne assignments, to J. G. Brill Company, Philadelphia, Pa. Car. No. 878,338; Feb. 4; Sp. p. 910; Dr. p. 182; Gaz. vol. 132; p. 905.
Budd, E. G., assignor to Hale-Kilburn Metal Company, Philadelphia, Pa. Car-seat. No. 879,730; Feb. 18; Sp. p. 3787; Dr. p. 795; Gaz. vol. 132; p. 1522.
Bullard, C. E., Brookline, assignor of one-half to G. R. Stetson, New Bedford Mass. Arch-supporter. No. 878,039; Feb. 4; Sp. p. 302; Dr. p. 64; Gaz. vol. 132; p. 897.
Bullock Electric Manufacturing Company. (See Lord, C. E., assignor.)
Bültzingslöwen, B. von, assignor to F. Kornicker, New York, N. Y. Tea-strainer. No. 880,190; Feb. 25; Sp. p. 4745; Dr. p. 1004; Gaz. vol. 133; p. 1706.
Bunnell, M. G., Porter, Ind., assignor to Austin Manufacturing Company, Chicago, Ill. Crusher. No. 879,242; Feb. 18; Sp. p. 2764; Dr. p. 579; Gaz. vol. 132; p. 1363.
Burckhardt, E., Mannheim, Germany. Centering apparatus for portable drilling-machines and the like. No. 879,142; Feb. 18; Sp. p. 2578; Dr. p. 537; Gaz. vol. 132; p. 1330.
Burden, H., Second. (See Blakeslee, M. D., assignor.)
Burdick, W. O., Stockton, Cal. Non-binding necktie. No. 880,191; Feb. 25; Sp. p. 4746; Dr. p. 1005; Gaz. vol. 132; p. 1707.
Burgess, F. S., New York, N. Y. Window attachment. No. 879,811; Feb. 18; Sp. p. 3928; Dr. p. 824; Gaz. vol. 132; p. 1548.
Burgess, J. P., Depauw, Ind. Separating buckhorn and plantain seeds from clover-seeds. No. 878,116; Feb. 4; Sp. p. 447; Dr. p. 95; Gaz. vol. 132; p. 921.
Burget, J. M. (See Knobloch and Burget.)
Burhans, P. C., Phœnix, N. D. Ice-can. No. 878,501; Feb. 11; Sp. p. 1304; Dr. p. 263; Gaz. vol. 132; p. 1082.
Burk, E. L., Goodell, Iowa. Check-hook. No. 878,805; Feb. 11; Sp. p. 2036; Dr. p. 421; Gaz. vol. 132; p. 1202.
Burk, T. F., Providence, R. I. Knife. No. 880,123; Feb. 25; Sp. p. 4607; Dr. p. 971; Gaz. vol. 132; p. 1684.
Burke, J. (See Burke, M. and J.)
Burke, M. and J., Chicago, Ill., Addressing-machine. No. 878,117; Feb. 4; Sp. p. 448; Dr. pp. 95-6; Gaz. vol. 132; p. 921.
Burke, T. N., Chicago, Ill. Seat-cushion. No. 878,040; Feb. 4; Sp. p. 304; Dr. p. 64; Gaz. vol. 132; p. 897.
Burnes, E. H., Amsterdam, N. Y. Aerating-churn. No. 878,359; Feb. 4; Sp. p. 911; Dr. p. 182; Gaz. vol. 132; p. 906.
Burns, R., New York, N. Y. Roaster for coffee, &c. No. 879,731; Feb. 18; Sp. p. 3790; Dr. p. 795; Gaz. vol. 132; p. 1523.
Burr, H. J., *et al.* (See Corellius, A. B., assignor.)
Burton, G. F., assignor of one-half to L. A. Christian and C. W. Cram, Woodlawn, Ala. Rotary engine. No. 880,009; Feb. 25; Sp. p. 4389; Dr. pp. 919-20; Gaz. vol. 132; p. 1647.
Busby, L. A. (See Busby, N. J., assignor.)
Busby, N. J., Boston, assignor to L. A. Busby, Chelsea, Mass. Antislipping tread for boots and shoes. No. 879,732; Feb. 18; Sp. p. 3791; Dr. p. 795; Gaz. vol. 132; p. 1523.
Buschur, G., Coldwater, Ohio. Door-holder. No. 878,864; Feb. 11; Sp. p. 2035; Dr. p. 420; Gaz. vol. 132; p. 1202.
Bush, P. M., Hartford, assignor to Whitlock Coil Pipe Company, West Hartford, Conn. Refrigerating apparatus. No. 879,243; Feb. 18; Sp. p. 2766; Dr. pp. 579-80; Gaz. vol. 132; p. 1363.
Bushong, H. F., assignor to Kalamazoo Loose Leaf Binder Company, Kalamazoo, Mich. Temporary binder. No. 878,340; Feb. 4 Sp. p. 913; Dr. p. 182; Gaz. vol. 132; p. 906.
Buterbaugh, L. B., *et al.* (See Chesterman, W., assignor.)
Butler, B. G., Columbia, S. C. Ice-cream freezer. No. 878,709; Feb. 11; Sp. p. 1742; Dr. p. 360; Gaz. vol. 132; p. 1152.
Butler, C. H., Oakland, Cal. Street-cleaning apparatus. No. 880,124; Feb. 25; Sp. p. 4608; Dr. pp. 971-2; Gaz. vol. 132; p. 1684.
Butler, C. R., Carthage, Ind. Heat transference. No. 877,903; Feb. 4; Sp. p. 12; Dr. p. 2; Gaz. vol. 132; p. 851.
Butler, W., Birkdale, Southport, England. Stand for photographic cameras, telescopes, and other scientific instruments. No. 880,192; Feb. 25; Sp. p. 4747; Dr. p. 1005; Gaz. vol. 132; p. 1707.
Butsch, J., Sr., Crossville, Ill. Rivet-extractor. No. 878,041; Feb. 4; Sp. p. 1306; Dr. p. 64; Gaz. vol. 132; p. 897.
Butterfield, J. D. (See Oldham, G. F., assignor.)
Butters, C., Berkeley, Cal. Treating slimes. No. 879,080; Feb. 11; Sp. p. 2427; Dr. p. 508; Gaz. vol. 132; p. 1208.
Button, W. H., and E. Dyer, Bandon, Oreg. Fishing-tool. No. 879,812; Feb. 18; Sp. p. 3930; Dr. p. 824; Gaz. vol. 132; p. 1548
Buzby, A. C. (See Beemer, F., assignor.)
Byrd, W. P., Baltimore, Md. Automatic brake-setting mechanism. No. 879,032; Feb. 11; Sp. p. 2336; Dr. p. 489; Gaz. vol. 132; p. 1253.
Byrnes, L. M., St. Louis, Mo., and G. H. Kendrick, Little Rock, Ark. Piston-rod packing. No. 878,186; Feb. 4; Sp. p. 614; Dr. p. 126; Gaz. vol. 132; p. 945.
C. B. Cottrell & Sons Company. (See Barber, H. M., assignor.)
C. B. Cottrell & Sons Company. (See Cottrell, E. H., assignor.)
C. B. Cottrell & Sons Company. (See Greenway, R. J. Jr., assignor.)
C. B. Cottrell & Sons Company. (See Seymour, R. C., assignor.)
C. G. Sargent's Sons Corporation. (See Sargent, F. G., assignor.)
C. O. Bartlett & Snow Co. (See Snow, K. F., assignor.)
C. T. Ham Manufacturing Company. (See Bergener, C., assignor.)
Cadillac Cabinet Company. (See Harding, M. P., assignor.)
Caha, F., Valparaiso, Nebr. End-gate. No. 880,010; Feb. 25; Sp. p. 4384; Dr. p. 920; Gaz. vol. 132; p. 1647.
Cahill, J., Norfolk, Va. Fireproof shutter. No. 878,341; Feb. 4; Sp. p. 917; Dr. p. 183; Gaz. vol. 132; p. 906.
Cahill, S. S., Brunswick, Me. Puzzle. No. 878,187; Feb. 4; Sp. p. 615; Dr. p. 126; Gaz. vol. 132; p. 946.
Cahill, W. A., Syracuse, N. Y. Carbureter. No. 878,770; Feb. 11; Sp. p. 1857; Dr. p. 383; Gaz. vol. 132; p. 1171.
Caillet, J., assignor to Société Anonyme des Automobiles Peugeot, Paris, France. Apparatus for cooling the brakes of motor road-vehicles. No. 878,454; Feb. 4; Sp. p. 1120; Dr. p. 229; Gaz. vol. 132; p. 1033.
Cairns, A., St. Louis, Mo. Door-check. No. 878,067; Feb. 11; Sp. p. 1530; Dr. p. 314; Gaz. vol. 132; p. 1119.
Calculagraph Company. (See Abbott, H., assignor.)
Calculus Company. (See Dennis, A. S., assignor.) (Reissue.)
Caldwell, F. B., Kenesaw, Nebr. Twine-cutter. No. 879,733; Feb. 18; Sp. p. 3792; Dr. p. 796; Gaz. vol. 132; p. 1523
Caldwell, J., Philadelphia, Pa. Insulator for electric wires. No. 879,033; Feb. 11; Sp. p. 2339; Dr. p. 489; Gaz. vol. 132; p. 1253.
Callahan, W. H., New York, N. Y. Device for cleaning hollow articles. No. 878,768; Feb. 11; Sp. p. 1854; Dr. p. 383; Gaz. vol. 132; p. 1171.
Cameron, J. A., Chicago, Ill. Water-current motor. No. 878,008; Feb. 11; Sp. p. 1540; Dr. p. 314; Gaz. vol. 132; p. 1119.
Cammett, I. A. (See Fellows and Cammett.)
Campbell, C. H., *et al.*, executors. (See Campbell, J. H., assignor.)
Campbell, C. H., New York, N. Y. Concentrated whole milk. No. 879,514; Feb. 18; Sp. p. 3332; Dr. p. 696; Gaz. vol. 132; p. 1452
Campbell, E., *et al.*, executors. (See Campbell, J. H., assignor.)
Campbell, G. N., Evansville, Ind. Baling device. No. 878,342; Feb. 4; Sp. p. 919; Dr. p. 183; Gaz. vol. 132; p. 907.
Campbell H. L., and J. L. Watts, Nashville, Tenn. Electrical vapor apparatus. No. 878,710; Feb. 11; Sp. p. 1744; Dr. p. 361; Gaz. vol. 132; p. 1153.
Campbell, J. H., deceased, New York, N. Y., assignor, by mesne assignments, to C. H., E., and C. H. Campbell, executors. Apparatus for concentrating liquids. No. 879,515; Feb. 18; Sp. p. 3334; Dr. p. 696; Gaz. vol. 132; p. 1453.
Campbell, J. W., Colorado Springs, Colo. Fire-escape. No. 879,430; Feb. 18; Sp. p. 3178; Dr. pp. 661-2; Gaz. vol. 132; p. 1427.
Campbell Printing Press & Manufacturing Company. (See Johnston, R. T., assignor.)
Campbell Printing Press & M'f'g. Co. (See Huson, W. S., assignor.)
Campbell, W. A., Kenton, Ohio. Kitchen-cabinet table. No. 878,709; Feb. 11; Sp. p. 1855; Dr. p. 383; Gaz. vol. 132; p. 1171.
Campo, C., Turin, Italy. Gearing. No. 878,502; Feb. 11; Sp. p. 1305; Dr. pp. 263-4; Gaz. vol. 132; p. 1083.
Cannon, J. F. (See Luman, C. C., assignor.)
Cantrovitz, H. S., Milwaukee, Wis. Roundabout. No. 879,143; Feb. 18; Sp. p. 2579; Dr. p. 537; Gaz. vol. 132; p. 1330.

Cantwell, T., St. Louis, Mo. Hot-water bottle. No. 879,516; Feb. 18; Sp. p. 3337; Dr. pp. 696-7; Gaz. vol. 132; p. 1453.
Carey, T. W., Jr., New Orleans, La. Railway-spike. No. 880,480; Feb. 25; Sp. p. 5351; Dr. p. 1128; Gaz. vol. 132; p. 1804.
Carlborg O., Providence, R. I. Magneto-electric igniter device for explosive-engines. No. 878,935; Feb. 11; Sp. p. 2171; Dr. p. 454; Gaz. vol. 132; p. 1224.
Carlsen, A. M., St. Paul, Minn. Sewing-machine needle. No. 879,608; Feb. 18; Sp. p. 3549; Dr. p. 742; Gaz. vol. 132; p. 1482.
Carlson, C. A., Barberton, Ohio, assignor to Diamond Match Company, Chicago, Ill. Composition-applying mechanism for match-machines. No. 880,354; Feb. 25; Sp. p. 5067; Dr. p. 1070; Gaz. vol. 132; p. 1760.
Carlson, G. A. (See Miller and Carlson.)
Carman, A. O., Homer, Mich. Transmission-gearing. No. 878,609; Feb. 11; Sp. p. 1546; Dr. p. 315; Gaz. vol. 132; p. 1119.
Carothers, B. E., Milan, Mo. Colander. No. 879,440; Feb. 18; Sp. p. 3180; Dr. p. 662; Gaz. vol. 132; p. 1428.
Carpenter, E. P., Pawtucket, R. I. Metal-planing machine. No. 879,734; Feb. 18; Sp. p. 3793; Dr. p. 796; Gaz. vol. 132; p. 1523.
Carpenter, H. A., Sewickley, Pa., assignor to Riter-Conley Manufacturing Company, Jersey City, N. J. Gas-holder. No. 880,441; Feb. 25; Sp. p. 5261; Dr. p. 1107; Gaz. vol. 132; p. 1790.
Carpenter, H. E., Sewickley, Pa., assignor to Riter-Conley Manufacturing Company, Jersey City, N. J. Mechanism for operating the rake and rake-carriage of retort-drawing machines. No. 880,439; Feb. 25; Sp. p. 5257; Dr. p. 1106; Gaz. vol. 132; p. 1790.
Carpenter, H. E., Sewickley, Pa., assignor to Riter-Conley Manufacturing Company, Jersey City, N. J. Charging and drawing machine for gas-retorts. No. 880,440; Feb. 25; Sp. p. 5259; Dr. pp. 1106-7; Gaz. vol. 132; p. 1790.
Carpenter, H. W., assignor to American Woven Lath Company, Washington, D. C. Slat-weaving machine. No. 877,904; Feb. 4; Sp. p. 14; Dr. pp. 3-4; Gaz. vol. 132; p. 851.
Carraine, E., Philadelphia, Pa. Cloth-winding board. No. 880,276; Feb. 25; Sp. p. 4928; Dr. p. 1043; Gaz. vol. 132; p. 1735.
Carrier, F. P., Edgerton, Wis. Internal-combustion engine. No. 878,936; Feb. 11; Sp. p. 2174; Dr. p. 454; Gaz. vol. 132; p. 1224.
Carroll, T., assignor, by mesne assignments, to National Cash Register Company, Dayton, Ohio. Cash-register. No. 879,081; Feb 11; Sp. p. 2428; Dr. pp. 508-10; Gaz. vol. 132; p. 1268.
Carter, C. A., Klein, Mich. Fence-post. No. 880,355; Feb. 25; Sp. p. 5069; Dr. p. 1070; Gaz. vol. 132; p. 1761.
Carter-Crume Company. (See Dickson, J. R., assignor.)
Carter, L. D., Muscatine, Iowa. Adjustable bracket. No. 878,455; Feb. 4; Sp. p. 1121; Dr. p. 235; Gaz. vol. 132; p. 1033.
Carter, O. L., assignor of one-third to J. K. Wallace, Washington, D. C. End piece for galleys. No. 878,503; Feb. 11; Sp. p. 1307; Dr. p. 264; Gaz. vol. 132; p. 1083.
Carter, T. J., Temple, Okla. Distributing and conveying belt. No. 880,356; Feb. 25; Sp. p. 5070; Dr. p. 1071; Gaz. vol. 132; p. 1761.
Cartwright, A. (See Collins, J. B., assignor.)
Carver, C. B. P., Bridgewater, assignor to Carver Cotton Gin Company, East Bridgewater, Mass. Feed attachment for cotton-gins. No. 878,188; Feb. 4; Sp. p. 616; Dr. pp. 126-7; Gaz. vol. 132; p. 946.
Carver Cotton Gin Company. (See Carver, C. B. P., assignor.)
Carveth, H. R. (See Foerstering and Carveth.)
Case, A. W., Highland Park, Conn. Manufactured leather. No. 878,485; Feb. 4; Sp. p. 1210; Gaz. vol. 132; p. 1044.
Cassella Color Company. (See Kalischer, G., assignor.)
Casterline, B. J., assignor to Casterline Cutlery Company, Portland, Oreg. Hardening and tempering steel. No. 879,517; Feb. 18; Sp. p. 3338; Gaz. vol. 132; p. 1453.
Casterline, B. J., assignor to Casterline Cutlery Company, Portland, Oreg. Composition of matter employed for hardening and tempering steel. No. 879,518; Feb. 18; Sp. p. 3339; Gaz. vol. 132; p. 1453.
Casterline Cutlery Company. (See Casterline, B. J., assignor.)
Cattell, C. F., West Chester, Pa. Apparatus for feeding fuel to gas-generators. No. 877,905; Feb. 4; Sp. p. 21; Dr. pp. 4-5; Gaz. vol. 132; p. 852.
Catucci, P. (See Meisselbach and Catucci.)
Cave, U. G., Louisville, Ky. Memorandum and recording device for use with telephones. No. 879,082; Feb. 11; Sp. p. 2440; Dr. p. 510; Gaz. vol. 132; p. 1269.
Caverhill, J. A., Tillsonburg, Ontario, Canada. Preparing barley. No. 878,189; Feb. 4; Sp. p. 617; Gaz. vol. 132; p. 946.
Cavis, A. R., assignor of one-half to Todd Hardware & Supply Co., Caney, Kans. Caster. No. 879,519; Feb. 18; Sp. p. 3340; Dr. p. 697; Gaz. vol. 132; p. 1454.
Cazin, F. M. F., Hoboken, N. J. Electric-incandescent-lamp luminant and manufacturing it. No. 879,083; Feb. 11; Sp. p. 2442; Dr. p. 511; Gaz. vol. 132; p. 1269.
Cazin, F. M. F., Hoboken, N. J. Manufacture of filaments in electric incandescent lamps, process and product. No. 879,084; Feb. 11; Sp. p. 2445; Dr. p. 511; Gaz. vol. 132; p. 1269.
Cazin, F. M. F., Hoboken, N. J. Filament in electric incandescent lamps and its manufacture. No. 879,085; Feb. 11; Sp. p. 2452; Dr. p. 511; Gaz. vol. 132; p. 1270.
Celso, M. L., Chicago, Ill. Measuring device for tailors' use. No. 879,281; Feb. 18; Sp. p. 2834; Dr. p. 594; Gaz. vol. 132; p. 1376.
Chadeloid Chemical Company. (See Ryan, P. J., assignor.)
Chafee Manufacturing Company. (See Kleidmann, J., assignor.)
Chamberlain, J. W., Toledo, Ohio. Burner for natural gas. No. 879,735; Feb. 18; Sp. p. 3794; Dr. p. 796; Gaz. vol. 132; p. 1525.
Chamberlin, J., Flat Rock, Mich. Bucket. No. 879,144; Feb. 18; Sp. p. 2580; Dr. p. 537; Gaz. vol. 132; p. 1330.
Chambers, J. S., Wilmington, N. C. Throttle-valve. (Reissue.) No. 12,755; Feb. 25; Sp. p. 5374; Dr. p. 1132; Gaz. vol. 132; p. 1808.
Chambers, W. L., Brookville, Ind. Match-case. No. 880,357; Feb. 25; Sp. p. 5071; Dr. p. 1071; Gaz. vol. 132; p. 1761.
Chandler, O. H., assignor of one-half to J. H. Young, Clinton, S. C. Tooth-brush. No. 880,277; Feb. 25; Sp. p. 4929; Dr. p. 1043; Gaz. vol. 132; p. 1735.
Chantigney, G. W., and J. P. Morency, Montreal, Quebec, Canada. Building construction. No. 879,520; Feb. 18; Sp. p. 3341; Dr. pp. 697-8; Gaz. vol. 132; p. 1454.
Chapel, G. H., Howell, Mich. Eyeglasses. No. 879,244; Feb. 18; Sp. p. 2768; Dr. p. 580; Gaz. vol. 132; p. 1364.
Chapman, W. H., Portland, Me. Conductor for discharging high-voltage electric charges. No. 878,272; Feb. 4; Sp. p. 777, Dr. p 156; Gaz. vol. 132; p. 974.
Chapman, W. H., Portland, Me. Neutralizing static electricity. No. 878,273; Feb. 4; Sp. p. 779; Dr. p. 156; Gaz. vol. 132; p. 974.
Charlottenburger Farbwerke Aktiengesellschaft. (See Wagner, H., assignor.)
Charlton, W. (See Prue and Charlton.)
Chase, H. M., *et al.* (See Pritchard, T. W., assignor.)
Chase, J. L., Ayer, assignor of one-half to R. J. Joslin, Webster, Mass. Trolley-pole support. No. 879,943; Feb. 25; Sp. p. 4258; Dr. p. 890; Gaz. vol. 132; p. 1626.
Chazal, P., Lyon, France. Manufacture of brushes and brooms. No. 878,343; Feb. 4; Sp. p. 920; Dr. p. 183; Gaz. vol. 132; p. 997.
Chazal, P., Lyon, France. Manufacture of brushes. No. 878,344; Feb. 4; Sp. p. 921; Dr. p. 183; Gaz. vol. 132; p. 997.
Chein, J., New York, N. Y. Toy drum. No. 879,521; Feb. 18; Sp. p. 3342; Dr. p. 698; Gaz. vol. 132; p. 1454.
Chemische Fabrik auf Actien (vorm. E. Schering.) (See Stephan and Hunsalz, assignors.)
Cheney, G. K., New York, N. Y., assignor, by mesne assignments, to Victor Talking Machine Company. Die-plate for stamping up sound-records. No. 879,363; Feb. 18; Sp. p. 3002; Dr. p. 628; Gaz. vol. 132; p. 1403.
Chesbrough, H. H., Southpark, Wash. Egg-boiler. No. 878,866; Feb. 11; Sp. p. 2037; Dr. p. 421; Gaz. vol. 132; p. 1202.
Chesterman, W., assignor of three-fourths to D. Smiley, L. B. Buterbaugh, and D. W. Richards, Walston, Pa. Nut-lock. No. 878,042; Feb. 4; Sp. p. 307; Dr. p. 65; Gaz. vol. 132; p. 898.
Chicago Pneumatic Tool Company. (See Keller, J., assignor.)
Childs, S. S., Bernardsville, N. J. Spring-wheel. No. 878,937; Feb. 11; Sp. p. 2176; Dr. p. 455; Gaz. vol. 132; p. 1225.
Chipchase, J. J., Horwich, England. Sand-molding machine. No. 878,345; Feb. 4; Sp. p. 922; Dr. p. 183; Gaz. vol. 132; p. 998.
Chitty, H., Strand, London, England. Dynamo-electric machine. No. 880,011; Feb. 25; Sp. p. 4385; Dr. p. 921; Gaz. vol. 132; p. 1648.
Chrisman, C. C., St. Louis, Mo. Pad for writing-machines, furniture, &c. No. 878,043; Feb. 4; Sp. p. 308; Dr. p. 65; Gaz. vol. 132; p. 898.
Christensen, B. R., San Francisco, Cal. Roofing-tile. No. 880,012; Feb. 25; Sp. p. 4389; Dr. p. 921; Gaz. vol. 132; p. 1648.
Christensen, N. A., Milwaukee, Wis. Compound air-compressor. No. 880,125; Feb. 25; Sp. p. 4610; Dr. p. 972; Gaz. vol. 132; p. 1684.
Christian, L. A., *et al.* (See Burton, G. F., assignor.)
Christmann, C. L., Englewood, N. J. Woven fabric. No. 879,736; Feb. 18; Sp. p. 3795; Dr. p. 796; Gaz. vol. 132; p. 1524.
Christmann, C. L., Englewood, N. J. Woven fabric. No. 879,737; Feb. 18; Sp. p. 3797; Dr. p. 797; Gaz. vol. 132; p. 1524.
Church, B. S., New York, N. Y. Expansible-fluid turbine. No. 878,118; Feb. 4; Sp. p. 451; Dr. p. 96; Gaz. vol. 132; p. 922.
Church, C. J., Porter Corners, N. Y. Oil-burner. No. 880,193; Feb. 25; Sp. p. 4749; Dr. p. 1006; Gaz. vol. 132; p. 1707.
Cissel, R. B., Elizabeth, assignor to Backus Water Motor Company, Newark, N. J. Gas-producer. No. 879,441; Feb. 18; Sp. p. 3181; Dr. p. 662; Gaz. vol. 132; p. 1428.
Claflin, A. D. (See Cole, A. L., assignor.)
Clark, B. V., Providence, and W. C. Cookson, Arctic, R. I. Key-ring device. No. 878,274; Feb. 4; Sp. p. 781; Dr. p. 156; Gaz. vol. 132; p. 974.
Clark, C. M. (See Harding and Clark.)
Clark, E., Alameda, assignor to J. Nordman, San Francisco, Cal. Watchmaker's hair-spring gage. No. 878,346; Feb. 4; Sp. p. 923; Dr. p. 184; Gaz. vol. 132; p. 998.
Clark, E. E. Colorado Springs, Colo. Calculator. No. 879,145; Feb. 18; Sp. p. 2582; Dr. p. 538; Gaz. vol. 132; p. 1331.

Clark, E. E., Springfield, assignor to C. H. Phinney, trustee, Chestnut Hill, Mass. Valve for pumps, &c. No. 877,906; Feb. 4; Sp. p. 24; Dr. p. 5; Gaz. vol. 132; p. 852.
Clark, E. E., and H. A. Douglas, Kalamazoo, Mich., assignors to Royal Supply Company, Chicago, Ill. Stereoscope. No. 880,481; Feb. 25; Sp. p. 5352; Dr. p. 1128; Gaz. vol. 132; p. 1804.
Clark, L. L. C. (See Fell and Clark.)
Clark, O. W., assignor of one-fourth to J. B. Doyle, Grand Rapids, Mich. Lightning-arrester. No. 879,522; Feb. 18; Sp. p. 3343; Dr. p. 626; Gaz. vol. 132; p. 1454.
Clark, J. A., Worcester, Mass., assignor to Crompton & Knowles Loom Works. Loom for weaving tufted fabrics. No. 878,119; Feb. 4; Sp. p. 454; Dr. pp. 96–7; Gaz. vol. 132; p. 922.
Clark, M., Chicago, Ill. Bellows for automatic musical instruments. No. 879,738; Feb. 18; Sp. p. 3800; Dr. p. 797; Gaz. vol. 132; p. 1528.
Clark, M., Chicago, Ill. Automatic piano. No. 879,739; Feb. 18; Sp. p. 3803; Dr. p. 797; Gaz. vol. 132; p. 1525.
Clark, R., Charlie, Tex. Machine for cutting bagging. No. 880,194; Feb. 25; Sp. p. 4749; Dr. p. 1006; Gaz. vol. 132; p. 1707.
Clark & Roberts Company. (See Kersey, W. H., assignor.)
Clark, S. W. (See Breslauer and Clark.)
Clarke, H. B., Highland Park, Ill. Filing-case. No. 879,944; Feb. 25; Sp. p. 4260; Dr. p. 891; Gaz. vol. 132; p. 1626.
Clayton & Bentley Co. (See Clayton, W. F., assignor.)
Clayton, T. A., Paris, France. Multiple-way valve applicable to devices for gaseous fire extinction, &c. No. 878,772; Feb. 11; Sp. p. 1963; Dr. p. 384; Gaz. vol. 132; p. 1172
Clayton, W. F., Atlanta, Ga., assignor to Clayton & Bentley Co. Train-place detector for looms. No. 879,523; Feb. 18; Sp. p. 3344; Dr. pp. 626–9; Gaz. vol. 132; p. 1455.
Clement, W. M., Aurora, S. D. Shoeing-harness. No. 878,347; Feb. 4; Sp. p. 924; Dr. p. 184; Gaz. vol. 132; p. 998.
Clements, E. F., *et al.*, trustees. (See Whitehorne, W. R., assignor.)
Clemetson, H. P., Ashford, England. Chair-bed, couch, stretcher, &c. No. 879,442; Feb. 18; Sp. p. 3182; Dr. p. 662; Gaz. vol. 132; p. 1428.
Clish, T., Lynn, Mass. Foldable feed-bag. No. 878,120; Feb. 4; Sp. p. 450; Dr. p. 97; Gaz. vol. 132; p. 922.
Clinton, M. W., Chicago, Ill. Metal sheet-piling. No. 878,773; Feb. 11; Sp. p. 1965; Dr. p 385; Gaz. vol. 132; p. 1173.
Clynick, G. H. (See Lawrence, F. W., assignor.)
Coates, W. A., Providence, R. I. Manufacture of nose-pieces for spectacles and eyeglasses. No. 878,504; Feb. 11; Sp. p. 1309; Dr. p. 265; Gaz. vol. 132; p. 1053.
Cobbett, C. A., Newton, Mass. Carding-machine cylinder and clothing therefor. No. 878,348; Feb. 4; Sp. p. 926; Dr. p. 184; Gaz. vol. 132; p. 998.
Cochran, E. J. (See Lincoln, W., assignor.)
Cochran, M. C., Cottage Grove, Oreg. Making half-tone cuts. No. 878,505; Feb. 11; Sp. p. 1311; Gaz. vol. 132; p. 1084.
Cockerill, L., Richmond, Ind. Storm-front. No. 879,945; Feb. 25; Sp. p. 4264; Dr. p. 891; Gaz. vol. 132; p. 1627.
Cocklin, S. G. (See Spera and Cocklin.)
Cockrell, S. (See Crump, T. J., assignor.)
Coe Brass Manufacturing Company. (See Wood, W. A., assignor.)
Coe, H. V. (See Howard and Coe.)
Coffee, B. M., assignor of one-fourth to W. J. Whitehurst, Richmond, Va. Variable-speed gearing. No. 879,086; Feb. 11; Sp. p. 2458; Dr. p. 512; Gaz. vol. 132; p. 1270.
Coffield, P. T., assignor to P. T. Coffield & Son, Dayton, Ohio. Rotary water-pressure motor. No. 878,044; Feb. 4; Sp. p. 310; Dr. p. 65; Gaz. vol. 132; p. 896.
Coffield & Son, P. T. (See Coffield, P. T., assignor.)
Coffin, H. E., assignor to Olds Motor Works, Lansing, Mich. Brake mechanism. No. 878,506; Feb. 11; Sp. p. 1311; Dr. p. 265; Gaz. vol. 132; p. 1084.
Coffman, C. R., assignor to D. S. Thomas, Bridgewater, Va. Plow. No. 878,774; Feb. 11; Sp. p. 1967; Dr. p. 385; Gaz. vol. 132; p. 1173.
Coghlan, J. M., Patchogue, N. Y. Optician's measuring instrument. No. 878,507; Feb. 11; Sp. p. 1313; Dr. p. 265; Gaz. vol. 132; p. 1084.
Cohen, A., New York, N. Y. Soup-plate. No. 879,364; Feb. 18; Sp. p. 3004; Dr. p. 628; Gaz. vol. 132; p. 1403.
Cohen, D. H., New York, N. Y. Check-protector. No. 878,349; Feb. 4; Sp. p. 927; Dr. p. 185; Gaz. vol. 132; p. 999.
Cohen, G., Jamestown, N. Y. Poison-indicator. No. 879,740; Feb. 18; Sp. p. 3805; Dr. p. 798; Gaz. vol. 132; p. 1526.
Cohen, H., and B. Nathan, New York, N. Y. Combination leg-covering. No. 880,358; Feb. 25; Sp. p. 5072; Dr. p. 1071; Gaz. vol. 132; p. 1761.
Cohen, J., New York, N. Y. Clasp for hose-supporters. No. 878,350; Feb. 4; Sp. p. 929; Dr. p. 185; Gaz. vol. 132; p. 999.
Cohen, J., New York, N. Y. Corset. No. 878,351; Feb. 4; Sp. p. 930; Dr. p. 185; Gaz. vol. 132; p. 999.
Colt, H. L., New London, Conn. Drill-chuck. No. 879,741; Feb. 18; Sp. p. 3807; Dr. p. 798; Gaz. vol. 132; p. 1526.
Cott, J. J., Venice, Cal. Trolley-pole controller. No. 879,034; Feb. 11; Sp. p. 2240; Dr. pp. 489–90; Gaz. vol. 132; p. 1253.
Colbert, C. W., Fulton, Okla. Staking-tool. No. 878,775; Feb. 11; Sp. p. 1969; Dr. p. 385; Gaz. vol. 132; p. 1173.
Coldwell, W. H., Newburgh, N. Y. Handle-brace. No. 878,867; Feb. 11; Sp. p. 2041; Dr. p. 421; Gaz. vol. 132; p. 1203.
Cole, A. L., assignor to A. D. Claflin, Newton, Mass. Car-fender. No. 879,742; Feb. 18; Sp. p. 3808; Dr. pp. 798–9; Gaz. vol. 132; p. 1526.
Cole, E. C., assignor to Cole Manufacturing Company, Chicago, Ill. Stove. No. 878,352; Feb. 4; Sp. p. 932; Dr. p. 185; Gaz. vol. 132; p. 999.
Cole Manufacturing Company. (See Cole, E. C., assignor.)
Cole, W. H., assignor to Eloc Company, New York, N. Y. Uniting metals. No. 878,868; Feb. 11; Sp. p. 2043; Dr. p. 422; Gaz. vol. 132; p. 1203.
Cole, W. H., assignor to Eloc Company, New York, N. Y. Apparatus for uniting metals. No. 878,869; Feb. 11; Sp. p. 2045; Dr. pp. 422–3; Gaz. vol. 132; p. 1203.
Collin, E. A., Turner, Nebr. Churn. No. 878,938; Feb. 11; Sp. p. 2177; Dr. p. 455; Gaz. vol. 132; p. 1225.
Collin, G. W., Bridgeport, Conn. Steam-pressure-reducing valve. No. 877,907; Feb. 4; Sp. p. 25; Dr. p. 5; Gaz. vol. 132; p. 852.
Collin, G. W., Mansfield, Ohio Reducing-valve. No. 877,908; Feb. 4; Sp. p. 27; Dr. p. 6; Gaz. vol. 132; p. 853.
Collins, C., San Francisco, Cal. Fireproof building construction. No. 878,275; Feb. 4; Sp. p. 782; Dr. p. 156; Gaz. vol. 132; p. 974.
Collins, C., San Francisco, Cal. Fireproof building construction. No. 878,276; Feb. 4; Sp. p. 784; Dr. p. 157; Gaz. vol. 132; p. 975.
Collins, E., Ekalaka, Mont. Tire attachment. No. 880,195; Feb. 25; Sp. p. 4751; Dr. p. 1006; Gaz. vol. 132; p. 1708.
Collins, F. A., Stark, Me. Preparing corn for table use. No. 880,359; Feb. 25; Sp. p. 5074; Dr. p. 1072; Gaz. vol. 132; p. 1762.
Collins, J. B., assignor of one-half to A. Cartwright, Eros, La. Adjustable brace. No. 879,524; Feb. 18; Sp. p. 3347; Dr. p. 699; Gaz. vol. 132; p. 1455.
Collins, J. D., Chicago, Ill., assignor to Creamery Package Mfg. Company. Freezer. No. 880,360; Feb. 25; Sp. p. 5075; Dr. p. 1072; Gaz. vol. 132; p. 1762.
Collins, J. J., Clemo, Pa. Invalid or hoisting bed. No. 878,045; Feb. 4; Sp. p. 314; Dr. pp. 65–6; Gaz. vol. 132; p. 899.
Collins, W. H., Indianapolis, Ind. Horse-hitch. No. 879,743; Feb. 18; Sp. p. 3812; Dr. p. 799; Gaz. vol. 132; p. 1527.
Colorado Iron Works Company. (See Neesmith, J. W., assignor.)
Colquhoun, K. M., Owatonna, Minn. Spark-arrester. No. 880,442; Feb. 25; Sp. p. 5262; Dr. p. 1107; Gaz. vol. 132; p. 1791.
Compressed Paper Box Co. (See Godfrey, J., assignor.)
Compton, E., deceased; E. A. Compton, administratrix, Washington, D. C. Holder for cleaning-cloths and the like. No. 879,365; Feb. 18; Sp. p. 3004; Dr. p. 628; Gaz. vol. 132; p. 1403.
Compton, E. A., administratrix. (See Compton, E.)
Compton, W. A., Columbus, Ohio. Boiler-tube. No. 878,353; Feb. 4; Sp. p. 933; Dr. p. 186; Gaz. vol. 132; p. 1000.
Connell, R., Gainsborough, England. Tire-setting tool. No. 878,354; Feb. 4; Sp. p. 935; Dr. p. 186; Gaz. vol. 132; p. 1000.
Connett, R. (See Seller, P., assignor.)
Conover, H. V., assignor of one-half to C. Olshei, Buffalo, N. Y. Seal-lock. No. 878,277; Feb. 4; Sp. p. 786; Dr. p. 157; Gaz. vol. 132; p. 975.
Conqueror Fire Extinguisher Company. (See Hyde and Peterson, assignors.)
Conrader, R., Erie, Pa. Apparatus for actuating liquids. No. 879,166; Feb. 18; Sp. p. 2585; Dr. p. 538; Gaz. vol. 132; p. 1331.
Conroy, P. J., assignor to International Subway & Tunnel Ventilating Company, New York, N. Y. Ventilating system. No. 878,278; Feb. 4; Sp. p. 788; Dr. p. 157; Gaz. vol. 132; p. 976.
Conway, H. D., Jackson, Mich. Feed device or feed-hopper. No. 879,366; Feb. 18; Sp. p. 3005; Dr. p. 628; Gaz. vol. 132; p. 1403.
Coo, T. J., Toronto, Ontario, Canada, assignor to Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 877,909; Feb. 4; Sp. p. 29; Dr. p. 6; Gaz. vol. 132; p. 853.
Cook, E. M., Oberlin, Ohio. Piston for cylinders of steam-engines. No. 880,361; Feb. 25; Sp. p. 5076; Dr. p. 1072; Gaz. vol. 132; p. 1762.
Cook, F. E. (See Maxstadt, F. W., assignor.)
Cook, F. B. (See Noiss, J. G., assignor.)
Cook, F. B., Chicago, Ill. Cable-terminal. No. 879,035; Feb. 11; Sp. p. 2343; Dr. p. 490; Gaz. vol. 132; p. 1254.
Cook, F. B., Chicago, Ill. Wire-rope clamp. No. 879,037; Feb. 11; Sp. p. 2400; Dr. p. 512; Gaz. vol. 132; p. 1271.
Cook, F. H., Spokane, Wash. Game apparatus. No. 879,036; Feb. 11; Sp. p. 2344; Dr. p. 490; Gaz. vol. 132; p. 1254.
Cook, J. (See Stevenson and Cook.)

Cook, J. H., Homer, Mich. Friction transmission mechanism for power-driven vehicles. No. 879,367; Feb. 18; Sp. p. 3008; Dr. p. 629; Gaz. vol. 132; p. 1404.
Cook, J. N., Westover, Mo. Wrench. No. 879,525; Feb. 18; Sp. p. 3348; Dr. p. 699; Gaz. vol. 132; p. 1455.
Cook, W. A., New York, N. Y. Feed mechanism for phonographs. No. 878,121; Feb. 4; Sp. p. 457; Dr. p. 97; Gaz. vol. 132; p. 923.
Cookson, W. C. (See Clark and Cookson.)
Cooper, D. P., Struthers, Ohio. Reinforced bar for vehicle running-gears. No. 878,939; Feb. 11; Sp. p. 2179; Dr. p. 455; Gaz. vol. 132; p 1225.
Cooper, J. D., Grand Rapids, Mich. Cane-harvester. No. 880,362; Feb. 25; Sp. p. 5077; Dr. p. 1073; Gaz. vol. 132; p. 1763.
Cooper, J. E., Stratford, London, England. Journal-box for road and other vehicles. No. 878,355; Feb. 4; Sp. p. 937; Dr. pp. 186–7; Gaz. vol. 132; p. 1001.
Cooper, J. L., Pulaski, Va. Boiler compound. No. 880,126; Feb. 25; Sp. p. 4612; Gaz. vol. 132; p. 1684.
Cooper, J. W., Seattle, Wash. Hoisting and conveying apparatus. No. 879,744; Feb. 18; Sp. p. 3813; Dr. p. 799; Gaz. vol. 132; p. 1527.
Cooper, J. W., Seattle, Wash. Thawing device. No. 879,745; Feb. 18; Sp. p. 3815; Dr. p. 600; Gaz. vol. 132; p. 1528.
Cooper, W., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Contact-finger. No. 879,245; Feb. 18; Sp. p. 2769; Dr. p. 580; Gaz. vol. 132; p. 1364.
Coopersmith, R., and C. J. Kindel, St. Louis, Mo. Davenport. No. 880,278; Feb. 25; Sp. p. 4931; Dr. p. 1043; Gaz. vol. 132; p. 1736.
Copeland, E. A., Tionesta, Pa. Stand-valve-extracting means for oil-well pumps. No. 879,147; Feb. 18; Sp. p. 2587; Dr. p. 538; Gaz. vol. 132; p. 1332.
Copeland, J., Denver, Colo. Engine. No. 877,910; Feb. 4; Sp. p. 31; Dr. pp. 6–7; Gaz. vol. 132; p. 854.
Copland, A. W., Detroit, Mich. Dough-feeding device. No. 879,852; Feb. 25; Sp. p. 4047; Dr. pp. 848–9; Gaz. vol. 132; p. 1595.
Coppridge, E. W. (See Coppridge, J. A. and E. W.)
Coppridge, J. A. and E. W., Richmond, Va. Hot-water heater. No. 878,356; Feb. 4; Sp. p. 938; Dr. p. 187; Gaz. vol. 132; p. 1001.
Corbin Cabinet Lock Company. (See Johnson, C. E., assignor.)
Corcilius, A. B., assignor to E. C. Anderson, H. J. Burr, and H. Hirschauer, Jamestown, N. Y. Hame-fastener. No. 879,813; Feb. 18; Sp. p. 3931; Dr. p. 824; Gaz. vol. 132; p. 1549.
Cordes, A. W., Berlin, Germany, assignor to F. W. Stocker, Hoboken, N. J. Locking device. No. 879,946; Feb. 25; Sp. p. 4266; Dr. p. 892; Gaz. vol. 132; p. 1627.
Cory & Reynolds Company. (See Brant, J. S., assignor.)
Coryell, L. J., Oshawa, Ontario, Canada. Machine for husking green corn. No. 878,610; Feb. 11; Sp. p. 1549; Dr. p. 316; Gaz. vol. 132; p. 1126.
Corzilius, J., South Manchester, Conn., assignor to Ellsworth & Company, New York, N. Y. Warp stop-motion for looms. No. 879,853; Feb. 25; Sp. p. 4054; Dr. pp. 849–50; Gaz. vol. 132; p. 1596.
Costa, E. S., Quincy, Mass. Self-tightening bushing-tool holder and tools. No. 878,776; Feb. 11; Sp. p. 1970; Dr. p. 386; Gaz. vol. 132; p. 1174.
Costello, J., Providence, R. I. Jeweler's chain and bead stock. No. 878,122; Feb. 4; Sp. p. 459; Dr. p. 97; Gaz. vol. 132; p. 923.
Costigan, J. F. J. (See Costigan, J. P. and J. F. J.)
Costigan, J. P. and J. F. J., New York, N. Y. Covering. No. 880,363; Feb. 25; Sp. p. 5082; Dr. p. 1073; Gaz. vol. 132; p. 1763.
Côté, L. E., Ottawa, Ontario, Canada. Pattern-grading machine. No. 878,046; Feb. 4; Sp. p. 315; Dr. pp. 66–7; Gaz. vol. 132; p. 899.
Cottom, A., Chillicothe, Iowa. Nut-lock. No. 879,746; Feb. 18; Sp. p. 3816; Dr. p. 820; Gaz. vol. 132; p. 1528.
Cottrell, E. H., Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Antismutting device for printing machinery. No. 879,443; Feb. 18; Sp. p. 3183; Dr. p. 663; Gaz. vol. 132; p. 1429.
Coulter, W. J., Toronto, Ontario, Canada. Clothes-drying reel. No. 877,983; Feb. 4; Sp. p. 176; Dr. p. 30; Gaz. vol. 132; p. 878.
Coulthri, H., Uncasville, Conn. Suspenders. No. 878,508; Feb. 11; Sp. p. 1315; Dr. p. 266; Gaz. vol. 132; p. 1085.
Cox, C. F., Bridgeton, N. J. Apparatus for the manufacture of hollow glassware. No. 880,482; Feb. 25; Sp. p. 5355; Dr. pp. 1128–9; Gaz. vol. 132; p. 1805.
Cox, F. W., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Commutator for electric apparatus. No. 879,246; Feb. 18; Sp. p. 2771; Dr. p. 580; Gaz. vol. 132; p. 1364.
Cox, P. F., assignor to Jackson Printing Press Company, Jackson, Mich. Bed-controlled web-feeding mechanism. No. 880,279; Feb. 25; Sp. p. 4932; Dr. p. 1044; Gaz. vol. 132; p. 1736.
Cox, P. F., assignor to Jackson Printing Press Company, Jackson, Mich. Continuous variable web-feeding mechanism. No. 880,280; Feb. 25; Sp. p. 4936; Dr. p. 1044; Gaz. vol. 132; p. 1738.
Cox, P. F., assignor to Jackson Printing Press Company, Jackson, Mich. Printing-press. No. 880,281; Feb. 25; Sp. p. 4939; Dr. p. 1044; Gaz. vol. 132; p. 1737.
Cox, P. F., assignor to Jackson Printing Press Company, Jackson, Mich. Web-printing press. No. 880,282; Feb. 25; Sp. p. 4942; Dr. p. 1045; Gaz. vol. 132; p. 1737.
Craig, R. M., Dennison, Ohio. Denture. (Reissue.) No. 12,753; Feb. 18; Sp. p. 4016; Dr. p. 842; Gaz. vol. 132; p. 1561.
Cram, C. W., *et al.* (See Burton, G. F., assignor.)
Cram, E. B., Brooklyn, N. Y., assignor to New York Adding Typewriter Company, Orange, N. J. Power driving mechanism for computing type-writers. No. 879,854; Feb. 25; Sp. p. 4057; Dr. pp. 850–2; Gaz. vol. 132; p. 1596.
Cramer, H. H., Denver, Colo. Turning-plug. No. 880,127; Feb. 25; Sp. p. 4613; Dr. p. 973; Gaz. vol. 132; p. 1684.
Crane Company. (See Doolittle, W. W., assignor.)
Crane, E. F., Newark, N. J. Metallic reinforcing structure for cementitious bodies. No. 879,444; Feb. 18; Sp. p. 3185; Dr. p. 664; Gaz. vol. 132; p. 1429.
Crane, J. S., Laconia, N. H. Stop-motion for knitting-machines. No. 880,013; Feb. 25; Sp. p. 4390; Dr. pp. 921–2; Gaz. vol. 132; p. 1648.
Creaghead, T. J., Covington, Ky. Insulator-support. No. 878,870; Feb. 11; Sp. p. 2047; Dr. p. 423; Gaz. vol. 132; p. 1204.
Creamery Package Mfg. Company. (See Collins, J. D., assignor.)
Crecelius, T. E., St. Louis, Mo. Toy vehicle. No. 879,947; Feb. 25; Sp. p. 4270; Dr. p. 892; Gaz. vol. 132; p. 1627.
Cribb, E. B., Shawnee, Okla. Transmission-gearing. No. 878,611; Feb. 11; Sp. p. 1555; Dr. p. 316; Gaz. vol. 132; p. 1120.
Crim, H. F., and W. C. Loy, Rochester, Ind. Permutation-padlock. No. 879,747; Feb. 18; Sp. p. 3817; Dr. p. 800; Gaz. vol. 132; p. 1528.
Crist, J. L. (See Duncan and Crist.)
Crocker, R. W., Chicago, Ill. Vessel-closure. No. 878,940; Feb. 11; Sp. p. 2180; Dr. p. 455; Gaz. vol. 132; p. 1225.
Crocker-Wheeler Company. (See Dunn, G., assignor.)
Crocker-Wheeler Company. (See Treat, R. B., assignor.)
Crompton, R., Worcester, Mass., assignor, by mesne assignments, to Crompton & Knowles Loom Works. Weft-replenishing loom. No. 879,368; Feb. 18; Sp. p. 3011; Dr. pp. 629–30; Gaz. vol. 132; p. 1404.
Crompton & Knowles Loom Works. (See Brothers, W. H., assignor.)
Crompton & Knowles Loom Works. (See Clark, J. A., assignor.)
Crompton & Knowles Loom Works. (See Crompton, R., assignor.)
Crompton & Knowles Loom Works. (See Ryon, E. H., assignor.)
Cronbaugh, C. W., E. L., and M. D., Ada, Ohio. Folding crate. No. 879,855; Feb. 25; Sp. p. 4067; Dr. p. 852; Gaz. vol. 132; p. 1596.
Cronbaugh, E. L. (See Cronbaugh, C. W., E. L., and M. D.)
Cronbaugh, M. D. (See Cronbaugh, C. W., E. L., and M. D.)
Crooker, H. L., Union City, Pa. Clothes-pounder. No. 878,190; Feb. 4; Sp. p. 619; Dr. p. 127; Gaz. vol. 132; p. 946.
Cross, A. B., and B. L. Umberger, Concord, N. C. Keyboard. No. 877,911; Feb. 4; Sp. p. 35; Dr. p. 7; Gaz. vol. 132; p. 854.
Crossley, J. T. (See Rathbone and Crossley.)
Crouse, M. E., Lawrence, Mass., and J. E. Roberts, New York, N. Y.; said Roberts assignor to said Crouse. Hat-holder. No. 880,364; Feb. 25; Sp. p. 5083; Dr. p. 1074; Gaz. vol. 132; p. 1763.
Croushore, A. W., Lincoln Place, Pa. Attachment for type-writers. No. 878,941; Feb. 11; Sp. p. 2181; Dr. p. 456; Gaz. vol. 132; p. 1226.
Crowell, E. R., *et al.*, executors. (See Crowell, L. H.)
Crowell, L. H., deceased, Halifax, Nova Scotia, Canada; E. R. and M. O. Crowell, executors. Tooth-brush. No. 878,486; Feb. 4; Sp p. 1211; Dr. p. 249; Gaz. vol. 132; p. 1044.
Crowell, M. O., *et al.*, executors. (See Crowell, L. H.)
Crowther, H. M., Salt Lake City, Utah. Extracting salts from solutions. No. 877,912; Feb. 4; Sp. p. 36; Gaz. vol. 132; p. 854.
Crumly, W. A., Springfield, Ill. Combined pump and well curb. No. 878,357; Feb. 4; Sp. p. 939; Dr. p. 187; Gaz. vol. 132; p. 1001.
Crummer, J. A., Grant township, Pocahontas county, Iowa. Surface-hoe. No. 877,913; Feb. 4; Sp. p. 38; Dr. p. 7; Gaz. vol. 132; p. 855.
Crump, T. J., assignor of one-half to S. Cockrell, Meridian, Miss. Animal-trap. No. 878,123; Feb. 4; Sp. p. 460; Dr. p. 98; Gaz. vol. 132; p. 923.
Cummings, G. W., Jr., Cohoes, N. Y. Garment-fastener. No. 879,369; Feb. 18; Sp. p. 3020; Dr. p. 630; Gaz. vol. 132; p. 1405.
Cummings, J., Grand Rapids, Mich. Carrier for cans, casks, &c. No. 878,358; Feb. 4; Sp. p. 941; Dr. p. 188; Gaz. vol. 132; p. 1001.
Cummings, R. A., Beaver, Pa. Connecting and spacing clip for metal reinforcement, &c. No. 879,148; Feb. 18; Sp. p. 2589; Dr. p. 539; Gaz. vol. 132; p. 1332.
Cumnock, R. L., Anderson, S. C. Doffing means for ring-spinning machines. No. 880,014; Feb. 25; Sp. p. 4394; Dr. p. 923; Gaz. vol. 132; p. 1649.
Cunningham, A. A., assignor of forty-five one-hundredths to E. M. Francis, San Francisco, Cal. Device for purifying products of combustion and oxidation. No. 879,149; Feb. 18; Sp. p. 2591; Dr. p. 539; Gaz. vol. 132; p. 1332.
Cunningham, H. E., Los Angeles, Cal. Rectal supporter. No. 878,191; Feb. 4; Sp. p. 620; Dr. p. 127; Gaz. vol. 132; p. 946.

Currie, R. O. (See Durand, L., assignor.)
Curtis, C. G., New York, N. Y., assignor, by mesne assignments, to General Electric Company. Elastic-fluid turbine. No. 879,748; Feb. 18; Sp. p. 3819; Dr. pp. 800-1; Gaz. vol. 132; p. 1528.
Curtis, L. E. (See Steele, L. C., assignor.)
Curtis, L. E., Chicago, Ill., assignor to B. Jones, trustee, St. Louis, Mo. Apparatus for hardening metal. No. 878,279; Feb. 4; Sp. p. 790; Dr. p. 158; Gaz. vol. 132; p. 976.
Curtright, H. P., Holliday, Mo. Riding attachment for plows, harrows, and the like. No. 879,037; Feb. 11; Sp. p. 2346; Dr. p. 491; Gaz. vol. 132; p. 1255.
Cushing, W. F., Bismarck, N. D. Magazine-pencil. No. 878,771; Feb. 11; Sp. p. 1861; Dr. p. 384; Gaz. vol. 132; p. 1172.
Cutler-Hammer Mfg. Co. (See Barnum, T. E., assignor.)
Cutter, L., Bladen, Nebr. Corn-husker. No. 879,150; Feb. 18; Sp. p. 2592; Dr. pp. 539-40; Gaz. vol. 132; p. 1333.
D'Aeth, E. K. H. (See Kennon, C. W., assignor.)
D'Armon, J. W., Clinton, Ky. Violin and the like. No. 878,124; Feb. 4; Sp. p. 461; Dr. p. 98; Gaz. vol. 132; p. 923.
D'Olier, W. L., Philadelphia, Pa. Centrifugal machine. No. 879,130; Feb. 11; Sp. p. 2548; Dr. p. 530; Gaz. vol. 132; p. 1284.
Dake-American Steam Turbine Company. (See Dake, C. W., assignor.)
Dake, C. W., assignor to Dake-American Steam Turbine Company, Grand Rapids, Mich. Elastic-fluid turbine. No. 880,365; Feb. 25; Sp. p. 5085; Dr. p. 1074; Gaz. vol. 132; p. 1764.
Dake, C. W., assignor to Dake-American Steam Turbine Company, Grand Rapids, Mich. Governor for turbines. No. 880,366; Feb 25; Sp. p. 5086; Dr. p. 1075; Gaz. vol. 132; p. 1764.
Dale, F. M., Wilkinsburg, Pa. Hall-rack. No. 880,283; Feb. 25; Sp. p. 4947; Dr. p. 1045; Gaz. vol. 132; p. 1737.
Dale, J. H. (See Livingstone, W., assignor.)
Dane, S. B., Lynn, Mass. Clothes-drying machine. No. 878,777; Feb. 11; Sp. p. 1872; Dr. p. 386; Gaz. vol. 132; p. 1174.
Danhoff, L. (See Sieben and Danhoff.)
Darcy & Speck. (See Hill, H., assignor.)
Darnall, C. R., Washington, D. C. Apparatus for purifying water. No, 879,856; Feb. 25; Sp. p. 4068; Dr. p. 853; Gaz. vol. 132; p. 1596.
Darracott, G. F., Aberdeen, Miss. Hasp-lock. No. 878,047; Feb. 4; Sp. p. 321; Dr. p. 67; Gaz. vol. 132; p. 900.
Darrow, W. E. (See Hambric, P. T., assignor.)
Darwin, H., Cambridge, England. Automatic apparatus for detecting smoke and the like. No. 878,456; Feb. 4; Sp. p. 1122; Dr. p. 230; Gaz. vol. 132; p. 1033.
Dauch, J. J., and W. F. Harbrecht, Sandusky, Ohio. Straw-cooker. No. 878,711; Feb. 11; Sp. p. 1744; Dr. p. 361; Gaz. vol. 132; p. 1153.
Davenport, J. (See Mortimer, H. L., assignor.)
Davidson, A. C., Chicago, Ill. Drop-light fixture and the like. No. 879,247; Feb. 18; Sp. p. 2772; Dr. p. 581; Gaz. vol. 132; p. 1364.
Davies, A., Stonehouse, Plymouth, England. Color photography. No. 879,445; Feb. 18; Sp. p. 317; Gaz. vol. 132; p. 1429.
Davies, E. T., Portland, Oreg. Sawing apparatus. No. 879,038; Feb. 11; Sp. p. 2348; Dr. p. 491; Gaz. vol. 132; p. 1255.
Davies, W. L. (See Forsythe, L. K., assignor.)
Davis, A. J., *et al.* (See Davis, D. J., assignor.)
Davis, C. H., *et al.* (See Titus, W., assignor.)
Davis, C. S. (See Selden, A. R., assignor.)
Davis, D. J., assignor of two-thirds to S. J. and A. J. Davis, Chicago, Ill. Bottle-filling apparatus. No. 879,133; Feb. 11; Sp. p. 2554; Dr. pp. 531-2; Gaz. vol. 132; p. 1285.
Davis & Furber Machine Company. (See Goodwin, L. O., assignor.)
Davis & Furber Machine Company. (See Stevens, F. C., assignor.)
Davis & Furber Manufacturing Company. (See Rundlett, W. D., assignor.)
Davis, L. H., Bridgeport, Conn. Truss. No. 877,966; Feb. 4; Sp. p. 177; Dr. p. 40; Gaz. vol. 132; p. 879.
Davis-Martin Company. (See Martin, T. A., assignor.)
Davis, S. J., *et al.* (See Davis, D. J., assignor.)
Davis, W. B. (See Garant, H., assignor.)
Davis, W. C. (See Hill and Davis.)
Davis, W. E. (See King, B. A., assignor.)
Davis, W. R., trustee. (See Allen, J. H., assignor.)
Dawson, A. T., and G. T. Buckham, assignors to Vickers Sons & Maxim Limited, Westminster, London, England. Field-gun carriage. No. 878,359; Feb. 4; Sp. p. 942; Dr. pp. 188-9; Gaz. vol. 132; p. 1002.
Dawson, J., Rochester, N. Y. Changeable-gear transmission mechanism. No. 878,778; Feb. 11; Sp. p. 1874; Dr. p. 387; Gaz. vol. 132; p. 1174.
Dayton, J. C., Petersburg, W. Va. Mail-bag catching and delivering apparatus. No. 878,360; Feb. 4; Sp. p. 946; Dr. pp. 189-90; Gaz. vol. 132; p. 1002.
De Camp, E. (See Lefferts and De Camp.)
De Forest, L., New York, N. Y., assignor, by mesne assignments, to De Forest Radio Telephone Co. Space telegraphy. No. 879,532; Feb. 18; Sp. p. 3363; Dr. p. 703; Gaz. vol. 132; p. 1458.
De Forest Radio Telephone Co. (See De Forest, L., assignor.)
De Kaiser, I., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Reel for coil-windings. No. 878,125; Feb. 4; Sp. p. 462; Dr. p. 98; Gaz. vol. 132; p. 924.
De La Matyr, E. B., Los Angeles, Cal. Window-sash fastener. No. 878,781; Feb. 11; Sp. p. 1882; Dr. p. 388; Gaz. vol. 132; p. 1176.
De Long, J. F., Bristow, Iowa. Truck. No. 880,015; Feb. 25; Sp. p. 4396; Dr. p. 923; Gaz. vol. 132; p. 1649.
De Milt, D. G., Toledo, Ohio. Clothes-pole. No. 878,943; Feb. 11; Sp. p. 2184; Dr. p. 456; Gaz. vol. 132; p. 1226.
De Remer, R. P., assignor of one-half to A. T. Germans, Houma, La. Car-stanchion. No. 879,128; Feb. 11; Sp. p. 2546; Dr. p. 529; Gaz. vol. 132; p. 1283.
De Vale, E. L., New York, N. Y. Paring attachment for knives. No. 879,857; Feb. 25; Sp. p. 4074; Dr. p. 853; Gaz. vol. 132; p. 1597.
De Vilbiss, A., Jr., Toledo, assignor of five-sixths to J. F. Pixley, A. S. Wells, and M. S. Park, Columbus, Ohio. Vertical lock. No. 879,371; Feb. 18; Sp. p. 3023; Dr. pp. 630-1; Gaz. vol. 132; p. 1405.
De Waldo, A. G., Warren, Ohio. Washboard. No. 878,782; Feb. 11; Sp. p. 1883; Dr. p. 388; Gaz. vol. 132; p. 1176.
Dean Electric Company. (See Brackett, E. W., assignor.)
Dean Electric Company. (See Dean, W. W., assignor.)
Dean Electric Company. (See Manson, R. H., assignor.)
Dean, W. W., assignor to Dean Electric Company, Elyria, Ohio. Telephone-transmitter. No. 878,192; Feb. 4; Sp. p. 622; Dr. p. 128; Gaz. vol. 132; p. 947.
Dean, W. W., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Party-line telephone system. No. 878,779; Feb.
Decker, E. S., Malden, and G. H. Gibby, Boston, Mass. Hot-water heater. No. 878,780; Feb. 11; Sp. p. 1880; Dr. p. 387; Gaz. vol. 132; p. 1175.
Decker Electrical Manufacturing Company. (See Decker, F. A., assignor.)
Decker, F. A., Philadelphia, Pa., assignor, by mesne assignments, to Decker Electrical Manufacturing Company, Wilmington, Del. Battery. No. 880,196; Feb. 25; Sp. p. 4751; Dr. p. 1007; Gaz. vol. 132; p. 1708.
Decker, F. A., Philadelphia, Pa., assignor, by mesne assignments, to Decker Electrical Manufacturing Company, Wilmington, Del. Battery. No. 880,367; Feb. 25; Sp. p. 5088; Dr. pp. 1075-6; Gaz. vol. 132; p. 1764.
Decker, F. A., Philadelphia, Pa., assignor, by mesne assignments, to Decker Electrical Manufacturing Company, Wilmington, Del. Battery. No. 880,368; Feb. 25; Sp. p. 5089; Dr. p. 1076; Gaz. vol. 132; p. 1765.
Dee, A. C., Cincinnati, Ohio. Machine for stretching and pressing lace and similar fabrics. No. 878,712; Feb. 11; Sp. p. 1746; Dr. p. 361; Gaz. vol. 132; p. 1153.
Deeg, C., assignor of two-thirds to P. Weller and C. H. Fix, Madison, Wis. Concrete sidewalk-block. No. 880,066; Feb. 25; Sp. p. 4505; Dr. p. 947; Gaz. vol. 132; p. 1665.
Deere & Company. (See McIvin, C. H., assignor.)
Dehn, G. J., Freeport, Ill. Apparatus for cleaning water-heaters. No. 878,280; Feb. 4; Sp. p. 792; Dr. p. 158; Gaz. vol. 132; p. 976.
Del Gaudio, P., New York, N. Y. Electrolytic irrigator. No. 878,361; Feb. 4; Sp. p. 952; Dr. p. 190; Gaz. vol. 132; p. 1003.
Del Mar, H., New York, N. Y., assignor to Boilers and Engineering Company, Jersey City, N. J. Steam-generator. No. 878,942; Feb. 11; Sp. p. 2182; Dr. p. 456; Gaz. vol. 132; p. 1226.
Delany, F. B., South Orange, N. J. Telegraphic transmitter. No. 877,914; Feb. 4; Sp. p. 30; Dr. p. 8; Gaz. vol. 132; p. 855.
Delany, F. B., South Orange, N. J. Telegraphic transmitter. No. 877,915; Feb. 4; Sp. p. 43; Dr. p. 8; Gaz. vol. 132; p. 855.
Delaunay-Belleville, L. M. G., Paris, assignor to Société Anonyme des Automobiles Delaunay-Belleville, St. Denis, Seine, France. Automobile. No. 879,027; Feb. 11; Sp. p. 2329; Dr. p. 488; Gaz. vol. 132; p. 1252.
Deller, J., Harrisburg, Pa. Radiator-nipple-drawing device. No. 878,457; Feb. 4; Sp. p. 1126; Dr. p. 231; Gaz. vol. 132; p. 1034.
Deneen, E. J., Oneida, N. Y. Holder for safety-razor blades. No. 879,446; Feb. 18; Sp. p. 3189; Dr. p. 664; Gaz. vol. 132; p. 1430.
Denlinger, H., Portland, Oreg. Index. No. 878,612; Feb. 11; Sp. p. 1556; Dr. p. 317; Gaz. vol. 132; p. 1120.
Denning, J. S., Burlington, Vt. Fish-line float. No. 878,362; Feb. 4; Sp. p. 962; Dr. p. 191; Gaz. vol. 132; p. 1003.
Dennis, A. S., Cleveland, Ohio, assignor, by mesne assignments, to Calculus Company. Computing-machine. (Reissue.) No. 12,748; Feb. 4; Sp. p. 1221; Dr. pp. 263-3; Gaz. vol. 132; p. 1045.

Dennison, W., New Orleans, La. Service-box. No. 879,370; Feb. 18; Sp. p. 3021; Dr. p. 630; Gaz. vol. 132; p. 1405.
Dennison, W. N., Merchantville, N. J., assignor to Victor Talking Machine Company. Tilting turn-table for sound recording and reproducing machines. No. 880,369; Feb. 25; Sp. p. 5091; Dr. pp. 1076-7; Gaz. vol. 132; p. 1765.
Denovan, R. A., Dalkeith, Ontario, Canada. Root-puller. No. 879,526; Feb. 18; Sp. p. 3349; Dr. p. 699; Gaz. vol. 132; p. 1456.
Depew, J. I., Loup City, Nebr. Shearing and punching mechanism. No. 878,048; Feb. 4; Sp. p. 323; Dr. p. 67; Gaz. vol. 132; p. 900.
Der Ananian, A. (See Peters and Der Ananian.)
Derby, W. A., Aurora, Ill. Dust-collector. No. 878,126; Feb. 4; Sp. p. 464; Dr. p. 99; Gaz. vol. 132; p. 924.
Derihon, M., Liege, Belgium. Machine for testing the wear of metals. No. 880,483; Feb. 25; Sp. p. 5360; Dr. p. 1130; Gaz. vol. 132; p. 1805.
Derr, C. L., Cleveland, Ohio. Barber's-check system. No. 878,193; Feb. 4; Sp. p. 623; Dr. p. 128; Gaz. vol. 132; p. 947.
Deschane, E. E., and J. C. Littlewood, Minneapolis, Minn. Radiator. No. 877,987; Feb. 4; Sp. p. 179; Dr. p. 40; Gaz. vol. 132; p. 879.
Despain, C. A., G. A. Kitt, and E. R. Gordon, Harrington, Wash. Weed-cutter. No. 879,089; Feb. 11; Sp. p. 2461; Dr. p. 513; Gaz. vol. 132; p. 1271.
Dethmers, R. P. Madalia, Minn. Stamp-affixing machine. No. 879,151; Feb. 18; Sp. p. 2594; Dr. pp. 540-1; Gaz. vol. 132; p. 1333.
Dettmann, F. (See Raymond and Dettmann.)
Detwiler, F. V., Chicago, Ill. Refrigerator. No. 880,443; Feb. 25; Sp. p. 5264; Dr. pp. 1107-8; Gaz. vol. 132; p. 1791.
Detwiler, J. P., Philadelphia, Pa. Horseshoe. No. 878,127; Feb. 4; Sp. p. 466; Dr. p. 99; Gaz. vol. 132; p. 924.
Devey, J. (See Yates, Devey, Richan, and Devey.)
Devey, W. A. (See Yates, Devey, Richan, and Devey.)
Dewar, J., Cambridge, England. Separation of gases. No. 879,129; Feb. 11; Sp. p. 2548; Gaz. vol. 132; p. 1283.
Dexter, T. C., Pearl River, N. Y. Paper-feeding machine. No. 880,197; Feb. 25; Sp. p. 4753; Dr. pp. 1007-8; Gaz. vol. 132; p. 1708.
Dexter, T. C., Pearl River, N. Y. Paper-feeding machine. No. 880,198; Feb. 25; Sp. p. 4759; Dr. pp. 1008-9; Gaz. vol. 132; p. 1709.
Diack, A. S., Detroit, Mich. Toy. No. 879,152; Feb. 18; Sp. p. 2597; Dr. p. 541; Gaz. vol. 132; p. 1333.
Diamond Match Company. (See Carlson, C. A., assignor.)
Diamond, T., Waukesha, Wis. Ice-harvesting machine. No. 877,916; Feb. 4; Sp. p. 42; Dr. p. 8; Gaz. vol. 132; p. 856.
Dibbell, G. A., Washburn, Wis. Rotary engine. No. 878,613; Feb. 11; Sp. p. 1558; Dr. p. 317; Gaz. vol. 132; p. 1121.
Dick, A. B., Lake Forest, assignor to A. B. Dick Company, Chicago, Ill. Sheet-feeding apparatus. No. 878,614; Feb. 11; Sp. p. 1560; Dr. p. 318; Gaz. vol. 132; p. 1121.
Dick, J. M., Fleming, Pa. Running-gear for vehicles. No. 880,199; Feb. 25; Sp. p. 4768; Dr. p. 1009; Gaz. vol. 132; p. 1709.
Dickinson, J. H. (See Miller and Dickinson.)
Dickson, J. R., assignor to Carter-Crume Company, Limited, Niagara Falls, N. Y. Manifolding sales-book. No. 879,447; Feb. 18; Sp. p. 3190; Dr. p. 664; Gaz. vol. 132; p. 1430.
Dieckmann, C. F., New York, N. Y., assignor to Meyrowitz Manufacturing Company. Goggles. No. 879,749; Feb. 18; Sp. p. 3823; Dr. p. 801; Gaz. vol. 132; p. 1529.
Diehl, P., Elizabeth, N. J., assignor to Singer Manufacturing Company. Loop-taker-actuating mechanism for sewing-machines. No. 880,200; Feb. 25; Sp. p. 4769; Dr. p. 1010; Gaz. vol. 132; p. 1709.
Dietrichs, C., Little Ferry, N. J. Apparatus for molding concrete and the like. No. 880,201; Feb. 25; Sp. p. 4772; Dr. p. 1010; Gaz. vol. 132; p. 1710.
Dikeman, E. B., Chicago, Ill. Combination-tool. No. 878,049; Feb. 4; Sp. p. 324; Dr. pp. 67-8; Gaz. vol. 132; p. 900.
Dill, C. C., Denver, Colo. Roof-covering. No. 879,372; Feb. 18; Sp. p. 3029; Dr. p. 631; Gaz. vol. 132; p. 1406.
Dillard, W. E., Petersburg, Va. Trick-knife. No. 878,509; Feb. 11; Sp. p. 1316; Dr. p. 266; Gaz. vol. 132; p. 1085.
Dillon, P. W., Sterling, Ill. Mechanism for gasolene-engines. No. 879,609; Feb. 18; Sp. p. 3552; Dr. p. 743; Gaz. vol. 132; p. 1483.
Dimick, D. B., Birmingham, Ala. Apparatus for casting pipe. No. 880,284; Feb. 25; Sp. p. 4948; Dr. pp. 1045-6; Gaz. vol. 132; p. 1738.
Dingman, A. H., assignor of one-half to J. Sauers, De Haven, Pa. Automobile. No. 880,202; Feb. 25; Sp. p. 4774; Dr. p. 1010; Gaz. vol. 132; p. 1710.
Dinsmore, F. A., Fredonia, N. Y. Water-motor. No. 878,194; Feb. 4; Sp. p. 624; Dr. p. 128; Gaz. vol. 132; p. 947.
Dinwiddie, A. A. (See Paddack and Dinwiddie.)
Dippel, G., and C. Koenig, Pittsburg, Pa. Railway. No. 879,750; Feb. 18; Sp. p. 3825; Dr. p. 801; Gaz. vol. 132; p. 1529.
Dirr, J., and O. Bergmann, Cincinnati, Ohio. Cloth-cutter for counters. No. 879,153; Feb. 18; Sp. p. 2597; Dr. p. 541; Gaz. vol. 132; p. 1334.
Dissel, T. A. (See Greenleaf and Dissel.)
Dixon, E. M. (See Wesner and Dixon.)
Dixon, J. H., Pittsburg, Pa. Pressure-indicating device and alarm-signal. No. 879,039; Feb. 11; Sp. p. 2350; Dr. p. 492; Gaz. vol. 132; p. 1256.
Dixon, R. M., East Orange, N. J., assignor to Safety Car Heating & Lighting Company. Pressure-regulator. No. 880,128; Feb. 25; Sp. p. 4614; Dr. p. 973; Gaz. vol. 132; p. 1685.
Dobson and Barlow. (See Eckersley, J., assignor.)
Dobson, R. T., *et al.* (See Squires, A. C., assignor.)
Dods, J. H., Cherryvale, Kans. Making wrought articles. No. 878,871; Feb. 11; Sp. p. 2048; Dr. p. 424; Gaz. vol. 132; p. 1204.
Doggwyler, J. E., Seattle, Wash. Concentrator. No. 878,363; Feb. 4; Sp. p. 953; Dr. p. 191; Gaz. vol. 132; p. 1003.
Doherty, H. L., Madison, Wis. Purifier-box. No. 878,128; Feb. 4; Sp. p. 467; Dr. pp. 99-100; Gaz. vol. 132; p. 925.
Dolan, C. P., Boston, Mass. Tremolo-meter. No. 878,615; Feb. 11; Sp. p. 1564; Dr. p. 318; Gaz. vol. 132; p. 1122.
Dolge, A., Los Angeles, Cal. Making sounding-boards for pianos. No. 879,373; Feb. 18; Sp. p. 3030; Dr. p. 631; Gaz. vol. 132; p. 1406.
Dom, A., Hartwell, assignor to Twinlock Company, Cincinnati, Ohio. Loose-leaf binder. No. 878,281; Feb. 4; Sp. p. 794; Dr. p. 159; Gaz. vol. 132; p. 976.
Donaldson, E. B., assignor of one-half to F. A. Linger, Washington, D. C. Attachment for phonographs. No. 880,016; Feb. 25; Sp. p. 4398; Dr. pp. 923-4; Gaz. vol. 132; p. 1650.
Donaldson, M., Oklahoma, Okla. Abdominal supporter. No. 880,444; Feb. 25; Sp. p. 5268; Dr. p. 1108; Gaz. vol. 132; p. 1792.
Donaldson, W. R., *et al.* (See Hay, J. D., assignor.)
Donnelly, J. S., Sharon, and J. Frederick, Copley, assignors to said Donnelly and M. D. Kilmer, Cleveland, Ohio. Land rolling and pulverizing machine. No. 880,445; Feb. 25; Sp. p. 5270; Dr. p. 1108; Gaz. vol. 132; p. 1792.
Donning, G. W., East Orange, assignor to H. T. Ambrose, Orange, N. J. Electrical type-writer. No. 879,814; Feb. 18; Sp. p. 3933; Dr. pp. 824-5; Gaz. vol. 132; p. 1549.
Donning, G. W., Stamford, Conn., assignor to H. T. Ambrose, Orange, N. J. Type-writer. No. 879,815; Feb. 18; Sp. p. 3938; Dr. pp. 825-7; Gaz. vol. 132; p. 1550.
Doolittle, P. E., Toronto, Ontario, Canada. Vehicle-tire. No. 879,610; Feb. 18; Sp. p. 3554; Dr. p. 743; Gaz. vol. 132; p. 1483.
Doolittle, W. W., Evanston, assignor to Crane Company, Chicago, Ill. Molding-machine. No. 878,510; Feb. 11; Sp. p. 1317; Dr. pp. 266-7; Gaz. vol. 132; p. 1085.
Dornfeld, J. F., Chicago, Ill. Cut-off slide. No. 879,751; Feb. 18; Sp. p. 3826; Dr. p. 802; Gaz. vol. 132; p. 1529.
Dorrity, M., Syracuse, N. Y. Instep-pad. No. 879,527; Feb. 18; Sp. p. 3350; Dr. p. 700; Gaz. vol. 132; p. 1456.
Dorward, J. G., San Francisco, Cal. Smooth-edger for fabrics. No. 879,528; Feb. 18; Sp. p. 3352; Dr. p. 700; Gaz. vol. 132; p. 1456.
Doss, G. W., Erick, Okla. Buckle. No. 880,067; Feb. 25; Sp. p. 4507; Dr. p. 947; Gaz. vol. 132; p. 1666.
Doty, M. F., Chicago, Ill. Wheel-guard. No. 879,752; Feb. 18; Sp. p. 3827; Dr. p. 802; Gaz. vol. 132; p. 1530.
Douglas, H. A. (See Clark and Douglas.)
Dover, G. W., Cranston, R. I. Cuff-button. No. 878,616; Feb. 11; Sp. p. 1567; Dr. p. 318; Gaz. vol. 132; p. 1122.
Dow, F., assignor of one-half to H. P. Phelps, Princeton, Ill. Display-rack. No. 878,872; Feb. 11; Sp. p. 2048; Dr. p. 424; Gaz. vol. 132; p. 1204.
Downer, H., Hayburn, Idaho. Shoe-lace and tongue-stay. No. 878,129; Feb. 4; Sp. p. 469; Dr. p. 100; Gaz. vol. 132; p. 925.
Downes, L. W., Providence, R. I. Apparatus for applying insulation to electrical conductors. No. 878,617; Feb. 11; Sp. p. 1568; Dr. pp. 319-20; Gaz. vol. 132; p. 1122.
Downie, R. M., assignor to Keystone Driller Co., Beaver Falls, Pa. Engine. No. 878,783; Feb. 11; Sp. p. 1884; Dr. p. 388; Gaz. vol. 132; p. 1176.
Downing, F. E. (See Maker, H., assignor.)
Downing, H. C. (See Downing, J. W. and H. C.)
Downing, J. W. and H. C., Washington, D. C. Bottle-closure. No. 879,529; Feb. 18; Sp. p. 3354; Dr. p. 700; Gaz. vol. 132; p. 1457.
Dowse, W. B. H., West Newton, assignor to United States Fastener Company, Boston, Mass. Fastener. No. 878,511; Feb. 11; Sp. p. 1320; Dr. p. 267; Gaz. vol. 132; p. 1086.
Doyle, J. B. (See Clark, G. W., assignor.)
Draper, C. T., Cleveland, Ohio, assignor to American Can Company, New York, N. Y. Sheet-metal display-can. No. 878,784; Feb. 11; Sp. p. 1887; Dr. p. 389; Gaz. vol. 132; p. 1177.
Draper, J. R., and T. L. Hughes, Hennessey, Okla. Barber's stool. No. 879,154; Feb. 18; Sp. p. 2598; Dr. p. 541; Gaz. vol. 132; p. 1334.
Dreistadt, J., Jr. (See Miller and Dreistadt.)
Driskell, W. S., Gretna, Nebr. Grain-door. No. 878,050; Feb. 4; Sp. p. 326; Dr. p. 68; Gaz. vol. 132; p. 901.
Dryden, N., Los Angeles, Cal. Vehicle-wheel. No. 878,713; Feb. 11; Sp. p. 1749; Dr. p. 361; Gaz. vol. 132; p. 1154.
Du Pont, F. I., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Obtaining dinitroglycerin, &c. No. 879,899; Feb. 25; Sp. p. 4182; Dr. p. 873; Gaz. vol. 132; p. 1612.

Dufour, L., Genoa, Italy. Decolorizing tannic extracts. No. 878,618; Feb. 11; Sp. p. 1574; Gaz. vol. 132; p. 1122.
Duganquier, L., Hoedeng-Goegnies, Belgium. Yarn-spinning machine. No. 877,917; Feb. 4; Sp. p. 44; Dr. p. 9; Gaz. vol. 132; p. 256.
Dumartin, H. (See Monard, Dumartin, and Moutier.)
Dunbar, H. T., Buffalo, N. Y. Spring-wheel. No. 878,714; Feb. 11; Sp. p. 1750; Dr. p. 362; Gaz. vol. 132; p. 1154.
Duncan, J. D. E., Brooklyn, N. Y. Insulator. No. 880,203; Feb. 25; Sp. p. 4775; Dr. pp. 1010–11; Gaz. vol. 132; p. 1710.
Duncan, J. S., and J. L. Crist, Lynchburg, Va. Vehicle. No. 880,129; Feb. 25; Sp. p. 4616; Dr. pp. 973–4; Gaz. vol. 132; p. 1685.
Dungan, T. A., Chicago, Ill. Distillation. No. 878,785; Feb. 11; Sp. p. 1889; Dr. p. 389; Gaz. vol. 132; p. 1177.
Dunham, G. W., assignor to Olds Motor Works, Lansing, Mich. Speed-controlling mechanism for motor-vehicles. No. 878,786; Feb. 11; Sp. p. 1891; Dr. p. 389; Gaz. vol. 132; p. 1177.
Dunn, C. E., *et al.*, trustees. (See Nelson, C. E., assignor.)
Dunn, G., East Orange, assignor to Crocker-Wheeler Company, Ampere, N. J. Coil-retainer for dynamo-electric machines. No. 879,949; Feb. 25; Sp. p. 4273; Dr. p. 893; Gaz. vol. 132; p. 1628.
Dunn, G. F., Brockton, assignor, by mesne assignments, to Boston Machine Works Company, Boston, Mass. Vamp-folding machine. (Reissue.) No. 12,746; Feb. 4; Sp. p. 1214; Dr. pp. 251–2; Gaz. vol. 132; p. 1044.
Dunn, M. J., Pittsburg, Pa. Molding-machine. No. 879,950; Feb. 25; Sp. p. 4274; Dr. pp. 893–4; Gaz. vol. 132; p. 1628.
Dunning, R. A., Yarmouth, Me. Fabric. No. 878,944; Feb. 11; Sp. p. 2185; Dr. p. 457; Gaz. vol. 132; p. 1227.
Dupiex Metals Company. (See Monnot, J. F., assignor.)
Duplex Printing Press Company. (See Bechman, H. F., assignor.)
Durand & Co. (See Mandeville, I., assignor.)
Durand, L., Dumont, N. J., assignor of one-fifth to R. O. Currie, New York, N. Y. Reduction of copper ore. No. 879,530; Feb. 18; Sp. p 3355; Dr. p. 700; Gaz. vol. 132; p. 1457.
Durbin, A. T. (See Swedberg and Durbin.)
Durett, P., Nice, France. Hasp-lock. No. 879,948; Feb. 25; Sp. p. 4272; Dr. p. 893; Gaz. vol. 132; p. 1628.
Durham, J. E., Muncie, Ind. Hand-car. No. 879,090; Feb. 11; Sp. p. 2463; Dr. p. 513; Gaz. vol. 132; p. 1271.
Dutchess Tool Company. (See Van Houten, F. H., assignor.)
Duyks, M. Von, Wellington, assignor to S. R. Auble, Lodi, Ohio. Medicated stock-salt and making the same. No. 879,070; Feb. 11; Sp. p. 2405; Gaz. vol. 132; p. 1265.
Dyar, C. P., Marietta, Ohio. Draft-equalizer. No. 878,873; Feb. 11; Sp. p. 2050; Dr. p. 425; Gaz. vol. 132; p. 1204.
Dyer, E. (See Button and Dyer.)
Dyer, F. L. (See Aylsworth and Dyer.)
Dytryeh, J. (See Francek and Dytryeh.)
E. Ingraham Co. (See Stockton and Porter, assignors.)
E. A. Pflueger Company. (See Pflueger, E. A., assignor.)
E. C. Fuller Company. (See Sturtevant, C. A., assignor.)
E. I. du Pont de Nemours Powder Company. (See Du Pont, F. I., assignor.)
E. I. du Pont de Nemours Powder Company. (See Smith, P. S., assignor.)
E. & T. Fairbanks & Company. (See Steenken, W., assignor.)
E. W. Bliss Company. (See Leavitt, F. M., assignor.)
Earl, J. H., Detroit, Mich. Automatic ginger-ale dispenser. No. 880,370; Feb. 25; Sp. p. 5094; Dr. p. 1077; Gaz. vol. 132; p. 1765.
Earle, J. H., and J. H. Senn, assignors of one-third to W. West, Greenville, S. C. Mail-catcher. No. 879,816; Feb. 18; Sp. p. 3952; Dr. p. 827; Gaz. vol. 132; p. 1550.
Eastman Kodak Co. (See Winter, H. J., assignor.)
Eberhard, C. R., Paterson, N. J. Joint structure for superimposed columns. No. 880,285; Feb. 25; Sp. p. 4952; Dr. p. 1046; Gaz. vol. 132; p. 1738.
Eberhardt Brothers Machine Company. (See Eberhardt, E. G., assignor.)
Eberhardt, E. G., assignor to Eberhardt Brothers Machine Company, Newark, N. J. Mechanical movement. No. 878,051; Feb. 4; Sp. p. 328; Dr. p. 68; Gaz. vol. 132; p. 901.
Eberhardt, G. W. (See Maxwell, W. T., assignor.)
Ebner, L., Philadelphia, Pa. Safety-razor. No. 879,611; Feb. 18; Sp. p. 3557; Dr. p. 744; Gaz. vol. 132; p. 1483.
Ebner, P., Columbus, Ohio. Metallic ceiling or sheathing. No. 879,248; Feb. 18; Sp. p. 2774; Dr. p. 581; Gaz. vol. 132; p. 1365.
Eckersley, J., Preston, assignor to Dobson and Barlow Limited, Bolton, England. Means for locking carding-engine-cylinder doors. No. 879,858; Feb. 25; Sp. p. 4075; Dr. p. 854; Gaz. vol. 132; p. 1507.
Eckert, E. A. (See Powell, W. O., assignor.)
Eckert, W. A., Buffalo, N. Y. Collapsible cup. No. 879,753; Feb. 18; Sp. p. 3828; Dr. p. 802; Gaz. vol. 132; p. 1530.
Edgington, L., Stout, Ohio. Ironing-board. No. 879,040; Feb. 11; Sp. p. 2351; Dr. p. 492; Gaz. vol. 132; p. 1256.
Edison Manufacturing Company. (See Brodie, W. M., assignor.)
Edison Storage Battery Company. (See Edison, T. A., assignor.)
Edison, T. A., Llewellyn Park, Orange, assignor to Edison Storage Battery Company, West Orange, N. J. Alkaline storage battery. No. 879,612; Feb. 18; Sp. p. 3558; Gaz. vol. 132; p. 1484.
Edison, T. A., Llewellyn Park, Orange, assignor to Edison Storage Battery Company, West Orange, N. J. Apparatus for producing very thin sheet metal. No. 879,850; Feb. 25; Sp. p. 4076; Dr. p. 854; Gaz. vol. 132; p. 1507.
Edison, T. A., Llewellyn Park, Orange, assignor to Edison Storage Battery Company, West Orange, N. J. Producing very thin sheet metal. No. 880,484; Feb. 25; Sp. p. 5362; Dr. p. 1130; Gaz. vol. 132; p. 1806.
Edwards, C., Drayton, N. D. Power-cultivator. No. 877,988; Feb. 4; Sp. p. 130; Dr. pp. 40–1; Gaz. vol. 132; p. 879.
Edwards, C. L., Vernon, N. Y. Explosion-engine. No. 878,364; Feb. 4; Sp. p. 954; Dr. p. 191; Gaz. vol. 132; p. 1003.
Edwards, C. L., Dallas, Tex. Transplanting-basket. No. 879,613; Feb. 18; Sp. p. 3559; Dr. p. 744; Gaz. vol. 132; p. 1484.
Edwin B. Stimpson Company. (See Stimpson, E. B., assignor.)
Egan, C. E., Petersburg, Ill., assignor to Egan Electric Massage Vibrator Company. Massage apparatus. No. 879,041; Feb. 11; Sp. p. 2352; Dr. p. 492; Gaz. vol. 132; p. 1256.
Egan Electric Massage Vibrator Company. (See Egan, C. E., assignor.)
Eichengrün, A., Dusseldorf, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Composition for generating formaldehyde. No. 880,204; Feb. 25; Sp. p. 4779; Gaz. vol. 132; p. 1711.
Ehrenburg, G., Anacortes Wash. Stand for tying shooks. No. 879,374; Feb. 18; Sp. p. 3032; Dr. p. 632; Gaz. vol. 132; p. 1406.
Eiker, F. G. (See Eiker, K. F. and F. G.)
Eiker, K. F. and F. G., Washington, D. C. Hose-supporter. No. 880,130; Feb. 25; Sp. p. 4617; Dr. p. 974; Gaz. vol. 132; p. 1685.
Eisel, A., Iserlohn, Germany. Device for fastening the handles in brushes, scrubbers, and the like. No. 878,282; Feb. 4; Sp. p. 797; Dr. p. 180; Gaz. vol. 132; p. 977.
Ekroot, T. (See Forsell and Ekroot.)
Elder, E. A. (See Kennedy and Elder.)
Eldred, B. E., Bronxville, N. Y. Cement-burning apparatus. No. 879,448; Feb. 18; Sp. p. 3193; Dr. p. 665; Gaz. vol. 132: p. 1430.
Electric Boat Company. (See Spear, L. Y., assignor.)
Electric Construction and Machinery Company. (See Leveen, S. J., assignor.)
Electric Controller and Supply Company. (See Hastings, B., assignor.)
Electric Goods Manufacturing Company. (See Thomson, H. C., assignor.)
Electro Metallurgical Company. (See Kügelgen and Seward, assignors.)
Elford, W. L., *et al.* (See McGinn and McCauley, assignors.)
Elias, O. A., London, England. Means for emptying bottles or other vessels. No. 879,951; Feb. 25; Sp. p. 4277; Dr. p. 894; Gaz. vol. 132; p. 1628.
Elledge, R. J., assignor to Anti Oak Leather Company, Los Angeles, Cal. Making leather tires. No. 880,371; Feb. 25; Sp. p. 5094; Dr. p. 1077; Gaz. vol. 132; p. 1766.
Elling, J. W. A., Christiania, Norway. Means for cooling the supply-passage of gas-turbines. No. 878,130; Feb. 4; Sp. p. 470; Dr. p. 100; Gaz. vol. 132; p. 925.
Elliott, J. A., Butte, Mont. Pump. No. 878,052; Feb. 4; Sp. p. 330; Dr. p. 60; Gaz. vol. 132; p. 901.
Elliott, W. F., De Kalb, Ill. Corn-sheller. No. 880,286; Feb. 25; Sp. p. 4954; Dr. p. 1046; Gaz. vol. 132; p. 1739.
Ellis, C., New York, N. Y. Apparatus for hydrating lime. No. 878,619; Feb. 11; Sp. p. 1575; Dr. p. 320; Gaz. vol. 132; p. 1123.
Ellis, C., Larchmont, N. Y. Composition of matter. No. 879,375; Feb. 18; Sp. p. 3033; Gaz. vol. 132; p. 1406.
Ellis, F., Fourche, Ark. Wrench. No. 879,155; Feb. 18; Sp. p. 2599; Dr. p. 542; Gaz. vol. 132; p. 1334.
Ellis, T., Tacoma, Wash. Car-stake. No. 880,446; Feb. 25; Sp. p. 5271; Dr. p. 1103; Gaz. vol. 132; p. 1792.
Ellsworth & Company. (See Corzilius, J., assignor.)
Elon Company. (See Cole, W. H., assignor.)
Elwell, H. D. (See Angus, A. A., assignor.)
Ely, J. W. (See Goode, J. R., assignor.)
Emal, F. J., Pickrell, Nebr. Cement-mixing machine. No. 877,918; Feb. 4; Sp. p. 46; Dr. p. 10; Gaz. vol. 132; p. 857.
Emerson, J. W., Durham, N. C. Logging-truck. No. 878,512; Feb. 11; Sp. p. 1321; Dr. p. 267; Gaz. vol. 132; p. 1086.
Emerson, V. H., New York, N. Y., assignor to American Graphophone Company, Bridgeport, Conn. Yielding matrix for sound-records. No. 878,513; Feb. 11; Sp. p. 1323; Dr. p. 268; Gaz. vol. 132; p. 1086.

Emett, G. H. H., deceased; H. Emett, administratrix, New Westminster, British Columbia, Canada. Hardening of cast-iron and the like. No. 878,053; Feb. 4; Sp. p. 332; Gaz. vol. 132; p. 902.
Emett, H., administratrix. (See Emett, G. H. H.)
Empire Jewelry Case Company. (See Sundee, J. R., assignor.)
Endsley, R., assignor of one-half to M. F. Horst, Marion, Ind. Cement-block machine. No. 878,945; Feb. 11; Sp. p. 2186; Dr. p. 457; Gaz. vol. 132; p. 1227.
Engbarth, C. E., Ocean Springs, Miss. Car-mover. No. 880,372; Feb. 25; Sp. p. 5096; Dr. p. 1078; Gaz. vol. 132; p. 1766.
Engelberg Huller Company. (See Tebyrica and Halstead, assignors.)
Engelberg, S. H., Brooklyn, N. Y. Fountain-pen. No. 879,614; Feb. 18; Sp. p. 3561; Dr. p. 744; Gaz. vol. 132; p. 1484.
Engelbrecht, W., Cisna Park, Ill. Feed-regulator. No. 878,621; Feb. 11; Sp. p. 1580; Dr. p. 321; Gaz. vol. 132; p. 1124.
Engelhardt, F. M., Chicago, Ill., assignor to Toledo Computing Scale Company, Toledo, Ohio. Computing-scale. No. 878,620; Feb. 11; Sp. p. 1577; Dr. p. 321; Gaz. vol. 132; p. 1123.
Engelmann, M., assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Making dialkylbarbituric acid. No. 879,156; Feb. 18; Sp. p. 2600; Gaz. vol. 132; p. 1334.
Engelmann, M., assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Making dialkylbarbituric acid. No. 879,335; Feb. 18; Sp. p. 3005; Gaz. vol. 132; p. 1557.
English, A. M., Boston, Mass., assignor to Manufacturers Machine Company, Montclair, N. J. Rough-rounding machine. No. 878,473; Feb. 4; Sp. p. 1179; Dr. pp. 240–7; Gaz. vol. 132; p. 1042.
English, J. C., Camden, N. J. Talking-machine. No. 877,989; Feb. 4; Sp. p. 183; Dr. p. 41; Gaz. vol. 132; p. 880.
Enochs, C. I., Brooklyn, N. Y. Amusement device. No. 879,615; Feb. 18; Sp. p. 3561; Dr. pp. 744–5; Gaz. vol. 132; p. 1484.
Enright, J. A., Columbus, Ohio. Nailless horseshoe. No. 879,952; Feb. 25. Sp. p. 4278; Dr. p. 894; Gaz. vol. 132; p. 1629.
Ensign, E. S., Newtonville, assignor to Ensign Manufacturing Company, Boston, Mass. Calculating-machine. No. 879,449; Feb. 18; Sp. p. 3198; Dr. pp. 666–8; Gaz. vol. 132; p. 1431.
Ensign Manufacturing Company. (See Ensign, E. S., assignor.)
Ergenbright, C. S., Caney, Kans. Hand-plow. No. 878,715; Feb. 11; Sp. p. 1754; Dr. pp. 362–3; Gaz. vol. 132; p. 1154.
Erie Malleable Iron Company. (See Hay, J. F., assignor.)
Ertz, J. W., Maple River Junction, Iowa. Corn-husker. No. 878,365; Feb. 4; Sp. p. 956; Dr. p. 192; Gaz. vol. 132; p. 1004.
Escales, R., and M. Novak, Munich, Germany. Accelerating the separation of nitroglycerin from acids. No. 880,373; Feb. 25; Sp. p. 5098; Dr. p. 1078; Gaz. vol. 132; p. 1766.
Escarfail, P., Pontcharra sur Bréda, France. Roller-press for paper-making machines. No. 878,946; Feb. 11; Sp. p. 2187; Dr. pp. 457–8; Gaz. vol. 132; p. 1227.
Eugene Dietzgen Company. (See Baumbach and Klitsche, assignors.)
Eulner, A. G., Philadelphia, Pa. Can-opener. No. 880,131; Feb. 25; Sp. p. 4619; Dr. p. 974; Gaz. vol. 132; p. 1686.
Eustace, E. C. (See Lacomme, G., assignor.)
Evans, C. S., Oakland, Cal. Oil-burner. No. 878,874; Feb. 11; Sp. p. 2051; Dr. p. 425; Gaz. vol. 132; p. 1205.
Evans, E. A., Chicago, Ill. Means and method for detecting and preventing fraud. No. 878,366; Feb. 4; Sp. p. 958; Dr. p. 192; Gaz. vol. 132; p. 1004.
Evans, J. J., and R. Lewis, New Castle, Pa. Roll. No. 880,205; Feb. 25; Sp. p. 4780; Dr. p. 1011; Gaz. vol. 132; p. 1711.
Everitt, W. (See Phelps and Glines, assignors.)
Ewing, M., Sharon, Pa. Post-office separating-case. No. 880,132; Feb. 25; Sp. p. 4620; Dr. p. 974; Gaz. vol. 132; p. 1686.
Eyles, A. G., Pontiac, Ill. Chair. No. 880,206; Feb. 25; Sp. p. 4781; Dr. pp. 1011–12; Gaz. vol. 132; p. 1711.
Eynon, J., Philadelphia, Pa. Rolling-mill for crushing pipes, bloomings, &c. No. 879,616; Feb. 18; Sp. p. 3564; Dr. pp. 745–6; Gaz. vol. 132; p. 1485.
F. Wesel Manufacturing Company. (See Winter, H., assignor.)
F. J. Johnston Circle Wave Amusement Co. (See Johnston, F. J., assignor.)
Fabian, O. J., Philadelphia, Pa. Flush-tank. (Reissue.) No. 12,747, Feb. 4; Sp. p. 1219; Dr. p. 252; Gaz. vol. 132; p. 1045.
Fairbanks, Morse & Company. (See Kennedy and Elder, assignors.)
Fairchild, A., Helmer, Mich. Wood-sawing machine. No. 879,376; Feb. 18; Sp. p. 3035; Dr. p. 632; Gaz. vol. 132; p. 1407.
Falkenberg, H. F. W., Dortmund, Germany. Oscillating motor. No. 879,091; Feb. 11; Sp. p. 2465; Dr. p. 514; Gaz. vol. 132; p. 1272.
Faller, L. A., assignor of one-fourth to B. H. Steif Jewelry Co., Nashville, Tenn. Watch-barrel. No. 878,716; Feb. 11; Sp. p. 1755; Dr. p. 363; Gaz. vol. 132; p. 1154.
Fanning, W. A., East Orange, N. J. Packaging-machine. No. 880,374; Feb. 25; Sp. p. 5099; Dr. pp. 1078–9; Gaz. vol. 132; p. 1766.
Faracchio, P., Philadelphia, Pa. Cigar-holder. No. 879,450; Feb. 18; Sp. p. 3214; Dr. p. 669; Gaz. vol. 132; p. 1431.
Farbenfabriken vorm. Friedr. Bayer & Co. (See Eichengrün, A., assignor.)
Farbenfabriken vorm. Friedr. Bayer & Co. (See Engelmann, M., assignor.)
Farbwerke, vorm. Meister, Lucius & Brüning. (See König, K., assignor.)
Farmer, A. J., Detroit, Mich. Paper for use in type-written work to obtain manifold copies. No. 878,717; Feb. 11; Sp. p. 1756; Dr. p. 363; Gaz. vol. 132; p. 1155.
Farrar, J., Halifax, England. Spinning, drawing, roving, and like frame. No. 880,068; Feb. 25; Sp. p. 4508; Dr. p. 947; Gaz. vol. 132; p. 1666.
Farrell, G. A., Chicago, Ill. Speed-boat. No. 879,860; Feb. 25; Sp. p. 4078; Dr. p. 855; Gaz. vol. 132; p. 1508.
Farris, L. W., Kansas City, Mo. Garment stay and fastener. No. 880,287; Feb. 25; Sp. p. 4955; Dr. p. 1047; Gaz. vol. 132; p. 1739.
Farrow, J., Covington, Ky., assignor of one-half to G. Rowe and J. A. Trunnell, Cincinnati, Ohio. Veneer-sawing machine. No. 879,451; Feb. 18; Sp. p. 3214; Dr. p. 669; Gaz. vol. 132; p. 1431.
Fawns, K. E., and G. Kermode, Ross, Tasmania, Australia. Coin freed or operated machine for vending postage-stamps, tickets, &c. No. 878,787; Feb. 11; Sp. p. 1892; Dr. p. 390; Gaz. vol. 132; p. 1177.
Featherstone, M. E., St. Elmo, Ill. Brush. No. 879,754; Feb. 18; Sp. p. 3829; Dr. p. 802; Gaz. vol. 132; p. 1530.
Fecker, J. H., and C. C. Jelleff, Piqua, Ohio. Hand-bellows. No. 878,367; Feb. 4; Sp. p. 959; Dr. p. 192, Gaz. vol. 132; p. 1004.
Fehler, R., Milwaukee, Wis. Brush-holder. No. 877,990; Feb. 4; Sp. p. 187; Dr. p. 41; Gaz. vol. 132; p. 880.
Feighan, W. C., Philadelphia, Pa. Self-locking attachment for angle-cocks. No. 878,368; Feb. 4; Sp. p. 960; Dr. pp. 192–3; Gaz. vol. 132; p. 1005.
Feightner, L. E., assignor to Lima Locomotive and Machine Company, Lima, Ohio. Locomotive-crank-shaft bracket. No. 879,617; Feb. 18; Sp. p. 3565; Dr. p. 746; Gaz. vol. 132; p. 1485.
Feild, A. J., assignor to American Box and Veneer Company, Raleigh, N. C. Tobacco box or caddy. No. 878,195; Feb. 4; Sp. p. 626; Dr. p. 128; Gaz. vol. 132; p. 948.
Felbel, J., New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 878,196; Feb. 4; Sp. p. 627; Dr. p. 129; Gaz. vol. 132; p. 948.
Felbel, J., New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 880,375; Feb. 25; Sp. p. 5100; Dr. p. 1079; Gaz. vol. 132; p. 1767.
Fell, A. G., New York, N. Y. Incandescent lamp. No. 879,157; Feb. 18; Sp. p. 2601; Dr. p. 542; Gaz. vol. 132; p. 1334.
Fell, A. G., New York, N. Y. Incandescent burner. No. 879,249; Feb. 18; Sp. p. 2775; Dr. pp. 581–2; Gaz. vol. 132; p. 1365.
Fellows, E. R., assignor to Fellows Gear Shaper Company, Springfield, Vt. Gear-generating machine. No. 879,531; Feb. 18; Sp. p. 3358; Dr. pp. 701–3; Gaz. vol. 132; p. 1457.
Fellows Gear Shaper Company. (See Fellows, E. R., assignor.)
Fellows, H. W., Cahuenga, and I. A. Cammett, Hollywood, Cal. Pilot. No. 879,092; Feb. 11; Sp. p. 2467; Dr. pp. 514–15; Gaz. vol. 132; p. 1272.
Felten & Guilleaume-Lahmeyerwerke Actien-Gesellschaft. (See Krämer, C., assignor.)
Felton, A. K., assignor of one-half to O. A. Rhodes, Smithville, Ohio. Storm-front for vehicles. No. 879,093; Feb. 11; Sp. p. 2469; Dr. p. 515; Gaz. vol. 132; p. 1272.
Ferguson, J., Creston, Ill. Wheelbarrow. No. 879,861; Feb. 25; Sp. p. 4080; Dr. p. 855; Gaz. vol. 132; p. 1508.
Ferner, L. J., Rochester, N. Y. Device for use in soldering. No. 878,622; Feb. 11; Sp. p. 1581; Dr. p. 321; Gaz. vol. 132; p. 1124.
Few, F. C., Albany, assignor of one-half to P. J. March, Troy, N. Y. Automatically-locking box. No. 879,094; Feb. 11; Sp. p. 2472; Dr. p. 515; Gaz. vol. 132; p. 1272.
Fewings, F. J., Duluth, Minn. Locomotive-headlight blind. No. 879,377; Feb. 18; Sp. p. 3036; Dr. pp. 632–3; Gaz. vol. 132; p. 1407.
Fidell, E., Jersey City, N. J. Mechanism for affixing stamps and similar devices. No. 878,514; Feb. 11; Sp. p. 1323; Dr. pp. 268–9; Gaz. vol. 132; p. 1086.
Field, S., Quincy, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Eyeleting-machine. No. 880,376; Feb. 25; Sp. p. 5112; Dr. pp. 1079–80; Gaz. vol. 132; p. 1767.
Filstead, D. W., assignor of one-half to A. R. Ames, Chicago, Ill. Machine for turning rubber shells of platens. No. 879,378; Feb. 18; Sp. p. 3040; Dr. p. 633; Gaz. vol. 132; p. 1407.
Finch, J. W., Elizabeth, Miss. Hand-car. No. 879,756; Feb. 18; Sp. p. 3831; Dr. p. 803; Gaz. vol. 132; p. 1530.
Fink, F., Recklinghausen, Germany. Electrical contact device. No. 877,919; Feb. 4; Sp. p. 50; Dr. p. 10; Gaz. vol. 132; p. 857.
Fink, J., New York, N. Y. Sewing-machine. No. 880,133; Feb. 25; Sp. p. 4621; Dr. p. 975; Gaz. vol. 132; p. 1686.
Fink, W. F., assignor of one-third to F. H. Phillips, La Jara, Colo. Grader and excavator. No. 878,283; Feb. 4; Sp. p. 797; Dr. pp. 159–60; Gaz. vol. 132; p. 977.
Finster, G. A., Schenectady, N. Y. Cartridge. No. 878,369; Feb. 4; Sp. p. 961; Dr. p. 193; Gaz. vol. 132; p. 1005.

Firsching, J. A., Utica, N. Y. Friction-clutch driving mechanism. No. 878,458; Feb. 4; Sp. p. 1127; Dr. p. 231; Gaz. vol. 132; p. 1034.
Fischer, A., London, England. Talking-machine. No. 879,755; Feb. 18; Sp. p. 3830; Dr. p. 803; Gaz. vol. 132; p. 1530.
Fischer, J., Vienna, Austria-Hungary. Apparatus for the chemical purification of oils and the like. No. 878,370; Feb. 4; Sp. p. 962; Dr. p. 193; Gaz. vol. 132; p. 1005.
Fischer, M., assignor to Actiengesellschaft "Magneta," Zurich, Switzerland. Magneto-electric inductor. No. 880,485; Feb. 25; Sp. p. 5365; Dr. p. 1130; Gaz. vol. 132; p. 1806.
Fisher, H., *et al.* (See Fisher, J. C., assignor.)
Fisher, J. C., assignor of one-half to F. L. Van Orden, Houghton, and H. Fisher, Lake Linden, Mich. Concentrating-table. No. 879,260; Feb. 18; Sp. p. 2778; Dr. p. 582; Gaz. vol. 132; p. 1366.
Fisher, J. F., assignor of one-half to E. W. Worrell, Oceana, W. Va. Wrench. No. 878,197; Feb. 4; Sp. p. 632; Dr. p. 129; Gaz. vol. 132; p. 948.
Fisk, J. M., Curlew, Iowa. Car-mover. No. 880,017; Feb. 25; Sp. p. 4399; Dr. p. 924; Gaz. vol. 132; p. 1650.
Fister, W. S., assignor of one-half to S. E. Bear, Hamburg, Pa. Car fender. No. 879,095; Feb. 11; Sp. p. 2474; Dr. p. 516; Gaz. vol. 132; p. 1273.
Fix, C. H., *et al.* (See Dreg, C., assignor.)
Fix, E. W., Danville, Ill. Mail-bag catching and delivering mechanism. No. 878,623; Feb. 11; Sp. p. 1582; Dr. pp. 321–2; Gaz. vol. 132; p. 1124.
Flanagan, T. (See Murphy, F. M., assignor.)
Flecksing, W. H., M. Kercher, and G. W. Henke, Bozeman, Mont. Safety-stirrup. No. 880,288; Feb. 25; Sp. p. 4956; Dr. p. 1047; Gaz. vol. 132; p. 1739.
Fleigel, B., assignor to B. Fleigel & Co., Chelsea, Mass. Sewing-machine attachment. No. 878,718; Feb. 11; Sp. p. 1758; Dr. p. 364; Gaz. vol. 132; p. 1155.
Fleigel & Co., B. (See Fleigel, B., assignor.)
Fleming, A. H., Fairmont, W. Va. Shade-roller bracket. No. 878,624; Feb. 11; Sp. p. 1585; Dr. p. 322; Gaz. vol. 132; p. 1125.
Fletcher, I. E., Montello, Mass. Rotary shoe-ironer and treeing-machine. No. 878,788; Feb. 11; Sp. p. 1896; Dr. p. 390; Gaz. vol. 132; p. 1178.
Flick, W. S., La Fayette, Ind. Gate. No. 877,920; Feb. 4; Sp. p. 51; Dr. pp. 10–11; Gaz. vol. 132; p. 857.
Flint, A. H., Moira, N. Y. Sleigh-knee. No. 879,251; Feb. 18; Sp. p. 2781; Dr. p. 583; Gaz. vol. 132; p. 1366.
Flockinger, F. C. (See Gauntt, G. B., assignor.)
Flora, E. E., and R. J. Zorge, Chicago, Ill., assignors to Zorge Safety Railway Equipment Company. Alarm-signal mechanism. No. 880,134; Feb. 25; Sp. p. 4623; Dr. pp. 975–7; Gaz. vol. 132; p. 1687.
Flournoy, A. H., *et al.* (See Flournoy, P. P., assignor.)
Flournoy, B. C., *et al.* (See Flournoy, P. P., assignor.)
Flournoy, E. S., *et al.* (See Flournoy, P. P., assignor.)
Flournoy, F. C., *et al.* (See Flournoy, P. P., assignor.)
Flournoy, P. P., jr. *et al.* (See Flournoy, P. P., assignor.)
Flournoy, P. P., assignor of one-half to P. P., Jr., B. C., R. W., E. S., A. H., and F. C. Flournoy, Bethesda, Md. Self-filling fountain-pen. No. 879,817; Feb. 18; Sp. p. 3054; Dr. p. 827; Gaz. vol. 132; p. 1551.
Flournoy, R. W., *et al.* (See Flournoy, P. P., assignor.)
Floyd, G. G., Granite, Ill., assignor to American Steel Foundries, New York, N. Y. Side frame and journal-box. No. 878,875; Feb. 11; Sp. p. 2053; Dr. p. 475; Gaz. vol. 132; p. 1205.
Flyberg, E. E., Baudette, Minn. Scissors. No. 879,618; Feb. 18; Sp. p. 3567; Dr. p. 747; Gaz. vol. 132; p. 1485.
Foerstering, H., Perth Amboy, N. J., and H. R. Carveth, Niagara Falls, assignors to Roessler & Hasslacher Chemical Co., New York, N. Y. Making molten peroxids. No. 879,452; Feb. 18; Sp. p. 3216; Dr. p. 669; Gaz. vol. 132; p. 1431.
Foley, J. B., New Haven, Conn. Car-rack. No. 878,198; Feb. 4; Sp. p. 633; Dr. p. 130; Gaz. vol. 132; p. 949.
Foley, R. H., Mystic, Conn. Shade and curtain bracket. No. 880,135; Feb. 25; Sp. p. 4630; Dr. pp. 977–8; Gaz. vol. 132; p. 1687.
Foote, C. F., Salida, Colo. Pulley. No. 878,054; Feb. 4; Sp. p. 332; Dr. p. 69; Gaz. vol. 132; p. 902.
Foote, J. H., Chicago, Ill. Bath-pad. No. 879,619; Feb. 18; Sp. p. 3568; Dr. p. 747; Gaz. vol. 132; p. 1486.
Forgan, M. P., Johannesburg, Transvaal. Developing-tray. No. 880,377; Feb. 25; Sp. p. 5118; Dr. p. 1081; Gaz. vol. 132; p. 1767.
Forlee, W. D., Morristown, N. J. Headlight for automobiles, &c. No. 880,289; Feb. 25; Sp. p. 4958; Dr. p. 1047; Gaz. vol. 132; p. 1740.
Forcier, J., Seattle, Wash. Apparatus for launching boats. No. 880,018; Feb. 25; Sp. p. 4401; Dr. p. 924; Gaz. vol. 132; p. 1650.
Ford, A. H., Westville, Tex., assignor of one-half to W. E. Patterson, Lake Charles, La. Smoke-consumer and artificial draft. No. 879,453; Feb. 18; Sp. p. 3217; Dr. p. 669; Gaz. vol. 132; p. 1432.
Ford, E. A. (See McTammany and Ford.)
Ford, E. W. (See Richardson and Ford.)
Ford, H., Detroit, Mich. Piston-ring. No. 879,757; Feb. 18; Sp. p. 3832; Dr. p. 803; Gaz. vol. 132; p. 1531.
Forsell, C. F., and T. Ekroot, Duluth, Minn. Convertible cot and pack-sack. No. 878,055; Feb. 4; Sp. p. 333; Dr. p. 69; Gaz. vol. 132; p. 902.
Forsyth Brothers Company. (See Stucki, A., assignor.)
Forsyth, G. H., Chicago, Ill. Curtain-fixture. No. 879,533; Feb. 18; Sp. p. 3366; Dr. p. 703; Gaz. vol. 132; p. 1458.
Forsyth, L., Hagerstown, Md. Drawing-table. No. 879,620; Feb. 18; Sp. p. 3569; Dr. p. 747; Gaz. vol. 132; p. 1486.
Forsythe, L. K., Battle Creek, assignor of one-half to W. L. Davies, Detroit, Mich. Pulverizing stone. No. 878,515; Feb. 11; Sp. p. 1333; Gaz. vol. 132; p. 1067.
Fortescue, C. L., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Transformer. No. 879,158; Feb. 18; Sp. p. 2604; Dr. p. 542; Gaz. vol. 132; p. 1335.
Fortescue, C. L., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Multiple-ratio transformer. No. 879,252; Feb. 18; Sp. p. 2782; Dr. p. 583; Gaz. vol. 132; p. 1366.
Fortier, C. L., Milwaukee, Wis. Type-writing machine. No. 878,789; Feb. 11; Sp. p. 1898; Dr. p. 391; Gaz. vol. 132; p. 1178.
Foschinbaur, J. F., Ridgeland, assignor to Union Special Sewing Machine Company, Chicago, Ill. Folding-guide for sewing-machines. No. 879,621; Feb. 18; Sp. p. 3571; Dr. p. 748; Gaz. vol. 132; p. 1486.
Fosler, I. G., Chicago, Ill. Talking-machine. No. 878,516; Feb. 11; Sp. p. 1333; Dr. p. 270; Gaz. vol. 132; p. 1067.
Foss, B. F., Fairfield, Me. Radiator. No. 879,963; Feb. 25; Sp. p. 4279; Dr. p. 895; Gaz. vol. 132; p. 1629.
Foster, F. B., Santa Barbara, Cal. Needle. No. 879,758; Feb. 18; Sp. p. 3833; Dr. p. 804; Gaz. vol. 132; p. 1531.
Foster, R. G., Providence, R. I. Shaving-cup. No. 880,207; Feb. 25; Sp. p. 4784; Dr. p. 1012; Gaz. vol. 132; p. 1712.
Fowler, J. W., C. S. Barnes, and H. G. Peters, Grinnell, Iowa. Cream-separator. No. 879,379; Feb. 18; Sp. p. 3041; Dr. p. 633; Gaz. vol. 132; p. 1407.
Fowler, S. B., La Fayette, Ind. Telephone-exchange system. No. 877,921; Feb. 4; Sp. p. 53; Dr. p. 11; Gaz. vol. 132; p. 857.
Fox, C. H., London, England. Railway wagon-stanchion and the like. No. 879,642; Feb. 11; Sp. p. 2354; Dr. pp. 492–3; Gaz. vol. 132; p. 1256.
Fox, C. M., De Kalb, Ill. Explosive-engine. No. 879,954; Feb. 25; Sp. p. 4280; Dr. p. 895; Gaz. vol. 132; p. 1629.
Fox, J. E., Courtenay, N. D. Metallic door. No. 878,876; Feb. 11; Sp. p. 2055; Dr. pp. 425–6; Gaz. vol. 132; p. 1205.
Fox, J. H. (See Simpson, W., assignor.)
Fox, W. R., Grand Rapids, Mich. Ribbon mechanism for type-writing machines. No. 879,159; Feb. 18; Sp. p. 2606; Dr. pp. 542–3; Gaz. vol. 132; p. 1335.
Fox, W. R., Grand Rapids, Mich. Tabulator for type-writers. No. 880,200; Feb. 25; Sp. p. 4950; Dr. pp. 1047–8; Gaz. vol. 132; p. 1740.
Francek, V., and J. Dytrych, Chicago, Ill. Safety door check and lock. No. 878,056; Feb. 4; Sp. p. 335; Dr. pp. 69–70; Gaz. vol. 132; p. 902.
Francis, E. M. (See Cunningham, A. A., assignor.)
Frank, H. A., Chicago, Ill. Cuff-protector. No. 879,955; Feb. 25; Sp. p. 4281; Dr. p. 895; Gaz. vol. 132; p. 1629.
Franke, R. (See Günther and Franke.)
Frantz, C., Niagara Falls, N. Y. Porch-awning. No. 878,284; Feb. 4; Sp. p. 799; Dr. p. 160; Gaz. vol. 132; p. 977.
Fraser, A. T., Butte, Mont. Dredge-bucket joint. No. 878,517; Feb. 11; Sp. p. 1335; Dr. p. 270; Gaz. vol. 132; p. 1087.
Fraser, C. W., Buffalo, N. Y. Body-guard. No. 879,534; Feb. 18; Sp. p. 3367; Dr. p. 704; Gaz. vol. 132; p. 1459.
Frederick, J. (See Donnelly and Frederick.)
Freeman, H. H., Wilkinsburg, Pa. Smelting-furnace for copper and other ores. No. 879,623; Feb. 18; Sp. p. 3574; Dr. p. 748; Gaz. vol. 132; p. 1487.
Freeman, J. H., Savanna, Ill. Toilet vessel. No. 878,625; Feb. 11; Sp. p. 1587; Dr. p. 322; Gaz. vol. 132; p. 1125.
Freeman, W. H., Freehold, N. J. Vein-tube. No. 878,199; Feb. 4; Sp. p. 636; Dr. p. 130; Gaz. vol. 132; p. 949.
French, H. C., Cleveland, Ohio. Lawn cleaner and cultivator. No. 879,759; Feb. 18; Sp. p. 3834; Dr. p. 804; Gaz. vol. 132; p. 1531.
French, S. R., Farmington, Iowa. Manure scraper and loader. No. 879,253; Feb. 18; Sp. p. 2784; Dr. p. 584; Gaz. vol. 132; p. 1367.
Fresh, W. E., Woburn, Mass. Top-draft lantern. No. 878,518; Feb. 11; Sp. p. 1336; Dr. p. 270; Gaz. vol. 132; p. 1088.
Frsund, H. H., New York, N. Y. Fermenting beer, ale, and other fermentable liquids. No. 878,790; Feb. 11; Sp. p. 1904; Dr. pp. 391–2; Gaz. vol. 132; p. 1179.
Frick, O. A., Defiance, Ohio. Hub-banding machine. No. 878,131; Feb. 4; Sp. p. 471; Dr. p. 101; Gaz. vol. 132; p. 926.
Fricke, W. A., assignor to Monarch Telephone Manufacturing Company, Chicago, Ill. Telephone-exchange apparatus. No. 879,454; Feb. 18; Sp. p. 3218; Dr. p. 670; Gaz. vol. 132; p. 1432.

Fricker, F. A., Scranton, Pa. Inkstand. No. 879,624; Feb. 18; Sp. p. 3576; Dr. p. 749; Gaz. vol. 132; p 1488.
Friedlaender, K., Berlin, Germany. Supervisory apparatus. No. 878,791; Feb. 11; Sp. p. 1907; Dr. p. 392; Gaz. vol. 132; p. 1179.
Friedman, N., New York, N. Y. Electric clock. No. 878,877; Feb. 11; Sp. p. 2056; Dr. pp. 426–7; Gaz. vol. 132; p. 1206.
Froelich, H. C., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Switch-plug. No. 879,760; Feb. 18; Sp. p. 3839; Dr. p. 805; Gaz. vol. 132; p. 1532.
Frost, C. W., Philadelphia, Pa. Toy building-block. No. 879,455; Feb. 18; Sp. p. 3222; Dr. p. 670; Gaz. vol. 132; p. 1433.
Frost, W. G., Broad Ripple, Ind. Renewable-front washboard. No. 879,761; Feb. 18; Sp. p. 3841; Dr. p. 805; Gaz. vol. 132; p. 1532.
Fry, R. C., Davis, assignor of one-half to M. Branan, Maysville, W. Va. Window-sash. No. 880,447; Feb. 25; Sp. p. 5272; Dr. p. 1109; Gaz. vol. 132; p. 1793.
Fuchs, J., Cincinnati, Ohio. Friction-clutch. No. 879,862; Feb. 25; Sp. p. 4081; Dr. p. 856; Gaz. vol. 132; p. 1598.
Fuchs, L., Rohrbach, Austria-Hungary. Centrifugal machine. No. 877,991; Feb. 4; Sp. p. 188; Dr. p. 42; Gaz. vol. 132; p. 880.
Fullilove, J. P., Shreveport, La. Automatic paris-green distributer. No. 879,535; Feb. 18; Sp. p. 3369; Dr. p. 704; Gaz. vol. 132; p. 1459.
Fulton, C. W., Paisley, Scotland. Mounting of road-wheels for vehicles. No. 879,160; Feb. 18; Sp. p. 2617; Dr. pp. 544–5; Gaz. vol. 132; p. 1337.
Furman, C., Decatur, Ill. Railway-truck frame. No. 878,459; Feb. 4; Sp. p. 1129; Dr. pp. 231–2; Gaz. vol. 132; p. 1034.
Fussenegger, E. (See Julius and Fussenegger.)
Futhey, R. S., Los Angeles, Cal. Pump for oil-wells. No. 880,019; Feb. 25; Sp. p. 4401; Dr. p. 925; Gaz. vol. 132; p. 1650.
Gage, E. E., New York, N. Y. Alarm-clock. No. 878,371; Feb. 4; Sp. p. 963; Dr. pp. 193–4; Gaz. vol. 132; p. 1005.
Gager, E. B., Columbus, Ohio., assignor to Kinnear and Gager Manufacturing Company. Metallic covering for doors. No. 877,922; Feb. 4; Sp. p. 57; Dr. p. 11; Gaz. vol. 132; p. 858.
Galley, A., Williamsburg, Pa. Ink-well. No. 878,372; Feb. 4; Sp. p. 966; Dr. p. 194; Gaz. vol. 132; p. 1006.
Gallagher, J. C. (See Murdock and Gallagher.)
Gallagher, R. D., Jr., New York, N. Y. Subframe for railway-cars. No. 879,536; Feb. 18; Sp. p. 3370; Dr. pp. 704–5; Gaz. vol. 132; p. 1459.
Gallagher, T. H., Ingram, Pa. Gas-stove. No. 879,762; Feb. 18; Sp. p. 3843; Dr. p. 805; Gaz. vol. 132; p. 1532.
Galvin, J., Brattleboro, Vt. Ash-collecting box attachment for furnaces, &c. No. 879,622; Feb. 18; Sp. p. 3573; Dr. p. 748; Gaz. vol. 132; p. 1487.
Gambler, E. V. (See Terrell, E., assignor.)
Garaghty, C. F. (See Philipp, J. H., assignor.)
Garant, H., assignor of one-half to W. B. Davis, Chattanooga, Tenn. Dial knitting-machine. No. 878,792; Feb. 11; Sp. p. 1908; Dr. p. 392; Gaz. vol. 132; p. 1179.
Gardner, K. C., assignor of one-half to United Engineering & Foundry Company, Pittsburg, Pa. Transfer system. No. 879,131; Feb. 11; Sp. p. 2551; Dr. pp. 530–1; Gaz. vol. 132; p. 1284.
Gardyne, A. H., Barton Landing, Vt. Ribbon-fastener. No. 878,719; Feb. 11; Sp. p. 1760; Dr. p. 364; Gaz. vol. 132; p. 1155.
Garms, J. A., Varel-Hafen, Germany. Trawling-net for use in herring or other fishing. No. 880,069; Feb. 25; Sp. p. 4509; Dr. p. 948; Gaz. vol. 132; p. 1666.
Garrett, W. R., and J. H. Walker, Central City, Ky. Apparatus for screening and grading coal. No. 879,625; Feb. 18; Sp. p. 3578; Dr. p. 749; Gaz. vol. 132; p. 1488.
Garrison, F. L. (See Harris, F., assignor.)
Gartenlaub, M. (See Keogh, T. B., assignor.)
Gartrell, J., Washington, D. C. Dental implement. No. 879,537; Feb. 18; Sp. p. 3373; Dr. p. 705; Gaz. vol. 132; p. 1460.
Gaston, C. W., Allegheny, Pa. Fountain-pen. No. 879,626; Feb. 18; Sp. p. 3580; Dr. p. 749; Gaz. vol. 132; p. 1488.
Gaunt, J., Armley, England. Playing-card shuffler and trump-indicator. No. 877,992; Feb. 4; Sp. p. 190; Dr. p. 42; Gaz. vol. 132; p. 881.
Gaunt, J., Meriden, assignor of one-half to W. M. Prisk, Yalesville, Conn. Percolator. No. 879,096; Feb. 11; Sp. p. 2475; Dr. p. 516; Gaz. vol. 132; p. 1273.
Gauntt, G. B., assignor of one-half to F. C. Flockinger, Taylor, Tex. Cotton-chopper. No. 878,373; Feb. 4; Sp. p. 968; Dr. p. 194; Gaz. vol. 132; p. 1006.
Gauthier, E. (See Rodrigues-Ely and Gauthier.)
Gauthier, J. L., Washington, D. C. Manually-controlled dental engine. No. 879,254; Feb. 18; Sp. p. 2788; Dr. pp. 584–5; Gaz. vol. 132; p. 1367.
Gebrüder Hammer. (See Zura, J., assignor.)
Gebrüder Siemens & Co. (See Viertel, H., assignor.)
Gee, T. J., Chatteris, England. Swinging feed-elevator for maize-shellers and threshing-machines. No. 880,291; Feb. 25; Sp. p. 4963; Dr. p. 1048; Gaz. vol. 132; p. 1741.
Geertsma O., Broadland, S. D. Vehicle-shaft. No. 879,456; Feb. 18; Sp. p. 3223; Dr. p. 670; Gaz. vol. 132; p. 1433.
Gehrung, J. A., New York, N. Y. Signal system. No. 880,136; Feb. 25; Sp. p. 4631; Dr. p. 978; Gaz. vol. 132; p. 1687.
Geis, H., Regensburg, assignor to M. Haeussler, Munich, Germany. Device for aiming from cover. No. 880,378; Feb. 25; Sp. p. 5118; Dr. p. 1081; Gaz. vol. 132; p. 1768.
Geissler, F., Klotzsche, near Dresden, Germany. Coffee or tea percolator. No. 878,374; Feb. 4; Sp. p. 970; Dr. p. 195; Gaz. vol. 132; p. 1007.
Gelabert, W. P., Fulton, Mo. Combined strap and strap-loop. No. 878,519; Feb. 11; Sp. p. 1337; Dr. p. 270; Gaz. vol. 132; p. 1088.
Gelb, S., *et al.* (See Köszegi, K., assignor.)
Geldermann, H., Gross-Lichterfelde-Ost, near Berlin, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Red azo dye and making same. No. 880,292; Feb. 25; Sp. p. 4964; Gaz. vol. 132; p. 1741.
Geldermann, H., Gross-Lichterfelde-Ost, near Berlin, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Yellow tetrazo dye and making same. No. 880,293; Feb. 25; Sp. p. 4965; Gaz. vol. 132; p. 1741.
General Electric Company. (See Curtis, C. G., assignor.)
General Hydrocarbon Company. (See Bates, S. W., assignor.)
General Railway Signal Company. (See Salmon, W. W., assignor.)
George, A. F., assignor to George Combination Windmill Company, Bisbee, Ariz. Ter. Windmill. No. 879,161; Feb. 18; Sp. p. 2621; Dr. pp. 545–6; Gaz. vol. 132; p. 1337.
George, A. F., assignor to George Combination Windmill Company, Bisbee, Ariz. Ter. Windmill. No. 879,162; Feb. 18; Sp. p. 2624; Dr. pp. 546–7; Gaz. vol. 132; p. 1337.
George Combination Windmill Company. (See George, A. F., assignor.)
George, W. B., Columbus, Ohio. Apparatus for removing the grains of corn from corncobs. No. 879,457; Feb. 18; Sp. p. 3224; Dr. p. 670; Gaz. vol. 132; p. 1433.
Georger, A. L., Buffalo, N. Y. Register for railway mail-matter. No. 879,956; Feb. 25; Sp. p. 4283; Dr. pp. 895–6; Gaz. vol. 132; p. 1630.
Georges, J. B., Toulon-sur-Allier, France. Racing track or course. No. 877,993; Feb. 4; Sp. p. 191; Dr. p. 43; Gaz. vol. 132; p. 881.
Gerard, A. (See Munro and Gerard.)
Gerdon, L. W., Meadville, Pa., assignor of one-half to E. P. Barnes, Cleveland, Ohio. Means for tying wires to insulators, &c. No. 878,520; Feb. 11; Sp. p. 1338; Dr. p. 271; Gaz. vol. 132; p. 1088.
Gere, W. B. (See Merrell and Gere.)
Gergler, C. R., New York, N. Y. Explosive-motor. No. 879,763; Feb. 18; Sp. p. 3844; Dr. p. 806; Gaz. vol. 132; p. 1533.
Gerhardts, E., Westbrook, Me. Tension device for loom-shuttles. No. 878,720; Feb. 11; Sp. p. 1762; Dr. p. 364; Gaz. vol. 132; p. 1156.
Germain, J. E., and G. A. Ossart, Ruell, assignors to J. A. G. Rousset, Vincennes, France. Optical lens. No. 880,208; Feb. 25; Sp. p. 4785; Dr. pp. 1012–13; Gaz. vol. 132; p. 1712.
Germann, E. (See Buckingham and Germann.)
Gerrans, A. T. (See De Reuer, R. P., assignor.)
Gerstner, A., New York, N. Y. Dirigible balloon. No. 880,070; Feb. 25; Sp. p. 4510; Dr. pp. 948–9; Gaz. vol. 132; p. 1666.
Getchell, C. W., assignor of one-half to F. B. Webber, Waterville, Me. Rifle-sight-lighting means. No. 880,294; Feb. 25; Sp. p. 4967; Dr. p. 1048; Gaz. vol. 132; p. 1742.
Gibbs, C., assignor to Underwood Typewriter Company, New York, N. Y. Stenciling-machine. No. 879,818; Feb. 18; Sp. p. 3056; D p. 828; Gaz. vol. 132; p. 1551.
Gibbs, C. W., Peshastin, Wash. Cultivator. No. 878,375; Feb. 4; Sp. p. 971; Dr. p. 195; Gaz. vol. 132; p. 1007.
Gibbs, L. T., Hempstead, N. Y. Car-heating system. No. 878,793; Feb. 11; Sp. p. 1911; Dr. p. 392; Gaz. vol. 132; p. 1180.
Gibby, G. H. (See Decker and Gibby.)
Gibson, C. C. (See Patterson, W. C., assignor.)
Gies, F. G., assignor to Gies Gear Company, Detroit, Mich. Reversing-gear. No. 878,132; Feb. 4; Sp. p. 473; Dr. p. 101; Gaz. vol. 132; p. 926.
Gies Gear Company. (See Gies, F. G., assignor.)
Gilbert, H. J., Saginaw, Mich., assignor to National Wash Board Company, Chicago, Ill. Washboard. No. 878,947; Feb. 11; Sp. p. 2188; Dr. p. 458; Gaz. vol. 132; p. 1227.
Gilfillan, W., New Haven, Conn. Combined door check and spring. No. 878,521; Feb. 11; Sp. p. 1339; Dr. p. 271; Gaz. vol. 132; p. 1088.
Gill, S. E. (See Stewart, F. L., assignor.)
Gillespie, R. T., Bloomfield, N. J. Cleaning-brush. No. 879,043; Feb. 11; Sp. p. 2355; Dr. p. 493; Gaz. vol. 132; p. 1257.
Gillespie R. T., Bloomfield, N. J. Adjustable cleaning-brush. No. 879,764; Feb. 18; Sp. p. 3846; Dr. p. 806; Gaz. vol. 132; p. 1533.

Gillette, H., Chicago, Ill. Electrically-operated clock. No. 880,209; Feb. 25; Sp. p. 4786; Dr. pp. 1013-14; Gaz. vol. 132; p. 1712.
Gilman, J. H., assignor to King & Hamilton Company, Ottawa, Ill. Conveying apparatus. No. 878,721; Feb. 11; Sp. p. 1763; Dr. p. 364; Gaz. vol. 132; p. 1156.
Gilson, W. J. (See Pommerer, R. W., assignor.)
Girard, A. L., Lincoln, Nebr. Brace for bicycle-frames. No. 879,458; Feb. 18; Sp. p. 3225; Dr. p. 671; Gaz. vol. 132; p. 1433.
Giulietti, E., Genoa, Italy. Scene-shifting device. No. 879,820; Feb. 18; Sp. p. 3556; Dr. pp. 828-9; Gaz. vol. 132; p. 1552.
Gladding, S. E., Jersey City, N. J. Fishing apparatus. No. 879,863; Feb. 25; Sp. p. 4083; Dr. p. 856; Gaz. vol. 132; p. 1599.
Glaentzer, A. L., New York, N. Y. Lamp. No. 878,376; Feb. 4; Sp. p. 973; Dr. pp. 195-6; Gaz. vol. 132; p. 1007.
Glardon, E. C., Hamburg, Germany. Joint-binder. No. 879,097; Feb. 11; Sp. p. 2477; Dr. p. 516; Gaz. vol. 132; p. 1273.
Gleason, D. E. (See Tolmie, G., assignor.)
Glines, E. C. (See Phelps and Glines.)
Globe Ticket Company. (See Snow, P. C., assignor.)
Glocker, W. H., and W. M. White, Philadelphia, Pa. Governor. No. 878,377; Feb. 4; Sp. p. 975; Dr. p. 196; Gaz. vol. 132; p. 1008.
Gloner, C. E., Carnegie, Pa. Spike-puller. No. 882,210; Feb. 25; Sp. p. 4790; Dr. p. 1014; Gaz. vol. 132; p. 1713.
Gnacy, S, Strasburg, Ohio. Hub-attaching device. No. 878,200; Feb. 4; Sp. p. 637; Dr. p. 130; Gaz. vol. 132; p. 949.
Goble, J. F. S., New Albin, Iowa. Gate. No. 880,205; Feb. 25; Sp. p. 4069; Dr. p. 1048; Gaz. vol. 132; p. 1742.
Godfrey, G. M., Carrollton, Miss. Cork-extractor. No. 878,722; Feb. 11; Sp. p. 1764; Dr. p. 364; Gaz. vol. 132; p. 1156.
Godfrey, J., assignor to Compressed Paper Box Co., Bridgeport, Conn. Pasteboard-box. No. 879,865; Feb. 25; Sp. p. 4085; Dr. p. 856; Gaz. vol. 132; p. 1599.
Goerwitz, W., Berlin, Germany. Type-writer. No. 878,378; Feb. 4; Sp. p. 980; Dr. pp. 197-8; Gaz. vol. 132; p. 1008.
Goffe, T. N., Springfield, Mo. Penholder. No. 878,794; Feb. 11; Sp. p. 1913; Dr. p. 393; Gaz. vol. 132; p. 1180.
Goffe, T. N., Springfield, Mo. Penholder. No. 878,795; Feb. 11; Sp. p. 1914; Dr. p. 393; Gaz. vol. 132; p. 1180.
Gogel, J., Toledo, Ohio. Oil-burner. No. 880,071; Feb. 25; Sp. p. 4512; Dr. p. 949; Gaz. vol. 132; p. 1667.
Gold, E. F., New York, N. Y. Car-heating system. No. 878,479; Feb. 4; Sp. p. 1200; Dr. p. 247; Gaz. vol. 132; p. 1042.
Golde, T., Gera-Reuss, Germany. Carriage-hood. No. 878,948; Feb. 11; Sp. p. 2130; Dr. pp. 458-9; Gaz. vol. 132; p. 1228.
Goldsborough, R. H., Washington, D. C. Turbine. No. 878,201; Feb. 4; Sp. p. 640; Dr. p. 131; Gaz. vol. 132; p. 949.
Goldschmidt, E., Német Keresztur, Austria-Hungary. Affixing apparatus for stamps and labels. No. 879,627; Feb. 18; Sp. p. 3581; Dr. p. 750; Gaz. vol. 132; p. 1488.
Gonce, J. W., Kinderhook, Ala. Hame-fastener. No. 879,096; Feb. 11; Sp. p. 2478; Dr. p. 517; Gaz. vol. 132; p. 1274.
Good, E., assignor to L. Y. Williams and F. B. Harrison, Toledo, Ohio. Car-journal box. No. 879,459; Feb. 18; Sp. p. 3226; Dr. p. 671; Gaz. vol. 132; p. 1433.
Good, J., Jr., New York, assignor to A. W. Hard, Jr., Lawrence, N. Y. Cash-delivery device. No. 880,448; Feb. 25; Sp. p. 5273; Dr. p. 1100; Gaz. vol. 132; p. 1793.
Goode, J. R., assignor of one-half to J. W. Ely, Washington, Pa. Farm-gate. No. 879,460; Feb. 18; Sp. p. 3227; Dr. p. 672; Gaz. vol. 132; p. 1434.
Goodman, H. M., Louisville, Ky. Centrifugal separating-machine. No. 879,255; Feb. 18; Sp. p. 2789; Dr. p. 585; Gaz. vol. 132; p. 1367.
Goodner, J. A., Rocky Ford, Colo. Water-elevator. No. 878,133; Feb. 4; Sp. p. 475; Dr. p. 102; Gaz. vol. 132; p. 926.
Goodridge, G. W., assignor to Bryant Electric Company, Bridgeport, Conn. Electric-lamp socket. No. 879,819; Feb. 18; Sp. p. 3958; Dr. p. 828; Gaz. vol. 132; p. 1551.
Goodwin, E. E., Cle Elum, Wash. Windmill attachment. No. 879,099; Feb. 11; Sp. p. 2481; Dr. p. 517; Gaz. vol. 132; p. 1274.
Goodwin, L. O., assignor to Davis & Furber Machine Company, North Andover, Mass. Revolution-indicating mechanism for spinning-machines. No. 879,957; Feb. 25; Sp. p. 4288; Dr. p. 896; Gaz. vol. 132; p. 1630.
Gordon, E. R. (See Despain, Kitt, and Gordon.)
Gordon, P. W. (See Smith, L. E., assignor.)
Gordon, G. E., Shenandoah, Iowa. Guiding device for wheeled agricultural implements. No. 879,864; Feb. 25; Sp. p. 4084; Dr. p. 856; Gaz. vol. 132; p. 1599.
Gordon, W., Sharon Springs, N. Y. Fastener. No. 880,296; Feb. 25; Sp. p. 4069; Dr. p. 1048; Gaz. vol. 132; p. 1742.
Gormley, C., assignor of one-half to J. C. Winters and J. W. Prophet, Mount Morris, N. Y. Corn-husking machine. No. 879,538; Feb. 18; Sp. p. 3374; Dr. pp. 705-6; Gaz. vol. 132; p. 1460.
Gormley, F. L., assignor to A. O. Norton Incorporated, Boston, Mass. Lifting-jack. No. 878,522; Feb. 11; Sp. p. 1342; Dr. p. 272; Gaz. vol. 132; p. 1039.
Gorndt, J. F., Chicago, Ill. Baker's oven. No. 879,836; Feb. 25; Sp. p. 4086; Dr. p. 857; Gaz. vol. 132; p. 1599.
Gorton, J. A., Montclair, N. J. Radiator appliance. No. 879,628; Feb. 18; Sp. p. 3583; Dr. p. 750; Gaz. vol. 132; p. 1489.
Gossard, J. A., South Solon, Ohio. Rail chair and fastener. No. 878,202; Feb. 4; Sp. p. 642; Dr. pp. 131-2; Gaz. vol. 132; p. 950.
Grace, G., Wichita, Kans. Pump. No. 880,137; Feb. 25; Sp. p. 4637; Dr. pp. 978-9; Gaz. vol. 132; p. 1688.
Graham, G. M., assignor to G. A. E. Kohler, Chicago, Ill. Fitting for reinforced concrete structures. No. 879,163; Feb. 18; Sp. p. 2628; Dr. p. 548; Gaz. vol. 132; p. 1338.
Graham, W. S., assignor to Parlin and Orendorff Company, Canton, Ill. Corn-planter. No. 879,461; Feb. 18; Sp. p. 3228; Dr. pp. 672-3; Gaz. vol. 132; p. 1434.
Graham-Yooll, F. R., Leith, Scotland. Shock-absorbing device for cycles. No. 880,297; Feb. 25; Sp. p. 4970; Dr. p. 1049; Gaz. vol. 132; p. 1742.
Grant, O. F., and J. G. McDowell, Pittsburg, Pa. Hydraulic motor. No. 880,298; Feb. 25; Sp. p. 4972; Dr. p. 1049; Gaz. vol. 132; p. 1743.
Grass, J. L., assignor to American Bank Protection Company, Minneapolis, Minn. Vault-lining. No. 880,020; Feb. 25; Sp. p. 4404; Dr. p. 925; Gaz. vol. 132; p. 1651.
Graupner, L. C., San Francisco, Cal. Centrifugal-impact dry pulverizer. No. 878,878; Feb. 11; Sp. p. 2059; Dr. p. 427; Gaz. vol. 132; p. 1208.
Gray, G. W. (See Gray, J. E., assignor.)
Gray, J. E., New Mills, England, assignor of one-half to G. W. Gray, North Adams, Mass. Aging and steaming chamber for fabrics. No. 879,867; Feb. 25; Sp. p. 4087; Dr. p. 857; Gaz. vol. 132; p. 1600.
Gray, W. J., Jeannette, Pa. Ornamental pedestal, column, and pilaster. No. 879,629; Feb. 18; Sp. p. 3584; Dr. p. 750; Gaz. vol. 132; p. 1489.
Graziano, F., New Orleans, La. Railway signal apparatus. No. 880,072; Feb. 25; Sp. p. 4514; Dr. p. 949; Gaz. vol. 132; p. 1667.
Green, D. F., Fort Wayne, Ind. Nose-guard for eyeglasses. No. 877,994; Feb. 4; Sp. p. 193; Dr. p. 43; Gaz. vol. 132; p. 881.
Green, L. G., assignor to R. M. Green & Sons, Philadelphia, Pa. Soda-water fountain. No. 878,379; Feb. 4; Sp. p. 984; Dr. pp. 198-9; Gaz. vol. 132; p. 1009.
Green, S. M., Holyoke, Mass., assignor to American Thread Company, New York, N. Y. Press. No. 880,449; Feb. 25; Sp. p. 5275; Dr. pp. 1109-10; Gaz. vol. 132; p. 1793.
Green, W. J., London, England. Branding-machine. No. 879,462; Feb. 18; Sp. p. 3234; Dr. p. 673; Gaz. vol. 132; p. 1434.
Green & Sons, Robert M. (See Green, L. G., assignor.)
Greenland, H., Helena, Okla. Harness-hook. No. 878,380; Feb. 4; Sp. p. 986; Dr. p. 199; Gaz. vol. 132; p. 1009.
Greenleaf, E. H., and T. A. Diesel, Newburgh, N. Y. Support for electric service wires and cables. No. 879,765; Feb. 18; Sp. p. 3848; Dr. p. 808; Gaz. vol. 132; p. 1533.
Greenway, R. J., Jr., Westerly, R. I., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Sheet-delivery. No. 879,630; Feb. 18; Sp. p. 3585; Dr. p. 751; Gaz. vol. 132; p. 1489.
Greer, H., Jr., Chicago, Ill., and J. R. Thompson, Ironwood, Mich. Excavator. No. 878,460; Feb. 4; Sp. p. 1131; Dr. pp. 232-3; Gaz. vol. 132; p. 1035.
Greer, M., Atlanta, Ga. Pinning and holding device for jewelry. No. 878,523; Feb. 11; Sp. p. 1343; Dr. p. 272; Gaz. vol. 132; p. 1039.
Gregory, J. W., assignor of three-fourths to M. F. Story, Coldwater, and J. W. Young, Jr., Elkton, Tenn. Cotton-compress. No. 878,786; Feb. 11; Sp. p. 1914; Dr. p. 393; Gaz. vol. 132; p. 1180.
Gregory, R. K., Greensboro, N. C., assignor of one-half to J. H. White, Baltimore, Md. Surgeon's knife. No. 878,524; Feb. 11; Sp. p. 1344; Dr. p. 272; Gaz. vol. 132; p. 1039.
Gregson, L., assignor to Morse Twist Drill & Machine Company, New Bedford, Mass. Making drills. No. 879,631; Feb. 18; Sp. p. 3587; Dr. p. 751; Gaz. vol. 132; p. 1490.
Greuter, C. R., Wilkes-Barre, Pa. Multiple carbureter. No. 879,380; Feb. 18; Sp. p. 3042; Dr. pp. 633-4; Gaz. vol. 132; p. 1408.
Greuter, C. R., Holyoke, Mass., assignor to Matheson Motor Car Company, Wilkes-Barre, Pa. Friction-clutch. No. 879,100; Feb. 11; Sp. p. 2482; Dr. p. 517; Gaz. vol. 132; p. 1274.
Gridley, G. W., et al. (See Squires, A. C., assignor.)
Griffith, F. E., Athens, Ga. Hand-planter. No. 880,379; Feb. 25; Sp. p. 5119; Dr. p. 1081; Gaz. vol. 132; p. 1768.
Griffith, D. I., Frostburg, Md. Railway-switch. No. 879,256; Feb. 18; Sp. p. 2795; Dr. pp. 585-6; Gaz. vol. 132; p. 1368.
Griffith, W. H., Omaha, Nebr. Wire fencing. No. 880,138; Feb. 25; Sp. p. 4639; Dr. p. 979; Gaz. vol. 132; p. 1688.
Griggs, S. E., Seattle, Wash. Vacuum apparatus. No. 878,723; Feb. 11; Sp. p. 1765; Dr. p. 365; Gaz. vol. 132; p. 1156.
Grob, M., Winterthur, Switzerland. Electric installation working with turbo-dynamos and accumulators. No. 878,525; Feb. 11; Sp. p. 1345; Dr. pp. 272-3; Gaz. vol. 132; p. 1039.
Grod, F. B., St. Johnsville, N. Y. Teat-cup. No. 878,067; Feb. 4; Sp. p. 336; Dr. p. 70; Gaz. vol. 132; p. 903.
Grod, F. B., St. Johnsville, N. Y. Self-adjusting belt for cow-milkers. No. 878,068; Feb. 4; Sp. p. 337; Dr. p. 70; Gaz. vol. 132; p. 903.

Groff, W. L., Lancaster, assignor of one-half to W. H. Lenker, Susquehanna township, Pa. Meat-holder. No. 880,486; Feb. 25; Sp. p. 5367; Dr. p. 1131; Gaz. vol. 132; p. 1807.
Gromer, G., New York, N. Y. Skirt-supporter. No. 880,299; Feb. 25; Sp. p. 4974; Dr. p. 1050; Gaz. vol. 132; p. 1743.
Gross, C. S., Philadelphia, Pa. Folding go-cart. No. 880,211; Feb. 25; Sp. p. 4791; Dr. p. 1015; Gaz. vol. 132; p. 1713.
Gross, G. H., Binghamton, N. Y. Trolley. No. 880,021; Feb. 25; Sp. p. 4406; Dr. p. 926; Gaz. vol. 132; p. 1651.
Gruhlke, A. C., Waterloo, Ind. Cigar-lighter. No. 879,632; Feb. 18; Sp. p. 3589; Dr. p. 751; Gaz. vol. 132; p. 1490.
Gruwell, R. C. (See Matthews and Gruwell.)
Guéniffet, J., A. Benoit, and J. Nicault, Paris, France. Cigarette-tube. No. 880,487; Feb. 25; Sp. p. 5368; Dr. p. 1131; Gaz. vol. 132; p. 1807.
Guéniffet, J., A. Benoit, and J. Nicault, Paris, France. Cigarette tube or mouthpiece. No. 880,488; Feb. 25; Sp. p. 5369; Dr. p. 1131; Gaz. vol. 132; p. 1807.
Guenther, P., Dover, N. J. Sectional plaiting device for straight-knitting machines. No. 878,724; Feb. 11; Sp. p. 1767; Dr. pp. 365-6; Gaz. vol. 132; p. 1157.
Guilford, O. C., Fort Wayne, Ind. Fish stringer or holder. No. 878,626; Feb. 11; Sp. p. 1588; Dr. p. 322; Gaz. vol. 132; p. 1125.
Gunderson, O., Bristol township, Worth county, Iowa. Milk-weighing machine. No. 880,073; Feb. 25; Sp. p. 4517; Dr. pp. 950-1; Gaz. vol. 132; p. 1667.
Gunn, C. H., Marysville, Cal. Triangular dredging-bucket and hoist for same. No. 878,526; Feb. 11; Sp. p. 1348; Dr. pp. 273-4; Gaz. vol. 132; p. 1040.
Günther, E., and R. Franke, Eisleben, Germany. Treating metallic ores or mattes. No. 879,633; Feb. 18; Sp. p. 3592; Gaz. vol. 132; p. 1490.
Gustafson, E. A. (See Hansen, H., assignor.)
Gustine, F. J., New Orleans, La. Trolley catcher and retriever. No. 879,257; Feb. 18; Sp. p. 2797; Dr. p. 586; Gaz. vol. 132; p. 1368.
Gusztáv, V., Vienna, Austria-Hungary. Car-mover. No. 878,381; Feb. 4; Sp. p. 987; Dr. p. 199; Gaz. vol. 132; p. 1009.
Gutridge, S. E., and J. F. Baker, Newark, Ohio. Nut-retainer. No. 879,958; Feb. 25; Sp. p. 4291; Dr. p. 897; Gaz. vol. 132; p. 1631.
Guy, C., assignor to Petrific Cement Company, Iola, Kans. Composition of matter to be used as a cement compound. No. 878,382; Feb. 4; Sp. p. 989; Gaz. vol. 132; p. 1010.
H. Mueller Manufacturing Company. (See Mueller, H., assignor.)
H. Mueller Manufacturing Company. (See Mueller, P. and H., assignors.)
H. Mueller Manufacturing Company. (See Mueller and Schuermann, assignors.)
Haagn, E., assignor to Firm of W. C. Heraeus, Hanau, Germany. Electrical system of measuring temperatures. No. 880,074; Feb. 25; Sp. p. 4519; Dr. p. 951; Gaz. vol. 132; p. 1668.
Habermann, M. R., Sun Prairie, Wis. Kitchen appliance. No. 879,539; Feb. 18; Sp. p. 3378; Dr. p. 706; Gaz. vol. 132; p. 1460.
Hachmann, F. (See Barclay and Hachmann.)
Hackney, T. J. (See Hawkins, G. E., assignor.)
Hadfield, R. A., Sheffield, England. Improving steel rails. No. 879,634; Feb. 18; Sp. p. 3594; Gaz. vol. 132; p. 1491.
Hadlington, R. J. (See Barnett, Hadlington, and Hinton.)
Haeussler, M. (See Geis, H., assignor.)
Hahn, H., Napoleon, Ohio. Corn-harvester. No. 880,139; Feb. 25; Sp. p. 4640; Dr. pp. 979-80; Gaz. vol. 132; p. 1688.
Hain, V., West Kensington, assignor of one-half to P. O. Wilson, London, England. Manufacture of sweetmeat, such as chocolate. No. 880,300; Feb. 25; Sp. p. 4975; Dr. p. 1050; Gaz. vol. 132; p. 1743.
Hairgrove, E. E. (See Nicolai, G., assignor.)
Hakes, H. W., Millbury, Mass. Heddle for looms. No. 879,258; Feb. 18; Sp. p. 2799; Dr. p. 586; Gaz. vol. 132; p. 1369.
Halbach, H., Neunkirchen, Germany. Potato-grater. No. 880,022; Feb. 25; Sp. p. 4407; Dr. p. 926; Gaz. vol. 132; p. 1651.
Hale-Kilburn Metal Company. (See Budd, E. G., assignor.)
Haley, R., Crafton, assignor to National Glass Company, Pittsburg, Pa. Apparatus for fire-finishing glassware. No. 877,923; Feb. 4; Sp. p. 59; Dr. pp. 11-12; Gaz. vol. 132; p. 859.
Hall, A. L., executrix. (See Hall, E. J.)
Hall, E. J., deceased, Waltham, Mass.; A. L. Hall, executrix. Time speed-indicating device. No. 879,540; Feb. 18; Sp. p. 3379; Dr. pp. 706-7; Gaz. vol. 132; p. 1461.
Hall, F., Fairbury, assignor to King & Hamilton Company, Ottawa, Ill. Cleaning apparatus for corn-shellers. No. 878,725; Feb. 11; Sp. p. 1770; Dr. p. 366; Gaz. vol. 132; p. 1157.
Hall, G. B., Yarmouth, Nova Scotia, Canada. Plate-holder. No. 879,101; Feb. 11; Sp. p. 2484; Dr. pp. 517-18; Gaz. vol. 132; p. 1275.
Hall, G. N., Omaha, Nebr. Garment-supporter clasp. No. 879,868; Feb. 25; Sp. p. 4088; Dr. p. 858; Gaz. vol. 132; p. 1600.
Hall, T. (See Stevens and Hall.)
Halladay, J. J., Brooklyn, N. Y. Antirattling device for windows and doors. No. 879,381; Feb. 18; Sp. p. 3044; Dr. p. 634; Gaz. vol. 132; p. 1408.
Halliday, C., Banbridge, Ireland. Means for supporting climbing plants. No. 879,959; Feb. 25; Sp. p. 4292; Dr. p. 897; Gaz. vol. 132; p. 1631.
Halliday, E. B. (See Reed, J. D., assignor.)
Halloran, J. R., New Britain, Conn. Apparatus for cooling and dispensing beverages. No. 880,075; Feb. 25; Sp. p. 4522; Dr. p. 952; Gaz. vol. 132; p. 1668.
Haim, F., Sherman, Cal. Car-fender. No. 879,044; Feb. 11; Sp. p. 2357; Dr. p. 493; Gaz. vol. 132; p. 1257.
Haisey, F. A., Swanton, Vt. Smokeless powder. No. 878,726; Feb. 11; Sp. p. 1773; Gaz. vol. 132; p. 1158.
Halstead, W. (See Tebyrica and Halstead.)
Halvorsen, O., et al. (See Johnson, E., assignor.)
Hamblin, S. M., assignor to Bay State Last Company, Stoughton, Mass. Last. No. 877,995; Feb. 4; Sp. p. 194; Dr. p. 43; Gaz. vol. 132; p. 882.
Hambric, P. T., assignor of one-half to W. E. Darrow, Sutter Creek, Cal. Concentrating apparatus. No. 878,879; Feb. 11; Sp. p. 2060; Dr. p. 427; Gaz. vol. 132; p. 1206.
Hamill, L., Olathe, Kans. Magazine-feed match-box. No. 878,059; Feb. 4; Sp. p. 330; Dr. p. 71; Gaz. vol. 132; p. 903.
Hamilton, I. M., assignor to herself and J. E. Hamilton, Simsbury, Conn. Security attachment for beds. No. 879,164; Feb. 18; Sp. p. 2631; Dr. p. 549; Gaz. vol. 132; p. 1338.
Hamilton, J. E. (See Hamilton, I. M., assignor.)
Hamilton, W., deceased, assignor to National Casket Company, Oneida, N. Y. Face-plate for burial-caskets. (Reissue.) No. 12,750; Feb. 11; Sp. p. 2558; Dr. p. 532; Gaz. vol. 132; p. 1286.
Hamlin, P. M., Catawissa, Pa., assignor of one-half to C. H. Unverzagt, New York, N. Y. Apparatus for making mixed fibers. No. 879,165; Feb. 18; Sp. p. 2632; Dr. p. 549; Gaz. vol. 132; p. 1339.
Hammond, M. C., Chattanooga, Tenn. Skirt-measuring device. No. 878,383; Feb. 4; Sp. p. 989; Dr. p. 199; Gaz. vol. 132; p. 1010.
Hammond, R. A., Sandwich, Mass. Rope-socket. No. 878,060; Feb. 4; Sp. p. 340; Dr. p. 71; Gaz. vol. 132; p. 904.
Hammond, R. C., Buffalo, assignor, by mesne assignments, to Union Shoe Polishing Machine Company, Elmira, N. Y. Shoe-polishing machine. No. 879,541; Feb. 18; Sp. p. 3382; Dr. pp. 707-9; Gaz. vol. 132; p. 1461.
Hamor, G. D. (See Tomer, J. L., assignor.) (Reissue.)
Hampton, E. E., and C. G. Smith, Palisade, Colo. Air-compressor mechanism for self-propelled vehicles. No. 877,924; Feb. 4; Sp. p. 60; Dr. p. 12; Gaz. vol. 132; p. 859.
Hanaman, F. (See Just and Hanaman.)
Hand, T. J., New York, N. Y. Wrench. No. 879,259; Feb. 18; Sp. p. 2800; Dr. p. 587; Gaz. vol. 132; p. 1369.
Hangen, C. P., et al. (See Titus, W., assignor.)
Hannagan, J. W. (See Walker, S. W., assignor.)
Hannes, B. M., St. Louis, Mo., assignor to J. E. Richards, Dayton, Ohio. Poultry-trap. No. 879,132; Feb. 11; Sp. p. 2552; Dr. p. 531; Gaz. vol. 132; p. 1285.
Hanrahan, J. E. (See Brown, Hanrahan, and Boyden.)
Hansen, H., assignor of one-third to E. A. Gustafson, Warwick, N. D. Stove-hood. No. 879,463; Feb. 18; Sp. p. 3235; Dr. p. 673; Gaz. vol. 132; p. 1435.
Hansen, H. C., Newton, Mass. Metal-extractor. No. 879,870; Feb. 25; Sp. p. 4091; Dr. p. 858; Gaz. vol. 132; p. 1601.
Hansen, J., Muskegon, Mich. Fish-bait. No. 879,869; Feb. 25; Sp. p. 4089; Dr. p. 858; Gaz. vol. 132; p. 1600.
Hansen, P. (See Jones and Hansen.)
Hanson, A., et al. (See Johnson, E., assignor.)
Hanson, J. H., Chicago, Ill. Electric-wire insulator. No. 878,949; Feb. 11; Sp. p. 2190; Dr. p. 450; Gaz. vol. 132; p. 1228.
Hanusch, M., Marienbad, Austria-Hungary. Double-pawl coupling. No. 879,960; Feb. 25; Sp. p. 4294; Dr. p. 897; Gaz. vol. 132; p. 1631.
Harbrecht, W. F. (See Dauch and Harbrecht.)
Hard, A. W., Jr. (See Good, J., Jr., assignor.)
Harding, H. M., New York, N. Y. and C. M. Clark, South Orange, N. J. Telpher. No. 878,797; Feb. 11; Sp. p. 1916; Dr. p. 394; Gaz. vol. 132; p. 1181.

Harding, M. P., assignor to Cadillac Cabinet Company, Detroit, Mich. Desk-table. No. 880,023; Feb. 25; Sp. p. 4408; Dr. p. 926; Gaz. vol. 132; p. 1651.
Hardman, H. V., Belleville, N. J. Brush. No. 878,134; Feb. 4; Sp. p. 477; Dr. p. 102; Gaz. vol. 132; p. 927.
Harpel, J. J., Sinking Spring, Pa. Heating-stove. No. 878,384; Feb. 4; Sp. p. 990; Dr. p. 200; Gaz. vol. 132; p. 1010.
Harrigan, E., Tacoma, Wash. Rotary engine. No. 879,464; Feb. 18; Sp. p. 3230; Dr. pp. 673–4; Gaz. vol. 132; p. 1435.
Harrington, W. G. (See Wolliver and Harrington.)
Harris, A. M., and M. A. Williams, Floyd, Va. Clothes-pin. No. 878,727; Feb. 11; Sp. p. 1773; Dr. p. 366; Gaz. vol. 132; p. 1158.
Harris Automatic Press Company. (See Smith, W. H., assignor.)
Harris Calorific Company. (See Harris, J., assignor.)
Harris, E. G. (See Harris, J. B., assignor.)
Harris, F., Acme, W. Va., assignor to F. L. Garrison, Cincinnati, Ohio. Squib, match, and file case for miners. No. 879,635; Feb. 18; Sp. p. 3596; Dr. p. 752; Gaz. vol. 132; p. 1491.
Harris, G., Los Angeles, Cal. Bit. No. 878,798; Feb. 11; Sp. p. 1919; Dr. p. 395; Gaz. vol. 132; p. 1181.
Harris, J., assignor to Harris Calorific Company, Cleveland, Ohio. Apparatus and process for burning acetylene or similar gases. No. 878,461; Feb. 4; Sp. p. 1135; Dr. p. 233; Gaz. vol. 132; p. 1035.
Harris, J. B., assignor to E. G. Harris, Nashville, Tenn. Smoke-consuming furnace. No. 880,380; Feb. 25; Sp. p. 5122; Dr. pp. 1081–2; Gaz. vol. 132; p. 1768.
Harris, L. P., Terrell, Tex. Mortise and tenon. No. 879,382; Feb. 18; Sp. p. 3046; Dr. p. 634; Gaz. vol. 132; p. 1408.
Harrison, E. J., South Bend, Ind. Trolley-wheel. No. 879,636; Feb. 18; Sp. p. 3597; Dr. p. 752; Gaz. vol. 132; p. 1491.
Harrison, F. B., *et al.* (See Good, E., assignor.)
Harrison, F. W., Morrison, Tenn. Harrow. No. 880,301; Feb. 25; Sp. p. 4978; Dr. p. 1050; Gaz. vol. 132; p. 1744.
Harrison, G. M., Lake Bluff, Ill. Belt-fastener. No. 878,950; Feb. 11; Sp. p. 2192; Dr. p. 459; Gaz. vol. 132; p. 1228
Harrison, J. J., and W. A. Owings, Pryor Creek, Okla. Cattle-guard. No. 879,260; Feb. 18; Sp. p. 2802; Dr. p. 587; Gaz. vol. 132; p. 1309.
Harrison Safety Boiler Works. (See Jones, J. C., assignor.)
Harrison, W., Day Dawn, Western Australia, Australia. Bottle. No. 879,766; Feb. 18; Sp. p. 3850; Dr. p. 806; Gaz. vol. 132; p. 1534.
Harróp, C. B., assignor to Richardson-Lovejoy Engineering Company, Columbus, Ohio. Wire screen. No. 878,728; Feb. 11; Sp. p. 1774; Dr. p. 367; Gaz. vol. 132; p. 1158.
Hart, H. C., Russiaville, Ind. Penholder. No. 878,729; Feb. 11; Sp. p. 1777; Dr. p. 367; Gaz. vol. 132; p. 1158.
Hartel, L., Cherryvale, Kans. Pocket. No. 878,385; Feb. 4; Sp. p. 991; Dr. p. 200; Gaz. vol. 132; p. 1010.
Harter, C., Tucson, Ariz. Ter. Steam-boiler. No. 879,961; Feb. 25; Sp. p. 4294; Dr. p. 898; Gaz. vol. 132; p. 1632.
Harter, C. J., Ilion, N. Y. Tension device for winding-rolls. No. 879,261; Feb. 18; Sp. p. 2803; Dr. p. 588; Gaz. vol. 132; p. 1370.
Hartley, W. H., Mount Pleasant, Mich. Blackboard-eraser. No. 879,767; Feb. 18; Sp. p. 3851; Dr. p. 807; Gaz. vol. 132; p. 1534.
Hartman, C., Springfield, S. D. Hair-pin attachment. No. 878,386; Feb. 4; Sp. p. 994; Dr. p. 200; Gaz. vol. 132; p. 104.
Hartman, J. R., Davenport, Iowa. Hinge. No. 879,542; Feb. 18; Sp. p. 3389; Dr. p. 709; Gaz. vol. 132; p. 1401.
Hartmann, F. W. C. (See Witt and Hartmann.)
Hartmann Trunk Company. (See Wheary, G. H., assignor.)
Hartness, J., Springfield, Vt. Taper-turning tool. No. 877,925; Feb. 4; Sp. p. 62; Dr. pp. 12–13; Gaz. vol. 132; p. 859.
Hartness, J., Springfield, Vt. Metal-turning mechanism. No. 878,203; Feb. 4; Sp. p. 644; Dr. p. 132; Gaz. vol. 132; p. 950.
Hastings, B., assignor to Electric Controller and Supply Company, Cleveland, Ohio. Drilling-machine. No. 880,140; Feb. 25; Sp. p. 4644; Dr. p. 980; Gaz. vol. 132; p. 1689.
Hastings, H., Rochester, N. Y. Turn-table. No. 878,135; Feb. 4; Sp. p. 477; Dr. p. 102; Gaz. vol. 132; p. 927.
Hathaway, S. (See Williams, Mitchell, and Hathaway.)
Hauschildt, J. R., Eskridge, Kans. Alarm-clock. No. 879,637; Feb. 18; Sp. p. 3598; Dr. p. 752; Gaz. vol. 132; p. 1491.
Havassy, J., Copperhill, Tenn. Bell-piano. No. 878,387; Feb. 4; Sp. p. 995; Dr. pp. 200–1; Gaz. vol. 132; p. 1011.
Haven, F. E., Salt Lake City, Utah. Turbine. No. 878,799; Feb. 11; Sp. p. 1919; Dr. pp. 395–6; Gaz. vol. 132; p. 1181.
Haven, H. D., Chicago, Ill. Pumping device for oil-wells. No. 879,166; Feb. 18; Sp. p. 2634; Dr. p. 549; Gaz. vol. 132; p. 1339.
Hawkins, G. E., assignor of one-half to T. J. Hackney, Wellborn, Fla. Saw-gummer. No. 879,902; Feb. 25; Sp. p. 4296; Dr. p. 898; Gaz. vol. 132; p. 1632.
Hawkins, P., Kokomo, Ind. Wrench. No. 879,383; Feb. 18; Sp. p. 3047; Dr. p. 635; Gaz. vol. 132; p. 1408.
Hay, J. F., assignor to Erie Malleable Iron Company, Erie, Pa. Sand-blast apparatus. No. 879,102; Feb. 11; Sp. p. 2486; Dr. p. 518; Gaz. vol. 132; p. 1275.
Hay, J. D., assignor of one-half to W. R. Donaldson and one-fourth to G. W. Marble, Chicago, Ill. Explosive-engine. No. 880,024; Feb. 25; Sp. p. 4400; Dr. p. 927; Gaz. vol. 132; p. 1652.
Hayden, E. L. (See Prager and Hayden.)
Hayes, J. W., assignor of one-half to M. Hirschman, Baltimore, Md. Detachable pocket for garments. No. 879,638; Feb. 18; Sp. p. 3599; Dr. p. 752; Gaz. vol. 132; p. 1492.
Haynes, R. E., Salisbury, N. C. Cotton-press. No. 879,639; Feb. 18; Sp. p. 3600; Dr. pp. 753–4; Gaz. vol. 132; p. 1492.
Hazen-Brown Company. (See Brown, M., assignor.)
Healey, E. G., Fort Dodge, Iowa. Shoe. No. 878,061; Feb. 4; Sp. p. 342; Dr. p. 71; Gaz. vol. 132; p. 904.
Healy, W. P. (See Miller, J. J., assignor.)
Heard, G. M. D., Painesville, Ohio. Ratchet-brace. No. 878,204; Feb. 4; Sp. p. 647; Dr. pp. 132–3; Gaz. vol. 132; p. 950.
Heard, G. M. D., Painesville, Ohio. Brace. No. 878,205; Feb. 4; Sp. p. 648; Dr. p. 133; Gaz. vol. 132; p. 951.
Heathorn, T. B., Knightsbridge, London, England. Means for preventing side slip of motor-vehicles. No. 880,212; Feb. 25; Sp. p. 4794; Dr. p. 1015; Gaz. vol. 132; p. 1714.
Hebert, H. B., New York, N. Y. Reduction-mill. No. 879,262; Feb. 18; Sp. p. 2805; Dr. p. 588; Gaz. vol. 132; p. 1370.
Hecker, H. F., Shakopee, Minn. Paneling. No. 878,627; Feb. 11; Sp. p. 1589; Dr. p. 323; Gaz. vol. 132; p. 1125.
Hecter, C. M., Butler, Pa. Packer for deep wells. No. 882,213; Feb. 25; Sp. p. 4795; Dr. p. 1016; Gaz. vol. 132; p. 1714.
Hegeman, B. A., Jr. (See Hillman, E. D., assignor.)
Heil, A., assignor to H. Simons, München-Gladbach, Germany. Machine for cutting fabrics. No. 878,527; Feb. 11; Sp. p. 1350; Dr. p. 274; Gaz. vol. 132; p. 1091.
Heimann, A. B., Coalinga, Cal. Pipe-wrench. No. 878,388; Feb. 4; Sp. p. 996; Dr. p. 201; Gaz. vol. 132; p. 1012.
Heimburger, F. W., Huron, Ohio. Potato-harvester. No. 878,285; Feb. 4; Sp. p. 801; Dr. pp. 160–1; Gaz. vol. 132; p. 978.
Heineman, C. E. and G. H., Attica, Ind. Pipe-ferrule. No. 880,302; Feb. 25; Sp. p. 4980; Dr. p. 1050; Gaz. vol. 132; p. 1744.
Heineman, G., San Francisco, Cal. Trolley-brush. No. 878,062; Feb. 4; Sp. p. 343; Dr. p. 71; Gaz. vol. 132; p. 904.
Heineman, G. H. (See Heineman, C. E. and G. H.)
Heissenberger, J., assignor to Automatic Utilities Company, New York, N. Y. Self-measuring tank. No. 879,263; Feb. 18; Sp. p. 2806; Dr. p. 588; Gaz. vol. 132; p. 1370.
Heissenberger, J., assignor to Automatic Utilities Company, New York, N. Y. Safety-razor. No. 879,264; Feb. 18; Sp. p. 2808; Dr. p. 589; Gaz. vol. 132; p. 1370.
Helsabeck, J. A., Ether, N. C. Lamp-burner. No. 878,063; Feb. 4; Sp. p. 344; Dr. p. 72; Gaz. vol. 132; p. 904.
Henderson, J., assignor to Sheffield Car Company, Three Rivers, Mich. Stand-pipe. No. 878,402; Feb. 4; Sp. p. 1138; Dr. p. 233; Gaz. vol. 132; p. 1035.
Henderson, W. W., assignor of one-half to H. A. Thrift and W. Hinds, Washington, D. C. Fluid-clutch. No. 879,045; Feb. 11; Sp. p. 2339; Dr. p. 494; Gaz. vol. 132; p. 1257.
Hendricks, M., Benwood, W. Va. Car-wheel. No. 878,951; Feb. 11; Sp. p. 2193; Dr. p. 459; Gaz. vol. 132; p. 1228.
Henius, M., Chicago, Ill. Brew-house equipment. No. 878,136; Feb. 4; Sp. p. 479; Dr. pp. 102–3; Gaz. vol. 132; p. 927.
Henke, G. W. (See Flecksing, Kercher, and Henke.)
Hennessey, J. W., *et al.* (See Smith, G. A., assignor.)
Henning, G. W. (See Beeson, A. W., assignor.)
Henninges, R. E., Cleveland, Ohio. Window-sash fastener. No. 880,214; Feb. 25; Sp. p. 4798; Dr. p. 1016; Gaz. vol. 132; p. 1714.
Henry, F. M., Minneapolis, Minn. Concrete-building-block wall. No. 877,996; Feb. 4; Sp. p. 195; Dr. p. 44; Gaz. vol. 132; p. 882.
Henry, F. M., Minneapolis, Minn. Concrete-building-block wall. No. 877,997; Feb. 4; Sp. p. 197; Dr. p. 44; Gaz. vol. 132; p. 882.
Henry, M. J., Oak Park, Ill. Pump. No. 878,389; Feb. 4; Sp. p. 998; Dr. p. 201; Gaz. vol. 132; p. 1012.
Hensel, O. A., Pittsburg, Pa. Making shields or armor for pneumatic tires. No. 879,768; Feb. 18; Sp. p. 3852; Dr. p. 807; Gaz. vol. 132; p. 1534.
Henvis, M. P., assignor of one-half to E. Ball, Norfolk, Va. Steering-gear and axle for automobiles. No. 880,450; Feb. 25; Sp. p. 5278; Dr. p. 1110; Gaz. vol. 132; p. 1793.
Heracus, Firm of W. C. (See Haagn, E., assignor.)
Herberg, T., Hendrum, Minn. Potato-digger. No. 879,543; Feb. 18; Sp. p. 3391; Dr. p. 709; Gaz. vol. 132; p. 1462.
Herbert, F. (See Swift, W. C., assignor.)
Herbert, F., Birtley, England. Machine for forming sand molds. No. 877,998; Feb. 4; Sp. p. 199; Dr. p. 45; Gaz. vol. 132; p. 882.
Herbert, F., Birtley, England. Machine for making sand molds. No. 877,999; Feb. 4; Sp. p. 204; Dr. p. 45; Gaz. vol. 132; p. 883.
Herbert, F., Birtley, England. Molding-machine. No. 878,064; Feb. 4; Sp. p. 345; Dr. p. 72; Gaz. vol. 132; p. 905.
Herman, R., Crafton, Pa. Running-gear or suspension-frame for vehicles. No. 880,025; Feb. 25; Sp. p. 4411; Dr. pp. 927–8; Gaz. vol. 132; p. 1632.
Herms, W., San Francisco, Cal. Glaze for the interior of vats and the like. No. 880,141; Feb. 25; Sp. p. 4646; Gaz. vol. 132; p. 1689.

Hersey, O. H. (See Singer, J. B., assignor.)
Hersfeln, B., Bayonne, N. J. Nitro derivative of cellulose and making same. No. 879,871; Feb. 25; Sp. p. 4092; Gaz. vol. 132; p. 1601.
Hertzberg, H., and M. J. Wohl, New York, N. Y. Electrically-heated sad-iron. No. 879,046; Feb. 11; Sp. p. 2361; Dr. p. 494; Gaz. vol. 132; p. 1258.
Hertzberg, H., and M. J. Wohl, New York, assignor to A. A. Low, Horseshoe, N. Y. Electrically-heated soldering and branding iron. No. 878,952; Feb. 11; Sp. p. 2194; Dr. p. 460; Gaz. vol. 132; p. 1229.
Hess, H. K., Philadelphia, Pa. Motive power. No. 878,953; Feb. 11; Sp. p. 2197; Dr. p. 460; Gaz. vol. 132; p. 1229.
Hetherington, F. A., Indianapolis, Ind. Bucket elevator. No. 880,303; Feb. 25; Sp. p. 4980; Dr. p. 1051; Gaz. vol. 132; p. 1744.
Hettrich, J., Grand Island, Nebr. Corn-harvester. No. 880,451; Feb. 25; Sp. p. 5279; Dr. p. 1111; Gaz. vol. 132; p. 1794.
Heublein, W. A., Wilson, Minn. Planter. No. 878,628; Feb. 11; Sp. p. 1590; Dr. pp. 323–4; Gaz. vol. 132; p. 1126.
Heubner, A. (See Heubner, H. and A.)
Heubner, H. and A., Brooklyn, N. Y. Adjustable supporting-stick for plants. No. 879,047; Feb. 11; Sp. p. 2365; Dr. p. 494; Gaz. vol. 132; p. 1258.
Hewlett, C. W., New York, N. Y. Skirt and waist hanger. No. 878,390; Feb. 4; Sp. p. 999; Dr. p. 201; Gaz. vol. 132; p. 1012.
Heys, J. J., Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J. Sole-laying machine. No. 878,391; Feb. 4; Sp. p. 1000; Dr. p. 202; Gaz. vol. 132; p. 1013.
Hibbler, E. M., Lyon, Miss. Cane-cutter. No. 879,048; Feb. 11; Sp. p. 2365; Dr. p. 495; Gaz. vol. 132; p. 1258.
Hicks, J. A., Summit, N. J., assignor to Auto Stopper Company, New York, N. Y. Apparatus for removing glaze from glass vessels. No. 879,167; Feb. 18; Sp. p. 2636; Dr. p. 550; Gaz. vol. 132; p. 1340.
Hicks, J. W., assignor to Oriental Candy Company, Chicago, Ill. Wrapping-machine. No. 879,544; Feb. 18; Sp. p. 3392; Dr. pp. 710–12; Gaz. vol. 132; p. 1462.
Hicks, M., Essex, Mo. Swingletree. No. 878,392; Feb. 4; Sp. p. 1002; Dr. p. 202; Gaz. vol. 132; p. 1013.
Hicks, R. P., Minneapolis, Minn. Running-gear for motor-driven vehicles. No. 880,076; Feb. 25; Sp. p. 4523; Dr. p. 952; Gaz. vol. 132; p. 1668.
Hien, P., Chicago, Ill. Friction-spring. No. 879,545; Feb. 18; Sp. p. 3401; Dr. pp. 712–13; Gaz. vol. 132; p. 1462.
Hight, N., Wolfboro, N. H. Knockdown plant-box. No. 879,769; Feb. 18; Sp. p. 3855; Dr. p. 807; Gaz. vol. 132; p. 1534.
Highstower, T. J., Murfreesboro, Tenn. Gate. No. 879,049; Feb. 11; Sp. p. 2366; Dr. p. 495; Gaz. vol. 132; p. 1259.
Higman, J., St. Joseph, Mich. Basket-handle. No. 879,103; Feb. 11; Sp. p. 2487; Dr. p. 518; Gaz. vol. 132; p. 1276.
Hilker, E., Chicago, Ill. Vaginal syringe. No. 877,926; Feb. 4; Sp. p. 66; Dr. p. 13; Gaz. vol. 132; p. 860.
Hill, C. B., trustee. (See Bartholomew, W. H., assignor.)
Hill, F. M., and W. C. Davis, Columbus, Ohio. Electric railway-signal. No. 879,168; Feb. 18; Sp. p. 2637; Dr. p. 550; Gaz. vol. 132; p. 1340.
Hill, H., Greenwich, Conn., assignor to Darcy & Speck, Philadelphia, Pa. Amusement apparatus. No. 879,872; Feb. 25; Sp. p. 4094; Dr. pp. 858–9; Gaz. vol. 132; p. 1601.
Hill, H., Kiowa, Kans. Trace-carrier. No. 878,393; Feb. 4; Sp. p. 1003; Dr. p. 203; Gaz. vol. 132; p. 1013.
Hillie, C. L., Boston, Mass. Watch-fob. No. 878,800; Feb. 11; Sp. p. 1921; Dr. p. 396; Gaz. vol. 132; p. 1181.
Hiller, G., Zittau, Germany. Device for separating the ends of warp-threads in warp-twisting machines. No. 880,215; Feb. 25; Sp. p. 4799; Dr. pp. 1016–18; Gaz. vol. 132; p. 1714.
Hillman, E. D., Larchmont Manor, N. Y., assignor to B. A. Hegeman, Jr., North Plainfield, N. J. Railway-car brake and other mechanism. No. 879,384; Feb. 18; Sp. p. 3048; Dr. p. 635; Gaz. vol. 132; p. 1409.
Hills, E. T., assignor of one-half to P. C. Hosmer, Salt Lake City, Utah. Type-writing-machine attachment. No. 880,077; Feb. 25; Sp. p. 4526; Dr. p. 953; Gaz. vol. 132; p. 1669.
Hindman, G. L., Worthington, Pa. Metal rail-tie. No. 880,381; Feb. 25; Sp. p. 5124; Dr. p. 1082; Gaz. vol. 132; p. 1769.
Hinds, W., *et al.* (See Henderson, W. W., assignor.)
Hines, J. M., Albany, N. Y. Brake-applying mechanism. No. 878,065; Feb. 4; Sp. p. 355; Dr. p. 73; Gaz. vol. 132; p. 905.
Hinkley, E. J., *et al*, executors. (See Hinkley, G. M.)
Hinkley, G. M., deceased, (E. J. Hinkley and E. L. Wood, executors,) assignor of one-half to Allis-Chalmers Company, Milwaukee, Wis. Adjustable box or bearing. No. 879,265; Feb. 18; Sp. p. 2809; Dr. p. 589; Gaz. vol. 132; p. 1371.
Hinton, C. W. (See Ingram and Hinton.)
Hinton, S. (See Barnett, Hadlington, and Hinton.)
Hirsch, M., Philadelphia, Pa. Garment-supporter. No. 878,137; Feb. 4; Sp. p. 481; Dr. p. 103; Gaz. vol. 132; p. 928.
Hirschauer, H., *et al.* (See Corcilius, A. B., assignor.)
Hirschman, M. (See Hayes, J. W., assignor.)
Hirt, L., assignor to Maschinenfabrik Grevenbroich, Grevenbroich, Germany. Filter. No. 879,963; Feb. 25; Sp. p. 4297; Dr. pp. 898–9; Gaz. vol. 132; p. 1632.
Hislaire, I., Brussels, Belgium, assignor to Universal Produce Preservation Company Ltd., London, England. Apparatus for sterilizing foods. No. 880,452; Feb. 25; Sp. p. 5282; Dr. p. 1111; Gaz. vol. 132; p. 1794.
Hobbis, F., Widnes, England. Preparing filter-press plates. No. 880,078; Feb. 25; Sp. p. 4528; Dr. p. 953; Gaz. vol. 132.
Hockenberry, G. C., Ravenna, Ohio. Campaign-cane. No. 879,640; Feb. 18; Sp. p. 3605; Dr. p. 754; Gaz. vol. 132; p. 1493.
Hodde, J. H., assignor to Sangamo Electric Company, Springfield, Ill. Electric mercury-motor meter. No. 878,629; Feb. 11; Sp. p. 1593; Dr. p. 325; Gaz. vol. 132; p. 1126.
Hodgdon, G., Wilkinsburg, Pa. Radiator. No. 880,079; Feb. 25; Sp. p. 4529; Dr. p. 953; Gaz. vol. 132; p. 1669.
Hodge, R. O., Buffalo, N. Y. Boiler-tube cleaner. No. 878,286; Feb. 4; Sp. p. 804; Dr. p. 161; Gaz. vol. 132; p. 978.
Hodgson, E., Bonesteel, S. D. Door-holder. No. 879,169; Feb. 18; Sp. p. 2639; Dr. p. 550; Gaz. vol. 132; p. 1340.
Hoe, R. (See Roesen, O., assignor.)
Hoering, P., assignor to Firm of Torfkoks, Gesellschaft mit beschränkter Haftpflicht, Berlin, Germany. Apparatus for manufacturing fuel. No. 878,480; Feb. 4; Sp. p. 1201; Dr. p. 247; Gaz. vol. 132; p. 1043.
Hoffmann, C., Charlottenberg, assignor to Siemens-Schuckertwerke, Gesellschaft mit beschränkter Haftung, Berlin, Germany. Rotary pump for gases. No. 878,528; Feb. 11; Sp. p. 1352; Dr. p. 275; Gaz. vol. 132; p. 1091.
Hoffmann, E. G., New Rochelle, N. Y. Annular knife. No. 877,927; Feb. 4; Sp. p. 69; Dr. p. 14; Gaz. vol. 132; p. 860.
Hoffmann, F. H., Dubuque, Iowa. Adjustable book-support and copy-spacer. No. 879,770; Feb. 18; Sp. p. 3857; Dr. p. 808; Gaz. vol. 132; p. 1535.
Hogle, W. M., *et al.* (See Miller and Rakestraw, assignors.)
Hogue, J., Bradford, Pa. Tube-hoisting appliance for oil-wells. No. 879,964; Feb. 25; Sp. p. 4299; Dr. p. 899; Gaz. vol. 132; p. 1633.
Hokanson, J., Newark, N. J. Rotary internal-combustion engine. No. 880,453; Feb. 25; Sp. p. 5283; Dr. p. 1112; Gaz. vol. 132; p. 1795.
Holbrook, H. R., Attleboro, Mass. Vending-machine. No. 879,546; Feb. 18; Sp. p. 3404; Dr. p. 713; Gaz. vol. 132; p. 1463.
Holderfield, E. C. (See Holderfield, J. M. and E. C.)
Holderfield, J. M. and E. C., Fogg, Tenn. Hay-press. No. 878,880; Feb. 11; Sp. p. 2063; Dr. p. 428; Gaz. vol. 132; p. 1207.
Holland, E. C., Benton Harbor, Mich., assignor to Metal Sectional Furniture Company, Portland, Me. Filing-box. No. 878,630; Feb. 11; Sp. p. 1595; Dr. p. 325; Gaz. vol. 132; p. 1126.
Holland, S. W., New Orleans, La. Sap-receptacle. No. 880,142; Feb. 25; Sp. p. 4647; Dr. p. 981; Gaz. vol. 132; p. 1689.
Holle, L., Chicago, Ill. Clothes-line reel. No. 878,394; Feb. 4; Sp. p. 1004; Dr. p. 203; Gaz. vol. 132; p. 1014.
Hollenburger, J., and C. Will, New Orleans, La. Mail-bag catcher and deliverer. No. 880,304; Feb. 25; Sp. p. 4982; Dr. p. 1051; Gaz. vol. 132; p. 1745.
Holley, F. S., and J. C. Whitford, Stockton, assignors to D. Best, San Leandro, Cal. Combined header and thresher. No. 880,454; Feb. 25; Sp. p. 5286; Dr. p. 1113; Gaz. vol. 132; p. 1795.
Holliday, J. S., Wilkinsburg, assignor to Union Switch & Signal Company, Swissvale, Pa. Alternating-current signaling apparatus for electric railways. No. 878,138; Feb. 4; Sp. p. 482; Dr. p. 103; Gaz. vol. 132; p. 928.
Holliday, J. S., Wilkinsburg, assignor to Union Switch & Signal Company, Swissvale, Pa. Alternating-current signaling apparatus for electric railways. No. 878,139; Feb. 4; Sp. p. 484; Dr. pp. 103–4; Gaz. vol. 132; p. 928.
Holliman, J. H. (See Peek, J. S., assignor.)
Hollingsworth, R. L., Decatur, Ga. Pneumatic gin-feeder. No. 879,771; Feb. 18; Sp. p. 3859; Dr. p. 808; Gaz. vol. 132; p. 1535.
Hollis, T. (See Beaumont and Hollis.)
Holman, J. W., Detroit, Mich. Wall-mold. No. 878,000; Feb. 4; Sp. p. 208; Dr. p. 45; Gaz. vol. 132; p. 884.
Holmes, A., Dunedin, New Zealand. Landing-net. No. 878,529; Feb. 11; Sp. p. 1353; Dr. p. 275; Gaz. vol. 132; p. 1091.
Holmes, A. E., *et al.* (See Reardon, D. W., assignor.)
Holmes, G. A., Newton, assignor to United States Fastener Company, Boston, Mass. Snap-fastening buckle. No. 879,465; Feb. 18; Sp. p. 3238; Dr. p. 674; Gaz. vol. 132; p. 1436.
Holsman, H. K., Chicago Ill. Driving mechanism for automobiles, &c. No. 878,954; Feb. 11; Sp. p. 2199; Dr. pp. 460–1; Gaz. vol. 132; p. 1229.
Holsman, H. K., Chicago, Ill. Driving mechanism for automobiles. No. 878,955; Feb. 11; Sp. p. 2204; Dr. p. 461; Gaz. vol. 132; p. 1230.
Holsters, P. F., Brussels, Belgium. Door-hanger. No. 878,395; Feb. 4; Sp. p. 1005; Dr. p. 203; Gaz. vol. 132; p. 1014.
Holter, T. B., Bloomsburg, Pa. Miter-clamp. No. 879,547; Feb. 18; Sp. p. 3408; Dr. p. 714; Gaz. vol. 132; p. 1463.
Holtmann, H. F., Indianapolis, Ind. Portable rubbing-machine. No. 879,466; Feb. 18; Sp. p. 3239; Dr. p. 674; Gaz. vol. 132; p. 1436.
Homet, J. G., Scranton, Pa. Signaling apparatus. No. 879,548; Feb. 18; Sp. p. 3409; Dr. p. 714; Gaz. vol. 132; p. 1463.
Hook, T. C., Philadelphia, Pa. Mechanism for turning the edges of sheet material. No. 878,631; Feb. 11; Sp. p. 1596; Dr. p. 325; Gaz. vol. 132; p. 1127.

Hook, T. C., Philadelphia, Pa. Machine for turning the edges of sheet material. No. 878,632; Feb. 11; Sp. p. 1597; Dr. pp. 325-6; Gaz. vol. 132; p. 1127.
Hoover, W. H., Jr., Elizabeth, N. J. Store-front. No. 878,140; Feb. 4; Sp. p. 486; Dr. p. 104; Gaz. vol. 132; p. 929.
Höpfner, P. (See Sauer, F. G., assignor.)
Hopkins, C. A., New York, N. Y. Supporting device. No. 878,801; Feb. 11; Sp. p. 1922; Dr. p. 397; Gaz. vol. 132; p. 1182.
Hopkins, G. E., Alton, Ill. Nail-polisher. No. 878,881; Feb. 11; Sp. p. 2064; Dr. p. 428; Gaz. vol. 132; p. 1207.
Horrell, C., Madison, Ill. Paper-bag holder. No. 879,772; Feb. 18; Sp. p. 3861; Dr. p. 809; Gaz. vol. 132; p. 1535.
Horsfal, H., assignor to Salts Textile Manufacturing Company, Bridgeport, Conn. Warp stop-motion for looms. No. 879,873; Feb. 25; Sp. p. 4096; Dr. pp. 859-60; Gaz. vol. 132; p. 1601.
Horst, M. F. (See Endsley, R., assignor.)
Horton, B. D., Detroit, Mich., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Extension-plug for electric lights. No. 879,773; Feb. 18; Sp. p. 3862; Dr. p. 809; Gaz. vol. 132; p. 1536.
Hoschke, W. H., assignor to Sonora Chime Co., New York, N. Y. Bell-chime for clocks and other devices. No. 879,170; Feb. 18; Sp. p. 2640; Dr. pp. 550-1; Gaz. vol. 132; p. 1341.
Hosmer, P. C. (See Hills, E. T., assignor.)
Hostettler, A., Columbus, Ohio. Bottle-sealing device. No. 878,287; Feb. 4; Sp. p. 809; Dr. p. 161; Gaz. vol. 132; p. 978.
Houghton, L. T., Worcester, Mass. Top-roll saddle. No. 879,641; Feb. 18; Sp. p. 3606; Dr. pp. 754-5; Gaz. vol. 132; p. 1493.
Houghton, L. T., Worcester, Mass. Spinning or twisting frame. No. 879,642; Feb. 18; Sp. p. 3611; Dr. p. 755; Gaz. vol. 132; p. 1493.
Houlehan, J., *et al.* (See Mayo, W. C., assignor.)
Houlehan, J. (See Mayo and Houlehan.)
Howard, C., Brooklyn, N. Y. Fire-extinguishing compound. No. 879,171; Feb. 18; Sp. p. 2643; Gaz. vol. 132; p. 1341.
Howard, C. A., and H. V. Coes, New York, N. Y. Safety appliance for steam-locomotives. No. 879,467; Feb. 18; Sp. p. 3240; Dr. p. 675; Gaz. vol. 132; p. 1436.
Howard, F. B., and A. Rector, assignors to Rector Gas Lamp Company, New York, N. Y. Adjustable mantle-support. No. 879,874; Feb. 25; Sp. p. 4100; Dr. p. 860; Gaz. vol. 132; p. 1602.
Howard, N. E., Statesboro, Ga. Gearing. No. 879,549; Feb. 18; Sp. p. 3411; Dr. p. 715; Gaz. vol. 132; p. 1464.
Howell, A. A., Powers Lake, N. D. Churn. No. 880,305; Feb. 25; Sp. p. 4984; Dr. pp. 1051-2; Gaz. vol. 132; p. 1745.
Hoxie, V., Adrian, Mich. Staple forming and discharging mechanism. No. 879,965; Feb. 25; Sp. p. 4300; Dr. pp. 899-900; Gaz. vol. 132; p. 1633.
Hoyt, A. H., Penacook, N. H., assignor to Whitney Electrical Instrument Company. Electrical measuring instrument. No. 879,385; Feb. 18; Sp. p. 3050; Dr. p. 635; Gaz. vol. 132; p. 1409.
Hubbell, H., Bridgeport, Conn. Key-socket. No. 878,633; Feb. 11; Sp. p. 1599; Dr. p. 326; Gaz. vol. 132; p. 1127.
Hubbell, H., Bridgeport, Conn. Socket-shell-cap fastening. No. 878,634; Feb. 11; Sp. p. 1601; Dr. p. 327; Gaz. vol. 132; p. 1128.
Huber N., *et al.* (See Squires, A. C., assignor.)
Hudson, B. F., Saugus, Mass. Steam coupling-head. No. 878,001; Feb. 4; Sp. p. 209; Dr. p. 46; Gaz. vol. 132; p. 884.
Huff, J. A., Memphis, Tenn. Animal-weaner. No. 879,172; Feb. 18; Sp. p. 2644; Dr. p. 551; Gaz. vol. 132; p. 1341.
Huffmaster, C. A., San Leandro, Cal. Pipe-coupling. No. 879,550; Feb. 18; Sp. p. 3414; Dr. p. 715; Gaz. vol. 132; p. 1464.
Hughes, L. L., and R. G. Browning, Mercer, Mo.; said Browning assignor to said Hughes. Feeding-trough. No. 879,173; Feb. 18; Sp. p. 2645; Dr. p. 551; Gaz. vol. 132; p. 1341.
Hughes, T. L. (See Draper and Hughes.)
Hughes, W. E. (See Kochenderfer, J. H., assignor.)
Hulin, J., Pittsburg, Pa. Shoe-fastener. No. 878,956; Feb. 11; Sp. p. 2205; Dr. p. 461; Gaz. vol. 132; p. 1230.
Hulse, G. E., Jersey City, N. J., assignor to Safety Car Heating & Lighting Company. Mantle-support and globe-holder for incandescent lamps. No. 880,143; Feb. 25; Sp. p. 4648; Dr. p. 981; Gaz. vol. 132; p. 1690.
Hultman, I. (See Johanson and Hultman.)
Human, O. M., Sherman, Tex. Envelop-stamping machine. No. 878,396; Feb. 4; Sp. p. 1006; Dr. pp. 203-4; Gaz. vol. 132; p. 1014.
Hume, J. P. (See Seymour, W. M., assignor.) (Reissue.)
Hummel, F., Newton, Iowa. Road-grader. No. 879,386; Feb. 18; Sp. p. 3053; Dr. pp. 635-6; Gaz. vol. 132; p. 1409.
Humphrey, A. H., New York, N. Y. Gas-lamp. No. 878,397; Feb. 4; Sp. p. 1012; Dr. pp. 204-5; Gaz. vol. 132; p. 1014.
Humphrey, A. H., New York, N. Y. Gas-lamp. No. 878,398; Feb. 4; Sp. p. 1016; Dr. pp. 205-6; Gaz. vol. 132; p. 1015.
Humphrey, E. N., assignor to Traut & Hine Manufacturing Company, New Britain, Conn. Buckle. No. 878,288; Feb. 4; Sp. p. 811; Dr. p. 161; Gaz. vol. 132; p. 978.
Humphrey, E. N., assignor to Traut & Hine Manufacturing Company, New Britain, Conn. Buckle. No. 880,216; Feb. 25; Sp. p. 4808; Dr. p. 1018; Gaz. vol. 132; p. 1715.
Humphrey, H. B., assignor to Humphrey & Sons, Joliet, Ill. Wire-baking oven. No. 878,289; Feb. 4; Sp. p. 812; Dr. p. 162; Gaz. vol. 132; p. 979.
Humphrey, H. B., assignor to Humphrey & Sons, Joliet, Ill. Wire-annealing furnace. No. 878,290; Feb. 4; Sp. p. 815; Dr. p. 162; Gaz. vol. 132; p. 979.
Humphrey & Sons. (See Humphrey, H. B., assignor.)
Humphrey & Sons. (See Reece, J. H., assignor.)
Hunsalz, P. (See Stephan and Hunsalz.)
Hunt, G. W., and J. Kinney, Pocatello, Idaho. Fire-extinguishing apparatus. No. 879,966; Feb. 25; Sp. p. 4303; Dr. p. 900; Gaz. vol. 132; p. 1633.
Hunter, H., assignor of two-fifths to A. L. Little, Prescott, Ariz. Screen-door catch and lock. No. 879,174; Feb. 18; Sp. p. 2646; Dr. p. 552; Gaz. vol. 132; p. 1341.
Hunter, J. R., *et al.* (See Lord, G. J., assignor.)
Huntington, F. A., San Francisco, Cal. Crushing-mill. No. 879,175; Feb. 18; Sp. p. 2647; Dr. p. 552; Gaz. vol. 132; p. 1342.
Hurst, O. M., Centerville, Ind. Farm-gate. No. 879,266; Feb. 18; Sp. p. 2811; Dr. p. 589; Gaz. vol. 132; p. 1371.
Huse, L. C. (See Huse, W. D. and L. C.)
Huse, W. D. and L. C., Laconia, N. H. Thread-feeding mechanism for knitting-machines. No. 879,821; Feb. 18; Sp. p. 3962; Dr. p. 830; Gaz. vol. 132; p. 1552.
Huson, W. S., Taunton, Mass., assignor to Campbell Printing Press & M'f'g Co., New York, N. Y. Side guide for printing-presses. No. 878,957; Feb. 11; Sp. p. 2206; Dr. p. 461; Gaz. vol. 132; p. 1230.
Hussong Dyeing Machine Company. (See Hussong, J., assignor.)
Hussong, J., Camden, assignor to Hussong Dyeing Machine Company, Groveville, N. J. Hoisting apparatus for dyeing and other machines. No. 878,399; Feb. 4; Sp. p. 1022; Dr. p. 206; Gaz. vol. 132; p. 1016.
Hyde, J. L., Portland, and O. P. Peterson, Falmouth, assignors to Conqueror Fire Extinguisher Company, Portland, Me. Fire-extinguisher. No. 878,487; Feb. 4; Sp. p. 1212; Dr. p. 250; Gaz. vol. 132; p. 1044.
Ihlder, J. D., New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Ammunition-hoist control. No. 879,387; Feb. 18; Sp. p. 3055; Dr. p. 636; Gaz. vol. 132; p. 1410.
Illingworth, A. H., Ben Rhydding, England. Bait-casting reel used in angling. No. 879,468; Feb. 18; Sp. p. 3242; Dr. p. 675; Gaz. vol. 132; p. 1436.
Illingworth, H. I., Swampscott, assignor to Boston Machine Works Company, Lynn, Mass. Vamp cementing and snipping machine. No. 878,958; Feb. 11; Sp. p. 2208; Dr. p. 462; Gaz. vol. 132; p. 1231.
Illingworth, H. I., Swampscott, assignor to Boston Machine Works Company, Lynn, Mass. Rotary cementing and snipping machine. No. 878,959; Feb. 11; Sp. p. 2211; Dr. pp. 462-3; Gaz. vol. 132; p. 1231.
Illoway, A., New York, N. Y. Collar-supporter. No. 877,926; Feb. 4; Sp. p. 70; Dr. p. 14; Gaz. vol. 132; p. 860.
Imbodan, C. H., and J. J. Lawlor, Greensburg, Pa. Ladle-carrier. No. 878,002; Feb. 4; Sp. p. 211; Dr. p. 46; Gaz. vol. 132; p. 884.
Imlach, F., Liverpool, England. Racket. No. 880,306; Feb. 25; Sp. p. 4985; Dr. p. 1052; Gaz. vol. 132; p. 1745.
Imperial Gas Engine Co., (See Moffitt, E. R., assignor.)
Independent Harvester Company. (See Boda, J., assignor.)
Indiana Road Machine Company. (See Brophy, L. V., assignor.)
Inglis, A. J., Chicago, Ill. Pneumatic stacker. No. 878,530; Feb. 11; Sp. p. 1355; Dr. pp. 275-6; Gaz. vol. 132; p. 1092.
Ingram, W. E., and C. W. Hinton, Los Angeles, Cal. Wardrobe-bedstead. No. 879,050; Feb. 11; Sp. p. 2368; Dr. pp. 495-6; Gaz. vol. 132; p. 1259.
Inter-West Peat Fuel Company. (See Kellond, R. A., assignor.)
International Calorific Company. (See Best, W. N., assignor.)
International Harvester Company. (See Sharp, C. S., assignor.)
International Heater Company. (See Lyman, C. M., assignor.)
International Patent Corporation. (See Veitch, T., assignor.)
International Subway & Tunnel Ventilating Company. (See Conroy, P. J., assignor.)
International Switch & Signal Company. (See Shaw, F. G., assignor.)
Isaacs, M. R., Philadelphia, Pa. Treating albuminoids and the composition of matter produced therefrom. No. 879,967; Feb. 25; Sp. p. 4305; Gaz. vol. 132; p. 1634.
Iwan, A., New York, N. Y. Game apparatus. No. 879,469; Feb. 18; Sp. p. 3244; Dr. p. 675; Gaz. vol. 132; p. 1437.
J. A. Fay & Egan Company. (See Thomas, J. R., assignor.)

J. G. Brill Company. (See Adams, W. S., assignor.)
J. G. Brill Company. (See Bucknam, E. S., assignor.)
J. I. Case Threshing Machine Company. (See MacGregor, W. F., assignor.)
J. P. Karns Tunneling Machine Co. (See Karns, J. P., assignor.)
J. S. McDonald Company. (See Wiedeman, H., assignor.)
Jackson, A. J., Ashton-on-Mersey, England. Weft-replenishing loom. No. 878,531; Feb. 11; Sp. p. 1357; Dr. pp. 276-7; Gaz. vol. 132; p. 1092.
Jackson, F., New York, N. Y. Floor-joint for soil-pipes. No. 879,176; Feb. 18; Sp. p. 2649; Dr. p. 552; Gaz. vol. 132; p. 1342.
Jackson, G. W., Chicago, Ill. Metallic sheet-piling, (driving-point.) No. 878,141; Feb. 4; Sp. p. 488; Dr. p. 105; Gaz. vol. 132; p. 929.
Jackson, M. P. (See Beusse and Jackson.)
Jackson Printing Press Company. (See Cox, P. F., assignor.)
Jackson, R. P., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Controlling means for pneumatically operated devices. No. 879,267; Feb. 18; Sp. p. 2813; Dr. p. 589; Gaz. vol. 132; p. 1371.
Jackson, S. W., Dillon, S. C. Cotton-chopper. No. 878,066; Feb. 4; Sp. p. 358; Dr. pp. 73-74; Gaz. vol. 132; p. 906.
Jacobs, C. M., Reading, and W. J. Thorrowgood, Wimbledon Park, England. Telephone-circuit. No. 879,643; Feb. 18; Sp. p. 3615; Dr. p. 756; Gaz. vol. 132; p. 1494.
Jacobs, M., New York, N. Y. Bolt. No. 878,003; Feb. 4; Sp. p. 213; Dr. p. 47; Gaz. vol. 132; p. 885.
Jacobs, M. B., *et al.*, trustees. (See Whitehorne, W. R., assignor.)
Jacobus, J. W., Great Neck, N. Y. Inkstand. No. 879,470; Feb. 18; Sp. p. 3245; Dr. p. 676; Gaz. vol. 132; p. 1437.
Jahn, A., Berlin, Germany. Penholder. No. 878,004; Feb. 4; Sp. p. 216; Dr. p. 47; Gaz. vol. 132; p. 886.
Jahraus, E. M., Dayton, Ohio. Ore-concentrator. No. 879,104; Feb. 11; Sp. p. 2488; Dr. p. 519; Gaz. vol. 132; p. 1276.
Jameson, S. W., Oskaloosa, Iowa. Packing-joint for radiators. No. 880,217; Feb. 25; Sp. p. 4809; Dr. p. 1018; Gaz. vol. 132; p. 1715.
Jamieson, J., Hamilton, Ontario, Canada, Shelf-grating for stoves, &c. No. 879,268; Feb. 18; Sp. p. 2815; Dr. p. 590; Gaz. vol. 132; p. 1372.
Jeavons, W. R., Cleveland, Ohio. Knockdown oven. No. 879,051; Feb. 11; Sp. p. 2369; Dr. p. 496; Gaz. vol. 132; p. 1259.
Jeffery, R. E., Piedmont, Cal. Wagon-wheel. No. 880,307; Feb. 25; Sp. p. 4986; Dr. p. 1072; Gaz. vol. 132; p. 1746.
Jeffrey, J. A. (See Merrill, E. R., assignor.)
Jeffrey Manufacturing Company. (See Willson, F. R., Jr., assignor.)
Jeffries, W. J., Oregon City, Oreg. Device for automatically opening and closing elevator-doors. No. 879,645; Feb. 18; Sp. p. 3617; Dr. p. 756; Gaz. vol. 132; p. 1494.
Jeffries, W. J., and E. G. Skeels, Kalama, Wash. Swivel. No. 879,644; Feb. 18; Sp. p. 3616; Dr. p. 756; Gaz. vol. 132; p. 1494.
Jelleff, C. C. (See Fecker and Jelleff.)
Jenkins, W. L., New Castle, Pa. Seesaw. No. 880,026; Feb. 25; Sp. p. 4415; Dr. p. 928; Gaz. vol. 132; p. 1652.
Jennings, E. B., New York, N. Y. Shell-dam. No. 878,291; Feb. 4; Sp. p. 818; Dr. p. 163; Gaz. vol. 132; p. 980.
Jennings, E. B., New York, N. Y. Shell-dam. No. 878,960; Feb. 11; Sp. p. 2214; Dr. p. 463; Gaz. vol. 132; p. 1231.
Jepson, J. W. (See McGary and Jepson.)
Jeranek, J., New York, N. Y. Gun-rest. No. 879,052; Feb. 11; Sp. p. 2372; Dr. p. 496; Gaz. vol. 132; p. 1260.
Jet Manufacturing Company. (See Walker, G. A., assignor.)
Jocoy, J. A., Wakefield, R. I. Brooder. No. 878,635; Feb. 11; Sp. p. 1602; Dr. p. 327; Gaz. vol. 132; p. 1128.
Johanson, A. M., and I. Hultman, Stockholm, Sweden. Calculating-machine. No. 878,292; Feb. 4; Sp. p. 819; Dr. p. 163; Gaz. vol. 132; p. 980.
Johnson, A. B., Mount Gilead, Ohio. Ice-creeper. No. 877,929; Feb. 4; Sp. p. 71; Dr. p. 14; Gaz. vol. 132; p. 861.
Johnson, A. R., Kuler, Mich. Bag-holder. No. 879,177; Feb. 18; Sp. p. 2650; Dr. p. 552; Gaz. vol. 132; p. 1342.
Johnson, C. E., assignor to Corbin Cabinet Lock Company, New Britain, Conn. Bolt for desks and other structures. No. 878,206; Feb. 4; Sp. p. 650; Dr. p. 133; Gaz. vol. 132; p. 951.
Johnson, E., Sandpoint, Idaho, assignor of three-fifths to O. Halvorsen and A. Hanson. Currycomb. No. 878,731; Feb. 11; Sp. p. 1779; Dr. p. 368; Gaz. vol. 132; p. 1159.
Johnson, F. A., and T. A. Smith, Hot Springs, S. D.; said Johnson assignor to said Smith. Horseshoe-pad. No. 878,730; Feb. 11; Sp. p. 1778; Dr. p. 367; Gaz. vol. 132; p. 1158.
Johnson, F. F., Rockton, Ill. Lubricator. No. 879,269; Feb. 18; Sp. p. 2816; Dr. p. 590; Gaz. vol. 132; p. 1372.
Johnson, G., and F. J. McLaren, Fremantle, Western Australia, Australia. Removable safety-guard for razors. No. 879,875; Feb. 25; Sp. p. 4101; Dr. p. 861; Gaz. vol. 132; p. 1602.
Johnson, H. L., Topeka, Kans. Signal mechanism for block-signal systems. No. 880,218; Feb. 25; Sp. p. 4810; Dr. pp. 1018-19; Gaz. vol. 132; p. 1715.
Johnson, J. E., Leaf Mountain township, Ottertail county, Minn. Automobile driving-gear. No. 878,005; Feb. 4; Sp. p. 217; Dr. pp. 47-48; Gaz. vol. 132; p. 886.
Johnson J. M., Bloomer, Wis. Garment-supporter. No. 878,802; Feb. 11; Sp. p. 1923; Dr. p. 397; Gaz. vol. 132; p. 1182.
Johnson, O. J., Wheeling, W. Va. Runway or chute for can-end-soldering machines. No. 880,144; Feb. 25; Sp. p. 4653; Dr. p. 981; Gaz. vol. 132; p. 1690.
Johnson, P., Downing, Wis. Stringed musical instrument. No. 878,006; Feb. 4; Sp. p. 219; Dr. p. 48; Gaz. vol. 132; p. 886.
Johnson, S. T., *et al.* (See Pattee, W. G., assignor.)
Johnson, T. S., Bluefield, W. Va. Cloth-layer. No. 879,551; Feb. 18; Sp. p. 3414; Dr. p. 715; Gaz. vol. 132; p. 1464.
Johnston, D. K., Oil City, assignor to Oil Well Supply Company, Pittsburg, Pa. Casing-head. No. 878,067; Feb. 4; Sp. p. 359; Dr. p. 74; Gaz. vol. 132; p. 906.
Johnston, F. J., Oakpark, assignor to F. J. Johnston Circle Wave Amusement Co., Sacramento, Cal. Amusement device. No. 878,400; Feb. 4; Sp. p. 1025; Dr. p. 207; Gaz. vol. 132; p. 1016.
Johnston, R. T., Plainfield, N. J., assignor to Campbell Printing Press & Manufacturing Company, New York, N. Y. Mechanical movement. No. 878,532; Feb. 11; Sp. p. 1360; Dr. pp. 277-9; Gaz. vol. 132; p. 1093.
Johnston, W. (See Vandegrift and Johnston.)
Johnstone, R. K., Salem, Mass., assignor to A. C. Lawrence Leather Company. Welt-stripper. No. 878,533; Feb. 11; Sp. p. 1363; Dr. p. 279; Gaz. vol. 132; p. 1093.
Jolly, M. B., Trenton, Mo. Fruit-slicer. No. 878,803; Feb. 11; Sp. p. 1924; Dr. p. 397; Gaz. vol. 132; p. 1182.
Jonata, F., New York, N. Y. Diaper-holder. No. 879,774; Feb. 18; Sp. p. 3864; Dr. p. 809; Gaz. vol. 132; p. 1536.
Jones, B., trustee. (See Curtis, L. E., assignor.)
Jones, B. W., Troy, assignor of three-fourths to G. M. Beattie, Cohoes, N. Y. Starching-machine. No. 880,455; Feb. 25; Sp. p. 5293; Dr. pp. 1113-14; Gaz. vol. 132; p. 1795.
Jones, E. W., Burta, Va. Pea-thresher. No. 878,882; Feb. 11; Sp. p. 2065; Dr. p. 429; Gaz. vol. 132; p. 1207.
Jones, G. (See Sullivan, A., assignor.)
Jones, J. C., Wynnewood, Pa., assignor to Harrison Safety Boiler Works. Heating and purifying water. No. 880,456; Feb. 25; Sp. p. 5297; Dr. p. 1114; Gaz. vol. 132; p. 1796.
Jones, J. W., Auburn, Wash. Milk-cooler. No. 879,105; Feb. 11; Sp. p. 2492; Dr. p. 519; Gaz. vol. 132; p. 1276.
Jones, L. A., Cambridge, Mass. Foot-rest for vehicles. No. 879,646; Feb. 18; Sp. p. 3620; Dr. p. 757; Gaz. vol. 132; p. 1494.
Jones, L. W., Sewickley, and P. Hansen, assignors to Pittsburgh Filter Manufacturing Company, Pittsburg, Pa. Filter. No. 879,876; Feb. 25; Sp. p. 4102; Dr. p. 861; Gaz. vol. 132; p. 1602.
Jones, P. N., Pittsburg, Pa. Controller for electric motors. No. 878,961; Feb. 11; Sp. p. 2215; Dr. pp. 463-4; Gaz. vol. 132; p. 1232.
Jones, P. T., Sr., Corinth, Miss. Strap turning and stretching machine. No. 878,804; Feb. 11; Sp. p. 1925; Dr. pp. 397-8; Gaz. vol. 132; p. 1182.
Jones, T. H., Juda, Wis. Trace-buckle. No. 879,775; Feb. 18; Sp. p. 3865; Dr. p. 809; Gaz. vol. 132; p. 1536.
Jones, W., Auburn, Me. Holder for brooms and the like. No. 878,068; Feb. 4; Sp. p. 361; Dr. p. 74; Gaz. vol. 132; p. 906.
Jones, W. M. (See McGee and Jones.)
Jones, W. M., Cross Plains, Tex. Cotton-chopper. No. 879,647; Feb. 18; Sp. p. 3622; Dr. p. 757; Gaz. vol. 132; p. 1495.
Josephs, A. S., New York, N. Y. Guard device. No. 878,069; Feb. 4; Sp. p. 362; Dr. p. 74; Gaz. vol. 132; p. 906.
Joslin, R. J. (See Chase, J. L., assignor.)
Judge, J. R., Buffalo, N. Y. Filter. No. 879,270; Feb. 18; Sp. p. 2817; Dr. p. 590; Gaz. vol. 132; p. 1372.
Judson L. Thomson M'fg. Co. (See Perrault, J. E., assignor.)
Julius, P., and E. Fussenegger, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Azo dye and making same. No. 879,053; Feb. 11; Sp. p. 2374; Gaz. vol. 132; p. 1260.
Junge, O. J. (See Mestrand, A. C., assignor.)
Jungner, E. W., Kneippbaden, assignor to Nya Ackumulator Aktiebolaget Jungner, Stockholm, Sweden. Making electrodes. No. 880,027; Feb. 25; Sp. p. 4417; Gaz. vol. 132; p. 1653.
Jürgens, F., Sangerhausen, Germany. Soap-molding machine. No. 879,968; Feb. 25; Sp. p. 4306; Dr. p. 901; Gaz. vol. 132; p. 1634.
Just, A., and F. Hanaman, Budapest, Austria-Hungary. Manufacturing incandescent bodies for electric lamps. No. 878,463; Feb. 4; Sp. p. 1141; Gaz. vol. 132; p. 1035.
Kabureck, G., Jersey City, N. J. Umbrella-tip. No. 879,471; Feb. 18; Sp. p. 3246; Dr. p. 676; Gaz. vol. 132; p. 1437.

Kadan, F. J., Baltimore, Md. Marking device. No. 878,293; Feb. 4; Sp. p. 822; Dr. p. 163; Gaz. vol. 132; p. 981.
Kaiser, P. G., Chicago, Ill. Evaporator. No. 880,080; Feb. 25; Sp. p. 4531; Dr. pp. 953–4; Gaz. vol, 132; p. 1670.
Kalamazoo Loose Leaf Binder Company. (See Bushong, H. F., assignor.)
Kallscher, G., Frankfort-on-the-Main, Germany, assignor to Cassella Color Company, New York, N. Y. Brown azo dye and making same. No. 879,552; Feb. 18; Sp. p. 3417; Gaz. vol. 132; p. 1465.
Kapff, S., Aix-la-Chapelle, assignor, by mesne assignments, to Nitrittabrik Aktiengesellschaft, Cöpenick, near Berlin, Germany. Mordanting wool. No. 879,553; Feb. 18; Sp. p. 3418; Gaz. vol. 132; p. 1465.
Kaplan, G. J., Owatonna, Minn., assignor to Perfection Churn Company. Combined churn and butter-worker. No. 880,061; Feb. 25; Sp. p. 4534; Dr. p. 964; Gaz. vol. 132; p. 1670.
Karns, J. P., assignor to J. P. Karns Tunneling Machine Co., Boulder, Colo. Sink-shaft drill. No. 879,822; Feb. 18; Sp. p. 3968; Dr. pp. 830–1; Gaz. vol. 132; p. 1552.
Kashian, M. H., Amesbury, Mass. Apparatus for making seat-bodies for automobiles. No. 878,636; Feb. 11; Sp. p. 1604; Dr. p. 327; Gaz. vol. 132; p. 1128.
Katzenberger, O., San Antonio, Tex. Key. No. 877,930; Feb. 4; Sp. p. 72; Dr. p. 15; Gaz. vol. 132; p. 861.
Katzenberger, O., San Antonio, Tex. Padlock. No. 877,931; Feb. 4; Sp. p. 73; Dr. p. 15; Gaz. vol. 132; p. 861.
Katzmann, W., Chicago, Ill. Fireless stove. No. 878,534; Feb. 11; Sp. p. 1366; Dr. p. 280; Gaz. vol. 132; p. 1093.
Kay, T. W., Scranton, Pa. Pigeon-trap. No. 880,219; Feb. 25; Sp. p. 4814; Dr. pp. 1019–20; Gaz. vol. 132; p. 1716.
Kay, W. E. (See Kehnert, E. E., assignor.)
Keeler, F. W., assignor of one-half to W. Morants, Temple, Tex. Means for automatically closing electric circuits. No. 879,648; Feb. 18; Sp. p. 3623; Dr. p. 758; Gaz. vol. 132; p. 1495.
Kegg, M. B., Toledo, Ohio. Combination-undergarment. No. 880,220; Feb. 25; Sp. p. 4820; Dr. p. 1020; Gaz. vol. 132; p. 1717.
Kehnert, E. E., Lorain, assignor to W. E. Kay, Amherst, Ohio. Gas-burner. No. 879,823; Feb. 18; Sp. p. 3970; Dr. p. 831; Gaz. vol. 132; p. 1553.
Keith, C. R., assignor of one-half to J. W. Mason, Tarrytown, N. Y. Power-transmission apparatus. No. 880,382; Feb. 25; Sp. p. 5125; Dr. p. 1063; Gaz. vol. 132; p. 1769.
Keith, J. G., Chicago, Ill. Sash-lock. No. 878,883; Feb. 11; Sp. p. 2067; Dr. p. 429; Gaz. vol. 132; p. 1207.
Keller, C. (See Yeakel, G. P., assignor.)
Keller, J., Philadelphia, Pa., assignor, by mesne assignments, to Chicago Pneumatic Tool Company. Pneumatic riveter. No. 878,805; Feb. 11; Sp. p. 1926; Dr. pp. 398–9; Gaz. vol. 132; p. 1183.
Keller, J., Philadelphia, Pa., assignor, by mesne assignments, to Chicago Pneumatic Tool Company. Pneumatic hammer. No. 879,106; Feb. 11; Sp. p. 2494; Dr. p. 519; Gaz. vol. 132; p. 1270.
Keller, L. E., Oil City, Pa. Brake-shoe. No. 879,969; Feb. 25; Sp. p. 4308; Dr. p. 901; Gaz. vol. 132; p. 1634.
Keller, P., Chicago, Ill. Gas-pressure regulator. No. 879,472; Feb. 18; Sp. p. 3246; Dr. p. 676; Gaz. vol. 132; p. 1437.
Kelley, J. B., Chicago, Ill. Sash-fastener. No. 879,271; Feb. 18; Sp. p. 2820; Dr. p. 591; Gaz. vol. 132; p. 1373.
Kelley, J. E., Bangor, Me. Track-sweeper. No. 880,308; Feb. 25; Sp. p. 4967; Dr. p. 1052; Gaz. vol. 132; p. 1746.
Kellogg Switchboard and Supply Company. (See Dean, W. W., assignor.)
Kellogg Switchboard & Supply Company. (See Winston, C. S., assignor.)
Kellond, R. A., Winnipeg, Manitoba, Canada, assignor to Inter-West Peat Fuel Company. Machine for manufacturing peat fuel. No. 878,732; Feb. 11; Sp. p. 1780; Dr. p. 368; Gaz. vol. 132; p. 1159.
Kelly, C. R., Louisville, Ky. Proportional calculating-machine. No. 879,178; Feb. 18; Sp. p. 2651; Dr. p. 553; Gaz. vol. 132; p. 1343.
Kelly, N., *et al.* (See Bryan, J. H. B., assignor.)
Kelly, N. J., *et al.* (See Bryan, J. H. B., assignor.)
Kelly, T. F., Galion, Ohio. Burial-vault. No. 878,962; Feb. 11; Sp. p. 2217; Dr. p. 464; Gaz. vol. 132; p. 1232.
Kelly, W., Toledo, Ohio. Closet-flushing valve. No. 878,535; Feb. 11; Sp. p. 1367; Dr. p. 280; Gaz. vol. 132; p. 1094.
Kelsey, W. A. (See Bailey and Kelsey.)
Kempter, F., Stuttgart, Germany. Baking-oven. No. 878,806; Feb. 11; Sp. p. 1936; Dr. p. 399; Gaz. vol. 132; p. 1183.
Kendrick, G. H. (See Byrnes and Kendrick.)
Kendrick, J. L., Boston, Mass. Bottle. No. 880,082; Feb. 25; Sp. p. 4535; Dr. p. 954; Gaz. vol. 132; p. 1670.
Kennebrew, J. H., Columbus, Miss. Planter. No. 878,536; Feb. 11; Sp. p. 1368; Dr. p. 280; Gaz. vol. 132; p. 1094.
Kennebrew, J. H., Columbus, Miss. Cotton-chopper. No. 878,537; Feb. 11; Sp. p. 1370; Dr. p. 281; Gaz. vol. 132; p. 1094.
Kennedy, A. L., New York, N. Y. Fertilizer. No. 879,877; Feb. 25; Sp. p. 4103; Gaz. vol. 132; p. 1602.
Kennedy, T. C., Chicago, and E. A. Elder, La Grange, assignors to Fairbanks, Morse & Company, Chicago, Ill. Storage apparatus. No. 879,473; Feb. 18; Sp. p. 3248; Dr. p. 676; Gaz. vol. 132; p. 1438.
Kenningt[illegible], R. B., Fitzpatrick, Ga. Spark-arrester. No. 880,309; Feb. 25; Sp. p. 4968; Dr. p. 1053; Gaz. vol. 132; p. 1746.
Kennon, C. W., assignor of one-half to E. K. H. D'Aeth, New York, N. Y. Protecting-covering for piles. No. 879,649; Feb. 18; Sp. p. 3626; Dr. p. 758; Gaz. vol. 132; p. 1495.
Kent, A. E., assignor to A. B. Felgimaker Erie Organ Company, Erie, Pa. Combination organ stop-action. No. 879,776; Feb. 18; Sp. p. 3866; Dr. p. 810; Gaz. vol. 132; p. 1537.
Keogh, T. B., assignor of one-half to M. Gartenlaub, New York, N. Y. Gas-pressure-regulating device. No. 877,932; Feb. 4; Sp. p. 75; Dr. p. 15; Gaz. vol. 132; p. 861.
Kercher, M. (See Flecksing, Kercher, and Henke.)
Kermode, G. (See Fawns and Kermode.)
Kersey, W. H., assignor to Clark & Roberts Company, Indianapolis, Ind. Specialist's chair. No. 879,179; Feb. 18; Sp. p. 2653; Dr. p. 553; Gaz. vol. 132; p. 1343.
Kessler, H. A., Los Angeles, Cal. Fly-catcher. No. 878,207; Feb. 4; Sp. p. 652; Dr. p. 133; Gaz. vol. 132; p. 951.
Kessling, E., Brooklyn, N. Y. Thermometer. No. 879,474; Feb. 18; Sp. p. 3249; Dr. p. 677; Gaz. vol. 132; p. 1438.
Kester, R. E. (See Sprout and Kester.)
Ketcham, C. H. (See Spang, H. W., assignor.)
Key, C. J., Macon, assignor of one-half to J. B. Key, Augusta, Ga. Combined shoe lacing and tongue holder. No. 879,272; Feb. 18; Sp. p. 2821; Dr. p. 591; Gaz. vol. 132; p. 1373.
Key, J. B. (See Key, C. J., assignor.)
Keystone Driller Co. (See Downie, R. M., assignor.)
Kidder, W. P., Boston, Mass., and C. W. Sponsel, Hartford, Conn., assignors to Parker Machine Company, Buffalo, N. Y. Typewriting machine. No. 879,107; Feb. 11; Sp. p. 2498; Dr. p. 520; Gaz. vol. 132; p. 1277.
Kiel, W., Butler, N. J., assignor to American Hard Rubber Company, New York, N. Y. Article of rubber compound. No. 879,388; Feb. 18; Sp. p. 3061; Dr. p. 637; Gaz. vol. 132; p. 1410.
Kies, G. A. (See Starrett, H. B., assignor.)
Kiesel, W. F., Jr, Altoona, Pa. Railway-car frame. No. 878,538; Feb. 11; Sp. p. 1372; Dr. pp. 281–2; Gaz. vol. 132; p. 1095.
Kiesel, W. F., Jr., Altoona, Pa. Interior finish for steel railway-cars. No. 878,539; Feb. 11; Sp. p. 1376; Dr. pp. 282–3; Gaz. vol. 132; p. 1095.
Kiesel, W. F., Jr., Altoona, Pa. Window-sash. No. 878,540; Feb. 11; Sp. p. 1380; Dr. p. 283; Gaz. vol. 132; p. 1096.
Kiesel, W. F., Jr., Altoona, Pa. Window-sash. No. 878,541; Feb. 11; Sp. p. 1381; Dr. pp. 283–4; Gaz. vol. 132; p. 1096.
Kilbride, E. M., Jersey City, N. J. Tiling for covering floors and walls. No. 879,554; Feb. 18; Sp. p. 3420; Dr. p. 716; Gaz. vol. 132; p. 1465.
Kilmer, M. D., *et al.* (See Donnelly and Frederick, assignors.)
Kimball, R. E., Fruitvale, Cal. Incandescent-lamp control. No. 879,555; Feb. 18; Sp. p. 3420; Dr. p. 716; Gaz. vol. 132; p. 1465.
Kimball, S. E., Powderville, Mont. Vehicle-axle. No. 880,145; Feb. 25; Sp. p. 4655; Dr. p. 981; Gaz. vol. 132; p. 1690.
Kimble, S. M., assignor of two-thirds to Simplex Manufacturing Co., Jackson, Mich. Cement block and brick machine. No. 878,542; Feb. 11; Sp. p. 1382; Dr. p. 284; Gaz. vol. 132; p. 1096.
Kimmerle Concrete Machinery Company. (See McMurtrie, T. A., assignor.)
Kindel, C. J. (See Coopersmith and Kindel.)
Kindel, C. J., St. Louis, Mo. Davenport. No. 880,221; Feb. 25; Sp. p. 4822; Dr. p. 1020; Gaz. vol. 132; p. 1717.
Kinealy, J. H., Ferguson, Mo. Air-purifying apparatus. No. 879,273; Feb. 18; Sp. p. 2822; Dr. p. 591; Gaz. vol. 132; p. 1373.
King, A., San Antonio, Tex. Advertising street-car sign. No. 878,537; Feb. 11; Sp. p. 1607; Dr. p. 328; Gaz. vol. 132; p. 1129.
King, A., Chicago, Ill. Asphalt-ripper. No. 878,638; Feb. 11; Sp. p. 1606; Dr. p. 328; Gaz. vol. 132; p. 1129.
King, B. A., assignor to W. E. Davis, Birmingham, Ala. Gearing. No. 879,108; Feb. 11; Sp. p. 2508; Dr. p. 521; Gaz. vol. 132; p. 1277.
King, F. O., Aitkin, Minn. Record-book. No. 879,109; Feb. 11; Sp. p. 2509; Dr. p. 521; Gaz. vol. 132; p. 1277.
King & Hamilton Company. (See Gilman, J. H., assignor.)
King & Hamilton Company. (See Hall, F., assignor.)
Kingsett, C. T., Kensington, and E. P. Kingzett, Caterham, England. Playing-ball. No. 878,070; Feb. 4; Sp. p. 362; Dr. p. 75; Gaz. vol. 132; p. 907.
Kingsett, E. P. (See Kingsett, C. T. and E. P.)
Kinnear and Gager Manufacturing Company. (See Gager, E. B., assignor.)
Kinney, J. (See Hunt and Kinney.)
Kinsey, B., Wyoming, Ohio. Concrete vault. No. 878,639; Feb. 11; Sp. p. 1610; Dr. p. 328; Gaz. vol. 132; p. 1129.
Kip, F. E., Montclair, N. J., and E. C. Smith, Seekonk, Mass., assignors to Batten-Hayes Company, Lewiston, Me. Traveling-flat carding-engine. No. 878,984; Feb. 11; Sp. p. 2068; Dr. p. 430; Gaz. vol. 132; p. 1208.

Kirby, E. P., *et al.* (See Wolke, G., assignor.)
Kirchner, E. A., Minneapolis, Minn. Self-arighting stamp. No. 878,007; Feb. 4; Sp. p. 221; Dr. p. 48; Gaz. vol. 132; p. 887.
Kirkpatrick-Picard, H. F. (See Suiman, Kirkpatrick-Picard, and Ballot.)
Kirschniok, J., Zabrze, Germany. Mining. No. 878,208; Feb. 4; Sp. p. 653; Dr. p. 134; Gaz. vol. 132; p. 952.
Kistler, S. L. (See Pettengill, F. B., assignor.)
Kitsee, I., Philadelphia, Pa. Electric transmission of intelligence. No. 879,651; Feb. 18; Sp. p. 3629; Dr. p. 758; Gaz. vol. 132; p. 1496.
Kitsee, I., assignor of one-half to W. J. Latta, Philadelphia, Pa. Telegraphy. No. 878,963; Feb. 11; Sp. p. 2218; Dr. p. 464; Gaz. vol. 132; p. 1232.
Kitsee, I., assignor of one-half to W. J. Latta, Philadelphia, Pa. Electric transmission of intelligence. No. 879,650; Feb. 18; Sp. p. 3628; Dr. p. 758; Gaz. vol. 132; p. 1496.
Kitt, G. A. (See Despain, Kitt, and Gordon.)
Kitzsteiner, F., Grand Rapids, Mich., assignor to Quick Work Stove Company, Cleveland, Ohio. Vapor-burner. No. 878,142; Feb. 4; Sp. p. 490; Dr. p. 105; Gaz. vol. 132; p. 929.
Kleidmann, J., assignor to Chafee Manufacturing Company, New York, N. Y. Door-chain. No. 878,294; Feb. 4; Sp. p. 823; Dr. p. 164; Gaz. vol. 132; p. 981.
Kling, H., Larned, Kans. Stovepipe hanger and support. No. 879,054; Feb. 11; Sp. p. 2375; Dr. p. 497; Gaz. vol. 132; p. 1260.
Klinge, W., assignor of one-half to J. McManus, Washington, D. C. Oyster-shucking apparatus. No. 880,222; Feb. 25; Sp. p. 4823; Dr. p. 1021; Gaz. vol. 132; p. 1717.
Klitsche, A. (See Baumbach and Klitsche.)
Klousnitzer, F., Herman, assignor of one-eighth to V. Krainbucher, Butler, Pa. Attachment for firearms. No. 880,310; Feb. 25; Sp. p. 4989; Dr. p. 1053; Gaz. vol. 132; p. 1746.
Knapp, J. J., Washington, D. C. Safety-lock for breech-blocks. No. 879,652; Feb. 18; Sp. p. 3630; Dr. p. 759; Gaz. vol. 132; p. 1496.
Knappenberger, A., Siegfried, Pa. Dust separating and collecting apparatus. No. 878,640; Feb. 11; Sp. p. 1611; Dr. p. 328; Gaz. vol. 132; p. 1129.
Knobloch, W. H., and J. M. Burget, Pittsburg, Pa.; said Burget assignor to said Knobloch. Hook and eye. No. 878,464; Feb. 4; Sp. p. 1142; Dr. p. 234; Gaz. vol. 132; p. 1036.
Knoop, E. G., Columbus, Ohio. Scarf-pin. No. 878,885; Feb. 11; Sp. p. 2071; Dr. p. 430; Gaz. vol. 132; p. 1208.
Knox, H., Washington, Pa. Wagon-body. No. 879,653; Feb. 18; Sp. p. 3632; Dr. p. 759; Gaz. vol. 132; p. 1497.
Knudsen, I. P. B., Copenhagen, Denmark. Guiding device for suspended separator-drums. No. 880,383; Feb. 25; Sp. p. 5127; Dr. p. 1063; Gaz. vol. 132; p. 1769.
Koch, F., St. Paul, Minn. Vehicle provided with movable rails. No. 878,807; Feb. 11; Sp. p. 1931; Dr. p. 399; Gaz. vol. 132; p. 1183.
Koch, J. W., Tamaqua, Pa. Combined nut-lock and antirattler. No. 878,143; Feb. 4; Sp. p. 491; Dr. p. 105; Gaz. vol. 132; p. 930.
Kochenderfer, J. H., Galion, assignor of one-half to W. E. Hughes, Clyde, Ohio. Railway-joint. No. 879,475; Feb. 18; Sp. p. 3251; Dr. p. 677; Gaz. vol. 132; p. 1438.
Koella, E., Rockford, Tenn., assignor to Myer Bridges Company, Louisville, Ky. Mop and brush making machine. No. 878,295; Feb. 4; Sp. p. 824; Dr. pp. 164–5; Gaz. vol. 132; p. 981.
Koenig, C. (See Dippel and Koenig.)
Kohler, F. E., Canton, Ohio. Embroidery-hoop. No. 879,654; Feb. 18; Sp. p. 3634; Dr. p. 760; Gaz. vol. 132; p. 1497.
Kohler, G. A. E. (See Graham, G. M., assignor.)
Kohn, K., New York, N. Y., assignor to Rail Joint Company. Insulated joint for railway-rails. No. 879,678; Feb. 25; Sp. p. 4104; Dr. p. 862; Gaz. vol. 132; p. 1602.
König, A., assignor to Firm of C. Zeiss, Jena, Germany. Telescope. No. 880,028; Feb. 25; Sp. p. 4419; Dr. p. 928; Gaz. vol. 132; p. 1653.
König, K., assignor to Farbwerke, vorm. Meister, Lucius & Brüning, Höchst-on-the-Main, Germany. Red color-lake. No. 878,964; Feb. 11; Sp. p. 2219; Gaz. vol. 132; p. 1232.
Könitzer, O., Munich, Germany. Arc-lamp. No. 879,180; Feb. 18; Sp. p. 2654; Dr. p. 553; Gaz. vol. 132; p. 1343.
Kornicker, F. (See Bültzingslöwen, B. von, assignor.)
Kosters, C. B., Buffalo, N. Y. Non-detachable hinged last. No. 879,181; Feb. 18; Sp. p. 2655; Dr. p. 553; Gaz. vol. 132; p. 1343.
Köszegi, K., Baja, assignor of two-thirds to J. Böhm and S. Gelb, Budapest, Austria-Hungary. Motor-driven cultivating-machine. No. 880,457; Feb. 25; Sp. p. 5299; Dr. p. 1115; Gaz. vol. 132; p. 1796.
Kouns, M. W., Columbus, assignor to Ohio Manufacturing Company, Upper Sandusky, Ohio. Reversing mechanism. No. 879,182; Feb. 18; Sp. p. 2657; Dr. p. 554; Gaz. vol. 132; p. 1344.
Kraft, H. F., New York, N. Y., and M. C. Schweinert, West Hoboken, N. J. Water-bottle stopper. No. 877,933; Feb. 4; Sp. p. 76; Dr. p. 15; Gaz. vol. 132; p. 861.
Kraft, W. B., Milan, Kans. Electromagnetic piano-player. No. 879,879; Feb. 25; Sp. p. 4110; Dr. p. 862; Gaz. vol. 132; p. 1603.
Krainbucher, V. (See Klousnitzer, F., assignor.)
Krämer, C., assignor to Felten & Guilleaume Lahmeyerwerke Actien-Gesellschaft, Frankfort-on-the-Main, Germany. Magnet for alternating currents. No. 878,402; Feb. 4; Sp. p. 1028; Dr. p. 207; Gaz. vol. 132; p. 1017.
Krämer, C., assignor to Felten & Guilleaume-Lahmeyerwerke Actien-Gesellschaft, Frankfort-on-the-Main, Germany. Friction coupling or clutch. No. 879,274; Feb. 18; Sp. p. 2824; Dr. p. 591; Gaz. vol. 132; p. 1374.
Krause, P., Babylon, N. Y. Internal-combustion turbine. No. 880,458; Feb. 25; Sp. p. 5302; Dr. p. 1116; Gaz. vol. 132; p. 1796.
Kreis, R. W., Jennings, Mo. Water-velocipede. No. 879,389; Feb. 18; Sp. p. 3063; Dr. p. 637; Gaz. vol. 132; p. 1410.
Krell, O., Charlottenburg, assignor to Siemens-Schuckertwerke G. M. B. H., Berlin, Germany. Centrifugal pump with funnel-shaped guide-pipes in the suction-space between the suction-pipe and ring of blades. No. 879,476; Feb. 18; Sp. p. 3252; Dr. p. 677; Gaz. vol. 132; p. 1439.
Krentler Brothers Company. (See Pym, C. F., assignor.)
Kretzer, P. (See Blake and Kretzer.)
Kreutz, T., Sweetbriar, N. D. Evener. No. 878,209; Feb. 4; Sp. p. 654; Dr. p. 134; Gaz. vol. 132; p. 952.
Krüger, C. H., Bradford, England. Tennis-racket. No. 879,477; Feb. 18; Sp. p. 3254; Dr. p. 678; Gaz. vol. 132; p. 1439.
Krumming, R., Milwaukee, Wis. Album. No. 880,311; Feb. 25; Sp. p. 4991; Dr. p. 1053; Gaz. vol. 132; p. 1746.
Kruse, J. V., Virginia, Ill. Road-grader. No. 879,970; Feb. 25; Sp. p. 4310; Dr. p. 901; Gaz. vol. 132; p. 1635.
Krygowski, W., Chicopee Falls, Mass. Steam-engine. No. 878,543; Feb. 11; Sp. p. 1384; Dr. p. 284; Gaz. vol. 132; p. 1097.
Kügelgen, F. von, and G. O. Seward, Holcombs Rock, Va., assignors, by mesne assignments, to Electro Metallurgical Company. Metallurgical process. No. 878,960; Feb. 11; Sp. p. 2221; Gaz. vol. 132; p. 1233.
Kügelgen, F. von, and G. O. Seward, Holcombs Rock, Va., assignors to Virginia Laboratory Company, New York, N. Y. Producing magnesium. No. 880,489; Feb. 25; Sp. p. 5300; Gaz. vol. 132; p. 1807.
Kuhn, G., Meadville, Pa. Swing. No. 878,965; Feb. 11; Sp. p. 2219; Dr. p. 465; Gaz. vol. 132; p. 1233.
Kuhn, J., assignor of one-fourth to J. N. Lippert, Pittsburg, Pa. Envelop. No. 880,223; Feb. 25; Sp. p. 4826; Dr. p. 1021; Gaz. vol. 132; p. 1718.
Kühne, K. A., assignor to Titan-Gesellschaft mit beschränkter Haftung, Dresden, Germany. Reduction of refractory oxide. No. 878,210; Feb. 4; Sp. p. 655; Gaz. vol. 132; p. 952.
Kuhnert, C., Chicago, Ill. Vermin-eradicator. No. 879,055; Feb. 11; Sp. p. 2377; Dr. p. 497; Gaz. vol. 132; p. 1260.
Kundtz, T., Lakewood, Ohio. Sewing-machine table or cabinet. No. 880,224; Feb. 25; Sp. p. 4828; Dr. pp. 1021–2; Gaz. vol. 132; p. 1718.
Kyle, J. W., Chicago, Ill. Oil-cup. No. 878,808; Feb. 11; Sp. p. 1933; Dr. p. 400; Gaz. vol. 132; p. 1184.
La Rocque, P. R. (See Parent, L. P., assignor.)
Lachapelle, S., assignor of one-half to G. W. Parent and G. de Werthemer, Montreal, Quebec, Canada. Thermometer. No. 878,481; Feb. 4; Sp. p. 1202; Dr. p. 248; Gaz. vol. 32; p. 1043.
Lachat, L. E., Lyon, France. Truck or trolley with sliding steering-wheels. No. 878,733; Feb. 11; Sp. p. 1783; Dr. p. 369; Gaz. vol. 132. p. 1159.
Lackland, S. H., St. Louis, Mo. Electromedical appliance. No. 879,777; Feb. 18; Sp. p. 3870; Dr. p. 810; Gaz. vol. 132; p. 1537.
Lacomme, G., assignor of one-half to E. C. Eustace, New York, N. Y. Amusement-walk. No. 879,275; Feb. 18; Sp. p. 2824; Dr. p. 592; Gaz. vol. 132; p. 1374.
Lafon, N., Red Jacket, W. Va. Street or roadway structure. No. 880,312; Feb. 25; Sp. p. 4993; Dr. p. 1054; Gaz. vol. 132; p. 1747.
Lagonda Manufacturing Company. (See Weinland, H. F., assignor.)
Lahr, E. G., *et al.* (See Squires, A. C., assignor.)
Laing, R., Radcliffe, England. Machine for pressing lines or designs into rollers. No. 878,071; Feb. 4; Sp. p. 364; Dr. p. 75; Gaz. vol. 132; p. 907.
Lamb, E. E., East St. Louis, Ill. Cattle-lander. No. 880,146; Feb. 25; Sp. p. 4656; Dr. p. 982; Gaz. vol. 132; p. 1690.
Lamb, R. L., and E. M. Tilden, Washington, D. C. Hand-stamp. No. 880,225; Feb. 25; Sp. p. 4831; Dr. p. 1022; Gaz. vol. 132; p. 1719.
Lambert, J. W., assignor to Buckeye Manufacturing Company, Anderson, Ind. Transmission-gear for automobiles. No. 878,072; Feb. 4; Sp. p. 365; Dr. pp. 75–6; Gaz. vol. 132; p. 908.
Lancia, V., assignor to Lancia & Co., Turin, Italy. Lubricant-distributer for engines. No. 878,073; Feb. 4; Sp. p. 369; Dr. p. 76; Gaz. vol. 132; p. 908.
Lancia & Co. (See Lancia, V., assignor.)
Landau, D., San Francisco, Cal. Pipe-coupling. No. 879,880; Feb. 25; Sp. p. 4112; Dr. p. 863; Gaz. vol. 132; p. 1603.
Landers, Frary and Clark. (See Warner, A. A., assignor.)
Landfield, H. M., New York, N. Y. Knee-rest. No. 878,008; Feb. 4; Sp. p. 222; Dr. p. 48; Gaz. vol. 132; p. 887.

Landholm, V., Westpoint, Nebr. Loader. No. 878,641; Feb. 11; Sp. p. 1613; Dr. p. 329; Gaz. vol. 132; p. 1130.
Landholm, V., Westpoint, Nebr. Attachment for traction-engines. No. 878,642; Feb. 11; Sp. p. 1615; Dr. p. 329; Gaz. vol. 132; p. 1130.
Landis, A. B. Waynesboro, Pa. Grinding-machine. No. 879,276; Feb. 18; Sp. p. 2825; Dr. p. 502; Gaz. vol. 132; p. 1374.
Landis, A. B., Waynesboro, Pa. Grinding-machine. No. 879,277; Feb. 18; Sp. p. 2828; Dr. pp. 502–3; Gaz. vol. 132; p. 1375.
Lang, J. S., Boston, Mass. Burner for explosive-engines. No. 880,313; Feb. 25; Sp. p. 4995; Dr. p. 1054; Gaz. vol. 132; p. 1747.
Langston, S. M., Camden, N. J. Manufacture of cellular boards. No. 878,403; Feb. 4; Sp. p. 1029; Dr. p. 208; Gaz. vol. 132; p. 1017.
Lapage, R. H., *et al.* (See Borries, F. W. A. von, assignor.) (Reissue.)
Largey, M. S. (See Riggs, E. W., assignor.)
Larkin, C. J., Everett, assignor of one-half to J. R. Learned, Newton, Mass. Lighting attachment for gas and acetylene burners. No. 879,824; Feb. 18; Sp. p. 3971; Dr. p. 831; Gaz. vol. 132; p. 1553.
Larkin, W., Barton, Ark. Ditcher and road-grader. No. 879,478; Feb. 18; Sp. p. 3255; Dr. p. 678; Gaz. vol. 132; p. 1439.
Larned, W. J., Syracuse, N. Y. Valve. No. 878,809; Feb. 11; Sp. p. 1935; Dr. p. 900; Gaz. vol. 132; p. 1184.
Larrabee, E. E., Williamston, Mich. Boiler. No. 879,056; Feb. 11; Sp. p. 2379; Dr. p. 498; Gaz. vol. 132; p. 1261.
Larson, I., Sandy, Utah. Bit-stock. No. 878,404; Feb. 4; Sp. p. 1023; Dr. pp. 208–9; Gaz. vol. 132; p. 1017.
Larsson, D., Smedjebacken, assignor to Aktiebolaget B. A. Hjorth & Co., Stockholm, Sweden. Apparatus for removing the percussion-caps from discharged shells. No. 880,147; Feb. 25; Sp. p. 4660; Dr. p. 963; Gaz. vol. 132; p. 1691.
Lash, D. L., and C. P. Mock, Alva, Okla. Clothes-line. No. 879,300; Feb. 18; Sp. p. 3064; Dr. p. 637; Gaz. vol. 132; p. 1410.
Lathrop, K. J., Cathay, N. D. Spring-motor. No. 880,148; Feb. 25; Sp. p. 4661; Dr. p. 983; Gaz. vol. 132; p. 1691.
Latta, W. J. (See Kitsee, I., assignor.)
Latzel, J., London, England. Motor-vehicle. No. 878,074; Feb. 4; Sp. p. 370; Dr. p. 77; Gaz. vol. 132; p. 908.
Lauffs, W., Zurich, Switzerland. Catamenial bandage. No. 879,773; Feb. 18; Sp. p. 3871; Dr. p. 811; Gaz. vol. 132; p. 1537.
Lauhon, E. S., Catlettsburg, Ky. Gas-burner. No. 879,556; Feb. 18; Sp. p. 3422; Dr. p. 716; Gaz. vol. 132; p. 1465.
Lawlor, J. J. (See Imboden and Lawlor.)
Lawrence, A. N., Los Angeles, Cal. Show-case. No. 879,655; Feb. 18; Sp. p. 3635; Dr. p. 760; Gaz. vol. 132; p. 1497.
Lawrence, F. W., assignor of one-half to G. H. Clynick, Bonner, Mont. Car-stake. No. 878,405; Feb. 4; Sp. p. 1034; Dr. p. 209; Gaz. vol. 132; p. 1017.
Lawrence, W. E., Brooklyn, N. Y. Jig or scroll saw. No. 879,656; Feb. 18; Sp. p. 3637; Dr. p. 760; Gaz. vol. 132; p. 1498.
Le Moon, A. R., Chicago, Ill. Friction driving-clutch. No. 880,054; Feb. 25; Sp. p. 4538; Dr. p. 955; Gaz. vol. 132; p. 1671.
Le Sage, G., Los Angeles, Cal. Necktie-fastener. No. 878,734; Feb. 11; Sp. p. 1784; Dr. p. 369; Gaz. vol. 132; p. 1160.
Lea, R. R., Newport, Me. Gage for carpenters' rules, &c. No. 877,934; Feb. 4; Sp. p. 78; Dr. p. 16; Gaz. vol. 132; p. 862.
Learned, J. R. (See Larkin, C. J., assignor.)
Leavitt, F. M., New York, assignor to E. W. Bliss Company, Brooklyn, N. Y. Ignition device for automobile torpedoes. No. 880,029; Feb. 25; Sp. p. 4421; Dr. p. 929; Gaz. vol. 132; p. 1653.
Leavitt, F. M., New York, assignor to E. W. Bliss Company, Brooklyn, N. Y. Starting-valve for automobile torpedoes. No. 880,030; Feb. 25; Sp. p. 4424; Dr. p. 929; Gaz. vol. 132; p. 1654.
Leclerc, L., New York, N. Y. Automatic egg-boiler. No. 879,057; Feb. 11; Sp. p. 2381; Dr. p. 499; Gaz. vol. 132; p. 1261.
Lederer, S. L., Providence, R. I. Bracelet. No. 879,881; Feb. 25; Sp. p. 4114; Dr. p. 863; Gaz. vol. 132; p. 1603.
Ledoux, J. W., Swarthmore, Pa., assignor to Simplex Valve & Meter Company, Camden, N. J. Automatic flow-controller. No. 879,557; Feb. 18; Sp. p. 3423; Dr. p. 717; Gaz. vol. 132; p. 1466.
Ledoux, J. W., Swarthmore, Pa., assignor to Simplex Valve & Meter Company, Camden, N. J. Automatic flow-controller. No. 879,558; Feb. 18; Sp. p. 3424; Dr. p. 717; Gaz. vol. 132; p. 1466.
Lee, E., Springfield, Ill. Road-grader. No. 878,643; Feb. 11; Sp. p. 1616; Dr. p. 330; Gaz. vol. 132; p. 1131.
Lee, E. A., Vinita, Okla. Feed-trough. No. 879,559; Feb. 18; Sp. p. 3425; Dr. p. 717; Gaz. vol. 132; p. 1466.
Leeds, E. F., Mount Carmel, Ill. Air-ship. No. 879,779; Feb. 18; Sp. p. 3872; Dr. pp. 811–12; Gaz. vol. 132; p. 1538.
Lefferts, H. D. B., and E. De Camp, Orange, N. J. Pneumatic tire. No. 878,075; Feb. 4; Sp. p. 371; Dr. p. 77; Gaz. vol. 132; p. 908.
Lehmann, E., Marchienne-au-Pont, Belgium. Friction-clutch. No. 880,083; Feb. 25; Sp. p. 4536; Dr. p. 955; Gaz. vol. 132; p. 1671.
Leipziger Föhrenwerke Gesellschaft mit beschränkter Haftung. (See Müller, A., assignor.)
Leitch, M., Elizabeth, N. J., assignor, by mesne assignments, to Metal Process Company. Washing apparatus. No. 878,544; Feb. 11; Sp. p. 1386; Dr. p. 285; Gaz. vol. 132; p. 1097.
Lemyre, J. E., Manchester, N. H. Bobbin for cotton-looms. No. 879,278; Feb. 18; Sp. p. 2831; Dr. p. 503; Gaz. vol. 132; p. 1375.
Lenker, W. H. (See Groff, W. L., assignor.)
Leonard, L. P., St. Cloud, Minn. Fresh-air-treatment apparatus. No. 879,391; Feb. 18; Sp. p. 3065; Dr. p. 638; Gaz. vol. 132; p. 1411.
Lepley, D. F., Connellsville, Pa. Triplex pump. No. 879,560; Feb. 18; Sp. p. 3426; Dr. p. 718; Gaz. vol. 132; p. 1467.
Leppla, J., Pittsburg, Pa. Bar for skylights and similar constructions. No. 878,211; Feb. 4; Sp. p. 655; Dr. p. 134; Gaz. vol. 132; p. 952.
Leslie, L. L. (See Sinclair and Leslie.)
Lester, G. W., Chicago, Ill. Feed-bag. No. 880,226; Feb. 25; Sp. p. 4833; Dr. p. 1022; Gaz. vol. 132; p. 1719.
Letts, A., *et al.* (See Smith, G. A., assignor.)
Letzkus, E. A., Allegheny, Pa. Exercising apparatus. No. 878,810; Feb. 11; Sp. p. 1935; Dr. p. 400; Gaz. vol. 132; p. 1184.
Levavasseur, L. M. J. C., Puteaux, France. Carbureter. No. 878,297; Feb. 4; Sp. p. 833; Dr. pp. 165–6; Gaz. vol. 132; p. 982.
Leveen, S. J., assignor of one-half to Electric Construction and Machinery Company, Rock Island, Ill. Electric fuse. No. 878,212; Feb. 4; Sp. p. 657; Dr. p. 135; Gaz. vol. 132; p. 953.
Levilly, O., Paris, France. System of cooling rooms by compressed air. No. 879,392; Feb. 18; Sp. p. 3067; Dr. p. 638; Gaz. vol. 132; p. 1411.
Levilly, O. E., Paris, France. Expansion-regulator for refrigerating-machines. No. 879,393; Feb. 18; Sp. p. 3068; Dr. p. 638; Gaz. vol. 132; p. 1412.
Levin, A. L., Denver, Colo. Opera-chair. No. 880,314; Feb. 25; Sp. p. 4997; Dr. pp. 1054–5; Gaz. vol. 132; p. 1748.
Lewis, H. J. S., New York, N. Y. Soap-dispenser. No. 879,780; Feb. 18; Sp. p. 3875; Dr. p. 812; Gaz. vol. 132; p. 1538.
Lewis, J. C., Milford, N. H. Adjustable table. No. 878,967; Feb. 11; Sp. p. 2222; Dr. p. 465; Gaz. vol. 132; p. 1233.
Lewis, J. C., Eldred, Ill. Game-counter. No. 879,183; Feb. 18; Sp. p. 2659; Dr. p. 554; Gaz. vol. 132; p. 1344.
Lewis, L. C., assignor to Monarch Manufacturing Company, Columbus, Ohio. Ironing-machine. No. 879,561; Feb. 18; Sp. p. 3430; Dr. p. 719; Gaz. vol. 132; p. 1467.
Lewis, L. R., Somerville, Mass. Music chart or table. No. 879,394; Feb. 18; Sp. p. 3070; Dr. p. 638; Gaz. vol. 132; p. 1412.
Lewis, R. (See Evans and Lewis.)
Lewis, T., Scranton, Pa. Bracket-hanger for winding-machines. No. 879,562; Feb. 18; Sp. p. 3432; Dr. p. 719; Gaz. vol. 132; p. 1467.
Lewis, W. H., Madison, Miss. Railway-rail joint. No. 880,384; Feb. 25; Sp. p. 5128; Dr. p. 1064; Gaz. vol. 132; p. 1770.
Lewis, W. H. A., Evansville, Ind. Folding bed. No. 879,657; Feb. 18; Sp. p. 3638; Dr. p. 761; Gaz. vol. 132; p. 1498.
Lichtenstein, J., Göttingen, Germany. Clock and watch. No. 878,076; Feb. 4; Sp. p. 374; Dr. p. 77; Gaz. vol. 132; p. 908.
Lichtig, I., Bonn-Süd., assignor to Bonner Maschinenfabrik & Eisengiesserei Fr. Mönkemöller & Cie., Bonn, Germany. Press. No. 878,208; Feb. 4; Sp. p. 834; Dr. p. 166; Gaz. vol. 132; p. 952.
Lidgerwood Manufacturing Company. (See Miller and Dickinson, assignors.)
Lima Locomotive and Machine Company. (See Feightner, L. E., assignor.)
Lincoln, W., Rock Falls, assignor to E. J. Cochran, Sterling, Ill. Chimney-cap. No. 878,811; Feb. 11; Sp. p. 1936; Dr. p. 400; Gaz. vol. 132; p. 1184.
Lindestrom, H., assignor of one-half to R. Tennerstedt, Chicago, Ill. Machine for pressing the seams of garments. No. 879,479; Feb. 18; Sp. p. 3256; Dr. pp. 678–9; Gaz. vol. 132; p. 1439.
Lindgren, K. A. (See Wettervik, A., assignor.)
Lindke, G. A., Detroit, Mich. Store-fixture. No. 878,644; Feb. 11; Sp. p. 1617; Dr. p. 330; Gaz. vol. 132; p. 1131.
Lindsay, F., Etna, Pa. Wrench. No. 878,968; Feb. 11; Sp. p. 2223; Dr. p. 465; Gaz. vol. 132; p. 1234.
Lindsay, H., assignor to Lindsay Wire Weaving Company, Cleveland, Ohio. Tension device for loom-shuttles. No. 879,184; Feb. 18; Sp. p. 2660; Dr. p. 555; Gaz. vol. 132; p. 1344.
Lindsay, W. L., Kansas City, Kans. Riveting tool or engine. No. 878,645; Feb. 11; Sp. p. 1618; Dr. pp. 330–1; Gaz. vol. 132; p. 1131.
Lindsay Wire Weaving Company. (See Lindsay, H., assignor.)
Lindsey, T. A., Biltmore, N. C. Punching-machine. No. 880,085; Feb. 25; Sp. p. 4541; Dr. p. 956; Gaz. vol. 132; p. 1672.
Lindstrom, G. G., and J. Wallin, Rockford, Ill. Musical-record holder. No. 879,279; Feb. 18; Sp. p. 2832; Dr. p. 503; Gaz. vol. 132; p. 1375.
Linger, F. A. (See Donaldson, E. B., assignor.)
Link, J. S. (See McNab and Link.)
Lippert, J. N. (See Kuhn, J., assignor.)
Liptal, L. New York, N. Y. Safety device. No. 878,969; Feb. 11; Sp. p. 2224; Dr. p. 466; Gaz. vol. 132; p. 1234.
Little, A. L. (See Hunter, H., assignor.)
Little, C. C., San Jose, Cal. Camera-shutter release. No. 879,058; Feb. 11; Sp. p. 2384; Dr. p. 499; Gaz. vol. 132; p. 1261.
Littlewood, J. C. (See Deschane and Littlewood.)
Lively, Z. A., Roseville, W. Va. Horse-detacher. No. 878,812; Feb. 11; Sp. p. 1937; Dr. p. 401; Gaz. vol. 132; p. 1185.
Livingstone, W., assignor to himself and J. H. Dale, New York, N. Y. Globe-holder for gas-burners. No. 878,299; Feb. 4; Sp. p. 835; Dr. p. 166; Gaz. vol. 132; p. 952.
Loberg, P. M., Homestead, N. D. Tramway. No. 879,280; Feb. 18; Sp. p. 2833; Dr. p. 504; Gaz. vol. 132; p. 1375.
Lobnitz, F., Renfrew, Scotland. Cutter of rock-cutting apparatus. No. 880,227; Feb. 25; Sp. p. 4835; Dr. pp. 1022–3; Gaz. vol. 132; p. 1719.

Locke, B. H., New York, N. Y. Rock-drill. No. 879,971; Feb. 25; Sp. p. 4311; Dr. pp. 901–2; Gaz. vol. 132; p. 1635.
Locke, F. M., Victor, N. Y. High-potential insulator. No. 878,646; Feb. 11; Sp. p. 1623; Dr. p. 331; Gaz. vol. 132; p. 1131.
Lodge, W. S., Albany, N. Y. Broom-cover. No. 880,086; Feb. 25; Sp. p. 4541; Dr. p. 956; Gaz. vol. 132; p. 1672.
Lodor, J. C., Wilmington, N. C. Trigger. No. 879,185; Feb. 18; Sp. p. 2661; Dr. p. 555; Gaz. vol. 132; p. 1345.
Loewenthal, A., *et al.*, trustees. (See Nelson, C. E., assignor.)
Lohse, R., Breslau, Germany. Liquid-meter. No. 879,563; Feb. 18; Sp. p. 3433; Dr. p. 719; Gaz. vol. 132; p. 1468.
Long, J. D., San Francisco, Cal. Rotary explosive-engine. No. 878,144; Feb. 4; Sp. p. 493; Dr. p. 105; Gaz. vol. 132; p. 930.
Longenecker, C., Beaver, Pa. Valve for furnaces. No. 878,213; Feb. 4; Sp. p. 659; Dr. p. 135; Gaz. vol. 132; p. 953.
Longenecker, C. I., Milwaukee, Wis. Internal-combustion engine. No. 878,647; Feb. 11; Sp. p. 1625; Dr. pp. 331–2; Gaz. vol. 132; p. 1132.
Longuemare, A. A., Paris, France. Cushioning device for automatic dilution-valves in carburetors. No. 878,077; Feb. 4; Sp. p. 374; Dr. p. 77; Gaz. vol. 132; p. 909.
Loos, G. J., assignor to J. H. B. Boyle, New York, N. Y. Trunk-fastener. No. 878,406; Feb. 4; Sp. p. 1035; Dr. p. 209; Gaz. vol. 132; p. 1018.
Looyer, H., Chicago, Ill. Ellipsograph. No. 880,228; Feb. 25; Sp. p. 4836; Dr. p. 1023; Gaz. vol. 132; p. 1720.
Lord, C. E., Norwood, Ohio, assignor to Bullock Electric Manufacturing Company. Turbo-alternator. No. 879,564; Feb. 18; Sp. p. 3434; Dr. p. 719; Gaz. vol. 132; p. 1468.
Lord, G. J., New Orleans, assignor to J. E. Thorsell and J. R. Hunter, Alexandria, La., and R. Wiggins, New York, N. Y. Automatically-moving sign. No. 880,315; Feb. 25; Sp. p. 5000; Dr. p. 1055; Gaz. vol. 132; p. 1748.
Lorenz, J., St. Louis, Mo. Ventilator. No. 878,214; Feb. 4; Sp. p. 661; Dr. p. 136; Gaz. vol. 132; p. 953.
Loring, B. C., Edgewood, assignor to J. Tillinghast, trustee, Providence, R. I. Sanding device. No. 879,658; Feb. 18; Sp. p. 3641; Dr. p. 761; Gaz. vol. 132; p. 1498.
Louden Machinery Company. (See Neller, A. H., assignor.)
Love, P. G., Denver, Colo. Horseshoe. No. 878,886; Feb. 11; Sp. p. 2072; Dr. p. 431; Gaz. vol. 132; p. 1208.
Loveless, E. L., Corning, N. Y. Vaporizer for medicaments. No. 878,296; Feb. 4; Sp. p. 832; Dr. p. 165; Gaz. vol. 132; p. 982.
Lovering, E. E., Dracut, and J. A. Pelletier, Lowell, Mass. Automatic stop mechanism for looms. No. 878,813; Feb. 11; Sp. p. 1939; Dr. p. 401; Gaz. vol. 132; p. 1185.
Low, A. A. (See Hertzberg and Wohl, assignors.)
Low, A. A., Horseshoe, N. Y. Cutting implement. No. 878,545; Feb. 11; Sp. p. 1383; Dr. p. 285; Gaz. vol. 132; p. 1097.
Low, A. A., Horseshoe, N. Y. Cutting implement. No. 878,648; Feb. 11; Sp. p. 1628; Dr. p. 332; Gaz. vol. 132; p. 1132.
Low, A. A., Horseshoe, N. Y. Hydrocarbon-motor. No. 879,659; Feb. 18; Sp. p. 3643; Dr. p. 762; Gaz. vol. 132; p. 1499.
Loy, W. C. (See Crim and Loy.)
Lubbers, E. R., Monticello, Ill. Detachable horseshoe. No. 879,781; Feb. 18; Sp. p. 3877; Dr. p. 812; Gaz. vol. 132; p. 1538.
Lucas, I., Passaic, N. J. Erasing instrument. No. 878,735; Feb. 11; Sp. p. 1786; Dr. p. 369; Gaz. vol. 132; p. 1160.
Lucas, W. (See Wolfe and Lucas.)
Ludewig, H., Charlottenburg, Germany. Rotary or centrifugal pump operating with auxiliary turbines. No. 879,059; Feb. 11; Sp. p. 2386; Dr. p. 500; Gaz. vol. 132; p. 1262.
Luedinghaus-Espenschied Wagon Co. (See Van Arsdale, J. H., assignor.)
Luman, C. C., assignor of one-half to J. F. Cannon, Erick, Okla. Flue-stop. No. 879,660; Feb. 18; Sp. p. 3643; Dr. p. 762; Gaz. vol. 132; p. 1499.
Lumb, J., Huddersfield, England. Combination guide and alarm for slubbing, reducing, and roving frames and like spinning and twisting machines. No. 878,300; Feb. 4; Sp. p. 837; Dr. p. 167; Gaz. vol. 132; p. 983.
Lumsden, D., Cisco, Ill. Clod-crusher. No. 878,887; Feb. 11; Sp. p. 2073; Dr. p. 431; Gaz. vol. 132; p. 1208.
Lungren, C. M., Bayonne, N. J., assignor to Safety Car Heating & Lighting Company. Strainer and perforate discharge for lamps. No. 880,149; Feb. 25; Sp. p. 4663; Dr. p. 983; Gaz. vol. 132; p. 1692.
Lüsebrink, G., Hagen, Germany. Steam-trap. No. 880,087; Feb. 25; Sp. p. 4542; Dr. p. 956; Gaz. vol. 132; p. 1672.
Lyman, C. M., assignor to International Heater Company, Utica, N. Y. Universal check-draft. No. 880,150; Feb. 25; Sp. p. 4669; Dr. p. 984; Gaz. vol. 132; p. 1692.
Lynchburg Foundry Co. (See McWane, C. W., assignor.)
Lyon & Healy. (See Smith, H. M., assignor.)
Lyon, J. H., Kearney, Nebr. House-truck. No. 878,546; Feb. 11; Sp. p. 1389; Dr. p. 285; Gaz. vol. 132; p. 1098.
Lyon, J. P., assignor of one-half to D. D. Rowlands, Ogden, Utah. Locomotive flag-signal and case. No. 877,935; Feb. 4; Sp. p. 79; Dr. p. 16; Gaz. vol. 132; p. 862.
MaLoney, M. F., Chicago, Ill. Hat-holder. No. 878,814; Feb. 11; Sp. p. 1941; Dr. p. 402; Gaz. vol. 132; p. 1185.
Maas, G. H., Milwaukee, Wis. Lock and sealing device. No. 878,215; Feb. 4; Sp. p. 663; Dr. p. 136; Gaz. vol. 132; p. 953.
MacDougall, W. T., Woodbridge, N. J. Book of account. No. 878,216; Feb. 4; Sp. p. 665; Dr. p. 137; Gaz. vol. 132; p. 954.
MacDougall, W. T., Woodbridge, N. J. Book of account. No. 878,217; Feb. 4; Sp. p. 667; Dr. p. 137; Gaz. vol. 132; p. 954.
MacGregor, W. F., assignor to J. I. Case Threshing Machine Company, Racine, Wis. Spark-arrester. No. 880,385; Feb. 25; Sp. p. 5130; Dr. p. 1084; Gaz. vol. 132; p. 1770.
MacRae, H., *et al.* (See Pritchard, T. W., assignor.)
Macdonald, J. W. (See Blake, J., assignor.)
Macdonald, M., Cleveland, Ohio, assignor to Macdonald Ticket & Ticket Box Company. Ticket-pad. No. 878,970; Feb. 11; Sp. p. 2225; Dr. p. 466; Gaz. vol. 132; p. 1234.
Macdonald, T. H., assignor to American Graphophone Company, Bridgeport, Conn. Production of disk sound-records. No. 878,547; Feb. 11; Sp. p. 1390; Dr. p. 285; Gaz. vol. 132; p. 1098.
Macdonald Ticket & Ticket Box Company. (See Macdonald, M., assignor.)
Macdonald, W. R., Pittsburg, Pa. Heating and ventilating system. No. 877,936; Feb. 4; Sp. p. 80; Dr. pp. 16–17; Gaz. vol. 132; p. 862.
Mackay, W. M., Newark, N. J. Vertical sectional boiler. No. 877,937; Feb. 4; Sp. p. 82; Dr. pp. 17–18; Gaz. vol. 132; p. 863.
Mackenzie, A., and T. M. Norton, Denver, Colo. Extensible clothes-line support. No. 880,031; Feb. 25; Sp. p. 4426; Dr. p. 929; Gaz. vol. 132; p. 1654.
Mackie, A. B., Glasgow, Scotland. Advertising device. No. 878,301; Feb. 4; Sp. p. 838; Dr. p. 167; Gaz. vol. 132; p. 983.
Macomber, G. R., New York, N. Y. Vibratory massage apparatus. No. 878,078; Feb. 4; Sp. p. 376; Dr. p. 78; Gaz. vol. 132; p. 909.
Maddox, W. J., Jamestown, N. Y. Sanding, abrading, or polishing machine. No. 878,649; Feb. 11; Sp. p. 1629; Dr. pp. 332–3; Gaz. vol. 132; p. 1132.
Maerten, C., Jr., Martinsville, N. Y. Pneumatic action for musical instruments. No. 879,110; Feb. 11; Sp. p. 2510; Dr. p. 521; Gaz. vol. 132; p. 1278.
Magaldi, G., Buccino, Italy. Cable or rope. No. 878,407; Feb. 4; Sp. p. 1037; Dr. pp. 209–10; Gaz. vol. 132; p. 1018.
Magner, W. P., Paton, Iowa. Dough-raising cabinet. No. 879,395; Feb. 18; Sp. p. 3074; Dr. p. 639; Gaz. vol. 132; p. 1412.
Maguolo, F. D., St. Louis, Mo. Display-cabinet. No. 879,782; Feb. 18; Sp. p. 3877; Dr. p. 813; Gaz. vol. 132; p. 1539.
Main, A., Pittsfield, Ill. Wagon. No. 878,971; Feb. 11; Sp. p. 2228; Dr. p. 466; Gaz. vol. 132; p. 1234.
Mait, J., Alameda, Cal. Concentrator. No. 879,481; Feb. 18; Sp. p. 3264; Dr. p. 680; Gaz. vol. 132; p. 1440.
Maker, H., assignor of one-half to F. E. Downing, Hibbing, Minn. Attachment for hoisting-engines. No. 878,216; Feb. 4; Sp. p. 669; Dr. p. 138; Gaz. vol. 132; p. 954.
Malloy, J. F. (See Mason, J., assignor.)
Malone, D. P., Rockwood, Ala. Combined hand and foot motor for churns. No. 880,229; Feb. 25; Sp. p. 4840; Dr. p. 1023; Gaz. vol. 132; p. 1720.
Maloy, J., and A. White, assignors of one-third to F. J. McFarland, Dunbar, Pa. Stuffing-box for throttles and valve-stems. No. 878,009; Feb. 4; Sp. p. 223; Dr. p. 49; Gaz. vol. 132; p. 887.
Maltitz, E. von, Chicago, Ill. Purifying iron. No. 879,480; Feb. 18; Sp. p. 3260; Dr. p. 679; Gaz. vol. 132; p. 1440.
Mandeville, I., assignor to Durand & Co., Newark, N. J. Clasp. No. 879,282; Feb. 18; Sp. p. 2836; Dr. p. 505; Gaz. vol. 132; p. 1376.
Manhattan Briar Pipe Company. (See O'Sullivan, W., assignor.)
Manhattan Screw and Stamping Works. (See Sussman, L., assignor.)
Mann, K., Zurich, Switzerland. Producing fat and oil preparations. No. 880,316; Feb. 25; Sp. p. 5002; Gaz. vol. 132; p. 1748.
Mann, K. E., Baltimore, Md. Lady's and child's hat. No. 878,219; Feb. 4; Sp. p. 671; Dr. p. 138; Gaz. vol. 132; p. 955.
Manning, I. F., Ottawa, Ill. Endless conveyer-belt. No. 878,650; Feb. 11; Sp. p. 1631; Dr. p. 333; Gaz. vol. 132; p. 1133.
Manson, R. H., assignor to Dean Electric Company, Elyria, Ohio. Electrical signaling and switching apparatus. No. 878,465; Feb. 4; Sp. p. 1142; Dr. p. 234; Gaz. vol. 132; p. 1036.
Manthey, R., Jersey City, N. J. Stem-winding watch. No. 878,220; Feb. 4; Sp. p. 672; Dr. pp. 138–9; Gaz. vol. 132, p. 955.
Manufacturers Machine Company. (See Bohr, N. C., assignor.)
Manufacturers Machine Company. (See English, A. M., assignor.)
Manufacturers Machine Company. (See Heys, J. J., assignor.)
Marble, G. W., *et al.* (See Hay, J. D., assignor.)
March, P. J. (See Few, F. C., assignor.)
Marcy, G. D., Dorchester, Mass. Pneumatic tool. No. 878,548; Feb. 11; Sp. p. 1392; Dr. p. 286; Gaz. vol. 132; p. 1098.
Marien, C. A., St. Louis, Mo. Cushion-tire wheel. No. 879,186; Feb. 18; Sp. p. 2662; Dr. p. 555; Gaz. vol. 132; p. 1345.
Marilly, E. M. A., Bolandoz, France. Lifting or hoisting gear for lifting forage, grain-bags, &c. No. 880,230; Feb. 25; Sp. p. 4842; Dr. p. 1024; Gaz. vol. 132; p. 1721.

Markel, H. R., Dayton, Ohio. Insulator. No. 878,302; Feb. 4; Sp. p. 339; Dr. p. 167; Gaz. vol. 132; p. 963.
Markey, W. A., Moundsville, W. Va. Door-lock. No. 878,972; Feb. 11; Sp. p. 2229; Dr. pp. 466–7; Gaz. vol. 132; p. 1235.
Markham Air Ride Company. (See Polley, D. F., assignor.)
Marlow, C. D., Dunellen, N. J. Sifter. No. 878,973; Feb. 11; Sp. p. 2230; Dr. p. 467; Gaz. vol. 132; p. 1235.
Marousch, J., Cleveland, Ohio. Excavating, hoisting, and conveying bucket. No. 879,972; Feb. 25; Sp. p. 4312; Dr. pp. 902–3; Gaz. vol. 132; p. 1635.
Marple, W., *et al.* (See Wallar, W. C., assignor.)
Marquette, J. S., assignor of one-half to F. J. Nelson, Baltimore, Md. Amalgamator. No. 879,825; Feb. 18; Sp. p. 3973; Dr. pp. 831–2; Gaz. vol. 132; p. 1554.
Marquis, C. A., St. Louis, Mo. Winding and cutting machine. No. 878,079; Feb. 4; Sp. p. 378; Dr. pp. 78–9; Gaz. vol. 132; p. 909.
Marr, A. N., Thorner, near Leeds, England. Apparatus for drying fabrics or fibrous material. No. 877,938; Feb. 4; Sp p. 86; Dr. pp. 18–20; Gaz. vol. 132; p. 863.
Martin, C., and M. Beasley, Dickson, Tenn. Automatic retaining-valve. No. 879 783; Feb. 18; Sp. p. 3878; Dr. pp. 813-14; Gaz. vol. 132; p. 1539.
Martin, F., Woonsocket, R. I., assignor, by mesne assignments, to Batten-Hayes Company, Lewiston, Me. Conveyer-belt cvener. No. 878,515; Feb. 11; Sp. p. 1943; Dr. p. 402; Gaz. vol. 132; p. 1186.
Martin, R. D., Habana, Cuba. Puzzle. No. 878,408; Feb. 4; Sp. p. 1039; Dr. p. 210; Gaz. vol. 132; p. 1018.
Martin, T., Pineville, La. Whip-socket. No. 878,974; Feb. 11; Sp. p. 2234; Dr. p. 467; Gaz. vol. 132; p. 1235.
Martin, T. A., assignor to Davis-Martin Company, Chicago, Ill. Animal-shears. No. 879,973; Feb. 25; Sp. p. 4314; Dr. p. 903; Gaz. vol. 132; p. 1636.
Marwitz, W. L. von de, Los Angeles, Cal. Door-hinge. No. 880,317; Feb. 25; Sp. p. 5004; Dr. p. 1055; Gaz. vol. 132; p. 1749.
Maschinenfabrik Grevenbroich. (See Hirt, L., assignor.)
Mascord, G. W., London, England. Printing-machine. No. 878,651; Feb. 11; Sp. p. 1633; Dr. pp. 334-5; Gaz. vol. 132; p. 1133.
Mason, J., assignor of one-half to J. F. Malloy, Wilmington, Del. Automatic fan. No. 878,736; Feb. 11; Sp. p. 1786; Dr. pp. 369–70; Gaz. vol. 132; p. 1160.
Mason, J. W. (See Keith, C. R., assignor.)
Massachusetts Wireless Equipment Company. (See Pierce, G. W., assignor.)
Massey, W. C., Atlanta, Ga. Writing device. No. 878,080; Feb. 4; Sp. p. 382; Dr. p. 80; Gaz. vol. 132; p. 910.
Matchan, G. L., *et al.* (See Pattee, W. G., assignor.)
Mateka, J., Chicago, Ill. Feed-bucket. No. 879,784; Feb. 18; Sp. p. 3881; Dr. p. 814; Gaz. vol. 132; p. 1539.
Mathers, E. A., assignor to E. E. Smith, Philadelphia, Pa. Dump-cart. No. 879,826; Feb. 18; Sp. p. 3975; Dr. p. 832; Gaz. vol. 132; p. 1554.
Matheson Motor Car Company. (See Greuter, C. R., assignor.)
Matthews, A. T., Worcester, Mass. Ball-bearing. No. 878,652; Feb. 11; Sp. p. 1637; Dr. p. 336; Gaz. vol. 132; p. 1133.
Matthews, E. J., and R. C. Gruwell, Stockton, Cal. Trolley-pulley. No. 878,853; Feb. 11; Sp. p. 1639; Dr. p. 336; Gaz. vol. 132; p. 1134.
Matthews, H. C., Salt Lake City, Utah. Truss for iron structures. No 878,221; Feb. 4; Sp. p. 675; Dr. p. 139; Gaz. vol. 132; p. 955
Matthews, H. E. and W. P., Salida, Colo. Car-replacer. No. 878,409; Feb. 4; Sp. p. 1040; Dr. p. 210; Gaz. vol. 132; p. 1019.
Matthews, W. P. (See Matthews, H. E. and W. P.)
Mattis, J. M., Tripp, S. D. Cow-milker. No. 878,222; Feb. 4; Sp. p. 676; Dr. p. 139; Gaz. vol. 132; p. 956.
Mattor, L. S., Plainfield, N. J. Sash-lock. No. 880,318; Feb. 25; Sp. p. 5005; Dr. p. 1056; Gaz. vol. 132; p. 1749.
Mauss, W., Brakpan, Transvaal. Chuck. No. 878,654; Feb. 11; Sp. p. 1640; Dr. p. 336; Gaz. vol. 132; p. 1134.
Mausey, J. P., Seattle, Wash. Water-heater. No. 878,975; Feb. 11; Sp. p. 2235; Dr. p. 468; Gaz. vol. 132; p. 1236.
Maxfield, J. R., Grand Saline, Tex. Permutation-lock. No. 879,785; Feb. 18; Sp. p. 3883; Dr. p. 814; Gaz. vol. 132; p. 1540.
Maxim, H. P., Hartford, Conn. Silent firearm No. 880,396; Feb. 25; Sp. p. 5132; Dr. p. 1064; Gaz. vol. 132; p. 1770.
Maxstadt, F. W., Los Angeles, Cal., assignor, by mesne assignments, to F. B. Cook, Chicago, Ill. Sleeve for joining wire ends. No. 878,816; Feb. 11; Sp. p. 1944; Dr. pp. 402–3; Gaz. vol. 132; p. 1186.
Maxwell, W. E., and J. M. Rowell, Wylam, Ala. Lifting-jack. No. 879,396; Feb. 18; Sp. p. 3075; Dr. p. 630; Gaz. vol. 132; p. 1412.
Maxwell, W. T., assignor of three-eighths to G. W. Eberhardt, Pittsburg, Pa. Gas-engine. No. 878,888; Feb. 11; Sp. p. 2075; Dr. p. 432; Gaz. vol. 132; p. 1209.
Mayberry, T. G. and W. H., Reading, Pa. Pleasure-railway. No. 879,283; Feb. 18; Sp. p. 2837; Dr. p. 595; Gaz. vol. 132; p. 1376.
Mayberry, W. H. (See Mayberry, T. G. and W. H.)
Mayer, A. R., assignor to E. G. Soltmann, New York, N. Y. Composition of matter for the removal of ink. No. 878,817; Feb. 11; Sp. p. 1947; Gaz. vol. 132; p. 1186.
Maynard, R. F., New York, N. Y. Artist's easel. No. 878,549; Feb. 11; Sp. p. 1394; Dr. p. 286; Gaz. vol. 132; p. 1099.
Mayo, W. C., El Paso, assignor of two-thirds to G. E. Briggs, Barstow, and J. Houlehan, El Paso, Tex. Nut-lock. No. 879,290; Feb 19; Sp. p. 2873; Dr. p. 599; Gaz. vol. 132; p. 1379.
Mayo, W. C., and J. Houlehan, assignors of one-third to G. E. Briggs, El Paso, Tex. Ticket-vending machine. No. 879,284; Feb. 18; Sp. p. 2839; Dr. pp. 595–6; Gaz. vol. 132; p. 1377.
Mayo, W. C., and J. Houlehan, El Paso, assignors of one-third to G. E. Briggs, Barstow, Tex. Automatic multiple fuse-block. No. 879,285; Feb. 18; Sp. p. 2842; Dr. pp. 596–7; Gaz. vol. 132; p. 1377.
Mayo, W. C., and J. Houlehan, El Paso, assignors of one-third to G. E. Briggs, Barstow, Tex. Yielding power-coupling. No. 879,286; Feb. 18; Sp. p. 2849; Dr. p. 597; Gaz. vol. 132; p. 1378.
Mayo, W. C., and J. Houlehan, El Paso, assignors of one-third to G. E. Briggs, Barstow, Tex. Car-wheel. No. 879,287; Feb. 18; Sp. p. 2853; Dr. p. 597; Gaz. vol. 132; p. 1378.
Mayo, W. C., and J. Houlehan, El Paso, assignors of one-third to G. E. Briggs, Barstow, Tex. Annunciator. No. 879,288; Feb. 18; Sp. p. 2856; Dr. p. 598; Gaz. vol. 132; p. 1379.
Mayo, W. C., and J. Houlehan, El Paso, assignors of one-third to G. E. Briggs, Barstow, Tex. Means for converting reciprocatory motion into rotary motion. No. 879,289; Feb. 18; Sp. p. 2869; Dr. p. 599; Gaz. vol. 132; p. 1379.
Mayo, W. C., and J. Houlehan, El Paso, assignors of one-third to G. E. Briggs, Barstow, Tex. Air-brake lighting, and signaling system for railway-trains. No. 879,307; Feb. 18; Sp. p. 3076; Dr. pp. 630–41; Gaz. vol. 132; p. 1413.
McAdoo, W., Reading, Pa. Spout for cans. No. 878,304; Feb. 4; Sp. p. 343; Dr. p. 168; Gaz. vol. 132; p. 984.
McCaffrey, R. C., Spokane, Wash. Trap for basins, sinks, &c. No. 880,156; Feb. 25; Sp. p. 4680; Dr. p. 985; Gaz. vol. 132; p. 1694.
McCann, J. F., New York, N. Y. Railway-lamp. No. 878,936; Feb. 11; Sp. p. 2258; Dr. p. 472; Gaz. vol. 132; p. 1239.
McCarthy, S. J., Galveston, Tex. Grain drying and cooling machine. No. 877,942; Feb. 4; Sp. p. 97; Dr. p. 22; Gaz. vol. 132; p. 865.
McCasland, C. K., Alvarado, Tex. Plow. No. 878,821; Feb. 11; Sp. p. 1951; Dr. p. 404; Gaz. vol. 132; p. 1187.
McCauley, E. H. (See McGiffin and McCauley.)
McClellan, H. W., Canterbury, Victoria, Australia. Gas water-heater. No. 879,486; Feb. 18; Sp. p. 3275; Dr. p. 684; Gaz. vol. 132; p. 1443.
McClintock, C. H., Hartford City, Ind. Crude-oil engine. No. 879,884; Feb. 25; Sp. p. 4118; Dr. p. 864; Gaz. vol. 132; p. 1604.
McClintock, E., St. Paul, Minn. Interlocking relay. No. 879,885; Feb. 25; Sp. p. 4122; Dr. p. 865; Gaz. vol. 132; p. 1605.
McClintock, E., St. Paul, Minn. Highway-crossing signal for electric roads. No. 879,886; Feb. 25; Sp. p. 4124; Dr. p. 865; Gaz. vol. 132; p. 1605.
McCloud, E. H., Columbus, Ohio. Operating device for flexible roller-shutters. No. 878,659; Feb. 11; Sp. p. 1645; Dr. pp. 337–8; Gaz. vol. 132; p. 1136.
McColl, H. P., Hawthorn, Victoria, Australia. Regulating magnet-controller for electric elevators. No. 879,789; Feb. 18; Sp. p. 3891; Dr. p. 816; Gaz. vol. 132; p. 1541.
McCormick, J., Des Moines, Iowa. Automatic bundle-shocker for binders. No. 879,403; Feb. 18; Sp. p. 3096; Dr. pp. 643–4; Gaz. vol. 132; p. 1415.
McDonald, J. J., Port Madison, Wash. Mop-wringer. No. 878,660; Feb. 11; Sp. p. 1647; Dr. p. 338; Gaz. vol. 132; p. 1136.
McDonald, R. A., and J. Salter, North Side Boulardorie, Nova Scotia, Canada. Hair dresser and trimmer. No. 879,509; Feb. 18; Sp. p. 3444; Dr. p. 721; Gaz. vol. 132; p. 1470.
McDougall, D., Fall River, Mass. Clothes-line prop. No. 878,415; Feb. 4; Sp. p. 1049; Dr. p. 212; Gaz. vol. 132; p. 1020.
McDougall, D., Fall River, Mass. Clothes-line prop. No. 878,416; Feb. 4; Sp. p. 1051; Dr. p. 212; Gaz. vol. 132; p. 1021.
McDowell, J. G. (See Grant and McDowell.)
McEachern, J. W., Eula, Tex. Trap. No. 878,987; Feb. 11; Sp. p. 2259; Dr. p. 987; Gaz. vol. 132; p. 1240.
McElroy, J. H., Chicago, Ill. Voting-machine. No. 879,114; Feb. 11; Sp. p. 2522; Dr. p. 524; Gaz. vol. 132; p. 1279.
McFarland, C. N., Kingston, Pa., and C. Wales, Cleveland, Ohio, assignors to Adder Machine Company, Kingston, Pa. Carrying mechanism for adding-machines. No. 880,157; Feb. 25; Sp. p. 4681; Dr. p. 986; Gaz. vol. 132; p. 1694.
McFarland, C. N., Kingston, Pa., and C. Wales, Cleveland, Ohio, assignors to Adder Machine Company, Kingston, Pa. Momentum-absorber for adding-machines. No. 880,158; Feb. 25; Sp. p. 4684; Dr. p. 987; Gaz. vol. 132; p. 1695.
McFarland, C. N., Dorranceton, assignor to Adder Machine Company, Kingston, Pa. Adding-machine. No. 880,159; Feb. 25; Sp. p. 4686; Dr. pp. 987–8; Gaz. vol. 132; p. 1695.
McFarland, F. J. (See Maloy and White, assignors.)
McFarland, G. B., assignor of one-half to W. I. Speice, Columbus, Nebr. Flour-bleaching apparatus. No. 878,738; Feb. 11; Sp. p. 1760; Dr. p. 371; Gaz. vol. 132; p. 1161.
McGary, A., and J. W. Jepson, New York, N. Y., assignors to Bliss Electric Car Lighting Company, Milwaukee, Wis. Means for mounting and driving dynamos for electric-car lighting. No. 878,305; Feb. 4; Sp. p. 344; Dr. p. 168; Gaz. vol. 132; p. 984.

McGee, R. M., and W. M. Jones, Dallas, Tex. Automatic railway-switch. No. 878,822; Feb. 11; Sp. p. 1952; Dr. p. 404; Gaz. vol. 132; p. 1187.
McGlehan, C. D., Jersey City, N. J. Antislipping and non-wearing medium. No. 879,790; Feb. 18; Sp. p. 3893; Dr. p. 816; Gaz. vol. 132; p. 1542.
McGiffin, H. H., and E. H. McCauley, Pittsburg, assignors to J. P. Brennan, Braddock, W. L. Elford, and said McGiffin, Pittsburg, Pa. Clamping device. No. 880,460; Feb. 25; Sp. p. 5307; Dr. p. 1117; Gaz. vol. 132; p. 1797.
McGiffin, H. H., and E. H. McCauley, Pittsburg, assignors to J. P. Brennan, Braddock, W. L. Elford, and said McGiffin, Pittsburg, Pa. Wind-guard. No. 880,461; Feb. 25; Sp. p. 5309; Dr. p. 1117; Gaz. vol. 132; p. 1798.
McGovern, T. J., Hartford, Conn. Button. No. 878,149; Feb. 4; Sp. p. 501; Dr. p. 107; Gaz. vol. 132; p. 932.
McGregor, R. B., Sherard, Miss. Means for protecting river-banks. No. 880,390; Feb. 25; Sp. p. 5138; Dr. p. 1085; Gaz. vol. 132; p. 1772.
McIntire, J. N., assignor to Brunswick-Balke-Collender Company, New York, N. Y. Combined sofa or settee and pool or billiard table. No. 878,555; Feb. 11; Sp. p. 1417; Dr. p. 290; Gaz. vol. 132; p. 1101.
McInturf, F. and F. T., Mendota, Ill. Corn-husking machine. No. 879,404; Feb. 18; Sp. p. 3103; Dr. pp. 645–6; Gaz. vol. 132; p. 1416.
McInturf, F. and F. T., Mendota, Ill. Corn-husking machine. No. 879,405; Feb. 18; Sp. p. 3107; Dr. p. 646; Gaz. vol. 132; p. 1416.
McInturf, F. T. (See McInturf, F. and F. T.)
McIntyre, D. D., Bucklin, Kans. Wind-motor. No. 880,321; Feb. 25; Sp. p. 5009; Dr. p. 1057; Gaz. vol. 132; p. 1750.
McIvor, D., Humboldt, Minn. Spark-arrester. No. 878,227; Feb. 4; Sp. p. 688; Dr. p. 142; Gaz. vol. 132; p. 957.
McKean, J. T., Santa Cruz, Cal. Plate-holder. No. 878,010; Feb. 4; Sp. p. 224; Dr. p. 49; Gaz. vol. 132; p. 887.
McKenzie, A., Jamestown, assignor, by mesne assignments, to U. S. Standard Voting Machine Co., Rochester, N. Y. Voting-machine. No. 879,664; Feb. 18; Sp. p. 3649; Dr. p. 764; Gaz. vol. 132; p. 1500.
McLaren, F. J. (See Johnson and McLaren.)
McLaughlin, J. C., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 878,988; Feb. 11; Sp. p. 2261; Dr. p. 473; Gaz. vol. 132; p. 1240.
McLaughlin, W. K., *et al.* (See Wolke, G., assignor.)
McLeod, K. K., White Bear Lake, Minn. Journal-support for centrifugal machines. No. 879,115; Feb. 11; Sp. p. 2526; Dr. p. 525; Gaz. vol. 132; p. 1279.
McLeod, R. S., Manchester, England. System of electrical distribution. No. 878,661; Feb. 11; Sp. p. 1648; Dr. pp. 338–9; Gaz. vol. 132; p. 1136.
McMahon, O. E., Elgin, Ill. Reel. No. 879,570; Feb. 18; Sp. p. 3445; Dr. p. 721; Gaz. vol. 132; p. 1470.
McMahon, O. E., Elgin, Ill. Gripping device. No. 880,090; Feb. 25; Sp. p. 4546; Dr. p. 957; Gaz. vol. 132; p. 1673.
McManus, J. (See Klinge, W., assignor.)
McMurtrie, T. A., assignor, by mesne assignments, to Kimmerle Concrete Machinery Company, Los Angeles, Cal. Artificial-stone machine. No. 878,417; Feb. 4; Sp. p. 1052; Dr. p. 213; Gaz. vol. 132; p. 1021.
McNab, N. S., Caulfield, and J. S. Link, Melbourne, Victoria, Australia. Time-recording register. No. 879,665; Feb. 18; Sp. p. 3656; Dr. pp. 764–5; Gaz. vol. 132; p. 1501.
McNair, R. H. and W. A., Peoria, Ill. Adding-machine. No. 880,034; Feb. 25; Sp. p. 4425; Dr. pp. 931–4; Gaz. vol. 132; p. 1655.
McNair, W. A. (See McNair, R. H. and W. A.)
McNaughton, J. M., *et al.* (See Reardon, D. W., assignor.)
McNaughton, W. W., Newark, N. J. Stationery novelty. No. 878,823; Feb. 11; Sp. p. 1956; Dr. p. 405; Gaz. vol. 132; p. 1188.
McNearney, J. J., Pittsburg, Pa. Hat, coat, and umbrella rack. No. 880,232; Feb. 25; Sp. p. 4845; Dr. p. 1024; Gaz. vol. 132; p. 1721.
McPhee, C. C., Montreal, Quebec, Canada. Type-writing machine. No. 880,391; Feb. 25; Sp. p. 5139; Dr. pp. 1085–7; Gaz. vol. 132; p. 1772.
McQuade, J. A., Lowell, Mass. Street-car fender. No. 880,233; Feb. 25; Sp. p. 4847; Dr. p. 1025; Gaz. vol. 132; p. 1722.
McTammany, F. A. (See McTammany and Ford, assignors.)
McTammany, J., Providence, R. I., and E. A. Ford, Uxbridge, Mass., assignors to F. A. McTammany, New York, N. Y. Mechanical musical instrument. No. 878,150; Feb. 4; Sp. p. 502; Dr. pp. 107–8; Gaz. vol. 132; p. 932.
McVail, D. C., and S. Mechan, Glasgow, Scotland. Caster. No. 880,234; Feb. 25; Sp. p. 4850; Dr. p. 1025; Gaz. vol. 132; p. 1722.
McWane, C. W., assignor to Lynchburg Foundry Co., Lynchburg, Va. Plowshare. No. 879,457; Feb. 18; Sp. p. 3277; Dr. p. 685; Gaz. vol. 132; p. 1443.
Mead, A. G., Somerville, Mass., assignor to United States Fastener Company. Fastener. No. 878,550; Feb. 11; Sp. p. 1396; Dr. p. 287; Gaz. vol. 132; p. 1099.
Mechan, S. (See McVail and Mechan.)
Meek Company. (See Townsend, F. S., assignor.)
Megrue, C. G., New York, N. Y. Fastening device. No. 880,319; Feb. 25; Sp. p. 5006; Dr. p. 1056; Gaz. vol. 132; p. 1749.
Meinen, D., Walhalla, Tex. Implement for crushing clods of earth, &c. No. 879,291; Feb. 18; Sp. p. 2876; Dr. p. 600; Gaz. vol. 132; p. 1380.
Meis, H. K., Lawton, Okla. Curtain-fixture. No. 878,410; Feb. 4; Sp. p. 1042; Dr. p. 210; Gaz. vol. 132; p. 1019.
Meisselbach, A. F., assignor to A. F. Meisselbach & Brother, Newark, N. J. Inhaler. No. 878,223; Feb. 4; Sp. p. 677; Dr. p. 139; Gaz. vol. 132; p. 956.
Meisselbach, A. F., and P. Catucci, assignors to A. F. Meisselbach & Brother, Newark, N. J. Pocket-tool. No. 878,224; Feb. 4; Sp. p. 678; Dr. p. 140; Gaz. vol. 132; p. 956.
Melvin, C. H., assignor to Deere & Company, Moline, Ill. Lister-cultivator. No. 879,187; Feb. 18; Sp. p. 2663; Dr. pp. 555–7; Gaz. vol. 132; p. 1345.
Mercer, A. I., Mannington, W. Va. Music-leaf turner. No. 880,032; Feb. 25; Sp. p. 4428; Dr. pp. 929–30; Gaz. vol. 132; p. 1654.
Meredith, C. A., St. Louis, Mo. Vehicle-spring. No. 878,081; Feb. 4; Sp. p. 384; Dr. p. 80; Gaz. vol. 132; p. 910.
Merrall, W. G., Onandaga, Ontario, Canada. Baling-press. No. 879,292; Feb. 18; Sp. p. 2877; Dr. p. 600; Gaz. vol. 132; p. 1380.
Merrell, I. S. (See Merrell and Gere.)
Merrell, L. C. and I. S., and W. B. Gere, assignors to Merrell-Soule Company, Syracuse, N. Y. Separating the moisture from the constituent solids of liquids. No. 878,977; Feb. 11; Sp. p. 2240; Dr. p. 469; Gaz. vol. 132; p. 1236.
Merrell-Soule Company. (See Merrell and Gere, assignors.)
Merrell, W. E., Stockton, Cal. Cutlery-washing machine. No. 878,010; Feb. 4; Sp. p. 224; Dr. p. 49; Gaz. vol. 132; p. 887.
Merrick, F. W., Boston, Mass. Automatic presser-foot-lifting mechanism for sewing-machines. No. 879,565; Feb. 18; Sp. p. 3436; Dr. p. 720; Gaz. vol. 132; p. 1468.
Merrill, E. R., assignor to J. A. Jeffrey, Columbus, Ohio. Mining-machine. No. 878,976; Feb. 11; Sp. p. 2237; Dr. p. 468; Gaz. vol. 132; p. 1236.
Merrow, E. L., assignor to National Ring Traveler Company, Providence, R. I. Ring traveler. No. 879,293; Feb. 18; Sp. p. 2880; Dr. p. 600; Gaz. vol. 132; p. 1380.
Mestraud, A. C., assignor to O. J. Junge, Lincoln, Nebr. Reproducer for phonographs. No. 880,320; Feb. 25; Sp. p. 5008; Dr. p. 1056; Gaz. vol. 132; p. 1749.
Metal Process Company. (See Leitch, M., assignor.)
Metal Sectional Furniture Company. (See Holland, E. C., assignor.)
Metallurgical Company of America. (See Meyer, F., assignor.)
Metcalf, E. P., *et al.*, trustees. (See Nelson, C. E., assignor.)
Metcalf, L. B., Spartanburg, S. C. Baling-press. No. 878,978; Feb. 11; Sp. p. 2243; Dr. p. 469; Gaz. vol. 132; p. 1237.
Meyer, F., Engelwood, N. J., assignor to Metallurgical Company of America, New York, N. Y. Metallurgy of ores of zinc, &c. No. 879,482; Feb. 18; Sp. p. 3266; Dr. pp. 680–1; Gaz. vol. 132; p. 1441.
Meyer, F., Englewood, N. J., assignor to Metallurgical Company of America, New York, N. Y. Metallurgical furnace. No. 879,483; Feb. 18; Sp. p. 3269; Dr. pp. 681–2; Gaz. vol. 132; p. 1441.
Meyer, H., New York, N. Y. Pneumatic action. No. 879,786; Feb. 18; Sp. p. 3885; Dr. p. 815; Gaz. vol. 132; p. 1540.
Meyer, H., New York, N. Y. Coin-controlled apparatus. No. 879,927; Feb. 18; Sp. p. 3977; Dr. pp. 832–3; Gaz. vol. 132; p. 1554.
Meyrowitz Manufacturing Company. (See Dieckmann, C. F., assignor.)
Michael, F. M. (See Pearsall, C. W., assignor.)
Michell, A. G. M. (See Newton and Michell.)
Michon, J. H. M., Aneta, N. D. Buckle. No. 879,974; Feb. 25; Sp. p. 4316; Dr. p. 903; Gaz. vol. 132; p. 1636.
Middleton, J. R., Everett, Mass. Tube or flue cleaner. No. 878,145; Feb. 4; Sp. p. 494; Dr. p. 106; Gaz. vol. 132; p. 930.
Miles, C. W., Cincinnati, Ohio. Ice-machine compressor. No. 878,483; Feb. 4; Sp. p. 1200; Dr. p. 249; Gaz. vol. 132; p. 1043.
Miller, C., Del Rio, Tex. Blind-tenon. No. 878,979; Feb. 11; Sp. p. 2245; Dr. p. 469; Gaz. vol. 132; p. 1237.
Miller, C. K., Seiling, Okla. Machine for baling broom-corn. No. 877,930; Feb. 4; Sp. p. 92; Dr. p. 21; Gaz. vol. 132; p. 864.
Miller, C. T., and G. A. Carlson, Moscow, Idaho. Bale-binding attachment for hay-presses. No. 879,975; Feb. 25; Sp. p. 4318; Dr. pp. 903–4; Gaz. vol. 132; p. 1636.
Miller, C. W., Milwaukee, Wis. Relief-valve. No. 880,088; Feb. 25; Sp. p. 4543; Dr. p. 956; Gaz. vol. 132; p. 1672.
Miller, D. F., Lowell, Mass. Electric sign. No. 878,146; Feb. 4; Sp. p. 496; Dr. p. 106; Gaz. vol. 132; p. 931.
Miller, G. F., Frankfort-on-the-Main, Germany. Packing of pipe-joints. No. 878,655; Feb. 11; Sp. p. 1641; Dr. p. 336; Gaz. vol. 132; p. 1134.
Miller, I. P., and L. M. Rakestraw, assignors to W. M. Hogle and L. Y. Williams, Toledo, Ohio. Gas-engine casing or frame. No. 878,466; Feb. 4; Sp. p. 1144; Dr. pp. 234–5; Gaz. vol. 132; p. 1037.

Miller, J. (See Brandon, W., assignor.)
Miller, J. C., assignor to Miller Pasteurizing Machine Company, Canton, Ohio. Pasteurizer. No. 878,225; Feb. 4; Sp. p. 679; Dr. pp. 140–1; Gaz. vol. 132; p. 956.
Miller, J. J., St. Joseph, Mich., assignor to W. P. Healy, Chicago, Ill. Machinery for use in making wire-bound boxes. No. 878,737; Feb. 11; Sp. p. 1788; Dr. pp. 370–7; Gaz. vol. 132; p. 1160.
Miller, J. J., and J. Dreistadt, Jr., Old Forge, Pa. Paper cartridge. No. 878,813; Feb. 11; Sp. p. 1948; Dr. p. 403; Gaz. vol. 132; p. 1186.
Miller, J. Z., Indianapolis, Ind. Folding seat. No. 878,889; Feb. 11; Sp. p. 2079; Dr. pp. 432–3; Gaz. vol. 132; p. 1209.
Miller, M., St. Louis, Mo. Automatically-controlled or self-regulating pumping mechanism. No. 879,111; Feb. 11; Sp. p. 2513; Dr. p. 522; Gaz. vol. 132; p. 1278.
Miller, M., St. Louis, Mo. Water-purifying apparatus. No. 879,112; Feb. 11; Sp. p. 2517; Dr. pp. 522–3; Gaz. vol. 132; p. 1278.
Miller Pasteurizing Machine Company (See Miller, J. C., assignor.)
Miller, S. G., assignor, by mesne assignments, to Smith & Furbush Machine Company, Philadelphia, Pa. Raveling-machine. No. 878,980; Feb. 11; Sp. p. 2246; Dr. pp. 469–70; Gaz. vol. 132; p. 1237.
Miller, T. S., South Orange, N. J., and J. H. Dickinson, Atlanta, Ga. Hoisting and conveying apparatus. No. 878,982; Feb. 11; Sp. p. 2251; Dr. pp. 470–1; Gaz. vol. 132; p. 1238.
Miller, T. S., South Orange, and J. H. Dickinson, Montclair, N. J. Hoisting and conveying device. No. 879,113; Feb. 11; Sp. p. 2520; Dr. pp. 523–4; Gaz. vol. 132; p. 1279.
Miller, T. S., South Orange, N. J., and J. H. Dickinson, Atlanta, Ga.; said Dickinson assignor to Lidgerwood Manufacturing Company. Hoisting and conveying device. No. 878,482; Feb. 4; Sp. p. 1204; Dr. p. 248; Gaz. vol. 132; p. 1043.
Miller, W. E., Oakdale, Cal. Ribbon show-case. No. 880,151; Feb. 25; Sp. p. 4670; Dr. p. 984; Gaz. vol. 132; p. 1093.
Miller, W. J., Coffeyville, Kans. Mold. No. 879,294; Feb. 18; Sp. p. 2881; Dr. p. 601; Gaz. vol. 132; p. 1381.
Millers Falls Company. (See Stebbins, W. M., assignor.)
Mills, D. B., East Orange, N. J. Protecting-hood for spark-plugs. No. 878,551; Feb. 11; Sp. p. 1399; Dr. p. 287; Gaz. vol. 132; p. 1099.
Minton, O., Brooklyn, N. Y. Carbureter for internal-combustion engines. No. 878,411; Feb. 4; Sp. p. 1043; Dr. p. 211; Gaz. vol. 132; p. 1019.
Minyard, J. T., Mulberry, Ark. Support for vehicle-shafts. No. 879,188; Feb. 18; Sp. p. 2668; Dr. p. 557; Gaz. vol. 132; p. 1346.
Mischke, A. F., Fremont, Ohio. Pruning-shears. No. 879,882; Feb. 25; Sp. p. 4115; Dr. p. 863; Gaz. vol. 132; p. 1604.
Mishler, J. T., Johnstown, Pa. Trolley-wheel. No. 878,656; Feb. 11; Sp. p. 1642; Dr. p. 337; Gaz. vol. 132; p. 1135.
Mitchell, A. W., Georgetown, Ohio. Lantern-holder. No. 879,566; Feb. 18; Sp. p. 3439; Dr. p. 720; Gaz. vol. 132; p. 1469.
Mitchell, C. E., New Britain, Conn. Fireplace-screen. No. 877,940; Feb. 4; Sp. p. 95; Dr. pp. 21–2; Gaz. vol. 132; p. 864.
Mitchell, M., Peoria, Ill. Corn-planter. No. 879,398; Feb. 18; Sp. p. 3080; Dr p. 641; Gaz. vol. 132; p. 1413.
Mitchell, P. B. (See Williams, Mitchell, and Hathaway.)
Mittasch, A. (See Bosch and Mittasch.)
Moan, J. E., Vincennes, Ind. Whiffletree. No. 880,231; Feb. 25; Sp. p. 4843; Dr. p. 1024; Gaz. vol. 132; p. 1721.
Mobley, H. E., Trafalgar, assignor of two-thirds to L. E. Slack, Franklin, and C. E. Ragsdale, Trafalgar, Ind. Wrench. No. 878,961; Feb. 11; Sp. p. 2250; Dr. p. 470; Gaz. vol. 132; p. 1238.
Mock, C. P. (See Lash and Mock.)
Moeller, A., Chicago, Ill. Magazine-revolver. No. 879,295; Feb. 18; Sp. p. 2683; Dr. p. 601; Gaz. vol. 132; p. 1381.
Moffitt, E. R., assignor to Imperial Gas Engine Co., San Francisco, Cal. Electric sparking device for gas-engines. No. 878,412; Feb. 4; Sp. p. 1044; Dr. p. 211; Gaz. vol. 132; p. 1020.
Mole, A., Fordsburg, Transvaal. Device for balancing sashes. No. 878,983; Feb. 11; Sp. p. 2253; Dr. p. 471; Gaz. vol. 132; p. 1238.
Monarch Manufacturing Company. (See Lewis, L. C., assignor.)
Monarch Seal Company. (See Schmitt, E. D., assignor.)
Monarch Telephone Manufacturing Company. (See Fricke, W. A., assignor.)
Monarch Typewriter Company. (See Coo, T. J., assignor.)
Monarch Typewriter Company. (See Steele, H. H., assignor.)
Monard, A., H. Dumartin, and E. A. Moutier, Paris, France. Apparatus for working and interlocking switch-points and signals for railways. No. 878,552; Feb. 11; Sp. p. 1402; Dr. pp. 287–9; Gaz. vol. 132; p. 1100.
Monette, J. B., Providence, R. I. Counter-protecting device for stores, &c. No. 878,147; Feb. 4; Sp. p. 498; Dr. p. 106; Gaz. vol. 132; p. 931.
Monnot, J. F., assignor to Duplex Metals Company, New York, N. Y. Apparatus for producing compound metal bodies. No. 878,984; Feb. 11; Sp. p. 2254; Dr. p. 471; Gaz. vol. 132; p. 1239.
Montrose, L. H., Camden, N. J. Burial-casket carrier. No. 878,985; Feb. 11; Sp. p. 2256; Dr. pp. 471–2; Gaz. vol. 132; p. 1239.
Moody, T. P., Chicago, Ill. Combined cigar-tip cutter and lighter. No. 878,082; Feb. 4; Sp. p. 385; Dr. p. 80; Gaz. vol. 132; p. 910.
Mooney, F. H., Chicago, Ill. Self-filling fountain-pen. No. 879,296; Feb. 18; Sp. p. 2886; Dr. p. 602; Gaz. vol. 132; p. 1381.
Mooney, H. E., Hastings, England. Instrument for use in navigation. No. 878,819; Feb. 11; Sp. p. 1949; Dr. p. 403; Gaz. vol. 132; p. 1187.
Moore, C., Becker, Minn. Grain-car door. No. 879,976; Feb. 25; Sp. p. 4321; Dr. p. 904; Gaz. vol. 132; p. 1636.
Moore, C. E., Los Angeles, Cal. Electric signal for elevators. No. 880,152; Feb. 25; Sp. p. 4671; Dr. p. 984; Gaz. vol. 132; p. 1693.
Moore, C. H., New York, N. Y. Water-closet-outlet connection. No. 879,300; Feb. 18; Sp. p. 3088; Dr. p. 642; Gaz. vol. 132; p. 1414.
Moore, E. Y., Cleveland, Ohio. Hoist. No. 878,226; Feb. 4; Sp. p. 685; Dr. p. 141; Gaz. vol. 132; p. 957.
Moore, E. Y., Cleveland, Ohio. Mechanism for locking trolleys. No. 878,484; Feb. 4; Sp. p. 1208; Dr. p. 249; Gaz. vol. 132; p. 1044.
Moore, O. L., *et al.* (See Payne, J. S., assignor.)
Moore, R. C., *et al.* (See Payne, J. S., assignor.)
Moore, T. J., New York, N. Y. Non-condensing and storm-proof mausoleum, &c. No. 878,303; Feb. 4; Sp. p. 841; Dr. p. 168; Gaz. vol. 132; p. 983.
Moorman, L. J., Chicago, Ill. Sharpening device for skates, &c. No. 880,153; Feb. 25; Sp. p. 4674; Dr. p. 984; Gaz. vol. 132; p. 1693.
Moormeister, F. T. M., La Grande, Oreg. Uterine curette. No. 879,297; Feb. 18; Sp. p. 2887; Dr. p. 602; Gaz. vol. 132; p. 1382.
Morants, W. (See Keeler, F. W., assignor.)
Moreau, J., St. Germain de Grantham, Quebec, Canada. Potato-digger. No. 879,661; Feb. 18; Sp. p. 3644; Dr. pp. 762–3; Gaz. vol. 132; p. 1490.
Morency, J. P. (See Chantigney and Morency.)
Morgan-Gardner Electric Company. (See Noble, R. E., assignor.)
Moritz, F., Dortmund, Germany. Mechanically-playing keyed instrument. No. 880,089; Feb. 25; Sp. p. 4545; Dr. p. 957; Gaz. vol. 132; p. 1673.
Morrill, D. O., assignor of one-half to L. W. Morrill, Spokane, Wash. Plumb-bob. No. 880,387; Feb. 25; Sp. p. 5135; Dr. p. 1084; Gaz. vol. 132; p. 1771.
Morrill, L. W. (See Morrill, D. O., assignor.)
Morris, E. T., Elburn, Ill. Culvert-mold. No. 879,662; Feb. 18; Sp. p. 3647; Dr. p. 763; Gaz. vol. 132; p. 1500.
Morris, H., New Rochelle, N. Y. Clothes-line support. No. 877,941; Feb. 4; Sp. p. 96; Dr. p. 22; Gaz. vol. 132; p. 864.
Morris, H. W., New York, N. Y. Feed-bag. No. 880,459; Feb. 25; Sp. p. 5306; Dr. p. 1116; Gaz. vol. 132; p. 1797.
Morris, J. G., *et al.* (See Wallar, W. C., assignor.)
Morrison, W. A., and F. L. Bryant, Chicago, Ill. Carpet-sweeper. No. 879,977; Feb. 25; Sp. p. 4322; Dr. p. 905; Gaz. vol. 132; p. 1637.
Morrow, J. B., East Pepperell, assignor to Pepperell Card & Paper Company, Pepperell, Mass. Paper-coating machine. No. 879,787; Feb. 18; Sp. p. 3887; Dr. pp. 815–16; Gaz. vol. 132; p. 1541.
Morse Twist Drill & Machine Company. (See Gregson, L., assignor.)
Morterud, E., Torderöd, near Moss, Norway. Pump for corrosive fluids. No. 879,484; Feb. 18; Sp. p. 3272; Dr. p. 682; Gaz. vol. 132; p. 1442.
Mortimer, H. L., Sound Beach, assignor of one-half to J. Davenport, Stamford, Conn. Truss. No. 879,567; Feb. 18; Sp. p. 3440; Dr. p. 720; Gaz. vol. 132; p. 1469.
Moul, M., Hanover, Pa. Shuttle-motion for looms. No. 878,143; Feb. 4; Sp. p. 500; Dr. p. 107; Gaz. vol. 132; p. 932.
Mount Lyell Mining and Railway Company. (See Sanderson, F. S., assignor.)
Moutier, E. A. (See Monard, Dumartin, and Moutier.)
Mueller, A. J., Chicago, Ill. Tie for building-blocks. No. 880,154; Feb. 25; Sp. p. 4676; Dr. p. 985; Gaz. vol. 132; p. 1694.
Mueller, H. (See Mueller, P. and H.)
Mueller, H. (See Mueller and Schuermann.)
Mueller, H., assignor to H. Mueller Manufacturing Company, Decatur, Ill. Making indicator-buttons. No. 879,788; Feb. 18; Sp. p. 3890; Dr. p. 816; Gaz. vol. 132; p. 1541.
Mueller, P. and H., and A. Schuermann, assignors to H. Mueller Manufacturing Company, Decatur, Ill. Swing-spout compression basin-cock. No. 879,400; Feb. 18; Sp. p. 3091; Dr. p. 642; Gaz. vol. 132; p. 1414.
Mueller, P. and H., assignors to H. Mueller Manufacturing Company, Decatur, Ill. Right and left basin-cock. No. 879,401; Feb. 18; Sp. p. 3093; Dr. pp. 642–3; Gaz. vol. 132; p. 1415.
Mugler, A., Brooklyn, N. Y. Machine for making book-covers. No. 880,033; Feb. 25; Sp. p. 4429; Dr. pp. 930–1; Gaz. vol. 132; p. 1655.
Mull, C., Indianapolis, Ind., assignor to T. C. Prouty Company, Albion, Mich. Automatic-closing door. No. 879,883; Feb. 25; Sp. p. 4116; Dr. p. 864; Gaz. vol. 132; p. 1604.
Muhlsley, W. J., and J. R. Schenck, assignors to American Can Company, Chicago, Ill. Rectangular can for dried beef and other articles. No. 878,533; Feb. 11; Sp. p. 1414; Dr. p. 290; Gaz. vol. 132; p. 1100.

Müller, A., Gautzsch, assignor to Leipziger Röhrenwerke Gesellschaft mit beschränkter Haftung, Lausen, near Markraustädt, Germany. Calculating-machine. No. 878,413; Feb. 4; Sp. p. 1046; Dr. pp. 211–12; Gaz. vol. 132; p. 1020.
Müller, J. P., New Rochelle, N. Y. Pyrographic tool. No. 878,414; Feb. 4; Sp. p. 1048; Dr. p. 212; Gaz. vol. 132; p. 1020.
Müller, W., Affoltern, Switzerland. Contrivance for feeding moving fabrics into calendering-machines. No. 879,298; Feb. 18; Sp. p. 2888; Dr. p. 602; Gaz. vol. 132; p. 1382.
Munch, A., St. Paul, Minn. Ratchet-wrench. No. 878,657; Feb. 11; Sp. p. 1643; Dr. p. 337; Gaz. vol. 132; p. 1135.
Munro, J., and A. Gerard, Ottawa, Ontario, Canada. Automatic counter. No. 879,180; Feb. 18; Sp. p. 2669; Dr. pp. 557–8; Gaz. vol. 132; p. 1346.
Murdoch, A., Montreal, Quebec, Canada. Fish-trap. No. 878,820; Feb. 11; Sp. p. 1950; Dr. p. 403; Gaz. vol. 132; p. 1187.
Murdock, M. L., and J. C. Gallagher, Elmira, N. Y.; said Gallagher assignor to said Murdock. Automatic telephone-alarm. No. 880,155; Feb. 25; Sp. p. 4677; Dr. p. 985; Gaz. vol. 132; p. 1694.
Murphy, F. M., assignor of one-half to T. Flanagan, Jersey City, N. J. Phonograph-horn. No. 880,388; Feb. 25; Sp. p. 5136; Dr. p. 1085; Gaz. vol. 132; p. 1771.
Murphy, W. B., New York, N. Y. Syringe. No. 879,299; Feb. 18; Sp. p. 2890; Dr. p. 602; Gaz. vol. 132; p. 1382.
Murray, J., Jamaica Plain, Mass. Automatic safety-valve for gas-supply pipes. No. 878,658; Feb. 11; Sp. p. 1644; Dr. p. 337; Gaz. vol. 132; p. 1135.
Murray, J., Edinburgh, Scotland. Machine for casing in books. No. 879,485; Feb. 18; Sp. p. 3273; Dr. pp. 683–4; Gaz. vol. 132; p. 1442.
Murray, J. A., New Haven, Conn., assignor to Seamless Rubber Company. Surgical pad. No. 880,389; Feb. 25; Sp. p. 5137; Dr. p. 1085; Gaz. vol. 132; p. 1771.
Murray, J. E., Washington, Pa. Burglar-alarm. No. 879,508; Feb. 18; Sp. p. 3442; Dr. p. 721; Gaz. vol. 132; p. 1469.
Muschenheim, F., New York, N. Y. Hotel-room rack. No. 878,554; Feb. 11; Sp. p. 1416; Dr. p. 290; Gaz. vol. 132; p. 1101.
Myer Bridges Company. (See Koella, E., assignor.)
Myrhow, C. C., Fingal, N. D. Mail-box. No. 879,402; Feb. 18; Sp. p. 3095; Dr. p. 643; Gaz. vol. 132; p. 1415.
Nash, C. J., assignor to W. H. Miner Company, Chicago, Ill. Railway draft-rigging. No. 877,943; Feb. 4; Sp. p. 99; Dr. p. 22; Gaz. vol. 132; p. 865.
Nathan, B. (See Cohen and Nathan.)
National Cash Register Company. (See Carroll, T., assignor.)
National Casket Company. (See Hamilton, W., assignor.) (Reissue.)
National Cellular Steel Company. (See Rude, J. M., assignor.)
National Compositype Company. (See Brown, Hanrahan, and Boyden, assignors.)
National Glass Company. (See Haley, R., assignor.)
National Interlocking Steel Sheeting Company. (See Nye, G. E., assignor.)
National Patent Company. (See Roever, J., assignor.)
National Ring Traveler Company. (See Merrow, E. L., assignor.)
National Ventilator and Mfg. Co. (See Redell and Panter, assignors.)
National Wash Board Company. (See Gilbert, H. J., assignor.)
Nau, J. B., New York, N. Y. Reversing-valve for regenerative furnaces. No. 878,306; Feb. 4; Sp. p. 847; Dr. p. 168; Gaz. vol. 132; p. 984.
Neeley, G. S., St. Louis, Mo. Regulating electric generators. No. 879,887; Feb. 25; Sp. p. 4126; Dr. p. 865; Gaz. vol. 132; p. 1606.
Neild, J. T., Leonardville, Kans. Machine for cutting grain. No. 879,666; Feb. 18; Sp. p. 3662; Dr. p. 765; Gaz. vol. 132; p. 1501.
Neill, J., Orange, N. J. Machine for fluting columns. No. 879,571; Feb. 18; Sp. p. 3447; Dr. pp. 722–3; Gaz. vol. 132; p. 1470.
Nelsen, C., Memphis, Tenn. Roller-press. No. 880,035; Feb. 25; Sp. p. 4451; Dr. p. 935; Gaz. vol. 132; p. 1656.
Neller, A. H., assignor to Louden Machinery Company, Fairfield, Iowa. Wire-bending device. No. 880,235; Feb. 25; Sp. p. 4850; Dr. p. 1026; Gaz. vol. 132; p. 1722.
Nelson, C. E., Capac, Mich., assignor to E. P. Metcalf, Providence, R. I., and A. Loewenthal and C. E. Dunn, trustees, New York, N. Y. Producing paper or paper-board and the like. No. 879,888; Feb. 25; Sp. p. 4129; Gaz. vol. 132; p. 1606.
Nelson, P. J. (See Marquette, J. S., assignor.)
Nesmith, J. W., assignor to Colorado Iron Works Company, Denver, Colo. Blast-heating apparatus. No. 879,302; Feb. 18; Sp. p. 2895; Dr. p. 604; Gaz. vol. 132; p. 1383.
Neukirch, O., Cincinnati, Ohio. Street-cleaning machine. No. 880,392; Feb. 25; Sp. p. 5150; Dr. p. 1087; Gaz. vol. 132; p. 1772.
Neumann, E. T., Chicago, Ill. Lady's suit-hanger. No. 877,944; Feb. 4; Sp. p. 100; Dr. p. 23; Gaz. vol. 132; p. 865.
Neumann, E. T., Chicago, Ill. Skirt-holder. No. 877,945; Feb. 4; Sp. p. 101; Dr. p. 23; Gaz. vol. 132; p. 866.
Neumayer, E., assignor to Optische Anstalt C. P. Goerz, Aktiengesellschaft, Friedenau, near Berlin, Germany. Telescope with displaceable reversing system. No. 879,572; Feb. 18; Sp. p. 3454; Dr. p. 723; Gaz. vol. 132; p. 1471.
Neuner, M. C., Los Angeles, Cal. Bookbinding. No. 879,573; Feb. 18; Sp. p. 3455; Dr. p. 724; Gaz. vol. 132; p. 1471.
New Haven Clock Co. (See Porter, W. E., assignor.)
New Jersey Patent Company. (See Aiken, E. L., assignor.)
New Jersey Patent Company. (See Weber, P., assignor.)
"New Way" Motor Company. (See Newbrough, W. H., assignor.)
New York Adding Typewriter Company. (See Cram, E. B., assignor.)
New York Air Brake Company. (See Bickel, H. F., assignor.)
Newbrough, W. H., assignor to "New Way" Motor Company, Lansing, Mich. Carbureter for explosion-engines. No. 878,824; Feb. 11; Sp. p. 1958; Dr. p. 405; Gaz. vol. 132; p. 1188.
Newby, W., Pittsburg, Pa. Mechanical glass-gatherer. No. 879,889; Feb. 25; Sp. p. 4130; Dr. p. 866; Gaz. vol. 132; p. 1607.
Newell, A. L., Ealing, England. Chromatic toy. No. 880,322; Feb. 25; Sp. p. 5010; Dr. p. 1057; Gaz. vol. 132; p. 1750.
Newhall, H. B., Plainfield, N. J. Chain. No. 878,989; Feb. 11; Sp. p. 2269; Dr. p. 473; Gaz. vol. 132; p. 1240.
Newhall, H. B., Plainfield, N. J. Chain. No. 878,990; Feb. 11; Sp. p. 2271; Dr. p. 474; Gaz. vol. 132; p. 1241.
Newman, A. A., Chicago, Ill. Key for watchmen's clocks and securing device therefor. No. 878,739; Feb. 11; Sp. p. 1791; Dr. p. 371; Gaz. vol. 132; p. 1161.
Newman, A. A., Chicago, Ill. Key for watchmen's clocks and securing device therefor. No. 878,740; Feb. 11; Sp. p. 1792; Dr. p. 372; Gaz. vol. 132; p. 1161.
Newman, A. A., Chicago, Ill. Marking device for watchmen's clocks. No. 878,741; Feb. 11; Sp. p. 1793; Dr. p. 372; Gaz. vol. 132; p. 1161.
Newman, A. A., Chicago, Ill. Marking device for watchmen's clocks. No. 878,742; Feb. 11; Sp. p. 1794; Dr. p. 372; Gaz. vol. 132; p. 1162.
Newman, A. T., Greeley, Kans. Telegraph-switchboard. No. 879,700; Feb. 18; Sp. p. 2891; Dr. p. 603; Gaz. vol. 132; p. 1383.
Newman, C., Staunton, Va. Wheel-tire clamp. No. 879,574; Feb. 18; Sp. p. 3457; Dr. p. 724; Gaz. vol. 132; p. 1472.
Newman, S. D., Jellico, Tenn. Cabinet. No. 878,228; Feb. 4; Sp. p. 689; Dr. p. 142; Gaz. vol. 132; p. 958.
Newton, H. C., Kew, near Melbourne, and A. G. M. Michell, Melbourne, Victoria, Australia. Cipher system. No. 879,667; Feb. 18; Sp. p. 3664; Dr. p. 765; Gaz. vol. 132; p. 1501.
Newton, J. F., Jr., Boston, Mass. Hanger-strap or handhold for cars, &c. No. 879,575; Feb. 18; Sp. p. 3459; Dr. p. 725; Gaz. vol. 132; p. 1472.
Newton, N. A., Kalamazoo, Mich. Vehicle-wheel. No. 879,301; Feb. 18; Sp. p. 2893; Dr. p. 603; Gaz. vol. 132; p. 1383.
Ney, M. R., and S. S. Ullman, Washington, D. C. Burglar-alarm system and apparatus therefor. No. 880,160; Feb. 25; Sp. p. 4689; Dr. p. 988; Gaz. vol. 132; p. 1696.
Neyland, C. A., Spokane, Wash. Current-motor. No. 880,393; Feb. 25; Sp. p. 5152; Dr. pp. 1087–8; Gaz. vol. 132; p. 1773.
Nicault, J. (See Guéniffet, Benoit, and Nicault.)
Nicholls, F. W. (See Nicholls, W. N. and F. W.)
Nicholls, G. H., Galveston, Tex. Shoe-lace fastener. No. 880,323; Feb. 25; Sp. p. 5011; Dr. p. 1057; Gaz. vol. 132; p. 1750.
Nicholls, W. N. and F. W., Toronto, Ontario, Canada. Vibrator. No. 878,083; Feb. 4; Sp. p. 386; Dr. p. 80; Gaz. vol. 132; p. 911.
Nickel, A., assignor to Wessell, Nickel & Gross, New York, N. Y. Repeating action for grand pianos. No. 879,978; Feb. 25; Sp. p. 4324; Dr. p. 905; Gaz. vol. 132; p. 1637.
Nicolai, G., Denver, Colo., assignor to E. E. Hairgrove, Kansas City, Mo. Target-trap. No. 880,394; Feb. 25; Sp. p. 5155; Dr. p. 1088; Gaz. vol. 132; p. 1773.
Nielsen, L. M., Montclair, N. J. Envelop sealing and stamping machine. No. 879,576; Feb. 18; Sp. p. 3462; Dr. pp. 725–7; Gaz. vol. 132; p. 1472.
Nienstadt, A. E., New York, N. Y., assignor of one-half to E. E. Bauman, Hoboken, N. J. Destroying insect eggs and larvæ. No. 879,406; Feb. 18; Sp. p. 3111; Gaz. vol. 132; p. 1417.
Nitritfabrik Aktiengesellschaft. (See Kapff, S., assignor.)
Noble, F. H., Chicago, Ill. Pin and the like. No. 878,011; Feb. 4; Sp. p. 225; Dr. p. 49; Gaz. vol. 132; p. 887.
Noble, J. W. (See O'Dell, Noble, and Sandrock.)
Noble, R. E., assignor to Morgan-Gardner Electric Company, Chicago, Ill. Trolley-wheel spring. No. 880,395; Feb. 25; Sp. p. 5156; Dr. p. 1088; Gaz. vol. 132; p. 1773.
Noble, W. H. (See Smith, C., assignor.)
Nolen, J. G., assignor of one-half to F. B. Cook, Chicago, Ill. Automatic electric supervisory and signaling system. No. 878,012; Feb. 4; Sp. p. 226; Dr. pp. 49–53; Gaz. vol. 132; p. 888.
Nolen, J. G., assignor to F. B. Cook, Chicago, Ill., and Automatic Fire Protection Company. Electric signaling system. No. 878,013; Feb. 4; Sp. p. 235; Dr. pp. 53–4; Gaz. vol. 132; p. 888.

Nordman, J. (See Clark, E., assignor.)
Normandin, E. P., Grand Rapids, Mich. Car-fender. No. 878,991; Feb. 11; Sp. p. 2272; Dr. p. 474; Gaz. vol. 132; p.1241.
North American Chemical Company. (See Thoma, A., assignor.)
North, S. N., Rising Sun, Ind. Shoe. No. 879,979; Feb. 25; Sp. p. 4325; Dr. p. 905; Gaz. vol. 132; p. 1637.
Northey, J. P., Toronto, Ontario, Canada. Sound-producing device. No. 879,190; Feb. 18; Sp. p. 2672; Dr. p. 558; Gaz. vol. 132; p. 1346.
Norton, T. M. (See Mackenzie and Norton.)
Nourse, F. P., Lewiston, Idaho. Pipe. No. 879,791; Feb. 18; Sp. p. 3895; Dr. p. 817; Gaz. vol. 132; p. 1542.
Novak, M. (See Escales and Novak.)
Nowalk, R. F., Mount Vernon, assignor to E. G. Soltmann, New York, N. Y. Composition of matter. No. 878,662; Feb. 11; Sp. p. 1651; Gaz. vol. 132; p. 1137.
Nuttall, J., Bury, England. Apparatus for cutting rags, ropes, and the like. No. 880,236; Feb. 25; Sp. p. 4852; Dr. p. 1026; Gaz. vol. 132; p. 1723.
Nya Ackumulator Aktiebolaget Jungner. (See Jungner, E. W., assignor.)
Nye, G. E., assignor to National Interlocking Steel Sheeting Company, Chicago, Ill. Interlocking sheet-piling. No. 879,792; Feb. 18; Sp. p. 3896; Dr. p. 817; Gaz. vol. 132; p. 1542.
Nylund, A., Duluth, Minn. Plane. No. 879,793; Feb. 18; Sp. p. 3898; Dr. p. 817; Gaz. vol. 132; p. 1543.
O. A. Miller Tracing Machine Company. (See Batcheider, C. A., assignor.)
O. K. Tool Holder Company. (See Robinson, P. H., assignor.)
O. P. Schriver & Co. (See Schriver and Webster, assignors.)
O'Brien, E. D., and M. E. O'Connell, Terre Haute, Ind. Automatic folding vehicle-door. No. 879,303; Feb. 18; Sp. p. 2896; Dr. p. 604; Gaz. vol. 132; p. 1384.
O'Connell, M. E. (See O'Brien and O'Connell.)
O'Connor, J., Clifton, Staten Island, N. Y. Water-gage. No. 878,992; Feb. 11; Sp. p. 2274; Dr. p. 475; Gaz. vol. 132; p. 1241.
O'Dell, L., J. W. Noble, and J. F. Sandrock, Tylersburg, Pa. Cuspidor. No. 878,993; Feb. 11; Sp. p. 2275; Dr. p. 475; Gaz. vol. 132; p. 1242.
O'Hara, J. and W. J., Auckland, New Zealand. Adjustable fastening device for beams. No. 880,238; Feb. 25; Sp. p. 4855; Dr. p. 1027; Gaz. vol. 132; p. 1723.
O'Hara, W. J. (See O'Hara, J. and W. J.)
O'Haver, L. R. (See Wiest, J. H., assignor.)
O'Keefe, D., Cincinnati, Ohio, assignor, by mesne assignments, to American Acetylene Company, Augusta, Me. Flashback-stop. No. 879,577; Feb. 18; Sp. p. 3470; Dr. p. 728; Gaz. vol. 132; p. 1473.
O'Sullivan, D. T., West Orange, N. J. Inking-pad. No. 878,420; Feb. 4; Sp. p. 1057; Dr. p. 214; Gaz. vol. 132; p. 1022.
O'Sullivan, H., Haverhill, Mass. Rubber. No. 879,306; Feb. 18; Sp. p. 2901; Dr. p. 605; Gaz. vol. 132; p. 1385.
O'Sullivan, W., assignor to Manhattan Briar Pipe Company, New York, N. Y. Means for displaying articles of merchandise. No. 878,207; Feb. 4; Sp. p. 850; Dr. p. 169; Gaz. vol. 132; p. 985.
O'Toole, J. J., Alliance, Ohio. Pipe. No. 878,014; Feb. 4; Sp. p. 240; Dr. p. 55; Gaz. vol. 132; p. 889.
Oakman, R. N., Brooklyn, N. Y. Distance-lighting gas-burner device. No. 879,890; Feb. 25; Sp. p. 4134; Dr. p. 866; Gaz. vol. 132; p. 1607.
Obenauer, F. P., Detroit, Mich. Water-heater. No. 880,237; Feb. 25; Sp. p. 4854; Dr. p. 1027; Gaz. vol. 132; p. 1723.
Ohio Manufacturing Company. (See Kouns, M. W., assignor.)
Ohio Pump & Brass Company. (See Wilkins, C. L., assignor.)
Oil Well Supply Company. (See Johnston, D. K., assignor.)
Oishei, C. (See Conover, H. V., assignor.)
Oldfield, F. F. W., Brixton, London, England. Mold for the production of base-blocks for mounting printing-blocks. No. 878,663; Feb. 11; Sp. p. 1651; Dr. p. 339; Gaz. vol. 132; p. 1137.
Oldham, G. F., assignor to J. D. Butterfield, Toledo, Ohio. Hem-finder. No. 879,304; Feb. 18; Sp. p. 2897; Dr. p. 604; Gaz. vol. 132; p. 1384.
Olds Motor Works. (See Coffin, H. E., assignor.)
Olds Motor Works. (See Dunham, C. W., assignor.)
Olds Motor Works. (See Smith, F. L., assignor.)
Olin, C. M., Vincennes, Ind. Light-box. No. 878,418; Feb. 4; Sp. p. 1055; Dr. p. 213; Gaz. vol. 132; p. 1022.
Oliver Typewriter Company. (See Poole, C. C., assignors.)
Oliver, W. H., Chicago, Ill. Wrench or nut-jack. No. 879,305; Feb. 18; Sp. p. 2898; Dr. p. 605; Gaz. vol. 132; p. 1384.
Olson, C., Washington, D. C. Saddle-post. No. 878,419; Feb. 4; Sp. p. 1056; Dr. p. 214; Gaz. vol. 132; p. 1022.
Olson, G. M., Cokato, Minn. Automatic wagon-brake. No. 878,229; Feb. 4; Sp. p. 600; Dr. p. 142; Gaz. vol. 132; p. 958.
Olson, M. H., Leer, Mich. Trap. No. 879,668; Feb. 18; Sp. p. 3666; Dr. p. 766; Gaz. vol. 132; p. 1502.
Ontario Drill Company. (See Armitage and Thistlethwaite, assignors.)
Optische Anstalt C. P. Goerz, Aktiengesellschaft. (See Neumayer, E., assignor.)
Ord, W., Brooklyn Station, Ohio. Valve. No. 878,664; Feb. 11; Sp. p. 1652; Dr. p. 340; Gaz. vol. 132; p. 1137.
Oriental Candy Company. (See Hicks, J. W., assignor.)
Orr, R. S., Pittsburg, Pa. Pole. No. 878,230; Feb. 4; Sp. p. 601; Dr. p. 143; Gaz. vol. 132; p. 958.
Orr, W. B., Salisbury, N. C. Wrench. No. 879,980; Feb. 25; Sp. p. 4326; Dr. p. 906; Gaz. vol. 132; p. 1638.
Orswell I. C., Amesbury, assignor to Orswell Igniter Company, Boston, Mass. Induction-coil system. No. 878,467; Feb. 4; Sp. p. 1145; Dr. p. 235; Gaz. vol. 132; p. 1037.
Orswell Igniter Company. (See Orswell, I. C., assignor.)
Osborn, F. C., Detroit, Mich. Cheese-cutter. No. 869,407; Feb. 18; Sp. p. 3172; Dr. p. 646; Gaz. vol. 132; p. 1417.
Osborne, W. S., Hyde Park, Mass. Pneumatic separator system. No. 878,665; Feb. 11; Sp. p. 1654; Dr. p. 341; Gaz. vol. 132; p. 1138.
Osborne, W. S., Marietta, Pa. Air and dust separator. No. 880,161; Feb. 25; Sp. p. 4691; Dr. p. 988; Gaz. vol. 132; p. 1696.
Osgood, I., Amesbury, Mass. Bearing. No. 879,578; Feb. 18; Sp. p. 3474; Dr. p. 728; Gaz. vol. 132; p. 1473.
Ossart, G. A. (See Germain and Ossart.)
Oswald, H., New York, assignor to V. & O. Press Company, Glendale, N. Y. Power-press. No. 880,239; Feb. 25; Sp. p. 4855; Dr. p. 1027; Gaz. vol. 132; p. 1723.
Otis Elevator Company. (See Ihlder, J. D., assignor.)
Overhiser, A. W., Casco, Mich. Screening device for spray-pumps. No. 880,240; Feb. 25; Sp. p. 4857; Dr. p. 1028; Gaz. vol. 132; p. 1724.
Overton, J. L., assignor to H. S. Wellcome, London, England. Apparatus for containing and injecting serums and other substances. No. 877,946; Feb. 4; Sp. p. 102; Dr. p. 24; Gaz. vol. 132; p. 866.
Owens, C. W., Lake City, Iowa. Duplex gravity gate-latch. No. 879,408; Feb. 18; Sp. p. 3115; Dr. p. 646; Gaz. vol. 132; p. 1417.
Owings, W. A. (See Harrison and Owings.)
Paasche, J. A., Chicago, Ill. Air-brush. No. 879,891; Feb. 25; Sp. p. 4135; Dr. p. 867; Gaz. vol. 132; p. 1607.
Pabst, C., Jr., and H. C. Savage, Philadelphia, Pa. Refrigerator. No. 879,579; Feb. 18; Sp. p. 3476; Dr. p. 729; Gaz. vol. 132; p. 1473.
Packard, H. T., Pasadena, Cal. Lawn-sprinkler. No. 879,892; Feb. 25; Sp. p. 4137; Dr. p. 867; Gaz. vol. 132; p. 1608.
Packer, A. A., St. Paul, Minn. Ventilator. No. 878,231; Feb. 4; Sp. p. 603; Dr. p. 143; Gaz. vol. 132; p. 958.
Paddock B. H., and A. A. Dinwiddie, Granada, Colo. Oiling device. No. 879,794; Feb. 18; Sp. p. 3899; Dr. p. 817; Gaz. vol. 132; p. 1543.
Padgham, H. F., Portland, Oreg. Folding fruit-box. No. 879,836; Feb. 18; Sp. p. 3906; Dr. p. 836; Gaz. vol. 132; p. 1557.
Paige, S. K., *et al.* (See Bentley, T., assignor.)
Pakin Company. (See Paul, A. G., assignor.)
Palm, O., Jr., New York, N. Y. Post-card. No. 878,556; Feb. 11; Sp. p. 1422; Dr. p. 291; Gaz. vol. 132; p. 1101.
Palm, V. H., assignor to T. W. Phillips Manufacturing Company, Butler, Pa. Sand pump and bail. No. 880,462; Feb. 25; Sp. p. 5310; Dr. p. 1117; Gaz. vol. 132; p. 1798.
Palmer Electrical Company. (See Palmer, R. M., assignor.)
Palmer, J. V., Greenwich, N. Y. Lady's undergarment. No. 878,994; Feb. 11; Sp. p. 2276; Dr. p. 475; Gaz. vol. 132; p. 1242.
Palmer, R. M., Cambridge, Mass., assignor to Palmer Electrical Company, Bangor, Me. System of electrical distribution. No. 879,307; Feb. 18; Sp. p. 2902; Dr. p. 605; Gaz. vol. 132; p. 1385.
Palmer, W. B., Greenwich, N. Y. Apparatus for inverting tubular fabrics. No. 878,995; Feb. 11; Sp. p. 2277; Dr. pp. 475-6; Gaz. vol. 132; p. 1242.
Panetti, B. E., assignor to C. Bloomberg, New York, N. Y. Garter. No. 878,084; Feb. 4; Sp. p. 390; Dr. p. 81; Gaz. vol. 132; p. 911.
Pangburn, T., Alma, N. Y. Flame-fastener. No. 878,557; Feb. 11; Sp. p. 1423; Dr. p. 291; Gaz. vol. 132; p. 1102.
Panter, J. A. (See Redell and Panter.)
Parcelle, A. L., deceased, Boston, Mass.; W. A. Parcelle, administrator. Telephone system. No. 878,151; Feb. 4; Sp. p. 507; Dr. p. 108; Gaz. vol. 132; p. 933.
Parcelle, W. A., administrator. (See Parcelle, A. L.)
Parent, G. W., *et al.* (See Lachapelle, S., assignor.)
Parent, L. P., assignor of one-half to P. R. La Rocque, Waterbury, Conn. Spoke-extractor. No. 879,308; Feb. 18; Sp. p. 2903; Dr. p. 605; Gaz. vol. 132; p. 1385.
Park, M. S., *et al.* (See De Vlieger, A., Jr., assignor.)
Parker, A. E., London, England, and E. H. Peabody, New York, N. Y. Chain-grate stoker. No. 878,085; Feb. 4; Sp. p. 391; Dr. p. 81; Gaz. vol. 132; p. 911.

Parker, J. K., Longbeach, Cal. Tubular metallic spring-tire. No. 878,015; Feb. 4; Sp. p. 241; Dr. p. 55; Gaz. vol. 132; p. 889.
Parker Machine Company. (See Kidder and Sponsel, assignors.)
Parker Machine Company. (See Sponsel, C. W., assignor.)
Parker, R. E., Flat River, Mo. Ball-bearing water-head for diamond drills. No. 880,324; Feb. 25; Sp. p. 5012; Dr. p. 1057; Gaz. vol. 132; p. 1750.
Parks, D., St. Louis, Mo. Molder's flask. No. 880,306; Feb. 25; Sp. p. 5158; Dr. p. 1089; Gaz. vol. 132; p. 1774.
Parks, D., St. Louis, Mo. Molder's flask. No. 880,307; Feb. 25; Sp. p. 5161; Dr. p. 1089; Gaz. vol. 132; p. 1774.
Parlin and Orendorff Company. (See Graham, W. S., assignor.)
Parmly, I., Bridgeport, Conn. Toy bear. No. 878,232; Feb. 4; Sp. p. 695; Dr. p. 143; Gaz. vol. 132; p. 959.
Pasley, D. C., Dolliver, Iowa. Harness-buckle. No. 878,996; Feb. 11; Sp. p. 2280; Dr. p. 476; Gaz. vol. 132; p. 1242.
Pastore, E., New Haven, Conn. Expansible bit. No. 879,309; Feb. 18; Sp. p. 2907; Dr. p. 606; Gaz. vol. 132; p. 1386.
Patesson, A., Uccle, Belgium. Manufacture of maps in colors and in relief. No. 878,309; Feb. 4; Sp. p. 851; Dr. p. 169; Gaz. vol. 132; p. 985.
Paton, P., London, England. Apparatus for conveying and discharging ores, &c. No. 880,091; Feb. 25; Sp. p. 4547; Dr. pp. 957-8; Gaz. vol. 132; p. 1673.
Pattee, W. G., assignor to S. T. Johnson and G. L. Matchan, Minneapolis, Minn. Air-brake. No. 878,468; Feb. 4; Sp. p. 1149; Dr. p. 235; Gaz. vol. 132; p. 1038.
Patterson, R. D., Fort Smith, Ark. Rotary swing. No. 879,310; Feb. 18; Sp. p. 2907; Dr. p. 606; Gaz. vol. 132; p. 1386.
Patterson, R. L., *et al.* (See Prescott, S. I., assignor.)
Patterson, R. L., assignor to American Tobacco Company, New York, N. Y. Tube-transferring mechanism. No. 879,311; Feb. 18; Sp. p. 2909; Dr. p. 607; Gaz. vol. 132; p. 1386.
Patterson, W. C., Tamaqua, assignor of one-half to C. C. Gibson, Williamsport, Pa. Automatic brake-operating attachment for signals. No. 878,016; Feb. 4; Sp. p. 243; Dr. p. 55; Gaz. vol. 132; p. 889.
Patterson, W. E. (See Ford, A. H., assignor.)
Paucksch, H., Landsberg-on-the-Warthe, Germany. Desiccating apparatus. No. 879,060; Feb. 11; Sp. p. 2389; Dr. p. 500; Gaz. vol. 132; p. 1262.
Paul, A. G., Boston, Mass., assignor to Pakin Company. Gate-valve. No. 880,463; Feb. 25; Sp. p. 5312; Dr. pp. 1117-18; Gaz. vol. 132; p. 1798.
Paul, C. F., Jr., Peekskill, N. Y., assignor to Paul & Kreuger Rock Drill Company. Hand rock-drill. No. 878,152; Feb. 4; Sp. p. 509; Dr. pp. 108-9; Gaz. vol. 132; p. 933.
Paul, C. F., Jr., Peekskill, N. Y., assignor to Paul & Kreuger Rock Drill Company. Support for rock-drilling machines. No. 878,153; Feb. 4; Sp. p. 511; Dr. p. 109; Gaz. vol. 132; p. 933.
Paul & Kreuger Rock Drill Company. (See Paul, C. F., Jr., assignor.)
Paulson, W. S., Pittsburg, Pa. Ink-bottle holder. No. 878,233; Feb. 4; Sp. p. 696; Dr. p. 144; vol. 132; p. 959.
Payne, D. W., Minneapolis, Minn. Apparatus for tempering cream and other liquids. No. 878,997; Feb. 11; Sp. p. 2281; Dr. pp. 476-7; Gaz. vol. 132; p. 1242.
Payne, J. S., assignor of one-fourth to R. C. and O. L. Moore, Mulvane, Kans. Railway switch and signal mechanism. No. 878,666; Feb. 11; Sp. p. 1656; Dr. p. 341; Gaz. vol. 132; p. 1138.
Payne, S. R. (See Brewer, R. B., assignor.)
Peabody, E. H. (See Parker and Peabody.)
Pearce, H. B., *et al.* (See Wallar, W. C., assignor.)
Pearce, W. L., Volta, Cal. Can-washer. No. 880,162; Feb. 25; Sp. p. 4694; Dr. p. 989; Gaz. vol. 132; p. 1697.
Pearsall, C. W., assignor of one-half to F. M. Michael, Binghamton, N. Y. Face-cooler. No. 879,580; Feb. 18; Sp. p. 3478; Dr. p. 729; Gaz. vol. 132; p. 1474.
Pearse, N., London, England. Cotton-gin. No. 880,325; Feb. 25; Sp. p. 5014; Dr. p. 1058; Gaz. vol. 132; p. 1751.
Pearson, C. F., Chicago, Ill., assignor to Triumph Motor Car Company. Explosion-engine. No. 839,837; Feb. 18; Sp. p. 3908; Dr. p. 837; Gaz. vol. 132; p. 1558.
Pearson, E. S., Bradford, Ohio. Self-loading cart. No. 878,890; Feb. 11; Sp. p. 2081; Dr. pp. 433-4; Gaz. vol. 132; p. 1209.
Pearson, J. H., Bloomfield, Ind. Facing-block. No. 880,092; Feb. 25; Sp. p. 4548; Dr. p. 958; Gaz. vol. 132; p. 1673.
Pearson, L. Z., Kearney, Mo. Feed-trough. No. 878,086; Feb. 4; Sp. p. 393; Dr. p. 82; Gaz. vol. 132; p. 912.
Pearson, W. J., Winchester, Oreg. Gate-hinge. No. 880,036; Feb. 25; Sp. p. 4453; Dr. p. 934; Gaz. vol. 132; p. 1656.
Peck, P. F., Chicago, Ill. Centrifugal ore-separator. No. 879,893; Feb. 25; Sp. p. 4139; Dr. pp. 867-8; Gaz. vol. 132; p. 1608.
Peck, P. F., Chicago, Ill. Centrifugal ore-separator. No. 879,894; Feb. 25; Sp. p. 4153; Dr. pp. 868-9; Gaz. vol. 132; p. 1609.
Peek, J. S., assignor of one-half to J. H. Holliman, Kerrville, Tex. Insect-destroyer. No. 879,838; Feb. 18; Sp. p. 3909; Dr. p. 837; Gaz. vol. 132; p. 1558.
Peerless Promoting and Manufacturing Company. (See Shive, C. A., assignor.)
Peil, J. L. E., and E. L. C. Clark, Great Barrington, Mass. Game apparatus. No. 878,309; Feb. 4; Sp. p. 854; Dr. p. 169; Gaz. vol. 132; p. 985.
Pelletier, J. A. (See Lovering and Pelletier.)
Pelton, C. H., assignor to Thomas Manufacturing Company, Springfield, Ohio. Draft mechanism for seeding-machines. No. 879,116; Feb. 11; Sp. p. 2527; Dr. p. 525; Gaz. vol. 132; p. 1280.
Penberthy Injector Company. (See Sweeney, P. J., assignor.)
Pendleton, L., Stanardsville, Va. Horseshoeing-stall. No. 877,947; Feb. 4; Sp. p. 103; Dr. p. 24; Gaz. vol. 132; p. 866.
Penington, F. E., Toledo, Ill. Rotary engine. No. 878,998; Feb. 11; Sp. p. 2284; Dr. p. 477; Gaz. vol. 132; p. 1243.
Penn, F. R., West Jefferson, Ohio. Wagon-bed. No. 878,667; Feb. 11; Sp. p. 1660; Dr. p. 341; Gaz. vol. 132; p. 1139.
Pepperell Card & Paper Company. (See Morrow, J. B., assignor.)
Percival, S., North Pender Island, British Columbia, Canada. Package-tie. No. 880,241; Feb. 25; Sp. p. 4859; Dr. p. 1028; Gaz. vol. 132; p. 1724.
Perfection Churn Company. (See Kaplan, G. J., assignor.)
Perky, H. D., deceased, Glencoe, Md.; L. Sparks, administrator. Machine for manufacturing cereal biscuit. No. 878,154; Feb. 4; Sp. p. 512; Dr. p. 109; Gaz. vol. 132; p. 934.
Perrault, J. E., Waltham, Mass., assignor to Judson L. Thomson M'fg. Co. Machine for setting rivets. No. 879,895; Feb. 25; Sp. p. 4167; Dr. pp. 869-70; Gaz. vol. 132; p. 1609.
Perrault, J. E., Waltham, Mass., assignor to Judson L. Thomson M'fg. Co. Machine for setting rivets. No. 879,896; Feb. 25; Sp. p. 4170; Dr. pp. 870-1; Gaz. vol. 132; p. 1610.
Perrin, F. S., New York, N. Y. Speed-limiting device for electrically-ignited explosive-engines. No. 880,093; Feb. 25; Sp. p. 4549; Dr. p. 958; Gaz. vol. 132; p. 1673.
Perritt, W. J., Rogers, Ark. Fruit-jar. No. 879,669; Feb. 18; Sp. p. 3668; Dr. p. 766; Gaz. vol. 132; p. 1502.
Perry, E. L., Paterson, N. J. Elastic vehicle-tire. No. 879,312; Feb. 18; Sp. p. 2911; Dr. p. 607; Gaz. vol. 132; p. 1387.
Perry, J. W. (See Perry, W. C. and J. W.)
Perry, W. C. and J. W., Toronto, Ontario, Canada. Clothes-pounder. No. 879,313; Feb. 18; Sp. p. 2913; Dr. p. 607; Gaz. vol. 132; p. 1387.
Pervesler, F. (See Abel and Pervesler.)
Peter, C., St. Louis, Mo. Cuspidor. No. 879,314; Feb. 18; Sp. p. 2914; Dr. p. 607; Gaz. vol. 132; p. 1387.
Peterkin, W., New York, N. Y. Computing-scale. No. 879,795; Feb. 18; Sp. p. 3900; Dr. p. 818; Gaz. vol. 132; p. 1543.
Peters, F. M., and A. Der Ananian, Milford, Mass. Nailing or pegging machine. No. 878,891; Feb. 11; Sp. p. 2087; Dr. pp. 434-5; Gaz. vol. 132; p. 1210.
Peters, H. G. (See Fowler, Barnes, and Peters.)
Peters, G. M., St. Louis, Mo. Folding umbrella. No. 878,558; Feb. 11; Sp. p. 1425; Dr. p. 291; Gaz. vol. 132; p. 1102.
Peterson, O. P. (See Hyde and Peterson.)
Petersson, A. J., Alby, Sweden. Treating gases and gas mixtures by means of voltaic arcs. No. 880,037; Feb. 25; Sp. p. 4454; Dr. p. 935; Gaz. vol. 132; p. 1656.
Petersson, A. J., Alby, Sweden. Apparatus for treating gases and gas mixtures by means of voltaic arcs. No. 880,464; Feb. 25; Sp. p. 5314; Dr. p. 1118; Gaz. vol. 132; p. 1799.
Petrific Cement Company. (See Guy, C., assignor.)
Petry, C. H., Paterson, N. J. Target and shield. No. 879,670; Feb. 18; Sp. p. 3669; Dr. p. 766; Gaz. vol. 132; p. 1503.
Pettengill, F. B., Burbank, assignor of one-half to S. L. Kistler, Los Angeles, Cal. Feeding mechanism for crushing-mills. No. 879,581; Feb. 18; Sp. p. 3479; Dr. p. 729; Gaz. vol. 132; p. 1474.
Pfeifer, E. I., Austin, Tex. Mute attachment for pianos. No. 878,421; Feb. 4; Sp. p. 1058; Dr. p. 214; Gaz. vol. 132; p. 1022.
Pfeiffer, W. C., Chicago, Ill. Steam-boiler. No. 878,892; Feb. 11; Sp. p. 2092; Dr. p. 435; Gaz. vol. 132; p. 1210.
Pfiasterer, G. S., Nashville, Tenn. Electromechanical slot for signals. No. 880,398; Feb. 25; Sp. p. 5164; Dr. pp. 1089-90; Gaz. vol. 132; p. 1774.
Pflueger, E. A., assignor to E. A. Pflueger Company, Akron, Ohio. Harness-rosette. No. 878,893; Feb. 11; Sp. p. 2093; Dr. p. 435; Gaz. vol. 132; p. 1211.
Phelan, W. J., Bennington, Vt. Spring-wheel. No. 878,422; Feb. 4; Sp. p. 1060; Dr. p. 215; Gaz. vol. 132; p. 1023.
Phelps, A. S., Jr., Chicago, Ill. Carbid-feed for acetylene-generators. No. 878,310; Feb. 4; Sp. p. 855; Dr. pp. 169-70; Gaz. vol. 132; p. 986.

Phelps, B. W. and E. C. Glines, Providence, R. I., assignors of one-third to W. Everitt, West Haven, Conn. Dropper. No. 878,668; Feb. 11; Sp. p. 1661; Dr. p. 342; Gaz. vol. 132; p. 1139.
Phelps, H. P. (See Dow., F., assignor.)
Philipp, J. H., Port Huron, assignor of one-half to C. F. Garaghty, Detroit, Mich. Flax-harvester. No. 878,311; Feb. 4; Sp. p. 857; Dr. p. 170; Gaz. vol. 132; p. 986.
Phillips, F. H. (See Fink, W. F., assignor.)
Phillips, L. O. (See Stevenson and Phillips.).
Phillips, R., Washington, D. C. Trolley-retriever. No. 879,582; Feb. 18; Sp. p. 3482; Dr. pp. 729–30; Gaz. vol. 132; p. 1474.
Phillips, W. T., Los Angeles, Cal. Mop-wringer. No. 879,671; Feb. 18; Sp. p. 3670; Dr. p. 767; Gaz. vol. 132; p. 1503.
Phinney, C. H., trustee. (See Clark, E. E., assignor.)
Phippe, M. V., *et al.* (See Bentley, T., assignor.)
Planta, C., Chicago, Ill. Burial-case. No. 878,669; Feb. 11; Sp. p. 1662; Dr. p. 342; Gaz. vol. 132; p. 1139.
Pieper, F. J., Salt Lake City, Utah. Hair-tonic. No. 879,191; Feb. 18; Sp. p. 2674; Gaz. vol. 132; p. 1346.
Pierce, C. S., Brockton, Mass. Feed-guide for trimming and skiving machines. No. 880,038; Feb. 25; Sp. p. 4456; Dr. p. 935; Gaz. vol. 132; p. 1657.
Pierce, G. H., Melrose, Mass. Printing-press. No. 879,897; Feb. 25; Sp. p. 4174; Dr. pp. 871–2; Gaz. vol. 132; p. 1610.
Pierce, G. W., Cambridge, assignor to Massachusetts Wireless Equipment Company, Boston, Mass. Rectifier for alternating currents. No. 879,061; Feb. 11; Sp. p. 2389; Dr. p. 501; Gaz. vol. 132; p. 1263.
Pierce, G. W., Cambridge, assignor to Massachusetts Wireless Equipment Company, Boston, Mass. Rectifier and detector. No. 879,062; Feb. 11; Sp. p. 2392; Dr. p. 501; Gaz. vol. 132; p. 1263.
Pierce, G. W., Cambridge, assignor to Massachusetts Wireless Equipment Company, Boston, Mass. Rectifier and detector. No. 879,117; Feb. 11; Sp. p. 2529; Dr. p. 526; Gaz. p. 132; p. 1280.
Pierce, G. W., Cambridge, Mass., assignor to Massachusetts Wireless Equipment Company. Wireless telegraphy. No. 879,409; Feb. 18; Sp. p. 3116; Dr. pp. 647–8; Gaz. vol. 132; p. 1418.
Pierson, J., Pigeon Cove, Mass. Rock-cleaving machine. No. 879,063; Feb. 11; Sp. p. 2394; Dr. p. 501; Gaz. vol. 132; p. 1263.
Pike, C. F., assignor to C. F. Van Horn, Philadelphia, Pa. Signal system for electric railways. No. 878,894; Feb. 11; Sp. p. 2094; Dr. pp. 436–7; Gaz. p. 132; p. 1211.
Pinel, A., Quincy, Mass. Bush-hammer. No. 878,559; Feb. 11; Sp. p. 1428; Dr. p. 292; Gaz. vol. 132; p. 1102.
Pitkin, C. F., San Francisco, Cal. Paper box. No. 879,488; Feb. 18; Sp. p. 3278; Dr. p. 685; Gaz. vol. 132; p. 1443.
Pitner, M. W., Chicago, Ill. Sheet-metal gauze or grating. No. 878,999; Feb. 11; Sp. p. 2286; Dr. p. 477; Gaz. vol 132; p. 1243.
Pitner, M. W., Chicago, Ill. Non-refillable bottle. No. 879,000; Feb. 11; Sp. p. 2288; Dr. p. 478; Gaz. vol. 132; p. 1244.
Pittsburgh Filter Manufacturing Company. (See Jones and Hansen, assignors.)
Pixley, J. F., *et al.* (See De Vilbiss, A., Jr., assignor.)
Plamondon, A. D. (See Rice, N. B., assignor.)
Plane, W. H., Chicago, Ill. Tobacco-pipe. No. 879,796; Feb. 18; Sp. p. 3902; Dr. p. 818; Gaz. vol. 132; p. 1543.
Pletscher, J. H., Deer Creek, Okla. Tedder attachment. No. 880,094; Feb. 25; Sp. p. 4551; Dr. p. 958; Gaz. vol. 132; p. 1674.
Ploudre, E., St. Louis, Mo. Electric alarm operated by alarm-clocks. No. 878,087; Feb. 4; Sp. p. 394; Dr. p. 82; Gaz. vol. 132; p 912.
Plym, F. J., Niles, Mich. Store-front construction. No. 879,896; Feb. 25; Sp. p. 4180; Dr. p. 872; Gaz. vol. 132; p. 1611.
Pokorny, J. J., Chicago, Ill. Reclining-chair. No. 879,489; Feb. 18; Sp. p. 3279; Dr. p. 685; Gaz. vol. 132; p. 1443.
Pollatschek, M., Bucharest, Roumania. Pump. No. 880,039; Feb. 25; Sp. p. 4457; Dr. p. 935; Gaz. vol. 132; p. 1657.
Polley, D. F., assignor to Markham Air Rifle Company, Plymouth, Mich. Air-gun. No. 878,560; Feb. 11; Sp. p. 1430; Dr. p. 292; Gaz. vol. 132; p. 1103.
Pommerer, R. W., assignor of one-half to W. J. Gilsen, New York, N. Y. Means for use in building concrete walls and the like. No. 878,155; Feb. 4; Sp. p. 514; Dr. p. 110; Gaz. vol. 132; p. 934.
Poole, A. F., Wheeling, W. Va. Party-line telephone system. No. 878,017; Feb. 4; Sp. p. 244; Dr. p. 56; Gaz. vol. 132; p. 890.
Poole, A. F., Wheeling, W. Va. Lock-out telephone system. No. 878,018; Feb. 4; Sp. p. 252; Dr. p. 56; Gaz. vol. 132; p. 890.
Poole, C. C., Evanston, assignor to Oliver Typewriter Company, Chicago, Ill. Paper-movement indicator for type-writers. No. 878,743; Feb. 11; Sp. p. 1796; Dr. pp. 372–3; Gaz. vol. 132; p. 1162.
Porter, A. H. (See Stockton and Porter.)
Porter, W. E., assignor to New Haven Clock Co., New Haven, Conn. Clock. No. 879,315; Feb. 18; Sp. p. 2915; Dr. p. 608; Gaz. vol. 132; p. 1387.
Potstada, G., San Francisco, Cal. Metal-shears. No. 879,900; Feb. 25; Sp. p. 4183; Dr. p. 873; Gaz. vol. 132; p. 1612.
Potter, J. G., Brooklyn, N. Y. Dumping-car. No. 879,412; Feb. 18; Sp. p. 3123; Dr. p. 650; Gaz. vol. 132; p. 1419.
Potticary, C., St. Thomas, Ontario, Canada. Turbine-driven locomotive. No. 880,163; Feb. 25; Sp. p. 4095; Dr. pp. 989–90; Gaz. vol. 132; p. 1697.
Poulet, C. (See Baer, J., assignor.)
Powell, R. H., Batesville, Ark. Mail-pouch catcher. No. 879,901; Feb. 25; Sp. p. 4185; Dr. pp. 173–4; Gaz. vol. 132; p. 1612.
Powell, W. O., assignor of one-half to E. A. Eckert, Henderson, Ky. Corn harvesting and husking machine. No. 880,467; Feb. 25; Sp. p. 5322; Dr. p. 1119; Gaz. vol. 132; p. 1800.
Power, J. A., New York, N. Y. Multiple-condenser water-still. No. 878,744; Feb. 11; Sp. p. 1800; Dr. p. 373; Gaz. vol. 132; p. 1162.
Prager, M., and E. L. Hayden, Savannah, Ga. Steam-superheater. No. 880,399; Feb. 25; Sp. p. 5167; Dr. p. 1090; Gaz. vol. 132; p. 1775.
Pratt, A., Dukinfield, England. Exhaust-muffler. No. 879,583; Feb. 18; Sp. p. 3484; Dr. p. 730; Gaz. vol. 132; p. 1475.
Pratt, C. T., Frankfort, N. Y. Automobile running-gear. No. 878,156; Feb. 4; Sp. p. 515; Dr. pp. 110–11; Gaz. vol. 132; p. 934.
Prentice, J. H., Glendive, Mont. Puzzle. No. 879,316; Feb. 18; Sp. p. 2917; Dr. p. 608; Gaz. vol. 132; p. 1388.
Prentiss, H. S., Elizabeth, N. J. Electric signaling-clock. No. 879,410; Feb. 18; Sp. p. 3118; Dr. pp. 648–9; Gaz. vol. 132; p. 1418.
Prentiss, H. S., Elizabeth, N. J. Self-winding clock. No. 879,411; Feb. 18; Sp. p. 3121; Dr. p. 649; Gaz. vol. 132; p. 1419.
Prentiss, S. B., Washington, D. C. Platen shift-key for type-writing machines. No. 879,317; Feb. 18; Sp. p. 2917; Dr. p. 608; Gaz. vol. 132; p. 1388.
Prescott, S. I., assignor to R. L. Patterson and G. Arents, Jr., New York, N. Y. Cigar-machine. No. 879,192; Feb. 18; Sp. p. 2674; Dr. pp. 558–9; Gaz. vol. 132; p. 1347.
Pressed Steel Wagon Bolster Co. (See Bleckley, F. W., assignor.)
Preston, W. M., assignor of one-half to W. and R. Bahr, Spring Valley, Wis. Vehicle-hub. No. 879,584; Feb. 18; Sp. p. 3485; Dr. p. 730; Gaz. vol. 132; p. 1475.
Price, A. M., Elgin, Ill., assignor, by mesne assignments, to A. E. Brion, New York, N. Y. Cutting mechanism for wrapping-machines. No. 880,465; Feb. 25; Sp. p. 5316; Dr. p. 1118; Gaz. vol. 132; p. 1799.
Pridmore, W. A., Chicago, Ill. Combined envelop and letter-sheet. No. 878,234; Feb. 4; Sp. p. 697; Dr. p. 144; Gaz. vol. 132; p. 959.
Prisk, W. M. (See Gaunt, J., assignor.)
Pritchard, T. W., Wilmington, N. C., assignor of one-fourth to H. MacRae, Washington, D. C., and H. M. Chase, Wilmington, N. C. Destructive distillation of wood. No. 880,466; Feb. 25; Sp. p. 5319; Dr. p. 1119; Gaz. vol. 132; p. 1800.
Proctor, O. S., Denver Colo. Electropneumatic drill. No. 879,823; Feb. 18; Sp. p. 3980; Dr. p. 833; Gaz. vol. 132; p. 1555.
Prohaska, A., Philadelphia, Pa. Shears or scissors. No. 879,064; Feb. 11; Sp. p. 2397; Dr. p. 502; Gaz. vol. 132; p. 1263.
Prophet, J. W., *et al.* (See Gormley, C., assignor.)
Prue, L., and W. Charlton, Wabeno, Wis. Beet-puller. No. 879,065; Feb. 11; Sp. p. 2399; Dr. p. 502; Gaz. vol. 132; p. 1264.
Prusz, F. F., Centralia, Ill. Cleansing compound. No. 879,902; Feb. 25; Sp. p. 4187; Dr. p. 874; Gaz. vol. 132; p. 1612.
Pryce, L., Germiston, Transvaal. Apparatus for loading and measuring. No. 880,400; Feb. 25; Sp. p. 5160; Dr. p. 1090; Gaz. vol. 132; p. 1775.
Pym, C. F., Essex, Ontario, Canada, assignor of one-half to Krentler Brothers Company, Detroit, Mich. Lasting-machine. No. 880,401; Feb. 25; Sp. p. 5172; Dr. p. 1091; Gaz. vol. 132; p. 1776.
Quick Work Stove Company. (See Kitzsteiner, F., assignor.)
R. Thomas and Sons Company. (See Thomas, G. W., assignor.)
Ragsdale, C. E., *et al.* (See Mobley, H. E., assignor.)
Rail Joint Company. (See Kohn, K., assignor.)
Rail Joint Company. (See Wolhaupter, B., assignor.)
Railroad Supply Company. (See Bell, E. H., assignor.)
Rakestraw, L. M. (See Miller and Rakestraw.)
Ramsey, M., North Girard, Pa. Wheel-hoe. No. 878,561; Feb. 11; Sp. p. 1432; Dr. p. 292; Gaz. vol. 132; p. 1103.
Rand, W. B., Boston, Mass. Caster. No. 877,948; Feb. 4; Sp. p. 104; Dr. p. 24; Gaz. vol. 132; p. 866.
Randall-Faichney Company. (See Wilson, J., assignor.)
Randaxhe, J. G., Liege, Belgium. Valve. No. 878,825; Feb. 11; Sp. p. 1960; Dr. p. 405; Gaz. vol. 132; p. 1189.
Rapke, V. H., New York, N. Y. Phonograph-horn. No. 879,797; Feb. 18; Sp. p. 3903; Dr. p. 818; Gaz. vol. 132; p. 1544.
Rappold, J., Allschwil, near Basel, Switzerland. Press. No. 879,318; Feb. 18; Sp. p. 2919; Dr. p. 609; Gaz. vol. 132; p. 1388.
Rapson, J. S., Elkins Park, Pa. Erasing device. No. 878,895; Feb. 11; Sp. p. 2100; Dr. p. 437; Gaz. vol. 132; p. 1211.
Rasmussen, S. P., Hanwell, England. Desiccating apparatus. No. 879,490; Feb. 18; Sp. p. 3280; Dr. p. 686; Gaz. vol. 132; p. 1444.
Rathbone, J. A., and J. T. Crossley, Utica, N. Y.; said Crossley assignor to said Rathbone. Molding-machine. No. 879,118; Feb. 11; Sp. p. 2530; Dr. p. 526; Gaz. vol. 132; p. 1280.
Rauch, L. W., Avon, S. D. Draft-equalizer. No. 879,001; Feb. 11; Sp. p. 2288; Dr. p. 478; Gaz. vol. 132; p. 1244.

Ravenskilde, P. M., Cabery, Ill. Starting means for sound-reproducing mechanism. No. 877,949; Feb. 4; Sp. p. 105; Dr. pp. 24–5; Gaz. vol. 132; p. 867.
Ray, A. S., Bellefonte, Pa. Box. No. 878,896; Feb. 11; Sp. p. 2102; Dr. p. 437; Gaz. vol. 132; p. 1212.
Ray, J. T., Lone Oak, Tex. Oil-heater. No. 879,672; Feb. 18; Sp. p. 3672; Dr. p. 768; Gaz. vol. 132; p. 1503.
Raymond, F. A., and F. Dettmann, Judson, N. D. Skirt-supporter. No. 880,095; Feb. 25; Sp. p. 4552; Dr. p. 959; Gaz. vol. 132; p. 1674.
Raymond, J. F., Scottsbluff, Nebr. Feed-chopper. No. 880,326; Feb. 25; Sp. p. 5016; Dr. p. 1058; Gaz. vol. 132; p. 1751.
Raynaud, E., Brussels, Belgium. Solidifying mineral oils. No. 879,193; Feb. 18; Sp. p. 2680; Gaz. vol. 132; p. 1347.
Raynes, J. F., Hyde Park, Mass. Combined gage and circuit-closer. No. 878,423; Feb. 4; Sp. p. 1061; Dr. p. 215; Gaz. vol. 132; p. 1023.
Reade, C. L., Bexhill, England. Golf-ball. No. 879,981; Feb. 25; Sp. p. 4328; Dr. p. 906; Gaz. vol. 132; p. 1638.
Reading Standard Company. (See Schaeffer, W. G., assignor.)
Reardon, D. W., Portland, assignor, by mesne assignments, of three-fourths to A. E. Holmes and J. M. McNaughton, Creighton, Oreg. Lifting-jack. No. 879,673; Feb. 18; Sp. p. 3673; Dr. p. 768; Gaz. vol. 132; p. 1503.
Reckweg, J. C., Palo Alto, Cal. Pleasure-railway. No. 880,040; Feb. 25; Sp. p. 4459; Dr. p. 936; Gaz. vol. 132; p. 1657.
Rector, A. (See Howard and Rector.)
Rector Gas Lamp Company. (See Howard and Rector, assignors.)
Redell, A. B., and J. A. Panter, assignors to National Ventilator and Mfg. Co., Chicago, Ill. Ventilator. No. 879,119; Feb. 11; Sp. p. 2532; Dr. p. 526; Gaz. vol. 132; p. 1281.
Redell, A. B., and J. A. Panter, assignors to National Ventilator and Mfg. Co., Chicago, Ill. Ventilator. No. 879,120; Feb. 11; Sp. p. 2534; Dr. pp. 526–7; Gaz. vol. 132; p. 1281.
Redway, G. M., Newark, N. J. Type-writer cushion. No. 879,903; Feb. 25; Sp. p. 4188; Dr. p. 874; Gaz. vol. 132; p. 1613.
Reece, J. H., assignor to Humphrey & Sons, Joliet, Ill. Automatic safety appliance for wire-reels. No. 878,235; Feb. 4; Sp. p. 698; Dr. p. 144; Gaz. vol. 132; p. 960.
Reece, J. H., assignor to Humphrey & Sons, Joliet, Ill. Wire-die safety appliance. No. 878,236; Feb. 4; Sp. p. 701; Dr. p. 144; Gaz. vol. 132; p. 960.
Reed, J. D., Greencastle, assignor of one-half to E. B. Halliday, Acton, Ind. Portable weighing apparatus for farm-wagons. No. 878,312; Feb. 4; Sp. p. 858; Dr. pp. 170–1; Gaz. vol. 132; p. 986.
Reed, P. B., Topeka, Kans. Oil-burner. No. 879,002; Feb. 11; Sp. p. 2295; Dr. p. 479; Gaz. vol. 132; p. 1244.
Reeve, S. A., Worcester, assignor to C. F. Brown, trustee, Reading, Mass. Valve mechanism for compressors. No. 878,562; Feb. 11; Sp. p. 1433; Dr. pp. 292–3; Gaz. vol. 132; p. 1103.
Reeves, C. H., La Fayette, Ind. Fire-guard. No. 878,563; Feb. 11; Sp. p. 1437; Dr. p. 293; Gaz. vol. 132; p. 1104.
Regnell, O. F. Milwaukee, Wis. Coffee-pot. No. 880,096; Feb. 25; Sp. p. 4553; Dr. p. 959; Gaz. vol. 132; p. 1674.
Reid, J. W. P. (See Rhodes, E., assignor.)
Reid, M., Somerset, Manitoba, Canada. Grain-car door. No. 878,019; Feb. 4; Sp. p. 263; Dr. pp. 56–7; Gaz. vol. 132; p. 891.
Rembaux, L., Moustier sur Sambre, Belgium. Table for casting glass. No. 879,491; Feb. 18; Sp. p. 3282; Dr. p. 686; Gaz. vol. 132; p. 1444.
Remington and Sherman Company. (See Williams, J. H., assignor.)
Remmers, H. C., Philadelphia, Pa. Confectionery-coating machine. No. 879,585; Feb. 18; Sp. p. 3486; Dr. p. 731; Gaz. vol. 132; p. 1475.
Rennie, E., Halifax, Nova Scotia, Canada. Shoe-heel attachment. No. 879,904; Feb. 25; Sp. p. 4189; Dr. p. 874; Gaz. vol. 132; p. 1613.
Reno, J. M., Kewanna, Ind. Compound for use with razor-strops. No. 879,319; Feb. 18; Sp. p. 2920; Gaz. vol. 132; p. 1389.
Renton, G. W., Brooklyn, N. Y. Air-valve for stench or water-seal traps. No. 878,424; Feb. 4; Sp. p. 1064; Dr. p. 215; Gaz. vol. 132; p. 1023.
Renton, H. T., Oakland, Cal. Belt and support for abdominal treatment. No. 880,041; Feb. 25; Sp. p. 4461; Dr. pp. 936–7; Gaz. vol. 132; p. 1658.
Reynolds, D. A., New York, N. Y. Cable-hanger. No. 879,586; Feb. 18; Sp. p. 3488; Dr. p. 731; Gaz. vol. 132; p. 1475.
Reynolds, H. J., Bettle, Tex. Belt. No. 878,897; Feb. 11; Sp. p. 2103; Dr. p. 438; Gaz. vol. 132; p. 1212.
Reynolds, J. N., Anita, Iowa. Safety device for gas-burners. No. 880,097; Feb. 25; Sp. p. 4554; Dr. p. 959; Gaz. vol. 132; p. 1675.
Reynolds, M. G., Anderson, Ind. Pressure-regulator. No. 880,402; Feb. 25; Sp. p. 5177; Dr. p. 1091; Gaz. vol. 132; p. 1776.
Reynolds, S. W., West Toledo, Ohio. Slip-clip. No. 878,670; Feb. 11; Sp. p. 1663; Dr. p. 342; Gaz. vol. 132; p. 1139.
Rhodes, E., assignor of one-half to J. W. P. Reid, Dresden, Ohio. Core for building-blocks. No. 879,066; Feb. 11; Sp. p. 2400; Dr. p. 502; Gaz. vol. 132; p. 1264.
Rhodes, L. V., Altoona, Pa. Needle-threader. No. 879,003; Feb. 11; Sp. p. 2296; Dr. p. 479; Gaz. vol. 132; p. 1244.
Rhodes, O. A. (See Felton, A. K., assignor.)
Rhorer, C. E., Columbus, Ind. Clip for structural ironwork. No. 879,905; Feb. 25; Sp. p. 4190; Dr. p. 875; Gaz. vol. 132; p. 1613.
Rhorer, C. E., Columbus, Ind. Sash-weight. No. 879,906; Feb. 25; Sp. p. 4191; Dr. p. 875; Gaz. vol. 132; p. 1613.
Riblet, B. C., Spokane, Wash. Cable-hoist conveyer. No. 878,157; Feb. 4; Sp. p. 517; Dr. p. 111; Gaz. vol. 132; p. 935.
Rice, A. B., Racine, Wis. Culinary boiler or steamer. No. 878,020; Feb. 4; Sp. p. 265; Dr. p. 57; Gaz. vol. 132; p. 891.
Rice, C. E., Livermore, Ky. Curtain-stretcher and clothes-drier. No. 879,004; Feb. 11; Sp. p. 2297; Dr. p. 479; Gaz. vol. 132; p. 1245.
Rice, J. V., Jr., Bordentown, N. J. Gas-engine governor. No. 878,826; Feb. 11; Sp. p. 1961; Dr. pp. 405–6; Gaz. vol. 132; p. 1189.
Rice, N. B., assignor of one-half to A. D. Plamondon, Chicago, Ill. Check-protector. No. 878,021; Feb. 4; Sp. p. 267; Dr. pp. 57–8; Gaz. vol. 132; p. 892.
Richan, W. B. (See Yates, Devey, Richan, and Devey.)
Richards, D. W., *et al.* (See Chesterman, W., assignor.)
Richards, E. L., Litchfield, Conn. Headlight for horses. No. 878,898; Feb. 11; Sp. p. 2104; Dr. p. 438; Gaz. vol. 132; p. 1212.
Richards, J. E. (See Hannes, B. M., assignor.)
Richardson, R. R., Ottawa, Ill. Coating-machine. No. 879,587; Feb. 18; Sp. p. 3490; Dr. pp. 731–4; Gaz. vol. 132; p. 1476.
Richardson-Lovejoy Engineering Company. (See Harrop, C. B., assignor.)
Richardson, W. C., Mystic, Conn. Water-cooled grate. No. 879,492; Feb. 18; Sp. p. 3284; Dr. pp. 686–7; Gaz. vol. 132; p. 1444.
Richardson, W. C., Lynn, and E. W. Ford, Salem, Mass. Shoe-form. No. 878,313; Feb. 4; Sp. p. 861; Dr. p. 171; Gaz. vol. 132; p. 987.
Richmond, G. E., Houston, Tex. Conveyer. No. 878,671; Feb. 11; Sp. p. 1664; Dr. p. 343; Gaz. vol. 132; p. 1140.
Rickards, W., Portland, Oreg. Feathering paddle attachment for small boats. No. 878,469; Feb. 4; Sp. p. 1152; Dr. p. 236; Gaz. vol. 132; p. 1038.
Rider, C. H., St. Louis, Mo. Apparatus for manufacturing fuel-gas. No. 879,320; Feb. 18; Sp. p. 2921; Dr. p. 609; Gaz. vol. 132; p. 1389.
Rider, C. H., St. Louis, Mo. Manufacturing gas. No. 879,321; Feb. 18; Sp. p. 2923; Dr. p. 610; Gaz. vol. 132; p. 1389.
Rieder, T. W., Pittsburg, Pa. Wheel for vehicles. No. 878,564; Feb. 11; Sp. p. 1438; Dr. p. 293; Gaz. vol. 132; p. 1104.
Riedl, A., Chicago, Ill. Musical valve instrument. No. 879,322; Feb. 18; Sp. p. 2924; Dr. p. 610; Gaz. vol. 132; p. 1389.
Riegel Sack Company. (See Sparks, C. F., assignor.)
Riesmer, E. P., Wahren, Germany. Music-box. No. 878,088; Feb. 4; Sp. p. 395; Dr. pp. 82–3; Gaz. vol. 132; p. 912.
Rietmann, H., Crown Point, Ind. Crate. No. 880,042; Feb. 25; Sp. p. 4462; Dr. p. 937; Gaz. vol. 132; p. 1658.
Riexinger, G., Buffalo, N. Y. Flexible pipe-joint. No. 879,588; Feb. 18; Sp. p. 3503; Dr. p. 734; Gaz. vol. 132; p. 1476.
Riffo, M. B., Philadelphia, Pa. Folding go-cart. No. 879,907; Feb. 25; Sp. p. 4192; Dr. p. 875; Gaz. vol. 132; p. 1614.
Riggs, E. W., assignor of one-half to M. S. Largey, Butte, Mont. Compound centrifugal pump. No. 880,327; Feb. 25; Sp. p. 5017; Dr. p. 1059; Gaz. vol. 132; p. 1751.
Riker, C. L., Jr., New York, N. Y. Boring-bar. No. 877,950; Feb. 4; Sp. p. 107; Dr. p. 25; Gaz. vol. 132; p. 867.
Rines, W. H., Rumford Falls, Me. Electrolytic apparatus for electrolysis of metallic salts. No. 878,425; Feb. 4; Sp. p. 1065; Dr. p. 216; Gaz. vol. 132; p. 1024.
Ritchie, J., New York, N. Y. Motor-vehicle. No. 880,403; Feb. 25; Sp. p. 5179; Dr. p. 1092; Gaz. vol. 132; p. 1777.
Riter-Conley Manufacturing Company. (See Carpenter, H. A., assignor.)
Riter-Conley Manufacturing Company. (See Carpenter, H. E., assignor.)
Robbins, L. K., St. Louis, Mo. Well-drilling machine. No. 878,827; Feb. 11; Sp. p. 1963; Dr. p. 406; Gaz. vol. 132; p. 1189.
Roberds, L., Scotia, S. C. Steam-tramping cotton-press. No. 879,413; Feb. 18; Sp. p. 3125; Dr. p. 650; Gaz. vol. 132; p. 1419.
Roberts, E. W., New York, N. Y. Coin-receptacle. No. 877,951; Feb. 4; Sp. p. 109; Dr. p. 25; Gaz. vol. 132; p. 867.
Roberts, J. E. (See Crouse and Roberts.)
Roberts, J. H., Darlington, England. Apparatus for annealing wire. No. 879,674; Feb. 18; Sp. p. 3677; Dr. pp. 768–9; Gaz. vol. 132; p. 1504.
Robinson, A. J., Washington, D. C. Brace for concrete structures. No. 880,468; Feb. 25; Sp. p. 5324; Dr. p. 1120; Gaz. vol. 132; p. 1800.
Robinson, C. J., and J. Backhouse, Rochdale, England, assignors to Thomas Robinson & Son Limited. Machine for separating dust or other particles from granular substances. No. 880,242; Feb. 25; Sp. p. 4859; Dr. pp. 1028–9; Gaz. vol. 132; p. 1724.
Robinson, E. T., St. Louis, Mo. Convertible car. No. 878,899; Feb. 11; Sp. p. 2105; Dr. pp. 438–9; Gaz. vol. 132; p. 1212.
Robinson, E. T., assignor to St. Louis Car Company, St. Louis, Mo. Automobile door-hinge. No. 878,745; Feb. 11; Sp. p. 1802; Dr p. 373; Gaz. vol. 132; p. 1163.
Robinson, E. T., assignor to St. Louis Car Company, St. Louis, Mo. Semiconvertible car. No. 878,828; Feb. 11; Sp. p. 1964; Dr. pp 406–7; Gaz. vol. 132; p. 1190.
Robinson, H. G., Sandusky, Ohio. Safety-stop for steam-turbines. No. 879,121; Feb. 11; Sp. p. 2537; Dr. p. 527; Gaz. vol. 132; p. 1281.
Robinson, P. H., assignor to O. K. Tool Holder Company, Shelton, Conn. Tool-holder. No. 878,672; Feb. 11; Sp. p. 1665; Dr. p. 343; Gaz. vol. 132; p. 1140.
Robinson, T., Haverhill, Mass. Tag-holder. No. 879,493; Feb. 18; Sp. p. 3286; Dr. p. 687; Gaz. vol. 132; p. 1445.

Robinson, W. E., assignor, by mesne assignments, to American Woven Lath Company, Washington, D. C. Woven lathing and treating same. No. 880,098; Feb. 25; Sp. p. 4556; Dr. pp. 959-60; Gaz. vol. 132; p. 1675.
Rockstroh, M., Klein-Sedlitz, Germany. Platen printing-press. No. 878,426; Feb. 4; Sp. p. 1067; Dr. p. 216; Gaz. vol. 132; p. 1024.
Rockstroh, M., Klein-Sedlitz, near Pirna, Germany. Clutch-operating device. No. 879,005; Feb. 11; Sp. p. 2296; Dr p. 480; Gaz. vol. 132; p. 1245.
Rodman, W. B., Charleston, S. C. Hinge. No. 879,097; Feb. 11; Sp. p. 2401; Dr. p. 502; Gaz. vol. 132; p. 1264.
Rodrigues-Ely, C., and E. Gauthier, Paris, France. Heating and welding metals. No. 880,099; Feb. 25; Sp. p. 4558; Dr. p. 960; Gaz. vol. 132; p. 1675.
Roesen, O., assignor to R. Hoe, New York, N. Y. Folder. No. 878,839; Feb. 11; Sp. p. 1966; Dr. p. 407; Gaz. vol. 132; p. 1190.
Roessler & Hasslacher Chemical Co. (See Foersterling and Carveth, assignors.)
Roever, J., assignor to National Patent Company, New York, N. Y. Carriage-feed for phonograph-machines. No. 880,100; Feb. 25; Sp. p. 4559; Dr. p. 960; Gaz. vol. 132; p. 1676.
Rogers, E. S., Knoxville, Tenn. Pessary. No. 880,101; Feb. 25; Sp. p. 4561; Dr. p. 960; Gaz. vol. 132; p. 1676.
Rogers, F. H., assignor of one-half to T. Wiesendanger, Los Angeles, Cal. Key-fastener for locks. No. 880,102; Feb. 25; Sp. p. 4562; Dr. p. 961; Gaz. vol. 132; p. 1676.
Rogers, J. F. (See Ball and Rogers.)
Rogers, K. E., South Manchester, Conn. Press-board. No. 878,089; Feb. 4; Sp. p. 397; Dr. p. 83; Gaz. vol. 132; p. 912.
Rogers, M. E., Johnsville, Cal. Combination-garment. No. 878,237; Feb. 4; Sp. p. 704; Dr. p. 145; Gaz. vol. 132; p. 961.
Rogers, P., Wollaston, Mass. Mordanting wool. No. 878,314; Feb. 4; Sp. p. 862; Gaz. vol. 132; p. 987.
Rolfe, E. C., Memphis, Tenn. Hopple for fowls. No. 880,043; Feb. 25; Sp. p. 4463; Dr. p. 937; Gaz. vol. 132; p. 1658.
Rolfson-Schmidt, S., New Dorp, assignor, by mesne assignments, to R. F. Woodward, Huntington, N. Y. Medicated-silk protector. No. 880,469; Feb. 25; Sp. p. 5325; Dr. p. 1120; Gaz. vol. 132; p. 1801.
Rollenhagen, C. G., assignor of one-half to W. Bates, Memphis, Tenn. Scoop. No. 879,194; Feb. 18; Sp. p. 2680; Dr. p. 559; Gaz. vol. 132; p. 1347.
Rollins, G. D., Philadelphia, Pa. Metallic packing. No. 878,238; Feb. 4; Sp. p. 704; Dr. p. 145; Gaz. vol. 132; p. 961.
Rominger, G. S., Philadelphia, Pa. Vat-support. No. 880,242; Feb. 25; Sp. p. 4961; Dr. p. 1029; Gaz. vol. 132; p. 1725.
Rommes, P., Pittsburg, Kans. Coal-mining drill-post. No. 879,006; Feb. 11; Sp. p. 2299; Dr. p. 480; Gaz. vol. 132; p. 1245.
Roos, A., South Norwalk, Conn. Fabric-cutting machine. No. 879,675; Feb. 18; Sp. p. 3679; Dr. pp. 709-70; Gaz. vol. 132; p. 1504.
Root, J. S., Chicago, Ill. Paper-clip. No. 879,007; Feb. 11; Sp. p. 2302; Dr. p. 481; Gaz. vol. 132; p. 1246.
Root, W. O., Chicago, Ill. Furnace-grate. No. 879,908; Feb. 25; Sp. p. 4195; Dr. p. 876; Gaz. vol. 132; p. 1614.
Roper, C. F., assignor to C. F. Roper & Company, Hopedale, Mass. Speed-controlling reversing-propeller. No. 878,022; Feb. 4; Sp. p. 272; Dr. p. 58; Gaz. vol. 132; p. 862.
Roper & Company, C. F. (See Roper, C. F., assignor.)
Rose, O., Crown Point, Ind. Arbor. No. 879,829; Feb. 18; Sp. p. 3983; Dr. p. 834; Gaz. vol. 132; p. 1555.
Rosenbluth, E. M., Philadelphia, Pa. Carbid-cartridge. No. 880,470; Feb. 25; Sp. p. 5326; Dr. pp. 1120-1; Gaz. vol. 132; p. 1801.
Rosenfeld, W. W., New York, N. Y. Phonograph. No. 879,589; Feb. 18; Sp. p. 3504; Dr. pp. 734-5; Gaz. vol. 132; p. 1476.
Ross, D. E., Brookston, assignor to Ross Gear and Tool Company, La Fayette, Ind. Steering-gear for vehicles. No. 879,414; Feb. 18; Sp. p. 3127; Dr. p. 651; Gaz. vol. 132; p. 1420.
Ross, G. R., Muskegon, Mich. Drawer-guide. No. 879,962; Feb. 25; Sp. p. 4329; Dr. p. 906; Gaz. vol. 132; p. 1638.
Ross Gear and Tool Company. (See Ross, D. E., assignor.)
Ross, J. W., Spencer, Nebr. Means for releasing and leading animals from stables. No. 879,323; Feb. 18; Sp. p. 2927; Dr. pp. 610-11; Gaz. vol. 132; p. 1300.
Rost, R., Leipzig, Germany. Mixing-valve. No. 878,023; Feb. 4; Sp. p. 275; Dr. p. 59; Gaz. vol. 132; p. 862.
Rote, C. V., assignor of two-thirds to P. E. Shee and F. Shoff, Lancaster, Pa. Railway-car. No. 880,164; Feb. 25; Sp. p. 4698; Dr. p. 990; Gaz. vol. 132; p. 1698.
Roth, A., Newport, Ky. Dough-mixing machine. No. 879,590; Feb. 18; Sp. p. 3510; Dr. p. 735; Gaz. vol. 132; p. 1477.
Roth Bros. (See Warder, W. J., Jr., assignor.)
Rothermel, S. W., New York, N. Y., assignor to R. W. Barkley, trustee, Montclair, N. J. Transmitter. No. 880,044; Feb. 25; Sp. p. 4464; Dr. pp. 937-8; Gaz. vol. 132; p. 1658.
Rounds, R., Hennessey, Okla. Cow-pea cutter. No. 879,324; Feb. 18; Sp. p. 2931; Dr. p. 611; Gaz. vol. 132; p. 1300.
Rousset, P. A., Raceland, La. Packet-holder. No. 879,591; Feb. 18; Sp. p. 3511; Dr. p. 735; Gaz. vol. 132; p. 1477.
Rousset, J. A. G. (See Germain and Ossart, assignors.)
Rowe, G., *et al.* (See Farrow, J., assignor.)
Rowell, B. C., Chicago, Ill., assignor to Rowell Potter Safety Stop Company, Portland, Me. Train protection for railways. No. 879,494; Feb. 18; Sp. p. 3287; Dr. pp. 688-9; Gaz. vol. 132; p. 1445.
Rowell, J. M. (See Maxwell and Rowell.)
Rowell Potter Safety Stop Company. (See Rowell, B. C., assignor.)
Rowell, T. B., Beaver Dam, Wis. Grain-drill. No. 879,495; Feb. 18; Sp. p. 3294; Dr. p. 690; Gaz. vol. 132; p. 1446.
Rowland, D. E., Canton, Ohio. Wrench. No. 878,673; Feb. 11; Sp. p. 1607; Dr. p. 343; Gaz. vol. 132; p. 1140.
Rowlands, D. D. (See Lyon, J. P., assignor.)
Roy, L. H. (See Sprague, A. R., assignor.)
Royal Supply Company. (See Clark and Douglas, assignors.)
Rubach, L., South Chicago, Ill. Hydraulic ram. No. 878,239; Feb. 4; Sp. p. 706; Dr. p. 145; Gaz. vol. 132; p. 961.
Rube, W., O'Fallon, Ill. Stove. No. 879,909; Feb. 25; Sp. p. 4197; Dr. p. 876; Gaz. vol. 132; p. 1615.
Rubel, I. F., Chicago, Ill. Binder. No. 878,746; Feb. 11; Sp. p. 1803; Dr. p. 373; Gaz. vol. 132; p. 1163.
Rude, J. M., Covington, Ky., assignor to National Cellular Steel Company, New York, N. Y. Metal-shaping machine. No. 879,415; Feb. 18; Sp. p. 3131; Dr. p. 651; Gaz. vol. 132; p. 1420.
Rudolph, M. R., Warrens, Wis. Sleigh. No. 880,165; Feb. 25; Sp. p. 4698; Dr. pp. 990-1; Gaz. vol. 132; p. 1698.
Rued, H. L., Butterfield, Minn. Sliding-door fastener. No. 879,226; Feb. 18; Sp. p. 2932; Dr. p. 611; Gaz. vol. 132; p. 1300.
Ruggles, C. S., Three Rivers, Mass. Fisherman's type. No. 880,045; Feb. 25; Sp. p. 4467; Dr. p. 938; Gaz. vol. 132; p. 1659.
Ruggles, G. W., Charlotte, N. Y. Green-corn fork. No. 880,166; Feb. 25; Sp. p. 4700; Dr. p. 991; Gaz. vol. 132; p. 1698.
Rundlett, W. D., assignor to Davis & Furber Machine Company, North Andover, Mass. Bobbin-winding machine. No. 879,798; Feb. 18; Sp. p. 3905; Dr. p. 818; Gaz. vol. 132; p. 1544.
Russ, F. A., Greenwich, and J. B. Russ, Derby, Conn. Buckle for webbing. No. 878,090; Feb. 4; Sp. p. 398; Dr. p. 84; Gaz. vol. 132; p. 913.
Russ, J. B. (See Russ, F. A. and J. B.)
Russell, C. N., *et al.* (See Squires, A. C., assignor.)
Ruud, E., Pittsburg, Pa. Water-valve for instantaneous water-heaters. No. 879,910; Feb. 25; Sp. p. 4199; Dr. p. 876; Gaz. vol. 132; p. 1615.
Ryan, E. E., South Bend, Ind. Lifting-jack. No. 879,592; Feb. 18; Sp. p. 3513; Dr. p. 735; Gaz. vol. 132; p. 1477.
Ryan, J. H., Dublin, Ireland. Tire of wheels. No. 879,676; Feb. 18; Sp. p. 3684; Dr. p. 770; Gaz. vol. 132; p. 1505.
Ryan, P. J., assignor to Chadeloid Chemical Company, New York, N. Y. Finish-remover. No. 878,240; Feb. 4; Sp. p. 708; Gaz. vol. 132; p. 962.
Ryan, W. D. (See Barker, I., assignor.)
Ryon, E. H., Worcester, Mass., assignor to Crompton & Knowles Loom Works. Worm-driving mechanism. No. 879,496; Feb. 18; Sp. p. 3296; Dr. p. 690; Gaz. vol. 132; p. 1446.
Saddler, H. K., assignor of one-half to C. C. Taylor, Oakmont, Pa. Smoking-pipe. No. 879,677; Feb. 18; Sp. p. 3685; Dr. p. 771; Gaz. vol. 132; p. 1505.
Sadler, R. E., Cleveland, Ohio. Combined impression-tray and cheek-distender. No. 880,328; Feb. 25; Sp. p. 5018; Dr. p. 1059; Gaz. vol. 132; p. 1752.
Saegmuller, G. N., assignor to Bausch, Lomb, Saegmuller Co., Rochester, N. Y. Adjustable vernier. No. 879,008; Feb. 11; Sp. p. 2303; Dr. p. 481; Gaz. vol. 132; p. 1246.
Saegmuller, G. N., assignor to Bausch, Lomb, Saegmuller Co., Rochester, N. Y. Level. No. 879,122; Feb. 11; Sp. p. 2539; Dr. pp. 527-8; Gaz. vol. 132; p. 1262.
Safety Car Heating & Lighting Company. (See Dixon, R. M., assignor.)
Safety Car Heating & Lighting Company. (See Hulse, G. E., assignor.)
Safety Car Heating & Lighting Company. (See Lungren, C. M., assignor.)
Salmon, W. W., Rochester, assignor to General Railway Signal Company, Gates, N. Y. Railway signaling system. No. 880,329; Feb. 25; Sp. p. 5020; Dr. p. 1059; Gaz. vol. 132; p. 1752.
Salts Textile Manufacturing Company. (See Horsfal, H., assignor.)
Salter, J. (See McDonald and Salter.)
Saltonstall, N., Battle Creek, Mich. Mail-box. No. 877,962; Feb. 4; Sp. p. 111; Dr. p. 26; Gaz. vol. 132; p. 868.
Sample, J. A., Rankin, Pa. Draft-gear for car-couplings. No. 879,911; Feb. 25; Sp. p. 4200; Dr. p. 877; Gaz. vol. 132; p. 1616.
Samsel, G., New York, N. Y. Dish-drainer. No. 878,315; Feb. 4; Sp. p. 864; Dr. p. 172; Gaz. vol. 132; p. 987.
Samuel, H. S., Perth, Scotland. Wind-shield or weather-screen for motor and similar vehicles. No. 879,195; Feb. 18; Sp. p. 2682; Dr. pp. 559-60; Gaz. vol. 132; p. 1347.

Samuelson, E. H., Boone, Iowa. Adjustable scaffold. No. 878,674; Feb. 11; Sp. p. 1609; Dr. p. 343; Gaz. vol. 132; p. 1141.
Sandahl, V., assignor to L. W. Beecher, New Haven, Conn. Machine for attaching heels to boots and shoes. No. 878,675; Feb. 11; Sp. p. 1670; Dr. pp. 344-5; Gaz. vol. 132; p. 1141.
Sandell, H. J., Minneapolis, Minn. Tap and bush for beer-kegs. No. 879,983; Feb. 25; Sp. p. 4331; Dr. p. 906; Gaz. vol. 132; p. 1638.
Sanderson, F. S., Queenstown, Tasmania, assignor to Mount Lyell Mining and Railway Company Limited, Melbourne, Australia. Mechanical ore-feeder for blast-furnaces. No. 879,839; Feb. 18; Sp. p. 4001; Dr. pp. 837-8; Gaz. vol. 132; p. 1558.
Sandrock, J. F. (See O'Dell, Noble, and Sandrock.)
Sanford, A. N., Wapato, Wash. Umbrella. No. 879,678; Feb. 18; Sp. p. 3687; Dr. p. 771; Gaz. vol. 132; p. 1505.
Sanford, P. P., Bratenahl village, Ohio. Fountain-pen. No. 879,912; Feb. 25; Sp. p. 4201; Dr. p. 877; Gaz. vol. 132; p. 1616.
Sanford, R. G., Yonkers, N. Y. Pipe-fishing tool. No. 880,404; Feb. 25; Sp. p. 5180; Dr. p. 1092; Gaz. vol. 132; p. 1777.
Sangamo Electric Company. (See Hodde, J. H., assignor.)
Safason, L., Hirschgarten, near Berlin, Germany. Process of and apparatus for preparing effervescing baths. No. 879,326; Feb. 18; Sp. p. 2933; Dr. p. 612; Gaz. vol. 132; p. 1301.
Sargent, F. G., assignor to C. G. Sargent's Sons Corporation, Westford, Mass. Wool-washing bowl. No. 879,196; Feb. 18; Sp. p. 2684; Dr. p. 560; Gaz. vol. 132; p. 1348.
Sasko, H., North Braddock, Pa. Wrench. No. 880,330; Feb. 25; Sp. p. 5024; Dr. p. 1060; Gaz. vol. 132; p. 1752.
Saucier, J. E., Montreal, Quebec, Canada. Trolley. No. 877,953; Feb. 4; Sp. p. 113; Dr. p. 26; Gaz. vol. 132; p. 868.
Sauer, F. G., Berlin, assignor to P. Höpfner, Schöneberg-Berlin, Germany. Producing vinaceous beverages from pure hemoglobin and fermentable sugar. No. 878,900; Feb. 11; Sp. p. 2107; Gaz. vol. 132; p. 1213.
Sauerburger, E., Pittsburg, Pa. Curtain-pole. No. 880,244; Feb. 25; Sp. p. 4962; Dr. p. 1029; Gaz. vol. 132; p. 1725.
Sauers, J. (See Dingman, A. H., assignor.)
Saurer, H., Arbon, Switzerland. Starting device for explosion-engines with four cylinders. No. 878,747; Feb. 11; Sp. p. 1804; Dr. p. 374; Gaz. vol. 132; p. 1164.
Savage, H. C. (See Pabst and Savage.)
Sawyers, D. A., Unionville, Iowa. Washing-machine. No. 878,427; Feb. 4; Sp. p. 1068; Dr. p. 217; Gaz. vol. 132; p. 1024.
Sayles, H. W., Peoria, assignor, by mesne assignments, to G. M. Willis, Chicago, Ill. Prepayment arrangement for meters. No. 879,913; Feb. 25; Sp. p. 4202; Dr. p. 877; Gaz. vol. 132; p. 1616.
Scanlan, F., Brantford, Ontario, Canada. Axle. No. 879,327; Feb. 18; Sp. p. 2934; Dr. p. 612; Gaz. vol. 132; p. 1301.
Scanlan, J. F., Brooklyn, N. Y. Brush. No. 878,748; Feb. 11; Sp. p. 1808; Dr. p. 374; Gaz. vol. 132; p. 1164.
Schaefer, A. (See Schaefer, G. L. and A.)
Schaefer, G. L., New York, N. Y. and A. Schaefer, Basel, Switzerland. Preparing cellulose for artificial silk. No. 879,416; Feb. 18; Sp. p. 3133; Gaz. vol. 132; p. 1421.
Schaeffer, W. G., Reading, Pa., assignor, by mesne assignments, to Reading Standard Company. Muffler cut-out. No. 880,471; Feb. 25; Sp. p. 5329; Dr. p. 1121; Gaz. vol. 132; p. 1801.
Scharf, F., Devils Lake, N. D. Vegetable-slicer. No. 878,676; Feb. 11; Sp. p. 1674; Dr. p. 345; Gaz. vol. 132; p. 1141.
Schaller, O., Maplewood, Mo. Excavator. No. 879,844; Feb. 18; Sp. p. 4013; Dr. p. 841; Gaz. vol. 132; p. 1560.
Schärer-Nussbaumer, J., Erlenbach, Switzerland. Apparatus for making cops. No. 878,091; Feb. 4; Sp. p. 400; Dr, pp. 84-5; Gaz. vol. 132; p. 913.
Schenck, J. E. (See Mullaley and Schenck.)
Schildhauer, E., Washington, D. C. Lock-gate. No. 880,103; Feb. 25; Sp. p. 4564; Dr. p. 961; Gaz. vol. 132; p. 1676.
Schiller, M., Berlin, Germany. Reel for reaping, mowing, and the like machines. No. 880,104; Feb. 25; Sp. p. 4567; Dr. p. 962; Gaz. vol. 132; p. 1677.
Schillinger, T., New York, N. Y. Floor system. No. 879,009; Feb. 11; Sp. p. 2304; Dr. p. 481; Gaz. vol. 132; p. 1246.
Schinner, J. M., Marshfield, Wis. Belt-tightener. No. 879,328; Feb. 18; Sp. p. 2936; Dr. p. 612; Gaz. vol. 132; p. 1301.
Schirmer, B. F., Cleveland, Ohio. Filter. No. 879,197; Feb. 18; Sp. p. 2685; Dr. p. 560; Gaz. vol. 132; p. 1348.
Schirmer, B. F., Indianapolis, Ind. Buffing device. No. 879,198; Feb. 18; Sp. p. 2687; Dr. p. 560; Gaz. vol. 132; p. 1348.
Schirmer, B. F., Indianapolis, Ind. Pneumatic tire. No. 879,199; Feb. 18; Sp. p. 2689; Dr. p. 561; Gaz. vol. 132; p. 1349.
Schlichter, J. J. (See Young and Schlichter.)
Schmick, H. J., Hamburg, Pa. Hoisting device. No. 879,679; Feb. 18; Sp. p. 3688; Dr. pp. 771-2; Gaz. vol. 132; p. 1506.
Schmidt, G. A., Chicago, Ill. Liquid-soap dispenser. No. 878,750; Feb. 11; Sp. p. 1812; Dr. p. 375; Gaz. vol. 132; p. 1165.
Schmidt, H., Cologne, Germany. Producing poreless and well-adhering electrodeposits. No. 880,405; Feb. 25; Sp. p. 5182; Gaz. vol. 132; p. 1777.
Schmieder, J. R., assignor, by mesne assignments, of one-half to W. W. Sterling, Cincinnati, Ohio. Clothes-drier. No. 879,799; Feb. 18; Sp. p. 3906; Dr. p. 819; Gaz. vol. 132; p. 1544.
Schmitt, B., Brazil, N. D. Trap. No. 879,010; Feb. 11; Sp. p. 2305; Dr. pp. 481-2; Gaz. vol. 132; p. 1247.
Schmitt, E. D., Brooklyn, assignor to Monarch Seal Company, New York, N. Y. Machine for applying bottle-seals. No. 880,406; Feb. 25; Sp. p. 5183; Dr. p. 1092; Gaz. vol. 132; p. 1778.
Schmitt, E. D., Brooklyn, assignor to Monarch Seal Company, New York, N. Y. Machine for applying bottle-caps. No. 880,407; Feb. 25; Sp. p. 5184; Dr. p. 1093; Gaz. vol. 132; p. 1778.
Schmitt, E. D., Brooklyn, assignor to Monarch Seal Company, New York, N. Y. Sealing-head for bottle-sealing machines. No. 880,408; Feb. 25; Sp. p. 5186; Dr. p. 1093; Gaz. vol. 132; p. 1778.
Schmitt, E. D., Brooklyn, assignor to Monarch Seal Company, New York, N. Y. Sealing-head for bottle-sealing machines. No. 880,490; Feb. 25; Sp. p. 5371; Dr. p. 1131; Gaz. vol. 132; p. 1807.
Schneider, A., Chicago, Ill. Filling-tube for liquids. No. 878,241; Feb. 4; Sp. p. 708; Dr. pp. 145-6; Gaz. vol. 132; p. 962.
Schneider, A., Chicago, Ill. Sealing-head for filling-tubes for liquids. No. 878,242; Feb. 4; Sp. p. 712; Dr. p. 146; Gaz. vol. 132; p. 963.
Schneider, A., Chicago, Ill. Filling-tube for liquids. No. 878,243; Feb. 4; Sp. p. 717; Dr. p. 146; Gaz. vol. 132; p. 963.
Schneider Manufacturing Company of New Jersey. (See Schneider, W. E., assignor.)
Schneider, W. E., Washington, D. C., assignor to Schneider Manufacturing Company of New Jersey. Vehicle-wheel. No. 878,158; Feb. 4; Sp. p. 521; Dr. p. 112; Gaz. vol. 132; p. 935.
Scholl, W. M., Chicago, Ill. Instep-arch support. No. 880,245; Feb. 25; Sp. p. 4963; Dr. p. 1029; Gaz. vol. 132; p. 1725.
Schrader, O. R., San Francisco, Cal. Sidewalk-door. No. 879,200; Feb. 18; Sp. p. 2690; Dr. p. 561; Gaz. vol. 132; p. 1349.
Schreiber, J., Jersey City, N. J. Truck. No. 878,751; Feb. 11; Sp. p. 1813; Dr. p. 375; Gaz. vol. 132; p. 1165.
Schriver, O. P., Fort Thomas, Ky., and J. M. Webster, assignors to O. P. Schriver & Co., Cincinnati, Ohio. Barrel-truck. No. 879,914; Feb. 25; Sp. p. 4207; Dr. p. 878; Gaz. vol. 132; p. 1617.
Schroder, E. J., Hamilton, Ohio. Molding-machine. No. 879,915; Feb. 25; Sp. p. 4208; Dr. p. 878; Gaz. vol. 132; p. 1617.
Schroder, N., New York, N. Y. Pasting-machine. No. 879,329; Feb. 18; Sp. p. 2937; Dr. pp. 612-13; Gaz. vol. 132; p. 1392.
Schuermann, A. (See Mueller and Schuermann.)
Schulze, A., Washington, D. C. Manufacture of india-rubber boots and shoes. No. 878,749; Feb. 11; Sp. p. 1810; Dr. p. 375; Gaz. vol. 132; p. 1165.
Schuttler, R. T., Oshkosh, Wis. Polishing-machine. No. 877,954; Feb. 4; Sp. p. 114; Dr. pp. 26-7; Gaz. vol. 132; p. 869.
Schwarz, G., Eisenach, Germany. Spring for vehicles. No. 878,316; Feb. 4; Sp. p. 864; Dr. p. 172; Gaz. vol. 132; p. 987.
Schweinert, M. C. (See Kraft and Schweinert.)
Schwieger, A., Berlin, Germany. Apparatus for manufacturing metal tubes. No. 878,092; Feb. 4; Sp. p. 403; Dr. p. 85; Gaz. vol. 132; p. 914.
Schwind, M., Thalheim, Germany. Bottle-stopper. No. 880,331; Feb. 25; Sp. p. 5026; Dr. p. 1060; Gaz. vol. 132; p. 1753.
Scott, C. I., assignor to Scott Manufacturing Co., Charlotte, Mich. Pulley-block. No. 879,680; Feb. 18; Sp. p. 3689; Dr. p. 772; Gaz. vol. 132; p. 1506.
Scott, C. S., Cadiz, assignor to F. A. Seiberling, Akron, Ohio. Wheel-rim for pneumatic tires. No. 880,332; Feb. 25; Sp. p. 5028; Dr. p. 1060; Gaz. vol. 132; p. 1753.
Scott, D. J., *et al.*, executors. (See Scott, W.)
Scott, I., *et al.*, executors. (See Scott, W.)
Scott Manufacturing Co. (See Scott, C. I., assignor.)
Scott, R. W., Philadelphia, assignor of one-half to L. N. D. Williams, Ashbourne, Pa. Knitting-machine. No. 879,681; Feb. 18; Sp. p. 3690; Dr. pp. 772-3; Gaz. vol. 132; p. 1506.
Scott, W., deceased, Plainfield, N. J.; I. and D. J. Scott, executors. Lubricating device. No. 879,916; Feb. 25; Sp. p. 4210; Dr. pp. 878-9; Gaz. vol. 132; p. 1618.
Seamless Rubber Company. (See Murray, J. A., assignor.)
Searle, H. S., Rochester, N. Y. Mechanism for boat propulsion. No. 879,497; Feb. 18; Sp. p. 3297; Dr. p. 690; Gaz. vol. 132; p. 1446.
Seaward, L. M., Ontario, Oreg. Fastening means for steam-boiler flues or tubes. No. 879,330; Feb. 18; Sp. p. 2940; Dr. p. 613; Gaz. vol. 132; p. 1392.
Sechler, J., Economy, Pa. Plumb and level. No. 880,246; Feb. 25; Sp. p. 4965; Dr. p. 1030; Gaz. vol. 132; p. 1726.
Secor, J. B., assignor to Williams Typewriter Company, Derby, Conn. Shift mechanism for type-writing machines. No. 878,244; Feb. 4; Sp. p. 721; Dr. p. 146; Gaz. vol. 132; p. 964.
Sedivi, L., Nashville, Tenn. Detachable shoe-heel. No. 879,011; Feb. 11; Sp. p. 2307; Dr. p. 482; Gaz. vol. 132; p. 1247.
Seeley, J. E., assignor to Synchronous Static Company, Los Angeles, Cal. High-frequency discharge apparatus. No. 880,040; Feb. 25; Sp. p. 4469; Dr. pp. 938-9; Gaz. vol. 132; p. 1659.
Segelcke, C. E., New York, N. Y. Combined grater, parer, and corer. No. 879,417; Feb. 18; Sp. p. 3134; Dr. p. 651; Gaz. vol. 132; p. 1421.

Selberling, F. A. (See Scott, C. S., assignor.)
Seibert, W., Erie, Kans. Rotary engine. No. 880,333; Feb. 25; Sp. p. 5029; Dr. p. 1061; Gaz. vol. 132; p. 1753.
Seifert, J. W., East Point, Ga. Boiler washing-machine. No. 880,334; Feb. 25; Sp. p. 5032; Dr. p. 1061; Gaz. vol. 132; p. 1754.
Seiffert, F., Berlin, Germany. Expansion-joint device. No. 878,317; Feb. 4; Sp. p. 385; Dr. p. 172; Gaz. vol. 132; p. 987.
Seiler, P., Chicago, Ill., assignor, by mesne assignments, to R. Connett, Upper Montclair, N. J. Acoustical instrument. No. 879,917; Feb. 25; Sp. p. 4212; Dr. p. 879; Gaz. vol. 132; p. 1618.
Selden, A. E., assignor of one-half to C. S. Davis, Rochester, N. Y. Mechanical stoker. No. 879,682; Feb. 18; Sp. p. 3602; Dr. pp. 773–4; Gaz. vol. 132; p. 1507.
Sellers, I., Edmonton, Alberta, Canada. Harness-buckle. No. 878,318; Feb. 4; Sp. p. 366; Dr. p. 173; Gaz. vol. 132; p. 988.
Selman, W. L., Summerville, Ga. Double plow. No. 878,566; Feb. 11; Sp. p. 1439; Dr. p. 393; Gaz. vol. 132; p. 1104.
Seng Company. (See Seng, F. J., assignor.)
Seng, F. J., assignor to Seng Company, Chicago, Ill. Extension-table. No. 878,003; Feb. 4; Sp. p. 404; Dr. p. 86; Gaz. vol. 132; p. 914.
Senn, C., *et al.* (See Squires, A. C., assignor.)
Senn, J. H. (See Earle and Senn.)
Sensenschmidt, M., Frankfort-on-the-Main, Germany. Apparatus for hardening incandescent bodies for incandescent lights. No. 879,202; Feb. 18; Sp. p. 2602; Dr. p. 561; Gaz. vol. 132; p. 1350.
Senssenbrenner, C., Obercassel, near Dusseldorf, Germany. Concentric-pipe coil. No. 879,201; Feb. 18; Sp. p. 2601; Dr. p. 561; Gaz. vol. 132; p. 1349.
Seward, G. O. (See Kügelgen and Seward.)
Seyboth, F. W. (See Baumann and Seyboth.)
Seymour, G. G., Troy, N. Y. Valve for flushing-tanks. No. 878,094; Feb. 4; Sp. p. 406; Dr. p. 86; Gaz. vol. 132; p. 914.
Seymour, R. C., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Cutting and folding machine. No. 879,418; Feb. 18; Sp. p. 3136; Dr. pp. 653–3; Gaz. vol. 132; p. 1421.
Seymour, R. C., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Signature-delivery mechanism for printing and folding machinery. No. 879,419; Feb. 18; Sp. p. 3139; Dr. pp. 653–4; Gaz. vol. 132; p. 1421.
Seymour, R. C., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Printing-press. No. 879,840; Feb. 18; Sp. p. 4002; Dr. pp. 835–40; Gaz. vol. 132; p. 1550.
Seymour, W. M., assignor of one-half to J. P. Hume, Marshfield, Wis. Land-clearing machine. (Reissue.) No. 12,749; Feb. 11; Sp. p. 2656; Dr. p. 532; Gaz. vol. 132; p. 1266.
Shackelford, E. H., Salt Lake City, Utah. Box-cleaning device for concentrating-tables. No. 879,012; Feb. 11; Sp. p. 2308; Dr. pp. 482–3; Gaz. vol. 132; p. 1247.
Shackley, J., Whitehaven, England. Spying-aperture for doors, walls, and the like. No. 878,245; Feb. 4; Sp. p. 723; Dr. p. 147; Gaz. vol. 132; p. 964.
Shakespeare, W., Jr., Kalamazoo, Mich. Spool for fishing-reels. No. 879,420; Feb. 18; Sp. p. 3142; Dr. p. 654; Gaz. vol. 132; p. 1422.
Shannon, W. M., and G. K. Taylor, Columbia, S. C. Combined lock and electric switch. No. 880,167; Feb. 25; Sp. p. 4701; Dr. p. 991–2; Gaz. vol. 132; p. 1698.
Shannon, W. M., and G. K. Taylor, Columbia, S. C. Combined lock and electric switch. No. 880,168; Feb. 25; Sp. p. 4703; Dr. p. 992; Gaz. vol. 132; p. 1699.
Sharp, C. S., Auburn, N. Y., assignor to International Harvester Company. Pole-truck for tillage implements. No. 879,331; Feb. 18; Sp. p. 2941; Dr. p. 613; Gaz. vol. 132; p. 1392.
Sharp, C. S., Auburn, N. Y., assignor to International Harvester Company. Riding attachment for harrows. No. 879,332; Feb. 18; Sp. p. 2942; Dr. pp. 613–14; Gaz. vol. 132; p. 1393.
Sharp, F. D., Altoona, Pa. Protector for third rails. No. 879,683; Feb. 18; Sp. p. 3608; Dr. p. 774; Gaz. vol. 132; p. 1507.
Sharp, R. C., Apple Creek, Ohio. Apparatus for transferring mail-pouches. No. 880,409; Feb. 25; Sp. p. 5188; Dr. p. 1093; Gaz. vol. 132; p. 1779.
Shaw, F. G., assignor to International Switch & Signal Company, Boston, Mass. Means for keeping switches clear from snow and ice. No. 878,566; Feb. 11; Sp. p. 1440; Dr. p. 294; Gaz. vol. 132; p. 1104.
Shawver, C. C., *et al.* (See Titus, W., assignor.)
Shee, P. E., *et al.* (See Rote, C. V., assignor.)
Sheffield Car Company. (See Henderson, J., assignor.)
Shelbourn, J. W., Grand Island, Nebr. Threshing mechanism. No. 878,901; Feb. 11; Sp. p. 2108; Dr. p. 439; Gaz. vol. 132; p. 1213.
Shelly, H. W. (See Sutton, T. E., assignor.)
Shepherd, L., *et al.* (See Spence, S. D., assignor.)
Sherman, W. S., Milwaukee, Wis. Boring-machine. No. 879,918; Feb. 25; Sp. p. 4214; Dr. p. 879; Gaz. vol. 132; p. 1618.
Shevlin, G. F., Saratoga Springs, N. Y., and F. D. Small, Woodland, Me.; said Shevlin assignor to Baker & Shevlin Company, Saratoga Springs, N. Y. Cooler for reclaimed liquor and gas in paper-pulp processes. No. 880,247; Feb. 25; Sp. p. 4866; Dr. p. 1030; Gaz. vol. 132; p. 1726.
Sheward, H. E., Upper Norwood, England. Anvil. No. 880,335; Feb. 25; Sp. p. 5034; Dr. p. 1062; Gaz. vol. 132; p. 1754.
Shimek, J. J., Cuba, Kans. Grate for cook-stoves. No. 880,105; Feb. 25; Sp. p. 4569; Dr. p. 963; Gaz. vol. 132; p. 1677.
Shimek, J. J., Cuba, Kans. Convertible heating and cooking stove. No. 880,106; Feb. 25; Sp. p. 4572; Dr. p. 963; Gaz. vol. 132; p. 1678.
Shimp, G. M., Celina, Ohio. Motor-plow. No. 877,955; Feb. 4; Sp. p. 116; Dr. p. 27; Gaz. vol. 132; p. 869.
Shive, C. A., assignor to Peerless Promoting and Manufacturing Company, Cherryvale, Kans. Gearing. No. 880,336; Feb. 25; Sp. p. 5034; Dr. p. 1062; Gaz. vol. 132; p. 1754.
Shoenberg, M. H., San Francisco, Cal. Electrical water-heater. No. 879,498; Feb. 18; Sp. p. 3300; Dr. p. 690; Gaz. vol. 132; p. 1447.
Shoff, F., *et al.* (See Rote, C. V., assignor.)
Shoop, G. D., Rock Island, Ill. Railway-crossing. No. 878,677; Feb. 11; Sp. p. 1675; Dr. p. 345; Gaz. vol. 132; p. 1142.
Shourds, M. R., North Powder, Oreg. Water-elevator. No. 877,956; Feb. 4; Sp. p. 117; Dr. p. 28; Gaz. vol. 132; p. 869.
Showalter, G. B., Broadway, Va. Wagon-brake. No. 878,567; Feb. 11; Sp. p. 1443; Dr. p. 294; Gaz. vol. 132; p. 1105.
Showalter, P. H., North River, Va. Vehicle-brake. No. 879,203; Feb. 18; Sp. p. 2603; Dr. p. 562; Gaz. vol. 132; p. 1350.
Shutts, D. S., New Brighton, Pa. Shade and curtain bracket. No. 879,684; Feb. 18; Sp. p. 3609; Dr. p. 775; Gaz. vol. 132; p. 1507.
Sicotte, F. (See Tunstall and Sicotte.)
Sieben, H., and L. Danhoff, Chicago, Ill. Furnace-grate. No. 878,246; Feb. 4; Sp. p. 725; Dr. p. 147; Gaz. vol. 132; p. 965.
Siedschlag, H., Monroe, Wis. Cattle-stanchion. No. 878,428; Feb. 4; Sp. p. 1070; Dr. p. 217; Gaz. vol. 132; p. 1024.
Siegrist, J. M., Oswego, N. Y. Trolley-wheel. No. 879,503; Feb. 18; Sp. p. 3514; Dr. p. 736; Gaz. vol. 132; p. 1478.
Siemens-Schuckertwerke G. M. B. H. (See Krell, O., assignor.)
Siemens-Schuckertwerke, Gesellschaft mit beschränkter Haftung. (See Hoffmann, C., assignor.)
Siewers, W. L., Winston Salem, N. C. Shirt. No. 879,685; Feb. 18; Sp. p. 3700; Dr. p. 775; Gaz. vol. 132; p. 1508.
Sill Stove Works. (See Stowe, W. A., assignor.)
Simons, H. (See Heil, A., assignor.)
Simplex Manufacturing Co. (See Kimble, S. M., assignor.)
Simplex Valve & Meter Company. (See Ledoux, J. W., assignor.)
Simpson, J. E., Brooklyn, N. Y. Pipe-cleanser. No. 879,594; Feb. 18; Sp. p. 3515; Dr. p. 736; Gaz. vol. 132; p. 1478.
Simpson, W., assignor to J. H. Fox, Berea, Ohio. Detonating-pistol. No. 879,919; Feb. 25; Sp. p. 4218; Dr. p. 880; Gaz. vol. 132; p. 1619.
Sims, L., Berryton, Kans. Bird-trap. No. 879,333; Feb. 18; Sp. p. 2943; Dr. p. 614; Gaz. vol. 132; p. 1393.
Sinclair, B. L., and L. L. Leslie, Santa Fe, N. Mex. Ter. Horse-releaser. No. 878,319; Feb. 4; Sp. p. 367; Dr. p. 173; Gaz. vol. 132; p. 988.
Sinclair, J., Belfast, Ireland. Spanner and wrench. No. 878,024; Feb. 4; Sp. p. 276; Dr. p. 50; Gaz. vol. 132; p. 893.
Singer, J. B., Boston, Mass., assignor to O. H. Hersey, trustee, Portland, Me. Combined carton and display device. No. 880,410; Feb. 25; Sp. p. 5190; Dr. p. 1094; Gaz. vol. 132; p. 1779.
Singer Manufacturing Company. (See Diehl, P., assignor.)
Sintz, C., Grand Rapids, Mich. Reversible propeller-wheel. No. 878,095; Feb. 4; Sp. p. 408; Dr. p. 86; Gaz. vol. 132; p. 914.
Sisley, E. P. L., Lyon, France, assignor to Societa Anonima Cooperativa per la Stagionatura e l'Asseggiodelle Sete ed Affini, Milan, Italy. Treating silk. No. 878,902; Feb. 11; Sp. p. 2109; Gaz. vol. 132; p. 1213.
Sisson, A. H., assignor to St. Louis Car Company, St. Louis, Mo. Metal window-sash. No. 878,830; Feb. 11; Sp. p. 1967; Dr. p. 428; Gaz. vol. 132; p. 1190.
Skeels, E. G. (See Jeffries and Skeels.)
Slack, L. E., *et al.* (See Mobley, H. E., assignor.)
Slapo, I., New York, N. Y. Oven-grate. No. 878,521; Feb. 11; Sp. p. 1969; Dr. p. 408; Gaz. vol. 132; p. 1191.
Slauter, F. S., Derby, Conn. Hook and eye. No. 878,908; Feb. 11; Sp. p. 2110; Dr. p. 439; Gaz. vol. 132; p. 1213.
Slick, E. E., Pittsburg, Pa. Valve. No. 878,904; Feb. 11; Sp. p. 2111; Dr. p. 440; Gaz. vol. 132; p. 1213.
Slocum, A. B., executrix. (See Slocum, G. S.)
Slocum, G. S., deceased, Newport, R. I.; A. B. Slocum, executrix. Sand-blast machine. No. 880,337; Feb. 25; Sp. p. 5037; Dr. pp. 1062–3; Gaz. vol. 132; p. 1755.
Small, F. D. (See Shevlin and Small.)
Small, T. W., assignor, by mesne assignments, to Acme Automatic Street Indicating Company, Cleveland, Ohio. Overhead electric contact. No. 878,247; Feb. 4; Sp. p. 726; Dr. p. 148; Gaz. vol. 132; p. 965.
Smetana, M., Philadelphia, Pa. Adhesive composition. No. 879,013; Feb. 11; Sp. p. 2309; Gaz. vol. 132; p. 1247.
Smiley, D., *et al.* (See Chesterman, W., assignor.)

Smith, A. M., Whitewater, Wis. Hoof-pad holder. No. 878,832; Feb. 11; Sp. p. 1970; Dr. p. 408; Gaz. vol. 132; p. 1192.
Smith, A. P. (See Smith, H. and A. P.)
Smith, B. S. and R. N. W., Paisley, Scotland. Machine for setting carpet-warps. No. 880,169; Feb. 25; Sp. p. 4705; Dr. pp. 992–3; Gaz. vol. 132; p. 1699.
Smith, C., assignor of one-third to W. H. Noble, Cleveland, Ohio. Permutation-lock. No. 877,957; Feb. 4; Sp. p. 119; Dr. p. 28; Gaz. vol. 132; p. 870.
Smith, C. G. (See Hampton and Smith.)
Smith, C. J., Jamestown, N. Y. Calculating-machine. No. 879,204; Feb. 18; Sp. p. 2604; Dr. p. 562; Gaz. vol. 132; p. 1350.
Smith, E. C. (See Kip and Smith.)
Smith, E. E. (See Mathers, E. A., assignor.)
Smith, F. L., assignor to Olds Motor Works, Lansing, Mich. Adjustable strap-securing clip for vehicles. No. 878,568; Feb. 11; Sp. p. 1445; Dr. p. 295; Gaz. vol. 132; p. 1105.
Smith, F. M., Coquille, Oreg. Double-seated valve. No. 879,014; Feb. 11; Sp. p. 2310; Dr. p. 483; Gaz. vol. 132; p. 1248.
Smith & Furbush Machine Company. (See Miller, S. G., assignor.)
Smith, G. A., *et al.* (See Smith, R. A., assignor.)
Smith, G. A., assignor of eighty-three one-hundred-and-fourths to J. W. Hennessey, New York, N. Y., A. Letts, Los Angeles, Cal., and F. H. Ward, Brooklyn, N. Y. Type-bar mechanism for type-writers. No. 879,123; Feb. 11; Sp. p. 2540; Dr. p. 528; Gaz. vol. 132; p. 1282.
Smith, G. A., and H. E. Stein, Baxter Springs, Kans. Garden-plow. No. 880,171; Feb. 25; Sp. p. 4709; Dr. p. 994; Gaz. vol. 132; p. 1700.
Smith, H. and A. P., Springfield, Mass. Metal vehicle-body. No. 879,205; Feb. 18; Sp. p. 2606; Dr. p. 562; Gaz. vol. 132; p. 1350.
Smith, H. F., Lexington, Ohio. Feeding fuel into gas-producers. No. 880,411; Feb. 25; Sp. p. 5192; Dr. p. 1094; Gaz. vol. 132; p. 1780.
Smith, H. M., assignor to Lyon & Healy, Chicago, Ill. Valve for piano or organ players. No. 878,096; Feb. 4; Sp. p. 410; Dr. p. 87; Gaz. vol. 132; p. 914.
Smith, J. C., Cleveland, Ohio. Pumping-engine. No. 878,159; Feb. 4; Sp. p. 523; Dr. p. 112; Gaz. vol. 132; p. 935.
Smith, L., North Tonawanda, N. Y. Electric trolley. No. 880,107; Feb. 25; Sp. p. 4575; Dr. p. 964; Gaz. vol. 132; p. 1678.
Smith, L., Myrtle Point, Oreg. Ax attachment for sawing logs. No. 880,412; Feb. 25; Sp. p. 5193; Dr. p. 1095; Gaz. vol. 132; p. 1780.
Smith, L. C., New York, N. Y. Door-securer. No. 880,108; Feb. 25; Sp. p. 4577; Dr. p. 964; Gaz. vol. 132; p. 1678.
Smith, L. E., Lock Haven, assignor of one-half to P. W. Gordon, Catawissa, Pa. Fastening device for wearing-apparel. No. 878,678; Feb. 11; Sp. p. 1676; Dr. p. 346; Gaz. vol. 132; p. 1142.
Smith, M., South Reddish, near Manchester, England. Bronzing-machine. No. 880,170; Feb. 25; Sp. p. 4708; Dr. p. 994; Gaz. vol. 132; p. 1699.
Smith, N., New Britain, Conn. Building construction. No. 879,595; Feb. 18; Sp. p. 3515; Dr. p. 736; Gaz. vol. 132; p. 1478.
Smith, O., Bridgeton, N. J. Notching-press. No. 880,413; Feb. 25; Sp. p. 5194; Dr. pp. 1095–6; Gaz. vol. 132; p. 1780.
Smith, O. E., Shattuck, Okla. Barber's pole. No. 879,984; Feb. 25; Sp. p. 4332; Dr. p. 907; Gaz. vol. 132; p. 1639.
Smith, P., Bardwell, Ky. Wire-working tool. No. 879,686; Feb. 18; Sp. p. 3701; Dr. p. 775; Gaz. vol. 132; p. 1508.
Smith, P. S., assignor to E. I. du Pont de Nemours Powder Company, Wilmington, Del. Recovery of sulfur from sulfur-bearing gases. No. 878,569; Feb. 11; Sp. p. 1445; Dr. p. 295; Gaz. vol. 132; p. 1105.
Smith, R. A., Marshalltown, assignor to G. A. Smith, Laurel, Iowa, and G. E. and T. L. Wetmore, Galesburg, Ill. Thread-cutting device. No. 878,097; Feb. 4; Sp. p. 411; Dr. p. 87; Gaz. vol. 132; p. 915.
Smith, R. N. W. (See Smith, B. S., and R. N. W.)
Smith, T. A. (See Johnson and Smith.)
Smith, T. L. (See Symons, E. B., assignor.)
Smith, T. L., assignor to T. L. Smith Company, Milwaukee, Wis. Mixing-machine. No. 880,248; Feb. 25; Sp. p. 4870; Dr. pp. 1030–1; Gaz. vol. 132; p. 1726.
Smith, W. B., Hartselle, Ala. Cotton and cotton-seed conveyer. No. 880,172; Feb. 25; Sp. p. 4710; Dr. pp. 994–5; Gaz. vol. 132; p. 1700.
Smith, W. H., assignor to Harris Automatic Press Company, Niles, Ohio. Printing-press. No. 879,667; Feb. 18; Sp. p. 3702; Dr. pp. 775–6; Gaz. vol. 132; p. 1508.
Smith, W. N., Yonkers, N. Y. Support for insulators. No. 878,679; Feb. 11; Sp. p. 1677; Dr. p. 346; Gaz. vol. 132; p. 1142.
Smith, W. R., Jackson, Mich. Spring construction. No. 879,334; Feb. 18; Sp. p. 2944; Dr. p. 614; Gaz. vol. 132; p. 1393.
Smith, W. S., Chicago, Ill. Cane. No. 880,047; Feb. 25; Sp. p. 4472; Dr. p. 939; Gaz. vol. 132; p. 1659.
Smithwick, S. D., Washington, D. C. Fruit and vegetable cutter. No. 878,833; Feb. 11; Sp. p. 1971; Dr. p. 408; Gaz. vol. 132; p. 1192.
Smythe, H. E., Oakmont, Pa. Gas-producer. No. 879,920; Feb. 25; Sp. p. 4222; Dr. pp. 880–1; Gaz. vol. 132; p. 1619.
Snell, H. B., Toledo, Ohio, assignor to Snell-Judd Company. Automatic time-switch. No. 878,248; Feb. 4; Sp. p. 730; Dr. p. 148; Gaz. vol. 132; p. 966.
Snell, J. B., Butler, Pa. Fastener for mirrors. No. 878,680; Feb. 11; sp. p. 1679; Dr. p. 346; Gaz. vol. 132; p. 1143.
Snell-Judd Company. (See Snell, H. B., assignor.)
Snoddy, J. A., Seattle, Wash. Pipe-lining. No. 879,688; Feb. 18; Sp. p. 3704; Dr. p. 776; Gaz. vol. 132; p. 1508.
Snodgrass, D. L., *et al.* (See Spence, S. D., assignor.)
Snodgrass, H., Oklahoma, Okla. Electromagnetic brake. No. 880,249; Feb. 25; Sp. p. 4875; Dr. p. 1031; Gaz. vol. 132; p. 1727.
Snow, K. F., assignor to C. O. Bartlett & Snow Co., Cleveland, Ohio. Drier. No. 879,206; Feb. 18; Sp. p. 2607; Dr. p. 563; Gaz. vol. 132; p. 1350.
Snow, P. C., Swarthmore, assignor to Globe Ticket Company, Philadelphia, Pa. Holder for tickets, checks, &c. No. 879,015; Feb. 11; Sp. p. 2311; Dr. p. 483; Gaz. vol. 132; p. 1248.
Societa Anonima Cooperativa per la Stagionatura e l'Asseggiodelle Sete ed Affini. (See Sisley, E. P. L., assignor.)
Société Anonyme des Automobiles Delaunay-Belleville. (See Delaunay-Belleville, L. M. G., assignor.)
Société Anonyme des Automobiles Peugeot. (See Calliet, J., assignor.)
Socin, C. J. B., Brooklyn, N. Y. Piano-action. No. 880,173; Feb. 25; Sp. p. 4713; Dr. p. 995; Gaz. vol. 132; p. 1700.
Soltmann, E. G. (See Mayer, A. R., assignor.)
Soltmann, E. G. (See Nowalk, R. F., assignor.)
Soltmann, E. G. (See Thomas, B. R., assignor.)
Sonora Chime Co. (See Haschke, W. H., assignor.)
Sorensen, C. M., Brooklyn, assignor to Vidal Typewriter Company, New York, N. Y. Type-writer-carriage control. No. 880,174; Feb. 25; Sp. p. 4714; Dr. p. 995; Gaz. vol. 132; p. 1701.
Souder, J. J., Washington, D. C. Device for securing split bolts. No. 878,570; Feb. 11; Sp. p. 1447; Dr. p. 295; Gaz. vol. 132; p. 1106.
Sourek, J. S., Bath township, Summit county, Ohio. Buckle. No. 877,958; Feb. 4; Sp. p. 123; Dr. p. 28; Gaz. vol. 132; p. 870.
Southmayd, A. L., Middletown, Conn. Stretcher. No. 879,335; Feb. 18; Sp. p. 2945; Dr. p. 614; Gaz. vol. 132; p. 1394.
Spang, H. W., New York, assignor, by mesne assignments, to C. H. Ketcham, Yonkers, N. Y. Electric apparatus for railway signaling. No. 878,249; Feb. 4; Sp. p. 732; Dr. p. 148; Gaz. vol. 132; p. 966.
Sparks, C. F., Alton, Ill., assignor to Riegel Sack Company, Jersey City, N. J. Cloth printing and cutting machine. No. 878,681; Feb. 11; Sp. p. 1660; Dr. pp. 346–7; Gaz. vol. 132; p. 1143.
Sparks, L., administrator. (See Perky, H. D.)
Spear, L. Y., Quincy, Mass., assignor to Electric Boat Company, New York, N. Y. Twin-screw submarine boat. No. 878,782; Feb. 11; Sp. p. 1817; Dr. p. 376; Gaz. vol. 132; p. 1166.
Speice, W. L. (See McFarland, G. B., assignor.)
Spence, S. D., Chattanooga, Tenn., assignor of one-half to L. Shepherd and D. L. Snodgrass. Electric-arc furnace. No. 880,338; Feb. 25; Sp. p. 5038; Dr. pp. 1063–4; Gaz. vol. 132; p. 1755.
Spencer, G. M., St. Louis, Mo. Fluid-pressure brake system. No. 877,959; Feb. 4; Sp. p. 125; Dr. p. 28; Gaz. vol. 132; p. 870.
Spencer, G. M., St. Louis, Mo. Automatic governing device. No. 878,571; Feb. 11; Sp. p. 1449; Dr. p. 295; Gaz. vol. 132; p. 1106.
Spera, J. B., Dillsburg, and S. G. Cocklin, Mechanicsburg, Pa. Railway-tie. No. 879,921; Feb. 25; Sp. p. 4223; Dr. p. 882; Gaz. vol. 132; p. 1620.
Sperry, E. A., Brooklyn, N. Y. Reclaiming tin-scrap. No. 879,596; Feb. 18; Sp. p. 3516; Gaz. vol. 132; p. 1478.
Spiro, C., New York, N. Y. Paper file and punch. No. 878,320; Feb. 4; Sp. p. 371; Dr. p. 173; Gaz. vol. 132; p. 989.
Spitler, N. E., Salem, Ohio. Automatic railway-signal. No. 878,905; Feb. 11; Sp. pp. 2112; Dr. pp. 440–1; Gaz. vol. 132; p. 1214.
Spivey, S. S., Paducah, Ky. Boiler-furnace. No. 880,175; Feb. 25; Sp. p. 4716; Dr. p. 996; Gaz. vol. 132; p. 1701.
Sponsel, C. W. (See Kidder and Sponsel.)
Sponsel, C. W., Hartford, Conn., assignor to Parker Machine Company, Buffalo, N. Y. Type-writer. No. 879,207; Feb. 18; Sp. p. 2609; Dr. pp. 563–4; Gaz. vol. 132; p. 1351.
Spooner, N. B., Warren, N. H. Wringer-stand. No. 878,682; Feb. 11; Sp. p. 1683; Dr. pp. 347–8; Gaz. vol. 132; p. 1143.
Sporieder, M., Colorado City, Colo. Setting mechanism for watches. No. 879,208; Feb. 18; Sp. p. 2705; Dr. p. 564; Gaz. vol. 132; p. 1351.
Sprague, S., Sacramento, Cal., assignor, by mesne assignments, to L. H. Roy, Chicago, Ill. Temperature regulation. No. 880,414; Feb. 25; Sp. p. 5201; Dr. p. 1096; Gaz. vol. 132; p. 1781.
Sprout, I. W., and R. E. Kester, Hanover, Pa. Furniture-fastener. No. 878,753; Feb. 11; Sp. p. 1818; Dr. p. 376; Gaz. vol. 132; p. 1166.
Squires, A. C., assignor of one-eighth to R. T. Dobson, Akron, one-fourth to E. G. Lahr, and two-sixteenths to C. N. Russell, Cuyahoga Falls, one-sixteenth to C. Senn, Monroe Falls, one-sixteenth to N. Huber, Akron; one-sixteenth to H. E. Bowman, Cuyahoga Falls, one-sixteenth to C. H. Stahl, and one-tenth to O. W. Gridley, Akron, Ohio. Machine for making rubber footwear. No. 878,572; Feb. 11; Sp. p. 1451; Dr. p. 296; Gaz. vol. 132; p. 1106.

St. Louis Car Company. (See Robinson, E. T., assignor.)
St. Louis Car Company. (See Sisson, A. H., assignor.)
Stafford, L., Spokane, Wash. Hair-dyer. No. 877,900; Feb. 4; Sp. p. 120; Dr. p. 29; Gaz. vol. 132; p. 871.
Stafford, T. J., Brooklyn, Iowa. Stove-grate. No. 880,472; Feb. 25; Sp. p. 5329; Dr. pp. 1121-2; Gaz. vol. 132; p. 1802.
Stahl, C. H., *et al.* (See Squires, A. C., assignor.)
Staley, H. L., Martinsville, Ind. Gearing for washing-machines. No. 880,250; Feb. 25; Sp. p. 4876; Dr. p. 1031; Gaz. vol. 132; p. 1727.
Stamm, W. A., Macon, Ohio. Piston-valve. No. 878,834; Feb. 11; Sp. p. 1972; Dr. p. 409; Gaz. vol. 132; p. 1192.
Standau, A., Terre Haute, Ind. Propeller. No. 879,689; Feb. 18; Sp. p. 3705; Dr. p. 776; Gaz. vol. 132; p. 1509.
Stanson, P., Minneapolis, Minn. Railway-switch. No. 880,339; Feb. 25; Sp. p. 5040; Dr. p. 1064; Gaz. vol. 132; p. 1755.
Starr, F., San Francisco, Cal. Clutch. No. 879,016; Feb. 11; Sp. p. 2313; Dr. p. 463; Gaz. vol. 132; p. 1248.
Starrett, H. B., assignor of one-half to G. A. Kies, Clinton, Mich. Drawer and drawer-support. No. 879,690; Feb. 18; Sp. p. 3707; Dr. pp. 776-7; Gaz. vol. 132; p. 1509.
Stashko, F., New York, N. Y. Mechanical button. No. 878,683; Feb. 11; Sp. p. 1684; Dr. p. 348; Gaz. vol. 132; p. 1144.
Stearns, W. F., Batavia, N. Y. Tire construction. No. 877,961; Feb. 4; Sp. p. 131; Dr. p. 29; Gaz. vol. 132; p. 871.
Stebbins, W. M., Montague, assignor to Millers Falls Company, Millers Falls, Mass. Hacksaw. No. 878,160; Feb. 4; Sp. p. 525; Dr. p. 113; Gaz. vol. 132; p. 936.
Steele, B. M., assignor to Ben Steele Weigher Manufacturing Company, Peoria, Ill. Spout-support. No. 878,906; Feb. 11; Sp. p. 2115; Dr. p. 441; Gaz. vol. 132; p. 1214.
Steele, H. H., assignor to Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 878,161; Feb. 4; Sp. p. 528; Dr. p. 113; Gaz. vol. 132; p. 936.
Steele, H. H., assignor to Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 878,162; Feb. 4; Sp. p. 534; Dr. pp. 114-15; Gaz. vol. 132; p. 937.
Steele, H. H., assignor to Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 878,163; Feb. 4; Sp. p. 548; Dr. pp. 115-16; Gaz. vol. 132; p. 937.
Steele, H. H., assignor to Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 878,573; Feb. 11; Sp. p. 1453; Dr. pp. 266-7; Gaz. vol. 132; p. 1107.
Steele, H. H., assignor to Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 878,574; Feb. 11; Sp. p. 1463; Dr. pp. 267-8; Gaz. vol. 132; p. 1108.
Steele, L. C., Wheeling, W. Va., assignor to L. E. Curtis, Chicago, Ill. Rolls for cutting sheet metal. No. 878,472; Feb. 4; Sp. p. 1169; Dr. p. 237; Gaz. vol. 132; p. 1039.
Steenkan, W., Brooklyn, N. Y., assignor to E. & T. Fairbanks & Company, St. Johnsbury, Vt. Automatic weighing-scale. No. 879,336; Feb. 18; Sp. p. 3047; Dr. p. 615; Gaz. vol. 132; p. 1304.
Steiger, J. R., Neuenkirchen, Austria-Hungary. Automatic lubricator for shaft-bearings. No. 877,962; Feb. 4; Sp. p. 132; Dr. p. 29; Gaz. vol. 132; p. 871.
Stein, H. E. (See Smith and Stein.)
Stein, J. M., Washington, D. C. Presser-form for garments. No. 879,017; Feb. 11; Sp. p. 2315; Dr. p. 484; Gaz. vol. 132; p. 1249.
Stein, R. R., Seattle, Wash. Soldering-copper. No. 880,048; Feb. 25; Sp. p. 4473; Dr. p. 939; Gaz. vol. 132; p. 1660.
Steinberger, L., New York, N. Y. Insulator for high-tension currents. No. 879,003; Feb. 11; Sp. p. 2303; Dr. p. 503; Gaz. vol. 132; p. 1264.
Stender, W., Streator, Ill. Bottle-conveyer. No. 878,684; Feb. 11; Sp. p. 1685; Dr. p. 348; Gaz. vol. 132; p. 1144.
Stephan, E., and P. Hunsalz, assignors to Chemische Fabrik auf Actien (vorm. E. Schering), Berlin, Germany. Manufacturing dialkyl-barbituric acids. No. 879,499; Feb. 18; Sp. p. 3302; Gaz. vol. 132; p. 1447.
Sterling, W. W. (See Schmieder, J. R., assignor.)
Sternberg, W., Milwaukee, Wis. Cigar-buncher. No. 879,597; Feb. 18; Sp. p. 3520; Dr. p. 737; Gaz. vol. 132; p. 1478.
Sternbergh, L. M., Paterson, N. J. Photographic camera. No. 878,250; Feb. 4; Sp. p. 737; Dr. p. 149; Gaz. vol. 132; p. 966.
Stetler, D. E., Medford, Okla. Gate-hinge. No. 880,340; Feb. 25; Sp. p. 5042; Dr. p. 1064; Gaz. vol. 132; p. 1756.
Stetson, G. E. (See Bullard, C. E., assignor.)
Stevens, B. D., assignor to Berlin Machine Works, Beloit, Wis. Band-saw-tensioning device. No. 879,500; Feb. 18; Sp. p. 3303; Dr. p. 601; Gaz. vol. 132; p. 1447.
Stevens, F. C., assignor to Davis & Furber Machine Company, North Andover, Mass. Pulley-sustaining hanger. No. 880,415; Feb. 25; Sp. p. 5205; Dr. p. 1097; Gaz. vol. 132; p. 1781.
Stevens, H. E., Macdonaldton, Pa. Wire-suspending device. No. 880,416; Feb. 25; Sp. p. 5206; Dr. p. 1097; Gaz. vol. 132; p. 1781.
Stevens, R. H., Chigwell, and T. Hall, Romford, England. Spring for vehicles. No. 878,429; Feb. 4; Sp. p. 1072; Dr. pp. 217-18; Gaz. vol. 132; p. 1025.
Stevenson, I., and J. Cook., Port Chalmers, New Zealand. Ore dredging and separating apparatus. No. 878,575; Feb. 11; Sp. p. 1477; Dr. pp. 268-9; Gaz. vol. 132; p. 1108.
Stevenson, J. A., and L. O. Phillips, New Castle, Pa. Water-closet. No. 879,421; Feb. 18; Sp. p. 3143; Dr. p. 654; Gaz. vol. 132; p. 1422.
Stewart, F. L., Murrysville, assignor of one-half to S. E. Gill, Pittsburg, Pa. Making levulose, glucose, &c. No. 879,422; Feb. 18; Sp. p. 3146; Gaz. vol. 132; p. 1423.
Stickney, B. C., Elizabeth, assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 879,598; Feb. 18; Sp. p. 3522; Dr. pp. 737-8; Gaz. vol. 132; pp. 1479.
Stifler, J., Pittsburg, Pa. Dump-wagon. No. 878,907; Feb. 11; Sp. p. 2118; Dr. p. 442; Gaz. vol. 132; p. 1215.
Still, W. J., Ealing, England. Apparatus for transmitting heat from one fluid to another. No. 880,417; Feb. 25; Sp. p. 5207; Dr. pp. 1097-8; Gaz. vol. 132; p. 1781.
Stimpson, E. B., assignor to Edwin B. Stimpson Company, New York, N. Y. Lacing-hook. No. 880,251; Feb. 25; Sp. p. 4879; Dr. p. 1032; Gaz. vol. 132; p. 1728.
Stocker, F. W. (See Cordes, A. W., assignor.)
Stockton, E. E., and A. H. Porter, assignors to E. Ingraham Co., Bristol, Conn. Alarm-clock. No. 878,251; Feb. 4; Sp. p. 739; Dr. p. 149; Gaz. vol. 132; p. 967.
Stoddard, E. R., Detroit, Mich. Die for forming sheet-metal vessels. No. 879,922; Feb. 25; Sp. p. 4224; Dr. p. 882; Gaz. vol. 132; p. 1620.
Stoddard, J. T., Westport, Oreg. Gang-edger. No. 879,923; Feb. 25; Sp. p. 4227; Dr. pp. 882-3; Gaz. vol. 132; p. 1620.
Stoffet, A. M., Mauch Chunk, Pa. Display-easel No. 880,040; Feb. 25; Sp. p. 4474; Dr. p. 939; Gaz. vol. 132; p. 1660.
Stollberg, C., Toledo, Ohio, assignor to American Can Company, New York, N. Y. Sheet-steel keg for white lead. No. 878,576; Feb. 11; Sp. p. 1478; Dr. p. 269; Gaz. vol. 132; p. 1108.
Stone, U., Lead, S. D. Safety device for pistols. No. 879,018; Feb. 11; Sp. p. 2316; Dr. p. 484; Gaz. vol. 132; p. 1249.
Stork Company. (See Thompson, M. S., assignor.)
Story, M. F., *et al.* (See Gregory, J. W., assignor.)
Stowe, W. A., Worcester, Mass., assignor to Sill Stove Works, Rochester, N. Y. Adjustable top for cooking-stoves. No. 878,252; Feb. 4; Sp. p. 740; Dr. p. 149; Gaz. vol. 132; p. 967.
Straubhaar, A., Paterson, N. J. Window. No. 878,253; Feb. 4; Sp. p. 742; Dr. p. 149; Gaz. vol. 132; p. 968.
Strauss, F., New York, N. Y. Harmonica. No. 880,109; Feb. 25; Sp. p. 4578; Dr. p. 964; Gaz. vol. 132; p. 1679.
Strubhar, C. O., Washington, Ill. Hay and hog rack. No. 879,309; Feb. 18; Sp. p. 2707; Dr. p. 564; Gaz. vol. 132; p. 1351.
Strutz, C. O., Washington, Mo. Pipe-topping machine. No. 878,685; Feb. 11; Sp. p. 1687; Dr. p. 349; Gaz. vol. 132; p. 1144.
Stuck, E. L., Plover, Wis. Force-feed lubricator. No. 879,210; Feb. 18; Sp. p. 2708; Dr. p. 565; Gaz. vol. 132; p. 1352.
Stuhl, A., Pittsburg, Pa., assignor to Forsyth Brothers Company, Chicago, Ill. Friction draft-gear for railway-cars. No. 878,321; Feb. 4; Sp. p. 872; Dr. p. 174; Gaz. vol. 132; p. 989.
Stuhr, B. J., assignor to W. C. Ritchie & Company, Chicago, Ill. Box. No. 879,337; Feb. 18; Sp. p. 2948; Dr. p. 615; Gaz. vol. 132; p. 1304.
Stuhy, P., Auburn, Ind. Device for repairing fractured jaws. No. 878,577; Feb. 11; Sp. p. 1479; Dr. p. 269; Gaz. vol. 132; p. 1109.
Sturtevant, C. A., Plainfield, N. J., assignor to E. C. Fuller Company, New York, N. Y. Packing mechanism for folding-machines. No. 879,841; Feb. 18; Sp. p. 4006; Dr. p. 840-1; Gaz. vol. 132; p. 1569.
Sturtevant Mill Company. (See Sturtevant, T. L. and T. J., assignors.)
Sturtevant, T. J. (See Sturtevant, T. L. and T. J.)
Sturtevant, T. L., Quincy, and T. J. Sturtevant, Wellesley, Mass., assignors to Sturtevant Mill Company, Portland, Me. Mechanical feeder. No. 879,620; Feb. 18; Sp. p. 3147; Dr. p. 655; Gaz. vol. 132; p. 1423.
Subers, L. A. (See Bayne and Subers.)
Suck, A., Boston, Mass. Valve-gate and operating means therefor. No. 877,963; Feb. 4; Sp. p. 133; Dr. pp. 30-1; Gaz. vol. 132; p. 871.
Sullivan, A., Toronto, Ontario, Canada, assignor to G. Jones, Chicago, Ill. Vehicle-wheel. No. 878,754; Feb. 11; Sp. p. 1819; Dr. pp. 376-7; Gaz. vol. 132; p. 1168.
Sullivan, J. A., Newton Highlands, Mass. Wearing-apparel. No. 877,964; Feb. 4; Sp. p. 136; Dr. p. 31; Gaz. vol. 132; p. 872.
Sullivan Machinery Company. (See Ball, A., assignor.)
Sulman, H. L., H. F. Kirkpatrick-Picard, and J. Ballot, London, England. Separation of metalliferous minerals from gangue. No. 879,934; Feb. 25; Sp. p. 4313; Dr. pp. 907-8; Gaz. vol. 132; p. 1630.
Sulzberger, N., Berlin, Germany. Making azo dyes containing radicals of higher fatty acids. No. 879,424; Feb. 18; Sp. p. 3148; Dr. p. 655; Gaz. vol. 132; p. 1423.
Sulzer, J., Winterthur, Switzerland. Reversing-gear for internal-combustion engines. No. 880,050; Feb. 25; Sp. p. 4475; Dr. p. 940; Gaz. vol. 132; p. 1660.

Sulzer, J., Winterthur, Switzerland. Reversing-valve mechanism for internal-combustion motors. No. 880,051; Feb. 25; Sp. p. 4477; Dr. p. 941; Gaz. vol. 132; p. 1661.
Summerscales, S. H., Winnipeg, Manitoba, Canada. Insulator for high-tension conductors. No. 880,418; Feb. 25; Sp. p. 5211; Dr. pp. 1098-9; Gaz. vol. 132; p. 1782.
Sundborg, A., St. Paul, Minn. Cylinder-cock. No. 878,686; Feb. 11; Sp. p. 1689; Dr. p. 349; Gaz. vol. 132; p. 1144.
Sundee, J. R., assignor to Empire Jewelry Case Company, Buffalo, N. Y. Apparatus for covering boxes. No. 879,599; Feb. 18; Sp. p. 3529; Dr. pp. 738-9; Gaz. vol. 132; p. 1479.
Superior Hay Stacker Manufacturing Co. (See Vroom, O. P., assignor.)
Süren, F., New York, N. Y. Rotary engine. No. 877,965; Feb. 4; Sp. p. 137; Dr. pp. 31-2; Gaz. vol. 132; p. 872.
Surfacing Machine Company. (See Wattles, C. B., assignor.)
Sussman, L., Bayonne, N. J., assignor to Manhattan Screw and Stamping Works, New York, N. Y. Acetylene-gas generator. No. 880,110; Feb. 25; Sp. p. 4579; Dr. p. 964; Gaz. vol. 132; p. 1679.
Sutton, T. E., assignor, by mesne assignments, to H. W. Shelly, Kansas City, Mo. Mirror attachment. No. 878,096; Feb. 4; Sp. p. 412; Dr. p. 87; Gaz. vol. 132; p. 915.
Swanson, C. F., assignor to X-Ray Egg Tester Co., St. Paul, Minn. Egg-tester. No. 879,800; Feb. 18; Sp. p. 3909; Dr. p. 819; Gaz. vol. 132; p. 1545.
Swanson, C. F., assignor to X-Ray Egg Tester Co., St. Paul, Minn. Egg-lifter. No. 879,801; Feb. 18; Sp. p. 3911; Dr. pp. 819-20; Gaz. vol. 132; p. 1545.
Swanson, G. E., Laporte, Ind. Seeder. No. 877,966; Feb. 4; Sp. p. 142; Dr. p. 32; Gaz. vol. 132; p. 872.
Swanwick, H. C., Houston, Tex. Canopy. No. 880,176; Feb. 25; Sp. p. 4717; Dr. p. 996; Gaz. vol. 132; p. 1701.
Swaren, W. A., Chicago, Ill. Attachment for umbrellas and the like. No. 880,419; Feb. 25; Sp. p. 5214; Dr. p. 1099; Gaz. vol. 132; p. 1782.
Swart, W. G., Denver, Colo. Roaster. No. 879,842; Feb. 18; Sp. p. 4010; Dr. p. 841; Gaz. vol. 132; p. 1559.
Swartz, M. W., *et al.* (See Bourdereaux, G. C., assignor.)
Sweat, W. C., Carlton, Wash. Wrench. No. 879,019; Feb. 11; Sp. p. 2318; Dr. p. 484; Gaz. vol. 132; p. 1249.
Swedberg, H. O., and A. T. Durbin, Rossville, Ill. Electrical appliance for clocks. No. 879,924; Feb. 25; Sp. p. 4229; Dr. pp. 883-4; Gaz. vol. 132; p. 1621.
Sweeney, P., Ericson, Nebr. Plow. No. 879,020; Feb. 11; Sp. p. 2319; Dr. p. 485; Gaz. vol. 132; p. 1249.
Sweeney, P. J., assignor to Penberthy Injector Company, Limited, Windsor, Ontario, Canada. Lubricator. No. 879,600; Feb. 18; Sp. p. 3531; Dr. p. 739; Gaz. vol. 132; p. 1479.
Swift, W. C., Hinsdale, Ill., assignor to F. Herbert, Birtley, England. Machine for forming sand molds. No. 878,470; Feb. 4; Sp. p. 1154; Dr. p. 236; Gaz. vol. 132; p. 1039.
Swift, W. C., Hinsdale, Ill., assignor to F. Herbert, Birtley, England. Sand-mold machine. No. 878,471; Feb. 4; Sp. p. 1162; Dr. p. 236; Gaz. vol. 132; p. 1039.
Symons, E. B., Fort Wayne, Ind., assignor to T. L. Smith, Milwaukee, Wis. Dumping-wagon. No. 876,687; Feb. 11; Sp. p. 1600; Dr. p. 350; Gaz. vol. 132; p. 1145.
Synchronous Static Company. (See Seeley, J. E., assignor.)
T. C. Prouty Company. (See Mull, C., assignor.)
T. L. Smith Company. (See Smith, T. L., assignor.)
T. W. Phillips Manufacturing Company. (See Palm, V. H., assignor.)
Taite, J. C., *et al.* (See Borries, F. W. A. von, assignor.) (Reissue.)
Tannehill, B. M., Connellsville, Pa. Moving-picture apparatus. No. 879,691; Feb. 18; Sp. p. 3708; Dr. p. 777; Gaz. vol. 132; p. 1509.
Tanner, R., Lincoln, Nebr. Automatic registering device. No. 878,835; Feb. 11; Sp. p. 1974; Dr. pp. 409-10; Gaz. vol. 132; p. 1192.
Tarr, E. B., Derrick City, Pa. Draw-jack. No. 879,692; Feb. 18; Sp. p. 3709; Dr. p. 777-8; Gaz. vol. 132; p. 1510.
Tatchell, P., London, England. Sail-boom. No. 879,986; Feb. 25; Sp. p. 4335; Dr. pp. 908-9; Gaz. vol. 132; p. 1639.
Tate, A. O., Toronto, Ontario, Canada, assignor to Tate Electrolytic Company of America. Storage-battery plate. No. 880,420; Feb. 25; Sp. p. 5217; Dr. p. 1099; Gaz. vol. 132; p. 1783.
Tate, A. O., Toronto, Ontario, Canada, assignor to Tate Electrolytic Company of America. Storage-battery plate. No. 880,421; Feb. 25; Sp. p. 5220; Dr. p. 1099; Gaz. vol. 132; p. 1783.
Tate, A. O., Toronto, Ontario, Canada, assignor to Tate Electrolytic Company of America. Storage-battery plate. No. 880,422; Feb. 25; Sp. p. 5223; Dr. p. 1100; Gaz. vol. 132; p. 1783.
Tate, A. O., Toronto, Ontario, Canada, assignor to Tate Electrolytic Company of America. Storage-battery plate. No. 880,423; Feb. 25; Sp. p. 5225; Dr. p. 1100; Gaz. vol. 132; p. 1784.
Tate, A. O., Toronto, Ontario, Canada, assignor to Tate Electrolytic Company of America. Storage-battery plate. No. 880,424; Feb. 25; Sp. p. 5227; Dr. p. 1100; Gaz. vol. 132; p. 1784.
Tate, A. O., Toronto, Ontario, Canada, assignor to Tate Electrolytic Company of America. Storage-battery plate. No. 880,425; Feb. 25; Sp. p. 5229; Dr. p. 1101; Gaz. vol. 132; p. 1785.
Tate Electrolytic Company of America. (See Tate, A. O., assignor.)
Taylor, C. C. (See Saddler, H. K., assignor.)
Taylor, G. K. (See Shannon and Taylor.)
Taylor, H. G., St. Paul, Minn. Postal card. No. 879,802; Feb. 18; Sp. p. 3913; Dr. p. 820; Gaz. vol. 132; p. 1546.
Taylor, H. P., Salt Lake City, Utah. Filtering apparatus. No. 880,426; Feb. 25; Sp. p. 5231; Dr. p. 1101; Gaz. vol. 132; p. 1785.
Taylor, J. H., Waterloo, Nebr. Metallic railway-signal. No. 877,967; Feb. 4; Sp. p. 144; Dr. pp. 32-3; Gaz. vol. 132; p. 873.
Taylor, J. H., Chicago, Ill. Flange-making process. No. 879,925; Feb. 25; Sp. p. 4231; Dr. p. 884; Gaz. vol. 132; p. 1621.
Taylor, M. D., Rochelle, Ill. Cooker. No. 879,693; Feb. 18; Sp. p. 3712; Dr. pp. 778-80; Gaz. vol. 132; p. 1510.
Taylor, W., Leicester, England. Golf-ball. No. 878,254; Feb. 4; Sp. p. 743; Dr. p. 150; Gaz. vol. 132; p. 968.
Taylor, W. N., Diamond, Cal. Tooth-brush. No. 878,164; Feb. 4; Sp. p. 571; Dr. p. 116; Gaz. vol. 132; p. 937.
Tebyrica, J. P., San Paulo, Brazil, and W. Halstead; said Tebyrica assignor to Engelberg Huller Company, Syracuse, N. Y. Coffee-sheller. No. 879,211; Feb. 18; Sp. p. 2710; Dr. p. 565; Gaz. vol. 132; p. 1352.
Tennent, R. D., Connellsville, Pa. Door-jamb setter. No. 880,252; Feb. 25; Sp. p. 4880; Dr. p. 1032; Gaz. vol. 132; p. 1728.
Tennerstedt, R. (See Lindestrom, H., assignor.)
Terhorst, G. W. and J. A., Pittsburg, Pa. Culinary vessel. No. 878,908; Feb. 11; Sp. p. 2120; Dr. p. 442; Gaz. vol. 132; p. 1215.
Terhorst, J. A. (See Terhorst, G. W. and J. A.)
Terrell, E., Columbus, Ohio, assignor to E. V. Gambier, trustee. Assembling attachment for type-setting machines. No. 880,341; Feb. 25; Sp. p. 5043; Dr. p. 1065; Gaz. vol. 132; p. 1756.
Terry, C. A., New York, N. Y. Core-drilling apparatus. No. 878,909; Feb. 11; Sp. p. 2121; Dr. p. 443; Gaz. vol. 132; p. 1215.
Tessmer, F. J., St. Louis, Mo. Chuck. No. 879,212; Feb. 18; Sp. p. 2711; Dr. p. 565; Gaz. vol. 132; p. 1352.
Tew, W. H., Glasgow, Scotland. Air compressor or pump. No. 879,213; Feb. 18; Sp. p. 2713; Dr. pp. 565-6; Gaz. vol. 132; p. 1353.
Thacher, J. J., Attleboro, Mass., assignor to Brown and Sharpe Manufacturing Company, Providence, R. I. Work-rest for grinding-machines. No. 879,214; Feb. 18; Sp. p. 2714; Dr. p. 566; Gaz. vol. 132; p. 1353.
Thalman, D. G., Kansas City, Mo. Fire-alarm. No. 879,601; Feb. 18; Sp. p. 3531; Dr. p. 739; Gaz. vol. 132; p. 1480.
Thedorf, W., St. Vincent, Minn. Folding umbrella. No. 880,427; Feb. 25; Sp. p. 5235; Dr. p. 1101; Gaz. vol. 132; p. 1785.
Thiel, L., Cincinnati, Ohio. Variable-speed mechanism. No. 879,215; Feb. 18; Sp. p. 2715; Dr. p. 566; Gaz. vol. 132; p. 1354.
Thiel, L., Cincinnati, Ohio. Variable-speed mechanism. No. 879,216; Feb. 18; Sp. p. 2717; Dr. p. 567; Gaz. vol. 132; p. 1354.
Thistlethwaite, W. P. (See Armitage and Thistlethwaite.)
Thome, A., Cambridge, Mass. assignor to North American Chemical Company, New York, N. Y. Electric-heated hand-molder for filling shoes. No. 878,688; Feb. 11; Sp. p. 1693; Dr. p. 350; Gaz. vol. 132; p. 1145.
Thomas, B. R., assignor, by mesne assignments, to E. G. Soltmann, New York, N. Y. Composition of matter for the removal of ink. No. 878,689; Feb 11; Sp. p. 1694; Gaz. vol. 132; p. 1145.
Thomas, D. S. (See Coffman, C. R., assignor.)
Thomas, F., Markleysburg, Pa. Paper-bag holder. No. 878,473; Feb. 4; Sp. p. 1170; Dr. p. 237; Gaz. vol. 132; p. 1040.
Thomas, G. W., assignor to R. Thomas and Sons Company, East Liverpool, Ohio. Die for saggars and the like. No. 878,910; Feb. 11; Sp. p. 2123; Dr. p. 443; Gaz. vol. 132; p. 1216.
Thomas J. F., Elkhart, Ill. Striper. No. 880,111; Feb. 25; Sp. p. 4580; Dr. p. 965; Gaz. vol. 132; p. 1679.
Thomas, J. J., Guelph, Ontario, Canada. Upright piano. No. 878,025; Feb. 4; Sp. p. 277; Dr. p. 50; Gaz. vol. 132; p. 893.
Thomas, J. R., assignor to J. A. Fay & Egan Company, Cincinnati, Ohio. Planing-machine. No. 878,009; Feb. 4; Sp. p. 414; Dr. pp. 87-8; Gaz. vol. 132; p. 915.
Thomas, J. R., assignor to J. A. Fay & Egan Company, Cincinnati, Ohio. Hand planing-machine. No. 878,911; Feb. 11; Sp. p. 2124; Dr. pp. 443-4; Gaz. vol. 132; p. 1216.
Thomas, J. R., assignor to J. A. Fay & Egan Company, Cincinnati, Ohio. Gaining-machine. No. 880,177; Feb. 25; Sp. p. 4718; Dr. p. 997; Gaz. vol. 132; p. 1702.
Thomas Manufacturing Company. (See Pelton, C. H., assignor.)
Thomas Robinson & Son. (See Robinson and Backhouse, assignors.)
Thomas, W. H., Whittier, Cal. Door-lock. No. 880,052; Feb. 25; Sp. p. 4478; Dr. p. 941; Gaz. vol. 132; p. 1661.
Thompson, C. I., Bensonhurst, N. Y. Mirror attachment for chairs. No. 878,255; Feb. 4; Sp. p. 744; Dr. p. 150; Gaz. vol. 132; p. 968.
Thompson, E. E., Kaufman, Tex. Stove-flue. No. 879,967; Feb. 25; Sp. p. 4337; Dr. p. 909; Gaz. vol. 132; p. 1640.

Thompson, F. J., Los Angeles, Cal. Shade-edge-holding device. No. 878,660; Feb. 11; Sp. p. 1695; Dr. p. 350; Gaz. vol. 132; p. 1145.
Thompson, H. L., Waterbury, Conn. Wire-drawing machine. No. 880,178; Feb. 25; Sp. p. 4721; Dr. p. 998; Gaz. vol. 132; p. 1702.
Thompson, J. B. (See Greer and Thompson.)
Thompson, M. H., Schenectady, N. Y. Emergency-cot. No. 879,988; Feb. 25; Sp. p. 4338; Dr. pp. 909-10; Gaz. vol. 132; p. 1640.
Thompson, M. S., assignor to Stork Company, Boston, Mass. Bib. No. 879,124; Feb. 11; Sp. p. 2541; Dr. p. 528; Gaz. vol. 132; p. 1282.
Thompson, R. S., Chicago, Ill. Internal-combustion engine. No. 878,578; Feb. 11; Sp. p. 1480; Dr. pp. 300-1; Gaz. vol. 132; p. 1169.
Thomson, H. C., assignor to Electric Goods Manufacturing Company, Boston, Mass. Combined telephone drop and jack. No. 877,905; Feb. 4; Sp. p. 146; Dr. p. 33; Gaz. vol. 132; p. 873.
Thomson, W. B., Charlerol, Pa. Antisiphon-valve. No. 878,430; Feb. 4; Sp. p. 1073; Dr. p. 218; Gaz. vol. 132; p. 1025.
Thorne, W. H., Mount Airy, assignor to William Sellers and Company, Incorporated, Philadelphia, Pa. Centrifugal pump. No. 878,386; Feb. 4; Sp. p. 745; Dr. p. 150; Gaz. vol. 132; p. 908.
Thorrowgood, W. J. (See Jacobs and Thorrowgood.)
Thoresby, A., assignor to Berlin Machine Works, Beloit, Wis. Knife-holder for cutter-heads. No. 879,501; Feb. 18; Sp. p. 3304; Dr. p. 691; Gaz. vol. 132; p. 1447.
Thorsell, J. E., et al. (See Lord, G. J., assignor.)
Thrasher, S. F., Manchester, Conn. Ticket delivering and registering mechanism. No. 879,217; Feb. 18; Sp. p. 2720; Dr. p. 567; Gaz. vol. 132; p. 1355.
Thrift, H. A., et al. (See Henderson, W. W., assignor.)
Thurlow, E. W., Northcote, Victoria, Australia. Golf-ball. No. 880,342; Feb. 25; Sp. p. 5046; Dr. p. 1066; Gaz. vol. 132; p. 1756.
Tickerhoof, J. H., Portage, Pa. Curtain-operating means for vehicle-tops. No. 879,218; Feb. 18; Sp. p. 2722; Dr. p. 568; Gaz. vol. 132; p. 1355.
Tideman, H., Menominee, Mich. Electric generator for telephone-lines. No. 879,425; Feb. 18; Sp. p. 3152; Dr. p. 655; Gaz. vol. 132; p. 1428.
Tidmarsh, H. E. (See Wolf and Tidmarsh.)
Tilden, E. M. (See Lamb and Tilden.)
Tillinghast, J., trustee. (See Loring, B. C., assignor.)
Timofeeff, P., St. Petersburg, Russia. Fireproof building-cement. No. 878,912; Feb. 11; Sp. p. 2127; Gaz. vol. 132; p. 1216.
Tingley, E. M., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Dynamo-electric machine. No. 878,165; Feb. 4; Sp. p. 571; Dr. p. 116; Gaz. vol. 132; p. 908.
Titan-Gesellschaft mit beschränkter Haftung. (See Kühne, K. A., assignor.)
Titchener, C. E., Binghamton, N. Y. Shaft end. No. 877,999; Feb. 4; Sp. p. 147; Dr. p. 33; Gaz. vol. 132; p. 873.
Titus, W., South Haven, assignor of one-sixth to C. C. Shawver, one-sixth to C. P. Hangen, Wellington, and one-third to C. H. Davis, South Haven, Kans. Plow-point. No. 878,026; Feb. 4; Sp. p. 278; Dr. p. 59; Gaz. vol. 132; p. 893.
Tobbias, N., Kingston, Jamaica. Combination-padlock. No. 878,913; Feb 11; Sp. p. 2128; Dr. p. 444; Gaz. vol. 132; p. 1217.
Tobin, J. W., Minneapolis, Minn. Grain tank and elevator. No. 878,488; Feb. 4; Sp. p. 1213; Dr. pp. 250-1; Gaz. vol. 132; p. 1044.
Todd Hardware & Supply Co. (See Cavis, A. R., assignor.)
Toledo Computing Scale Company. (See Engelhardt, F. M., assignor.)
Toledo Metal Wheel Company. (See Weber, J., Jr., assignor.)
Tolmie, G., assignor of one-fourth to D. E. Gleason, Ogden, Utah. Dry ore-concentrator. No. 879,009; Feb. 11; Sp. p. 2406; Dr. pp. 503-4; Gaz. vol. 132; p. 1265.
Tomer, J. L., Export, assignor of one-half to G. D. Hamor, New Kensington, Pa. Mowing-machine. (Reissue.) No. 12,752; Feb. 18; Sp. p. 4015; Dr. p. 842; Gaz. vol. 132; p. 1560.
Tomlinson, E. M., Petersfield, England. Hand signaling-lantern. No. 878,431; Feb. 4; Sp. p. 1074; Dr. pp. 218-19; Gaz. vol. 132; p. 1025.
Toof, E. J. (See Ammerman, W. M., assignor.)
Torfkoks, Gesellschaft mit beschränkter Haftpflicht, Firm of. (See Hoering, P., assignor.)
Totten, R. C., Pittsburg, Pa. Cast metal. No. 878,091; Feb. 11; Sp. p. 1666; Gaz. vol. 132; p. 1146.
Totten, T. L., Brooklyn, N. Y. Carpet-sweeper. No. 878,432; Feb. 4; Sp. p. 1077; Dr. pp. 219-20; Gaz. vol. 132; p. 1026.
Towne, H. R., New York, N. Y., assignor to Yale & Towne Manufacturing Company, Stamford, Conn. Lock-case. No. 879,694; Feb. 18; Sp. p. 3718; Dr. p. 780; Gaz. vol. 132; p. 1511.
Towne, H. R., New York, N. Y., assignor to Yale & Towne Manufacturing Company, Stamford, Conn. Lock-case. No. 879,695; Feb. 18; Sp. p. 3719; Dr. p. 780; Gaz. vol. 132; p. 1511.
Towne, W., Liverpool, England. Purifier for gases. No. 879,219; Feb. 18; Sp. p. 2723; Dr. p. 568; Gaz. vol. 132; p. 1355.
Townsend, F. S., assignor to Meek Company, Coshocton, Ohio. Sign. No. 879,426; Feb. 18; Sp. p. 3155; Dr. p. 656; Gaz. vol. 132; p. 1424.
Tracy, W. F., Warren, Mass. Tool-holder. No. 879,220; Feb. 18; Sp. p. 2725; Dr. p. 568; Gaz. vol. 132; p. 1356.
Tracy, W. H. H., Troy, N. Y. Starching-machine. No. 879,926; Feb. 25; Sp. p. 4232; Dr. pp. 884-5; Gaz. vol. 132; p. 1621.
Traut & Hine Manufacturing Company. (See Humphrey, E. N., assignor.)
Treat, R. B., Newark, assignor to Crocker-Wheeler Company, Ampere, N. J. Pole-shoe for dynamo-electric machines. No. 879,927; Feb. 25; Sp. p. 4235; Dr. p. 885; Gaz. vol. 132; p. 1622.
Treat, R. B., Newark, assignor to Crocker-Wheeler Company, Ampere, N. J. Self-oiling bearing. No. 880,428; Feb. 25; Sp. p. 5237; Dr. p. 1102; Gaz. vol. 132; p. 1786.
Treat, R. B., Newark, assignor to Crocker-Wheeler Company, Ampere, N. J. Coil-retainer for dynamo-electric machines. No. 880,429; Feb. 25; Sp. p. 5238; Dr. p. 1102; Gaz. vol. 132; p. 1786.
Trent, L. C., San Francisco, Cal. Air-compressor. No. 878,579; Feb. 11; Sp. p. 1484; Dr. p. 301; Gaz. vol. 132; p. 1109.
Trevor, E. W. J., Westminster, London, England. Nutshell-breaking and kernel-extracting apparatus. No. 879,696; Feb. 18; Sp. p. 3720; Dr. p. 781; Gaz. vol. 132; p. 1511.
Trickey, E. D., Blanchester, Ohio. Securing device for trolleys. No. 878,836; Feb. 11; Sp. p. 1977; Dr. p. 410; Gaz. vol. 132; p. 1192.
Trilke, A., Eimsbüttel, near Hamburg, Germany. Electric clock winding mechanism. No. 879,697; Feb. 18; Sp. p. 3722; Dr. p. 781; Gaz. vol. 132; p. 1511.
Triplex Gas Engine Company. (See Anderson, L., assignor.)
Tripp, B. F., Medford, Mass. Mechanism for forcing doors for safes, &c., to their seats. No. 880,179; Feb. 25; Sp. p. 4724; Dr. p. 999; Gaz. vol. 132; p. 1702.
Triumph Motor Car Company. (See Pearson, C. F., assignor.)
Tropenas, A., Montelimar, France. Manufacture of steel by the pneumatic process. No. 880,253; Feb. 25; Sp. p. 4882; Dr. p. 1032; Gaz. vol. 132; p. 1726.
Trunnell, J. A., et al. (See Farrow, J., assignor.)
Trussell, C. D., New York, N. Y., assignor to Trussell Manufacturing Company. Temporary binder. No. 879,928; Feb. 25; Sp. p. 4235; Dr. p. 885; Gaz. vol. 132; p. 1622.
Trussell, C. D., assignor to Trussell Manufacturing Company, New York, N. Y. Temporary binder. No. 880,053; Feb. 25; Sp. p. 4461; Dr. p. 941; Gaz. vol. 132; p. 1661.
Trussell Manufacturing Company. (See Trussell, C. D., assignor.)
Tunstall, R. N., and F. Sicotte, Guerneville, Cal. Currycomb. No. 878,433; Feb. 4; Sp. p. 1079; Dr. p. 220; Gaz. vol. 132; p. 1026.
Turnbull, W., Wellington, New Zealand. Flushing-valve for water-closets. No. 878,166; Feb. 4; Sp. p. 572; Dr. p. 117; Gaz. vol. 132; p. 908.
Turner, E. M., Okawville, Ill. Saddle-stirrup. No. 878,837; Feb. 11; Sp. p. 1979; Dr. p. 410; Gaz. vol. 132; p. 1193.
Turner, W. V., Wilkinsburg, assignor to Westinghouse Air Brake Company, Pittsburg, Pa. Pressure-reducing valve. No. 879,698; Feb. 18; Sp. p. 3724; Dr. p. 781; Gaz. vol. 132; p. 1512.
Turner, W. V., Wilkinsburg, assignor to Westinghouse Air Brake Company, Pittsburg, Pa. Electric pump-governor. No. 879,699; Feb. 18; Sp. p. 3726; Dr. p. 782; Gaz. vol. 132; p. 1512.
Turner, W. V., Edgewood, assignor to Westinghouse Air Brake Company, Pittsburg, Pa. Graduated release-valve. No. 879,700; Feb. 18; Sp. p. 3731; Dr. p. 782; Gaz. vol. 132; p. 1513.
Tuttle, S., New York, N. Y. Hot-air register. No. 878,257; Feb. 4; Sp. p. 747; Dr. p. 150; Gaz. vol. 132; p. 909.
Twinlock Company. (See Dom, A., assignor.)
Tyree, W., Nelson, New Zealand. Automatic spraying device. No. 879,929; Feb. 25; Sp. p. 4237; Dr. pp. 885-6; Gaz. vol. 132; p. 1622.
U. S. Standard Voting Machine Co. (See McKenzie, A., assignor.)
Uhlmann, O., Taunton, Mass. Pneumatic tire. No. 877,970; Feb. 4; Sp. p. 148; Dr. p. 33; Gaz. vol. 132; p. 873.
Ullman, S. S. (See Ney and Ullman.)
Ulrich, J., Hoboken, N. J. Stylographic pen. No. 878,914; Feb. 11; Sp. p. 2131; Dr. p. 444; Gaz. vol. 132; p. 1217.
Umberger, B. L. (See Cross and Umberger.)
Underwood, H. G., New York, N. Y. Internal-combustion engine. No. 879,989; Feb. 25; Sp. p. 4340; Dr. p. 910; Gaz. vol. 132; p. 1640.
Underwood, H. M., Unionville, Iowa. Hammock-stand. No. 879,221; Feb. 18; Sp. p. 2725; Dr. p. 568; Gaz. vol. 132; p. 1356.
Underwood Typewriter Company. (See Gibbs, C., assignor.)
Underwood Typewriter Company. (See McLaughlin, J. C., assignor.)
Union Bank. (See Bliss, J., assignor.)
Union Shoe Polishing Machine Company. (See Hammond, R. O., assignor.)

Union Special Machine Company. (See Woodward, R. G., assignor.)
Union Special Sewing Machine Company. (See Feschinbaur, J. F., assignor.)
Union Switch & Signal Company. (See Holliday, J. S., assignor.)
Union Typewriter Company. (See Felbel, J., assignor.)
Union Typewriter Company. (See Stickney, B. C., assignor.)
United Engineering and Foundry Company. (See Gardner, K. C., assignor.)
United Shoe Machinery Company. (See Alley, F. L., assignor.)
United Shoe Machinery Company. (See Field, S., assignor.)
United States Fastener Company. (See Dowse, W. B. H., assignor.)
United States Fastener Company. (See Holmes, G. A., assignor.)
United States Fastener Company. (See Mead, A. G., assignor.)
Universal Produce Preservation Company. (See Hilsaire, I., assignor.)
Unverzagt, C. H. (See Hamlin, P. M., assignor.)
Urbanek, J., Schuyler, Nebr. Rail-joint. No. 878,602; Feb. 11; Sp. p. 1698; Dr. p. 350; Gaz. vol. 132; p. 1146.
V. & O. Press Company. (See Oswald, H., assignor.)
Van Aradale, J. H., St. Louis, Mo., assignor to Luedinghaus-Espenschied Wagon Co. Dumping-wagon. No. 880,054; Feb. 25; Sp. p. 4483; Dr. p. 942; Gaz. vol. 132; p. 1662.
Van Antwerp, E., Dent, Minn. Advertising device. No. 880,254; Feb. 25; Sp. p. 4884; Dr. p. 1033; Gaz. vol. 132; p. 1728.
Van Beresteyn, H., Brussells, Belgium. Rotary motor. No. 878,100; Feb. 4; Sp. p. 416; Dr. p. 88; Gaz. vol. 132; p. 916.
Van Horn, C. F. (See Pike, C. F., assignor.)
Van Houten, F. H., assignor to Dutchess Tool Company, Fishkill-on-the-Hudson, N. Y. Draw-plate baking-oven. No. 878,434; Feb. 4; Sp. p. 1080; Dr. p. 220; Gaz. vol. 132; p. 1026.
Van Matre, J., Paso Robles, Cal. Draft-equalizer. No. 878,027; Feb. 4; Sp. p. 279; Dr. p. 60; Gaz. vol. 132; p. 893.
Van Oosterwyck, J., Chênée, Belgium. Steam-generator. No. 879,502; Feb. 18; Sp. p. 3305; Dr. p. 691; Gaz. vol. 132; p. 1448.
Van Orden Corset Company. (See Van Orden, J. M., assignor.)
Van Orden, F. L., et al. (See Fisher, J. C., assignor.)
Van Orden, J. M., Cedargrove, assignor to Van Orden Corset Company, Newark, N. J. Garment. No. 879,338; Feb. 18; Sp. p. 2949; Dr. p. 615; Gaz. vol. 132; p. 1394.
Van Tassell, O., Bozeman, Mont. Gate. No. 879,701; Feb. 18; Sp. p. 3733; Dr. pp. 782-3; Gaz. vol. 132; p. 1513.
Vandegrift, T. F., and W. Johnston, Shelbyville, Ind. Shaft-coupling. No. 880,255; Feb. 25; Sp. p. 4886; Dr. p. 1033; Gaz. vol. 132; p. 1729.
Varley, J., Jamestown, N. Y. Loom-shuttle. No. 879,427; Feb. 18; Sp. p. 3156; Dr. p. 656; Gaz. vol. 132; p. 1424.
Varley, R. Englewood, N. J., assignor to Autocoil Company. Induction-coil. No. 878,435; Feb. 4; Sp. p. 1081; Dr. p. 220; Gaz. vol. 132; p. 1026.
Vaught, J. C. H., Lead, S. D. Cam. No. 878,755; Feb. 11; Sp. p. 1822; Dr. p. 377; Gaz. vol. 132; p. 1167.
Vavrusks, J. J., Cleveland, Ohio. Vegetable-slicing machine. No. 878,436; Feb. 4; Sp. p. 1084; Dr. p. 221; Gaz. vol. 132; p. 1027.
Vearing, F. C., Cincinnati, Ohio. Gas-burner. No. 880,112; Feb. 25; Sp. p. 4581; Dr. p. 965; Gaz. vol. 132; p. 1680.
Veitch, T., New York, N. Y., assignor to International Patent Corporation, Jersey City, N. J. Ore-separating apparatus. No. 880,430; Feb. 25; Sp. p. 5239; Dr. p. 1102; Gaz. vol. 132; p. 1786.
Verney, W. C., Mason City, Iowa. Pneumatic chest for pipe-organs. No. 879,503; Feb. 18; Sp. p. 3307; Dr. p. 692; Gaz. vol. 132; p. 1448.
Verplast, F., Boston, Mass. Weighing-machine. No. 878,915; Feb. 11; Sp. p. 2132; Dr. pp. 444-5; Gaz. vol. 132; p. 1217.
Vessot, S., Joliette, Quebec, Canada. Grain-mill. No. 878,093; Feb. 11; Sp. p. 1699; Dr. pp. 351-2; Gaz. vol. 132; p. 1146.
Vetter Desk Works. (See Zimmerli, C., assignor.)
Vickers Sons & Maxim. (See Dawson and Buckham assignors.)
Victor Talking Machine Company. (See Cheney, G. K., assignor.)
Victor Talking Machine Company. (See Dennison, W. N., assignor.)
Vidal Typewriter Company. (See Sorensen, C. M., assignor.)
Viertel, H., assignor to Gebrüder Siemens & Co., Charlottenburg, Germany. Arc-light electrode containing metal within the same. No. 880,055; Feb. 25; Sp. p. 4484; Dr. p. 942; Gaz. vol. 132; p. 1662.
Vincent, M., Geneva, Switzerland. Stereoscopic camera. No. 878,838; Feb. 11; Sp. p. 1980; Dr. p. 411; Gaz. vol. 132; p. 1193.
Vincze, A. Rankin, Pa. Nail-making machine. No. 879,702; Feb. 18; Sp. p. 3734; Dr. p. 783; Gaz. vol. 132; p. 1513.
Virginia Laboratory Company. (See Kügelgen and Seward, assignors.)
Vlasak, C. J., St. Louis, Mo. Combined chair and cabinet. No. 879,803; Feb. 18; Sp. p. 3914; Dr. p. 820; Gaz. vol. 132; p. 1546.
Vocke, F., Berlin-Schöneberg, Germany. Stop and measuring cock. No. 880,256; Feb. 25; Sp. p. 4887; Dr. p. 1033; Gaz. vol. 132; p. 1729.
Voigtlander, M. G., Harrison, Ohio. Igniter for gas and gasolene engines. No. 878,094; Feb. 11; Sp. p. 1704; Dr. p. 352; Gaz. vol. 132; p. 1146.
Volger, B. G., assignor to B. G. Volger Manufacturing Company, Inc., Passaic, N. J. Stopper and brush for receptacles. No. 878,437; Feb. 4; Sp. p. 1086; Dr. p. 221; Gaz. vol. 132; p. 1027.
Volk, F. M., Minturn, Cal. Nut-lock. No. 878,258; Feb. 4; Sp. p. 748; Dr. p. 151; Gaz. vol. 132; p. 909.
Vosburgh, H. E., Auburn, N. Y. Antirattling device for thill-couplings. No. 878,438; Feb. 4; Sp. p. 1087; Dr. p. 221; Gaz. vol. 132; p. 1027.
Voss, W. H., Davenport, Iowa. Gear-case for mechanical movements. No. 880,113; Feb. 25; Sp. p. 4582; Dr. p. 965; Gaz. vol. 132; p. 1680.
Vroom, O. P., assignor to Superior Hay Stacker Manufacturing Co., Linneus, Mo. Swing. No. 878,101; Feb. 4; Sp. p. 420; Dr. p. 89; Gaz. vol. 132; p. 916.
Vulkan Maschinenfabriks Actien Gesellschaft. (See Ast, H., assignor.)
W. C. Ritchie & Company. (See Stuker, S. J., assignor.)
W. H. Miner Company. (See Nash, C. J., assignor.)
Wabers, H. H., Racine, Wis. Seed-planter. No. 879,339; Feb. 18; Sp. p. 2951; Dr. p. 615; Gaz. vol. 132; p. 1395.
Waecker, A. C., Wilmington, Del. Separable square. No. 879,703; Feb. 18; Sp. p. 3737; Dr. p. 784; Gaz. vol. 132; p. 1514.
Wagner, H., St., Louis, Mo. Heating-stove. No. 878,028; Feb. 4; Sp. p. 281; Dr. p. 60; Gaz. vol. 132; p. 894.
Wagner, H., Anderson, Ind. Press-mold for making insulators. No. 880,343; Feb. 25; Sp. p. 5047; Dr. p. 1066; Gaz. vol. 132; p. 1756.
Wagner, H., Munich, assignor to Chariottenburger Farbwerke Aktiengesellschaft, Charlottenburg, Prussia, Germany. Cemented lithographic stone. No. 878,222; Feb. 4; Sp. p. 877; Dr. p. 174; Gaz. vol.132; p. 990.
Wagniere, A., Los Angeles, Cal. Measuring and gaging tool. No. 878,439; Feb. 4; Sp. p. 1088; Dr. p. 222; Gaz. vol. 132; p. 1028.
Wainwright, C. D. (See Buck, H. A., assignor.)
Wales, C. (See McFarland and Wales.)
Walker, A. L., Dongan Hills, N. Y. Casting-machine. No. 878,102; Feb. 4; Sp. p. 421; Dr. pp. 89-90; Gaz. vol. 132; p. 917.
Walker, C. J., North Fitzroy, near Melbourne, Victoria, Australia. Boot and shoe. No. 879,704; Feb. 18; Sp. p. 3738; Dr. p. 784; Gaz. vol. 132; p. 1514.
Walker, E. R., Chicago, Ill. Combination-lock bank. No. 879,602; Feb. 18; Sp. p. 3532; Dr. p. 740; Gaz. vol. 132; p. 1480.
Walker, G. A., Jet, Okla. Ice-tongs. No. 878,839; Feb. 11; Sp. p. 1981; Dr. p. 411; Gaz. vol. 132; p. 1193.
Walker, G. A., assignor to Jet Manufacturing Company, Jet, Okla. Hay-barrack. No. 879,071; Feb. 11; Sp. p. 2409; Dr. p. 504; Gaz. vol. 132; p. 1265.
Walker, J. A., Minneapolis, Minn. Sad-iron heater. No. 879,222; Feb. 18; Sp. p. 2727; Dr. p. 569; Gaz. vol. 132; p. 1356.
Walker, J. H. (See Garrett and Walker.)
Walker, S. W., Anson, assignor of one-half to J. W. Hannagan, Madison, Me. Wheel-jack. No. 878,580; Feb. 11; Sp. p. 1487; Dr. p. 301; Gaz. vol. 132; p. 1110.
Wallace, J. A., Mishawaka, Ind. Lacing attachment for shoe-trees. No. 878,581; Feb. 11; Sp. p. 1488; Dr. p. 301; Gaz. vol. 132; p. 1110.
Wallace, J. K. (See Carter, O. L., assignor.)
Wallace, W. E., West Middlesex, Pa. Core for making concrete culverts. No. 879,340; Feb. 18; Sp. p. 2953; Dr. p. 616; Gaz. vol. 132; p. 1395.
Wallar, W. C., Byesville, assignor of three-twelfths to W. Marple, Zanesville, one-twelfth to J. G. Morris, and one-twelfth to H. B. Pearce, Byesville, Ohio. Folding umbrella. No. 879,072; Feb. 11; Sp. p. 2410; Dr. p. 505; Gaz. vol. 132; p. 1265.
Wallerstein, M., New York, N. Y. Preparing calcium sulfate. No. 879,603; Feb. 18; Sp. p. 3536; Gaz. vol. 132; p. 1480.
Wallerstein, M., New York, N. Y. Preparing brewing-waters. No. 879,843; Feb. 18; Sp. p. 4012; Gaz. vol. 132; p. 1560.
Wallgreen, C. E., Adams, N. D. Automatic wire-reel. No. 880,114; Feb. 25; Sp. p. 4585; Dr. p. 966; Gaz. vol. 132; p. 1680.
Wallin, J. (See Lindstrom and Wallin.)
Wally, J. C., Kittanning, Pa. Well-drilling apparatus. No. 878,916; Feb. 11; Sp. p. 2133; Dr. p. 445; Gaz. vol. 132; p. 1217.
Walsh, H. H., Newburgh, N. Y. Removable sleigh-runner for vehicles. No. 878,259; Feb. 4; Sp. p. 749; Dr. p. 151; Gaz. vol. 132; p. 909.
Walsh, W. J., Boston, Mass. Cutting and stripping device for spool adhesive plasters. No. 879,223; Feb. 18; Sp. p. 2728; Dr. p. 569; Gaz. vol. 132; p. 1356.
Walter, B. M. C., Kansas City, Mo. Portable fire-escape. No. 878,695; Feb. 11; Sp. p. 1705; Dr. p. 352; Gaz. vol. 132; p. 1147.
Waltz, P. W., Vallejo, Cal. Vehicle-wheel. No. 878,440; Feb. 4; Sp. p. 1089; Dr. p. 222; Gaz. vol. 132; p. 1028.
Wanscleben, C., Crefeld, Germany. Machine for dyeing bobbins and the like. No. 878,103; Feb. 4; Sp. p. 424; Dr. p. 90; Gaz. vol. 132; p. 917.

Wappler, R. H., New York, N. Y. Endoscope or other optical instrument. No. 878,917; Feb. 11; Sp. p. 2134; Dr. p. 445; Gaz. vol. 122; p. 1218.
Wappler, R. H., New York, N. Y. Cystoscope. No. 879,224; Feb. 18; Sp. p. 2730; Dr. p. 509; Gaz. vol. 132; p. 1357.
Ward, F. H., *et al.* (See Smith, G. A., assignor.)
Ward, R. H., Youngstown, Ohio. Metal-annealing furnace. No. 878,840; Feb. 11; Sp. p. 1962; Dr. p. 411; Gaz. vol. 132; p. 1193.
Ward, W. E., Spaulding, Cal. Cobbler's sewing-tool. No. 880,180; Feb. 25; Sp. p. 4725; Dr. p. 909; Gaz. vol. 132; p. 1703.
Warder, W. J., Jr., assignor to Roth Bros., Chicago, Ill. Controller. No. 878,756; Feb. 11; Sp. p. 1825; Dr. p. 377; Gaz. vol. 132; p. 1167.
Wardwell, S. W., Providence, R. I. Cop-tube. No. 878,104; Feb. 4; Sp. p. 426; Dr. p. 90; Gaz. vol. 122; p. 917.
Wardwell, S. W., Providence, R. I. Cop-tube. No. 879,021; Feb. 11; Sp. p. 2230; Dr. p. 485; Gaz. vol. 132; p. 1250.
Wardwell, S. W., Providence, R. I. Cop-tube. No. 879,706; Feb. 18; Sp. p. 3740; Dr. p. 784; Gaz. vol. 132; p. 1514.
Warner, A. A., assignor to Landers, Frary and Clark, New Britain, Conn. Safety-razor. No. 878,841; Feb. 11; Sp p. 1963; Dr. p. 412; Gaz. vol. 132; p. 1194.
Warner, W. H., Jr., Allegan, Mich. Trap-nest. No. 879,990; Feb. 25; Sp. p. 4341; Dr. p. 910; Gaz. vol. 132; p. 1641.
Warnock, W. S., Chicago, Ill. Printer's registering device. No. 878,842; Feb. 11; Sp p. 1966; Dr. p. 412; Gaz. vol. 132; p. 1194.
Wasser, T. J., Jersey City, N. J. Rail-lift. No. 880,344; Feb. 25; Sp. p. 5049; Dr. p. 1066; Gaz. vol. 132; p. 1757.
Water Overflow Preventive Co. (See Werner, L. A., assignor.)
Waterbury, J. L., and C. Waterman, Minneapolis, Minn. Ventilating device. No. 878,474; Feb. 4; Sp. p. 1172; Dr. p. 238; Gaz. vol. 122; p. 1040.
Waterman, C. (See Waterbury and Waterman.)
Watson, J. E., Pensacola, Fla. Scrubbing-brush. No. 879,706; Feb. 18; Sp. p. 3740; Dr. p. 784; Gaz. vol. 132; p. 1514.
Watson, N. M., Detroit, Mich. Electric air-compressor. No. 878,260; Feb. 4; Sp. p. 751; Dr. p. 151; Gaz. vol. 132; p. 969.
Watson, W. J., Evart, Mich. Vehicle-brake. No. 877,971; Feb. 4; Sp. p. 149; Dr. p. 34; Gaz. vol. 132; p. 874.
Watson, W. S., Memphis, Tenn. Automatic button cutting and shaping machine. No. 880,431; Feb. 25; Sp. p. 5241; Dr. pp. 1102–3; Gaz. vol. 132; p. 1787.
Wattles, C. B., assignor to Surfacing Machine Company, Providence, R. I. Grinding or polishing wheel. No. 879,504; Feb. 18; Sp. p. 3310; Dr. p. 602; Gaz. vol. 132; p. 1449.
Watts, J. L. (See Campbell and Watts.)
Wawrzinski, J., Oshkosh, Wis. Beer-tap. No. 879,604; Feb. 18; Sp. p. 3536; Dr. p. 740; Gaz. vol. 132; p. 1480.
Weatherford, J., Horace, Ill. Rotary engine. No. 879,707; Feb. 18; Sp. p. 3741; Dr. p. 785; Gaz. vol. 132; p. 1515.
Webb, D. L., New York, N. Y., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Attachment-plug. No. 879,830; Feb. 18; Sp. p. 3984; Dr. p. 834; Gaz. vol. 132; p. 1555.
Webber, F. B. (See Getchell, C. W., assignor.)
Weber, G. J., Kansas City, Mo. Gas-producer. No. 879,505; Feb. 18; Sp. p. 3312; Dr. p. 603; Gaz. vol. 132; p. 1449.
Weber, J. F., assignor to Toledo Metal Wheel Company, Toledo, Ohio. Mechanical motor-vehicle propulsion. No. 878,582; Feb. 11; Sp. p. 1499; Dr. p. 302; Gaz. vol. 132; p. 1110.
Weber, P., East Orange, assignor to New Jersey Patent Company, Orange, N. J. Phonograph-horn. No. 878,029; Feb. 4; Sp. p. 282; Dr. p. 60; Gaz. vol. 122; p. 894.
Weber, P. J., Jr., Chicago, Ill. Stencil-holder. No. 877,972; Feb. 4; Sp. p. 151; Dr. p. 34; Gaz. vol. 132; p. 874.
Webster, I. J., Paulding, Ohio. Coffee or tea pot. No. 877,973; Feb. 4; Sp. p. 152; Dr. p. 34; Gaz. vol. 132; p. 874.
Webster, J. E., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Commutator-cover. No. 878,167; Feb. 4; Sp. p. 574; Dr. p. 117; Gaz. vol. 132; p. 938.
Webster, J. M. (See Schriver and Webster.)
Webster, T. B., Baltimore, Md. Hoisting apparatus. No. 878,844; Feb. 11; Sp. p. 1969; Dr. p. 412; Gaz. vol. 132; p. 1195.
Wedekind, C., St. Jean-sur-Mer, France. Turbine. No. 880,181; Feb. 25; Sp. p. 4727; Dr. p. 1000; Gaz. vol. 132; p. 1703.
Wedelin, C. R., assignor to Aktiebolaget L. M. Ericsson & Co., Stockholm, Sweden. Coin-controlled selling apparatus for stamps, tickets, and the like. No. 879,991; Feb. 25; Sp. p. 4343; Dr. pp. 910–11; Gaz. vol. 132; p. 1641.
Weekley, V. S., Pennsboro, W. Va. Poultry-coop. No. 878,696; Feb. 11; Sp. p. 1706; Dr. p. 353; Gaz. vol. 132; p. 1147.
Weel, L. V., Jersey City, N. J. Sash-lock or window-fastener. No. 878,697; Feb. 11; Sp. p. 1708; Dr. pp. 353–4; Gaz. vol. 132; p. 1147.
Weidhaas, G. A., Jr., New York, N. Y. Tooth-brush cabinet. No. 880,432; Feb. 25; Sp. p. 5245; Dr. p. 1103; Gaz. vol. 132; p. 1787.
Weiler, P., *et al.* (See Deeg, C., assignor.)
Weingott, N. L., Warsaw, Russia. Telephone and station apparatus. No. 879,073; Feb. 11; Sp. p. 2414; Dr. pp. 505–6; Gaz. vol. 132; p. 1266.
Weinland, H. F., assignor to Lagonda Manufacturing Company, Springfield, Ohio. Apparatus for cleaning boiler-tubes. No. 878,583; Feb. 11; Sp. p. 1490; Dr. pp. 302–3; Gaz. vol. 132; p. 1111.
Weir, J. C., Vidalia, La. Hand-power propeller. No. 878,845; Feb. 11; Sp. p. 1991; Dr. p. 413; Gaz. vol. 132; p. 1195.
Weiss, A. T., assignor to Yawman & Erbe Manufacturing Company, Rochester, N. Y. Follower for paper-filing devices. No. 879,343; Feb. 18; Sp. p. 2957; Dr. p. 617; Gaz. vol. 132; p. 1306.
Welch, E. G., Nankin, Ohio. Lap-joint for roofing or siding sheets. No. 879,708; Feb. 18; Sp. p. 3743; Dr. p. 785; Gaz. vol. 132; p. 1515.
Welch, L. C., Oakland, Me. Shock-absorbing device for vehicles. No. 880,257; Feb. 25; Sp. p. 4888; Dr. p. 1033; Gaz. vol. 132; p. 1729.
Welch, L. W., Grand Rapids, Mich. Extension-bracket for garment-display cases. No. 879,341; Feb. 18; Sp. p. 2954; Dr. p. 616; Gaz. vol. 132; p. 1306.
Welloome, H. S. (See Overton, J. L., assignor.)
Welliver, J. D., and W. G. Harrington, Scranton, Pa. Door track and hanger. No. 880,258; Feb. 25; Sp. p. 4891; Dr. p. 1034; Gaz. vol. 132; p. 1730.
Wells, A. S., *et al.* (See De Vilbiss, A., Jr., assignor.)
Wells, J. L. (See Wells, S. R., assignor.)
Wells, S. R., assignor to J. L. Wells, Greenfield, Ind. Window-guard. No. 879,342; Feb. 18; Sp. p. 2955; Dr. p. 616; Gaz. vol. 132; p. 1306.
Wennerström, H., Norway, Mich. Locking and supporting means for suit or sample cases. No. 878,698; Feb. 11; Sp. p. 1713; Dr. p. 354; Gaz. vol. 132; p. 1148.
Wenzel, W., Chicago, Ill. Mail catching and delivery system. No. 880,259; Feb. 25; Sp. p. 4892; Dr. p. 1034; Gaz. vol. 132; p. 1730.
Werner, L. A., New York, N. Y., assignor to Water Overflow Preventive Co. Valve-locking mechanism. No. 880,056; Feb. 25; Sp. p. 4498; Dr. p. 942; Gaz. vol. 132; p. 1662.
Werthemar, G. de, *et al.* (See Lachapelle, S., assignor.)
Wertsberger, H. J., Holyrood, Kans. Stamp-affixing machine. No. 879,904; Feb. 18; Sp. p. 3915; Dr. pp. 820–1; Gaz. vol. 132; p. 1546.
Wesner, L. M., Seymour, and E. M. Dixon, Sparksville, Ind. Corn-popping machine. No. 878,918; Feb. 11; Sp. p. 2136; Dr. pp. 445–6; Gaz. vol. 122; p. 1218.
Wessell, Nickel & Gross. (See Nickel, A., assignor.)
West, W. (See Earle and Senn, assignors.)
Westinghouse Air Brake Company. (See Turner, W. V., assignor.)
Westinghouse Air Brake Company. (See Westinghouse, H. H., assignor.)
Westinghouse Electric & Manufacturing Company. (See Aalborg, C., assignor.)
Westinghouse Electric & Manufacturing Company. (See Cooper, W., assignor.)
Westinghouse Electric & Manufacturing Company. (See Cox, F. W., assignor.)
Westinghouse Electric & Manufacturing Company. (See De Kalser, L., assignor.)
Westinghouse Electric & Manufacturing Company. (See Fortescue, C. L., assignor.)
Westinghouse Electric & Manufacturing Company. (See Jackson, R. P., assignor.)
Westinghouse Electric & Manufacturing Company. (See Tingley, E. M., assignor.)
Westinghouse Electric & Manufacturing Company. (See Webster, J. E., assignor.)
Westinghouse, H. H., New York, N. Y., assignor to Westinghouse Air Brake Company, Pittsburg, Pa. Pressure-governor for pumps. No. 879,709; Feb. 18; Sp. p. 3744; Dr. p. 785; Gaz. vol. 132; p. 1515.
Westman, G. M., New York, N. Y. Reducing arsenical ores. No. 879,931; Feb. 25; Sp. p. 4242; Dr. pp. 886–7; Gaz. vol. 132; p. 1623.
Westman, G. M., New York, N. Y. Reducing arsenical ores. No. 879,932; Feb. 25; Sp. p. 4244; Dr. p. 887; Gaz. vol. 132; p. 1623.
Wetmore, G. E., *et al.* (See Smith, R. A., assignor.)
Wetmore, T. L., *et al.* (See Smith, R. A., assignor.)
Wettarvik, A., Iron River, assignor to K. A. Lindgren, Stambaugh, Mich. Ice-road-making machine. No. 878,584; Feb. 11; Sp. p. 1494; Dr. pp. 303–4; Gaz. vol. 122; p. 1111.
Wheary, G. H., assignor to Hartmann Trunk Company, Racine, Wis. Trunk. No. 879,074; Feb 11; Sp. p. 2417; Dr. pp. 506–7; Gaz. vol. 132; p. 1266.
Wheeler, E. J., Bryson City, N. C. Combined auger-head and reamer. No. 879,075; Feb. 11; Sp. p. 2419; Dr. p. 507; Gazl vol. 132; p. 1266.
Wheeler, H. T., Washington, D. C. Firing mechanism for ordnance. No. 879,225; Feb. 18; Sp. p. 2732; Dr. p. 509; Gaz. vol. 132; p. 1357.
Wheeler, M. M., Winnsboro, Tex. Potato-cutter. No. 880,057; Feb. 25; Sp. p. 4497; Dr. p. 943; Gaz. vol. 132; p. 1663.
Wheeler, W. R., Hartford, Conn. Fishing-rod trimming. No. 878,757; Feb. 11; Sp. p. 1829; Dr. p. 378; Gaz. vol. 132; p. 1167.
Whipple, L. W., Lowell, Mass. Pleasure-giving machine. No. 878,168; Feb. 4; Sp. p. 575; Dr. pp. 117–18; Gaz. vol. 132; p. 939.

White, A. (See Maloy and White.)
White, A., Raywood, Tex. Horse-releaser. No. 878,223; Feb. 4; Sp. p. 378; Dr. p. 175; Gaz. vol. 132; p. 990.
White, F., Euclid, Ohio. Ice-cutting machine. No. 879,933; Feb. 25; Sp. p. 4246; Dr. pp. 887–8; Gaz. vol. 132; p. 1624.
White, G. A., Bristol, Conn. Automatic brake for knitting-machines. No. 879,506; Feb. 18; Sp. p. 3316; Dr. p. 603; Gaz. vol. 132; p. 1449.
White, H. R., Lowell, Mass., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y. Type-writing machine. No. 878,846; Feb. 11; Sp. p. 1992; Dr. p. 413; Gaz. vol. 132; p. 1195.
White, J. H. (See Gregory, R. K., assignor.)
White, L. H., Chicago, Ill. Window-curtain appliance. No. 879,226; Feb. 18; Sp. p. 2734; Dr. p. 570; Gaz. vol. 132; p. 1358.
White, W. M. (See Glocker and White.)
Whiteborn, C. A., Lawton, Iowa. Indicator for baling-presses. No. 878,160; Feb. 4; Sp. p. 578; Dr. p. 118; Gaz. vol. 132; p. 939.
Whitehorne, W. R., Brooklyn, N. Y., assignor to E. C. Clements and M. B. Jacobs, trustees, Philadelphia, Pa. Electric heater. No. 878,919; Feb. 11; Sp. p. 2137; Dr. p. 446; Gaz. vol. 132; p. 1218.
Whitehurst, W. J. (See Coffee, B. M., assignor.)
Whitford, J. C. (See Holley and Whitford.)
Whitlock Coil Pipe Company. (See Brinkman, L. H., assignor.)
Whitlock Coil Pipe Company. (See Bush, P. M., assignor.)
Whitney Electrical Instrument Company. (See Hoyt, A. H., assignor.)
Wieber, G., Pittsfield, Mass. Shear-grinding machine. No. 878,030; Feb. 4; Sp. p. 283; Dr. p. 61; Gaz. vol. 132; p. 894.
Wiedeman, H., assignor to J. S. McDonald Company, Chicago, Ill. Temporary binder. No. 880,473; Feb. 25; Sp. p. 5331; Dr. p. 1122; Gaz. vol. 132; p. 1802.
Wieland, C. G., Hoboken, N. J. Pneumatic motor. No. 879,227; Feb. 18; Sp. p. 2736; Dr. pp. 570–1; Gaz. vol. 132; p. 1358.
Wiemann-Munhall Company. (See Wiemann, W. P., assignor.)
Wiemann, W. P., Allegheny, assignor to Wiemann-Munhall Company, Pittsburg, Pa. Purifying device for steam-boilers. No. 879,930; Feb. 25; Sp. p. 4240; Dr. p. 886; Gaz. vol. 132; p. 1622.
Wiesendanger, T. (See Rogers, F. H., assignor.)
Wiest, J. H., assignor of one-half to L. R. O'Haver, Indianapolis, Ind. Post-mold. No. 879,076; Feb. 11; Sp. p. 2420; Dr. p. 507; Gaz. vol. 132; p. 1267.
Wiggins, R., *et al.* (See Lord, G. J., assignor.)
Wild, T. C., Pimlico, London, England. Device for lubricating the wheels of vehicles. No. 879,228; Feb. 18; Sp. p. 2737; Dr. p. 571; Gaz. vol. 132; p. 1358.
Wilder, W. H., Gardner, Mass. Oil-stove. No. 878,609; Feb. 11; Sp. p. 1714; Dr. p. 354; Gaz. vol. 132; p. 1149.
Wildman Manufacturing Company. (See Ballard, G. L., assignor.)
Wiley, R. R., St. Catherines, Ontario, Canada. Sign-letter. No. 878,758; Feb. 11; Sp. p. 1830; Dr. p. 378; Gaz. vol. 132; p. 1168.
Wilkin, J. A., Matamoras, Pa. Changeable-speed device. No. 879,710; Feb. 18, Sp. p. 3745; Dr. p. 786; Gaz. vol. 132; p. 1515.
Wilkins, C. L., assignor to Ohio Pump & Brass Company, Columbus, Ohio. Hydraulic motor. No. 878,700; Feb. 11; Sp. p. 1716; Dr. p. 355; Gaz. vol. 132; p. 1149.
Will, C. (See Hollenburger and Will.)
William Sellers and Company. (See Thorne, W. H., assignor.)
Williams, A. G. R., Petone, Wellington, New Zealand. Safety-lamp. No. 879,934; Feb. 25; Sp. p. 4248; Dr. p. 888; Gaz. vol. 132; p. 1624.
Williams, B. R., English, Ark. Hoe. No. 878,920; Feb. 11; Sp. p. 2139; Dr. p. 446; Gaz. vol. 132; p. 1219.
Williams, C. C., Cleveland, Ohio. Clam-shell bucket. No. 878,585; Feb. 11; Sp. p. 1496; Dr. pp. 304–5; Gaz. vol. 132; p. 1111.
Williams, C., P. B. Mitchell, and S. Hathaway, Barton, Ohio. Telegraphic transmitter. No. 879,711; Feb. 18; Sp. p. 3750; Dr. pp. 786–7; Gaz. vol. 132; p. 1516.
Williams, E. R., Downers Grove, Ill. Printing-frame. No. 880,345; Feb. 25; Sp. p. 5050; Dr. p. 1067; Gaz. vol. 132; p. 1757.
Williams, I., Lima, Ohio. Steam-boiler. No. 878,261; Feb. 4; Sp. p. 753; Dr. pp. 152–3; Gaz. vol. 132; p. 970.
Williams, J. H., assignor to Remington and Sherman Company, Philadelphia, Pa. Adjustable hinge construction for safe and vault doors. No. 879,229; Feb. 18; Sp. p. 2738; Dr. p. 571; Gaz. vol. 132; p. 1359.
Williams, J. S., Hurley, S. D. Sponge-holder. No. 880,260; Feb. 25; Sp. p. 4894; Dr. p. 1035; Gaz. vol. 132; p. 1731.
Williams, J. S., Hurley, S. D. Wheel-washer. No. 880,261; Feb. 25; Sp. p. 4895; Dr. p. 1035; Gaz. vol. 132; p. 1731.
Williams, L. N. D. (See Scott, R. W., assignor.)
Williams, L. Y., *et al.* (See Good, E., assignor.)
Williams, L. Y., *et al.* (See Miller and Rakestraw, assignors.)
Williams, M. A. (See Harris and Williams.)
Williams, M. F., assignor to Williams Patent Crusher & Pulverizer Company, St. Louis, Mo. Feed-regulator. No. 878,847; Feb. 11; Sp. p. 1995; Dr. p. 413; Gaz. vol. 132; p. 1196.
Williams, M. F., assignor to Williams Patent Crusher & Pulverizer Company, St. Louis, Mo. Crusher and pulverizer. No. 878,921; Feb. 11; Sp. p. 2140; Dr. p. 447; Gaz. vol. 132; p. 1219.
Williams Patent Crusher & Pulverizer Company. (See Williams, M. F., assignor.)
Williams Typewriter Company. (See Secor, J. B., assignor.)
Williams, W. E., Chicago, Ill. Shredding-machine. No. 878,262; Feb. 4; Sp. p. 759; Dr. p. 153; Gaz. vol. 132; p. 970.
Williamson, G. F., Savannah, Ga. Still for extracting turpentine from gum and rosin. No. 878,701; Feb. 11; Sp. p. 1720; Dr. pp. 355–6; Gaz. vol. 132; p. 1149.
Williamson, H. C., New York, N. Y. Push-button switch. No. 878,586; Feb. 11; Sp. p. 1502; Dr. p. 305; Gaz. vol. 132; p. 1112.
Willis, G. M. (See Sayles, H. W., assignor.)
Wilson, F. R., Jr., Worthington, Ohio, assignor, by mesne assignments, to Jeffrey Manufacturing Company. Conveyer. No. 878,170; Feb. 4; Sp. p. 580; Dr. pp. 118–19; Gaz. vol. 132; p. 940.
Wilson, G. M., Los Angeles, Cal. Wave-motor. No. 879,992; Feb. 25; Sp. p. 4346; Dr. p. 911; Gaz. vol. 132; p. 1641.
Wilson, G. M., Los Angeles, Cal. Roller-clutch. No. 879,993; Feb. 25; Sp. p. 4348; Dr. p. 911; Gaz. vol. 132; p. 1642.
Wilson, G. T., Wellington, New Zealand. Railway fish-plate. No. 879,935; Feb. 25; Sp. p. 4249; Dr. p. 888; Gaz. vol. 132; p. 1624.
Wilson, J., Belmont, assignor to Randall-Faichney Company, Boston, Mass. Syringe. No. 880,433; Feb. 25; Sp. p. 5247; Dr. p. 1103; Gaz. vol. 132; p. 1787.
Wilson, J. S., Scranton, Pa. Sectional culm. No. 878,441; Feb. 4; Sp. p. 1090; Dr. p. 222; Gaz. vol. 132; p. 1028.
Wilson, K. R., Arcade, N. Y. Cooling means for engines. No. 879,230; Feb. 18; Sp. p. 2739; Dr. p. 572; Gaz. vol. 132; p. 1559.
Wilson, M. I., Ohiman, Ill. Hay-press. No. 879,344; Feb. 18; Sp. p. 2959; Dr. p. 617; Gaz. vol. 132; p. 1306.
Wilson, P. O. (See Hain, V., assignor.)
Wilson, R. F., Albany, N. Y. Assembler slide-brake for linotype-machines. No. 880,346; Feb. 25; Sp. p. 5052; Dr. p. 1067; Gaz. vol. 132; p. 1758.
Wilson, R. M., San Francisco, Cal. Means for advancing dredgers. No. 879,345; Feb. 18; Sp. p. 2960; Dr. p. 618; Gaz. vol. 132; p. 1307.
Wilson, W., Yeadon, Pa. Milk pasteurizer and cooler. No. 879,346; Feb. 18; Sp. p. 2962; Dr. p. 618; Gaz. vol. 132; p. 1307.
Wilt, C. T. (See Wilt, C. T. and E. E., assignors.)
Wilt, C. T. and E. E., assignors to C. T. Wilt, Chicago, Ill. Trunk. No. 880,058; Feb. 25; Sp. p. 4498; Dr. pp. 943–4; Gaz. vol. 132; p. 1663.
Wilt, C. T. and E. E., assignors to C. T. Wilt, Chicago, Ill. Overhead suspending mechanism for motor-driven tools. No. 880,059; Feb. 25; Sp. p. 4499; Dr. p. 944; Gaz. vol. 132; p. 1663.
Wilt, E. E. (See Wilt, C. T. and E. E.)
Wimpee, G. C., Rome, Ga. Vehicle-wheel. No. 878,587; Feb. 11; Sp. p. 1504; Dr. p. 305; Gaz. vol. 132; p. 1112.
Winchenbach, G. K., Waldoboro, Me. Can-opener. No. 877,974; Feb. 4; Sp. p. 153; Dr. p. 34; Gaz. vol. 132; p. 875.
Winsor, P., Weston, Mass. Portable automatic stop mechanism for cars. No. 878,263; Feb. 4; Sp. p. 760; Dr. p. 153; Gaz. vol. 132; p. 970.
Winston, C. S., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Telephone central-office apparatus. No. 878,264; Feb. 4; Sp. p. 762; Dr. p. 154; Gaz. vol. 132; p. 971.
Winston, C. S., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Automatic trunking system. No. 878,265; Feb. 4; Sp. p. 766; Dr. p. 154; Gaz. vol. 132; p. 971.
Winter, H., New York, assignor, by mesne assignments, to F. Wesel Manufacturing Company, Brooklyn, N. Y. Drilling and nailing machine. No. 879,347; Feb. 18; Sp. p. 2964; Dr. pp. 618–19; Gaz. vol. 132; p. 1307.
Winter, H., New York, assignor, by mesne assignments, to F. Wesel Manufacturing Company, Brooklyn, N. Y. Device for measuring and clamping printing-forms. No. 879,348; Feb. 18; Sp. p. 2966; Dr. p. 619; Gaz. vol. 132; p. 1308.
Winter, H. J., assignor to Eastman Kodak Co., Rochester, N. Y. View-finder. No. 878,324; Feb. 4; Sp. p. 879; Dr. p. 175; Gaz. vol. 122; p. 990.
Winterburn, C. L., Kalamazoo, Mich. Beet-topper. No. 877,975; Feb. 4; Sp. p. 155; Dr. p. 35; Gaz. vol. 132; p. 875.
Winters, J. C., *et al.* (See Gormley, C., assignor.)
Witham, G. S., Jr., assignor of one-half to G. S. Witham, Sr., Sandy Hill, N. Y. Machine for removing bark from logs. No. 878,848; Feb. 11; Sp. p. 1997; Dr. pp. 414–15; Gaz. vol. 132; p. 1196.
Witham, G. S., Sr. (See Witham, G. S., Jr., assignor.)
Witt, M., Atlanta, Ga. View-folder and mailing-case therefor. No. 878,325; Feb. 4; Sp. p. 880; Dr. p. 176; Gaz. vol. 132; p. 990.
Witt, W., and F. W. C. Hartmann, Ripon, Wis. Centrifugal cream-separator. No. 879,994; Feb. 25; Sp. p. 4349; Dr. p. 912; Gaz. vol. 132; p. 1642.

Wohl, M. J. (See Hertzberg and Wohl.)
Wolf, E. A., Nerstrand, Minn. Signal. No. 879,022; Feb. 11; Sp. p. 2321; Dr. p. 485; Gaz. vol. 132; p. 1250.
Wolf, R. B., and H. E. Tidmarsh, Sandy Hill, N. Y. Paper-making machinery. No. 878,840; Feb. 11; Sp. p. 2005; Dr. p. 415; Gaz. vol. 132; p. 1196.
Wolfe, W., and W. Lucas, Patton, Pa. Lubricator-protector for vehicle-wheel journals. No. 880,262; Feb. 25; Sp. p. 4896; Dr. p. 1045; Gaz. vol. 132; p. 1731.
Wolhaupter, B., assignor to Rail Joint Company, New York, N. Y. Insulated rail-joint. No. 878,568; Feb. 11; Sp. p. 1505; Dr. p. 306; Gaz. vol. 132; p. 1113.
Wolhaupter, B., assignor to Rail Joint Company, New York, N. Y. Reinforced angle-bar for rail-joints. No. 878,589; Feb. 11; Sp. p. 1507; Dr. pp. 306-7; Gaz. vol. 132; p. 1113.
Wolke, G., assignor of one-half to E. P. Kirby and W. K. McLaughlin, Jacksonville, Ill. Governor and valve movement. No. 878,106; Feb. 4; Sp. p. 427; Dr. p. 90; Gaz. vol. 132; p. 917.
Wolke, G., assignor of one-half to E. P. Kirby and W. K. McLaughlin, Jacksonville, Ill. Cooling device for engines. No. 879,428; Feb. 18; Sp. p. 3157; Dr. p. 656; Gaz. vol. 132; p. 1424.
Wollet, E., Cleveland, Ohio. Horseshoe. No. 879,936; Feb. 25; Sp. p. 4250; Dr. p. 888; Gaz. vol. 132; p. 1624.
Wolz, A., St. Luzi, Chur, Switzerland. Inkstand. No. 878,922; Feb. 11; Sp. p. 2141; Dr. p. 447; Gaz. vol. 132; p. 1219.
Wood, E. L., *et al.*, executors. (See Hinkley, G. M.)
Wood, G. S., Chicago, Ill. Supporting-sheath for train-pipe coupling-hose. No. 880,060; Feb. 25; Sp. p. 4496; Dr. p. 944; Gaz. vol. 132; p. 1664.
Wood, J. J., Fort Wayne, Ind. Single-phase motor. No. 878,923; Feb. 11; Sp. p. 2142; Dr. pp. 447-8; Gaz. vol. 132; p. 1219.
Wood, M. E., New York, N. Y. Stove attachment. No. 877,976; Feb. 4; Sp. p. 156; Dr. p. 35; Gaz. vol. 132; p. 875.
Wood, W. A., Ansonia, Conn., assignor to Coe Brass Manufacturing Company. Automatic blocking attachment for strip-rolls. No. 880,434; Feb. 25; Sp. p. 5247; Dr. pp. 1103-4; Gaz. vol. 132; p. 1788.
Wooding, B. F., Denver, Colo. Electrical signaling apparatus. No. 878,106; Feb. 4; Sp. p. 429; Dr. p. 91; Gaz. vol. 132; p. 918.
Woods, J. D., Steubenville, Ohio. Ink-well. No. 879,712; Feb. 18; Sp. p. 3752; Dr. p. 787; Gaz. vol. 132; p. 1516.
Woodward, G. H., San Francisco, Cal. External valve-chamber. No. 878,924; Feb. 11; Sp. p. 2147; Dr. p. 448; Gaz. vol. 132; p. 1220.
Woodward, I. S., Wichita, Kans. Seesaw and rotary swing. No. 879,937; Feb. 25; Sp. p. 4251; Dr. p. 889; Gaz. vol. 132; p. 1624.
Woodward, R. F. (See Rolfson-Schmidt, S., assignor.)
Woodward, R. G., Waukegan, assignor to Union Special Machine Company, Chicago, Ill. Sewing-machine. No. 878,442; Feb. 4; Sp. p. 1091; Dr. p. 223; Gaz. vol. 132; p. 1028.
Wooley, J. W., Norfolk, Va. Shutter-worker. No. 879,250; Feb. 18; Sp. p. 2960; Dr. p. 620; Gaz. vol. 132; p. 1398.
Woolf, E. J., assignor to Woolf Valve Gear Company, Minneapolis, Minn. Reversible explosive compound engine. No. 878,925; Feb. 11; Sp. p. 2148; Dr. p. 449; Gaz. vol. 132; p. 1220.
Woolf Valve Gear Company. (See Woolf, E. J., assignor.)
Worrell, E. W. (See Fisher, J. F., assignor.)
Woradell, T. W., *et al.* (See Borries, F. W. A. von, assignor.) (Reissue.)
Worth, G. E., Barnard, N. Y. Hemp-brake. No. 878,702; Feb. 11; Sp. p. 1721; Dr. p. 356; Gaz. vol. 132; p. 1150.
Worthington, J., Manitowoc, Wis. Strain-distributing device for vehicles. No. 879,349; Feb. 18; Sp. p. 2968; Dr. p. 620; Gaz. vol. 132; p. 1398.
Wrabek, F. M., Lesueur Center, Minn. Excavating-machine. No. 879,231; Feb. 18; Sp. p. 2740; Dr. p. 572; Gaz. vol. 132; p. 1359.
Wunner, J., New York, N. Y. Amusement device. No. 878,703; Feb. 11; Sp. p. 1723; Dr. pp. 356-7; Gaz. vol. 132; p. 1150.
Wyckoff, Seamans & Benedict. (See White, H. R., assignor.)
Wyman, O. J., Albion, N. Y. Gate. No. 879,507; Feb. 18; Sp. p. 3319; Dr. p. 693; Gaz. vol. 132; p. 1450.
X-Ray Egg Tester Co. (See Swanson, C. F., assignor.)
Yale, C. A. and C. E., assignors to Yale Wonder Clock Company, Burlington, Vt. Advertising apparatus. No. 878,171; Feb. 4; Sp. p. 584; Dr. p. 119; Gaz. vol. 132; p. 940.
Yale, C. E. (See Yale, C. A. and C. E.)
Yale, C. E., assignor to Yale Wonder Clock Company, Burlington, Vt. Percentage mechanism for coin-controlled apparatus. No. 878,172; Feb. 4; Sp. p. 587; Dr. p. 120; Gaz. vol. 132; p. 940.
Yale, C. E., assignor to Yale Wonder Clock Company, Burlington, Vt. Automatic cashier and discount machine. No. 878,173; Feb. 4; Sp. p. 588; Dr. pp. 120-1; Gaz. vol. 132; p. 941.
Yale & Towne Manufacturing Company. (See Towne, H. R., assignor.)
Yale Wonder Clock Company. (See Yale, C. A. and C. E., assignors.)
Yale Wonder Clock Company. (See Yale, C. E., assignor.)
Yarnell, H., Los Angeles, Cal. Supplemental detachable vehicle-tire. No. 878,107; Feb. 4; Sp. p. 431; Dr. p. 91; Gaz. vol. 132; p. 918.
Yates, J. T., J. Devey, Lehi, W. B. Richan and W. A. Devey, assignors of one-eighth to E. H. Boley, American Fork, Utah. Smoke and fume condenser. No. 879,023; Feb. 11; Sp. p. 2323; Dr. p. 486; Gaz. vol. 132; p. 1250.
Yawman & Erbe Manufacturing Company. (See Weiss, A. T., assignor.)
Yeakel, G. P., assignor of one-third to C. Keller, Norristown, Pa. Fish scaling and cleaning machine. No. 878,174; Feb. 4; Sp. p. 593; Dr. pp. 121-2; Gaz. vol. 132; p. 941.
Yeates, G., Montreal, Quebec, Canada. Low-water alarm. No. 879,508; Feb. 18; Sp. p. 3320; Dr. p. 694; Gaz. vol. 132; p. 1450.
Yocom, R. P., Chebanse, Ill. Mail-carrier. No. 879,125; Feb. 11; Sp. p. 2542; Dr. pp. 528-9; Gaz. vol. 132; p. 1283.
York, L. D., and G. Youngman, Portsmouth, Ohio. Burner. No. 878,390; Feb. 11; Sp. p. 1909; Dr. p. 307; Gaz. vol. 132; p. 1113.
Young, A. C., Philadelphia, Pa. Transit-head. No. 879,606; Feb. 18; Sp. p. 3526; Dr. pp. 740-1; Gaz. vol. 132; p. 1481.
Young, A. G., New London, Conn. Grain-chute. No. 878,443; Feb. 4; Sp. p. 1092; Dr. p. 223; Gaz. vol. 132; p. 1028.
Young, D. H., assignor to S. R. Young, Manchester, Iowa. Harness-buckle. No. 879,077; Feb. 11; Sp. p. 2422; Dr. p. 507; Gaz. vol. 132; p. 1267.
Young, E., and J. J. Schlichter, Portsmouth, Ohio. Bale-tie fastener. No. 879,232; Feb. 18; Sp. p. 2742; Dr. p. 573; Gaz. vol. 132; p. 1359.
Young, G. P., Gloversville, N. Y. Window-washer. No. 878,444; Feb. 4; Sp. p. 1094; Dr. p. 223; Gaz. vol. 132; p. 1029.
Young, I., San Francisco, Cal. Electric sign. No. 880,263; Feb. 25; Sp. p. 4896; Dr. pp. 1035-7; Gaz. vol. 132; p. 1731.
Young, J. A., Bellevue, Iowa. Combined cut-off and strainer for water-pipes. No. 878,850; Feb. 11; Sp. p. 2007; Dr. p. 415; Gaz. vol. 132; p. 1197.
Young, J. H. (See Chandler, O. H., assignor.)
Young, J. W., Jr., *et al.* (See Gregory, J. W., assignor.)
Young, R. H., Nanticoke, Md. Waterproof self-seating tube for protecting the mouth-end of cigars. No. 879,713; Feb. 18; Sp. p. 3754; Dr. p. 787; Gaz. vol. 132; p. 1517.
Young, S. H., Phillipsburg, Kans. Cultivator. No. 879,429; Feb. 18; Sp. p. 3150; Dr. p. 657; Gaz. vol. 132; p. 1424.
Young, S. R. (See Young, D. H., assignor.)
Youngman, G. (See York and Youngman.)
Zahnter, R. R., Fruit, Ill. Lathing-machine. No. 879,905; Feb. 25; Sp. p. 4352; Dr. p. 912; Gaz. vol. 132; p. 1643.
Zalinski, E. L., U. S. Army. Collimating-sight for heavy guns. No. 878,709; Feb. 11; Sp. p. 1832; Dr. pp. 378-9; Gaz. vol. 132; p. 1166.
Zeiss, Firm of C. (See König, A., assignor.)
Zellweger, J., St. Louis, Mo. Roasting-kiln. No. 878,704; Feb. 11; Sp. p. 1725; Dr. p. 357; Gaz. vol. 132; p. 1150.
Ziegler, H., New York, N. Y. String-frame for upright pianos. No. 878,926; Feb. 11; Sp. p. 2152; Dr. p. 449; Gaz. vol. 132; p. 1221.
Zimmerli, C., assignor to Vetter Desk Works, Rochester, N. Y. Cabinet. No. 879,233; Feb. 18; Sp. p. 2743; Dr. p. 573; Gaz. vol. 132; p. 1360.
Zimmerman, R. E., assignor of one-third to S. M. Brewster, Troy, Kans. Hay-baler. No. 878,445; Feb. 4; Sp. p. 1095; Dr. p. 224; Gaz. vol. 132; p. 1029.
Zoldowski, J. H., and P. F. Baranek, Toledo, Ohio. Horse-releasing means for vehicles. No. 878,851; Feb. 11; Sp. p. 2009; Dr. p. 416; Gaz. vol. 132; p. 1197.
Zorge, R. J. (See Flora and Zörge.)
Zorge Safety Railway Equipment Company. (See Flora and Zorge, assignors.)
Zünd, A., Paris, France. Apparatus for massaging the hearing organs. No. 878,760; Feb. 11; Sp. p. 1835; Dr. p. 379; Gaz. vol. 132; p. 1168.
Zura, J., assignor of one-half to Gebrüder Hammer, Berlin, Germany. Rotary engine. No. 880,182; Feb. 25; Sp. p. 4728; Dr. pp. 1000-1; Gaz. vol. 132; p. 1703.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF FEBRUARY, 1908.

[Abbreviations: "Sp."=Monthly Volume of Specifications; "Dr."=Monthly Volume of Drawings; "Gaz."=Official Gazette.]

Abdominal supporter. M. Donaldson. No. 880,444; Feb. 25; Sp. p. 5268; Dr. p. 1108; Gaz. vol. 132; p. 1792.
Acetylene-generators, Carbid-feed for. A. S. Phelps, Jr. No. 878,310; Feb. 4; Sp. p. 855; Dr. pp. 169-70; Gaz. vol. 132; p. 986.
Acids, Making dialkylbarbituric. M. Engelmann. No. 879,156; Feb. 18; Sp. p. 2600; Gaz. vol. 132; p. 1334.
Acids, Making dialkylbarbituric. M. Engelmann. No. 879,835; Feb 18; Sp. p. 3095; Gaz. vol. 132; p. 1557.
Acids, Manufacturing dialkylbarbituric. K. Stephan and P. Hunsalz. No. 879,499; Feb. 18; Sp. p. 3302; Gaz. vol. 132; p. 1447.
Acoustical instrument. P. Seiler. No. 879,917; Feb. 25; Sp. p. 4212; Dr. p. 879; Gaz. vol. 132; p. 1618.
Adding-machine. R. H. and W. A. McNair. No. 880,034; Feb. 25; Sp. p. 4435; Dr. pp. 931-4; Gaz. vol. 132; p. 1655.
Adding-machine. C. N. McFarland. No. 880,159; Feb. 25; Sp. p. 4686; Dr. pp. 987-8; Gaz. vol. 132; p. 1695.
Adding-machine carrying mechanism. C. N. McFarland and C. Wales. No. 880,157; Feb. 25; Sp. p. 4681; Dr. p. 986; Gaz. vol. 132; p. 1694.
Adding-machine momentum-absorber. C. N. McFarland and C. Wales. No. 880,158; Feb. 25; Sp. p. 4684; Dr. p. 987; Gaz. vol. 132; p. 1695.
Addressing-machine. M. and J. Burke. No. 878,117; Feb. 4; Sp. p. 448; Dr. pp. 95-6; Gaz. vol. 132; p. 921.
Adhesive composition. M. Smetana. No. 879,013; Feb. 11; Sp. p. 2309; Gaz. vol. 132; p. 1247.
Adhesive plasters, Cutting and stripping device for spool. W. J. Walsh. No. 879,223; Feb. 18; Sp. p. 2728; Dr. p. 569; Gaz. vol. 132; p. 1356.
Adjustable box or bearing. G. M. Hinkley. No. 879,265; Feb. 18; Sp. p. 2809; Dr. p. 589; Gaz. vol. 132; p. 1371.
Adjustable brace. J. B. Collins. No. 879,524; Feb. 18; Sp. p. 3347; Dr. p. 699; Gaz. vol. 132; p. 1455.
Adjustable bracket. L. D. Carter. No. 878,455; Feb. 4; Sp. p. 1121; Dr. p. 230; Gaz. vol. 132; p. 1033.
Adjustable table. J. C. Lewis. No. 878,967; Feb. 11; Sp. p. 2222; Dr. p. 465; Gaz. vol. 132; p. 1233.
Advertising apparatus. C. A. and C. E. Yale. No. 878,171; Feb. 4; Sp. p. 584; Dr. p. 119; Gaz. vol. 132; p. 940.
Advertising device. A. B. Mackie. No. 878,301; Feb. 4; Sp. p. 838; Dr. p. 167; Gaz. vol. 132; p. 983.
Advertising device. E. Van Antwerp. No. 880,254; Feb. 25; Sp. p. 4884; Dr. p. 1033; Gaz. vol. 132; p. 1728.
Aeroplane. G. H. Benedict. No. 879,848; Feb. 25; Sp. p. 4025; Dr. p. 844; Gaz. vol. 132; p. 1594.
Agricultural implements, Guiding device for wheeled. G. E. Gordon. No. 879,864; Feb. 25; Sp. p. 4084; Dr. p. 856; Gaz. vol. 132; p. 1599.
Aiming from cover, Device for. H. Geis. No. 880,378; Feb. 25; Sp. p. 5118; Dr. p. 1081; Gaz. vol. 132; p. 1768.
Air and dust separator. W. S. Osborne. No. 880,161; Feb. 25; Sp. p. 4691; Dr. p. 988; Gaz. vol. 132; p. 1696.
Air-brake. W. G. Pattee. No. 878,468; Feb. 4; Sp. p. 1140; Dr. p. 235; Gaz. vol. 132; p. 1038.
Air-brake apparatus. H. F. Bickel. No. 878,601; Feb. 11; Sp. p. 1525; Dr. p. 312; Gaz. vol. 132; p. 1116.
Air-brake, lighting and signaling system for railway-trains. W. C. Mayo and J. Houlehan. No. 879,397; Feb. 18; Sp. p. 3076; Dr. pp. 639-41; Gaz. vol. 132; p. 1413.
Air-compressor. L. C. Trent. No. 878,579; Feb. 11; Sp. p. 1484; Dr. p. 301; Gaz. vol. 132; p. 1109.
Air-compressor, Compound. N. A. Christensen. No. 880,125; Feb. 25; Sp. p. 4610; Dr. p. 972; Gaz. vol. 132; p. 1684.
Air-compressor, Electric. N. M. Watson. No. 878,200; Feb. 4; Sp. p. 751; Dr. p. 151; Gaz. vol. 132; p. 969.
Air-compressor, Hydraulic. R. I. Blakney. No. 880,187; Feb. 25; Sp. p. 4738; Dr. p. 1003; Gaz. vol. 132; p. 1705.
Air compressor or pump. W. H. Tew. No. 879,213; Feb. 18; Sp. p. 2713; Dr. pp. 565-6; Gaz. vol. 132; p. 1353.
Air-purifying apparatus. J. H. Kinealy. No. 879,273; Feb. 18; Sp. p. 2822; Dr. p. 591; Gaz. vol. 132; p. 1373.
Air-ship. E. F. Leeds. No. 879,779; Feb. 18; Sp. p. 3872; Dr. pp. 811-12; Gaz. vol. 132; p. 1538.
Air-treatment apparatus, Fresh-. L. P. Leonard. No. 879,391; Feb. 18; Sp. p. 3065; Dr. p. 638; Gaz. vol. 132; p. 1411.
Alarm: *See* Burglar-alarm; Electric alarm; Fire-alarm; Low-water alarm; Telephone-alarm.
Album. R. Krumming. No. 880,311; Feb. 25; Sp. p. 4991; Dr. p. 1053; Gaz. vol. 132; p. 1746.
Albuminoids and the composition of matter produced therefrom, Treating. M. R. Isaacs. No. 879,967; Feb. 25; Sp. p. 4305; Gaz. vol. 132; p. 1634.
Ale dispenser, Automatic ginger-. J. H. Earl. No. 880,370; Feb. 25; Sp. p. 5094; Dr. p. 1077; Gaz. vol. 132; p. 1765.
Amalgamator. J. S. Marquette. No. 879,825; Feb. 18; Sp. p. 3973; Dr. pp. 831-2; Gaz. vol. 132; p. 1554.
Amalgamator. J. M. Barnes. No. 879,999; Feb. 25; Sp. p. 4360; Dr. p. 914; Gaz. vol. 132; p. 1644.
Ammunition-hoist control. J. D. Ihlder. No. 879,387; Feb. 18; Sp. p. 3055; Dr. p. 636; Gaz. vol. 132; p. 1410.
Amusement apparatus. H. Hill. No. 879,572; Feb. 25; Sp. p. 4094; Dr. pp. 858-9; Gaz. vol. 132; p. 1601.
Amusement device. F. J. Johnston. No. 878,400; Feb. 4; Sp. p. 1025; Dr. p. 207; Gaz. vol. 132; p. 1016.
Amusement device. J. Wunner. No. 878,703; Feb. 11; Sp. p. 1723; Dr. pp. 356-7; Gaz. vol. 132; p. 1150.
Amusement device. C. I. Enochs. No. 879,515; Feb. 18; Sp. p. 3561; Dr. pp. 744-5; Gaz. vol. 132; p. 1484.
Amusement-walk. G. Lacomme. No. 879,375; Feb. 18; Sp. p. 2924; Dr. p. 592; Gaz. vol. 132; p. 1374.
Animal-shears. T. A. Martin. No. 879,973; Feb. 25; Sp. p. 4314; Dr. p. 903; Gaz. vol. 132; p. 1636.
Animal-trap. T. J. Crump. No. 878,123; Feb. 4; Sp. p. 460; Dr. p. 98; Gaz. vol. 132; p. 923.
Animals from stables, Means for releasing and leading. J. W. Ross. No. 879,323; Feb. 18; Sp. p. 2927; Dr. pp. 610-11; Gaz. vol. 132; p. 1390.
Annealing apparatus, Wire-. J. H. Roberts. No. 879,674; Feb. 18; Sp. p. 3677; Dr. pp. 768-9; Gaz. vol. 132; p. 1504.
Annealing furnace, Metal-. R. H. Ward. No. 878,840; Feb. 11; Sp. p. 1982; Dr. p. 411; Gaz. vol. 132; p. 1193.
Annealing furnace, Wire-. H. B. Humphrey. No. 878,290; Feb. 4; Sp. p. 815; Dr. p. 162; Gaz. vol. 132; p. 971.
Annular knife. E. G. Hoffmann. No. 877,927; Feb. 4; Sp. p. 69; Dr. p. 14; Gaz. vol. 132; p. 860.
Ammoniator. W. C. Mayo and J. Houlehan. No. 879,286; Feb. 18; Sp. p. 2856; Dr. p. 598; Gaz. vol. 132; p. 1379.
Antislipping and non-wearing medium. C. D. McGlehan. No. 879,790; Feb. 18; Sp. p. 3893; Dr. p. 816; Gaz. vol. 132; p. 1542.
Anvil. H. E. Sheward. No. 880,335; Feb. 25; Sp. p. 5034; Dr. p. 1062; Gaz. vol. 132; p. 1754.
Apparel fastening device, Wearing-. L. E. Smith. No. 878,678; Feb. 11; Sp. p. 1676; Dr. p. 346; Gaz. vol. 132; p. 1142.
Apparel, Wearing-. J. A. Sullivan. No. 877,964; Feb. 4; Sp. p. 136; Dr. p. 31; Gaz. vol. 132; p. 872.
Arbor. O. Rose. No. 879,226; Feb. 18; Sp. p. 2963; Dr. p. 834; Gaz. vol. 132; p. 1555.
Arch-supporter. C. E. Bullard. No. 878,090; Feb. 4; Sp. p. 302; Dr. p. 64; Gaz. vol. 132; p. 897.
Arsenical ores, Reducing. G. M. Westman. No. 879,931; Feb. 25; Sp. p. 4242; Dr. pp. 886-7; Gaz. vol. 132; p. 1623.
Arsenical ores, Reducing. G. M. Westman. No. 879,932; Feb. 25; Sp. p. 4244; Dr. p. 887; Gaz. vol. 132; p. 1623.
Asphalt-ripper. A. King. No. 878,638; Feb. 11; Sp. p. 1608; Dr. p. 326; Gaz. vol. 132; p. 1129.
Assembling apparatus. J. R. Brown. No. 877,900; Feb. 4; Sp. p. 6; Dr. p. 1; Gaz. vol. 132; p. 850.
Auger-head and reamer, Combined. E. J. Wheeler. No. 879,075; Feb. 11; Sp. p. 2419; Dr. p. 507; Gaz. vol. 132; p. 1266.
Automatically-locking box. F. C. Few. No. 879,094; Feb. 11; Sp. p. 2472; Dr. p. 515; Gaz. vol. 132; p. 1272.
Automobile. L. M. G. Delaunay-Belleville. No. 879,027; Feb. 11; Sp. p. 2329; Dr. p. 488; Gaz. vol. 132; p. 1252.
Automobile. A. H. Dingman. No. 880,202; Feb. 25; Sp. p. 4774; Dr. p. 1010; Gaz. vol. 132; p. 1710.
Automobile compensating mechanism. C. H. Ball and J. F. Rogers. No. 880,117; Feb. 25; Sp. p. 4590; Dr. p. 967; Gaz. vol. 132; p. 1682.
Automobile-door hinge. E. T. Robinson. No. 878,745; Feb. 11; Sp. p. 1902; Dr. p. 373; Gaz. vol. 132; p. 1163.
Automobile driving-gear. J. E. Johnson. No. 878,005; Feb. 4; Sp. p. 217; Dr. pp. 47-8; Gaz. vol. 132; p. 886.
Automobile driving mechanism. H. K. Holsman. No. 878,955; Feb. 11; Sp. p. 2204; Dr. p. 461; Gaz. vol. 132; p. 1230.
Automobile running-gear. C. T. Pratt. No. 878,156; Feb. 4; Sp. p. 515; Dr. pp. 110-11; Gaz. vol. 132; p. 934.

Automobile steering-gear and axle. M. P. Henvis. No. 880,450; Feb. 25; Sp. p. 5278; Dr. p. 1110; Gaz. vol. 132; p. 1793.
Automobile-torpedoes, Ignition device for. F. M. Leavitt. No. 880,029; Feb. 25; Sp. p. 4421; Dr. p. 929; Gaz. vol. 132; p. 1653.
Automobile-torpedoes, Starting-valve for. F. M. Leavitt. No. 880,030; Feb. 25; Sp. p. 4424; Dr. p. 929; Gaz. vol. 132; p. 1654.
Automobile transmission-gear. J. W. Lambert. No. 878,972; Feb. 4; Sp. p. 366; Dr. pp. 75–6; Gaz. vol. 132; p. 907.
Automobiles, Apparatus for making seat-bodies for. M. H. Kashian. No. 878,636; Feb. 11; Sp. p. 1604; Dr. p. 327; Gaz. vol. 132; p. 1128.
Automobiles, &c., Driving mechanism for. H. K. Holsman. No. 878,954; Feb. 11; Sp. p. 2199; Dr. pp. 460–1; Gaz. vol. 132; p. 1230.
Automobiles, &c., Tire and luggage carrier for. J. J. Bond. No. 879,511; Feb. 18; Sp. p. 3326; Dr. p. 695; Gaz. vol. 132; p. 1451.
Awning, Porch-. C. Frantz. No. 878,284; Feb. 4; Sp. p. 799; Dr. p. 160; Gaz. vol. 132; p. 977.
Ax attachment for sawing logs. L. Smith. No. 880,412; Feb. 25; Sp. p. 5193; Dr. p. 1085; Gaz. vol. 132; p. 1780.
Axle, F. Scanlan. No. 879,227; Feb. 18; Sp. p. 2934; Dr. p. 612; Gaz. vol. 132; p. 1201.
Axle-box lid, Car-. C. C. Barclay and F. Hachmann. No. 879,137; Feb. 18; Sp. p. 2568; Dr. pp. 534–5; Gaz. vol. 132; p. 1328.
Axle, Vehicle-. S. E. Kimball. No. 880,145; Feb. 25; Sp. p. 4655; Dr. p. 961; Gaz. vol. 132; p. 1800.
Bag: *See* Feed-bag.
Bag-holder. Z. R. Brown. No. 874,336; Feb. 4; Sp. p. 906; Dr. p. 181; Gaz. vol. 132; p. 995.
Bag-holder. A. R. Johnson. No. 879,177; Feb. 18; Sp. p. 2650; Dr. p. 552; Gaz. vol. 132; p. 1342.
Bagging-cutting machine. R. Clark. No. 880,194; Feb. 25; Sp. p. 4749; Dr. p.1006; Gaz. vol. 132; p. 1707.
Bait-casting reel used in angling. A. H. Illingworth. No. 879,468; Feb. 18; Sp. p. 3242; Dr. p. 675; Gaz. vol. 132; p. 1436.
Baking-pan. J. A. Bailey. No. 879,434; Feb. 18; Sp. p. 2167; Dr. p. 459; Gaz. vol. 132; p. 1426.
Bale-binding attachment for hay-presses. C. T. Miller and G. A. Carlson. No. 879,975; Feb. 25; Sp. p. 4318; Dr. p. 904; Gaz. vol. 132; p. 1636.
Bale-tie fastener. E. Young and J. J. Schlichter. No. 879,232; Feb. 18; Sp. p. 2742; Dr. p. 573; Gaz. vol. 132; p. 1350.
Baler, Hay-. R. E. Zimmerman. No. 878,445; Feb. 4; Sp. p. 1086; Dr. p. 224; Gaz. vol. 132; p. 1029.
Baling device. G. N. Campbell. No. 874,342; Feb. 4; Sp. p. 919; Dr. p. 183; Gaz. vol. 132; p. 997.
Baling machine, Broom-corn-. C. K. Miller. No. 877,999; Feb. 4; Sp. p. 92; Dr. p. 21; Gaz. vol. 132; p. 804.
Baling-press. L. B. Metcalf. No. 878,978; Feb. 11; Sp. p. 2243; Dr. p. 469; Gaz. vol. 132; p. 1237.
Baling-press. W. G. Merrell. No. 879,292; Feb. 18; Sp. p. 2877; Dr. p. 600; Gaz. vol. 132; p. 1390.
Baling-press indicator. C. A. Whitehorn. No. 878,109; Feb. 4; Sp. p. 578; Dr. p. 118; Gaz. vol. 132; p. 939.
Ball: *See* Golf-ball; Playing-ball.
Balloon, Dirigible. A. Gerstner. No. 880,070; Feb. 25; Sp. p. 4510; Dr. pp. 948–9; Gaz. vol. 132; p. 1666.
Bank, Combination-lock. E. R. Walker. No. 879,602; Feb. 18; Sp. p. 3532; Dr. p. 740; Gaz. vol. 132; p. 1480.
Bar: *See* Boring-bar; Clamp-bar.
Barber's check system. C. L. Derr. No. 878,193; Feb. 4; Sp. p. 623; Dr. p. 128; Gaz. vol. 132; p. 947.
Barber's pole. O. E. Smith. No. 879,964; Feb. 25; Sp. p. 4332; Dr. p. 907; Gaz. vol. 132; p. 1639.
Barium cyanid, Production of. K. Bosch and A. Mittasch. No. 879,030; Feb. 11; Sp. p. 2334; Gaz. vol. 132; p. 1253.
Bark from logs, Machine for removing. G. S. Witham, Jr. No. 878,848; Feb. 11; Sp. p. 1997; Dr. pp. 414–15; Gaz. vol. 132; p. 1196.
Barley, Preparing. J. A. Caverhill. No. 878,189; Feb. 4; Sp. p. 617; Gaz. vol. 132; p. 946.
Basket-handle. J. Higman. No. 879,103; Feb. 11; Sp. p. 2487; Dr. p. 518; Gaz. vol. 132; p. 1276.
Basket, Transplanting-. C. L. Edwards. No. 879,613; Feb. 18; Sp. p. 3559; Dr. p. 744; Gaz. vol. 132; p. 1484.
Bath-pad. J. H. Foote. No. 879,619; Feb. 18; Sp. p. 3568; Dr. p. 747; Gaz. vol. 132; p. 1486.
Baths, Process of and apparatus for preparing effervescing. L. Sarason. No. 879,326; Feb. 18; Sp. p. 2933; Dr. p. 612; Gaz. vol. 132; p. 1391.
Battery: *See* Storage battery.
Battery. F. A. Decker. No. 880,196; Feb. 25; Sp. p. 4751; Dr. p. 1007; Gaz. vol. 132; p. 1708.
Battery. F. A. Decker. No. 880,367; Feb. 25; Sp. p. 5089; Dr. pp. 1075–6; Gaz. vol. 132; p. 1764.
Battery. F. A. Decker. No. 880,368; Feb. 25; Sp. p. 5090; Dr. p. 1076; Gaz. vol. 132; p. 1765.
Battery-plate. W. M. Brodie. No. 879,361; Feb. 18; Sp. p. 2996; Dr. p. 627; Gaz. vol. 132; p. 1402.
Battery plate, Storage-. A. O. Tate. No. 880,420; Feb. 25; Sp. p. 5217; Dr. p. 1099; Gaz. vol. 132; p. 1783.
Battery plate, Storage-. A. O. Tate. No. 880,421; Feb. 25; Sp. p. 5220; Dr. p. 1099; Gaz. vol. 132; p. 1783.
Battery plate, Storage-. A. O. Tate. No. 880,422; Feb. 25; Sp. p. 5223; Dr. p. 1100; Gaz. vol. 132; p. 1783.
Battery plate, Storage-. A. O. Tate. No. 880,423; Feb. 25; Sp. p. 5225; Dr. p. 1100; Gaz. vol. 132; p. 1784.
Battery plate, Storage-. A. O. Tate. No. 880,424; Feb. 25; Sp. p. 5227; Dr. p. 1100; Gaz. vol. 132; p. 1784.
Battery plate, Storage-. A. O. Tate. No. 880,425; Feb. 25; Sp. p. 5229; Dr. p. 1101; Gaz. vol. 132; p. 1785.
Beam-fastening device, Adjustable. J. and W. J. O'Hara. No. 880,238; Feb. 25; Sp. p. 4855; Dr. p. 1027; Gaz. vol. 132; p. 1723.
Bearing. I. Osgood. No. 879,578; Feb. 18; Sp. p. 3474; Dr. p. 728; Gaz. vol. 132; p. 1473.
Bearing, Ball-. A. T. Matthews. No. 878,652; Feb. 11; Sp. p. 1637; Dr. p. 336; Gaz. vol. 132; p. 1133.
Bearing, Self-oiling. R. B. Treat. No. 880,428; Feb. 25; Sp. p. 5237; Dr. p. 1102; Gaz. vol. 132; p. 1786.
Bearings, Automatic lubricator for shaft-. J. R. Steiger. No. 877,962; Feb. 4; Sp. p. 132; Dr. p. 29; Gaz. vol. 132; p. 871.
Bed, Folding. W. H. A. Lewis. No. 879,457; Feb. 18; Sp. p. 3033; Dr. p. 761; Gaz. vol. 132; p. 1406.
Bed, Invalid or hoisting. J. J. Collins. No. 878,045; Feb. 4; Sp. p. 314; Dr. pp. 65–6; Gaz. vol. 132; p. 899.
Beds, Security attachment for. T. M. Hamilton. No. 879,164; Feb. 18; Sp. p. 2631; Dr. p. 549; Gaz. vol. 132; p. 1338.
Bedstead, Wardrobe-. W. E. Ingram and C. W. Hinton. No. 879,050; Feb. 11; Sp. p. 2368; Dr. pp. 495–6; Gaz. vol. 132; p. 1259.
Beet-puller. L. Prue and W. Charlton. No. 879,055. Feb. 11; Sp. p. 2399; Dr. p. 502; Gaz. vol. 132; p. 1264.
Beet-topper. C. L. Winterburn. No. 877,975; Feb. 4; Sp. p. 135; Dr. p. 35; Gaz. vol. 132; p. 875.
Bellows, Hand-. J. H. Fecker and C. C. Jelleff. No. 878,367; Feb. 4; Sp. p. 959; Dr. p. 192; Gaz. vol. 132; p. 1004.
Belt. H. J. Reynolds. No. 878,897; Feb. 11; Sp. p. 2103; Dr. p. 438; Gaz. vol. 132; p. 1212.
Belt and support for abdominal treatment. H. T. Renton. No. 880,041; Feb. 25; Sp. p. 4461; Dr. pp. 936–7; Gaz. vol. 132; p. 1658.
Belt, Distributing and conveying. T. J. Carter. No. 880,356; Feb. 25; Sp. p. 5070; Dr. p. 1071; Gaz. vol. 132; p. 1761.
Belt, Endless conveyer-. I. F. Manning. No. 878,650; Feb. 11; Sp. p. 1631; Dr. p. 333; Gaz. vol. 132; p. 1133.
Belt evener, Conveyer-. F. Martin. No. 878,315; Feb. 11; Sp. p. 1943; Dr. p. 402; Gaz. vol. 132; p. 1186.
Belt-fastener. G. M. Harrison. No. 878,950; Feb. 11; Sp. p. 2192; Dr. p. 459; Gaz. vol. 132; p. 1228.
Belt-tightener. J. M. Schinner. No. 879,328; Feb. 18; Sp. p. 2936; Dr. p. 612; Gaz. vol. 132; p. 1391.
Berth, Ship's. F. L. Ames. No. 878,852; Feb. 11; Sp. p. 2011; Dr. p. 416; Gaz. vol. 132; p. 1197.
Beverage cooling and dispensing apparatus. J. R. Halloran. No. 880,075; Feb. 25; Sp. p. 4522; Dr. p. 952; Gaz. vol. 132; p. 1668.
Beverages from pure hemoglobin and fermentable sugar, Producing vinaceous. F. G. Sauer. No. 878,900; Feb. 11; Sp p. 2107; Gaz. vol. 132; p. 1213.
Bib. M. S. Thompson. No. 879,124; Feb. 11; Sp. p. 2541; Dr. p. 528; Gaz. vol. 132; p. 1282.
Bicycle-frame brace. A. L. Girard. No. 879,458; Feb. 18; Sp. p. 3225; Dr. p. 671; Gaz. vol. 132; p. 1433.
Binder. I. F. Rubel. No. 878,746; Feb. 11; Sp. p. 1803; Dr. p. 373; Gaz. vol. 132; p. 1163.
Binder. N. F. Bourne. No. 879,356; Feb. 18; Sp. p. 2961; Dr. p. 623; Gaz. vol. 132; p. 1400.
Binder, Loose-leaf. A. Dom. No. 878,261; Feb. 4; Sp. p. 794; Dr. p. 150; Gaz. vol. 132; p. 976.
Binder, Loose-leaf. C. S. Broadwell. No. 880,352; Feb. 25; Sp. p. 5063; Dr. p. 1069; Gaz. vol. 132; p. 1760.
Binder, Temporary. H. F. Bushong. No. 878,340; Feb. 4; Sp. p. 913; Dr. p. 182; Gaz. vol. 132; p. 993.
Binder, Temporary. C. D. Trussell. No. 879,928; Feb. 25; Sp. p. 4235; Dr. p. 895; Gaz. vol. 132; p. 1622.
Binder, Temporary. C. D. Trussell. No. 880,053; Feb. 25; Sp. p. 4481; Dr. p. 941; Gaz. vol. 132; p. 1661.
Binder, Temporary. H. Wiedeman. No. 880,473; Feb. 25; Sp. p. 5331; Dr. p. 1122; Gaz. vol. 132; p. 1802.
Bird-trap. L. Sims. No. 879,333; Feb. 18; Sp. p. 2943; Dr. p. 614; Gaz. vol. 132; p. 1393.
Biscuit, Machine for manufacturing cereal. H. D. Perky. No. 878,154; Feb. 4; Sp. p. 512; Dr. p. 109; Gaz. vol. 132; p. 934.
Bit: *See* Expansible bit.
Bit. G. Harris. No. 878,798; Feb. 11; Sp. p. 1919; Dr. p. 396; Gaz. vol. 132; p. 1181.
Bit-stock. I. Larson. No. 878,404; Feb. 4; Sp. p. 1033; Dr. pp. 208–9; Gaz. vol. 132; p. 1017.
Blast-heating apparatus. J. W. Nesmith. No. 879,302; Feb. 18; Sp. p. 2895; Dr. p. 604; Gaz. vol. 132; p. 1383.
Bleaching apparatus, Cotton-. J. B. Brennan. No. 880,005; Feb. 25; Sp. p. 4371; Dr. p. 916; Gaz. vol. 132; p. 1646.
Blind-tenon. C. Miller. No. 878,979; Feb. 11; Sp. p. 2245; Dr. p. 469; Gaz. vol. 132; p. 1237.
Block: *See* Concrete sidewalk-block; Facing-block; Fuse-block; Pulley-block; Toy building-block.
Block-signal systems, Signal mechanism for. H. L. Johnson. No. 880,218; Feb. 25; Sp. p. 4810; Dr. pp. 1018–19; Gaz. vol. 132; p. 1715.
Board: *See* Cloth-winding board; Ironing-board; Press-board; Wash-board.
Boards, Manufacture of cellular. S. M. Langston. No. 878,403; Feb. 4; Sp. p. 1029; Dr. p. 208; Gaz. vol. 132; p. 1017.
Boat-launching apparatus. J. Forcier. No. 880,018; Feb. 25; Sp. p. 4401; Dr. p. 924; Gaz. vol. 132; p. 1650.
Boat, Speed-. G. A. Farrell. No. 879,860; Feb. 25; Sp. p. 4078; Dr. p. 855; Gaz. vol. 132; p. 1598.
Boat, Twin-screw submarine. L. Y. Spear. No. 878,752; Feb. 11; Sp. p. 1817; Dr. p. 376; Gaz. vol. 132; p. 1166.
Boats, Feathering paddle attachment for small. W. Rickards. No. 878,489; Feb. 4; Sp. p. 1152; Dr. p. 235; Gaz. vol. 132; p. 1038.
Body-guard. C. W. Fraser. No. 879,534; Feb. 18; Sp. p. 3367; Dr. p. 704; Gaz. vol. 132; p. 1459.
Boiler: *See* Culinary boiler; Egg-boiler; Multitubular boiler; Sectional boiler; Steam-boiler.
Boiler. E. E. Larrabee. No. 879,056; Feb. 11; Sp. p. 2370; Dr. p. 496; Gaz. vol. 132; p. 1261.
Boiler compound. J. L. Cooper. No. 880,126; Feb. 25; Sp. p. 4612; Gaz. vol. 132; p. 1684.

Boiler flues or tubes, Fastening means for steam-. L. M. Seaward. No. 879,330; Feb. 18; Sp. p. 2940; Dr. p. 613; Gaz. vol. 132; p. 1392.
Boiler-furnace. W. N. Best. No. 879,806; Feb. 18; Sp. p. 3022; Dr. p. 822; Gaz. vol. 132; p. 1547.
Boiler-furnace. S. S. Spivey. No. 880,175; Feb. 25; Sp. p. 4716; Dr. p. 996; Gaz vol. 132; p. 1701.
Boiler-purifying device, Steam-. W. P. Wiemann. No. 879,930; Feb. 25; Sp. p. 4240; Dr. p. 886; Gaz. vol. 132; p. 1622.
Boiler-tube. W. A. Compton. No. 878,353; Feb. 4; Sp. p. 933; Dr. p. 186; Gaz. vol. 132; p. 1000.
Boiler-tube cleaner. R. O. Hodge. No. 878,286; Feb. 4; Sp. p. 804; Dr. p. 161; Gaz. vol. 132; p. 978.
Boiler-tube-cleaning apparatus. H. F. Weinland. No. 878,583; Feb. 11; Sp. p. 1490; Dr. pp. 302–3; Gaz. vol. 132; p. 1111.
Bolt. M. Jacobs. No. 878,003; Feb. 4; Sp. p. 213; Dr. p. 47; Gaz. vol. 132; p. 885.
Bolt for desks and other structures. C. E. Johnson. No. 878,206; Feb. 4; Sp. p. 650; Dr. p. 133; Gaz. vol. 132; p. 951.
Bolt-securing device, Split-. J. J. Souder. No. 878,570; Feb. 11; Sp. p. 1447; Dr. p. 295; Gaz. vol. 132; p. 1106.
Book, Account-. W. T. MacDougall. No. 878,216; Feb. 4; Sp. p. 665; Dr. p. 137; Gaz. vol. 132; p. 954.
Book, Account-. W. T. MacDougall. No. 878,217; Feb. 4; Sp. p. 667; Dr. p. 137; Gaz. vol. 132; p. 954.
Book-covers, Machine for making. A. Mugler. No. 880,053; Feb. 25; Sp. p. 4420; Dr. pp. 930–1; Gaz. vol. 132; p. 1655.
Book, Manifolding sales-. J. R. Dickson. No. 879,447; Feb. 18; Sp. p. 3190; Dr. p. 664; Gaz. vol. 132; p. 1430.
Book, Record-. F. O. King. No. 879,109; Feb. 11; Sp. p. 2509; Dr. p. 521; Gaz. vol. 132; p. 1277.
Book-support and copy-spacer, Adjustable. F. H. Hoffmann. No. 879,770; Feb. 18; Sp. p. 3857; Dr. p. 806; Gaz. vol. 132; p. 1535.
Books, Machine for casing in. J. Murray. No. 879,485; Feb. 18; Sp. p. 3273; Dr. pp. 683–4; Gaz. vol. 132; p. 1442.
Bookbinding. M. C. Neuner. No. 879,573; Feb. 18; Sp. p. 3455; Dr. p. 724; Gaz. vol. 132; p. 1471.
Boot and shoe. C. J. Walker. No. 879,704; Feb. 18; Sp. p. 3738; Dr. p. 784; Gaz. vol. 132; p. 1514.
Boots and shoes, Antislipping tread for. N. J. Busby. No. 879,732; Feb. 18; Sp. p. 3791; Dr. p. 795; Gaz. vol. 132; p. 1523.
Boring-bar. C. L. Riker, Jr. No. 877,950; Feb. 4; Sp. p. 107; Dr. p. 25; Gaz. vol. 132; p. 867.
Boring-machine. W. S. Sherman. No. 879,918; Feb. 25; Sp. p. 4214; Dr. p. 879; Gaz. vol. 132; p. 1618.
Boring tool, Earth-. A. Beldiman. No. 878,856; Feb. 11; Sp. p. 2020; Dr. p. 417; Gaz. vol. 132; p. 1199.
Bottle. W. Harrison. No. 879,766; Feb. 18; Sp. p. 3850; Dr. p. 806; Gaz. vol. 132; p. 1534.
Bottle. J. L. Kendrick. No. 880,062; Feb. 25; Sp. p. 4535; Dr. p. 954; Gaz. vol. 132; p. 1670.
Bottle-cap-applying machine. E. D. Schmitt. No. 880,407; Feb. 25; Sp. p. 5184; Dr. p. 1093; Gaz. vol. 132; p. 1778.
Bottle-closure. J. W. and H. C. Downing. No. 879,529; Feb. 18; Sp. p. 3354; Dr. p. 700; Gaz. vol. 132; p. 1457.
Bottle-conveyer. W. Stender. No. 878,694; Feb. 11; Sp. p. 1685; Dr. p. 343; Gaz. vol. 132; p. 1144.
Bottle-filling apparatus. D. J. Davis. No. 879,133; Feb. 11; Sp. p. 2554; Dr. pp. 531–2; Gaz. vol. 132; p. 1285.
Bottle holder, Ink-. W. S. Paulson. No. 878,233; Feb. 4; Sp. p. 666; Dr. p. 144; Gaz. vol. 132; p. 959.
Bottle, Hot-water. T. Cantwell. No. 879,516; Feb. 18; Sp. p. 3337; Dr. pp. 696–7; Gaz. vol. 132; p. 1453.
Bottle, Non-refillable. M. W. Pitner. No. 879,000; Feb. 11; Sp. p. 2288; Dr. p. 478; Gaz. vol. 132; p. 1244.
Bottle-stopper. J. S. Alston. No. 878,175; Feb. 4; Sp. p. 597; Dr. p. 123; Gaz. vol. 132; p. 942.
Bottle-stopper. M. Anderson, Jr. No. 879,024; Feb. 11; Sp. p. 2324; Dr. p. 490; Gaz. vol. 132; p. 1251.
Bottle-stopper. M. Schwind. No. 880,331; Feb. 25; Sp. p. 5026; Dr. p. 1060; Gaz. vol. 132; p. 1753.
Bottle stopper, Water-. H. P. Kraft and M. C. Schweinert. No. 877,933; Feb. 4; Sp. p. 76; Dr. p. 15; Gaz. vol. 132; p. 861.
Bottles or other vessels, Means for emptying. O. A. Elias. No. 879,951; Feb. 25; Sp. p. 4277; Dr. p. 894; Gaz. vol. 132; p. 1628.
Box: *See* Adjustable box; Automatically-locking box; Display-box; Filing-box; Fruit-box; Light-box; Mail-box; Match-box; Music-box; Paper box; Pasteboard box; Plant-box; Purifier-box; Service-box; Shipping-box; Stuffing-box; Tobacco-box.
Box. A. S. Ray. No. 878,896; Feb. 11. Sp. p. 2102; Dr. p. 437; Gaz. vol. 132; p. 1212.
Box. S. J. Stuker. No. 879,337; Feb. 18; Sp. p. 2948; Dr. p. 615; Gaz. vol. 132; p. 1394.
Box-covering apparatus. J. R. Sundee. No. 879,599; Feb. 18; Sp. p. 3529; Dr. pp. 738–9; Gaz. vol. 132; p. 1479.
Boxes, Machinery for use in making wire-bound. J. J. Miller. No. 878,737; Feb. 11; Sp. p. 1788; Dr. pp. 370–1; Gaz. vol. 132, p. 1160.
Brace: *See* Adjustable brace; Bicycle-frame brace; Concrete-structure brace; Handle-brace; Ratchet-brace.
Brace. G. M. D. Heard. No. 878,205; Feb. 4; Sp. p. 648; Dr. p. 133; Gaz. vol. 132; p. 951.
Bracelet. S. L. Lederer. No. 879,881; Feb. 25; Sp. p. 4114; Dr. p. 863; Gaz. vol. 132; p. 1603.
Bracket: *See* Adjustable bracket; Electric bracket; Shade and curtain bracket; Shade-roller bracket.
Brake: *See* Air-brake; Car-brake; Electromagnetic brake; Hemp-brake; Vehicle-brake; Wagon-brake.
Brake-applying mechanism. J. M. Hines. No. 878,065; Feb. 4; Sp. p. 355; Dr. p. 73; Gaz. vol. 132; p. 905.
Brake mechanism. H. E. Coffin. No. 878,506; Feb. 11; Sp. p. 1311; Dr. p. 265; Gaz. vol. 132; p. 1084.
Brake mechanism for car-trucks. W. S. Adams. No. 879,606; Feb. 18; Sp. p. 3539; Dr. pp. 741–2; Gaz. vol. 132; p. 1481.
Brake-setting mechanism, Automatic. W. P. Byrd. No. 879,032; Feb. 11; Sp. p. 2336; Dr. p. 489; Gaz. vol. 132; p. 1253.
Brake-shoe. L. E. Keller. No. 879,909; Feb. 25; Sp. p. 4208; Dr. p. 901; Gaz. vol. 132; p. 1634.
Branding-machine. W. J. Green. No. 879,462; Feb. 18; Sp. p. 3234; Dr. p. 673; Gaz. vol. 132; p. 1454.
Breech-blocks, Safety-lock for. J. J. Knapp. No. 879,652; Feb. 18; Sp. p. 3630; Dr. p. 750; Gaz. vol. 132; p. 1496.
Brew-house equipment. M. Henius. No. 878,136; Feb. 4; Sp. p. 479; Dr. pp. 102–3; Gaz. vol. 132; p. 927.
Brewing-waters, Preparing. M. Wallerstein. No. 879,843; Feb. 18; Sp. p. 4012; Gaz. vol. 132; p. 1560.
Brick-kiln, Continuous. S. Barnett, R. J. Hadlington, and S. Hinton. No. 879,354; Feb. 18; Sp. p. 2975; Dr. p. 621; Gaz. vol. 132; p. 1399.
Bronzing-machine. M. Smith. No. 880,170; Feb. 25; Sp. p. 4706; Dr. p. 994; Gaz. vol. 132; p. 1699.
Brooder. J. A. Jocoy. No. 878,035; Feb. 11; Sp. p. 1602; Dr. p. 327; Gaz. vol. 132; p. 1128.
Broom-cover. W. S. Lodge. No. 880,086; Feb. 25; Sp. p. 4541; Dr. p. 956; Gaz. vol. 132; p. 1672.
Brooms and the like, Holder for. W. Jones. No. 878,068; Feb. 4; Sp. p. 361; Dr. p. 74; Gaz. vol. 132; p. 906.
Brush. H. V. Hardman. No. 878,134; Feb. 4; Sp. p. 477; Dr. p. 102; Gaz. vol. 132; p. 927.
Brush. R. C. Bryant. No. 878,606; Feb. 11; Sp. p. 1538; Dr. p. 314; Gaz. vol. 132; p. 1118.
Brush. J. F. Scanlan. No. 878,748; Feb. 11; Sp. p. 1806; Dr. p. 374; Gaz. vol. 132; p. 1164.
Brush. M. E. Featherstone. No. 879,754; Feb. 18; Sp. p. 3829; Dr. p. 802; Gaz. vol. 132; p. 1530.
Brush, Adjustable cleaning-. R. T. Gillespie. No. 879,764; Feb. 18; Sp. p. 3846; Dr. p. 805; Gaz. vol. 132; p. 1533.
Brush, Air-. J. A. Faasche. No. 879,891; Feb. 25; Sp. p. 4135; Dr. p. 867; Gaz. vol. 132; p. 1607.
Brush cabinet, Tooth-. G. A. Weidhaas, Jr. No. 880,432; Feb. 25; Sp. p. 5245; Dr. p. 1103; Gaz. vol. 132; p. 1787.
Brush, Cleaning-. R. T. Gillespie. No. 879,043; Feb. 11; Sp. p. 2355; Dr. p. 493; Gaz. vol. 132; p. 1257.
Brush, Fountain bath-. W. E. Allen. No. 878,894; Feb. 11; Sp. p. 1517; Dr. p. 308; Gaz. vol. 132; p. 1115.
Brush-holder. R. Fehler. No. 877,990; Feb. 4; Sp. p. 187; Dr. p. 41; Gaz. vol. 132; p. 880.
Brush-holder. A. Ball. No. 880,437; Feb. 25; Sp. p. 5253; Dr. p. 1105; Gaz. vol. 132; p. 1780.
Brush-making machine. J. Baer. No. 880,475; Feb. 25; Sp. p. 5334; Dr. pp. 1123–4; Gaz. vol. 132; p. 1803.
Brush, Scrubbing-. J. E. Watson. No. 879,706; Feb. 18; Sp. p. 3740; Dr. p. 784; Gaz. vol. 132; p. 1514.
Brush, Tooth-. W. N. Taylor. No. 878,164; Feb. 4; Sp. p. 571; Dr. p. 116; Gaz. vol. 132; p. 937.
Brush, Tooth-. L. H. Crowell. No. 878,486; Feb. 4; Sp. p. 1211; Dr. p. 249; Gaz. vol. 132; p. 1044.
Brush, Tooth-. O. H. Chandler. No. 880,277; Feb. 25; Sp. p. 4929; Dr. p. 1043; Gaz. vol. 132; p. 1735.
Brushes and brooms, Manufacture of. P. Chazal. No. 878,343; Feb. 4; Sp. p. 930; Dr. p. 183; Gaz. vol. 132; p. 997.
Brushes, Manufacture of. P. Chazal. No. 878,344; Feb. 4; Sp. p. 921; Dr. p. 183; Gaz. vol. 132; p. 997.
Brushes, scrubbers, and the like, Device for fastening the handles in. A. Eisel. No. 878,262; Feb. 4; Sp. p. 797; Dr. p. 159; Gaz. vol. 132; p. 977.
Bucket. J. Chamberlin. No. 879,144; Feb. 18; Sp. p. 2580; Dr. p. 537; Gaz. vol. 132; p. 1330.
Bucket, Clam-shell. C. C. Williams. No. 878,585; Feb. 11; Sp. p. 1496; Dr. pp. 304–5; Gaz. vol. 132; p. 1111.
Bucket elevator. F. A. Hetherington. No. 880,303; Feb. 25; Sp. p. 4980; Dr. p. 1051; Gaz. vol. 132; p. 1744.
Bucket, Feed-. J. Mateka. No. 879,784; Feb. 18; Sp. p. 3881; Dr. p. 814; Gaz. vol. 132; p. 1539.
Buckle. J. S. Sourek. No. 877,968; Feb. 4; Sp. p. 123; Dr. p. 28; Gaz. vol. 132; p. 870.
Buckle. E. N. Humphrey. No. 878,238; Feb. 4; Sp. p. 811; Dr. p. 161; Gaz. vol. 132; p. 978.
Buckle. B. Bixby. No. 878,764; Feb. 11; Sp. p. 1848; Dr. p. 382; Gaz. vol. 132; p. 1170.
Buckle. J. H. M. Michon. No. 879,974; Feb. 25; Sp. p. 4316; Dr. p. 903; Gaz. vol. 132; p. 1636.
Buckle. G. W. Doss. No. 880,067; Feb. 25; Sp. p. 4507; Dr. p. 947; Gaz. vol. 132; p. 1666.
Buckle. E. N. Humphrey. No. 880,216; Feb. 25; Sp. p. 4808; Dr. p. 1018; Gaz. vol. 132; p. 1715.
Buckle for webbing. F. A. and J. B. Russ. No. 878,060; Feb. 4; Sp. p. 398; Dr. p. 84; Gaz. vol. 132; p. 913.
Buckle, Harness-. I. Sellers. No. 878,318; Feb. 4; Sp. p. 866; Dr. p. 173; Gaz. vol. 132; p. 988.
Buckle, Harness-. D. C. Pasley. No. 878,906; Feb. 11; Sp. p. 2280; Dr. p. 476; Gaz. vol. 132; p. 1242.
Buckle, Harness-. D. H. Young. No. 879,077; Feb. 11; Sp. p. 2422; Dr. p. 507; Gaz. vol. 132; p. 1267.
Buckle, Snap-fastening. G. A. Holmes. No. 879,465; Feb. 18; Sp. p. 3238; Dr. p. 674; Gaz. vol. 132; p. 1436.
Buckle, Trace-. T. H. Jones. No. 879,775; Feb. 18; Sp. p. 3865; Dr. p. 809; Gaz. vol. 132; p. 1536.
Buffing device. B. F. Schirmer. No. 879,196; Feb. 18; Sp. p. 2687; Dr. p. 560; Gaz. vol. 132; p. 1348.
Building-block core. E. Rhodes. No. 879,066; Feb. 11; Sp. p. 2400; Dr. p. 502; Gaz. vol. 132; p. 1264.
Building-block tie. A. J. Mueller. No. 880,154; Feb. 25; Sp. p. 4676; Dr. p. 985; Gaz. vol. 132; p. 1694.
Building construction. G. W. Chantigney and J. P. Morency. No. 879,520; Feb. 18; Sp. p. 3341; Dr. pp. 697–8; Gaz. vol. 132; p. 1454.
Building construction. N. Smith. No. 879,595; Feb. 18; Sp. p. 3515; Dr. p. 736; Gaz. vol. 132; p. 1478.
Burglar-alarm. J. E. Murray. No. 879,568; Feb. 18; Sp. p. 3442; Dr. p. 721; Gaz. vol. 132; p. 1469.
Burglar-alarm system and apparatus therefor. M. R. Ney and S. S. Ullman. No. 880,160; Feb. 25; Sp. p. 4689; Dr. p. 988; Gaz. vol. 132; p. 1696.

Burial-case. C. Pianta. No. 878,669; Feb. 11; Sp. p. 1662; Dr. p. 342; Gaz. vol. 132; p. 1139.
Burial-casket carrier. L. H. Montrose. No. 878,965; Feb. 11; Sp. p. 2256; Dr. pp. 471–2; Gaz. vol. 132; p. 1239.
Burial-caskets, Face-plate for. National Casket Company. (Reissue.) No. 12,750; Feb. 11; Sp. p. 2558; Dr. p. 532; Gaz. vol. 132; p. 1266.
Burner: *See* Gas-burner; Hydrocarbon-burner; Incandescent burner; Lamp-burner; Oil-burner; Vapor-burner.
Burner. L. D. York and G. Youngman. No. 878,500; Feb. 11; Sp. p. 1509; Dr. p. 307; Gaz. vol. 132; p. 1113.
Button. T. J. McGovern. No. 878,149; Feb. 4; Sp. p. 501; Dr. p. 107; Gaz. vol. 132; p. 982.
Button, Cuff-. G. W. Dover. No. 878,616; Feb. 11; Sp. p. 1567; Dr. p. 318; Gaz. vol. 132; p. 1122.
Button cutting and shaping machine, Automatic. W. S. Watson. No. 880,431; Feb. 25; Sp. p. 5241; Dr. pp. 1102–3; Gaz. vol. 132; p. 1767.
Button, Mechanical. F. Stashko. No. 878,663; Feb. 11; Sp. p. 1684; Dr. p. 348; Gaz. vol. 132; p. 1144.
Buttoning device, Collar-. F. Bailey. No. 878,598; Feb. 11; Sp. p. 1525; Dr. p. 310; Gaz. vol. 132; p. 1116.
Cabinet. S. D. Newman. No. 878,228; Feb. 4; Sp. p. 689; Dr. p. 142; Gaz. vol. 132; p. 958.
Cabinet. C. Zimmerli. No. 879,233; Feb. 18; Sp. p. 2743; Dr. p. 573; Gaz. vol. 132; p. 1360.
Cabinet, Kitchen-. R. Beverly. No. 880,185; Feb. 25; Sp. p. 4733; Dr. p. 1002; Gaz. vol. 132; p. 1704.
Cabinet table, Kitchen-. W. A. Campbell. No. 878,760; Feb. 11; Sp. p. 1855; Dr. p. 383; Gaz. vol. 132; p. 1171.
Cable-hanger. D. A. Reynolds. No. 879,586; Feb. 18; Sp. p. 3488; Dr. p. 731; Gaz. vol. 132; p. 1475.
Cable or rope. G. Magakli. No. 878,407; Feb. 4; Sp. p. 1037; Dr. pp. 209–10; Gaz vol. 132; p. 1018.
Cable-terminal. F. B. Cook. No. 879,035; Feb. 11; Sp. p. 2343; Dr. p. 490; Gaz. vol. 132; p. 1254.
Calcium sulfate, Preparing. M. Wallerstein. No. 879,608; Feb. 18; Sp. p. 3536; Gaz. vol. 132; p. 1480.
Calculating-machine. A. M. Johanson and I. Hnitman. No. 878,292; Feb. 4; Sp. p. 819; Dr. p. 163; Gaz. vol. 132; p. 990.
Calculating-machine. A. Müller. No. 878,413; Feb. 4; Sp. p. 1046; Dr. pp. 211–12; Gaz. vol. 132; p. 1020.
Calculating-machine. C. J. Smith. No. 879,204; Feb. 18; Sp. p. 2604; Dr. p. 562; Gaz. vol. 132; p. 1350.
Calculating-machine. E. S. Ensign. No. 879,449; Feb. 18; Sp. p. 3198; Dr. pp. 668–8; Gaz. vol. 132; p. 1431.
Calculating machine, Proportional-. C. R. Kelly. No. 879,178; Feb. 18; Sp. p. 2531; Dr. p. 553; Gaz. vol. 132; p. 1343.
Calculator. E. E. Clark. No. 879,145; Feb. 18; Sp. p. 2562; Dr. p. 538; Gaz. vol. 132; p. 1331.
Calendering-machines, Contrivance for feeding moving fabrics into. W. Müller. No. 879,298; Feb. 18; Sp. p. 2888; Dr. p. 602; Gaz. vol. 132; p. 1352.
Cam. J. C. H. Vaught. No. 878,755; Feb. 11; Sp. p. 1822; Dr. p. 377; Gaz. vol. 132; p. 1167.
Camera, Photographic. L. M. Sternbergh. No. 878,250; Feb. 4; Sp. p. 737; Dr. p. 149; Gaz. vol. 132; p. 966.
Camera-shutter release. C. C. Little. No. 879,058; Feb. 11; Sp. p. 2384; Dr. p. 499; Gaz. vol. 132; p. 1261.
Camera, Stereoscopic. M. Vincent. No. 878,838; Feb. 11; Sp. p. 1960; Dr. p. 411; Gaz. vol. 132; p. 1193.
Cameras, telescopes, and other scientific instruments, Stand for photographic. W. Butler. No. 880,192; Feb. 25; Sp. p. 4747; Dr. p. 1005; Gaz. vol. 132; p. 1707.
Can: *See* Display-can; Friction-top can; Ice-can; Rectangular can.
Can feeding and righting machine. M. D. Blakeslee. No. 878,603; Feb. 11; Sp. p. 1531; Dr. pp. 312–13; Gaz. vol. 132; p. 1117.
Can feeding and righting machine. M. D. Blakeslee. No. 880,119; Feb. 25; Sp. p. 4504; Dr. pp. 967–8; Gaz. vol. 132; p. 1682.
Can-opener. G. K. Winchenbach. No. 877,974; Feb. 4; Sp. p. 153; Dr. p. 34; Gaz. vol. 132; p. 875.
Can-opener. A. G. Eulner. No. 880,131; Feb. 25; Sp. p. 4619; Dr. p. 974; Gaz. vol. 132; p. 1686.
Can-righting machine. M. D. Blakeslee. No. 880,186; Feb. 25; Sp. p. 4734; Dr. p. 1002; Gaz. vol. 132; p. 1705.
Can-spout. W. McAdoo. No. 878,304; Feb. 4; Sp. p. 843; Dr. p. 168; Gaz. vol. 132; p. 984.
Can-washer. W. L. Pearce. No. 880,162; Feb. 25; Sp. p. 4694; Dr. p. 989; Gaz. vol. 132; p. 1697.
Cans, casks, &c. Carrier for. J. Cummings. No. 878,358; Feb. 4; Sp. p. 941; Dr. p. 188; Gaz. vol. 132; p. 1001.
Cane. W. S. Smith. No. 880,047; Feb. 25; Sp. p. 4472; Dr. p. 939; Gaz. vol. 132; p. 1650.
Cane, Campaign-. G. C. Hockenberry. No. 879,640; Feb. 18; Sp. p. 3605; Dr. p. 754; Gaz. vol. 132; p. 1493.
Cane-cutter. E. M. Hibbler. No. 879,048; Feb. 11; Sp. p. 2365; Dr. p. 495; Gaz. vol. 132; p. 1258.
Cane-stripper. B. E. Bagley. No. 878,926; Feb. 11; Sp. p. 2157; Dr. p. 450; Gaz. vol. 132; p. 1222.
Canopy. H. C. Swanwick. No. 880,176; Feb. 25; Sp. p. 4717; Dr. p. 998; Gaz. vol. 132; p. 1701.
Canopy. B. K. Apple. No. 880,183; Feb. 25; Sp. p. 4731; Dr. p. 1001; Gaz. vol. 132; p. 1704.
Car. E. A. Barber. No. 878,180; Feb. 4; Sp. p. 505; Dr. p. 124; Gaz. vol. 132; p. 943.
Car. E. S. Buckman. No. 878,336; Feb. 4; Sp. p. 910; Dr. p. 182; Gaz. vol. 132; p. 995.
Car and door therefor, Grain-. H. Alsop. No. 879,716; Feb. 18; Sp. p. 3750; Dr. p. 788; Gaz. vol. 132; p. 1518.
Car brake and other mechanism, Railway-. E. D. Hillman. No. 879,384; Feb. 18; Sp. p. 3048; Dr. p. 635; Gaz. vol. 132; p. 1409.
Car, Convertible. E. T. Robinson. No. 878,899; Feb. 11; Sp. p. 2105; Dr. pp. 438–9; Gaz. vol. 132; p. 1212.
Car-couplings, Draft-gear for. J. A. Sample. No. 879,911; Feb. 25; Sp. p. 4200; Dr. p. 877; Gaz. vol. 132; p. 1616.
Car door, Grain-. M. Reid. No. 878,019; Feb. 4; Sp. p. 363; Dr. pp. 56–7; Gaz. vol. 132; p. 891.
Car door, Grain-. C. Moore. No. 879,976; Feb. 25; Sp. p. 4321; Dr. p. 904; Gaz. vol. 132; p. 1636.
Car, Dumping-. J. G. Potter. No. 879,412; Feb. 18; Sp. p. 3123; Dr. p. 650; Gaz. vol. 132; p. 1419.
Car-fender. E. F. Normandin. No. 878,991; Feb. 11; Sp. p. 2272; Dr. p. 474; Gaz. vol. 132; p. 1241.
Car-fender. F. Halm. No. 879,044; Feb. 11; Sp. p. 2357; Dr. p. 493; Gaz. vol. 132; p. 1257.
Car-fender. W. S. Fister. No. 879,095; Feb. 11; Sp. p. 2474; Dr. p. 516; Gaz. vol. 132; p. 1273.
Car-fender. A. L. Cole. No. 879,742; Feb. 18; Sp. p. 3808; Dr. pp. 798–9; Gaz. vol. 132; p. 1526.
Car fender, Street-. J. A. McQuade. No. 880,233; Feb. 25; Sp. p. 4847; Dr. p. 1025; Gaz. vol. 132; p. 1722.
Car frame, Railway- W. F. Kiesel, Jr. No. 878,538; Feb. 11; Sp. p. 1372; Dr. pp. 281–2; Gaz. vol. 132; p. 1095.
Car friction draft-gear, Railway-. A. Stucki. No. 878,221; Feb. 4; Sp. p. 872; Dr. p. 174; Gaz. vol. 132; p. 989.
Car grain-door, Box-. J. S. Bender. No. 880,476; Feb. 25; Sp. p. 5337; Dr. pp. 1124–5; Gaz. vol. 132; p. 1803.
Car, Hand-. J. F. Durham. No. 879,090; Feb. 11; Sp. p. 2463; Dr. p. 513; Gaz. vol. 132; p. 1271.
Car, Hand-. J. W. Finch. No. 879,756; Feb. 18; Sp. p. 3831; Dr. p. 803; Gaz. vol. 132; p. 1530.
Car-heating system. E. E. Gold. No. 878,479; Feb. 4; Sp. p. 1200; Dr. p. 247; Gaz. vol. 132; p. 1042.
Car-heating system. L. T. Gibbs. No. 878,703; Feb. 11; Sp. p. 1011; Dr. p. 302; Gaz. vol. 132; p. 1180.
Car-motor mounting, Street-. E. A. Barber. No. 878,179; Feb. 4; Sp. p. 504; Dr. p. 124; Gaz. vol. 132; p. 943.
Car-mover. V. Guestáv. No. 878,781; Feb. 4; Sp. p. 967; Dr. p. 199; Gaz. vol. 132; p. 1009.
Car-mover. J. M. Fisk. No. 880,017; Feb. 25; Sp. p. 4399; Dr. p. 924; Gaz. vol. 132; p. 1650.
Car-mover. C. E. Engbarth. No. 880,372; Feb. 25; Sp. p. 5096; Dr. p. 1078; Gaz. vol. 132; p. 1766.
Car-rack. J. B. Foley. No. 878,198; Feb. 4; Sp. p. 633; Dr. p. 130; Gaz. vol. 132; p. 949.
Car, Railway-. C. V. Rote. No. 880,164; Feb. 25; Sp. p. 4698; Dr. p. 990; Gaz. vol. 132; p. 1698.
Car-replacer. H. E. and W. P. Matthews. No. 878,409; Feb. 4; Sp. p. 1040; Dr. p. 210; Gaz. vol. 132; p. 1019.
Car-seat. E. G. Budd. No. 879,730; Feb. 18; Sp. p. 3787; Dr. p. 795; Gaz. vol. 132; p. 1522.
Car, Semiconvertible. E. T. Robinson. No. 878,838; Feb. 11; Sp. p. 1964; Dr. pp. 406–7; Gaz. vol. 132; p. 1190.
Car, Single-truck. E. A. Barber. No. 878,181; Feb. 4; Sp. p. 607; Dr. p. 125; Gaz. vol. 132; p. 944.
Car-stake. F. W. Lawrence. No. 878,405; Feb. 4; Sp. p. 1034; Dr. p. 209; Gaz. vol. 132; p. 1017.
Car-stake. T. Ellis. No. 880,446; Feb. 25; Sp. p. 5271; Dr. p. 1108; Gaz. vol. 132; p. 1792.
Car-stanchion. R. P. De Remer. No. 879,128; Feb. 11; Sp. p. 2546; Dr. p. 529; Gaz. vol. 132; p. 1263.
Car-underframe. J. M. Ames. No. 879,996; Feb. 25; Sp. p. 4355; Dr. p. 913; Gaz. vol. 132; p. 1643.
Car-wheel. M. Hendricks. No. 878,961; Feb. 11; Sp. p. 2193; Dr. p. 459; Gaz. vol. 132; p. 1228.
Car-wheel. W. C. Mayo and J. Houlahan. No. 879,287; Feb. 18; Sp. p. 2853; Dr. p. 597; Gaz. vol. 132; p. 1378.
Car-wheels, Device for the inspection of. C. Browning, Jr. No. 878,499; Feb. 11; Sp. p. 1293; Dr. pp. 261–2; Gaz. vol. 132; p. 1082.
Car-wheels, Device for the inspection of. C. Browning, Jr. No. 878,500; Feb. 11; Sp. p. 1209; Dr. pp. 262–3; Gaz. vol 132; p. 1082.
Cars, Double body-bolster for railway-. J. M. Ames. No. 878,495; Feb. 11; Sp. p. 1519; Dr. p. 309; Gaz. vol. 132; p. 1115.
Cars, Double body-bolster for railway-. J. M. Ames. No. 878,496; Feb. 11; Sp. p. 1521; Dr. pp. 309–10; Gaz. vol. 132; p. 1115.
Cars, Draw-head for railway-. C. R. Bowen. No. 880,270; Feb. 25; Sp. p. 4918; Dr. p. 1041; Gaz. vol. 132; p. 1734.
Cars, &c., Hanger-strap or handhold for. J. F. Newton, Jr. No. 879,575; Feb. 18; Sp. p. 3469; Dr. p. 725; Gaz. vol. 132; p. 1472.
Cars, Interior finish of steel railway-. W. F. Kiesel, Jr. No. 878,539; Feb. 11; Sp. p. 1376; Dr. pp. 282–3; Gaz. vol. 132; p. 1095.
Cars, Portable automatic stop mechanism for. P. Winsor. No. 878,363; Feb. 4; Sp. p. 760; Dr. p. 153; Gaz. vol. 132; p. 970.
Cars, Subframe for railway-. R. D. Gallagher, Jr. No. 879,536; Feb. 18; Sp. p. 3370; Dr. pp. 704–5; Gaz. vol. 132; p. 1459.
Carbid-cartridge. E. M. Rosenbluth. No. 880,470; Feb. 25; Sp. p. 5326; Dr. pp. 1120–1; Gaz. vol. 132; p. 1801.
Carbonated liquid. H. B. Brehaut. No. 879,031; Feb. 11; Sp. p. 2335; Gaz. vol. 132; p. 1253.
Carburetor. L. M. J. C. Levavasseur. No. 878,297; Feb. 4; Sp. p. 833; Dr. pp. 165–6; Gaz. vol. 132; p. 982.
Carburetor. L. Anderson. No. 878,706; Feb. 11; Sp. p. 1733; Dr. pp. 358–9; Gaz. vol. 132; p. 1151.
Carburetor. W. A. Cahill. No. 878,770; Feb. 11; Sp. p. 1857; Dr. p. 383; Gaz. vol. 132; p. 1171.
Carburetor. F. W. Beardsley. No. 880,062; Feb. 25; Sp. p. 4493; Dr. pp. 945–6; Gaz. vol. 132; p. 1664.
Carburetor for explosion-engines. W. H. Newbrough. No. 878,824; Feb. 11; Sp. p. 1936; Dr. p. 405; Gaz. vol. 132; p. 1188.
Carburetor for internal-combustion engines. O. Minton. No. 878,411; Feb. 4; Sp. p. 1043; Dr. p. 211; Gaz. vol. 132; p. 1019.
Carburetor, Multiple. C. R. Greuter. No. 879,360; Feb. 18; Sp. p. 3042; Dr. pp. 633–4; Gaz. vol. 132; p. 1468.
Carburetors, Combining device for automatic dilution-valves in. A. A. Longuemare. No. 878,077; Feb. 4; Sp. p. 374; Dr. p. 77; Gaz. vol. 132; p. 909.

Card shuffler and trump-indicator, Playing-. J. Gaunt. No. 877,992; Feb. 4; Sp. p. 190; Dr. p. 42; Gaz. vol. 132; p. 881.
Carding-engine, Travelling-flat. F. E. Kip and E. C. Smith. No. 878,884; Feb. 11; Sp. p. 2008; Dr. p. 430; Gaz. vol. 132; p. 1208.
Carding-machine cylinder and clothing therefor. C. A. Cobbett. No. 878,348; Feb. 4; Sp. p. 926; Dr. p. 184; Gaz. vol. 132; p. 998.
Carpet-sweeper. T. L. Totten. No. 878,432; Feb. 4; Sp. p. 1077; Dr. pp. 219–20; Gaz. vol. 132; p. 1026.
Carpet-sweeper. W. A. Morrison and F. L. Bryant. No. 879,977; Feb. 25; Sp. p. 4322; Dr. p. 905; Gaz. vol. 132; p. 1637.
Carpet-warp-setting machine. B. S. and R. N. W. Smith. No. 880,160; Feb. 25; Sp. p. 4705; Dr. pp. 992–3; Gaz. vol. 132; p. 1699.
Carriage-hood. T. Golde. No. 878,948; Feb. 11; Sp. p. 2189; Dr. pp. 458–9; Gaz. vol. 132; p. 1228.
Carrier: *See* Burial casket carrier; Ladle-carrier; Mail-carrier; Trace-carrier.
Carrier system, Elevated. F. W. Ayer. No. 880,348; Feb. 25; Sp. p. 5056; Dr. p. 1068; Gaz. vol. 132; p. 1758.
Cart, Dump-. E. A. Mathers. No. 879,826; Feb. 18; Sp. p. 3975; Dr. p. 832; Gaz. vol. 132; p. 1554.
Cart, Dumping-. B. F. Brown. No. 878,115; Feb. 4; Sp. p. 446; Dr. p. 94; Gaz. vol. 132; p. 921.
Cart, Self-loading. E. S. Pearson. No. 878,890; Feb. 11; Sp. p. 2081; Dr. pp. 433–4; Gaz. vol. 132; p. 1209.
Carton and display device, Combined. J. B. Singer. No. 880,410; Feb. 25; Sp. p. 5190; Dr. p. 1094; Gaz. vol. 132; p. 1779.
Cartridge. G. A. Finster. No. 878,369; Feb. 4; Sp. p. 961; Dr. p. 193; Gaz. vol. 132; p. 1005.
Case: *See* Burial-case; Filing-case; Lock-case; Show-case.
Cash-delivery device. J. Good, Jr. No. 880,448; Feb. 25; Sp. p. 5273; Dr. p. 1109; Gaz. vol. 132; p. 1793.
Cash-register. T. Carroll. No. 879,061; Feb. 11; Sp. p. 2423; Dr. pp. 506–10; Gaz. vol. 132; p. 1268.
Cashier and discount machine, Automatic. C. E. Yale. No. 878,173; Feb. 4; Sp. p. 588; Dr. pp. 120–1; Gaz. vol. 132; p. 941.
Casing-head. D. K. Johnston. No. 878,067; Feb. 4; Sp. p. 359; Dr. p. 74; Gaz. vol. 132; p. 908.
Cast-iron and the like, Hardening of. G. H. B. Emett. No. 878,053; Feb. 4; Sp. p. 332; Gaz. vol. 132; p. 902.
Caster. W. B. Rand. No. 877,948; Feb. 4; Sp. p. 104; Dr. p. 24; Gaz. vol. 132; p. 866.
Caster. A. R. Cavis. No. 879,519; Feb. 18; Sp. p. 3340; Dr. p. 607; Gaz. vol. 132; p. 1454.
Caster. D. C. McVail and S. Mechan. No. 880,234; Feb. 25; Sp. p. 4850; Dr. p. 1025; Gaz. vol. 132; p. 1722.
Casting apparatus, Pipe-. D. B. Dimick. No. 880,284; Feb. 25; Sp. p. 4948; Dr. pp. 1045–6; Gaz. vol. 132; p. 1738.
Casting cylinders, Pattern for. G. C. Bourdereaux. No. 879,942; Feb. 25; Sp. p. 4257; Dr. p. 900; Gaz. vol. 132; p. 1625.
Casting-machine. A. L. Walker. No. 878,102; Feb. 4; Sp. p. 421; Dr. pp. 89–90; Gaz. vol. 132; p. 917.
Catamenial bandage. W. Lauffs. No. 879,778; Feb. 18; Sp. p. 3871; Dr. p. 811; Gaz. vol. 132; p. 1537.
Cattle-guard. J. J. Harrison and W. A. Owings. No. 879,260; Feb. 18; Sp. p. 2802; Dr. p. 587; Gaz. vol. 132; p. 1369.
Cattle-lander. E. E. Lamb. No. 880,146; Feb. 25; Sp. p. 4656; Dr. p. 982; Gaz. vol. 132; p. 1690.
Ceiling or sheathing, Metallic. P. Ebner. No. 879,248; Feb. 18; Sp. p. 2774; Dr. p. 581; Gaz. vol. 132; p. 1365.
Cellulose and making same, Nitro derivative of. B. Herstein. No. 879,871; Feb. 25; Sp. p. 4092; Gaz. vol. 132; p. 1601.
Cellulose for artificial silk, Preparing. G. L. and A. Schaefer. No. 879,416; Feb. 18; Sp. p. 3133; Gaz. vol. 132; p. 1421.
Cement. M. Brown. No. 879,241; Feb. 18; Sp. p. 2763; Gaz. vol. 132; p. 1363.
Cement block and brick machine. S. M. Kimble. No. 878,542; Feb. 11; Sp. p. 1382; Dr. p. 284; Gaz. vol. 132; p. 1096.
Cement-block machine. R. Endsley. No. 878,945; Feb. 11; Sp. p. 2186; Dr. p. 457; Gaz. vol. 132; p. 1227.
Cement-burning apparatus. B. E. Eldred. No. 879,448; Feb. 18; Sp. p. 3193; Dr. p. 665; Gaz. vol. 132; p. 1430.
Cement compound, Composition of matter to be used as a. C. Guy. No. 878,382; Feb. 4; Sp. p. 989; Gaz. vol. 132; p. 1010.
Cement-mixing machine. F. J. Emal. No. 877,918; Feb. 4; Sp. p. 48; Dr. p. 10; Gaz. vol. 132; p. 857.
Cementing and snipping machine, Rotary. H. I. Illingworth. No. 878,959; Feb. 11; Sp. p. 2211; Dr. pp. 462–3; Gaz. vol. 132; p. 1231.
Cementitious bodies, Metallic reinforcing structure for. E. F. Crane. No. 879,444; Feb. 18; Sp. p. 3185; Dr. p. 664; Gaz. vol. 132; p. 1429.
Centrifugal machine. L. Fuchs. No. 877,991; Feb. 4; Sp. p. 188; Dr. p. 42; Gaz. vol. 132; p. 880.
Centrifugal machine. W. L. D'Olier. No. 879,130; Feb. 11; Sp. p. 2548; Dr. p. 530; Gaz. vol. 132; p. 1284.
Centrifugal machines, Journal-support for. K. K. McLeod. No. 879,115; Feb. 11; Sp. p. 2536; Dr. p. 526; Gaz. vol. 132; p. 1279.
Chain. H. B. Newhall. No. 878,989; Feb. 11; Sp. p. 2269; Dr. p. 473; Gaz. vol. 132; p. 1240.
Chain. H. B. Newhall. No. 878,990; Feb. 11; Sp. p. 2271; Dr. p. 474; Gaz. vol. 132; p. 1241.
Chain and bead stock, Jeweler's. J. Costello. No. 878,122; Feb. 4; Sp. p. 459; Dr. p. 97; Gaz. vol. 132; p. 923.
Chain, Door-. J. Kleidmann. No. 878,294; Feb. 4; Sp. p. 823; Dr. p. 164; Gaz. vol. 132; p. 981.
Chair: *See* Opera-chair; Rail-chair; Reclining-chair; Specialist's chair.
Chair. J. E. Baker. No. 878,267; Feb. 4; Sp. p. 770; Dr. p. 154; Gaz. vol. 132; p. 972.
Chair. A. G. Eyles. No. 880,206; Feb. 25; Sp. p. 4781; Dr. pp. 1011–12; Gaz. vol. 132; p. 1711.
Chair and cabinet, Combined. C. J. Vlasak. No. 879,803; Feb. 18; Sp. p. 3914; Dr. p. 820; Gaz. vol. 132; p. 1546.
Chair-bed, couch, stretcher, &c. H. P. Clemetson. No. 879,442; Feb. 18; Sp. p. 3182; Dr. p. 662; Gaz. vol. 132; p. 1428.
Chair-roller. W. M. Archibald. No. 879,351; Feb. 18; Sp. p. 2970; Dr. p. 620; Gaz. vol. 132; p. 1398.
Chairs, Mirror attachment for. C. I. Thompson. No. 878,255; Feb. 4; Sp. p. 744; Dr. p. 150; Gaz. vol. 132; p. 968.
Check-draft, Universal. C. M. Lyman. No. 880,150; Feb. 25; Sp. p. 4669; Dr. p. 984; Gaz. vol. 132; p. 1692.
Check-hook. E. L. Burk. No. 878,865; Feb. 11; Sp. p. 2030; Dr. p. 421; Gaz. vol. 132; p. 1202.
Check-protector. N. B. Rice. No. 878,021; Feb. 4; Sp. p. 267; Dr. pp. 57–8; Gaz. vol. 132; p. 892.
Check-protector. D. H. Cohen. No. 878,349; Feb. 4; Sp. p. 927; Dr. p. 185; Gaz. vol. 132; p. 999.
Cheese-cutter. F. C. Osborn. No. 879,407; Feb. 18; Sp. p. 3112; Dr. p. 646; Gaz. vol. 132; p. 1417.
Chimney-cap. W. Lincoln. No. 878,811; Feb. 11; Sp. p. 1936; Dr. p. 400; Gaz. vol. 132; p. 1184.
Chopper: *See* Cotton-chopper; Feed-chopper.
Chuck. W. Mauss. No. 878,654; Feb. 11; Sp. p. 1640; Dr. p. 336; Gaz. vol. 132; p. 1134.
Chuck. F. J. Teasmer. No. 879,212; Feb. 18; Sp. p. 2711; Dr. p. 565; Gaz. vol. 132; p. 1352.
Chuck, Drill-. H. L. Coit. No. 879,741; Feb. 18; Sp. p. 3807; Dr. p. 798; Gaz. vol. 132; p. 1526.
Churn. E. A. Collin. No. 878,938; Feb. 11; Sp. p. 2177; Dr. p. 455; Gaz. vol. 132; p. 1225.
Churn. A. A. Howell. No. 880,305; Feb. 25; Sp. p. 4964; Dr. pp. 1051–2; Gaz. vol. 132; p. 1745.
Churn, Aerating-. E. H. Burnes. No. 874,339; Feb. 4; Sp. p. 911; Dr. p. 182; Gaz. vol. 132; p. 996.
Churn and butter-worker, Combined. G. J. Kaplan. No. 880,081; Feb. 25; Sp. p. 4534; Dr. p. 954; Gaz. vol. 132; p. 1670.
Churns, Combined hand and foot motor for. D. P. Malone. No. 880,229; Feb. 25; Sp. p. 4840; Dr. p. 1023; Gaz. vol. 132; p. 1720.
Chute, Grain-. A. G. Young. No. 878,443; Feb. 4; Sp. p. 1092; Dr. p. 223; Gaz. vol. 132; p. 1028.
Cigar-buncher. W. Sternberg. No. 879,597; Feb. 18; Sp. p. 3520; Dr. p. 737; Gaz. vol. 132; p. 1478.
Cigar-clipper. M. Bixby. No. 878,110; Feb. 4; Sp. p. 435; Dr. p. 92; Gaz. vol. 132; p. 919.
Cigar-holder. P. Faracchio. No. 879,450; Feb. 18; Sp. p. 3214; Dr. p. 669; Gaz. vol. 132; p. 1431.
Cigar-lighter. A. C. Gruhlke. No. 879,632; Feb. 18; Sp. p. 3589; Dr. p. 751; Gaz. vol. 132; p. 1490.
Cigar-machine. S. I. Prescott. No. 879,192; Feb. 18; Sp. p. 2674; Dr. pp. 558–9; Gaz. vol. 132; p. 1347.
Cigar tip-cutter and lighter, Combined. T. P. Moody. No. 878,062; Feb. 4; Sp. p. 385; Dr. p. 80; Gaz. vol. 132; p. 910.
Cigars, Waterproof self-seating tube for protecting the mouth end of. R. H. Young. No. 879,713; Feb. 18; Sp. p. 3754; Dr. p. 787; Gaz. vol. 132; p. 1517.
Cigarette-tube. J. Guéniffet, A. Benoit, and J. Nicault. No. 880,487; Feb. 25; Sp. p. 5308; Dr. p. 1131; Gaz. vol. 132; p. 1807.
Cigarette tube or mouthpiece. J. Guéniffet, A. Benoit, and J. Nicault. No. 880,488; Feb. 25; Sp. p. 5309; Dr. p. 1131; Gaz. vol. 132; p. 1807.
Cipher system. H. C. Newton and A. G. M. Michell. No. 879,667; Feb. 18; Sp. p. 3664; Dr. p. 765; Gaz. vol. 132; p. 1501.
Clamp: *See* Gluing-clamp; Miter-clamp; Tire-clamp; Wire-rope clamp.
Clamp-bar. E. Barker. No. 878,492; Feb. 11; Sp. p. 1232; Dr. p. 255; Gaz. vol. 132; p. 1080.
Clamping device. H. H. McGiffin and E. H. McCauley. No. 880,400; Feb. 25; Sp. p. 5307; Dr. p. 1117; Gaz. vol. 132; p. 1797.
Clarinet. H. Bonn, Jr. No. 878,333; Feb. 4; Sp. p. 895; Dr. pp. 179–80; Gaz. vol. 132; p. 993.
Clasp: *See* Garment-supporter clasp; Hose-supporter clasp.
Clasp. I. Mandeville. No. 879,252; Feb. 18; Sp. p. 2836; Dr. p. 595; Gaz. vol. 132; p. 1376.
Clasp. M. D. Arnow. No. 880,116; Feb. 25; Sp. p. 4589; Dr. p. 967; Gaz. vol. 132; p. 1681.
Cleaner: *See* Boiler-tube cleaner; Lawn-cleaner; Tube or flue cleaner.
Cleaning apparatus, Suction. E. K. A. Baumann and F. W. Seyboth. No. 878,109; Feb. 4; Sp. p. 434; Dr. p. 92; Gaz. vol. 132; p. 919.
Cleaning-cloths and the like, Holder for. E. Compton. No. 879,365; Feb. 18; Sp. p. 3004; Dr. p. 628; Gaz. vol. 132; p. 1403.
Cleansing compound. F. F. Prusz. No. 879,902; Feb. 25; Sp. p. 4187; Dr. p. 874; Gaz. vol. 132; p. 1612.
Clip: *See* Connecting and spacing clip; Paper-clip; Slip-clip.
Clock. W. E. Porter. No. 879,315; Feb. 18; Sp. p. 2915; Dr. p. 608; Gaz. vol. 132; p. 1387.
Clock, Alarm-. E. E. Stockton and A. H. Porter. No. 878,251; Feb. 4; Sp. p. 739; Dr. p. 149; Gaz. vol. 132; p. 967.
Clock, Alarm-. E. E. Gage. No. 878,371; Feb. 4; Sp. p. 963; Dr. pp. 193–4; Gaz. vol. 132; p. 1005.
Clock, Alarm-. J. R. Hauschildt. No. 879,637; Feb. 18; Sp. p. 3598; Dr. p. 752; Gaz. vol. 132; p. 1491.
Clock and watch. J. Lichtenstein. No. 878,076; Feb. 4; Sp. p. 374; Dr. p. 77; Gaz. vol. 132; p. 908.
Clock, Electric. N. Friedman. No. 878,577; Feb. 11; Sp. p. 2056; Dr. pp. 426–7; Gaz. vol. 132; p. 1206.
Clock, Electric signaling-. H. S. Prentiss. No. 879,410; Feb. 18; Sp. p. 3118; Dr. pp. 648–9; Gaz. vol. 132; p. 1418.
Clock, Electrically-operated. H. Gillette. No. 880,209; Feb. 25; Sp. p. 4786; Dr. pp. 1013–14; Gaz. vol. 132; p. 1712.
Clock key and securing device therefor, Watchman's-. A. A. Newman. No. 878,739; Feb. 11; Sp. p. 1791; Dr. p. 371; Gaz. vol. 132; p. 1161.
Clock key and securing device therefor, Watchman's-. A. A. Newman. No. 878,740; Feb. 11; Sp. p. 1792; Dr. p. 372; Gaz. vol. 132; p. 1161.
Clock marking device, Watchman's-. A. A. Newman. No. 878,741; Feb. 11; Sp. p. 1793; Dr. p. 372; Gaz. vol. 132; p. 1161.
Clock marking device, Watchman's-. A. A. Newman. No. 878,742; Feb. 11; Sp. p. 1794; Dr. p. 372; Gaz. vol. 132; p. 1162.

Clock, Self-winding. H. S. Prentiss. No. 879,411; Feb. 18; Sp. p. 3121; Dr. p. 649; Gaz. vol. 132; p. 1419.
Clock winding mechanism, Electric. A. Trilke. No. 879,607; Feb. 18; Sp. p. 3722; Dr. p. 781; Gaz. vol. 132; p. 1511.
Clocks and other devices, Bell-chime for. W. H. Hoschke. No. 879,170; Feb. 18; Sp. p. 2640; Dr. pp. 550-1; Gaz. vol. 132; p. 1341.
Clocks, Electrical appliance for. H. O. Swedberg and A. T. Durbin. No. 879,924; Feb. 25; Sp. p. 4229; Dr. pp. 883-4; Gaz. vol. 132; p. 1621.
Clod-crusher. D. Lumsden. No. 878,887; Feb. 11; Sp. p. 2073; Dr. p. 431; Gaz. vol. 132; p. 1208.
Closet: *See* Water-closet.
Closet-flushing valve. W. Kelly. No. 878,535; Feb. 11; Sp. p. 1267; Dr. p. 280; Gaz. vol. 132; p. 1094.
Cloth-cutter for counters. J. Dirr and O. Bergmann. No. 879,153; Feb. 18; Sp. p. 2597; Dr. p. 541; Gaz. vol. 132; p. 1334.
Cloth-layer. T. S. Johnson. No. 879,551; Feb. 18; Sp. p. 3314; Dr. p. 715; Gaz. vol. 132; p. 1464.
Cloth rolls, Machine for winding and cutting. A. L. Adams. No. 878,705; Feb. 11; Sp. p. 1729; Dr. pp. 357-8; Gaz. vol. 132; p. 1150.
Cloth-winding board. E. Carraine. No. 880,276; Feb. 25; Sp. p. 4928; Dr. p. 1043; Gaz. vol. 132; p. 1735.
Clothes-drier. J. R. Schmieder. No. 879,799; Feb. 18; Sp. p. 3008; Dr. p. 619; Gaz. vol. 132; p. 1544.
Clothes-drying machine. S. B. Dane. No. 878,777; Feb. 11; Sp. p. 1872; Dr. p. 386; Gaz. vol. 132; p. 1174.
Clothes-drying reel. W. J. Coulter. No. 877,985; Feb. 4; Sp. p. 176; Dr. p. 30; Gaz. vol. 132; p. 878.
Clothes-line. D. L. Lash and C. P. Mock. No. 879,390; Feb. 18; Sp. p. 3064; Dr. p. 637; Gaz. vol. 132; p. 1410.
Clothes-line prop. D. McDougall. No. 878,415; Feb. 4; Sp. p. 1049; Dr. p. 212; Gaz. vol. 132; p. 1020.
Clothes-line prop. D. McDougall. No. 878,416; Feb. 4; Sp. p. 1051; Dr. p. 212; Gaz. vol. 132; p. 1021.
Clothes-line reel. L. Holle. No. 878,394; Feb. 4; Sp. p. 1004; Dr. p. 203; Gaz. vol. 132; p. 1014.
Clothes-line support. H. Morris. No. 877,941; Feb. 4; Sp. p. 96; Dr. p. 22; Gaz. vol. 132; p. 864.
Clothes-line support, Extensible. A. Mackenzie and T. M. Norton. No. 880,031; Feb. 25; Sp. p. 4426; Dr. p. 929; Gaz. vol. 132; p. 1654.
Clothes-pin. A. M. Harris and M. A. Williams. No. 878,727; Feb. 11; Sp. p. 1773; Dr. p. 366; Gaz. vol. 132; p. 1158.
Clothes-pole. D. G. De Milt. No. 878,943; Feb. 11; Sp. p. 2184; Dr. p. 456; Gaz. vol. 132; p. 1226.
Clothes-pounder. H. L. Crooker. No. 878,190; Feb. 4; Sp. p. 619; Dr. p. 127; Gaz. vol. 132; p. 946.
Clothes-pounder. W. C. and J. W. Perry. No. 879,313; Feb. 18; Sp. p. 2913; Dr. p. 607; Gaz. vol. 132; p. 1387.
Clutch. O. Anderson. No. 878,177; Feb. 4; Sp. p. 600; Dr. pp. 122-4; Gaz. vol. 132; p. 942.
Clutch. F. Starr. No. 879,016; Feb. 11; Sp. p. 2513; Dr. p. 483; Gaz. vol. 132; p. 1248.
Clutch, Electromagnetic. H. Ast. No. 880,266; Feb. 25; Sp. p. 4909; Dr. pp. 1038-9; Gaz. vol. 132; p. 1732.
Clutch, Fluid-. W. W. Henderson. No. 879,045; Feb. 11; Sp. p. 2359; Dr. p. 494; Gaz. vol. 132; p. 1257.
Clutch, Friction-. C. R. Greuter. No. 879,100; Feb. 11; Sp. p. 2482; Dr. p. 517; Gaz. vol. 132; p. 1274.
Clutch, Friction-. J. Fuchs. No. 879,862; Feb. 25; Sp. p. 4081; Dr. p. 856; Gaz. vol. 132; p. 1598.
Clutch, Friction-. E. Lehmann. No. 880,083; Feb. 25; Sp. p. 4536; Dr. p. 955; Gaz. vol. 132; p. 1671.
Clutch, Friction driving-. A. R. Le Moon. No. 880,084; Feb. 25; Sp. p. 4538; Dr. p. 955; Gaz. vol. 132; p. 1671.
Clutch-operating device. M. Rockstroh. No. 879,005; Feb. 11; Sp. p. 2298; Dr. p. 480; Gaz. vol. 132; p. 1245.
Clutch, Roller-. G. M. Wilson. No. 879,903; Feb. 25; Sp. p. 4348; Dr. p. 911; Gaz. vol. 132; p. 1642.
Coal screening and grading apparatus. W. R. Garrett and J. H. Walker. No. 879,025; Feb. 18; Sp. p. 3578; Dr. p. 749; Gaz. vol. 132; p. 1488.
Coating-machine. R. R. Richardson. No. 879,587; Feb. 18; Sp. p. 3490; Dr. pp. 731-4; Gaz. vol. 132; p. 1476.
Cock, Cylinder-. A. Sundborg. No. 878,696; Feb. 11; Sp. p. 1659; Dr. p. 349; Gaz. vol. 132; p. 1144.
Cock, Right and left basin-. P. and H. Mueller. No. 879,401; Feb. 18; Sp. p. 3093; Dr. pp. 642-3; Gaz. vol. 132; p. 1415.
Cock, Stop and measuring. F. Vocke. No. 880,256; Feb. 25; Sp. p. 4887; Dr. p. 1033; Gaz. vol. 132; p. 1729.
Cock, Swing-spout compression basin-. P. and H. Mueller and A. Schuermann. No. 879,400; Feb. 18; Sp. p. 3091; Dr. p. 642; Gaz. vol. 132; p. 1414.
Cocks, Self-locking attachment for angle-. W. C. Feighan. No. 878,368; Feb. 4; Sp. p. 960; Dr. pp. 192-3; Gaz. vol. 132; p. 1005.
Coffee or tea percolator. F. Geissler. No. 878,374; Feb. 4; Sp. p. 970; Dr. p. 195; Gaz. vol. 132; p. 1007.
Coffee or tea pot. I. J. Webster. No. 877,973; Feb. 4; Sp. p. 152; Dr. p. 34; Gaz. vol. 132; p. 874.
Coffee-pot. O. F. Regnell. No. 880,096; Feb. 25; Sp. p. 4553; Dr. p. 959; Gaz. vol. 132; p. 1674.
Coffee, &c., roaster. R. Burns. No. 879,731; Feb. 18; Sp. p. 3790; Dr. p. 795; Gaz. vol. 132; p. 1523.
Coffee-sheller. J. P. Tebyrica and W. Halstead. No. 879,211; Feb. 18; Sp. p. 2710; Dr. p. 565; Gaz. vol. 132; p. 1352.
Coil-windings, Reel for. I. De Kaiser. No. 878,125; Feb. 4; Sp. p. 462; Dr. p. 98; Gaz. vol. 132; p. 924.
Coin-controlled apparatus. H. Meyer. No. 879,827; Feb. 18; Sp. p. 3977; Dr. pp. 833-3; Gaz. vol. 132; p. 1554.
Coin-controlled apparatus, Percentage mechanism for. C. E. Yale. No. 878,172; Feb. 4; Sp. p. 587; Dr. p. 120; Gaz. vol. 132; p. 940.
Coin-receptacle. E. W. Roberts. No. 877,951; Feb. 4; Sp. p. 109; Dr. p. 25; Gaz. vol. 132; p. 867.
Colander. B. E. Carothers. No. 879,440; Feb. 18; Sp. p. 3180; Dr. p. 662; Gaz. vol. 132; p. 1428.
Collapsible cup. W. A. Eckert. No. 879,753; Feb. 18; Sp. p. 3828; Dr. p. 802; Gaz. vol. 132; p. 1530.
Collar-supporter. A. Illoway. No. 877,928; Feb. 4; Sp. p. 70; Dr. p. 14; Gaz. vol. 132; p. 860.
Collecting and folding machine. H. M. Barber. No. 879,721; Feb. 18; Sp. p. 3766; Dr. pp. 790-1; Gaz. vol 132; p. 1519.
Color-lake, Red. K. König. No. 878,964; Feb. 11; Sp. p. 2219; Gaz. vol. 132; p. 1232.
Column-fluting machine. J. Neill. No. 879,571; Feb. 18; Sp. p. 3447; Dr. pp. 722-3; Gaz. vol. 132; p. 1470.
Columns, Joint structure for superimposed. C. R. Eberhard. No. 880,285; Feb. 25; Sp. p. 4952; Dr. p. 1046; Gaz. vol. 132; p. 1738.
Comb: *See* Currycomb.
Comb. A. A. Angus. No. 879,126; Feb. 11; Sp. p. 2544; Dr. p. 529; Gaz. vol. 132; p. 1283.
Combustion and oxidation, Device for purifying products of. A. A. Cunningham. No. 879,149; Feb. 18; Sp. p. 2591; Dr. p. 539; Gaz. vol. 132; p. 1332.
Commutator-cover. J. E. Webster. No. 878,167; Feb. 4; Sp. p. 574; Dr. p. 117; Gaz. vol. 132; p. 938.
Commutator for electric apparatus. F. W. Cox. No. 879,246; Feb. 18; Sp. p. 2771; Dr. p. 580; Gaz. vol. 132; p. 1364.
Composition of matter. R. F. Nowalk. No. 878,662; Feb. 11; Sp. p. 1651; Gaz. vol. 132; p. 1137.
Composition of matter. C. Ellis. No. 879,375; Feb. 18; Sp. p. 3033; Gaz. vol. 132; p. 1406.
Compound engine, Reversible explosive. E. J. Woolf. No. 878,925; Feb. 11; Sp. p. 2168; Dr. p. 447; Gaz. vol. 132; p. 1220.
Computing-machine. A. S. Dennis. (Reissue.) No. 12,748; Feb. 4; Sp. p. 1221; Dr. pp. 252-3; Gaz. vol. 132; p. 1045.
Concentrating apparatus. F. T. Hambric. No. 878,879; Feb. 11; Sp. p. 2060; Dr. p. 427; Gaz. vol. 132; p. 1206.
Concentrating-table. J. C. Fisher. No. 879,250; Feb. 18; Sp. p. 2778; Dr. p. 582; Gaz. vol. 132; p. 1366.
Concentrating-tables, Box-cleaning device for. E. H. Shackelford. No. 879,012; Feb. 11; Sp. p. 2308; Dr. pp. 482-3; Gaz. vol. 132; p. 1247.
Concentrator. J. E. Doggwyler. No. 878,363; Feb. 4; Sp. p. 953; Dr. p. 191; Gaz. vol. 132; p. 1003.
Concentrator. M. P. Boss. No. 878,861; Feb. 11; Sp. p. 2027; Dr. pp. 418-19; Gaz. vol. 132; p. 1200.
Concentrator. J. Malt. No. 879,481; Feb. 18; Sp. p. 3264; Dr. p. 680; Gaz. vol. 132; p. 1440.
Concrete and the like, Apparatus for molding. C. Dietrichs. No. 880,201; Feb. 25; Sp. p. 4772; Dr. p. 1010; Gaz. vol. 132; p. 1710.
Concrete-building-block wall. F. M. Henry. No. 877,996; Feb. 4; Sp. p. 195; Dr. p. 44; Gaz. vol. 132; p. 862.
Concrete-building-block wall. F. M. Henry. No. 877,997; Feb. 4; Sp. p. 197; Dr. p. 44; Gaz. vol. 132; p. 862.
Concrete culverts, Core for making. W. E. Wallace. No. 879,340; Feb. 18; Sp. p. 2953; Dr. p. 616; Gaz. vol. 132; p. 1395.
Concrete-mixer. H. Besser. No. 879,808; Feb. 18; Sp. p. 3924; Dr. pp. 822-3; Gaz. vol. 132; p. 1547.
Concrete pile. J. M. Braxton. No. 878,765; Feb. 11; Sp. p. 1850; Dr. p. 382; Gaz. vol. 132; p. 1170.
Concrete sidewalk-block. C. Deeg. No. 880,066; Feb. 25; Sp. p. 4505; Dr. p. 947; Gaz. vol. 132; p. 1665.
Concrete-structure brace. A. J. Robinson. No. 880,468; Feb. 25; Sp. p. 5324; Dr. p. 1120; Gaz. vol. 132; p. 1800.
Concrete structures, Fitting for reinforced. G. M. Graham. No. 879,163; Feb. 18; Sp. p. 2628; Dr. p. 548; Gaz. vol. 132; p. 1338.
Concrete vault. B. Kinsey. No. 878,639; Feb. 11; Sp. p. 1610; Dr. p. 328; Gaz. vol. 132; p. 1129.
Concrete walls and the like, Means for use in building. R. W. Pommerer. No. 878,155; Feb. 4; Sp. p. 514; Dr. p. 110; Gaz. vol. 132; p. 934.
Condenser, Smoke and fume. J. T. Yates, J. Devey, W. B. Richan, and W. A. Devey. No. 879,023; Feb. 11; Sp. p. 2323; Dr. p. 486; Gaz. vol. 133; p. 1250.
Confectionery-coating machine. H. C. Remmers. No. 879,585; Feb. 18; Sp. p. 3486; Dr. p. 731; Gaz. vol. 132; p. 1475.
Connecting and spacing clip for metal reinforcement, &c. R. A. Cummings. No. 879,148; Feb. 18; Sp. p. 2589; Dr. p. 534; Gaz. vol. 132; p. 1332.
Contact-finger. W. Cooper. No. 879,245; Feb. 18; Sp. p. 2769; Dr. p. 580; Gaz. vol. 132; p. 1364.
Controller. W. J. Warder, Jr. No. 878,756; Feb. 11; Sp. p. 1825; Dr. p. 377; Gaz. vol. 132; p. 1167.
Controlling mechanism, Safety. T. R. Bell. No. 879,847; Feb. 25; Sp. p. 4023; Dr. p. 843; Gaz. vol. 132; p. 1593.
Conveyer. F. R. Willson, Jr. No. 878,170; Feb. 4; Sp. p. 580; Dr. pp. 118-19; Gaz. vol. 132; p. 940.
Conveyer. G. E. Richmond. No. 878,671; Feb. 11; Sp. p. 1664; Dr. p. 343; Gaz. vol. 132; p. 1140.
Conveyer, Cable-hoist. B. C. Riblet. No. 878,157; Feb. 4; Sp. p. 517; Dr. p. 111; Gaz. vol. 132; p. 935.
Conveyer, Cotton and cotton-seed. W. B. Smith. No. 880,172; Feb. 25; Sp. p. 4710; Dr. pp. 994-5; Gaz. vol. 132; p. 1700.
Conveying apparatus. J. H. Gilman. No. 878,721; Feb. 11; Sp. p. 1763; Dr. p. 364; Gaz. vol. 132; p. 1156.
Cooker. M. D. Taylor. No. 879,693; Feb. 18; Sp. p. 3712; Dr. pp. 778-80; Gaz. vol. 132; p. 1510.
Cooker, Straw-. J. J. Dauch and W. F. Harbrecht. No. 878,711; Feb. 11; Sp. p. 1744; Dr. p. 361; Gaz. vol. 132; p. 1153.
Cooler: *See* Face-cooler; Milk-cooler.
Cooling rooms by compressed air, System of. O. Levilly. No. 879,392; Feb. 18; Sp. p. 3067; Dr. p. 638; Gaz. vol. 132; p. 1411.
Coop, Poultry-. V. S. Weekley. No. 878,686; Feb. 11; Sp. p. 1706; Dr. p. 353; Gaz. vol. 132; p. 1147.

Cop-making apparatus. J. Schärer-Nussbaumer. No. 878,091; Feb. 4; Sp. p. 400; Dr. pp. 84-5; Gaz. vol. 132; p. 913.
Cop-tube. S. W. Wardwell. No. 878,104; Feb. 4; Sp. p. 436; Dr. p. 90; Gaz. vol. 132; p. 917.
Cop-tube. S. W. Wardwell. No. 879,021; Feb. 11; Sp. p. 2320; Dr. p. 485; Gaz. vol. 132; p. 1250.
Cop-tube. S. W. Wardwell, No. 879,705; Feb. 18; Sp. p 3740; Dr. p. 784; Gaz. vol. 132; p. 1514.
Copper ore, Reduction of. L. Durand. No. 879,530; Feb. 18; Sp. p. 3355; Dr. p. 700; Gaz. vol. 132 p. 1457.
Core-drilling apparatus. C. A. Terry. No. 878,909; Feb. 11; Sp. p. 2121; Dr. p. 443; Gaz. vol. 132; p. 1215.
Cork-extractor. G. M. Godfrey. No. 878,722; Feb. 11; Sp. p. 1764; Dr. p. 364; Gaz. vol. 132; p. 1156.
Corn for table use, Preparing. F. A. Collins. No. 880,350; Feb. 25; Sp. p. 5074; Dr. p. 1072; Gaz. vol. 132; p. 1762.
Corn fork, Green-. G. W. Ruggles. No. 880,166; Feb. 25; Sp. p. 4700; Dr. p. 991; Gaz. vol. 132; p. 1698.
Corn from corncobs, Apparatus for removing the grains of. W. B. George. No. 879,457; Feb. 18; Sp. p. 3224; Dr. p. 670; Gaz. vol. 132; p. 1433.
Corn-husker. J. W. Ertz. No. 878,365; Feb. 4; Sp. p. 956; Dr. p. 192; Gaz. vol. 132; p. 1004.
Corn-husker. L. Cutter. No. 879,150; Feb. 18; Sp. p. 2592; Dr. pp. 539-40; Gaz. vol. 132; p. 1333.
Corn-husking machine. F. and F. T. McInturf. No. 879,404; Feb. 18; Sp. p. 3103; Dr. pp. 645-6; Gaz. vol. 132; p. 1416.
Corn-husking machine. F. and F. T. McInturf. No. 879,405; Feb. 18; Sp. p. 3107; Dr. p. 646; Gaz. vol. 132; p. 1416.
Corn-husking machine. C. Gormley. No. 879,538; Feb. 18; Sp. p. 3374; Dr. pp. 705-6; Gaz. vol. 132; p. 1460.
Corn-husking machine, Green-. L. J. Coryell. No. 878,610; Feb. 11; Sp. p. 1549; Dr. p. 316; Gaz. vol. 132; p. 1120.
Corn magnifier, Seed-. G. Anderson. No. 879,717; Feb. 18; Sp. p. 3761; Dr. p. 789; Gaz. vol. 132; p. 1518.
Corn-popping machine. L. M. Wesner and E. M. Dixon. No. 878,918; Feb. 11; Sp. p. 2136; Dr. pp. 445-6; Gaz. vol. 132; p. 1218.
Corn-sheller. W. F. Elliott. No. 880,286; Feb. 25; Sp. p. 4954; Dr. p. 1046; Gaz. vol. 132; p. 1739.
Corn-sheller cleaning apparatus. F. Hall. No. 878,725; Feb. 11; Sp. p. 1770; Dr. p. 366; Gaz. vol. 132; p. 1157.
Corn-shellers, Cob-gate for. A. H. and H. A. Berns. No. 878,037; Feb. 4; Sp. p. 299; Dr. p. 63; Gaz. vol. 132; p. 896.
Corn tree, Seed-. J. C. Blackford. No. 878,271; Feb. 4; Sp. p. 776; Dr. p. 155; Gaz. vol. 132; p. 973.
Corset. M. Bachura. No. 877,978; Feb. 4; Sp. p. 161; Dr. p. 36; Gaz. vol. 132; p. 876.
Corset. J. Cohen. No. 878,351; Feb. 4; Sp. p. 930; Dr. p. 185; Gaz. vol. 132; p. 999.
Corset. E. Abadie-Leotard. No. 878,446; Feb. 4; Sp. p. 1100; Dr. p. 225; Gaz. vol. 132; p. 1030.
Cot and pack-sack, Convertible. C. F. Forsell and T. Ekroot. No. 878,055; Feb. 4; Sp. p. 333; Dr. p. 69; Gaz. vol. 132; p. 902.
Cot, Emergency-. M. H. Thompson. No. 879,988; Feb. 25; Sp. p. 4338; Dr. pp. 909-10; Gaz. vol. 132; p. 1640.
Cotton and other fibers. Clearer for preparing frames for. N. S. Brown. No. 880,007; Feb. 25; Sp. p. 4374; Dr. p. 917; Gaz. vol. 132; p. 1646.
Cotton-chopper. S. W. Jackson. No. 878,066; Feb. 4; Sp. p. 358; Dr. pp. 73-4; Gaz. vol. 132; p. 906.
Cotton-chopper. G. B. Gauntt. No. 878,373; Feb. 4; Sp. p. 968; Dr. p. 194; Gaz. vol. 132; p. 1006.
Cotton-chopper. J. H. Kennebrew. No. 878,537; Feb. 11; Sp. p. 1370; Dr. p. 281; Gaz. vol. 132; p. 1094.
Cotton-chopper. W. M. Jones. No. 879,647; Feb. 18; Sp. p. 3622; Dr. p. 757; Gaz. vol. 132; p. 1498.
Cotton-compress. J. W. Gregory. No. 878,796; Feb. 11; Sp. p. 1914; Dr. p. 393; Gaz. vol. 132; p. 1180.
Cotton-drying apparatus, Seed-. J. A. Adams. No. 879,715; Feb. 18; Sp. p. 3757; Dr. p. 788; Gaz. vol. 132; p. 1517.
Cotton-gin. N. Pearse. No. 880,325; Feb. 25; Sp. p. 5014; Dr. p. 1058; Gaz. vol. 132; p. 1751.
Cotton-gin feed attachment. C. B. P. Carver. No. 878,188; Feb. 4; Sp. p. 616; Dr. pp. 126-7; Gaz. vol. 132; p. 946.
Cotton-plant-thinning machine. O. R. Beusse and M. P. Jackson. No. 880,003; Feb. 25; Sp. p. 4368; Dr. pp. 915-16; Gaz. vol. 132; p. 1645.
Cotton-press. R. E. Haynes. No. 879,639; Feb. 18; Sp. p. 3600; Dr. pp. 753-4; Gaz. vol. 132; p. 1492.
Cotton-press, Steam-tramping. L. Roberds. No. 879,413; Feb. 18; Sp. p. 3125; Dr. p. 650; Gaz. vol. 132; p. 1419.
Cotton-scrape. C. R. Bowen, Jr. No. 877,899; Feb. 4; Sp. p. 4; Dr. p. 1; Gaz. vol. 132; p. 849.
Counter, Automatic. J. Munro and A. Gerard. No. 879,189; Feb. 18; Sp. p. 2669; Dr. pp. 557-8; Gaz. vol. 132; p. 1346.
Counter-protecting device for stores, &c. J. B. Monette. No. 878,147; Feb. 4; Sp. p. 498; Dr. p. 106; Gaz. vol. 132; p. 931.
Coupling: *See* Double-pawl coupling; Friction-coupling; Pipe-coupling; Power-coupling; Shaft-coupling.
Coupling-head, Steam. B. F. Hudson. No. 878,001; Feb. 4; Sp. p. 209; Dr. p. 46; Gaz. vol. 132; p. 884.
Covering. J. P. and J. F. J. Costigan. No. 880,363; Feb. 25; Sp. p. 5082; Dr. p. 1073; Gaz. vol. 132; p. 1763.
Crate. H. Rietmann. No. 880,042; Feb. 25; Sp. p. 4462; Dr. p. 937; Gaz. vol. 132; p. 1658.
Crate, Folding. C. W., E. L., and M. D. Cronbaugh. No. 879,855; Feb. 25; Sp. p. 4067; Dr. p. 852; Gaz. vol. 132; p. 1596.
Cream and other liquids, Apparatus for tempering. D. W. Payne. No. 878,907; Feb. 11; Sp. p. 2281; Dr. pp. 476-7; Gaz. vol. 132; p. 1242.
Cream-separator. J. W. Fowler, C. S. Barnes, and H. G. Peters. No. 879,379; Feb. 18; Sp. p. 3041; Dr. p. 633; Gaz. vol. 132; p. 1407.
Cream-separator, Centrifugal. W. Witt and F. W. C. Hartmann. No. 879,994; Feb. 25; Sp. p. 4340; Dr. p. 912; Gaz. vol. 132; p. 1642.
Crossing signal for electric roads, Highway-. E. McClintock. No. 879,886; Feb. 25; Sp. p. 4124; Dr. p. 865; Gaz. vol. 132; p. 1605.
Crusher: *See* Clod-crusher
Crusher. M. G. Bunnell. No. 879,242; Feb. 18; Sp. p. 2764; Dr. p. 579; Gaz. vol. 132; p. 1363.
Crusher and pulverizer. M. F. Williams. No. 878,921; Feb. 11; Sp. p. 2140; Dr. p. 447; Gaz. vol. 132; p. 1219.
Crushing clods of earth, &c, Implement for. D. Meinen. No. 879,291; Feb. 18; Sp. p. 2876; Dr. p. 600; Gaz. vol. 132; p. 1380.
Crushing-mill. F. A. Huntington. No. 879,175; Feb. 18; Sp. p. 2647; Dr. p. 552; Gaz. vol. 132; p. 1342.
Crushing-mill feeding mechanism. F. B. Pettengill. No. 879,581; Feb. 18; Sp. p. 3479; Dr. p. 729; Gaz. vol. 132; p. 1474.
Cuff-pin and other analogous article of jewelry. J. S. Brant. No. 879,359; Feb. 18; Sp. p. 2996; Dr. p. 626; Gaz. vol. 132; p. 1401.
Cuff-protector. H. A. Frank. No. 879,955; Feb. 25; Sp. p. 4281; Dr. p. 895; Gaz. vol. 132; p. 1620.
Culinary boiler or steamer. A. B. Rice. No. 878,020; Feb. 4; Sp. p. 265; Dr. p. 57; Gaz. vol. 132; p. 891.
Culinary vessel. G. W. and J. A. Terhorst. No. 878,908; Feb. 11; Sp. p. 2120; Dr. p. 442; Gaz. vol. 132; p. 1215.
Culm, Sectional. J. S. Wilson. No. 878,441; Feb. 4; Sp. p. 1090; Dr. p. 222; Gaz. vol. 132; p. 1028.
Cultivating-machine, Motor-driven. K. Köszegi. No. 880,457; Feb. 25; Sp. p. 5299; Dr. p. 1115; Gaz. vol. 132; p. 1796.
Cultivator. C. W. Gibbs. No. 878,375; Feb. 4; Sp. p. 971; Dr. p. 195; Gaz. vol. 132; p. 1007.
Cultivator. S. H. Young. No. 879,429; Feb. 18; Sp. p. 3159; Dr. p. 657; Gaz. vol. 132; p. 1424.
Cultivator, Lister-. C. H. Melvin. No. 879,187; Feb. 18; Sp. p. 2663; Dr. pp. 555-7; Gaz. vol. 132; p. 1345.
Cultivator, Power-. C. Edwards. No. 877,988; Feb. 4; Sp. p. 180; Dr. pp. 40-1; Gaz. vol. 132; p. 879.
Culvert-mold. E. T. Morris. No. 879,662; Feb. 18; Sp. p. 3647; Dr. p. 763; Gaz. vol. 132; p. 1500.
Cup: *See* Collapsible cup; Grease-cup; Oil-cup; Shaving-cup; Teat-cup.
Curd-mill. J. Brouwers. No. 878,114; Feb. 4; Sp. p. 445; Dr. p. 94; Gaz. vol. 132; p. 921.
Curette, Uterine. F. T. M. Moormeister. No. 879,297; Feb. 18; Sp. p. 2887; Dr. p. 602; Gaz. vol. 132; p. 1382.
Current-motor. C. A. Neyland. No. 880,393; Feb. 25; Sp. p. 5152; Dr. pp. 1087-8; Gaz. vol. 132; p. 1773.
Current rectifier, Alternating-. G. W. Pierce. No. 879,061; Feb. 11; Sp p. 2389; Dr. p. 501; Gaz. vol. 132; p. 1263.
Currycomb. R. N. Tunstall and F. Sicotte. No. 878,433; Feb. 4; Sp. p. 1079; Dr. p. 220; Gaz. vol. 132; p. 1026.
Currycomb. E. Johnson. No. 878,731; Feb. 11; Sp. p. 1779; Dr. p. 368; Gaz. vol. 132; p. 1159.
Curtain appliance, Window-. L. H. White. No. 879,226; Feb. 18; Sp. p. 2734; Dr. p. 570; Gaz. vol. 132; p. 1358.
Curtain-bracket and shade-roller support. F. Adams. No. 878,448; Feb. 4; Sp. p. 1106; Dr. p. 227; Gaz. vol. 132; p. 1031.
Curtain-fixture. H. K. Meis. No. 878,410; Feb. 4; Sp. p. 1042; Dr. p. 210; Gaz. vol. 132; p. 1019.
Curtain-fixture. G. H. Forsyth. No. 879,533; Feb. 18; Sp. p. 3366; Dr. p. 703; Gaz. vol. 132; p. 1458.
Curtain-pole. E. Sauerburger. No. 880,244; Feb. 25; Sp. p. 4862; Dr. p. 1029; Gaz. vol. 132; p. 1725.
Curtain-stretcher and clothes-drier. C. E. Rice. No. 879,004; Feb. 11; Sp. p. 2297; Dr. p. 479; Gaz. vol. 132; p. 1245.
Cushion: *See* Seat-cushion; Type-writer cushion.
Cushion-tire wheel. C. A. Marien. No. 879,186; Feb. 18; Sp. p. 2662; Dr. p. 555; Gaz. vol. 132; p. 1345.
Cuspidor. L. O'Dell, J. W. Noble, and J. F. Sandrock. No. 878,993; Feb. 11; Sp. p. 2275; Dr. p. 475; Gaz. vol. 132; p. 1242.
Cuspidor. C. Peter. No. 879,314; Feb. 18; Sp. p. 2914; Dr. p. 607; Gaz. vol. 132; p. 1387.
Cut-off and strainer for water-pipes, Combined. J. A. Young. No. 878,850; Feb. 11; Sp. p. 2007; Dr. p. 415; Gaz. vol. 132; p. 1197.
Cut-off slide. J. F. Dornfeld. No. 879,751; Feb. 18; Sp. p. 3826; Dr. p. 802; Gaz. vol. 132; p. 1529.
Cutlery-washing machine. W. E. Merrell. No. 878,010; Feb. 4; Sp. p. 224; Dr. p. 49; Gaz. vol. 132; p. 887.
Cutter: *See* Cane-cutter; Cheese-cutter; Cigar-tip cutter; Cloth-cutter; Fruit and vegetable cutter; Pea-cutter; Potato-cutter; Twine-cutter; Weed-cutter.
Cutter-heads, Knife-holder for. A. Thorsby. No. 879,501; Feb. 18; Sp. p. 3304; Dr. p. 691; Gaz. vol. 132; p. 1447.
Cutting and folding machine. R. C. Seymour. No. 879,418; Feb. 18; Sp. p. 3136; Dr. pp. 652-3; Gaz. vol. 132; p. 1421.
Cutting implement. A. A. Low. No. 878,545; Feb. 11; Sp. p. 1388; Dr. p. 285; Gaz. vol. 132; p. 1097.
Cutting implement. A. A. Low. No. 878,646; Feb. 11; Sp. p. 1628; Dr. p. 332; Gaz. vol. 132; p. 1132.
Cutting rags, ropes, and the like, Apparatus for. J. Nuttall. No. 880,256; Feb. 25; Sp. p. 4852; Dr. p. 1026; Gaz. vol. 132; p. 1723.
Cycles, Shock-absorbing device for. F. R. Graham-Yooll. No. 880,297; Feb. 25; Sp. p. 4970; Dr. p. 1049; Gaz. vol. 132; p. 1742.
Cylinder-head. H. A. Buck. No. 880,478; Feb. 25; Sp. p. 5342; Dr. pp. 1126-7; Gaz. vol. 132; p. 1804.
Cystoscope. R. H. Wappler. No. 879,224; Feb. 18; Sp. p. 2730; Dr. p. 569; Gaz. vol. 132; p. 1357.
Dam, Shell-. E. B. Jennings. No. 878,291; Feb. 4; Sp. p. 818; Dr. p. 163; Gaz. vol. 132; p. 980.
Dam, Shell-. E. B. Jennings. No. 878,960; Feb. 11; Sp. p. 2214; Dr. p. 463; Gaz. vol. 132; p. 1231.
Davenport. C. J. Kindel. No. 880,221; Feb. 25; Sp. p. 4822; Dr. p. 1020; Gaz. vol. 132; p. 1717.
Davenport. R. Coopersmith and C. J. Kindel. No. 880,278; Feb. 25; Sp. p. 4931; Dr. p. 1043; Gaz. vol. 132; p. 1736.
Dental engine, Manually-controlled. J. L. Gauthier. No. 879,254; Feb. 18; Sp. p. 2788; Dr. pp. 584-5; Gaz. vol. 132; p. 1367.
Dental implement. J. Gartrell. No. 879,537; Feb. 18; Sp. p. 3373; Dr. p. 705; Gaz. vol. 132; p. 1460.

Denture. R. M. Craig. (Reissue.) No. 12,753; Feb. 18; Sp. p. 4016; Dr. p. 842; Gaz. vol. 132; p. 1561.
Desiccating apparatus. H. Paucksch. No. 879,000; Feb. 11; Sp. p. 2389; Dr. p. 500; Gaz. vol. 132; p. 1202.
Desiccating apparatus. S. P. Rasmussen. No. 879,490; Feb. 18; Sp. p. 3230; Dr. p. 686; Gaz. vol. 132; p. 1444.
Desk-table. M. P. Harding. No. 880,023; Feb. 25; Sp. p. 4408; Dr. p. 920; Gaz. vol. 132; p. 1651.
Developing-tray. M. P. Foran. No. 880,377; Feb. 25; Sp. p. 5118; Dr. p. 1061; Gaz. vol. 132; p. 1767.
Diaper-holder. F. Jonata. No. 879,774; Feb. 18; Sp. p. 3864; Dr. p. 809; Gaz. vol. 132; p. 1536.
Digger: *See* Potato-digger.
Dinitroglycerin, &c., Obtaining. F. I. du Pont. No. 879,899; Feb. 25; Sp. p. 4182; Dr. p. 873; Gaz. vol. 132; p. 1612.
Dish-drainer. G. Samsó. No. 878,315; Feb. 4; Sp. p. 804; Dr. p. 172; Gaz. vol. 132; p. 987.
Disk drill. A. Armitage and W. P. Thistlethwaite. No. 879,531; Feb. 18; Sp. p. 3087; Dr. p. 834; Gaz. vol. 132; p. 1556.
Display-box. S. L. Bachrach. No. 879,235; Feb. 18; Sp. p. 2750; Dr. pp. 574–5; Gaz. vol. 132; p. 1361.
Display-cabinet. F. D. Maguolo. No. 879,782; Feb. 18; Sp. p. 3877; Dr. p. 813; Gaz. vol. 132; p. 1539.
Display-can, Sheet-metal. C. T. Draper. No. 878,784; Feb. 11; Sp. p. 1887; Dr. p. 389; Gaz. vol. 132; p. 1177.
Display cases, Extension-bracket for garment-. L. W. Welch. No. 879,341; Feb. 18; Sp. p. 2954; Dr. p. 616; Gaz. vol. 132; p. 1395.
Display-easel. A. M. Stofflet. No. 880,049; Feb. 25; Sp. p. 4474; Dr. p. 939; Gaz. vol. 132; p. 1660.
Display mechanism, Check-controlled. W. R. Benjamin. No. 879,139; Feb. 18; Sp. p. 2572; Dr. p. 535; Gaz. vol. 132; p. 1328.
Display-rack. F. Dow. No. 878,872; Feb. 11; Sp. p. 2048; Dr. p. 424; Gaz. vol. 132; p. 1204.
Displaying articles of merchandise, Means for. W. O'Sullivan. No. 878,307; Feb. 4; Sp. p. 850; Dr. p. 169; Gaz. vol. 132; p. 985.
Distillation. T. A. Dungan. No. 878,785; Feb. 11; Sp. p. 1889; Dr. p. 389; Gaz. vol. 132; p. 1177.
Distillation of wood, Destructive. T. W. Pritchard. No. 880,406; Feb. 25; Sp. p. 5319; Dr. p. 1119; Gaz. vol. 132; p. 1800.
Distilling apparatus. W. H. Bartholomew. No. 879,236; Feb. 18; Sp. p. 2751; Dr. pp. 575–6; Gaz. vol. 132; p. 1361.
Distilling apparatus, Coal-. J. W. Aylsworth and F. L. Dyer. No. 878,490; Feb. 11; Sp. p. 1228; Dr. p. 254; Gaz. vol. 132; p. 1079.
Ditcher and road-grader. W. Larkin. No. 879,478; Feb. 18; Sp. p. 3255; Dr. p. 678; Gaz. vol. 132; p. 1439.
Door, Automatic-closing. C. Mull. No. 879,883; Feb. 25; Sp. p. 4116; Dr. p. 864; Gaz. vol. 132; p. 1604.
Door catch and lock, Screen-. H. Hunter. No. 879,174; Feb. 18; Sp. p. 2646; Dr. p. 552; Gaz. vol. 132; p. 1341.
Door-check. A. Cairns. 878,607; Feb. 11; Sp. p. 1539; Dr. p. 314; Gaz. vol. 132; p. 1119.
Door check and lock, Safety. V. Francek and J. Dytrych. No. 878,656; Feb. 4; Sp. p. 835; Dr. pp. 69–70; Gaz. vol. 132; p. 902.
Door check and spring, Combined. W. Gilfillan. No. 878,521; Feb. 11; Sp. p. 1339; Dr. p. 271; Gaz. vol. 132; p. 1088.
Door-covering, Metallic. E. B. Gager. No. 877,922; Feb. 4; Sp. p. 57; Dr. p. 11; Gaz. vol. 132; p. 858.
Door fastener, Sliding-. H. L. Rued. No. 879,325; Feb. 18; Sp. p. 2932; Dr. p. 611; Gaz. vol. 132; p. 1390.
Door, Grain-. W. S. Driskel. No. 878,050; Feb. 4; Sp. p. 326; Dr. p. 68; Gaz. vol. 132; p. 901.
Door-hanger. P. F. Holsters. No 878,395; Feb. 4; Sp. p. 1005; Dr. p. 208; Gaz. vol. 132; p. 1014.
Door-holder. G. Buschur. No. 878 864; Feb. 11; Sp. p. 2035; Dr. p. 420; Gaz vol. 132; p. 1202.
Door-holder. E. Hodgson. No. 879,169; Feb. 18; Sp. p. 2630; Dr. p. 550; Gaz. vol. 132; p. 1340.
Door-jamb setter. R. D. Tennent. No. 880,252; Feb. 25; Sp. p. 4880; Dr. p. 1032; Gaz. vol. 132; p. 1728.
Door-lock. W. A. Markey. No. 878,972; Feb. 11; Sp. p. 2229; Dr. pp. 466–7; Gaz. vol. 132; p. 1235.
Door-lock. W. H. Thomas. No. 880,052; Feb. 25; Sp. p. 4478; Dr. p. 941; Gaz. vol. 132; p. 1661.
Door, Metallic. J. E. Fox. No. 878,876; Feb. 11; Sp. p. 2055; Dr. pp. 425–6; Gaz. vol. 132; p. 1205.
Door or sash, Sliding. G. P. Balch. No. 880,350; Feb. 25; Sp. p. 5060; Dr. p. 1069; Gaz. vol. 132; p. 1759.
Door-securer. L. C. Smith. No. 880,108; Feb. 25; Sp. p. 4577; Dr. p. 964; Gaz. vol. 132; p. 1678.
Door, Sidewalk-. O. R. Schrader. No. 879,200; Feb. 18; Sp. p. 2600; Dr. p. 561; Gaz. vol. 132; p. 1349.
Door track and hanger. J. D. Wellver and W. G. Harrington. No. 880,258; Feb. 25; Sp. p. 4801; Dr. p. 1034; Gaz. vol. 132; p. 1730.
Doors for safes, &c., to their seats, Mechanism for forcing. B. F. Tripp. No. 880,179; Feb. 25; Sp. p. 4724; Dr. p. 999; Gaz. vol. 132; p. 1702.
Doors, walls, and the like, Spying-aperture for. J. Shackley. No. 878,245; Feb. 4; Sp. p. 723; Dr. p. 147; Gaz. vol. 132; p. 964.
Double-pawl coupling. M. Hanusch. No. 879,900; Feb. 25; Sp. p. 4294; Dr. p. 897; Gaz. vol. 132; p. 1631.
Dough-feeding device. A. W. Copland. No. 879,852; Feb. 25; Sp. p. 4047; Dr. pp. 848–9; Gaz. vol. 132; p. 1595.
Dough-mixing machine. A. Roth. No. 879,590; Feb. 18; Sp. p. 3510; Dr. p. 735; Gaz. vol. 132; p. 1477.
Dough-raising cabinet. W. P. Magner. No. 879,305; Feb. 18; Sp. p. 3074; Dr. p. 639; Gaz. vol. 132; p. 1412.
Draft-equalizer. J. Van Matre. No. 878,027; Feb. 4; Sp. p. 279; Dr. p. 60; Gaz. vol. 132; p. 893.
Draft-equalizer. C. F. Dyar. No. 878,573; Feb. 11; Sp. p. 2050; Dr. p. 425; Gaz. vol. 132; p. 1204.
Draft-equalizer. L. W. Rauch. No. 879,001; Feb. 11; Sp. p. 2283; Dr. p. 478; Gaz. vol. 132; p. 1244.
Draw-jack. E. B. Tarr. No. 879,662; Feb. 18; Sp. p. 3709; Dr. pp. 777–8; Gaz. vol. 132; p. 1510.
Drawer and drawer-support. H. B. Starrett. No. 879,660; Feb. 18; Sp. p. 3707; Dr. pp. 776–7; Gaz. vol. 132; p. 1509.
Drawer-guide. G. R. Ross. No. 879,982; Feb. 25; Sp. p. 4359; Dr. p. 906; Gaz. vol. 132; p. 1638.
Drawing-table. L. Forsyth. No. 879,620; Feb. 18; Sp. p. 3580; Dr. p. 747; Gaz. vol. 132; p. 1486.
Dredge-bucket joint. A. T. Fraser. No. 878,517; Feb. 11; Sp. p. 1335; Dr. p. 270; Gaz. vol. 132; p. 1087.
Dredgers, Means for advancing. R. M. Wilson. No. 879,345; Feb. 18; Sp. p. 2960; Dr. p. 618; Gaz. vol. 132; p. 1397.
Dredging-bucket and hoist for same, Triangular. C. H. Gunn. No. 878,526; Feb. 11; Sp. p. 1348; Dr. pp. 273–4; Gaz. vol. 132; p. 1090.
Drier: *See* Clothes-drier.
Drier. K. F. Snow. No. 879,206; Feb. 18; Sp. p. 2697; Dr. p. 563; Gaz. vol. 132; p. 1350.
Drying fabrics or fibrous material, Apparatus for. A. N. Marr. No. 877,938; Feb. 4; Sp. p. 86; Dr. pp. 18–20; Gaz. vol. 132; p. 863.
Drill: *See* Disk drill; Electropneumatic drill; Grain-drill; Rock-drill; Shaft-drill.
Drill attachment. W. H. Adams. No. 879,430; Feb. 18; Sp. p. 3160; Dr. pp. 657–8; Gaz. vol. 132; p. 1425.
Drill-post, Coal-Mining. P. Rommes. No. 879,006; Feb. 11; Sp. p. 2299; Dr. p. 480; Gaz. vol. 132; p. 1245.
Drills, Ball-bearing water-head for diamond. R. E. Parker. No. 880,334; Feb. 25; Sp. p. 5012; Dr. p. 1057; Gaz. vol. 132; p. 1750.
Drills, Making. L. Gregson. No. 879,631; Feb. 18; Sp. p. 3587; Dr. p. 751; Gaz. vol. 132; p. 1490.
Drilling and nailing machine. H. Winter. No. 879,347; Feb. 18; Sp. p. 2964; Dr. pp. 618–19; Gaz. vol. 132; p. 1397.
Drilling-machine. B. Hastings. No. 880,140; Feb. 25; Sp. p. 4644; Dr. p. 980; Gaz. vol. 132; p. 1689.
Drilling-machines and the like, Centering apparatus for portable. E. Burckhardt. No. 879,142; Feb. 18; Sp. p. 2578; Dr. p. 537; Gaz. vol. 132; p. 1330.
Driving mechanism, Friction-clutch. J. A. Firsching. No. 878,458; Feb. 4; Sp. p. 1127; Dr. p. 231; Gaz. vol. 132; p. 1034.
Drop-light fixture and the like. A. C. Davidson. No. 879,247; Feb. 18; Sp. p. 2772; Dr. p. 581; Gaz. vol. 132; p. 1364.
Dropper. B. W. Phelps and E. C. Gilmes. No. 878,668; Feb. 11; Sp. p. 1661; Dr. p. 342; Gaz. vol. 132; p. 1130.
Drum-trap. P. Ayres. No. 880,436; Feb. 25; Sp. p. 5252; Dr. p. 1104; Gaz. vol. 132; p. 1788.
Dust-collecting apparatus. G. R. Bimm. No. 878,329; Feb. 4; Sp. p. 836; Dr. p. 178; Gaz. vol. 132; p. 992.
Dust-collector. W. A. Derby. No. 878,126; Feb. 4; Sp. p. 464; Dr. p. 99; Gaz. vol. 132; p. 924.
Dust or other particles from granular substances, Machine for separating. C. J. Robinson and J. Backhouse. No. 880,242; Feb. 25; Sp. p. 4859; Dr. pp. 1028–9; Gaz. vol. 132; p. 1724.
Dust separating and collecting apparatus. A. Knappenberger. No. 878,640; Feb. 11; Sp. p. 1611; Dr. p. 328; Gaz. vol. 132; p. 1129.
Dye and making same, Azo. P. Julius and E. Fussenegger. No. 879,053; Feb. 11; Sp. p. 2374; Gaz. vol. 132; p. 1200.
Dye and making same, Brown azo. G. Kalischer. No. 879,552; Feb. 18; Sp. p. 3417; Gaz. vol. 132; p. 1465.
Dye and making same, Red azo. H. Geidermann. No. 880,292; Feb. 25; Sp. p. 4964; Gaz. vol. 132; p. 1741.
Dye and making same, Yellow tetrazo. H. Geidermann. No. 880,293; Feb. 25; Sp. p. 4965; Gaz. vol. 132; p. 1741.
Dyes containing radicals of higher fatty acids, Making azo. N. Sulzberger. No. 879,424; Feb. 18; Sp. p. 3148; Dr. p. 655; Gaz. vol. 132; p. 1423.
Dyeing and other machines, Hoisting apparatus for. J. Hussong. No. 878,399; Feb. 4; Sp. p. 1022; Dr. p. 206; Gaz. vol. 132; p. 1016.
Dyeing bobbins and the like, Machine for. C. Wansleben. No. 878,103; Feb. 4; Sp. p. 424; Dr. p. 90; Gaz. vol. 132; p. 917.
Ear-drop, Pierceless. J. S. Brant. No. 879,358; Feb. 18; Sp. p. 2995; Dr. p. 626; Gaz. vol. 132; p. 1401.
Easel, Artist's. R. F. Maynard. No. 878, 549; Feb. 11; Sp. p. 1394; Dr. p. 286; Gaz. vol. 132; p. 1099.
Edger, Gang-. J. T. Stoddard. No. 879,923; Feb. 25; Sp. p. 4227; Dr. pp. 882–3; Gaz. vol. 132; p. 1620.
Egg-boiler. H. H. Cheesbrough. No. 878,866; Feb. 11; Sp. p. 2037; Dr. p. 421; Gaz. vol. 132; p. 1202.
Egg-boiler, Automatic. L. Leclerc. No. 879,057; Feb. 11; Sp. p. 2381; Dr. p. 499; Gaz. vol. 132; p. 1261.
Egg-lifter. C. F. Swanson. No. 879,801; Feb. 18; Sp. p. 3911; Dr. pp. 819–20; Gaz. vol. 132; p. 1545.
Egg-tester. C. F. Swanson. No. 879,800; Feb. 18; Sp. p. 3909; Dr. p. 819; Gaz. vol. 132; p. 1545.
Electric alarm operated by alarm-clocks. E. Ploudre. No. 878,087; Feb. 4; Sp. p. 394; Dr. p. 82; Gaz. vol. 132; p. 912.
Electric-arc furnace. S. D. Spence. No. 880,338; Feb. 25; Sp. p. 5038; Dr. pp. 1063–4; Gaz. vol. 132; p. 1755.
Electric bracket, Swinging. J. F. Brown. No. 878,496; Feb. 11; Sp. p. 1292; Dr. p. 261; Gaz. vol. 132; p. 1082.
Electric-car lighting, Means for mounting and driving dynamos for. A. McGary and J. W. Jepson. No. 878,305; Feb. 4; Sp. p. 844; Dr. p. 165; Gaz. vol. 132; p. 984.
Electric charges, Conductor for discharging high-voltage. W. H. Chapman. No. 878,272; Feb. 4; Sp. p. 777; Dr. p. 156; Gaz. vol. 132; p. 974.
Electric-circuit controller. C. Aalborg. No. 879,234; Feb. 18; Sp. p. 2746; Dr. p. 574; Gaz. vol. 132; p. 1360.
Electric circuits, Means for automatically closing. F. W. Keeler. No. 879,648; Feb. 18; Sp. p. 3623; Dr. p. 758; Gaz. vol. 132; p. 1495.
Electric contact, Overhead. T. W. Small. No. 878,247; Feb. 4; Sp. p. 723; Dr. p. 146; Gaz. vol. 132; p. 965.
Electric generator for telephone-lines. H. Tideman. No. 879,425; Feb. 18; Sp. p. 3152; Dr. p. 655; Gaz. vol. 132; p. 1423.

Electric generators, Regulating. G. S. Neeley. No. 879,887; Feb. 25; Sp. p. 4126; Dr. p. 865; Gaz. vol. 132; p. 1606.
Electric heater. W. R. Whitehorne. No. 878,919; Feb. 11; Sp. p. 2137; Dr. p. 446; Gaz. vol. 132; p. 1218.
Electric inductor, Magneto-. M. Fischer. No. 880,485; Feb. 25; Sp. p. 5365; Dr. p. 1130; Gaz. vol. 132; p. 1806.
Electric installation working with turbo-dynamos and accumulators. M. Grob. No. 878,525; Feb. 11; Sp. p. 1345; Dr. pp. 272–3; Gaz. vol. 132; p. 1090.
Electric-light plug, Extension. B. D. Horton. No. 879,773; Feb. 18; Sp. p. 3862; Dr. p. 809; Gaz. vol. 132; p. 1536.
Electric machine, Dynamo-. E. M. Tingley. No. 878,165; Feb. 4; Sp. p. 571; Dr. p. 116; Gaz. vol. 132; p. 988.
Electric machine, Dynamo-. H. Chitty. No. 880,011; Feb. 25; Sp. p. 4385; Dr. p. 921; Gaz. vol. 132; p. 1648.
Electric machines, Coil-retainer for dynamo-. G. Dunn. No. 879,949; Feb. 25; Sp. p. 4273; Dr. p. 893; Gaz. vol. 132; p. 1628.
Electric machines, Coil-retainer for dynamo-. R. B. Treat. No. 880,429; Feb. 25; Sp. p. 5238; Dr. p. 1102; Gaz. vol. 132; p. 1786.
Electric machines, Pole-shoe for dynamo-. R. B. Treat. No. 879,927; Feb. 25; Sp. p. 4235; Dr. p. 885; Gaz. vol. 132; p. 1622.
Electric service wires and cables, Support for. E. H. Greenleaf and T. A. Dissel. No. 879,765; Feb. 18; Sp. p. 3848; Dr. p. 806; Gaz. vol. 132; p. 1533.
Electric supervisory and signaling system, Automatic. J. G. Nolen. No. 878,012; Feb. 4; Sp. p. 226; Dr. pp. 49–53; Gaz. vol. 132; p. 888.
Electric transmission of intelligence. I. Kitsee. No. 879,650; Feb. 18; Sp. p. 3628; Dr. p. 758; Gaz. vol. 132; p. 1496.
Electric transmission of intelligence. I. Kitsee. No. 879,651; Feb. 18; Sp. p. 3629; Dr. p. 758; Gaz. vol. 132; p. 1496.
Electric wires, Tool for. H. B. Barnes. No. 878,493; Feb. 11; Sp. p. 1233; Dr. p. 255; Gaz. vol. 132; p. 1080.
Electrical contact device. F. Fink. No. 877,919; Feb. 4; Sp. p. 50; Dr. p. 10; Gaz. vol. 132; p. 857.
Electrical-distribution system. R. S. McLeod. No. 878,661; Feb. 11; Sp. p. 1648; Dr. pp. 338–9; Gaz. vol. 132; p. 1136.
Electrical-distribution system. R. M. Palmer. No. 879,307; Feb. 18; Sp. p. 2902; Dr. p. 605; Gaz. vol. 132; p. 1385.
Electrical system, Thermo-. W. H. Bristol. No. 880,272; Feb. 25; Sp. p. 4920; Dr. p. 1041; Gaz. vol. 132; p. 1734.
Electrical vapor apparatus. H. L. Campbell and J. L. Watts. No. 878,710; Feb. 11; Sp. p. 1744; Dr. p. 361; Gaz. vol. 132; p. 1153.
Electricity, Neutralizing static. W. H. Chapman. No. 878,273; Feb. 4; Sp. p. 779; Dr. p. 156; Gaz. vol 132; p. 974.
Electrode containing metal within the same, Arc-light. H. Viertel. No. 880,055; Feb. 25; Sp. p. 4484; Dr. p. 942; Gaz. vol. 132; p. 1662.
Electrodes, Making. E. W. Jungner. No. 880,027; Feb. 25; Sp. p. 4417; Gaz. vol. 132; p. 1653.
Electrodeposits, Producing poreless and well-adhering. H. Schmidt. No. 880,405; Feb. 25; Sp. p. 5182; Gaz. vol. 132; p. 1777.
Electrolytic apparatus for electrolysis of metallic salts. W. H. Rines. No. 878,425; Feb. 4; Sp. p. 1065; Dr. p. 216; Gaz. vol. 132; p. 1024.
Electromagnetic brake. H. Snodgrass. No. 880,249; Feb. 25; Sp. p. 4875; Dr. p. 1031; Gaz. vol. 132; p. 1727.
Electromedical appliance. S. H. Lackland. No. 879,777; Feb. 18; Sp. p. 3870; Dr. p. 810; Gaz. vol. 132; p. 1537.
Electropneumatic drill. O. S. Proctor. No. 879,828; Feb. 18; Sp. p. 3960; Dr. pp. 833–4; Gaz. vol. 132; p. 1555.
Elevator: *See* Bucket elevator; Feed-elevator; Water-elevator.
Elevator-doors, Device for automatically opening and closing. W. J. Jeffries. No. 879,645; Feb. 18; Sp. p. 3617; Dr. p. 756; Gaz. vol. 132; p. 1494.
Elevator safety appliance. F. M. Ashby. No. 878,489; Feb. 11; Sp. p. 1227; Dr. p. 254; Gaz. vol. 132; p. 1079.
Elevators by means of a switch, System for controlling the motion of electrically-operated. W. Baxter, Jr. No. 878,496; Feb. 11; Sp. p. 1237; Dr. pp. 256–60; Gaz. vol. 132; p. 1081.
Elevators, Electric signal for. C. E. Moore. No. 880,152; Feb. 25; Sp. p. 4671; Dr. p. 984; Gaz. vol. 132; p. 1693.
Elevators, Regulating magnet-controller for electric. H. P. McCall. No. 879,789; Feb. 18; Sp. p. 3891; Dr. p. 816; Gaz. vol. 132; p. 1541.
Ellipsograph. H. Looyer. No. 880,228; Feb. 25; Sp. p. 4836; Dr. p. 1023; Gaz. vol. 132; p. 1720.
Embroidered web, Appliance for severing. A. Bosshard. No. 878,111; Feb. 4; Sp. p. 437; Dr. pp. 92–3; Gaz. vol. 132; p. 920.
Embroidery-hoop. F. E. Kohler. No. 879,654; Feb. 18; Sp. p. 3634; Dr. p. 760; Gaz. vol. 132; p. 1497.
End-gate. F. Caha. No. 880,010; Feb. 25; Sp. p. 4384; Dr. p. 920; Gaz. vol. 132; p. 1647.
Endoscope or other optical instrument. R. H. Wappler. No. 878,917; Feb. 11; Sp. p. 2134; Dr. p. 445; Gaz. vol. 132; p. 1218.
Engine: *See* Carding-engine; Compound engine; Dental engine; Explosion-engine; Explosive-engine; Gas-engine; Internal-combustion engine; Oil-engine; Pumping-engine; Rotary engine; Rotary explosive-engine; Rotary internal-combustion engine; Steam-engine; Turbine-engine.
Engine. J. Copeland. No. 877,910; Feb. 4; Sp. p. 31; Dr. pp. 6–7; Gaz. vol. 132; p. 854.
Engine. R. M. Downie. No. 878,783; Feb. 11; Sp. p. 1884; Dr. p. 388; Gaz. vol. 132; p. 1176.
Engine attachment, Hoisting-. H. Maker. No. 878,218; Feb. 4; Sp. p. 669; Dr. p. 138; Gaz. vol. 132; p. 954.
Engine attachment, Traction-. V. Landholm. No. 878,642; Feb. 11; Sp. p. 1615; Dr. p. 329; Gaz. vol. 132; p. 1130.
Engine casing or frame, Gas-. I. P. Miller and L. M. Rakestraw. No. 878,466; Feb. 4; Sp. p. 1144; Dr. pp. 234–5; Gaz. vol. 132; p. 1037.
Engine-cooling device. G. Wolke. No. 879,428; Feb. 18; Sp. p. 3157; Dr. p. 656; Gaz. vol. 132; p. 1424.
Engine-cooling means. K. R. Wilson. No. 879,230; Feb. 18; Sp. p. 2739; Dr. p. 572; Gaz. vol. 132; p. 1359.
Engine-cylinder doors, Means for locking carding-. J. Eckersley. No. 879,858; Feb. 25; Sp. p. 4075; Dr. p. 854; Gaz. vol. 132; p. 1597.
Engine fuel-feeding mechanism, Internal-combustion-. F. W. Brady. No. 878,933; Feb. 11; Sp. p. 2164; Dr. p. 452; Gaz. vol. 132; p. 1223.
Engine fuel-feeding mechanism, Internal-combustion-. F. W. Brady. No. 878,934; Feb. 11; Sp. p. 2168; Dr. p. 453; Gaz. vol. 132; p. 1223.
Engine igniter, Gas and gasolene. M. G. Voigtlander. No. 878,694; Feb. 11; Sp. p. 1704; Dr. p. 352; Gaz. vol. 132; p. 1140.
Engine reversing-gear, Internal-combustion-. J. Sulzer. No. 880,050; Feb. 25; Sp. p. 4475; Dr. p. 940; Gaz. vol. 132; p. 1660.
Engine vaporizing device, Internal-combustion. F. W. Brady. No. 878,932; Feb. 11; Sp. p. 2162; Dr. p. 451; Gaz. vol. 132; p. 1222.
Engines, Burner for explosive-. J. S. Lang. No. 880,313; Feb. 25; Sp. p. 4995; Dr. p. 1054; Gaz. vol. 132; p. 1747.
Engines, Electric sparking device for gas-. E. R. Moffitt. No. 878,412; Feb. 4; Sp. p. 1044; Dr. p. 211; Gaz. vol. 132; p. 1020.
Engines, Lubricant-distributer for. V. Lancia. No. 878,073; Feb. 4; Sp. p. 369; Dr. p. 76; Gaz. vol. 132; p. 908.
Engines, Magneto-electric igniter device for explosive-. O. Carlborg. No. 878,935; Feb. 11; Sp. p. 2171; Dr. p. 454; Gaz. vol. 132; p. 1224.
Engines, Mechanism for gasolene- P. W. Dillon. No. 879,606; Feb. 18; Sp. p. 3552; Dr. p. 743; Gaz. vol. 132; p. 1483.
Engines, Speed-limiting device for electrically-ignited explosive-. F. S. Perrin. No. 880,093; Feb. 25; Sp. p. 4549; Dr. p. 958; Gaz. vol. 132; p. 1673.
Engines with four cylinders, Starting device for explosion-. H. Saurer. No. 878,747; Feb. 11; Sp. p. 1804; Dr. p. 374; Gaz. vol. 132; p. 1164.
Envelop. J. Kuhn. No. 880,223; Feb. 25; Sp. p. 4826; Dr. p. 1021; Gaz. vol. 132; p. 1718.
Envelop and letter sheet, Combined. W. A. Pridmore. No. 878,234; Feb. 4; Sp. p. 697; Dr. p. 144; Gaz. vol. 132; p. 959.
Eraser, Blackboard- W. H. Hartley. No. 879,767; Feb. 18; Sp. p. 3851; Dr. p. 807; Gaz. vol. 132; p. 1534.
Erasing device. J. S. Rapson. No. 878,895; Feb. 11; Sp. p. 2100; Dr. p. 437; Gaz. vol. 132; p. 1211.
Erasing instrument. I. Lucas. No. 878,735; Feb. 11; Sp. p. 1786; Dr. p. 369; Gaz. vol. 132; p. 1160.
Evaporator. P. G. Kaiser. No. 880,080; Feb. 25; Sp. p. 4531; Dr. pp. 953–4; Gaz. vol. 132; p. 1670.
Evener. T. Kreutz. No. 878,209; Feb. 4; Sp. p. 654; Dr. p. 134; Gaz. vol. 132; p. 952.
Excavating, hoisting, and conveying bucket. J. Marousch. No. 879,972; Feb. 25; Sp. p. 4312; Dr. pp. 902–3; Gaz. vol. 132; p. 1635.
Excavating-machine. F. M. Wrabek. No. 879,231; Feb. 18; Sp. p. 2740; Dr. p. 572; Gaz. vol. 132; p. 1359.
Excavator. H. Greer, Jr., and J. R. Thompson. No. 878,460; Feb. 4; Sp. p. 1131; Dr. pp. 232–3; Gaz. vol. 132; p. 1035.
Excavator. O. Schaller. No. 879,844; Feb. 18; Sp. p. 4013; Dr. p. 841; Gaz. vol. 132; p. 1560.
Exercising apparatus. E. A. Letzkus. No. 878,810; Feb. 11; Sp. p. 1935; Dr. p. 400; Gaz. vol. 132; p. 1184.
Expansible bit. E. Pastore. No. 879,309; Feb. 18; Sp. p. 2907; Dr. p. 606; Gaz. vol. 132; p. 1386.
Explosion-engine. C. L. Edwards. No. 878,364; Feb. 4; Sp. p. 954; Dr. p. 191; Gaz. vol. 132; p. 1003.
Explosion-engine. C. F. Pearson. No. 879,537; Feb. 18; Sp. p. 3996; Dr. p. 837; Gaz. vol. 132; p. 1558.
Explosive-engine. C. M. Fox. No. 879,954; Feb. 25; Sp. p. 4293; Dr. p. 895; Gaz. vol. 132; p. 1629.
Explosive-engine. J. D. Hay. No. 880,024; Feb. 25; Sp. p. 4409; Dr. p. 927; Gaz. vol. 132; p. 1652.
Explosive-motor. C. R. Gergler. No. 879,763; Feb. 18; Sp. p. 3844; Dr. p. 806; Gaz. vol. 132; p. 1533.
Extension-table. F. J. Seng. No. 878,093; Feb. 4; Sp. p. 404; Dr. p. 86; Gaz. vol. 132; p. 914.
Extractor: *See* Cork-extractor; Metal-extractor; Rivet-extractor; Spoke-extractor.
Eyeglass nose-guard. D. F. Green. No. 877,994; Feb. 4; Sp. p. 193; Dr. p. 43; Gaz. vol. 132; p. 881.
Eyeglasses. G. H. Chapel. No. 879,244; Feb. 18; Sp. p. 2768; Dr. p. 580; Gaz. vol. 132; p. 1364.
Eyeglasses. W. L. Bemis. No. 880,002; Feb. 25; Sp. p. 4367; Dr. p. 915; Gaz. vol. 132; p. 1645.
Eyeglasses or spectacles. G. Bausch. No. 878,599; Feb. 11; Sp. p. 1526; Dr. p. 311; Gaz. vol. 132; p. 1116.
Eyeleting-machine. S. Field. No. 880,376; Feb. 25; Sp. p. 5112; Dr. pp. 1079–80; Gaz. vol. 132; p. 1767.
Fabric: *See* Woven fabric.
Fabric. R. A. Dunning. No. 878,944; Feb. 11; Sp. p. 2185; Dr. p. 457; Gaz. vol. 132; p. 1227.
Fabric-cutting machine. A. Heil. No. 878,527; Feb. 11; Sp. p. 1350; Dr. p. 274; Gaz. vol. 132; p. 1091.
Fabric-cutting machine. A. Roos. No. 879,675; Feb. 18; Sp. p. 3679; Dr. pp. 769–70; Gaz. vol. 132; p. 1504.
Fabrics, Aging and steaming chamber for. J. E. Gray. No. 879,867; Feb. 25; Sp. p. 4087; Dr. p. 857; Gaz. vol. 132; p. 1600.
Fabrics, Apparatus for inverting tubular. W. B. Palmer. No. 878,905; Feb. 11; Sp. p. 2277; Dr. pp. 475–6; Gaz. vol. 132; p. 1242.
Fabrics, Smooth-edger for. J. G. Dorward. No. 879,528; Feb. 18; Sp. p. 3352; Dr. p. 700; Gaz. vol. 132; p. 1456.
Face-cooler. C. W. Pearsall. No. 879,580; Feb. 18; Sp. p. 3478; Dr. p. 729; Gaz. vol. 132; p. 1474.
Facing-block. J. H. Pearson. No. 880,092; Feb. 25; Sp. p. 4548; Dr. p. 958; Gaz. vol. 132; p. 1673.

Fan, Automatic. J. Mason. No. 878,736; Feb. 11; Sp. p. 1736; Dr. pp. 369-70; Gaz. vol. 132; p. 1160.
Farm-gate. O. M. Hurst. No. 879,266; Feb. 18; Sp. p. 2811; Dr. p. 589; Gaz. vol. 132; p. 1371.
Farm-gate. J. R. Goode. No. 879,460; Feb. 18; Sp. p. 3227; Dr. p. 672; Gaz. vol. 132; p. 1454.
Fastener. W. B. H. Dowse. No. 878,511; Feb. 11; Sp. p. 1320; Dr. p. 267; Gaz. vol. 132; p. 1056.
Fastener. A. G. Mead. No. 878,550; Feb. 11; Sp. p. 1396; Dr. p. 287; Gaz. vol. 132; p. 1069.
Fastener. W. Gordon. No. 880,296; Feb. 25; Sp. p. 4969; Dr. p. 1049; Gaz. vol. 132; p. 1742.
Fastening device. C. G. Megrue. No. 880,319; Feb. 25; Sp. p. 5006; Dr. p. 1056; Gaz. vol. 132; p. 1749.
Fat and oil preparations, Producing. K. Mann. No. 880,316; Feb. 25; Sp. p. 5002; Gaz. vol. 132; p. 1748.
Fats, oils, and the like, Extracting. E. Berliner. No. 878,930; Feb. 11; Sp. p. 2158; Dr. p. 450; Gaz. vol. 132; p. 1222.
Feed-bag. G. W. Lester. No. 880,226; Feb. 25; Sp. p. 4833; Dr. p. 1022; Gaz. vol. 132; p. 1719.
Feed-bag. R. J. Brooks. No. 880,438; Feb. 25; Sp. p. 5255; Dr. p. 1105; Gaz. vol. 132; p. 1789.
Feed-bag. H. W. Morris. No. 880,459; Feb. 25; Sp. p. 5306; Dr. p. 1116; Gaz. vol. 132; p. 1797.
Feed-bag, Foldable. T. Cliah. No. 878,120; Feb. 4; Sp. p. 456; Dr. p. 97; Gaz. vol. 132; p. 922.
Feed-chopper. J. F. Raymond. No. 880,326; Feb. 25; Sp. p. 5016; Dr. p. 1058; Gaz. vol. 132; p. 1751.
Feed device or feed-hopper. H. D. Conway. No. 879,366; Feb. 18; Sp. p. 3005; Dr. p. 628; Gaz. vol. 132; p. 1403.
Feed-elevator for maize-shellers and threshing-machines, Swinging. T. J. Geo. No. 880,291; Feb. 25; Sp. p. 4963; Dr. p. 1048; Gaz. vol. 132; p. 1741.
Feed-regulator. W. Engelbrecht. No. 878,621; Feb. 11; Sp. p. 1550; Dr. p. 321; Gaz. vol. 132; p. 1124.
Feed-regulator. M. F. Williams. No. 878,847; Feb. 11; Sp. p. 1995; Dr. p. 413; Gaz. vol. 132; p. 1196.
Feed-trough. L. Z. Pearson. No. 878,096; Feb. 4; Sp. p. 393; Dr. p. 82; Gaz. vol. 132; p. 912.
Feed-trough. E. A. Lee. No. 879,559; Feb. 18; Sp. p. 3425; Dr. p. 717; Gaz. vol. 132; p. 1466.
Feed-water heater. W. H. Brown. No. 879,362; Feb. 18; Sp. p. 3000; Dr. p. 627; Gaz. vol. 132; p. 1402.
Feeder, Mechanical. T. L. and T. J. Sturtevant. No. 879,423; Feb. 18; Sp. p. 3147; Dr. p. 655; Gaz. vol. 132; p. 1423.
Feeding-trough. L. L. Hughes and R. G. Browning. No. 879,173; Feb. 18; Sp. p. 2945; Dr. p. 551; Gaz. vol. 132; p. 1341.
Fence-post. C. A. Carter. No. 880,355; Feb. 25; Sp. p. 5069; Dr. p. 1070; Gaz. vol. 132; p. 1761.
Fencing, Wire. W. H. Griffith. No. 880,138; Feb. 25; Sp. p. 4639; Dr. p. 979; Gaz. vol. 132; p. 1688.
Fender: *See* Car-fender.
Fermenting beer, ale, and other fermentable liquids. H. H. Freund. No. 878,790; Feb. 11; Sp. p. 1904; Dr. pp. 391-2; Gaz. vol. 132; p. 1179.
Fertilizer. A. L. Kennedy. No. 879,877; Feb. 25; Sp. p. 4103; Gaz. vol. 132; p. 1602.
Fibers, Apparatus for making mixed. F. M. Hamlin. No. 879,165; Feb. 18; Sp. p. 2932; Dr. p. 549; Gaz. vol. 132; p. 1339.
File and punch, Paper. C. Spiro. No. 878,320; Feb. 4; Sp. p. 871; Dr. p. 173; Gaz. vol. 132; p. 989.
Filing-box. E. C. Holland. No. 878,630; Feb. 11; Sp. p. 1563; Dr. p. 325; Gaz. vol. 132; p. 1126.
Filing-case. H. B. Clarke. No. 879,944; Feb. 25; Sp. p. 4260; Dr. p. 891; Gaz. vol. 132; p. 1626.
Filing devices, Follower for paper-. A. T. Weiss. No. 879,343; Feb. 18; Sp. p. 2957; Dr. p. 617; Gaz. vol. 132; p. 1396.
Filling-tube for liquids. A. Schneider. No. 878,341; Feb. 4; Sp. p. 708; Dr. pp. 145-6; Gaz. vol. 132; p. 962.
Filling-tube for liquids. A. Schneider. No. 878,343; Feb. 4; Sp. p. 717; Dr. p. 146; Gaz. vol. 132; p. 963.
Filling-tube for liquids, Sealing-head for. A. Schneider. No. 878,242; Feb. 4; Sp. p. 712; Dr. p. 146; Gaz. vol. 132; p. 963
Filter. B. F. Schirmer. No. 879,107; Feb. 18; Sp. p. 2685; Dr. p. 540; Gaz. vol. 132; p. 1348.
Filter. J. R. Judge. No. 879,270; Feb. 18; Sp. p. 2817; Dr. p. 590; Gaz. vol. 132; p. 1372.
Filter. L. W. Jones and P. Hansen. No. 879,576; Feb. 25; Sp. p. 4102; Dr. p. 861; Gaz. vol. 132; p. 1602.
Filter. L. Hirt. No. 879,963; Feb. 25; Sp. p. 4267; Dr. pp. 896-9; Gaz. vol. 132; p. 1632.
Filter-press plates, Preparing. F. Hobbis. No. 880,078; Feb. 25; Sp. p. 4528; Dr. p. 953; Gaz. vol. 132; p. 1669.
Filtering apparatus. H. P. Taylor. No. 880,426; Feb. 25; Sp. p. 5231; Dr. p. 1101; Gaz. vol. 132; p. 1785.
Finish remover. P. J. Ryan. No. 878,240; Feb. 4; Sp. p. 709; Gaz. vol. 132; p. 962.
Fire-alarm. D. G. Thalman. No. 879,601; Feb. 18; Sp. p. 3531; Dr. p. 739; Gaz. vol. 132; p. 1480.
Fire-escape. J. W. Campbell. No. 879,439; Feb. 18; Sp. p. 3178; Dr. pp. 661-2; Gaz. vol. 132; p. 1427.
Fire-escape, Portable. B. M. C. Walter. No. 878,695; Feb. 11; Sp. p. 1705; Dr. p. 352; Gaz. vol. 132; p. 1147.
Fire extinction, &c., Multiple-way valve applicable to devices for gaseous. T. A. Clayton. No. 878,772; Feb. 11; Sp. p. 1863; Dr. p. 384; Gaz. vol. 132; p. 1172.
Fire-extinguisher. J. L. Hyde and O. P. Peterson. No. 878,487; Feb. 4; Sp. p. 1212; Dr. p. 250; Gaz. vol. 132; p. 1044.
Fire-extinguishing apparatus. G. W. Hunt and J. Kinney. No. 879,966; Feb. 25; Sp. p. 4303; Dr. p. 900; Gaz. vol. 132; p. 1633.
Fire-extinguishing compound. C. Howard. No. 879,171; Feb. 18; Sp. p. 2943; Gaz. vol. 132; p. 1341.
Fire-guard. C. H. Reeves. No. 878,563; Feb. 11; Sp. p. 1437; Dr. p. 293; Gaz. vol. 132; p. 1104.
Fireplace-screen. C. E. Mitchell. No. 877,940; Feb. 4; Sp. p. 95; Dr. pp. 21-2; Gaz. vol. 132; p. 864.
Firearm attachment. F. Klounitzer. No. 880,310; Feb. 25; Sp. p. 4969; Dr. p. 1053; Gaz. vol. 132; p. 1746.
Firearm, Silent. H. P. Maxim. No. 880,396; Feb. 25; Sp. p. 5132; Dr. p. 1084; Gaz. vol. 132; p. 1770.
Fireproof building, Cement. P. Timofeeff. No. 878,912; Feb. 11; Sp. p. 2127; Gaz. vol. 132; p. 1216.
Fireproof building construction. C. Collins. No. 878,275; Feb. 4; Sp. p. 782; Dr. p. 156; Gaz. vol. 132; p. 974.
Fireproof building construction. C. Collins. No. 878,276; Feb. 4; Sp. p. 784; Dr. p. 157; Gaz. vol. 132; p. 975.
Fireproof shutter. J. Cahill. No. 874,841; Feb. 4; Sp. p. 917; Dr. p. 183; Gaz. vol. 132; p. 996.
Fish-bait. J. Hansen. No. 879,869; Feb. 25; Sp. p. 4089; Dr. p. 858; Gaz. vol. 132; p. 1600.
Fish-line float. J. S. Denning. No. 878,362; Feb. 4; Sp. p. 952; Dr. p. 191; Gaz. vol. 132; p. 1003.
Fish scaling and cleaning machine. G. P. Yeakel. No. 878,174; Feb. 4; Sp. p. 593; Dr. pp. 121-2; Gaz. vol. 132; p. 941.
Fish stringer or holder. O. C. Guilford. No. 878,626; Feb. 11; Sp. p. 1588; Dr. p. 322; Gaz. vol. 132; p. 1125.
Fish-trap. A. Murdoch. No. 878,820; Feb. 11; Sp. p. 1960; Dr. p. 403; Gaz. vol. 132; p. 1187.
Fish-trap. J. W. Angel. No. 879,136; Feb. 18; Sp. p. 2567; Dr. p. 534; Gaz. vol. 132; p. 1327.
Fish-trap. R. E. Allday. No. 879,432; Feb. 18; Sp. p. 3163; Dr. p. 658; Gaz. vol. 132; p. 1425.
Fisherman's type. C. S. Ruggles. No. 880,045; Feb. 25; Sp. p. 4467; Dr. p. 938; Gaz. vol. 132; p. 1659.
Fishing apparatus. S. E. Gladding. No. 879,863; Feb. 25; Sp. p. 4083; Dr. p. 856; Gaz. vol. 132; p. 1599.
Fishing-reel spool. W. Shakespeare, Jr. No. 879,420; Feb. 18; Sp. p. 3142; Dr. p. 654; Gaz. vol. 132; p. 1422.
Fishing-rod trimming. W. R. Wheeler. No. 878,757; Feb 11; Sp. p. 1829; Dr. p. 378; Gaz. vol. 132; p. 1167.
Fishing-tool. W. H. Button and E. Dyer. No. 879,812; Feb. 18; Sp. p. 3680; Dr. p. 824; Gaz. vol. 132; p. 1548.
Fishing, Trawling-net for use in herring or other. J. A. Farms. No. 880,009; Feb. 25; Sp. p. 4590; Dr. p. 948; Gaz. vol. 132; p. 1666.
Flag-signal and case, Locomotive. J. F. Lyon. No. 877,955; Feb. 4; Sp. p. 79; Dr. p. 16; Gaz. vol. 132; p. 852.
Flange-making process. J. H. Taylor. No. 879,925; Feb. 25; Sp. p. 4231; Dr. p. 884; Gaz. vol. 132; p. 1621.
Flashback-stop. D. O'Keefe. No. 879,577; Feb. 18; Sp. p. 3470; Dr. p. 728; Gaz. vol. 132; p. 1473.
Flask: *See* Molder's flask.
Floor-finishing apparatus. N. D. S. K. Beck. No. 878,200; Feb. 4; Sp. p. 772; Dr. p. 155; Gaz. vol. 132; p. 972.
Floor-joint for soil-pipes. F. Jackson. No. 879,176; Feb. 18; Sp. p. 2949; Dr. p. 552; Gaz. vol. 132; p. 1342.
Floor system. T. Schillinger. No. 879,009; Feb. 11; Sp. p. 2304; Dr. p. 481; Gaz. vol. 132; p. 1246.
Flour-bleaching apparatus. G. B. McFarland. No. 878,738; Feb. 11; Sp. p. 1790; Dr. p. 371; Gaz. vol. 132; p. 1161.
Flow-controller, Automatic. J. W. Ledoux. No. 879,557; Feb. 18; Sp. p. 3423; Dr. p. 717; Gaz. vol. 132; p. 1466.
Flow-controller, Automatic. J. W. Ledoux. No. 879,558; Feb. 18; Sp. p. 3424; Dr. p. 717; Gaz. vol. 132; p. 1466.
Flue-stop. C. C. Luman. No. 879,660; Feb. 18; Sp. p. 3643; Dr. p. 762; Gaz. vol. 132; p. 1499.
Fluid-pressure brake system. G. M. Spencer. No. 877,960; Feb. 4; Sp. p. 125; Dr. p. 28; Gaz. vol. 132; p. 870.
Flush-tank. O. J. Fabian. (Reissue.) No. 12,747; Feb. 4; Sp. p. 1219; Dr. p. 252; Gaz. vol. 132; p. 1045.
Fly-catcher. H. A. Kessler. No. 878,207; Feb. 4; Sp. p. 652; Dr. p. 133; Gaz. vol. 132; p. 951.
Fly-catcher. F. Bayer. No. 878,208; Feb. 4; Sp. p. 771; Dr. p. 155; Gaz. vol. 132; p. 972.
Folder. O. Roesen. No. 878,529; Feb. 11; Sp. p. 1966; Dr. p. 407; Gaz. vol. 132; p. 1190.
Folder and mailing-case therefor, View-. M. Witt. No. 878,325; Feb. 4; Sp. p. 880; Dr. p. 175; Gaz. vol. 132; p. 990.
Folding-machine packing mechanism. C. A. Sturtevant. No. 879,841; Feb. 18; Sp. p. 4006; Dr. pp. 840-1 Gaz. vol. 132; p. 1559.
Folding seat. J. Z. Miller. No. 878,899; Feb. 11; Sp. p. 2079; Dr. pp. 432-3; Gaz. vol. 132; p. 1209.
Force-feed lubricator. E. L. Stuck. No. 879,210; Feb. 18; Sp. p. 2705; Dr. p. 565; Gaz. vol. 132; p. 1352.
Fork: *See* Corn-fork.
Fork-scraper. W. H. Abts. No. 879,134; Feb. 18; Sp. p. 2565; Dr. p. 534; Gaz. vol. 132; p. 1327.
Form for garments, Presser-. J. M. Stein. No. 879,017; Feb. 11; Sp. p. 2315; Dr. p. 484; Gaz. vol. 132; p. 1249.
Formaldehyde, Composition for generating. A. Eichengrün. No. 880,204; Feb. 25; Sp. p. 4779; Gaz. vol. 132; p. 1711.
Fountain: *See* Soda-water fountain.
Frame: *See* Car-frame; Piano-string frame; Printing-frame; Spinning, drawing, roving, and like frame; Spinning or twisting frame Tire-frame; Truck-frame; Umbrella or parasol frame.
Framing-spacer, Automatic. J. Broadley. No. 878,606; Feb. 11; Sp. p. 1536; Dr. p. 313; Gaz. vol. 132; p. 1118.
Fraud detecting and preventing means and method. E. A. Evans. No. 878,366; Feb. 4; Sp. p. 958; Dr. p. 192; Gaz. vol. 132; p. 1004
Fresser. J. D. Collins. No. 880,360; Feb. 25; Sp. p. 5075; Dr. p. 1072; Gaz. vol. 132; p. 1762.
Friction-coupling, Cone. H. Baumgartner-Mica. No. 878,035; Feb. 4; Sp. p. 296; Dr. p. 63; Gaz. vol. 132; p. 896.
Friction coupling or clutch. C. Krämer. No. 879,274; Feb. 18; Sp. p. 2824; Dr. p. 591; Gaz. vol. 132; p. 1374.

Friction-spring. P. Hien. No. 879,545; Feb. 18; Sp. p. 3401; Dr. pp. 712-13; Gaz. vol. 132; p. 1462.
Friction-top can. K. S. Breckenridge. No. 878,766; Feb. 11; Sp. p. 1850; Dr. p. 382; Gaz. vol. 132; p. 1170.
Fruit and vegetable cutter. S. D. Smithwick. No. 878,833; Feb. 11; Sp. p. 1971; Dr. p. 408; Gaz. vol. 132; p. 1191.
Fruit-box, Folding. H. F. Padgham. No. 879,836; Feb. 18; Sp. p. 3995; Dr. p. 836; Gaz. vol. 132; p. 1557.
Fruit-jar. W. J. Ferritt. No. 879,669; Feb. 18; Sp. p. 3668; Dr. p. 766; Gaz. vol. 132; p. 1502.
Fuel, Machine for manufacturing peat. R. A. Kellond. No. 878,732; Feb. 11; Sp. p. 1780; Dr. p. 368; Gaz. vol. 132; p. 1159.
Fuel-manufacturing apparatus. P. Hoering. No. 878,480; Feb. 4; Sp. p. 1201; Dr. p. 247; Gaz. vol. 132; p. 1043.
Furnace: *See* Annealing-furnace; Boiler-furnace; Electric-arc furnace; Gas-burning furnace; Metallurgical furnace; Smelting-furnace; Smoke-consuming furnace.
Furnace-grate. H. Sieben and L. Danhoff. No. 878,246; Feb. 4; Sp. p. 725; Dr. p. 147; Gaz. vol. 132; p. 965.
Furnace-grate. W. O. Root. No. 879,908; Feb. 25; Sp. p. 4195; Dr. p. 876; Gaz. vol. 132; p. 1614.
Furnaces, &c., Ash-collecting box attachment for. J. Galvin. No. 879,822; Feb. 18; Sp. p. 3573; Dr. p. 748; Gaz. vol. 132; p. 1487.
Furnaces, Mechanical ore-feeder for blast-. F. S. Sanderson. No. 879,839; Feb. 18; Sp. p. 4001; Dr. pp. 837-8; Gaz. vol. 132; p. 1558.
Furnaces, Reversing-valve for regenerative. J. B. Nau. No. 878,496; Feb. 4; Sp. p. 847; Dr. p. 168; Gaz. vol. 132; p. 984.
Furniture-fastener. I. W. Sprout and R. E. Kester. No. 878,753; Feb. 11; Sp. p. 1818; Dr. p. 376; Gaz. vol. 132; p. 1166.
Furniture, Store. W. E. Bailey and W. A. Kelsey. No. 878,853; Feb. 11; Sp. p. 2012; Dr. p. 416; Gaz. vol. 132; p. 1198.
Fuse-block, Automatic multiple. W. C. Mayo and J. Houlehan. No. 879,285; Feb. 18; Sp. p. 2842; Dr. pp. 596-7; Gaz. vol. 132; p. 1377.
Fuse, Electric. S. J. Leveen. No. 878,212; Feb. 4; Sp. p. 657; Dr. p. 135; Gaz. vol. 132; p. 953.
Gage: *See* Hair-spring gage; Water-gage.
Gage and circuit-closer, Combined. J. F. Raynes. No. 878,423; Feb. 4; Sp. p. 1061; Dr. p. 215; Gaz. vol. 132; p. 1023.
Gage for carpenters' rules, &c. R. R. Lea. No. 877,984; Feb. 4; Sp. p. 78; Dr. p. 16; Gaz. vol. 132; p. 862.
Gaining-machine. J. R. Thomas. No. 880,177; Feb. 25; Sp. p. 4718; Dr. p. 997; Gaz. vol. 132; p. 1702.
Galleys, End piece for. O. L. Carter. No. 878,503; Feb. 11; Sp. p. 1307; Dr. p. 264; Gaz. vol. 132; p. 1063.
Game apparatus. J. L. E. Pell and E. L. C. Clark. No. 878,309; Feb. 4; Sp. p. 854; Dr. p. 169; Gaz. vol. 132; p. 985.
Game apparatus. S. D. Bowers. No. 878,334; Feb. 4; Sp. p. 899; Dr. p. 180; Gaz. vol. 132; p. 994.
Game apparatus. F. H. Cook. No. 879,036; Feb. 11; Sp. p. 2344; Dr. p. 490; Gaz. vol. 132; p. 1254.
Game apparatus. A. Iwan. No. 879,469; Feb. 18; Sp. p. 3244; Dr. p. 676; Gaz. vol. 132; p. 1437.
Game-counter. J. C. Lewis. No. 879,183; Feb. 18; Sp. p. 2959; Dr. p. 554; Gaz. vol. 132; p. 1344.
Garment. J. M. Van Orden. No. 879,338; Feb. 18; Sp. p. 2949; Dr. p. 615; Gaz. vol. 132; p. 1394.
Garment, Combination-. M. E. Rogers. No. 878,237; Feb. 4; Sp. p. 704; Dr. p. 145; Gaz. vol. 132; p. 961.
Garment-fastener. G. W. Cummings, Jr. No. 879,369; Feb. 18; Sp. p. 3020; Dr. p. 630; Gaz. vol. 132; p. 1405.
Garment-supporter. M. Hirsch. No. 878,137; Feb. 4; Sp. p. 481; Dr. p. 103; Gaz. vol. 132; p. 928.
Garment-supporter. J. M. Johnson. No. 878,302; Feb. 11; Sp. p. 1923; Dr. p. 397; Gaz. vol. 132; p. 1182.
Garment-supporter clasp. G. N. Hall. No. 879,808; Feb. 25; Sp. p. 4088; Dr. p. 858; Gaz. vol. 132; p. 1600.
Garter. B. E. Paneth. No. 878,084; Feb. 4; Sp. p. 390; Dr. p. 81; Gaz. vol. 132; p. 911.
Gas and acetylene burners, Lighting attachment for. C. J. Larkin. No. 879,824; Feb. 18; Sp. p. 3971; Dr. p. 831; Gaz. vol. 132; p. 1553.
Gas-burner. E. S. Luthon. No. 879,556; Feb. 18; Sp. p. 3422; Dr. p. 716; Gaz. vol. 132; p. 1465.
Gas-burner. E. E. Kehnert. No. 879,823; Feb. 18; Sp. p. 3970; Dr. p. 831; Gaz. vol. 132; p. 1553.
Gas-burner. F. C. Vearing. No. 880,112; Feb. 25; Sp. p. 4581; Dr. p. 965; Gaz. vol. 132; p. 1680.
Gas-burner device, Distance-lighting. R. N. Oakman. No. 879,830; Feb. 25; Sp. p. 4134; Dr. p. 866; Gaz. vol. 132; p. 1607.
Gas burner, Natural-. J. W. Chamberlain. No. 879,735; Feb. 18; Sp. p. 3794; Dr. p. 796; Gaz. vol. 132; p. 1523.
Gas-burner safety device. J. N. Reynolds. No. 880,097; Feb. 25; Sp. p. 4554; Dr. p. 959; Gaz. vol. 132; p. 1675.
Gas-burners, Globe-holder for. W. Livingstone. No. 878,299; Feb. 4; Sp. p. 835; Dr. p. 166; Gaz. vol. 132; p. 982.
Gas-burning furnace. O. H. P. Basom. No. 880,000; Feb. 25; Sp. p. 4362; Dr. p. 914; Gaz. vol. 132; p. 1644.
Gas-conduits, Automatic water-level controller for water-separators of. A. Billouez. No. 878,858; Feb. 11; Sp. p. 2024; Dr. p. 418; Gaz. vol. 132; p. 1199.
Gas-engine. W. T. Maxwell. No. 878,888; Feb. 11; Sp. p. 2075; Dr. p. 432; Gaz. vol. 132; p. 1209.
Gas-engine. J. S. Benson. No. 879,726; Feb. 18; Sp. p. 3781; Dr. p. 792; Gaz. vol. 132; p. 1521.
Gas generator, Acetylene-. L. Sussman. No. 880,110; Feb. 25; Sp. p. 4579; Dr. p. 964; Gaz. vol. 132; p. 1679.
Gas-generators, Apparatus for feeding fuel to. C. F. Cattell. No. 877,905; Feb. 4; Sp. p. 21; Dr. pp. 4-5; Gaz. vol. 132; p. 852.
Gas-holder. H. A. Carpenter. No. 880,441; Feb. 25; Sp. p. 5261; Dr. p. 1107; Gaz. vol. 132; p. 1790.
Gas, Manufacturing. C. H. Rider. No. 879,321; Feb. 18; Sp. p. 2923; Dr. p. 610; Gaz. vol. 132; p. 1389.
Gas-manufacturing apparatus, Fuel-. C. H. Rider. No. 879,320; Feb. 18; Sp. p. 2921; Dr. p. 609; Gaz. vol. 132; p. 1389.
Gas-pressure-regulating device. T. B. Keogh. No. 877,932; Feb. 4; Sp. p. 75; Dr. p. 15; Gaz. vol. 132; p. 861.
Gas-pressure regulator. P. Keller. No. 879,472; Feb. 18; Sp. p. 3246; Dr. p. 676; Gaz. vol. 132; p. 1437.
Gas-producer. R. B. Cissel. No. 879,441; Feb. 18; Sp. p. 3181; Dr. p. 662; Gaz. vol. 132; p. 1428.
Gas-producer. G. J. Weber. No. 879,505; Feb. 18; Sp. p. 3312; Dr. p. 693; Gaz. vol. 132; p. 1449.
Gas-producer. H. E. Smythe. No. 879,920; Feb. 25; Sp. p. 4222; Dr. pp. 880-1; Gaz. vol. 132; p. 1619.
Gas-producers, Feeding fuel into. H. F. Smith. No. 880,411; Feb. 25; Sp. p. 5192; Dr. p. 1094; Gaz. vol. 132; p. 1780.
Gas-purifier. W. Towns. No. 879,219; Feb. 18; Sp. p. 2723; Dr. p. 568; Gaz. vol. 132; p. 1355.
Gas-retort charging and drawing machine. H. E. Carpenter. No. 880,440; Feb. 25; Sp. p. 5259; Dr. pp. 1106-7; Gaz. vol. 132; p. 1790.
Gases and gas mixtures by means of voltaic arcs, Apparatus for treating. A. J. Petersson. No. 880,464; Feb. 25; Sp. p. 5314; Dr. p. 1118; Gaz. vol. 132; p. 1799.
Gases and gas mixtures by means of voltaic arcs, Treating. A. J. Petersson. No. 880,037; Feb. 25; Sp. p. 4454; Dr. p. 935; Gaz. vol. 132; p. 1656.
Gases, Apparatus and process for burning acetylene or similar. J. Harris. No. 878,461; Feb. 4; Sp. p. 1135; Dr. p. 233; Gaz. vol. 132. p. 1035.
Gases, Separation of. J. Dewar. No. 879,129; Feb. 11; Sp. p. 2548; Gaz. vol. 132; p. 1284.
Gate: *See* End-gate; Farm-gate; Lock-gate; Valve-gate.
Gate. W. S. Flick. No. 877,920; Feb. 4; Sp. p. 51; Dr. pp. 10-11; Gaz. vol. 132; p. 857.
Gate. T. J. Hightower. No. 879,049; Feb. 11; Sp. p. 2366; Dr. p. 495; Gaz. vol. 132; p. 1250.
Gate. O. J. Wyman. No. 879,507; Feb. 18; Sp. p. 3319; Dr. p. 693; Gaz. vol. 132; p. 1450.
Gate. O. Van Tassell. No. 879,701; Feb. 18; Sp. p. 3733; Dr. pp. 782-3; Gaz. vol. 132; p. 1513.
Gate, J. F. S. Goble. No. 880,295; Feb. 25; Sp. p. 4968; Dr. p. 1048; Gaz. vol. 132; p. 1742.
Gear-generating machine. E. R. Fellows. No. 879,531; Feb. 18; Sp. p. 3358; Dr. pp. 701-3; Gaz. vol. 132; p. 1457.
Gear, Reversing-. F. G. Gies. No. 878,132; Feb. 4; Sp. p. 473; Dr. p. 101; Gaz. vol. 132; p. 926.
Gearing. C. Campo. No. 878,502; Feb. 11; Sp. p. 1305; Dr. pp. 263-4; Gaz. vol. 132; p. 1063.
Gearing. B. A. King. No. 879,108; Feb. 11; Sp. p. 2508; Dr. p. 521; Gaz. vol. 132; p. 1277.
Gearing. N. E. Howard. No. 879,549; Feb. 18; Sp. p. 3411; Dr. p. 715; Gaz. vol. 132; p. 1464.
Gearing. C. A. Shive. No. 880,336; Feb. 25; Sp. p. 5034; Dr. p. 1062; Gaz. vol. 132; p. 1754.
Gearing, Transmission-. A. O. Carman. No. 878,609; Feb. 11; Sp. p. 1546; Dr. p. 315; Gaz. vol. 132; p. 1119.
Gearing, Transmission-. E. B. Cribb. No. 878,611; Feb. 11; Sp. p. 1555; Dr. p. 316; Gaz. vol. 132; p. 1120.
Gearing, Variable-speed. B. M. Coffee. No. 879,086; Feb. 11; Sp. p. 2458; Dr. p. 512; Gaz. vol. 132; p. 1270.
Generator: *See* Electric generator; Gas-generator; Steam-generator.
Gin-feeder, Pneumatic. R. L. Hollingsworth. No. 879,771; Feb. 18; Sp. p. 3859; Dr. p. 808; Gaz. vol. 132; p. 1535.
Glass-gatherer, Mechanical. W. Newby. No. 879,889; Feb. 25; Sp. p. 4130; Dr. p. 866; Gaz. vol. 132; p. 1607.
Glass pressing and blowing machine. A. W. Beeson. No. 877,961; Feb. 4; Sp. p. 166; Dr. pp. 37-8; Gaz. vol. 132; p. 877.
Glass, Table for casting. L. Rembaux. No. 879,491; Feb. 18; Sp. p. 3282; Dr. p. 686; Gaz. vol. 132; p. 1444.
Glass vessels, Apparatus for removing glaze from. J. A. Hicks. No. 879,167; Feb. 18; Sp. p. 2936; Dr. p. 550; Gaz. vol. 132; p. 1340.
Glassware, Apparatus for fire-finishing. R. Haley. No. 877,923; Feb. 4; Sp. p. 59; Dr. pp. 11-12; Gaz. vol. 132; p. 859.
Glassware, Apparatus for the manufacture of hollow. C. F. Cox. No. 880,482; Feb. 25; Sp. p. 5355; Dr. pp. 1128-9; Gaz. vol. 132; p. 1805.
Glaze for the interior of vats and the like. W. Herms. No. 880,141; Feb. 25; Sp. p. 4646; Gaz. vol. 132; p. 1689.
Gluing-clamp. E. Barker. No. 878,491; Feb. 11; Sp. p. 1230; Dr. pp. 254-5; Gaz. vol. 132; p. 1079.
Go-cart, Folding. M. B. Riffo. No. 879,907; Feb. 25; Sp. p. 4192; Dr. p. 875; Gaz. vol. 132; p. 1614.
Go-cart, Folding. C. S. Gross. No. 880,211; Feb. 25; Sp. p. 4791; Dr. p. 1015; Gaz. vol. 132; p. 1713.
Goggles. C. F. Dieckmann. No. 879,749; Feb. 18; Sp. p. 3823; Dr. p. 801; Gaz. vol. 132; p. 1529.
Gold-leaf and the like, Apparatus for applying ribbon. G. Bräunlein. No. 878,184; Feb. 4; Sp. p. 610; Dr. p. 125; Gaz. vol. 132; p. 945.
Golf-ball. W. Taylor. No. 878,254; Feb. 4; Sp. p. 743; Dr. p. 150; Gaz. vol. 132; p. 968.
Golf-ball. C. L. Reade. No. 879,981; Feb. 25; Sp. p. 4328; Dr. p. 906; Gaz. vol. 132; p. 1638.
Golf-ball. E. W. Thurlow. No. 880,342; Feb. 25; Sp. p. 5046; Dr. p. 1066; Gaz. vol. 132; p. 1756.
Governing device, Automatic. G. M. Spencer. No. 878,571; Feb. 11; Sp. p. 1449; Dr. p. 295; Gaz. vol. 132; p. 1106.
Governor. W. H. Glocker and W. M. White. No. 878,377; Feb. 4; Sp. p. 975; Dr. p. 196; Gaz. vol. 132; p. 1008.
Governor and valve movement. G. Wolke. No. 878,105; Feb. 4; Sp. p. 427; Dr. p. 90; Gaz. vol. 132; p. 917.
Governor, Gas-engine. J. V. Rice, Jr. No. 878,826; Feb. 11; Sp. p. 1961; Dr. pp. 405-6; Gaz. vol. 132; p. 1189.
Grader and excavator. W. F. Fink. No. 878,283; Feb. 4; Sp. p. 797; Dr. pp. 159-60; Gaz. vol. 132; p. 977.

Grader drag, Duplex road-. G. Alexander. No. 879,806; Feb. 18; Sp. p. 3821; Dr. p. 821; Gaz. vol. 132; p. 1547.
Grader, Elevating-. L. V. Brophy. No. 879,607; Feb. 18; Sp. p. 3545; Dr. p. 742; Gaz. vol. 132; p. 1481.
Grader, horse-builder, digger, and conveyer, Road-. J. W. Baker. No. 880,268; Feb. 25; Sp. p. 4915; Dr. p. 1040; Gaz. vol. 132; p. 1733.
Grader, Road-. E. Lee. No. 878,643; Feb. 11; Sp. p. 1616; Dr. p. 330; Gaz. vol. 132; p. 1131.
Grader, Road-. F. Hummel. No. 879,286; Feb. 18; Sp. p. 3053; Dr. pp. 635-6; Gaz. vol. 132; p. 1409.
Grader, Road-. J. V. Kruse. No. 879,970; Feb. 25; Sp. p. 4310; Dr. p. 901; Gaz. vol. 132; p. 1635.
Grain-cutting machine. J. T. Neild. No. 879,666; Feb. 18; Sp. p. 3662; Dr. p. 765; Gaz. vol. 132; p. 1501.
Grain-drill. T. B. Rowell. No. 879,495; Feb. 18; Sp. p. 3294; Dr. p. 689; Gaz. vol. 132; p. 1446.
Grain drying and cooling machine. S. J. McCarthy. No. 877,942; Feb. 4; Sp. p. 97; Dr. p. 22; Gaz. vol. 132; p. 865.
Grain-mill. S. Vessot. No. 878,698; Feb. 11; Sp. p. 1690; Dr. pp. 351-2; Gaz. vol. 132; p. 1146.
Grain-shakers, Strain-equalizer for. E. Anderson. No. 878,597; Feb. 11; Sp. p. 1524; Dr. p. 310; Gaz. vol. 132; p. 1116.
Grain-shocker. J. Boda. No. 879,850; Feb. 25; Sp. p. 4032; Dr. pp. 845-7; Gaz. vol. 132; p. 1594.
Grain-shockers, Tripping and bundle-counting mechanism for. J. Boda. No. 879,834; Feb. 18; Sp. p. 3991; Dr. pp. 835-6; Gaz. vol. 132; p. 1557.
Grain tank and elevator. J. W. Tobin. No. 878,496; Feb. 4; Sp. p. 1213; Dr. pp. 250-1; Gaz. vol. 132; p. 1044.
Gramophone-record tablets, Making. H. S. Berliner. No. 878,931; Feb. 11; Sp. p. 2161; Dr. p. 451; Gaz. vol. 132; p. 1222.
Grate, Water-cooled. W. C. Richardson. No. 879,492; Feb. 18; Sp. p. 3284; Dr. pp. 686-7; Gaz. vol. 132; p. 1444.
Grater, parer, and corer, Combined. C. E. Segelcke. No. 879,417; Feb. 18; Sp. p. 3134; Dr. p. 651; Gaz. vol. 132; p. 1421.
Grater, Potato-. H. Halbach. No. 880,022; Feb. 25; Sp. p. 4407; Dr. p. 926; Gaz. vol. 132; p. 1651.
Grease-cup. F. Beemer. No. 879,026; Feb. 11; Sp. p. 2327; Dr. p. 487; Gaz. vol. 132; p. 1251.
Grinding-machine. A. B. Landis. No. 879,276; Feb. 18; Sp. p. 2825; Dr. p. 592; Gaz. vol. 132; p. 1374.
Grinding-machine. A. B. Landis. No. 879,277; Feb. 18; Sp. p. 2828; Dr. pp. 592-3; Gaz. vol. 132; p. 1375.
Grinding-machine. J. G. Blessing. No. 880,120; Feb. 25; Sp. p. 4600; Dr. pp. 969-70; Gaz. vol. 132; p. 1683.
Grinding-machine. J. G. Blessing. No. 880,138; Feb. 25; Sp. p. 4740; Dr. pp. 1003-4; Gaz. vol. 132; p. 1706.
Grinding machine, Shear-. G. Wieber. No. 878,050; Feb. 4; Sp. p. 283; Dr. p. 61; Gaz. vol. 132; p. 904.
Grinding-machine work-rest. J. J. Thacher. No. 879,214; Feb. 18; Sp. p. 2714; Dr. p. 566; Gaz. vol. 132; p. 1353.
Grinding or polishing wheel. C. B. Wattles. No. 879,504; Feb. 18; Sp. p. 3310; Dr. p. 692; Gaz. vol. 132; p. 1449.
Grinding-roller, Antifriction. H. Besser. No. 879,807; Feb. 18; Sp. p. 3923; Dr. p. 822; Gaz. vol. 132; p. 1547.
Gripping device. O. E. McMahon. No. 880,000; Feb. 25; Sp. p. 4546; Dr. p. 957; Gaz. vol. 132; p. 1673.
Ground-connection clamp. W. H. Blood, Jr. No. 879,940; Feb. 25; Sp. p. 4254; Dr. p. 889; Gaz. vol. 132; p. 1625.
Guard device. A. S. Josepha. No. 878,069; Feb. 4; Sp. p. 362; Dr. p. 74; Gaz. vol. 132; p. 906.
Gun, Air-. D. F. Polley. No. 878,560; Feb. 11; Sp. p. 1430; Dr. p. 292; Gaz. vol. 132; p. 1103.
Gun carriage, Field-. A. T. Dawson and G. T. Buckham. No. 878,350; Feb. 4; Sp. p. 942; Dr. pp. 188-9; Gaz. vol. 132; p. 1002.
Gun-rest. J. Jeranek. No. 879,052; Feb. 11; Sp. p. 2372; Dr. p. 496; Gaz. vol. 132; p. 1260.
Gun-sight, Adjustable. L. C. Bevier. No. 878,857; Feb. 11; Sp. p. 2022; Dr. p. 417; Gaz. vol. 132; p. 1199.
Guns, Collimating-sight for heavy. E. L. Zalinski. No. 878,750; Feb. 11; Sp. p. 1832; Dr. pp. 378-9; Gaz. vol. 132; p. 1168.
Hacksaw. W. M. Stebbins. No. 878,160; Feb. 4; Sp. p. 525; Dr. p. 113; Gaz. vol. 132; p. 936.
Hair dresser and trimmer. R. A. McDonald and J. Salter. No. 879,509; Feb. 18; Sp. p. 3444; Dr. p. 721; Gaz. vol. 132; p. 1470.
Hair-dyer. L. Stafford. No. 877,980; Feb. 4; Sp. p. 130; Dr. p. 29; Gaz. vol. 132; p. 871.
Hair-pin attachment. C. Hartman. No. 878,385; Feb. 4; Sp. p. 994; Dr. p. 200; Gaz. vol. 132; p. 1011.
Hair-spring gage, Watchmaker's. E. Clark. No. 878,346; Feb. 4; Sp. p. 923; Dr. p. 184; Gaz. vol. 132; p. 998.
Hair-tonic. F. J. Pieper. No. 879,191; Feb. 18; Sp. p. 2674; Gaz. vol. 132; p. 1246.
Half-tone cuts, Making. M. C. Cochran. No. 878,505; Feb. 11; Sp. p. 1311; Gaz. vol. 132; p. 1084.
Hall-rack. F. M. Dale. No. 880,283; Feb. 25; Sp. p. 4947; Dr. p. 1045; Gaz. vol. 132; p. 1737.
Hame-fastener. T. Pangburn. No. 878,557; Feb. 11; Sp. p. 1423; Dr. p. 291; Gaz. vol. 132; p. 1102.
Hame-fastener. J. W. Gonce. No. 879,098; Feb. 11; Sp. p. 2473; Dr. p. 517; Gaz. vol. 132; p. 1274.
Hame-fastener. A. B. Corcillus. No. 879,813; Feb. 18; Sp. p. 3931; Dr. p. 824; Gaz. vol. 132; p. 1549.
Hammer, Bush-. A. Pinel. No. 878,559; Feb. 11; Sp. p. 1428; Dr. p. 292; Gaz. vol. 132; p. 1102.
Hammer, Pneumatic. J. Keller. No. 879,105; Feb. 11; Sp. p. 2494; Dr. p. 519; Gaz. vol. 132; p. 1276.
Hammock-stand. H. M. Underwood. No. 879,221; Feb. 18; Sp. p. 2725; Dr. p. 568; Gaz. vol. 132; p. 1356.
Hand, Artificial. C. M. Broady. No. 879,300; Feb. 18; Sp. p. 2907; Dr. p. 627; Gaz. vol. 132; p. 1402.
Handle: *See* Basket-handle; Wire handle.
Handle-brace. W. H. Coldwell. No. 878,867; Feb. 11; Sp. p. 2041; Dr. p. 421; Gaz. vol. 132; p. 1203.
Hanger: *See* Cable-hanger; Door-hanger; Pulley-sustaining hanger; Skirt and waist hanger; Stovepipe-hanger; Suit-hanger; Winding-machine bracket-hanger.
Harmonica. F. Strauss. No. 880,109; Feb. 25; Sp. p. 4578; Dr. p. 964; Gaz. vol. 132; p. 1679.
Harness-hook. H. Greenland. No. 878,380; Feb. 4; Sp. p. 966; Dr. p. 199; Gaz. vol. 132; p. 1000.
Harness-rosette. E. A. Pflueger. No. 878,893; Feb. 11; Sp. p. 2093; Dr. p. 435; Gaz. vol. 132; p. 1211.
Harness, Shoeing-. W. M. Clement. No. 878,347; Feb. 4; Sp. p. 924; Dr. p. 184; Gaz. vol. 132; p. 998.
Harrow. F. W. Harrison. No. 880,301; Feb. 25; Sp. p. 4978; Dr. p. 1050; Gaz. vol. 132; p. 1744.
Harrow riding attachment. C. S. Sharp. No. 879,332; Feb. 18; Sp. p. 2942; Dr. pp. 613-14; Gaz. vol. 132; p. 1393.
Harvester, Cane-. J. D. Cooper. No. 880,362; Feb. 25; Sp. p. 5077; Dr. p. 1073; Gaz. vol. 132; p. 1763.
Harvester, Corn-. R. B. Brewer. No. 878,477; Feb. 4; Sp. p. 1177; Dr. p. 239; Gaz. vol. 132; p. 1041.
Harvester, Corn-. H. Hahn. No. 880,139; Feb. 25; Sp. p. 4640; Dr. pp. 979-80; Gaz. vol. 132; p. 1688.
Harvester, Corn-. J. Hettrich. No. 880,451; Feb. 25; Sp. p. 5279; Dr. p. 1111; Gaz. vol. 132; p. 1794.
Harvester, Flax-. J. H. Philipp. No. 878,311; Feb. 4; Sp. p. 857; Dr. p. 170; Gaz. vol. 132; p. 986.
Harvester, Potato-. F. W. Helmberger. No. 878,285; Feb. 4; Sp. p. 801; Dr. pp. 160-1; Gaz. vol. 132; p. 978.
Harvesting and husking machine, Corn. W. O. Powell. No. 880,467; Feb. 25; Sp. p. 5322; Dr. p. 1119; Gaz. vol. 132; p. 1800.
Hasp-lock. G. F. Darracott. No. 878,047; Feb. 4; Sp. p. 321; Dr. p. 67; Gaz. vol. 132; p. 900.
Hasp-lock. P. Durett. No. 879,948; Feb. 25; Sp. p. 4272; Dr. p. 893; Gaz. vol. 132; p. 1628.
Hat, coat, and umbrella rack. J. J. McNearney. No. 880,232; Feb. 25; Sp. p. 4845; Dr. p. 1024; Gaz. vol. 132; p. 1721.
Hat-holder. M. F. Ma Loney. No. 878,514; Feb. 11; Sp. p. 1941; Dr. p. 402; Gaz. vol. 132; p. 1185.
Hat-holder. M. E. Crouse and J. E. Roberts. No. 880,364; Feb. 25; Sp. p. 5063; Dr. p. 1074; Gaz. vol. 132; p. 1763.
Hat, Lady's and child's. K. E. Mann. No. 878,219; Feb. 4; Sp. p. 671; Dr. p. 138; Gaz. vol. 132; p. 955.
Hay and hog rack. C. O. Strubhar. No. 879,209; Feb. 18; Sp. p. 2707; Dr. p. 564; Gaz. vol. 132; p. 1351.
Hay-barrack. G. A. Walker. No. 879,071; Feb. 11; Sp. p. 2409; Dr. p. 504; Gaz. vol. 132; p. 1265.
Hay-press. J. M. and E. C. Holderfield. No. 878,880; Feb. 11; Sp. p. 2063; Dr. p. 428; Gaz. vol. 132; p. 1207.
Hay-press. M. I. Wilson. No. 879,344; Feb. 18; Sp. p. 2969; Dr. p. 617; Gaz. vol. 132; p. 1396.
Hay-rack. E. A. W. Beemer. No. 880,118; Feb. 25; Sp. p. 4592; Dr. p. 967; Gaz. vol. 132; p. 1682.
Header and thresher, Combined. F. S. Holley and J. C. Whitford. No. 880,454; Feb. 25; Sp. p. 5286; Dr. p. 1113; Gaz. vol. 132; p. 1795.
Headlight. G. W. Brown. No. 879,727; Feb. 18; Sp. p. 3782; Dr. p. 798; Gaz. vol. 132; p. 1521.
Headlight blind, Locomotive-. F. J. Fewings. No. 879,377; Feb. 18; Sp. p. 3036; Dr. pp. 632-3; Gaz. vol. 132; p. 1407.
Headlight for automobiles, &c. W. D. Forbes. No. 880,289; Feb. 25; Sp. p. 4958; Dr. p. 1047; Gaz. vol. 132; p. 1740.
Headlight for horses. E. L. Richards. No. 878,898; Feb. 11; Sp. p. 2104; Dr. p. 438; Gaz. vol. 132; p. 1212.
Heat from one fluid to another, Apparatus for transmitting. W. J. Still. No. 880,417; Feb. 25; Sp. p. 5207; Dr. pp. 1097-8; Gaz. vol. 132; p. 1781.
Heat transference. C. R. Butler. No. 877,903; Feb. 4; Sp. p. 12; Dr. p. 2; Gaz. vol. 132; p. 851.
Heater: *See* Electric-heater; Feed-water heater; Hot-water heater; Oil-heater; Sad-iron heater; Water-heater.
Heaters, Apparatus for cleaning water-. G. J. Dehn. No. 878,230; Feb. 4; Sp. p. 792; Dr. p. 158; Gaz. vol. 132; p. 976.
Heating and ventilating system. W. R. Macdonald. No. 877,936; Feb. 4; Sp. p. 80; Dr. pp. 16-17; Gaz. vol. 132; p. 862.
Heel attachment, Shoe-. E. Rennie. No. 879,904; Feb. 25; Sp. p. 4196; Dr. p. 874; Gaz. vol. 132; p. 1613.
Heel, Detachable shoe-. L. Sedivi. No. 879,011; Feb. 11; Sp. p. 2307; Dr. p. 482; Gaz. vol. 132; p. 1247.
Heels to boots and shoes, Machine for attaching. V. Sandahl. No. 878,675; Feb. 11; Sp. p. 1670; Dr. p. 344-5; Gaz. vol. 132; p. 1141.
Hem-finder. G. F. Oldham. No. 879,304; Feb. 18; Sp. p. 2897; Dr. p. 604; Gaz. vol. 132; p. 1384.
Hemp-brake. G. E. Worth. No. 878,702; Feb. 11; Sp. p. 1721; Dr. p. 356; Gaz. vol. 132; p. 1150.
High-frequency discharge apparatus. J. E. Seeley. No. 880,046; Feb. 25; Sp. p. 4469; Dr. pp. 938-9; Gaz. vol. 132; p. 1659.
Hinge. W. B. Rodman. No. 879,057; Feb. 11; Sp. p. 2401; Dr. p. 502; Gaz. vol. 132; p. 1264.
Hinge. J. R. Hartman. No. 879,542; Feb. 18; Sp. p. 3329; Dr. p. 709; Gaz. vol. 132; p. 1461.
Hinge construction for safe and vault doors, Adjustable-. J. H. Williams. No. 879,229; Feb. 18; Sp. p. 2738; Dr. p. 571; Gaz. vol. 132; p. 1360.
Hinge, Door-. W. L. von de Marwitz. No. 880,217; Feb. 25; Sp. p. 5004; Dr. p. 1055; Gaz. vol. 132; p. 1749.
Hinge, Gate-. W. J. Pearson. No. 880,086; Feb. 26; Sp. p. 4453; Dr. p. 934; Gaz. vol. 132; p. 1656.
Hinge, Gate-. D. E. Stetler. No. 880,240; Feb. 25; Sp. p. 5042; Dr. p. 1064; Gaz. vol. 132; p. 1756.
Hoe. B. R. Williams. No. 878,932; Feb. 11; Sp. p. 2159; Dr. p. 445; Gaz. vol. 132; p. 1219.
Hoe, Surface-. J. A. Crummer. No. 877,913; Feb. 4; Sp. p. 58; Dr. p. 7; Gaz. vol. 132; p. 854.
Hoe, Wheel-. M. Ramsey. No. 878,861; Feb. 11; Sp. p. 1462; Dr. p. 303; Gaz. vol. 132; p. 1103.

Hoist. E. Y. Moore. No. 878,226; Feb. 4; Sp. p. 685; Dr. p. 141; Gaz. vol. 132; p. 957.
Hoisting and conveying apparatus. T. S. Miller and J. H. Dickinson. No. 878,962; Feb. 11; Sp. p. 2251; Dr. pp. 470-1; Gaz. vol. 132; p. 1235.
Hoisting and conveying apparatus. J. W. Cooper. No. 879,744; Feb. 18; Sp. p. 3813; Dr. p. 790; Gaz. vol. 132; p. 1527.
Hoisting and conveying device. T. S. Miller and J. H. Dickinson. No. 878,482; Feb. 4; Sp. p. 1204; Dr. p. 248; Gaz. vol. 132; p. 1043.
Hoisting and conveying device. T. S. Miller and J. H. Dickinson. No. 879,113; Feb. 11; Sp. p. 2520; Dr. pp. 523-4; Gaz. vol. 132; p. 1279.
Hoisting apparatus. A. P. Boyer. No. 878,335; Feb. 4; Sp. p. 900; Dr. p. 180; Gaz. vol. 132; p. 994.
Hoisting apparatus. T. B. Webster. No. 878,844; Feb. 11; Sp. p. 1989; Dr. p. 412; Gaz. vol. 132; p. 1195.
Hoisting device. H. J. Schmick. No. 879,679; Feb. 18; Sp. p. 3688; Dr. pp. 771-2; Gaz. vol. 132; p. 1506.
Hollow articles, Device for cleaning. W. H. Callahan. No. 878,768; Feb. 11; Sp. p. 1854; Dr. p. 383; Gaz. vol. 132; p. 1171.
Hoof-pad holder. A. M. Smith. No. 878,832; Feb. 11; Sp. p. 1970; Dr. p. 408; Gaz. vol. 132; p. 1191.
Hook: *See* Check-hook; Harness-hook; Lacing-hook.
Hook and eye. W. H. Knobloch and J. M. Burget. No. 878,464; Feb. 4; Sp. p. 1142; Dr. p. 234; Gaz. vol. 132; p. 1036.
Hook and eye. F. S. Slauter. No. 878,903; Feb. 11; Sp. p. 2110; Dr. p. 439; Gaz. vol. 132; p. 1213.
Hoop: *See* Embroidery-hoop.
Hopple for fowls. E. C. Rolfe. No. 880,043; Feb. 25; Sp. p. 4463; Dr. p. 937; Gaz. vol. 132; p. 1658.
Horse-detacher. Z. A. Lively. No. 878,812; Feb. 11; Sp. p. 1937; Dr. p. 401; Gaz. vol. 132; p. 1185.
Horse-hitch. W. H. Collins. No. 879,743; Feb. 18; Sp. p. 3812; Dr. p. 799; Gaz. vol. 132; p. 1527.
Horse-releaser. B. L. Sinclair and L. L. Leslie. No. 878,319; Feb. 4; Sp. p. 867; Dr. p. 173; Gaz. vol. 132; p. 988.
Horse-releaser. A. White. No. 878,323; Feb. 4; Sp. p. 878; Dr. p. 175; Gaz. vol. 132; p. 990.
Horse-releasing means for vehicles. J. H. Zoldowski and P. F. Baranek. No. 878,851; Feb. 11; Sp. p. 2009; Dr. p. 416; Gaz. vol. 132; p. 1197.
Horseshoe. J. P. Detwiler. No. 878,127; Feb. 4; Sp. p. 466; Dr. p. 90; Gaz. vol. 132; p. 924.
Horseshoe. P. G. Love. No. 878,886; Feb. 11; Sp. p. 2072; Dr. p. 431; Gaz. vol. 132; p. 1208.
Horseshoe. E. Wollet. No. 879,936; Feb. 25; Sp. p. 4250; Dr. p. 888; Gaz. vol. 132; p. 1624.
Horseshoe, Detachable. E. R. Lubbers. No. 879,781; Feb. 18; Sp. p. 3877; Dr. p. 812; Gaz. vol. 132; p. 1538.
Horseshoe, Nailless. J. A. Enright. No. 879,952; Feb. 25; Sp. p. 4278; Dr. p. 894; Gaz. vol. 132; p. 1629.
Horseshoe-pad. F. A. Johnson and T. A. Smith. No. 878,730; Feb. 11; Sp. p. 1778; Dr. p. 367; Gaz. vol. 132; p. 1158.
Horseshoeing-stall. L. Pendleton. No. 877,947; Feb. 4; Sp. p. 103; Dr. p. 24; Gaz. vol. 132; p. 866.
Hose-supporter. K. F. and F. G. Elker. No. 880,130; Feb. 25; Sp. p. 4617; Dr. p. 974; Gaz. vol. 132; p. 1685.
Hose-supporter clasp. J. Cohen. No. 878,350. Feb. 4; Sp. p. 929; Dr. p. 185; Gaz. vol. 132; p. 999.
Hose, Supporting-sheath for train-pipe coupling-. G. S. Wood. No. 880,060; Feb. 25; Sp. p. 4496; Dr. p. 944; Gaz. vol. 132; p. 1664.
Hot-air register. S. Tuttle. No. 878,257; Feb. 4; Sp. p. 747; Dr. p. 150; Gaz. vol. 132; p. 969.
Hot-water heater. J. A. and E. W. Coppridge. No. 878,356; Feb. 4; Sp. p. 938; Dr. p. 187; Gaz. vol. 132; p. 1001.
Hot-water heater. E. S. Decker and G. H. Gibby. No. 878,780; Feb. 11; Sp. p. 1880; Dr. p. 387; Gaz. vol. 132; p. 1175.
Hub-attaching device. S. Gnagy. No. 878,200; Feb. 4; Sp. p. 637; Dr. p. 130; Gaz. vol. 132; p. 949.
Hub-banding machine. O. A. Frick. No. 878,131; Feb. 4; Sp. p. 471; Dr. p. 101; Gaz. vol. 132; p. 926.
Hub, Vehicle-. W. M. Preston. No. 879,584; Feb. 18; Sp. p. 3455; Dr. p. 730; Gaz. vol. 132; p. 1475.
Hydraulic motor. C. L. Wilkins. No. 878,700; Feb. 11; Sp. p. 1716; Dr. p. 355; Gaz. vol. 132; p. 1149.
Hydraulic motor. O. F. Grant and J. G. McDowell. No. 880,298; Feb. 25; Sp. p. 4972; Dr. p. 1049; Gaz. vol. 132; p. 1743.
Hydrocarbon-burner. S. W. Bates. No. 877,907; Feb. 4; Sp. p. 1; Dr. p. 1; Gaz. vol. 132; p. 849.
Hydrocarbon-burner. S. W. Bates. No. 877,908; Feb. 4; Sp. p. 2; Dr. p. 1; Gaz. vol. 132; p. 849.
Hydrocarbon-motor. A. A. Low. No. 879,659; Feb. 18; Sp. p. 3643; Dr. p. 762; Gaz. vol. 132; p. 1499.
Ice-can. P. C. Burhans. No. 878,501; Feb. 11; Sp. p. 1304; Dr. p. 263; Gaz. vol. 132; p. 1082.
Ice-cream freezer. B. G. Butler. No. 878,709; Feb. 11; Sp. p. 1742; Dr. p. 360; Gaz. vol. 132; p. 1152.
Ice-creeper. A. B. Johnson. No. 877,929; Feb. 4; Sp. p. 71; Dr. p. 14; Gaz. vol. 132; p. 861.
Ice-cutting machine. F. White. No. 879,933; Feb. 25; Sp. p. 4246; Dr. pp. 887-8; Gaz. vol. 132; p. 1624.
Ice-harvesting machine. T. Diamond. No. 877,916; Feb. 4; Sp. p. 42; Dr. p. 8; Gaz. vol. 132; p. 856.
Ice-machine compressor. C. W. Miles. No. 878,483; Feb. 4; Sp. p. 1206; Dr. p. 249; Gaz. vol. 132; p. 1043.
Ice-road-making machine. A. Wettervik. No. 878,584; Feb. 11; Sp. p. 1494; Dr. pp. 303-4; Gaz. vol. 132; p. 1111.
Ice-tongs. G. A. Walker. No. 878,839; Feb. 11; Sp. p. 1981; Dr. p. 411; Gaz. vol. 132; p. 1193.
Impression-tray and cheek-distender, Combined. R. E. Sadler. No. 880,328; Feb. 25; Sp. p. 5018; Dr. p. 1059; Gaz. vol. 132; p. 1752.
Incandescent bodies for incandescent lights, Apparatus for hardening. M. Sensenschmidt. No. 879,302; Feb. 18; Sp. p. 2692; Dr. p. 561; Gaz. vol. 132; p. 1350.
Incandescent burner. A. G. Fell. No. 879,249; Feb. 18; Sp. p. 2775; Dr. pp. 581-2; Gaz. vol. 132; p. 1365.
Index. H. Denlinger. No. 878,612; Feb. 11; Sp. p. 1556; Dr. p. 317; Gaz. vol. 132; p. 1120.
Indicating and recording system. W. H. Bristol. No. 880,273; Feb. 25; Sp. p. 4923; Dr. p. 1042; Gaz. vol. 132; p. 1734.
Indicator: *See* Baling-press indicator; Poison-indicator.
Indicator-buttons, Making. H. Mueller. No. 879,788; Feb. 18; Sp. p. 3890; Dr. p. 816; Gaz. vol. 132; p. 1541.
Induction-coil. R. Varley. No. 878,435; Feb. 4; Sp. p. 1081; Dr. p. 220; Gaz. vol. 132; p. 1026.
Induction-coil system. I. C. Orswell. No. 878,467; Feb. 4; Sp. p. 1145; Dr. p. 235; Gaz. vol. 132; p. 1037.
Inhaler. A. F. Meisselbach. No. 878,223; Feb. 4; Sp. p. 677; Dr. p. 139; Gaz. vol. 132; p. 956.
Ink, Composition of matter for the removal of. B. R. Thomas. No. 878,689; Feb. 11; Sp. p. 1694; Gaz. vol. 132; p. 1145.
Ink, Composition of matter for the removal of. A. R. Mayer. No. 878,817; Feb. 11; Sp. p. 1947; Gaz. vol. 132; p. 1186.
Ink-well. A. Galley. No. 878,372; Feb. 4; Sp. p. 966; Dr. p. 194; Gaz. vol. 132; p. 1006.
Ink-well. J. D. Woods. No. 879,712; Feb. 18; Sp. p. 3752; Dr. p. 787; Gaz. vol. 132; p. 1516.
Inking-pad. D. T. O'Sullivan. No. 878,420; Feb. 4; Sp. p. 1057; Dr. p. 214; Gaz. vol. 132; p. 1022.
Inkstand. A. Wolz. No. 878,922; Feb. 11; Sp. p. 2141; Dr. p. 447; Gaz. vol. 132; p. 1219.
Inkstand. J. W. Jacobus. No. 879,470; Feb. 18; Sp. p. 3245; Dr. p. 676; Gaz. vol. 132; p. 1437.
Inkstand. F. A. Fricker. No. 879,624; Feb. 18; Sp. p. 3576; Dr. p. 749; Gaz. vol. 132; p. 1488.
Insect-destroyer. J. S. Peek. No. 879,838; Feb. 18; Sp. p. 3999; Dr. p. 837; Gaz. vol. 132; p. 1558.
Insect eggs and larvæ, Destroying. A. E. Nienstadt. No. 879,406; Feb. 18; Sp. p. 3111; Gaz. vol. 132; p. 1417.
Insole. N. C. Bohr. No. 878,453; Feb. 4; Sp. p. 1118; Dr. p. 229; Gaz. vol. 132; p. 1032.
Instep-arch support. W. M. Scholl. No. 880,245; Feb. 25; Sp. p. 4863; Dr. p. 1029; Gaz. vol. 132; p. 1725.
Instep-pad. M. Dorrity. No. 879,527; Feb. 18; Sp. p. 3350; Dr. p. 700; Gaz. vol. 132; p. 1456.
Insulation to electrical conductors, Apparatus for applying. L. W. Downes. No. 878,017; Feb. 11; Sp. p. 1568; Dr. pp. 319-20; Gaz. vol. 132; p. 1122.
Insulator. H. R. Markel. No. 878,302; Feb. 4; Sp. p. 839; Dr. p. 167; Gaz. vol. 132; p. 983.
Insulator. J. D. E. Duncan. No. 880,203; Feb. 25; Sp. p. 4775; Dr. pp. 1010-11; Gaz. vol. 132; p. 1710.
Insulator, Electric-wire. J. H. Hanson. No. 878,949; Feb. 11; Sp. p. 2190; Dr. p. 459; Gaz. vol. 132; p. 1228.
Insulator, Electrical. D. G. Bolton. No. 880,121; Feb. 25; Sp. p. 4605; Dr. p. 970; Gaz. vol. 132; p. 1683.
Insulator for electric wires. J. Caldwell. No. 879,033; Feb. 11; Sp. p. 2339; Dr. p. 489; Gaz. vol. 132; p. 1253.
Insulator for high-tension conductors. S. H. Summerscales. No. 880,418; Feb. 25; Sp. p. 5211; Dr. pp. 1098-9; Gaz. vol. 132; p. 1782.
Insulator for high-tension currents. L. Steinberger. No. 879,008; Feb. 11; Sp. p. 2403; Dr. p. 503; Gaz. vol. 132; p. 1264.
Insulator, High-potential. F. M. Locke. No. 878,646; Feb. 11; Sp. p. 1623; Dr. p. 331; Gaz. vol. 132; p. 1131.
Insulator-support. W. N. Smith. No. 878,679; Dec. 11; Sp. p. 1677; Dr. p. 346; Gaz. vol. 132; p. 1142.
Insulator-support. T. J. Creaghead. No. 878,870; Feb. 11; Sp. p. 2047; Dr. p. 423; Gaz. vol. 132; p. 1204.
Insulators, &c., Means for tying wires to. L. W. Gerdon. No. 878,520; Feb. 11; Sp. p. 1338; Dr. p. 271; Gaz. vol. 132; p. 1088.
Insulators, Press-mold for making. H. Wagner. No. 880,343; Feb. 25; Sp. p. 5047; Dr. p. 1066; Gaz. vol. 132; p. 1756.
Internal-combustion engine. R. S. Thompson. No. 878,578; Feb. 11; Sp. p. 1490; Dr. pp. 300-1; Gaz. vol. 132; p. 1109.
Internal-combustion engine. C. I. Longenecker. No. 878,647; Feb. 11; Sp. p. 1625; Dr. pp. 331-2; Gaz. vol. 132; p. 1132.
Internal-combustion engine. F. P. Carrier. No. 878,936; Feb. 11; Sp. p. 2174; Dr. p. 454; Gaz. vol. 132; p. 1224.
Internal-combustion engine. J. Braunwalder. No. 879,512; Feb. 18; Sp. p. 3328; Dr. p. 695; Gaz. vol. 132; p. 1452.
Internal-combustion engine. H. G. Underwood. No. 879,989; Feb. 25; Sp. p. 4340; Dr. p. 910; Gaz. vol. 132; p. 1640.
Iron: *See* Sad-iron.
Iron, Purifying. E. von Maltitz. No. 879,490; Feb. 18; Sp. p. 3260; Dr. p. 679; Gaz. vol. 132; p. 1440.
Ironing-board. L. Edgington. No. 879,040; Feb. 11; Sp. p. 2351; Dr. p. 492; Gaz. vol. 132, p. 1256.
Ironing-machine. L. C. Lewis. No. 879,561; Feb. 18; Sp. p. 3430; Dr. p. 719; Gaz. vol. 132; p. 1467.
Ironwork, Clip for structural. C. E. Rhorer. No. 879,905; Feb. 25; Sp. p. 4190; Dr. p. 875; Gaz. vol. 132; p. 1613.
Irrigator, Electrolytic. P. Del Gandio. No. 878,361; Feb. 4; Sp. p. 952; Dr. p. 190; Gaz. vol. 132; p. 1003.
Jack: *See* Draw-jack; Lifting-jack; Wheel-jack.
Jar: *See* Fruit-jar.
Jaws, Device for repairing fractured. P. Stukey. No. 878,577; Feb. 11; Sp. p. 1479; Dr. p. 300; Gaz. vol. 132; p. 1109.
Jewelry pinning and holding device. M. Greer. No. 878,523; Feb. 11; Sp. p. 1343; Dr. p. 272; Gaz. vol. 132; p. 1089.
Joint: *See* Dredge-bucket joint; Floor-joint; Pipe-joint; Radiator packing-joint; Rail-joint; Railway offset joint; Railway-rail joint.
Joint-binder. E. C. Glardon. No. 879,097; Feb. 11; Sp. p. 2477; Dr. p. 516; Gaz. vol. 132; p. 1273.

Joint device, Expansion-. F. Seiffert. No. 878,317; Feb. 4; Sp. p. 865; Dr p. 172; Gaz. vol. 132; p. 967.
Journal-bearing. F. L. Adams. No. 878,031; Feb. 4; Sp. p. 288; Dr. p. 61; Gaz. vol. 132; p. 895.
Journal-box, Car. E. Good. No. 879,459; Feb. 18; Sp. p. 3226; Dr. p. 671; Gaz. vol. 132; p. 1433.
Journal-box, Car-axle. C. T. Arnold. No. 878,328; Feb. 4; Sp. p. 886; Dr. p. 177; Gaz. vol. 132; p. 991.
Journal-box for road and other vehicles. J. E. Cooper. No. 878,355; Feb. 4; Sp. p. 937; Dr. pp. 186–7; Gaz. vol. 132; p. 1001.
Journaling device. N. S. Bök. No. 878,200; Feb. 11; Sp. p. 2026; Dr. p. 418; Gaz. vol. 132; p. 1200.
Keg for white lead, Sheet-steel. C. Stollberg. No. 878,576; Feb. 11; Sp. p. 1473; Dr. p. 290; Gaz. vol. 132; p. 1108.
Key: *See* Clock-key.
Key. O. Katzenberger. No. 877,930; Feb. 4; Sp. p. 72; Dr. p. 15; Gaz. vol. 132; p. 861.
Key-fastener for locks. F. H. Rogers. No. 880,102; Feb. 25; Sp. p. 4502; Dr. p. 961; Gaz. vol. 132; p. 1676.
Key-ring device. B. V. Clark and W. C. Cookson. No. 878,274; Feb. 4; Sp. p. 781; Dr. p. 156; Gaz. vol. 132; p. 974.
Key-socket. H. Hubbell. No. 878,633; Feb. 11; Sp. p. 1599; Dr. p. 326; Gaz. vol. 132; p. 1127.
Keyboard. A. B. Cross and B. L. Umberger. No. 877,911; Feb. 4; Sp. p. 35; Dr. p. 7; Gaz. vol. 132; p. 854.
Keyed instrument, Mechanically-playing. F. Moritz. No. 880,089; Feb. 25; Sp. p. 4545; Dr. p. 957; Gaz. vol. 132; p. 1673.
Kiln: *See* Brick-kiln; Roasting-kiln.
Kitchen appliance. M. R. Habermann. No. 879,539; Feb. 18; Sp. p. 3378; Dr. p. 706; Gaz. vol. 132; p. 1460.
Knee-rest. H. M. Landfield. No. 878,006; Feb. 4; Sp. p. 222; Dr. p. 48; Gaz. vol. 132; p. 887.
Knife: *See* Annular knife; Surgeon's knife; Trick-knife.
Knife. T. F. Burk. No. 880,123; Feb. 25; Sp. p. 4607; Dr. p. 971; Gaz. vol. 132; p. 1684.
Knives, Paring attachment for. E. L. De Vale. No. 879,857; Feb. 25; Sp. p. 4074; Dr. p. 853; Gaz. vol. 132; p. 1507.
Knitting-machine. R. W. Scott. No. 879,681; Feb. 18; Sp. p. 3690; Dr. pp. 772–3; Gaz. vol. 132; p. 1506.
Knitting-machine brake, Automatic. G. A. White. No. 879,506; Feb. 18; Sp. p. 3316; Dr. p. 693; Gaz. vol. 132; p. 1449.
Knitting-machine cam-adjusting mechanism. G. L. Ballard. No. 879,720; Feb. 18; Sp. p. 3764; Dr. p. 789; Gaz. vol. 132; p. 1519.
Knitting-machine dial. H. Garant. No. 878,792; Feb. 11; Sp. p. 1968; Dr. p. 392; Gaz. vol. 132; p. 1179.
Knitting-machine stop-motion. J. S. Crane. No. 880,013; Feb. 25; Sp. p. 4390; Dr. pp. 921–2; Gaz. vol. 132; p. 1648.
Knitting-machine thread-feeding mechanism. W. D. and L. C. Huse. No. 879,821; Feb. 18; Sp. p. 3962; Dr. p. 830; Gaz. vol. 132; p. 1558.
Knitting machines, Sectional plaiting device for straight-. P. Guenther. No. 878,724; Feb. 11; Sp. p. 1767; Dr. pp. 365–6; Gaz. vol. 132; p. 1157.
Label, Bottle-. J. F. Ahrens. No. 880,115; Feb. 25; Sp. p. 4587; Dr. p. 966; Gaz. vol. 132; p. 1681.
Lace and similar fabrics, Machine for stretching and pressing. A. C. Dee. No. 878,712; Feb. 11; Sp. p. 1746; Dr. p. 361; Gaz. vol. 132; p. 1153.
Lace and tongue-stay, Shoe-. H. Downer. No. 878,129; Feb. 4; Sp. p. 469; Dr. p. 100; Gaz. vol. 132; p. 925.
Lace fastener, Shoe-. G. H. Nicholls. No. 880,323; Feb. 25; Sp. p. 5011; Dr. p. 1057; Gaz. vol. 132; p. 1750.
Lacing and tongue holder, Combined shoe. C. J. Key. No. 879,272; Feb. 18; Sp. p. 2821; Dr. p. 591; Gaz. vol. 132; p. 1373.
Lacing attachment for shoe-trees. J. A. Wallace. No. 878,581; Feb. 11; Sp. p. 1488; Dr. p. 301; Gaz. vol. 132; p. 1110.
Lacing-hook. E. B. Stimpson. No. 880,251; Feb. 25; Sp. p. 4879; Dr. p. 1032; Gaz. vol. 132; p. 1728.
Ladder, Collapsible. W. J. Blundell. No. 878,332; Feb. 4; Sp. p. 893; Dr. p. 179; Gaz. vol. 132; p. 993.
Ladle-carrier. C. H. Imboden and J. J. Lawlor. No. 878,002; Feb. 4; Sp. p. 211; Dr. p. 46; Gaz. vol. 132; p. 884.
Lamp. A. L. Glaentzer. No. 878,376; Feb. 4; Sp. p. 973; Dr. pp. 195–6; Gaz. vol. 132; p. 1007.
Lamp and lantern. C. Bergener. No. 880,184; Feb. 25; Sp. p. 4731; Dr. p. 1001; Gaz. vol. 132; p. 1704.
Lamp, Arc-. O. Könitzer. No. 879,180; Feb. 18; Sp. p. 3054; Dr. p. 553; Gaz. vol. 132; p. 1343.
Lamp-burner. J. A. Heisebeck. No. 878,063; Feb. 4; Sp. p. 244; Dr. p. 72; Gaz. vol. 132; p. 904.
Lamp control, Incandescent-. R. E. Kimball. No. 879,555; Feb. 18; Sp. p. 3420; Dr. p. 716; Gaz. vol. 132; p. 1465.
Lamp, Electric-arc. T. E. Adams. No. 880,435; Feb. 25; Sp. p. 5250; Dr. p. 1104; Gaz. vol. 132; p. 1788.
Lamp filament and its manufacture, Electric-incandescent-. F. M. F. Cazin. No. 879,085; Feb. 11; Sp. p. 2452; Dr. p. 511; Gaz. vol. 132; p. 1270.
Lamp, Gas-. A. H. Humphrey. No. 878,397; Feb. 4; Sp. p. 1012; Dr. pp. 204–5; Gaz. vol. 132; p. 1014.
Lamp, Gas-. A. H. Humphrey. No. 878,398; Feb. 4; Sp. p. 1016; Dr. pp. 205–6; Gaz. vol. 132; p. 1015.
Lamp, Incandescent. A. G. Fell. No. 879,157; Feb. 18; Sp. p. 2601; Dr. p. 542; Gaz. vol. 132; p. 1334.
Lamp luminant and manufacturing it, Electric-incandescent-. F. M. F. Cazin. No. 879,083; Feb. 11; Sp. p. 2442; Dr. p. 511; Gaz. vol. 132; p. 1269.
Lamp, Railway-. J. F. McCann. No. 878,986; Feb. 11; Sp. p. 2258; Dr. p. 472; Gaz. vol. 132; p. 1239.
Lamp, Safety-. A. G. R. Williams. No. 879,934; Feb. 25; Sp. p. 4248; Dr. p. 888; Gaz. vol. 132; p. 1624.
Lamp socket, Electric-. R. B. Benjamin. No. 879,724; Feb. 18; Sp. p. 3776; Dr. p. 792; Gaz. vol. 132; p. 1520.
Lamp socket, Electric-. G. W. Goodridge. No. 879,819; Feb. 18; Sp. p. 3958; Dr. p. 828; Gaz. vol. 132; p. 1551.
Lamps, Manufacturing incandescent bodies for electric. A. Just and F. Hanaman. No. 878,463; Feb. 4; Sp. p. 1141; Gaz. vol. 132; p. 1036.
Lamps, Mantle-support and globe-holder for incandescent. G. E. Hulse. No. 880,143; Feb. 25; Sp. p. 4648; Dr. p. 981; Gaz. vol. 132; p. 1690.
Lamps, process and product, Manufacture of filaments in electric incandescent. F. M. F. Cazin. No. 879,084; Feb. 11; Sp. p. 2445; Dr. p. 511; Gaz. vol. 132; p. 1269.
Lamps, Strainer and perforate discharge for. C. M. Lungren. No. 880,149; Feb. 25; Sp. p. 4663; Dr. p. 983; Gaz. vol. 132; p. 1692.
Land-clearing machine. W. M. Seymour. (Reissue.) No. 12,749; Feb. 11; Sp. p. 2556; Dr. p. 532; Gaz. vol. 132; p. 1286.
Land rolling and pulverizing machine. J. S. Donnelly and J. Frederick. No. 880,445; Feb. 25; Sp. p. 5270; Dr. p. 1108; Gaz. vol. 132; p. 1792.
Lantern, Hand signaling-. E. M. Tomlinson. No. 878,431; Feb. 4; Sp. p. 1074; Dr. pp. 218–19; Gaz. vol. 132; p. 1025.
Lantern-holder. A. W. Mitchell. No. 879,566; Feb. 18; Sp. p. 3439; Dr. p. 720; Gaz. vol. 132; p. 1469.
Lantern, Top-draft. W. E. Fresh. No. 878,518; Feb. 11; Sp. p. 1336; Dr. p. 270; Gaz. vol. 132; p. 1088.
Last. S. M. Hamblin. No. 877,995; Feb. 4; Sp. p. 194; Dr. p. 43; Gaz. vol. 132; p. 882.
Last, Non-detachable hinged. C. B. Kosters. No. 879,181; Feb. 18; Sp. p. 2655; Dr. p. 553; Gaz. vol. 132; p. 1343.
Lasting and tacking machine, Shoe. H. A. Ballard. No. 878,854; Feb. 11; Sp. p. 2013; Dr. pp. 416–17; Gaz. vol. 132; p. 1198.
Lasting-machine. C. F. Pym. No. 880,401; Feb. 25; Sp. p. 5172; Dr. p. 1091; Gaz. vol. 132; p. 1776.
Latch, Door-. J. H. Brown. No. 880,006; Feb. 25; Sp. p. 4372; Dr. p. 917; Gaz. vol. 132; p. 1646.
Latch, Duplex gravity gate-. C. W. Owens. No. 879,408; Feb. 18; Sp. p. 3115; Dr. p. 646; Gaz. vol. 132; p. 1417.
Lathes, Model or guide wheel for. D. K. Barry. No. 877,979; Feb. 4; Sp. p. 162; Dr. p. 37; Gaz. vol. 132; p. 877.
Lathing and treating same, Woven. W. E. Robinson. No. 880,008; Feb. 25; Sp. p. 4556; Dr. pp. 959–60; Gaz. vol. 132; p. 1675.
Lathing-machine. R. R. Zahnter. No. 879,995; Feb. 25; Sp. p. 4352; Dr. p. 912; Gaz. vol. 132; p. 1643.
Lawn cleaner and cultivator. H. C. French. No. 879,750; Feb. 18; Sp. p. 3834; Dr. p. 804; Gaz. vol. 132; p. 1531.
Lawn-sprinkler. H. T. Packard. No. 879,892; Feb. 25; Sp. p. 4137; Dr. p. 867; Gaz. vol. 132; p. 1608.
Leaf and binder, Adjustable. D. C. Anderson. No. 879,133; Feb. 18; Sp. p. 2566; Dr. p. 534; Gaz. vol. 132; p. 1327.
Leather, Manufactured. A. W. Case. No. 878,485; Feb. 4; Sp. p. 1210; Gaz. vol. 132; p. 1044.
Leg-covering, Combination. H. Cohen and B. Nathan. No. 880,358; Feb. 25; Sp. p. 5072; Dr. p. 1071; Gaz. vol. 132; p. 1761.
Lens, Optical. J. F. Germain and C. A. Ossart. No. 880,206; Feb. 25; Sp. p. 4785; Dr. pp. 1012–13; Gaz. vol. 132; p. 1712.
Letter, Sign-. R. R. Wiley. No. 878,758; Feb. 11; Sp. p. 1830; Dr. p. 378; Gaz. vol. 132; p. 1168.
Level. G. N. Saegmuller. No. 879,122; Feb. 11; Sp. p. 2539; Dr. pp. 527–8; Gaz. vol. 132; p. 1282.
Levulose, glucose, &c., Making. F. L. Stewart. No. 879,422; Feb. 18; Sp. p. 3146; Gaz. vol. 132; p. 1423.
Lifter: *See* Egg-lifter.
Lifting-jack. F. L. Gormley. No. 878,522; Feb. 11; Sp. p. 1342; Dr. p. 272; Gaz. vol. 132; p. 1089.
Lifting-jack. W. E. Maxwell and J. M. Rowell. No. 879,306; Feb. 18; Sp. p. 3075; Dr. p. 639; Gaz. vol. 132; p. 1412.
Lifting-jack. E. E. Ryan. No. 879,592; Feb. 18; Sp. p. 3513; Dr. p. 735; Gaz. vol. 132; p. 1477.
Lifting-jack. D. W. Reardon. No. 879,673; Feb. 18; Sp. p. 3673; Dr. p. 768; Gaz. vol. 132; p. 1503.
Lifting or hoisting gear for lifting forage, grain-bags, &c. E. M. A. Marilly. No. 880,230; Feb. 25; Sp. p. 4842; Dr. p. 1024; Gaz. vol. 132; p. 1721.
Light-box. C. M. Olin. No. 878,418; Feb. 4; Sp. p. 1055; Dr. p. 213; Gaz. vol. 132; p. 1022.
Lightning-arrester. G. W. Clark. No. 879,522; Feb. 18; Sp. p. 3343; Dr. p. 698; Gaz. vol. 132; p. 1454.
Lime-hydrating apparatus. C. Ellis. No. 878,619; Feb. 11; Sp. p. 1575; Dr. p. 320; Gaz. vol. 132; p. 1123.
Linotype and other type-casting machine. C. A. Albrecht. No. 880,264; Feb. 25; Sp. p. 4906; Dr. p. 1037; Gaz. vol. 132; p. 1731.
Linotype-machine. J. B. Bell. No. 879,239; Feb. 18; Sp. p. 2759; Dr. pp. 577–8; Gaz. vol. 132; p. 1362.
Linotype-machines, Assembler slide-brake for. R. F. Wilson. No. 880,346; Feb. 25; Sp. p. 5052; Dr. p. 1067; Gaz. vol. 132; p. 1758.
Liquid-actuating apparatus. R. Conrader. No. 879,146; Feb. 18; Sp. p. 2585; Dr. p. 538; Gaz. vol. 132; p. 1331.
Liquid-concentrating apparatus. J. H. Campbell. No. 879,515; Feb. 18; Sp. p. 3334; Dr. p. 696; Gaz. vol. 132; p. 1453.
Liquid-meter. S. Bramley-Moore. No. 879,141; Feb. 18; Sp. p. 2576; Dr. pp. 536–7; Gaz. vol. 132; p. 1329.
Liquid-meter. R. Lohse. No. 879,563; Feb. 18; Sp. p. 3453; Dr. p. 719; Gaz. vol. 132; p. 1468.
Liquids, Separating the moisture from the constituent solids of. L. C. and I. S. Merrell and W. B. Gere. No. 878,977; Feb. 11; Sp. p. 2049; Dr. p. 409; Gaz. vol. 132; p. 1236.
Lithographic stone, Cemented. H. Wagner. No. 878,322; Feb. 4; Sp. p. 877; Dr. p. 174; Gaz. vol. 132; p. 990.
Load-binder. T. Barnes. No. 878,084; Feb. 4; Sp. p. 295; Dr. p. 62; Gaz. vol. 132; p. 906.

Loader. V. Landholm. No. 878,641; Feb. 11; Sp. p. 1613; Dr. p. 329; Gaz. vol. 132; p. 1130.
Loading and measuring apparatus. L. Pryce. No. 880,400; Feb. 25; Sp. p. 5160; Dr. p. 1090; Gaz. vol. 132; p. 1775.
Lock: *See* Door-lock; Hasp-lock; Nut-lock; Padlock; Permutation-lock; Sash-lock; Seal-lock; Vertical lock; Window-lock.
Lock and electric switch, Combined. W. M. Shannon and G. K. Taylor. No. 880,167; Feb. 25; Sp. p. 4701; Dr. pp. 991–2; Gaz. vol. 132; p. 1698.
Lock and electric switch, Combined. W. M. Shannon and G. K. Taylor. No. 880,168; Feb. 25; Sp. p. 4703; Dr. p. 992; Gaz. vol. 132; p. 1699.
Lock and sealing device. G. H. Mass. No. 878,215; Feb. 4; Sp. p. 663; Dr. p. 136; Gaz. vol. 132; p. 953.
Lock-case. H. R. Towne. No. 879,694; Feb. 18; Sp. p. 3718; Dr. p. 780; Gaz. vol. 132; p. 1511.
Lock-case. H. R. Towne. No. 879,695; Feb. 18; Sp. p. 3719; Dr. p. 780; Gaz. vol. 132; p. 1511.
Lock-gate. E. Schildhauer. No. 880,103; Feb. 25; Sp. p. 4564; Dr. p. 961; Gaz. vol. 132; p. 1676.
Locking device. A. W. Cordes. No. 879,946; Feb. 25; Sp. p. 4266; Dr. p. 892; Gaz. vol. 132; p. 1627.
Locomotive, Compound. F. W. A. von Borries. (Reissue.) No. 12,751; Feb. 11; Sp. p. 2559; Dr. p. 533; Gaz. vol. 132; p. 1286.
Locomotive-crank-shaft bracket. L. E. Feightner. No. 879,617; Feb. 18; Sp. p. 3565; Dr. p. 746; Gaz. vol. 132; p. 1485.
Locomotive safety appliance, Steam-. C. A. Howard and H. V. Coes. No. 879,467; Feb. 18; Sp. p. 3240; Dr. p. 675; Gaz. vol. 132; p. 1436.
Locomotive, Turbine-driven. C. Potticary. No. 880,163; Feb. 25; Sp. p. 4695; Dr. pp. 989–90; Gaz. vol. 132; p. 1697.
Loom for producing textile fabrics. R. Beaumont and T. Hollis. No. 878,707; Feb. 11; Sp. p. 1736; Dr. pp. 359–60; Gaz. vol. 132; p. 1151.
Loom for weaving tufted fabrics. J. A. Clark. No. 878,119; Feb. 4; Sp. p. 454; Dr. pp. 96–7; Gaz. vol. 132; p. 922.
Loom-heddle. H. W. Hakes. No. 879,258; Feb. 18; Sp. p. 2799; Dr. p. 586; Gaz. vol. 132; p. 1369.
Loom-shuttle. J. Varley. No. 879,427; Feb. 18; Sp. p. 3156; Dr. p. 656; Gaz. vol. 132; p. 1424.
Loom shuttle-motion. M. Moul. No. 878,148; Feb. 4; Sp. p. 500; Dr. p. 107; Gaz. vol. 132; p. 932.
Loom-shuttle tension device. E. Gerhardts. No. 878,720; Feb. 11; Sp. p. 1762; Dr. p. 364; Gaz. vol. 132; p. 1156.
Loom-shuttle tension device. H. Lindsay. No. 879,184; Feb. 18; Sp. p. 2660; Dr. p. 555; Gaz. vol. 132; p. 1344.
Loom stop mechanism, Automatic. E. E. Lovering and J. A. Pelletier. No. 878,813; Feb. 11; Sp. p. 1939; Dr. p. 401; Gaz. vol. 132; p. 1185.
Loom warp stop-motion. J. Corzilius. No. 879,853; Feb. 18; Sp. p. 4054; Dr. pp. 849–50; Gaz. vol. 132; p. 1596.
Loom warp stop-motion. H. Horsfal. No. 879,873; Feb. 25; Sp. p. 4096; Dr. pp. 859–60; Gaz. vol. 132; p. 1601.
Loom, Weft-replenishing. W. H. Brothers. No. 878,337; Feb. 4; Sp. p. 907; Dr. p. 181; Gaz. vol. 132; p. 995.
Loom, Weft-replenishing. A. J. Jackson. No. 878,531; Feb. 11; Sp. p. 1357; Dr. pp. 276–7; Gaz. vol. 132; p. 1092.
Loom, Weft-replenishing. R. Crompton. No. 879,368; Feb. 18; Sp. p. 3011; Dr. pp. 629–30; Gaz. vol. 132; p. 1404.
Loom weft-replenishing mechanism. J. Bim. No. 878,763; Feb. 11; Sp. p. 1844; Dr. pp. 380–1; Gaz. vol. 132; p. 1169.
Looms, Bobbin for cotton-. J. E. Lemyre. No. 879,278; Feb. 18; Sp. p. 2831; Dr. p. 593; Gaz. vol. 132; p. 1375.
Looms, Thin-place detector for. W. F. Clayton. No. 879,523; Feb. 18; Sp. p. 3344; Dr. pp. 698–9; Gaz. vol. 132; p. 1455.
Low-water alarm. G. Yeates. No. 879,508; Feb. 18; Sp. p. 3320; Dr. p. 404; Gaz. vol. 132; p. 1450.
Lubricating device. W. Scott. No. 879,916; Feb. 25; Sp. p. 4210; Dr. pp. 878–9; Gaz. vol. 132; p. 1618.
Lubricator: *See* Force-feed lubricator.
Lubricator. F. F. Johnson. No. 879,269; Feb. 18; Sp. p. 2816; Dr. p. 590; Gaz. vol. 132; p. 1372.
Lubricator. P. J. Sweeney. No. 879,600; Feb. 18; Sp. p. 3531; Dr. p. 739; Gaz. vol. 132; p. 1479.
Lubricator-protector for vehicle-wheel journals. W. Wolfe and W. Lucas. No. 880,262; Feb. 25; Sp. p. 4896; Dr. p. 1035; Gaz. vol. 132; p. 1731.
Magnesium, Producing. F. von Kügelgen and G. O. Seward. No. 880,489; Feb. 25; Sp. p. 5369; Gaz. vol. 132; p. 1807.
Magnet for alternating currents. C. Krämer. No. 878,402; Feb. 4; Sp. p. 1028; Dr. p. 207; Gaz. vol. 132; p. 1017.
Mail-bag catcher and deliverer. J. Hollenburger and C. Will. No. 880,304; Feb. 25; Sp. p. 4982; Dr. p. 1051; Gaz. vol. 132; p. 1745.
Mail-bag catching and delivering apparatus. J. C. Dayton. No. 878,360; Feb. 4; Sp. p. 946; Dr. pp. 189–90; Gaz. vol. 132; p. 1002.
Mail-bag catching and delivering mechanism. E. W. Fix. No. 878,623; Feb. 11; Sp. p. 1582; Dr. pp. 321–2; Gaz. vol. 132; p. 1124.
Mail-box. N. Saltonstall. No. 877,952; Feb. 4; Sp. p. 111; Dr. p. 26; Gaz. vol. 132; p. 868.
Mail-box. C. C. Myrhow. No. 879,402; Feb. 18; Sp. p. 3095; Dr. p. 643; Gaz. vol. 132; p. 1415.
Mail-box signal. T. G. Brown. No. 878,036; Feb. 4; Sp. p. 297; Dr. p. 63; Gaz. vol. 132; p. 896.
Mail-carrier. R. P. Yocom. No. 879,125; Feb. 11; Sp. p. 2542; Dr. pp. 528–9; Gaz. vol. 132; p. 1283.
Mail-catcher. J. H. Earle and J. H. Senn. No. 879,816; Feb. 18; Sp. p. 3952; Dr. p. 827; Gaz. vol. 132; p. 1550.
Mail catching and delivery system. W. Wenzel. No. 880,259; Feb. 25; Sp. p. 4892; Dr. p. 1034; Gaz. vol. 132; p. 1730.
Mail-matter, Register for railway. A. L. Georger. No. 879,956; Feb. 25; Sp. p. 4283; Dr. pp. 895–6; Gaz. vol. 132; p. 1630.
Mail-pouch catcher. R. H. Powell. No. 879,901; Feb. 25; Sp. p. 4185; Dr. pp. 873–4; Gaz. vol. 132; p. 1612.
Mail-pouch receiving and delivery apparatus for railway-cars. N. S. Brown. No. 880,007; Feb. 25; Sp. p. 4374; Dr. p. 917; Gaz. vol. 132; p. 1646.
Mail-pouch receiving and delivery apparatus for railway-cars. C. W. Broughton. No. 880,008; Feb. 25; Sp. p. 4375; Dr. p. 918; Gaz. vol. 132; p. 1647.
Mail-pouch-transferring apparatus. R. C. Sharp. No. 880,409; Feb. 25; Sp. p. 5188; Dr. p. 1093; Gaz. vol. 132; p. 1779.
Mantle-support, Adjustable. F. B. Howard and A. Rector. No. 879,874; Feb. 25; Sp. p. 4100; Dr. p. 860; Gaz. vol. 132; p. 1602.
Manure scraper and loader. S. R. French. No. 879,253; Feb. 18; Sp. p. 2784; Dr. p. 584; Gaz. vol. 132; p. 1367.
Maps in colors and in relief, Manufacture of. A. Patesson. No. 878,308; Feb. 4; Sp. p. 851; Dr. p. 169; Gaz. vol. 132; p. 985.
Marking device. F. J. Kadan. No. 878,293; Feb. 4; Sp. p. 822; Dr. p. 163; Gaz. vol. 132; p. 981.
Massage apparatus. C. E. Egan. No. 879,041; Feb. 11; Sp. p. 2352; Dr. p. 492; Gaz. vol. 132; p. 1256.
Massage apparatus, Vibratory. G. R. Macomber. No. 878,078; Feb. 4; Sp. p. 376; Dr. p. 78; Gaz. vol. 132; p. 909.
Massaging the hearing organs, Apparatus for. A. Zünd. No. 878,760; Feb. 11; Sp. p. 1835; Dr. p. 379; Gaz. vol. 132; p. 1168.
Match-box, Magazine-feed. L. Hamill. No. 878,059; Feb. 4; Sp. p. 339; Dr. p. 71; Gaz. vol. 132; p. 903.
Match-case. W. L. Chambers. No. 880,357; Feb. 25; Sp. p. 5071; Dr. p. 1071; Gaz. vol. 132; p. 1761.
Match-machines, Composition-applying mechanism for. C. A. Carlson. No. 880,354; Feb. 25; Sp. p. 5067; Dr. p. 1070; Gaz. vol. 132; p. 1760.
Match-safe. H. L. Beach. No. 878,762; Feb. 11; Sp. p. 1842; Dr. p. 380; Gaz. vol. 132; p. 1169.
Mausoleum, &c., Non-condensing and storm-proof. T. J. Moore. No. 878,303; Feb. 4; Sp. p. 841; Dr. p. 168; Gaz. vol. 132; p. 983.
Measuring and clamping printing-forms, Device for. H. Winter. No. 879,348; Feb. 18; Sp. p. 2966; Dr. p. 619; Gaz. vol. 132; p. 1398.
Measuring and gaging tool. A. Wagniere. No. 878,439; Feb. 4; Sp. p. 1088; Dr. p. 222; Gaz. vol. 132; p. 1028.
Measuring device, Cloth-. W. K. and T. B. Bayless. No. 879,946; Feb. 25; Sp. p. 4021; Dr. p. 843; Gaz. vol. 132; p. 1593.
Measuring device for tailors' use. M. Lo Celso. No. 879,261; Feb. 18; Sp. p. 2834; Dr. p. 594; Gaz. vol. 132; p. 1376.
Measuring device, Skirt-. M. C. Hammond. No. 878,383; Feb. 4; Sp. p. 989; Dr. p. 199; Gaz. vol. 132; p. 1010.
Measuring instrument, Electrical. A. H. Hoyt. No. 879,385; Feb. 18; Sp. p. 3050; Dr. p. 635; Gaz. vol. 132; p. 1409.
Measuring instrument, Optician's. J. M. Coghlan. No. 878,507; Feb. 11; Sp. p. 1313; Dr. p. 265; Gaz. vol. 132; p. 1084.
Measuring temperatures, Electrical system of. E. Haagn. No. 880,074; Feb. 25; Sp. p. 4519; Dr. p. 951; Gaz. vol. 132; p. 1668.
Meat-holder. W. L. Groff. No. 880,486; Feb. 25; Sp. p. 5367; Dr. p. 1131; Gaz. vol. 132; p. 1807.
Mechanical movement. E. G. Eberhardt. No. 878,051; Feb. 4; Sp. p. 328; Dr. p. 68; Gaz. vol. 132; p. 901.
Mechanical movement. R. T. Johnston. No. 878,532; Feb. 11; Sp. p. 1360; Dr. pp. 277–9; Gaz. vol. 132; p. 1093.
Mechanical movements, Gear-case for. W. H. Voss. No. 880,113; Feb. 25; Sp. p. 4582; Dr. p. 965; Gaz. vol. 132; p. 1680.
Medicated-silk protector. S. Rolfson-Schmidt. No. 880,469; Feb. 25; Sp. p. 5325; Dr. p. 1120; Gaz. vol. 132; p. 1801.
Medicated stock-salt and making the same. M. von Duyke. No. 879,070; Feb. 11; Sp. p. 2408; Gaz. vol. 132; p. 1265.
Metal bodies, Apparatus for producing compound. J. F. Monnot. No. 878,984; Feb. 11; Sp. p. 2254; Dr. p. 471; Gaz. vol. 132; p. 1239.
Metal, Cast. R. C. Totten. No. 878,691; Feb. 11; Sp. p. 1666; Gaz. vol. 132; p. 1146.
Metal-extractor. H. C. Hansen. No. 879,870; Feb. 25; Sp. p. 4091; Dr. p. 858; Gaz. vol. 132; p. 1601.
Metal-hardening apparatus. L. E. Curtis. No. 878,279; Feb. 4; Sp. p. 790; Dr. p. 158; Gaz. vol. 132; p. 976.
Metal-shaping machine. J. M. Rude. No. 879,415; Feb. 18; Sp. p. 3131; Dr. p. 651; Gaz. vol. 132; p. 1420.
Metal-shears. G. Potstada. No. 879,900; Feb. 25; Sp. p. 4183; Dr. p. 873; Gaz. vol. 132; p. 1612.
Metal-turning mechanism. J. Hartness. No. 878,203; Feb. 4; Sp. p. 644; Dr. p. 132; Gaz. vol. 132; p. 950.
Metals, Apparatus for uniting. W. H. Cole. No. 878,809; Feb. 11; Sp. p. 2045; Dr. pp. 422–3; Gaz. vol. 132; p. 1203.
Metals, Heating and welding. C. Rodrigues-Ely and E. Gauthier. No. 880,099; Feb. 25; Sp. p. 4558; Dr. p. 960; Gaz. vol. 132; p. 1675.
Metals, Machine for testing the wear of. M. Derihon. No. 880,483; Feb. 25; Sp. p. 5360; Dr. p. 1130; Gaz. vol. 132; p. 1805.
Metals, Uniting. W. H. Cole. No. 878,868; Feb. 11; Sp. p. 2043; Dr. p. 422; Gaz. vol. 132; p. 1203.
Metallurgical furnace. F. Meyer. No. 879,483; Feb. 18; Sp. p. 3209; Dr. pp. 681–2; Gaz. vol. 132; p. 1441.
Metallurgical process. F. von Kügelgen and G. O. Seward. No. 878,966; Feb. 11; Sp. p. 2221; Gaz. vol. 132; p. 1233.
Meter: *See* Liquid-meter; Motor-meter.
Meters, Prepayment arrangement for. H. W. Sayles. No. 879,913; Feb. 25; Sp. p. 4202; Dr. p. 877; Gaz. vol. 132; p. 1616.
Milk, Concentrated whole. C. H. Campbell. No. 879,514; Feb. 18; Sp. p. 3332; Dr. p. 696; Gaz. vol. 132; p. 1452.
Milk-cooler. J. W. Jones. No. 879,105; Feb. 11; Sp. p. 2492; Dr. p. 519; Gaz. vol. 132; p. 1276.
Milk pasteurizer and cooler. W. Wilson. No. 879,346; Feb. 18; Sp. p. 2962; Dr. p. 618; Gaz. vol. 132; p. 1397.
Milk-weighing machine. O. Gunderson. No. 880,073; Feb. 25; Sp. p. 4517; Dr. pp. 950–1; Gaz. vol. 132; p. 1667.
Milker, Cow-. J. M. Mattis. No. 878,222; Feb. 4; Sp. p. 676; Dr. p. 139; Gaz. vol. 132; p. 956.

Milkers, Self-adjusting belt for cow-. F. B. Groff. No. 878,058; Feb. 4; Sp. p. 337; Dr. p. 70; Gaz. vol. 132; p. 903.
Mill: *See* Crushing-mill; Curd-mill; Grain-mill; Reduction-mill; Rolling-mill; Windmill.
Minerals from gangue, Separation of metalliferous. H. L. Sulman, H. F. Kirkpatrick-Picard, and J. Ballot. No. 879,985; Feb. 25; Sp. p. 4823; Dr. pp. 907–8; Gaz. vol. 132; p. 1639.
Miner's squib, match, and file case. F. Harris. No. 879,635; Feb. 18; Sp. p. 3596; Dr. p. 752; Gaz. vol. 132; p. 1491.
Mining. J. Kirsehnick. No. 878,206; Feb. 4; Sp. p. 653; Dr. p. 134; Gaz. vol. 132; p. 952.
Mining-machine. E. R. Merrill. No. 878,976; Feb. 11; Sp. p. 2237; Dr. p. 468; Gaz. vol. 132; p. 1236.
Mirror attachment. T. E. Sutton. No. 878,098; Feb. 4; Sp. p. 412; Dr. p. 87; Gaz. vol. 132; p. 915.
Mirror-fastener. J. B. Snell. No. 878,680; Feb. 11; Sp. p.1679; Dr. p. 346; Gaz. vol. 132; p. 1143.
Miter-clamp. T. B. Holter. No. 879,547; Feb. 18; Sp. p. 3408; Dr. p. 714; Gaz. vol. 132; p. 1463.
Mixer: *See* Concrete-mixer.
Mixing-machine. T. L. Smith. No. 880,248; Feb. 25; Sp. p. 4870; Dr. pp. 1030–1; Gaz. vol. 132; p. 1726.
Mold: *See* Culvert-mold; Post-mold; Wall-mold.
Mold. W. J. Miller. No. 879,294; Feb. 18; Sp. p. 2881; Dr. p. 601; Gaz. vol. 132; p. 1381.
Molder's flask. D. Parks. No. 880,306; Feb. 25; Sp. p. 5158; Dr. p. 1069; Gaz. vol. 132; p. 1774.
Molder's flask. D. Parks. No. 880,307; Feb. 25; Sp. p. 5161; Dr. p. 1069; Gaz. vol. 132; p. 1774.
Molding-machine. F. Herbert. No. 878,004; Feb. 4; Sp. p. 347; Dr. p. 65; Gaz. vol. 132; p. 905.
Molding-machine. W. W. Docolittle. No. 878,510; Feb. 11; Sp. p. 1517; Dr. pp. 366–7; Gaz. vol. 132; p. 1085.
Molding-machine. J. A. Rathbone and J. T. Crossley. No. 879,116; Feb. 11; Sp. p. 2530; Dr. p. 526; Gaz. vol. 132; p. 1280.
Molding-machine. E. J. Schroder. No. 879,915; Feb. 25; Sp. p. 4208; Dr. p. 878; Gaz. vol. 132; p. 1617.
Molding-machine. M. J. Dunn. No. 879,950; Feb. 25; Sp. p. 4274; Dr. pp. 893–4; Gaz. vol. 132; p. 1628.
Molding-machine, Sand-. J. J. Chipchase. No. 878,345; Feb. 4; Sp. p. 422; Dr. p. 184; Gaz. vol. 132; p. 998.
Mop and brush making machine. E. Koella. No. 878,295; Feb. 4; Sp. p. 524; Dr. pp. 164–5; Gaz. vol. 132; p. 961.
Mop-wringer. J. J. McDonald. No. 878,660; Feb. 11; Sp. p. 1647; Dr. p. 338; Gaz. vol. 132; p. 1136.
Mop-wringer. W. T. Phillips. No. 879,671; Feb. 18; Sp. p. 3670; Dr. p. 767; Gaz. vol. 132; p. 1503.
Mortise and tenon. L. P. Harris. No. 879,382; Feb. 18; Sp. p. 3046; Dr. p. 634; Gaz. vol. 132; p. 1408.
Motion into rotary motion, Means for converting reciprocatory. W. C. Mayo and J. Houlehan. No. 879,289; Feb. 18; Sp. p. 2869; Dr. p. 599; Gaz. vol. 132; p. 1379.
Motive power. H. K. Hess. No. 878,953; Feb. 11; Sp. p. 2197; Dr. p. 460; Gaz. vol. 132; p. 1229.
Motor: *See* Current-motor; Explosive-motor; Hydraulic motor; Hydrocarbon-motor; Oscillating motor; Pneumatic motor; Rotary motor; Single-phase motor; Spring-motor; Tremolo-motor; Water-motor; Water-current motor; Water-pressure motor; Wave-motor; Wind-motor.
Motor. F. C. Axtell. No. 877,977; Feb. 4; Sp. p. 158; Dr. pp. 35–6; Gaz. vol. 132; p. 876.
Motor controller, Electric-. P. N. Jones. No. 878,961; Feb. 11; Sp. p. 2215; Dr. pp. 463–4; Gaz. vol. 132; p. 1232.
Motor meter, Electric mercury-. J. H. Hodde. No. 878,629; Feb. 11; Sp. p. 1593; Dr. p. 325; Gaz. vol. 132; p. 1126.
Motors, System for controlling the operation of electric. T. E. Barnum. No. 878,855; Feb. 11; Sp. p. 2016; Dr. p. 417; Gaz. vol. 132; p. 1198.
Mowing-machine. J. L. Tomer. (Reissue.) No. 12,752; Feb. 18; Sp. p. 4015; Dr. p. 842; Gaz. vol. 132; p. 1560.
Muffler cut-out. W. G. Schaefer. No. 880,471; Feb. 25; Sp. p. 5359; Dr. p. 1121; Gaz. vol. 132; p. 1801.
Muffler, Exhaust-. A. Pratt. No. 879,583; Feb. 18; Sp. p. 3484; Dr. p. 730; Gaz. vol. 132; p. 1475.
Multitubular boiler. C. Bourdon. No. 880,180; Feb. 25; Sp. p. 4744; Dr. p. 1004; Gaz. vol. 132; p. 1706.
Music-box. E. P. Riesener. No. 878,088; Feb. 4; Sp. p. 395; Dr. pp. 82–3; Gaz. vol. 132; p. 912.
Music chart or table. L. R. Lewis. No. 879,304; Feb. 18; Sp. p. 3070; Dr. p. 638; Gaz. vol. 132; p. 1412.
Music-leaf turner. A. I. Mercer. No. 880,032; Feb. 25; Sp. p. 4428; Dr. pp. 929–30; Gaz. vol. 132; p. 1654.
Musical instrument, Mechanical. J. McTammany and E. A. Ford. No. 878,150; Feb. 4; Sp. p. 502; Dr. pp. 107–8; Gaz. vol. 132; p. 932.
Musical instrument, Stringed. P. Johnson. No. 878,006; Feb. 4; Sp. p. 219; Dr. p. 48; Gaz. vol. 132; p. 886.
Musical instruments, Bellows for automatic. M. Clark. No. 879,735; Feb. 18; Sp. p. 3800; Dr. p. 797; Gaz. vol. 132; p. 1525.
Musical instruments, Pneumatic action for. C. Maerten, Jr. No. 879,110; Feb. 11; Sp. p. 2510; Dr. p. 521; Gaz. vol. 132; p. 1278.
Musical-record holder. G. G. Lindstrom and J. Wallin. No. 879,279; Feb. 18; Sp. p. 2832; Dr. p. 593; Gaz. vol. 132; p. 1375.
Musical valve instrument. A. Riedl. No. 879,222; Feb. 18; Sp. p. 2924; Dr. p. 610; Gaz. vol. 132; p. 1389.
Nail-making machine. A. Vincze. No. 879,702; Feb. 18; Sp. p. 3734; Dr. p. 783; Gaz. vol. 132; p. 1513.
Nail-polisher. G. E. Hopkins. No. 878,881; Feb. 11; Sp. p. 2064; Dr. p. 428; Gaz. vol. 132; p. 1207.
Nailing or pegging machine. F. M. Peters and A. Der Ananian. No. 878,891; Feb. 11; Sp. p. 2087; Dr. pp. 434–5; Gaz. vol. 132; p. 1210.
Navigation, Instrument for use in. H. E. Mooney. No. 878,819; Feb. 11; Sp. p. 1949; Dr. p. 403; Gaz. vol. 132; p. 1187.
Necktie-fastener. G. Le Sage. No. 878,734; Feb. 11; Sp. p. 1784; Dr. p. 369; Gaz. vol. 132; p. 1160.
Necktie, Non-binding. W. O. Burdick. No. 880,191; Feb. 25; Sp. p. 4746; Dr. p. 1005; Gaz. vol. 132; p. 1707.
Needle. F. B. Foster. No. 879,758; Feb. 18; Sp. p. 3833; Dr. p. 804; Gaz. vol. 132; p. 1531.
Needle-threader. J. H. Boye. No. 878,767; Feb. 11; Sp. p. 1852; Dr. p. 382; Gaz. vol. 132; p. 1170.
Needle-threader. L. V. Rhodes. No. 879,003; Feb. 11; Sp. p. 2296; Dr. p. 479; Gaz. vol. 132; p. 1244.
Nest, Trap-. W. H. Warner, Jr. No. 879,990; Feb. 25; Sp. p. 4341; Dr. p. 910; Gaz. vol. 132; p. 1641.
Net, Landing-. A. Holmes. No. 878,529; Feb. 11; Sp. p. 1355; Dr. p. 275; Gaz. vol. 132; p. 1091.
Nitroglycerin from acids, Accelerating the separation of. R. Escales and M. Novak. No. 880,373; Feb. 25; Sp. p. 5098; Dr. p. 1078; Gaz. vol. 132; p. 1766.
Notching-press. O. Smith. No. 880,413; Feb. 25; Sp. p. 5194; Dr. pp. 1095–6; Gaz. vol. 132; p. 1780.
Novelty device. V. J. Augir. No. 879,998; Feb. 25; Sp. p. 4359; Dr. p. 914; Gaz. vol. 132; p. 1644.
Nut and pipe wrench. W. Brandon. No. 879,810; Feb. 18; Sp. p. 3926; Dr. p. 825; Gaz. vol. 132; p. 1548.
Nut-lock. W. Chesterman. No. 878,042; Feb. 4; Sp. p. 397; Dr. p. 65; Gaz. vol. 132; p. 896.
Nut-lock. F. M. Volk. No. 878,288; Feb. 4; Sp. p. 742; Dr. p. 151; Gaz. vol. 132; p. 960.
Nut-lock. I. Barker. No. 878,476; Feb. 4; Sp. p. 1176; Dr. p. 239; Gaz. vol. 132; p. 1041.
Nut-lock. W. C. Mayo. No. 879,290; Feb. 18; Sp. p. 2873; Dr. p. 599; Gaz. vol. 132; p. 1379.
Nut-lock. A. Cottom. No. 879,746; Feb. 18; Sp. p. 3816; Dr. p. 800; Gaz. vol. 132; p. 1528.
Nut-lock. O. Blais. No. 879,833; Feb. 18; Sp. p. 3990; Dr. p. 835; Gaz. vol. 132; p. 1550.
Nut-lock. J. J. Brunello. No. 880,055; Feb. 25; Sp. p. 4504; Dr. p. 946; Gaz. vol. 132; p. 1665.
Nut, Lock-. I. L. and J. Abe. No. 879,714; Feb. 18; Sp. p. 3755; Dr. p. 787; Gaz. vol. 132; p. 1517.
Nut-lock and antirattler, Combined. J. W. Koch. No. 878,143; Feb. 4; Sp. p. 491; Dr. p. 105; Gaz. vol. 132; p. 930.
Nut-retainer. S. E. Guthridge and J. F. Baker. No. 879,958; Feb. 25; Sp. p. 4291; Dr. p. 897; Gaz. vol. 132; p. 1631.
Nutshell-breaking and kernel-extracting apparatus. E. W. J. Trevor. No. 879,696; Feb. 18; Sp. p. 3720; Dr. p. 781; Gaz. vol. 132; p. 1511.
Oil-burner. C. S. Evans. No. 878,874; Feb. 11; Sp. p. 2051; Dr. p. 425; Gaz. vol. 132; p. 1205.
Oil-burner. P. B. Reed. No. 879,002; Feb. 11; Sp. p. 2295; Dr. p. 479; Gaz. vol. 132; p. 1244.
Oil-burner. J. Gogel. No. 880,071; Feb. 25; Sp. p. 4512; Dr. p. 949; Gaz. vol. 132; p. 1667.
Oil-burner. C. J. Church. No. 880,193; Feb. 25; Sp. p. 4749; Dr. p. 1005; Gaz. vol. 132; p. 1707.
Oil-cleaning apparatus. L. W. Brown. No. 879,728; Feb. 18; Sp. p. 3785; Dr. pp. 792–4; Gaz. vol. 132; p. 1522.
Oil-cup. J. W. Kyle. No. 878,808; Feb. 11; Sp. p. 1933; Dr. p. 400; Gaz. vol. 132; p. 1184.
Oil engine, Crude-. C. H. McClintock. No. 879,884; Feb. 25; Sp. p. 4118; Dr. p. 864; Gaz. vol. 132; p. 1604.
Oil-heater. J. T. Ray. No. 879,672; Feb. 18; Sp. p. 3672; Dr. p. 768; Gaz. vol. 132; p. 1503.
Oils and the like, Apparatus for the chemical purification of. J. Fischer. No. 878,370; Feb. 4; Sp. p. 962; Dr. p. 193; Gaz. vol. 132; p. 1006.
Oils, Solidifying mineral. E. Raynaud. No. 879,193; Feb. 18; Sp. p. 2680; Gaz. vol. 132; p. 1347.
Oiling device. B. H. Paddack and A. A. Dinwiddie. No. 879,794; Feb. 18; Sp. p. 3899; Dr. p. 817; Gaz. vol. 132; p. 1543.
Opera-chair. A. L. Levin. No. 880,314; Feb. 25; Sp. p. 4997; Dr. pp. 1054–5; Gaz. vol. 132; p. 1748.
Ordnance, Firing mechanism for. H. T. Wheeler. No. 879,225; Feb. 18; Sp. p. 2732; Dr. p. 560; Gaz. vol. 132; p. 1357.
Ore-concentrator. E. M. Jahraus. No. 879,104; Feb. 11; Sp. p. 2483; Dr. p. 519; Gaz. vol. 132; p. 1276.
Ore-concentrator, Dry. G. Tolmie. No. 879,069; Feb. 11; Sp. p. 2406; Dr. pp. 503–4; Gaz. vol. 132; p. 1265.
Ore dredging and separating apparatus. I. Stevenson and J. Cook. No. 878,575; Feb. 11; Sp. p. 1477; Dr. pp. 298–9; Gaz. vol. 132; p. 1108
Ore-separating apparatus. T. Veitch. No. 880,430; Feb. 25; Sp. p. 5230; Dr. p. 1102; Gaz. vol. 132; p. 1786.
Ore-separator, Centrifugal. P. F. Peck. No. 879,803; Feb. 25; Sp. p. 4139; Dr. pp. 867–8; Gaz. vol. 132; p. 1668.
Ore-separator, Centrifugal. P. F. Peck. No. 879,804; Feb. 25; Sp. p. 4153; Dr. pp. 868–9; Gaz. vol. 132; p. 1669.
Ores, &c., Apparatus for conveying and discharging. P. Paton. No. 880,091; Feb. 25; Sp. p. 4547; Dr. pp. 957–8; Gaz. vol. 132; p. 1673.
Ores of zinc, &c., Metallurgy of. F. Meyer. No. 879,482; Feb. 18; Sp. p. 3266; Dr. pp. 680–1; Gaz. vol. 132; p. 1441.
Ores or matter, Treating metallic. E. Günther and R. Franke. No. 879,653; Feb. 18; Sp. p. 3562; Gaz. vol. 132; p. 1490.
Organ stop-action, Combination. A. E. Kent. No. 879,776; Feb. 18; Sp. p. 3866; Dr. p. 810; Gaz. vol. 132; p. 1537.
Organs, Pneumatic chest for pipe-. W. C. Verney. No. 879,503; Feb. 18; Sp. p. 3307; Dr. p. 692; Gaz. vol. 132; p. 1448.
Oscillating motor. H. F. W. Falkenberg. No. 879,091; Feb. 11; Sp. p. 2465; Dr. p. 514; Gaz. vol. 132; p. 1272.
Oven, Baker's. J. F. Gorndt. No. 879,846; Feb. 25; Sp. p. 4086; Dr. p. 857; Gaz. vol. 132; p. 1599.
Oven, Baking-. F. Kempter. No. 878,396; Feb. 11; Sp. p. 1930; Dr. p. 399; Gaz. vol. 132; p. 1183.

Oven, Draw-plate baking-. F. H. Van Houten. No. 878,434; Feb. 4; Sp. p. 1090; Dr. p. 220; Gaz. vol. 132; p. 1026.
Oven-grate. I. Siapo. No. 878,831; Feb. 11; Sp. p. 1969; Dr. p. 408; Gaz. vol. 132; p. 1191.
Oven, Knockdown. W. R. Jeavons. No. 879,051; Feb. 11; Sp. p. 2369; Dr. p. 496; Gaz. vol. 132; p. 1259.
Oxids, Reduction of refractory. K. A. Kühne. No. 878,210; Feb. 4; Sp. p. 655; Gaz. vol. 132; p. 952.
Oyster-shucking apparatus. W. Klinge. No. 880,222; Feb. 25; Sp. p. 4823; Dr. p. 1021; Gaz. vol. 132; p. 1717.
Package-tie. S. Percival. No. 880,241; Feb. 25; Sp. p. 4859; Dr. p. 1028; Gaz. vol. 132; p. 1724.
Packaging-machine. W. A. Fanning. No. 880,374; Feb. 25; Sp. p. 5099; Dr. pp. 1076–9; Gaz. vol. 132; p. 1766.
Packet-holder. P. A. Roussel. No. 879,591; Feb. 18; Sp. p. 3511; Dr. p. 735; Gaz. vol. 132; p. 1477.
Packing, Metallic. G. D. Rollins. No. 878,238; Feb. 4; Sp. p. 704; Dr. p. 145; Gaz. vol. 132; p. 961.
Packing of pipe-joints. G. F. Miller. No. 878,655; Feb. 11; Sp. p. 1641; Dr. p. 336; Gaz. vol. 132; p. 1134.
Packing, Piston-rod. L. M. Byrnes and G. H. Kendrick. No. 878,186; Feb. 4; Sp. p. 614; Dr. p. 126; Gaz. vol. 132; p. 945.
Pad: *See* Bath-pad; Horseshoe-pad; Inking-pad; Instep-pad; Surgical pad; Ticket-pad.
Pad for writing-machines, furniture, &c. C. C. Chrisman. No. 878,043; Feb. 4; Sp. p. 398; Dr. p. 65; Gaz. vol. 132; p. 898.
Paddle-wheel. O. Brown. No. 880,353; Feb. 25; Sp. p. 5066; Dr. p. 1070; Gaz. vol. 132; p. 1760.
Padlock. O. Katzenberger. No. 877,931; Feb. 4; Sp. p. 73; Dr. p. 15; Gaz. vol. 132; p. 861.
Padlock, Combination-. N. Tobias. No. 878,913; Feb. 11; Sp. p. 2128; Dr. p. 444; Gaz. vol. 132; p. 1217.
Padlock, Permutation-. H. F. Crim and W. C. Loy. No. 879,747; Feb. 18; Sp. p. 3817; Dr. p. 800; Gaz. vol. 132; p. 1528.
Painting apparatus. M. G. Barrier. No. 880,351; Feb. 25; Sp. p. 5062; Dr. p. 1069; Gaz. vol. 132; p. 1759.
Pan: *See* Baking-pan.
Paneling. H. F. Hecker. No. 878,627; Feb. 11; Sp. p. 1589; Dr. p. 323; Gaz. vol. 132; p. 1125.
Paper-bag holder. F. Thomas. No. 878,473; Feb. 4; Sp. p. 1170; Dr. p. 237; Gaz. vol. 132; p. 1040.
Paper-bag holder. C. Horrell. No. 879,772; Feb. 18; Sp. p. 3861; Dr. p. 809; Gaz. vol. 132; p. 1535.
Paper box. C. F. Pitkin. No. 879,488; Feb. 18; Sp. p. 3278; Dr. p. 685; Gaz. vol. 132; p. 1443.
Paper cartridge. J. J. Miller and J. Dreistadt, Jr. No. 878,818; Feb. 11; Sp. p. 1948; Dr. p. 403; Gaz. vol. 132; p. 1186.
Paper-clip. J. S. Root. No. 879,007; Feb. 11; Sp. p. 2302; Dr. p. 481; Gaz. vol. 132; p. 1246.
Paper clip or fastener. C. R. Bleakney. No. 878,497; Feb. 11; Sp. p. 1291; Dr. p. 260; Gaz. vol. 132; p. 1081.
Paper-coating machine. J. B. Morrow. No. 879,787; Feb. 18; Sp. p. 3887; Dr. pp. 815–16; Gaz. vol. 132; p. 1541.
Paper-feeding machine. T. C. Dexter. No. 880,197; Feb. 25; Sp. p. 4753; Dr. pp. 1007–8; Gaz. vol. 132; p. 1708.
Paper-feeding machine. T. C. Dexter. No. 880,198; Feb. 25; Sp. p. 4759; Dr. pp. 1008–9; Gaz. vol. 132; p. 1709.
Paper for the automatic transmission of messages, &c., Apparatus for perforating fillets of. C. L. Buckingham and E. Germann. No. 880,275; Feb. 25; Sp. p. 4927; Dr. p. 1042; Gaz. vol. 132; p. 1735.
Paper for use in type-written work to obtain manifold copies. A. J. Farmer. No. 878,717; Feb. 11; Sp. p. 1756; Dr. p. 363; Gaz. vol. 132; p. 1155.
Paper-making machinery. R. B. Wolf and H. E. Tidmarsh. No. 878,849; Feb. 11; Sp. p. 2005; Dr. p. 415; Gaz. vol. 132; p. 1196.
Paper-making machines, Roller-press for. P. Escarfail. No. 878,946; Feb. 11; Sp. p. 2187; Dr. pp. 457–8; Gaz. vol. 132; p. 1227.
Paper or paper-board and the like, Producing. C. E. Nelson. No. 879,888; Feb. 25; Sp. p. 4129; Gaz. vol. 132; p. 1606.
Paper-pulp processes, Cooler for reclaimed liquor and gas in. G. F. Shevlin and F. D. Small. No. 880,247; Feb. 25; Sp. p. 4866; Dr. p. 1030; Gaz. vol. 132; p. 1726.
Paris-green distributer, Automatic. J. P. Fullilove. No. 879,535; Feb. 18; Sp. p. 3369; Dr. p. 704; Gaz. vol. 132; p. 1459.
Pasteboard box. J. Godfrey. No. 879,865; Feb. 25; Sp. p. 4085; Dr. p. 856; Gaz. vol. 132; p. 1599.
Pasteurizer. J. C. Miller. No. 878,225; Feb. 4; Sp. p. 679; Dr. pp. 140–1; Gaz. vol. 132; p. 956.
Pasting-machine. N. Schroder. No. 879,329; Feb. 18; Sp. p. 2937; Dr. pp. 612–13; Gaz. vol. 132; p. 1392.
Pattern-grading machine. L. E. Côté. No. 878,046; Feb. 4; Sp. p. 315; Dr. pp. 66–7; Gaz. vol. 132; p. 899.
Pea cutter, Cow-. R. Rounds. No. 879,324; Feb. 18; Sp. p. 2931; Dr. p. 611; Gaz. vol. 132; p. 1390.
Pedestal, column, and pilaster, Ornamental. W. J. Gray. No. 879,629; Feb. 18; Sp. p. 3564; Dr. p. 750; Gaz. vol. 132; p. 1489.
Pen, Fountain-. G. W. Bennum. No. 879,436; Feb. 18; Sp. p. 3109; Dr. p. 650; Gaz. vol. 132; p. 1426.
Pen, Fountain-. S. H. Engelberg. No. 879,614; Feb. 18; Sp. p. 3561; Dr. p. 744; Gaz. vol. 132; p. 1484.
Pen, Fountain-. C. W. Gaston. No. 879,626; Feb. 18; Sp. p. 3580; Dr. p. 749; Gaz. vol. 132; p. 1488.
Pen, Fountain-. P. P. Sanford. No. 879,912; Feb. 25; Sp. p. 4201; Dr. p. 877; Gaz. vol. 132; p. 1616.
Pen, Self-filling fountain-. F. H. Mooney. No. 879,296; Feb. 18; Sp. p. 2886; Dr. p. 602; Gaz. vol. 132; p. 1381.
Pen, Self-filling fountain-. P. P. Flournoy. No. 879,817; Feb. 18; Sp. p. 3954; Dr. p. 827; Gaz. vol. 132; p. 1551.
Pen, Stylographic. J. Ullrich. No. 878,914; Feb. 11; Sp. p. 2131; Dr. p. 444; Gaz. vol. 132; p. 1217.
Penholder. A. Jahn. No. 878,004; Feb. 4; Sp. p. 216; Dr. p. 47; Gaz. vol. 132; p. 886.
Penholder. H. C. Hart. No. 878,729; Feb. 11; Sp. p. 1777; Dr. p. 367; Gaz. vol. 132; p. 1158.
Penholder. T. N. Goffe. No. 878,794; Feb. 11; Sp. p. 1913; Dr. p. 393; Gaz. vol. 132; p. 1180.
Penholder. T. N. Goffe. No. 878,795; Feb. 11; Sp. p. 1914; Dr. p. 393; Gaz. vol. 132; p. 1180.
Penmanship pupils, Arm-rest for. A. Asper. No. 879,353; Feb. 18; Sp. p. 2974; Dr. p. 621; Gaz. vol. 132; p. 1399.
Pencil, Magazine-. W. F. Cushing. No. 878,771; Feb. 11; Sp. p. 1861; Dr. p. 384; Gaz. vol. 132; p. 1172.
Percolator. J. Gaunt. No. 879,096; Feb. 11; Sp. p. 2475; Dr. p. 516; vol. 132; p. 1273.
Permutation-lock. C. Smith. No. 877,957; Feb. 4; Sp. p. 119; Dr. p. 28; Gaz. vol. 132; p. 870.
Permutation-lock. J. R. Maxfield. No. 879,785; Feb. 18; Sp. p. 3883; Dr. p. 814; Gaz. vol. 132; p. 1540.
Peroxids, Making molten. H. Foerstering and H. R. Carveth. No. 879,452; Feb. 18; Sp. p. 3716; Dr p 669; Gaz. vol. 132; p. 1431.
Pessary. E. S. Rogers. No. 880,101; Feb. 25; Sp. p. 4561; Dr. p. 960; Gaz. vol. 132; p. 1676.
Phonograph. E. L. Aiken. No. 878,032; Feb. 4; Sp. p. 280; Dr. p. 61; Gaz. vol. 132; p. 895.
Phonograph. W. W. Rosenfield. No. 879,589; Feb. 18; Sp. p. 3504; Dr. pp. 734–5; Gaz. vol. 132; p. 1476.
Phonograph attachment. E. B. Donaldson. No. 880,016; Feb. 25; Sp. p. 4396; Dr. pp. 923–4; Gaz. vol. 132; p. 1650.
Phonograph-horn. P. Weber. No. 878,020; Feb. 4; Sp. p. 282; Dr. p. 60; Gaz. vol. 132; p. 894.
Phonograph-horn. V. H. Rapke. No. 879,797; Feb. 18; Sp. p. 3903; Dr. p. 818; Gaz. vol. 132; p. 1544.
Phonograph-horn. F. M. Murphy. No. 880,388; Feb. 25; Sp. p. 5136; Dr. p. 1085; Gaz. vol. 132; p. 1771.
Phonograph-machines, Carriage-feed for. J. Roever. No. 880,100; Feb. 25; Sp. p. 4559; Dr. p. 960; Gaz. vol. 132; p. 1676.
Phonograph-reproducer. A. C. Mestraud. No. 880,320; Feb. 25; Sp. p. 5008; Dr. p. 1056; Gaz, vol. 132; p. 1749.
Phonographs, Feed mechanism for. W. A. Cook. No. 878,121; Feb. 4; Sp. p. 457; Dr. p. 97; Gaz. vol. 132; p. 923.
Photography, Color. A. Davies. No. 879,445; Feb. 18; Sp. p. 3187; Gaz. vol. 132; p. 1429.
Piano-action. C. J. B. Socin. No. 880,173; Feb. 25; Sp. p. 4713; Dr. p. 995; Gaz. vol. 132; p. 1700.
Piano, Automatic. M. Clark. No. 879,739; Feb. 18; Sp. p. 3803; Dr. p. 797; Gaz. vol. 132; p. 1525.
Piano, Bell-. J. Havassy. No. 878,387; Feb. 4; Sp. p. 995; Dr. pp. 200–1; Gaz. vol. 132; p. 1011.
Piano or organ players, Valve for. H. M. Smith. No. 878,096; Feb. 4; Sp. p. 410; Dr. p. 87; Gaz. vol. 132; p. 914.
Piano-player, Electromagnetic. W. B. Kraft. No. 879,879; Feb. 25; Sp. p. 4110; Dr. p. 862; Gaz. vol. 132; p. 1603.
Piano repeating action, Grand. A. Nickel. No. 879,978; Feb. 25; Sp. p. 4324; Dr. p. 905; Gaz. vol. 132; p. 1637.
Piano sounding-boards, Making. A. Dolge. No. 879,373; Feb. 18; Sp. p. 3030; Dr. p. 631; Gaz. vol. 132; p. 1406.
Piano string-frame, Upright. H. Ziegler. No. 878,926; Feb. 11; Sp. p. 2152; Dr. p. 449; Gaz. vol. 132; p. 1221.
Piano, Upright. J. J. Thomas. No. 878,025; Feb. 4; Sp. p. 277; Dr. p. 59; Gaz. vol. 132; p. 893.
Pianos, Mute attachment for. E. I. Pfeiffer. No. 878,421; Feb. 4; Sp. p. 1058; Dr. p. 214; Gaz. vol. 132; p. 1022.
Picture apparatus, Moving-. S. M. Tannehill. No. 879,691; Feb. 18; Sp. p. 3708; Dr. p. 777; Gaz. vol. 132; p. 1509.
Picture machine, Moving-. D. J. Bell. No. 879,355; Feb. 18; Sp. p. 2978; Dr. pp. 622–3; Gaz. vol. 132; p. 1400.
Pigeon-trap. T. W. Kay. No. 880,219; Feb. 25; Sp. p. 4814; Dr. pp. 1019–20; Gaz. vol. 132; p. 1716.
Piles, Protecting-covering for. C. W. Kennon. No. 879,649; Feb. 18; Sp. p. 3626; Dr. p. 758; Gaz. vol. 132; p. 1495.
Piling, Interlocking sheet-. G. E. Nye. No. 879,792; Feb. 18; Sp. p. 3896; Dr. p. 817; Gaz. vol. 132; p. 1542.
Piling, (driving-point,) Metallic sheet-. G. W. Jackson. No. 878,141; Feb. 4; Sp. p. 488; Dr. p. 105; Gaz. vol. 132; p. 929.
Piling, Metal sheet-. M. W. Cluxton. No. 878,773; Feb. 11; Sp. p. 1865; Dr. p. 385; Gaz. vol. 132; p. 1173.
Pilot. H. W. Fellows and I. A. Cammett. No. 879,092; Feb. 11; Sp. p. 2467; Dr. pp. 514–15; Gaz. vol. 132; p. 1272.
Pin: *See* Clothes-pin; Scarf-pin.
Pin and the like. F. H. Noble. No. 878,011; Feb. 4; Sp. p. 225; Dr. p. 49; Gaz. vol. 132; p. 887.
Pipe: *See* Smoking-pipe; Stand-pipe; Tobacco-pipe.
Pipe. J. J. O'Toole. No. 878,014; Feb. 4; Sp. p. 240; Dr. p. 55; Gaz. vol. 132; p. 889.
Pipe. F. P. Nourse. No. 879,791; Feb. 18; Sp. p. 3895; Dr. p. 817; Gaz. vol. 132; p. 1542.
Pipe-bending machine. L. H. Brinkman. No. 878,604; Feb. 11; Sp. p. 1535; Dr. p. 313; Gaz. vol. 132; p. 1117.
Pipe-cleanser. J. E. Simpson. No. 879,594; Feb. 18; Sp. p. 3515; Dr. p. 736; Gaz. vol. 132; p. 1478.
Pipe coil, Concentric-. C. Senssenbrenner. No. 879,201; Feb. 18; Sp. p. 2691; Dr. p. 501; Gaz. vol. 132; p. 1349.
Pipe-coupling. C. A. Huffmaster. No. 879,550; Feb. 18; Sp. p. 3414; Dr. p. 715; Gaz. vol. 132; p. 1464.
Pipe-coupling. D. Landau. No. 879,880; Feb. 25; Sp. p. 4112; Dr. p. 863; Gaz. vol. 132; p. 1603.
Pipe-ferrule. C. E. and G. H. Heineman. No. 880,302; Feb. 25; Sp. p. 4980; Dr. p. 1050; Gaz. vol. 132; p. 1744.
Pipe-fishing tool. R. G. Sanford. No. 880,404; Feb. 25; Sp. p. 5180; Dr. p. 1092; Gaz. vol. 132; p. 1777.
Pipe-joint, Flexible. G. Hexinger. No. 879,588; Feb. 18; Sp. p. 3503; Dr. p. 734; Gaz. vol. 132; p. 1476.
Pipe-lining. J. A. Snoddy. No. 879,688; Feb. 18; Sp. p. 3704; Dr. p. 776; Gaz. vol. 132; p. 1508.
Pipe-topping machine. C. O. Strutz. No. 878,685; Feb. 11; Sp. p. 1687; Dr. p. 349; Gaz. vol. 132; p. 1144.

Pipe-wrench. A. B. Heimann. No. 878,388; Feb. 4; Sp. p. 996; Dr. p. 201; Gaz. vol. 132; p. 1012.
Pistol, Detonating-. W. Simpson. No. 879,919; Feb. 25; Sp. p. 4218; Dr. p. 880; Gaz. vol. 132; p. 1619.
Pistols, Safety device for. U. Stone. No. 879,018; Feb. 11; Sp. p. 2316; Dr. p. 484; Gaz. vol. 132; p. 1249.
Piston for cylinders of steam-engines. E. M. Cook. No. 880,361; Feb. 25; Sp. p. 5076; Dr. p. 1072; Gaz. vol. 132; p. 1762.
Piston-ring. H. Ford. No. 879,757; Feb. 18; Sp. p. 3832; Dr. p. 803; Gaz. vol. 132; p. 1531.
Plane. A. Nylund. No. 879,796; Feb. 18; Sp. p. 3896; Dr. p. 817; Gaz. vol. 132; p. 1543.
Planing-machine. J. R. Thomas. No. 878,909; Feb. 4; Sp. p. 414; Dr. pp. 57–8; Gaz. vol. 132; p. 915.
Planing-machine, Hand-. J. R. Thomas. No. 878,911; Feb. 11; Sp. p. 2124; Dr. pp. 443–4; Gaz. vol. 132; p. 1216.
Planing machine, Metal-. E. P. Carpenter. No. 879,734; Feb. 18; Sp. p. 3793; Dr. p. 796; Gaz. vol. 132; p. 1523.
Plant-box, Knockdown. N. Hight. No. 879,769; Feb. 18; Sp. p. 3855; Dr. p. 807; Gaz. vol. 132; p. 1534.
Plant-supporting stick, Adjustable. H. and A. Heubner. No. 879,047; Feb. 11; Sp. p. 2365; Dr. p. 494; Gaz. vol. 132; p. 1258.
Plants, Means for supporting climbing. C. Halliday. No. 879,959; Feb. 25; Sp. p. 4292; Dr. p. 897; Gaz. vol. 132; p. 1631.
Plants of their fleshy substance, Machine for divesting parts of. H. J. Boeken. No. 877,984; Feb. 4; Sp. p. 174; Dr. p. 39; Gaz. vol. 132; p. 878.
Planter. J. H. Kennebrew. No. 878,536; Feb. 11; Sp. p. 1368; Dr. p. 280; Gaz. vol. 132; p. 1094.
Planter. W. A. Heublein. No. 878,628; Feb. 11; Sp. p. 1590; Dr. pp. 323–4; Gaz. vol. 132; p. 1126.
Planter, Corn-. M. Mitchell. No. 879,306; Feb. 18; Sp. p. 3086; Dr. p. 641; Gaz. vol. 132; p. 1413.
Planter, Corn-. W. S. Graham. No. 879,461; Feb. 18; Sp. p. 3228; Dr. pp. 672–3; Gaz. vol. 132; p. 1454.
Planter, Hand-. F. E. Griffeth. No. 880,379; Feb. 25; Sp. p. 5119; Dr. p. 1081; Gaz. vol. 132; p. 1768.
Planter, Seed-. H. H. Wabers. No. 879,339; Feb. 18; Sp. p. 2951; Dr. p. 615; Gaz. vol. 132; p. 1395.
Plate-holder. J. T. McKean. No. 878,227; Feb. 4; Sp. p. 688; Dr. p. 142; Gaz. vol. 132; p. 957.
Plate-holder. G. B. Hall. No. 879,101; Feb. 11; 2484; Dr. pp. 517–18; Gaz. vol. 132; p. 1275.
Plate, Soup-. A. Cohen. No. 879,364; Feb. 18; Sp. p. 3004; Dr. p. 628; Gaz. vol. 132; p. 1403.
Platens, Machine for turning rubber shells of. D. W. Filstead. No. 879,378; Feb. 18; Sp. p. 3040; Dr. p. 633; Gaz. vol. 132; p. 1407.
Playing-ball. C. T. and E. P. Kingzett No. 878,070; Feb. 4; Sp. p. 362; Dr. p. 75; Gaz. vol. 132; p. 907.
Pleasure-giving machine. L. W. Whipple. No. 878,168; Feb. 4; Sp. p. 575; Dr. pp. 117–18; Gaz. vol. 132; p. 930.
Plow. C. R. Coffman. No. 878,774; Feb. 11; Sp. p. 1867; Dr. p. 385; Gaz. vol. 132; p. 1173.
Plow. C. K. McCasland. No. 878,821; Feb. 11; Sp. p. 1951; Dr. p. 404; Gaz. vol. 132; p. 1187.
Plow. P. Sweeney. No. 879,020; Feb. 11; Sp. p. 2319; Dr. p. 485; Gaz. vol. 132; p. 1249.
Plow, Breaking-. J. D. Arras. No. 878,033; Feb. 4; Sp. p. 290; Dr. p. 62; Gaz. vol. 132; p. 895.
Plow, Double. W. L. Selman. No. 878,565; Feb. 11; Sp. p. 1439; Dr. p. 293; Gaz. vol. 132; p. 1104.
Plow, Garden-. G. A. Smith and H. E. Stein. No. 880,171; Feb. 25; Sp. p. 4709; Dr. p. 994; Gaz. vol. 132; p. 1700.
Plow, Hand-. C. S. Ergenbright. No. 878,715; Feb. 11; Sp. p. 1754; Dr. pp. 362–3; Gaz. vol. 132; p. 1154.
Plow, Motor-. G. M. Shimp. No. 877,955; Feb. 4; Sp. p. 116; Dr. p. 27; Gaz. vol. 132; p. 869.
Plow-point. W. Titus. No. 878,026; Feb. 4; Sp. p. 278; Dr. p. 59; Gaz. vol. 132; p. 893.
Plows, harrows, and the like, Riding attachment for. H. P. Curtright. No. 879,037; Feb. 11; Sp. p. 2346; Dr. p. 491; Gaz. vol. 132; p. 1255.
Plowshare. C. W. McWane. No. 879,487; Feb. 18; Sp. p. 3277; Dr. p. 685; Gaz. vol. 132; p. 1443.
Plug, Attachment-. R. B. Benjamin. No. 879,723; Feb. 18; Sp. p. 3773; Dr. pp. 791–2; Gaz. vol. 132; p. 1520.
Plug, Attachment-. R. B. Benjamin. No. 879,725; Feb. 18; Sp. p. 3778; Dr. p. 792; Gaz. vol. 132; p. 1521.
Plug, Attachment-. D. L. Webb. No. 879,830; Feb. 18; Sp. p. 3984; Dr. p. 834; Gaz. vol. 132; p. 1555.
Plumb and level. J. Sechler. No. 880,246; Feb. 25; Sp. p. 4865; Dr. p. 1030; Gaz. vol. 132; p. 1726.
Plumb-bob. D. O. Morrill. No. 880,387; Feb. 25; Sp. p. 5135; Dr. p. 1084; Gaz. vol. 132; p. 1771.
Pneumatic action. H. Meyer. No. 879,786; Feb. 18; Sp. p. 3885; Dr. p. 815; Gaz. vol. 132; p. 1540.
Pneumatic motor. C. G. Wieland. No. 879,227; Feb. 18; Sp. p. 2736; Dr. pp. 570–1; Gaz. vol. 132; p. 1358.
Pneumatically-operated devices, Controlling means for. R. P. Jackson. No. 879,267; Feb. 18; Sp. p. 2813; Dr. p. 589; Gaz. vol. 132; p. 1371.
Pocket. L. Hartel. No. 878,383; Feb. 4; Sp. p. 991; Dr. p. 200; Gaz. vol. 132; p. 1010.
Pocket for garments, Detachable. J. W. Hayes. No. 879,538; Feb. 18; Sp. p. 3599; Dr. p. 752; Gaz. vol. 132; p. 1492.
Poison-indicator. G. Cohen. No. 879,740; Feb. 18; Sp. p. 3805; Dr. p. 798; Gaz. vol. 132; p. 1526.
Pole. R. S. Orr. No. 878,230; Feb. 4; Sp. p. 691; Dr. p. 143; Gaz. vol. 132; p. 958.
Polishing-machine. R. T. Schuttler. No. 877,954; Feb. 4; Sp. p. 114; Dr. pp. 26–7; Gaz. vol. 132; p. 869.
Post: *See* Drill-post; Fence-post; Saddle-post.
Post-card. O. Palm, Jr. No. 878,556; Feb. 11; Sp. p. 1422; Dr. p. 291; Gaz. vol. 132; p. 1101.
Post-mold. J. H. Wiest. No. 879,070; Feb. 11; Sp. p. 2420; Dr. p. 507; Gaz. vol. 132; p. 1267.
Post-office separating-case. M. Ewing. No. 880,132; Feb. 25; Sp. p. 4620; Dr. p. 974; Gaz. vol. 132; p. 1686.
Postal card. H. G. Taylor. No. 879,802; Feb. 18; Sp. p. 3913; Dr. p. 820; Gaz. vol. 132; p. 1546.
Pot: *See* Coffee-pot; Coffee or tea pot.
Potato-cutter. M. M. Wheeler. No. 880,057; Feb. 25; Sp. p. 4487; Dr. p. 943; Gaz. vol. 132; p. 1663.
Potato-digger. T. Herberg. No. 879,543; Feb. 18; Sp. p. 3391; Dr. p. 709; Gaz. vol. 132; p. 1462.
Potato-digger. J. Moreau. No. 879,661; Feb. 18; Sp. p. 3644; Dr. pp. 672–3; Gaz. vol. 132; p. 1499.
Poultry-trap. B. M. Hannes. No. 879,132; Feb. 11; Sp. p. 2552; Dr. p. 531; Gaz. vol. 132; p. 1285.
Powder, Smokeless. F. A. Halsey. No. 878,726; Feb. 11; Sp. p. 1773; Gaz. vol. 132; p. 1158.
Power: *See* Motive power.
Power-coupling, Yielding. W. C. Mayo and J. Houlehan. No. 879,286; Feb. 18; Sp. p. 2849; Dr. p. 597; Gaz. vol. 132; p. 1378.
Power-press. H. Osswald. No. 880,239; Feb. 25; Sp. p. 4855; Dr. p. 1027; Gaz. vol. 132; p. 1723.
Power-transmission apparatus. C. R. Keith. No. 880,382; Feb. 25; Sp. p. 5125; Dr. p. 1083; Gaz. vol. 132; p. 1769.
Power-transmission mechanism. J. U. Baker. No. 880,267; Feb. 25; Sp. p. 4911; Dr. pp. 1039–40; Gaz. vol. 132; p. 1733.
Press: *See* Baling-press; Cotton-press; Hay-press; Notching-press; Power-press; Printing-press; Roller-press.
Press. I. Lichtig. No. 878,298; Feb. 4; Sp. p. 834; Dr. p. 166; Gaz. vol. 132; p. 982.
Press. J. Rappold. No. 879,319; Feb. 18; Sp. p. 2919; Dr. p. 609; Gaz. vol. 132; p. 1388.
Press. S. M. Green. No. 880,449; Feb. 25; Sp. p. 5275; Dr. pp. 1100–10; Gaz. vol. 132; p. 1793.
Press-board. K. E. Rogers. No. 878,089; Feb. 4; Sp. p. 307; Dr. p. 83; Gaz. vol. 132; p. 912.
Pressure-indicating device and alarm-signal. J. H. Dixon. No. 879,039; Feb. 11; Sp. p. 2350; Dr. p. 492; Gaz. vol. 132; p. 1256.
Pressure-regulator. A. Beler. No. 879,127; Feb. 11; Sp. p. 2544; Dr. p. 529; Gaz. vol. 132; p. 1283.
Pressure-regulator. R. M. Dixon. No. 880,128; Feb. 25; Sp. p. 4614; Dr. p. 973; Gaz. vol. 132; p. 1685.
Pressure-regulator. M. G. Reynolds. No. 880,402; Feb. 25; Sp. p. 5177; Dr. p. 1091; Gaz. vol. 132; p. 1776.
Printer's registering device. W. S. Warnock. No. 878,842; Feb. 11; Sp. p. 1986; Dr. p. 412; Gaz. vol. 132; p. 1194.
Printing and cutting machine, Cloth. C. F. Sparks. No. 878,681; Feb. 11; Sp. p. 1680; Dr. pp. 346–7; Gaz. vol. 132; p. 1143.
Printing and folding machinery, Signature-delivery mechanism for. R. C. Seymour. No. 879,419; Feb. 18; Sp. p. 3139; Dr. pp. 653–4; Gaz. vol 132; p. 1421.
Printing-blocks, Mold for the production of base-blocks for mounting. F. F. W. Oldfield. No: 878,663; Feb. 11; Sp. p. 1651; Dr p. 339; Gaz. vol. 132; p. 1137.
Printing-frame. E. R. Williams. No. 880,345; Feb. 25; Sp. p. 5050; Dr. p. 1067; Gaz. vol. 132; p. 1757.
Printing-machine. G. W. Mascord. No. 878,651; Feb. 11; Sp. p. 1633; Dr. pp. 334–5; Gaz. vol. 132; p. 1133.
Printing machine, Pencil-. H. C. Biette. No. 879,849; Feb. 25; Sp. p. 4028; Dr. pp. 844–5; Gaz. vol. 132; p. 1504.
Printing machinery, Antismutting device for. E. H. Cottrell. No. 879,443; Feb. 18; Sp. p. 3183; Dr. p. 663; Gaz. vol. 132; p. 1429.
Printing mechanism, Time-. H. Abbott. No. 878,447; Feb. 4; Sp. p. 1102; Dr. pp. 225–7; Gaz. vol. 132; p. 1030.
Printing-press. W. H. Smith. No. 879,687; Feb. 18; Sp. p. 3702; Dr. pp. 775–6; Gaz. vol. 132; p. 1508.
Printing-press. R. C. Seymour. No. 879,840; Feb. 18; Sp. p. 4002; Dr. pp. 838–40; Gaz. vol. 132; p. 1550.
Printing-press. G. H. Pierce. No. 879,897; Feb. 25; Sp. p. 4174; Dr. pp. 871–2; Gaz. vol. 132; p. 1610.
Printing-press. P. F. Cox. No. 880,281; Feb. 25; Sp. p. 4939; Dr. p. 1044; Gaz. vol. 132; p. 1737.
Printing-press, Platen. M. Rockstroh. No. 878,426; Feb. 4; Sp. p. 1067; Dr. p. 216; Gaz. vol. 132; p. 1024.
Printing-press side-guide. W. S. Huson. No. 878,957; Feb. 11; Sp. p. 2206; Dr. p. 461; Gaz. vol. 132; p. 1230.
Printing press, Traveling-cylinder web-. H. F. Bechman. No. 880,001; Feb. 25; Sp. p. 4363; Dr. p. 915; Gaz. vol. 132; p. 1645.
Printing press, Web-. P. F. Cox. No. 880,282; Feb. 25; Sp. p. 4942; Dr. p. 1045; Gaz. vol. 132; p. 1737.
Printing-presses, Folding mechanism for. H. F. Bechman. No. 879,510; Feb. 18; Sp. p. 3323; Dr. pp. 694–5; Gaz. vol. 132; p. 1451.
Projectile. J. A. Bon. No. 879,079; Feb. 11; Sp. p. 2426; Dr. p. 508; Gaz vol. 132; p. 1268.
Propeller. A. Standau. No. 879,680; Feb. 18; Sp. p. 3705; Dr. p. 776; Gaz. vol. 132; p. 1509.
Propeller, Hand-power. J. C. Weir. No. 878,845; Feb. 11; Sp. p. 1991; Dr. p. 413; Gaz. vol. 132; p. 1195.
Propeller, Speed-controlling reversing-. C. F. Roper. No. 878,022; Feb. 4; Sp. p. 272; Dr. p. 58; Gaz. vol. 132; p. 892.
Propeller-wheel, Reversible. C. Sintz. No. 878,095; Feb. 4; Sp. p. 408; Dr. p. 86; Gaz. vol. 132; p. 914.
Propulsion, Mechanism for boat. H. S. Searle. No. 879,497; Feb. 18; Sp. p. 3297; Dr. p. 690; Gaz. vol. 132; p. 1446.
Pruning-shears. A. F. Mischke. No. 879,882; Feb. 25; Sp. p. 4115; Dr. p. 863; Gaz. vol. 132; p. 1604.
Puller: *See* Beet-puller; Root-puller; Spike-puller.
Pulley. C. F. Foote. No. 878,054; Feb. 4; Sp. p. 332; Dr. p. 69; Gaz. vol. 132; p. 902.

Pulley-block. C. I. Scott. No. 879,680; Feb. 18; Sp. p. 3689; Dr. 772; Gaz. vol. 132; p. 1506.
Pulley, Split sheet-metal. L. A. Biggar. No. 878,602; Feb. 11; Sp. p. 1530; Dr. p. 312; Gaz. vol. 132; p. 1117.
Pulley-sustaining hanger. F. C. Stevens. No. 880,415; Feb. 25; Sp. p. 5205; Dr. p. 1097; Gaz. vol. 132; p. 1781.
Pulverizer, Centrifugal-impact dry. L. C. Graupner. No. 878,878; Feb. 11; Sp. p. 2059; Dr. p. 427; Gaz. vol. 132; p. 1206.
Pump. J. A. Elliott. No. 878,052; Feb. 4; Sp. p. 330; Dr. p. 69; Gaz. vol. 132; p. 901.
Pump. M. J. Henry. No. 878,389; Feb. 4; Sp. p. 998; Dr. p. 201; Gaz. vol. 132; p. 1012.
Pump. M. Pollatschek. No. 880,039; Feb. 25; Sp. p. 4457; Dr. p. 935; Gaz. vol. 132; p. 1657.
Pump. G. Grace. No. 880,137; Feb. 25; Sp. p. 4637; Dr. pp. 978–9; Gaz. vol. 132; p. 1688.
Pump and ball, Sand. V. H. Palm. No. 880,462; Feb. 25; Sp. p. 5310; Dr. p. 1117; Gaz. vol. 132; p. 1798.
Pump and well curb, Combined. W. A. Crumly. No. 878,357; Feb. 4; Sp. p. 939; Dr. p. 187; Gaz. vol. 132; p. 1001.
Pump, Centrifugal. W. H. Thorne. No. 878,256; Feb. 4; Sp. p. 745; Dr. p. 150; Gaz. vol. 132; p. 968.
Pump, Compound centrifugal. E. W. Riggs. No. 880,327; Feb. 25; Sp. p. 5017; Dr. p. 1059; Gaz. vol. 132; p. 1751.
Pump for corrosive fluids. E. Morterud. No. 879,484; Feb. 18; Sp. p. 3272; Dr. p. 682; Gaz. vol. 132; p. 1442.
Pump for gases, Rotary. C. Hoffmann. No. 878,528; Feb. 11; Sp. p. 1352; Dr. p. 275; Gaz. vol. 132; p. 1091.
Pump for oil-wells. R. S. Futhey. No. 880,019; Feb. 25; Sp. p. 4401; Dr. p. 925; Gaz. vol. 132; p. 1650.
Pump-governor, Electric. W. V. Turner. No. 879,699; Feb. 18; Sp. p. 3726; Dr. p. 782; Gaz. vol. 132; p. 1512.
Pump operating with auxiliary turbines, Rotary or centrifugal. H. Ludewig. No. 879,059; Feb. 11; Sp. p. 2386; Dr. p. 500; Gaz. vol. 132; p. 1262.
Pump, Rotary. R. Berrenberg. No. 878,600; Feb. 11; Sp. 1527; Dr. pp. 311–12; Gaz. vol. 132; p. 1116.
Pump screening device, Spray-. A. W. Overhiser. No. 880,240; Feb. 25; Sp. p. 4857; Dr. p. 1028; Gaz. vol. 132; p. 1724.
Pump, Triplex. D. F. Lepley. No. 879,560; Feb. 18; Sp. p. 3426; Dr. p. 718; Gaz. vol. 132; p. 1467.
Pump with funnel-shaped guide-pipes in the suction-space between the suction-pipe and ring of blades, Centrifugal. O. Krell. No. 879,476; Feb. 18; Sp. p. 3252; Dr. p. 677; Gaz. vol. 132; p. 1439.
Pumps, Pressure-governor for. H. H. Westinghouse. No. 879,709; Feb. 18; Sp. p. 3744; Dr. p. 785; Gaz. vol. 132; p. 1515.
Pumps, Stand-valve-extracting means for oil-well. E. A. Copeland. No. 879,147; Feb. 18; Sp. p. 2587; Dr. p. 538; Gaz. vol. 132; p. 1332.
Pumps, &c., Valve for. E. E. Clark. No. 877,906; Feb. 4; Sp. p. 24; Dr. p. 5; Gaz. vol. 132; p. 852.
Pumping device, Oil-well. H. D. Haven. No. 879,166; Feb. 18; Sp. p. 2634; Dr. p. 549; Gaz. vol. 132; p. 1339.
Pumping-engine. J. C. Smith. No. 878,150; Feb. 4; Sp. p. 523; Dr. p. 112; Gaz. vol. 132; p. 935.
Pumping mechanism, Automatically-controlled or self-regulating. M. Miller. No. 879,111; Feb. 11; Sp. p. 2513; Dr. p. 522; Gaz. vol. 132; p. 1278.
Punching-machine. T. A. Lindsey. No. 880,065; Feb. 25; Sp. p. 4541; Dr. p. 956; Gaz. vol. 132; p. 1672.
Purifier-box. H. L. Doherty. No. 878,128; Feb. 4; Sp. p. 467; Dr. pp. 99–100; Gaz. vol. 132; p. 925.
Push-button switch. H. C. Williamson. No. 878,586; Feb. 11; Sp. p. 1502; Dr. p. 305; Gaz. vol. 132; p. 1112.
Puzzle. S. S. Cahill. No. 878,187; Feb. 4; Sp. p. 615; Dr. p. 126; Gaz. vol. 132; p. 946.
Puzzle. R. D. Martin. No. 878,408; Feb. 4; Sp. p. 1039; Dr. p. 210; Gaz. vol. 132; p. 1018.
Puzzle. J. H. Prentice. No. 879,316; Feb. 18; Sp. p. 2917; Dr. p. 608; Gaz. vol. 132; p. 1388.
Pyrographic tool. J. P. Müller. No. 878,414; Feb. 4; Sp. p. 1048; Dr. p. 212; Gaz. vol. 132; p. 1020.
Racing track or course. J. B. Georges. No. 877,993; Feb. 4; Sp. p. 191; Dr. p. 43; Gaz. vol. 132; p. 881.
Rack: *See* Car-rack; Display-rack; Hall-rack; Hat, coat, and umbrella rack; Hay-rack; Hay and hog rack; Room-rack.
Racket. F. Imlach. No. 880,306; Feb. 25; Sp. p. 4985; Dr. p. 1052; Gaz. vol. 132; p. 1745.
Radiator. E. E. Deschane and J. C. Littlewood. No. 877,987; Feb. 4; Sp. p. 179; Dr. p. 40; Gaz. vol. 132; p. 879.
Radiator. B. F. Foss. No. 879,953; Feb. 25; Sp. p. 4279; Dr. p. 895; Gaz. vol. 132; p. 1629.
Radiator. G. Hodgdon. No. 880,079; Feb. 25; Sp. p. 4529; Dr. p. 953; Gaz. vol. 132; p. 1669.
Radiator appliance. J. A. Gorton. No. 879,628; Feb. 18; Sp. p. 3583; Dr. p. 750; Gaz. vol. 132; p. 1489.
Radiator-nipple-drawing device. J. Deller. No. 878,457; Feb. 4; Sp. p. 1126; Dr. p. 231; Gaz. vol. 132; p. 1034.
Radiator packing-joint. S. W. Jameson. No. 880,217; Feb. 25; Sp. p. 4809; Dr. p. 1018; Gaz. vol. 132; p. 1715.
Rail-bonds, &c., Forming. E. M. Bournonville. No. 880,271; Feb. 25; Sp. p. 4919; Dr. p. 1041; Gaz. vol. 132; p. 1734.
Rail chair and fastener. J. A. Gossard. No. 878,202; Feb. 4; Sp. p. 642; Dr. pp. 131–2; Gaz. vol. 132; p. 950.
Rail-joint. J. Urbanek. No. 878,692; Feb. 11; Sp. p. 1698; Dr. p. 350; Gaz. vol. 132; p. 1146.
Rail-joint, Insulated. B. Wolhaupter. No. 878,588; Feb. 11; Sp. p. 1505; Dr. p. 306; Gaz. vol. 132; p. 1113.
Rail-joints, Reinforced angle-bar for. B. Wolhaupter. No. 878,589; Feb. 11; Sp. p. 1507; Dr. pp. 306–7; Gaz. vol. 132; p. 1113.
Rail-lift. T. J. Wasser. No. 880,344; Feb. 25; Sp. p. 5049; Dr. p. 1066; Gaz. vol. 132; p. 1757.
Rail protector, Third-. F. D. Sharp. No. 879,683; Feb. 18; Sp. p. 3698; Dr. p. 774; Gaz. vol. 132; p. 1507.
Rail-tie, Metal. G. L. Hindman. No. 880,381; Feb. 25; Sp. p. 5124; Dr. p. 1082; Gaz. vol. 132; p. 1769.
Rails, Improving steel. R. A. Hadfield. No. 879,634; Feb. 18; Sp. p. 3594; Gaz. vol. 132; p. 1491.
Railway. G. Dippel and C. Koenig. No. 879,750; Feb. 18; Sp. p. 3825; Dr. p. 801; Gaz. vol. 132; p. 1529.
Railway-crossing. G. D. Shoop. No. 878,677; Feb. 11; Sp. p. 1675; Dr. p. 345; Gaz. vol. 132; p. 1142.
Railway-crossings, Automatic signal for. A. Aretz. No. 879,718; Feb. 18; Sp. p. 3762; Dr. p. 789; Gaz. vol. 132; p. 1518.
Railway draft-rigging. C. J. Nash. No. 877,943; Feb. 4; Sp. p. 99; Dr. p. 22; Gaz. vol. 132; p. 865.
Railway fish-plate. G. T. Wilson. No. 879,935; Feb. 25; Sp. p. 4249; Dr. p. 888; Gaz. vol. 132; p. 1624.
Railway-joint. J.H. Kochenderfer. No. 879,475; Feb. 18; Sp. p. 3251; Dr. p. 677; Gaz. vol. 132; p. 1438.
Railway offset joint. J. H. Allen. No. 879,938; Feb. 25; Sp. p. 4252; Dr. p. 889; Gaz. vol. 132; p. 1625.
Railway, Pleasure-. T. G. and W. H. Mayberry. No. 879,283; Feb. 18; Sp. p. 2837; Dr. p. 595; Gaz. vol. 132; p. 1376.
Railway, Pleasure-. J. C. Reckweg. No. 880,040; Feb. 25; Sp. p. 4459; Dr. p. 936; Gaz. vol. 132; p. 1657.
Railway-rail joint. W. H. Lewis. No. 880,384; Feb. 25; Sp. p. 5128; Dr. p. 1084; Gaz. vol. 132; p. 1770.
Railway-rail joint, Insulated. K. Kohn. No. 879,878; Feb. 25; Sp. p. 4104; Dr. p. 862; Gaz. vol. 132; p. 1602.
Railway safety appliance. M. D. Breslauer and S. W. Clark. No. 878,113; Feb. 4; Sp. p. 441; Dr. pp. 93–4; Gaz. vol. 132; p. 920.
Railway signal. B. E. Ahlders. No. 879,431; Feb. 18; Sp. p. 3162; Dr. p. 658; Gaz. vol. 132; p. 1425.
Railway signal apparatus. F. Graziano. No. 880,072; Feb. 25; Sp. p. 4514; Dr. p. 949; Gaz. vol. 132; p. 1667.
Railway-signal, Automatic. N. E. Spitler. No. 878,905; Feb. 11; Sp. p. 2112; Dr. pp. 440–1; Gaz. vol. 132; p. 1214.
Railway-signal, Electric. F. M. Hill and W. C. Davis. No. 879,168; Feb. 18; Sp. p. 2637; Dr. p. 550; Gaz. vol. 132; p. 1340.
Railway-signal, Metallic. J. H. Taylor. No. 877,967; Feb. 4; Sp. p. 144; Dr. pp. 32–3; Gaz. vol. 132; p. 873.
Railway signal system, Electric-. C. F. Pike. No. 878,804; Feb. 11; Sp. p. 2004; Dr. pp. 436–7; Gaz. vol. 132; p. 1211.
Railway signaling apparatus, Electric. H. W. Spang. No. 878,249; Feb. 4; Sp. p. 732; Dr. p. 148; Gaz. vol. 132; p. 966.
Railway signaling device. F. Bauer. No. 879,133; Feb. 18; Sp. p. 2571; Dr. p. 535; Gaz. vol. 132; p. 1328.
Railway signaling system. W. W. Salmon. No. 880,329; Feb. 25; Sp. p. 5020; Dr. p. 1059; Gaz. vol. 132; p. 1752.
Railway-spike. T. W. Carey, Jr. No. 880,480; Feb. 25; Sp. p. 5351; Dr. p. 1128; Gaz. vol. 132; p. 1804.
Railway-switch. D. I. Griffith. No. 879,256; Feb. 18; Sp. p. 2795; Dr. pp. 585–6; Gaz. vol. 132; p. 1368.
Railway-switch. P. Stanson. No. 880,339; Feb. 25; Sp. p. 5040; Dr. p. 1064; Gaz. vol. 132; p. 1755.
Railway switch and signal mechanism. J. S. Payne. No. 878,666; Feb. 11; Sp. p. 1656; Dr. p. 341; Gaz. vol. 132; p. 1138.
Railway-switch, Automatic. R. M. McGee and W. M. Jones. No. 878,822; Feb. 11; Sp. p. 1952; Dr. p. 404; Gaz. vol. 132; p. 1187.
Railway switch-points and signals, Apparatus for working and interlocking. A. Monard, H. Dumartin, and E. A. Moutier. No. 878,552; Feb. 11; Sp. p. 1402; Dr. pp. 287–9; Gaz. vol. 132; p. 1100.
Railway tie. J. B. Spera and S. G. Cocklin. No. 879,921; Feb. 25; Sp. p. 4223; Dr. p. 882; Gaz. vol. 132; p. 1620.
Railway-train protection. B. C. Rowell. No. 879,494; Feb. 18; Sp. p. 3287; Dr. pp. 688–9; Gaz. vol. 132; p. 1445.
Railway wagon-stanchion and the like. C. H. Fox. No. 879,042; Feb. 11; Sp. p. 2354; Dr. pp. 492–3; Gaz. vol. 132; p. 1256.
Railways, Alternating-current signaling apparatus for electric. J. S. Holliday. No. 878,138; Feb. 4; Sp. p. 482; Dr. p. 103; Gaz. vol. 132; p. 928.
Railways, Alternating-current signaling apparatus for electric. J. S. Holliday. No. 878,139; Feb. 4; Sp. p. 484; Dr. pp. 103–4; Gaz. vol. 132; p. 928.
Ram, Hydraulic. L. Rubach. No. 878,239; Feb. 4; Sp. p. 706; Dr. p. 145; Gaz. vol. 132; p. 961.
Ramie-decorticator. H. J. Boeken. No. 877,983; Feb. 4; Sp. p. 173; Dr. pp. 38–9; Gaz. vol. 132; p. 878.
Range, Steam cooking-. J. B. Barrett. No. 878,449; Feb. 4; Sp. p. 1109; Dr. p. 228; Gaz. vol. 132; p. 1031.
Ratchet-brace. G. M. D. Heard. No. 878,204; Feb. 4; Sp. p. 647; Dr. pp. 132–3; Gaz. vol. 132; p. 950.
Ratchet-wrench. A. Munch. No. 878,657; Feb. 11; Sp. p. 1643; Dr. p. 337; Gaz. vol. 132; p. 1135.
Raveling-machine. S. G. Miller. No. 878,980; Feb. 11; Sp. p. 2246; Dr. pp. 469–70; Gaz. vol. 132; p. 1237.
Razor and stropping device, Safety-. S. B. Battey. No. 878,450; Feb. 4; Sp. p. 1111; Dr. p. 228; Gaz. vol. 132; p. 1031.
Razor-blade holder, Safety-. E. J. Densen. No. 879,446; Feb. 18; Sp. p. 3139; Dr. p. 664; Gaz. vol. 132; p. 1430.
Razor, Safety-. A. A. Warner. No. 878,941; Feb. 11; Sp. p. 1963; Dr. p. 412; Gaz. vol. 132; p. 1194.
Razor, Safety-. J. Heissenberger. No. 879,264; Feb. 18; Sp. p. 2808; Dr. p. 589; Gaz. vol. 132; p. 1370.
Razor, Safety-. L. Ebner No. 879,611; Feb. 18; Sp. p. 3557; Dr. p. 744; Gaz. vol. 132; p. 1493.
Razor, Safety-. O. V. Ball. No. 880,269; Feb. 25; Sp. p. 4917; Dr. p. 1041; Gaz. vol. 132; p. 1733.
Razor-strops, Compound for use with. J. M. Reno. No. 879,319; Feb. 18; Sp. p. 2920; Gaz. vol. 132; p. 1389.
Razors, Removable safety-guard for. G. Johnson and F. J. McLaren. No. 879,575; Feb. 25; Sp. p. 4101; Dr. p. 861; Gaz. vol. 132; p. 1602.
Reaping, mowing, and the like machines, Reel for. M. Schiller. No. 880,104; Feb. 25; Sp. p. 4567; Dr. p. 962; Gaz. vol. 132; p. 1677.
Receptacle stopper and brush. B. G. Volger. No. 878,437; Feb 4; Sp. p. 1086; Dr. p. 221; Gaz. vol. 132; p. 1027.

Reclining-chair. J. J. Pokorny. No. 879,489; Feb. 18; Sp. p. 3279; Dr. p. 685; Gaz. vol. 132; p. 1443.
Rectal supporter. H. E. Cunningham. No. 878,191; Feb. 4; Sp. p. 620; Dr. p. 127; Gaz. vol. 132; p. 946.
Rectangular can for dried beef and other articles. W. J. Mullaley and J. E. Schenck. No. 878,553; Feb. 11; Sp. p. 1414; Dr. p. 200; Gaz. vol. 132; p. 1100.
Rectifier and detector. G. W. Pierce. No. 879,062; Feb. 11; Sp. p. 2302; Dr. p. 501; Gaz. vol. 132; p. 1263.
Rectifier and detector. G. W. Pierce. No. 879,117; Feb. 11; Sp. p. 2529; Dr. p. 526; Gaz. vol. 132; p. 1280.
Reduction-mill. H. B. Hebert. No. 879,202; Feb. 18; Sp. p. 2805; Dr. p. 583; Gaz. vol. 132; p. 1370.
Reel: *See* Bait-casting reel; Clothes-drying reel; Clothes-line reel; Wire-reel.
Reel. O. E. McMahon. No. 875,570; Feb. 18; Sp. p. 3445; Dr. p. 721; Gaz. vol. 132; p. 1470.
Refrigerating apparatus. F. M. Bush. No. 879,243; Feb. 18; Sp. p. 2766; Dr. pp. 579–80; Gaz. vol. 132; p. 1363.
Refrigerating-machines, Expansion-regulator for. O. E. Levilly. No. 879,303; Feb. 18; Sp. p. 3003; Dr. p. 638; Gaz. vol. 132; p. 1412.
Refrigerator. C. Pabst, Jr., and H. C. Savage. No. 879,579; Feb. 18; Sp. p. 3476; Dr. p. 729; Gaz. vol. 132; p. 1473.
Refrigerator. F. V. Detwiler. No. 880,443; Feb. 25; Sp. p. 5264; Dr. pp. 1107–8; Gaz. vol. 132; p. 1791.
Register: *See* Cash-register; Hot-air register; Time-recording register.
Registering device, Automatic. R. Tanner. No. 878,835; Feb. 11; Sp. p. 1974; Dr. pp. 409–10; Gaz. vol. 132; p. 1192.
Regulator: *See* Feed-regulator; Gas-pressure regulator; Pressure-regulator.
Regulator. J. M. Blackburn. No. 879,029; Feb. 11; Sp. p. 2333; Dr. p. 488; Gaz. vol. 132; p. 1252.
Relay, Interlocking. E. McClintock. No. 879,885; Feb. 25; Sp. p. 4122; Dr. p. 865; Gaz. vol. 132; p. 1605.
Retort-drawing machines, Mechanism for operating the rake and rake-carriage of. H. E. Carpenter. No. 880,439; Feb. 25; Sp. p. 5257; Dr. p. 1106; Gaz. vol. 132; p. 1790.
Reversing mechanism. M. W. Kouns. No. 879,182; Feb. 18; Sp. p. 2657; Dr. p. 554; Gaz. vol. 132; p. 1344.
Revolver, Magazine-. A. Moeller. No. 879,295; Feb. 18; Sp. p. 2883; Dr. p. 601; Gaz. vol. 132; p. 1381.
Ribbon-fastener. A. H. Gardyne. No. 878,719; Feb. 11; Sp. p. 1760; Dr. p. 364; Gaz. vol. 132; p. 1155.
Rifle-sight-lighting means. C. W. Getchell. No. 880,294; Feb. 25; Sp. p. 4967; Dr. p. 1048; Gaz. vol. 132; p. 1742.
Ring: *See* Piston-ring.
Ring traveler. E. L. Merrow. No. 879,293; Feb. 18; Sp. p. 2880; Dr. p. 600; Gaz. vol. 132; p. 1380.
River-banks, Means for protecting. R. B. McGregor. No. 880,300; Feb. 25; Sp. p. 5138; Dr. p. 1085; Gaz. vol. 132; p. 1772.
Rivet-extractor. J. Butsch, Sr. No. 878,041; Feb. 4; Sp. p. 306; Dr. p. 64; Gaz. vol. 132; p. 897.
Rivet-setting machine. J. E. Perrault. No. 879,895; Feb. 25; Sp. p. 4167; Dr. pp. 869–70; Gaz. vol. 132; p. 1609.
Rivet-setting machine. J. E. Perrault. No. 879,896; Feb. 25; Sp. p. 4170; Dr. pp. 870–1; Gaz. vol. 132; p. 1610.
Riveter, Pneumatic. J. Keller. No. 878,935; Feb. 11; Sp. p. 1926; Dr. pp. 398–9; Gaz. vol. 132; p. 1183.
Riveting-machine. T. S. Bennett. No. 877,982; Feb. 4; Sp. p. 171; Dr. p. 38; Gaz. vol. 132; p. 878.
Riveting tool or engine. W. L. Lindsay. No. 878,645; Feb. 11; Sp. p. 1618; Dr. pp. 330–1; Gaz. vol. 132; p. 1131.
Roaster: *See* Coffee, &c., roaster.
Roaster. W. G. Swart. No. 879,842; Feb. 18; Sp. p. 4010; Dr. p. 841; Gaz. vol. 132; p. 1559.
Roasting-kiln. J. Zellweger. No. 878,704; Feb. 11; Sp. p. 1725; Dr. p. 357; Gaz. vol. 132; p. 1150.
Rock-cleaving machine. J. Pierson. No. 879,063; Feb. 11; Sp. p. 2304; Dr. p. 501; Gaz. vol. 132; p. 1263.
Rock-cutting apparatus, Cutter of. F. Lobnitz. No. 880,227; Feb. 25; Sp. p. 4835; Dr. pp. 1022–3; Gaz. vol. 132; p. 1719.
Rock-drill. B. H. Locke. No. 879,971; Feb. 25; Sp. p. 4311; Dr. pp. 901–2; Gaz. vol. 132; p. 1635.
Rock-drill, Hand. C. F. Paul, Jr. No. 878,152; Feb. 4; Sp. p. 509; Dr. pp. 108–9; Gaz. vol. 132; p. 933.
Rock-drilling-machine support. C. F. Paul, Jr. No. 878,153; Feb. 4; Sp. p. 511; Dr. p. 109; Gaz. vol. 132; p. 933.
Roll. J. J. Evans and R. Lewis. No. 880,205; Feb. 25; Sp. p. 4780; Dr. p. 1011; Gaz. vol. 132; p. 1711.
Rolls, Automatic blocking attachment for strip-. W. A. Wood. No. 880,434; Feb. 25; Sp. p. 5247; Dr. pp. 1103–4; Gaz. vol. 132; p. 1788.
Roller: *See* Chair-roller; Grinding-roller.
Roller-press. C. Nelsen. No. 880,035; Feb. 25; Sp. p. 4451; Dr. p. 934; Gaz. vol. 132; p. 1656.
Rollers, Machine for pressing lines or designs into. R. Laing. No. 878,071; Feb. 4; Sp. p. 364; Dr. p. 75; Gaz. vol. 132; p. 907.
Rolling-mill for crushing pipes, bloomings, &c. J. Eynon. No. 879,616; Feb. 18; Sp. p. 3564; Dr. pp. 745–6; Gaz. vol. 132; p. 1485.
Roof-covering. C. C. Dill. No. 879,372; Feb. 18; Sp. p. 3029; Dr. p. 631; Gaz. vol. 132; p. 1406.
Roofing or siding sheets, Lap-joint for. E. G. Welch. No. 879,708; Feb. 18; Sp. p. 3743; Dr. p. 785; Gaz. vol. 132; p. 1515.
Room rack, Hotel-. F. Muschenheim. No. 878,554; Feb. 11; Sp. p. 1416; Dr. p. 200; Gaz. vol. 132; p. 1101.
Root-puller. R. A. Denovan. No. 879,526; Feb. 18; Sp. p. 3349; Dr. p. 699; Gaz. vol. 132; p. 1456.
Rope-socket. R. A. Hammond. No. 878,060; Feb. 4; Sp. p. 340; Dr. p. 71; Gaz. vol. 132; p. 904.
Rotary engine. F. Süren. No. 877,965; Feb. 4; Sp. p. 137; Dr. pp. 31–2; Gaz. vol. 132; p. 872.
Rotary engine. J. L. Adams. No. 878,327; Feb. 4; Sp. p. 882; Dr. pp. 176–7; Gaz. vol. 132; p. 991.
Rotary engine. G. A. Dibbell. No. 878,613; Feb. 11; Sp. p. 1558; Dr. p. 317; Gaz. vol. 132; p. 1121.
Rotary engine. F. E. Penington. No. 878,998; Feb. 11; Sp. p. 2284; Dr. p. 477; Gaz. vol. 132; p. 1243.
Rotary engine. E. Harrigan. No. 879,464; Feb. 18; Sp. p. 3236; Dr. pp. 673–4; Gaz. vol. 132; p. 1435.
Rotary engine. J. Weatherford. No. 879,707; Feb. 18; Sp. p. 3741; Dr. p. 785; Gaz. vol. 132; p. 1515.
Rotary engine. G. F. Burton. No. 880,009; Feb. 25; Sp. p. 4380; Dr. pp. 918–20; Gaz. vol. 132; p. 1647.
Rotary engine. J. Zura. No. 880,182; Feb. 25; Sp. p. 4728; Dr. pp. 1000–1; Gaz. vol. 132; p. 1703.
Rotary engine. W. Seibert. No. 880,333; Feb. 25; Sp. p. 5029; Dr. p. 1061; Gaz. vol. 132; p. 1753.
Rotary explosive-engine. J. D. Long. No. 878,144; Feb. 4; Sp. p. 493; Dr. p. 105; Gaz. vol. 132; p. 930.
Rotary internal-combustion engine. J. Hokanson. No. 880,453; Feb. 25; Sp. p. 5263; Dr. p. 1112; Gaz. vol. 132; p. 1795.
Rotary motor. H. Van Beresteyn. No. 878,100; Feb. 4; Sp. p. 416; Dr. p. 88; Gaz. vol. 132; p. 916.
Rough-rounding and channeling machine. F. L. Alley. No. 878,478; Feb. 4; Sp. p. 1174; Dr. p. 238; Gaz. vol. 132; p. 1041.
Rough-rounding machine. A. M. English. No. 878,478; Feb. 4; Sp. p. 1179; Dr. pp. 240–7; Gaz. vol. 132; p. 1042.
Roundabout. H. S. Cantrovitz. No. 879,143; Feb. 18; Sp. p. 2579; Dr. p. 537; Gaz. vol. 132; p. 1330.
Roving and similar frames, Device for preventing singles in. T. Bentley. No. 878,451; Feb. 4; Sp. p. 1113; Dr. p. 228; Gaz. vol. 132; p. 1032.
Rubber. H. O'Sullivan. No. 879,306; Feb. 18; Sp. p. 2901; Dr. p. 605; Gaz. vol. 132; p. 1385.
Rubber boots and shoes, Manufacture of india-. A. Schulze. No. 878,749; Feb. 11; Sp. p. 1810; Dr. p. 375; Gaz. vol. 132; p. 1165.
Rubber compound, Article of. W. Kiel. No. 879,388; Feb. 18; Sp. p. 3061; Dr. p. 637; Gaz. vol. 132; p. 1410.
Rubber footwear, Machine for making. A. C. Squires. No. 878,572; Feb. 11; Sp. p. 1451; Dr. p. 206; Gaz. vol. 132; p. 1106.
Rubbing-machine, Portable. H. F. Holtmann. No. 879,466; Feb. 18; Sp. p. 3239; Dr. p. 674; Gaz. vol. 132; p. 1436.
Rule, Slide-. O. L. Baumbach and A. Klitsche. No. 879,237; Feb. 18; Sp. p. 2755; Dr. p. 577; Gaz. vol. 132; p. 1362.
Sad-iron, Electrically-heated. H. Hertzberg and M. J. Wohl. No. 879,046; Feb. 11; Sp. p. 2361; Dr. p. 494; Gaz. vol. 132; p. 1258.
Sad-iron heater. J. A. Walker. No. 879,222; Feb. 18; Sp. p. 2727; Dr. p. 569; Gaz. vol. 132; p. 1356.
Saddle-post. C. Olson. No. 878,419; Feb. 4; Sp. p. 1056; Dr. p. 214; Gaz. vol. 132; p. 1022.
Saddle, Top-roll. L. T. Houghton. No. 879,641; Feb. 18; Sp. p. 3606; Dr. pp. 754–5; Gaz. vol. 132; p. 1493.
Safety device. L. Liptal. No. 878,969; Feb. 11; Sp. p. 2224; Dr. p. 466; Gaz. vol. 132; p. 1234.
Saggers and the like, Die for. G. W. Thomas. No. 878,910; Feb. 11; Sp. p. 2123; Dr. p. 447; Gaz. vol. 132; p. 1216.
Sail-boom. P. Tatchell. No. 879,986; Feb. 25; Sp. p. 4335; Dr. pp. 908–9; Gaz. vol. 132; p. 1639.
Salts from solutions, Extracting. H. M. Crowther. No. 877,912; Feb. 4; Sp. p. 26; Gaz. vol. 132; p. 854.
Sand-blast apparatus. J. F. Hay. No. 879,102; Feb. 11; Sp. p. 2486; Dr. p. 513; Gaz. vol. 132; p. 1275.
Sand-blast machine. G. S. Slocum. No. 880,337; Feb. 25; Sp. p. 5037; Dr. pp. 1062–3; Gaz. vol. 132; p. 1755.
Sand-mold-forming machine. F. Herbert. No. 877,998; Feb. 4; Sp. p. 199; Dr. p. 45; Gaz. vol. 132; p. 883.
Sand-mold-forming machine. W. C. Swift. No. 878,470; Feb. 4; Sp. p. 1154; Dr. p. 236; Gaz. vol. 132; p. 1039.
Sand-mold machine. W. C. Swift. No. 878,471; Feb. 4; Sp. p. 1162; Dr. p. 236; Gaz. vol. 132; p. 1039.
Sand-mold-making machine. F. Herbert. No. 877,999; Feb. 4; Sp. p. 204; Dr. p. 45; Gaz. vol. 132; p. 883.
Sanding, abrading, or polishing machine. W. J. Maddox. No. 878,649; Feb. 11; Sp. p. 1629; Dr. pp. 332–3; Gaz. vol. 132; p. 1132.
Sanding device. B. C. Loring. No. 879,658; Feb. 18; Sp. p. 3641; Dr. p. 761; Gaz. vol. 132; p. 1498.
Sap-receptacle. S. W. Holland. No. 880,142; Feb. 25; Sp. p. 4647; Dr. p. 981; Gaz. vol. 132; p. 1689.
Sash-balancing device. A. Mois. No. 878,963; Feb. 11; Sp. p. 2253; Dr. p. 471; Gaz. vol. 132; p. 1238.
Sash-fastener. J. B. Kelley. No. 879,271; Feb. 18; Sp. p. 2820; Dr. p. 591; Gaz. vol. 132; p. 1378.
Sash fastener, Window-. E. B. De La Matyr. No. 878,781; Feb. 11; Sp. p. 1862; Dr. p. 388; Gaz. vol. 132; p. 1176.
Sash fastener, Window-. R. E. Henninges. No. 880,214; Feb. 25; Sp. p. 4798; Dr. p. 1016; Gaz. vol. 132; p. 1714.
Sash-lock. J. G. Keith. No. 878,887; Feb. 11; Sp. p. 2067; Dr. p. 420; Gaz. vol. 132; p. 1207.
Sash-lock. J. H. Barton. No. 879,078; Feb. 11; Sp. p. 2425; Dr. p. 506; Gaz. vol. 132; p. 1267.
Sash-lock. L. S. Mattox. No. 880,318; Feb. 25; Sp. p. 5005; Dr. p. 1056; Gaz. vol. 132; p. 1749.
Sash-lock or window-fastener. L. Vander Weel. No. 878,697; Feb. 11; Sp. p. 1708; Dr. pp. 353–4; Gaz. vol. 132; p. 1147.
Sash, Metal window-. A. H. Sisson. No. 878,830; Feb. 11; Sp. p. 1967; Dr. p. 406; Gaz. vol. 132; p. 1190.
Sash-weight. C. E. Rhorer. No. 879,908; Feb. 25; Sp. p. 4191; Dr. p. 875; Gaz. vol. 132; p. 1613.
Sash, Window-. W. F. Kiesel, Jr. No. 878,540; Feb. 11; Sp. p. 1380; Dr. p. 283; Gaz. vol. 132; p. 1096.
Sash, Window-. W. F. Kiesel, Jr. No. 878,541; Feb. 11; Sp. p. 1381; Dr. pp. 283–4; Gaz. vol. 132; p. 1096.
Sash, Window-. R. C. Fry. No. 880,447; Feb. 25; Sp. p. 5272; Dr. p. 1109; Gaz. vol. 132; p. 1793.
Saw-gummer. G. E. Hawkins. No. 879,902; Feb. 25; Sp. p. 4206; Dr. p. 898; Gaz. vol. 132; p. 1632.
Saw, Jig or scroll. W. E. Lawrence. No. 879,658; Feb. 18; Sp. p. 3637; Dr. p. 760; Gaz. vol. 132; p. 1496.

Saw-swage. E. P. Armstrong. No. 879,352; Feb. 18; Sp. p. 2971; Dr. p. 621; Gaz. vol. 132; p. 1399.
Saw-tensioning device, Band-. B. D. Stevens. No. 879,500; Feb. 18; Sp. p. 3303; Dr. p. 691; Gaz. vol. 132; p. 1447.
Sawing device. E. T. Davies. No. 879,039; Feb. 11; Sp. p. 2349; Dr. p. 491; Gaz. vol. 132; p. 1255.
Sawing machine, Wood-. A. Fairchild. No. 879,376; Feb. 18; Sp. p. 3035; Dr. p. 632; Gaz. vol. 132; p. 1407.
Scaffold, Adjustable. E. H. Samuelson. No. 878,674; Feb. 11; Sp. p. 1669; Dr. p. 343; Gaz. vol. 132; p. 1141.
Scale, Automatic weighing-. W. Steenken. No. 879,336; Feb. 18; Sp. p. 2947; Dr. p. 615; Gaz. vol. 132; p. 1394.
Scale, Computing-. F. M. Engelhardt. No. 878,620; Feb. 11; Sp. p. 1577; Dr. p. 321; Gaz. vol. 132; p. 1123.
Scale, Computing-. W. Peterkin. No. 879,795; Feb. 18; Sp. p. 3900; Dr. p. 818; Gaz. vol. 132; p. 1543.
Scarf-pin. E. G. Knoop. No. 878,885; Feb. 11; Sp. p. 2071; Dr. p. 430; Gaz. vol. 132; p. 1208.
Scene-shifting device. E. Giulietti. No. 879,820; Feb. 18; Sp. p. 3959; Dr. pp. 828–9; Gaz. vol. 132; p. 1558.
Scissors. E. E. Flyberg. No. 879,618; Feb. 18; Sp. p. 3567; Dr. p. 747; Gaz. vol. 132; p. 1485.
Scoop. C. G. Rollenhagen. No. 879,194; Feb. 18; Sp. p. 2680; Dr. p. 559; Gaz. vol. 132; p. 1347.
Screen: *See* Fireplace-screen; Wire screen.
Seal-applying machine, Bottle-. E. D. Schmitt. No. 880,406; Feb. 25; Sp. p. 5183; Dr. p. 1092; Gaz. vol. 132; p. 1778.
Seal-lock. H. V. Conover. No. 878,277; Feb. 4; Sp. p. 786; Dr. p. 157; Gaz. vol. 132; p. 975.
Sealing and stamping machine, Envelop. L. M. Nielsen. No. 879,576; Feb. 18; Sp. p. 3462; Dr. pp. 725–7; Gaz. vol. 132; p. 1472.
Sealing device, Bottle-. A. Hostettler. No. 878,237; Feb. 4; Sp. p. 809; Dr. p. 161; Gaz. vol. 132; p. 978.
Sealing machines, Sealing-head for bottle-. E. D. Schmitt. No. 880,408; Feb. 25; Sp. p. 5186; Dr. p. 1093; Gaz. vol. 132; p. 1778.
Sealing machines, Sealing-head for bottle-. E. D. Schmitt. No. 880,490; Feb. 25; Sp. p. 5371; Dr. p. 1131; Gaz. vol. 132; p. 1807.
Seam-pressing machine, Garment-. H. Lindestrom. No. 879,479; Feb. 18; Sp. p. 3256; Dr. pp. 678–9; Gaz. vol. 132; p. 1430.
Seat: *See* Car-seat; Folding seat.
Seat-cushion. T. N. Burke. No. 878,040; Feb. 4; Sp. p. 304; Dr. p. 64; Gaz. vol. 132; p. 897.
Sectional boiler, Vertical. W. M. Mackay. No. 877,937; Feb. 4; Sp. p. 82; Dr. pp. 17–18; Gaz. vol. 132; p. 863.
Seeder. G. E. Swanson. No. 877,966; Feb. 4; Sp. p. 142; Dr. p. 32; Gaz. vol. 132; p. 872.
Seeding-machine draft mechanism. C. H. Pelton. No. 879,116; Feb. 11; Sp. p. 2527; Dr. p. 525; Gaz. vol. 132; p. 1280.
Seeds, Separating buckhorn and plantain seeds from clover-. J. P. Burgess. No. 878,116; Feb. 4; Sp. p. 447; Dr. p. 95; Gaz. vol. 132; p. 921.
Seesaw. W. L. Jenkins. No. 880,026; Feb. 25; Sp. p. 4415; Dr. p. 928; Gaz. vol. 132; p. 1652.
Self-measuring tank. J. Heissenberger. No. 879,263; Feb. 18; Sp. p. 2806; Dr. p. 588; Gaz. vol. 132; p. 1370.
Selling apparatus for stamps, tickets, and the like, Coin-controlled. C. R. Wedelin. No. 879,991; Feb. 25; Sp. p. 4343; Dr. pp. 910–11; Gaz. vol. 132; p. 1641.
Separating-machine, Centrifugal. H. M. Goodman. No. 879,255; Feb. 18; Sp. p. 2789; Dr. p. 585; Gaz. vol. 132; p. 1367.
Separator: *See* Air and dust separator; Cream-separator; Ore-separator.
Separator-drums, Guiding device for suspended. I. P. B. Knudsen. No. 880,383; Feb. 25; Sp. p. 5127; Dr. p. 1083; Gaz. vol. 132; p. 1769.
Separator system, Pneumatic. W. S. Osborne. No. 878,665; Feb. 11; Sp. p. 1654; Dr. p. 341; Gaz. vol. 132; p. 1138.
Serums and other substances, Apparatus for containing and injecting. J. L. Overton. No. 877,946; Feb. 4; Sp. p. 102; Dr. p. 24; Gaz. vol. 132; p. 866.
Service-box. W. Dennison. No. 879,370; Feb. 18; Sp. p. 3021; Dr. p. 630; Gaz. vol. 132; p. 1405.
Sewing-machine. R. G. Woodward. No. 878,442; Feb. 4; Sp. p. 1091; Dr. p. 223; Gaz. vol. 132; p. 1028.
Sewing-machine. J. Fink. No. 880,133; Feb. 25; Sp. p. 4621; Dr. p. 975; Gaz. vol. 132; p. 1686.
Sewing-machine attachment. B. Fleigel. No. 878,718; Feb. 11; Sp. p. 1758; Dr. p. 364; Gaz. vol. 132; p. 1155.
Sewing-machine guide, Folding. J. F. Foschinbaur. No. 879,621; Feb. 18; Sp. p. 3571; Dr. p. 748; Gaz. vol. 132; p. 1486.
Sewing-machine loop-taker-actuating mechanism. P. Diehl. No. 880,200; Feb. 25; Sp. p. 4769; Dr. p. 1010; Gaz. vol. 132; p. 1709.
Sewing-machine needle. A. M. Carlsen. No. 879,606; Feb. 18; Sp. p. 3549; Dr. p. 742; Gaz. vol. 132; p. 1482.
Sewing-machine ruffler attachment. W. M. Ammerman. No. 879,433; Feb. 18; Sp. p. 3165; Dr. p. 658; Gaz. vol. 132; p. 1426.
Sewing-machine table or cabinet. T. Kunditz. No. 880,224; Feb. 25; Sp. p. 4828; Dr. pp. 1021–2; Gaz. vol. 132; p. 1718.
Sewing machines, Automatic presser-foot-lifting mechanism for. F. W. Merrick. No. 879,565; Feb. 18; Sp. p. 3436; Dr. p. 720; Gaz. vol. 132; p. 1468.
Sewing-tool, Cobbler's. W. E. Ward. No. 880,180; Feb. 25; Sp. p. 4725; Dr. p. 999; Gaz. vol. 132; p. 1703.
Shade and curtain bracket. D. S. Shutts. No. 879,684; Feb. 18; Sp. p. 3699; Dr. p. 775; Gaz. vol. 132; p. 1507.
Shade and curtain bracket. R. H. Foley. No. 880,135; Feb. 25; Sp. p. 4630; Dr. pp. 977–8; Gaz. vol. 132; p. 1687.
Shade-edge-holding device. F. J. Thompson. No. 878,990; Feb. 11; Sp. p. 1095; Dr. p. 350; Gaz. vol. 132; p. 1145.
Shade fixture, Window-. G. E. Berry. No. 879,140; Feb. 18; Sp. p. 2575; Dr. p. 536; Gaz. vol. 132; p. 1329.
Shade-roller bracket. A. H. Fleming. No. 878,624; Feb. 11; Sp. p. 1585; Dr. p. 322; Gaz. vol. 132; p. 1125.
Shaft and journaling device, Elastically-articulated. N. S. Bök. No. 878,859; Feb. 11; Sp. p. 2025; Dr. p. 418; Gaz. vol. 132; p. 1200.
Shaft-coupling. T. F. Vandegrift and W. Johnston. No. 880,255; Feb. 25; Sp. p. 4886; Dr. p. 1033; Gaz. vol. 132; p. 1729.
Shaft drill, Sink-. J. P. Karns. No. 879,822; Feb. 18; Sp. p. 3966; Dr. p. 830–1; Gaz. vol. 132; p. 1558.
Shaft end. C. E. Titchener. No. 877,969; Feb. 4; Sp. p. 147; Dr. p. 33; Gaz. vol. 132; p. 873.
Shaft support, Vehicle-. J. T. Minyard. No. 879,188; Feb. 18; Sp. p. 2668; Dr. p. 557; Gaz. vol. 132; p. 1346.
Sharpening device for skates, &c. L. J. Moorman. No. 880,158; Feb. 25; Sp. p. 4674; Dr. p. 984; Gaz. vol. 132; p. 1693.
Shaving-cup. R. G. Foster. No. 880,207; Feb. 25; Sp. p. 4784; Dr. p. 1012; Gaz. vol. 132; p. 1712.
Shearing and punching mechanism. J. I. Depew. No. 878,048; Feb. 4; Sp. p. 323; Dr. p. 67; Gaz. vol. 132; p. 900.
Shears: *See* Animal-shears; Metal-shears; Pruning-shears.
Shears or scissors. A. Prohaska. No. 879,064; Feb. 11; Sp. p. 2397; Dr. p. 502; Gaz. vol. 132; p. 1263.
Sheet-delivery. R. J. Greenway, Jr. No. 879,630; Feb. 18; Sp. p. 3585; Dr. p. 751; Gaz. vol. 132; p. 1489.
Sheet-feeding apparatus. A. E. Dick. No. 878,614; Feb. 11; Sp. p. 1560; Dr. p. 318; Gaz. vol. 132; p. 1121.
Sheet material, Machine for turning the edges of. T. C. Hook. No. 878,632; Feb. 11; Sp. p. 1597; Dr. pp. 325–6; Gaz. vol. 132; p. 1127.
Sheet material, Mechanism for turning the edges of. T. C. Hook. No. 878,631; Feb. 11; Sp. p. 1596; Dr. p. 325; Gaz. vol. 132; p. 1127.
Sheet metal, Apparatus for producing very thin. T. A. Edison. No. 879,859; Feb. 25; Sp. p. 4076; Dr. p. 854; Gaz. vol. 132; p. 1597.
Sheet-metal-cutting rolls. L. C. Steele. No. 878,472; Feb. 4; Sp. p. 1160; Dr. p. 236; Gaz. vol. 132; p. 1039.
Sheet-metal guaze or grating. M. W. Pitner. No. 878,999; Feb. 11; Sp. p. 2286; Dr. p. 477; Gaz. vol. 132; p. 1243.
Sheet metal, Producing very thin. T. A. Edison. No. 880,484; Feb. 25; Sp. p. 5362; Dr. p. 1130; Gaz. vol. 132; p. 1806.
Sheet-metal vessels, Die for forming. E. R. Stoddard. No. 879,922; Feb. 25; Sp. p. 4224; Dr. p. 882; Gaz. vol. 132; p. 1620.
Sheller: *See* Coffee-sheller; Corn-sheller.
Shells, Apparatus for removing the percussion-caps from discharged. D. Larsson. No. 880,147; Feb. 25; Sp. p. 4660; Dr. p. 983; Gaz. vol. 132; p. 1691.
Shipping-box, Folding. W. K. Allgire. No. 880,347; Feb. 25; Sp. p. 5054; Dr. p. 1068; Gaz. vol. 132; p. 1758.
Shirt. W. L. Siewers. No. 879,685; Feb. 18; Sp. p. 3700; Dr. p. 775; Gaz. vol. 132; p. 1508.
Shocker for binders, Automatic bundle-. J. McCormick. No. 879,403; Feb. 18; Sp. p. 3096; Dr. pp. 643–4; Gaz. vol. 132; p. 1415.
Shoe. E. G. Healey. No. 878,061; Feb. 4; Sp. p. 342; Dr. p. 71; Gaz. vol. 132; p. 904.
Shoe. S. N. North. No. 879,979; Feb. 25; Sp. p. 4325; Dr. p. 905; Gaz. vol. 132; p. 1637.
Shoe-fastener. J. Hulin. No. 878,956; Feb. 11; Sp. p. 2205; Dr. p. 461; Gaz. vol. 132; p. 1230.
Shoe-form. C. A. Batchelder. No. 877,990; Feb. 4; Sp. p. 163; Dr. p. 37; Gaz. vol. 132; p. 877.
Shoe-form. W. C. Richardson and E. W. Ford. No. 878,313; Feb. 4; Sp. p. 861; Dr. p. 171; Gaz. vol. 132; p. 987.
Shoe-ironer and treeing-machine, Rotary. I. E. Fletcher. No. 878,783; Feb. 11; Sp. p. 1896; Dr. p. 390; Gaz. vol. 132; p. 1178.
Shoe-polishing machine. R. O. Hammond. No. 879,541; Feb. 18; Sp. p. 3382; Dr. pp. 707–9; Gaz. vol. 132; p. 1461.
Shoes, Electric-heated hand-molder for filling. A. Thoma. No. 878,698; Feb. 11; Sp. p. 1693; Dr. p. 350; Gaz. vol. 132; p. 1145.
Shooks, Stand for tying. G. Elkenburg. No. 879,374; Feb. 18; Sp. p. 3022; Dr. p. 632; Gaz. vol. 132; p. 1406.
Show-case. A. N. Lawrence. No. 879,655; Feb. 18; Sp. p. 3635; Dr. p. 760; Gaz. vol. 132; p. 1497.
Show-case, Ribbon. W. E. Miller. No. 880,151; Feb. 25; Sp. p. 4670; Dr. p. 984; Gaz. vol. 132; p. 1693.
Shredding-machine. W. E. Williams. No. 878,262; Feb. 4; Sp. p. 789; Dr. p. 153; Gaz. vol. 132; p. 970.
Shutter-bower. B. E. Beyer. No. 880,064; Feb. 25; Sp. p. 4503; Dr. p. 946; Gaz. vol. 132; p. 1665.
Shutter-worker. W. J. Aumen. No. 878,178; Feb. 4; Sp. p. 603; Dr. p. 124; Gaz. vol. 132; p. 943.
Shutter-worker. J. W. Wooley. No. 879,350; Feb. 18; Sp. p. 2999; Dr. p. 620; Gaz. vol. 132; p. 1398.
Shutters, Operating device for flexible roller-. E. H. McCloud. No. 878,650; Feb. 11; Sp. p. 1645; Dr. pp. 337–8; Gaz. vol. 132; p. 1136.
Side frame and journal-box. G. G. Floyd. No. 878,875; Feb. 11; Sp. p. 2053; Dr. p. 425; Gaz. vol. 132; p. 1205.
Sifter. C. D. Marlow. No. 878,973; Feb. 11; Sp. p. 2230; Dr. p. 467; Gaz. vol. 132; p. 1235.
Sign. F. S. Townsend. No. 879,426; Feb. 18; Sp. p. 3155; Dr. p. 656; Gaz. vol. 132; p. 1424.
Sign, Advertising street-car. A. King. No. 878,637; Feb. 11; Sp. p. 1607; Dr. p. 328; Gaz. vol. 132; p. 1129.
Sign, Automatically-moving. G. J. Lord. No. 880,315; Feb. 25; Sp. p. 5000; Dr. p. 1055; Gaz. vol. 132; p. 1748.
Sign, Electric. D. F. Miller. No. 878,146; Feb. 4; Sp. p. 496; Dr. p. 108; Gaz. vol. 132; p. 931.
Sign, Electric. I. Young. No. 880,263; Feb. 25; Sp. p. 4808; Dr. pp. 1035–7; Gaz. vol. 132; p. 1731.
Signal: *See* Crossing-signal; Flag-signal; Mail-box signal; Railway-signal; Switch-signal; Switchboard-signal.
Signal. E. A. Wolf. No. 879,022; Feb. 11; Sp. p. 2321; Dr. p. 485; Gaz. vol. 132; p. 1250.
Signal mechanism, Alarm-. E. E. Flora and R. J. Zorge. No. 880,134; Feb. 25; Sp. p. 4623; Dr. pp. 975–7; Gaz. vol. 132; p. 1687.

Signal system. J. A. Gehrung. No. 880,136; Feb. 25; Sp. p. 4631; Dr. p. 978; Gaz. vol. 132; p. 1687.
Signals, Automatic brake-operating attachment for. W. C. Patterson. No. 878,916; Feb. 4; Sp. p. 243; Dr. p. 55; Gaz. vol. 132; p. 880.
Signals, Electromechanical slot for. G. S. Pflasterer. No. 880,306; Feb. 25; Sp. p. 5164; Dr. pp. 1060-00; Gaz. vol. 132; p. 1774.
Signaling and switching apparatus, Electrical. R. H. Manson. No. 878,465; Feb. 4; Sp. p. 1142; Dr. p. 234; Gaz. vol. 132; p. 1036.
Signaling apparatus. J. G. Homet. No. 879,648; Feb. 18; Sp. p. 2409; Dr. p. 714; Gaz. vol. 132; p. 1463.
Signaling apparatus, Electrical. B. F. Wooding. No. 878,108; Feb. 4; Sp. p. 429; Dr. p. 91; Gaz. vol. 132; p. 918.
Signaling system, Electric. J. G. Nolen. No. 878,013; Feb. 4; Sp. p. 235; Dr. pp. 53-4; Gaz. vol. 132; p. 888.
Silk, Treating. E. P. L. Sisley. No. 878,902; Feb. 11; Sp. p. 2109; Gaz. vol. 132; p. 1213.
Single-phase motor. J. J. Wood. No. 878,923; Feb. 11; Sp. p. 2142; Dr. pp. 447-8; Gaz. vol. 132; p. 1219.
Skirt and waist hanger. C. W. Hewlett. No. 878,290; Feb. 4; Sp. p. 990; Dr. p. 201; Gaz. vol. 132; p. 1012.
Skirt-holder. E. T. Neumann. No. 877,945; Feb. 4; Sp. p. 101; Dr. p. 23; Gaz. vol. 132; p. 866.
Skirt-supporter. F. A. Raymond and F. Dettmann. No. 880,095; Feb. 25; Sp. p. 4552; Dr. p. 959; Gaz. vol. 132; p. 1674.
Skirt-supporter. G. Gromer. No. 880,299; Feb. 25; Sp. p. 4974; Dr. p. 1050; Gaz. vol. 132; p. 1743.
Skylights and similar constructions, Bar for. J. Lappla. No. 878,211; Feb. 4; Sp. p. 655; Dr. p. 134; Gaz. vol. 132; p. 952.
Slat-weaving machine. H. W. Carpenter. No. 877,904; Feb. 4; Sp. p. 14; Dr. pp. 3-4; Gaz. vol. 132; p. 851.
Sled-shoe. W. C. Abelson. No. 878,326; Feb. 4; Sp. p. 881; Dr. p. 176; Gaz. vol. 132; p. 990.
Sleigh. M. R. Rudolph. No. 880,145; Feb. 25; Sp. p. 4698; Dr. pp. 990-1; Gaz. vol. 132; p. 1698.
Sleigh-knee. A. H. Flint. No. 879,251; Feb. 18; Sp. p. 2781; Dr. p. 883; Gaz. vol. 132; p. 1366.
Slicer, Fruit-. M. B. Jolly. No. 878,303; Feb. 11; Sp. p. 1924; Dr. p. 307; Gaz. vol. 132; p. 1182.
Slicer, Vegetable-. F. Scharf. No. 878,676; Feb. 11; Sp. p. 1674; Dr. p. 345; Gaz. vol. 132; p. 1141.
Slicing machine, Vegetable-. J. J. Vavrusha. No. 878,436; Feb. 4; Sp. p. 1054; Dr. p. 221; Gaz. vol. 132; p. 1027.
Slimes, Treating. C. Butters. No. 879,060; Feb. 11; Sp. p. 2427; Dr. p. 508; Gaz. vol. 132; p. 1268.
Slip-clip. S. W. Reynolds. No. 878,670; Feb. 11; Sp. p. 1663; Dr. p. 342; Gaz. vol. 132; p. 1139.
Slubbing, reducing, and roving frames and like spinning and twisting machines, Combination guide and alarm for. J. Lumb. No. 878,300; Feb. 4; Sp. p. 837; Dr. p. 167; Gaz. vol. 132; p. 963.
Small-arms, Drop-down. W. Baker. No. 879,025; Feb. 11; Sp. p. 2325; Dr. p. 487; Gaz. vol. 132; p. 1251.
Smelting-furnace for copper and other ores. H. H. Freeman. No. 879,623; Feb. 18; Sp. p. 3574; Dr. p. 748; Gaz. vol. 132; p. 1487.
Smoke and the like, Automatic apparatus for detecting. H. Darwin. No. 878,456; Feb. 4; Sp. p. 1122; Dr. p. 230; Gaz. vol. 132; p. 1033.
Smoke-consumer and artificial draft. A. H. Ford. No. 879,453; Feb. 18; Sp. p. 3217; Dr. p. 669; Gaz. vol. 132; p. 1432.
Smoke-consuming furnace. J. B. Harris. No. 880,380; Feb. 25; Sp. p. 5122; Dr. pp. 1081-2; Gaz. vol. 132; p. 1768.
Smoking-pipe. H. K. Saddler. No. 879,677; Feb. 18; Sp. p. 3685; Dr. p. 771; Gaz. vol. 132; p. 1505.
Snow and ice, Means for keeping switches clear from. F. G. Shaw. No. 878,566; Feb. 11; Sp. p. 1440; Dr. p. 294; Gaz. vol. 132; p. 1104.
Soap-dispenser. H. J. S. Lewis. No. 879,780; Feb. 18; Sp. p. 3875; Dr. p. 812; Gaz. vol. 132; p. 1538.
Soap dispenser, Liquid-. G. A. Schmidt. No. 878,750; Feb. 11; Sp. p. 1812; Dr. p. 375; Gaz. vol. 132; p. 1165.
Soap-molding machine. F. Jürgens. No. 879,968; Feb. 25; Sp. p. 4306; Dr. p. 901; Gaz. vol. 132; p. 1634.
Socket-shell-cap fastening. H. Hubbell. No. 878,634; Feb. 11; Sp. p. 1001; Dr. p. 327; Gaz. vol. 132; p. 1128.
Soda-water fountain. L. G. Green. No. 878,379; Feb. 4; Sp. p. 884; Dr. pp. 195-9; Gaz. vol. 132; p. 1009.
Sofa or settee and pool or billiard table, Combined. J. N. McIntire. No. 878,555; Feb. 11; Sp. p. 1417; Dr. p. 290; Gaz. vol. 132; p. 1101.
Soldering and branding iron, Electrically-heated. H. Hertzberg and M. J. Wohl. No. 878,952; Feb. 11; Sp. p. 2194; Dr. p. 460; Gaz. vol. 132; p. 1229.
Soldering appliance. C. C. Blake. No. 878,182; Feb. 4; Sp. p. 608; Dr. p. 125; Gaz. vol. 132; p. 944.
Soldering-copper. R. R. Stein. No. 880,048; Feb. 25; Sp. p. 4473; Dr. p. 939; Gaz. vol. 132; p. 1660.
Soldering device. L. J. Ferner. No. 878,622; Feb. 11; Sp. p. 1581; Dr. p. 321; Gaz. vol. 132; p. 1124.
Soldering machines, Runway or chute for can-end-. O. J. Johnson. No. 880,144; Feb. 25; Sp. p. 4653; Dr. p. 981; Gaz. vol. 132; p. 1890.
Sole-laying machine. J. J. Heys. No. 878,391; Feb. 4; Sp. p. 1000; Dr. p. 202; Gaz. vol 132; p. 1013.
Sound-producing device. J. P. Northey. No. 879,190; Feb. 18; Sp. p. 2672; Dr. p. 558; Gaz. vol. 132; p. 1346.
Sound recording and reproducing machines, Tilting turn-table for. W. N. Dennison. No. 880,369; Feb. 25; Sp. p. 5091; Dr. pp. 1076-7; Gaz. vol. 132; p. 1765.
Sound-records, Die-plate for stamping up. G. K. Cheney. No. 879,363; Feb. 18; Sp. p. 3002; Dr. p. 628; Gaz. vol. 132; p. 1403.
Sound-records, Production of disk. T. H. Macdonald. No. 878,547; Feb. 11; Sp. p. 1390; Dr. p. 285; Gaz. vol. 132; p. 1098.
Sound-records, Yielding matrix for. V. H. Emerson. No. 878,513; Feb. 11; Sp. p. 1323; Dr. p. 268; Gaz. vol. 132; p. 1086.
Sound-reproducing mechanism, Starting means for. P. M. Ravenskilde. No. 877,949; Feb. 4; Sp. p. 105; Dr. pp. 24-5; Gaz. vol. 132; p. 867.
Spanner and wrench. J. Sinclair. No. 878,024; Feb. 4; Sp. p. 276; Dr. p. 59; Gaz. vol. 132; p. 893.
Spark-arrester. D. McIvor. No. 879,663; Feb. 18; Sp. p. 3648; Dr. p. 763; Gaz. vol. 132; p. 1500.
Spark-arrester. R. B. Kennington. No. 880,309; Feb. 25; Sp. p. 4988; Dr. p. 1053; Gaz. vol. 132; p. 1746.
Spark-arrester. W. F. MacGregor. No. 880,385; Feb. 25; Sp. p. 5130; Dr. p. 1084; Gaz. vol. 132; p. 1770.
Spark-arrester. K. M. Colquhoun. No. 880,442; Feb. 25; Sp. p. 5262; Dr. p. 1107; Gaz. vol. 132; p. 1791.
Spark-plug protecting-hood. D. B. Mills. No. 878,351; Feb. 11; Sp. p. 1399; Dr. p. 287; Gaz. vol. 132; p. 1099.
Spark-timer. D. Almy. No. 878,176; Feb. 4; Sp. p. 596; Dr. p. 123; Gaz. vol. 132; p. 942.
Specialist's chair. W. H. Kersey. No. 879,179; Feb. 18; Sp. p. 2653; Dr. p. 553; Gaz. vol. 132; p. 1343.
Spectacles and eyeglasses, Manufacture of nose-pieces for. W. A. Coates. No. 878,504; Feb. 11; Sp. p. 1309; Dr. p. 265; Gaz. vol. 132; p. 1083.
Speed device, Changeable-. J. A. Wilkin. No. 879,710; Feb. 18; Sp. p. 3745; Dr. p. 786; Gaz. vol. 132; p. 1515.
Speed-indicating device, Time. E. J. Hall. No. 879,540; Feb. 18; Sp. p. 3379; Dr. pp. 706-7; Gaz. vol. 132; p. 1461.
Speed mechanism, Variable-. L. Thiel. No. 879,215; Feb. 18; Sp. p. 2715; Dr. p. 566; Gaz. vol. 132; p. 1354.
Speed mechanism, Variable-. L. Thiel. No. 879,216; Feb. 18; Sp. p. 2717; Dr. p. 567; Gaz. vol. 132; p. 1354.
Spike-puller. C. E. Gloner. No. 880,210; Feb. 25; Sp. p. 4790; Dr. p. 1014; Gaz. vol. 132; p. 1713.
Spinning, drawing, roving, and like frame. J. Farrar. No. 880,068; Feb. 25; Sp. p. 4508; Dr. p. 947; Gaz. vol. 132; p. 1666.
Spinning machine, Yarn-. L. Duganquier. No. 877,917; Feb. 4; Sp. p. 44; Dr. p. 9; Gaz. vol. 132; p. 856.
Spinning machines, Doffing means for ring-. R. L. Cumnock. No. 880,014; Feb. 25; Sp. p. 4394; Dr. p. 923; Gaz. vol. 132; p. 1649.
Spinning-machines, Revolution-indicating mechanism for. L. O. Goodwin. No. 879,957; Feb. 25; Sp. p. 4288; Dr. p. 896; Gaz. vol. 132; p. 1630.
Spinning or twisting frame. L. T. Houghton. No. 879,642; Feb. 18; Sp. p. 3611; Dr. p. 755; Gaz. vol. 132; p. 1493.
Spoke-extractor. L. P. Parent. No. 879,306; Feb. 18; Sp. p. 2906; Dr. p. 606; Gaz. vol. 132; p. 1385.
Sponge-holder. J. S. Williams. No. 880,260; Feb. 25; Sp. p. 4894; Dr. p. 1035; Gaz. vol. 132; p. 1731.
Spout-support. B. M. Steele. No. 878,906; Feb. 11; Sp. p. 2115; Dr. p. 441; Gaz. vol. 132; p. 1214.
Spraying device, Automatic. W. Tyree. 879,929; Feb. 25; Sp. p. 4237; Dr. pp. 885-6; Gaz. vol. 132; p. 1622.
Spring: *See* Friction-spring; Trolley-wheel spring; Vehicle-spring.
Spring construction. W. R. Smith. No. 879,234; Feb. 18; Sp. p. 2744; Dr. p. 614; Gaz. vol. 132; p. 1363.
Spring-motor. K. J. Lathrop. No. 880,143; Feb. 25; Sp. p. 4661; Dr. p. 983; Gaz. vol. 132; p. 1691.
Spring-wheel. W. J. Phelan. No. 878,422; Feb. 4; Sp. p. 1060; Dr. p. 218; Gaz. vol. 132; p. 1023.
Spring-wheel. H. T. Dunbar. No. 878,714; Feb. 11; Sp. p. 1750; Dr. p. 362; Gaz. vol. 132; p. 1154.
Spring-wheel. S. S. Childs. No. 879,937; Feb. 11; Sp. p. 2176; Dr. p. 455; Gaz. vol. 132; p. 1225.
Sprinkler: *See* Lawn-sprinkler.
Square, Separable. A. C. Waecker. No. 879,708; Feb. 18; Sp. p. 3737; Dr. p. 784; Gaz. vol. 132; p. 1514.
Stacker, Pneumatic. A. J. Inglis. No. 878,530; Feb. 11; Sp. p. 1355; Dr. pp. 275-6; Gaz. vol. 132; p. 1092.
Stairway for fire-escapes, &c. J. M. Brazill. No. 878,863; Feb. 11; Sp. p. 2032; Dr. p. 420; Gaz. vol. 132; p. 1201.
Staking-tool. C. W. Colbert. No. 878,775; Feb. 11; Sp. p. 1866; Dr. p. 385; Gaz. vol. 132; p. 1173.
Stamp-affixing machine. R. P. Dethmers. No. 879,151; Feb. 18; Sp. p. 2694; Dr. pp. 540-1; Gaz. vol. 132; p. 1333.
Stamp-affixing machine. H. J. Wertsberger. No. 879,804; Feb. 18; Sp. p. 3915; Dr. pp. 830-1; Gaz. vol. 132; p. 1546.
Stamp and label affixing apparatus. E. Goldschmidt. No. 879,627; Feb. 18; Sp. p. 3581; Dr. p. 750; Gaz. vol. 132; p. 1488.
Stamp, Hand-. R. L. Lamb and E. M. Tilden. No. 880,225; Feb. 25; Sp. p. 4831; Dr. p. 1022; Gaz. vol. 132; p. 1719.
Stamp, Self-arighting. E. A. Kirchner. No. 878,007; Feb. 4; Sp. p. 221; Dr. p. 48; Gaz. vol. 132; p. 887.
Stamps and similar devices, Mechanism for affixing. E. Fidell. No. 878,514; Feb. 11; Sp. p. 1323; Dr. pp. 268-9; Gaz. vol. 132; p. 1086.
Stamping machine, Envelop-. O. M. Human. No. 878,366; Feb. 4; Sp. p. 1006; Dr. pp. 203-4; Gaz. vol. 132; p. 1014.
Stanchion, Cattle-. H. Stelschlag. No. 878,428; Feb. 4; Sp. p. 1070; Dr. p. 217; Gaz. vol. 132; p. 1024.
Stand: *See* Hammock-stand; Wringer-stand.
Stand-pipe. J. Henderson. No. 878,462; Feb. 4; Sp. p. 1138; Dr. p. 233; Gaz. vol. 132; p. 1035.
Staple forming and discharging mechanism. V. Hoxie. No. 879,965; Feb. 25; Sp. p. 4300; Dr. pp. 899-900; Gaz. vol. 132; p. 1633.
Starching-machine. W. H. H. Tracy. No. 879,926; Feb. 25; Sp. p. 4232; Dr. pp. 884-5; Gaz. vol. 132; p. 1621.
Starching-machine. B. W. Jones. No. 880,455; Feb. 25; Sp. p. 5253; Dr. pp. 1113-14; Gaz. vol. 132; p. 1795.
Stationary novelty. W. W. McNaughton. No. 878,823; Feb. 11; Sp. p. 1968; Dr. p. 406; Gaz. vol. 132; p. 1188.
Stay and fastener, Garment. L. W. Farris. No. 880,287; Feb. 25; Sp. p. 4955; Dr. p. 1047; Gaz. vol. 132; p. 1730.
Steam-boiler. I. Williams. No. 878,361; Feb. 4; Sp. p. 753; Dr. pp. 153-3; Gaz. vol. 132; p. 970.
Steam-boiler. W. C. Pfeiffer. No. 878,992; Feb. 11; Sp. p. 2093; Dr. p. 435; Gaz. vol. 132; p. 1210.

Steam-boiler. C. Harter. No. 879,961; Feb. 25; Sp. p. 4294; Dr. p. 898; Gaz. vol. 132; p. 1632.
Steam-cylinders or other revolving bodies, Steam fitting or joint for journals of rotary. A. Aldrich. No. 879,845; Feb. 25; Sp. p. 4019; Dr. p. 843; Gaz. vol. 132; p. 1593.
Steam-engine. W. Krygowski. No. 878,543; Feb. 11; Sp. p. 1384; Dr. p. 284; Gaz. vol. 132; p. 1097.
Steam-generator. J. Blake. No. 878,330; Feb. 4; Sp. p. 889; Dr. p. 178; Gaz. vol. 132; p. 992.
Steam-generator. H. Del Mar. No. 878,942; Feb. 11; Sp. p. 2152; Dr. p. 456; Gaz. vol. 132; p. 1226.
Steam-generator. J. Van Oosterwyck. No. 879,502; Feb. 18; Sp. p. 3305; Dr. p. 691; Gaz. vol. 132; p. 1448.
Steam-superheater. M. Prager and E. L. Hayden. No. 880,309; Feb. 25; Sp. p. 5167; Dr. p. 1060; Gaz. vol. 132; p. 1775.
Steam-trap. D. Arthur. No. 879,997; Feb. 25; Sp. p. 4357; Dr. p. 913; Gaz. vol. 132; p. 1643.
Steam-trap. G. Lüschbrink. No. 880,087; Feb. 25; Sp. p. 4542; Dr. p. 956; Gaz. vol. 132; p. 1672.
Steel by the pneumatic process, Manufacture of. A. Tropenas. No. 880,253; Feb. 25; Sp. p. 4882; Dr. p. 1032; Gaz. vol. 132; p. 1728.
Steel, Composition of matter employed for hardening and tempering. B. J. Casterline. No. 879,518; Feb. 18; Sp. p. 3339; Gaz. vol. 132; p. 1453.
Steel, Hardening and tempering. B. J. Casterline. No. 879,517; Feb. 18; Sp. p. 3338; Gaz. vol. 132; p. 1453.
Steering-wheel, Heated. C. Berg. No. 878,708; Feb. 11; Sp. p. 1740; Dr. p. 360; Gaz. vol. 132; p. 1152.
Stencil-holder. P. J. Weber, Jr. No. 877,972; Feb. 4; Sp. p. 151; Dr. p. 34; Gaz. vol. 132; p. 874.
Stenciling-machine. C. Gibbs. No. 879,818; Feb. 18; Sp. p. 3956; Dr. p. 828; Gaz. vol. 132; p. 1551.
Stereoscope. E. E. Clark and H. A. Douglas. No. 880,481; Feb. 25; Sp. p. 5352; Dr. p. 1128; Gaz. vol. 132; p. 1801.
Sterilizing apparatus, Food-. I. Hilsaire. No. 880,452; Feb. 25; Sp. p. 5282; Dr. p. 1111; Gaz. vol. 132; p. 1794.
Still for extracting turpentine from gum and rosin. G. F. Williamson. No. 878,701; Feb. 11; Sp. p. 1720; Dr. pp. 355-6; Gaz. vol. 132; p. 1149.
Still, Multiple-condenser water-. J. A. Power. No. 878,744; Feb. 11; Sp. p. 1800; Dr. p. 373; Gaz. vol. 132; p. 1162.
Stirrup, Saddle-. E. M. Turner. No. 878,537; Feb. 11; Sp. p. 1979; Dr. p. 410; Gaz. vol. 132; p. 1183.
Stirrup, Safety-. W. H. Flecksing, M. Kercher, and C. W. Henke. No. 880,288; Feb. 25; Sp. p. 4956; Dr. p. 1047; Gaz. vol. 132; p. 1730.
Stoker, Chain-grate. A. E. Parker and E. H. Peabody. No. 878,085; Feb. 4; Sp. p. 391; Dr. p. 81; Gaz. vol. 132; p. 911.
Stoker, Mechanical. A. R. Selden. No. 879,682; Feb. 18; Sp. p. 3692; Dr. pp. 772-4; Gaz. vol. 132; p. 1507.
Stone machine, Artificial-. T. A. McMurtrie. No. 878,417; Feb. 4; Sp. p. 1052; Dr. p. 213; Gaz. vol. 132; p. 1021.
Stone, Pulverizing. L. K. Forsythe. No. 878,515; Feb. 11; Sp. p. 1333; Gaz. vol. 132; p. 1087.
Stool, Barber's. J. R. Draper and T. L. Hughes. No. 879,154; Feb. 18; Sp. p. 2598; Dr. p. 541; Gaz. vol. 132; p. 1334.
Stopper: *See* Bottle-stopper; Receptacle-stopper.
Store-fixture. G. A. Lindke. No. 878,644; Feb. 11; Sp. p. 1617; Dr. p. 330; Gaz. vol. 132; p. 1131.
Store-front construction. F. J. Plym. No. 879,898; Feb. 25; Sp. p. 4180; Dr. p. 872; Gaz. vol. 132; p. 1611.
Storage apparatus. T. C. Kennedy and E. A. Elder. No. 879,473; Feb. 18; Sp. p. 3248; Dr. p. 676; Gaz. vol. 132; p. 1438.
Storage battery, Alkaline. T. A. Edison. No. 879,612; Feb. 18; Sp. p. 3558; Gaz. vol. 132; p. 1484.
Store-front. W. H. Hoover, Jr. No. 878,140; Feb. 4; Sp. p. 486; Dr. p. 104; Gaz. vol. 132; p. 929.
Storm-front. L. Cockerill. No. 879,945; Feb. 25; Sp. p. 4264; Dr. p. 891; Gaz. vol. 132; p. 1627.
Stove. E. C. Cole. No. 878,352; Feb. 4; Sp. p. 932; Dr. p. 185; Gaz. vol. 132; p. 999.
Stove. W. Rube. No. 879,909; Feb. 25; Sp. p. 4197; Dr. p. 876; Gaz. vol. 132; p. 1615.
Stove attachment. M. E. Wood. No. 877,976; Feb. 4; Sp. p. 156; Dr. p. 35; Gaz. vol. 132; p. 875.
Stove, Camp-. F. M. Boughton. No. 878,862; Feb. 11; Sp. p. 2030; Dr. p. 419; Gaz. vol. 132; p. 1201.
Stove, Convertible heating and cooking. J. J. Shimek. No. 880,106; Feb. 25; Sp. p. 4572; Dr. p. 963; Gaz. vol. 132; p. 1678.
Stove, Fireless. W. Katzmann. No. 878,534; Feb. 11; Sp. p. 1366; Dr. p. 280; Gaz. vol. 132; p. 1093.
Stove-flue. E. E. Thompson. No. 879,967; Feb. 25; Sp. p. 4337; Dr. p. 909; Gaz. vol. 132; p. 1640.
Stove, Gas-. T. H. Gallagher. No. 879,762; Feb. 18; Sp. p. 3843; Dr. p. 805; Gaz. vol. 132; p. 1532.
Stove-grate. T. J. Stafford. No. 880,472; Feb. 25; Sp. p. 5329; Dr. pp. 1121-2; Gaz. vol. 132; p. 1801.
Stove grate, Cook-. J. J. Shimek. No. 880,105; Feb. 25; Sp. p. 4569; Dr. p. 963; Gaz. vol. 132; p. 1677.
Stove, Heating-. H. Wagner. No. 878,028; Feb. 4; Sp. p. 281; Dr. p. 60; Gaz. vol. 132; p. 894.
Stove, Heating-. J. J. Harpel. No. 878,384; Feb. 4; Sp. p. 990; Dr. p. 200; Gaz. vol. 132; p. 1010.
Stove-hood. H. Hansen. No. 879,463; Feb. 18; Sp. p. 3235; Dr. p. 673; Gaz. vol. 132; p. 1435.
Stove, Oil-. W. H. Wilder. No. 878,690; Feb. 11; Sp. p. 1714; Dr. p. 354; Gaz. vol. 132; p. 1149.
Stoves, Adjustable top for cooking-. W. A. Stowe. No. 878,252; Feb. 4; Sp. p. 740; Dr. p. 149; Gaz. vol. 132; p. 967.
Stoves, &c., Shelf-grating for. J. Jamieson. No. 879,268; Feb. 18; Sp. p. 2815; Dr. p. 590; Gaz. vol. 132; p. 1372.
Stovepipe hanger and support. H. Kling. No. 879,054; Feb. 11; Sp. p. 2375; Dr. p. 497; Gaz. vol. 132; p. 1260.
Strainer, Tea-. B. von Blützingslöwen. No. 880,190; Feb. 25; Sp. p. 4745; Dr. p. 1004; Gaz. vol. 132; p. 1706.
Strap and strap-loop, Combined. W. P. Gelabert. No. 878,519; Feb. 11; Sp. p. 1337; Dr. p. 270; Gaz. vol. 132; p. 1088.
Strap turning and stretching machine. P. T. Jones, Sr. No. 878,814; Feb. 11; Sp. p. 1925; Dr. pp. 397-8; Gaz. vol. 132; p. 1182.
Street-cleaning apparatus. C. H. Butler. No. 880,124; Feb. 25; Sp. p. 4608; Dr. pp. 971-2; Gaz. vol. 132; p. 1684.
Street-cleaning machine. O. Neukirch. No. 880,392; Feb. 25; Sp. p. 5150; Dr. p. 1087; Gaz. vol. 132; p. 1772.
Street or roadway structure. N. Lafon. No. 880,312; Feb. 25; Sp. p. 4993; Dr. p. 1054; Gaz. vol. 132; p. 1747.
Stretcher. A. L. Southmayd. No. 879,335; Feb. 18; Sp. p. 2945; Dr. p. 614; Gaz. vol. 132; p. 1394.
Striper. J. F. Thomas. No. 880,111; Feb. 25; Sp. p. 4580; Dr. p. 965; Gaz. vol. 132; p. 1679.
Stuffing-box for throttles and valve-stems. J. Maloy and A. White. No. 878,009; Feb. 4; Sp. p. 223; Dr. p. 49; Gaz. vol. 132; p. 887.
Stuffing-machine. J. L. Allen. No. 878,761; Feb. 11; Sp. p. 1837; Dr. pp. 379-80; Gaz. vol. 132; p. 1168.
Suit-hanger, Lady's. E. T. Neumann. No. 877,944; Feb. 4; Sp. p. 100; Dr. p. 23; Gaz. vol. 132; p. 866.
Suit or sample cases, Locking and supporting means for. H. Wenoerström. No. 878,098; Feb. 11; Sp. p. 1713; Dr. p. 354; Gaz. vol. 132; p. 1148.
Sulfur from sulfur-bearing gases, Recovery of. P. S. Smith. No. 878,509; Feb. 11; Sp. p. 1445; Dr. p. 295; Gaz. vol. 132; p. 1105.
Supervisory apparatus. K. Friedländer. No. 878,791; Feb. 11; Sp. p. 1907; Dr. p. 392; Gaz. vol. 132; p. 1179.
Supporting device. C. A. Hopkins. No. 878,801; Feb. 4; Sp. p. 1922; Dr. p. 397; Gaz. vol. 132; p. 1182.
Surgeon's knife. R. K. Gregory. No. 878,524; Feb. 11; Sp. p. 1344; Dr. p. 272; Gaz. vol. 132; p. 1089.
Surgical pad. J. A. Murray. No. 880,389; Feb. 25; Sp. p. 5137; Dr. p. 1085; Gaz. vol. 132; p. 1771.
Suspenders. H. Couthri. No. 878,508; Feb. 11; Sp. p. 1315; Dr. p. 266; Gaz. vol. 132; p. 1085.
Sweetmeat, such as chocolate, Manufacture of. V. Hain. No. 880,300; Feb. 25; Sp. p. 4975; Dr. p. 1050; Gaz. vol. 132; p. 1743.
Swing. O. P. Vroom. No. 878,101; Feb. 4; Sp. p. 420; Dr. p. 89; Gaz. vol. 132; p. 916.
Swing. G. Kuhn. No. 878,905, Feb. 11; Sp. p. 2219; Dr. p. 465; Gaz. vol. 132; p. 1233.
Swing, Rotary. R. D. Patterson. No. 879,310; Feb. 18; Sp. p. 2907; Dr. p. 606; Gaz. vol. 132; p. 1386.
Swing, Seesaw and rotary. I. S. Woodward. No. 879,937; Feb. 25; Sp. p. 4251; Dr. p. 889; Gaz. vol. 132; p. 1624.
Swingletree. M. Hicks. No. 878,392; Feb. 4; Sp. p. 1002; Dr. p. 202; Gaz. vol. 132; p. 1013.
Switch: *See* Lock and electric switch; Push-button switch; Railway-switch; Telephone-switch; Time-switch; Vehicle-switch.
Switch device. K. Abel and F. Perveseler. No. 878,591; Feb. 11; Sp. p. 1510; Dr. p. 307; Gaz. vol. 132; p. 1113.
Switch-operating mechanism. A. B. Allen. No. 878,927; Feb. 11; Sp. p. 2154; Dr. pp. 449-50; Gaz. vol. 132; p. 1221.
Switch-plug. H. C. Froelich. No. 879,760; Feb. 18; Sp. p. 3830; Dr. p. 805; Gaz. vol. 132; p. 1532.
Switch-signal. P. E. Bolan. No. 879,240; Feb. 18; Sp. p. 2762; Dr. pp. 578-9; Gaz. vol. 132; p. 1363.
Switchboard-signal, Electromechanical. E. W. Brackett. No. 878,112; Feb. 4; Sp. p. 439; Dr. p. 93; Gaz. vol. 132; p. 920.
Swivel. W. J. Jeffries and E. G. Steele. No. 879,644; Feb. 18; Sp. p. 3616; Dr. p. 756; Gaz. vol. 132; p. 1494.
Syringe. W. B. Murphy. No. 879,299; Feb. 18; Sp. p. 2900; Dr. p. 602; Gaz. vol. 132; p. 1382.
Syringe. J. Wilson. No. 880,433; Feb. 25; Sp. p. 5247; Dr. p. 1103; Gaz. vol. 132; p. 1787.
Syringe, Vaginal. E. Hilker. No. 877,926; Feb. 4; Sp. p. 66; Dr. p. 13; Gaz. vol. 132; p. 860.
Table: *See* Adjustable table; Cabinet-table; Concentrating-table; Desk-table; Drawing-table; Extension-table; Sewing-machine table; Turn-table.
Tag-holder. T. Robinson. No. 879,493; Feb. 18; Sp. p. 3286; Dr. p. 687; Gaz. vol. 132; p. 1445.
Tags, Machine for feeding and affixing laundry-. F. F. Akerly and W. Borchert. No. 878,503; Feb. 11; Sp. p. 1513; Dr. p. 306; Gaz. vol. 132; p. 1114.
Talking-machine. J. C. English. No. 877,989; Feb. 4; Sp. p. 133; Dr. p. 41; Gaz. vol. 132; p. 880.
Talking-machine. I. G. Fosler. No. 878,516; Feb. 11; Sp. p. 1333; Dr. p. 270; Gaz. vol. 132; p. 1087.
Talking-machine. A. Fischer. No. 879,755; Feb. 18; Sp. p. 3830; Dr. p. 803; Gaz. vol. 132; p. 1530.
Tank: *See* Grain-tank; Self-measuring tank; Water-tank.
Tannic extracts, Decolorizing. L. Dufour. No. 878,618; Feb. 11; Sp. p. 1574; Gaz. vol. 132; p. 1123.
Tap and bush for beer-kegs. H. J. Sandell. No. 879,983; Feb. 25; Sp. p. 4331; Dr. p. 906; Gaz. vol. 132; p. 1638.
Tap, Beer-. J. Wawrzinski. No. 879,004; Feb. 18; Sp. p. 3536; Dr. p. 740; Gaz. vol. 132; p. 1490.
Tapping device, Pipe-. J. H. B. Bryan. No. 879,513; Feb. 18; Sp. p. 3330; Dr. p. 695; Gaz. vol. 132; p. 1452.
Taper-turning tool. J. Hartness. No. 877,925; Feb. 4; Sp. p. 62; Dr. pp. 12-13; Gaz. vol. 132; p. 859.
Target and shield. C. H. Petry. No. 879,670; Feb. 18; Sp. p. 3669; Dr. p. 766; Gaz. vol. 132; p. 1503.
Target-trap. G. Nicolai. No. 880,304; Feb. 25; Sp. p. 5155; Dr. p. 1088; Gaz. vol. 132; p. 1773.
Teat-cup. F. B. Groff. No. 878,057; Feb. 4; Sp. p. 336; Dr. p. 70; Gaz. vol. 132; p. 903.
Tedder attachment. J. H. Pletscher. No. 880,094; Feb. 25; Sp. p. 4551; Dr. p. 958; Gaz. vol. 132; p. 1674.

Telegraph-switchboard. A. T. Newman. No. 879,300; Feb. 18; Sp. p. 2891; Dr. p. 603; Gaz. vol. 132; p. 1383.
Telegraphic transmitter. P. B. Delany. No. 877,914; Feb. 4; Sp. p. 39; Dr. p. 3; Gaz. vol. 132; p. 855.
Telegraphic transmitter. P. B. Delany. No. 877,915; Feb. 4; Sp. p. 41; Dr. p. 3; Gaz. vol. 132; p. 855.
Telegraphic transmitter. C. Brain. No. 879,357; Feb. 18; Sp. p. 2883; Dr. pp. 624-6; Gaz. vol. 132; p. 1401.
Telegraphic transmitter. C. Williams, P. B. Mitchell, and S. Hathaway. No. 879,711; Feb. 18; Sp. p. 3750; Dr. pp. 786-7; Gaz. vol. 132; p. 1513.
Telegraphy. I. Kitsee. No. 878,963; Feb. 11; Sp. p. 2218; Dr. p. 464; Gaz. vol. 132; p. 1232.
Telegraphy, Space. L. De Forest. No. 879,532; Feb. 18; Sp. p. 3383; Dr. p. 703; Gaz. vol. 132; p. 1458.
Telegraphy, Wireless. G. W. Pierce. No. 879,409; Feb. 18; Sp. p. 3116; Dr. pp. 647-8; Gaz. vol. 132; p. 1418.
Telephone-alarm, Automatic. M. L. Murdock and J. C. Gallagher. No. 880,155; Feb. 25; Sp. p. 4677; Dr. p. 985; Gaz. vol. 132; p. 1694.
Telephone and station apparatus. N. L. Weingott. No. 879,073; Feb. 11; Sp. p. 2414; Dr. pp. 505-6; Gaz. vol. 132; p. 1266.
Telephone central-office apparatus. C. S. Winston. No. 878,364; Feb. 4; Sp. p. 762; Dr. p. 154; Gaz. vol. 132; p. 971.
Telephone-circuit. C. M. Jacobs and W. J. Thorrowgood. No. 879,643; Feb. 18; Sp. p. 3615; Dr. p. 756; Gaz. vol. 132; p. 1494.
Telephone drop and jack, Combined. H. C. Thomson. No. 877,965; Feb. 4; Sp. p. 146; Dr. p. 33; Gaz. vol. 132; p. 873.
Telephone-exchange apparatus. W. A. Fricke. No. 879,454; Feb. 18; Sp. p. 3218; Dr. p. 670; Gaz. vol. 132; p. 1432.
Telephone-exchange system. S. B. Fowler. No. 877,921; Feb. 4; Sp. p. 53; Dr. p. 11; Gaz. vol. 132; p. 857.
Telephone memorandum and recording device. U. G. Cave. No. 879,082; Feb. 11; Sp. p. 2440; Dr. p. 510; Gaz. vol. 132; p. 1269.
Telephone-switch. W. M. Bruce, Jr. No. 877,902; Feb. 4; Sp. p. 10; Dr. p. 2; Gaz. vol. 132; p. 851.
Telephone system. A. L. Parcelle. No. 878,151; Feb. 4; Sp. p. 507; Dr. p. 106; Gaz. vol. 132; p. 933.
Telephone system, Lock-out. A. F. Poole. No. 878,018; Feb. 4; Sp. p. 252; Dr. p. 56; Gaz. vol. 132; p. 890.
Telephone system, Party-line. A. F. Poole. No. 878,017; Feb. 4; Sp. p. 244; Dr. p. 56; Gaz. vol. 132; p. 890.
Telephone system, Party-line. W. W. Dean. No. 878,779; Feb. 11; Sp. p. 1870; Dr. p. 387; Gaz. vol. 132; p. 1175.
Telephone-transmitter. W. W. Dean. No. 878,192; Feb. 4; Sp. p. 622; Dr. p. 128; Gaz. vol. 132; p. 947.
Telephones, Lock-out device for party-line. W. M. Bruce, Jr. No. 877,901; Feb. 4; Sp. p. 8; Dr. p. 2; Gaz. vol. 132; p. 850.
Telephony. M. Brooks. No. 879,436; Feb. 18; Sp. p. 3173; Dr. p. 661; Gaz. vol. 132; p. 1427.
Telescope. A. König. No. 880,028; Feb. 25; Sp. p. 4419; Dr. p. 928; Gaz. vol. 132; p. 1653.
Telescope with displaceable reversing system. E. Neumayer. No. 879,572; Feb. 18; Sp. p. 3454; Dr. p. 723; Gaz. vol. 132; p. 1471.
Telpher. H. M. Harding and C. M. Clark. No. 878,797; Feb. 11; Sp. p. 1916; Dr. p. 394; Gaz. vol. 132; p. 1181.
Temperature regulation. A. R. Sprague. No. 880,414; Feb. 25; Sp. p. 5201; Dr. p. 1096; Gaz. vol. 132; p. 1781.
Tennis-racket. C. H. Krüger. No. 879,477; Feb. 18; Sp. p. 3254; Dr. p. 678; Gaz. vol. 132; p. 1439.
Thawing device. J. W. Cooper. No. 879,745; Feb. 18; Sp. p. 3815; Dr. p. 800; Gaz. vol. 132; p. 1528.
Thermometer. S. Lachapelle. No. 879,461; Feb. 4; Sp. p. 1202; Dr. p. 248; Gaz. vol. 132; p. 1043.
Thermometer. E. Kessling. No. 879,474; Feb. 18; Sp. p. 3240; Dr. p. 677; Gaz. vol. 132; p. 1436.
Thill-coupling antirattling device. H. E. Vosburgh. No. 878,438; Feb. 4; Sp. p. 1087; Dr. p. 221; Gaz. vol. 132; p. 1027.
Thread-cutting device. R. A. Smith. No. 878,097; Feb. 4; Sp. p. 411; Dr. p. 87; Gaz. vol. 132; p. 915.
Thresher, Pea-. E. W. Jones. No. 878,882; Feb. 11; Sp. p. 2065; Dr. p. 429; Gaz. vol. 132; p. 1207.
Threshing mechanism. J. W. Shelbourn. No. 878,901; Feb. 11; Sp. p. 2106; Dr. p. 439; Gaz. vol. 132; p. 1213.
Throttle-operator, Automatic. A. S. Anderson. No. 880,061; Feb. 25; Sp. p. 4497; Dr. pp. 944-5; Gaz. vol. 132; p. 1664.
Ticket delivering and registering mechanism. S. P. Thrasher. No. 879,217; Feb. 18; Sp. p. 2720; Dr. p. 567; Gaz. vol. 132; p. 1355.
Ticket-pad. M. Macdonald. No. 878,976; Feb. 11; Sp. p. 2225; Dr. p. 466; Gaz. vol. 132; p. 1234.
Tickets, checks, &c., Holder for. P. C. Snow. No. 879,015; Feb. 11; Sp. p. 2311; Dr. p. 483; Gaz. vol. 132; p. 1248.
Tie: *See* Building-block tie; Package-tie; Rail-tie; Railway-tie.
Tie-plates, Manufacturing. E. H. Bell. No. 879,288; Feb. 18; Sp. p. 2757; Dr. p. 577; Gaz. vol. 132; p. 1362.
Tile, Roofing-. B. R. Christensen. No. 880,012; Feb. 25; Sp. p. 4386; Dr. p. 921; Gaz. vol. 132; p. 1648.
Tiling for covering floors and walls. E. M. Kilbride. No. 879,554; Feb. 18; Sp. p. 3420; Dr. p. 716; Gaz. vol. 132; p. 1465.
Time-recording register. N. S. McNab and J. S. Link. No. 879,665; Feb. 18; Sp. p. 3656; Dr. pp. 764-5; Gaz. vol. 132; p. 1501.
Time-switch, Automatic. H. B. Snell. No. 878,248; Feb. 4; Sp. p. 730; Dr. p. 148; Gaz. vol. 132; p. 966.
Tin-scrap, Reclaiming. E. A. Sperry. No. 879,506; Feb. 18; Sp. p. 3516; Gaz. vol. 132; p. 1478.
Tire attachment. E. Collins. No. 880,195; Feb. 25; Sp. p. 4751; Dr. p. 1006; Gaz. vol. 132; p. 1708.
Tire clamp, Wheel-. C. Newman. No. 879,574; Feb. 18; Sp. p. 3457; Dr. p. 724; Gaz. vol. 132; p. 1472.
Tire construction. W. F. Stearns. No. 877,961; Feb. 4; Sp. p. 131; Dr. p. 29; Gaz. vol. 132; p. 871.
Tire-cover. W. A. Allen. (Reissue.) No. 12,754; Feb. 25; Sp. p. 5373; Dr. p. 1132; Gaz. vol. 132; p. 1808.
Tire cover, Pneumatic-. C. A. Brophy. No. 880,274; Feb. 25; Sp. p. 4925; Dr. p. 1042; Gaz. vol. 132; p. 1735.
Tire, Elastic vehicle-. E. L. Perry. No. 879,312; Feb. 18; Sp. p. 2911; Dr. p. 607; Gaz. vol. 132; p. 1387.
Tire-frame, Flexible. E. D. C. Bayne and L. A. Subera. No. 879,500; Feb. 18; Sp. p. 3322; Dr. p. 694; Gaz. vol. 132; p. 1451.
Tire, Pneumatic. O. Uhlmann. No. 877,976; Feb. 4; Sp. p. 148; Dr. p. 33; Gaz. vol. 132; p. 873.
Tire, Pneumatic. H. D. B. Lefferts and E. De Camp. No. 878,075; Feb. 4; Sp. p. 371; Dr. p. 77; Gaz. vol. 132; p. 908.
Tire, Pneumatic. B. F. Schirmer. No. 879,199; Feb. 18; Sp. p. 2689; Dr. p. 561; Gaz. vol. 132; p. 1349.
Tire-setting tool. R. Connell. No. 878,354; Feb. 4; Sp. p. 935; Dr. p. 186; Gaz. vol. 132; p. 1000.
Tire, Supplemental detachable vehicle-. H. Yarnell. No. 878,107; Feb. 4; Sp. p. 431; Dr. p. 91; Gaz. vol. 132; p. 918.
Tire, Tubular metallic spring-. J. K. Parker. No. 878,015; Feb. 4; Sp. p. 241; Dr. p. 55; Gaz. vol. 132; p. 889.
Tire, Vehicle-. P. E. Doolittle. No. 879,610; Feb. 18; Sp. p. 3554; Dr. p. 743; Gaz. vol. 132; p. 1483.
Tire, Wheel-. J. H. Ryan. No. 879,676; Feb. 18; Sp. p. 3664; Dr. p. 770; Gaz. vol. 132; p. 1505.
Tires, Making leather. R. J. Elledge. No. 880,371; Feb. 25; Sp. p. 5094; Dr. p. 1077; Gaz. vol. 132; p. 1766.
Tires, Making shields or armor for pneumatic. O. A. Hensel. No. 879,768; Feb. 18; Sp. p. 3852; Dr. p. 807; Gaz. vol. 132; p. 1534.
Tobacco box or caddy. A. J. Feild. No. 878,195; Feb. 4; Sp. p. 626; Dr. p. 128; Gaz. vol. 132; p. 948.
Tobacco-pipe. W. H. Plane. No. 879,706; Feb. 18; Sp. p. 3803; Dr. p. 818; Gaz. vol. 132; p. 1543.
Tobacco-reservoir and cigarette-filler, Combined. H. D. Bonnell. No. 879,851; Feb. 25; Sp. p. 4045; Dr. p. 847; Gaz. vol. 132; p. 1595.
Toilet vessel. J. H. Freeman. No. 878,626; Feb. 11; Sp. p. 1587; Dr. p. 322; Gaz. vol. 132; p. 1125.
Tonga, Casing-. J. W. Brackney. No. 879,808; Feb. 18; Sp. p. 3926; Dr. p. 828; Gaz. vol. 132; p. 1548.
Tool, Combination-. E. B. Dikeman. No. 878,040; Feb. 4; Sp. p. 324; Dr. pp. 67-8; Gaz. vol. 132; p. 900.
Tool-holder. P. H. Robinson. No. 878,672; Feb. 11; Sp. p. 1665; Dr. p. 343; Gaz. vol. 132; p. 1140.
Tool-holder. W. F. Tracy. No. 879,220; Feb. 18; Sp. p. 2725; Dr. p. 568; Gaz. vol. 132; p. 1356.
Tool holder and tools, Self-tightening bushing-. E. S. Costa. No. 878,776; Feb. 11; Sp. p. 1870; Dr. p. 386; Gaz. vol. 132; p. 1174.
Tool, Pneumatic. G. D. Marcy. No. 878,548; Feb. 11; Sp. p. 1392; Dr. p. 286; Gaz. vol. 132; p. 1096.
Tool, Pocket-. A. F. Meisselbach and P. Catucci. No. 878,224; Feb. 4; Sp. p. 678; Dr. p. 140; Gaz. vol. 132; p. 956.
Tools, Overhead suspending mechanism for motor-driven. C. T. and E. E. Wilt. No. 880,059; Feb. 25; Sp. p. 4493; Dr. p. 944; Gaz. vol. 132; p. 1663.
Towel-holder. C. Araing. No. 879,719; Feb. 18; Sp. p. 3763; Dr. p. 789; Gaz. vol. 132; p. 1513.
Toy. A. S. Diack. No. 879,182; Feb. 18; Sp. p. 2897; Dr. p. 541; Gaz. vol. 132; p. 1333.
Toy bear. I. Parmly. No. 878,232; Feb. 4; Sp. p. 695; Dr. p. 143; Gaz. vol. 132; p. 950.
Toy building-block. C. W. Frost. No. 879,433; Feb. 18; Sp. p. 3222; Dr. p. 670; Gaz. vol. 132; p. 1433.
Toy, Chromatic. A. L. Newell. No. 880,322; Feb. 25; Sp. p. 5010; Dr. p. 1057; Gaz. vol. 132; p. 1750.
Toy drum. J. Chein. No. 878,521; Feb. 18; Sp. p. 3342; Dr. p. 698; Gaz. vol. 132; p. 1454.
Toy vehicle. T. E. Crecelius. No. 879,947; Feb. 25; Sp. p. 4270; Dr. p. 892; Gaz. vol. 132; p. 1628.
Trace-carrier. H. Hill. No. 878,393; Feb. 4; Sp. p. 1003; Dr. p. 203; Gaz. vol. 132; p. 1013.
Tract-sweeper. J. E. Kelley. No. 880,308; Feb. 25; Sp. p. 4987; Dr. p. 1052; Gaz. vol. 132; p. 1746.
Tramway. P. M. Loberg. No. 879,230; Feb. 18; Sp. p. 2733; Dr. p. 564; Gaz. vol. 132; p. 1375.
Transfer system. K. C. Gardner. No. 879,131; Feb. 11; Sp. p. 2551; Dr. pp. 530-1; Gaz. vol. 132; p. 1294.
Transformer. C. L. Fortescue. No. 879,158; Feb. 18; Sp. p. 2804; Dr. p. 542; Gaz. vol. 132; p. 1335.
Transformer, Multiple-ratio. C. L. Fortescue. No. 879,223; Feb. 18; Sp. p. 2782; Dr. p. 583; Gaz. vol. 132; p. 1366.
Transit-head. A. G. Young. No. 879,686; Feb. 18; Sp. p. 3638; Dr. pp. 749-1; Gaz. vol. 132; p. 1481.
Transmission mechanism, Changeable-gear. J. Dawson. No. 878,778; Feb. 11; Sp. p. 1874; Dr. p. 387; Gaz. vol. 132; p. 1174.
Transmitter. S. W. Rothermel. No. 880,044; Feb. 25; Sp. p. 4464; Dr. pp. 937-8; Gaz. vol. 132; p. 1658.
Trap: *See* Animal-trap; Bird-trap; Drum-trap; Fish-trap; Pigeon-trap; Poultry-trap; Steam-trap; Target-trap.
Trap. J. W. McEachern. No. 878,987; Feb. 11; Sp. p. 2259; Dr. p. 472; Gaz. vol. 132; p. 1240.
Trap. B. Schmitt. No. 879,010; Feb. 11; Sp. p. 2306; Dr. pp. 481-2; Gaz. vol. 132; p. 1247.
Trap. M. H. Olson. No. 879,666; Feb. 18; Sp. p. 3662; Dr. p. 766; Gaz. vol. 132; p. 1502.
Trap for basins, sinks, &c. H. C. McCaffrey. No. 880,156; Feb. 25; Sp. p. 4680; Dr. p. 985; Gaz. vol. 132; p. 1694.
Tree: *See* Corn-tree.
Trellis, Vine-. G. D. Bassa. No. 878,494; Feb. 11; Sp. p. 1235; Dr. p. 255; Gaz. vol. 132; p. 1060.
Tremolo-stop. C. P. Dolan. No. 878,618; Feb. 11; Sp. p. 1564; Dr. p. 313; Gaz. vol. 132; p. 1122.
Trick-knife. W. E. Dillard. No. 878,436; Feb. 11; Sp. p. 1216; Dr. p. 206; Gaz. vol. 132; p. 1025.
Trigger. J. C. Loder. No. 879,186; Feb. 18; Sp. p. 2861; Dr. p. 555; Gaz. vol. 132; p. 1345.
Trimming and skiving machines, Feed-guide for. C. S. Pierce. No. 880,033; Feb. 25; Sp. p. 4456; Dr. p. 935; Gaz. vol. 132; p. 1657.
Tripod. G. A. Belfrage. No. 880,063; Feb. 25; Sp. p. 4562; Dr. p. 946; Gaz. vol. 132; p. 1664.

Trolley. J. E. Saucier. No. 877,953; Feb. 4; Sp. p. 113; Dr. p. 26; Gaz. vol. 132; p. 868.
Trolley. G. H. Gross. No. 880,021; Feb. 25; Sp. p. 4406; Dr. p. 926; Gaz. vol. 132; p. 1651.
Trolley-brush. G. Heineman. No. 878,062; Feb. 4; Sp. p. 343; Dr. p. 71; Gaz. vol. 132; p. 904.
Trolley catcher and retriever. F. J. Gustine. No. 879,257; Feb. 18; Sp. p. 2797; Dr. p. 586; Gaz. vol. 132; p. 1368.
Trolley, Electric. L. Smith. No. 880,107; Feb. 25; Sp. p. 4575; Dr. p. 964; Gaz. vol. 132; p. 1678.
Trolley-pole controller. J. J. Coit. No. 879,034; Feb. 11; Sp. p. 2346; Dr. pp. 489-90; Gaz. vol. 132; p. 1253.
Trolley-pole head. G. G. Buchanan. No. 879,729; Feb. 18; Sp. p. 3789; Dr. p. 794; Gaz. vol. 132; p. 1522.
Trolley-pole support. J. L. Chase. No. 879,943; Feb. 25; Sp. p. 4258; Dr. p. 890; Gaz. vol. 132; p. 1626.
Trolley-pulley. E. J. Matthews and R. C. Gruwell. No. 878,653; Feb. 11; Sp. p. 1639; Dr. p. 336; Gaz. vol. 132; p. 1134.
Trolley-retriever. R. Phillips. No. 879,562; Feb. 18; Sp. p. 3482; Dr. pp. 729-30; Gaz. vol. 132; p. 1474.
Trolley-securing device. E. D. Trickey. No. 878,836; Feb. 11; Sp. p. 1977; Dr. p. 410; Gaz. vol. 132; p. 1192.
Trolley-wheel. J. T. Mishler. No. 878,656; Feb. 11; Sp. p. 1642; Dr. p. 337; Gaz. vol. 132; p. 1135.
Trolley-wheel. J. M. Siegrist. No. 879,503; Feb. 18; Sp. p. 3514; Dr. p. 736; Gaz. vol. 132; p. 1478.
Trolley-wheel. E. J. Harrison. No. 879,636; Feb. 18; Sp. p. 3597; Dr. p. 752; Gaz. vol. 132; p. 1491.
Trolley-wheel spring. R. E. Noble. No. 880,395; Feb. 25; Sp. p. 5156; Dr. p. 1088; Gaz. vol. 132; p. 1773.
Trolleys, Mechanism for locking. E. Y. Moore. No. 878,484; Feb. 4; Sp. p. 1208; Dr. p. 249; Gaz. vol. 132; p. 1044.
Trough: *See* Feed-trough; Feeding-trough.
Trousers, belts, &c., Stretcher for. J. M. Blackburn. No. 879,028; Feb. 11; Sp. p. 2330; Dr. p. 488; Gaz. vol. 132; p. 1252.
Truck. J. Schreiber. No. 878,751; Feb. 11; Sp. p. 1813; Dr. p. 378; Gaz. vol. 132; p. 1165.
Truck. J. F. De Long. No. 880,015; Feb. 25; Sp. p. 4396; Dr. p. 923; Gaz. vol. 132; p. 1649.
Truck, Barrel-. O. P. Schriver and J. M. Webster. No. 879,914; Feb. 25; Sp. p. 4207; Dr. p. 878; Gaz. vol. 132; p. 1617.
Truck for tillage implements, Pole-. C. S. Sharp. No. 879,351; Feb. 18; Sp. p. 2941; Dr. p. 613; Gaz. vol. 132; p. 1392.
Truck frame, Railway-. C. Furman. No. 878,450; Feb. 4; Sp. p. 1129; Dr. pp. 231-2; Gaz. vol. 132; p. 1034.
Truck, House-. J. H. Lyon. No. 878,546; Feb. 11; Sp. p. 1389; Dr. p. 285; Gaz. vol. 132; p. 1096.
Truck, Logging-. J. W. Emerson. No. 878,512; Feb. 11; Sp. p. 1321; Dr. p. 267; Gaz. vol. 132; p. 1086.
Truck or trolley with sliding steering-wheels. L. E. Lachat. No. 878,733; Feb. 11; Sp. p. 1783; Dr. p. 369; Gaz. vol. 132; p. 1159.
Truck, Thawing-furnace. T. D. Bausher. No. 879,939; Feb. 25; Sp. p. 4254; Dr. p. 889; Gaz. vol. 132; p. 1625.
Trunk. G. H. Wheary. No. 879,074; Feb. 11; Sp. p. 2417; Dr. pp. 505-7; Gaz. vol. 132; p. 1266.
Trunk. C. T. and E. E. Wilt. No. 880,058; Feb. 25; Sp. p. 4488; Dr. pp. 943-4; Gaz. vol. 132; p. 1663.
Trunk-fastener. G. J. Loos. No. 878,406; Feb. 4; Sp. p. 1035; Dr. p. 209; Gaz. vol. 132; p. 1018.
Trunking system, Automatic. C. S. Winston. No. 878,365; Feb. 4; Sp. p. 766; Dr. p. 154; Gaz. vol. 132; p. 971.
Truss. L. H. Davis. No. 877,986; Feb. 4; Sp. p. 177; Dr. p. 40; Gaz. vol. 132; p. 879.
Truss. H. L. Mortimer. No. 879,567; Feb. 18; Sp. p. 3440; Dr. p. 720; Gaz. vol. 132; p. 1469.
Truss for iron structures. H. C. Matthews. No. 878,221; Feb. 4; Sp. p. 675; Dr. p. 139; Gaz. vol. 132; p. 955.
Tube: *See* Boiler-tube; Cop-tube; Filling-tube; Vein-tube.
Tube-manufacturing apparatus, Metal-. A. Schwieger. No. 878,092; Feb. 4; Sp. p. 403; Dr. p. 85; Gaz. vol. 132; p. 913.
Tube-mills, Feeder-head for rotary. W. N. Beach. No. 879,435; Feb. 18; Sp. p. 3168; Dr. p. 659; Gaz. vol. 132; p. 1426.
Tube or flue cleaner. J. R. Middleton. No. 878,145; Feb. 4; Sp. p. 494; Dr. p. 106; Gaz. vol. 132; p. 931.
Tube-transferring mechanism. R. L. Patterson. No. 879,311; Feb. 18; Sp. p. 2909; Dr. p. 607; Gaz. vol. 132; p. 1386.
Turbine. R. H. Goldsborough. No. 878,201; Feb. 4; Sp. p. 640; Dr. p. 131; Gaz. vol. 132; p. 949.
Turbine. F. E. Haven. No. 878,790; Feb. 11; Sp. p. 1919; Dr. pp. 395-6; Gaz. vol. 132; p. 1181.
Turbine. C. Wedekind. No. 880,181; Feb. 25; Sp. p. 4727; Dr. p. 1000; Gaz. vol. 132; p. 1703.
Turbine, Elastic-fluid. C. G. Curtis. No. 879,748; Feb. 18; Sp. p. 3819; Dr. pp. 800-1; Gaz. vol. 132; p. 1528.
Turbine, Elastic-fluid. C. W. Dake. No. 880,365; Feb. 25; Sp. p. 5085; Dr. p. 1074; Gaz. vol. 132; p. 1764.
Turbine, Expansible-fluid. B. S. Church. No. 878,118; Feb. 4; Sp. p. 451; Dr. p. 96; Gaz. vol. 132; p. 922.
Turbine-engine. H. A. Buck. No. 880,479; Feb. 25; Sp. p. 5345; Dr. p. 1127; Gaz. vol. 132; p. 1804.
Turbine-governor. C. W. Dake. No. 880,366; Feb. 25; Sp. p. 5086; Dr. p. 1075; Gaz. vol. 132; p. 1764.
Turbine, Internal-combustion. P. Krause. No. 880,458; Feb. 25; Sp. p. 5302; Dr. p. 1116; Gaz. vol. 132; p. 1796.
Turbines, Means for cooling the supply-passage of gas-. J. W. A. Elling. No. 878,130; Feb. 4; Sp. p. 470; Dr. p. 100; Gaz. vol. 132; p. 925.
Turbines, Safety-stop for steam-. H. G. Robinson. No. 879,121; Feb. 11; Sp. p. 2537; Dr. p. 527; Gaz. vol. 132; p. 1281.
Turbo-alternator. C. E. Lord. No. 879,504; Feb. 18; Sp. p. 3434; Dr. p. 719; Gaz. vol. 132; p. 1468.
Turn-table. H. Hastings. No. 878,135; Feb. 4; Sp. p. 477; Dr. p. 102; Gaz. vol. 132; p. 927.
Turning-plug. H. H. Cramer. No. 880,127; Feb. 25; Sp. p. 4613; Dr. p. 973; Gaz. vol. 132; p. 1684.
Twine-cutter. F. B. Caldwell. No. 879,733; Feb. 18; Sp. p. 3792; Dr. p. 796; Gaz. vol. 132; p. 1523.
Type-casting means. F. H. Brown, J. E. Hanrahan, and G. A. Boyden. No. 878,185; Feb. 4; Sp. p. 612; Dr. p. 126; Gaz. vol. 132; p. 945.
Type-setting machines, Assembling attachment for. E. Terrell. No. 880,341; Feb. 25; Sp. p. 5043; Dr. p. 1065; Gaz. vol. 132; p. 1756.
Type-writer. W. Goerwitz. No. 878,378; Feb. 4; Sp. p. 980; Dr. pp. 197-8; Gaz. vol. 132; p. 1008.
Type-writer. C. W. Sponsel. No. 879,207; Feb. 18; Sp. p. 2699; Dr. pp. 563-4; Gaz. vol. 132; p. 1351.
Type-writer. G. W. Donning. No. 879,815; Feb. 18; Sp. p. 3938; Dr. pp. 825-7; Gaz. vol. 132; p. 1550.
Type-writer attachment. A. W. Croushore. No. 879,941; Feb. 11; Sp. p. 2181; Dr. p. 456; Gaz. vol. 132; p. 1226.
Type-writer-carriage control. C. M. Sorensen. No. 880,174; Feb. 25; Sp. p. 4714; Dr. p. 995; Gaz. vol. 132; p. 1701.
Type-writer cushion. G. M. Redway. No. 879,903; Feb. 25; Sp. p. 4188; Dr. p. 874; Gaz. vol. 132; p. 1613.
Type-writer, Electrical. G. W. Donning. No. 879,814; Feb. 18; Sp. p. 3933; Dr. pp. 824-5; Gaz. vol. 132; p. 1549.
Type-writer tabulator. W. R. Fox. No. 880,290; Feb. 25; Sp. p. 4959; Dr. pp. 1047-8; Gaz. vol. 132; p. 1740.
Type-writers, Paper-movement indicator for. C. C. Poole. No. 878,743; Feb. 11; Sp. p. 1796; Dr. pp. 372-3; Gaz. vol. 132; p. 1162.
Type-writers, Power-driving mechanism for computing. E. B. Cram. No. 879,854; Feb. 25; Sp. p. 4057; Dr. pp. 850-2; Gaz. vol. 132; p. 1596.
Type-writers, Type-bar mechanism for. G. A. Smith. No. 879,123; Feb. 11; Sp. p. 2540; Dr. p. 528; Gaz. vol. 132; p. 1282.
Type-writing machine. T. J. Coo. No. 877,909; Feb. 4; Sp. p. 29; Dr. p. 6; Gaz. vol. 132; p. 853.
Type-writing machine. H. H. Steele. No. 878,161; Feb. 4; Sp. p. 528; Dr. p. 113; Gaz. vol. 132; p. 936.
Type-writing machine. H. H. Steele. No. 878,162; Feb. 4; Sp. p. 534; Dr. pp. 114-15; Gaz. vol. 132; p. 937.
Type-writing machine. H. H. Steele. No. 878,163; Feb. 4; Sp. p. 548; Dr. pp. 115-16; Gaz. vol. 132; p. 937.
Type-writing machine. J. Felbel. No. 878,196; Feb. 4; Sp. p. 627; Dr. p. 129; Gaz. vol. 132; p. 948.
Type-writing machine. H. H. Steele. No. 878,573; Feb. 11; Sp. p. 1453; Dr. pp. 296-7; Gaz. vol. 132; p. 1107.
Type-writing machine. H. H. Steele. No. 878,574; Feb. 11; Sp. p. 1463; Dr. pp. 297-8; Gaz. vol. 132; p. 1105.
Type-writing machine. C. L. Fortier. No. 878,789; Feb. 11; Sp. p. 1898; Dr. p. 391; Gaz. vol. 132; p. 1178.
Type-writing machine. H. R. White. No. 878,846; Feb. 11; Sp. p. 1992; Dr. p. 413; Gaz. vol. 132; p. 1195.
Type-writing machine. J. C. McLaughlin. No. 878,988; Feb. 11; Sp. p. 2261; Dr. p. 473; Gaz. vol. 132; p. 1240.
Type-writing machine. W. P. Kidder and C. W. Sponsel. No. 879,107; Feb. 11; Sp. p. 2498; Dr. p. 520; Gaz. vol. 132; p. 1277.
Type-writing machine. B. C. Stickney. No. 879,568; Feb. 18; Sp. p. 3522; Dr. pp. 737-8; Gaz. vol. 132; p. 1479.
Type-writing machine. J. Felbel. No. 880,375; Feb 25; Sp. p. 5100; Dr. p. 1079; Gaz. vol. 132; p. 1767.
Type-writing machine. C. C. McPhee. No. 880,301; Feb. 25; Sp. p. 5139; Dr. pp. 1085-7; Gaz. vol. 132; p. 1772.
Type-writing-machine attachment. E. T. Hills. No. 880,077; Feb. 25; Sp. p. 4526; Dr. p. 953; Gaz. vol. 132; p. 1669.
Type-writing machine platen shift-key. S. B. Prentiss. No. 879,317; Feb. 18; Sp. p. 2917; Dr. p. 608; Gaz. vol. 132; p. 1388.
Type-writing machine ribbon mechanism. W. R. Fox. No. 879,150; Feb. 18; Sp. p. 2606; Dr. pp. 542-3; Gaz. vol. 132; p. 1335.
Type-writing machines, Shift mechanism for. J. B. Secor. No. 878,244; Feb. 4; Sp. p. 721; Dr. p. 146; Gaz. vol. 132; p. 964.
Umbrella. A. N. Sanford. No. 879,678; Feb. 18; Sp. p. 3687; Dr. p. 771; Gaz. vol. 132; p. 1505.
Umbrella, Folding. G. M. Peters. No. 878,558; Feb. 11; Sp. p. 1425; Dr. p. 291; Gaz. vol. 132; p. 1102.
Umbrella, Folding. W. C. Wallar. No. 879,072; Feb. 11; Sp. p. 2410; Dr. p. 505; Gaz. vol. 132; p. 1265.
Umbrella, Folding. W. Thedorf. No. 880,427; Feb. 25; Sp. p. 5235; Dr. p. 1101; Gaz. vol. 132; p. 1785.
Umbrella or parasol frame. A. Blake and P. Kretzer. No. 878,270; Feb. 4; Sp. p. 774; Dr. p. 155; Gaz. vol. 132; p. 973.
Umbrella-tip. G. Kabureck. No. 879,471; Feb. 18; Sp. p. 3246; Dr. p. 676; Gaz. vol. 132; p. 1437.
Umbrellas and the like, Attachment for. W. A. Swaren. No. 880,419; Feb. 25; Sp. p. 5214; Dr. p. 1099; Gaz. vol. 132; p. 1782.
Undergarment, Combination-. M. B. Kegg. No. 880,220; Feb. 25; Sp. p. 4820; Dr. p. 1020; Gaz. vol. 132; p. 1717.
Undergarment, Lady's. J. V. Palmer. No. 878,994; Feb. 11; Sp. p. 2276; Dr. p. 475; Gaz. vol. 132; p. 1242.
Vacuum apparatus. S. E. Griggs. No. 878,723; Feb. 11; Sp. p. 1765; Dr. p. 365; Gaz. vol. 132; p. 1156.
Valve. H. Brauner. No. 878,183; Feb. 4; Sp. p. 609; Dr. p. 125; Gaz. vol. 132; p. 944.
Valve. W. Ord. No. 878,654; Feb. 11; Sp. p. 1652; Dr. p. 340; Gaz. vol. 132; p. 1137.
Valve. W. J. Larned. No. 878,900; Feb. 11; Sp. p. 1935; Dr. p. 400; Gaz. vol. 132; p. 1184.
Valve. J. G. Randaxhe. No. 878,925; Feb. 11; Sp. p. 1900; Dr. p. 405; Gaz. vol. 132; p. 1189.
Valve. E. E. Slick. No. 878,904; Feb. 11; Sp. p. 2111; Dr. p. 440; Gaz. vol. 132; p. 1213.
Valve, Antisiphon-. W. B. Thomson. No. 878,430; Feb. 4; Sp. p. 1073; Dr. p. 218; Gaz. vol. 132; p. 1025.
Valve, Automatic retaining-. C. Martin and M. Beasley. No. 879,783; Feb. 18; Sp. p. 3878; Dr. pp. 813-14; Gaz. vol. 132; p. 1539.
Valve-chamber, External. G. H. Woodward. No. 878,924; Feb. 11; Sp. p. 2147; Dr. p. 448; Gaz. vol. 132; p. 1220.
Valve, Cylinder relief-. M. Bohn. No. 880,004; Feb. 25; Sp. p. 4390; Dr. p. 916; Gaz. vol. 132; p. 1645.

Valve, Double-seated. F. M. Smith. No. 879,014; Feb. 11; Sp. p. 2310; Dr. p. 483; Gaz. vol. 132; p. 1248.
Valve for flushing-tanks. G. G. Seymour. No. 878,094; Feb. 4; Sp. p. 406; Dr. p. 86; Gaz. vol. 132; p. 914.
Valve for gas-supply pipes, Automatic safety-. J. Murray. No. 878,658; Feb. 11; Sp. p. 1644; Dr. p. 337; Gaz. vol. 132; p. 1135.
Valve for instantaneous water-heaters, Water-. E. Ruud. No. 879,910; Feb. 25; Sp. p. 4199; Dr. p. 876; Gaz. vol. 132; p. 1615.
Valve for stench or water-seal traps, Air-. G. W. Renton. No. 878,424; Feb. 4; Sp. p. 1264; Dr. p. 215; Gaz. vol. 132; p. 1023.
Valve, Furnace-. C. Longenecker. No. 878,213; Feb. 4; Sp. p. 659; Dr. p. 135; Gaz. vol. 132; p. 953.
Valve, Gate. A. G. Paul. No. 880,463; Feb. 25; Sp. p. 5312; Dr. pp. 1117–18; Gaz. vol. 132; p. 1798.
Valve-gate and operating means therefor. A. Suck. No. 877,963; Feb. 4; Sp. p. 133; Dr. pp. 30–1; Gaz. vol. 132; p. 871.
Valve, Graduated-release. W. V. Turner. No. 879,700; Feb. 18; Sp. p. 3731; Dr. p. 782; Gaz. vol. 132; p. 1512.
Valve-locking mechanism. L. A. Werner. No. 880,056; Feb. 25; Sp. p. 4486; Dr. p. 942; Gaz. vol. 130; p. 1662.
Valve mechanism for compressors. S. A. Reeve. No. 878,562; Feb. 11; Sp. p. 1423; Dr. pp. 292–3; Gaz. vol. 132; p. 1103.
Valve mechanism for internal-combustion motors, Reversing-. J. Sulzer. No. 880,051; Feb. 25; Sp. p. 4477; Dr. p. 941; Gaz. vol. 132; p. 1661.
Valve, Mixing-. R. Rost. No. 878,023; Feb. 4; Sp. p. 275; Dr. p. 50; Gaz. vol. 132; p. 892.
Valve, Piston-. W. A. Stamm. No. 878,834; Feb. 11; Sp. p. 1972; Dr. p. 409; Gaz. vol. 132; p. 1191.
Valve, Pressure-reducing. W. V. Turner. No. 879,698; Feb. 18; Sp. p. 3724; Dr. p. 781; Gaz. vol. 132; p. 1512.
Valve, Reducing-. G. W. Collin. No. 877,908; Feb. 4; Sp. p. 27; Dr. p. 6; Gaz. vol. 132; p. 853.
Valve, Relief-. C. W. Miller. No. 880,068; Feb. 25; Sp. p. 4543; Dr. p. 956; Gaz. vol. 132; p. 1672.
Valve, Steam-pressure-reducing. G. W. Collin. No. 877,907; Feb. 4; Sp. p. 25; Dr. p. 5; Gaz. vol. 132; p. 852.
Valve, Throttle-. J. S. Chambers. (Reissue.) No. 12,755; Feb. 25; Sp. p. 5374; Dr. p. 1132; Gaz. vol. 132; p. 1808.
Vamp cementing and snipping machine. H. I. Illingworth. No. 878,958; Feb. 11; Sp. p. 2208; Dr. p. 462; Gaz. vol. 132; p. 1231.
Vamp-folding machine. G. F. Dunn. (Reissue.) No. 12,746; Feb. 4; Sp. p. 1214; Dr. pp. 251–2; Gaz. vol. 132; p. 1044.
Vapor-burner. F. Kitzsteiner. No. 878,142; Feb. 4; Sp. p. 490; Dr. p. 105; Gaz. vol. 132; p. 929.
Vaporizer for medicaments. E. L. Loveless. No. 878,296; Feb. 4; Sp. p. 832; Dr. p. 165; Gaz. vol. 132; p. 982.
Vat-support. G. S. Rominger. No. 880,243; Feb. 25; Sp. p. 4861; Dr. p. 1029; Gaz. vol. 132; p. 1725.
Vault, Burial-. T. F. Kelly. No. 878,902; Feb. 11; Sp. p. 2217; Dr. p. 464; Gaz. vol. 132; p. 1232.
Vault-lining. J. L. Grase. No. 880,020; Feb. 25; Sp. p. 4404; Dr. p. 925; Gaz. vol. 132; p. 1651.
Vehicle. N. H. Bloom. No. 879,437; Feb. 18; Sp. p. 3171; Dr. pp. 660–1; Gaz. vol. 132; p. 1427.
Vehicle. J. S. Duncan and J. L. Crist. No. 880,129; Feb. 25; Sp. p. 4616; Dr. pp. 973–4; Gaz. vol. 132; p. 1685.
Vehicle-body, Metal. H. and A. P. Smith. No. 879,206; Feb. 18; Sp. p. 2900; Dr. p. 562; Gaz. vol. 132; p. 1350.
Vehicle-brake. W. J. Watson. No. 877,971; Feb. 4; Sp. p. 149; Dr. p. 34; Gaz. vol. 132; p. 874.
Vehicle-brake. P. H. Showalter. No. 879,203; Feb. 18; Sp. p. 2903; Dr. p. 562; Gaz. vol. 132; p. 1350.
Vehicle-door, Automatic folding. E. D. O'Brien and M. E. O'Connell. No. 879,303; Feb. 18; Sp. p. 2896; Dr. p. 604; Gaz. vol. 132; p. 1384.
Vehicle, Motor-. J. Latzel. No. 878,074; Feb. 4; Sp. p. 370; Dr. p. 77; Gaz. vol. 132; p. 908.
Vehicle, Motor-. J. Ritchie. No. 880,403; Feb. 25; Sp. p. 5179; Dr. p. 1092; Gaz. vol. 132; p. 1777.
Vehicle propulsion, Mechanical motor-. J. Weber, Jr. No. 878,582; Feb. 11; Sp. p. 1480; Dr. p. 302; Gaz. vol. 132; p. 1110.
Vehicle provided with movable rails. F. Koch. No. 878,807; Feb. 11; Sp. p. 1931; Dr. p. 399; Gaz. vol. 132; p. 1183.
Vehicle running-gear. J. M. Dick. No. 880,199; Feb. 25; Sp. p. 4768; Dr. p. 1009; Gaz. vol. 132; p. 1709.
Vehicle running-gear, Motor-driven-. R. P. Hicks. No. 880,076; Feb. 25; Sp. p. 4523; Dr. p. 952; Gaz. vol. 132; p. 1668.
Vehicle running-gear or suspension-frame. R. Herman. No. 880,025; Feb. 25; Sp. p. 4411; Dr. pp. 927–8; Gaz. vol. 132; p. 1652.
Vehicle running-gears, Reinforced bar for. D. P. Cooper. No. 878,939; Feb. 11; Sp. p. 2179; Dr. p. 455; Gaz. vol 132; p. 1225.
Vehicle-shaft. O. Geertsma. No. 879,456; Feb. 18; Sp. p. 3223; Dr. p. 670; Gaz. vol. 132; p. 1433.
Vehicle shock-absorbing device. L. C. Welch. No. 880,257; Feb. 25; Sp. p. 4888; Dr. p. 1033; Gaz. vol. 132; p. 1729.
Vehicle-spring. C. A. Meredith. No. 878,081; Feb. 4; Sp. p. 384; Dr. p. 80; Gaz. vol. 132; p. 910.
Vehicle-spring. G. Schwarz. No. 878,316; Feb. 4; Sp. p. 864; Dr. p. 172; Gaz. vol. 132; p. 987.
Vehicle-spring. R. H. Stevens and T. Hall. No. 878,429; Feb. 4; Sp. p. 1072; Dr. pp. 217–18; Gaz. vol. 132; p. 1025.
Vehicle steering-gear. D. E. Ross. No. 879,414; Feb. 18; Sp. p. 3127; Dr. p. 651; Gaz. vol. 132; p. 1420.
Vehicle storm-front. A. K. Fulton. No. 879,093; Feb. 11; Sp. p. 2439; Dr. p. 515; Gaz. vol. 132; p. 1272.
Vehicle-switch. G. C. Wimpee. No. 878,587; Feb. 11; Sp. p. 1504; Dr. p. 305; Gaz. vol. 132; p. 1112.
Vehicle-tops, Curtain-operating means for. J. H. Tickerhoof. No. 879,218; Feb. 18; Sp. p. 2722; Dr. p. 568; Gaz. vol. 132; p. 1355.
Vehicle-wheel. W. E. Schneider. No. 878,158; Feb. 4; Sp. p. 521; Dr. p. 112; Gaz. vol. 132; p. 935.
Vehicle-wheel. G. W. T. Akehurst. No. 878,266; Feb. 4; Sp. p. 769; Dr. p. 154; Gaz. vol. 132; p. 972.
Vehicle-wheel. P. W. Waltz. No. 878,440; Feb. 4; Sp. p. 1069; Dr. p. 222; Gaz. vol. 132; p. 1028.
Vehicle-wheel. T. W. Rieder. No. 878,564; Feb. 11; Sp. p. 1438; Dr. p. 293; Gaz. vol. 132; p. 1104.
Vehicle-wheel. N. Dryden. No. 878,713; Feb. 11; Sp. p. 1749; Dr. p. 361; Gaz. vol. 132; p. 1154.
Vehicle-wheel. A. Sullivan. No. 878,754; Feb. 11; Sp. p. 1819; Dr. pp. 376–7; Gaz. vol. 132; p. 1166.
Vehicle-wheel. N. A. Newton. No. 879,301; Feb. 18; Sp. p. 2893; Dr. p. 603; Gaz. vol. 132; p. 1383.
Vehicles, Adjustable strap-securing clip for. F. L. Smith. No. 878,568; Feb. 11; Sp. p. 1445; Dr. p. 295; Gaz. vol. 132; p. 1105.
Vehicles, Air-compressor machanism for self-propelled. E. E. Hampton and C. G. Smith. No. 877,924; Feb. 4; Sp. p. 60; Dr. p. 12; Gaz. vol. 132; p. 859.
Vehicles, Apparatus for cooling the brakes of motor road-. J. Caillet. No. 878,454; Feb. 4; Sp. p. 1120; Dr. p. 229; Gaz. vol. 132; p. 1033.
Vehicles, Conducting-conduit for. F. M. Brinkerhoff. No. 880,477; Feb. 25; Sp. p. 5339; Dr. pp. 1125–6; Gaz. vol. 132; p. 1803.
Vehicles, Device for lubricating the wheels of. T. C. Wild. No. 879,228; Feb. 18; Sp. p. 2737; Dr. p. 571; Gaz. vol. 132; p. 1358.
Vehicles, Foot-rest for. L. A. Jones. No. 879,646; Feb. 18; Sp. p. 3620; Dr. p. 757; Gaz. vol. 132; p. 1494.
Vehicles, Friction transmission mechanism for power-driven. J. H. Cook. No. 879,367; Feb. 18; Sp. p. 3008; Dr. p. 629; Gaz. vol. 132; p. 1404.
Vehicles, Means for preventing side slip of motor-. T. B. Heathorn. No. 880,212; Feb. 25; Sp. p. 4794; Dr. p. 1015; Gaz. vol. 132; p. 1714.
Vehicles, Mounting of road-wheels for. C. W. Fulton. No. 879,160; Feb. 18; Sp. p. 2617; Dr. pp. 544–5; Gaz. vol. 132; p. 1337.
Vehicles, Removable sleigh-runner for. H. H. Walsh. No. 878,250; Feb. 4; Sp. p. 749; Dr. p. 151; Gaz. vol. 132; p. 969.
Vehicles, Speed-controlling mechanism for motor-. G. W. Dunham. No. 878,783; Feb. 11; Sp. p. 1891; Dr. p. 389; Gaz. vol. 132; p. 1177.
Vehicles, Strain-distributing device for. J. Worthington. No. 879,340; Feb. 18; Sp. p. 2968; Dr. p. 620; Gaz. vol. 132; p. 1396.
Vehicles, Wind-shield or weather-screen for motor and similar. H. S. Samuel. No. 879,195; Feb. 18; Sp. p. 2682; Dr. pp. 559–60; Gaz. vol. 132; p. 1347.
Vein-tube. W. H. Freeman. No. 878,199; Feb. 4; Sp. p. 636; Dr. p. 130; Gaz. vol. 132; p. 949.
Velocipede, Water-. R. W. Krais. No. 879,389; Feb. 18; Sp. p. 3013; Dr. p. 637; Gaz. vol. 132; p. 1410.
Vending apparatus, Coin-controlled. R. N. and B. F. Beasley. No. 879,722; Feb. 18; Sp. p. 3770; Dr. p. 791; Gaz. vol. 132; p. 1519.
Vending-machine. H. R. Holbrook. No. 879,546; Feb. 18; Sp. p. 3404; Dr. p. 713; Gaz. vol. 132; p. 1463.
Vending machine, Ticket-. W. C. Mayo and J. Houlehan. No. 879,284; Feb. 18; Sp. p. 2839; Dr. pp. 595–6; Gaz. vol. 132; p. 1377.
Vending postage-stamps, tickets, &c., Coin freed or operated machine for. K. E. Fawns and G. Kermode. No. 878,787; Feb. 11; Sp. p. 1892; Dr. p. 390; Gaz. vol. 132; p. 1177.
Veneer-sawing machine. J. Farrow. No. 879,451; Feb. 18; Sp. p. 3214; Dr. p. 669; Gaz. vol. 132; p. 1431.
Ventilating device. J. L. Waterbury and C. Waterman. No. 878,474; Feb. 4; Sp. p. 1172; Dr. p. 238; Gaz. vol. 132; p. 1040.
Ventilating system. P. J. Conroy. No. 878,278; Feb. 4; Sp. p. 789; Dr. p. 157; Gaz. vol. 132; p. 976.
Ventilator. J. Lorens. No. 878,214; Feb. 4; Sp. p. 661; Dr. p. 136; Gaz. vol. 132; p. 953.
Ventilator. A. A. Packer. No. 878,231; Feb. 4; Sp. p. 693; Dr. p. 143; Gaz. vol. 132; p. 958.
Ventilator. A. B. Redell and J. A. Panter. No. 879,119; Feb. 11; Sp. p. 2532; Dr. p. 526; Gaz. vol. 132; p. 1281.
Ventilator. A. B. Redell and J. A. Panter. No. 879,120; Feb. 11; Sp. p. 2534; Dr. pp. 526–7; Gaz. vol. 132; p. 1281.
Vermin-eradicator. C. Kuhnert. No. 879,055; Feb. 11; Sp. p. 2377; Dr. p. 497; Gaz. vol. 132; p. 1260.
Vernier, Adjustable. G. N. Saegmuller. No. 879,008; Feb. 11; Sp. p. 2303; Dr. p. 481; Gaz. vol. 132; p. 1246.
Vertical lock. A. De Vilbiss, Jr. No. 879,371; Feb. 18; Sp. p. 3023; Dr. pp. 630–1; Gaz. vol. 132; p. 1405.
Vessel-closure. R. W. Crocker. No. 878,940; Feb. 11; Sp. p. 2180; Dr. p. 455; Gaz. vol. 132; p. 1225.
Vibrator. W. N. and F. W. Nicholls. No. 878,063; Feb. 4; Sp. p. 333; Dr. p. 80; Gaz. vol. 132; p. 911.
View-finder. H. J. Winter. No. 878,324; Feb. 4; Sp. p. 879; Dr. p. 175; Gaz. vol. 132; p. 990.
Violin and the like. J. W. D'Armon. No. 878,124; Feb. 4; Sp. p. 461; Dr. p. 98; Gaz. vol. 132; p. 923.
Voting-machine. J. H. McElroy. No. 879,114; Feb. 11; Sp. p. 2522; Dr. p. 524; Gaz. vol. 132; p. 1279.
Voting-machine. A. McKenzie. No. 879,664; Feb. 18; Sp. p. 3640; Dr. p. 764; Gaz. vol. 132; p. 1500.
Wagon. F. W. Blackley. No. 878,452; Feb. 4; Sp. p. 1117; Dr. p. 229; Gaz. vol. 132; p. 1032.
Wagon. A. Main. No. 878,971; Feb. 11; Sp. p. 2228; Dr. p. 466; Gaz. vol. 132; p. 1234.
Wagon-bed. F. R. Penn. No. 878,667; Feb. 11; Sp. p. 1660; Dr. p. 341; Gaz. vol. 132; p. 1139.
Wagon-body. H. Knox. No. 879,653; Feb. 18; Sp. p. 3632; Dr. p. 759; Gaz. vol. 132; p. 1497.
Wagon-bolster. F. W. Blackley. No. 878,038; Feb. 4; Sp. p. 300; Dr. p. 64; Gaz. vol. 132; p. 897.
Wagon-brake. G. B. Showalter. No. 878,567; Feb. 11; Sp. p. 1443; Dr. p. 294; Gaz. vol. 132; p. 1105.
Wagon-brake, Automatic. G. M. Olson. No. 878,229; Feb. 4; Sp. p. 600; Dr. p. 142; Gaz. vol. 132; p. 958.
Wagon, Dump-. J. Stifter. No. 878,997; Feb. 11; Sp. p. 2118; Dr. p. 442; Gaz. vol. 132; p. 1215.

Wagon, Dumping-. E. B. Symons. No. 878,687; Feb. 11; Sp. p. 1690; Dr. p. 350; Gaz. vol. 132; p. 1145.
Wagon, Dumping-. J. H. Van Arsdale. No. 880,054; Feb. 25; Sp. p. 4483; Dr. p. 942; Gaz. vol. 132; p. 1662.
Wagon-wheel. R. E. Jeffery. No. 880,307; Feb. 25; Sp. p. 4986; Dr. p. 1052; Gaz. vol. 132; p. 1746.
Wall-mold. J. W. Holman. No. 878,000; Feb. 4; Sp. p. 208; Dr. p. 45; Gaz. vol. 132; p. 884.
Warp-threads in warp-twisting machines, Device for separating the ends of. G. Hillier. No. 880,215; Feb. 25; Sp. p. 4799; Dr. pp. 1016–18; Gaz. vol. 132; p. 1714.
Washboard. A. G. De Waldo. No. 878,782; Feb. 11; Sp. p. 1883; Dr. p. 388; Gaz. vol. 132; p. 1176.
Washboard, H. J. Gilbert.. No. 878,947; Feb. 11; Sp. p. 2188; Dr. p. 458; Gaz. vol. 132; p. 1227.
Washboard, Renewable-front. W. G. Frost. No. 879,761; Feb. 18; Sp. p. 3841; Dr. p. 805; Gaz. vol. 132; p. 1532.
Washer: *See* Can-washer; Wheel-washer; Window-washer.
Washing apparatus. M. Leitch. No. 878,544; Feb. 11; Sp. p. 1386; Dr. p. 285; Gaz. vol. 132; p. 1097.
Washing-machine. D. A. Sawyers. No. 878,427; Feb. 4; Sp. p. 1068; Dr. p. 217; Gaz. vol. 132; p. 1024.
Washing-machine. H. G. Batt. No. 878,495; Feb. 11; Sp. p. 1236; Dr. p. 256; Gaz. vol. 132; p. 1081.
Washing-machine. J. W. Ayers. No. 880,349; Feb. 25; Sp. p. 5058; Dr. p. 1068; Gaz. vol. 132; p. 1750.
Washing-machine, Boiler. J. W. Seifert. No. 880,334; Feb. 25; Sp. p. 5032; Dr. p. 1061; Gaz. vol. 132; p. 1754.
Washing-machine gearing. H. L. Staley. No. 880,250; Feb. 25; Sp. p. 4876; Dr. p. 1031; Gaz. vol. 132; p. 1727.
Watch-barrel. L. A. Faller. No. 878,716; Feb. 11; Sp. p. 1755; Dr. p. 363; Gaz. vol. 132; p. 1154.
Watch-fob. C. L. Hille. No. 878,800; Feb. 11; Sp. p. 1921; Dr. p. 396; Gaz. vol. 132; p. 1181.
Watch setting mechanism. M. Sporleder. No. 879,208; Feb. 18; Sp. p. 2705; Dr. p. 564; Gaz. vol. 132; p. 1351.
Watch, Stem-winding. R. Manthey. No. 878,220; Feb. 4; Sp. p. 672; Dr. pp. 138–9; Gaz. vol. 132; p. 955.
Water-closet. J. A. Stevenson and L. O. Phillips. No. 879,421; Feb. 18; Sp. p. 3143; Dr. p. 654; Gaz. vol. 132; p. 1422.
Water-closet flushing-valve. W. Turnbull. No. 878,166; Feb. 4; Sp. p. 572; Dr. p. 117; Gaz. vol. 132; p. 938.
Water-closet-outlet connection. C. H. Moore. No. 879,399; Feb. 18; Sp. p. 3088; Dr. p. 642; Gaz. vol. 132; p. 1414.
Water-current motor. J. A. Cameron. No. 878,608; Feb. 11; Sp. p. 1540; Dr. p. 314; Gaz. vol. 132; p. 1119.
Water-elevator. M. R. Shourds. No. 877,956; Feb. 4; Sp. p. 117; Dr. p. 28; Gaz. vol. 132; p. 869.
Water-elevator. J. A. Goodner. No. 878,133; Feb. 4; Sp. p. 475; Dr. p. 102; Gaz. vol. 132; p. 926.
Water-gage. J. O'Connor. No. 878,992; Feb. 11; Sp. p. 2274; Dr. p. 475; Gaz. vol. 132; p. 1241.
Water-heater. H. Anderson. No. 878,108; Feb. 4; Sp. p. 432; Dr. p. 91; Gaz. vol. 132; p. 919.
Water-heater. J. P. Mauzey. No. 878,975; Feb. 11; Sp. p. 2235; Dr. p. 468; Gaz. vol. 132; p. 1236.
Water-heater. F. P. Obenauer. No. 880,237; Feb. 25; Sp. p. 4854; Dr. p. 1027; Gaz. vol. 132; p. 1723.
Water-heater, Electrical. M. H. Shoenberg. No. 879,498; Feb. 18; Sp. p. 3300; Dr. p. 690; Gaz. vol. 132; p. 1447.
Water-heater, Gas. H. W. McClellan. No. 879,486; Feb. 18; Sp. p. 3275; Dr. p. 684; Gaz. vol. 132; p. 1443.
Water, Heating and purifying. J. C. Jones. No. 880,456; Feb. 25; Sp. p. 5287; Dr. p. 1114; Gaz. vol. 132; p. 1796.
Water-motor. F. A. Dinamore. No. 878,194; Feb. 4; Sp. p. 624; Dr. p. 128; Gaz. vol. 132; p. 947.
Water-pressure motor, Rotary. P. T. Coffield. No. 878,044; Feb. 4; Sp. p. 310; Dr. p. 65; Gaz. vol. 132; p. 898.
Water-purifying apparatus. M. Miller. No. 879,112; Feb. 11; Sp. p. 2517; Dr. pp. 522–3; Gaz. vol. 132; p. 1278.
Water-purifying apparatus. C. R. Darnall. No. 879,856; Feb. 18; Sp. p. 4008; Dr. p. 853; Gaz. vol. 132; p. 1596.
Water-tank, Stock. E. Bergien. No. 878,929; Feb. 11; Sp. p. 2158; Dr. p. 450; Gaz. vol. 132; p. 1222.
Wave-motor. G. M. Wilson. No. 879,992; Feb. 25; Sp. p. 4346; Dr. p. 911; Gaz. vol. 132; p. 1641.
Wave-motor. A. Allen. No. 880,474; Feb. 25; Sp. p. 5332; Dr. pp. 1122–3; Gaz. vol. 132; p. 1802.
Weaner, Animal-. J. A. Huff. No. 879,172; Feb. 18; Sp. p. 2644; Dr. p. 551; Gaz. vol. 132; p. 1341.
Web-feeding mechanism, Bed-controlled. P. F. Cox. No. 880,279; Feb. 25; Sp. p. 4932; Dr. p. 1044; Gaz. vol. 132; p. 1736.
Web-feeding mechanism, Continuous variable. P. F. Cox. No. 880,280; Feb. 25; Sp. p. 4936; Dr. p. 1044; Gaz. vol. 132; p. 1736.
Weed-cutter. C. A. Despain, G. A. Kitt, and E. R. Gordon. No. 879,089; Feb. 11; Sp. p. 2461; Dr. p. 513; Gaz. vol. 132; p. 1271.
Weighing apparatus for farm-wagons, Portable. J. D. Reed. No. 878,312; Feb. 4; Sp. p. 858; Dr. pp. 170–1; Gaz. vol. 132; p. 986.
Weighing-machine. F. Verplast. No. 878,915; Feb. 11; Sp. p. 2132; Dr. pp. 444–5; Gaz. vol. 132; p. 1217.
Well-drilling apparatus. J. C. Wally. No. 878,916; Feb. 11; Sp. p. 2133; Dr. p. 445; Gaz. vol. 132; p. 1217.
Well-drilling machine. L. K. Robbins. No. 878,827; Feb. 11; Sp. p. 1963; Dr. p. 406; Gaz. vol. 132; p. 1189.
Well packer, Deep-. C. M. Heeter. No. 880,213; Feb. 25; Sp. p. 4795; Dr. p. 1016; Gaz. vol. 132; p. 1714.
Wells, Tube-hoisting appliance for oil-. J. Hogue. No. 879,964; Feb. 25; Sp. p. 4200; Dr. p. 899; Gaz. vol. 132; p. 1633.
Welt-stripper. R. K. Johnstone. No. 878,533; Feb. 11; Sp. p. 1363; Dr. p. 279; Gaz. vol. 132; p. 1093.
Wheel: *See* Car-wheel; Cushion-tire wheel; Grinding or polishing wheel; Paddle-wheel; Propeller-wheel; Spring-wheel; Steering-wheel; Trolley-wheel; Vehicle-wheel; Wagon-wheel.
Wheel. C. Adams-Randall. No. 878,592; Feb. 11; Sp. p. 1511; Dr. p. 307; Gaz. vol. 132; p. 1114.
Wheel. G. M. Bucey. No. 880,122; Feb. 25; Sp. p. 4606; Dr. pp. 970–1; Gaz. vol. 132; p. 1083.
Wheel-guard. M. F. Doty. No. 879,752; Feb. 18; Sp. p. 3827; Dr. p. 802; Gaz. vol. 132; p. 1530.
Wheel-jack. S. W. Walker. No. 878,580; Feb. 11; Sp. p. 1487; Dr. p. 301; Gaz. vol. 132; p. 1110.
Wheel-rim for pneumatic tires. C. S. Scott. No. 880,332; Feb. 25; Sp. p. 5028; Dr. p. 1060; Gaz. vol. 132; p. 1753.
Wheel-washer. J. S. Williams. No. 880,261; Feb. 25; Sp. p. 4895; Dr. p. 1035; Gaz. vol. 132; p. 1731.
Wheelbarrow. J. Ferguson. No. 879,801; Feb. 25; Sp. p. 4080; Dr. p. 855; Gaz. vol. 132; p. 1598.
Whiffletree. J. E. Moan. No. 880,231; Feb. 25; Sp. p. 4843; Dr. p. 1024; Gaz. vol. 132; p. 1721.
Whip-socket. T. Martin. No. 878,974; Feb. 11; Sp. p. 2234; Dr. p. 467; Gaz. vol. 132; p. 1235.
Wind-guard. H. H. McGiffin and E. H. McCauley. No. 880,461; Feb. 25; Sp. p. 5309; Dr. p. 1117; Gaz. vol. 132; p. 1798.
Wind-motor. D. D. McIntyre. No. 880,321; Feb. 25; Sp. p. 5009; Dr. p. 1057; Gaz. vol. 132; p. 1750.
Windmill. A. F. George. No. 879,161; Feb. 18; Sp. p. 2621; Dr. pp. 545–6; Gaz. vol. 132; p. 1337.
Windmill. A. F. George. No. 879,162; Feb. 18; Sp. p. 2624; Dr. pp. 546–7; Gaz. vol. 132; p. 1337.
Windmill attachment. E. E. Goodwin. No. 879,099; Feb. 11; Sp. p. 2481; Dr. p. 517; Gaz. vol. 132; p. 1274.
Winding and cutting machine. C. A. Marquis. No. 878,079; Feb. 4; Sp. p. 378; Dr. pp. 78–9; Gaz. vol. 132; p. 909.
Winding machine, Bobbin-. W. D. Rundlett. No. 879,798; Feb. 18; Sp. p. 3905; Dr. p. 818; Gaz. vol. 132; p. 1544.
Winding-machine bracket-hanger. T. Lewis. No. 879,562; Feb. 18; Sp. p. 3432; Dr. p. 719; Gaz. vol. 132; p. 1467.
Winding-roll tension device. C. J. Harter. No. 880,261; Feb. 18; Sp. p. 2803; Dr. p. 588; Gaz. vol. 132; p. 1370.
Window. A. Straubhaar. No. 878,253; Feb. 4; Sp. p. 742; Dr. p. 149; Gaz. vol. 132; p. 968.
Window. S. U. Barr. No. 879,832; Feb. 18; Sp. p. 3989; Dr. p. 835; Gaz. vol. 132; p. 1556.
Window attachment. F. S. Burgess. No. 879,811; Feb. 18; Sp. p. 3928; Dr. p. 824; Gaz. vol. 132; p. 1548.
Window-guard. S. R. Wells. No. 879,342; Feb. 18; Sp. p. 2955; Dr. p. 616; Gaz. vol. 132; p. 1396.
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Window-washer. G. P. Young. No. 878,444; Feb. 4; Sp. p. 1094; Dr. p. 223; Gaz. vol. 132; p. 1029.
Windows and doors, Antirattling device for. J. J. Halladay. No. 879,381; Feb. 18; Sp. p. 3044; Dr. p. 634; Gaz. vol. 132; p. 1408.
Wire-baking oven. H. B. Humphrey. No. 878,289; Feb. 4; Sp. p. 812; Dr. p. 162; Gaz. vol. 132; p. 979.
Wire-bending device. A. H. Neller. No. 880,235; Feb. 25; Sp. p. 4850; Dr. p. 1026; Gaz. vol. 132; p. 1722.
Wire-die safety appliance. J. H. Reece. No. 878,236; Feb. 4; Sp. p. 701; Dr. p. 144; Gaz. vol. 132; p. 960.
Wire-drawing machine. H. L. Thompson. No. 880,178; Feb. 25; Sp. p. 4721; Dr. p. 998; Gaz. vol. 132; p. 1702.
Wire ends, Sleeve for joining. F. W. Maxstadt. No. 878,816; Feb. 11; Sp. p. 1944; Dr. pp. 402–3; Gaz. vol. 132; p. 1186.
Wire handle for paper vessels. C. T. Bloomer. No. 878,331; Feb. 4; Sp. p. 892; Dr. p. 178; Gaz. vol. 132; p. 993.
Wire-reel, Automatic. C. E. Wallgreen. No. 880,114; Feb. 25; Sp. p. 4585; Dr. p. 966; Gaz. vol. 132; p. 1680.
Wire-reels, Automatic safety appliance for. J. H. Reece. No. 878,235; Feb. 4; Sp. p. 698; Dr. p. 144; Gaz. vol. 132; p. 960.
Wire-rope clamp. F. B. Cook. No. 879,087; Feb. 11; Sp. p. 2460; Dr. p. 512; Gaz. vol. 132; p. 1271.
Wire screen. C. B. Harrop. No. 878,728; Feb. 11; Sp. p. 1774; Dr. p. 367; Gaz. vol. 132; p. 1158.
Wire splice or coupling. I. M. Botkin. No. 879,941; Feb. 25; Sp. p. 4256; Dr. p. 890; Gaz. vol. 132; p. 1625.
Wire-suspending device. H. E. Stevens. No. 880,416; Feb. 25; Sp. p. 5206; Dr. p. 1097; Gaz. vol. 132; p. 1781.
Wire-working tool. P. Smith. No. 879,686; Feb. 18; Sp. p. 3701; Dr. p. 775; Gaz. vol. 132; p. 1508.
Wool, Mordanting. P. Rogers. No. 878,314; Feb. 4; Sp. p. 862; Gaz. vol. 132; p. 987.
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Wool-washing bowl. F. G. Sargent. No. 879,196; Feb. 18; Sp. p. 2684; Dr. p. 560; Gaz. vol. 132; p. 1348.
Worm-driving mechanism. E. H. Ryon. No. 879,496; Feb. 18; Sp. p. 3296; Dr. p. 689; Gaz. vol. 132; p. 1446.
Woven fabric. C. L. Christmann. No. 879,736; Feb. 18; Sp. p. 3795; Dr. p. 790; Gaz. vol. 132; p. 1524.
Woven fabric. C. L. Christmann. No. 879,737; Feb. 18; Sp. p. 3797; Dr. p. 797; Gaz. vol. 132; p. 1524.
Wrapping-machine. J. W. Hicks. No. 879,544; Feb. 18; Sp. p. 3392; Dr. pp. 710–12; Gaz. vol. 132; p. 1462.
Wrapping-machine cutting mechanism. A. M. Price. No. 880,465; Feb. 25; Sp. p. 5316; Dr. p. 1118; Gaz. vol. 132; p. 1799.
Wrench: *See* Nut and pipe wrench; Pipe-wrench; Ratchet-wrench.
Wrench. J. F. Fisher. No. 878,197; Feb. 4; Sp. p. 632; Dr. p. 129; Gaz. vol. 132; p. 948.
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Wrench. H. E. Mobley. No. 878,981; Feb. 11; Sp. p. 2250; Dr. p. 470; Gaz. vol. 132; p. 1238.
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Wrench. F. Ellis. No. 879,155; Feb. 18; Sp. p. 2696; Dr. p. 543; Gaz. vol. 132; p. 1334.
Wrench. T. J. Hand. No. 879,289; Feb. 18; Sp. p. 2800; Dr. p. 587; Gaz. vol. 132; p. 1369.
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Wrench. H. Sasko. No. 880,330; Feb. 25; Sp. p. 5024; Dr. p. 1060; Gaz. vol. 132; p. 1752.
Wrench or nut-jack. W. H. Oliver. No. 880,305; Feb. 18; Sp. p. 2696; Dr. p. 605; Gaz. vol. 132; p. 1384.
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Wringer-stand. N. B. Spooner. No. 878,682; Feb. 11; Sp. p. 1683; Dr. pp. 347-8; Gaz. vol. 132; p. 1143.
Writing device. W. C. Massey. No. 878,080; Feb. 4; Sp. p. 382; Dr. p. 80; Gaz. vol. 132; p. 910.
Wrought articles, Making. J. H. Dods. No. 878,871; Feb. 11; Sp. p. 2048; Dr. p. 424; Gaz. vol. 132; p. 1204.

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